

Job #: 233

Rego: NBY

**AFTTIS: 52.30** 

Start Date: 28-03-2019

Finish Date: 28-03-2019

Customer: Horizontal Falls Helicopters

Job Type : AD/SB

Coordinator:

Description: RHC R44 S/B 96 D602-1 Time

Delay Assembly

Serial # : 2544 Job No : 233	Date: 78 / 3 / 15	C), Licence No : 594407	Alrframe	Days	28-03-2019	
Work Required: RHC R44 S/B 096 D602-1 Time Dolay Assembly	1 Time Delay Assembly				ATA Code :	
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Worksheet

──PearLCoast Heli Maintenance Pty Ltd COA - 0686

Airframe Airframe Component

Days Hours Counter

> 52.3 Total

28-03-2019

Aircraft: R44 Rego: VH-NBY

Form No: PCHM004

Helibiz Pty Ltd

Ph.07 4946 9422 Fax.07 4946 9188 ABN.89011072816

HELIBIZ PTY LTD, Whitsunday Airport, Shute Harbour Road Airlie Beach QLD 4802

eception@helibiz.com

Customer: West Coast Seaplanes Pty Ltd

PO Box 905

BROOME WA 6725

Ship To: West Coast Seaplanes Pty Ltd

Hangar 14, Gus Winckel Road

Broome WA 6725

**Delivery Docket** 

Sales Reference: 4567

Date: 23-11-2018

Job No:

Customer Ref: TIME RELAY

Ship Via:

		GRN	Quantity
Part #	Description	AB2373	1 Each
D602-1	RELAY, TIME DELAY		
FREIGHT	Freight - Aust Post - 23/11/2018		
		X	Each
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Comment:

### ROBINSON HELICOPTER COMPANY

2901 Airport Drive, Torrance, California 90505

Phone (310) 539-0508 Fax (310) 539-5198

Page 1 of 2

### **R44 SERVICE BULLETIN SB-96**

YH MBY

DATE: 02 October 2018

TO: R44-series Owners, Operators, and Maintenance Personnel

SN 2544

**SUBJECT:** D602-1 Time Delay Assembly

**EFFECTIVITY:** D602-1 Time Delay Assemblies identified as Lot 99 or Lot 100. Affected parts were originally installed on R44 Helicopters S/N 0046, 0381, 1308, 2076, and 2507 thru 2557, and R44 II Helicopters S/N 10664 and 14175 thru 14249 except 14221, 14222, 14245, and 14247. Affected parts were also shipped as spares between November 2017 and June 2018.

TIME OF COMPLIANCE: Within next 100 flight hours or by 31 January 2019, whichever occurs first.

BACKGROUND: RHC has determined that Lot 99 and Lot 100 of D602-1 (Clutch Actuator) Time Delay Assemblies were assembled with an incorrect resistor, which may cause the circuit to overheat in service.

### **COMPLIANCE PROCEDURE:**

- For each affected helicopter, order a replacement D602-1 Time Delay Assembly from RHC Customer Service. Note that MS3367-5-9 and MS3367-7-9 ty-raps will also be required as shown in Figure 1.
- 2. Remove C706-1 tailcone cowling assembly.
- Verify battery switch is off. Refer to Figure 1. Cut and discard ty-raps securing D602-1 Time Delay Assembly to frame. Disconnect time delay assembly from airframe harness and remove time delay assembly.
- Connect replacement D602-1 Time Delay Assembly to airframe harness at connector. Secure with ty-raps as shown. Cinch ty-raps until snug without over-tightening, and trim tips flush with heads. Verify security.
- 5. Momentarily engage and disengage clutch actuator to verify proper operation.
- 6. Install C706-1 tailcone cowling assembly.
- 7. Make appropriate maintenance record entries.
- 8. Discard or return to RHC any spare D602-1 Time Delay Assemblies identified as Lot 99 or Lot 100.

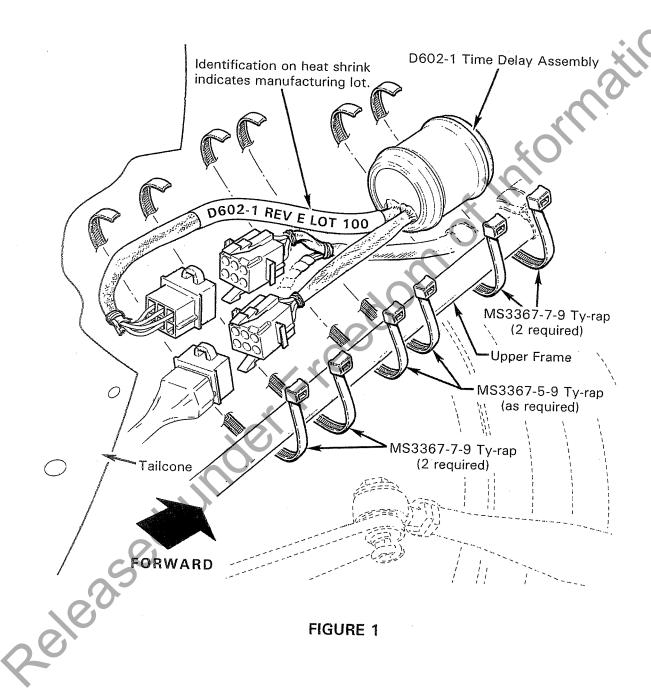
(OVER) 594087 72/3/2019.

# <u>APPROXIMATE COST:</u>

Parts: No charge for D602-1 Time Delay Assembly if ordered by 31 January 2019.

Reference helicopter serial number or RHC Invoice number.

Labor: 1.0 man-hour.



# Engineering Work Package Pearl Coast Heli Maintenance Pty Ltd COA - 0686



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Aircraft Registration	VH-NBY	05	Date Completed	28(3119,	Engine TTIS		
Operator	Horizontal Falls Helicopters	elicopters	Approved Maintenance Data (Airframe)	RHC R44 RTR 460 Maintenance Manual Rev May 2016	Landings/Starts		
Aircraft Type	R44		Approved		Cycles		
Operator Base	Pearl Coast Heli Maintenance	Vaintenance	Maintenance Data (Engine)	Lycoming O-540 Operators Manual rev Match 2009	RINS	-	
Job Description:	RHC R44 S/B 96 D602-1 Time Delay Assembly	Delay Assembly					
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XI

594407

Job Coordinator

AME/LAME

Form No: PCHM003

Page 1 of 1



Job #: 255

Rego: NBY

**AFTTIS: 88.62** 

Start Date: 12-05-2019

Finish Date: 24-05-2019

Customer: Horizontal Falls Helicopters

Job Type: 100Hrly/Annual Inspection

Coordinator:

Description: 100Hrly/Annual Inspection/300Hrly

Valve Inspection/M/R Tack &

Balance

Worksheet

Pearl Coast Heli Maintenance Pty Ltd COA - 0686

Component

Hours Counter

88.62 Total

### Work Required: 100HRLY/12MONTHS M/R Head Teeter Friction Test Work Required: 100HRLY/12MONTHS Maintenance Flight To Be Carried Out Before Release To Service Work Required: 100HRLY/12MONTHS M/R Swashplate Friction Test Work Required: 100HRLY/12MONTHS POH Update/Status Check Monitor By Hours, Days Monitor By Hours, Days Monitor By Hours, Days Monitor By Hours, Days Category Airframe Category Airframe Category Airframe Category Airframe Task No 005 Task No 006 Interval 100 Job No: 255 Interval 100 Task No 007 Interval 100 Task No 008 To Run 11.38 Interval 100 To Run 11.38 To Run 11.38 To Run 11.38 Due 100, 11-09-2019 Due 100, 11-09-2019 Due 100, 11-09-2019 Due 100, 11-09-2019 C/O NDF C/O NDF C/O NDF Action Taken: Action Taken: C/O NDF Action Taken: Action Taken: Date: $\widetilde{\mathcal{V}}$ 3 Licence No: 594407 Labour Hours Labour Hours Labour Hours Labour Hours ATA Code: ATA Code: ATA Code: ATA Code: Licence No Licence No Licence No Licence No L.A.M.E L.A.M.E L.A.M.E L.A.M.E A.M.E A.M.E A.M.E A.M.E Date Date Date Date 13/05/2019 13/05/2019 13/05/2019 13/05/2019 594407 594407 594407 594407

Worksheet

Aircraft: R44

ators Signature :

<u>Pearl C</u>oast Heli Maintenance Pty Ltd COA - 0686

**Component** 

Counter Hours

88.62

12-05-2019

Total

Airframe Airframe

nt Name :

Serial #: 2544

Rego: VH-NBY

Vorkshaat	Pearl Coast Heli Maintenance Pty Ltd COA - 0686	.td COA - 0686			<b>9</b>
Aircraft: R44 Rego: VH-NBY	Co-ordinators Signature :	Component Airframe	<b>Counter</b> Hours Days	<b>Total</b> 88.62 12-05-2019	Pearly \Coast Tell (Elinement)
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Page 1 Tages	Total	Counter	Component		

Worksheet

Pearl Coast Heli Maintenance Pty Ltd COA - 0686

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Aircraft: R44	Co-ordinators Signature:	Component	<b>Counter</b> Hours	<b>Total</b> 88.62	Pearly Coast
Rego: VH-NBY	Print Name: 02	Airframe	Days	12-05-2019	
Job No : 255	Date: 13/3/7	Licence No: 594407			
Work Required: LYC S/B 366C Carb Throttle Body Screw Inspection	Throttle Body Screw Inspection			A.M.	
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Licence No: 594407

Worksheet

Aircraft: R44

Serial #: 2544

Rego: VH-NBY

Co-ordinators Signature:

Pearl Coast Heli Maintenance Pty Ltd COA - 0686

Component

Airframe Airframe

Days Hours Counter

88.62 12-05-2019

Total

Print Name: , 2

Job No: 255

Due 100, 11-09-2019	Interval 100	Monitor By Hours, Days	Category Engine	Task No 036	Work Required : LTC 31 1000C Special Accident Facilities and Taken :	The second of the second secon	To Run 11.38	Due 100, 11-09-2019	Interval 100	Monitor By Hours, Days	Category Engine	Task No 035 C/O NDF	Work Required - 100 Inc. / 16 Oction Taken :	Work Beguired : 100HRI Y/12MONTHS Spark Plug Clean/Gap/Test	To Run -38.62	Due 50	Interval 50	Monitor By Hours, Days	Category Engine	Task No 034	Work Required: LYC S/B 480F Oil Filter Change & Inspection	To Run 211.38	Due 300	Interval 300	ZS.		Task No 033	Action Taken:	Work Required: LYC S/B 301B Maintence Procedures & Service Limitations For Valves		Job No : 255	Rego: VH-NBY	Aircraft : R44 Co-ordinators Signature :	•	
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Additional Worksheet Item Aircraft : R44 Serial # : 2544 Job Na : 255 Rego: VH-NBY Defect or Work Required Co-ordinators Signat Print Name: Pearl Coast Heli Maintenance Pty Ltd COA - 0686 Date: **Rectification Details** Licence No: 594407 . М Airframe Airframe Component Days Hours Counter L.A.M.E 88.62 Total 12-05-2019 Licence No. Date

certification for L.A.M.E constitutes a certification pursuant to CAR42ZE that all maintenance has been properly performed as detailed in the above mentioned job umber for and on behalf of Pearl Coast Heli Maintenance Pty Ltd COA - 0686

Form No :

Page ... of ...

Aircraft : R44 Rego : VH-NBY Serial # : 2544 Job No : 255	BY Co-ordinators Sig	Print Name:	Names:	<b>Component</b> Alrframe Alrframe	<b>Counter</b> Hours Days	<b>Total</b> 88.62 12-05-2019	Pearly A Coast
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# Co-Ordination and Final Certification Pearl Coast Heli Maintenance Pty Ltd COA - 0686

A CERTIFICATION ABOVE CONSTITUTES A CERTIFICATION PURSUANT TO CAR42ZE THAT ALL MAINTENANCE HAS BEEN PROPERLY CERTIFIED. Note: The person who certifies for the completion and co-ordination of the entire inspection or workpackage contents is to ensure that any maintenance performed during the inspection has not invalidated a certification already made in another category and has been completed and properly certified. LAME Signature : I hereby certify for the completion and co-ordination of the entire inspection. CO-ORDINATING CERTIFICATION 2nd Inspection Signature: 1st Inspection Signature : Independent Inspection Certificate Pursuant to CAR 42G. Inspection carried out on the following: Radio Instrument Electrical Airframe Engines Categories covered during this inspection - Certifications L.A.M.E CERTIFICATION I hereby certify that all maintenance in the category(s) for which I am responsible have been completed. Operator: Horizontal Falls Serial # : 2544 Aircraft: R44 Owner: Horizontal Falls Helicopters Rego: VH-NBY Job Description: 100Hrly/Annual Inspection/300Hrly Valve Inspection/M/R Tack & Licence Number Licence Number Licence Number Licence Number Licence Number LAME Licence No: Job No: 255 - Franks 594407 LE TITUPS tetribs torto Licence Number Licence Number Date 13/5/19 Date 13/8/17. 13 15 119 For & on behalf of: Pearl Coast Heli Maintenance Pty Ltd COA -13/5/19 For & on behalf of: Aircraft TTIS Issued M/R Serial No. Expired M/R Serial No. M/R Date of Issue Pearl Coast Heli Maintenance Pty Ltd COA - 0686 Pearl Coast Hell Maintenance Pty Ltd COA -Pearl Coast Heli Maintenance Pty Ltd COA - 0686 Pearl Coast Heli Maintenance Pty Ltd COA - 0686 Pearl Coast Heli Maintenance Pty Ltd COA - 0686 1744012Y A15825/

# Engineering Work Package Pearl Coast Heli Maintenance Pty Ltd COA - 0686

JOB DETAILS



AME/LAME	Job Coordinator	SIGNATURE SIGN OFF Name	Job Description: 100Hrly/Annual Inst		Aircraft Type R44	Operator Horizo	Aircraft Registration VH-NBY	Job Number 255
	594407		100Hrly/Annual Inspection/300Hrly Valve Inspection/M/R Tack & Balance	Pearl Coast Heil Maintenance		Horizontal Falls Helicopters	AR AR	
		Licence No.	sqoil	Approved Maintenance Data (Engine)	(Airframe)	Approved Maintenance Data	Date Completed	Date Raised
s 22		Signature & Initial		Lycoming O-540 Operators Manual Rev March 2009	2010	RHC R44 RTR 460 Maintenance Manual Rev May	13/5/19	12/05/2019
				RINS	Cycles	Landings/Starts	Engine TTIS	AF TTIS
AME	CANS	Trade Type						88.62

Hours

Pearl Coast HeliMaintenance Pty Ltd - Parts Control Form J/N 255 Page No:

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# **ENGINEER TIME SHEET**

CLIENT HORIZONAL VH-NBY JOB NO. 255 PG NO.

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DATE	ENGINEER	TIME ON / OFF	TOTAL	WORK PERFORMED
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ROBINSON MAINTENANCE MANUAL

MODEL RAG

### 2,200 GROUND AND FLIGHT CHECK FOR 100 HOURIANNUAL INSPECTION

Complete following checklists in conjunction with a 700-hour or annual inspection. Note and correct any discrepancies.

2.205 Ground Check (Aircraft not running)

- Throttle Control: Check for freedom of rotation with collective full down and full up.
- Throttle Overtravel Spring: Check by twisting throttle past idle position to override stop. Release throttle and ensure it returns to normal idle position.
- Mixture Control: Check for smoothness of operation with no binding. Check press-to-unlock button for proper function. Verify 0.03 to 0.10 inch spring-back at full rich position.
- Carburetor Heat Control (0-540 only): Check for smoothness of operation with no binding, Verify 0.03 to 0.10 inch spring-back at full
- Cyclic Control: With trim motors (if installed) in neutral position, verify freedom thru full travel with friction off. Verify friction knob rotates 1/8-to-1 full turn before adding friction. For hydraulic controls: Verify approximately one-half inch total longitudinal and one inch total lateral freeplay before encountering resistance. Verify normal hydraulic resistance with no binding or abnormal feel throughout control travel.
- resistance with no bending or abnormal feet throughout control travel.

  Collective Control: Verify freedom through full travel with friction off and on, for non-hydraulic aircraft, verify friction knob moves 0.3-0.6 inch before adding friction. For hydraulic controls: Verify approximately one-half inch total freeplay before encountering resistance. With carb heat assist (if installed) locked and friction lever fully off, verify C334 friction (between rear seats) within freeplay range is 4-5 pounds average measured at grip. With friction lever fully on, verify 18-22 pounds measured at grip. Verify normal hydraulic resistance with no binding or abnormal feel throughout control travel.
- Carb Heat Assist (if installed): With collective down and full carb heat, raise collective full up and verify carb heat off. Lower collective full down and verify carb heat full on. With collective friction off, push carb heat off and verify collective stays down.
- 8. Tail Rotor Pedals; Check for smooth operation with no binding.
- 9. Removable Controls: Verify security of attach fasteners.

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ROBINSON MAINTENANCE MANUAL

MODEL 844

2,205 Ground Check (com'd)

- 10. Lighting and Instruments: (Master Switch on)
  - CARBON MONOXIDE warning fight flashes twice (if installed).
  - Carb Air Temp approximately same as Outside Air Temp.
  - ALT warning light on.
  - d. OIL pressure warning light on,
  - AUX FUEL PUMP warning light on (IO-540 only). e٠
  - f. Fuel quantity gages - indication of fuel level.
  - Navigation and panel lights check function. g.
  - Strobe light check function. h.
  - Landing lights check function (clutch switch must be engage to check landing lights).
  - Map light check function.
  - Ammeter shows discharge
  - Oil temperature gage slight needle deflection with engine cold
  - Cylinder head temp gage slight needle deflect tion with engin
  - MR TEMP light on when sender shorted or depressed. test switch
  - MR CHIP light on when sender shorted or test switch
  - ENGINE FIRE light on when sender shorted or test switch
  - TR CHIP light on when sender shorted or test switch depressed.
  - LOW FUEL fight on (slight delay is normal) when low fuel sender in tank is depressed with clean, non-sparking rod or when test switch depressed.
- FUEL FILTER light on when test switch depressed (IO-540 only).
- Verify aircreft checklist laminated card is current revision (refer to Section 1.002).

Page

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ROBINSON MAINTENANCE MANUAL

MODEL R44

2,210 Run Up

- Perform POH Section 4 "Preflight" checklist.
- Perform "Sefore Starting Engine" checklist.
- IO-540 engine: Verify AUX FUEL PUMP light extinguishes during prime and &urninates after priming. Verify fuel drains from sniffle valve.

NOTE

Significant prime may be required before fuel drains from sniftle valve. Wait for valve to stop draining before starting engine. Engine will be hard starting/flooded while valve is draining.

- Perform "Starting Engine and Run-Up" checklist. If less than 15 minutes has elapsed since Step 3, use minimum or no prime.
- Check clutch engagement time maximum 70 seconds.
- Ammeter indicates charge, ALT light off.
- Both magnetos ground (off momentarily) at 60% RPM. 7.
- Tachometer operates with alternator and battery switches off.
- No unusual bearing noise when varying RPM through operating range (mechatic to listen near V-belt drive). Refer to Section 2.110 and 2.501 thru 2.503.
- Set RPM at 75%, governor on. Increase to 85%, release throttle, and verify governor increases RPM to 101 to 102%. Increase RPM to 104%, release throttle, and verify governor decreases RPM to 101 10.
- Engine and rotor tach needles within 1% of each other at 102% RPM.
- Verify alternator voltage as follows:
  - 13.4 to 13.9 vdc for A942-3 alternator control unit
  - 27.75 to 29.25 vdc for A942-4 alternator control unit
- Heater operates properly.
- Tachometer needles do not jump more than 2% when transmitting on 118.00, 125.00 , and 136.975 MHz with governor on.
- Raise collective control 0.5 inch at grip and slowly decrease RPM. haze coective control 0.5 inch at grip and slowly decrease HPM. Verify low-rotor-RPM warning horn and light activate at 97% to 96% RPM and remain on as RPM is decreased to idle.

ROBINSON MAINTENANCE MANUAL

MODEL R44

2.210 Run Up (cont'd)

Idle RPM with engine warm, clutch engaged, throttle closed-

0-540 engine: 53% - 57% IO-540 engine; 58% - 62%

ldle mixture with engine warm, clutch engaged, throttle closed.

O-540 engine: 2% to 4% RPM rise as mixture is pulled slowly to idle cut-off. Adjust idle mixture screw as required.
If unable to obtain rise, set idle mixture screw 1 1/2
tums out from fully in then adjust as required for

IO-540 engine: Adjust idle mixture per Section 6.495, Step 23.

- 18. Check hydraulic system (if installed) operation. Using cyclic-mounted hydraulics switch, turn hydraulics OFF. Using small longitudinal cyclic inputs, there should be approximately one-half inch of freeplay before encountering stiffness and feedback. Turn hydraulics ON. Controls should be free with no feedback or uncommanded motion ("motoring"). Complete flight check with hydraulics on.
- Air Conditioning: Verify system blows cold air on both low and high settings. Verify no EMI/RFI with other instruments and systems. After a flight with air conditioning on, verify water drains from drain tube in ship's belly (may be little or no water in very dry conditions).

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rs/5/19

### 2,220 Flight Check

- 1. Hover:



- b. Controllability in left and right pedal turns.
- Cyclic electric trim (or hydraulics) zeros cyclic stick forces.
- Vibration levels satisfactory.
- Level flight: Typical cruise altitude (if possible, deviate as required for weather and regulations), maximum continuous power, governor on.
  - Vibration levels satisfactory.
  - Cyclic electric trim (or hydraulics) zeros cyclic stick forces.
  - Collective trim spring (electric trim system only) zeros collective forces. For hydraulic controls: Verify no feedback and collective is balanced
  - Fixed collective friction adequate to prevent "bounce" but not excessive (electric trim system only).
  - Tail rotor pedal position when yaw string is centered: 0.25 to 0.75 inch right for adjustable pedals, within 0.25 inch of neutral for non-adjustable pedals.
  - Tail rotor elastic trim cord zeros pedal forces (cord applies left
  - For hydraulic controls: Turn hydraulica OFF and verify no excessive feedback forces.
- Autorotate at 100 KIAS with station 99 or greater CG. Verify electric trim (or hydraulics) zeros cyclic stick forces.

### 2.230 Shutdown

- 1. Verify rotor brake functions and ROTOR BRAKE light illuminates.
- Complete shutdown per POH checklist.

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ROBINSON MAINTENANCE MANUAL

MODEL FI44

2.300 AIRFRAME PREPARATION FOR 100HR/ANNUAL INSPECTION

Thoroughly clean airframe prior to inspection. Wipe down main and tail rotor bland airframe exterior with a mild scap and water solution.

### CAUTION

Do not spray magnetos, main rotor hub, tail rotor ge hydraulic reservoir vent, swashplate area, or bearing high-pressure water or solvent as water or solvent ma cause corrosion and breskdown of lubricants.

2,400 100HR/ANNUAL AIRFRAME INSPECTION

Numbers in parentheses indicate location as illustrated in Figures 2-4 and 2-4A.

CAUTION

If pop-out floats are installed, ensure safety on pilot's red inflation lever is in LOCKED position when working on helicopter.

Pop-out float pressure cylinder contents are under extreme pressure. If pop-out floats are installed, install looking pin in pressure cylinder valve (see Figure 5-6) when working in forward left baggage compartment, during cylinder removal or installation, and when working on floats or inflation hoses. Remove locking pin when work is completed. Avoid excessive heat (> 200 degrees F) as thermal relief valve will activate.

Perform 100 hour or Annual inspection per Section 2.410.

2.410 Inspection Procedures and Checklist

R44 Serial No.: Registration No.: Hourmeter Indication: Aircraft Total Time:

2544 VH-13 Technician name:

Technician Certificate number: 5140

1. Tail Rotor Pedal Bearing Blocks

NOTE

Do not remove pedal bearing block cover plates (1) unless function check of pedals indicates possible problem with pedal bearing

To remove cover plates (1) peel back carpeting and remove screws holding plates. Use an inspection light and mirror to inspect bearing blocks. Inspect for condition and looseness or play. Maximum allowable play is 0,080 inch axially and 0,030 inch radially. Inspect all weld areas in pedal controls.

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FIGURE 2-4 ACCESS AND INSPECTION PANELS Change 13: OCT 2006

CO-PILOT'S SEAT CO-PILOT'S 4f (ENG ONLY) FORWARD

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Page 2.13

0

BSA

NUMBER PART NUMBER DESCRIPTION

Cover Assy

Cover Assy

Cover Assy

Cover Assa

Panel (without scoop) Panel Assy (with scoop)

Panel (without socop) Panel Assy (with socop)

Cover

Cover

Panel

Cover

Tray

Сача

Cover

B189-4 A412-2 and B189-2

B050

C445-1

C445-3 38

C398-

C794-1

C461-1

C463-1 C054-1 4D 4E

C794-2 C794-3

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30 C444-1

4A C680-1

4C C464-1

4F C474-2 4G C474-1

4H

4H C794-2 C794-3 2.410 Inspection Procedures and Checklist (cont'd)

2. Upper Console (2)

Console (2), is opened by removing one screw on each side. With console open, inspect the following:

Pitot-Static System: Check pitot and static lines for cracking, chafing-pinching or kinking. Check all connections for security.

Flight and Engine Gages: Check all gauges for security. Inspect wiring and connections on all gages.

Radio Tray(s): Check condition and security.

Tail Rotor Controls: Check accessible portions of TR padal assemblies for defects. Verify operating clearance.

Remove Forward Tunnel Covers (3A & 3B), Cyclic Stop Cover (3C), Inboard Collective Cover (3D), and Forward Belly Panel (3E)

NOTE

If radio antennas are installed on removed panels, disconnect antenna lead and any ground wire. Pull respective radio circuit breaker and tag circuit breaker with "Antenna Removed".

Cyclic Box Assembly: Inspect cyclic box assembly for defects. Ch cyclic stop sheet metal assembly for cracks and other defects (deteriorat distortion, loose rivets, corrosion).

Cyclic Stick Assembly: Inspect cyclic stick assembly for defects. Inspect welds for cracks.

CAUTION
(manual controls)
Do not disturb clear silicone coating protecting strain gages, or attached wiring. Any demage to strain gages or wiring will disable trim system.

Cyclic Trim (manual controls): Turn master and cyclic trim switches on. Move cyclic laterally stop to stop and longitudinally stop to stop and chack operation of trim motors. Check trim motors, springs and elastic cords for clearance from all wire bundles and fuselage structure during movement and at travel limits.

and at travel limits.

Cyclic Lateral Trim Actuator (manual controls): Turn master and cyclic trim switches on. Push and hold cyclic stick against right stop until motor stops then turn bim off. Move cyclic stick to left stop to compress spring, inspect exposed portion of shaft for wear and galling. Do not grease rod on Rev H and subsequent CO56-1 spring assemblies, bearing is self-fubricating. Inspect C130-13 urethane spacer (stop). Check security of attachment to cyclic pivot.

Cyclic Longitudinal Trim Actuator (manual controls): Inspect C130-13 urethane spacer (stop). Check security of attachment to cyclic stick.

100

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# ROBINSON MAINTENANCE MANUAL

R44 SERIES

### 2.410 Inspection Procedures and Checklist (continued)

Remove Forward Tunnel Covers (3A & 3B), Cyclic Stop Cover (3C), Inbo-Collective Cover (3D) and Forward Belly Panel (3E) (continued)

FIGURE 2-4A ACCESS AND INSPECTION PANELS

бA C337-1

68 C378-1

7A D042-4 D042-4

12 D412-1

D041-1

DO40-1

C706-1

A231-1

A558-2

C261-1

C082-2 C082-3 C082-4

C082-5

or D347-1

NUMBER PART NUMBER DESCRIPTION

Seat Back Assy (RH) Seat Back Assy (LH)

Cowing Assy (LH)

Cowling Assy (RH)

Covring Assy - Belly

ing Assy

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Aft Cowling Assy

Mest Fairing Assy

Fairing Assy (FWD, RH) Fairing Assy (FWD, LH) Fairing Assy (AFT, RH) Faking Assy (AFT, RH)

Circuit Breaker Pagel

Fairing (Inframetrics Camera)

Foiring (FSI Comero)

Door Assy Door Assy

Tailcone Co

Plug Assy

Cyclic Fraction: Check for excessive play or looseness in links and rod ends connected to cyclic stick. Verify no excessive flaring at either end of C130-

2 spacer.

Cyclic Push-Pull Tube and Torque Tube: Inspect C319 torque tube paying special attention to area around blocks and end of torque tube for creeks, inspect C121-1 push-pull tube or one day almust and igm nut for tightness. Check witness holes on push-pull tubes. Check rod ends and bearings for excessive play and looseness. Check accessible portions of cyclic push-pull tube and torque tube for defects, including scratches. Pay particular attention to top of torque tube immediately below C348-1 anchor assembly. Inspect all nuts and botts in cyclic controls for rotation and looseness.

Tail Rotor Push-Pull Tube: Inspect accessible portions of C121-9 tail rotor push-pull tube. Look for defects such as creaks, bends, scratches, or chafing. Check rod ends for excessive play and looseness.

Collective Friction and Stop: Inspect collective interior level for security and operation. Move collective up and down and verify no bending or binding of stop. Verify collective boat's lace cannot entangle stop.

Throttle Overtravel Spring: Inspect operation of overtravel spring while

Throttle Overtravel Spring: Inspect operation of overtravel spring while operating throttle. It should move freely without any binding or jerkiness Check play in upper and lower rod ends. Check rod ends for binding.

Wiring Harness: Inspect for chafing and clearance from controls.

Pitot and Static Lines: Inspect pitot and static lines for security and any evidence of cracking, chafing, pinching or kinking from sharp bends. Open drains and check for moisture: close drains.

Bastic Trim Cord(s): With cyclic forward-right, feel forward elastic trim cord(s) for voids which may indicate broken strands.

Heater Hose: Check heater hose for collapsed areas and chafing.

Fasteners and Torque Stripes: Inspect condition and verify security of all fasteners. Renew deteriorated torque stripes per Figure 2-1.

Remove Outboard Collective Cover (4A), Collective Torque Tube Cover (4B), Tray (4C), Mid Tunnel Covers (4D & 4E), Aft Tunnel Covers (4F & 4G), Aft Belly Cover Panel (4H), and Rear Console (4I, ENG ships only)

NOTE

if radio antenna is interalled on ratiowed panel, disconnect antenna read and corresponding ground wire. Pull respective radio circuit breaker and tag circuit breaker with "antenna removed".

ROBINSON MAINTENANCE MANUAL

R44 SERIES

### 2.410 Inspection Procedures and Checklist (continued)

Remove Outboard Collective Cover (4A), Collective Torque Tube Cover (4B), Tray (4C), Mid Tunnel Covers (4D & 4E), Aft Tunnel Covers (4F & 4C), Aft Belly Cover Panel (4H), and Rear Console (4I, ENG ships only) (continued)

Collective Stick: Inspect condition of collective stick. Inspect all welds for cracks. Inspect C328-1 connecting rod assembly giving special attention to points of attachment. Inspect governor motor and governor motor arm for looseness or binding. Inspect collective-activated micro switch for cracks or louse wires.

Collective Stick Torque Tube: Verify no corrosion pitting. Apply a corrosion-preventative compound such as LPS 2, ACF-50, or Corrosion-X to any unpainted, phosphate-coated area while avoiding contaminating governor friction clutch (a foam-type applicator works well). Ensure interior of open-end "box" structures at inboard attach point and at A205 fork connection are also treated.

Aft End of Cyclic Torque Tube and Yoke Assembly: Inspect torque tube and yoke, paying special attention to area around blocks and end of torque tube for cracks. Check play in belicrank bearings per Section 2.120. Inspect swaged bearing for movement in yoke.

Aft End of Cyclic Push-Pull Tube (C121-1) and Lower Ends of Vertical Push-Pull Tubes (C121-7): Inspect push-pull tubes for cracks. Check rod end jam nuts and palnuts for tightness and rod ends for play. Check rod end bearings for looseness. Inspect fork assembly areas. Check bearings for looseness. Check between bearings and swage for evidence of fretting.

Aft End of (C121-19) Tail Rotor Push-Pull Tube and Lower Bearing: Check witness hole. Check lower belicrank bearing for play. Inspect all welds on support assembly for lower belicrank and inspect surrounding sheat metal,

Collective Push-Pull Tube (C121-19): Check for binding or nicks. Check witness holes. Check jam nuts and palnut for tightness and rod end for play.

Collective Friction Assembly: Check jam nuts and palnuts for tightness and rod ends for play. Inspect all welds on belicrank support assembly and inspect surrounding sheet metal for cracks and corrosion.

Collective Spring Assembly (Manual Controls Only): Move collective up and down and verify no binding or cracking. Spring coils must not touch when collective is full down. Verify jam nut and palnut tightness. Verify rod ends play within limits. Verify guide rods are greased. If required by Section 1.101, service assembly per Section 8.221.

Throttle Control Linkage: Remove throttle control arm cover if cover is not transparent (under ait left seat [0-540], or inside tunnel [I0-540], at firewall. Inspect condition. Verify throttle control clearance to installed equipment and adjacent structure. Verify proper installation and security. Install cover.

Fuel Valve and Fuel Line: Inspect fuel line for damage and valve fittings for leakage (leakage is indicated by a blue or green residue, depending on fuel used, or odor of fuel). Verify no chafing of fuel lines.

Fuel Valve-to-Knob Torque Tube: Inspect condition. Verify attaching security.

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# Willing: Check widing for security and proper installation.

Pitot and Static Lines: Check for security, chafing, and kinks.

Air Conditioning Refrigerant Lines (if installed): Verify security & no damage.

Evaporator Drain Tubes and Valve lif installed): Verify tubes are unobstructed. Place a container under sediment-tube protruding from bottom of tee-fitting into right-aft baggage compartment. Remova plug from sediment tube and allow any accumulated moisture and debns to drain. Reinstall plug. Simultaneously squeeze drain tube and sediment tube near tee-fitting and verify check-valve ball moves up mamentarily.

Strobe Power Supply & Alternator Control Unit: Inspect strobe power supply and alternator control unit wiring. Inspect mounting panels for cracks.

Blind Encoder & Governor Controller: Inspect blind encoder and governor controller wiring. Inspect mounting panels for cracks.

Fasteners and Torque Stripes: Inspect condition and verify security of all fasteners. Renew deteriorated torque stripes per Figure 2-1.

6. Remove Engine Aft (6D), Belly (6C), and both side (6A & 6B) Cowlings

Vertical Firewell: Inspect vertical firewell condition, especially around structural attachment points, verify no cracks, buckling or whinkles.

Fuse(s) and Fuse Holder(s) (if installed on vertical firewall): Verify security and no corrosion. Verify correct fuses: -66 wire requires AGC-3 fuse, -1601/-1602 wires requires AGC-5 fuse. If installed, -1228 wire requires AGC-3 fuse.

Wiring: Verify security, proper installation, and no deterioration

Electric Fuel Pump (IO-540 only): Verify security, proper installation, unobstructed drain tube, and no leakage.

Fuel Line & Hose(s): Inspect condition. Verify security, proper installation, no leakage, & IIO-940 only) good condition of spirap insulation on fuel line between firewall & gascoletor. If deteriorated, replace MS3367-5-9 ty-raps securing fuel hoses to clamps (reference R44 S8-f)7).

Lower Steel Tube Frames: Thoroughly inspect lower steel tube structure for corrosion and inspect all welds for cracks. Ensure trames are not chafed by wires, hoses, clamps, etc.

Engine Cooling Panels: Inspect cooling panels for cracks and missing

Oil Cooler(s): Inspect oil cooler(s) and fittings for demaye, leaks, cleanliness, and security. Check oil cooler mounting area(s) for cracks.

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# ROBINSON MAINTENANCE MANUAL 2.410 Inspection Procedures and Checklist (Continued)

ố. Remove Engine Aft (6D), Belly (6C), and both side (6A & 68) Cou

Of Lines: Inspect entire length of all oil lines and verify no cracks, abracion, or broken clamps. Verify clearance: wires, ty-raps, and structure must not

Gascolator: With fuel valve off, remove and clean gascolator bowl and filter screen. Verify no deterioration of gasket. If gascolator bowl is secured by threaded collar and ring, lightly lube threads and ring with A257-6 grease. Reassemble and turn fuel valve on. Safety wire after ensuring up losks occur. Verify drain valve is secure and torque-striped.

Mixture Control: Verify mixture control moves mixture control carm stop to stop. Inspect condition and verify security of mixture control cable clamps on bracket; push and pull cable housing to ensure it does not stip in clamps. Inspect condition and verify security of mixture control cable inner wire attachment to mixture control arm. Ensure freedom of rotation between mixture control arm and inner wire retention fitting (bott) when arm moves. Verify mixture cantrol safety oping its properly installed (so spring force holds mixture control arm at full-rich position if inner wire breaks).

Throttle Correlation Rigging: Check per § 10.150 and adjust as required.

Full-Throttle Switch Rigging: Check per § 14.1020 and adjust as required

Air Box & Alternate Air Door: Ensure carburator heat slider valve (if applic moves fully from stop to stop). Replace air filter (hib/cating iO-540 air rubber with A257-8 nubber lubricant will facilitate sealing). Check air bo condition and security. Verify spring-loaded alternate air door opens who binding and closes completely.

Engine Air Inlet Hose: Yearly correct installation & security. holes, or collapsed areas. Ensure hose is not challing from: Verify no rips,

Carburetor Heat Scoon and Hose (0-540 accines ordy): Irrepoct and security.

Heater Hose: Inspect for condition and security.

Battery and Battery Box (alternate locations under upper console or under left, front seat): Check cable terminals for cracks. Check each cell electrolyte for quantity and specific gravity if equipped with non-sealed battery. As required, perform capacity test per manufacturer's instructions or replace battery. Verify security and no obstructions in drain tube.

7. Open Cowling Doors (7A), Remove Talcone Cowling (73) & Mast Fairing (9)

Cowling Door: Inspect hinges and latches for condition and security.

Talcone cowling: Verify no cracks, air inter obstructions, or loose rivers.

Electrical and Antenna Wires: Inspect condition. Varify security and retraining, kinks or signit bends.

MRGB Input Yoke: Inspect condition. Verify security and apereting clearance. Yelly Security of Integrets.

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# ROBINSON MAINTENANCE MANUAL

2.410 Inspection Procedures and Checklist (cont'd)

7. Open Cowling Doors (7A), Remove Tailcone Cowling (7B) & Mast Fairing (9)

Forward Flox Plate: Inspect condition, particularly edges. Verify security Verify bonded wasters are securely bonded to both sides of each flex plate arm. Verify operating clearance.

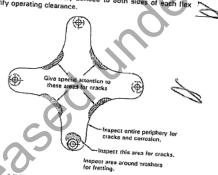


FIGURE 2-5 FLEX PLATE INSPECTION

Clutch Shaft Forward Yoke: Inspect condition. Verify no cracks, corrosion, or fretting: Varify security and operating clearance.

Rotor Brake: Inspect condition, including activating cable & pulleys and auto prays. Hapters continued, including searching search a puncys and gircoswitch. Verify integrity of brake pads and 0.030 inch minimum pad phocases. Verify brake pad clearance to input yoke when brake is off. Verify security and operating clearance.

Jackshaft: Inspect entire welded assembly for cracks and corrosion. Inspect jackshaft supporting strut and tube weldments for security, cracks

Main Rotor Push-Pull Tubes: Inspect condition of viewable portions. Verify no cracks at ends. Inspect rod ends per Section 2-120. Verify on tears in sleeves (manual cantrols only). Verify security and operating clearances.

Main Rotor Push-Pull Tube Rollers & Busbings: (manual controls only): Inspect condition. Verify cleanliness, no wear into metal, and free

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2.410 Inspection Procedures and Checklist (cont'd)

7. Open Cowling Goors (7A), Remove Tailcone Cowling (78) & Most Fairing (9)

Tall Rotor Push-Pull Tube and Upper Bellcrank: Inspect C121-15 push-pull tube, especially at ends, for cracks. Check jam nut for tightness and rod end for looseness. Inspect bellcrank and mounting for cracks or

Main Rotor Gearbox Cooling Hoses: Inspect both ends for security. Inspect for rips, holes, and chafing.

Main Rotor Gearbox: Inspect main rotor gearbox, especially around gearbox mounts, cap mounting lugs, and mast tube for cracks. Verify no contamination and no deterioration of rubber mounts. Verify security of Hall Effect senders. Check Telatemp for overtemp indications.

Main Rotor Gearbox Oil: With ship on level ground, verify correct oil level and cleanliness using sight gage. If required by Section 1.101, and drain and flush gearbox per Section 1.120,

Main Rotor Gearbox Chip Detector: If required by Section 1.101, clean chip detector per Section 1.115.

Upper Steel Tube Frame: Use an inspection light and mirror to inspect

CAUTION

Upper steel tube frame is fatigue-loaded and therefore susceptible to fatigue cracks. Inspect thoroughly.

Horizontal Firewall: Inspect upper and lower surfaces of horizontal nonzontar rinewall, inspect upper and lower surfaces of nonzontal frewall, especially where bolted to steel structure, for cracks, buckling, or wrinkles. Inspect firewall under fuel tank for leakage (fuel residue). Fuel Tanks: Inspect condition of visible portion. Verify no leaks. Verify

Auxiliary Fuel Tank Fuel Line: Inspect condition. Verify clearance to structure. Verify no leakage. Verify security.

Puel Return Lines & Pressure Relief Valve (IO-540 only): Inspect condition. Verify no leakage. Verify security.

Fuel Gage Senders & Wiring: Inspect condition. Verify no le

Fuel Tank Vents: Check vent tube connections for security.

Fuel Tank Sump Drains: Verily both drain values open easily, drain first freely, spring closed, and seal completely. Verify D863-1 shut-off clamp on aux tank drain tabe seals completely, and inspect clamp and deterioration.

Low Fuel Warning: Turn MASTER switch on, With a clean wonder dowel, gently depress low-fuel sender flost in main fuel tank and verify LOW FUEL warning light illuminates. Turn MASTER switch off.

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C041-1

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2.410 Inspection Criteria (cont'd)

MAXIMUM ALLOWARIE WEAR

0.040 inch

VIEW LOOKING AFT

2.410 Inspection Criteria (cont'd)

8. Remove Tailcone Plugs (8A) & Aft Plastic Cover (8B)

NOTE All plactic cover 1981 is secured with two MS27039C0806 Art plastic cover (ob) is secured with (WO M327036004K) screws on Rev L and subsequent tailcones. On Rev K and prior tailcones ensure screws securing plastic cover are short enough to prevent interference in aft flex plate area.

Tail Rotor Drive Shaft: Inspect condition of that section of shaft that can be seen through each hole, looking for obvious defects such as cracks, bends, bows in shaft or corrosion or contact with inside of tailcone. Check cunout per Section 7.340. Inspect each end of drive shaft for cracks and corrosion.

### CAUTION

Bends, bowing, dents, cracks and corrosion are cause for immediate replacement of tell rotor drive shaft.

Damper: Inspect tell rotor drive shaft damper (C041-1). Inspect bearing and housing for cracks, corrosion, wear (see Figure 2-8), and bearing seal deterioration. Inspect arms and bearings for cleanliness, cracks, bends and corrosion. Inspect bearing's inner race-to-drive shaft torque stripe.

Tailcone Exterior: Inspect tailcone sterior for nicks, scratches, corrosion, fretting between skin joints, loose rivets and dents. Inspect tailcone for cracks in vicinity of anterina mounts and battery (if installed on tailcone).

Strobe Light: Inspect tens and strobe light mount for cracks, loose rivers, and security. If split red/clear lens is installed, verify clear half of lons faces aft. Antennas: Inspect all antennas for condition and security.

Tailcone Battery (if installed): Inspect tailcone-mounted battery condition and security. Verify no debris between battery box cover and tailcone.

Tailcone Interior: Inspect tailcone interior, especially around rivets, for cracks, fretting, and corrosion.

Tailcone Attachment: Inspect condition and security of four holts attaching telicone to upper frame. Empennage: Inspect entire empennage and attachment points for damage, cracks, and loose fasteners. Check tail skid for audence of tail strike is found, refer to special inspection section.

Float Stabilizer (if installed): Inspect condition and security.

Aft Flex Plate (See Figure 2-5): Inspect flex plate for cracks, fratting, and distortion. If fratting is detected, contact RHC Technical Support. Inspect security of flex plate fasteners.

Tail Rotor Drive Shaft Aft Yoke: Using inspection hole, check value for cracks, fretting, and corrosion.

Tail Rotor Guard: Inspect for security. Check forward mount for cracks are welded area. Inspect area around aft mount for cracking and fretting.

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### 2.410 Inspection Procedures and Checklist (continued)

9. Tail Rotor Gearbox and Tail Rotor

Input Shaft Yoke: Inspect flange and weld for cracks and comoson.

input Seal: inspect for leakage.

Gearbox: Inspect general condition. Look for leakage. Check off quantity and cleanliness through sight gage and adjust or flush as required. Check gearbox-to-tallcone mounting security. Inspect output shaft for nicks, caratches and corrosion. Check safety wire on applicable gearbox bolts. Check Telatemp.

NOTE

At 500 hours time-in-service or annually, whichever occurs first, remove chip detector and clean varnish from detector's magnetic probe and adjacent metal body (a toothbrush dampened with solvent works well). Also, drain and flush gearboxes at intervals not to exceed 500 hours time-in-service (refer to Section 1.101).

Pitch Control Assembly and C721-17 Push-Pull Tube: Check pitch control assembly for free movement throughout its entire range and for looseness on output shaft (0,25 inch maximum rotational play measured at pitch link attach bolt). Inspect belierant for cracks and ensure free movement. Pay special attention to spherical bearing atop stud protruding from underside of pitch control, it is permissible to have a single rotal crack in the spherical bearing ball. Inspect aft end of C121-17 push-pull tube for cracks and check rod end for excessive looseness (refer to R44 SB-43A).

Pitch Links: Check rod ends for excessive looseness. If equipped with one-piece pitch links, disconnect and rotate inboard end outboard as required to obtain maximum service life.

Tail Rotor Blades: Inspect blade surfaces for excessive erosion, nicks, scratches, cracks, and corrosion. Check tail rotor blade roor fitting bearings for fretting and looseness. Loose bearing outer race in root fitting is nairworthy, requiring replacement of blade. CO29-1 blades only: remove tip covers, inspect for debris and corrosion, & reinstall covers. CO29-1 or CO29-2 blades only: inspect tail rotor blades for fatigue cracks per R44 SB-33. Refinish blades per Section 9.460 if excessive erosion is found.

Hub Plates and Hub: Inspect for cracks and corrosion, paying special attention to areas around blade and hub mounting bolts. Ensure teeter hinge bearing outer races move with hub and hearing inner balls and retaining nut and bolt remain stationary when hub is teetered. Hub should move freely on bearings without stiffness or jerkiness. Check teeter hinge bearings for excessive play. For elastomeric bearings inspect per Section 2.125.

Fasteners and Torque Stripes: Inspect condition and vecify security of all fasteners. Renew deteriorated torque stripes per Figure 2-1.

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### 2.410 Inspection Procedures and Checklist (continued)

### 10. Open Mast Fairing (9)

Mast Fairing: Inspect condition, especially where stiffeners intersect ribs.

Lower Swashplate Scissors: Inspect condition of scissors. Check rod end and bearing play. Check jam nut.

PIGURE 2-8 THE ROTOR DRIVE SHAFT DAMPER SEASING INSPECTION

Vertical Push-Pull Tubes: Inspect for general condition and corrosion. For manual controls, inspect push-pull tube sleeves at rollers and guide.

Rod Ends: Check push-pull tube rod ends per Section 2.120.

Plastic Rollers and Guide (manual controls): inspect plastic rollers and guide for cleanliness, security, and deterioration.

Pitot Tube: Inspect pitot line and tube, giving special attention to connecting and for bending, cracking and kinking. Verify pitot tube albow drain hole is unobstructed.

Fuel Tank Vents: Inspect condition and security of fuel tank vent tube clamps. Ensure pitot line is not chafing fuel vent tubes. Check tube connections. Verify tubes are unobstructed and are not kinked, pinched, or chafing.

Mast Fairing Ribs: Inspect for cracks especially around mast tube attachments.

### 11. Rotor Hub Area

Swashplate Lower Scissors: Inspect condition. Inspect rod ends per Section 2.120, Verify security.

Swashplate Upper Scissors: Inspect condition. Inspect rod ends and spherical bearings per Section 2.120. Measure scissors play per Figure 2.9. Observe scissor linkage while having someone raise and lower collective. Verify bolt, journals (or spherical bearing balls and spacars), and arm rotate together at each scissor linkage pivot. Verify operating clearance.

Swashplate Slider Tube: Inspect condition. Verify no cracks at rivet holes or corrosion on base. Verify no damage to, or wear through, anodized tube

Remove Swashplate Boot Lower Ty-rap: Lift boot from swashplate. Using an inspection mirror, inspect area between main rotor drive shaft and inside of slider tube. Verify no corrosion and no debris: Verify no boot damage.

Swashplate: Inspect condition. Verify 0.020 inch maximum radial play between swashplate ball and slider tube. Rotate roter by hand and verify operating clearance and no rough or dry bearings.

Swashplate Titing Priction: Observe swashplate ball from belaw and have someone move collective stick slowly up & down. Verify swashplate ball insmediately moves with swashplate when swashplate reverses direction. Movement of swashplate without attendant ball movement indicates axial play between ball and swashplate; adjust swashplate tilting friction per Section 8.413.

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### 2.410 Inspection Procedures and Checklist (cont'd)

### Open Cowling Doors (7A), Remove Tailcone Cowling (7B) & Mast Fairing (9)

(Roma o)
Fuel Cape: Inspect condition, to include gentlet. Verify security when closed. Verify alignment marks on cap and tonk align when cap is fully

Nuts and Boits: inspect all nuts and boits in this area for movement and

Cabin Bulkitead & Forward Hydraulic Servo Mounts: Inspect bulkhead and servo mounts (if installed) for corrosion, loose rivets, deformation and cracks.

Clutch Assembly: Inspect ends of drive shaft and seals on sheave for oil leakage. Inspect shaft for corrosion, especially at shaft-to-seal junctures. Remove any light surface corrosion at shaft-to-seal junctures, and apply a suitable corrosion-inhibitor.

Upper Sheave: Inspect sheave grooves. Replace any sheave showing corrosion pitting or flaking of metalized or anodized coatings, wear through anodized coatings, roughness, or sharp ridges.

anonized coamigs, roughness, or sharp roughs.

Drive V-Belts (see Section 2.507): Inspect V-belts. Verify no breakage, deterioration of rubber, cuts, fraying, oil, grease, or foreign objects.

Actuator Fuses & Holders: Inspect condition. Verify no corrosion. Verify correct fuses (14-volt systems require AGC-3 fuses while 28-volt systems require AGC-1½ fuses). Verify twist-to-lock function and security.

Actuator Upper Bearing and Strut: Inspect seals on both sides of bearing for damage. Inspect strut, including both rod ends, and check witness holes. Check for fretting between bearing inner races and clutch shaft. Bearing inner races should be torque striped to clutch shaft. If stripes are broken or misaligned, shaft is unariworthy. Check bearing Teletemp. Perform bearing inspection per Section 2.503 if Teletemp indication has increased without corresponding increase in ambient temperature.

Actuator Lower Bearing: Inspect as much of bearing as can be seen, inspect fiberglass scroll area at bearing attachment brackets for signs of cracking. Check bearing seals for avidence of deterioration. Inspect lower bearing brackets for looseness or wear. Inspect bearing per Section 2.502 if discrepancies are found

Intermediate Fiex Plate and Forward End of Tail Rotor Drive Shaft (see Figure 2-5): Inspect flex plate for cracks and fretting. Inspect yoke-todrive shaft weld for cracks (steel shafts).

Tailcone Attachment: Thoroughly inspect all welds in this area for cracks, corrosion, and security of attaching fasteners. Inspect ta mounting area for cracks.

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2.410 Inspection Procedures and Checklist (cont'd)

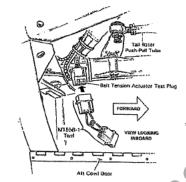


FIGURE 2-6 MT558-1 TOOL INSTALLATION

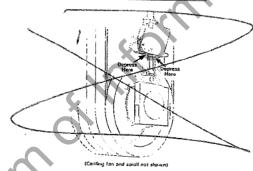


FIGURE 2-6A ACTUATOR SWITCH TEST

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### 2.410 Inspection Procedures and Checklist (cont'd)

Open Cowing Doors (7A), Remove Tailcone Cowling (7B) & Mast Fairing (9) (cont'd)

Actuator (COS1): Verify clearence to structure and drive train when fully disengaged. Turn master switch on and engage clutch switch. While actuator is engaging, depress extension limit switch lever (see Figure 7-15) and verify gearmotor resumes tunning. Verify integrity of activating cable for extension limit switch. Use an inspection mirror to observe column springs at end of bethersioning cycle; springs should snap outward simultaneously. Verify maximum engaged extension limit per Figure 7-15 is not exceeded. Verify clearance to structure and drive train when fully engaged. Verify down-limit stop screw jarm nut is tight.

Check actuator for falled-closed spring switch using either of the following

Method 1 - (actuator electrical homess must be equipped with "Test" plug per Figure 2-6)

With MASTER switch on and actuator fully engaged, connect one end of MT558-1 tool to actuator test plug and verify gearmotor remains off.

CAUTION

If gearmotor activates when installing MT558-1 tool then a spring switch has falled in closed position; immediately remove MT558-1 to prevent actuator damage.

- Disconnect MT558-1 tool, connect opposite end to actuator test plug, and verify gearmotor remains off.
- Disengage clutch and turn MASTER switch off.
- d. MT558-1 pins 1-2 jumper tests wire 98 spring switch; pins 2-3 jumper tests wire 91 spring switch (see Figure 14-1D). Replace any malfunctioning switch per Section 7.551 before further flight.

Method 2 - lactuator electrical harness without "Test" plug)

- a. Refer to Figure 2-6A. With MASTER switch on and actuator fully engaged, depress column springs on one side of actuator until springs arrap inward (use large screwdiplexper similar tool with several largest to tape over end to protect actuator. Hold springs injused for at least one second. Actuator motor should not rue. If prefor starts, allow motor to run approximately two seconds, then selects expressure on column springs. Depress and hold column springs again. If motor starts again, opposite spring switch does not furnished properly.
- t. Diangage and re-engage actuator. Flupeat Step a. on opposite-side
- c. Replace any non-functioning switch per Section 7.551 before further

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### 2.410 Inspection Procedures and Checklist (cont'd)

Open Cowling Doors (7A), Remove Tailcone Cowling (7B) & Mast Fairing (9) (cont'd)

Lower Drive Sheave: Inspect lower sheave. Replace any sheave showing corrosion pitting or flaking of metalized coating, wear grooves, roughness, or sharp ridges. Sheave Alignment: Verify sheave alignment per Section 7.230. Adjust as

Hydraulic Reservoir: Inspect condition. Verify security and no significant leakage. If required by Section 1.101, replace filter per Section 1.170. Drain and flush hydraulic system per Section 1.180 if oil has turned dark or emits bad odor. Add fluid as required.

### CAUTION

Cleanliness of hydraulic fluid is vital to proper system operation. Use only clean fluid from sealed containers and avoid contamination from dirty funnels, tubing, etc.

Hydraulic Reservoir Cooling Hose: Inspect condition. Verify hose is secure and is directed at center of reservoir cooling fins.

Hydraulic Pump: Inspect condition. Pump temperature indication should not exceed gearbox temperature indication. Verify security and no significant leakage

Forward Hydraulic Servos: Inspect condition. Inspect rod ends per Section 2.120. Verify security and no significant leakage. Verify servo input rod end/clevis area is clean; cleanes area with no-residue, non-alcoholic solvent as required. Verify approximately 0.040 inch total freeplay at servo valve input. Verify valve clearance to surrounding structure while flight controls are moved through full range of travel. Inspect condition and verify security of scissors at upper clevis of servos.

### CAUTION

Use LPS PreSolve to clean hydraulic parts. Do not use alcohol.

Aft Hydraulic Servo: Inspect condition. Inspect rod ends per Section 2.120. Verify security and no significant leakage. Verify servo input rod endiclevis area is cleanc; cleanse area with no-cledue, non-alceholic solvent as required. Verify approximately 0.040 inch total freeplay at servo valve input. Verify valve clearance to surrounding structure while tlight controls are moved through full range of travel.

Aft Hydraulic Servo: Inspect rod ends per Section 2.120. Inspect attachment to sheet metal, verify no eracks. Verify security.

Hydraulic Lines & Fittings: inspect condition. Verify valve clearance to surrounding structure while flight controls are moved through full range of travel. Verify security and no leakage. Verify minimum 0.25 inch clearance between pump hoses and aux fuel tank.

Fasteners and Torque Stripes: Inspect condition and verify security of all fasteners. Renew deteriorated torque stripes per Figure 2-1.

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### 2,410 Inspection Procedures and Checkfist (continued)

### 11. Rotor Hub Area (continued)

Install Sweshplate Boot Lower Ty-rap: Verify correct boot position and security and no boot damage.

Hub: Inspect condition. Verify no nicks, scratches, gouges, or corrosion. If main rotor imbalance is suspected, check tester and coning hinge friction per Section 9.124. Verify no brown or black residue (indicates bearing wear).

Hinge Bolts: Inspect condition. Verify cotter pins are in place and secure. Verify bolt heads and nuts are torque striped to thrust washers.

Pitch Links and Rod Ends: Inspect condition. Inspect rod ends per Section 2.120, including centering. Verify security, including jamnut tightness and proper safety wiring.

Fasteners and Torque Stripes: Inspect condition and verify security of all fasteners. Renew deteriorated torque stripes per Figure 2-1.

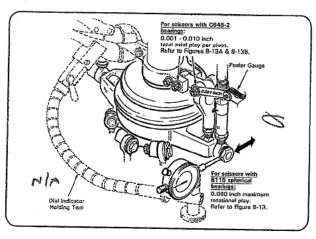


FIGURE 2-9 MEASURING UPPER SWASHPLATE ROTATIONAL PLAY fidentity scissors bearing type and measure as shown)

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### ROBINSON MAINTENANCE MANUAL

### 2.410 Inspection Procedures and Checklist (continued)

### 12. Main Rotor Stades

Boots: Inspect condition. Verify no boot damage or oil leakage. Verify proper boot position and security. Verify sufficient clearance from hub assembly through full control travel.

Blade Spindles & Root Fittings: Inspect area for damage per § 9.133. Verify proper installation and security of visible fasteners. Renew deteriorated torque stripes per Figure 2-1.

C016-7 Main Rotor Blade Inspection: Remove tip covers. Remove corrosion and loose paint from tip covers, blade tips, and skin-to-sper bond lines. Epoxy prime, or prime and paint, any exposed bear entat on tip covers, blade tips, and skin-to-sper bond lines. Using an AN970-4 washer or 1965-or-later U.S. quarter-dollar coin, tap-test critical bond areas and verify no dull or hollow sounds. Visually inspect critical bond areas and verify no separation. Install tip covers, ensuring cover edges are flush with blade profile.

C016-2 or C016-5 Main Rotor Blade Bond Inspection: Perform R44 SB 72A or subsequent.

Main Rotor Blade Inspection: Inspect skins and doublers for scratches an corrosion per § 9.131. Inspect blades for dents and local deformation per § 9.132 and for voids per § 9.134. As required, wax blades wit soft cleaning cloths using carnauba-type wax (such as SC Johnson® Pest Wax). Ensure tip cover and blade tip drain holes are unobstructed.

### WARNING

Structural damage may occur if compressed air is applied to blade tip drain holes.

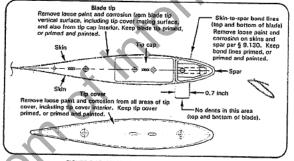


FIGURE 2-10 MAIN ROTOR BLADE TIP AND TIP COVER

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### 2.410 Inspection Criteria (cont'd)

12. Main Rotor Blades (Refer to Section 9,130 for damage and

Install tip covers: Verify security.

Fasteners & Torque Stripes: Inspect condition and verify security of all fasteners. Renew deteriorated torque stripes per Figure 2-1.

13. Scroll Area

Farumheel Assembly: Clean and inspect fanwheel assembly for cracks and corrosion. Check leading edge of vanes for damage. Verify spring pin and fanwheel alignment marks are aligned (see Figure 2-11): remove fanwheel and inspect mating surfaces for damage if misalignment is evident.

evident.

Fiberglass Scroll: Inspect fiberglass scroll for cracks and contact marks from fanixheel. Inspect flexible seal around scroll left for any rips or damage, inspect vane assembly in right upper scroll for damage. Verify Acrify Metal Index Lips &Gep: Verify 0.030 / 0.090 inch gap between lips and fanixheel inlet (elengate to attach holes as required to adjust gap). Engine

14. Engine

Engine
Refer to Section 1.101. Refer to Lycoming Operator's Manual (P/N
60297-10 sections 4 and 5), Lycoming 51 10808, and applicable
engine component manufacturer's maintenance publications for 100hour or accurat inspection and service procedure.

Engine Cooling Panels: Inspect condition. Pay particular attention to panel(s) mounting all cooler(s) and panel attached to alternator cooling hose. Verify no cracks or missing or loose fasteners. Verify security.

Afternator & Pulley: Inspect condition. Verify steel pulley (use magnet); aluminum pulley is not approved. Verify security. Verify electrical wiring security.

Alternator Gelft Inspect condition. Replace belt if there are any cracks, missing teeth, or delamination. Check tension per Lycoming Service Instruction 1129 (latest revision). Verify proper belt alignment.

Emergency Spare Alternator Belt: Remove if installed.

Alternator Cooling Hose: Inspect condition. Verify no obstructions or holes. Verify security.

Air Conditioning Refrigerant Lines (if installed): Verify security, no damage, and clearance to adjacent structure. Verify dust caps installed on servicing fittings at vertical firewall.

Air Conditioning Compressor (if installed): Verify security.

Air Conditioning Compressor Drive Belt tif instelled: Inspect condition. Verify 4.5/5.5 pounds force applied at mid-span of belt causes 0.11/0.17 inch belt dellection; adjust as required.

Muffler Etbow & Tallpipe Shields: Verify no cracks in shields and shield attaching brackets. Verify clamp security.

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2.410 Inspection Criteria (cont'd)

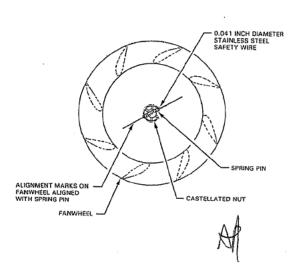


FIGURE 2-11 FANWHEEL ALIGNMENT MARKS

# 2.410 Inspection Procedures and Checklist (cont'd)

### 15. Exhaust System

Remove muffler half scalers, and open should, inspect muffler Olds Wall for Clacks, deformation, and nucluses. Pay particular attention

to balloipe and riser attachment areas, welds, clamps, supports, reser-flanges and gaskets. Pressurize muffler with low pressure air and inspect for leakage. Close and secure heater shroud.

### 16. Landing Gear

Skids and Shoes: Inspect left and right landing gear skids and skid shoes; minimum allowable shoe thickness is 0.05 inch. Verify drain holes one open (not applicable to float landing gear).

Struts and Elbows (open fairings if installed): Inspect for cracks and orrosion, especially at elbow joints, Inspect wald area at bottom of strut for cracks.

Landing Gear Fairings (if installed): Inspect for cracks and loose rivets.

Crosstubes: Inspect, especially at albow joints, for cracks and corresion. With helicopter on level ground, measure distance from ground to tail skid. If dimension is less than 30 inches, one or both cross tubes must be replaced (see Section 5).

Landing Gear Attach Points: Check forward attach points for loose rivets cracks, buckling, and fretting. Check bearing mounts for loose rivets, and worn bearings.

Utility Floats (if installed): Inspect for damage. Refer to Pilot's Operating Handbook for proper inflation pressure.

Pop-out Floats (if installed) Pressure Cylinder & Valve: inspe Popular Florate (in Instance of Floration Explanate of Valuation (Instance) Floration (Instan

Pop-out Floats (if installed) Inflation Manifold: Inspect condition, Verify no chafing or pinching of hoses, especially where hoses pass thru structure.

Pop-out Floats (if installed): Inspect condition of stowed floats. Verify no Pop-out Floats (if installed): Inspect condition of stowed floats. Verify no holes, cuts, tears, abrasion thru, or unraveling of, float covers. If cover damage is found, inflate and inspect floats. Verify all float cover snaps and hook-and-loop fasteners are properly secured. Verify float-to-skid

### NOTE

Annually apply A257-7 dry-film lubricant (see Section 1.470) to float cover anap mating surfaces. Annually perform Section 5.630 leak check. Every three years, perform Section 5.640 emergency inflation test.

Change 13: OCT 2006

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# ROBINSON MAINTENANCE MANUAL

2.410 Inspection POLICE And Checklist (cont'd)

### 17, Cabin

Verify no loose equipment that might foul controls.

Static Ports: Inspect static ports for obstructions, if fixed utility floats installed, verify air dam installed aft of both static ports.

Sear Seat-Sectorn Suspension Straps; Inspect condi-Seat Bofts and Shoulder Hamesses: Inspect for fraying and broken stitching. Check inertia reefs for proper operation by pulling harness quickly to varify locking function. Check buckles for proper operation. Check boft and red attach points for security.

### NOTE

TSO tag not required on factory installed hymnesses

Trim Controller (Manual flight controls only): Adjust trim controller per Section 14,710.

Windows: Minor damage that does not impair paot's visibility or indicate impending structural failure is incognitable. For cracks and crazing adjacen to windshield retainer strips, refer to Section 2.580. Acceptable daniage includes:

- One nick, not more than 0.010 inch deep and occupying an area not larger than 0.25 by 0.50 inch per square foot.
- Scratches not more than 0.010 inch deep and 5 inches long.
- c. Any surface defect such as small spots or stains that can be with light polishing.
- d. Minor polarization faults in small armas of windshield near odgas.

Shirt, Inspect aim for damage, Inspect for loose rivers, indicated by cracked paint and/or black residue around heats.

Doors: Inspect for cracks around hinges and latches. Check vents for operation. Ensure hinge pins are secured with cotter pins. Check tightness of hinge mounting screws. Verify proper operation of door latching and locking mechanisms.

Chin Drains (R44 Clipper): Verify no obstructions.

### 18. Special Equipment (if installed)

Special Equipment (if installed)
Peak Boam Searchlight: Check for proper operation. Align beams by focusing both lights to another spot possible and ethining against a wall at loast 100 feet away. Verify both spots hit same point within one foot.

Nose Gimbal and Monkfors: Turn power on and verify infrared units complete cool down sequence in manufacture's recommended time. Verify gimbal stoers smoothly in azimuth and elevation. Check focus and zoom of infrared/video. Check for clear images on monitors. Verify No.

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# ROBINSON MAINTENANCE MANUAL

### R44 SERIES

# 2.410 Inspection Procedures and Checklist (continued)

# Special Equipment (if installed)

Spectroleb Searchlight: Verify light starts and cooling fan operates. Verify searchlight steers smoothly in azimuth and elevation. For slaved units, turn on slaving and verify light follows nose gimbal approximately.

FM Radios: Verify radios transmit and receive properly and control head AIA

Video Tape Recorder: Verify all video tape recorder modes operate properly and remote control correctly controls modes. Overhead Light: Verify overhead light on/off.

Transmit and Intercom Switches: Verify proper operation of special transmit and intercom switches. Talent Light: Verify talent light on/off, acceptable friction.

Micro Cameras: Verify all micro eameras are selectable from video switcher and produce focused, upright images on monitors.

TV Tuner: Verify TV tuner receives broadcasts (video clear on monitors,  $\sim /\Delta$ 

Microwave Antenna: Verify omnidirectional microwave antenna extends/ X/A

Electromagnetic and Radio Frequency Interference: With all special equipment turned on, check for EMI/RFI with tach, COM, intercom,

19. Life-limited Parts, Component Overhaul and Retirement, ADs, & SBs

Life-Limited Parts: Replace life-limited parts that have reached maximum service life per § 3.300. Verify components installed correspond with helicopter maintenance record and have sufficient time remaining for projected operations.

Component Overhaul: Replace component Overhaul: Replace components that have reached maximum service before overhaul per § 3,100. Verify components installed correspond with helicopter maintenance record and have sufficient time remaining for projected operations.

Component Retirement: Replace components that have reached maximis service life per § 3.100. Verify components installed correspond with the licopter maintenance record and have sufficient time remaining in the contract operations.

Airworthiness Directives: Verify applicable airframe, engine, and accessory Airworthiness Directives (ADs) have been performed according to AD compliance procedures. Some aircraft may be affected by ADs that require recurring inspections at less than 100-hour or annual intervals. Recent U.S. Airworthiness Directives are available online at <a href="https://www.faa.gov">www.faa.gov</a>.

# ROBINSON MAINTENANCE MANUAL

944 SERIES

# 2.410 Inspection Procedures and Checklist (continued)

# 19. Life-limited Parts, Component Overhaul and Retirement, ADs, & SBs (continue

Service Bulletins: Verify applicable airframe, engine, and accessory Service Bulletins (SBs) have been compiled with according to manufacturers' instructions. Some aircraft may be affected by SBs that require recurring inspections at less than 100-hour or annual intervals. RHC Service Bulletins are available online at <a href="https://www.robinsonhail.com">www.robinsonhail.com</a>, under the Publications tab.

### Required Documents and Placards

Documents: Check that required documents (Airworthiness Certificate, Registration, applicable Radio Station License, Pilot's Operating Handbook, Equipment List/Weight & Balance Data) are on board, legible, and current.

Placards: Verify required placards are properly installed, legible, and current, Refer to Pilot's Operating Handbook Section 2 for placard requirements.

# 21. Inspection and Access Covers

Foreign Objects Removed: Verify all tools, loose hardware, regs, and other foreign objects are removed from helicopter.

Covers Closed and Secure: Install/close all inspection and access covers where the preceding steps. Verify security of all access covers.

Clipper I Airbox Sealed: Ensure air box cover perimeter is sealed with Aluminum tape (Clipper I models only). 22. Maintenance Records

Maintenance Records: Verify maintenance records are accurate, legible, and complete. Enter maintenance performed Isuch as part replacement, equipment adjustments, servicing, and lubrication) and inspection data. Data must include a description of (or reference to data acceptable to the Administrator) the work performed, date, helicopter total time in service, aignature, certificate type and certificate number of person approving aircraft for return to service.

Inspection Procedures and Chec

Mechanic's signature:

JUN 2014

## ROBINSON

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### **MAINTENANCE MANUAL**

**R44 SERIES** 

TABLE 1 SCHEDULED MAINTENANCE AND INSPECTIONS	First 10 hours	First 25 hours	First 100 hours	Every 50 hours	Every 100 hours	Every 300 hours	Every 500 hours	Every 2200 hours	Every 4 months	Every 12 months	Every 24 months	Every 3 years	Every 4 years	Every 12 years	Every 15 years
Perform maintenance & inspection per Lycoming Operator's Manual.*	•	•		•	•	•						Г			
Perform Lycoming SI 1129B  Methods of Checking DC Alternator and Generator Belt Tension.		•			•								7	Z	
Perform Lycoming SI 1191A Cylinder Compression.					•						(	C			
Perform Lycoming SI 1080C  Maintenance Items for Special Attention.				•	•	Γ			. (						
Perform Lycoming SB 301B*  Maintenance Procedures and Service Limitations for Valves.						•									
Perform Lycoming SB 366B Carburetor Throttle Body Screw Inspection.					•	k									
Perform Lycoming SB 342F (IO-540 Only) Fuel Line (Stainless Steel Tube Assy.) and Support Clamp Inspection & Installation. Reference <u>AD 2011-26-04</u> .					(	)									
Perform Lycoming SB 388C  Procedure to Determine Exhaust Valve and Guide Condition.			•			•									
Perform Lycoming SB 480E  1. Oil & Filter Change & Screen Cleaning / II. Oil Filter/Screen Content Inspection.		•	7	•					•						
Perform TCM SB 643B Maintenance Intervals for All TCM & Bendix A/C Magnetos & Related Equipment.					•		•						•		
Perform TCM SB 658 Distributor Gear Maintenance.							•								
Perform <b>TCM SB 663A</b> Two-Wire Magneto Tach. Breaker Contact (Points) Assy. P/N 10-400507.							•						•		
Perform 100-hour/annual maintenance & inspection per § 2.400.					•					•					
Lubricate C181-3 bearing per § 1.140.						•						•		一	
Replace hydraulic filter per § 1.170.	П					•								$\neg$	
Drain and flush gearboxes per § § 1.120 & 1.130.							•							$\neg$	
Clean gearbox chip detectors per § 1.115.							•			•				$\exists$	
Perform clutch assembly lubricant inspection & servicing per § 7.210.							•							$\neg$	
Service collective spring (manual controls) per § 8.221.							•							$\neg$	
Verify magneto drive cushion pliability.							•					$\neg$	•	T	
Overhaul helicopter per § 2.700.			$\neg$					•				$\exists$	$\neg$	T	
Inspect emergency locator transmitter (ELT) per 14 CFR § 91.207.										•		$\exists$	T	$\forall$	
Perform pop-out float leak check per § 5.630.							$\neg$	$\neg$		•		ヿ	$\neg$	十	
Test and inspect transponder per 14 CFR § 91.413.				$\neg$							•	ヿ	寸	十	
Perform pop-out float inflation check per § 5.640.			7	$\neg$	$\neg$	$\neg$	$\neg$	$\dashv$	7		$\dashv$	•	$\dashv$	十	$\neg$
Perform pop-out float pressure cylinder hydrostatic test.*	$\sqcap$	$\neg$	1	$\exists$	1	$\dashv$	$\dashv$	7			7	•	$\dashv$	十	ᅦ
Perform 12-year maintenance and inspection per § 2.600.		$\neg$	7	$\dashv$	$\dashv$	$\dashv$	$\dashv$	$\dashv$	$\dashv$		7	$\dashv$	+	•	一
Pop-out float pressure cylinder maximum life.	1	$\neg$	$\neg$	1	_	1	_	1	-	1	_	$\dashv$	$\dashv$	$\top$	-

<sup>\*</sup> Shorter interval than published on referenced document/decal.

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LYCOMING OPERATOR'S MANUAL

LYCOMING OPERATOR'S MANUAL O-540, IO-540 SERIES

SECTION 4 PERIODIC INSPECTIONS

# SECTION 4 PERIODIC INSPECTIONS

	Page
General	
Pre-Starting Inspection	4-1
Daily Pre-Flight Inspection	., 4-2
10-Hour, Tospection	4-2
25-Hour Inspection	4-2
50-Hour Easpection	4-2
100-Hour Inspection	4-3
400-Hour inspection	4-4
Non-Scheduled Inspections	

### SECTION 4

### PERIODIC INSPECTIONS

Perhaps no other factor is quite so important to safety and durability of the siren consponents as faithful and diligent function to regular checks for ninor tro-prompt repair when they are found.

operator should bear in mind that the items listed in the following pages do not constitute a complete inspection, but are metalt for the engine only. Consult the airful al instructions.

Pre-Starting Inspection — The daily pre-flight inspection is a check of the aircraft prior to the first flight of the day. This inspection is to determine the general condition of the aircraft and engine.

the day. This inspection is to determine the generalized cannot be over emphandred accidents occur yearly directly responsible to poor pre-flight.

Among the major causes of poor pre-flight inspection are lack of com-acknowledge the need for a check list, carelessness bred by familiarity and haste. ntration, reluctance to

4-1

### SECTION 4 PERIODIC INSPECTIONS

# LYCOMING OPERATOR'S MANUAL 0-540, 10-540 SERIES

### 1. DAILY PRE-FLIGHT (ENGINE).

- a. Be sure all switches are in the "Off" position.
- Be sure magneto ground wires are connected,
   Check oil level.
- d. Check fuel level.
- Check fuel and oil li te minor indications for repair at 50-hour inspection. Repair any leaks before aircraft is flown.
- slation of water and sediment. f. Open the fuel drain to remove any ac-
- Make sure all shields and cowling are in place and secure. If any are missing or damaged, repair or replacement should be made before the aircraft is flown. g.
- h. Check controls for general condition, travel and freedom of operations
- i. Indection system air filter should be inspected and serviced in accordance with the airframe manufacturer's recommendations.

  2. 10-HOUR INSPECTION (ENGINE). After the first ten (10) hours of operating time, new, rebuilt, or newly overhauled engines replace the oil filter, and conduct an inspection of the contents of the used oil filter for traces of metal particles.
- 3. 25-HOUR INSPECTION (ENGINE). At twenty-five (25) hours of operating time since the first inspection, new, rebuilt, or newly overfueled engines should undergo a 50-hour inspection including draining and renewing jubicating oil, replacing the oil filter, and interesting the contents of the used oil filter.

If the engine does not have a full-flow oil filter, change oil every 25 hours; also, inspect oil pressure and suspine screens for metal contamination, and clean thoroughly before reinstallation.

- 50-HOUR INSPECTION (ENGINE). In addition to the items listed for daily pre-flight inspection, the following maintenance checks should be made after every 50 hours of operation.
- a. Ienitian System -
  - (1) If fouling of spark plugs see been apparent, clean them and check electrode gap. Rotate bottom plugs to upper position.

     (2) Examine spark plug leads of cable and ceramics for corrosion and deposits. This condition is
  - evidence of editor leaking spark plays, improper cleaning of the spark play will so connection and the spark plays and plays in the control and the world of the control and t
  - (3) Check ignition hurness for securing plug and magneto terminals. uity of mounting clamps and be sure connections are tight at spark

TUAN LYCOMING OPERATOR'S MANUAL O-540, 1O-540 SERIES

SECTION 4
PERIODIC INSPECTIONS

- Fuel Line and Induction System Check the primer lines for leaks and security of the clamps. Remove and clean the fuel inlet strainers. Check the mixture control and throttle linkage for travel, freedom of movement, security of the clamps and lubricate if necessary. Check the air intake duets for leaks, security, filter damage, evidence of dust or other solid material in the ducts is indicative of inadequate filter care or damaged filter. Check the air lines for evidence of fuel or oil seepage; if present, fuel pump may require replacement.
- c. Lubrication System -
  - (1) Check oil lines for leaks, particularly at connections; for security of anchorage and for wear due to nubbing or vibration, for dents and cracks.
  - (2) Replace elements on external full-flow oil filters. Before disposing of used element check interior folds for traces of metal particles that might be evidence of internal engine damage. Drain and renew lubricating oil. (Reference latest revision of Service Instruction No. 1014 for proper oil.)
- d. Exhaust System Check attaching flanges at exhaust ports on cylinders for evidence of leakage. If they are loose, they must be removed and machined that before they are reassembled and tightened. Examine exhaust manifolds for general condition.
- Cooling System Check cowling, baffles and baffle seals for damage and secure anchorage. Any damaged or missing part of the cooling system must be repaired or replaced before the aircraft resumes operation.
- Cylindors Check rocker box covers for orderidence of oil leaks. If found, replace gasket and tighten screws to specified torque (50 in.-lbs.).

Check cylinders for evidence of excessive heat which is indicated by burned paint on the cylinder. This condition is indicative of internal damage to the cylinder and, if found, its cause must be determined and corrected before the aircraft resumes operation.

Heavy discoloration and appearance of scepage at cylinder head and barrel attachment area is usually due to emission of thread lubricant used during assembly of the barrel at the factory, or by slight gas leakage which stops after the cylinder has been in service for awhile. This condition is neither harmful not detrimental to engine performance and operation. If it can be proven that leakage exceeds these conditions, the cylinder should be replaced.

- 5. 100-HOUR INSPECTION. In addition to the items listed for daily pre-flight, and 50-hour aspection, the following maintenance checks should be made after every one hundred hours of operation.
- a. Electrical System -
- (1) Check all wiring connected to the engine or accessories. Any shielded cables that are damaged should be replaced. Replace clamps or loose wires and check terminals for security and cleanliness.
- (2) Remove spark plugs; test, clean, regap, and rotate them. Replace if necessary

13/5/19

4-3

- b. Lubrication System Drain and renew lubricating oil.

c. Mognetos - Check breaker points for pitting and minimum gap. Mognetor - Check breaker points tor puting and responses to the first of the breaker compartment, if found, if found is the breaker points to be breaker points. field in light and in accordance with the magneto manufacturer's instructions. Check magneto to

engine timing. (Timing procedures for Bendix and Slick magnetos are covered in the Maintenance Procedures Section.)

- d. Engine Accessories Engine mounted accessories such as pumps, temperature and pressure sensing units should be checked for secure mounting, tight connections.
- e. Cylinders Check cylinders visually for cracked or broken fins.
- f. Engine Mounts Check engine mounting bolts and bushings for security and excessive wear. Replace any excessive wear. Replace any bushings that are excessively worn.

Peleased units 13k/a.

2901 Airport Drive, Torrance, California 90505

Phone (310) 539-0508 Fax (310) 539-5198

Page 1 of 1

# **R44 SERVICE BULLETIN SB-97**

**DATE:** 11 April 2019

TO: R44 II Owners, Operators, and Maintenance Personnel

SUBJECT: R44 II Induction Hose

EFFECTIVITY: A785-31 hoses shipped as spares from May thru November 2018, and A785-31 hoses originally installed on R44 II Helicopters S/N 14248 thru 14286 except 14269.

<u>TIME OF COMPLIANCE:</u> Part A: Within one flight hour, or prior to further flight if engine roughness or power loss is, or has been, encountered. Part B: By 30 June 2019.

BACKGROUND: RHC has received a report of an A785-31 engine air induction hose with separation between its outer and inner layers. A separated inner layer can block engine induction air flow.

# **COMPLIANCE PROCEDURE:**

## Part A:

- 1. Remove right side engine cowling and remove A785-31 hose.
- Visually inspect inside of hose to verify no separation between outer and inner layers. Also, flex the hose in all directions and listen for a crinkling sound, which is an indication of separation. (An airworthy hose does not make a crinkling sound when flexed.)
- 3. Prior to further flight, replace any hose with any indication of separation; contact Pat Cox (ts1@robinsonheli.com) for instructions regarding any separated hose.
- 4. Make appropriate maintenance record entries.

# Part B:

- 1. Replace or discard all affected A785-31 hoses by 30 June 2019.
- 2. Make appropriate maintenance record entries.

# APPROXIMATE COST:

Parts: No charge for replacement A785-31 hose if ordered by 30 June 2019. Reference helicopter serial number or RHC invoice number when ordering.

Labor: 0.5 man-hour.

THE DESIGN ENGINEERING ASPECTS OF THIS BULLETIN HAVE BEEN SHOWN TO COMPLY WITH APPLICABLE FEDERAL AVIATION REGULATIONS AND ARE FAA APPROVED.

N/A DUB A/C S/N,

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Page 1 of 2

## **R44 SERVICE BULLETIN SB-98B**

(supersedes R44 SB-98A)

**DATE:** 15 April 2019

**REV B**: 3 May 2019

TO: R44-series Owners, Operators, and Maintenance Personnel

**SUBJECT:** Air/Oil Separator Hose Spring

**EFFECTIVITY:** R44 Helicopters S/N 2566 thru 2579 except 2577. R44 II Helicopters S/N 14284 thru 14314 except 14287, 14299, and 14304. R44 Cadet Helicopters S/N 30044 thru 30053 except 30047. Also helicopters retrofitted with air/oil separators.

<u>TIME OF COMPLIANCE:</u> Part A: Prior to further flight. Part B: Within next 5 flight hours or by 17 May 2019, whichever occurs first.

BACKGROUND: RHC has received a report of a kinked A729-75 hose, installed between the engine and C728-2 air/oil separator assembly. The kinked hose caused the crankcase to vent through the separator drain back tube, resulting in loss of engine oil. Revision A of this bulletin added an immediate inspection requirement and reduced the compliance time for installing a replacement hose and inserting a spring inside the hose to prevent kinking. Revision B adds Figures 1 & 2; compliance time is unchanged.

## **COMPLIANCE PROCEDURE:**

## Part A:

- Open left side cowl door.
- Refer to Figure 1. Using a bright light, visually inspect A729-75 black rubber | breather hose, located above and beyond the oil filter. If hose is kinked, remove and replace prior to further flight.

## Part B:

- Refer to Figure 2. For each affected helicopter, order one D774-20 spring and one A729-75 crankcase breather hose from RHC Customer Service.
- 2. Remove engine RH cowling. R44 IIs only: Remove air box assembly per R44 Maintenance Manual (MM) § 6.470.
- 3. Remove screw securing air/oil separator's can-to-frame clamp.
- 4. Loosen B277-12 clamps and remove A729-75 hose; retain clamps and discard hose.
- 5. Install new A729-75 hose and insert new D774-20 spring inside hose; secure hose with retained clamps.

(OVER)

MA TOUTE ALC SIN.

- 6. Install screw securing air/oil separator's can-to-frame clamp. Verify security.
- 7. Install air box assembly per MM § 6.480, if removed. Install engine RH cowling.
- 8. Make appropriate maintenance record entries.

## **APPROXIMATE COST:**

Parts: No charge for one D774-20 spring and one A729-75 hose if ordered by 17 May

2019. Reference helicopter serial number when ordering.

Labor: 0.5 man-hour for R44 and R44 Cadet Helicopters.

1.0 man-hour for R44 II Helicopters.

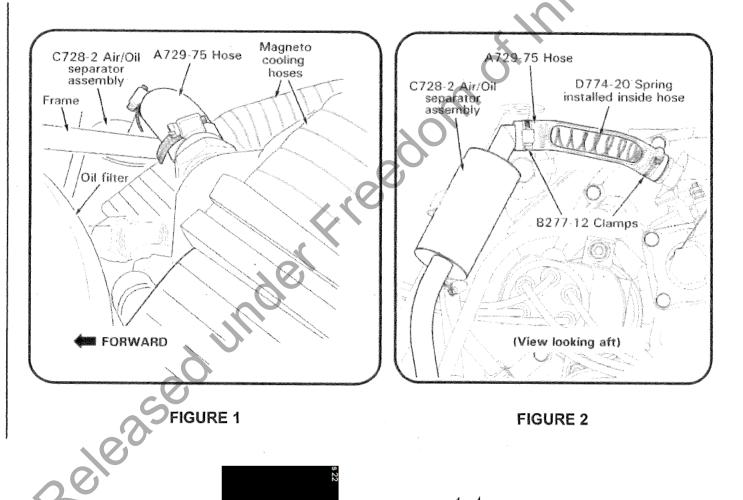


FIGURE 2



THE DESIGN ENGINEERING ASPECTS OF THIS BULLETIN HAVE BEEN SHOWN TO COMPLY WITH APPLICABLE FEDERAL AVIATION REGULATIONS AND ARE FAA APPROVED.

			4	18	HEL1812 COA# C542:	,		,						actory Installed.	
	Compliance Details and Certification Or Reason for Non-Applicability	Complied With by RHC.	Complied With at Reassembly.	Complied With at Reassembly.	Complied With and Placard Per Rule.	N/A, No Emergency Exits Doors.	Complied With/ Factory Installed.	Kannad 406 Integra AF ELT Factory Installed.	Not Installed.	Not installed.	Refer R44 POH (RTR461) Sect.6.	Under Seat and Placard Per RHC.	Complied With/ Factory Installed.	Transponder Meets Standard, ADS-B In/Out Factory Installed.	N/A All Serviceable at Time of Issue.
	Required Document (where applicable)	CASR 1998 Subpart 21.Q	CASR 1998 Subpart 45.B	CASR 1998 Subpart 45.D	CASR 1998 Subpart 90.B	CASR 1998 Subpart 90.B	CAR 1988 Subpart 174.A	CAR 1988 Subpart 252.A	CAO 20.4	CAO 20.11	CAO 20.16.1	CAO 20.16.2	CAO 20.18	CAO 20.18	CAO 20.18
	Para			Ø	90.130	90.135		-					3.2, App. VI &VIII	9C & 9E	10
	Amdt.			<i></i>											
2000	Airworthiness Directive, Special Inspection or Modification	Manufacturers Data Plate	Australian National and Registration Markings	Aircraft Registration Identification Plate	External Doors	Emergency Exit Doors	Equipment for Aircrafts for VFR Flight – Day and Night.	Emergency Locator Transmitter	Provision & Use of Oxygen Equipment.	Emergency and Life Saving Equipment.	Air Service Operations – Loading System.	Air Service Operations – Carriage of Cargo.	Instruments for VFR, Day and Night – Helicopters.	Standards for Mode S Transponders	Serviceability of Required Equipment.
	Aircraft TTIS	4.0													
	Date	11/09/2018	Helibiz J/No H5015												

	*	<del></del>			<u> </u>		<u>دي</u>				
				A	A STATE OF THE STA		COA# C5823			ook.	
	Compliance Details and Certification Or Reason for Non-Applicability	Not Required – A/C Less Than 2750 kg.	Complied With by RHC on 04 May 2018	ASI New at Installation on 24 May 2018	Complied With by RHC on 21 May 2018	Complied With/Placard Attached.	Weight & Balance Validated. See Logbook.	Complied With/ Factory Installed.	Complied With/ Factory Installed.	Transferred to Maintenance Release - See Logbook.	helicopter at this time:
	Required Document (where applicable)	CAO 20.18	CAO 100.5	CAO 100.5	CAO 100.5	CAO 100.5	CAO 100.7	CAO 108.34	CAO 108.50	AWB 34-008	d found not applicable to this helicopter at this time:
,	Para	2	11		11	11					assessed and
	Amdt.	S									) sections
	Airworthiness Directive, Special Inspection or Modification	Windshield Clear Vision Equipment.	Altimeter & Altitude Encoder and Transponder Testing.	Airspeed Indicator Testing.	Pitot-Static System Testing.	Fuel Quantity Gauge Testing.	Weight Control of Aircraft.	Airborne Radio Equipment.	Anti-Collision Lights.	Calibration of Compasses.	Following AD sections assessed and
	Aircraft	4.0									
	Date	11/09/2018	Helibiz 1/No H5015								

Air-conditioning Equipment, Air Induction Systems , Auxiliary Power Units, Cargo Equipment , Cockpit Voice and Flight Data Recording Systems, Compressed Gas Cylinders, Instruments and Automatic Pilots, Lubrication Systems, Oxygen Systems, Parachute Equipment, Pneumatic Equipment, Precision Aerial Delivery System, Propeller, Seats Emergency Equipment, Fire Protection Equipment, Flight Management Systems, Fuel Supply and Metering Equipment, and Berths, Supplementary Equipment, Turbochargers, Wheels and Tyres.

S/No. 2544

VH- NBY

		d	S. C.	W. J. 18.	COA# C582366		C New.					ded.	I, 65, 67, 69, 70 mponent.			8
Compliance Details and Certification	Or Reason for Non-Applicability		- All Cancelled.	N/A No Emergency Exits.	Complied With - Placard Installed.	Still to be Issued.	86, 87 - All N/A by A/C Type, Equipment Not Installed or A/C New.		N/A by S/No.	N/A by S/No.		AD/ELECT/1 - 10, 12, 14 - 19, 21, 22, 24 - 27, 29, 30 - 36, 41, 44 - 47, 49, 50, 53, 68, EASA2010-0237-CN - All Cancelled or Superseded.	AD/ELECT/11 A.1, 13 A.2, 20, 23, 28 A.3, 37 A.2, 38, 40, 42 A.1, 43, 48 A.3, 51 A.1, 52, 54, 55 A.2, 56 A.1, 57 A.1, 58, 60, 61, 62, 64, 65, 67, 69, 70 A.2, 71, 72, 73, 74 A.1, 75 A.1, FAA2013-10-01 - All N/A due component not installed on A/C, A/C model or model and SN of component.	N/A by P/No.	N/A Due TCM Switch installed.	OG. VH- NBY S/No. 2544
Required Document	Para (where applicable)	General AD's	- 48, 51 - 64, 66 - 74, 76 - 81, 83 - 85	Ø		<u>(</u> @	5, 82 Amdt.2,	Cooler AD's			Electrical AD's	27, 29, 30 - 36, 41, 44 - 47, 49, 50, 53, 6	77 A.2, 38, 40, 42 A.1, 43, 48 A.3, 51 A.1 0-01 - All N/A due component not inst			MODIFICATION CERTIFICATION LOG.
, see	Special Inspection or Amdt. Modification		AD/GENERAL/ 1-28, 30 - 36, 38, 40 - 44, 46	AD/ GENERAL /37 9 Emergency Exits	AD/ GENERAL /39 Generator 3	AD/GENERAL/75	AD/GENERAL/29, 45 Amdt.2, 49 Amdt.3, 50, 65 Amdt.		AD/COOL/1 Stewart Warner Oil Coolers	AD/COOL/2 Stewart Warner Oil Coolers		AD/ELECT/1 - 10, 12, 14 - 19, 21, 22, 24	AD/ELECT/11 A.1, 13 A.2, 20, 23, 28 A.3, 37 A.2, 38, 40 A.2, 71, 72, 73, 74 A.1, 75 A.1, FAA2013-10-01 - All N/	AD/ELECT/39 Bendix Starting Vibrator	AD/ELECT/59 1	NON RECURRING AD, SPECIAL INSPECTION AND MODIFICA
Aircraft	SITT		4.0						4.0			4.0			A STATE OF THE STA	NON REC
	Date		11/09/2018	Helibiz J/No H5015				1	11/09/2018	Helibiz J/No H5015		11/09/2018	Helibiz J/No H5015		The state of the s	

		7 23 -	Industrial St						Lacare	<del></del>			· · · · · · · · · · · · · · · · · · ·
Compliance Details and Certification Or	N/A by S/No.	N/A by S/No. 65823	t.AD's	l Cancelled.	AD/RAD/33, 44, 45, 48, 49, 51 A.1, 52, 54, 58 A.1, 59, 60 A.1, 62, 63, 64 A.1, 65, 67, 69, 70, 71, 72, 73, 75, 77 A.1, 78, 79 A.1, 80, 82, 83, 85A.1, 86, 87 A.1, 88, 89, 90, CF-2009-44, 91 A.1, 92 A.1, 2010-07-02, 2010-0186, 2010-0204, 2011-0043, 2011-0103, 2011-0239, 2012-02-08, 2012-14-15, CF-2013-25, 2014-05-27, 2014-0125, 2014-095R1, 2014-18-01, 2010-0003R2, 2015-0093, 2015-10-51. N/A Due Component/s Not Installed This A'craft	Cancelled. Ref CAO 100.5	N/A, Not Installed.	N/A, GTX 335 Installed With Latest Software.			N/A – Not installed.	N/A, New A/C.	N/A, Not Fitted.
Required Document (where applicable)			Radio Communication and Navigation Equipment AD's	76, 84, 93, 2006-0265-CN - All Cancelled	0 A.1, 62, 63, 64 A.1, 65, 67, 6-02, 2010-0186, 2010-0204, 2-8-01, 2010-0003R2, 2015-009	24 month requirement.	300	0	Restraint Equipment AD's	42, 29 A.1, 30 - All Cancelled.	26, 28, 31, 32, 33 A.1, 34, 35 - N/A - Not Installed		
Amdt. Para	3		Radio Communicatio		.1, 52, 54, 58 A.1, 59, 6 31 A.1, 92 A.1, 2010-07 5, 20140095R1, 2014-1	2		-	Restre	, 18, 22 A.1, 24, 25, 27 .	14,19, 20, 21, 23 A.1, 20		
Airworthiness Directive, Special Inspection or	AD/ELECT/63 Magneto Capacitor	AD/ELECT/66 Bendix Magneto Coils		AD/RAD/1 - 32, 34 - 43, 46, 50, 53, 55 - 57, 61, 66, 68	AD/RAD/33, 44, 45, 48, 49, 51 A.1, 52, 54, 58 A.1, 59, 87 A.1, 88, 89, 90, CF-2009-44, 91 A.1, 92 A.1, 2010-0 2013-25, 2014-05-27, 2014-0125, 20140095R1, 2014	AD/RAD/47 Periodic Testing of ATC Transponders	AD/RAD/74 Garmin GNS 430	AD/RAD/81 Garmin Mode S Transponders		AD/RES/1 - 9, 11 A.1, 15, 16, 17, 18, 22 A.1, 24, 25, 27 A2, 29 A.1, 30 - All Cancelled.	AD/RES/10 A.4, 12 A.1, 13 A.1, 14,19, 20, 21, 23 A.1,	EASA 2013-0020R4 Safety Belts/Torso Restraints – Insp.	EASA 2014-0279 Restraint Sys Rotary Buckle Ident./Replace.
Aircraft	4.0			4.0						4.0			
Date	11/09/2018	Helibiz J/No H5015		11/09/2018	Helibiz J/No H5015					11/09/2018	Helibiz J/No H5015		

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tion			6	25050	2 23	COA# C58											
Compliance Details and Certification Or Reason for Non-Applicability			N/A by S/No.	N/A by S/No.	Complied With by RHC.	N/A by S/No.	N/A by S/No.	N/A by S/No.	N/A by S/No.	N/A by S/No.	N/A by S/No.	N/A by S/No.	N/A by S/No.	Complied with by RHC SB-35	N/A by S/No.	N/A by S/No.	
Required Document (where applicable)	Robinson R44 Series Helicopter AD's								\ <u>\</u>	70	×O						
Para	R44 Series H	celled						Se			mainer obsession de proposition de la constant de l						
Amdt.	Robinson	19, 22 A.4, 24, 25 A2 - All Cancelled			26	T.						-					
Airworthiness Directive, Special Inspection or Modification	0	AD/R44/1, 18 A.1, 19, 22 A.4, 24	AD/R44/2 Cyclic Control System	AD/R44/3 Push-Pull Guide Tubes	AD/R44/4 Placard to Prohibit Pushovers	AD/R44/5 Low RPM Warning Unit	AD/R44/6	AD/R44/7	AD/R44/8	AD/R44/9 Oil Line Elbows	AD/R44/10 Main Rotor Blade	AD/R44/11 Cyclic Control Pilots Grin Assembly	AD/R44/12 Auxiliary Fuel Tank Sump Drain	AD/R44/13 Rotor Drive Yoke	AD/R44/14 Wire and Fuel Line Chafing	AD/R44/15 Sprag Clutch	Control Strate
Aircraft TTIS		4.0															
Date		11/09/2018	Helibiz J/No H5015														

			2002	KIND IN						ıfacture	ıfacture			
Compliance Details and Certification Or Reason for Non-Applicability			Complied with by RHC SB-31.	Complied with by RHC SB-56.		Superseded by FAA AD 2014-23-16.	Floats Not Installed.	Complied With by RHC at Production.	N/A due M/R Blade P/No.	N/A, Complied With by RHC at Manufacture	N/A, Complied With by RHC at Manufacture			•. (
Compliance Or Reason for D	N/A by S/No.	N/A by S/No.	Complied wi	Complied wi	N/A by S/No.	Superseded	N/A, Floats	Complied W	N/A due M/	N/A, Compl	N/A, Compl	oduction.	3	
Required Document (where applicable)	The second secon							10	C			R.H.C. during rotorcraft pr	found N/A at this time.	rotorcraft production.
Para						Se						8-14 complied with by	.8-18 complied with or	5 complied with during
Amdt.			S	)								kly issue 201	kly issue 201	rough No. 95
Airworthiness Directive, Special Inspection or	AD/R44/16 Vertical to Horizontal Stabiliser Attach	AD/R44/17 T/R Pitch Control Assembly	AD/R44/20 Main Rotor Swashplate and T/Rotor Bolts	AD/R44/21 Seat Belt Buckles	FAA 2010-24-03 T/R Control	FAA 2011-12-10 M/R Blade Leading Edge Skin	FAA 2013-05-15 Emergency Float Valve Assembly	AD/R44/23 R44 Bladder Euel Tank Retro	FAA 2014-23-16 M/R Blade - Skin Debonding – Inspection.	FAA 2016-26-04	FAA 2016-26-04	Main Rotor Blades.  All FAA AD's through Bi-Weekly issue 2018-14 complied with by R.H.C. during rotorcraft production.	All FAA AD's through Bi-Weekly issue 2018-18 complied with or found N/A at this time.	All R.H.C. Service Bulletins through No. 95 complied with during rotorcraft production.
Aircraft	4.0													
Date	11/09/2018	Helibiz J/No H5015												

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Compliance Details and Certifications or Reason for Non-Applicability For Path Coast Heli	Maintenance FIVET ON COM NDF Pearl Coast Heli Maintenance JIN 233 Refers	李智	e A/C S/N Pearl Coast Helf Mainter JN	40 PEREL COST HERIPHAINOTERMENT	NO DUE A C STORE THOSE NOT 30/1	COND BALGOS HOWARD CONSTRUCTION	W/H Day Not installed	WA Due 1/15 Sw Forth Coast Heli	Cort. C. Approval No.	<b>*</b>			VH-NBY S/N 2644
Required Document (where applicable)	RHC R44 S/B 096	RHC R44 S/B 097	RHC R44 S/B 098B	RHC RHH 5/6 099	RHC RULY SP 100	ONBORD CARCO STETENT SORES	AHC 1200 5/15/10/	1.WE RAG 5/3 102	K.4C K.4C 518 103		O		ATION CERTIFICATION LOG:
Para,			Tanahan Par	<b>(</b>		S		١	١	1			NODIFIC,
Amdt.	Liberton	No.				المتعادلة	(4)	1	(	\			ON AND
Airworthiness Directive, Special Inspection or Modification	D602-1 Time Delay Assembly	R44 II Induction Hose	Air/Oil Separator Hose Spring	24-volt Barrely 3-87/01-175 USAKABB	-7	OF BOARD SOFT 28 Y BESTONS RUT 28 Y HOOK AT	12.4C 1406.515 4 (1994 Control courses)	CHIN Hole cover	MKTIP PLATE	fir loil Separtor			NON RECURRING AD, SPECIAL INSPECTION AND MODIFICATION CERTIFICATION LOG:
Aircraft TTIS	52.3	88.62	88,62	1 h. 981	186.41	MS.03	2.84.5	236.9	5.987	b.987			NON REC
Date	28/03/19	13/05/19	13/05/19	19/1/pz	17-981 180-41	8/869 PS-03	plaly	4/6/20	4/6/20	4/6/20			

Job No: H5015 NBY

Maintenance Release No: A210444 Expired M/Release No: N/A

# - --- LOS DOOK LIILLY Heli biz

## Reassemble / CofA - Airframe

- Aircraft Date of Manufacture: 19/07/2018, S/No. 2544. Registered as VH-NBY.
- New Aircraft Received on U.S.A Export Certificate of Airworthiness # E472473.
- Aircraft Total Time in Service, Equipment Fitted and Details of Components Fitted, Have Been Transferred From the FAA U.S.A. Logbooks to CASA Australian Logbooks. CASA Airworthiness Directives Assessed and Entered in the Non-recurring Airworthiness Directive, Special Inspection and Modification Certification Log.
- Robinson R44 Service Bulletins Through and up to # 95 and FAA Airworthiness Directive's Through to Bi-weekly Issue No. 2018-14 Have Been Complied with by R.H.C. at
- FAA Airworthiness Directives Issued Through Bi-Weekly Issue No. 2018-18 Have Been Complied With or Found Not Applicable at this Time.
- The Helicopter was Inspected and Found to be in Compliance with the FAA Type Certificate Data Sheet: H11NM Rev. 9 Thus Complies With CASA Type Acceptance Certificate: R44.
- The Following Optional Avionics Equipment Installed by R.H.C. at Manufacture: 1 x Garmin GTX335 Transponder, 1 x Trans Cal B240-3 Blind-encoder, 2 x Garmin GTR225B VHF Transceiver Com/X'CVR, 1 x Kannad Integra AF ELT, 1 x Garmin GMA350HC Audio Panel, 1 x Kelly.

  - Pitot-Static and Pressure Altimeter Inspected/Tested by R.H.C. at Manufacture and Satisfy the Requirements of CAO 100.5. Carried Out on the 21 May 2018.
- Airspeed Indicator New at Installation 24 May 2018, Next Inspection 24/05/2022.

## Following Maintenance Carried Out:

- Reassembled IAW R44 Maintenance Manual Sect. 1.700 (May 2016), Special Instructions for Reassembling After Crating for Export.
- 100 Hr/Annual Airframe Inspection Carried out IAW R44 Maintenance Manual Sect. 2.400. for the Initial Issue of an Australian Certificate of

- Fireproof Data Plate Attached IAW CASA CASR AC45-01 Para. 10.

- Magnetic Compass P/No. Airpath C2400-L4-B S/No. RB-02254 Removed, P/No. C2400-L4-B S/No. RB-02156 Southern Dip Applied and Installed. Insta - Weight and Balance validation (Issue One) Carried out by Weight Control Officer – S.Berson Authority No: A058707.

- Fuel Quantity Indicator Test Carried out IAW CASA CAO 100.5. Para. 11.

HE COA#

Main Fuel Tank Read:

Actual:

1/2 3/4 Field 17 64 92 115

> 1/2 3/2 Foll

Low Fuel Light 20 Litres

Auxiliary Fuel Tank

Read:

Ε Actual:

9 20 37 52 67

- MIR TRACK + BAUNIES CARRIED OUT HOUSTED TO WITHIN LIMITS
   T/R Balance Carried out and Adjusted to Within Limits IAW R44 M.M. Sect. 10.240.
   Fan Balance Carried out and Adjusted to Within Limits IAW R44 M.M. Sect. 6.240.

- Ground Run Carried out JAW R44 M.M. Sect. 2.200 and 1.700. Nil Defects Evident. - Certificate of Airworthiness #TH/2018/59 issued by: Troy Holloway IOA# 1-ZZ50B.
- NOTE: Compass Swing Due Entered on Maintenance Release. Operational Flight Check Due – Entered on Maintenance Release.

# The following airworthiness directives and special inspections carried out:

Task	Code	Description	
0000	Inspection		Action Taken
		AIRFRAME - Reassembling and Flight Testing R44 Series Helicopters After Crating For Export IAW R44 Maintenance Manual Section 1.700	Complied With - Nil Defect Evident
0001	Inspection	AIRFRAME - RHC R44 100 Hr/Annual Airframe Inspection IAW R44 Maintenance Manual Section 2,400	Complied With - Nil Defect Evident
0005	Inspection	AIRFRAME - RHC R44 Ground Run and Flight Check IAW R44 Maintenance Manual Section 2.200.	Complied With - Nil Defect Evident
0110	Inspection	ENGINE - 100 Hr Engine Inspection IAM Lycomian	Complied With - Nil Defect Evident
0113	TCM SB 643C Part 1	100 Hour Maintenance Intended For All Totals, Post to a fe	Complied With - Nil Defect Evident
0114	Lycoming SI 1080C	100 Hour Maintenance Items for Special Attention	Complete Assets
0115	Lycoming SI 1129D	100 Hour Alternator/Consented Bull T	Complied With - Nil Defect Evident
0425	Inspection		Complied With - Nil Defect Evident
		CASA CAO 100.5 - Fuel Calibration	Complied With - Nil Defect Evident
The follo	owing relevant parts w	ere acad	

## he following relevant parts were used:

The remember ing i	cicadiit haita wele fised:			
Part #	Description			
DATA PLATES	Data Plates - VH-NBY, SN: 2544	GRN	Task	Quantity
PR1422 B2 PT	PROSEAL Pint Kit 500ml (Book to Aircraft)	AB2301		1
Independent In	spections Carried out pursuant to Capaca	AB2208		20

# Independent Inspections Carried out pursuant to CAR42G

Main Rotor Head and Blades Install, Main Rotor Pitch Change Links, Tail Rotor Drive Train, Tail Rotor Control, Tail Rotor Pitch Change Links

1st Inspection by: \$22	Signature:					
2nd Inspection by:	_	***************************************	Licence	222950	Date: 11	/09/2018
	Signature:	*****	Licence	781890	Date: 11	/09/2018
or and on behalf of Helibiz C of A Nui	mber C582366	e 22				05/2010

Co-ordinator's Name: \$22 Signature:.... ...... Licence: 222950 Date: 11/09/2018

								Heustz	12/09/18	Date	
								A DO H	4	Air	and the second s
								505		Aircraft  Landings or Cycles	
			Co-ordinator's Name: 8 Signature:	For and on behalf of Helibiz C of A Number C582366	The following relevant parts were used:  Part # Description  C2400-L4-B Magnetic Compass- Southern Dip Serial # -RB-02156	Compass Name 0 N 030 060 090 E 120 Airpath C2400-L4-B 000 030 060 089 120	The following airworthiness directives and special inspections carried out:  Task Code  Description  O400 Inspection  CASA AWB 34-008 - Compass Swing	WS SW	This Constitutes a Final Certification in Accordance with CAR42ZE as a Loose Leaf Log Book Entry  VH-NBY Model: R44 Raven 1 AF Serial #: 2544  AF TTIS: 4.00 AF Cycles: AF Landings:  Maintenance Release No: A210444	Maintenance Details and Certifications	
0	S	<b>\( \)</b>	Licence: 222950		GRN Task AB2155	<b>150 180 S 210 240 270 W</b> 151 180 210 240 271	Action Taken Complied With	Expired M/Release No: N/A	R42ZE as a Loose Leaf Log Book Ei Job No: H5015 NBY Maintenance Release No: A210444	d Certifications	
			Date: 12/09/2018		Quantity 1	N 300 330 11 301 330	HELIBTZ COA# C5823		Helibiz		

AIRCRAFT MAINTENANCE CERTIFICATION LOG

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		•		-			p/S/19	Date	) -
							83.62	TTIS	Aircraft
								Landings or Cycles	raft
			 		,,	,	 		

## This Constitutes a Final Certification in Accordance with CAR42ZE as a Loose Leaf Log Book Entry p.

VH-NBY Model: R44 AF Serial #: 2544

AF TTIS: 88.62 AF Cycles:

Job No: 255 Maintenance Release No: A158251

Expired M/Release No: A210444

## 100Hrly/Annual Inspection/399Hrly Valve Inspection

100Hrfy/Annual Inspection C/O IAW Aircraft Logbook Statement & RHC R44 RTR 460 Maintenance Manual Rev May 2016

The too	lowing maintenance tasks camed	OUC	
Task	Code	Description	Action Taken
001	100HRLY/12MONTHS	100Hrly/12Month Inspection IAW RHC R44 M/M Section 2.200	C/O NDF
032	SORHRLY/12HONTHS	Clean & Test M/R & T/R Gearbox Chip Detectors Per RHC R44 M/M Section 1.115	Entered M/R
003	108HRLY/12MONTHS	Gascolstor Filter Clean/Inspect	C/O NDF
004	300HRLY/3YRLY	Lubricate C161-3 Lower Bearing IAW RHC R44 M/M Section 1.140	Entered M/R
005	100HRLY/12MONTHS	M/R Head Teeter Friction Test	C/O NDF
005	100HRLY/12MONTHS	M/R Swashplate Friction Test	C/O NDF
097	100HRLY/12MONTHS	Maintenance Flight To Be Carried Out Before Release To Service	C/O NOF
800	100HRLY/12MONTHS	POH Update/Status Check	C/O NOF
009	300H#LY	Replace Hydraulic Filter IAW RHC R44 M/M Section 1.170	C/O NDF
010	100HRLY/12MONTHS	Sheave Alignment/Actuator Switch Check IAW RHC R44 M/M Section 7.230	C/O LHS 0.115" RHS 0.100" Within Limits NDF
011	RHC R44 5/8 097	R44 Rayen II Induction Hose	N/A Due A/C S/N
012	RHC R44 5/B 098	Air/Oil Separator Hose Spring	N/A Due A/C S/N
013	ADDITIONAL	M/R Track & Balance	C/O To Under 0.21PS Within Limits NOF
014	12MONTHS	Annual ELT Inspection IAW 14 CFR 91.207	Entered M/R
015	2YRLY	CAO 100.5 ATC Transponder Test	Entered H/R
016	50HRLY/12MONTHS	Lights/Electrical/Warning Lights Check	C/O NDF

The following	relevant parts	theau susw
Part #		Description
AERO XPD120		OIL
AN5235-1A		R44 Hydraulic Fi

C528-7 R44 Rear Inertia Re CH48108-1

GRN PC437 12 PC358 PC463 PC417 PC045-2

Date: 13/05/2019

Maintenance Details and Certifications

For Pearl Coast Heli Maintenance PTY LTD Cert.Of Approva

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				,								Alt/a	Dale		
												h.381	SILL	Ai	
													Landings or Cycles	Aircraft	
	VH-148Y I AF TTIS: 1	onstitutes a Fina Model: R44 AF Serial #: : 186.41 AF Cycles: Annual Inspection			cordance	with CA	Mair	as a Loose Joi Ibenance Refeas Opired M/Refeas	b No: 299 e No: A22286	7	Age in	Co.151	. (	O	
	100Hrly/A	nnual Inspection C/O IAW wing maintenance task		Statement & R	NHC R44 RTR	460 Maintenano	ce Manual	Revision May 2016	i			6			
		Code	Desi	cription				Action Taken				~~			
		100HRLY/12MONTHS	100F	trly/12Month I	nspection IAW	RHC R44 M/M	Section	C/O NDF							
	302	50GHRLY/12MONTHS		0 n & Test M/R & M/M Section 1		Chip Detector	s Per RHC	C/O NDF							
	003	100HRLY/12MONTHS	Gasc	colator Filter Cl	zoeqanl/nse			C/O NOF			ζ,	•			
1	004	100HRLY/12MONTHS	M/R	Head Tester F	rktion Test			C/O NDF							
1	005	100HRLY/12MONTHS	M/R	Swashplate Fr	iction Test			C/O NDF			) •				
	005	100HRLY/12MONTHS		itenance Flight		i Gut Before Re	elease To	C/O NDF							
	007	100HRLY/12MONTHS	POH	Update/Status	s Check			C/O NOF	4						

	maintenance	to do	contest	cuts
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The folia	owing maintenance tasks carried	out:	
Task	Code	Description	Action Taken
001.	100HRLY/12MONTHS	100Hrhy/12Month Inspection IAW RHC R44 M/M Section 2.200	C/O NDF
302	503HRLY/12MONTHS	Clean & Test M/R & T/R Gearbox Chip Detactors Per RHC R44 M/M Section 1.115	C/O NDF
003	100HRLY/12MONTHS	Gascolator Filter Clean/Inspect	C/O NDF
004	10XHRLY/12MONTHS	M/R Head Teeter Friction Test	C/O NDF
005	100HRLY/12MONTH5	M/R Swashplate Friction Test	C/O NDF
026	103HRLY/12MONTHS	Maintenance Flight To Be Carried Out Before Release To Service	C/O NDF
007	100HRLY/12MONTHS	POH Update/Status Check	C/O NOF
905	100HRLY/12MONTHS	Sheave Allgament/Actuator Switch Check IAW RHC R44 M/M Section 7.230	C/O LHS 0.080" RHS 0.060° Within Limits NDF
609	RHC R44 S/B 099	24V Battery Electrolyta Leakage	N/A Due A/C S/N
010	RHC R44 S/B 100	R44 RII Induction Hose	N/A Due A/C S/N
011	12MONTHS	Agrusi ELT Inspection IAW 14 CFR 91.207	Entered M/R
012	ZYRLY	CAO 100.5 Altimeter Altitude Reporting Mode C Test	Entered M/R
013	ZYRLY	CAO 100.5 ATC Transponder Test	Entered M/R
014	ZYRLY	CAO 100.5 Pitot Static System Test	Entered M/R
015	SGHPLY/12MONTHS	Lights/Electrical/Warning Lights Check	C/O NDF

The following	refevant parts	were used:

tito temperated total			GRN	Task	ORTHORY
Part #	Description				12
AERO XPD120	OIL		PC437		**
	R44 Hydraulic Filter		PC358 .		1
AN8235-1A	,		PC484		2
CH48108-1	Oil Filter				1
F110-2	Telatemp 140-190°F		PC459		
	Telatemp 180-230°F		PC136		1
P110-3			PC136		12
M-674	GASKET	5 22			1
MS28778-14	O-Ring		PC045-2		

.ama: \$22

Date: 20/07/2019

Maintenance Details and Certifications

Page 1 of 1

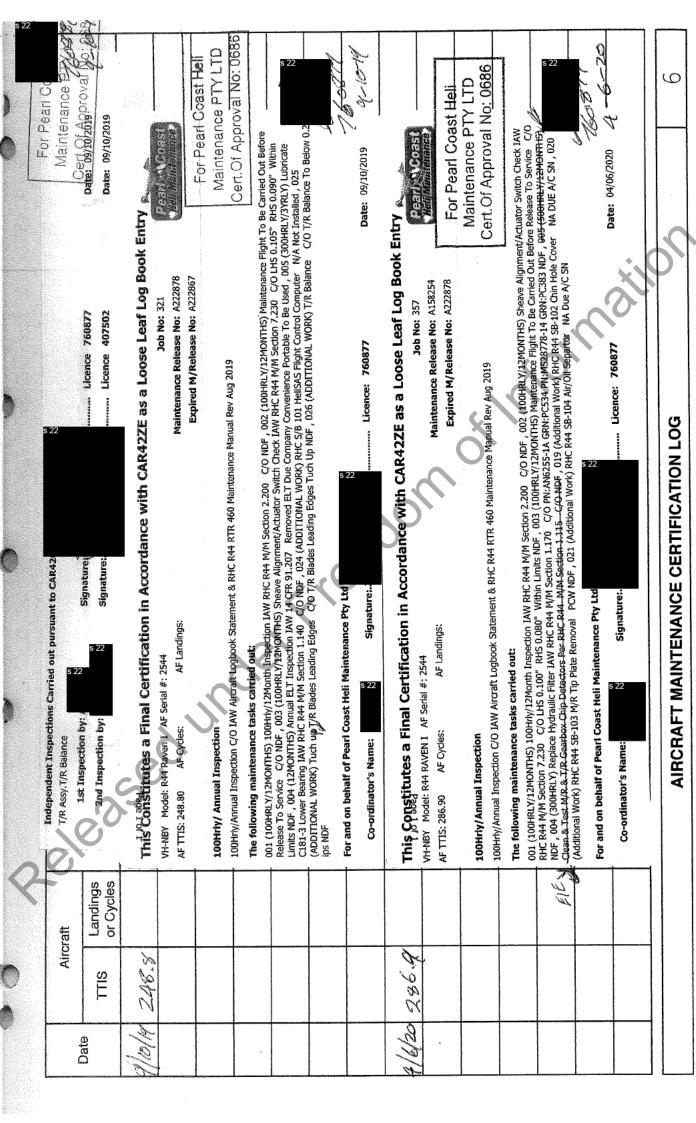
For Pearl Coast Heli Maintenance Cert.Of Approval No: 0686

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																					F5 05	SITT	Aircraft	And have not able to the first of the first
																						or Cycles	raft	
		Co-ordinator's Name: 2	For and on behalf of Pearl Coast Heli Maintenance Pty Ltd C c	MS27039C0808 Screw	- MS21919WDG2 P-Clamp	51	B263-14 3 Pin Housing	B263-13 2 Pin Housing	2		200-327-00 R44 28Volt	Part # Description	The following relevant parts were used:		- Task Code	The following maintenance tasks carried out:	C/O Install Of Onboard Systems 28v Hook Kit	Onboard Systems Hook Install	or cycles.	#: 2544	This Constitutes a Final Cer		0	and the second s
	<b>S 2</b> ?	Signature	intenance Pty Ltd C d	Ö	3	9					R44 28Volt Cargo Hook Kit		2)	Install Onbord Cargo Hook System IAW Onboard Systems STC # SR01808SE	Description	d out:			Ar Ediscuigs.	AE I spelinger	bification in Accordance wit	AND THE REAL PROPERTY OF THE P	Maintenano	
	For Pearl Coast Heli Maintenance PTX-LTD Cen. Ci Approval No. 0686	Licence: 594407	<b>&gt;</b>	PC383	PC357	PC357	3		PC357	DC357		GEN			Action Taken				Expired M/Release No:	Job No: 304	This Constitutes a Final Certification in Accordance with CAR42ZE as a Loose Leaf Log Book Entry		Maintenance Details and Certifications	
9		Date: 29/07/2019		<b>,</b> 1	10	<b></b>	<b></b>	2	2 10	<b>5</b> ;		Task Opentity		C/O Installed 1 x New 28v Onboard Systems Cargo Hook System P/N 200-327-00 B/N PC508 NDF						Pearl NCoast	ook Entry			

**AIRCRAFT MAINTENANCE CERTIFICATION LOG** 

S



6-27772-40E 0-540-F1B5

100 8 1

fication	4		s 22	05000		HELIBIZ 604# E582366	, gypthyn glynni												- Australia -			7
Compliance Details and Certification Or Reason for Non-Applicability		, 117A.2 , 119.	N/A By Model	N/A By Model	N/A By P/No.	N/A By Model	Complied With at Manufacture	elegical viva	N/A By Kole	N/A By Model		N/A By Model	N/A – Due at Sudden Stoppage Only	N/A By Manufacture	1 ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) (	N/A by iviodel	N/A Not Fitted		N/A By DOM Manufacture		N/A By Manufacture	For Lycoming O-540-F1B5 S/No: L-27772-40E
Required Document (where applicable)		- 75 , 77 , 79 , 82 , 84 , 87 , 88 , 90A.2 - 96 , 117A.2 , 119.											, O									
Para	Lycoming AD's	8, 61, 71,				•			0	Ö												CERTIFICATION LOG
Amdt.	Lycon	0,72-75,	-	9	5	<	3			1		2	4								-	
Airworthiness Directive, Special Inspection or Modification	S.	The following Lycoming AD's Cancelled: 1 - 70, 72	AD/LYC/71 Pushrod – Inspection	AD/LYC/76 Propeller Attachment Flange	AD/LYC/78 Thermostatic Oil Cooler Bypass Valve	AD/LYC/80 Turbo Charger Oil Inlet Adapter Bushing	AD/LYC/81	Oil Pump Impellers AD/LYC/83	Crankshaft Flange	AD/LYC/85	Exhaust Assembly	AU/LYC/86 Propeller Governor Oil Line	AD/LYC/89 Crankshaft Gear	AD/LYC/97	AD/LYC/98	Push Rod Inner Diameter Scoring	AD/LYC/99	Diaphragm Fuel Pumps	AD/LYC/100	Piston Pin P/N LW-14077	Superior Cylinders	MOLECULAR AND EDECIAL INCEDENTION AND MODIFICATION
Aircraft TTIS		4.0																				
Date		11/09/2018	Helibiz J/No H5015		THE THE PERSON WITH THE PERSON WE WERE THE PERSON WE WE WE WE WE WERE THE PERSON WE																	2

		1		.0 >	<u> </u>	366		-	-							makeman market of the second		
	Compliance Details and Certification Or Reason for Non-Applicability	N/A By Model	N/A, Not Fitted	N/A By S/No.	N/A, Not Fitted	N/A, Not Fitted 604 6582366	N/A By Model	N/A By Model	Complied With at Manufacture	N/A, Not Fitted	N/A, New	N/A By S/No.	N/A By Manufacture	N/A, New	N/A By Model	N/A By Manufacture	N/A By Manufacture	540-F1B5 S/No: L-27772-40E
	Required Document (where applicable)									S		5	, C	O				ON LOG. For Lycoming 0-540-F1B5
0	Para								S									IFICATION
	Amdt.	3			2		N		2	-			2				2	ON CERT
	Aircraft Airworthiness Directive, TTIS Modification	4.0 AD/LYC/102 Crankshaft Internal Inspection	AD/LYC/103 Slick Magneto Inspection	AD/LYC/104 Crankshaft Drive Gear Bolts	AD/LYC/105 Oil Filter Converter Plate Gasket	AD/LYC/106 RYCO R14 Oil Filters	AD/LYC/107 Crankshaft Replacement	AD/LYC/108	AD/LYC/109	AD/LYC/110 Rotary Fuel Pump Relief Valve Screws	AD/LYC/111 Lyc. Engines Last Overhaul in France	AD/LYC/112 Lycoming Crankshaft Replace	AD/LYC/113 Eci Cylinder Assemblies	AD/LYC/114 Improper Maintenance	AD/LYC/115 Lycoming Crankshaft Replacement	AD/LYC/116 Eci Connecting Rods	AD/LYC/118 Superior Cylinder Assemblies	NON RECURRING AD, SPECIAL INSPECTION AND MODIFICATION CERTIFICATION LOG.
	Date	11/09/2018	Helibiz J/No H5015															ON

Compliance Details and Certification Or Reason for Non-Applicability	N/A By Manufacture		Model Model		/NO		Model	Opp	Nodel	Model		3/No.			nstalled.	N/A Using Manufacturers Schedule.		s/No.	S/No.		N/A BY P/NO. & S/NO.	
Required Document (where applicable)	N/A By N	N/A By Model	N/A By Model	N/A By Model	ON/S NA BV S/NO		N/A By Model	N/A D/M	N/A By Model	N/A By Model		N/A By S/No.		o's O	'A due piston or slick magnetos not in	N/A Usi	35	N/A By S/No.	N/A By S/No		N/A BY	
Amdt. Para			-					2	2					Engine-General AD's	-07 Cancelled or N/	11	Electrical AD's	<b>+</b>	,	1		
Airworthiness Directive, Special Inspection or Modification	FAA AD 2009-26-12 Eci Cylinder Assemblies	FAA AD 2011-18-09 Crankshaft Inspect Counterweight Washers	FAA AD 2012-03-06 AVStar Fuel Servo Diaphragm	FAA AD 2012-03-07	FAA AD 2012-19-01	Crankshaft Replacement	FAA AD 2015-02-07	FAA AD2015-10-06	Replace Turbo Mount	FAA AD 2017-11-10	Engine Exhaust System - Inspect	FAA AD 2017-16-11	Connecting Rod Small End Bushing – Inspect		AD/ENG/1, 2, 3A1, 5A9, 6A1, 7 & FAA 2011-26-07 Cancelled or N/A due piston or slick magnetos not installed.	AD/ENG/4 Piston Engine Airworthiness Requirement		AD/ELECT/63 TCM Magneto Capacitor	AD/ELECT/66	Bendix Magneto Coils & Magnets	AD/ELECT/75	TCM Magneto Impulse Compline
Aircraft	4.0														4.0			4.0				
Date	11/09/2018	Helibiz J/No H5015				######################################			III The				,		11/09/2018			11/09/2018				

	4	<del></del>	s 22			Z 2361	Reconstruction (Co.		ter and designed to the control of the con-	n <sub>g</sub> ina (quadrumathreismer st		open <del>a (an</del> ema)	***************************************		
Compliance Details and Certification Or Reason for Non-Applicability			N/A By Manufacture Date (P/No. & S/No.)	\$2555 \$1-6-11		G0A# C582361		The following New Lycoming Service Bulletins updated: 342G-S3, 411D, 530B-S1, 593B, 608-S1, 613, 614A, 619, 621B, 622, 623, 625, 627C & 632B - All N/A due Model or part not fitted.							C
Required Document (where applicable)	S		N/A By Ma		iry 2018.		446	٩, 619, 6218, 622, 623, 625		4	()	O	C	0	
Para	Metering Equipment AD's				ycoming. D.O.M 29 Janua	nufacture by RHC.	S	, 5938, 608-S1, 613, 614/	S						
irective, ion or Amdt.	Fuel Supply and I	7	S		All FAA AD's and Lycoming SB's complied with at time of Engine Manufacture by Lycoming. D.O.M 29 January 2018.	All FAA Bi Weekly AD's through to 2018-14 complied with at time of Aircraft Manufacture by RHC.	cked and found N/A.	l: 342G-S3, 411D, 530B-S1							
Alrworthiness Directive, Special Inspection or Modification	8	Ø	AD/FSM/26 Air Metering Stop Pin		s complied with at time o	th to 2018-14 complied w	Additional FAA Bi Weekly AD's through to 2018-18 checked and found N/A.	Service Bulletins updated							
Aircraft			4.0 Ai		Lycoming SB's	y AD's throug	i Weekly AD'	ew Lycoming							
Date			11/09/2018	Helibiz J/No H5015	All FAA AD's and	All FAA Bi Weekl	Additional FAA B	The following Ne part not fitted.							

Form:

# Aircraft Run Out (Components)

**Pearl Coast Heli Maintenance** 

% Rem. Tolerance Notes

85 %

87 %

87 %

87 %

% /8

% 28

% 28 % 28 87 % % 48 87 % 87 % % 28 % /8 87 % 87 % % /8 % 48 % 28 87 % % 28 % 48

87 %

Component Type	Install Date	Install Hrs Limit	rs Limit	Interval	Interval Counters	TSO	TSN	AF Off	To Run
VH-NBY AF Date 03-07-2020 AF Hours - 291									
TACHOMETER Part #-C792-4 Serial # -			Life Limit	2,200	Hours, Days				
R44 Raven I Carburettor Part #-AV10-6035-11 (MA-4-5MF) Serial # - AV124732464	30/04/2018	0	OH Limit	2,000	Hours, Days	291	291	2000, 27-04-2028	1,709
R44 24v Skytec Starter Motor Part #-149-24HT-H Serial # -H-R100035		0	OH Limit	2,200	Hours	291	291	2200	1,909
R44 28V Clutch Actuator Part #-C051-2 Serial # -8769		0	Life Limit	2,200	Hours		291	2200	1,909
R44 28V Plane Power Alternator Part #-RH24-70 Serial # -H-R110102		0	OH Limit	2,200	Hours	291	291	2200	1,909
R44 Aux Bladder Tank Part #-D028-2 Serial # -	?	0	OH Limit	2,200	Hours	291	291	2200	1,909
R44 Clutch Shaft Part #-C166-5 Serial # -0869	19/07/2018	0	Life Limit	2,200	Hours, Days		291	2200, 16-07-2030	1,909
R44 Fanwheel Assy Part #-Ď174-2 Serial # -NSN	19/07/2018	0	Life Limit	2,200	Hours, Days		291	2200, 16-07-2030	1,909
R44 Raven I Engine Part #-O-540-F1B5 Serial # -L-27772-40E	30/04/2018	0	OH Limit	2,200	Hours, Days	291	291	2200, 27-04-2030	1,909
R44 Raven I Governor Part #-D278-1 Serial # -3107	19/07/2018	0	Life Limit	2,200	Hours, Days		291	2200, 16-07-2030	1,909
R44 Hydraulic Pump Part #-D500-1 Serial # -6835	19/07/2018	0	Life Limit	2,200	Hours, Days		291	2200, 16-07-2030	1,909
R44 28V Hydraulic Reservoir Part #-D211-2 Serial # -6568	19/07/2018	0	Life Limit	2,200	Hours, Days		291	2200, 16-07-2030	1,909
R44 Hydraulic Servo Part #-D212-1 Serial # -32203		0	Life Limit	2,200	Hours		291	2200	1,909
R44 Hydraulic Servo Part #-D212-1 Serial # -32214		0	Life Limit	2,200	Hours		291	2200	1,909
R44 Hydraulic Servo Part #-D212-1 Serial # -32215		0	Life Limit	2,200	Hours		291	2200	1,909
R44 Lower Bearing Part #-C181-3 Serial # -9465	19/07/2018	0	Life Limit	2,200	Hours, Days		291	2200, 16-07-2030	1,909
R44 -7 M/R Blade Part #-C016-7 Serial # -9818	19/07/2018	0	Life Limit	2,200	Hours, Days		291	2200, 16-07-2030	1,909
R44 -7 M/R Blade Part #-C016-7 Serial # -9863	19/07/2018	0	Life Limit	2,200	Hours, Days		291	2200, 16-07-2030	1,909
R44 M/R Gbox Part #-C006-7 Serial # -9838	19/07/2018	0	Life Limit	2,200	Hours, Days	(	291	2200	1,909
R44 M/R Hub Part #-C154-1 Serial # -10510		0	Life Limit	2,200	Hours		291	2200	1,909
R44 M/R Spindle Part #-C158-1 Serial # -23398	19/07/2018	0	Life Limit	2,200	Hours, Days		291	2200, 16-07-2030	1,909
R44 M/R Spindle Part #-C158-1 Serial # -23396	19/07/2018	0	Life Limit	2,200	Hours, Days			2200, 16-07-2030	1,909
R44 R/H Magneto Part #-10-600646-201 Serial # -E17IA029	30/04/2018	0	OH Limit	2,200	Hours, Days	291	291	2200, 27-04-2030	1,909
R44 Main Bladder Tank Part #-D028-1 Serial # -		0	OH Limit	2,200	Hours	291	291	2200	1,909
R44 Oil Cooler Part #-C649-2 Serial # -4947209	30/04/2018	0	OH Limit	2,200	Hours, Days	291	291	2200, 27-04-2030	1,909

# Aircraft Run Out (Components)

**Pearl Coast Heli Maintenance** 

Component Type	Install Date	Install !	Install Hrs Limit	Interval	Counters	TSO	TSN	AF Off	To Run	% Кет.	% Rem. Tolerance Notes
R44 Sprag Clutch Part #-C188-3 Serial # -11844	19/07/2018	0	Life Limit	2,200	Hours, Days		291	2200, 16-07-2030	1,909	% 28	
R44 -6 Swashplate Assy Part #-C017-6 Serial # -4226	19/07/2018	0	Life Limit	2,200	Hours, Days		291	2200	1,909	87 %	
R44 T/R Blade Part #-C029-3 Serial # -8160	19/07/2018	0	Life Limit	2,200	Hours, Days		291	2200, 16-07-2030	1,909	% 28	
R44 T/R Blade Part #-C029-3 Serial # -8162	19/07/2018	0	Life Limit	2,200	Hours, Days		291	2200, 16-07-2030	1,909	% 28	
R44 T/R Gbox Part #-C021-1 Serial # -8702	19/07/2018	0	Life Limit	2,200	Hours, Days		291	2200, 16-07-2030	1,909	87 %	
R44 T/R Gbox Gearset Part #-C545-2 Serial # -11002		0	Life Limit	2,200	Hours		291	2200	1,909	% 28	
R44 T/R Guard Part #-D079-1 Serial # -11137	?	0	Life Limit	2,200	Hours		291	2200	1,909	% 28	
R44 T/R Hub Part #-G062-2 Serial # -5025	6	0	Life Limit	2,200	Hours		291	2200	1,909	% 28	
R44 T/R Pitch Control Assy Part #-C031-1 Serial # -10873	19/07/2018	0	Life Limit	2,200	Hours, Days		291	2200, 16-07-2030	1,909	87 %	
R44 Upper Frame Part #-C020-1 Serial # -9317	19/07/2018	0	Life Limit	2,200	Hours, Days		291	2200, 16-07-2030	1,909	% 28	
R44 Raven I L/H Magneto Part #-10-600616-3 Serial # -E17EA097	30/04/2018	0	OH Limit	2,200	Hours, Days	291	291	2200, 27-04-2030	1,909	% 28	
R44 Horizontal Stabiliser Part #-C044-1 Serial # -9423		0	Life Limit	4,400	Hours		291	4400	4,109	93 %	
R44 T/R Driveshaft Part #-D196-1 Serial # -8521		0	Life Limit	4,400	Hours		291	4400	4,109	93 %	
R44 Tailcone Part #-C023-1 Serial # -10109		0	Life Limit	4,400	Hours		291	4400	4,109	93 %	
				$O_{I}$	O'S STATE OF THE PARTY OF THE P			Siloli			
20/07/2020 3.57 PM				Form :	:						Page 2 of 2

Released under Freedom of Information 

Date 07-10-2019

**AFTTIS 248.8** 

Type 100Hrly/Annual Inspection

# Worksheet

Aircraft: R44

Rego: VH-NBY

Co-ordinators Signature:

A certification for L.A.M.E constitutes a certification pursuant to CAR42ZE that all maintenance has been properly performed as detailed in the above mentioned job number for and on behalf of Pearl Coast Hell Maintenance Pty Ltd COA - 0686

# Pearl Coast Heli Maintenance Pty Ltd COA - 0686

Component

Counter

Form No: PCHM004

Page 1 of 6

Serial #: 2544	Print Name: \$22		Airframe	Hours 248.8	Mul Maintenanse
Job No : 321	Date: 9 1/8/1/9	Licence No: 760877	Airframe	Days 07-10-2019	
Work Required: 100HRLY/12MONTHS 100	Hrly/12Month Inspection IAW RHC R44 M/M Section 2.200			ATA Code :	
Task No 001	Action Taken :	The second secon	and a second part of the of the factor on the control of the factor of the control of the contro	ATA CODE;	
Category Airframe	C/O NDF	An effective of the second of		A.M.E	s 22
Monitor By Hours, Days		and the second of the second o			\$ 22
Interval 100		The second secon		L.A.M.E	THE PROPERTY AND ADMINISTRATION ADMINISTRATION AND ADMINISTRATION AND ADMINISTRATION ADMINISTRATION AND ADMI
<b>Due</b> 286.41, 19-07-2020		The second secon	en en entre de la companya de la co	Licence No	760877
To Run 37.61	** ** ** ** ** ** ** ** ** ** ** ** **	A contract of the contract of	Labour Hours	Date	9-10-19
Work Required: 100HRLY/12MONTHS Main	ntenance Flight To Be Carried Out Before Release To Service		adabati ribars	**************************************	
Task No 002	Action Taken :		er til store i sen er	ATA Code :	The second secon
Category Airframe	C/O NDF		e de la companya del companya de la companya del companya de la co	A.M.E	
Monitor By Hours, Days	The second section of the second section is a second section of the second section of the second section section section sections and the second section secti		san a san a san a san a san a		s 22
Interval 100		And the second of the second o	and the second of the second of	L.A.M.E	***************************************
Due 286.41, 19-07-2020				Licence No	760877
To Run 37.61				- Bat-	
Work Required: 100HRLY/12MONTHS Shea	ave Alignment/Actuator Switch Check IAW RHC R44 M/M Section	7.230	Labour Hours	Date	1-10-19
Task No 003	Action Taken :	Production of the Community of the Commu	e fina y de mara e carbo alaga y y y y como y manenar l'escabilitamenta e diferencia	ATA Code :	
Category Airframe	C/O LHSO. 105 RHSO. 096 Within Limits NDF			A.M.E	- 22
Monitor By Hours, Days			territoria de la companya de la comp		5 22
Interval 100		and the second s		L.A.M.E	
Due 286.41, 19-07-2020		the state of the s	e e e e e e e e e e e e e e e e e e e	Licence No	760877
To Run 37.61			1	Date	
Work Required: 12MONTHS Annual ELT Ins	spection IAW 14 CFR 91.207	Parameter and the second of polytophic and the second of t	Labour Hours	Date	3-9-19
Task No 004	Action Takens a	Dela	P	ATA Code :	
Category Elec. Instr. Radio	+ Dur Dir manh	Due company con	UVAN 1ENCE	A.M.E	
Monitor By Days					5 22
Interval 365				L.A.M.E	
Due 11-09-2019	\O_1^*			Licence No	760877
To Run -26			·	_	
en de la companya de la catalograpia de la catalograpia de la catalograpia de la catalograpia de la catalograpi	00	- The field of control and a property for the factor of the field and the control and the cont	Labour Hours	Date	8-18-14

Worksheet	Pearl Coast Heli Maintenance I	Pty Ltd COA - 0686	
Aircraft: R44 Rego: VH-NBY Serial #: 2544 Job No: 321	Co-ordinators Signature :  Print Name :  Date : 2/1/01/2/ Licence No : 760877	Component Counter  Airframe Hours  Airframe Days	Total  248.8 07-10-2019
Work Required : 300HRLY/3YRLY	Lubricate C181-3 Lower Bearing IAW RHC R44 M/M Section 1.140	~0	ATA Code :
Task No 005	Action Taken :		
Category Airframe	C/O NDF		A.M.E
Monitor By Hours, Days			s 22
Interval 300			L.A.M.E
Due 300, 10-09-2021			Licence No 760877
To Run 51.2		Labour Hours	Date 9-10-19
Work Required : 500HRLY/12MON	NTHS Clean & Test M/R & T/R Gearbox Chip Detectors Per RHC R44 M/M Section 1.115		ATA Code :
Task No 006	Action Taken :		
Category Airframe	ENTERED WE KA WAL		A.M.E
Monitor By Days, Hours		<ul> <li>A service of the servic</li></ul>	L.A.M.E

Interval 365

To Run 286

Due 19-07-2020, 686.41

Labour Hours

Licence No

760877

# Worksheet

Aircraft: R44

Rego: VH-NBY

Co-ordinators Signature:

# Pearl Coast Heli Maintenance Pty Ltd COA - 0686

Component

Counter

Serial # : 2544	Print Name : \$ 22	The state of the s	Airframe	Hours	248.8	Hall Maintenance
Job No : 321	Date : 2 1 10 1 /	Licence No : 760877	Airframe	Days	07-10-2019	
Work Required: 2YRLY AWB 34.008 2Yrly Com	pass Swing			<b>10</b>	ATA Code :	
Task No 007	Action Taken :	The second secon			and the second district of the second	and the state of t
Category Elec. Instr. Radio	ENTERED MR				A.M.E	22
Monitor By Days		The second section of the second section secti			L.A.M.E	100
Interval 730						- 6
Due 10-09-2020			and a second second second second second	Address of the same of	Licence No	760877
To Run 339			Labour Hours		Date 🖑	-00-19
Work Required: 2YRLY CAO 100.5 Altimeter Al	titude Reporting Mode C Test	**************************************	The state of the s	and the second s	ATA Code :	
Task No 008	Action Taken :	The second secon	alle en		AIA Code I	
Category Elec, Instr. Radio	ENTERED MR		entrale de la companya del companya de la companya del companya de la companya de		A.M.E	2
Monitor By Days			•• • • • • • • • • • • • • • • • • • •		L.A.M.E	
Interval 730					L.A.M.E	
Due 23-05-2020					Licence No	760877
To Run 229			Labour Hours	,4	Date 4	-10-19
Work Required: 2YRLY CAO 100.5 ATC Transpo	onder Test			the decision of the second of	1,000	
Task No 009 .	Action Taken :	To the second section of the second s	The state of the s		ATA Code :	
Category Elec. Instr. Radio	ENTERED MR				A.M.E	
Monitor By Days					\$ 2	2
Interval 730					L.A.M.E	Production of the Control of the Con
<b>Due</b> 03-05-2020	· · · · · · · · · · · · · · · · · · ·				Licence No	760877
To Run 209			Labour Hours		Date C	-10-10
Work Required: 2YRLY CAO 100.5 Pitot Static S					ATA Code :	
Task No 010	Action Taken :	The second secon	the state of the s		ATA COUE;	
Category Elec. Instr. Radio	ENTERED MR				A.M.E	an orang apply ap
Monitor By Days					1 4 7/1 64	797
Interval 730	~0				L.A.M.E	**************************************
Due 20-05-2020					Licence No	760877
To Run 226					man m	18
	(A) 1 along 1		Labour Hours		vate (	-18-19

A certification for L.A.M.E constitutes a certification pursuant to CAR42ZE that all maintenance has been properly performed as detailed in the above mentioned job number for and on behalf of Pearl Coast Heli Maintenance Pty Ltd COA - 0686

Form No: PCHM004

Page 3 of 6

Worksheet	Pe	earl Coast Heli Maintenance P	ty Ltd COA - 0686	
Aircraft: R44 Rego: VH-NBY	S 22 Co-ordinators Signature :		_	unter Total
Serial #: 2544	Print Name: S22		Airframe Hou	urs 248.8 (1914) (1914) (1914) (1914) (1914)
Job No : 321	Date: 9 1 101	Licence No : 760877	Airframe Day	9 07-10-2019
Work Required: 100HRLY 100 Hrly	Maintenance & Inspection IAW Lycoming Operators I	Manual		ATA Code :
Task No 011	Action Taken :	- regions of the control of the cont		AIA CODE :
Category Engine	C/O NDF			A.M.E
Monitor By Hours	A Committee of the Comm	the first of the second of the		\$ 22
Interval 100	* * * * * * * * * * * * * * * * * * *	the first section of the control of		L.A.M.E
Due 286.41	the second control of	e de la companya de		Licence No 760877
To Run 37.61		and the second of the second o	Labour Hours	Date 8-10-19
Work Required: 50HRLY 50 Hrly Ma	aintenance & Inspection IAW Lycoming Operators Man	nual		
Task No 012	Action Taken :		and the second section of the section of t	ATA Code :
Category Engine	C/O NDF		X	A.M.E
Monitor By Hours	· · · · · · · · · · · · · · · · · · ·		$(\frac{1}{2} - \frac{1}{2} + \frac{1}{2} - \frac{1}{2} + \frac{1}{2} - \frac{1}{2} + \frac{1}{2} - 1$	5.22
Interval 50	en de la companya de		en e	L.A.M.E
Due 236.41			entre de la seconomiento de la companya de la comp	Licence No 760877
To Run -12.39			r and a second	"and recognized the special property of the special pr
Work Required: TCM S/B 643C 100	Hrly Magneto Inspection		Labour Hours	Date 8 - 10-14
Task No 013	Action Taken :	and the control of graduation about the control of	and the commence of the second of the commence	ATA Code :
Category Engine	C/O NDF			A.M.E
Monitor By Hours, Days	Territoria de la companya della companya della companya de la companya della comp			s 22
Interval 100				L.A.M.E
Due 286.41, 19-07-2020				
To Run 37.61				Licence No 760877
			Labour Hours	Date 8-10-19
Work Required : LYC SI 1129B Alter	and the second s		The state of the s	ATA Code ;
Task No 014	Action Taken :		The second secon	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Category Engine	C/O NDF			A.M.E
Monitor By Hours, Days	23			s 22
Interval 100				La.M.E
Due 286.41, 19-07-2020				Licence No 760877

A certification for L.A.M.E constitutes a certification pursuant to CAR42ZE that all maintenance has been properly performed as detailed in the above mentioned job number for and on behalf of Pearl Coast Heli Maintenance Pty Ltd COA - 0686

To Run 37.61

Form No: PCHM004

Labour Hours

# Worksheet

Aircraft: R44

Rego: VH-NBY

Co-ordinators Signature:

# Pearl Coast Heli Maintenance Pty Ltd COA - 0686

Component

Counter

Serial #: 2544	Print Name :	Airframe Hours	248.8 Auf Maintenance
Job No : 321	Date: 9 1 10 119 Licence No: 760877	Airframe Days	07-10-2019
Work Required : LYC S/B 366C Carb Thrott	tle Body Screw Inspection		ATA Code :
Task No 015	Action Taken:		
Category Engine	C/O NDF		A.M.E
Monitor By Hours, Days		X	s22 L.A.M.E
Interval 100			
Due 286.41, 19-07-2020			Licence No 760877
To Run 37.61		Labour Hours	Date 5 - 10-19
Work Required: LYC SI 1191A Cylinder Co	mpression Check		ATA Code :
Task No 016	Action Taken :		ATA CODE :
Category Engine	C/O Within Limits NDF	· · · · · · · · · · · · · · · · · · ·	A.M.E
Monitor By Hours, Days	1,17 4,71	**	s 22
Interval 100	772 575	the state of the s	L.A.M.E
Due 286.41, 19-07-2020	2.72 5.75 3.76 6.71 Allover sport	******	Licence No 760877
To Run 37.61	ALL OVER GOPSL		Date \$ -10-19
Work Required : TCM S/B 653 Hot Magneto	n Test	Labour Hours	Date / /
Task No 017	Action Taken :		ATA Code ;
Category Engine	C/O NDF		A.M.E
Monitor By Hours, Days		and the second s	s 22
Interval 100			L.A.M.E
Due 286.41, 19-07-2020		and the second second	Licence No 760877
To Run 37.61		processor and a second	
		Labour Hours	Date 9-10-19
Work Required: TCM S/B 670 Magneto Dis			ATA Code :
Task No 018	Action Taken :		
Category Engine	C/O NDF		A.M.E
Monitor By Hours, Days		i i	L.A.M.E
Interval 100			~
Due 286.41, 19-07-2020			Licence No 760877
To Run 37.61		Labour Hours	Date 8-10-19
			The state of the s

Vorksheet	Pearl C	oast Heli Maintenance Pty I	Ltd COA - 0686	;	
Aircraft: R44	Co-ordinators Signature :		Component	Counter	Total
Rego: VH-NBY	- cy in-		Airframe	Hours	248.8 Rell Malitonano
Serial #: 2544	Print Name : S22		Airframe	Days •	07-10-2019
Job No : 321	Date: 1101/1	Licence No: 760877			
Work Required : LYC SI 1080C Spe	cial Attention Maintenance Items			70	ATA Code :
1	Action Taken :				A.M.E
Task No 019	C/O NDF				S 22
Category Engine	The second secon				L.A.M.E
Monitor By Hours, Days	and the second s				
Interval 100	was to the second of the secon	The second secon			Licence No Joseph 14
Due 286.41, 19-07-2020		The second of th			Date 8-10-19
To Run 37.61			Labour Hours		
Work Required: LYC S/B 595 Torq	ue Values Ignition Harness Attach Screws		and the second s		ATA Code :
Task No 020	Action Taken :				A.M.E
Category Engine	C/O NDF				s 22
Monitor By Hours, Days					L.A.M.E
Interval 100					Licence No 760877
Due 286.41, 19-07-2020					In Internal State of the ACT of the State of
To Run 37.61		.01	Labour Hours		Date 9-10-16
Work Required : LYC S/B 480F Oil	Filter Change & Inspection		and a summary and a summary and an expension of the summary and the summary an	and the second s	ATA Code :
Task No 021	Action Taken :				A.M.E
Category Engine	GIONDE Entered	AL S			\$ 22
Monitor By Hours, Days					L.A.M.E
Interval 50					
Due 236.41					Licence No 760817
To Run -12.39		• • • • • • • • • • • • • • • • • • • •	Labour Hours		Date 9-10-19
Work Required : LYC S/B 480F 4M	onthly Oil & Filter Change			E	ATA Code :
	Action Taken :				4 D4 19
Task No 022	CONDE FINE SIL	41			A.M.E
Category Engine	E WE WE TO				s 22
Monitor By Days				:	Chandon as m
Interval 120	- '/			j	A language Office and the second

Due 10-09-2019

To Run -27

Labour Hours

# Additional Worksheet Pearl Coast Heli Maintenance Pty Ltd COA - 0686

Aircraft: R44

Rego: VH-NBY

Serial #: 2544 Job No: 321 Co-ordinators Signature:

s 22 nature :

Print Name : S22

Date: 9 1/0 1/9

Component

Airframe

Airframe

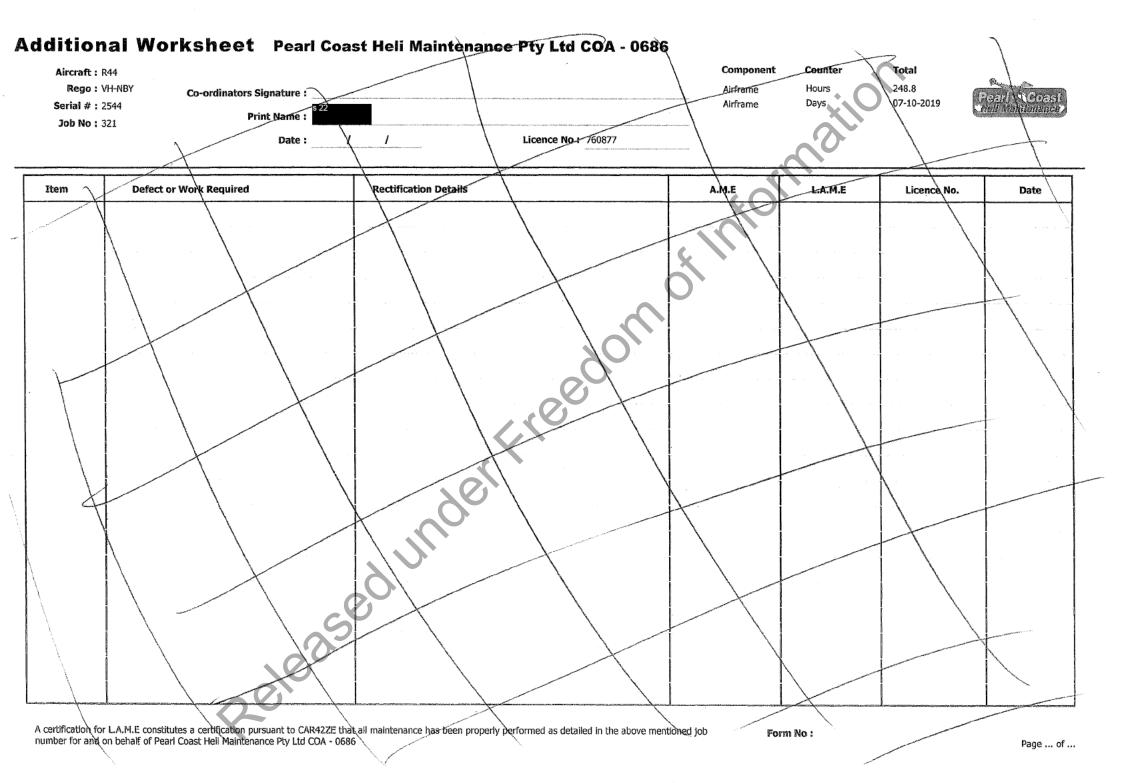
Counter Hours

248.8 07-10-2019



-						
Item	Defect or Work Required	Rectification Details	A.M.E	L.A.M.E	Licence No.	Date
/•	CHT prope found 4/5	FRENER CHT POBE PIN: 30003.		s 22	165871	9-10-19
Z.	trick rep 1/2 Plades Lendary Edges.	Cloth Blades Landing edge tachup N.D.F	<b>J</b>		760011	9-10-19
	T/R Balance	do the the Balance to Below			76087-1	9-10-19
4.	I.HC 5/B tot Helisas flight control computer	U/A vot installed		c	1600 77	9-10-19
		9 JICO				
	0000		- American Control of the Control of			

Licence No: 760877



# **Co-Ordination and Final Certification**

## Pearl Coast Heli Maintenance Pty Ltd COA - 0686

Aircraft: R44

Job No: 321

Rego: VH-NBY

Job Description:

Serial #: 2544

Owner: Horizontal Falls Helicopters

Operator: Horizontal Falls

M/R Date of Issue

Expired M/R Serial

Issued M/R Serial No.

A222678

Aircraft TTIS

248.8

### L.A.M.E CERTIFICATION

I hereby certify that all maintenance in the category(s) for which I am responsible have been completed.

## Categories covered during this inspection - Certifications

Airframe	s 22
Engines	
Electrical	
Instrument	
Radio	

760877

For & on behalf of:

Pearl Coast Heli Maintenance Pty Ltd COA -

For & on behalf of:

Pearl Coast Heli Maintenance Pty Ltd COA -

For & on behalf of:

Pearl Coast Hell Maintenance Pty Ltd COA -

For & on behalf of:

Pearl Coast Heli Maintenance Pty Ltd COA -

For & on behalf of:

Pearl Coast Heli Maintenance Pty Ltd COA -

Licence Number

Licence Number

Licence Number

Licence Number

Licence Number

760877 760877

760877

Independent Inspection Certificate Pursuant to CAR 42G. Inspection carried out on the following:

K ASSY, T/h Balance.

1st Inspection Signature :

2nd Inspection Signature:

Licence Number

760877

Licence Number

467502

## **CO-ORDINATING CERTIFICATION**

I hereby certify for the completion and co-ordination of the entire inspection.

LAME Signature:



LAME Licence No:

760877

For & on behalf of: Pearl Coast Heli Maintenance Pty Ltd COA - 0686

A CERTIFICATION ABOVE CONSTITUTES A CERTIFICATION PURSUANT TO CAR42ZE THAT ALL MAINTENANCE HAS BEEN PROPERLY CERTIFIED. Note: The person who certifies for the completion and co-ordination of the entire inspection or workpackage contents is to ensure that any maintenance performed during the inspection has not invalidated a certification already made in another category and has been completed and properly certified.

# Engineering Work Package Pearl Coast Heli Maintenance Pty Ltd COA - 0686



**JOB DETAILS** 248.B 07/10/2019 AF TTIS Date Raised 321 Job Number 248.8 **Engine TTIS** Date Completed Aircraft Registration VH-NBY Landings/Starts Approved Horizontal Falls Helicopters RHC R44 RTR 460 Maintenance Manual Rev Au Operator Maintenance Data (Airframe) Cycles R44 Aircraft Type Approved Lycoming O-540 Operators Manual Rev March Maintenance Data RINS Operator Base Pearl Coast Heli Maintenance (Engine) Job Description: Signature & Initial Trade Type Hours SIGNATURE SIGN OFF Name B1.4 Job Coordinator AME/LAME

Form No: PCHM003

Page 1 of 1

			MODEL R44		ROBINS	BON	MAINTENANCE MANUAL	MODEL R44
		MAINTENANCE MANUAL			2,205 Groun			
200 GROUND	AND FL	GHT CHECK FOR 100-HOUR/ANHUAL INS	a continue entire Mate	ı	10. Lightin	ig und ins	truments: (Master Switch on)	
nd correct say	discreps		nnusi inspection. Note	'	a, C	ARBON N	IONOXIDE warning light flashes twice (if ins Imp approximately same as Outside Air Tem	
2.205 Ground	d Check	(Aircreft not renning)						
1. Wheattle down s	s Control	: Check for freedom of rotation with or p.	alloctive full				ng light on. re warning light on.	
Throitis     to over     position	urae stob	wel Spring: Check by twisting throttle past b. Release throttle and ensure it returns to	idle position normal idle	-	f. F	uel quent	PUMP warning light on (10-540 only). ity gages - indication of fuel level.	
inch sp	KKUG-DEC	l: Chack for smoothness of operation with unlock button for proper function. Verify ( k at full rich position.		-	b, \$	Strobe ligh	and panel lights - check function. it - check function.	
Carbur operations	retor Hea ion with	et Control (0-540 anly): Check for sm no binding. Verify 0.03 to 0.10 inch spring		-			ihts - check function (clutch switch must be unding lights). - check function.	engaged
5. Cyclo freedo. 1/8-co- sppro- freepis resista	Control: in thru fi -1 full tu- imately on an before ance with	With trim motors (if installed) in neutral pout travel with friction off, Verify friction of new fire from the fore adding friction. For hydraxic or one-half inch total longitudinal and one into excountering resistence. Verify nor no binding or abnormal feet throughout on	sition, verify knob rotates trois: Verify r total lateral al hydraubo ntrol travel.	- \$\lambda	k, /	Ammeter Oil temper	- shows discharge. ature gage - slight needle deflection with en ead tomp gage - slight needle deflection with	gine cold.
6. Called and or inch to one-by heat e friction average pound binding	tive Cont n. For no efore add off inch to essist (if i n (betwee ge measu is measu ig or abou	rod: Verify freedom through till travel wir n-hydraelic akcraft, verify friction knob mi king friction. For hydraelic controls: Verify a otal freeplay before encountering resident retailed looked and frietfon lever fully on the rear seats) within freeplay impgels seed at grip. With friction lever fully on, red at grip. Verify normal hydraelic resistation mmgl feel throughout control travel.	in friction ori specs 0.3-0.6 pproximately e. With carb verify C334 4-5 pounds verify 18-22 since with no	-	o. p.	depressed MR CHIP depressed ENGINE F depressed TR CHIP I	ight - on when sender shorted or test switch.  RE light on when sender shorted or test s  ,  ight - on when sender shorted or test switch	h
7. Carb i raise d down heat o	Heet Assi collective and verif off and ve	iet (if installed): With collective down and f full up and verify carb heat off. Lower of y carb heat full on. With collective friction of the collective stays down.	ull carb heat, collective full off, push carb	_	r.	LOW FUE	l. L. light - on (slight delay is normall when low tank is depressed with clean, non-sparking a t switch depressed.	
S. Tank	otor Feds	als: Check for smooth operation with no bi	nding.	- [	s.	FUEL FIL	TER light - on when test switch depressed (	10-540 NA
9. Remo	wable Co	nerols: Verify security of attach fasteners.		- Samuel Control	11. Verif Sect	y aircraft ion 1.002	checklist laminated card is current revision (	refer to
Chango 14: JU	UL 2008		Page 2.	.,	Page 2.8			Change 13: OCT 20
			1	S				
ROBIN	son!	MAINTENANCE MANUAL	MODEL R44	-			MAINTENANCE MANUAL	MODEL R44
2.210 Run l	<u>Va</u>				2,210 Rur			
		and the state of t		-			engine warm, clutch engaged, throttle class	,u-
		Section 4 "Prellight" checklist.		T. \			gine: 53% - 57%	RA
2. Perfor	rm "Befo	re Starting Engine" checklist.	inter during	-			gine: 58% - 62%	te closed
3, IO-64	C engine	e: Verify AUX FUEL PUMP light extinguminates after priming. Verify fuel drains	from sniffle / A	1	17.	idle mixtu	re with engine warm, clutch engaged, thrott	ne cioseo.
valve.		NOTE		-	1	O-540 en	gine: 2% to 4% RPM rise as mixture is pulle idle cut-off. Adjust idle mixture screw if unable to obtain rise, set idle mixture turns out from fully in then adjust as smooth idle.	as required. a screw 1 ½
ž	raive. W	t prime may be required before fuel drains leit for valve to stop draining before ste il be hard starting/flooded while valve is dr	rting engine.	1		10-540 er	egine: Adjust idle mixture per Section 6.495	. Step 23.
4 Barla	ren *Stor	rting Engine and Run-Up" checklist. If I lapsed since Step 3, use minimum or no po	ess than 15	_	18. Che	ck hydrau	lic system (if installed) operation. Using cycl	ic- mounted udinal cyclic
5. Chec	k ciutch :	engagement time – maximum 70 seconds. sates charge, ALT light off.		-	ence	ountering ald be free	should be approximately one-half inch of free stiffness and feedback. Turn hydraulics On with no feedback or uncommanded motion (* ht check with hydraulics on.	v. Controls

 Ammerar indicates charge, ALT light off.
 Both magnetos ground (off momentarily) at 60% RPM. Both magneties groupd (off momentarity) at 60% nr.m.
 Exchangetic operates with alternator and battery switches off.
 Nonsusual bearing noise when varying RPM through operating range (magnetist to listen near V-butt drive). Refer to Section 2.110 and 2.501 thru 2.503.
 Ser RPM at 75%, governor on. Increase to 85%, release throttle, and verify governor increases RPM to 101 to 102%. Increase RPM to 104%, release throttle, and verify governor decreases RPM to 101 to 102%. Engine and rotor tach needles within 1% of each other at 102% RPM. Verify alternator voltage as follows: 13.4 to 13.5 vdc for A942-3 alternator control unit ,27.75 to 29,25 vdc for A942-4 alternator control unit

 Tachometer needles do not jump more than 2% when transmitting on 118.00, 125.00, and 136.975 MHz with governor on. Raise collective control 0.5 inch at grip and stowly decrease RPM.
 Verify issu-rotor-RPM warning horn and light uctivate at 97% to 96% RPM and remain on as RPM is decreased to idle.

Change 13: OCT 2006

760874 9-10-19

Page 2.9

Change 14: JUL 2008

13. Heater operates properly.

19. Air Conditioning: Verify system blows cold air on both low and high settings. Verify no EMI/RFI with other instruments and systems. After a flight with air conditioning on, verify water drains from drain tube in ship's belly (may be little or no water in very dry conditions).

#### 2.220 Flight Chack

- Hover:
  - a. All gages graen.
  - Controllability in left and right pedal turns.
  - Cyclic electric trim (or hydraulics) zeros cyclic stick forces.
  - Vibration levels satisfactory.
- Level (light: Typical cruise attitude (if possible, deviate as required for weather and regulations), maximum continuous power, governor on,
  - s. Vibration levels satisfactory.
  - b. Cyclic electric trim (or hydraulics) zeros cyclic stick forces.
  - Collective trim spring (electric trim system only) zeros collective forces. For hydraulic controls: Verify no feedback and collective is balanced.
  - Sixed collective friction adequate to prevent "bounce" but not excessive (electric trim system only).
  - Tail rotor pedal position when yew string is centered: 0.25 to 0.75 inch right for adjustable pedals, within 0.25 inch of neutra for non-adjustable pedals.
  - Tail rotor elastic trim cord zeros pedal forces (cord applies left podal force).
  - For hydraulic controls: Turn hydraulics OFF and verify no excessive feedback forces.
- Automate at 100 KIAS with station 99 or greater CG. Verify electric trim (or hydraulics) zeros cyclic stick forces.

#### 2.230 Shutdown

- Verify rotor brake functions and ROTOR BRAKE light illuminates.
- Complete shutdown per POH checklist.

Change 13: GCT 2008

ROBINSON MAINTENANCE MANUAL

## 2.300 AIRFRAMS PREPARATION FOR 100HR/ANNUAL INSPECTION

Thorsughly clean eifframe prior to inspection. Wipe down main and tell and aifframe exterior with a mild seep and water solution.

#### CAUTION

Do not spray magnetos, main rotor hub, hydraulic reservoir vent, swashplate are high-pressure water or solvent as water of cause corrosion and breakdown of lubrica

#### 2,400 100HR/ANSSUAL AIRFRAME INSPECTION

NOTE

dicate locati

CAUTION

100 hour or Annual inspection per Section 2.410.

2.410 Inspection Procedures and Checklint

Registration No.: UH-1/37 Technician
Hourmeter (notication: 240, 57 Certificate -

Technician name

Certificate number: 2007671

Aircraft Total Time: 2453 1. Tall Rotor Pedal Bearing Slocks

NOTE

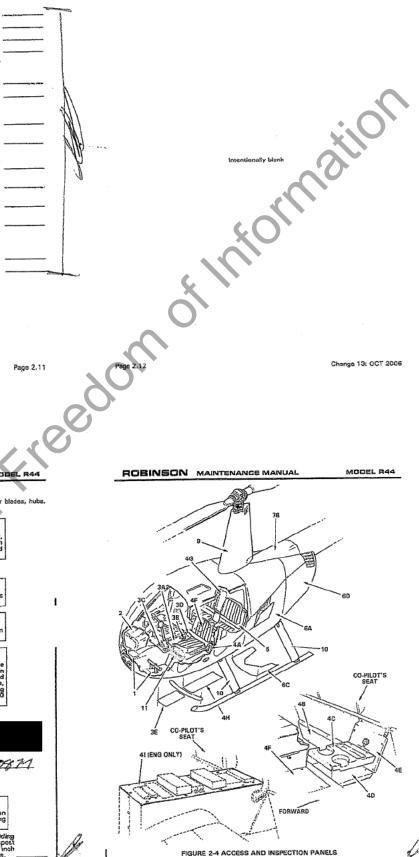
Do not remove pedal bearing block cover plates (1) unless function check of pedals indicates possible problem with pedal bearing blocks.

To remove cover plates (1) peel book carpeting and remove octave plates. Use an inspection light and mirror to inspect bearing blocks for condition and looseness or play. Maximum allowable play is 0 arielly and 0.030 inch radially. Inspect all weld areas in pedal or

Change 13: OCF 2008

Page 2.13



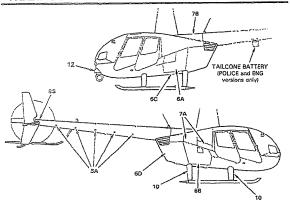


Page 2.14

Change 13: OCT 2006



MODEL R44



	F	gure 2-4a access a	ind insp	ECTION PAIN	LS
MUMBER	PART SUMSER	DESCRIPTION	NUMBER	PART NUMBER	DESCRIPTION
;	8189-4	Deflector (LH)	41	D383-1	Face (ENG only)
	A412-2 and B189-2	Cover and Deflector (RH)	5	C003-10 C003-11	Seat Back Assy (RH) Geat Back Assy (LH)
2	9050	Consola Assy	6A	C337-1	Cowling Assy (LH)
3A	C445-1	Cover Assy	68	C378-1	Cowing Assy (RH)
38	C445-3	Cover	6C	D041-1	Cowing Assy - Bolly
3C	C444-3	Cover	5D	0040-1	Alt Cowling Assy
3D	C398-1	Cover Assy	7A	D042-4	Door Assy
38	C794-1	Panel		0042-4	Door Assy
4A	0580-1	Saver Assy	7B	C708-1	Tailcone Cowling Assy
48	C451-1	Cover	BA	A231-1	Plug Assy
4C	C464-1	Tray	88	A558-2	Cover
4D	C463-1	Cover	9	C261-1	Most Fairing Assy
4E	C054-1	Cover Assy	10	C082-2	Fairing Assy (FWD, RH)
4F	C474-2	Cover		C082-3	Fairing Assy (FWD, LH)
4G	C474-1	Cover		C082-4 C082-5	Fairing Assy (AFT, RH) Fairing Assy (AFT, RH)
4H	C794-2	Panel (without scoop)	11	C045	Circuit Breaker Panel
	C794-3	Panel Assy (with sopes)	12	D412-1	Fairing (Inframetrics
4H	C794-2 C794-3	Panel (without scoop) Panel Assy (with scoop)	(Police ships)	or D347-1	Camera) Feiring (FSI Camera)

ROBINSON MAINTENANCE MANUAL 2.410 Inspection Procedures and Checklist (cont'd)

2. Upper Console (2)

Console (2), is opened by removing one screw on each side. With console open, inspect the following:

Pitot-Static System: Check pitot and static lines for cracking, chafing, pinching or kinking. Check all connections for security.

Flight and Engine Gages: Check all gauges for security. Inspect wiring and connections on all gages.

Radio Tray(s): Check condition and security.

Tail Rotor Controls: Check accessible portions of TR pedal assemblies for defects. Verify operating clearance.

3. Remove Forward Tunnel Covers (3A & 3B), Cyclic Stop Cover (3C), Inboard Collective Cover (3D), and Forward Belly Panel (3E)

If radio antennas are installed on removed panels, disconnect antenna lead and any ground wire. Pull respective radio circuit breaker and tag circuit breaker with "Antenna Removed".

Cyclic Box Assembly: Inspect cyclic box assembly for defects. Check cyclic stop sheet metal assembly for cracks and other defects (deterioration, distortion, loose rivets, corrosion).

Cyclic Stick Assembly: Inspect cyclic stick assembly for defects, Inspect welds for cracks.

CAUTION
(manual controls)
Do not disturb clear silicone coating protecting strain gages, or attached wiring. Any damage to strain gages or wiring will disable trim system.

Cyclic Trim (manual controle): Turn master and cyclic trim switches on. Move cyclic laterally stop to stop and longitudinally stop to stop and check operation of trim motors. Check trim motors, springs and elastic cords for clearance from all wire bundles and fuselage structure during movement and at travel limits.

Cyclic Lateral Trim Actuator (manual controls): Turn master and cyclic trim switches on. Push and hold cyclic stick against right stop until motor stops then turn trim off. Move cyclic stick to left stop to compress spring, Inspect exposed portion of shaft for wear and galling. Do not grease rod on Rev H and subsequent C056-1 spring assemblies, bearing is self-lubricating, Inspect C130-13 urethane spacer (stop). Check security of attachment to cyclic pivot.

Oyclie Longitudinal Trim Actuator (manual controls): Inspect C130-13 urethane spacer (stop). Check security of attachment to cyclic stick.

Change 13: OCT 2006

ROBINSON MAINTENANCE MANUAL

Change 13: OCT 2006

I

2.410 Inspection Procedures and Checklist (continued)

Remove Forward Tunnel Covers (3A & 3B), Cyclic Stop Cover (3C), Inboard Collective Cover (3D) and Forward Belly Panel (3E) (continued)

Gydic Friction: Check for excessive play or loopeness in links and rod ends connected to cyclic stick. Verify no excessive flaring at either end of C130-2 spacer.

Cyclic Push-Pull Tube and Torque Tube: Inspect C319 torque tube paying special attention to area around blocks and end of torque tube for crocks. Inspect C121-1 push-pull tube rod end palnut and jam nut for tightness. Check witness incles on push-pull tubes. Check and ends and bearings for excessive play and looseness. Check, accessible ontions of cyclic push-pull tube and torque tube for defects, including scratches. Pay particular attention to top of torque tube immediately below C348-1 anchor assembly. Inspect ell nuts and botts in cyclic controls for rotation and looseness.

Teil Rotor Push-Pusi Tube: Inspect accessible portions of C121-9 tail rotor push-pusi tube. Look for defects such as cracks, bends, scratches, or chafing. Check rod ends for excessive play and looseness.

Collective Priorien and Stops Inspect collective stop condition; no nicks, cuts or suretclies are allowed. Check collective friction lever for security and operation. Move gollective up and down and verify no bending or binding of stop. Verify collective boot's lace cannot entangle stop.

Throttle Oversavel Spring: Inspect operation of overtravel spring while operating throttle. It should move freely without any binding or jerkiness. Check play in upper and lower rod ends. Check rod ends for binding.

Wiring Harness: Inspect for chafing and clearance from controls.

Pices and Static Lines: Inspect pitot and static lines for security and any evidence of cracking, chaffing, plaching or kinking from sharp bands. Open drains and check for moisture; close drains.

Elastic Trim Cord(s): With cyclic forward-right, feel forward elastic trim cord(s) for voids which may indicate broken strands.

Heater Hose: Check heater hose for collapsed areas and chafing.

Fasteners and Torque Stripes: Inspect condition and verify security of all fasteners. Renew deteriorated torque stripes per Figure 2-1.

Remove Outboard Collective Cover (4A), Collective Torque Tube Cover (4B), Tray (4C), Mid Tunnel Covers (4D & 4E), Aft Tunnel Covers (4F & 4G), Aft Belly Cover Famel (4H), and Reer Console (4I, ENG ships only

NOTE

if radio antenna is installed on removed panel, disconnect antenna lead and corresponding ground wire. Pull respective radio circuit breaker and tag circuit breaker with "antenna removed".

ROBINSON MAINTENANCE MANUAL

R44 SERIES

2.410 Inspection Procedures and Checklist (continued)

Remove Outboard Collective Cover (4A), Collective Torque Tube Cover (4B), Tray (4C), Mid Tunnel Covers (4D & 4E), Aft Tunnel Covers (4F & 4G), Aft Belly Cover Panel (4H), and Rear Console (4I, EMG ships only) [conditued)

Collective Stick: Inspect condition of collective stick. Inspect all welds for cracks. Inspect C328-1 connecting rod assembly giving special attention to points of attachment. Inspect governor motor and governor motor am for looseness or binding. Inspect collective-activated micro switch for cracks or loose wires.

Collective Stick Torque Tube: Verify no corrosion pitting. Apply a corrosion-preventative compound such as LPS 2, ACF-50, or Corrosion-X to any unpainted, hosphate-coated area while avoiding contaminating governor friction clutch (a foam-type applicator works well). Ensure interior of open-end "box" structures at inboard attach point and at A205 fork connection are also treated.

Aft End of Cyclic Torque Tube and Yoke Assembly: Inspect torque tube and yoke, paying special attention to area around blocks and end of torque tube for cracks. Check play in belicrank bearings per Section 2.120. Inspect swaged bearing for movement in yoke.

Aft End of Cyclic Push-Pull Tube (C121-1) and Lower Ends of Vertical Push-Pull Tubes (C121-7): Inspect push-pull tubes for cracks. Check rod end jam nuts and palnuts for tightness and rod ends for play. Check rod end bearings for looseness. Inspect fork assembly areas. Check bearings for looseness. Check between bearings and swage for evidence of fretting.

Aft End of (C121-19) Tail Rotor Push-Pull Tube and Lower Bearing: Check witness hole. Check lower bellcrank bearing for play. Inspect all welds on support assembly for lower bellcrank and inspect surrounding sheet matal area for cracks.

Collective Push-Pull Tube (C121-19): Check for binding or nicks. Check witness holes. Check jam nuts and palnut for sightness and rod end for play.

Collective Friction Assembly: Check jam nuts and palnuts for tightness and rod ends for play. Inspect all welds on bellcrank support assembly and inspect surrounding sheat metal for cracks and corrosion.

Collective Spring Assembly (Manual Controls Only): Move collective up and down and verify no binding or cracking. Spring poils must not touch when collective is full down. Verify jam nut and palnut tightness. Verify rod ends play within limits. Verify guide rods are greased. If required by Section 1.101, service assembly per Section 8.221.

Throttle Control Linkage: Remove throttle control arm cover if cover is not transparent (under aft left seat [0-540], or inside tunnel [10-540], at firewall), inspect condition. Verify throttle control clearance to installed equipment and adjacent structure. Verify proper installation and security. Install cover.

Fuel Valve and Fuel Line: Inspect fuel line for damage and valve fittings for leakage (leakage is indicated by a blue or green residue, depending on fuel used, or odor of fuel). Verify no chafing of fuel lines.

Fuel Valve-to-Knob Torque Tube: Inspect condition. Verify attaching security.

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#### 2.410 Inspection Procedures and Checklist (continued)

5. Remove Aft Seat Back Assemblies (5)

Wiring: Check wiring for security and proper installation.

Pitot and Stade Lines: Check for security, chafing, and kinks.

Air Canditioning Refrigerant Lines (if installed): Verify security & no damage. MA

Evaporator Drain Tubes and Valve (if installed): Verify tubes are unobstructed Place a container under sediment-tube protruding from bottom of tee-fitting into right-oft baggage compartment. Remove plug from sediment tube and allow any accumulated moisture and debris to drain. Reinstell plug. Simultaneously squeeze drain tube and sediment tube near tee-fitting and verify check-velve ball moves up mamantarily.

Strobe Power Supply & Alternator Control Unit: Inspect strobe power supply and alternator control unit wiring. Inspect mounting panels for cracks.

Blind Encoder & Governor Controller: Inspect blind encoder and governor controller wiring. Inspect mounting panels for cracks.

Fasteners and Torque Stripes: Inspect condition and verify security of all fasteners. Renew deteriorated torque stripes per Figure 2-1.

6. Remove Engine Aft (6D), Bally (6C), and both side (6A & 6B) Cowlings

Vertical Firewall: Inspect vertical firewall condition, especially around structural attachment opints, verify no cracks, buckling or wrinkles.

Fuse(s) and Fuse Holder(s) (if installed on vertical firewall): Verify security and no cerrosion. Verify correct fuses: -66 wire requires AGC-3 fuse, -1601/-1602 wires require AGC-5 fuse. If installed, -1226 wire requires AGC-3 fuse.

Wiring: Verify security, proper installation, and no deterioration.

Electric Fuel Pump ((0-546 only): Verify security, proper installation, with unobstructed drain tube, and no leakage.

Fuel Line & Rose(s): Inspect condition. Verify security, proper installation, no leskage, & (IC-640 only) good condition of spirap insulation on fuel line between lirewait & gascolator. If deteriorated, replace MS3367-5-9 tyraps securing fuel hoses to clamps (reference R44-58-67).

Lower Steef Tube Frames: Thoroughly inspect lower steel tube structure for corrosion and inspect all welds for cracks. Ensure frames are not chafed by wires, hoses, clamps, etc.

Engine Cooling Panels: Inspect cooling panels for cracks and missing fasteners.

Off Cocker(s): Inspect oil cooler(s) and fittings for damage, leaks, cleanliness, and security. Check oil cooler mounting area(s) for cracks.

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contact lines.

2,410 Inspection Procedures and Checklist (continued)

6. Remove Engine Aft (6D), Belly (6C), and both side (6A & 6B) Cowlings (con Qi Lines: Inspect entire length of all pil lines and verify no crecks, abrasion, or broken clamps. Verify clearance; wires, ty-raps, and structure must not

Gascolator: With fuel valve off, remove and clean gascolator bowl and filter screen. Verify no deterioration of gasket. If gascolator bowl is secured by threaded collar and ring, lightly lube threads and ring with A257-6 grease. Reassemble and turn fuel valve on. Safety wire after ensuring no leaks occur. Verify drain valve is secure and torque-striped.

Mixture Control: Verify mixture control moves mixture control arm stop to stop. Inspect condition and verify security of mixture control cable clamps stop. Inspect conductor and varify security of intitude control cable carefully on bracket; push and pull cable housing to ensure it does not slip in clamps. Inspect condition and verify security of mixture control cable inner wire attachment to mixture control arm. Ensure freedom of rotation between mixture control arm and inner wire retention fitting (bolt) when arm moves. Verify mixture control safety spring is properly installed (so spring force holds mixture control arm at full-rich position if inner wire breaks).

Throttle Correlation Rigging: Check per § 10.150 and adjust as req

Full-Throttle Switch Rigging: Check per § 37-70 and adjust as required.

Air Box & Altemate Air Door: Ensure carburator heat elider valve if applicable) moves fully from stop to stop. Replace air filter (lubricating 10-540 air filter rubber with A257-8 rubber lubricatin will facilitate sealing). Check air box for condition and security. Verify spring-loaded alternate air door opens without binding and closes completely.

Engine Air Inlet Hose: Verify correct installation & security. Verify no rips, holes, or collapsed areas. Ensure hose is not challing frame. Remove hose. Visually inspect inside of hose to verify no separation between outer and inner layers. Also, flex the hose in all directions and listen for a crinkling sound, which is an indication of separation. (An airworthy hose does not make a crinkling sound when flexed.) Replace any hose with any indication of separation. of separation.

Carburetor Heat Scoop and Hose (O-540 engines only): Inspect for condition and security.

Heater Hose: Inspect for condition and security.

Battery and Battery Box (alternate locations under upper console or under left, front seat): Check cable terminals for cracks. Check each cell electrofyte for quantity and specific gravity if equipped with non-sealed battery. As required, perform capacity test per manufacturer's instructions of replace battery. Verify security and no obstructions in drain tube.

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2.410 Inspection Procedures and Checklist (continued)

Electrical and Antenna Wires: Inspect condition.

7. Open Cowling Doors (7A), Remove Tailcone Cowling (7B) & Mast Fairing (9)

Cowling Oper: Inspect hinges and latches for condition and security.

Takcone cowling: Verify no cracks, air inlet obstructions, or loose rivets

Verify security and no chaffing, kinks or tight bends.

MRGS input Yoke: inspect condition. Verify security clearance. Verify security of magnets.

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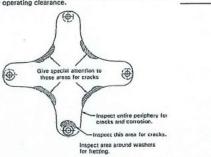
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#### 2.410 Inspection Procedures and Checklist (cont'd)

7. Open Cowling Doors (7A), Remove Tailcone Cowling (7B) & Mast Fairing (9)

Forward Flex Plate: Inspect condition, particularly edges. Verify security. Verify bonded washers are securely bonded to both sides of each flex plate arm. Verify operating clearance.



#### FIGURE 2-5 FLEX PLATE INSPECTION

Clutch Shaft Forward Yoke: Inspect condition. Verify no cracks, corrosion, or fretting. Verify security and operating clearance.

Rotor Brake: Inspect condition, including activating cable & pulleys and microswitch. Verify integrity of brake pads and 0,030 inch minimum pad thickness. Verify brake pad clearance to input yoke when brake is off. Verify security and operating clearance.

Jackshaft: Inspect entire welded assembly for cracks and corrosion. Inspect jackshaft supporting strut and tube weldments for security, cracks and corrosion.

Main Rotor Push-Pull Tubes: Inspect condition of viewable portions. Verify no cracks at ends. Inspect rod ends per Section 2.120. Verify no tears in sleeves (manual controls only). Verify security and operating

Main Rotor Push-Pull Tube Rollers & Bushings: (manual controls only): Inspect condition. Verify cleanliness, no wear into metal, and free movement of rollers.

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#### ROBINSON MAINTENANCE MANUAL 2,410 Inspection Procedures and Checklist (cont'd)

7. Open Cowling Doors (7A), Remove Tailcone Cowling (7B) & Mast Feiring (9) (cont'd)

Tell Rotor Push-Pull Tube and Upper Bellcrenk: Inspect C121-15 push-pull tube, especially at ends, for crecks. Check jam nut for tightness and rod end for looseness. Inspect bellcrenk and mounting for cracks or

Main Rotor Gearbox Cooling Hoses: Inspect both ends for security. Inspect for rips, holes, and chafing.

Mein Rotor Gearbox: Inspect main rotor gearbox, especially around gearbox mounts, cap mounting lugs, and mast tube for creaks. Verify no contamination and no deterioration of rubber mounts. Verify security of Hall Effect senders. Check Telatemp for overtemp indications.

Main Rotor Gearbox Oil: With ship on level ground, verify correct oil level and cleanliness using sight gage. If required by Section 1.101, drain and flush gearbox per Section 1.120.

Main Rotor Gearbox Chip Detector: If required by Section 1.101, cloa chip detector per Section 1.115.

Upper Steel Tube Frame: Use an inspection light and mirror to inspected weld, verify no cracks or corrosion.

#### CAUTION

Upper steel tube frame is fatigue-loaded and therefore susceptible to fatigue cracks. Inspect theroughly.

Horizontal Firewall: Inspect upper and lower surfaces of horizontal firewall, especially where bolted to steel structure, for crecks, buckling, or wrinkles. Inspect firewall under fuel tank for leakage (fuel residue). Verify no leaks. Verify Fuel Tanks: Inspect condition of visible portion.

security.

Auxiliary Fuel Tank fuel Line: Inspect condition. Verify clearance to structure. Verify no leakage. Verify security.

Fuel Return Lines & Pressure Relief Valve (IO-540 only): Inspect condition. Verify no leakage. Verify security.

Fuel Gage Senders & Wiring: Inspect condition. Verify no leaks. security.

Fuel Tank Vents: Check vent rube connections for security.
Fuel Tank Sump Draise: Verify both drain valves open easily, drain fuel freely, spring closed, and seal completely. Verify D663-1 shut-off clamp on aux rank drain tube seals completely, and inspect clamp and tube for damage and deterioration.

Low Fuel Waming: Turn MASTER switch on. With a clean wooden dowel, gently depress low-fuel sender float in main fuel tank and verify LOW FUEL warning light illuminates. Turn MASTER switch off.

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#### 2.410 Inspection Procedures and Checklist (cont'd)

7. Open Cowling Doors (7A), Remove Tailcone Cowling (7B) & Mast Fairing (9) (cont'd)

os: Inspect condition, to include gasket. Verity secu Verify alignment marks on cap and tank align when c Fuel Caps closed.

Nuts and Bolts: Inspect all nuts and bolts in this area for r

Cabin Bulkhead & Forward Hydraulic Servo Mounts: Inspect bulkhead and servo mounts (if installed) for corrosion, loose rivets, deformation and cracks.

cracks. Chutch Assembly: Inspect ends of drive shaft and seals on sheave for oil leakage. Inspect shaft for corrosion, especially at shaft to seal junctures. Remove any light surface corrosion at shaft to seal junctures, and apply a

Remove any light surface corrosion at shaft-to-seal junctures, and apply a suitable corrosion-inhibitor. Upper Sheave: Inspect sheave croaves. Replace any sheave showing corrosion pitting or flaking of metalized or anodized coatings, wear through anodized coatings, roughness, or shaip ridges. Drive V-Belts (see Section 2,507): Inspect V-belts. Verify no breakage, deterioration of rubber; cirts, fraying, oil, grease, or foreign objects. Actuator Fuses & Holders: Inspect condition. Verify no corrosion. Verify correct fuses (14-yoft systems require AGC-3 fuses while 28-volt systems require AGC-1 ft fuses). Verify twist-to-lock function and security. Actuator Upper Bearing and Strut: Inspect seals on both sides of bearing for damage. Inspect strut, including both rod ends, and check witness holes. Check for fretting between bearing inner races and clutch shaft. Bearing inner races should be torque striped to clutch shaft. If stripes are broken or missligned, shaft is unal/worthy. Check bearing Telatamp. Perform bearing inspection per Section 2,503 if Telatamp indication has increased without corresponding increase in ambient temperature.

Actuator Lower Bearing: Inspect as much of bearing as can be seen. Inspect fibergless scroll area at bearing attachment brackets for signs of cracking. Check bearing seals for evidence of deterioration. Inspect lower bearing brackets for looseness or was. Inspect bearing per Section 2.502 if discrepancies are found

Intermediate Flex Plate and Forward End of Tail Rotor Drive Shaft (see Figure 2-5): Inspect flex plate for cracks and fretting. Inspect yoke-todrive shaft weld for cracks (steel shafts).

Tailcone Attachment: Thoroughly inspect all welds in this area for cracks, corrosion, and security of attaching fasteners. Inspect tailcone

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2.410 Inspection Procedures and Checklist (cont'd)

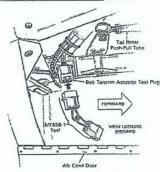
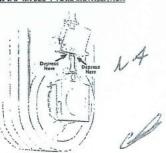


FIGURE 2-6 MT558-1 TOOL INSTALLATION



(Conling fan and scroll not shorm)

FIGURE 2-6A ACTUATOR SWITCH TEST

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2.410 Inspection Procedures and Checklist (cont'd

Open Cowling Doors (7A), Remove Tailcone Cowling (7B) & Mast Fairing (9) (copt d)

Actuator (C051): Verify clearence to structure and drive train when fully disengaged. Turn master switch on and engage clutch switch. While actuator is engaging, deprass extension limit switch lever fisee Figure 7-15 and verify gearmour stops; release lever and verify gearmotor resumes running. Verify integrity of activating cable for extension limit switch. Use an inspection mirror to observe column springs at end of bett-ensioning cycle: springs should snap outward simultaneously. Verify maximum engaged extension first per Figure 7-15 is not exceeded. Verify clearence to structure and drive train when fully engaged. Verify down-limit stop screw jam nut is tight.

Check actuator for failed-closed spring switch using either of the following two methods:

Method 1 - (actuator electrical harness must be equipped with "Test" plug per Figure 2-6)

With MASTER switch on and actuator fully engaged, connect one end of MT558-1 tool to actuator test plug and verify gearmotor remains off.

#### CAUTION

gearmotor activates when installing MT558-1 tool then a spring ritch has failed in closed position; immediately remove MT558-

- Disconnect MT558-1 tool, connect opposite end to actuator test p and verify gearmotor remains off.
- c. Disengage clutch and turn MASTER switch off.
- d. MT558-1 pins 1-2 jumper tests wire 98 spring switch; pins 2-3 jumper tests wire 91 spring switch (see Figure 14-10). Replace any malfunctioning switch per Section 7.551 before further flight.

Method 2 - (actuator electrical harness without "Test" plug)

- a. See to Figure 2-9A: WiththASTER switch or and scruster-fully angaged, depress column springs on one side of actuator until springs snap inveitif (use large screwdriver or similar tool with several layers to tape over god-to-protect actuator). Hold springs inward to a lakest one second. Actuator motor should not up. It-motor Starts, allow motor to run approximately two seconds. Then release pressure on column springs. Depress and hold column springs again. If motor starts again, opposite spring switch does not function properly.
- b. Disengage and re-engage actuator. Repeat Step a. on opposite-side
- c. Replace any non-functioning switch per Section 7.551 before further flight.

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2.410 Inspection Procedures and Checklist (cont'd)

7. Open Cowling Doors (7A), Remove Tailcone Cowling (78) & Mass Fairing (9)

Lower Drive Sheave: Inspera lower sheave. Replace any sheave showing corrosion pitting or flaking of metalized coating, wear grooves, roughness, or sharp ridges.

Sheave Alignment: Verify sheave alignment per Section 7.230. Adjust as

Hydroulia Reservoir: Inspect condition. Verify security and no significant leakage. If required by Section 1.101, replace filter per Section 1.170. Drain and Bush hydraulic system per Section 1.180 if oil has turned dark or emits bad odor. Add fluid as required.

nose of hydraulic fluid is vital to proper system operation. ly clean fluid from sealed containers and syuid contamination from dirty funnels, tubing, etc.

lic Reservoir Cooling Hose: Inspect condition. Verify hose is secure Brected at center of reservoir cooling fins.

Hydraulic Pump: Inspect condition. Pump temperature indication exceed gearbox temperature indication. Verify security and no leakage

reanage.

Forward Hydraulic Serves: Inspect condition. Inspect rod enes per Section 2.120. Verify security and no significant leakage. Verify serve input rod end-felevis area is clean; cleanase area with non-residue, non-relacional servent es required. Verify approximately 0.040 inch total free-play at error velve input. Verify volve clearance to surrounding structive while first controls are moved through full range of travel. Inspect condition and verify security of scissors at upper clevis of servos.

#### CAUTION

Use LPS PreSolve to clean hydrautic parts. Do not use alcohol.

Lise LPS PreSolve to clean hydraufic parts. Do not use elechol.

Aft Hydraufic Servo: Inspect condition. Inspect rod ends per Section 2.120. Verify security and no significant leakage, Verify servo input rod end/clevis area is clean; cleanse area with no-residue, non-elockokis solvent as required. Verify sporovimetely 0.040 inch total freeplay at servo valvo input. Verify valve clearance to surrounding structure white flight controls are moved through full range of travel.

Aft Hydraufic Servor inspect rod ends per Section 2.120. Inspect strachment to sheat metal, verify no cracks. Verify security. Hydraufic Elnes & Pittingst Inspect condition. Verify valve clearance to surrounding structure while flight controls are moved through full range of travel. Verify security and no leakage. Verify maintain 0.25 inch clearance between pump hoses and aux fuel tenk.

Fasteners and Torque Stripas: Inspect condition and verify accurity of all testeners. Renew deteriorated torque stripes per Figure 2-1.

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2.410 Inspection Criteria (cont'd)

8. Remove Tailcone Plugs (8A) & Aft Plastic Cover (8B)

NOTE

Aft plastic cover (88) is secured with two MS27039C0806 screws on Rev L and subsequent tailcones, On Rev K and prior tailcones ensure screws securing plastic cover are short enough to prevent interference in aft flex plate area.

Tail Rotor Drive Shaft: Inspect condition of that section of shaft that can be seen through each hole, looking for obvious defects such as cracks, bends, bows in shaft or corrosion or contact with inside of tailcone. Check running the Section 7.340. Inspect each end of drive shaft for cracks and corrosion.

#### CAUTION

Bends, bowing, dents, cracks and corrosio immediate replacement of tall rotor drive shaft. cracks and corrosion are cause for

Damper: Inspect rail roter drive shaft damper (CO41-1). Inspect bearing and housing for cracks, corresion, wear (see Figure 2-8), and bearing soci deterioration. Inspect arms and bearings for clearliness, cracks, bends and corresion. Inspect arms and bearings for clearliness, cracks, bends and Corresion. Inspect arms of inner race-to-drive shaft torque stripe. Tailcone Exterior: Inspect tailcone exterior for ricks, scratches, corrosion, feeting between skin joints, loose rivers and dents. Inspect tailcone for cracks in vicinity of antenna mounts and battery (if installed on tailcone).

Strobe Light: Inspect lens and strobe light mount for cracks, loose rivets, and security. If split red/clear lens is installed, verify clear half of lens faces aft. Inspect all antennas for condition and security.

Tailcone Battery (if installed): Inspect tailcone-mounted battery condition and security. Verify no debris between battery box cover and tailcone. Tollcone Interior: Inspect tailcone interior, especially around rivets, for cracks, ferting, and corrosion.

Tailcone Attachment: Inspect condition and security of four bolts attaching tailcone to upper frame.

Empennage inspect entire empennage and attachment points for damage, cracks, and loose fasteners. Check tail skid for evidence of tail strike. It evidence of tail strike is found, refer to special inspection section. Float Stabilizer (if installed): Inspect condition and security.

Aft Flex Plate (See Figure 2-5): Inspect flex plate for cracks, fretting, and distortion. If frotting is detected, contact RHC Technical Support. Inspect security of flex plate fasteners.

Tail Rotor Drive Shaft Aft Yoke: Using inspection hole, check yoke for cracks, fretting, and corrosion.

Tail Rotor Guard: Inspect for security. Check forward mount for cracks around welded area. Inspect area around aft mount for cracking and fretting.

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MODEL 844

2.410 Inspection Criteria (cont'd)

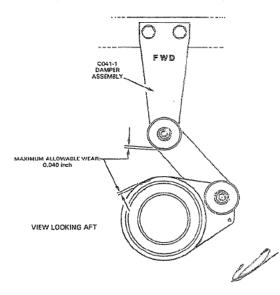


FIGURE 2-8 TAIL ROTOR DRIVE SHAFT DAMPER REARING INSPECTION

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#### 2.410 Inspection Procedures and Checklist (continued)

#### 9. Tail Rotor Gearbox and Tail Rotor

Input Shaft Yoke: Inspect flange and weld for cracks and corresion.

Input Seal: Inspect for leakage.

Gearbox: Inspect general condition. Look for leakage. Check oil quantity and clearliness through sight gage and adjust or flush as required. Check gearbox-to-tailcone mounting security. Inspect output shaft for nicks, scratches and corrosion. Check safety wire on applicable gearbox bolts. Check Telatemp.

#### NOTE

At 500 hours time-in-service or annually, whichever occurs first, remove chip detector and clean varnish from detector's magnetic probe and adjacent metal body (a toothbrush dampened with solvent works well). Also, drain and flush geathoxes at intervals not to exceed 500 hours time-in-service (rafer to Section 1.101).

Pitch Control Assembly and C121-17 Push-Puil Tube: Check pitch control essembly for free movement throughout its entire range end for looseness on output shart (0.25 inch maximum rotational play measured at pitch link attach bott). Inspect belicrank for cracks and ensure free movement. Pay special attention to spherical bearing stop stud protuding from underside of pitch control; it is permissible to have a single radial crack in the spherical bearing ball, Inspect aft end of C121-17 push-puil tube for cracks and check rod end for excessive looseness (refer to R44 SB-43A).

Pitch Links: Check rod ends for excessive looseness. If equipped with one-piece pitch links, disconnect and rotate inboard end outboard as required to obtain maximum service life.

Tail Rotor Blades: Inspect blade surfaces for excessive erosion, nicks, scratches, cracks, and corrosion. Check teil rotor blade root fitting bearings for frettling and looseness. Loose bearing outer race in root fitting is uneinvorthy, requiring replacement of blade. CO29-1 blades only: remove tip covers, inspect for debris and corrosion, & reinstall covers. CO29-1 or CO29-2 blades only: Inspect tail rotor blades for fatigue cracks par R44 SB-83. Refinish blades per Section 9.460 if excessive crosion is found.

Hub Plates and Hub: Inspect for cracks and corrosion, paying special attention to areas around blade and hub mounting bolts. Ensure teeter hinge bearing outer races move with hub and bearing inner balls and retaining nut and bolt remain stationary when hub is teetered. Hub should move freely on bearings without stiffness or jerkiness. Check tester hinge bearings for excessive play. For elastomeric bearings inspect per Section 2.125.

Fasteners and Torque Stripes: Inspect condition and verify security of all fasteners. Renew deteriorated torque stripes per Figure 2-1.

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### ROBINSON MAINTENANCE MANUAL 2,410 Inspection Procedures and Checklist (continued)

#### 10. Open Mast Fairing (9)

Mast Fairing: Inspect condition, especially where stiffeners intersect ribs.

Lower Swashplate Scissors: Inspect condition of scissors. Check rod end and bearing play. Check jam nut.

Vertical Push-Puli Tubes: Inspect for general condition and corrosion. For manual controls, inspect push-pull tube sleeves at rozers and guide.

Rod Ends: Check push-pull tube rod ends per Section 2.120.

Plastic Rollers and Guide (manual controls): Inspect plastic rollers and guide for cleanliness, security, and deterioration.

Pitot Tube: Inspect pitot line and tube, giving special attention to connecting area, for bending, cracking and kinking. Verify pitot tube elbow drain hole is unobstructed.

Fuel Tank Vents: Inspect condition and security of fuel tank vent tube clamps. Ensure pitot line is not chafing fuel vent tubes. Chack tube connections. Verify tubes are unobstructed and are not kinked, pixolad, or chafing.

Mast Fairing Ribs: Inspect for cracks especially around mest tube attachments.

#### 11. Rotor Hub Area

Swashplate Lower Scissors: Inspect condition. Inspect red ends per Section 2.120. Verify security.

Section 2.120. Verny security. Swashplate Upper Scissors: Inspect condition. Inspect rod ends and spherical bearings per Section 2.120. Measure selssors play per Figure 2-9. Observe scissor linkage while having someone raise and lower collective. Verify bolt, journals (or spherical bearing balls and spacers), and arm rotate together at each scissor linkage pivot. Verify operating clearance.

Swashplate Silder Tube: Inspect condition. Verify no cracks at rives heles or corrosion on base. Verify no damage to, or wear through, anodized tube surface.

surface.

Remove Swashplate Book Lower Tyrop: Lift boot from swashplate. Using an inspection mirror, inspect area between main rotor drive shaft and inside of slider tube. Verify no corrosion and no debris. Verify no boot damaga.

Swashplate: Inspect condition. Verify 0.020 inch maximum radial play between swashplate ball and slider tube. Rotate rotor by hand and verify operating clearance and no rough or dry bearings.

Swashplate Tilting Friction: Observe swashplate ball from below and have someone myove collective stick slowly up 8 down. Verify swashplate ball from below and have someone myove collective stick slowly up 8 down. Verify swashplate belignmediately moves with awashplate when awashplate reverses direction. Movement of swashplates without extreadant ball movement indicates axial play between ball and swashplate; adjust awashplate tilting friction per Section 8.413.

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#### 2.410 Inspection Procedures and Checklist (continued) 11. Rotor Hub Area (continued)

Install Swashplate Boot Lower Ty-rap: Verify correct boot position an security and no boot damage.

Hub: Inspect condition. Verify no nicks, scratches, gouges, or corrosion. If main rotor imbalance is suspected, check tester and coning things friction per Section 9.124. Verify no brown or black residue (indicates bearing wear).

Hinge Bolts: Inspect condition. Verify cotter pins are in place and secure. Verify bolt heads and nuts are torque striped to thrust washers.

Pitch Links and Rod Ends: Inspect condition. Inspect rod ends per Section 2.120, including centering. Verify security, including jamout tightness and proper safety wiring.

proper safety wiring.

Fasteners and Torque Stripes: Inspect condition and verify security of all fasteners. Renew deteriorated torque stripes per Figure 2-1.

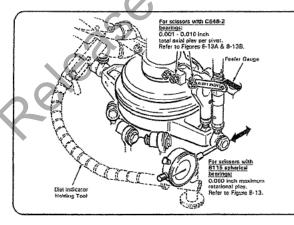


FIGURE 2-9 MEASURING UPPER SWASHPLATE ROTATIONAL PLAY (Identify scissors bearing type and measure as shown)

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#### 2.410 Inspection Procedures and Checklist (continued)

#### 12. Main Rotor Blades

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Boots: Inspect condition. Verify no boot damage or oil leekage. Verify proper boot position and security. Verify sufficient clearance from hub assembly through full control travel.

Blade Spindles & Root Fittings: Inspect area for damage per § 9.133. Verify proper installation and security of visible fasteners. Renew deteriorated torque stripes per Figure 2-1.

torque stripes per rigure 2-1.

C016-7 Main Rotor Blade Inspection: Remove tip covers. Remove corrosion and loose paint from tip covers, blade tips, and skin-to-sper bond lines. Epoxy prime, or prime and paint, any exposed bare metal on tip covers, blade tips, and skin-to-sper bond lines. Using an ANB70-4 weeker or 1955-or-laster U.S. quarter-dollar coin, top-test critical bond areas and verify no outli or hollow sounds. Visually inspect critical bond areas and verify no separation. Install tip covers, ensuring cover edges are flush with blade profile.

C016-2 or C016-5 Main Rotor Blade Bond Inspection: Perform R44 SB DA

Main Rotor Blade inspection: Inspect skins and doublers for scrotches and corrosion per § 9.131. Inspect blades for dents and local deformations per § 9.132 and for volids per § 9.134. As required, wax blades with soft cleaning cloths using carnauba-type wax (such as SC Johnson<sup>®</sup> Paste Wax). Ensure tip cover and blade tip drain holes are unobstructed.

Structural damage may occur if compressed air is applied to blade tip drain holes.

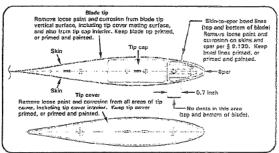


FIGURE 2-10 MAIN ROTOR BLADE TIP AND TIP COVES

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MODEL RAG

2.410 Inspection Criteria (cont'd)

12. Main Roter Blades (Refer to Section 9.130 for damage and repair limits)

Install tip covers: Verify security.

Fasteners & Torque Stripes: Inspect condition and verify security of all fasteners. Renew deteriorated torque stripes per Figure 2-1.

13, Scroll Area

Famwheel Assembly: Clean and inspect famwheel assembly for cracks and corrosion. Check leading edge of venes for damage. Verify spring pin and famwheel alignment marks are aligned [see Figure 2-11]; remove famwheel and inspect mating surfaces for damage if misalignment is

Fiberglass Scroll: Inspect fiberglass scroll for cracks and contact marks from farwheel. Inspect flexible seal around scroll inlet for any rips or damage. Inspect vane assembly in right upper scroll for damage. Verify drain hole is unobstructed.

Scroll Metal Inlet Lips &Gap: Verify 0.030 / 0.090 inch gap between lips and famwheel inlet (elongate lip attach holes as required to adjust gap).

14. Engine

Refer to Section 1.101. Refer to Lycoming Operator's Manual (P/N 60297-10 sections 4 and 5), Lycoming SI 1080B, and applicable engine component manufacturer's maintenance publications for 100-hour or annual inspection and service procedure.

Engine Cooling Panels: Inspect condition. Pay particular attention to panel(s) mounting oil cooler(s) and panel attached to alternator cooling hose. Verify no cracks or missing or loose fasteners. Verify security.

Alternator & Pulley: Inspect condition. Verify steel pulley luse magnet; aluminum pulley is not approved. Verify security. Verify electrical wining security.

Alternator Belt: Inspect condition. Replace belt if there are any cracks, missing teeth, or delamination. Check tension per Lycoming Service Instruction 1129 (latest revision). Verify proper belt slignment.

Emergency Spare Alternator Belt: Remove if installed.

Alternator Cooling Hose: Inspect condition. Verify no obstructions or holes. Verify security.

Air Conditioning Refrigerant Lines (if installed): Verify security, no damage, and clearance to adjacent structure. Verify dust caps installed on servicing fittings at vertical firewall.

Air Conditioning Compressor (if installed): Verify security.

Air Conditioning Compressor Drive Belt (if installed): Inspect condition. Verify 4.5/5.5 pounds force applied at mid-span of belt causes 0.11/0.17 inch belt deflection; adjust as required.

Muffler Elbow & Tailpipe Shields: Verify no cracks in shields and shield attaching brackets. Verify clamp security.

Change 14: JUL 2008

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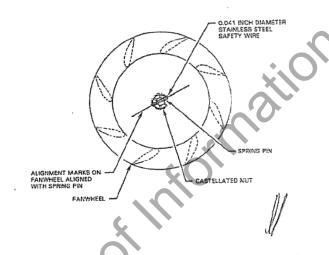


FIGURE 2-11 FANWHEEL ALIGNMENT MARKS

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ROBINSON MAINTENANCE MANUAL

MODEL R44

2.410 Inspection Procedures and Checklist (cont'd)

15. Exhaust System

Remove muffler heater shroud screws, and open shroud. Inspect muffler outer wall for cracks, deformation, and ruptures. Pay particular attention to talkpipe and riser attachment areas, weds, clamps, supports, riser flanges and gaskets. Pressurize muffler with low pressure air and inspect for leakage. Close and secure heater shroud.

16. Landing Gear

Skids and Shoes; Inspect left and right landing geer skids and skid shoes; minimum allowable shoe thickness is 0.05 inch. Verify drain holes are open (not applicable to float landing gear).

Struts and Elbows (open fairings if installed): Inspect for cracks and corrosion, especially at elbow joints, inspect weld area at bottom of strut for cracks.

Landing Gear Fairings (if inetalled): Inspect for cracks and loose rivets. Verify security.

Crosstubes, inspect, especially at elbow joints, for cracks and corrosion. With helicopter on level ground, measure distance from ground to tall skid. If dimension is less than 30 inches, one or both cross tubes must be replaced (see Section 5).

Landing Gear Attach Points: Check forward attach points for loose rivets, cracks, bucking, and fretting. Check bearing mounts for loose awages and wom bearings.

Utility Floats (if installed): Inspect for damage. Refer to Pilot's Operating Handbook for proper inflation pressure.

Pop-out Floats (if installed) Pressure Cylinder & Valve: Inspect condition. Verify security. Verify pressure goge indicates correct pressure for ambient temperature; refer to placard on cylinder for limits.

Pop-out Floats (if installed) Inflation Manifold: Inspect condition. Verify no chafing or pinching of bases associative than the charge of the condition of the ching of hoses, especially where hoses pass thru structure.

Pop-out Floats (if installed): Inspect condition of stowed floats. Verify no holes, cuts, tears, abrasion thru, or unraveling of, float covers. If cover damage is found, inflate and inspect floats. Verify all float cover snaps and hook-and-loop fasteners are properly secured. Verify float-to-skid attachment cenuity. attachment security.

NOTE

Annually apply A257-7 dry-film lubricant (see Section 1.470) to float cover snap mating surfaces. Annually perform Sectio 5.630 leak check. Every three years, perform Section 5.640 emergency inflation test.

Page 2,34 ROBINSON MAINTENANCE MANUAL 110 Inspection Procedures and Checklist (cont'd)

MODEL R44

Verify no loose equipment that might foul controls.

Static Ports: Inspect static ports for obstructions. If fixed utility floats are installed, verify air dam installed aft of both static ports.

Rear Seat-Bottom Suspension Straps: Inspect condition and security. Seat Belts and Shoulder Hamesses: Inspect for fraying and broken strening. Seat Beats and shoulder harmesses, impect in hearing the check inertia reels for proper operation by pushing harmess quickly to verify locking function. Check buckles for proper operation. Check belt and reel attach points for security.

NOTE

TSO tag not required on factory installed harnesses.

Trim Controller (Manual flight controls only): Acquet trim controller per

Windows: Minor damage that does not imper pitot's visibility or indicate impending structural failure is acceptable. For cracks and crazing adjacent to windshield retainer strips, refer to Section 2.580. Acceptable damage includes:

- a. One nick, not more than 0,010 inch deep and occupying an area not larger than 0.25 by 0.50 inch per square foot.
- b. Scratches not more than 0.010 inch deep and 5 inches long.
- c. Any surface defect such as small spots or steins that can be removed with light polishing d. Minor polarization faults in small areas of windshield near edges.

Skin: Inspect skin for damage. Inspect for loose rivets, indicated by cracked paint and/or black residue around heads.

Doors: Inspect for cracks around hinges and latches. Check vants for operation. Ensure hinge pins are secured with cotter pins. Check tightness of hinge mounting screws. Verify proper operation of door latching and locking mechanisms.

Chin Drains (R44 Clipper): Verify no obstructions.

18. Special Equipment (if installed)

Peak Beam Searchlight: Check for proper operation. Align beams by focusing both lights to smallest spot possible and shining against a wall at least 100 feet away. Verify both spots hit same point within one foot. least 100 teet away. Verify both spots in salie point want for lock.

Nose Gimbal and Monitore: Turn power on and verify infrared units complete cool down sequence in manufacturer's recommended time. Verify gimbal steers smoothly in azimuth and elevation. Check focus and zoom of infrared/video. Check for clear images on monitors. Verify retractable monitor retracts without interforence.

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Change 13: OCT 2006

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### 2.410 Inspection Procedures and Checklist (continued)

#### 18. Special Equipment (If inst幽ed)

Spectrolab Searchight: Verify light starts and cooling fan operates. Verify searchlight steers smoothly in azimuth and elevation. For slaved units, turn on slaving and verify light follows nose gimbal approximately.

FM Redios: Verify radios transmit and receive properly and control head wat programs radios properly.

Video Tape Recorder: Verify all video tape recorder modes operate properly and remote control correctly controls modes.

Overhead Light: Verify overhead light on/off.

Transmit and intercom Switches: Verify proper operation of special transmit and intercom switches.

Talent Light: Verify talent light on/off, acceptable friction.

Micro Cameras: Verify all micro cameras are selectable from video switcher and produce focused, upright images on monitors.

TV Tuner: Verify TV tuner receives broadcasts (video clear on monitors,  $\mathcal{M}^{\mathcal{A}}$  audio clear in headset).

Microwave Antenna: Verify omnidirectional microwave antenna extends/ interacts properly. Verify up/down indicator lights function properly.

Electromagnetic and Radio Frequency Interference: With all special equipment turned on, check for EMI/RFI with tach, COM, intercom, compass, or other systems.

19. Life-limited Parts, Component Overhaul and Retirement, ADs, & SBs

Life-Limited Parts: Replace life-limited parts that have reached maximum service life per § 3.300. Verify components installed correspond with helicopter maintenance record and have sufficient time remaining for projected operations.

Component Overhaul: Replace components that have reached maximum service before overhaul per § 3.100. Verify components installed correspond with helicopter maintenance record and have sufficient time remaining for projected operations.

Component Retirement: Replace components that have reached maximum service life per § 3.100. Verify components installed correspond with helicopter maintenance record and have sufficient time remaining for projected operations.

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ROBINSON MAINTENANCE MANUAL

2.410 Inspection Procedures and Checklist (continued)

19. Life-limited Parts, Composent Overhauf and Retirement, ADs, & SBs (continued)

Service Bulletins: Verity applicable airtrams, engine, and accessory lianvice Bulletins (SBs) have been compiled with according to manufacturars' instructions. Some aircraft may be affected by SBs that require recurring inspections at less than 100-hour or annual intervals. RHC Service Bulletins are available online at <a href="https://www.robinsonholi.com">www.robinsonholi.com</a>, under the Publications tab.

20. Required Documents and Placards

Documents: Check that required documents (Airworthiness Certificate, Registration, applicable Radio Station License, Prot's Operating Handbook, Equipment List/Weight & Balance Data) are on board, legible, and current.

Placards: Verify required placards are properly installed, legible, and current. Refer to Pilot's Operating Handbook Section 2 for placard requirements.

21. Inspection and Access Covers

Foreign Objects Removed: Verify all tools, loose hardware, rags, and other foreign objects are removed from helicopter.

Covers Closed and Secure: Install/close all inspection and access cover removed in preceding steps. Verify security of all access covers.

Clipper I Airbox Sealed: Ensure air box cover perimeter is sealed with aluminum tape (Clipper I models only).

22. Maintenance Records

Maintenance Records: Verify maintenance records are accurate, legible, and complete. Enter maintenance performed (such as per replacement, equipment adjustments, servicing, and lubrication) and impaction data. Data must include a description of (or reference to data acceptable to the Administrator) the work performed, data, helicopter total time in service, signature, certificate type and certificate number of person approving aircraft for return to service.

Inspection Procedures and Mechanic's signature: . 760817

JUN 2014

VH-NBY

JU: 321

LYCOMING OPERATOR'S MANUAL O-540, IO-540 SERIES

SECTION 4 PERIODIC INSPECTIONS

1. DAILY PRE-FLIGHT (ENGINE).

PERIODIC INSPECTIONS

- a. Be sure all switches are in the "Off" position.
- b. He ture imagneto ground wires are connected.
- c. Check oil level.

SECTION 4

- d. Check fuel level.
- c. Check fuel and oil line connections, note minor indications for repair at 50-hour inspection. Repairing leaks before aircraft is flown.

LYCOMING OPERATOR'S MANUAL 0-340, ID-340 SERIES

- f. Open the fuel drain to remove any accumulation of water and sediment.
- g. Make sure ell shields and cowling are in place and secure. If any are missing or damaged, repair or replacement should be made before the aircraft is flown.
- h. Check controls for general condition, travel and freedom of operation.
- i. Induction system air filter should be inspected and serviced in accordance with the airflame
- 2. 10-HOUR INSPECTION (ENGINE). After the first ten (10) hours of operating time, next, rebuils, newly overhauled engines replace the oil filter, and conduct an inspection of the contents of the need newly overhauled engines replace the oil filter, and consu-filter for traces of metal particles.
- 3. 25-HOUR INSPECTION (ENGINE). At twenty-five (25) hours of operating time since the first inspection, new, rebuilt, or newly overheaded engines should undergo a 50-fector imposition including chaining and renewing lubricating oil, replacing the oil filter, and inspecting the contents of the med oil filter.

#### NOTE

If the engine does not have a full-flow oil filter, change oil every 15 hours; also, inspect oil pressure and suction screens for metal contamination, and clean thoroughly before

- 50-HOUR INSPECTION (ENGINE). In addition to the items listed for chily pra-flight inspection, the illowing maintenance checks should be made after every 50 bours of operation. following ma
- a. Ionition System -
  - (1) If fooling of spark plugs has been apparent, clean them and check electrode gap. Rotate bottom plugs to upper position.
  - (2) Examine spark plug leads of cable and ceramics for correcton and deposits. This credition is evidence of either leaking spark plugs, improper cleaning of the spark plug walls or connector ends. Where this condition is found, clean the cable ends, spark plug walls and curantics with a dry, clean cloth or a clean cloth moistened with neithyl-actual-halp parts about the clean and property of the clean cloth or a clean cloth moistened with neithyl-actual-halp parts about the clean and property of the clean cloth or a clean cloth moistened with neithyl-actual.
- (3) Check ignition barness for security of mounting clamps and be seen competions are tight at opark plug and magneto terminals.

4-2

# PERIODIC INSPECTIONS

SECTION 4

Perhaps no other factor is quite so important to sofety and durability of the aircraft and its components as faithful and diligent attention to regular checks for minor troubles and prompt repair when they are found.

The operator should bear in mind that the items listed in the following pages do not constitute a complete aircraft inspection, but are meant for the engine only. Consult the airframe manufacturer's handbook for

Pre-Starting Inspection - The daily pre-flight inspection is a check of the aircraft prior to the first flight of the day. This inspection is to determine the general condition of the aircraft and engine.

The importance of proper pre-flight inspection cannot be over emphasized. Statistics prove several hundred accidents occur yearly directly responsible to poor pre-flight.

Among the major causes of poor pre-flight inspection are lack of concentration, reluctance to acknowledge the need for a check list, carelessness bred by familiarity and haste.

## LYCOMING OPERATOR'S MANUAL O-540, IO-540 SERIES

# SECTION 4 PERIODIC INSPECTIONS

- First Line and Induction System Check the primer lines for leaks and security of the clamps.

  Remove and clean the fuel inlet strainers. Check the mixture control and throate linksige for travel, freedom of movement security of the clamps and lubricate if necessary. Check the air intuke ducts for leaks, security, filter damager, evidence of dust or other solid material in the ducts is indicative of inadequate filter care or damaged filter. Check vent lines for evidence of field or oil seepage; if b. Fuel Line and Indu present, fuel pump may require replacement.
- (1) Check oil lines for leaks, particularly at connections: for security of anchorage and for wear due to rubbing or vibration, for dents and cracks.
- (2) Replace elements on external full-flow oil filters. Before disposing of used element check interior folds for traces of metal particles that might be evidence of internal engine damage. Drain and renew lubricating oil. (Reference latest revision of Service Instruction No. 1014 for proper oil.)
- Ethoust System Check attaching flanges at subaust ports on cylinders for evidence of leakage. If they are loose, they must be removed and machined flat before they are reassembled and tightened. Examino exhaust manifolds for general condition.
- Cooling System Check cowling, baffles and baffle seals for damage and secure anchorage. Any damaged or missing part of the cooling system mass be repaired or replaced before the sircraft resumes operation.
- Cylinders Check rocker box covers for evidence of oil leaks. If found, replace gasket and tighten screws to specified torque (50 in.-lbs.).

Check cylinders for evidence of excessive heat which is indicated by burned paint on the cylinder, his condition is indicative of internal damage to the cylinder and, if found, its cause must be termined and corrected before the aircraft resumes operation.

Heavy discoloration and appearance of seepage at cylinder head and barrel attachment area is usually due to emission of thread lubricant used during assembly of the barrel at the factory, or by slight gas leakage which stops after the cylinder has been in service for awhile. This condition is neither harmful not detrimental to engine performance and operation. If it can be proven that leakage enceeds these conditions, the cylinder should be replaced.

- 100-HOUR INSPECTION. In addition to the items listed for delly pre-flight, and 50-hour inspection, the following maintenance checks should be made after every one hundred hours of operation.
- - (1) Check all wiring connected to the engine or accessories. Any shielded cables that are dam should be replaced. Replace clamps or loose wires and check terminals for security cleanliness.
  - (2) Remove spark plugs; test, clean, regap, and rotate them. Replace if necessary.



SECTION 4 PERIODIC INSPECTIONS

Lycoming operator's manual 0-80, 10-80 series

- b. Lubrication System Dmin and renew lubricating oil.
- c. Magnetor Check breaker points for pitting and minimum gap. Check for excessive oil in the breaker compartment, if found, wipe dry with a clean linders cloth. The first located at the breaker points should be lubificated in accordance with the magnetor manufacturer's instructions. Check magneto to engine timing. (Timing procedures for Bendix and Slick magnetor are covered in the Maintenance
- d. Engine Accessories Fingine mounted accessories such as pumps, temperature and pressure sensing units should be checked for secure mounting, tight connections.
- e. Cylinders Check cylinders visually for cracked or broken fires.
- f. Engine Mounts Check engine mounting boks and bashings for recurity and excessive wear. Replace any excessive wear. Replace any bushings that are excessively worn.
- g. Primer Numles Disconnect primer nozzles from engine and check for equal floro.
- h. Fuel Injector Nomies and Lines Check fuel injector nozzles for ionsenses. Tighten to 60 in.-lbs. torque. Check fuel line for dye stains at connections (indicating leakage) and security of lines. Repair or replacement must be accomplished before aircraft resumes operation.
- Carburetor Check throttle body attaching screws for tightness; the convert tosque for those scarws is 40-50 in -lbs.

480-HOUR INSPECTION. In addition to the items listed for daily per-flight, 50-kops and 100-hour inspections, the following maintenance check should be made after every 400 hours of operation.

Valve Inspection — Remove rocker box covers and check for freedom of valve nockers when valves are closed. Look for evidence of shromasi wear or broken parts in the area of the valve tips, valve keeper, springs and spring seats. If any indications are found, the cylinder and all of its components should be removed (including the piston and connecting rod assembly) and inspectate for strains chemage. Replace they parts that do not conform with limits aboven in the Intext revision of Special Service Publication No. SSP-

7. NON-SCHEDULED INSPECTIONS. Occasionally, service bulletins or service instructions are issued by Lycoming that require inspection procedures that are not listed in this measured. Such publications, usually are limited to specified engine models and become obsolete after corrective modification has been accomplished. All such publications are available from Lycoming distributions, or from the factory by substription. Consult the latest revision of Service Letter No. L114 for subscription information. Maintenance facilities should have an up-to-date file of these publications available for at all inners.

: 12 August 2019

R44-series and R66 Owners, Operators, and Maintenance Personnel

**ECT:** HeliSAS Flight Control Computer

CTIVITY: HeliSAS Flight Control Computers (FCCs) having Hardware Mod Code prior. Affected computers were installed in autopilot-equipped R44-series and R66 copters manufactured in 2015 and early 2016. A reference list of aircraft and FCC all numbers as-delivered from the Robinson factory is provided on page 2. The FCC all number is listed in the Installed Equipment section of the Airframe Maintenance ord delivered with the helicopter. The Hardware Mod Code can also be read from a all on the bottom of the unit if the unit is loosened from its mounts.

OF COMPLIANCE: Within the next 150 flight hours or by 31 December 2019, hever occurs first.

GROUND: S-TEC, the manufacturer of the HeliSAS autopilot, has issued Service r SL 19-011 which provides instructions to upgrade the FCC to address a possible e of the audio warning alert for an autopilot disconnect. SL 19-011 is available on Robinson website.

#### LIANCE PROCEDURE:

etermine Hardware Mod Code of installed FCC.

FCC has Mod Code B or prior, remove per R44 Illustrated Parts Catalog (IPC) iqure 22-7 or R66 Maintenance Manual (MM) § 22-30.

pgrade computer per S-TEC SL 19-011.

stall upgraded FCC per R44 IPC Figure 22-7 or R66 MM § 22-30.

ake appropriate maintenance record entries.

(OVER)



#### APPROXIMATE COST:

Parts: As indicated in S-TEC SL 19-011

Labor: As indicated in S-TEC SL 19-011.

FCCs with Hardware Mod Code B or price Delivered on R44-series Helicopters					
Helicopter S/N	FCC S/N				
11294	01311-1528-00561				
13889	01311-1528-00558				
13925	01311-1528-00559				
13934	01311-1527-00556				
13936	01311-1528-00560				
13947	01311-1528-00557				

	re Mod Code B or prior R66 Helicopters
Helicopter S/N	FCC S/N
No Record	01311-1526-00536
0373	01311-1526-00535
0552	01311-1505-00439
0602	01311-1511-00457
0618	01311-1507-00444
0648	01311-1510-00445
0650	01311-1510-00448
0653	01311-1511-00455
0654	01311-1511-00456
0657	01311-1510-00446
0658	01311-1511-00458
0659	01311-1510-00447
0660	01311-1513-00469
0661	01311-1511-00454
0662	01311-1513-00472
0663	01311-1513-00464
0664	01311-1513-00470
0665	01311-1513-00471
0667	01311-1513-00468
0668	01311-1517-00486
0669	01311-1517-00485

Helicopter S/N	FCC S/N
0672	01311-1517-00484
0674	01311-1517-00487
0675	01311-1517-00488
0676	01311-1523-00512
0681	01311-1523-00515
0682	01311-1523-00511
0683	01311-1523-00513
0687	01311-1523-00514
0688	01311-1524-00526
0690	01311-1524-00524
0691	01311-1527-00548
0692	01311-1525-00527
0694	01311-1527-00551
0696	01311-1527-00550
0697	01311-1527-00549
0770	01311-1524-00525

THE DESIGN ENGINEERING ASPECTS OF THIS BULLETIN HAVE BEEN SHOWN TO COMPLY WITH APPLICABLE FEDERAL AVIATION REGULATIONS AND ARE FAA APPROVED.

oflinformation



Job #: 299

Rego: **NBY** 

AFTTIS: 186.41

Start Date: 18-07-2019

Finish Date: 20-07-2019

Customer: Ultimate Outback Experience

Job Type: 100Hrly/Annual Inspection

Coordinator:

Description: 100Hrly/Annual Inspection

VH-NBY J/V-299

## Worksheet

Aircraft: R44

Rego: VH-NBY

Co-ordinators Signature:

number for and on behalf of Pearl Coast Heli Maintenance Pty Ltd COA - 0686

# Pearl Coast Heli Maintenance Pty Ltd COA - 0686

Total

186.41

Counter

Hours

Component

Airframe

Serial #: 2544	Print Name : SZZ	Airframe Days	19-07-2019	
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Interval 100	many representation of the State Section 1 and the State Section a		Licence No	594407
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Rego: VH-NBY	Co-ordinators Signature :		er en generalen antalen al antalen la		Component	Counter	Total	Pearl, Coast
Serial #: 2544	Print Name :	s 22			Airframe	Hours	186.41	Hell Maintenance
<b>Job No :</b> 299	Date :	2017/19-	Licence No: 59440	7	Airframe	Days	19-07-2019	
			LICENCE NO: 55440			X		
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Task No 006	Action Taken :			U	The state of the s			3 22
Category Airframe	C/O NDF				- Aggin's response service control from 1 and 1 did 1 did 1 dian 1 di		A.M.E	manuse of the control physical particles
Monitor By Hours, Days					The state of the s	The second second	L.A.M.E	
Interval 100				The second secon	Andrew Andrews and Control of the Co			
Due 188.62, 12-05-2020				The second second second second	The state of the s		Licence No	594407
To Run 2.21					Labour Hours		Date	20/07/2019
Work Required: 100HRLY/12MONTH	IS POH Update/Status Check		40	and the second s	erreference richt einer son einer Strach eine der der einer eine der aber ein andere eine Anstein der der eine		ATA Code :	
Task No 007	Action Taken :			PPP (B) B) We Plake 1 Manks of h Securities of culture comp.	- The second			s 22
Category Airframe	C/O NDF				4.1. *** 11.1		A.M.E	neath and
Monitor By Hours, Days			Annual or providence of complete control of the con	F. add 1999 legical 17 and 1 man 1 may 1 m 1 years on a langu	n i de las liudi i i momente e la directa e la secola de l	Mile Control of the Control	L.A.M.E	
Interval 100					the second district the second districts are second as a second second		TOTAL DEL CONTROL DE LA CONTRO	
<b>Due</b> 188.62, 12-05-2020			Spendengaga magaza ja 1919 ga 1	The state of the s		TO THE PERSON NEWS TO SERVE	Licence No	594407
To Run 2.21			THE CAR SE A COUNTY OF THE CONTRACT OF THE CONTRACT OF THE COUNTY OF THE		Labour Hours	4.7.1.188.47	Date	20/07/2019
Work Required: 100HRLY/12MONTH	IS Sheave Alignment/Actuator Swi	itch Check IAW RHC R44 M/M Section	on 7.230		C. C. Barrella Medical Communication for the second consistency consequency against an	entrope esperiment programme esperiment esperiment de la companya della companya	ATA Code :	
Task No 008	Action Taken :		ment over ever over mente of "about" date on shill consend. I benefit a company agreement expenses	10 - 10 - 10 - 10 - 10 - 10 - 10 - 10 -				s 22
Category Airframe	C/O LHS 0.080" RI-	4S 0.060" Within Limits NDF			on the contract of the contrac	,	A.M.E	
Monitor By Hours, Days		.0		and the second of the second o			L.A.M.E	
Interval 100		7				·		
Due 188.62, 12-05-2020	60						Licence No	594407
Yo Run 2.21				1	Labour Hours		Date	20/07/2019

Pearl Coast Heli Maintenance Pty Ltd COA - 0686

Worksheet

Aircraft: R44

Form No: nult

UH-NBY J/N: 299.

Pearl Coast Heli Maintenance Pty Ltd COA - 0686 Worksheet Total Aircraft: R44 Component Counter Co-ordinators Signature: 186.41 Hours Rego: VH-NBY Airframe Print Name: 19-07-2019 Days Serial #: 2544 Airframe Date: 25/ 7.117. Job No: 299 Licence No: 594407 ATA Code : Work Required: RHC R44 S/B 099 24V Battery Electrolyte Leakage Action Taken: A.M.E Task No 009 N/A Due A/C S/N Category Airframe L.A.M.E Monitor By Hours Licence No 594407 Interval 100 **Due** 188 20/07/2019 **Labour Hours** To Run 1.59 ATA Code: Work Required: RHC R44 S/B 100 R44 RII Induction Hose Action Taken: Task No 010 N/A Due A/C S/N Category Airframe L.A.M.E Monitor By Hours 594407 Licence No Interval 100 **Due** 188 Date 20/07/2019 Labour Hours To Run 1.59

Aliciale: N44	Co-ordinators Signature :		Component	Counter	Total	R
Rego: VH-NBY	William In the Committee of the Committe		-		Total	Pearl ACoast
Serial #: 2544	Print Name : \$22		Airframe	Hours	186.41	Hëli Meintenimce
Job No: 299	Date: 20/7/19	Licence No : 594407	Airframe	Days	19-07-2019	
	NAME OF THE PARTY	Licence No : 39440/		X		
Elec. Instr. Radio						
Work Required: 12MONTHS Annual	ELT Inspection IAW 14 CFR 91.207			70	ATA Code :	
Task No 011	Action Taken :					4
Category Elec. Instr. Radio	Entered M/R				A.M.E	s 22
Monitor By Days		TO A STATE OF THE PROPERTY OF	XU	to the Committee and the state of the second	L.A.M.E	
Interval 365		COMMITTED COMMITTED CONTROL CO				sian.
Due 11-09-2019		ANTENNA ANTENNA DE PROPERTO DE LA CONTRACTOR DE LA CONTRA		74.	Licence No	594407
To Run 54	The state of the s		Labour Hours		Date	20/07/2019
Work Required: 2YRLY CAO 100.5	Altimeter Altitude Reporting Mode C Test				ATA Code :	
Task No 012	Action Taken :		and the part of the Comment of the C		ATA Code :	
Category Elec. Instr. Radio	Entered M/R	Anna ar anna ann ann ann ann ann ann ann	The state of the s	and an Art World State on the State of the S	A.M.E	<b>22</b>
Monitor By Days	PPP CHROCIFE and involved medition of the control o	A PARTICIPATION OF THE PROPERTY OF THE PARTICIPATION OF THE PARTICIPATIO	thanks the state of the state o	er er er sommendelse skrade skare opgever	1 4 14 5	
Interval 730	The state of the s				L.A.M.E	-
Due 23-05-2020	Miles of an example of an example of an example of the first of the fi		that what with the comment of the property of	NY - Malakana Pandidikkana mananggapan	Licence No	594407
To Run 309	The Marketing of the Albanian or the control of the property of the property of the Albanian and Albanian or the control of the property of the Albanian and Albanian or the control of the Albanian and		tami dia kanganasa any magangangang ay ay ay ay ay	The sales half the thick security condition	Date	20/07/2019
Work Required: 2YRLY CAO 100.5 A	ATC Transponder Tect		Labour Hours		Name of Street, Street	20/07/2019
**************************************	Action Taken :		the section of the se		ATA Code :	
Task No 013	Entered M/R	AND THE COLUMN ASSESSMENT AND THE COLUMN ASSESSMENT ASS	and the second s		A.M.E	
Category Elec. Instr. Radio	Ministration interesting interest on the support time and approximately the support time and approximately approxi	and the second section of the 1/2 to the telescond and the conditional feetings are the second contract, and the second s		Whetheliteress and the halps of the second	s	22
Monitor By Days	Marie 1980 Military 1971 Company of the marie of the following the file of the file of the following	O. 1000 -			· L.A.M.E	
Interval 730		Produktion dan bakka aran kakka arah daga maga per gammanda katakka angalakkan ng paga arah gang ayang pammang	Weeklike Song Self Care and govern and government		Licence No	594407
Due 03-05-2020	THE PARTY OF THE P	en en journespering of the production of the control of the production of the produc				337707
To Run 289			Labour Hours		Date	20/07/2019
Work Required: 2YRLY CAO 100.5 P	Pitot Static System Test		men elemente i i mengel son nga i sanga ni salama sasawi sah s	State State State and the State Stat	ATA Code :	
Task No 014	Action Taken :					The second secon
Category Elec. Instr. Radio	Entered M/R	The second secon			A.M.E	s 22
Monitor By Days	79	The state of the s			L.A.M.E	
Interval 730		en e		.,		
<b>Due</b> 20-05-2020			Z		Licence No	594407
To Run 306			Labour Hours		Date	20/07/2019
The state of the s			Labour Hours		No.	29,07,202

Coast Heli Maintenance Pty Ltd COA - 0686

**Worksheet** 

VH-NBY J/N:299

Pearl Coast Heli Maintenance Pty Ltd COA - 0686 Worksheet Total Counter Component Aircraft: R44 Co-ordinators Signature : 186.41 Rego: VH-NBY Hours 4 Airframe Print Name: s 22 19-07-2019 Days Serial #: 2544 Airframe Date: 25/7/19 Job No: 299 Licence No: 594407 ATA Code: Work Required: 50MRLY/12MONTHS Lights/Electrical/Warning Lights Check Action Taken: A.M.E Task No 015 C/O NDF Category Elec. Instr. Radio L.A.M.E Monitor By Hours, Days 594407 Licence No Interval 50 Due 138.62, 12-05-2020 Date 20/07/2019 **Labour Hours** To Run -47.79

Form No: null

Rego: VH-NBY			The state of the s	Comp	ponent	Counter	Total	Pearly \Coast
Serial #: 2544	Print Name : S2			Airfra	me	Hours	186.41	Hell Maintenance
Job No : 299	Date: 2	017.18,	Licence No: 594407	Airfra	me	Days	19-07-2019	
	Cham	Andrews and the control of the contr	Licence No: 594407	**************************************		X		
Engine								
Work Required: 100HRLY 100 Hrly Mainte	enance & Inspection IAW Lycom	ing Operators Manual			4	70	ATA Code :	
Task No 016	Action Taken :	The state of the s	Friends alone in manner propressing to 20 Marie and Panalahanan Marie Barahanangay (1997) and the fact of barah	Parakitika magagat Aritanakan di kacamatan kantar sa dingan ngikiya ngitika kabasa sa sa kana			and the state of t	22
Category Engine	C/O NDF	Printer Mile Park the second s	To the state of th	<ul> <li>A contract on the Art (1974) While have a company quantity of the contract of the</li></ul>			A.M.E	
Monitor By Hours	and the second of the second o	THE STATE OF THE S						
Interval 100	all the contract of the first of the first of the first of the contract of the contract of the first of the f	to the comment of the continues and account of the contract of					L.A.M.E	Mile de state de la company
Due 188.62	Programme and the state of the	epinensy transcension, Sci. 1984 and William Street, S	F. The B. Company programming and september and while Milledge Company and programming a program of the Section 2015.	and the state of t	October a community on the opposite	2 · · F. · Ø · All · · · · · · · · · · · · · · · · ·	Licence No	594407
To Run 2.21		, a group, we see that the shallowing one can be considered by the second state of the			Principal Company		Date	Management of the second secon
Mode Booking at TSM C/D C10C 10C		in a company of the property of the second s		Labour	Hours		Date	20/07/2019
Work Required : TCM S/B 643C 100Hrly M	Action Taken :						ATA Code :	
Task No 017	STATE OF STA	er diederte hann verstendigt ein diedert voorbest hier die een meersten gebore.	The state of the s	i Book e restricte a settlete a medicaria a su	***************************************		A.M.E	s 22
Category Engine	C/O NDF	and the second s					A.M.C	
Monitor By Hours, Days		en engel en grego a la comita de	70				L.A.M.E	
Interval 100				The state of the s			L-10A-11-Ladd	Wald to see your
Due 188.62, 12-05-2020			01	The second control of the second control of the second of		*148.51 - 51.41 55 50,	Licence No	594407
To Run 2.21		The first contract of the cont	All a 175 Auto-articles and a second	Labour	Hours		Date	20/07/2019
Work Required: LYC S/B 480F 4Monthly O	Oil & Filter Change			A CONTRACT OF THE PARTY OF THE			Marie al	
Task No 018	Action Taken :	в в поставления об чение не неворите (ид 19°и) М. Чандан и на настойнован сонов времен предодателен стру д		Commence on the first aggreency of the sign of philosophic behavior and the second aggreept on a green	Perfect Statement Philips And new Yorkstein		ATA Code :	22
Category Engine	Entered M/R	of section of the second of th		to the contract to the contract to the second of the contract to the contract			A.M.E	
	P War a fire becomes a constraint of			the second second second second second second second				
Monitor By Days Interval 120	The second of th			, against a community of the page 1 and 1 and 2	er. 100 er. 100 er. 100 er. 100 er.		L.A.M.E _e	
Due 10-09-2019			With the art the control of the transport of the control of the co	and administration of the contract of the cont	. Comment of the second of the second		Licence No	594407
To Run 53			and the second s	the time to the form the second of the secon	er on the contract of the contract of		Market and American	337707
The second secon				Labour	Hours		Date	20/07/2019
Work Required: 50HRLY 50 Hrly Maintena	nce & Inspection IAW Lycoming	Operators Manual		The state of the s		d i Wandadon Parana ana bina	ATA Code :	
Task No 019	Action Taken :							22
Category Engine	C/O NDF	0		Marks 1			A.M.E	Mark Charles
Monitor By Hours		)		· · · · · · · · · · · · · ·			L.A.M.S	
Interval 50							Esperivis Design	and a fine factor of the second
Due 138.62	0,0				7 M		Licence No	594407
To Run -47,79			and the second s				Date	20/07/004
the contract of the contract o				Labour	Hours		Date	20/07/2019

Pearl Coast Heli Maintenance Pty Ltd COA - 0686

**Worksheet** 

Aircraft: R44

Co-ordinators Signature :

VH - NBY J/N:299.

orksheet	Pearl Co	ast Heli Maintenance Pty Lt	d COA - 0686	;		
	ordinators Signature :	and the state of t	Component	Counter	Total	Pearl \Coast
Rego: VH-NBY	Print Name : \$22		Airframe	Hours	186.41 19-07-2019	Ban mannenance
Serial # : 2544	- Company of the Comp		Airframe	Days	19-07-2019	
Job No : 299	Date: 2017-115.	Licence No : 594407				
Work Required: 100HRLY/12MONTHS Airb	oox Clean/Inspect				ATA Code :	gar manamanan nyangan nyangapan nangan manadan nyapidal ana balan 1980 da 1975 di 1986.
Task No 020	Action Taken :	and the second s			A.M.E	engelegen menen
Category Engine	C/O NDF		🕻 🔘			
Monitor By Hours, Days		The second secon			L.A.M.E	Action and the second
Interval 100	and year, a range or agree from the last of the second of	and the second contract the second contract of the second contract o			Licence No	594407
<b>Due</b> 188.62, 12-05-2020	representation and the contract of the contrac			and the second s	Date	20/07/2019
To Run 2.21			Labour Hours	terrane financia in Sankarana mpalifik sasanina mpalifik sasanina		
Work Required: LYC SI 1129B Alternator B	Belt Tension Check	المستعدة والمستعدة والمستعدة والمستعدة والمستعدد والمستعد والمستعدد والمستعد	de elemente de Menjor d'adales de como de cele en elemente en menor en en elemente en elemente en elemente el	A the state of the	ATA Code :	22
	Action Taken :		aranamana da dagos e nacego y en depresente femilidade social e e e		A.M.E	22
Task No 021	C/O NDF		the state of the s			
Category Engine	The state of the s				L.A.M.E	-
Monitor By Hours, Days	Assemble of the best of the proper proper property of the control of the control of the best of the distribution of the control of the contro	The state of the s		İ	Lineman No.	504407
Interval 100	the thinks placement where where the second is the control of the personal control of the second of	or a constant system terminal formation for the property of the property of the constant of the property of th	and the second of the second o		Licence No	594407
Due 188.62, 12-05-2020	Many de commente en commente, en contrado al fongamento de partir de commente e commente e commente e caba e comment		Labour Hours		Date	20/07/2019
To Run 2.21		in the second se			ATA Code :	
Work Required: 100HRLY/12MONTHS Alto	ternator Inspection, Belt Inspect/Adjust/Replace	والمرافق والم	almany transmission (sept. 1864–1864 m. n. n. n. n. 1864 metropological des 1862, 1864 f. de decembré ann	agaman juga pagahi telah adalah pengana penganan angan penganah penganah telah telah telah telah telah telah t	AIA COUCT	s 22
Task No 022	Action Taken:	A STATE OF THE PROPERTY OF THE	100 pt 10	and a country of the	A.M.E	~
Category Engine	C/O NDF	- The state of the	the forest and the field of the field of the second state of the s	ray yaggiyingirini waxayin dadibi. Titi yafatiyini ya	1 A M E	
Monitor By Hours, Days		probably resigned to resign the property of the Advances of th	and the state of t	year year of the second state of the second	L.A.M.E	•
Interval 100		y System with which the growth specificates the section of the sec	_ mg nya, pang into agreement chestatus to mits angles over up again the first of the single	to the state of th	Licence No	594407
Due 188.62, 12-05-2020			ngalangan sama lipinistrak dalam sa pangandan dalam sa sa sa sa sa pangandan dalam sa sa sa sa sa sa sa sa sa		Date	20/07/2019
To Run 2.21	70		Labour Hours		Andrew Control of the	20/07/2019
Work Required : LYC S/B 366C Carb Thro	ottle Body Screw Inspection		والمراب والمراب والمرابعة والمرابعة والمرابعة والمرابعة والمرابعة والمرابعة والمرابعة والمرابعة والمرابعة	and the same of th	ATA Code :	3 22
Task No 023	Action Taken :		er agraphic greens was a sound to make a trade of the second of the seco		A.M.E	
Category Engine	C/O NDF		en gaggi man e e e e e e e e e e e e e e e e e e e	gar capping operations of colorinate of their state of compression of		
Monitor By Hours, Days			Market and and against the second	- carlos contacto de compresso de la contacto de la	L.A.M.E	
Interval 100			photocology to the party of the continues of the the continues of the the continues of the	*** And Andrew Andrew only present the party of the Andrews of the Andrews on the	Licence No	594407
Due 188.62, 12-05-2020			and the state of t	and a substitute of the supplementary and the supplementary of the suppl	Date	20/07/2010
To Run 2.21	<b>7</b>		Labour Hours		```	20/07/2019

orksheet	Pearl Coast Heli Maintenance Pty L	_td COA - 0686	<b>;</b>		
Aircraft: R44 Rego: VH-NBY	Co-ordinators Signature :	Component	Counter	Total	Pearl NCoa
Serial #: 2544	Print Name :	Airframe	Hours	186.41	Well Walntenan
Job No : 299	Date: 1017 19 Licence No: 594407	Alrframe	Days	19-07-2019	
Vork Required: 100HRLY/12MONTHS	Carburettor Inspection			ATA Code :	
Task No 024	Action Taken :	Print Print in the Colon		s 2	22
Category Engine	C/O NDF			A.M.E	
Monitor By Hours, Days			and the state of t	L.A.M.E	
Interval 100	A STATE OF THE PROPERTY OF THE				
Due 188.62, 12-05-2020			- Shar Ali I shakkakhikhikhikhiya wa mada wa supermaggar	Licence No	594407
To Run 2.21		Labour Hours	to tax to a discovery to provide magney, service manages	Date	20/07/2019
ork Required : LYC SI 1191A Cylinder	Compression Check		and the street of the street o	ATA Code :	
Task No 025	Action Taken :				22
Category Engine	C/O #1 78/80 #2 75/80 #3 77/80 #4 78/80 #5 76/80 #6 77/80 Within Limits NDF	etti valta eta eta eta eta eta eta eta eta eta e	-	A.M.E _	
Monitor By Hours, Days	**************************************	after, commenced to the second second second second	The second secon	L.A.M.E	
Interval 100	- Participation of the Control of th	The transfer of the second of	The state of the s		
Due 188.62, 12-05-2020	THE RESIDENCE OF THE PARTY OF T	en e		Licence No	594407
To Run 2.21		Labour Hours	odno tra otroro, o pragami i popu	Date	20/07/2019
rk Required: 100HRLY/12MONTHS E	ingine Compression Check	and the second s		ATA Code :	and the same of th
Task No 026	Action Taken :	and the second s			s 22
Category Engine	C/O NDF	To a time of company on the grown man of the company	re-research and the party of	A.M.E	
Monitor By Hours, Days	And the state of t	P. P. S. Commission of the Com		L.A.M.E	
Interval 100				Videolou	
Due 188.62, 12-05-2020		The second secon		Licence No	594407
<b>To Run</b> 2.21		Labour Hours		Date	20/07/2019
rk Required: TCM S/B 653 Hot Magn	eto Test	1	and the second s	ATA Code :	s 22
Task No 027	Action Taken :	THE STATE OF STATE OF STATE OF THE STATE OF			

Category Engine

Monitor By Hours, Days
Interval 100

To Run 2.21

Due 188.62, 12-05-2020

Labour Hours

Licence No

Date

594407

20/07/2019

VH - NBY J/N: 299

Pearl Coast Heli Maintenance Pty Ltd COA - 0686

Vorksheet	s 22	Pearl Coas	t Heli Maintenance Pty L	.ta COA - 0000			8
Aircraft: R44	Co-ordinators Signature :			Component	Counter	Total	Pearl: NCoast
Rego: VH-NBY				Airframe	Hours	186,41	(Hell Mähltenance)
Serial #: 2544	Print Name : \$22	5 1Q.	and the state of t	Airframe	Days	19-07-2019	
Job No : 299	Date: 25	1716	Licence No: 594407		20		
Work Required: TCM S/B 670 Magne	eto Distributor Block Inspection					ATA Code :	
Task No 028	Action Taken :	المعارض والمعارض والمراوات والمستويدون	the state of the s			A.M.E	
Category Engine	C/O NDF	and the second s	<ul> <li>M. Control State of the control of the</li></ul>	, grand	na trida al se reser i ser e e e e	L.A.M.E	L ST
Monitor By Hours, Days	The state of the s		and the control of th				
Interval 100	AND		and the second s	alam at a parameter and a superior and a superior and		Licence No	594407
Due 188.62, 12-05-2020		at one hatte to provide one of the box of the species and all all all and an experience of the species of the s	and the second control of the contro		age	Date	20/07/2019
To Run 2.21				Labour Hours	the side and a second s	- Andrewson - Andr	After the second
Work Required : LYC 5/B 480F Oil Fil	ilter Change & Inspection	And the state of t		The state of the s	and the second of the second o	ATA Code :	
	Action Taken :	The second of the second confirmers of the second confirmers and the s		annigen same her melt er som fine er er er er en er en betyde steller steller som en en eine eine eine eine e	program, and a continuous designation of the manufacture of the same of the sa	A.M.E	
Task No 029	C/O NDF	Annual region processor in month of the Market and Company and Company and Company and Company and Company and Company		and the second s			
Category Engine	Property and the state of the s	en meneral former Monte (group menergine meneral) (s. 1915), en en en el 1906 en el 1906 former el 1906 en el	the control of the control of the state of t			L.A.M.E	anagement <sub>k</sub>
Monitor By Hours, Days		where the $C_{ij}$ $C_{ij}$ $C_{ij}$ , we consider a small distribution of the $C_{ij}$ $C_{$		and a file of New York and a second of the Second of Second of Second of Second of Second of Second of Second		Licence No	594 <del>4</del> 07
Interval 50	and the second s	and the state of t	And the control of th	a Charles de Carres de Carres de Carres (1974) (1974) (1974) (1974) (1974) (1974) (1974) (1974) (1974) (1974)		ricence No	7044AC
Due 138.62	and the state of t	along the street of the state o		Labour Hours		Date	20/07/2019
To Run -47.79	the first and an an analysis of the separate of the first of the separate of t		and the second s	And the second s		ATA Code :	And the state of t
Work Required: 100HRLY/12MONT		the solution of the particular and the solution of the solutio	And the state of t	والمراوية	and the state of t	- Andread State of the State of	s 22
Task No 030	Action Taken :	e y myse a gypennemienia się tengen i są posie i mienienia sakamentatore staj mienienia begin tengen tengen t	The state of the s	of the Brandward of Mary 1995 are a controllers of the Brandward of the second	manus (Millione) des compressos de la compresso de la compresione de la compresso de la compresso de la compresso de la compre	A.M.E	
Category Engine	C/O NDF	Annual and the state of the sta	The Control of the Co	$\sigma$ (e.g., channels, if effects the post of the fit data is been affects, $\sigma$ among $g_{\sigma}$ , applying that the determinant	and the state of t	LAME	
Monitor By Hours, Days			Professional Company of the Company	ngan may may magangan manan ana ana ana ana ana ana ana ana	and the second s	L.A.M.E	
Interval 100	Association in the contract of			ment of the first tipe of manner of many many times and the many times of the many times and the times of the man	the an example of the section of the	Licence No	594407
Due 188.62, 12-05-2020	0			one was a transmit high highest at the geography and a second of the sec		Date	20/07/2010
To Run 2.21	And the state of t	representation of the control of the	Committee of the second of the	Labour Hours			20/07/2019
	The many	And the state of t	and the second s	a de manifestation all a manages de fermi esta en en experience par la manage en antimiser par en en		ATA Code :	7, s in y angue process and different
Work Required: LYC SI 1080C Spe	Action Taken :	And the second s	ears de Vangle schrift anned Birs (pysys) (Laglestein anne vonde Magazana anne Bronspagn) (Lagles Magazana Artista de Art	Security and a second security and a security and a second security and a second second security and a second seco		A.M.E	
Task No 031	The second secon	principal design (pro operating of location representation occurred to the Medic of Prese	t jamanga sama didaksidi dianga - magalipinakat sakaran arawa a malia sa jam magaman a akabib dinagang jam mbaga kabib saka saka saka sa	and the characteristic and demonstrate (1945) the characteristic and property and property and the contract of the characteristic and t	The state of the s	A.M.E	A mind and the manhate many paying
Category Engine	C/O NDF	nggan ngapanamanlaga ang 17 dilikah manggapayan maman nimatinan hidakah ngapanaman namandalah manin n T	The second secon			L.A.M.E	
Monitor By Hours, Days	The state of the s			andrew and the street each and the street and recover on a made street of the consequence of the	VANT MATERIAL CONTRACTOR STATES	^	
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Aircraft: R44 Rego: VH-NBY	Co-ordinators Signature :		Component	Counter	Total	2
Serial #: 2544	Print Name : \$22		Airframe	Hours	186.41	l (e) (l) Hall Mäinte
Job No : 299	Date: 25 17 19	Licence No: 594407	Airframe	Days	19-07-2019	
ork Required: 100HRLY/12MONTH	S Starter Motor/Starter Ring Gear Inspection			7	ATA Code :	
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ork Required: LYC S/B 595 Torque	Values Ignition Harness Attach Screws		inadalaja ( ) varantii paraja - 1, mat saata 1 ad ad ada ada ada ada anaja anga anga anga anga anga anga an	arra makandari da da makali ya pala la la da	ATA Code :	
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# **Co-Ordination and Final Certification**

# Pearl Coast Heli Maintenance Pty Ltd COA - 0686

Aircraft: R44

Job No: 299

Rego: VH-NBY

Job Description: 100Hrly/Annual Inspection

Serial #: 2544

Owner: Horizontal Falls Helicopters

Operator: Horizontal Falls

M/R Date of Issue Zo / 7 / 19

Expired M/R Serial No. A I S 8 2 S (

Issued M/R Serial No. A Z Z Z 8 6 7.

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L.A.	M.E	LEK	IIFI	LA	ITOI	۸

I hereby certify that all maintenance in the category(s) for which I am responsible have been completed.

Categories covered during this inspection - Certifications

	s 22	
Airframe		
Engines		
raigines		
Electrical		
Instrument		
Radio		

Licence Number	594427
Licence Number	STHAS
Licence Number	594427
Licence Number	BH47E
Licence Number	South

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For & on behalf of:

Pearl Coast Heli Maintenance Pty Ltd COA - 0686

Pearl Coast Heli Maintenance Pty Ltd COA - 0686

Pearl Coast Heli Maintenance Pty Ltd COA - 0686

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Pearl Coast Heli Maintenance Pty Ltd COA - 0686

Pearl Coast Heli Maintenance Pty Ltd COA - 0686

Independent Inspection Certificate Pursuant to CAR 42G. Inspection carried out on the following:

1st Inspection Signature:

Licence Number

2nd Inspection Signature:

Licence Number

#### CO-ORDINATING CERTIFICATION

I hereby certify for the completion and co-ordination of the entire inspection

LAME Signature:

LAME Licence No: 594407

Date 20 17. 11

For & on behalf of: Pearl Coast Heli Maintenance Pty Ltd COA -

A CERTIFICATION ABOVE CONSTITUTES A CERTIFICATION PURSUANT TO CAR42ZE THAT ALL MAINTENANCE HAS BEEN PROPERLY CERTIFIED. Note: The person who certifies for the completion and co-ordination of the entire inspection or workpackage contents is to ensure that any maintenance performed during the inspection has not invalidated a certification already made in another category and has been completed and properly certified.

For & on behalf of:

For & on behalf of:

For & on behalf of:

VH-NBY J/N:299.

# Engineering Work Package Pearl Coast Heli Maintenance Pty Ltd COA - 0686



OB DETAILS  ob Number	299	Date Raised	18/07/2019	AF TTIS	186.41	
rcraft Registration	VH-NBY	Date Completed	20/7/19	Engine TTIS	en e	
perator	Horizontal Falls Helicopters	Approved Maintenance Data	RHC R44 RTR 460 Maintenand 2016	ice Manual Rev May Landings/Starts		
rcraft Type	R44	(Airframe)	Lycoming O-540 Operators M	Cycles		
perator Base	Pearl Coast Heli Maintenance	Approved Maintenance Data (Engine)	Lycoming 0-540 Operators P	RINS		
Description: 100	OHrly/Annual Inspection					
			O		Trade Type	Hour
GNATURE SIGN OFF	Name	Licence No.	Signature & Initial	*.	IMME	
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Form No: PCHM003

Page 1 of 1

VH-NBY J/N: 299

# Additional Worksheet Pearl Coast Heli Maintenance Pty Ltd COA - 0686

Aircraft: R44

Job No: 299

Rego: VH-NBY Serial #: 2544

Co-ordinators Signature:

Print Name:

Component

Counter

Airframe Airframe Total

186.41 19-07-2019



			A.M.E	Licence No.	Date	
Item	Defect or Work Required	Rectification Details	Allan	L.A.M.E		
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Licence No: 594407

A certification for L.A.M.E constitutes a certification pursuant to CAR42ZE that all maintenance has been properly performed as detailed in the above mentioned job number for and on behalf of Pearl Coast Heli Maintenance Pty Ltd COA - 0686

Form No:

VH-NBY J/N: 299

# Additional Worksheet Pearl Coast Heli Maintenance Pty Ltd COA - 0686

Aircraft: R44

Rego: VH-NBY

Co-ordinators Signature:

Component Hours Airframe

Airframe

Counter

Days .

Total

186.41 19-07-2019

Serial #: 2544 Job No: 299

Print Name:

Date: / /

Licence No: 594407

Rem Defect or Work Required Rectification Details A.M.E L.A.M.E Licence No.	Date
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#### 2.200 GROUND AND FLIGHT CHECK FOR 100-HOUR/ANNUAL INSPECTION

Complete following checklists in conjunction with a 100-hour or annual inspection. Note and correct any discrepancies.

#### 2.205 Ground Check (Aircraft not running)

- Throttle Control: Check for freedom of rotation with collective full down and full up.
- Throttle Overtravel Spring: Check by twisting throttle past idle position to override stop. Release throttle and ensure it returns to normal idle position.
- Mixture Control: Check for smoothness of operation with no binding. Check press-to-unlock button for proper function. Verify 0.03 to 0.10 inch spring-back at full rich position.
- Carburetor Heat Control (O-540 only): Check for smoothness of operation with no binding. Verify 0.03 to 0.10 inch spring-back at full
- Cyclic Control: With trim motors (if installed) in neutral position, verify freedom thru full travel with friction off. Verify friction knob rotates 1/8-to-1 full turn before adding friction. For hydraulic controls: Verify approximately one-half inch total longitudinal and one inch total lateral freeplay before encountering resistance. Verify normal hydraulic resistance with no binding or abnormal feel throughout control travel.
- Collective Control: Verify freedom through full travel with friction off and on. For non-hydraulic aircraft, verify friction knob moves 0.3-0.6 inch before adding friction. For hydraulic controls: Verify approximately one-half inch total freeplay before encountering resistance. With carb heat assist (if installed) locked and friction lever fully off, verify C3b friction (between roar seats) within freeplay range is 4-5 pounds average measured at grip. With friction lever fully on, verify 18-22 pounds measured at grip. Verify normal hydraulic resistance with no binding or abnormal feel throughout control travel.
- Carb Heat Assist (if installed): With collective down and full carb heat, raise collective full up and verify carb heat off. Lower collective full down and verify carb heat full on. With collective friction off, push carb heat off and verify collective stays down.
- 8. Tail Rotor Pedals: Check for smooth operation with no binding.
- 9. Removable Controls: Verify security of attach fasteners,

ROBINSON MAINTENANCE MANUAL

MODEL R44

#### 2.205 Ground Check (cont'd)

- 10. Lighting and Instruments: (Master Switch on)
  - a. CARBON MONOXIDE warning light flashes twice (if installed).
  - Carb Air Temp approximately same as Outside Air Temp.
  - ALT warning light on.
  - OIL pressure warning light on.
  - AUX FUEL PUMP warning light on (IO-540 only).
  - Fuel quantity gages indication of fuel level.
  - Navigation and panel lights check function.
  - Strobe light check function.
  - Landing lights check function (clutch switch must be engaged to check landing lights).
  - Map light check function.
  - Ammeter shows discharge.
  - Oil temperature gage slight needle deflection with engine cold
  - Cylinder head temp gage slight needle deflection with engine
  - MR TEMP light on when sender shorted or test switch
  - MR CHIP light on when sender shorted or test switch
  - ENGINE FIRE light on when sender shorted or test switch
  - TR CHIP light on when sender shorted or test switch depressed.
  - LOW FUEL light on (slight delay is normal) when low fuel sender in tank is depressed with clean, non-sparking rod or when test switch depressed.
- FUEL FILTER light on when test switch depressed (IO-540
- Verify aircraft checklist laminated card is current revision (refer to Section 1.002).

Change 14: JUL 2008

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#### ROBINSON MAINTENANCE MANUAL

MODEL R44

#### 2.210 Run Up

- 1. Perform POH Section 4 "Preflight" checklist.
- 2. Perform "Sefore Starting Engine" checklist.
- 10-540 engine: Verify AUX FUEL PUMP light extinguishes during prime and illuminates after priming. Verify fuel drains from sniffle

NA

Significant prime may be required before fuel drains from valve. Wait for valve to stop draining before starting ending will be hard starting/flooded while valve is draining.

- Perform "Starting Engine and Run-Up" checklist. If less than 15 minutes has elapsed since Step 3, use minimum or no prime.
- Check clutch engagement time maximum 70 seconds.
- 6. Ammeter indicates charge, ALT light off.
- 7. Both magnetos ground (off momentarily) at 60% RPM.
- 8. Tachometer operates with alternator and battery switches off.

  9. No unusual bearing noise when varying RPM through operating range (mechanic to listen near V-belt drive). Refer to Section 2.110 and 2.501 thru 2.503.
- Set RPM at 75%, governor on. Increase to 85%, release throttle, and verify governor increases RPM to 101 to 102%. Increase RPM to 104%, release throttle, and verify governor decreases RPM to 101 to 102%.
- Engine and rotor tach needles within 1% of each other at 102% RPM.
- Verify alternator voltage as follows:
  - 13.4 to 13.9 vdc for A942-3 alternator control unit
  - 27.75 to 29.25 vdc for A942-4 alternator control unit
- 13. Heater operates properly.
- Tachometer needles do not jump more than 2% when transmitting on 118.00, 125.00 , and 136.975 MHz with governor on.
- Raise collective control 0.5 inch at grip and slowly decrease RPM. Verify low-rotor-RPM warning horn and light activate at 97% to 96% SRPM and remain on as RPM is decreased to idle.

ROBINSON MAINTENANCE MANUAL

MODEL R44

2.210 Run Up (cont'd)

16. Idle RPM with engine warm, clutch engaged, throttle closed-

O-540 engine: 53% - 57%

IO-540 engine: 58% - 62%

Idle mixture with engine warm, clutch engaged, throttle closed.

O-540 engine: 2% to 4% RPM rise as mixture is pulled slowly to idle cut-off. Adjust idle mixture screw as required. If unable to obtain rise, set idle mixture screw 1 ½ turns out from fully in then adjust as required for smooth idle.

IO-540 engine: Adjust idle mixture per Section 6.495, Step 23.

- 18. Check hydraulic system (if installed) operation. Using cyclic-mounted hydraulics switch, turn hydraulics OFF. Using small longitudinal cyclic inputs, there should be approximately one-half inch of freeplay before encountering stiffeness and feedback. Turn hydraulics ON. Controls should be free with no feedback or uncommanded motion ("motoring"). Complete flight check with hydraulics on.
- Air Conditioning: Verify system blows cold air on both low and high settings. Verify no EMI/RFI with other instruments and systems. After a flight with air conditioning on, verify water drains from drain tube in ship's belly (may be little or no water in very dry conditions).

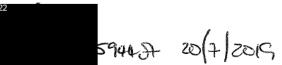
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Change 14: JUL 2008

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Change 13: OCT 2006



#### MODEL 844

#### 2,220 Flight Check

- 1. Hover:
  - a. All gages green.
  - Controllability in left and right pedal turns.
  - Cyclic electric trim (or hydraulice) zeroe cyclic stick forces.
  - d. Vibration levels satisfactory.
- Level flight: Typical cruise altitude (if possible, deviate as required for weather and regulations), maximum continuous power, governor on.
  - a. Vibration levels satisfactory.
  - b. Cyclic electric trim (or hydraulics) zeros cyclic stick forces.
  - Collective trim spring (electric trim system only) zeros collective forces. For hydraulic controls: Verify no feedback and collective is balanced.
  - Fixed collective friction adequate to prevent "bounce" but not excessive (electric trim system only).
  - Tail rotor pedal position when yaw string is centered: 0.25 to 0.75 inch right for adjustable pedals, within 0.25 inch of neutral for non-adjustable pedals.
  - Tail rotor elastic trim cord zeros pedal forces (cord applies left
  - For hydraulic controls: Turn hydraulics OFF and verify no excessive feedback forces.
- Autorotate at 100 KIAS with station 99 or greater CG. Verify electric trim (or hydraulics) zeros cyclic stick forces.

#### 2.230 Shutdown

- 1. Verify rotor brake functions and ROTOR BRAKE light illuminates.
- 2. Complete shutdown per POH checklist.

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#### ROBINSON MAINTENANCE MANUAL

MODEL 844

MODEL R44

#### 2,300 AIRFRAME PREPARATION FOR 100HR/ANNUAL INSPECTION

Thoroughly clean airframe prior to inspection. Wipe down main and tail rotor blades, and airframe exterior with a mild soap and water solution.

#### CAUTION

Do not spray magnetos, main rotor hub, tail rotor gearbo hydraulic reservoir vent, swashplate area, or bearing sei high-pressure water or solvent as water or solvent may er cause corrosion and breakdown of lubricants.

#### 2.400 100HR/ANNUAL AIRFRAME INSPECTION

Numbers in parentheses indicate location as illustrated in Figures 2-4 and 2-4A.

CAUTION

If proposet floats are installed, ensure safety on pilot's red inflation lever is in LOCKED position when working on helicopter.

Pop-out float pressure cylinder contents are under extreme pressure. If pop-out floats are installed, install locking pin in pressure cylinder valve (see Figure 5-6) when working in forward feft baggage compartment, during cylinder removal or installation, and when working on floats or inflation hoses. Remove locking pin when work is completed. A wold excessive heat (> 200 degrees F) as thermal relief valve will activate.

Perform 100 hour or Annual inspection per Section 2.410.

2.410 Inspection Procedures and Checklist

R44 Serial No.: 344 Registration No.: HOurmeter Indication: Aircraft Total Time:

Technician name:

Technician

Certificate number

1. Tail Rotor Pedal Bearing Blocks

NOTE

Do not remove pedal bearing block cover plates (1) unless function check of pedals indicates possible problem with pedal bearing blocks.

To remove cover plates (1) peel back carpeting and remove screws holding plates. Use an inspection light and mirror to inspect bearing blocks. Inspect or condition and looseness or play. Maximum allowable play is 0.080 instructionable play is 0.080 instructionable play is 0.080 instructionable play in the controls.

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Page 2,12 ROBINSON MAINTENANCE MANUAL

MODEL R44

CO-PILOT'S 41 IENG ONLY) FIGURE 2-4 ACCESS AND INSPECTION PANELS ı

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Change 13: OCT 2006

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#### LYCOMING OPERATOR'S MANUAL

### SECTION 4 PERIODIC INSPECTIONS

		,	
SECTION 4 PERIODIC INSPECTIONS			
	Page		
General	4-1		
Pre-Starting Enspection			
Daily Pre-Flight Exspection			
10-Hour Inspection	4-2	This Page Intentionally Le	di Blank
25-Rour Isspection	4-2		
50-Hour Inspection			~~
100-Roar Inspection			
400-Hour Inspection			
Non-Scheduled Enspections		4.0	
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		SECTION 4	LYCOMING OPERATOR'S MANUAL
LYCOMING OPERATOR'S MANUAL 0-540, IO-540 SERIES	SECTION 4 PERIODIC INSPECTIONS	PERIODIC INSPECTIONS	O-540, 1O-540 SERIES
		DAILY PRE-FLIGHT (ENGINE).  Be sure all switches are in the "Off" position.  All properties are in the "Off" position.  All properties are in the "Off" position.	

#### SECTION 4

### PERIODIC INSPECTIONS

NOTE

and that the items listed in the following pages do not constitute a complete of for the engine only. Consult the airframe manufacturer's handbook for

re-Right inspection is a check of the aircraft prior to the first flight of to the general condition of the aircraft and engine.

- I. DAILY PRE-FLIGHT (ENGINE).
- a. Be sure all switches are in the "Off" position

- g. Make sure all shields and cowling are in place and secure. If any are missing or damaged, repair or replacement should be made before the aircraft is flown.
- h. Check controls for general condition, travel and freedom of operation

- n. Check controls for general condition, travel and freedom of operation (1).

  i. Induction system air filter should be inspected and serviced in accordance with the airframe manufacturer's recommendations (1).

  2. 10-HOUR INSPECTION (ENGINE). After the first ten (10) hours of operating time, new, rebuilt, or newly overhauled engines replace the oil filter, and conduct an inspection of the contents of the used oil filter for traces of metal particles.

  3. 25-HOUR INSPECTION (ENGINE). At twenty-five (25) hours of operating time since the first inspection, new, rebuilt, or newly overhauled engines should undergo a 50-hour inspection including draining and renewing lubricating oil, replacing the oil filter, and inspecting the contents of the used oil filter.

  NOTE

If the engine does not have a full-flow oil filter, change oil every 25 hours; also, inspect oil pressure and section screens for metal contamination, and clean thoroughly before reinstallation.

- SO-HOUR INSPECTION (ENGINE). In addition to the items listed for daily any flight inspection, the following maintenance checks should be made after every 50 hours of operation.
- a. Ignitlon System
  - (1) If fouling of spark plugs has been apparent, clean them and check electrode gap. Rotate bottom plugs to upper position.
  - (2) Examine spark plug leads of cable and ceramics for corrosion and deposits. This condition is evidence of either leaking spark plugs, improper cleaning of the spark plug walls or connector ends. Where this condition is found, clean the cable ends, spark plug walls and ceramics with a dry, clean cloth or a clean of the moistened with methyl-tethyl-ketone. All parts should be clean and dry before reassembly.
  - (3) Check ignition harness for securit plug and magneto terminals. ugity of mounting clamps and be sure connections are tight at spark

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4-1

- b. Fiel Line and Induction System Check the primer lines for leaks and security of the clamps. Remove and clean the fuel inlet strainers. Check the mixture control and throttle linkage for travel, freedom of movement, security of the clamps and hibricate if necessary. Check the air intake ducts for leaks, security, filter damage; evidence of dust or other solid material in the ducts is indicative of inadequate filter care or damaged filter. Check then times for evidence of fuel or oil seepage; if present, fixel pump may require replacement.
- c. Lubrication System -
  - (1) Check oil lines for leaks, particularly at consections; for security of anchorage and for wear due to rubbing or vibration, for dents and eracks.
  - (2) Replace elements on external full-flow oil filters. Before disposing of used element check interior folds for traces of metal particles that might be evidence of internal engine damage. Drain and renew lubricating oil. (Reference latest revision of Service Instruction No. 1014 for proper oil.)
- d. Exhaust System Check attaching flanges at exhaust ports on cylinders for evidence of leakage. If they are loose, they must be removed and machined by before they are reassembled and tightened. Examine exhaust manifolds for general condition.
- a. Cooling System Check cowling, baffles and baffle seals for damage and secure anchorage. Any damaged or missing part of the cooling system must be repaired or replaced before the aircraft resumes operation.
- f. Cylinders Check rocker box covers for evidence of oil leaks. If found, replace gasket and tighten screws to specified torque (50 in.-lbs.)

Check cylinders for evidence of excessive heat which is indicated by burned paint on the cylinder, his condition is indicative of internal damage to the cylinder and, if found, its cause must be etermined and corrected before the aircraft resumes operation.

Heavy discoloration and appearance of seepage at cylinder head and barrel attachment area is usually due to emission of thread lubricant used during assembly of the barrel at the factory, or by slight gas leakage which stops after the cylinder has been in service for awhile. This condition is neither harmful not detrinential to engine performance and operation. If it can be proven that leakage exceeds these conditions, the cylinder should be replaced.

- 5. 100-HOUR INSPECTION. In addition to the items listed for daily pre-flight, and 50-houning pection, the following maintenance checks should be made after every one hundred hours of operation.
- a. Electrical System -
  - (1) Check all wiring connected to the engine or accessories. Any shielded cables that are damaged should be replaced. Replace clamps or loose wires and check terminals for security and cleanliness.
  - (2) Remove spark plugs; test, clean, regap, and rotate them. Replace if necessary.

b. Lubrication System - Drain and renew lubricating oil.

SECTION 4
PERIODIC INSPECTIONS

- c. Magnetos Check breaker points for pitting and minimum gap. Check for excessive oil in the breaker companient, if found, wipe dry with a clean lindess cloth. The felt located at the breaker points should be lubricated in accordance with the magneto manufacturer's instructions. Check magneto to engine timing. (Turing threedures for Berolix and Silvik magnetos are covered in the Maintenance Procedures Section.)
- d. Engine Accessories Engine mounted accessories such as pumps to be because and pressure sensing units should be checked for secure mounting, light connections.

  e. Cylinders Check cylinders visually for cmeked or broken fins.
- Engine Mounts Check engine mounting bolts and bushings for security and excessive wear. Replace any excessive wear. Replace any bushings that are excessively worn.
- g. Primer Nemles Disconnect primer nozzles from engine and check for equal flow
- h. Fuel Injector Nozales and Lines Check fuel injector nozales for leeseness. Tighten to 60 in-lbs. torque. Check fuel line for dye stains at connections (indicating leakage) and security of lines. Repair or replacement must be accomplished before aircraft resumes operation.
- c for these screws is Carburetor - Check throttle body attaching screws for tightness; the correct torque-40-50 in.-lbs.

4 180 HOUR INSPECTION. In addition to the items tissed for the the following maintenance check should be made after every 400 hours of operation.

inspections, the following maintenance check should be made after every 500 hours of operation.

Valve Inspection — Remove trocker base covers and check for freedom at wave forchers when valves are closed. Look for evidence of abnormal wear of brokes costs in the area of the valve tips, valve keeper springs and springs geats. If any indicatings are found, the cylineer said all of its components should be removed (including the piston and collecting rod assembly) and inspected for further dramage. Replace any parts that do not evident with limits shown in the latest recision of Sercial Service Publication 10, 339

7. NON-SCHEDULED INSPECTIONS. Occasionally, service bulletins or service instructions are issued by Lycoming that require inspection procedures that are not listed in this manual. Such publications, usually ne limited to specified engine madels and become exbedient after corrective modification has been accomplished. All such publications are available from Lycoming distributors, or from the factory by subscription. Consult the latest revision of Service Letter No. L114 for scheeripton information. Maintenance facilities should have an up-to-date file of these publications socialable at all times.

Released linder

	FU	GURE 2-4A ACCESS A	IND INSP	ECTION PANE	LS	ı
	PART NUMBER		NUMBER		DESCRIPTION	
1	B189-4	Deffector (LH)	41	D383-1	Face (ENG only)	I
*	A412-2 and	Cover and Deflector (RH)	5	C003-10	Seat Back Assy (RH)	ı
	B189-2			C003-11	Seat Back Assy (LH)	۰
2	8050	Console Assy	6A	C337-1	Cowling Assy (LH)	
3A	C445-1	Cover Assy	68	C378-1	Cowling Assy (RH)	
38	C445-3	Cover	8C	0041-1	Cowling Assy - Belly	
3C	C444-1	Cover	60	D040-1	Aft Cowling Assy	
30	C398-1	Cover Assy	7A	D042-4	Door Assy	
35	C794-1	Panel		D042-4	Door Assy	I
	C680-1	Cover Assy	76	C706-1	Tailcone Cowling Assy	
4A		Cover	8A	A231-1	Plug Assy	
48	C461-1		88	A558-2	Cover	
4C	C464-1	Tray	9	C261-1	Mast Fairing Assy	
40	C463-1		10	C082-2	Fairing Assy (FWD, RH)	
4E	C054-1	Cover Assy		C082-3	Fairing Assy (FWD, LH)	
4F	C474-2	Cover		CO82-4	Fairing Assy (AFT, RH)	
4G	C474-1	Cover		CQ82-5	Fairing Assy (AFT, RH)	
4H	C794-2	Panel (without scoop)	11	CQ45	Circuit Breaker Panel	
	C794-3	Panel Assy (with scoop)	12	0412-1	Fairing (Inframetrics Camera)	
4H	C794-2	Panel (without scoop)	(Police	or D347-1	Fairing (FSI Camera)	
	C794-3	Panel Assy (with scoop)	ships)	U347-1	Page 2.15	
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ROBINSON MAINTENANCE MANUAL

2.410 Inspection Procedures and Checklist (cont'd)

2. Upper Console (2)

Console (2), is opened by removing one screw on each side. With console open, inspect the following:

Pitot-Static System: Check pitot and static lines for cracking, chaling, pinching or kinking. Check all connections for security.

Flight and Engine Gages: Check all gauges for security. Inspect wiring and connections on all gages.

Radio Tray(s): Check condition and security.

Tail Rotor Controls: Check accessible portions of TR pedal assemblies for defects. Verify operating clearance.

Remove Forward Tunnel Covers (3A & 3B), Cyclic Stop Cover (3C), Inboard Collective Cover (3D), and Forward Belly Panel (3E)

If radio antennas are installed on removed panels, disconnect antenna lead and any ground wire. Pull respective radio circuit breaker and tog circuit breaker with "Antenna Removed".

Cyclic Box Assembly: Inspect cyclic box assembly for defects. Check cyclic stop sheet metal assembly for cracks and other defects (deterioration, distortion, loose rivets, corrosion).

Cyclic Stick Assembly: Inspect cyclic stick assembly for defects, Inspect welds for cracks.

CAUTION
(manual controls)

Do not disturb clear silicone coating protecting strain gages, or attached wiring. Any damage to strain gages or wiring will disable trim system.

Cyclic Trim (manual controls): Turn master and cyclic trim switches on. Move cyclic laterally stop to stop and longitudinally stop to stop and check operation of trim motors, Check trim motors, check trim motors, grings and elastic cords for clearance from all wire bundles and fuselege structure during movement and at travel limits.

Gydic Lateral Trim Actuator (manual controls): Turn master and cyclic trim switches on. Push and hold cyclic stick against right stop until motor stops then turn trim off. Move cyclic stick to left stop to compress spring. Inspect exposed option of shaft for wear and galling. Do not grease rod on Rev H and subsequent C056-1 spring assemblies, bearing is self-lubricating. Inspect C130-13 urethane spacer (stop). Check security of attachment to cyclic pivol. nual controls): Turn master and cyclic inspect C130 cyclic pivot.

Cyclic Longitudinal Trim Actuator (manual controls): Inspect C130-13 A interthane spacer (stop). Check security of attachment to cyclic stick.

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410 Inspection Procedures and Checklist (continued)

Remove Forward Tunnel Covers (3A & 3B), Cyclic Stop Cover (3C), Int Collective Cover (3D) and Forward Belly Panel (3E) (continued)

Cyclic Friction: Check for excessive play or looseness in links and rod ends connected to cyclic stick. Verify no excessive flaring at either end of C130-2 spacer.

2 spacer.

Cyclic Push-Pusl Tube and Torque Tube: Inspect C319 torque tube paying special attention to area around blocks and end of torque tube for cracks. Inspect C121-1 push-pull tube rod end patnut and jam nut for tighness. Check witness holes on push-pull tubes. Check rod ends and bearings for excessive play and looseness. Check accessible portions of cyclic push-pull tube and torque tube for defects, including scratches. Pey particular pull tube and torque tube immediately below C348-1 anchor assembly, inspect all nuts and boits in cyclic controls for rotation and looseness.

Tail Rotor Push-Puil Tube: Inspect accessible portions of C121-9 tail rotor push-puil tube. Look for defects such as cracks, bands, scratches, or chafing. Check rod ends for excessive play and looseness.

Collective Friction and Stop: inspect collective stop condition; no nicks, cuts or scratches are allowed. Chack collective friction lever for security and operation. Move collective up and down and verify no bending or binding of stop. Verify collective boot's lace cannot entangle stop.

Throtte Overtravel Spring: Inspect operation of overtravel spring while operating throttle. It should move freely without any binding or jerkiness. Check play in upper and lower rod ends. Check rod ends for binding.

Wining Hamess: Inspect for chafing and clearance from controls.

Pitot and Static Lines: Inspect pitot and static lines for security and any evidence of crecking, chafing, pinching or kinking from sharp bends. Open drains and check for moisture; close drains.

Electic Trim Cord(s): With cyclic forward-right, feel forward elastic trim cord(s) for voids which may indicate broken strands.

Heater Hose: Check heater hose for collapsed areas and chafing.

Fasteners and Torque Stripes: Inspect condition and verify security of all fasteners. Renew deteriorated torque stripes per Figure 2-1.

Remove Outboard Collective Cover (4A), Collective Torque Tube Cover (48), Tray (4C), Mid Tunnel Covers (4D & 4E), Aft Tunnel Covers (4F & 4G), Aft Belly Cover Panel (4H), and Rear Console (4I, ENG ships only)

If radio antenna is installed on removed panel, disconnect antenna lead and corresponding ground wire. Pull respective radio circuit breaker and tag circuit breaker with "antenna removed".

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2.410 Inspection Procedures and Checklist (continued)

Remove Outboard Collective Cover (4A), Collective Torque Tube Cover (4B), Tray (4C), Mid Tunnel Covers (4D & 4E), Aft Tunnel Covers (4F & 4G), Aft Belly Cover Panel (4H), and Rear Console (4I, ENG ships only) (continued)

Collective Stick: Inspect condition of collective stick. Inspect all welds for cracks. Inspect C32B-1 connecting rod assembly giving special attention to points of attachment. Inspect governor motor and governor motor arm for looseness or binding. Inspect collective-activated micro switch for cracks or loose wires.

Collective Stick Torque Tube: Verify no corrosion pitting. Apply a corrosion-preventative compound such as LPS 2, ACF-50, or Corrosion-X to any unpainted, phosphate-coated area while avoiding contaminating governor friction citutch (a foam-type applicator works well). Ensure interior of openend "box" structures at inboard attach point and at A205 fork connection are also treated.

Aft End of Cyclic Torque Tube and Yoke Assembly: Inspect torque tube and yoke, paying special attention to area around blocks and end of torque tube for cracks. Check play in bellcrank bearings per Section 2,120. Inspect swaged bearing for movement in yoke.

Aft.End of Cyclic Push-Pull Tube (C121-1) and Lower Ends of Vertical Push Pull Tubes (C121-7): Inspect push-pull tubes for cracks. Check rod end jam nuts and paintus for tightness and rod ends for play. Check rod end bearings for looseness. Inspect fork assembly areas. Check bearings for looseness Check between bearings and swage for evidence of fretting.

Aft End of (C121-19) Tail Rotor Push-Pull Tube and Lower Bearing: Check witness hole. Check lower belicrank bearing for play. Inspect all welds on support assembly for lower belicrank and inspect surrounding sheet metal area for cracks.

Collective Push-Pull Tube (C121-19): Check for binding or nicks, Check witness holes. Check Jam nuts and painut for tightness and rod end for play.

Collective Friction Assembly: Check jam nuts and palnuts for tightness and rod ends for play. Inspect all welds on bellcrank support assembly and inspect surrounding sheet metal for cracks and corrosion.

Collective Spring Assembly (Manual Controls Only): Move collective up and down and verify no binding or cracking. Spring colls must not touch when collective is full down. Verify jam nut and palnut tightness. Verify rod ends play within limits. Verify guide rods are greased. If required by Section 1.101, service assembly per Section 8.221.

Throttle Control Linkage: Remove throttle control arm cover if cover is not transparent (under aft left seat [0-540], or inside tunnel [10-540], at firewall). Inspect condition. Verify throttle control clearance to installed equipment and adjacent structure. Verify proper installation and security. Install cover.

Fuel Valve and Fuel Line: Inspect fuel line for damage and valve fittings for leakage (leakage is indicated by a blue or green residue, depending on fuel used, or odor of fuel). Verify no chafing of fuel lines.

Fuel Valve-to-Knob Torque Tube: Inspect condition. Verify attaching security.

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6. Remove Engine Aft (6D), Belly (6C), and both side (6A & 6B) Cowlings (continued) Oil Lines: Inspect entire length of all oil lines and verify no cracks, abrasion, or broken clamps. Verify clearance; wires, ty-raps, and structure must not

Gascolator: With fuel valve off, remove and clean gasculator bowl and screen. Verify no deterioration of gasket. If gascolator bowl is secured threaded collar and ring, lightly lube threads and ring with AZ57-6 gre Reassemble and turn fuel valve on. Safety wire after ensuring no le occur. Verify drain valve is secure and torque-striped.

Mixture Control: Verify mixture control moves mixture control arm stop to stop. Inspect condition and verify security of mixture control cable clamps on bracket; push and pull cable housing to ensure it does not slip in clamps. Inspect condition and verify security of mixture control cable inner wire attachment to mixture control arm. Ensure freedom of rotation between mixture control arm and inner wire retention fitting (bolt) when arm moves. Verify mixture control safety spring is properly installed (so spring force holds mixture control arm at full-rich position if inner wire breaks).

Throttle Correlation Rigging: Check per § 10.150 and adjust as required. Full-Throttle Switch Rigging: Check per § 14.1020 and adjust as required.

2.410 Inspection Procedures and Checklist (continued)

#### 2.410 Inspection Procedures and Checklist (continued)

#### 5. Remove Aft Seat Back Assemblies (5)

Wiring: Check wiring for security and proper installation.

Pitot and Static Lines: Check for security, chafing, and kinks.

Air Conditioning Refrigerant Lines (if installed): Verify security & no damage.

Evaporator Drain Tubes and Valve (if installed): Verify tubes are unobstructed. Place a container under sediment-tube protruding from bottom of tee-fitting into right-aft baggage compartment. Remove plug from sediment tube and allow any accumulated moisture and debris to drain. Reinstall plug. Simultaneously squeeze drain tube and sediment tube near tee-fitting and verify check-valve ball moves up momentarily.

Strobe Power Supply & Alternator Control Unit: Inspect strobe power supply and alternator control unit wiring, Inspect mounting panels for cracks.

Blind Encoder & Governor Controller: Inspect blind encoder and governor controller wiring. Inspect mounting panels for cracks.

Fasteners and Torque Stripes: Inspect condition and verify security of all fasteners. Renew deteriorated torque stripes per Figure 2-1.

6. Remove Engine Aft (6D), Belly (6C), and both side (6A & 6B) Cowlings

Vertical Firewall: Inspect vertical firewall condition, especially around structural attachment points, verify no cracks, buckling or wrinkles.

Fuse(s) and Fuse Holder(s) (if installed on vertical firewall): Verify securit and no corrosion. Verify correct fuses: -66 wire requires AGC-3 fuse, -1601, 1602 wires require AGC-5 fuse. If installed, -1226 wire requires AGC-3 fuse

Wiring: Verify security, proper installation, and no deterioration.

Electric Fuel Pump (IO-540 only): Verify security, proper installation, unobstructed drain tube, and no leakage.

Fuel Line & Hose(s): Inspect condition. Verify security, proper installation, no leakage, & (IO-540 only) good condition of spirap insulation on fuel line between firewall & gascolator. If deteriorated, replace MS3367-5-9 ty-raps securing fuel hoses to clamps (reference R44 SB-67).

Lower Steel Tube Frames: Thoroughly inspect lower steel tube structure for corrosion and inspect all welds for cracks. Ensure frames are not chafed by wires, hoses, clamps, etc.

Oil Cooler(s): Inspect oil cooler(s) and fittings for damage, leaks, cleanliness, and security. Check oil cooler mounting area(s) for cracks.



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Engine Cooling Panels: Inspect cooling panels for cracks and missing fasteners.

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2.410 Inspection Procedures and Checklist (cont'd)

7. Open Cowling Doors (7A), Remove Tailcone Cowling (7B) & Mast Fairing (9)

Forward Flex Plate: Inspect condition, particularly edges. Verify security Verify bonded washers are securely bonded to both sides of each plate arm. Verify operating clearance.

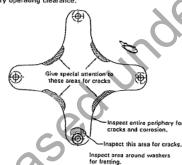


FIGURE 2-5 FLEX PLATE INSPECTION

Clutch Shaft Forward Yoke: Inspect condition. Verify no cracks, corrosion, or fretting. Verify security and operating clearance.

Rotor Brake: Inspect condition, including activating cable & pulleys and microswitch. Verify integrity of brake pads and 0.030 inch minimum pad thickness. Verify brake pad clearance to input yoke when brake is off. Verify security and operating clearance.

thaft: Inspect entire welded assembly for cracks and corrosion, ct jackshaft supporting strut and tube weldments for security, cracks

Main Rotor Push-Pull Tubes: Inspect condition of viewable portions. Verify no cracks at ends. Inspect rod ends per Section 2.120. Verify no tears in sleeves (manual controls only). Verify security and operating clearances.

Main Rotor Push-Pull Tube Rollers & Bushings: (manual controls only): inspect condition. Verify cleanliness, no wear into metal, and free movement of rollers.

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Horizontal Firewall: Inspect upper and lower surfaces of horizontal firewall, especially where bolted to steel structure, for cracks, buckling, or wrinkles. Inspect firewall under fuel tank for leakage (fuel residue).

Fuel Tank Vents: Check vent tube connections for security.

Fuel Tank Sump Drains: Verify both drain valves open easily, drain fuel

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Air Box & Alternate Air Door: Ensure carburetor heat slider valve (if applicable moves fully from stop to stop. Replace air filter (lubricating IO-540 air filter rubber with A257-8 rubber lubricant will facilitate sealing). Chack air box for condition and security. Verify spring-loaded alternate air door opens without binding and closes completely. Engine Air Inlet Hose: Verify correct installation & security. holes, or collapsed areas. Ensure hose is not chafing frame. Verify no rips,

Carburetor Heat Scoop and Hose (0-540 engines only): Inspect for condition and security.

Heater Hose: Inspect for condition and security.

Battery and Battery Box (alternate locations under upper console or under left, front seat): Check cable terminals for cracks. Check each cell electrolyte for quantity and specific gravity if equipped with non-sealed battery. As required, perform capacity test per manufacturer's instructions or replace battery. Verify security and no obstructions in drain tube.

7. Open Cowling Doors (7A), Remove Tailcone Cowling (73) & Mast Fairing (9)

Cowling Door: Inspect hinges and latches for condition and security

Tailcone cowling: Verify no cracks, air inlet obstructions, or loose rivets.

Electrical and Antenna Wires: Inspect condition. Verify security and no chafing, kinks or tight bends.

MRGB Input Yoke: Inspect condition. Verify security and operating clearance. Verify security of magnets.

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2.410 Inspection Procedures and Checklist (cont'd)

7. Open Cowling Doors (7A), Remove Tallcone Cowling (7B) & Mast Fairing (9) (cont'd)

Tail Rotor Push-Pull Tube and Upper Bellgrank: Inspect C121-15 push pull tube, especially at ends, for cracks. Check jam nut for tightness and rod end for looseness. Inspect bellcrank and mounting for cracks or other defects.

Main Rotor Gearbox Cooling Hoses: Inspect both ends for security. Inspect for rips, holes, and chafing,

Main Rotor Gearbox: Inspect main rotor gearbox, especially around gearbox mounts, cap mounting lugs, and mast tube for cracks. Verify no contamination and no deterioration of rubber mounts. Verify security of Hall Effect senders. Check Telatemp for overtemp indications.

Main Rotor Gearbox Oil: With ship on level ground, verify correct oil level and cleanliness using sight gage. If required by Section 1.101, a level and cleanliness using sight gage. If drain and flush gearbox per Section 1.120,

Main Rotor Gearbox Chip Detector: If required by Section 1.101, clean chip detector per Section 1.115.

Upper Steel Tube Frame: Use an inspection light and mirror to inspect each weld, verify no cracks or corrosion.

er steel tube frame is fatigue-loaded and therefore susceptible to fatigue cracks. Inspect thoroughly.

Fuel Tanks: Inspect condition of visible portion. Verify no leaks. Verify

Auxiliary Fuel Tank Fuel Line: Inspect condition. Verify clearance to structure. Verify no leakage. Verify security.

Fuel Return Lines & Pressure Relief Valve (IO-540 only): Inspect condition. Verify no leakage. Verify security.

Fuel Gage Senders & Wiring: Inspect condition. Verify no leaks.

freely, spring closed, and seal completely. Verify D863-1 shut-off clamp on aux tank drain tube seals completely, and inspect clamp and tube for damage and deterioration.

Low Fuel Warning: Turn MASTER switch on. With a clean wooden dowel, gently depress low-fuel sender float in main fuel tank and verify LOW FUEL warning light illuminates. Turn MASTER switch off.

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2.410 Inspection Procedures and Checklist (cont'd)

7. Open Cowling Doors (7A), Remove Tailcone Cowling (7B) & Mast Fairing (9)

ps: Inspect condition, to include gasket. Verify security when Verify alignment marks on cap and tank align when cap is fully

Nuts and Bolts: Inspect all nuts and bolts in this area for movement ar

Cabin Buikhead & Forward Hydraulic Servo Mounts: Inspect bulkhead and serve mounts (if instelled) for corresion, loose rivets, deformation and cracks.

leakage. Inspect shaft for corrosion, especially at shaft-to-seal junctures. Remove any light surface corrosion at shaft-to-seal junctures, and apply a suitable corrosion-inhibitor.

Upper Sheave: Inspect sheave grooves. Replace any sheave showing corrosion pitting or flaking of metalized or anodized coatings, wear through anodized coatings, roughness, or sharp ridges.

Drive V-Selts (see Section 2.507): Inspect V-belts. Verify no bread deterioration of rubber, cuts, fraying, oil, grease, or foreign objects.

Actuator Fuses & Holders: Inspect condition. Verify no corrosion. Verify correct fuses (14-volt systems require AGC-3 fuses while 28-volt systems require AGC-1½ fuses). Verify twist-to-lock function and security.

Actuator Upper Bearing and Strut: Inspect seals on both sides of bearing Inspect strut, including both rod ends, and check witnes for damage. Inspect strut, including both rod ends, and check witheas holes. Check for fretting between bearing inner races and clutch shaft. Bearing inner races should be torque striped to clutch shaft. If stripes to the control of the control o are broken or missligned, shaft is unaitworthy. Check bearing Telatemp. Perform bearing inspection per Section 2.503 if Telatemp indication has increased without corresponding increase in ambient temperature.

Actuator Lower Bearing: Inspect as much of bearing as can be seen Inspect fiberglass scroll area at bearing attachment brackets for signs of cracking. Check bearing seals for evidence of deterioration. Inspect lower bearing brackets for looseness or wear. Inspect bearing per Section 2.502 if discrepancies are found

Intermediate Flex Plate and Forward End of Tail Rotor Drive Shaft (see Figure 2-5): Inspect flex plate for cracks and fretting. Inspect yoke-to-drive shaft weld for cracks (steel shafts).

Tailcone Attachment: Thoroughly inspect all welds in this area for cracks, corrosion, and security of attaching fasteners. Inspect tailcone mounting area for cracks.

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Tail

FIGURE 2-6 MT558-1 TOOL INSTALLATION

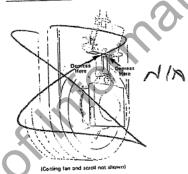


FIGURE 2-6A ACTUATOR SWITCH TEST

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2.410 Inspection Procedures and Checklist (cont'd)

7. Open Cowling Doors (7A), Remove Tailcone Cowling (7B) & Mast Fairing (9) (cont'd)

Actuator (CG51): Verify clearance to structure and drive train when fully disengaged. Tum master switch on and engage clutch switch. While actuator is engaging, depress extension limit switch lever (see Figure 7-15) and verify gearmotor stops; release lever and verify gearmotor resumes running. Verify integrity of activating cable for extension limit switch. Use an inspection mirror to observe column springs at end of belt-ensioning cycle; springs should snap outward simultaneously. Verify entermined and cycle; springs limit per Figure 7-15 is not exceeded. Verify clearance to structure and drive train when fully engaged. Verify dwm-limit stop screw jam nut is tight.

Check actuator for failed-closed spring switch using either of the following two methods:

Method 1 - (actuator electrical harness must be equipped with "Test" plug per Figure 2-6)

 With MASTER switch on and actuator fully engaged, connect one end of MT558-1 tool to actuator test plug and verify gearmotor remains off. CAUTION

If gearmotor activates when installing MT558-1 tool then a spring switch has failed in closed position; immediately remove MT558-1 to prevent actuator damage.

Disconnect MT558-1 tool, connect opposite end to actuator test plug, and verify gearmotor remains off.

c. Disengage clutch and turn MASTER switch off.

d. MT558-1 pins 1-2 jumper tests wire 98 spring switch; pins 2-3 jumper tests wire 91 spring switch (see Figure 14-10). Replace any malfunctioning switch per Section 7.551 before further flight.

(actuator electrical harness without "Test" plug)

Refer to Figure 2-6A. With MASTER switch on and actuator full pengaged, depress column springs on one side of actuator until guings snap inward luse large screwdriver or similar tool with several-hydres to tape over end to protect actuator). Hold springs inward for at least one second. Actuator motor should not run. If motor starts, allow motor to run approximately two seconds, then release pressure on column springs. Depress and hold column springs again. If motor starts again, opposite spring switch does not function properly.

Diagnage and re-engage actuator. Repeat Step a. on opposite-side column springs.

Replace any non-functioning switch per Section 7.551 before further flight.

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2.410 Inspection Procedures and Checklist (cont'd)

7. Open Cowling Doors (7A), Remove Tailcone Cowling (7B) & Mast Fairing (9) (cont'd)

Lower Drive Sheave: Inspect lower sheave. Replace any sheave showing corrosion pitting or flaking of metalized coating, wear grooves, roughnesss; or sharp ridges.

Sheave Alignment: Verify sheave alignment per Section 7.230. Adjust as

Required.

Hydraulic Reservoir: Inspect condition. Verify security and no significant leakage. If required by Section 1.101, replace filter per Section 1.170, Drain and flush hydraulic system per Section 1.180 if oil has turned dark or emits bad odor. Add fluid as required,

CAUTION

Cleanliness of hydraulic fluid is vital to proper system operation Use only clean fluid from sealed containers and avoid contamination from dirty funnels, tubing, etc.

Hydraulic Reservoir Cooling Hose: Inspect condition. Verify hose is secure and is directed at center of reservoir cooling fins.

Hydraulic Pump: Inspect condition. Pump temperature indication should not exceed gearbox temperature indication. Verify security and no significant

reakage.

Forward Hydraulic Servos: Inspect condition. Inspect rod ends per Section 2.120. Verify security and no significant leakage. Verify servo input rod end/clevis area is clean; cleanse area with no-residue, non-alcoholic solvent as required. Verify approximately 0.040 inch total freeplay at servo valve input. Verify valve clearance to surrounding structure while flight controls are moved through full range of travel. Inspect condition and verify security of scissors at upper clevis of servos.

CAUTION

Use LPS PreSolve to clean hydraulic parts. Do not use alcohol.

Aft Hydraulic Servo: Inspect condition. Inspect rod ends per Section 2.120. Verify security and no significant leakage. Verify servo input rod end/clevis area is clean; cleanse area with no-residue, non-alcoholic solvent as required. Verify approximately 0.040 inch total freeplay at servo valve input. Verify valve clearance to surrounding structure while flight controls are moved through full range of travel.

Aft Hydraulin Server Inspect orlands per Section 2.120. Inspect

Aft Hydraulic Servo: Inspect rod ends per Section 2.120. Inspect attachment to sheet metal, verify no cracks. Verify security.

Hydraulic Lines & Fittings: Inspect condition. Verify valve clearance to surrounding structure while flight controls are moved through full range of travel. Verify security and no leakage. Verify minimum 0.25 inch clearance between pump hoses and aux fuel tank.

Fasteners and Torque Stripes: Inspect condition and verify se fasteners. Renew deteriorated torque stripes per Figure 2-1.

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C041-1 DAMPER

2,410 Inspection Criteria (cont'd)

MAXIMUM ALLOWABLE WEAR 0.040 inch

VIEW LOOKING AFT

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2.410 Inspection Procedures and Checklist (continued)

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#### 2.410 Inspection Criteria (cont'd)

#### 8. Remove Tailcone Plugs (8A) & Aft Plastic Cover (8B)

#### NOTE

Aft plastic cover (8B) is secured with two MS27039C0806 screws on Rev L and subsequent tailcones. On Rev K and prior tailcones ensure screws securing plastic cover are short enough to prevent interference in aft flex plate area.

Tail Rotor Drive Shaft: Inspect condition of that section of shaft that can be seen through each hole, looking for obvious defects such as cracks, bends, bows in shaft or corresion or contact with inside of tailcone. Check runout per Section 7.340. Inspect each end of drive shaft for cracks and corrosion.

#### CAUTION

Bends, bowing, dents, cracks and corrosion are cause for immediate replacement of tail rotor drive shaft.

Damper: Inspect tail rotor drive shaft damper (CO41-1). Inspect bearing and housing for cracks, corrosion, wear (see Figure 2-8), and bearing seal deterioration. Inspect arms and bearings for cleanliness, cracks, bends and corrosion. Inspect the same shaft torque stripe.

Talkone Exterior: Inspect tailcone exterior for nicks, scratches, corrosion fretting between skin joints, loose rivets and dents. Inspect tailcone fo cracks in vicinity of antenna mounts and battery (if installed on tailcone).

Strobe Light: Inspect lens and strobe light mount for cracks, loose rivets, and security. If split red/clear lens is installed, verify clear half of lens faces aft. Antennas: Inspect all antennas for condition and security.

Tailcone Battery (if installed): Inspect tailcone-mounted battery condition and security. Verify no debris between battery box cover and tailcone.

Tailcone Interior: Inspect tailcone interior, especially around rivets, for cracks, fretting, and corrosion. Tailcone Attachment: Inspect condition and security of four bolts attaching tailcone to upper frame.

Empennage: Inspect entire empennage and attachment points for damag cracks, and loose fasteners. Check tail skid for evidence of tail strike evidence of tail strike is found, refer to special inspection section.

Float Stabilizer (if installed): Inspect condition and security.

Aft Flex Plate (See Figure 2-5): Inspect flex plate for cracks, fretting, and distortion. If fretting is detected, contact RHC Technical Support. Inspect security of flex plate fasteners.

Tail Rotor Drive Shaft Aft Yoke: Using inspection hole, check yoke for cracks, fretting, and corrosion.

Tail Rotor Guard: Inspect for security. Check forward mount for cracks arou welded area. Inspect area around aft mount for cracking and fretting.



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#### 2.410 Inspection Procedures and Checklist (continued)

#### 9. Tail Rotor Gearbox and Tail Roto

Input Shaft Yoke: Inspect flange and weld for cracks and corrosion.

Gearbox: Inspect general condition. Look for leakage. Check oil quantity and cleanliness through sight gage and adjust or flush as required. Check gearbox-to-tailcone mounting security. Inspect output shaft for nicks, scratches and corrosion. Check safety wire on applicable gearbox bolts. Check Telatemp.



#### NOTE

At 500 hours time-in-service or annually, whichever occur first, remove chip detector and clean varials from detector magnetic probe and adjacent metal body (a toothbrus dampened with solvent works will). Also, drain and flus gearboxes at intervals not to exceed 500 hours time-in-pervice (refer to Section 1.101).

Pitch Control Assembly and C121-17 Push-Pull Tube: Check pitch control assembly for free movement throughout its entire range and for looseness on output shaft (0.25 inch maximum rotational play measured at pitch link attach both. Inspect belicrank for cracks and ensure free movement. Pay special attention to spherical bearing atop stud protruding from underside of pitch control; it is permissible to have a single radial crack in the spherical bearing ball. Inspect aft and of C121-17 push-pull tube for cracks and check rod end for excessive looseness (refer to R44 S8-43A).

Pitch Links: Check rod ands for excessive looseness. If equipped with one-piece pitch links, disconnect and rotate inboard end outboard as required to obtain maximum service life.

Tail Rofor Blades: Inspect blade surfaces for excessive erosion, nicks, scratches, cracks, and corrosion. Check tail rotor blade root fitting bearings for fretting and looseness. Loose bearing outer race in root fitting is undirworthy, requiring replacement of blade. CO29-1 blades only: remove tip covers, inspect for debris and corrosion, & reinstall covers. CO29-1 or CO29-2 blades only: Inspect tail rotor blades for fatigue cracks per R44 SB-83. Refinish blades per Section 9.480 if excessive erosion is found.

Hub Plates and Hub: Inspect for cracks and corrosion, paying special attention to areas around blade and hub mounting bolts. Ensure teeter hinge bearing outer races move with hub and bearing inner balls and retaining nut and bolt remain stationary when hub is teetered. Hub should move frealy on bearings without stiffness or jerkiness. Check teeter hinge bearings for excessive play. For elastomeric bearings inspect per Section 2.125.

Fasteners and Torque Stripes: Inspect condition and verify security of all fasteners. Renew deteriorated torque stripes per Figure 2-1.



10. Open Mast Fairing (9)

Mast Fairing: Inspect condition, especially where stiffeners intersect ribs.

FIGURE 2-8 TAIL ROTOR DRIVE SHAFT DAMPER BEARING INSPECTION

Lower Swashplate Scissors: Inspect condition of scissors. Check rod end and bearing play. Check jam nut.

Vertical Push-Pull Tubes: Inspect for general condition and corrosion. For manual controls, inspect push-pull tube sleeves at rollers and guide.

Rod Ends: Check push-pull tube rod ends per Section 2.120.

Plastic Rollers and Guide (manual controls): Inspect plastic rollers and guide for cleanliness, security, and deterioration.

Pitot Tube: Inspect pitot line and tube, giving special attention to connecting area, for bending, cracking and kinking. Verify pitot tube elbow drain hale is unobstructed. Fuel Tank Vents: Inspect condition and security of fuel tank vent tube clamps. Ensure gitter like is not chaffing fuel vent bubes. Chack tube connections. Vently unber are unbestudental and are not Winked, pixelied,

Mast Fairing Ribs: Inspect for cracks especially around mast tube attachments.

#### 11. Rotor Hub Area

or chafing.

Swashplate Lower Scissors: Inspect condition. Inspect rod ends per Section 2.120. Verify security.

Swashplate Upper Scissors: Inspect condition. Inspect rod ends and spherical bearings per Section 2.120. Measure scissors play per Figure 2-9. Observe scissor linkage while having someone raise and lower collective. Verify both, journals (or spherical bearing balls and spacers), and arm rotate together at each scissor linkage pivot. Verify operating clearance.

Swashplate Slider Tube: Inspect condition. Verify no cracks at rivet hole or corrosion on base. Verify no damage to, or wear through, anodized tule

Remove Swashplate Boot Lower Ty-rap: Lift boot from swashplate. Using an inspection mirror, inspect area between main rotor drive shaft and inside of slider tube. Verify no corrosion and no debris. Verify no boot damage.

Swashplate: Inspect condition. Verify 0.020 inch maximum radial play between swashplate ball and slider tube. Rotate rotor by hand and verify operating clearance and no rough or dry bearings.

Swashplate Tilting Friction: Observe swashplate ball from below and have someone move collective stick slowly up & down. Verify swashplate ball immediately moves with swashplate when swashplate reverses direction. Movement of swashplate without attendant ball movement indicates axial play between ball and swashplate; adjust swashplate tilting friction per Section 8.413.



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## 2.410 Inspection Procedures and Checklist (continued)

#### 11. Rotor Hub Area (continued)

tnstall Swasteplate Boot Lower Ty-rap: Verify correct boot position and security and no boot damage.

Hub: Inspect condition. Verify no nicks, scratches, gouges, or corrosion. If main rotor imbalance is suspected, check tester and coning hinge friction per Section 9.124. Verify no brown or black residue (indicates bearing wear).

Hinge Bolts: Inspect condition. Verify cotter pins are in place and secure. Verify bolt heads and nuts are torque striped to thrust washers.

Pitch Links and Rod Ends: Inspect condition. Inspect rod ends per Section 2.120, including centering. Verify security, including jamnut tightness and proper safety witing.

Fasteners and Torque Stripes: Inspect condition and verify security of all fasteners. Renew deteriorated torque stripes per Figure 2-1.

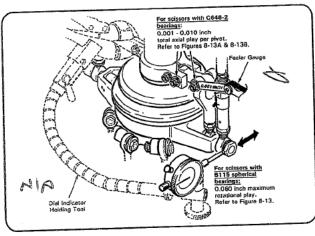


FIGURE 2-9 MEASURING UPPER SWASHPLATE ROTATIONAL PLAY
(Identify scissors bearing type and measure as shown)

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ROBINSON MAINTENANCE MANUAL

## 2.410 Inspection Procedures and Checklist (continued)

#### 12. Main Rotor Blades

Boots: Inspect condition. Verify no boot damage or oil leakage. Verify proper boot position and security. Verify sufficient clearance from hub assembly through full control travel.

Blade Spindles & Root Fittings: Inspect area for damage per § 9.133. Verify proper installation and security of visible fasteners. Renew deteriorated torque stripes per Figure 2-1.

torque stripes per Figure 2-1.

C016-7 Main Rotor Blade Inspection: Remove tip covers. Remove corrosion and loose paint from tip covers, blade tips, and skin-to-spar bond lines. Epoxy prime, or prime and paint, any exposed bare metal on tip covers, blade tips, and skin-to-spar bond lines. Using an AN970-4 washer or 1985-or-later U.S. quarter-dollar coin, tap-test critical bond areas and verify no dull or hollow sounds. Visually inspect critical bond areas and verify no separation, install tip covers, ensuring cover edges are flush with blade profile.

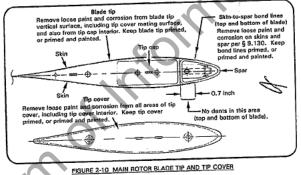
CO16-2 or CO16-5 Main Rotor Blade Bond Inspection: Perform R44 SB-72A or subsequent.

/∠A or subsequent.

Main Rotor Blade Inspection: Inspect skins and doublers for scratches and corrosion per § 9,131. Inspect blades for dents and local deformations per § 9,132 and for voids per § 9,134. As required, wax blades with per § 9,132 and for voids per § 9,134. As required, wax blades with soft cleaning cloths using carnaubar-type wax fsuch as SC Johnson® Paste Wax). Ensure tip cover and blade tip drain holes are unobstructed.



ral damage may occur if compressed air is applied Structural dam tip drain holes.



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ROBINSON MAINTENANCE MANUAL

MODEL R44

## 2.410 Inspection Criteria (cont'd)

12. Main Rotor Stades (Refer to Section 9.130 for damage and repair limits

install tip covers: Verify security.

Fasteners & Torque Stripes: Inspect condition and verify security all fasteners. Renew deteriorated torque stripes per Figure 2-1.

13 Scroff Area

Fenwheel Assembly: Clean and inspect fanwheel assembly for cracks and corrosion. Check leading edge of varies for damage. Verify spring pin and fanwheel alignment marks are aligned (see Figure 2-11); remove fanwheel and inspect mating surfaces for damage if misalignment is evident. Fiberglass Scroil: Inspect fiberglass scroil for cracks and contact marks from fanwheel. Inspect fiberglass scroil for cracks and contact marks from fanwheel. Inspect fiberglass around scroil inlet for any rips or damage. Inspect vane assembly in right upper scroil for damage. Verify drain hole is unobstructed.

drain hole is unobstructed.

Scroll Metal Inlet Lips &Gap: Verify 0.030 / 0.090 inch gap between lips and fanwheel inlet (elongate lip attach holes as required to adjust gap).

14. Engine

Refer to Section 1.101. Refer to Lycoming Operator's Manual (P/N 80297-10 sections 4 and 5), Lycoming SI 10808, and applicable engine component manufacturer's maintenance publications for 100-hour or annual inspection and service procedure.

Engine Cooling Panels: Inspect condition. Pay particular attention to panel(s) mounting oil cooler(s) and panel attached to alternator cooling nose. Verify no cracks or missing or loose fasteners. Verify security.

Afternator & Pulley: Inspect condition. Verify steel pulley (use magnet); aluminum pulley is not approved. Verify security. Verify electrical writing security.

Alternator Belt: Inspect condition. Replace belt if there are any cracks, missing teeth, or delamination. Check tension per Lycoming Service instruction 1129 (latest revision). Verify proper belt alignment.

Emergency Spare Alternator Belt: Remove if installed. Alternator Cooling Hose: Inspect condition. Verify no obstructions or holes. Verify security.

Air Conditioning Refrigerant Lines (if installed): Verify security, no damage, and clearance to adjacent structure. Verify dust caps installed on servicing fittings at vertical firewall.

Air Conditioning Compressor (if installed): Verify security.

Air Conditioning Compressor Drive Belt (if installed): Inspect condition. Verify 4.5/5.5 pounds force applied at mid-span of belt causes 0.11/0.17 inch belt deflection; adjust as required.

Maffier Eibow & Tailpipe Shields: Verify no cracks in shields and shield attaching brackets. Verify clamp security.

ROBINSON MAINTENANCE MANUAL

MODEL R44

2.410 Inspection Criteria (cont'd)

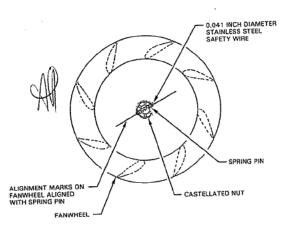


FIGURE 2-11 FANWHEEL ALIGNMENT MARKS

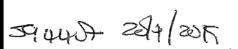
Page 2.34

Change 13: OCT 2006

Change 14: JUL 2008



NA





#### 2.410 Inspection Procedures and Checklist (cont'd)

#### 15. Exhaust System

Remove muffler heater shroud screws, and open shroud. Inspect muffler outer wall for cracks, deformation, and ruptures. Pay particular attention to tellpipe and riser attachment areas, welds, clamps, supports, riser flanges and gaskets. Pressurize muffler with low pressure air and inspect for leakage. Close and secure heater shroud



#### 16. Landing Gear

Skids and Shoes: Inspect left and right landing gear skids and skid shoes; minimum allowable shoe thickness is 0.05 inch. Verify drain holes are open (not applicable to float landing gear).

Struts and Elbows (open fairings if installed): Inspect for cracks and corrosion, especially at elbow joints, inspect weld area at bottom of strut for cracks.

Landing Gear Fairings (if installed): Inspect for cracks and loose rivets.

Crosstubes: Inspect, especially at elbow joints, for cracks and corrosion With helicopter on level ground, measure distance from ground to tail skid. If dimension is less than 30 inches, one or both cross tubes must be replaced (see Section 5).

Landing Gear Attach Points: Check forward attach points for loose rivets cracks, buckling, and fretting. Check bearing mounts for loose swages and worn bearings.

Utility Floats (if installed): Inspect for damage. Refer to Pilot's Operating Handbook for proper inflation pressure.

Pop-out Floats (if installed) Pressure Cylinder & Valve: Inspect condition Verify security. Verify pressure gage indicates correct pressure for ambient temperature; refer to placard on cylinder for limits.

Pop-out Floats (if installed) Inflation Manifold: Inspect condition. Verify no A chafing or pinching of hoses, especially where hoses pass thru structure.

Pop-out Floats (if installed): Inspect condition of stowed floats. Verify no holes, cuts, tears, abrasion thru, or unraveling of, float covers. If cover damage is found, inflate and inspect floats. Verify all float cover snaps and hook-and-loop fasteners are properly secured. Verify float-to-skid 🗡 🔝 attachment security.

#### NOTE

Annually apply A257-7 dry-film lubricant (see Section 1.470) to float cover snap mating surfaces. Annually perform Sectio 5.630 leak check. Every three years, perform Section 5.640 mergency inflation test.

Change 13: OCT 2006

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#### 2.410 Inspection Procedures and Checklist (cont'd)

Verify no loose equipment that might foul controls.

Static Ports: Inspect static ports for obstructions. If fixed utility installed, verify air dam installed aft of both static ports.

Rear Sout-Bottom Suspension Straps: Inspect condition and security Seat Belts and Shoulder Harnesses: Inspect for fraying and broken stitching. Check inertia reels for proper operation by pulling harness quickly to verify locking function. Check buckles for proper operation. Check belt and reel attach points for security.

#### NOTE

TSO tag not required on factory installed harnesses

Trim Controller (Manual flight controls only): Adjust trim controller per Section 14.710

Windows: Minor damage that does not impair pilot's visibility or indicat impending structural failure is acceptable. For cracks and crazing adjacen to windshield retainer strips, refer to Section 2.580. Acceptable damage includes:

- One nick, not more than 0.010 inch deep and occupying an area as a. larger than 0.25 by 0.50 inch per square foot.
- b. Scratches not more than 0.010 inch deep and 5 inches long.
- c. Any surface defect such as small spots or stains that can be removed with light polishing.
- d. Minor polarization faults in small areas of windshield near edges.

Skin: Inspect skin for damage. Inspect for loose rivets, indicated by cracked paint and/or black residue around heads.

Doors: Inspect for cracks around hinges and latches. Check vents for operation. Ensure hinge pins are secured with cotter pins. Check tightness of hinge mounting screws. Verify proper operation of door latching and leaking methods are the proper operation. locking mechanisms.

Chin Drains (R44 Clipper): Verify no obstructions.

18. Special Equipment (if installed)
Peak Beam Searchlight: Check for proper operation. Align beams by focusing both lights to smallest spot possible and shining against a wall at least 100 feet away. Verify both spots hit same point within one foot.

Nose Gimbal and Monitors: Turn power on and verify infrared units

complete cool down sequence in manufacturer's recommended time. Verify gimbal steers smoothly in azimuth and elevation. Check focus and zoom of infrared/video. Check for clear images on monitors. Verify retractable monitor retracts without interference.

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Change 13: OCT 2006

#### ROBINSON MAINTENANCE MANUAL

18. Special Equipment (if installed)

#### **R44 SERIES**

MIA

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#### 2.410 Inspection Procedures and Checklist (continued)

Spectrolab Searchlight: Verify light starts and cooling fan operates. Verify searchlight steers smoothly in azimuth and elevation. For slaved units, turn on slaving and verify light follows nose gimbal approximately.

FM Radios: Verify radios transmit and receive properly and control h programs radios properly.

Video Tape Recorder: Verify all video tape recorder modes of and remote control correctly controls modes.

Overhead Light: Verify overhead light on/off. Transmit and Intercom Switches: Verify proper operation of special transmit and intercom switches.

Talent Light: Verify talent light on/off, acceptable friction.

Micro Cameras: Verify all micro cameras are selectable from video switcher and produce focused, upright images on monitors.

TV Tuner: Verify TV tuner receives broadcasts (video clear on monitors, audio clear in headset). Microwave Antenna: Verify omeidirectional microwave antenna extends/ retracts properly. Verify up/down indicator lights function properly.

Electromagnetic and Radio Frequency Interference: With all special equipment turned on, check for EMI/RFI with tach, COM, intercom, compass, or other systems.

19. Life-limited Parts, Component Overhaul and Retirement, ADs, & SBs

Life-Limited Parts: Replace life-limited parts that have reached maximum service life per § 3.300. Verify components installed correspond with helicopter maintenance record and have sufficient time remaining for projected operations.

Component Overhaul: Replace components that have reached maxim service before overhaul per § 3.100. Verify components installed correspondith helicopter maintenance record and have sufficient time remaining projected operations.

Component Retirement: Replace components that have reached maximum service life per § 3.100. Verify components installed correspond with helicopter maintenance record and have sufficient time remaining for projected operations.

Airworthiness Directives: Verify applicable airframe, engine, and accessory Airworthiness Directives (ADs) have been performed according to AD compliance procedures. Some aircraft may be affected by ADs that require recurring inspections at less than 100-hour or annual intervals. Recent U.S. Airworthiness Directives are available online at www.loa.gov.

ROBINSON MAINTENANCE MANUAL

R44 SERIES

#### 2.410 Inspection Procedures and Checklist (continued)

#### 19. Life-limited Parts, Component Overhaul and Retirement, ADs, & SBs (continued)

Service Bulletine: Verify applicable airframe, engine, and accessory Service Bulletins (SBs) have been complied with according to manufacturers' instructions. Some aircraft may be affected by SBs that require recurring inspections at less than 100-hour or annual intervals. RNC Service Bulletins are available online at <a href="https://www.robirnsonheil.com">www.robirnsonheil.com</a>, under the Publications tab.

20. Required Documents and Placards

Documents: Check that required documents (Airworthiness Certificate, Registration, applicable Radio Station License, Pilot's Operating Handbook, Equipment List/Weight & Balance Data) are on board, legible, and current.

Placards: Verify required placards are properly installed, legible, and current. Refer to Pilot's Operating Handbook Section 2 for placard requirements.

21. Inspection and Access Covers

Foreign Objects Removed: Verify all tools, loose hardware, rags, and other foreign objects are removed from helicopser.

Covers Closed and Secure: Install/close all inspection and access covers removed in preceding steps. Verify security of all access covers.

Clipper I Alrbox Sealed: Ensure air box cover perimeter is sealed with Albanium tape (Clipper I models only).

#### 22. Maintenance Records

Maintenance Records: Verify maintenance records are accurate, legible, and complete. Enter maintenance performed (such as part replacement, equipment adjustments, servicing, and lubrication) and inspection data. Data must include a description of (or reference to data acceptable to the Administrator) the work performed, date, helicopter total time in service, signature, certificate type and certificate number of person approving aircraft for return to service.

Inspection Procedures S 22 Mechanic's signature

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Samot 20/7/19

									Т				ī	$\neg \tau$	$\neg$	
TABLE 1 SCHEDULED MAINTENANCE AND INSPECTIONS	First 10 hours	First 25 hours	First 100 hours	Every 50 hours	Every 100 hours	Every 300 hours	Every 500 hours	Every 2200 hours	Every 4 months	Every 12 months	Every 24 months	Every 3 years	Every 4 years	12	Every 15 years	
Perform maintenance & inspection per Lycoming Operator's Manual.*	•	•	_	•	•	•					-	_	$\dashv$	$\dashv$	亅	
Perform Lycoming SI 1129B  Methods of Checking DC Alternator and Generator Belt Tension.		•			•										4	
Perform Lycoming SI 1191A Cylinder Compression.					•										4	
Perform Lycoming SI 1080C  Maintenance Items for Special Attention.				•	•			_	_		9		<b>)</b> -		$\dashv$	
Perform Lycoming SB 301B*  Maintenance Procedures and Service Limitations for Valves.	_	_			_	•									$\dashv$	
Perform Lycoming SB 366B Carburetor Throttle Body Screw Inspection.		<u> </u>	<u> </u>	-	•						_	_		-		İ
Perform Lycoming SB 342F (IO-540 Only) Fuel Line (Stainless Steel Tube Assy.) and Support Clamp Inspection & Installation. Reference AD 2011-26-04.					Ċ						_					
Perform Lycoming SB 388C Procedure to Determine Exhaust Valve and Guide Condition.			•		5	•		_	_	-	-	_	-		-	
Perform Lycoming SB 480E  I. Oil & Filter Change & Screen Cleaning / II. Oil Filter/Screen Content Inspection	,		2	•				_	<u> •</u>	-	-	-	-	_		
Perform TCM SB 643B  Maintenance Intervals for All TCM & Bendix A/C Magnetos & Related Equipment					•	L	<u> •</u>	-	-	-	$\downarrow$	-	•	-	<u> </u>	
Perform TCM SB 658 Distributor Gear Maintenance.	<u> </u>	_	_	_	_	-	<b> •</b>	_	lacksquare	-	$\downarrow$	igert	_	-	$\vdash$	
Perform TCM SB 663A Two-Wire Magneto Tach. Breaker Contact (Points) Assy. P/N 10-400507.			_	_	1	-	•	ig	1	╀.	-	-	•	+	<u> </u>	-
Perform 100-hour/annual maintenance & inspection per § 2.400.	_	$\bot$	$\bot$	+	+•	┼.	+	+	+	╀	+	╁.		+	$\vdash$	1
Lubricate C181-3 bearing per § 1.140.		+	+	+	+	┼.	┽	╀	+	+	+	╁	+	+	十	1
Replace hydraulic filter per § 1.170.	+	+	+	+-	+	╀	+.	+	╁	十	+	十	十	+	+	1
Drain and flush gearboxes per § \$ 1.120 & 1.130.	+	╀	+	+	+	+	╁.	┰	+	┧.	+	十	╁	+	十	1
Clean gearbox chip detectors per § 1.115.	+	+	+	+	+	╀	+	+	╁	+	+	+	十	十	十	1
Perform clutch assembly lubricant inspection & servicing per § 7.210	0.	_	╬	+	+	+	+;	+	+	+	╁	+	十	+	+-	1
Service collective spring (manual controls) per § 8.221.	_	+	╬	+	+	+	+	+	╁	╅	+	+	╅,		十	1
Verify magneto drive cushion pliability.	$\dashv$	+	+	+	╁	+	+	+	+	十	+	+	十	十	十	4
Overhaul helicopter per § 2.700.	$\dashv$	+	+	+	+	╁	+	+	+	+,		十	十	十	+	-
Inspect emergency locator transmitter (ELT) per 14 CFR § 91.207.	_	+	+	+	+	╀	╁	╫	+		+	+	+	十	十	_
Perform pop-out float leak check per § 5.630.	_	+	+	+	+	+	+	+	+	+	-	+	+	十	十	_
Test and inspect transponder per 14 CFR § 91.413.	-	+	+	+	+	+	+	+	+	+	+	-		十	十	
Perform pop-out float inflation check per § 5.640.	$\dashv$	+	+	+	+	+	+	+	+	+	+	-	-	+	+	_
Perform pop-out float pressure cylinder hydrostatic test.*	+	+	+	+	+	+	+	+	$\dashv$	+	+	+	十	十。	,†	_
Perform 12-year maintenance and inspection per § 2.600.	+	+	+	+	+	+	+	+	十	+	+	十	+	+	+,	_
Pop-out float pressure cylinder maximum life.		丄	$\perp$	L		丄						L_				_

<sup>\*</sup> Shorter interval than published on referenced document/decal.

2901 Airport Drive, Torrance, California 90505

Phone (310) 539-0508 Fax (310) 539-5198

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### **R44 SERVICE BULLETIN SB-99**

**DATE: 03 July 2019** 

TO: R44-series Owners, Operators, and Maintenance Personnel

**SUBJECT: 24-volt Battery Electrolyte Leakage** 

### EFFECTIVITY:

- R44 II Helicopter S/N 10410 thru 14327, 14331, and 14334, except 10915, 11049, 11429, 11529, 11611, 12415, 14269, 14304, 14318, and 14321;
- R44 Helicopter S/N 2421 thru 2582 and 2587, except 2577 and 2580; and
- R44 Cadet Helicopter S/N 30001 thru 30055, except 30047.

**TIME OF COMPLIANCE:** Within next 100 flight hours or by 30 September 2019, whichever occurs first.

**BACKGROUND:** RHC has received reports of B237-4 (Concorde RG24-15) batteries leaking electrolyte. Concorde recommends rubber support strips be added for batteries installed in the engine compartment and batteries installed under the left front seat be rotated to the upright position. Concorde has also revised their manufacturing procedures to reduce the likelihood of battery leakage.

### **COMPLIANCE PROCEDURE:**

- 1. For each affected helicopter, determine location of battery. If battery is located in the engine compartment and oriented on its side (per R44 IPC Figure 96-13), order one KI-264-1 Battery Support Strips Installation Kit. If battery is located under the left front seat, order one KI-264-2 Battery Installation Upgrade Kit.
- 2. Install KI-264-1 or -2 kit per kit instructions.
- 3. Make appropriate maintenance record entries.

### APPROXIMATE COST:

Parts: No charge for KI-264-1. \$385 for KI-264-2, discounted to \$190 if ordered by 30 September 2019. Reference helicopter serial number.

Labor: 0.5 man-hours to install KI-264-1 kit.

3.0 man-hours to install KI-264-2 kit.

THE DESIGN ENGINEERING ASPECTS OF THIS BULLETIN HAVE BEEN SHOWN TO COMPLY WITH APPLICABLE FEDERAL AVIATION REGULATIONS AND ARE FAA APPROVED.

KH PARTS OLDERSO VIA HEUBIZ C/W 594457 20/7/2019

### ROBINSON HELICOPTER COMPANY

2901 Airport Drive, Torrence, California 90505

Phone (310) 539-0508 Fax (310) 539-5198

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### R44 SERVICE BULLETIN SB-100

**DATE:** 03 July 2019

TO: R44 II Owners, Operators, and Maintenance Personnel

**SUBJECT:** R44 II Induction Hose

**EFFECTIVITY:** R44 II Helicopters S/N 10001 thru 14314, except 14269, 14287, 14299, and 14304. Also spare A785-31 hoses shipped thru March 2019.

TIME OF COMPLIANCE: Within next 100 flight hours or by 31 August 2019, whichever occurs first.

BACKGROUND: RHC has received reports of A785-31 engine air induction hoses with separation between their outer and inner layers. A separated inner layer can block engine induction air flow. Service Bulletin SB-97 requires replacement of certain suspect hoses. This bulletin requires a one-time inspection of all hoses.

### **COMPLIANCE PROCEDURE:**

- 1. For installed hoses, remove right side engine cowling and remove A785-31 hose.
- 2. Visually inspect inside of hose to verify no separation between outer and inner layers. Also, flex the hose in all directions and listen for a crinkling sound, which is an indication of separation. (An airworthy hose does not make a crinkling sound when flexed.)
- 3. Replace any installed hose with any indication of separation. Return to RHC or discard any spare hose with any indication of separation.
- 4. Make appropriate maintenance record entries (appropriately tag spares inventory in accordance with local procedures.) Notify RHC Technical Support of any hose where indications of separation were found.

### APPROXIMATE COST:

Parts: None for hose inspection. \$134 for replacement of A785-31 hose.

Labor: 0.2 man-hour (in conjunction with scheduled oil change).

THE DESIGN ENGINEERING ASPECTS OF THIS BULLETIN HAVE BEEN SHOWN TO COMPLY WITH APPLICABLE FEDERAL AVIATION REGULATIONS AND ARE FAA APPROVED.

N/A DUES A/C S/N 59:447 20/4/2019



Job #: 369

Rego: **NBY** 

**AFTTIS: 291.00** 

Start Date: 03-07-2020

Finish Date: 3 - 7 - 2020

Customer: Ultimate Outback Experience

Job Type: Airframe Inspection

Coordinator:

Description: Pilot Reported Tail rotor Vibe

### Worksheet

### Pearl Coast Heli Maintenance Pty Ltd COA - 0686

Licence No: 760877

Aircraft: R44

Job No: 369

Co-ordinators Signature:

Component

Rego: VH-NBY

Serial #: 2544

Print Name:

Date: 3 1 / 120

Airframe Airframe Hours

Counter

Form No: PCHM004

291 03-07-2020

ATA Code: Work Required: Additional Work Pilot Reported Tail Rotor Vibe **Action Taken:** Task No 001 C/O T/R Balance Check Found To Be 0.05ips Within Limits No adjustments made NDF Owner Was Notified Check Flight To Be Carried Out Category Airframe L.A.M.E Monitor By Interval Licence No Due To Run **Labour Hours** 

### Co-Ordination and Final Certification Pearl Coast Heli Maintenance Pty Ltd COA - 0686

Aircraft: R44	Job No : 369				M/R Date of Issue	1 1
Rego: VH-NBY	Job Description: Pilot Repo	rted Tall rotor Vibe			\$4 1977 1 19 A 16 a 19 A 16 a 19 A 19 A 19 A 19 A 19 A 19 A 19 A 19	
Serial # : 2544					Expired M/R Serial I	No.
Owner: Ultimate Outback Experience				ļ		
Operator: Ultimate Outback Experience					Januari M/D Cariel N	-
				6.0	Issued M/R Serial N	IO.
	·					
L.A.M.E CERTIFICATION					Aircraft TTIS	291
I hereby certify that all maintenance in the category(s	) for which I am responsible have been con	npleted.				
		the field of the of the of the section for other sector (by the FFE bounds on the of the second managing sectors spring on a spage		Professor St. 1907-1906 - V. Palin (1908) the P. See Williams of according to consider a second consideration as a second		
Categories covered during this inspection - Cer	tifications					
s 22 Airframe	Licence Number	160874	Date	3-7-20	For & on behalf of:	Pearl Coast Heli Maintenance Pty Ltd COA - 0686
Engines	Licence Number		Date		For & on behalf of:	Pearl Coast Heli Maintenance Pty Ltd COA - 0686
Electrical	Licence Number		Date	The state of the s	For & on behalf of:	Pearl Coast Heli Maintenance Pty Ltd COA - 0686
Instrument	Licence Number	,,0	Date	-	For & on behalf of:	Pearl Coast Hell Maintenance Pty Ltd COA - 0686
Radio	Licence Number		Date	- ang Militar Schiller (1 and 1 and	For & on behalf of:	Pearl Coast Heli Maintenance Pty Ltd COA - 0686
Independent Inspection Certificate Pursuant to CAR 4.	2G. Inspection carried out on the following	6				
1st Inspection Signature :		Licenc	e Number		Mir. Sahah Sahiri. Maraka Palainshaka sa rida Para marakaka kacama asarra ya sa j	TO THE DEPOSITION AND AND THE STATE AND AND AND AND AND AND AND AND AND AND
2nd Inspection Signature :		Licenc	e Number	90 (4 m) (4	of companyation of the first dark from the control of the February Control of the February Control of the Contr	htteren i Sudh sa hadi sada maray ana qua mga ng mga ga ga ga ga ga ga ga ga ga ga ga ga g
CO-ORDINATING CERTIFICATION				The response states are not as a substant should be able to be substantial to be set of the substantial to be substantial to be set of the substantial to be substantial t		***************************************
I hereby certify for the completion and co-ordination of	of the entire inspection.					
LAME Signature :	LAME Licence No :	760877	Date	3 17 120	For & on behalf of: Pe 0686	earl Coast Heli Maintenance Pty Ltd COA -
A CERTIFICATION ABOVE CONSTITUTES A CERTIFIC or workpackage contents is to ensure that any mainten	ATION PURSUANT TO CAR42ZE THAT ALL nance performed during the inspection has	MAINTENANCE HAS BEEN PROPERLY not invalidated a certification already	CERTIFIED	D. Note: The person who cer other category and has beer	tifies for the completion completed and prope	on and co-ordination of the entire inspection orly certified.

Form No: PCHM002 Page 1 of 1

### Engineering Work Package Pearl Coast Heli Maintenance Pty Ltd COA - 0686



Page 1 of 1

### **JOB DETAILS**

JOB DETAILS	:					
Job Number	369	Date Rais	ed 03/07/2020	AFTTIS	291	
Aircraft Registration	VH-NBY	Date Com	11 3 - 7 - 2G	Engine TTIS	29/	
Operator	Ultimate Outback Experience	Approved Maintenar	nce Data 2019	nce Manual Rev Aug Landings/Starts	anne Person et et trem 1964 196 196 196 196 196 196 196 196 196 196	e Parla manani e mana Para meti Para manana melilikan men kamani kanani
Aircraft Type	R44	(Airframe		Cycles		Comment of the Commen
Operator Base	Pearl Coast Heli Maintenance	Approved Maintenai (Engine)	nce Data Lycoming O-540 Operators N 2009	Manual Rev March RINS	- Annother Transport	
Job Description : Pilot R	Reported Tail rotor Vibe					his his selection and his anima defense a refer season of humanical animals.
			%0,			
SIGNATURE SIGN OFF	Name	Licence No	Signature & Initial		Trade Type	Hours
Job Coordinator	s 22	760877	<b>s</b> 22		131.4	
AME/LAME			and the control of th	emmet mit samt, als dem mit de authensieren der eine der eine der eine der eine der eine der eine der eine der		The state of the s
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And an extension of the control of t						Property and the second
	08					
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Form No: PCHM003



### **TEMPORARY LOCATION RECORD**

This document records the assessment made by the Chief Engineer before carrying out maintenance at a Temporary Location. A copy of this form will be retained in the work pack for the job and a copy on file with the Chief Engineer to form the Temporary Location Register

Aircraft Type: R44 Rayen / Aircraft Rego: VH-V/34 Job Nº: 369
Job Description: Pilot Reported fail Notes vibe
Job Location: 14 fan ami Drive Brome.
Subject Record of Assessment
Facility / Environment Opin Cament area.
S 22
Personnel
Parts and Materials
Barbard wishers
Tooling and Equipment
Bulance toding and hor + Ty Dr torque wrench
Approved Data LAA In/In and tyc.
I certify that the assessment of the location stated in this document deems it appropriate to carry out the maintenance required and stated above.
Signature Date: 3 – 7 – 26

PCHM-017



Job #: 357

Rego: NBY

**AFTTIS: 286.90** 

Start Date: 01-06-2020

Finish Date: 4-6-7020

Customer: Ultimate Outback Experience

Job Type: 100Hrly/Annual Inspection

Coordinator:

Description: 100Hrly/Annual Inspection

### Worksheet

Rego: VH-NBY Aircraft: R44

Serial #: 2544 Job No: 357

Co-ordinators Signature:

# Pearl Coast Heli Maintenance Pty Ltd COA - 0686

Component Airframe Airframe

286.9 Total Counter Hours Days

02-06-2020

Category Airframe Monitor By Hours, Days  To Run 61.9  Vork Required: 100HRLY/12MONTHS 100Hry  To Run 61.9  Vork Required: 100HRLY/12MONTHS Sheave  Task No 002  Category Airframe Monitor By Hours, Days  Interval 100	Work Required : 100HRLY/12MONTHS 100Hrly/12Month Inspection (AW RHC R44 M/M Section 2.200           Task No         Action Taken :         Acti		ATA Code:  A.M.E  L.A.M.E  Date $Q - 6 \sim 20$ ATA Code:  A.M.E  L.A.M.E	
Due 348.8, 08-10-2020  To Run 61.9  Renuired: 100HRI Y/12MONTHS Mainte	To Run 61.9  To Run 61.9  Work Required: 100HRI Y/12MONTHS Maintenance Flight To Be Carried Out Before Release To Service	Labour Hours	Date 4 - 6-26	,
Task No 003 Category Airframe Monitor By Hours, Days	Action Taken:  (/O NDF		A.M.E	making special communication and the last test to the last test test test to the last test test test test test test test t
Interval 100  Due 348.8, 08-10-2020  To Run 61.9		Labour Hours	Licence No 760877  Date	1 1:
Vork Required: 330HRLY Replace Hydraulic Task No 004 Category Airframe Monitor By Hours Interval 300	Work Required: 300HRLY Replace Hydraulic Filter TAW RHC R44 M/M Section 1.170  Task No 004  Category Airframe  Monitor By Hours  Interval 300		ATA Code:  A.M.E  L.A.M.E  L.Cence No 760877	I I I
Due 388.62 To Run 101.72	UN. 16528118-14 UN. 16343	Labour Hours	Date 3-6-20	

Form No: PCHM004

# Pearl Coast Heli Maintenance Pty Ltd COA - 0686 Worksheet

Aircraft: R44

Rego: VH-NBY

Serial #: 2544

Job No: 357

Co-ordinators Signature: Print Name:

Date: 416 120

Licence No: 760877

Component Airframe Airframe

Hours Days

Counter

02-06-2020 Total 286.9

Date 4-6-20 760877 A.M.E Licence No L.A.M.E ATA Code: Labour Hours Work Required: 500HRLY/12MONTHS Clean & Test M/R & T/R Gearbox Chip Detectors Per RHC R44 M/M Section 1.115 Action Taken: 156 NPF Due 98-10-2026, 748.8

Monitor By Days, Hours

Interval 365

To Run 128 /7

Category Airframe

Task No 005

Form No: PCHM004 A certification for L.A.M.E constitutes a certification pursuant to CAR42ZE that all maintenance has been properly performed as detailed in the above mentioned job number for and on behalf of Pearl Coast Hell Maintenance Pty Ltd COA - 0686

Freedomofilmation

# Worksheet

Rego: VH-NBY Aircraft: R44

Job No: 357

Serial #: 2544

Co-ordinators Signature:

Pearl Coast Heli Maintenance Pty Ltd COA - 0686

Component Airframe Airframe

Licence No: 760877

Hours Days

Counter

02-06-2020 Total 286.9

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Required: 50HRLY 50 Hrly Maintenance	Work Required: 50HRLY 50 Hrly Maintenance & Inspection IAW Lycoming Operators Manual	AIA CODE:	2
terlines in the second control of the second control of the second control of the second control of the second	Action Taken:	A.M.E	
Task No 006	CONTRACTOR AND CONTRA	THE STATE OF THE S	4
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Monitor By Hours	Special and the state of the st	The state of the s	
Interval 50		Licence No	760877
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To Run 11.9	Labour Hours		
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To Run 61.9	Labour Hours		
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Category Engine		L.A.M.E	
Monitor By Hours, Days			Aller Agents
Interval 100		Licence No	760877
Due 348.8, 08-10-2020			Date 7-6-70
To Run 61.9	Labour	Labour Hours	

Form No: PCHM004

### Worksheet

Pearl Coast Heli Maintenance Pty Ltd COA - 0686



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Total	286.9		ATA Code :	A.M.E	L.A.M.E		Licence No	Date	energy of the contract of the	ATA Code:	A.M.E	L.A.M.E		Licence No	Date	ATA Code:	A.M.E	,	L.A.M.E	Licence No	Date	ATA Code:	M M		a.A.M.E	+ Licence No	Date	
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Secondinators Signature :	Print Name:	Date: 416120	dy Screw Inspection	Action Taken:	C/O NDF	The same described the described of the second seco				ession Check	Action Taken: C/O #1 74/80 #2 /80 #3 76/80 #4 76/80	in the trial of the state of th	After the first and the second of the second	The second state of the se	to depend of the Colon and the	5t	Action Taken :	C/O NDF	The second secon	en en en en en en en en en en en en en e	ele en en en en en el ele el el el el en l'agua deprenden municipal department, d'exploit el el elle en en en	n Maintenance Items	Action Taken:	C/O NDF				
Aircraft: R44 Co-ordin	Rego: VH-NBY	Job No : 357	Work Renuired: 1 YC S/B 366C Carb Throttle Body Screw Inspection	Task No 010	Category Engine	Monitor By Hours, Days	Interval 100	Due 348.8, 08-10-2020	To Run 61.9	Work Required: LYC SI 1191A Cylinder Compression Check	Task No 011	Category Engine	Monitor By Hours, Days	Interval 100  Due 348.8, 08-10-2020	To Run 61.9	Work Required: TCM S/B 653 Hot Magneto Test	Task No. 012	Category Engine	Monitor By Hours, Days	Interval 100	<b>Due</b> 348.8, 08-10-2020 <b>To Run</b> 61.9	Work Required : LYC SI 1080C Special Attention Maintenance Items	The control of the section of the control of the co	Category Engine	Monitor By Hours, Days	Interval 100	Due 348.8, 08-10-2020	To Run 61.9

# Pearl Coast Heli Maintenance Pty Ltd COA - 0686

Co-ordinators Signature : Print Name :

Rego: VH-NBY

Aircraft: R44

Worksheet

Component Airframe , Airframe

Counter Hours Days

02-06-2020 Total 286.9

Serial #: 2544	Print Name:	er en de se de la company en de la company en company en en particular de la company de la company de la compa	Airframe Days	02-06-2020	
Job No : 357	621918 : ale	Licence No : 760877	1		-
Work Remirred: 1 YC 5/8 595 Torque Values Ignition Harness Attach Screws	ues Ionition Harness Attach Screws			ATA Code:	s 22
Task No 015	Action Taken:	Of the second of	es fili ban i la ban imprepiator i processible en la companiation de l	A.M.E	and a second
Category Engine	C/O NDF	mage that also industrial facilities are more more more analysis. I make the separate separate series		L.A.M.E	The second secon
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<b>Due</b> 348.8, 08-10-2020 <b>To Run</b> 61.9		todat telepis fin eine erhenke mentkrijneren kontonen ennterkrijneren ennterkr	Labour Hours	Date	3-6-74
Work Remitted : 1 YC S/R 480F 4Monthly Oil & Filter Change	Oil & Filter Change	ommong Antiques proper and makes in the same of the commence of the property of the property of the same and	er de la compression della compression della compression della compression della compression della compression della compression della compression della compression della compression della compression della compression della compression della compression della compression della compression della com	ATA Code:	9
	Action Taken :		17.00	2	22
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Interval 120	and the second second of the s	Control of the Contro	e end, me e english end bomb bilde menne per y by de tip ondight by by by by by by en e e e en	Licence No	//809//
Due 06-02-2020	ender and the court of the cour	The state of the s		Date	Date 4 5-20
To Run -117			Labour Hours	gianaki Andrianaki menjipan peliji beledikan anakatan temahan dan dan dan dan dan dan dan dan dan d	for the designation of the state of the stat
Work Required: LYC 5/B 480F Oil Filter Change & Inspection	Change & Inspection		and the second control of the second control	ATA Code:	Company of the state of the sta
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To Run 11.9			Labour Hours	) aled	Date for 100

A certification for L.A.M.E constitutes a certification pursuant to CAR42ZE that all maintenance has been properly performed as detailed in the above mentioned job number for and on behalf of Pearl Coast Hell Maintenance Pty Ltd COA - 0686

Form No: PCHM004

Additional Worksheet Pearl Coast Heli Maintenance Pty Ltd COA - 0686

Co-ordinators Signature :

Rego: VH-NBY Serial #: 2544

Job No: 357

Aircraft: R44

Print Name: 8 %

Licence No: 760877

Component Airframe Airframe

Counter Hours Days

286.9

02-06-2020

Total

			A.M.E	L.A.M.E	Licence No.	Date
Item	Defect or Work Required	Rectification Details				
	#2 CYC has low	haveued #2 Kit PN:05 \$ 21745	A	s 22	160877	4-6-20
			3			
7	RH RAG 5B-102 CHIN 15/4 COVET	Ut Due He Su	<b>177</b>	2	160571	2-9-7
N	9 HK R44 58-103 MK	Year water	\$		16871	02-9-7
4	RHE RAGE 513-184 AIT NA DUR A/C SI	44 Due A/C SN	€		760574	02-9-1
~	OIL SEPANATOR					
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Form No:

A certification for L.A.M.E constitutes a certification pursuant to CAR42ZE that all maintenance has been properly performed as detailed in the above mentioned job number for and on behalf of Pearl Coast Hell Maintenance Pty Ltd COA - 0686

Page ... of ...

### Page 1 of 1

# Pearl Coast Heli Maintenance Pty Ltd COA - 0686 Co-Ordination and Final Certification

Rego: VH-NBY Aircraft: R44

Serial #: 2544

Operator: Ultimate Outback Experience Owner: Ultimate Outback Experience

Job No: 357

Job Description: 100Hrly/Annual Inspection

M/R Date of Issue

Expired M/R Serial No. Issued M/R Serial No.

8182224

A 158254

Aircraft TTIS

### L.A.M.E CERTIFICATION

I hereby certify that all maintenance in the category(s) for which I am responsible have been completed.

Categories covered during this inspection - Certifications

Instrument Electrical Airframe Engines

760877

Licence Number

Pearl Coast Hell Maintenance Pty Ltd COA - 0686

For & on behalf of:

4-6-20

Date

Pearl Coast Heli Maintenance Pty Ltd COA - 0686

4-8-26 For & on behalf of:

Pearl Coast Heli Maintenance Pty Ltd COA - 0686

For & on behalf of:

02-9-7

Pearl Coast Heli Maintenance Pty Ltd COA -0686

For & on behalf of:

760877

Licence Number

Date

760877 760877

Licence Number

Licence Number

Licence Number

760877

Date 4-6-20 For & on behalf of:

Pearl Coast Heli Maintenance Pty Ltd COA -0686

1st Inspection Signature:

Independent Inspection Certificate Pursuant to CAR 42G. Inspection carried out on the following:

Radio

Licence Number

Licence Number

2nd Inspection Signature:

CO-ORDINATING CERTIFICATION

I hereby certify for the completion and co-ordination of the entire inspection.

LAME Signature:

760877 LAME Licence No:

Date

 $\mathcal{L}^{-1}\mathcal{E}^{-1}$  For 8, on behalf of: Pearl Coast Heli Maintenance Pty Ltd COA -

A CERTIFICATION ABOVE CONSTITUTES A CERTIFICATION PURSUANT TO CAR42ZE THAT ALL MAINTENANCE HAS BEEN PROPERLY CERTIFIED. Note: The person who certifies for the completed and properly certified.

or workpackage contents is to ensure that any maintenance performed during the inspection has not invalidated a certification already made in another category and has been completed and properly certified.

Form No: PCHM002

Form No: PCHM003

# Engineering Work Package Pearl Coast Heli Maintenance Pty Ltd COA - 0686



JOB DETAILS	Date Raised	01/06/2020	AF TTIS	286.9	
	Date Completed	2/8/20	Engine TTIS	6.782	
Aircraft Registration VH-NB1	Approved	RHC R44 RTR 460 Maintenance Manual Rev Aug	Landings/Starts		
Ultimate Outback Experience	Maintenance Data (Airframe)		Cycles		
Aircraft Type R44  Aircraft Type Race Pearl Coast Hell Maintenance	Approved Maintenance Data (Engine)	<u> </u>	RINS		
1: 100Hrly/Ann					
	Licence No.	letter o months		Trade Type	Hours
SIGNATURE SIGN OFF Name				13/.4	
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V H-NBY

JN. 357

MODEL R44 ROBINSON MAINTENANCE MANUAL 2.200 GROUND AND FLIGHT CHECK FOR 100-HOUR/ANNUAL INSPECTION Complete following checklists in continuation with a 100-hour or annual inspection. Note and correct any discrepancies. 2.205 Ground Check (Aircraft not running) Throttle Control: Check for freedom of rotation with collective full down and full up. Throttle Overtravel Spring: Check by twisting throttle past idle por to override stop, Release throttle and ensure it returns to normal Mixture Control: Check for smoothness of operation with no binding. Check press-to-unlock button for proper function, Verify 0.03 to 0.10 inch spring-back at full rich position. Carburetor Reat Control (0.540 only): Check for smoothness of operation with no bixding. Verify 0.03 to 0.10 inch spring-back at full 5. Cycilc Control: With trim motors (if installed) in neutral position, verify freedom thru full travel with friction off. Verify friction knob rotates the control of t resistance with no trinastig or attributed the trioughout control travel.

6. Collective Control: Verify Insedem through full travel with littleton off and on. For non-hydrostic aircraft, verify friction knob moves 0.3-0.6 inch before adding friction. For hydraulic controls: Verify oppositionately con-hall inch treat freeday before encountering resistants. With carbited the statistic finatelled) locked and friction fever fully all. 4-15 pounds driving to between one seasts within tresplay gis 4-5 pounds average measured at grip. With includin level fully on, verify 18-22 pounds measured at grip. Verify includin level fully on, verify 18-22 pounds measured at grip. Verify neural hydrostic resistance with no bitisting or abnormal level throughout control travel. Carb Heat Assist (if installed): With callective down and full carb heat, raise collective full up and verify carb heat off, Lower collective full down and verify carb heat full on. With callective friction of f, push carb heat off end verify oxilective stays down.

ROBINSON MAINTENANCE MANUAL

MODEL 844

### 2,205 Ground Check (cont'd)

- 10. Ughting and Instruments: (Master Switch on)
  - CARBON-MONOXIDE warning light flashes twice (if installed).
  - Carb Air Temp approximately same as Outside Air Temp.
  - c. ALT warning light on.
  - d. OIL pressure warning light on.
  - e. AUX FUEL PUMP warning light on (IO-540 only).
  - Fuel quantity gages indication of fuel level. ١.
  - g. Navigation and panel lights check function.
  - h. Strobe light check function.
  - Landing lights check function (clutch switch must be engaged to check landing lights).
  - Map light check function
  - Ammeter shows discharge.
  - Oil temperature gage slight needle deflection with engine cold
  - Cylinder head temp gage slight needle deflection with engine
  - MR TEMP light on when sender shorted or test st
  - MR CHIP light on when sender shorted or test switch depressed.
  - ENGINE FIRE light on when sowier shorted or test switch degreesed.
  - TR CHIP light on when sender shorted or test
  - LOW FUEL light on (slight datay is normal) when low fuel sender in tank is depressed with clean, non-sparking rod or
  - FUEL FILTER light on when test switch depressed (IO-540
- ecklist laminated card is current revision frefer to Verify aircraft of Section 1.002)

Change 14: JUL 2008

Change 13: OCT 2006

V

N

ROBINSON MAINTENANCE MANUAL

MODEL RA

### 2.210 Bun Up

- Perform POH Section 4 "Preflight" chacklist.
- Parform "Before Starting Engine" checklist.
- 10-540 engine: Verify AUX FUEL PUMP light extinguishes of prime and Exercinates after priming. valve.

Tell Rotor Pedals: Check for smooth operation with no binding. Removebie Controls: Verily security of attach fasteners.

Significant prime may be required before fuel drains from sniftle valve. Wait for valve to stop draining before starting engine. Engine will be hard starting/leoted while valve is draining.

- Perform "Starting Engine and Run-Up" checklist. It loss than 15 minutes has alopsed since Step 3, use minimum or no prime.
   Check clutch organizations—maximum 70 seconds.
- 6. Ammeter indicates charge, ALT light off.
- Both magnetos ground (off momentarity) at 60% RPM.
- 8. Tachometer operates with alternator and battery switches off.
- No unusual bearing noise when varying RPM through operating range innertures to listen near V-bolt drive). Refer to Section 2.110 and 2.501 three 2.503.
- Sat RPM at 75%, governor on. Increase to 65%, release throttle, and verify governor increases RPM to 101 to 102%. Increase RPM to 104%, release throttle, and verify governor decreases RPM to 101 to 102%.
- Engine and rotor toch needles within 1% of each other at 102% RPM.
- Verify atternator voltage as fellows:
  - 13.4 to 13.9 vdc for A942-3 alternator control unit
  - 27.75 to 29.25 vdc (or A942-4 alternator central unit
- Heater operates properly.
- Tachometer needles do not jump more than 2% when transmitting on 118.00, 125.00 , and 136,975 MHz with governor on.
- Raise of Sective control 0.5 inch at grip and slowly decrease RPM. Verify low-rotor-RPM warning hern and light activate at 97% to 96% RPM and remain on as RPM is decreased to idle.

A

Page 2.9

Page 2.8 ROBINSON MAINTENANCE MANUAL

MODEL R44

2.210 Run Up (cont'd)

16. Ide RPM with engine warm, clutch engaged, throttle closed-

O-540 engine: 53% · 57%

IO-540 engine: 58% - 62%

ldle mixture with engine warm, clutch engaged, throttle closed.

O-540 engine: 2% to 4% RPM rice as mixture is pulled stawly to idla cut-off. Adjust idla mixture scrow as required. If unable to obtain rise, sol idle mixture scraw 1 ½ turns out from fully in then adjust as required for

smooth idle.

10-540 ongine: Adjust idle mixture per Section 5.495, Step 23.

18. Check hydraulic system (if installed) operation. Using cyclic-mounted hydraulics switch, turn hydroulics OFF. Using small brongitudinal cyclic inputs, there should be approximately one-half inch of treeplay before encountering stiffness and feedback. Turn hydraulics ON. Controls should be free with no feedback or uncommanded motion ("motoring"). Complete light check with hydraulics on.

Air Conditioning: Verify system blows cold air on both low and high sattings. Verify no EMMRFI with other instruments and systems. After a flight with air conditioning on, verify water drains from drain tube in ship's belly (may be little or no water in very dry conditions).

NA

VIV

Change 14: JUL 2008

Page 2.10

Change 13: OCT 2006



4-6-20

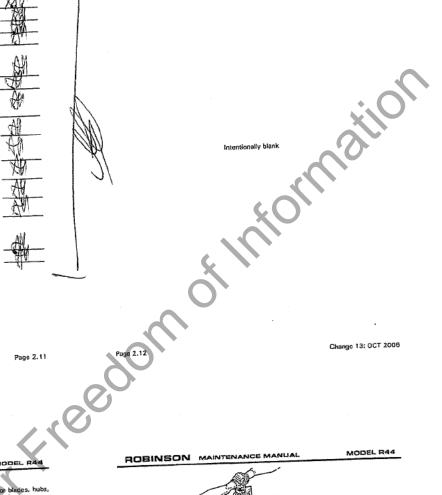
MODEL R44

### 2,220 Flight Check

- 1, Haver
  - a. All gages green
  - b. Controllability in left and right pedal turns.
  - Cyclic electric trim (or hydraulics) zeros cyclic stick forces.
  - d. Vibration levels satisfactory.
- Lavel (light: Typical cruise altitude (if possible, deviate as required for weather and regulations), maximum continuous power, governor on.
  - Vibration levels satisfactory.
  - Cyclic stectric trim (or hydraulics) zeros cyclic stick forces.
  - Collective trim spring (electric trim system only) zeros collec-forces. For hydrawlic controls: Verify no feedback and collective is balanced.
  - Fixed collective iniction adequate to prevent "bounce" but not excessive foliotric trim system only).
  - Tall roter podal position when yaw etring is centered: 0.25 to 0.75 inch right for adjustable pedals, within 0.25 inch of neutral for non-adjustable pedals.
  - Tak rotor elastic trim cord zeros pedal forces (cord applies left pedal force).
  - g. For hydraulic contrels: Turn hydraulics OFF and verify no excessive feedback forces.
- Autorotate at 100 KIAS with station 99 or greater CG. Verify electric trim for hydrautice) zeros cyclic stick forces.

### 2.230 Shutdown

- Vority rotor broke functions and ROTOR BRAKE light illuminates.
- Complete shutdown per POH checklist.



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### 2.300 AIRFRAME PREPARATION FOR 100HR/ANNUAL INSPECTION

Thoroughly clean airframa prior to inspection. Wips down main and tall rotor and airframe exterior with a mild soap and water solution.

### CAUTION

Do not spray magnetos, main reter hub, tail reter hydraulic reservoir vent, swashplate area, or bear high-pressure water or solvent as water or solvent legales corrosion and breakdown of lubricants.

### 2.400 100HR/ANNUAL AIRFRAME INSPECTION

Numbers in parenthoses Indicate location as illustrated in Figures 2.4 and 2.4A.

m 100 hour or Annual inspection per Section 2.410.

2,410 Inspection Procedures and Checklist

Registration No.:

2544 VHNG Hourmeter Indication: 286-9

Technician name:

Certificate number: 760614

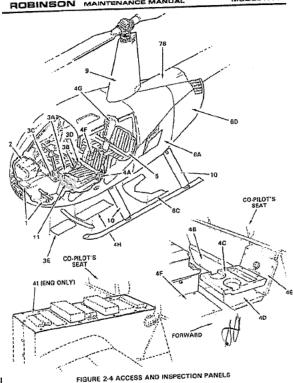
Aircraft Total Time: 1. Tail Rotor Pedal Bearing Blocks

NOTE

On not remove pedal bearing black cover plates (1) unless function check of pedale indicates possible problem with pedal bearing blacks.

o remove cover plates (1) peel back carpating and remove screws halding ates. Use an inspection light and mirror to inspect bearing blocks. Inspect or condition and upocation of play. Maximum allowable play is 0,080 inch

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COURS 2.4A	ACCECC	AND	INSPECTION	PANELS

	FH	GURE 2-4A ACCESS A	ND INSP	ECTION PANE	LS
water of D	PART NUMBER		NUMBER	PART NUMBER	DESCRIPTION
		Dellactor (LH)	41	D383-1	Face (FNG only)
*	6189-4 A412-2 and	Cover and Deflector (RH)	5	C003-10	Soat Back Assy (RH)
	B180-2			C003-11	Seat Back Asty (LH)
		Console Assy	GA	C337-1	Cowling Assy (LH)
2	2020	Cover Assy	88	C378-1	Counting Assy (RH)
3A	C445-1		60	0045-3	Cowling Assy - Belly
36	C445-3	Court	60	D049-1	Aft Cowing Assy
30	C444-1	Caver	7A	0042-4	Dap: Assy
30	C398-1	Covet Assy	,,,	D042-4	Dear Assy
35	C794-1	Papal	70	C706-1	Tarlaune Cowling Assy
4A	C680-1	Caver Assiv	7B		Plug Assy
48	C461-1	Cevst	₽A	A231-1	Cover
40	C464-1	Teny	83	A558-2	Mast Feiring Assy
4D	C463-1	Cover	9	C261-1	Fairing Assy (PY/D, RH)
4E	C054-1	Cover Assv	10	C087-3	Folking Assy (FVID, LH)
.45	C474-2	Cover		CD82-4	Fairing Assy (AFT, RH)
46	C474-1	Couct		C092-5	Fiving Assy (AFT, RH)
_	-	Panel (without source)	11	C045	Circuit Breeker Panel
414	C794-2	Panel Assay bolth scoops	12	D412-1	Friend (Inframetrics
	C794-3	Panel (without scrop)	(Pol/ce	Of .	Comeral
48	C794-2 C794-3	Patrol Assy (#W) (COO)	ships)	0347-1	Fair-rtt (FSI Camera)
	G/94-3	Policy Peach 1-4-14	-		Page 2.15

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2.410 Inspection Procedures and Checklist (cont'd)

2. Upper Console (2)

Console (2), is opened by removing one screw on each side. With console open, inspect the following:

Pitot-Static System: Check pitot and static lines for cracking, chaling. Applicating or kinking. Check all connections for security.

Flight and Engine Gages: Check all gauges for security. Inspect wiring and connections on all gages.

Radio Tray(s): Check condition and security.

Tail Rotor Controls: Check accessible portions of TR pedal assemblies for defects. Verify operating charance.

Remove Forward Tunnel Covers (3A & 3B), Cyclic Stop Cover (3C), Inboard Collective Cover (3D), and Forward Bolly Panel (3E)

NOTE

If radio antennas are instelled on removed panels, disconnect antenna lead and any ground wire. Pull respective radio circuit breaker and teg circuit breaker with "Antenna Removed".

Cyclic Box Assembly: Inspect cyclic box assembly for delects. Check cyclic stop sheet metal assembly for cracks and other delects (deterioration, distortion, leose rivets, corrosion).

Cyclic Stick Assembly: Inspect cyclic stick assembly for defects, Inspected of cracks.

CAUTION
(manual controls)

Do not disturb clear silicone costing protecting strain gages, or attached wiring. Any demage to strain gages or wiring will disable too system. trim system.

Cyclic Trim (manual controls): Turn master and cyclic trim switches on.

Move cyclic laterally stop to stop and longitudinally stop to stop and check
operation of trim motors. Check trim motors, springs and elastic cords for
clearance from all wire bundles and fuselege structure during movement
and at trovel limits.

Cyclic Lateral Trim Actuator (manual controls): Turn master and cyclic trim switches on. Prist and held cyclic stock against right stop until motor stops then turn trim off. Navor cyclic stock to left stop to compress spring, inspect exposed portion of shaft for wear and galling. Do not grease red on Rev H and subsequent GOS6-1 spring essemblies, bearing is self-lubricating, inspect C130-13 urethone spacer (stop). Check security of attachment to cyclic givot.

cyclic psyot.

Cyclic Longitudinal Trim Actuator Imanual controls): Inspect C130-13 urethene spacer (stop). Check security of attachment to cyclic stick.

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2,410 Inspection Procedures and Checklist (continued)

Remove Forward Tunnel Covers (3A & 3B), Cyclic Stop Cover (3C), Inboard Collective Cover (3D) and Forward Belly Panel (3E) (continued)

Cyclic Friction: Check for excessive play or looseness in links and rod ends connected to eyolic stick. Verify no excessive flaring at attore and of C130-2 spacer.

2 spacer.

Cycic Push-Pusi Tuba and Torque Tuba: Inspect C319 torque tuba paying spacial attention to area around blocks and end of torque tuba for cracks. Inspect C121-1 push-push tube rod and paint and paying to the concept can be compared to the concept can be considered to the con

Tail Rotor Push-Puil Tube: Inspect accessible portions of C121-9 tail r push-puil tubo. Look for defects aligh se cracks, bends, scratches, or chail Check rod ands for excessive play and looseness.

Collective Friction and Stops Inspect collective stop condition; no nicks, cuts or scratches are aboved. Check collective friction lever for security and operation. Move defined to the collective friction lever for security and operation. Move defined boat's lace cannot entangle stop.

Throttle Overtsivel Spring: Inspect operation of overtravel spring while operating throttle, it should move freely without any binding or jerkinass. Check play in upper and lewer rod ends. Check rod ends for binding.

Whing Harness: Inspect for chafing and clearance from controls.

Pitot and Static Lines: Inspect pitot and static lines for security and any avidence of cracking, chaling, pinching or kinking from sharp bends. Open drains and check for moisture: close drains.

Elastic Trim Cord(s): With cyclic forward-right, leaf forward elastic trim cord(s) for voids which may indicate broken strands.

Heater Hose: Check heater hose for collapsed areas and challing.

Fasteners and Torque Stripes: Inspect condition and varify security of all fasteners. Renew detariorated torque stripes per Figure 2-1.

Remove Outboard Collective Cover (4A), Collective Torque Tube Cover (4B), Tray (4C), Mid Tuanet Covers (4D & 4E), Art Tunnel Covers (4F & 4G), Art Belly Cover Panel (4H), and Rear Console (4), ENG ships only)

NOTE

If radio untanna is installed on removed panel, discennect untunque lead and corresponding ground wire. Pull respective radio circuit breaker and tag circuit breaker with "antenna removed".

ROBINSON MAINTENANCE MANUAL

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2.410 Inspection Procedures and Checklist (continued)

ove Dutboard Collective Gover (4A), Collective Torque Tuba Cover (4B), (4C), Mid Tunnd Covers (4D & 4E), Aft Tunnel Covers (4F & 4G), Aft Cover Panel (4H), and Rear Console (4), ENG ships only) (continued)

Collective Stick: Inspect condition of collective stick, Inspect all welds for cracks. Inspect Ca38-1 connecting red essembly-giving special attention to paints of attachment. Inspect governor motor and governor motor erm for looseness or binding. Inspect collective-activated micro switch for cracks or loose wires.

Collective Stick Torque Tube: Verify no corresion pitting. Apply a corresion-preventative compound such as LP5 2. ACF-50, or Corresion-X to any unpainted, phosphate-coated area while avoiding contaminating governor horizo-clutch in learn-type applicator works well). Ensure interior of open-end "box" structures at inboard attach point and at A205 tork connection are also related.

Att End of Cyclic Torque Tube and Yoke Assembly: Inspect torque and yoke, paying special attention to area around blocks and end of tube for cracks. Check play in belierank bearings per Section 2.120. Is swaged bearing for movement in yoke.

Aft End of Cyclic Push-Pull Tube (C121-1) and Lower Ends of Vertical Pu Pull Tubes (C121-7): Inspect push-Pull tubes for cranks. Check rod only nuts and painuts for tightness and rod ends for play. Check rod and pearing for looseness. Inspect fack assembly areas. Check bearings for loosenes Check between bearings and swage for evidence of fretting.

Aft End of (C121-19) Tail Rotor Push-Pull Tube and Lower Bearing: Chock vitness hole. Check lower believenk bearing for play. Inspect all welds on support essembly for lower belierank and inspect surrounding sheet metal area for crecks.

Collective Push-Pull Tube (C121-19): Check for binding or nicks. Check witness holes. Check jam nuts and pelnut for tightnoss and rod end for play.

Collective Friction Assembly: Check jam nuts and palnuts for tightness and rod ends for play. Inspect all welds on belictank support assembly and inspect surrounding sheet metal for cracks and corrosion.

Collective Spring Assembly (Manual Controls Only): Move collective up and down and verify no binding or cracking. Spring cuits must not touch when collective is full down. Verify jam nut and painut tightness. Verify rad ends play within limits. Verify guider rods ere greesed. If required by Section 1,101, service assembly per Section 8,221.

Throttle Control Linkage: Remove throttle control arm cover if cover is not transparent funder aft left seat [0-540], or inside tunnel [10-540], at firewall, Inspect condition. Varily throttle centrol clearance to installed equipment and adjacent structure. Venly proper installation and security. Install cover.

Fuel Valve and Fuel Line: Inspect fuel line for damage and valve fittings for leakage fleakage is indicated by a blue or green residue, depending on fuel used, or oder of fuel). Verify no chafing of fuel lines.

Fuel Valve-to-Knob Torque Tube: Inspect condition, Verify attaching security.

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### 2.410 Inspection Procedures and Checklist (continued)

### 5. Remove Att Seat Back Assemblies (5)

Wiring: Check wiking for security and proper installation.

Pitot and Static Lines: Check for security, chafing, and kinks.

Air Conditioning Refrigerent Lines (if installed): Verify security & no dam Evaporator Drain Tubes and Valve (if installed): Verify tubes are unobstructed.

Place a container under sediment-tube protruding from bottom of tee-fitting riaca a contamer under ascenent-tude prorroung from contom of tes-study into right-aft baggage compartment. Remove plug from sediment tube and allow any accuratizated moisture and debris to drain. Reinstall plug. Simultonsously squeeze drain tube and sediment tube near tes-fitting and verify check-valve ball moves up mementarily.

Strobe Power Supply & Alternator Control Unit: Inspect strobe power supply and alternator control unit wiring. Inspect mounting panels for cracks.

Blind Encoder & Governor Controller: Inspect blind encoder and governor controller witing. Inspect mounting panels for cracks.

Fasteners and Torque Stripes: Inspect condition and verify security of all fasteners. Renow deteriorated torque stripes per Figure 2-1.

6. Remove Engine Aft (6D), Selly (6C), and both side (6A & 6B) Cowlings

Vertical Firewall: Inspect vertical firewall condition, especially around structural attachment points, varify no crucks, buckling or wrinkles.

Fuse(s) and Fuse Holder(s) (if installed on ventical firewall): Verify security and no corrosien. Verify correct fuses: -66 wire requires AGC-3 fuse, -1601/-1602 wires require AGC-6 fuse. If installed, -1226 wire requires AGC-3 fuse. Wiring: Venify accurity, proper installation, and no deterioration.

Electric Fuel Pump (IO-540 only): Verify security, proper installation, unobstructed drain tube, and no leakage.

Fuel Line & Hosels): Inspect condition. Verify security, proper installation, no leakage, & (10-540 only) good condition of spirap insulation on fuel line between firewall & gascolator. If deteriorated, replace MS3387-5-9 tyraps securing fuel hoses to clamps freference R44 SB-67).

Lower Steel Tube Frames: Theroughly inspect lower steel tube structure for corrosion and inspect all welds for cracks. Ensure frames are not chafed by wires, hoses, clamps, etc.

Engine Gooling Panels: Inspect cooling panels for cracks and missing lesteners.

Oil Cocler(s): Inspect oil cooler(s) and fittings for damage, leaks, cleanliness, and security. Check oil cooler mounting area(s) for crocks.





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2.410 Inspection Procedures and Checklist (continued) 6. Remove Engine Aft (6D), Belly (6C), and both side (6A & 6B) Cowlings (continued)

Oil Lines: Inspect entire length of all oil lines and verify no cracks, abrasion, or broken clamps. Verify clearance; wires, ty-raps, and structure must not

Gascolator: With funivalve off, remove and clean gascolator bowl and filter screen. Verify no deterioration of gasket. If gascolator bowd is secured by threaded collar and ring, lightly lube threads and ring with A257-6 grease. Reassemble and turn fuel valve on. Safety wire after ensuring no leaks occur. Verify drain valve is secure and torque-striped.

Mixture Control: Verify mixture control moves mixture control arm step to stop. Inspect condition and verify security of mixture control cable clamps on bracket; push and pull cable housing to ensure it does not slip in clamps. Inspect condition and verify security of mixture control cable inner wire attachment to mixture control arm. Ensure freedom of rotation between mixture control arm and inner wire retention fitting (bolt) when arm moves. Verify mixture control safety spring is properly installed (so spring long-holds mixture control arm at full-rich position if inner wire broaks).

Throttle Correlation Rigging: Check per § 10.150 and adjust as requ

Full-Throttle Switch Rigging: Check pur § 37-70 and adjust as required.

Air Box & Alternate Air Door: Ensure carburator heat slider valve iff applicable) moves tully from stop to stop. Replace air fifter (lubricating 10-540 air fifter rubber with A257-8 rubber tubricant will facilitate sealing). Check air box for condition and security. Verify spring-loaded alternate air door opens without binding and closes completely.

Engine Air Inlet Hose: Verify correct installation & security. Verify no rips. holes, or collapsed areas. Ensure hose is not challing frame. Remove hose. Visually inspect inside of hose to verify no separation between outer and innor layers. Also, flex the hose in all rifections and listen for a crickling sound, which is an indication of separation. (An sirvorthy hose does not make a crinkling sound when flexed.) Replace any hose with any indication of separation. of separation.

Carburetor Heat Scoop and Hase (0-540 engines only): Inspect for condition and security.

Heater Hose: Inspect for condition and security.

Battery and Battery Box (alternate locations under upper console or under left, front seath: Check cable terminals for cracks. Check each cell electrolyte for quantity and specific gravity if equipped with non-scaled battery. As required, perform capacity test por manufacturer's instructions or replace battery. Verify security and no obstructions in drain tube.

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2,410 Inspection Procedures and Checklist (continued)

7. Opan Cowling Doors (7A), Remove Tailcone Cowling (78) & Mass Fairing (9) Cowling Door: Inspect harges and latches for condition and security.

Tailcone cowing: Verify no cracks, air inlet obstructions, or loose rivats.

Verify security and no Electrical and Antenna Wires: Inspect condition. chaling, kinks or tight bends.

MRGS Input Yoke: Inspect condition. Verify clearance. Verify security of magnets. security and operating Released

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Chapter 2 Paparties

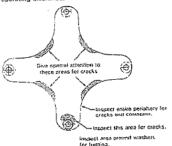
Chapter 2 Inspection

### 2.410 Inspaction Procedures and Checklist (cont'd)

7. Open Cowiling Doors (7A), Remove Telecone Cowling (78) & Mast Fairing (9)

Forward Flat Plate: Inspect condition, particularly edges, Verify security. Verify handed washers are securely bonded to both sides of each flex plate arm. Verify operating clearance.





### FIGURE 2-5 FLEX PLATE INSPECTION

Clutch Shaft Forward Yoke: Inspect condition, Verify no cracks, corresion, or Irotting. Venify security and operating clearance.

Rotor Brake: Inspect condition, including activating cable & pulleys and microsvotich. Verify integrity of brake pads and 0.030 inch mislimum pad thickness. Verify brake pad clearance to input yoke when brake is off. Verify occurity and operating clearance.

Jackshaft: Inspect online welded assembly for cracks and corrosion. Inspect jackshaft asphorting strut and tube weldments for security, cracks and corrosion.

Main Rotor Push-Pull Tubes: Inspect condition of viewable portic Verify no cracks at ends. Inspect rod ends par Section 2.120. Ver co tears in sleeves Imanual controls only). Verify security and operationations.

Main Roter Push-Push Tube Rollers & Bushings: (manual controls only): inspect condition. Verify cleaniness, no wear into metal, and free inspect condition. movement of reliars.

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7. Open Cowling Doors (7A), Remove Tailcone Cowling (7B) & Mast Fairing (3)

Tall Rotor Push-Pull Tube and Upper Bellcrank: Inspect C121-15 push-pull tube, especially at ends, for cracks. Check jam nut for tightness and rod end for looseness. Inspect bellcrank and mounting for cracks or other defects.

onner detects.

Main Rotor Gearbox Cooling Hoses: Inspect both ends for security. Inspect for rips, holes, and chaffing.

Main Rotor Gearbox: Inspect mein rotor gearbox, especially around gearbox mounts, cap mounting lugs, and mast tube for cracks. Verify no commaniation and no deterioration of rubber mounts. Verify security of Hall Effect senders. Check Tetatemp for overtemp indications.

Main Rotor Gearbox Oil: With ship on level ground, willy correct oil level and cleanlinnss using sight gage. If required by Section 1.101, drain and flush gearbox per Section 1.120.

Main Rotor Gearbox Chip Detector: If required by Section 1.101, clean chip detector per Section 1.115.

Upper Steel Tube Frame: Use an inspection light and mirror to each weld, verify no cracks or corrosion.

CAUTION

Upper steal tube frame is faugue-loaded and therefore susceptible to latigue cracks. Inspect thoroughly.

Horizontal Firawall: Inspect upper and lower surfaces of horizontal lirewall, especially where bolted to steel structure, for cracks, buckling, or wrinkles. Inspect firewall under fuel tank for leakage (fuel residue). Fuel Tanks: Inspect condition of visible portion. Verify no leaks. Verify

security.

Auxiliary Fuel Tank Fuel Line: Inspect condition. Verify clearance to structure. Verify no leakage. Verify security.

Fuel Return Lines & Pressure Relief Valve (10-540 only): Inspect condition. Verify no leakage. Verify security.

Fuel Gage Senders & Wiring: Inspect condition. Verify no leaks.

Fuel Tank Vents: Check vent tube connections for security.

Fuel Tank Vents: Circult vents come conventions to security.

Fuel Tank Sump Drains: Vents both drain valves open vasily, drain fuel treely, spring closed, and seal completely. Verily D663-1 shut-off clamp on aux tank drain tube seals completely, and inspect clamp and tube for damage and deterioration.

Low Fuel Warning: Turn MASTER switch on. With a clean wooden dowel, goodly depress low-fuel sender float in main fuel tank and varily LOW FUEL warning light situminates. Turn MASTER switch off.

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2,410 Inspection Procedures and Checklist (cont'd)

7. Open Cowling Doors (7A), Remove Tailcone Cowling (7B) & Most Fairing (9) (cont'd)

os: Inspect condition, to include gasket. Verify security Verify alignment marks on cap and tank align when cap i Fuel Caps closed

Nuts and Bolts: Inspect all nuts and bolts in this area for n loccanass. Cabin Bukknead & Forward Hydrautic Servo Mounts: Inspect bulkhead and servo mounts (if installed) for corrosion, loose rivers, deformation and

cracks. Clutch Assembly: Inspect ends of drive shaft and se Laural Assertion: Inspect shaft for corresion, especially at shaft-to-seel junctures. Remove any light surface corresion at shaft-to-seel junctures, and apply a suitable corresion in safety.

Suitable corresion-inhibitor.

Upper Sheave: Inspect sheave growns. Replace any sheave showing corresion pitting or flaking of metalized or anodized coatings, wear through anodized coatings, seen through anodized coatings. So the state of

require AQC-17. Topical. Varify trusts-to-lock function and security.

Actuative Uppes Beaching and Strutt, Inspect seals on both sides of bearing for damage. Inspect strutt, including both rod onds, and check witness holes. Check for fretting between bearing inner races and clutch shaft. Searing inner races should be torque striped to clutch shaft. If stripes are bloken or miseagench, shaft is unsilventry. Check bearing Telatomp. Perform bracing inspection per Section 2.503 if Telatomp indication has mercesed without corresponding increase in ambient temperature.

Increased without corresponding increase in antitient temperature.

Actuator Lower Searing: Inspect as much of bearing as can be seen, Inspect (liberglass scroll area at bearing attachment brockets for signs of cracking. Check bearing seals for evidence of deterioration. Inspect lower bearing brackets for looseness or wear. Inspect bearing per Section 2.502 if discrepencies are found.

Intermediate Flex Plate and Forward End of Tail Rotor Drive Shaft (see Figure 2-5): Insport flex plate for cracks and frutting. Inspect yoke-todrive shaft wald for cracks (steel shefts).

Tailcone Attachment: Thoroughly inspect all welds in this area for crocke, corrogion, and security of attaching festeners. Inspect tailcone mounting area for crucks.

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2.410 Inspection Procedures and Checklist (cont'd)

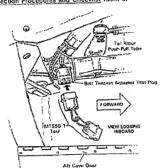
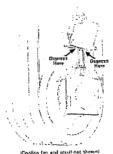


FIGURE 2-6 MT558-1 TOOL INSTALLATION



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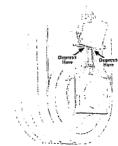
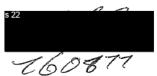


FIGURE 2-6A ACTUATOR SWITCH TEST

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2,410 Inspection Procedures and Checklist (cont'd)

7. Open Cowling Boars (7A), Remove Tallcone Cowling (7B) & Mast Fairing (9) (cont'd)

Actustor (CO51): Verify clearance to structure and drive train when fully disengaged. Turn master switch on and engage clutch switch. While actuator is engaged, depress extension limit switch lever (see Figure 7.15) and verify garmotor stoops release lever and verify garmotor resumes running. Verify jearancy to stoop release lever and verify garmotor resumes running. Verify integrity of activating cable for extension limit switch. Les an inspection integrity of activating cable for extension limit switch. Les an inspection mixture of best very country springs and of bett-consioning cycle; springs should snap outward simulationously. Verify maximum engaged extension train when fully engaged. Verify down-lant at op screw jam nut is tight.

Check actuator for failed-closed spring switch using either of the following two methods:

Method 1 - lactuator electrical herness must be equipped with "Test" plug per Figure 2-51

With MASTER switch on and actuator fully engaged, connect one end of MT558-1 tool to actuator tost plug and verify gearmotor remains off.

### CAUTION

It geamotor activates when instaling MT558-1 tool then a spring switch has falled in closed position; immediately remove MT538-1 to prevent actuator damage.

- Discorded MT558-1 tool, condect opposite and to actuator test plug, and varily geameter remains off.
- c Disongage clutch and turn MASTER switch off.
- MT568.1 bins 1-2 jumper tests wire 98 spring switch; pins 2-3 jumper tests wire 91 spring switch (see Figure 14-10). Replace any maltunctioning switch per Section 7.551 before further Night.

Method 2 - Iscrumos econocit telenose victious Test-plugi-

- Refer to Figure 2-0.4. With MASTER switch on and actuator fully orgaged depress column springs on one side of actuator until sorings map ignered tuse large screwdriver or similar tool with several layers to tape gueffed to protect octuator). Held springs invered for at least one second. Actuator mater should not run. If motor starts, allow motor to are approximately two seconds, then release pressure on column springs. Depress and hold column springs again. If motor starts again, opposite spring switch does not function peoperly.
- b. Disengage and re-engage actuator. Repeat Step a. on opposito-side column sorings.
- Replace any non-functioning switch per Section 7.551 before further

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7. Open Cowling Doors (7A), Remove Tailcone Cowling (78) & Most Feiring (9) (cont/d)

Lower Drive Sheave: Inspect lower sheave. Replace any sheave showing corrosion pitting or flaking of metalized coating, wear grooves, mughnose, or sharp ridges.

Sheave Alignment: Verily sheave alignment per Section 7.230. Adjust as

Hydraulic Reservoir: Inspect condition. Verify security and no significant leakage. If required by Section 1.101, replace filter per Section 1.170. Drain and flush hydraulic system per Section 1.180 if oil has turned dark or emits bad odor. Add fluid as required.

### CAUTION

Cleanliness of hydrautic fluid is vital to proper system operation. Use only clean fluid from scaled containers and avoid contemination from dirty funnels, tubing, etc.

Hydraulic Reservoir Cooling Hose: Inspect condition, Verily hose is secure and is directed at center of reservoir cooling fins,

Hydraulic Pump: Inspect condition. Pump temperature indication should not exceed gearbox temperature indication. Verify security and no significant

leakego.

Forward Hydraulic Servos: Inspect condition. Inspect rod onds per Section 2.120. Verify security and no significant leakage. Verify servo input for endictivity area is clean; cleans area with no-residue, non-alcoholic solvent as required. Verify approximately 0.040 inch total freeplay at servo valve input. Verify valve clearance to surrounding structure while flight controls are moved through full range of travel. Inspect condition and verify security of scissors at upper clevis of servos.

### CAUTION

Use LPS PreSolve to clean hydraulic perts Do not use alcohol.

Aft Hydraulic Servo: Inspect condition. Inspect rod ends per Soction 2.120. Varily accurity and no significant leakaga. Verily servo input rod and/clevis area is clean; cleanse area with no residue, non-alcoholic solvent as required. Verily approximately 0.040 inch total freeplay at sorve valve input. Verily yake clearance to surrounding structure while light controls are moved through full range of travel.

light controls are moved through rull reage of used.

Aff Hydraulic Servo: Inspect and ends per Section 2.120. Inspect state-kment to sheet motils, verify no cracks. Verify security.

Hydraulic Lines & Fittings: Inspect condition. Verify valve clearance to surrounding structure while flight controls are moved through full range of savel. Verify security and no leakage. Verify minimum 0.25 inch clearance between pump hoses and aux fuel tank.

Fasteners and Torque Stripes: Inspect condition and verify of fasteners. Renow deteclorated forque stripes per Figure 2-1.

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2.410 Inspection Criteria (cont'd)

8. Remove Telicone Plugs (8A) & Aft Plastic Cover (8B)

NOTE

Aft plastin cover (8B) is secured with two MS27039C0806 geness on Rev L and subsequent tellogens. On Rev K and pitor tellogens consure screws securing plastic cover are shart enough; to prevent interference in aft flex plate area.

Tail Rotor Drive Sheft: Inspect condition of that section of shaft that can be seen through each halt, looking for obvious defects such as cracks, beads, bows in shaft or corrosion or contact with inside of tellicone. Check tractic per Section 7,340. Inspect each and of drive shaft for creeks and corrosion.

### CAUTION

Bends, bowing, dents, cracks and corrosion are cause for immediate replacement of tail retor drive shaft.

Demper: Inspect reprocursers or the rough convolution and transper (CO41-1), Inspect bearing and housing for cracks, corrosion, wear (see Figure 2-8), and hearing seel deteriorables. Inspect terms and boarings for cleanliness, cracks, bends and carrosion. Inspect bearing input race-to-drive shart torque stripe. Takeone Exterior inspect telecone exterior for ricks, scratches, corrosion, Irotting between skin joints, loose rivets and dents. Inspect telecone for crocks in vicinity of antonea mounts and battery (if installed on tallocate). Strobe Light: inspect lons and strobe light mount for cracks, loose rivets, and security. It spit readfolior lons is installed, verify clear hall of lens faces oft. Inspect all antennes for condition and security.

Tailone Battery if installed: Inspect tailone-mounted battery condition moderative. Verify no debts between battery box cover and tailone. Tailone interior: Inspect tailone interior, especially around rivets, for cracks, frutting, and corresion.

cracks, frutting, and corresion.

Talkone Attachment: Inspect condition and security of four boits attaching talkone to upper frame.

Empennage: Inspect entire empennage and attachment points for damage, cracks, and loose lasteners. Check tail skid for evidence of tail strike is found, reter to special inspection section.

Float Stabilizer (if installed): Inspect condition and security.

Aft Flax Plete (See Figure 2-5): Inspect flax plate for tracks, fretting, and detortion. If frotting is detected, contact RHC Tachilical Support. Inspect security of flex plate fasteners.

Tail Rotor Drive Shaft Aft Yoke: Using inspection hole, check yoke for cracks, fretting, and corrosion.

Tell Rotor Guard: Inspect for security. Chack forward mount for cracks are welded area. Inspect area around aft mount for cracking and fretding.

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MODEL R44

2.410 Inspection Criteria (cont'd)

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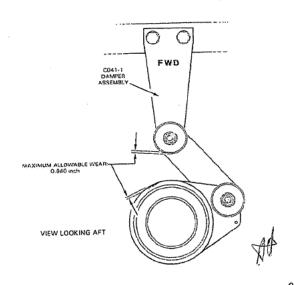


FIGURE 2-8 TAIL ROTOR DRIVE SHAFT DAMPER BEARING INSPECTION

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### 2.410 Inspection Procedures and Checklist (continued)

### 9. Tail Rotor Gearbox and Tail Rotor

Input Shaft Yoke: Inspect flenge and weld for cracks and corresion.

Input Soal: Inspect for leakage.

Gearbox: Inspect general condition. Look for leakage. Check oil quantity and placetiness through sight gage and adjust or flush as required. Check generated the condition excuting security. Inspect output shaft for ricks, scratches and corrosion. Check safety wire on applicable gearbox bolts. Check Telutemp.

NOTE



DA4 SERIES

At 500 hours time-in-service or annually, whichever occurs first, remove cho detector and clean varnish from detector's magnetic probe and adjacent metal body (a toothbrush demogrand with solvent works well). Also, drain and flush gearboxes at intervals not to exceed 500 hours time-in-service (rafer to Section 1.101).

Pitch Control Assembly and C121-17 Push-Pell Tube: Check pitch control assembly for free movement throughout its entire range and for leaseness on output shaft (0.25 inch maximum rotational play measured at pitch stated belti. Inspect belteralk for cracks and ensure free movement. Pay special storeion to spherical bearing stop stud protruding from underside of pitch control; it is parmissible to have a single radial crack in the spherical bearing ball, inspect aft and of C121-17 push-pall tube for cracks and check rod end for excessive boseness (refer to R44 S8-43A).

Pitch Links: Check rad ends for excessive looseness. If equipped with one-piece pitch links, disconnect and rotate inboard and outboard as required to obtain maximum service life.

Tail Rotor Glades: Inspect blade surfaces for excessive erosion, nicks, scratchus, cracks, and corrosion. Check tail rotor blade not fitting bearings for featung end looseness. Loose bearing dute rate in rot fitting is roter texture, and proposed the rot blade. Color blades only: remove upserworthy, requiring replacement of blade. Color blades only: remove tip sovers, inspect for debris and corrosion, & reinstall covers. CO29-1 blades only: inspect tell rotor blades for fatigue cracks per R44 SB-83. Refinish blades per Section 9,480 if excessive crosion is found.

Hub Plates and Hub: Inspect for cracks and corrosion, paying special attention to areas around blade and hub mounting botts. Ensure tenter hinge beaning outer races move with hub and bearing inner balls and retaining nut around remain stationary when hub is tentered. Hub should move freely on bearings without stiffness or jerkiness. Check tenter hinge bearings for excessive play. For stationario bearings inspect per Section 2.125.

Fasteners and Torque Stripes: Inspect condition and verify security of all fasteners. Renew deteriorated torque stripes per Figure 2-1.

2,410 Inspection Procedures and Checklist (continued)

10. Open Mast Failing (9)

Mast Fairing: Inspect condition, especially where stiffeners intersect ribs.

Lower Swashplate Scissors: Inspect condition of scissors. Check rod end and hearing play. Check jem nut.

Vertical Push-Pull Tubes: Inspect for general condition and corrosion menual controls, inspect push-pull tube sleeves at rollers and guide.

Rad Ends: Check push-pull tube rad ands per Section 2.120.

Plastic Rollers and Guide (manual controls): Inspect plastic rollers and guide for cleanliness, security, and deterioration.

Pitot Tube: Inspect pitot line and tube, giving special attention to connecting area, for bending, cracking and kinking. Verify pitot tube elbow drain hole is unobstructed.

Fuel Tank Vents: Inspect condition and security of fuel tank vent tube clemps. Ensure pitot line is not charing fuel vent tubes. Check tube connections. Verify tubes are unobstructed and are not kinked, pinched.

Mact Fairing Ribs: Inspect for cracks especially around mast attachments.

### 11. Rotor Hub Area

Swashplate Lower Scissors: Inspect condition. Inspect rod ends per Section 2.120. Verify seatrify.

Swashplate Upper Scissors: Inspect condition. Inspect rod ends and spherical bearings per Section 2.120. Mensure scissors play per Figure 2-9. Observe scissor linkape while having someone raise and lower collective. Overity belt, journals (or spherical bearing sells and specers), and arm notate together at each scissor linkage pivot. Verify operating clearence.

Swashplate Slider Tube: Inspect condition. Verify operating clearance.

Swashplate Slider Tube: Inspect condition. Venify no cracks at rivet holes or corrosion on base. Verify no domage to, or wear through, analyzed tube surface.

Remove Swashplate Boot Lower Ty-rap: Lift boot from swashplate. Using an inspection mirror, inspect area between main rotor drive shaft and inside of slider tube. Verify no corrosion and no debris. Verify no boot damage.

Swashplate: Inspect condition. Verify 0.020 inch maximum radial play between swashplate ball and slider tube. Rotate rotor by hand and verify operating clearance and no rough or dry beanings.

Swashplate Titing Friction: Observe swashplate ball from below and have someone move collective stick slowly up & down. Verify swashplate ball immediately moves with swashplate without attendant bell movement indicates axial play, between ball and swashplate; acquest direction. Section 8.413.

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### 2,410 Inspection Procedures and Checklist (continued)

### 11. Rotor Hub Area (continued)

Install Swashplate Boot Lower Ty-rap; Verify correct boot position security and no boot damage. and

Hub: Inspect condition. Verify no nicks, scratches, gauges, or corrosion. If main rotor imbalance is suspected, check teeter and caning bringe friction per Section 9.124. Verify no brown or black residue (indicates bearing wear). Hinge Solts: Inspect condition. Verify cotter pins are in place and secure.

Verify both heads and nuts are torque steiped to thrust washers.

Pitch Links and Rod Ends: Insphet condition, Inspect rod ends per Section 2.120, including contenting. Verify security, including lamnut tightness and proper safety wicking.

proper safety wiring.

Fasteners and Torque Stripes: Inspact condition and verify security of all fasteners. Renew deteriorated torque stripes per Figure 2-1.

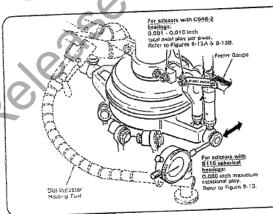


FIGURE 2-9 MEASURING UPPER SWASHPLATE ROTATIONAL PLAY Applify sureases bearing type and magnite as silvering

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R44 SERIES

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### 2.410 Inspection Procedures and Checklist (continued)

### 12. Main Rotor Blades

Boots: Inspect condition. Verify no boot damage or oil leakage. Verify proper boot position and security. Verify sufficient clearance from hub assembly through full control travel.

Blade Spindles & Root Fittings: Inspect area for damage per § 9.133. Verify proper installation and security of visible fasteners. Renow deteriorated torque atripes per Figure 2-1.

torque stripes per Figure 2-1.

CO16-7 Main Rotro Blade Inspection: Remove tip covers. Remove corrosion and loose paint from tip covers, blade tips, and skin-to-spar bond lines. Epoxy prime, or prime and paint, any exposed bate metal on the covers, blade tips, and skin-to-spar bond lines. Using an ANB70-4 washer or 1955-or-later and skin-to-spar bond lines. Using an ANB70-4 washer or 1955-or-later U.S. quarter-dollar coin, tap-test critical bond areas and verify no dull or hollow sounds. Vistually inspect critical bond areas and verify no separation, Install tip covers, ensuring cover edges are flush with blade profile.

C016-2 or C016-5 Main Rotor Blade Bond Inspection: Perform R44 SB-72A or subsequent.

72A or subsequent.

Main Rotor Blade Inspection: Inspect skins and doublers for scratches and correction per § 9.131. Inspect blades for dents and lecul deformations per § 9.132 and for voids per § 9.134. As required, wax blades with soft denning clothe using dramablant-use wax founds as SC Johnson<sup>®</sup> Paste Wax. Ensure tip cover and blade tip drain holes are unobstructed.

### WARNING

actural damage may occur if compressed air is applied to blade

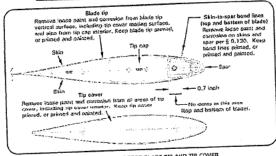


FIGURE 2-10 MAIN ROTOR BLADE TIP AND TIP COVER

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2.410 Inspection Criteria (cont'd)

2.410 Inspection Criteria (cont'd)

12. Main Rotor Biodes (Refer to Section 9.130 for damage and repair limits) (cont'd)

Install tip covers: Verify security.

Fasteners & Torque Stripes: Inspect condition and verify security of all festeners. Renew deteriorated lorque stripes per Figure 2-1.

Fonwheel Assembly: Clean and inspect lanwheel assembly for cracks and corosion. Check leading edge of vanes for damage. Verify spring pin and farwheel alignment marks are aligned (see Figure 2-11); remove formwisel and inspect mating surfaces for damage if misalignment is gridlent.

issummit. Tiberglass Scroll: Inspect liberglass scroll for cracks and contact marks from farwheel, inspect flexible seal around scroll inlet for any rips or damage, lespect vere assembly in right upper scroll for damage. Verify drain hole is unobstructed.

Scroll Metal Iriat Lips &Gup: Verify 0,030 / 0.090 inch gap between lips and larwheel irdet (elangate Sp attach holes as required to adjust gap).

Refer to Section 1.101. Refer to Lycoming Operator's Manual (P/N 60297-10 sections 4 and 5), Lycoming St 10808, and applicable ergate component manufacturer's maintenance publications for 100-hour or annual inspection and service procedure.

Engine Cooling Penels: Inspect condition. Pay particular attention to panels! mounting oil cooler(s) and panel attached to alternator cooling hose. Verify no cracks or missing or loose fasteners. Verify security.

Alternator & Polley: Inspect condition. Verify steel pulley luse magnet); aluminum pulley is not approved. Verify security. Verify steetrinal witing security.

Atternator Belt: Inspect condition, Replace belt if there are any cracks, missing teeth, or delamination. Check tension per Lycoming Service Instruction 1129 (latest revision). Verify proper belt alignment.

Emergency Spare Alternator Belt; Remove it installed.

Alternator Cooking Hose; Inspect condition, Verify no obstructions or holes, Verify security.

Air Conditioning Refrigerant Lines (if installed): Verily security, no damage, and clearance to adjacent structure. Verily dust caps installed on servicing (litings at vertical firewall.

Air Conditioning Compressor (if installed): Verify security.

Air Conditioning Compressor (in installed): Verify Secondy, Air Conditioning Compressor Drive Belt (if installed): Inspect condition. Verify 4,576,5 pounds force applied at mid-spen of belt causes 0.11/0.17 such belt deflaction; adjust as required. Multifier Elbow & Tailejops Stieldes: Verify no cracks in shielde and shield attacking brackets. Verify clamp security.

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0.041 INCH DIAMETER STAWLESS STEEL SAFETY WHITE

ALIGNMENT MARKS ON FANWHEEL ALIGNED WITH SPRING PIN FANWHEEL

FIGURE 2-11 FANWHEEL ALIGNMENT MARKS

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CASTELLATED NUT

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2.410 Inspection Procedures and Checklist (cont'd)

15. Exhaust System

Remove muffler heater shroud screws, and open shroud. Inspect muffler outer wall for cracks, deformation, and ruptures. Pay particular attention to talkiphe and riser attachment areas, welds, clamps, supports, riser flanges and gaskets. Pressurize muffler with low pressure air and inspect for leakage. Close and secure heater shroud.

16. Landing Gear

Landing Gear

Skids and Shoes: Inspect left and right landing gear skids and skid shoes; minimum allowable shoe thickness is 0.05 inch. Verify drain holes are open finet applicable to float landing gear).

Strute and E'bows (open fairings if installed): Inspect for cracks and corrosion, especially at olbow joints. Inspect weld area at bottom of strut

Lending Gear Feirings (if installed); Inspect for cracks and loose rivets.

Verify security.

Crosstubes: inspect, especially at allow joints, for cracks and corrosion.

With helizopter on level ground, measure distance from ground to tail

skid. If dimension is less than 30 inches, one or both cross tubes must be

Landing for Advanced.

Landing Gear Attack Points: Check forward attach points for loose rivets, dracks, buckling, and fretting. Check bearing mounts for loose swages and worm bearings.

Utility Floats (if installed): Inspect for damage. Refer to Pilot's Operating Handbook for proper inflation pressure.

Pop-out Floats (if installed) Pressure Cylinder & Valve: Inspect condition. Verify security. Varify pressure gage indicates correct pressure for ambient temperature; refer to placard on cylinder for limits.

Pop-put Floats (if installed) inflation Manifold: Inspect condition. Verify no ng of hoses, especially where hoses pass thru structu

Pap-out Roats (if installed): Inspect condition of stowed floats. Verify no holes, cuts, tears, altresion thu, or unraveling of, float covers, if cover demage is found, intlate and inspect floats. Verify all float cover snaps and hook-and-doop fasteners are properly secured. Verify float-to-skid attachment security. attachment security.

NOTE

Annually apply A257-7 dry-film lubricant (see Section 1,470) to float cover snap making surfaces. Annually perform Section 5,630 leak clieck. Every three years, perform Section 5,640 mergency inflation test.

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2.410 Inspection Procedures and Checklist (cont'd)

Verify no loose equipment that might foul controls.

Static Ports: Inspect static ports for obstructions. If fixed utility floats are installed, verify air dam installed aft of both static ports.

Rear Seat-Bottom Suspension Straps: Inspect condition and security.

near searroutem suspension suspens; inspect conductor and security. Seat Belts and Shoulder Hamesses: Inspect for fraying and broken stitching. Check inertia reels for proper operation by pulling hamess quickly to verify locking function. Check buckles for proper operation. Check belt and real attach points for security.

TSO tag not required on factory installed harnesses.

Trim Controller (Manual flight controls only) : Adjust trim controller per Section 14.710.

Windows: Minor damage that does not impair pilat's visibility or indicate impending structural failure is acceptable. For cracks and crazing adjacent to windshield teteiner strips, refer to Section 2.500.

Acceptable demage includes:

One nick, not more than 0.010 inch deep and occupying an area not larger than 0.25 by 0.50 inch per square foot.

b. Scratches not more than 0.010 inch deep and 5 inches long.

 Any surface defect such as small spots or stains that can be remo with light polishing. d. Minor polarization faults in small areas of windshield near edges.

Skin: Inspect skin for damage. Inspect for loose rivets, indicated by cracked point and/or black residue around heads.

Doors: Inspect for cracks around hinges and latches. Check vents for operation. Ensure hinge pins are secured with cotter pins. Check tightness of hinge mounting screws. Verify proper operation of door latching and locking mechanisms.

Chin Drains (R44 Clipper): Verify no obstructions.

18. Special Equipment (if installed)

Peak Beam Searchlight: Check for proper operation. Align beams by focusing both lights to smallest spot possible and shiring against a wall at least 100 feet away. Verify both spots hit same point within one foot. least 100 teet away. Venry both spots hit same pokit which one root.

Nose Gimbal and Monitors: Turn power on and verify infrared units complete cool down sequence in manufacturer's recommended time. 

Verify gimbal steers smoothly in azimuth and elevation. Chack focus and zoom of infered/video. Check for clear images on monitors. Verify retractable monitor retracts without interference.

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### 2.410 Inspection Procedures and Checklist (continued)

### 18. Special Equipment (if installed)

Spactrolab Searchaght: Verify light starts and cooking fan operates. Verify searchaght steers smoothly in azimuth and elevation. For cloved units, turn on slaving and verify light (ellows nose gimbal approximately.

FM Radios: Verify radios transmit and receive properly and control head programs radios properly.

Video Tapa Recorder: Verify all video tape recorder modes operate properly and remote control correctly controls modes.

Overhead Light: Verify overhead light on/off.

Transmit and Intercom Switches: Verify proper operation of special transmit and intercom switches.

Talent Light: Verify talent light on/off, acceptable friction.

Micro Comeras: Verify all micro cameras are selectable from video switcher and produce focused, uoright images on monitors. TV Tuner: Varily TV tuner receives broadcasts (video clear on monitors, NA audio clear in headset).

Microwavo Antenna: Verify omnidirectional microwave antenna extended MA retracts properly. Verify up/down indicator lights function properly.

Electromagnetic and Radio Frequency Interference: With all special equipment turned on, check for EMI/RFI with tach, COM, intercom,

equipment turned on, one compass, or other systems. 19. Life-limited Parts, Component Overhaul and Retirement, ADs. & SBs

Life-Limited Ports: Regions life-limited parts that have reached maximum service life per § 3,300. Verify components installed correspond with helicopter maintenance record and have sufficient time remaining for projected operations.

Component Overhault: Replace components that have reached maximum service before overhead per § 3.100. Verify components installed correspond with helicopter maketenance record and have sufficient time remaining for projected operations.

Component Retirement: Replace components that have reached maximum service life per § 3.100. Verify components installed correspond with helicopter maintenance record and have sufficient time remaining for projected operations.

Altworthiness Directives: Verify applicable sirframe, engine, and accessory Airworthiness Directives (ADs) have been performed according to AD compliance procedures. Some aircraft may be affected by ADs that require recurring inspections at less than 100-hour or annual intervals. Recent U.S. Airworthiness Directives are available online at <a href="https://www.das.udw.new.das Released under thee

ROBINSON MAINTENANCE MANUAL

2,410 Inspection Procedures and Checklist (continued)

19. Life-limited Parts, Companent Overhaul and Retirement, ADs, & SBs (conti-

Service Bulletins: Verily applicable airframe, engine, and accessory Service Bulletins: (SBs) have been compiled with according to manufacturers' instructions. Some aircraft may be affected by SBs that require recouring inspections at less than 100-hour or annual intervals. RHC Service Bulletins are available online at manufacturers and the Publications tab.

20. Required Documents and Placards

Documents: Check that required documents (Airworthiness Certificate, Registration, applicable Radio Station License, Pilot's Operating Handbook, Equipment List/Weight & Salance Data) are on board, legible, and current.

Placards: Verify required placards are properly installed, legible, and current. Refer to Pilot's Operating Handbook Section 2 for placard requirements.

21. Inspection and Access Covers

Foreign Objects Removed: Verify all tools, loose hardware, rags, and other foreign objects are removed from helicopter.

Covers Closed and Secure: Install/close all inspection and access removed in preceding steps. Verify security of all access covers.

Glippor I Airbox Sealed: Ensure air box cover perimeter is scaled with aluminum tape (Clipper I models only).

22. Maintenance Records

Maintenance Records: Verify maintenance records are accurate, legible, and complete. Enter maintenance performed (such as part replacement, equipment adjustments, servicing, and fubrication) and inspection but the part must include a description of for reference to data acceptable to the Administrator) the work performed, date, helicopter total time in service, signature, certificate type and certificate number of person approving aircraft for return to service.

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Inspection Procedures aS 22

Mechanic's signature:

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LYCOMING OPERATOR'S MANUAL 0-540, 10-540 SERIES

SECTION 4
PERIODIC INSPECTIONS

### SECTION 4

### PERIODIC INSPECTIONS

### NOTE

Peritagis no other factor is quite so important to safety and durability of the aircraft and its components as faintful and differnt attention to regular checks for minur troubles and prompt repair when they are found.

The operator should bear in mind that the items listed in the following pages do not constitute a complete irerall inspection, but are means for the engine only. Consult the sinframe meansfacturer's handbook for distinual instructions.

Pre-Starting Impection - The daily pre-flight inspection is a check of the aircraft prior to the first flight of the day. This inspection is to determine the general condition of the aircraft and engine.

The importance of proper pre-flight inspection cases to over emphasized. Statistics prove several undred accidents occur yearly directly responsible to poor pre-flight.

Among the major ensues of poor pro-flight inspection are lack of concer-acknowledge the need for a check list, carelessaess brod by familiarity and haste.

SECTION 4 PERIODIC INSPECTIONS

1. DAILY PRE-FLIGHT (ENGINE).

- a. Be sure all switches are in the 'Off' position
- Be sure magneto ground wires are conc
   Check oil level.

  d. Check fuel level.

d. Check fiel level 1149

e. Check fiel and oil line connections for indications for repair at 50-hour inspection. Repair any looks before aircraft is flown 1149

The connection of the connect

LYCOMING OPERATOR'S MANUAL 0-540, IO-540 SERIES

f. Open the fuel drain to remove any accur-

g. Make sure all shields and cowling are in place and secure. If any are missing or damaged, repair or replacement should be made before the aircraft is flown.

h. Check controls for general condition, travel and freedom of

i. Induction system air filter should be inspected and serviced in accordance with the airfrance manufacturer's recommendations.

2. 10-HOUR INSPECTION (ENGINE). After the first ten (10) hours of operating time, new, sebult, or newly overhauled engines replace the oil filter, and conduct an inspection of the contents of the used oil filter for traces of metal particles.

3. 25-HOUR INSPECTION (ENGINE). At twenty-five (25) hours of operating time since the first inspection, new, rebuilt, or newly overhauled engines should undergo a 50-hour inspection including draining and renewing lubricating oil, replacing the oil filter, and inspecting the contents of the used oil filter.

NOTE

If the engine does not have a full-flow oil filter, change oil every 25 hours; also, impact of pressure and entition screens for metal contamination, and clean thoroughly before reinstallation.

4. SE-HOUR INSPECTION (ENGINE). In addition to the items listed for daily proglight inspection, the following maintenance checks should be made after every 50 hours of operation.

- (1) If fouling of spark plugs has been apparent, clean them and check electrode gap. Rotate bottom plugs to upper position.
- (2) Examine spark plug leads of cable and ceramics for corrosion and deposits. This condition is evidence of either looking spark plugs, improper cleaning of the spark plug walls or connector ends. Where this condition is found, clean the cable ends, spark plug walls and coramics with a dry, clean cleah or a clean fold moistened with methyl-ethyl-ketone. All parts should be clean and dry before reassermbyl (1)

  (3) Check itemation harmest for security of according cleans and he was a cast of the condition of th
- (3) Check ignition hamess for security of mounting clamps and be sure connections are tight at spark plug and magneto terminals.

LYCOMING OPERATOR'S MANUAL O-840, IO-840 SERIES

SECTION 4
PERIODIC INSPECTIONS

h. Fuel Line and Induction System - Check the prince lines for leaks and security of the clamps.

Remove and clean the first inlet strainers. Check the mixture copyrol and through intege for travel, freedom of novement, security of the clamps and lubricate if nocessary. Check the sir instact dues for leaks, security, filter duanger, evidence of dust or other solid material in the dusts is indicative for inadequate filter care or duanaged filter. Check-yeart lines for evidence of fuel or oil seepage; if present, fuel pump may require replacement.

6. Lubrication System

(1) Chock oil lines for leaks, particularly at counterficies: for security of anchorage and for wear due to rubhing or vibration, for dents and cracks.

(2) Replace elements on external full-flow of filters. Before disposing of used element check interior, folds for ences of menal particles that might be evidence of internal engine damage. Drain and renew lubricating oil. (Reference Intex section of Service Instruction No. 1014 for proper oil.)

Tensew Induced and only of the control of the contr

Chark cylinders for evidence of excessive heat which is indicated by humed paint on the cylinder. This condition is indicative of internal damage to the cylinder and, if found, its cause must be determined and corrected before the aircraft resumes operation.

Heavy discoloration and appearance of scepage at cylinder lead and barrel attachment area is usually due to emission of thread lubricant used during assembly of the barrel at the factory, or by slight gas leakage which stops after the cylinder has been in service for awhile. This condition is online harmful not deviauental to engine performance and operation. If it can be proven that leakage exceeds these conditions, the cylinder should be replaced.

100-HOUR INSPECTION. In addition to the items listed for daily pre-llight, and 50-hour inspection, the illewing maintenance checks should be made after every one hundred hours of operation.

o. Electrical System -

Check ell wiring connected to the engine or accessories. Any shielded cables that are damaged should be replaced. Replace clamps or loose wires and check terminate for recordly and claustiness.

(2) Remove speck plage; test, clean, regap, and cotate thom. Replace if necessary.

reed SECTION 4 PERIODIC INSPECTIONS

h. Lubrication System - Drain and renew lubricating oil.

Magnetos - Check breaker points for pitting and minimum gap. Check for excessive oil in the breaker compartment, if found, wipe dry with a clean lintless cloth. The felt located at the breaker points about be lubricated in accordance with the nugneto manufacturer's instructions. Check nugneto to engine timing. (Timing prodedures for Bendix and Slick nugnetos are covered in the Maintenance Procedures Section.)

Engine Accessories - Engine mounted necessories such as pumps, temperature and pressure sensing

Engine Accessories - Engine mounted necessories such as pumps, temperature and pressure sensing units should be checked for secure mounting, tight connections.

Cylinders - Check cylinders visually for cracked or broken fin

Engine Mounts - Check engine mounting bolts and bushings for security and excessive wear. Replace any excessive wear. Replace any bushings that are excessively worn.

g. Primer Nucles - Disconnect primer nozzles from engine and check for

h. Firel Injector Norzles and Lines - Check firel injector norzles for looseness. Tighten to 60 in.-lbs. tarque, Check fuel line for dye stains at connections (indicating leakage) and security of lines. Repair or replacement must be accomplished before aircraft resumes operation.

Carbinetor - Checking tottle body attaching screws for tightness; the correct torque for these sen 40-50 in.-lbs.

400-HOUR INSPECTION. In addition to the items listed for daily pre-flight, 50-hour en-opections, the following maintenance check should be made after every 400 hours of operation.

Valve Inspection — Remove rocker box covers and check for freedom of valve rockers when valves are closed. Look for evidence of abnormal wear or broken parts in the area of the valve tips, valve keeper, springs and spring seats. If any indications are found, the cylinder and all of its components should removed (including the piston and connecting rod assembly) and inspected for further duauge. Replace any parts that do not conform with limits shown in the latest revision of Special Service Publication No. SSP-

7. NONSCHEDULED INSPECTIONS. Occasionally, service bulletins or service instructions are issued by Lycoming that require inspection procedures that are not listed in this manual. Such publications, usually care limited to specified engine models and become obsolete after corrective modification has been accomplished. All such publications are available from Lycoming distributors, or from the factory by subscription. Consult the latest revision of Service Letter No. L114 for subscription information. Maintenance facilities should have an up-to-date file of these publications available at all times.

4-3

4-6-20

LYCOMING OPERATOR'S MANUAL
O-840, IO-840 SERIES

2901 Airport Drive, Torrance, California 90505

Phone (310) 539-0508 Fax (310) 539-5198

Page 1 of 1

### **R44 SERVICE BULLETIN SB-102**

DATE: 29 October 2019

TO: R44-series Owners, Operators, and Maintenance Personnel

**SUBJECT:** Chin Inspection Hole and Access Cover

ROTORCRAFT AFFECTED: R44 Helicopters S/N 0004 thru 2261 & R44 II Helicopters S/N 10001 thru 13420, except Police & E.N.G. configurations. (R44 Cadets are not affected.)

TIME OF COMPLIANCE: Within next 500 flight hours or by 30 November 2020, whichever occurs first.

**BACKGROUND:** This bulletin requires cutting a hole and installing an access cover in the chin to facilitate inspection of tail rotor flight controls.

### COMPLIANCE PROCEDURE:

- 1. For each affected helicopter, order one KI-233-1 Chin Access Cover Installation Kit.
- 2. Install KI-233-1 kit per kit instructions.
- 3. Make appropriate maintenance record entries.

### APPROXIMATE COST:

Parts: \$35 for KI-233-1 Kit if ordered by 30 November 2020.

Labor: Approximately 2.5 man-hours.

THE DESIGN ENGINEERING ASPECTS OF THIS BULLETIN HAVE BEEN SHOWN TO COMPLY WITH APPLICABLE FEDERAL AVIATION REGULATIONS AND ARE FAA APPROVED.



R44 SERVICE BULLETIN SB-103 (supersedes R44 SL-68B)

R66 SERVICE BULLETIN SB-36

DATE: 02 December 2019

TO: R22-series, R44-series, & R66 Owners, Operators, & Maintenance Personnel

SUBJECT: Main Rotor Blade Tip Plate Permanent Removal & Sealant Application

- A016-6 Revision AT, AU, & AV main rotor blade assemblies (R22)
- C016-7 Revision AH & Al main rotor blade assemblies (R44)
- F016-2 Revision H & I main rotor blade assemblies (R66)

Main rotor blade part number and Revision letter are on data plate on inboard lower skin.

TIME OF COMPLIANCE: At next 100-hour inspection or annual inspection, or by 01

BACKGROUND: This bulletin requires permanent removal of C155 tip plates from specified main rotor blades and application of polysulfide sealant for improved corrosion resistance.

### COMPLIANCE PROCESURE:

For each affected main rotor blade:

- 1. Refer to Figure 1. Position main rotor blade to allow tip access and apply rotor brake. Support blade in level (spanwise) position with cushioned stand.
- 2. Remove tip cover from blade. If tip plate has previously been removed, proceed to step 4.
- Initiate separation of tip plate from spar using mallet and a razor blade; hold razor parallel to plate. Peel off plate by pulling with pliers. If tip plate is removed from only one of an installed pair of blades, weigh removed tip plate and add equal amount balance weight to tip.

(OVER)

R22 SB-116 R44 SB-103 R66 SB-26 Page 3 of 3

### WARNING

Review appropriate Safety Data Sheet (SDS) when working in proximity to hazardous materials. Specific recommendations for use of personal protective equipment are located in the SDS.

- 8. Clean bare metal area with lint-free cloth dampened with acetone.
- 9. Refer to Figure 2. Apply thin, even layer of B270-1 sealant (polysulfide, ref MM approved sealants) as shown. Allow to cure



FIGURE 2

- 10. Refer to Figure 1. Visually inspect tip cover for corrosion. Remove any corrosion from tip cover damping surface, and maintain surface flatness, by hand-sanding tip cover on 220-grit aluminum-oxide abrasive paper on a flat plate. Minimum allowable height of cover's drain slot after rework is 0.07 inch. Clean bare metal area with acetone, prime with two coats of epoxy primer (chromated epoxy preferred), and allow to cure.
- On blade tip, prime bare metal with two coats of epoxy primer (chromated epoxy 11. preferred), and allow to cure.
- 12. Install tip cover and special torque screws to 40 inch-pounds wet with A257-9 anti-
- Apply topcoat to blade tip and tip cover within 2-48 hours of primer application. For best performance, allow topcoat to cure 48 hours before flight.
- Make appropriate maintenance record entries.

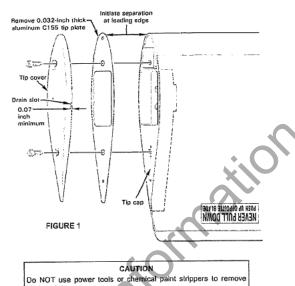
### APPROXIMATE COST:

Parts: None.

Labor: 3.0 man-hours per installed pair of main rotor blades.

THE DESIGN ENGINEERING ASPECTS OF THIS BULLETIN HAVE BEEN SHOWN TO COMPLY WITH APPLICABLE FEDERAL AVIATION REGULATIONS AND ARE FAA APPROVED.

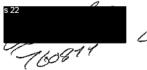




Using a hard, flat block with 220-qdl aluminum-oxide abrasive paper, hand-sand blade tip vertical surface in a chordwise direction to expose bare metal of tip cap and outboard edges of skins. Clean up debris.

or chemical paint strippers to remove

- 5. Using 10X magnification, visually inspect blade tip for corrosion.
- 6. Remove any corrosion from tip cap and outboard edges of blade skins by handsanding vertical surface in a chordwise direction; use a hard, flat block with 220-grit aluminum-oxide abrasive paper. Remove only material necessary to eliminate
- Remove any corrosion from upper and lower surface of blade skins per current revision R22 SL-83 / R44 SL-70 / R66 SL-30.



4-6-20

2901 Airport Drive, Torrance, California 90506

Phone (310) 539-0608 Fax (310) 539-5198

Page 1 of 2

secure hose with retained clamps.

# R44 SERVICE BULLETIN SB-104

(supersedes R44 SB-98B)

**DATE:** 11 March 2020

IO: R44-series Owners, Operators, and Maintenance Personnel

SUBJECT: Air/Oil Separator Hose

EFFECTIVITY: R44 Helicopters S/N 2566 thru 2607 except 2600. R44 II Helicopters S/N 14284 thru 14384 except 14381 and 14382. R44 Cadet Helicopters S/N 30044 thru 30065 except 30047 and 30061. Also helicopters retrofitted with air/oil separators.

TIME OF COMPLIANCE: Within next 150 flight hours or by 31 May 2020, whichever occurs first.

BACKGROUND: RHC received a report of a kinked A729-75 hose, installed between the engine and C728-2 air/oil separator assembly. The kinked hose caused the crankcase to vent through the separator drain back tube resulting in loss of engine oil. R44 SB-98B required a spring to be inserted inside the hose to prevent kinking. However, RHC has found that the hose is still susceptible to kinking. This bulletin requires replacing the A729-75 hose & spring with an A785-43 wire-reinforced hose.

## COMPLIANCE PROCEDURE:

- Refer to Figure 1. For each affected helicopter, obtain one A785-43 crankcase breather hose, available from RHC Customer Service.
- Remove engine RH cowling. R44 IIs only: Remove air box assembly per R44 Maintenance Manual (MM) § 6.470.
- Loosen B277-4 clamp and disconnect black oil drain tube from air/oil separator's can
- 4. Loosen screw securing separator's breather tube.
- 5. Remove screw securing air/oil separator's can-to-frame clamp.
- 6. Loosen B277-12 clamps and remove A729-75 hose and D774-20 spring; retain clamps and discard hose and spring.

(OVER)

-9-7 W8201

Page 2 of 2  $\,$  7. Install new A785-43 hose with soft cuff (portion without wire) over engine fitting;

NOTE:
Applying A257-8 rubber lubricant to hose bore at ends facilitates installation.

- . Install screw securing air/oil separator's can-to-frame clamp. Verify security.
- Tighten screw securing separator's breather tube.
- 10. Connect black oil drain tube to separator's can & tighten B277-4 clamp. Verify security,
- 11. Install air box assembly per MM § 6.480, if removed. Install engine RH cowling.
- Make appropriate maintenance record entries.

### APPROXIMATE COST

Parts: No charge for one A785-43 if ordered by 31 May 2020. Reference helicopter serial number when ordering.

Labor: 0.5 man-hour for R44 and R44 Cadet Helicopters. 1.0 man-hour for R44 II Helicopters.

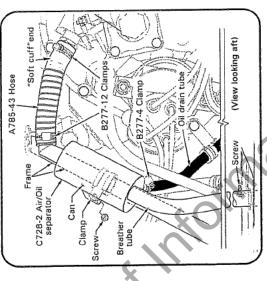


FIGURE 1

THE DESION ENGINEERING ASPECTS OF THIS BULLETIN HAVE BEEN SHOWN TO COMPLY WITH APPLICABLE FEDERAL AVIATION REGULATIONS AND ARE FAA APPROVED.

### **UNSERVICEABLE ITEM**

DESCRIPTION: 644 KIT	
PART No.: 05/5 7/7 45 A/F HRS.: 286.9	
SERIAL No.:	
REMOVED FROM: UH-NBY TSOH:	
SIGNED: DATE: 4-6-20	
LIC No.: 760379 REPAIRABLE/NON REPAIRABLE	
Low Compression	
SEE OVER FOR REMARKS / REASON FOR REMOVAL.	.:.0
JN:357	
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Released under	

Description O-360/O-540 Cylinder Kit Part # 05K21745 **GRN PC579** 

Purchase # **579** 

Expiry QTY 1

Serial #

Condition NEW

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Purchase # 579

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Serial #

Condition NEW

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### **ENGINEER TIME SHEET**

CLIENT. U.O. E. VH-NBY JOB NO. 35.7. PG NO.

DATE	ENGINEER	TIME ON / OFF	TOTAL	WORK PERFORMED
2/6	A-Q	·	0.5	JOB Pack
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Job #: 304

Rego: NBY

**AFTTIS: 195.03** 

Start Date: 26-07-2019

Finish Date: 29-07-2019

Customer: Ultimate Outback Experience

Job Type: Component Install/Replace

Coordinator:

Description: Onboard Systems Hook Install

# Book Coast Heli Maintenance Pty Ltd COA - 0686 Worksheet Component Counter Aircraft: R44 Co-ordinators Signature: 195.03 Rego: VH-NBY Hours Airframe 26-07-2019 Print Name: Days Serial # : 2544 Airframe Job No: 304 Licence No: 594407 pate: Airframe ATA Code: Work Required: ADDITIONAL WORK Install Onbord Cargo Hook System IAW Onboard Systems STC # SR01808SE Action Taken: A.M.E Task No 001 C/O Installed 1 x New 28v Onboard Systems Cargo Hook System P/N 200-327-00 B/N PC508 NDF

L.A.M.E

Date

594407

29/07/2019

Licence No

**Labour Hours** 

Category Airframe

**Monitor By** 

Interval Due

To Run

# Engineering Work Package Pearl Coast Heli Maintenance Pty Ltd COA - 0686



OR DETAILS					
JOB DETAILS Job Number	304	Date Rai	ised 26/07/2019	AF TTIS	195.03
Aircraft Registration	VH-NBY	Date Co	impleted 29/4/19	Engine TTIS	
Operator	Horizontal Falls Helicopters	Approve	ed RHC R44 RTR 460 Mainter	enance Manual Rev May Landings/Starts	
Aircraft Type	R44	Mainten (Airfram	nance Data 2016 ne)	Cycles	
	Pearl Coast Heli Maintenance	Approve Mainten (Engine	nance Data	rs Manual Rev March	
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Form No: PCHM003

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# Co-Ordination and Final Certification Pearl Coast Heli Maintenance Pty Ltd COA - 0686

Job No: 304

Aircraft: R44

Job Description: Onboard Systems Hook Install Rego: VH-NBY Expired M/R Serial Serial # : 2544 Owner: Horizontal Falls Helicopters Issued M/R Serial No Operator: Horizontal Falls 195.03 Aircraft TTIS L.A.M.E CERTIFICATION I hereby certify that all maintenance in the category(s) for which I am responsible have been completed. Categories covered fluring this inspection - Certifications Pearl Coast Heli Maintenance Pty Ltd COA -For & on behalf of: Licence Number Airframe Pearl Coast Heli Maintenance Pty Ltd COA -For & on behalf of: Licence Number Engines Pearl Coast Heli Maintenance Pty Ltd COA -For & on behalf of: Licence Number Electrical Pearl Coast Heli Maintenance Pty Ltd COA -For & on behalf of: Licence Number Instrument Pearl Coast Heli Maintenance Pty Ltd COA -For & on behalf of: Date Licence Number Radio Independent Inspection Certificate Pursuant to CAR 42G. Inspection carried out on the following Licence Number 1st Inspection Signature: Licence Number 2nd Inspection Signature: CO-ORDINATING CERTIFICATION I hereby certify for the completion and co-ordination of the entire inspection For & on behalf of: Pearl Coast Heli Maintenance Pty Ltd COA -594407 LAME Licence No: LAME Signature : A CERTIFICATION ABOVE CONSTITUTES A CERTIFICATION PURSUANT TO CAR42ZE THAT ALL MAINTENANCE HAS BEEN PROPERLY CERTIFIED. Note: The person who certifies for the completion and co-ordination of the entire inspection or workpackage contents is to ensure that any maintenance performed during the Inspection has not invalidated a certification already made in another category and has been completed and properly certified.

M/R Date of Issue



# RECORD OF WEIGHT ALTERATIONS

NAME OF ORGANISATION	AIRCRAFT	TYPE	DATUM
For Pearl Coast Heli Maintenance PTY LTD	VH-NBY	R44 Raven I	100 INCHES FORWARD OF THE MAIN ROTOR CENTRE LINE
Cert.Of Approval No: 0686	<b>V</b> 11-10-1		• 6

	MOMENT	WEIGH	T AND BA	LANCE CH	ANGE	RUNNI	NG TOTAL	EMPTY
DESCRIPTION OF	FROM	Added (+)		Removed (-)				
ALIZATION	mm	Weight kg	Index	Weight kg	Index	kg	mm	Index 1812860.
Longitudinal C of G						663.9	2730.5	7
Install Cargo Hook Kit	2385.06	2.4	5724					
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Total						666.3	2729.4	1818584. 7
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Lateral C of G		1				663.9	5.1	3372.8
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PLEASE CHECK WER STE AT WWW.ONBOARDSYSTEMS.COM FOR

Owner's Manual For the Cargo Hook Suspension System Robinson R44 and R44 II Helicopter

Kit Part Numbers 200-326-00, 200-327-00, 200-327-01, 200-327-10, 200-327-11 200-396-00

STC SR01808SE

Onne's Manual Humber 120-132-00 Revision 17 March 1, 2019



13915 NW 3⁴ Court Vancouver, Washington 98685 USA Phone: 360-546-3072 Fax: 360-546-3073 To8 Free: 800-275-0883 www.OnboardSystems.com

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Section 4 Maintenance latinations for Returning a System to the Eccory, 4-1

Section 5 Certification for tetuning FAA STC, 5-1 Canadian Approval, 5-3 FASA Approval, 5-5 ANAC Approval, 5-7

# Record of Revisions

Hev.	Date	Page(s)	Renson for Revision
9	11/11/13	2-10 to 2-25	Updated pin load cell installation instructions
10	02/10:14	2-4, 2-6, 2-7	Liosened tolerances on relay location, moved manual release cable T-handle location. 80 inches inbourd to provide clearance with a'c structure. Updated Notice for locating T-handle.
11	02/13/14	1-3, 1-4, 2-1, 2-2, & 3-2	Replaced bott P/N 290-505-00 with 511-076-00.
12	08/24/15	1-4, 2-9, 3-3, 3-4	Added load cell P/N 210-101-01. Updated cargo hool rigging section.
13	10.09'15	Section 1, 2-24 that 2-32	Added remote book electrical release kit P/N 200-396 00.
H	07/29/16	1-1, 1-4, 2-13, 2-16, 2-17, 2-25	Clatified applicability of this by aircraft voltage rather than aircraft model. Replaced remote hook reloca- kit's external connector assembly P/N 270-230-00 wide P/N 270-230-01. Clarified avoich invalidation instructions and educid play P/N 560-016-00. Removed load weigh operation instructions and replaced with reference to sugment no. 120-039-00.
15	03/30/17	2-4	Updated instructions for locating relay.
16	03/31/17	1-1, 1-3 thru 1-7, 2- 32, 2-33, 3-1	Added kit P/N 200-327-10 and P/N 200-327-11 which include cargo hook P/N \$28-029-02 with Surefire release. Added instructions associated with this cargo hook P/N.
17	03/01/19	2-1, 2-2	Added information on insultation location of cargo hook suspension.

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# Section 1

# General Information

Introduction

the IVN 200-326-02, 200-327-03, 200-327-04, 200-327-10, and 200-327-11 Carpo Hook Surpension System Kits are approach for use on the Robbroon F44 and R44 Holiscopters. These this Robbed the cargo book, surpension strendby, internal electrical uting including release withches, and annual release solds. RHV 300-327-01 includes a lad weight system. The PN 300-327-00 kit is vistended for use on R44 interflu titlefth three a 14V electrical system while the IVN 200-327-01 this are festeded for use on R44 and R44 H saleral which have a 23V electrical system while the PN 200-327-01 with a respectively system and PN 300-327-01 with probable a different policy of the policy of the PN 300-327-01 kit to becommoded to the R44 H cyclic configuration.

The PN 200-326-00 cargo hook ampention lit includes the PN 528-020-01 HV keeperless cargo hook. This cargo book it directly interchangeable with cartier model Onbornd Systems PN 528-023-03 and PN 528-010-06 trees books.

The FNN 200-227-00 and 200-327-01 cargo book surpuriées lâts include the FN 378-202-00 28V keeprelss cargo book. This cargo hook is directly fine twith carlest mode (obsorted System WN 328-202-01 and PN 327-201-00 cargo books. The earlier models may be used with the tespective cargo book surpuends to the second of the process of the cargo books.

Kil INN 2003/27-10 and 2003/27-11 are identical to PNA 2003/27-40 and 2003/27-11 are identical to PNA 2003/27-40 and 2003/27-11 respectively except they include a cargo book with Swedfer scharce as part of its electrical relates en particular exhause can part of its electrical relates en particular exhause contact to protect against insolvation tool relates as scholarsh worked with the electra swidels or multikan activation of the relates which when another is intended. See Theory of Operation section for complete functioning of Swedfer electrical seeds.

overginous to survive create. A Renarc Host Electrical Release Kin (P.N. 200-396-00) for 28 volt R44 II models is available as a complanean to the kin litted Above. This kit provides the fixed electrical juvivisions for the operation for a termote cargo Joaks aboth as the Orbeigust Systems JPN 210-223-200 cargo book or the 531-038 series of exprange books. It is fickled as sycletic novalide winch, circuit breaker, relity, writing, and connector barcket. Refer to section 2.9 for Published in faturations for this kit.



The PAN 200-396-00 kit is thaired to use with intermittent electrical levels only (such as for the electrical release of a remote cargo leak).

Geseral Information

Į.

# Bill of Materials contant

Descelptien	109-114-64	200-327-00	160-317-01	100-117-19	103-117-1
Nut				ī	
			l t	-	1
Hamesi	•	•	ı		ı
C-39 Indicator			1		
Power Switch			1		
Placard		•	2		2
Placard	·				1
Serew			1		-4
Nut	· ·		4		4
	Not Pin Load Cell Assembly Load Weigh Informal Hames C-19 Indicator Power Strikeli Placard Placard Seriev	Not	Not	Not	Not

<sup>1</sup> Suspension Attentibly Pol 232-292-01 superiods P.N 232-292-00 Superion Assembly, P.N 291-103-03 Pilipa Block, and P.N 291-107-00 Pb.

 $^{3}PAC10.401.61$  supercedes P/N 210-226-01. These P/Ns are therehongs selfc in this installation.

The following times are included with the optional Load Weigh Upgrade Kit (IVN 200-340-00). This Lik is interded for operators using the 200-327-00 or 200-327-10 kit and who would fixe to add a load weigh system. It converts the IVN 200-327-00 and 200-327-10 kit configuration to a BN 200-372-10 and 200-327-10 kit configuration.

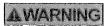
Part Ne.	Description	Qts
210-301-01	Fin Load Cell Assembly	
270-018-04	Load Weigh Internal Harnes	
210-095-00	C-39 Indicator	
100-018-00	Power Switch	1
215-010-00	Placard	2
215-012-06	Placifi	
\$10-028-60	Screw	4
510-029-00	Nut	- 4
\$10-178-00	Cotter Pist	
\$10-170-00	Nut	T
510-174-00	Washer	
510-183-00	Washer	

Sufety Lubets

The following definitions apply to safety labels used in this manual.



Indicates a hazardous situation which, if not avoided, will result in death or serious injury.



halicates a hazardous situation which, if not avoided, could result in death or various inform.



ladicates a hazardous situation which, if not avoided, could result in minor or mederate injury.



Draws the reader's extendion to important or unusual information not directly related to safety.



Used to address practices not related to personal

1-2

Bill of Materials continued

The following items are included with the optional ZaV Remote Huck Electrical Release Kit (Kit PN 200-396-00). If shortages are found contact the company from whom the asystem was purchased.

Feet No.	Ovictorion	Q
215-284-00	Placed	
237-513-00	Switch Housing Assembly	1
270-198-00	Wire Assembly, Circuit Breaker	
270-205-00	Extensi Electical Hamess	
270-230-01	R44 External Cornector Assembly	
410-293-00	Ring Tenalest	1
410-302-00	Ring Terminal	2
420-084-00	22 Ga. Wird	61
110-012-00	Circuit Breaker	1
450-001-00	Heat Shrink, 55" Lu	2

panel IVN C734-3 with air injet.

Specifications

Suspension design load	800 lb. (363 kg.)
Design Ultimate strength	3,000 fb. (1,361 kg.)
Cargo hook electrical and mechanical release espacity	9,000 lb. (4,031 kg.)
Force required for meethanical release at 3,600 lb.	8 lb. Max (.600" travel)
Cargo hook P/N 528-029-00, 528-029- 02 electrical requirements	22-32 VDC, 6.9 - 10 attnts
Curgo hook P/N 528-029-01 electrical requirements (kit P/N 200-326-00)	10-15 VDC, 7.7-11.5 amps
Curgo hook minimum release load	0 palamils
Corgo hook mating electrical connector	1C06P8-2S
falde 1.5 Specifications - Kit P/N 200-394-4	99
Kit Weight	1.1 fbs (0.5 kg)
Vultage Rating	28 volts
Current Rating	15 amps**
Compatible electrical computer (from	Leviton 5259-VY*

long likes ide)

\*\*Or copitalent 3 prong, 15 ampplug.

\*\*The 200-306-00 remote book release kit is limited to use with internitional elocitical leads that do not exceed 1 second in duration (us.h as a remote surge book electrical relates).

Bill of Materials

The following items are included with the Cargo Hook Suspension System Kits. If shortages are found contact the company from whom the system was purchased.

Table 1.1 Suspension System Bill of Materials

1	Part No.	Description	200 124 00	149-311-03	160.117.01	160.117.18	169.117.61
ı		Owner's Minual, C-39	100-310-00	149-31-103	1	*********	140-211-11
		Owner's Manual	i	H i -	<del>                                     </del>	l i	$\vdash$
		RFM Supplement			<del> </del>		<del></del>
	122-017-00	CMM, Cargo Hook					<del>                                     </del>
		ICA ICA	<del> </del>		<del> </del>		<del>                                     </del>
			<del> </del>				
4	528-029-01	Cargo Hook, 14V		<u> </u>	<u> </u>		<u> </u>
Р		Cargo Hook, 28V		1		<u></u>	
( :	528-029-02	Cargo Hook, 28V, Surefire	-÷-	-	- <del></del> -	- 1	1
	232-292-01	Suspension Assembly		1		1	1
	311-076-00	Drifted Head Cap Screw	2	2	2	2	2
Ŋ.	270-059-00	Wire Arcembly	1	1	ı	1	1
q	215-118-00	Multiple Decal Sheet	1		1	1	
	213-119-00	External Load Limit Decal	1	1	1	1	1
	215-343-00	Cockpit Decal, Surefire			-	1	1
	270-090-00	Wire Harness	- <del>i-</del>	1	1	1	1
	232-114-01	Switch Housing Assembly	1				T -
	232-152-01	Switch Housing Assembly		1	1	l l	1
	270-178-01	Switch Ottard, Co-pilota	1	1	1	1	
	268-014-01	Minual Release Cable	1	1	1		1
	506-016-00	Hole Plag		ı		1	1
	310-297-00	Screw	1	1	1	1	1
		Nut	1	i	1	1	1
	510-209-00	Washer	1	1		1	1
	512-010-00	Loop Climp	1	1	1	1	1
	\$12-027-00	Leop Clamp	3	3	3	3	3
	500-066-00	Spacer	1	1	1	1	1
	500-065-00	Grommet Edging	1	1	1	1	1
	512-018-00	Chap	2	2	2	2	2
	440-006-00	Circuit Breaker	1	1	1	1	i i
	415-002-00	Relay	i i	-		-	1 .
	415-003-00			1	1	1	1
	410-162-00	Ring Territinal	2	2	2	1	2
	510-277-00	Servi	2	2	2	2	2
	510-278-00		2	2	2	2	2
		Nut	2	2	2	2	1
	505-011-00	Grommet	2	2	2	2	2
	400-059-00	Switch	i	1-i-	⊢î-	T T	<del>l î</del>
	450-001-00	Heat Strink, 15" Le.	1	1	<del>                                     </del>	1	1
	2/0-332-00	Attach Bolt	1	1	<del></del>	1	<del>                                     </del>
	510-183-00	Waster	1 2	2		2	
	510-17-1-00	Washer	<del>                                     </del>	<del>                                     </del>	<del>                                     </del>	<del>                                     </del>	<del> </del>
	310-178-00	Cotter Pin	<del>l i </del>	⊢ <del>i</del> −	<del>                                     </del>	<del></del>	<del></del>
	ciatinued	1 22 191 1 20		·			

Goscral Stifusation

1-3

Theory of Operation

The primary elements of the Cargo Hook see the load beam, the internst mechanism, and a DC sudenoid. The lead beam supports the load and it is talked through the internst mechanism. The DC reclosist, in external annual release Cable and a minural release lever provide the means for unlikeling the load beam.

The load is attached to the load beam by passing the cargo siling ring into the throat of the load beam and peahing the ring against the upper portion of the load beam throat, which will inhibit the flook to close. In the closed portion, a birth ringsger the load beam and latches it in this position.

To release the ford, the fatch is disengaged from the load beam. With the latch disengaged, the weight of the load causes the feed beam to swing to its open position, and the cargo sling pilles of the load beam. The load beam then remains in the open position as also give the next load.

bealt their rentless to the open position was large the next tool.

A load release of the initiated by three different methods. Normal release
is addresed by pilot actuation of the push-belton within in the cochpic.

When the push-belton within is preved, it unergizes the De Confordid in
the Carge Hook, and the relensied opens the bleft in the internal
medianata. A resolution year the bleft in the internal
medianata is resolution years and the prevention of the prevention of the prevention of the prevention of the prevention of the prevention of the prevention of the prevention of the prevention of the prevention of the prevention of the prevention of the prevention of the prevention of the prevention of the prevention of a lever bested on the risk of the feed of the prevention of a lever bested on the risk of the prevention of the prevention of the risk of the prevention of the prevention of the prevention of a lever bested on the risk of the prevention of the prevention of a lever bested on the risk of the prevention of

Cargo involve.

The epticual eargo hook with Surefire Includes a short time drizy circuit built into the cargo book's electrical release system (cargo book fiv) 321-059-031. This feature is a safety embacoment to protect #point loadweinto load release due to accelerate central with the release availed or mistakes accounts on the cargo hook with when another is intended. The time delay feature requires that the release which be depressed and half for more distant 21 section (some the cargo look). Surefire makes the cargo in the cargo which release a 12 section to open the cargo look. Surefire makes the cargo in the cargo in the cargo look in the cargo in the cargo look in the cargo in the cargo look in the cargo in the cargo look in the cargo in the cargo look in the cargo in the cargo look in the cargo in the cargo look in the cargo in the cargo look in the cargo in the cargo look in the cargo in the cargo look in the cargo in the cargo look in the cargo in the cargo look in the cargo in the cargo look in

In addition to its PN, a cargo hook with Surctire can be identified by a gold color tolenoid homing (see Figure 1.1). Also a plazard on the underside of the solonoid housing indicates that the electrical release it delayed by is accord.



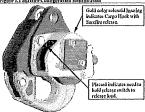
The 528-029-02 cargo book melades on electronic delay of approximately is second. It is necessary to press and held the cargo heads release button.

# **A CAUTION**

If a Surfice equipped eargy heak must be releated to moved tittly which as any delay (such as the coase of englass fathure or surged least), suc the mechanical backup release.

In addition to the delay feature the circuit includes on-off cycling to limit the duty-cycle on the cargo hook solenoid. If the release switch is held down, the solenoid will cycle on and off repeatedly in a "nuclaine gon"

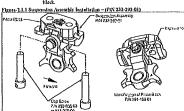
Figure 1.1 Surefire Configuration Identification

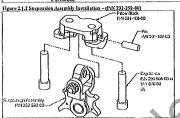


General (sforesut)

2.1 Cargo Hook Suspension Assembly Installation continued

- o Gresso the Pin (P.N 291-107-00) with Mobilgresse 28 or equivalent before assembly.
- or Patibly front the Fin join the Pillow Hock. Hold the Suspension Assembly (HN 222-292-60) in the orientation as thosus in Figure 2.1.2, position it within the state of the Fillow Hock, and Alde the or through the Suspension Assembly and juto the other idde of the pillow block.



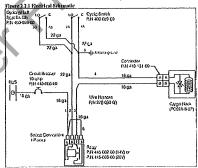


1-2

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2.2 Electrical Release Wiring Installation

The electrical release system is powered from the low through a 10 and
cloud treater for a first in the content must. Switches on the cyclic and
complish cert type and switch the relay and energize the DC solenoid in the
Carried 100s. regaring the book and relativing the cargo. A schematic for
the electrical system is them below in Figure 2.1.



o Install the relay (P.N 445-002-00 if installing kit P.N 200-326-00 or P.N 445-003-00 if installing kit P.N 200-327-00) on the level panel below the existing relay installation (see Figure 2.2.2) using the



Due to differences in aircraft and charges by Robeston this location may not be possible, huistle areas of possible and kefine diffing to boles position the relay and cruze, calegaste cleanume for the wire humans concertions are mure the holes are a programs of 4D objecdistance from surrounding holes.

Section 2

Installation Instructions

These procedures are provided for the baselik of experienced sincarl multiprinting facilities equally of earlying out this procedures. They must not be attempted by these belong the merceutry expertise.

The R44 maintenance and parts manually abould be available throughout

the installation or various R44 components will be referred in by rame and part number. The part numbers for Robinson components are provided for reference and are subject to change by Robinson.

All equipment removed and replaced shall be done is accordance with the R44 matternace numeral. All installed hardware shall be torqued in accordance with steedard tengen of AC43,13 urders noted otherwise. Apply torque attipe whose applicable.

2.1 Cargo Hook Suspension Assembly Installation

ISJECTISTON ASSECTING ASSECTING ASSECTION ASSECTING ASSECTION ASSE

- o lauret the cap screws (IVN 293-305-6); or \$11-976-00) into the two threaded holes in the hardgoing block and serve in to engage thread integrity. Some re-work of access holes in thin pasy he required to allow both intuitation.
- o Remove the two cap screws.
- Apply scalars to the side of the Superaires Assembly (P/N 232-292-01) Pillow Block which is to be insuffed against the belly skin.
- O Orient the Suspension Assembly as shown in Figure 2.1.1 and secure it to the belivoyter with the two P/N 250-302-60 or \$11-076-00 cap secure (refer to Figure 2.1.1).



Install the Suspension Attrobly so that the engineed "F" is forward and the engineed "A" is off as shown in Figure 2.1.1.

- o Torque the PrN 290-505-00 or \$11-076 por explorers to 26 ft-lbs
- o Safety-wire the cap screws to the ears 60 the pillow block.
- \*I finitalling Suspension Acquibly PN 202-202-00, Fillow Block PN 201-108-00, and Fis PN 201-108-00 perform the following steps (the Supersion Acceptly PN on the determined by the chain the underside of the Fillow Block, PN 232-202-01 Supersien Assembly Nasa "-01" on the acceptance of the Fillow Block, PN 232-202-01 Supersien Assembly has a "-01" on the acceptance of the PR of the PN on the acceptance of the PR of the PN on the Acceptance of the Acceptance of the Accepta underside of the Pillow Block).

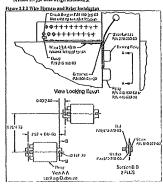
2-1 Installation Instructions

2.2 Electrical Release Wiring Installation continued

Piece the electrical release wining human (PN 270-090-00) into the tunnel on tep of the existing wire hund.



If installing the land weigh system, I may be distable to justall the electrical havens of the rates time at the release wiring havings, Refer to Section 2.7 for load weigh installation.

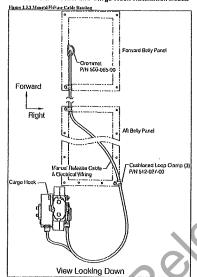


# 2.2 Electrical Release Wiring Installation continued

- Connect wire numbers 1, 2 and 3 from the main wire harness to the relay terminals A, II and 7 as about in the electrical system schematic. Connect jumper wire 6 to relay terminal 5.
- Connect the ground tend of wire number 5 to any convenient existing ground location in the tomaci.
- o Secure the wire tamers with wire ties as required.
- (c) Remove the cheer's Frenker cover panel and fastiff the 10 sup circuit breaker (10) 410-006-00) is an available (cention. On some early noods), it may be necessary to remove the panel 2nd make a hole for the additional circuit breaker.
- Open the circuit breaker to disarm the cargo book release circuit.
- Use the wire assembly (P/N 270-059-05) and a ring tendinal (P/N 410-162-00) as a jumper to power the input vide of the circuit breaker in compliance with AC 43.13.
- o Feed the #1 wire of the main use bundle from the turnel into the effectible braker bay using the existing which harters access hole. Councet the wire to the output side of the circuit breaker using the other ring terminal (IWA 1401-162-00) provided. Secure the poster wire to the existing wire harnesses with the wrape.
- The 2A and 4A wires are rooted to the cyclic switch, which is installed per Section 2.5.
- If the external coupled's seed switch is to be installed, the 2B and 4B wires are routed to the outboard side of the couplint's seal, otherwise cap and stou these two wires. The couplint's seal switch is installed an another two. per vection 26
- o The #3 and #4 electrical wires are to be routed out the same hole in the forward belly panel as the manual release cable. This hole is created during the charmal release cable initalistion (reference section 2.3).

Installation Instruction

# 2.3 Manual Release Cable and Cargo Hook Installation continued



# 2.3 Manual Release Cable and Cargo Hook Installation

# M(O)TI(O)

Intuit the named release F-landle on the syste-control over in the location thous in Pigure 23.1. If, the sex coefficients changes by Bobiuson Hillergiers, Chi beaston is not modable, locate it as now a possible. BIODINIST Higher preceding with stilling the for F-booking, resift their in cleanures beneath the cyclic control cover for the release coefficient control cover for the release coefficient and the cyclic control cover for the release coefficient and the cyclic control cover for the release

- 6 Drill a 38 inch diameter hole through the left aft corner of the cyclic control cover (Robinson 198 C444-3 or C444-3) and cyclic box (Robinson 198 C338-4) shown in Figure 2.2.1.
- o Locata and drill the hole for the cable clamp in the tennel keel panel as
- Make a cutout in the forward belty panet as shown in Figure 2.3.2 and install the P/N 500-065-00 edge pronunct.
- Remove the T-knudle and first sait from the IVN 268-014-01 intensal release cable.
- o Place the 268-014-01 manual release cable builds the tunnel and route trace are 200-014-01 minute fercion carpor buttles the futured and core the coupled and of the cable through the cutout in the fervized belighant. Insert the fervized and of the cable into the cyclic centred cover place and install the face and and T-bandle as shown in Figure 2.3.1. Install the loop change as about (install on same side as T-bandle) and secure the reference solde to it.

# **A** CAUTION

Verify that the namual release table signs not merities with push pull control texts and electrical components in the named and that there is Sufficient clearance between these terms to other for matter and account for tray stack

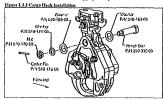
o Route the 83 and 84 electrical release wires through the count and toute aft as shown in Figure 2.3.2 and accure them and the natural release cable with loop clamps.

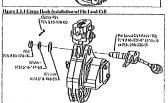
# 2.3 Manual Release Cable and Cargo Hook Installation continued

- Remove the manual release cover from the cargo hook. o Screw the manual release cable into the cargo hook (see Figure 2.3.3) by holding the cable and terming the cargo hook.
- Temporarily install the eargo hook to the suspension assembly in order to set the release cable rigging. Temporarily install the eargo hook. (BN 528-029-00, PN 528-029-01 or PN 528-029-02) to the suspension astembly using the hardware as shown in Figure 2.3.3. If intalling the load weigh system, temperarily intall the cargo book with the Pen Load Cell Assembly and hardware as shown in Figure 2.3.4. The earge book load beam must point forward.

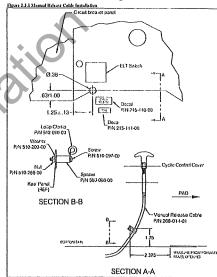


Do not lighten out and butall coater pin usual off the manual release valle tigging to completed.





# 2.3 Manual Release Cable and Cargo Hook Installation confined



Invallation Instructions

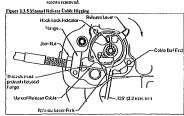
# 2.3 Manual Release Cable and Cargo Hook Installation continued o Place the funer cable of the manual release cable through the slot of the release level fork a short in Figure 2.3.5.

- the neckese lever fork a shore in Figure 23.3.

  Robits the release lever is the electricist receivant to remove free play and hold (the free play) is removed when the hook look beliefulor Solgies to move. This is also really first as the lever notice relatively easily for several degrees as the free play is removed. Measure the gap holdened the relates how fork and the cable half and with the manual release handle in the acceptable that the manual release handle in the acceptable that the positions. The gap should excellent earliering of all 25° (see 5 debras). The maximum amount off free play is limited by the unitant release court, i.e.—the soll risk mount fit inside the remain release cover them it installed.
- when it is instance.

  If the gap does not measure at Jeus 1,125°, make adjustments at the cargo hook. This is done by controling the cargo hook from the suspension and rotating the cargo hook. In the required directlen.

  When correct ceiting is achieved, tighten the jum tool securely against the cargo hook.
- o Re-install the manual release cover on the cargo hook with the two



2-10 Installation Instructions

- 2.3 Manual Release Cable and Cargo Hook Installation continued
  - Re-install the washers and not onto the cargo book attach bolt or if installing the load weigh system install the washers and not onto the pin load cell.
  - Tighten not on eargo book attach holt or pin load cell until fully vested, finger tight only. Back off not to previous extellation, if needed, when sligning cotter pin for installation. Intall and secure contention.



Du not tighten må un pin local cell more than finger tight. Over-tightening will damage local cell.



Instalkation Instructions

2.5 Electrical Release Switches Installation continued
2.5.1 Release Switch Installation - Robinson Grig Assembly COSS - R44
1. Remove Pag (Robinson P.N. 2003) shown by Figure 2.5.1 and discard.



2. Remove outboard torew (MS27039C0406) and sut (MS210421.08)



- 2.4 Electrical Wiving to Cargo Haok

  o Route the destrial release whing (\*3 and \*4 union) with the number release cable to the cargo heak.
  - o. Secure the wiring to the manual pelesas cable with ty-scraps at
  - Route (as far as possible) the load cell assembly harnes with the manual release cable and electrical release wiring.
  - Connect the eargo hook electrical release homes connector to the eargo hook. Litted below is the pin out for the eargo hook cermector. Safety-raise the connector.

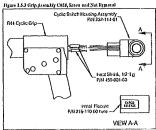
Table 1.4.1 Carrellicok Connector

- A Ground
- B Power

Early versions of the Corps Hook were equipped with a suppression diody that will be described if the Cargo Hook electrical connections are

2-12

- 2.5 Electrical Release Switches Installation contained
  2.5.1 Release Switch Installation Robinson Grip Assembly COSS R44 continued
  3. Release Switch Installation Robinson Grip Assembly COSS R44 continued
  3. Release Switch Installation Robinson Wiley and each of the grip assembly the only the only the horizontal type and out the end of the grip assembly the switches and out the end of the grip assembly the switches and out the
  - Slide a piece of heat thrick (P/N 450-001-00) over the 2A and 4A wires (ref. Figure 2.5.3).
  - Prop and solder, using a lay splice, the 2A wire from up through the sychic to one of the wires from the switch and the 4A wire from the cyclic to the other wire from the switch.
  - Slide the heat shrink over the respective solder joints and shrink in place uting a heat gum.



- Install the Switch Howing Assembly into the ord of the grip astembly
  and recure with the Seren (PN MSE2003C0866) removed earlier. The
  Not (PN MSE10412.08) removed earlier will not be re-used for this
  installation and can be diseased.
- Check the cyclic for freedom of motion throughout its complete travel range and entury the wires are not chaffing on any equipments.

2-15

2.5 Electrical Release Switches Installation

The column to the left in the table below shares three R44 configurations, refer to the column on the right for insulability instructions for the electrical release switch.



Installaries Instructions

2-13

2.5 Electrical Release Switches Installation continued

2.5.2 Release Swifted Installation - Robbinson Grip COSS - 3x7 R44

1.6.1 Release Swifted Installation - Robbinson Grip COSS - 3x7 R44

1.6.1 Remove me (RN 1922-1) from tail 1925, ship Print 1922-22) and sensore unlish Messad (RN 1944-2) from tail of pin secondary. The Start switch is present on the R44 II, on the R44 3, bolle plug is installed in from the R54 III, on the R44 3, bolle plug is installed in from the R54 III, on the R44 3, bolle plug is installed in from the R54 III on the R44 3, bolle plug is installed.



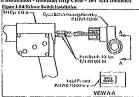
Remove outbough serest (MS27039Cygos) and not (MS21042LOB) as shown in Figure 2.5.5. The not will be the re-sacd for this installation and can be discarded.



- 3. Using a lead wire, pull the number &s and 4A wires up through the
- horizontal (abe and out the end of the gifa assembly.

  4. Slide a piece of heat thrink (IVN 45)-201-00) over the 2A and 4A.
- Prep and solder, using a lap splice, the 2A wire from up through the cyclic to one of the wires from the technic and the 4A wire from the cyclic to the other wire from the awieg.
- 6. Slide the heat shrink over the respective colder joints and shrink in place using a heat gup.

## 2.5 Electrical Release Switches Installation continued 2.5.2 Release Switch Installation - Robinson Grin C058 - 28V R44 continued



Invest the Switch Houring Assembly into the end of the COS8 syclic gip while palling the Robbison Start which (if prevent) through its Re-install the Robbisons start which fits the Switch Mount (IVS 113-2) with the next and secure the Switch Mount by lightening the pre-imitallest ext even in the Switch Housing Mountain.

If the Start switch is not present, insert the provided plug (IVN 206-016-00) into the cust of the Switch housing secently.

If necessary, while intenting the Switch Housing Assembly into the cyclic grip, pull excess who beek down the cyclic grip. Secure the Switch Housing Assembly into the end of the grip assembly with the MSZ/1039C0305 server removed earlier.



9. Install placerd P/N 215-110-00 as shown in Figure 2.5.6.

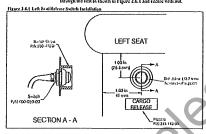
Check the cyclic for freedom of motion throughout its complete travel range and cause the trives are not classify on any components.

Installation Institutions

2.6 Optional Loft Scat Release Switch Installation

If the left seat release awards hustaffitten is not desired, eap and flow wires 2D and 4D per AC 43, 13 and skip this section.

- 1. Drill a .250 litch hole in the left side of the tunnel wall above the main wire bundle in a convenient totation or use an existing musted hole in the turnel wall. Install Grommet (PAN 505-011-00).
- Drill a .50 inch hole in the outboard side of the left rest support as thosen in Figure 2.6.1.
- Route the number 2D and 4B wires through the gronmeted hole and through the left bagging area to the .50 inch hole on the outboard seat support. Secure the wires to the forward reat hings fastenest with two clamps (Pro 312018-00).
- Slide the not (provided with the ratio) IVN 400-039-00) over the wires front limble the rest support and feed the wires through the .50 inch hole and through the ratioh guard (IVN 280-478-01).
- 5. Phase a .90 inch length of host shrink over each wire to the switch. Solder the wires to the switch as shown in the Figure 2.21 wing schematic. Vou a heat gas and durink the overstign asterial to final size. Phee the ravich (HN 400-09-00) into the switch goald and through the sect at whom in Figure 2.61 and recurse with not.



2.5 Electrical Release Switches Installation confinued
2.5.3 Release Switch Installation - Farly R44 with A785-6 Grip Assembly

Remove the cover to the cyclic switch hunting and enture its wirer are clear of the areas to be drilled on the horizontal cyclic control handle.

Drift a 172 inch (4.4 mm) diameter halo on the forward side of the cyclle grip as shown in Figure 2.5.8.

- Use a lead wire and route the number 2A and 4A wires up through the
  cyclic disk and out the existing whe routing hate. Place a length of
  heat strink over the wires that will cover the exposed portion similar
  that the contract of the contract
- Using a lead wire again, pull the number 2A and 4A wires up through the cyclic grip and out the 250 hole on the fresh of the cyclic grip.
- 5. Place a Linch (23.4 mm) length of host thirds over each wire to the cyclic awird. Prepare Cach whe cost and todder that to the storately open and closed switch terminals as shown in the Figure 2.2.1 wiring schematic. Using a heat gast, think the covering mattell to find size.



Instell the IFM 400-059-00 switch in the 212-063-01 sychic switch boung assembly using needle more pilers to hold the switch, Install the completed which flooring strength with the hadawar as shown in Figure 2.5.9. Remove the exhibits switch holdings acress and replace them with the longer 510-010-00 section and relation one of the removed tasks as shown in Figure 2.5.9.

2.7 Lond Weigh System Installation Rit DNN 2002327-01 and 200-327-11 feature a load weigh system, which includes the food cell, an electrical using plotted humers and a C-39 load weigh hold-after. Rit Wit 200-340-00 in a load weigh system "logopade" bit for an expection with lift Puls 20-27-200 for 120-27-10 local-lead.

Install the internal harness and C-19 liabSaker per this section; refer to rection 2.5 for pin load cell liabslithion. If this system is not being installed, skip to section 2.8.

Weigh Internal Harness Installation

Internal Harmess Installation to the Lad Weigh Humes is most up of four cables terminated to our convector. The connector is plaging also the facts of the historic. One of This cable is connected to the Good cell. Another cable is mixted. "PAWIG" and is connected to the internal extent electrical power. Another cable is mixted to the connected to the connected to the connected to the internal extent electrical power. Another cable is mixted "RAIT", eafer to the challenow Instantal Mac Refer section for installation instructions. The last cable is trucked "DATA" and is connected to an optional Data Recorded and C-22 printer.

Connection to the optional Data (George and C-2 printer). The load cell table on the ported with the hook electrical release homes to the carge hook area. The load cell connection should be mounted in a location close comple to the load cell to ensure the back cell called from trained when the carge hook is moved to its furthermost point, but far company any to ministrate excess calcula which may be amaged. Secure the connector with the recens [NN 310-028-00] and nots [NN 310-028-00] provided.

Roote the liarness to the electrical bus and to the Indicator mounting location. Secure the cables to the existing wiring bundles with the tywraps. Secure the cables clear of flight control rods.

wazps. Secure the coldes clear of flight control cold.

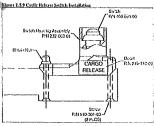
Electrical Connections
Intuit the tropiled power strick, BN 400-018-00. The "PUWEAF" coble
on the Internal Items is supplied exter long, ext off the excent roble and
use as needed to connect the stricks and circuit breaker. Correct the
"PUWEFF" which we fixed if wise themse roby 270-018-00 is intalled) to
one risk or the power and connect stander price of robotics in the to the
association of the connect stander price of robotics in the to the
association of the connect stander price of robotics in the conal illustrated in Figure 2.7.1. Councet the checked view for the XP XP-048-00 is
intalled to the ground but. The called hidd wise in the youndard at this
council flow called 1nd may be cat off. Use a ministrate of 22 gauge wire to
make all counciled onn. Secure the connection and procedured at this

2-21

2.5 Electrical Release Switches Installation continued

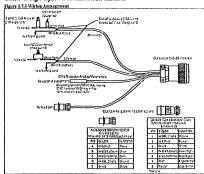
2.5.3 Cyclic Refease Switch Installation continued
7. Re-install the commutate housing and who.

Check the cyclic for freedom of motion throughout its complete travel range and entere the nines are not challing 54 Jay components.



Tree Hatton Instructions

2.7 Load Weigh System Installation continued





2.19

# 2.7 Load Weigh System Installation cominged

# C-39 Indicator Installation

The inglisher should be mounted in a position that is convenient, according any visible to the pilet. If can be mounted in a standard 2½ intragrant hole. Compact the Indicator to its Internal Harness, refer to Internal Harness Installation.

# Indicator Internal Back Light

remai lines region. The 210-25-20 Indicator is equipped with an Internal Bock Lighting System that can be congested to the atrent BZXMZE light alcuming circuit. Vice a 22 gape, public plyi, biddled cable to connect the atrent disming circuit to the linearial Planess. The cable shield wise is not growed at this read of the cable and may be could be.

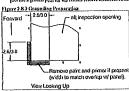
ground at with each of the cable and may be cut off.

Indicator Hood, Open Warning the equipped with a Hook-Open Warning feature that can be compacted to a carge hook equipped with a head open switch. Depending on the expedition of the carge hook within, the Indicator will Huly "HOOK OHI", when the exapt hook tool begarn it expet. The earsy hook within must be attention of the carge hook had beam in in the closed postige. When the feating hook had beam in in the closed postige, When the feating hook as they cannot be of the switch must be presented and the other ideo of the switch in the connected to the holdstoot. He at 22 seage, whiched wite to convent the carge host with holdstoot. He at 22 seage, whiched wite to convent the carge host carding sadder the wite, from the carge hook witch, to pip II. Connect the coble stield write to adjunce ground at close to the carge hook as possible, at the carge hook end of the cable ONLY.

Installation learnest kan

# 2.8 Remote Hook Electrical Release Kit Installation continued External Connector Assembly Installation continued

History and the minimum and the minimum of the first properties of the first properties of the first properties of the first properties of the fixterial Connector Assumbly's bracket and the steernth belty (see below) to provide a ground pelt fig the termine release electrical electric.



- o Install the "OSBRI-15" tabel from the P/N 215-284-00 placed sheet on or adjected to the relay and the "OSCRI-4" label adjected to the
- Attach the lixternal Councetor Attemptly using a seriest at the corner leastion and recute in place for wine routing by temporarity installing serious at the other two locations.
- o floate the wiret (wire nos. 7 and 8) from the External Connector Assembly scross the twenth and then up in the existing main wire bundle with the DMH enterages wires and rough these forward with the main wire

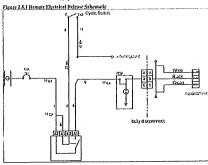
# House the wires using the following general guidance.

- a Pick up existing wire runs by opening existing cable clumps, nylon ties alone may not be used for primary support.
- o New wire non-shoold be supported with MS21919 type loop clamp).
- The distance between supports thould not exceed 21".
- o The minimum 13 dies of bends in wire groups or bundles must not be fess than 10 times the outside diameter of the largest wire or cable.
- Inspect and verify that the wire harners may not be manually deflected into a structure with a head radius less than .125".
- Noste the no. 7 whe (14 gs. twie) from the total that the circuit breaster by using the exheling wide burners access field. Consequence the week to the output tills of the circuit tecker tring the other ring terminal (1884-110-199-01) provided.
- o Route wire no. It to the base of the cyclic. This wire is routed to the release awitch per the following section.

2-26

2.8 Remote Hook Electrical Release Kit Installation

This section provides instructions for the optional Renote Hook Electrical Release Kit (P/N 200-396-00). Stip to section 2.9 if not instelling this kit. The Berusse Hook Electrical Release Kit includes the fixed electrical proxitions (which, circuit brasker, telay, wiring, and connector bracket) and an external horness for operating a remote cargo hook. The schematic for this system is shown below.



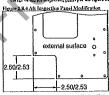
Circuit Breaker Installation

- Remove the circuit breaker cover gated and igastill the 15 amp circuit breaker (INN 440-013-00) in an available location. On rome early models, it may be necessary to remove the posted and make a hole for the additional circuit breater.
- Use the wire assembly (BN 270-198-40) and a ring tentian) (PN 410-309-00) at a jumper to power the input side of the circuit breaker in compliance with AC 43.13.

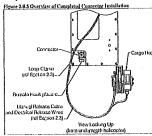
2.24

# 2.8 Remote Hook Electrical Release Kit Installation continued

External Connector Assembly Installation continued
o in preparation for dusing out the aft importion opening cut out the
corner of the aft importion paged per the figure below.



- Remove the two screws temporarily instilled to secure the External Connector Assembly and re-install the modified all daugestion panel and the loop charges for routing of the manual release cable and electrical wires.
- o Adhere the "REMOTE HOOK" placard from the placard sheet



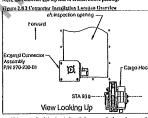
o Connect the external harness (PN 270-203-00) connector to the fixed

2.8 Remote Hook Electrical Release Kit Installation confined

External Connector Assembly Installation
The Esternal Connector Assembly (Installation
The Esternal Connector Assembly (INS 270-230-60) or 270-230-01)
includes the connector, relay, INB with surge argeoter for highling
potentian, and the withey to note to the egytle mounted within and circuit
forcity. It is negated at the art light (when tooking ferrard) corner of the
aft belly impection pared (too below for once) work word to action.

P.N 270 230-01 is real compatitie with Robinson pased P.N C794-3 which has the air talet P.N 270-230-01 is correct production version.

The external side of the bracket is primed and ready to point if desired. Mark the connector and top side of bracket before painting.



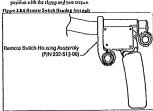
- If the cargo hack is already installed, comme the loop clamps at the importion panel fastment along the belty that secure the cuspo hach's natural release cable and electrical white.
- o Remove the forward and aft belly importion panels, retain all screws as they will be roused for the laternal Competer Assembly

2.25 Installativa Instructions

# 2.8 Remote Hook Electrical Release Kit Installation continued

Switch Housing Assembly Installation
The transe cargo texts release switch is provided pre-assembled into a
housing (P.N. 222513-00) which is designed to meast on the cyclic take
(as shown below).

- Remove the two screws and charp provided pre-assembled neta the switch lousing.
- o Position the switch heaving assembly to the left of the control housing on the end of the cyclic. The exact position of the switch housing attembly can be allocated extending a plut preference by rotating if thoust and/or skiding it inhard, on the cyclic shall, in preparation by write routing temperative recurs in the desired position with the cheep out two steeps.



# 2.8 Remote Hook Electrical Release Kit Installation continued

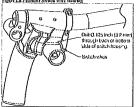
# Switch Hossing Assembly Installation continued

stulig ASSCHIDIY INSTALLIBATION continued.

Routing of the width wires requires that a small hale be delited in the cyclic foulted bosolog. The location of that hale Cun be through the beek of the Lousing or through the bost of the Housing or third plant hale the configuration of the switch housing and Vr possible interfective with configuration internal safety bosonics.

- Remove the cover of the cyclic control housing and day internal components in necessary to provide elektrone for drilling.
- C. Loosen the change series and slide the switch housing assembly out of the way and drill a .135 inch (3.2 mm) hole in the cyclic coldrels knuting th order to feed the wire leads from the switch through.

Figure 2.8.7 Remote Snitch Wire Routing



- Using a lead wire, pull wire no. I from the trire homers and the 6' length of 22 gauge wire (M22759/34-22-9) up through the cyclic tube and into the cyclic controls housing.
- o Slide a piece of the supplied heat shrink (FN 450-001-00) over the end of each wire (the no. 8 wire and the 22 gange wire).
- Reposition the witch houring ascendy and scoure in place by lighteding the two scrows. Feed the wires through the deliked hold tade the holding and cut them to length if necessary. If possible it not sub-decirable to keve a small service topy in the housing to accommodate some winted position adjourned later.
- O Prip and solder (using a 12p splice) the no. 8 wire from up through the cyclic to one of the wires from the antich and the 22 pange wire from the antich and the 22 pange wire from up through the cyclic to the other wire from the antich.
- Stide the heat shrink over the respective relder joints and shrink in place using a heat gain.
- o Re-assemble and re-install the cyclic control cover.
- a Re-install the forward importion panel.

fishikaien Katrestlan

# 2.10 Installation Check-out

After initialistion of the Cargo Hook Suspension System, perform the following functional checks:

- 1. Swing the installed Cargo Hook to ensure that the manual release cible assembly and the electrical release cable have enough stick to allow full using of the Varpeithon assembly vindous a fullaling of damaging the cables. The cables ritter not be the clays that prevent the Cargo Hauk fixtus not high freely and Hutertedian.
- 2. Wills not load un the catgo hook load beam, pull the cargo hook mechanical referse T-handle, the Cargo Hook should referse. Reset the cargo hook load beatte.
- 3. Perulde power to the electrical release system. Electrical release system operation depends to the edges back 1976 installed. The following instructions are applicable to engap book PA 328-309-40 which is equipped with Surefire electrical release. With no load on the eargo load perform the following, repeat with the Switch on the cu-pilled's sent (if installed).
- Very briefly press the Cargo Release switch, the eargo hook should not actuate and the load beam should retain cloved.
- Press and hold the Curgo Release awitch for a few seconds, the lord beam should fall to the open partition and the cargo hook solenoid should continue to cycle repeatedly.
- Push up on the fond beatti and verify that if latelest and the hook lock bullettor is aligned with the engraved line on the cover.

The following instructions are applicable to cargo hook 19% 528-629-00.

- Press and release the Citigo Release switch but the cyclic, the load beam should immediately fall to the open position.
- Push up on the load beam and verify that it fatches and the book lock indicator is aligned with the engraved line on the cover.

lbs (kgs)

5.3 (2.4)

5.3 (2.4)

6.8 (3.1)

1.1 (0.5)

If the retitote hook release the (P/N 200-396-00) was installed connect a tempore hook to its connector 18st press the REMOTE HOOK release twitch on cyclic. The remote hook should release.

# 2.11 Component Weights

# The weight of the system is fisted in Table 2.11.1.

13ble 1.11.1 Companient Weights Kit 19N 200-326-00 200-127-00-200-327-10 200-327-01, 200-327-11

200-396-00 2.33 Installation Instruction

# 2.8 Remote Hook Electrical Release Kit Installation continued

- Switch Housing Assembly Installation continued

  a local the narrow "REMOTE HOOK" pleased from the P/N 215-28460 pleased thest on the front of the awilet housing extendity (as thous to keep.
  - Install the renaining "REMOTE HOOK" placerd from the placerd theet adjecent to the circuit breaker.

Figure 2.8.8 Sulish Hunday Placard Installa REMOTE HOOK

2-30

# 2.12 Cargo Hook Location

Table 2.12.1 Cargo Hook Location Functage Station 93.9

# 2.13 Paper Work

Intellation Instruction

In the US, fill in FAA form 337 for the initial finitalition. This procedure may vary in different constricts. Make the appropriate alteraft bog book entry, lasert the Rotoceraft Flight Manual Supplement 121-048-00 in the Rotoceraft Flight Manual.

2-33

# 2.9 Placards

install the following placards.

Table 2.9.1 Placards

	table tall lineards	
-	DECAL NUMBER (DECAL DESCRIPTION)	LOCATION
	PN 215-110-80 (CARGO RELEASE)	Mount adjucts to the cyclic relove switch in clear view of the plot (see Figure 25.1, Figure 25.6, or Figure 25.9).
	15N 215-110-00 (CARGO RELEASE)	Mount adjacent to the left soat refeare switch in clear view of the pilot (See Figure 2.6.1).
7	P.M 215-110-00 (CARGO RELEASE)	Mount adjacent to the mechanical release in clear view of the pilot (See Figure 2.3.1)
	P-N 215-111-00 (PULL)	Mount adjacent to the mechanical release in clear view of the pilot (See Figure 2.3.1)
	P-N 215-112-00 (CARGO)	Mount adjacent to the eargo hotel, circuit breaker in clear view of the pilot.
	P.N 215-343-00 (CARGO RELEASE BOLD FOR >1 SECOND)	Mount adjacent to the cyclic release switch in clear view of the pilot (if cargo book w? Sureline velexic (IVN 528-029-02) is installed).
	BN 215-115-00 (FAR PART 133-35(A) OPERATIONS)	Mount on the imtrument panel in elect view of the pilot.
	P.N 215-119-00 (ENTERNAL LOAD LÉMIT ~ 800 LDS (363 KGS))	Mount on the belly of the aircraft adjacent to the eargo book attachment print in clear view of the ground support personnel.
	PN 213-2#1-00 (REMOTE HOOK)	If Remote Hook Release Kit is installed, install on the terrote switch housing assembly in elest view of the pilot (See Figure 2.8.5).
	P.N 213-284-00 (REMOTE HOOK)	If Remote Hook Release Kit is installed, mount alfacent to the empo hook circuit breaker in clear view of the pilot.
-	IVN 215-284-00 (OSRICI-15)	If Remote Hook Release Kit is intelled, mount on or adjacent to the eargo back relay in the turnel.
-	P/N 215-284-00 (REMOTE HOOK)	If Remote Release Kit is installed, mount edjacent to the remote accessory connected to the belly of the helicopter.
-	IVN 215-284-00 (OSCR1-4)	If Remote Release Kit is installed, materi edjacent to the remote accessory connector on the belly of the helicopter.

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# Section 3

# **Operation Instructions**

Operating Procedures

If the toad weigh system is installed, refer to Owner's Manual 120-039-00 for operating instructions for the C-39 indicater

Prior to a flight involving external load operations perform the following:

- Nove the Cargo Book throughout its complete range of motion and enurum that the manual release cable and the electrical release hamps du not limit its movement.
- Provide power to the electrical release system. Electrical release system operation depends on the eages book 10N institled. The following intustions are applicable to earge book 10N 58240200 within the equipped with Suerfire electrical release. With no load on the eages book perform the following.
- Fery briefly press the Cargo Release switch, the cargo book should not ectuate and the load beam abould renain closed.
- Press and hold the Cargo Release switch for a few seconds, the load beam should full to the open position and the eargo hook sedenoid should cogtinue to cycle repeatedly.
- Path up on the load beam and verify that it latcher and the hook lock indicator is aligned with the engraved line on the manual

The following instructions are applicable to cargo hook P/N 528-029-

- Press and release the Cargo Release switch up the cyclic, the load beam should full to the open position.
- buth up on the bard heam and verify that it latches and the book lock indicator is aligned with the engraved line on the manual



The release referred is intended to be energical only intermittently. Depressing the electrical release batton continguously in crease of secretal well come the release selected to overheat, possibly consisting permanent demands.

Organiza Instruction

# Cargo Hook Rigging

Extreme care most be exercised when rigging a load to the Cargo Hook, Steel load rings are recommended to provide constituent release performance and resistance to feeding. The following litherstates above the recommended rigging and rigging to avoid but is not intended to represent all rigging possibilities.



Nylon Type Straps and Rope



Sylon type straigt (or studies material) or roje must rea be upd directly on the cargo hook lead Keng. If mylon straigs or roge must be used hep-though the part anached by a steel primary rog. Perfy that the ring will freshy tilk, off the lead kenn when it to quench. Only the primary long idealid be in centact with the early hook lead leads.

# Operating Procedures continued

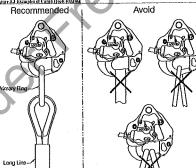
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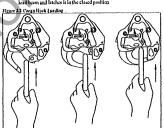
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Cargo Hook Rigging continued Figure 3.1 Examples of Cargo Hook Rigging



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# Section 4

# Maintenance

Refer to the Introctions for Configured Agraenthings; (ICA) magnal [23-030-00 for mintenance of the earse book suspension system. For milegiance of earse book PA \$26,0250, PA \$28,0290, and PN \$28,029-02 refer to Cargo Hook Compagnal Mintenance Mintel 122-022 Agraent Section 120,000 for the Cargo Hook Compagnal Mintenance Mintel 122-

Instructions for Returning Equipment to the Fraziery
If an Orband Systems product much the finite for any
reason (legicality terms, services repts, overhead see) obtain as RMA
number before shipping your return.



To obtain an RMA, please use one of the fisted methods.

- · Contact Technical Support by phase or e-mail
- l Tedskelpigt), nivopilänteen somi
- Generate an RMA number at our website:
- http://www.achandonstern.com/gu.php

After you have obtained the RMA gamber, please be sure to:

- Package the component carefully to ensure safe transit.
- Write the RMA number on the auxide of the box or on the mailing label.
- . Include the RACA number and reason for the return on your
- purchase or work order.
- Include your name, address, phone and fax number and entitl (is applicable).
- · Return the components freight, surtage, insurance and customs

prepaid to: Oabord System 13915 NW 3rd Court 1.517 NW 313 COM1 Vancouver, Washington 98685 USA Phane: 360-546-3072

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Mr. MaX Harser Orbital System International 13915 NW, 3<sup>th</sup> court Vencourter, WA 9363J USA

Subject: Acceptaines of Foreign STC SHITERSE

Dear Mr. Haven,

this is in response to FAA letter requesting Transport Casada approval of the relient STC.

his accordance with the current policy and ordered with the review of foleign STCs, some STCs applicable to credit a despries of decisit may be accepted folely on the busin Wilhold foreign certification, and the strought decision of a corresponding critificate by Theoperi Canada her subject STC (1011) 48th above ordering.

This S1C will be retried in the rotional index of S1Cs that have been reviewed and occupted by Brasport Careful for histalistion on Careful orgistered screenastical products

His bater confirms fortal acceptance of the referenced STC by Transport Canada

Yeers truly. P. Vandl

Paul Arrell For Regional Manager Aircraft Certification

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Section 5 Certification FAA STC

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MAINCOES E CONUCOLS

This modification must be inspected and Maintained in secondance with:

- Onloand Systems international instruction for Continued Aircontinues, Section ATA 5 document No. 123-030-00, Rev. 04, dated 23 3-39 2010 or later FAA approved terration;
- Origand Systems International Corp. Hook Component Maintenance Munual document No. 122 601-00. Nov. 13 days. 13 Sep. 2010, or liter FAA approved rection for range facek MLPMI 200-324-00. PAI 200-325-00 and PMI 200-325-01.
- Octoard Systems International Cargo Hook Service Manual document No. 122-018-00, Rov. 7, dated 17 Sep. 2010, or later FAA approved revision for cargo book M Pril 203-226-09, and
- Approval of this change in type design appears only to those lightween referrall models lated above which are equipped with listenates land pairelist down block part number (RH) D134-1.
- Viii. Cargo hook kit models 5(0-324-00 and 2(0-326-00 are elliptic for institution on IR4 carly, Cargo Hook kit models 500-325-00, 200-325-01, 200-327-00 and 200-327-01 are stiglets for institution on IR44 if each.
- A copy of this Certificate and the Supplement related on item th, as applicable, above their to maintained as just of the permutent records of the treated about.

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ANAC AGÉNCIA HACIONAL DE AVIAÇÃO CIVIL - BINASIL

CERTIFICADO SUPLEMENTAR DE TIPO

HOMERO 2010B12-07

Esta certificada embido tem basa na bala 17555 "Coffina Beatilito de Australia", de 18 de desembro de 1668, esta la constanta de

# conteste as (1): Orboard Systems International 13915 INV 3rd Court Vancouver, WA 90685

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Products Drightel - Habitary do Constructo do Tipo: 8402 (ANAC).

Fabricantes Robinson

Medicial: R44 and R44 II.

rescrição da hobificação ao projeto de tipo:

Fabrication of Octoping System International Model; 200 324-00 and 200-328-60 12V cargo hook iss. Model 200-328-00 and 200-327-00 26V cargo hook iss. Model 200;325-01 and 200-327-00 26V cargo hook is Model 200;325-01 and 200-327-00 26V cargo hook is Wall but and evide just and Model 200 and 200-327-01 26V cargo hook is Wall but and Model Just and Model 200 and 200-327-01 and 200

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This CST validates in Brazil the STC # SRO1608SE, issued by FAA (USA).

LMITAÇÕES E CONDIÇÕES:

See continuation sheet for applicable data

DATAS

Do Requerimento 17 Sep. 2010

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ANAC AGÉNCIA NACIONAL DE AVIAÇÃO CIVIL - BITASE.

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If the holder agrees to permit another person to use this certificate to align the product, the holder shall give the other person maken exidence of that permission.

- Operation must be performed in accordance with the applicable FAA approved Robinshill Full Manual Supplement (AFMS) specified below:
- Document Ho. 121-051-00, Rev. 1, dated 25 Feb. 2010, or base appropriate revision, for the Ochoord Systems 200-024-00, 200-025-00 and 200-026-01 Carpo Hook Las;
- Document No. 121-048-00, Rev. 2, dated 01 July 2008, or talar appropriate textiliers, for the Onlocard Systems 200-328 (9), 200-327-00 and 200-327-51 Cargo Hook Kas.
- Installation of the Cargo Hock Kit in accordance with the following approved documents:
- Owner Manual document No. 120-137-00, Rev. 4, dateg 27 July 2010, or later approved revision. for the Ordered Systems 200-324-00, 205-525-00, or 200-325-01 Cargo Rook Kit.
- Owner's Manual decument No. 120-132-00, Rev. 5, dates \$7 July 2010, or later approved toxistion, for the Onboard Systems 202-326-00, 203-327-00 or 203-327-01 Carga Hook kit.
- Instablish of the 200-340-00 Logal Weight Kit in accordance with above identified Ophoard System International Owner's Manual for either the model 200-325-01 or 200-327-01 cargo hooks hit, as applicable

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Ceetification

PLEASE CHECK WEB SITE AT WWW.ONBOARDSYSTEMS.COM FOR THE LATEST REVISION OF THIS MANUAL

Instructions for Continued Airworthiness Cargo Hook Suspension Systems Robinson R44 Series



# Record of Revisions

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200-	200-32 327-00, 20	24-00. 200-325-	t Numbers 00, 200-325-01, 200-326-00, 327-10, 200-327-11 and 200-396-00	
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				Instructions for Continued Airmorthiness 123-939-20
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Revision	Date	Page(s)	Reason for Revision	
4	07/23/10	00-00-00 Page 2, 05-00-00 Pages 1, 6 thru 8 25-00-00 Pages 3, 7, 13 thru 18	Updated format of safety labels (see nection 0.12). Corrected weight and eg data in table 25.2. Added new suspension assembly configuration to Section 5 and Section 25.	
5	11/12/13	00-00-00 Page 2, Section 5, 25-00-00 Page 15	Updated Distribution of Instructions for Cominued Airwesthiness section. Updated installation of pin fead cell. Updated external load operation definition. Moved items from daily check to armeal inspection and removed daily check section.	
6	02/13/14	25-00-00 Page 7, 13 & 14	Added bolt P/N 511-076-00 as an alternate to P/N 290-505-00.	THIS PAGE INTERVIEW MAY LEFT BLOWN
7	06/16/15	Section 5 pages 5, 6, 8, 9, Section 25 pages 3, 7, 15	instructions section to refer to cargo hook  CMM for cargo look storage.	
8	10/09/15	Section 5 page 1, 4, 7 Section 11, Section 25 pages 2-4, 6, 11, 12, 17- 20	Added remote book electrical release kit P/N 200-396-00 and associated maintenance instructions. Updated houble shooting table, clarified suspension disastembly.	
9	07/29/16	Section 25 page 4, 6, 10, 17, 18, 19	Added external connector assembly P/N 270- 230-01, clarified release switch removal and re- installation instructions, added references to CMM 122-017-00 in troubleshauting table.	
10	03/28/17	Section 5 page 1, 2 Section 11 Section 25 pages 1, 2, 2 - 5, 20		
11	03/08/18	Section 5 Page 8	Removed magnetic particle inspection requirement.	

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11.1 Cargo Herk Suspension System Placents, Section 11 Page 1
11.1 Cargo Herk Connector, Section 25 Page 1
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# Section 5

# Inspection and Overhaul Schedule

5.1 Cargo Hook Suspension System Inspection

The scheduled inspection internals natural below are mediumases and are not to be exceeded. If the coups have superation operation is preferred to trained circumstances, extreme emphasization and entablishes, ofte, it is the responsibility of the expension to perform the inspections more frequently to entare proper operation.

Annually or 100 hours of external load operations (see section 5.2 for definition), whichever comes first, inspect the cargo hank and suspension per the fullowing. Refer also to Component Maintenance Manual 122-001-00 er 122-017-00 for additional criteria.

Activate the electrical system and press the Catern Release backers to ensure the engel hook electrical release system in operating controlly. For the keepered carps hook (PN 52-60-10-64) es 25-6010-65, apprecisately 10 lbs of dossward force is required to open the earps have level beam and the head hours should assumediately re-later aller have level beam and the head hours should assumediately re-later head

The keeperless cargo lecol; (P.N. 528-029-0), 528-029-01, or 528-029-02) should open with no lead on it and should be cleesed by hand after release. If the hook does not release or re-lately, do not use the unit until the problem is resolved.



Depressing the electrical release ballon continuously in access of 20 sectords will ensure the cargo lack solution to overhear, possibly causing permittents desired.

The following instructions are applicable to cargo heek PN 528-020-02 which is equipped with Surefire electrical release. With no lead on the cargo hook perform the following.

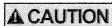
- Very briefly press the Cargo Release switch, the rargo look should not acteste and the load beam should remain closed.
- Press and hold the Cargo Release switch for a few seconds, the lead beam should fall to the open position and the cargo hock selected should continue to cycle repeatedly.
- Push up on the load beam and verify that it latches and the loads lock indicator is aligned with the cograved line on the numeral release cover (see Figure 5.1.1).

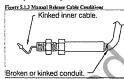
Revision 10 03/28/17

05-00-00 Page 1

Instructions for Continued Airworthiness 123-030-00

5.1 Cargo Hook Suspension System Inspection continued
5. Remove the unusual release cover from the cargo hook and in visible section of the inner cable for kinks or frays.



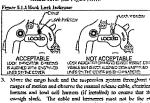


Broken or kinked conduit.

Chest the manual release cable regions per the following. With the carp hode in the cleenal and locked pealing, relate the release lever in the cleekwise discretion to reasons fire play (the free play is taken up that the cleek to be a supplementation of the cleek to be a supplementation of the cleek to be a supplementation of the cleek to be a supplementation of the cleek to be a supplementation of the cleek to be a supplementation of the cleek to be a supplementation of the cleek to be a supplementation of the cleek to be a supplementation of the cleek fitting as shown in Figure 5. 1d. The maximum amount of first play is initiated by the masses all cleek are considered to the cleek fitting as shown in Figure 5. 1d. The maximum amount of first play is initiated by the masses all cleek are considered to the cleek fitting as shown in Figure 5. 1d. The maximum amount of first play is initiated by the masses all cleeks are considered to the cleeks and the cleeks are considered to the cleeks and the cleeks are cleeked to be a supplementation of the cleeks and the cleeks are cleeked to be a supplementation of the cleeks are cleeked to be a supplementation of the cleeks are cleeked to be a supplementation of the cleeks are cleeked to be a supplementation of the cleeks are cleeked to be a supplementation of the cleeks are cleeked to be a supplementation of the cleeked to be a supplementation of the cleeked to be a supplementation of the cleeked to be a supplementation of the cleeked to be a supplementation of the cleeked to be a supplementation of the cleeked to be a supplementation of the cleeked to be a supplementation of the cleeked to be a supplementation of the cleeked to be a supplementation of the cleeked to be a supplementation of the cleeked to be a supplementation of the cleeked to be a supplementation of the cleeked to be a supplementation of the cleeked to be a supplementation of the cleeked to be a supplementation of the cleeked to be a supplementation of the cleeked to be a sup

5.1 Cargo Hook Suspension System Inspection evodesed 2. Activate the manual nelease system by pelling the T-hookle in the certifit. The region benefit stated reads. For the keepend caugh benefit to lead bean result instructionally re-latelt. For the heapenless eargo breek read the lead beam by hand after relates and verify than the leck indicator returns to be fully letted perificial reter Fagure 5.1.1).





- attly import the measural release cable for charage, paying close union to the floreble centack at the area of transitions to the cargo back! filling (twifer to Figure 5.1.2). Import for splicing of the cuter that and separation of the constant from the steel cad follow.

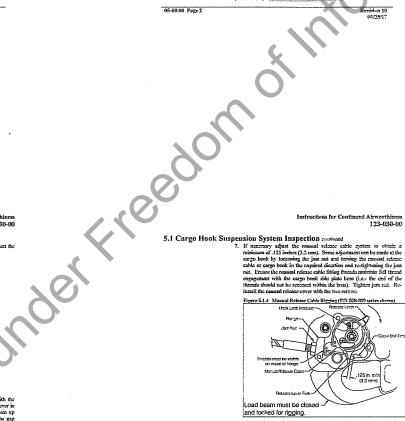


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Instructions for Continued Airworthiness 123-039-00

5.1 Cargo Hook Suspension System Inspection continued

7. If nucromy adjust the massaal release cebbs system to obtain a robinism of 125 inches (2.5 tem). Some adjustment can be noted at the cargo heet, by locating the jun not and farringly in the massaal release cable or cargo hook in the required discretian end re-big/bossing the jun not. Emuse the measured release cable fulfage fluends insurable full thread engagement with the cargo heads thick place beas (i.e., the crit of the threads should not be recensive which the brusy.) Tighten jun rut. Reinstall the massaal release erver with the two-person.



- Visitely import for pressure and security of fantamers and chapter
- Visually impect the antennal electrical vise horners for drawinge and security.
- Notes in the control of the control

- 12. Virsually impact the pin load cell strain reliaf and hardery for dramage ascentity (If lead weight potent is leastfulf).
  13. In the conclusive virsually impact for ascentity of the charmest release problems on the cytain instability of the remove hark release problem in the III.

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05-00-60 Page 4

# Section 0 Introduction

0.4 Scope

0.5 Purpose

purpose of this instructions for Condessed Airwardsisses (ICA) at its to provide the information necessary to service, inspect and thin the Cargo Hook Suspension Systems in an airwardsy condition.

0.6 Arrangement

internation.

Airmentia-cas Limitations (None apply to this Eyetem.)
imposition and Overhead Schoolele
Piecerds and Maritings
Equipment and Fermishings

0.7 Applicability

empetions for Confessed Airconfessess are applicable to Cargo-papacified System PN's 200-324-06, 200-325-06, 200-325-01 5-09, 200-325-09, 200-327-01, 200-327-01, and 200-327-11 and Houl: Electrical Release Kit FW 200-306-00 on the Releasem R44

0.9 Abbreviations

0.12 Precautions

The following definitions apply to safety labels used in this manual.



Indicates a hazard-aus situation which, if not avoided, will result in death or serious injury.





Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.





Used to address practices not related to personal injury.

0.19 Distribution of Instructions for Continued Airworthiness

Before performing ministrations contine that the Instructions Aircoordinates (ICA) in your passession is the most recountry revision levels of all manuals are posted on Ordenard

Onhard Systems offers a free antification sort product alorts and documentation updates. Systems products on the unb site, we will be service bulletin is issued, or if the documentation

Notices can be chosen to be received on an in-mod schedule via fax, email or both methods. Then cervice. Please visit the Ordourd Syn away or board and continuity for to get starte

Instructions for Continued Airworthiness 123-030-00

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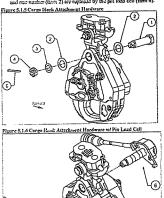
Revision 0

# 5.1 Cargo Hook Suspension System Inspection assistant

Every 1800 hours of external lond operations or 5 years, whichever comes first, truever the suspension assembly from the helicopter, and disassemble per the following instructions and inspect. Refer to figures for part identification. Refer to section 5.2 for the overhaul schedule for the cargo heak.

The transce the cargo hand; four the surpassion arranglely by removing coster pin (them 5), not (them 4), washers (tiens 2 and 3), and statch boil (them 1). If the lead weight system is fortable, the statch boil (them 1) and now areafor (doint 2) are replaced by the pin lead cell (tiem 6).

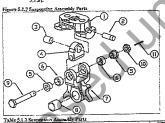
Figure S.1.5 Cargo Hant Attoches at Henderson.



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5.1 Cargo Hook Suspension System Inspection continued
Discounted the Despansion Assembly per the following (refer to Figure 5.1.7 for form con.). Press out Bushings and Pin using an arter press or involver.

- Control 102 features ago once pas, not need soit 12. 10, and 12. 10. Read to 12. Readout the Ceithard According from the Filter Black (1) by restaining the Fin (2). If Fix 291-108-01 Filter Black (as Figure 5.1.8 for identification) is installed, the Fin must be preuned out. Press out in the opposite direction of the INSTALL PIX empreced arms (coo Figure 0540site 5.1.81.



ITEM	PART NO.	DISCRIPTION	ĺδυ.
1	291-163-01	Nawa Black	
i 14	291-103-00	Pillaw Block	1*
2	291-536-00	Pin	
. "	291-107-00	Pin	1ª
3	291-109-00	Bushing	1
4	291-110-00	Gimbal	1
- 5	291-112-00	Bushin:	1 2
6	291-111-00	Bushing	2
7	291-113-00	Load Link	1 1
8	290-364-00	Bestérne	1
9	510-631-00	Bolt	] 1
10	510-634-00	Nut	1 1
11	510-021-00	Cetter Pin	- 1 1

11 \$10-081-00 Cotter Fin 
\* 1545-291-103-00 and 291-107-00 are superceded by FNS 291-103-00 and 291-107-00 are superceded by FNS 291-103-00 1 are 107-107-00 are superceded by FNS 291-103-00 Files Block most be used with FNS 291-103-00 Files Block most be used with FNS 291-103-00 Files Block most be used with FNS 291-103-00 Files Block most be used with

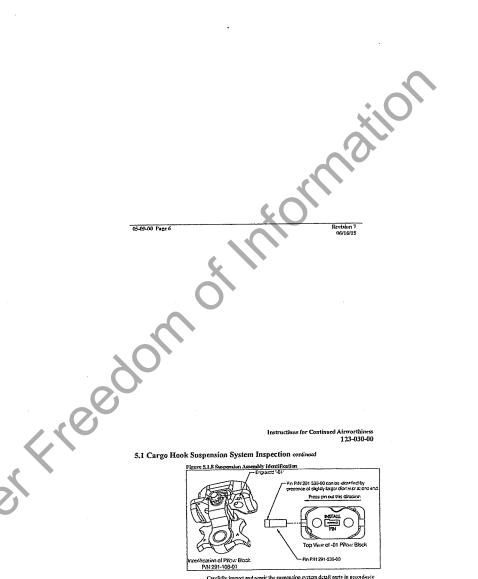
05-00-00 Page 7

# 5.1 Cargo Hook Suspension System Inspection continued

TEM	PART NO.	DESCRIPTION	I OT
1.	290-332-00	Attach Bolt	1
2*	510-183-20	Washer	1 2
3	510-174-00	Washr	1
4	510-170-00	lviot	1
5	510-178-00	Cotter Pin	1
6	210-301-01**	Pin Load Cell	1

\* If the load weight system is installed, the Attach Bolt and (1) item 2 washes are replaced by the Pin Load Cell as shown.

\*\* Supersedes P.N 210-225-01, these P.Ns are interchangeable in this



Carefully impact and repair the suspension system detail parts in accordance with the instructions in Table 5.1.3. Inspect the parts in a clean, well-lit

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Revision 11 03/08/18

# 5.1 Cargo Hook Suspension System Inspection Schedule continu

ortifinated	Damage Permitted without Repair		Maximum Damage which Causes	Table 5.1.3 Suspend	no System Inspection		
Hach Bolt,	Wear on outside diameter, dissacter	None.	Replacement  Wear on outside dismeter, dismeter less than	Compensed	Damage Permitted without Repair	Repair	Maximum Dantage which Causes Replacement
74 250-332-00 km 1, Figure 1.5) in Loud Cell	greater than A93".		or equal to .495". Craeks.	Flange Bushing PN 2014112-00 (Nem 1, Ferma	West on shoulder outside dismater, dissouter greater than A22".	None.	Replacement  Went on shoulder custode dissance, dismolection stem. 422".
Lend Cell 210-226-01 or 210-301-01 n I, Figure	Wear on outside diameter of pin, diameter greater than 495"	New	Wear on outside diameter, dissouter less than .495".  Cracks.	5.1.7)  Bushing PN 291-111-60 (item 6, Figure	Wear on irrele districtor, dismeter less than .445°.	Mone.	West on inside districtor, Corneter greats 445".
.6) an Hack	Dente gouges, nicks, and sentiches	Bland at 20:1 ratio, length to depth, to	Dents, grieges, and serotches greater than .030"	5.1.7) Lond Link	Darks, gueges, nicks, and scratches	Bland at 20:1 ratio, length to dopth, to	Davis, gruges, and sensithes greater than
291-108-01 291-108-00	less than .010" deep.	provide sessouth transitions.	desp.	P.N 291-113-00 (item 7, France	Dants, guega, nicks, and scratches less than .010° deep.	provide sessoth transitions.	deep.
n I, Figure 7)		Part is 15-5 sminders semil, up hearing fivish is required.	Cracks.	5.1.71		Part is 15-5 emissions steel, us touch up finish is recylinal.	Cmelo.
291-107-00 291-536-00 u 2, Figure	Wear on matride diameter, dissenter greater than 300°.	None.	Wear on outside dismater, dismater less than or equal to 300°.	Bushing PN 290-364-00 (fam 8, Figure 5.1.7)	Wear on inside dissector, diameter less than .520".	Neme,	Wear on invide dissetter, dissetter great.
.7) shal Bushing	Wear on inside diameter, diameter	Neste.	Wear on inside diseaster, diseaster greater than	Threaded fasteners	N-ma.	None.	It is recommended to replace all threaded factories at created.
291-169-00 m 3, Figure 7)	less than or equal to .328".		.328".				
.7) obal : 201-110-00	Dents, gauges, nicks, and seratches less than .010" deep.	Blend at 20:1 ratio, length to depth, to provide smooth transitions.	Dents, geoges, and serutches greater than .020" deep.				
m 4, Figure .7)		Part is 15-5 stainless steel, no touch up finish is required.	Cracks.				
islan 7			05-00-00 Page 9	05-00-00 Page 10			Revision 5
					o's 's	VIO,	
			·	0,00			
	Ok Overhaul Schedule Overhaul the cargo hock in Onboard Systems for the I cargo hook and guidance to Time Between Overhaul (T) 5 years, whichever comes fir Heurs of external load a transpraced to the (I) anything primary cargo level, poladic primary cargo level, poladic	ICE	96.	3e90	in	structions for Contineed Airworthine 123-038-6	
	Ok Overhaul Schedule Overhaul the cargo hock in Onboard Systems for the I cargo hook and guidance to Time Between Overhaul (T) 5 years, whichever comes fir Heurs of external load a transpraced to the (I) anything primary cargo level, poladic primary cargo level, poladic	123-030-0  accordance with the guidelines below. Contastest revision of everbast leatmentines for the locate authorized overhant facilities.  30): 1660 facure of external load operations of a second load operations of a second load operations of a second load operations of a second load operations of a second load operations should be load of the load of the load operations should be load of the load operations operations operat	96.	3690	In This page Secunitarially to	123-63 <i>%-6</i>	
	Ok Overhaul Schedule Overhaul the cargo hock in Onboard Systems for the I cargo hook and guidance to Time Between Overhaul (T) 5 years, whichever comes fir Heurs of external load a transpraced to the (I) anything primary cargo level, poladic primary cargo level, poladic	123-030-0 scoontinues with the guidelines below. Containest revision of everhant instinctions for the footest authorized overhant institute.  303: 100% insure of external load operations of the containest of th	96.	3690		123-63 <i>%-6</i>	
	Ok Overhaul Schedule Overhaul the cargo hock in Onboard Systems for the I cargo hook and guidance to Time Between Overhaul (T) 5 years, whichever comes fir Heurs of external load a transpraced to the (I) anything primary cargo level, poladic primary cargo level, poladic	123-030-0  accordance with the guidelines below. Contacted trivialen of everheat leatherthese for the locate authorized overheat facilities.  3(3): 1660 treats of external lead operations of the locate authorized by the locate authorized to the research authorized to the research authorized to the research authorized to the research authorized to the locate authorized	96.	3690		123-63 <i>%-6</i>	

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06/16/15	



5.1 Cargo Hook Suspension System Inspection Schedule combined

# Section 11

# Placards and Markings

11.1 Placards

As applicable the 200-324-09, 200-325-09, 200-325-01, 200-326-09, 201-327-09, 200-327-01, 300-327-19, 200-327-11, and 200-396-00 bits respire that the placemes shown in Table 11.1 be installed.

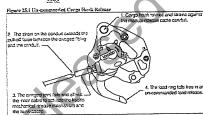
able II.1 Cargo Hook Suspension System Piacards Placard part number	Location
2.3: 215-110-00	Measured adjacent to the cyclic release exists in clear view of the piles.
CARGO RELEASE	Measured adjacent to the left seat release insists in clear view of the pilot (if optional tell seat release switch is installed).
	Monated adjacent to the machanical release T handle in clear view of the pilot.
PULL	Monoted adjacent to the mechanical release in clear view of the pilot.
R\$1215-112-09 CARGO	Musted adjacent to the cargo hook circuits to clear view of the pilot.
Frit 215-119-00	Monated on the belly of the aircraft adjacent t the cargo brook attachment point in clear vice
EXTERNAL LONDINAL - STOTES 303 KC2	of the ground support personnel.
PER 215-115-60  IGRIANIENT LID DIA DEPARTUAL  IAPPRODUCE EL DISEDURE DI LEDITE SI,  CLATARIO CENTRACES DI LEDITE SI,  PLANCIENTO CONTRACES DI LEDITE SI,  CLATARIO CONTRACES DI LEDITE SI,  CLATARIO CONTRACES DI LEDITE SI,  CLATARIO CONTRACES DI LEDITE SI,  CLATARIO CONTRACES DI LEDITE SI,  CLATARIO CONTRACES DI LEDITE SI  CONTRACES DI LEDITE SI  DI LIDITARIO CONTRACES DI LEDITE SI  DI LIDITARIO CONTRACES DI LIDITARIO DI  DI LIDITARIO CONTRACES DI LIDITARIO DI  DI LIDITARIO CONTRACES DI LIDITARIO DI  DI LIDITARIO CONTRACES DI LIDITARIO DI  DI LIDITARIO CONTRACES DI LIDITARIO DI  DI LIDITARIO CONTRACES DI LIDITARIO DI  DI LIDITARIO CONTRACES DI LIDITARIO DI  DI LIDITARIO DI LIDITARIO DI  LIDITARIO DI LIDITARIO DI  LIDITARIO DI LIDITARIO DI  LIDITARIO DI LIDITARIO DI  LIDITARIO D	Mesonal on the instrument panel in clear vist of the pilet.

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# Section 25 **Equipment and Furnishings**





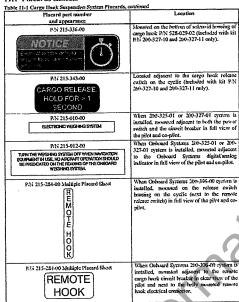
25.1 Cargo Hook Con

	20,000 12 2-4 July 041 144
Table 2	5.1 Cargo Hank Consect
Pin	Function
A	Ground
3	Pusitive

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# 11.1 Placards continued



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Instructions for Continued Airworthiness 123-030-00

encian Systems are converted of:

- no Cargo Hods Surpensian Systems are comprised of: The cargo back, skilch is newnoted to the helly of the belicoper through a glinkaled suspension talkings an existing hard print. The 280-32400 kH features the 14V looppord cargo back (RN 5280/1046), the 220-325-00 this features the 24V looppord cargo back (RN 5280/1046), the 220-325-00 this features the 24V looppord cargo back (RN 5284/2010-0), and the 200-327-06 features the 24V looppord cargo back (RN 5284/2010), and the
- 25 · 20-327-00 (enteres the 220 keep-ortes sarge) next (NCS 124-24-24). The 20-325-0 and 20-327-0 (entered her 20-24-24) in the 20-325-0 and 20-327-0 entered her sep-ortes) county they seem to the 20-325-0 and 20-327-0 entered respectively county they include a lot only sight postam. The lot of ending the prior, it in misster a give lost cell at the eargy back, lead indicator in the codquit, and the interconnecting distributed with homes.
  - interconnecting electrical were borness.

    Sit Bi-Si 263-271-0 and 203-271-11 include Cargo Back RN 528-02902 with Suedice releane as part of its electrical releane system. Swerfur 
    releane is a safely enhancement utilist requires the releane exist in the 
    half for apprecimately 1's second. This products against inadvertent load 
    release due to a neichemal contact with the release resists or missalem 
    asterfane of the release resists who are morber to inarrelease.
  - areasement of the resistance resistant watern amounter is unknowled. An obseriated release cyatem that promisions a means for releasing a load by piles estuation of a prache-betten crusich installated on the cust of the expelie grip ascendely. The tiles also include an originarial particulation existed that in mentaled on the conformal side of the co-piler's seas. The electrical reason expelien is possered from the bus through a 10 pmg circuit levestart to a relay in the center transel. The oxidation except of the relay and exception that the Dr selectrical in the Carpy Blook, opuring the book and releasing the cargo. A schematic for the electrical system is shown in Figure 25.3.
  - reasonal release system, which provides a means of releasing a corgo ok lead in the event of an electrical release system failure. A T-handle smited to the cyclic control cover actuales it.
  - General persuast may also release a lead by the actuation of a lever located on the side of the cargo break.

optiminal remote brock electrical release kit (P.N. 200-396-09) is available installation under this STC. This kit consists of the foxed electrical richans for operation of a remote cargo brock. It installed an electrical sease satisfs on the expelie, electrif breaker, relay, connector on the belly, and ancerconnecting wiring.

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# 25.5 Component Weights

The weight and eg of the systems are listed in Table 25.2.

Kit P/N	Weight lbs (kgs)	STA io (mm)	BL in (mm)
200-324-00, 200-325-00, 200-326- 00, 200-327-90, 200-327-10	53 (2.40)	93.9 (2385)	-1.1 (-194)
200-325-01, 200-327-01, 200-327-	6.8 (3.10)	93.9 (2385)	<b>-1.1 (-104)</b>
200-324-00, 200-325-00, 200-326- 00, 200-327-00 and 200-327-10 with cargo back and suspension removal (see section 25.16 for removal instructions).	1.5 (0.68)	63.3 (1469)	-4.1 (-104)
2:0-394-00 (ortional accessory kit)	1.1 (0.5)	93(1698)	0.0

25.12 Storage Instructions

Refer to the eargo look CMM for storage instructions for the eargo hook.
Clean the exterior nespectation components thereughly of excess diff and greates with a rap 8-bit or policing. For the unit is no hort-cashable periods,
If the unit is to be stored for long periods in a replead climate it though be packed in a reliable manner to unit local coefficious. Refer to MIL-PEP.
21199 and MIL-STD-2073-1 for additional guidance.

Package the unit in a suitable filserboard bost and curbion the unit to prevent skilling. Seal the liberboard bost with tope and mark the bost with the constants and date of packaging.

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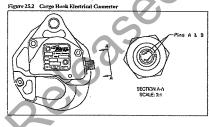
# 25.15 Troubleshooting confinued

Lable 25.3 Troubleshoatir	ng	
MALFUNCTION	PROBABLE CAUSE	CORRECTIVE ACTION
Cargo hock muscul release cable pull-off force exceeds 8 lbs (35.6 N) at the book.	Friction in internal purchassions.	Remove and replace cargo back (see Section 25.16 and 25.17) or repair per CMM 122-001-00 or 123-017-00.
Circuit breaker opens when eargo book is energized.	Short in the system, facily wiring, circuit breaker or solemid.	Check for shorts to general sleen length of wire learness. Check polessial resistance (see rose 1), repair or replace defective parts.
Lord Weigh indicator does not light up.	Faulty wiring or circuit breaker.	Check the circuit breaker and wiring (see Yoke 2). If this dome it help, reasons and replace indicator per vections 25,16 and 25,17.
The displayed lead on the Lead Weigh Isolanter is incorrect.	Incorrect calibration code.	Emany the correct calibration code has been catened.
Indicator displayed lead is not stable.	Dampusing level is too small.	A Speat the dampening level to a larger sunder.
Indicator displayed load takes too long to change the reading when the lead is changed.	Omparing level is too large.	Adjust the dampening level to a smaller mader,

# Table 25.3 Notes:

# 1. Checking resistance at nins A and B.

Check for 3.0 to 4.0 slens (cargo heck part numbers \$23-010-04 and \$23-029-(e)) or 1.2 to 1.6 share (cargo heck part numbers \$23-010-05 and \$23-029-01) between pins A and B of electrical connector located on the cargo heak (see below).

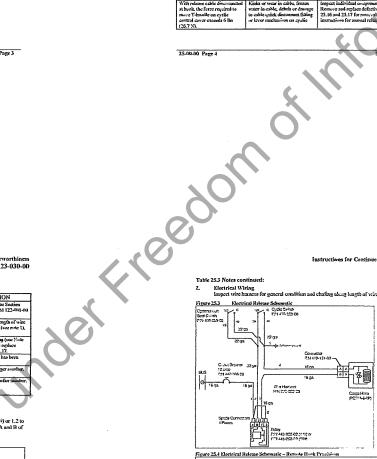


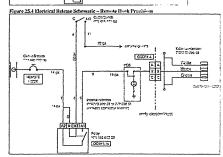
25-00-00 Page 5 Revision 10 03/28/17

# 25.15 Trouble Shooting

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I mile 2023 I roubleshowing		
MALFUNCTION	PROBABLE CAUSE	CORRECTIVE ACTION
Cargo book does not operate clustrically or manually.	Defective internal reservations.	Remove and repiste cargo book (see sections 25.16 and 25.17) or repeir per CMS4 122-091-01 or 122-017-90.
Cargo hook (except FN 523- 029-03) then not operate electrically, massed cable release operates assembly.	Open electrical circuit, faulty vinings circuit breaker, reviets or volument.	Using modification, check the resistance between plast A and B of decided consector/poor role to below). If open indication is obtained, remove and replace cargo heaft (see sections 25.16 and 25.17). If emistic is family, remove and replace per Sections 25.16 and 25.17.
Cargo basis 173: 523-029-03 (includes district time delay circuit) does not operate circuit does not operate classificatly, massed release speciales soverably.	Releases writch not held down long crowds.  Open chartieral ainmit, thenty wiring, circuit forester, switch or submich.	Hold the relation switch for a longer failer. The friend educy describe interspersion and exclusive facility of preparationally by more after which free the beats relationally will exclusive expressionally. If the relation smith this said hold down long on cough the samp hold "a whole of which are analysis. Once the substantial could for present end shorts by under a stable-mater on the hold, consumers.  When the relation resided is or more CDV shares?
		vehinge should be present on the commuter year. Check the aircraft connector polarity. The time delay circuit is polarity sensitive and presented agricust reverse polarity. *207' absolute be on pin B and goossed on pin A.
		Check the power pins on the brook death. A make make that to the Kilon-base range should read be three. 24Kehns. Done otherwise the traces a state of the three that the three that the three that the three
Cargo heek operates electrically, but not recessily.	Defective massest release cable, Defective massest release system,	Inspect imment release exhibit and exhibit commentum to Carpo Honk. Resease and replace early book (not Sections 25.16 and 25.17) or opini per ChOs 122-011-10 or 122-017-00.
Lood beam fails to re-latch after being reset.	Defective latch mechanism.	Remove and replace cargo book (not exclined 25.16 and 25.17) or repair per CN26 122 003-00 or 122-017-00.
Force required to release bank with T-handle on cyclic course) zover exceeds 14 lbs (62.3 N).	High cable friction or friction in internal machinism of back	Remove cable from brok and check cable and brok independently to determine cause. Remove and replace defective compounts per 25, 16 and 25, 17.
With release cable disconnected at hard, the ferror repaired to more T-handle on cyrlic control cay or exceeds 6 lbs (26.7 N).	Kinks or wear in cable, freeze water in cable, debets or dassage to cable quick discrement fixing or lever mechanism on cyclic	Import individual components to include gradum. Remove and replace defeating parts for a Sections 25.16 and 25.17 for removed and replace insurantees for musual release cable).





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# 25.16 Component Removal

- Cargo Hook and Pin Load Cell Assembly Removal

  1. Distanced the districted connector from the cargo hook.

  2. Reserve the court pin Pil 10-178-00 from the Attach But Pil 20-313-60 or Pin Load Cell Assembly (Pil 210-226-01 or Pil 210-301-01) if lead weight grown is installed.
  - 61) if said weight (shirth is installed. Remove the castellated not F/N \$10-170-00 from the Attach Bell (or Fix Load Cell Assumbly). Permove attach holt (or Pin Load Cell Assumbly) and all washers.

  - Remove mental release cover by removing two series a. Hensive the mental release only from the cargo book by unhooking the cable ball end from the first fifting on the mental release leave and lossessing the jum sort and underesting it by retaining the cargo back clovel fit.
  - 7. Renove curso hook from supericion system.

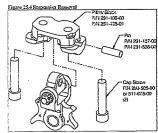
# Suspension Removal

- noval
  To remove the Surparation Anomaly;

  1. Remove the safety wire from the two Cap Survey and remove the Cap
  Survey that recover the Pillow Book to the aircraft hard point.

  2. Symante to his perposion Accountly from the Pillow Block by removing
  the Fig. from within the Pillow Block. The configuration with Pillow
  Block Block State Block Block. The configuration with Pillow
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  Block Block State Block Block Block Pillow
  Block Block Block
  Fig. Block.

  Fig. Block.



Revision 06/16/15

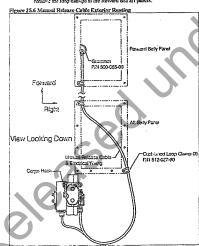
25-00-00 Page 7

# ed Airworthiaess 123-030-00

25.16 Component Rentoval continued

Manual Release Cable Rentoval continued

3. Pull the orbit down theraph the cyclic control cover and through the grounded in the forward peach in the bottom skin (ref Figure 25.6) and receive the June classes at the fereward and all peacls.



- At the eargo book remove the screens that secure the measure release cover to the book and unbook the cable ball and form the firsk litting.
- 5. Loosen the jam and and anticoad the release cable from the book.

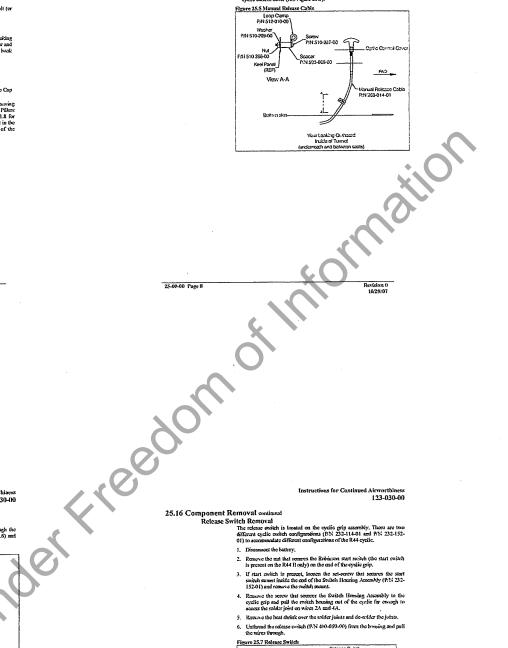
# 25.16 Component Removal continued

Manual Release Cable Removal

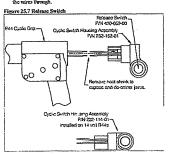
1. In the cockpit outbread the T-handle and not from the end of the release
cable located on the cyclic control over (ref. Figure 2.5.5).

cable located on the cyclic control cover (ref. Figure 25.5).

2. Researce the local classificated on the turned local moderneath the cyclic cantrol cover (ref. Figure 25.5).



- Unthread the release exists (P.N 40)-059-00) from the brening and pull the tures through.



25-09-00 Page 10

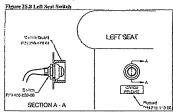
Revision 1 02/03/09

25-00-00 Page 9

# 25.16 Component Removal coatinued

Left Seat Release Switch Removal
This is an optional installation; thus it may not be present on all belieopters
with these cargo back kits.

- 1. Discussed the hattery.
- Hisge the next textom forward and reach reader the sext to usational the next from that back of the protein.
- 3. Pull the switch out far cassigh to de-solder the wires from the back.



Remote Hook Release Switch Removal

The remote hook ratioh is included with the optional Ramote Hook
Esterical Release Mit. The remote book ratioh is located within a housing
to the left of the pibu's cyclic grip control housing.

- 1. Discussed the battery.
- 2. Remarks the cyclic control cover to access the wiring within the beasing
- Locate the two wires from the remote book gwirds, strip the heat shrink off, and de-solder the solder joints with the internal hurrers.
- Remove the silicene from mused the back of the resists and pull the wires through until they extend straight out the back of the housing.
- Use a pair of needle-mose pliers to grab the back of the switch and tackward it from the humaing.

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# Instructions for Continued Airworthiness 123-030-00

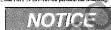
# 25.17 Component Re-installation

- Suspension Re-installation

  o Apply scalant to the side of the Stapension Assembly (PN 232-292-01) Fillow Block which is to be installed against the belty skin.
  - Orient the Surpension Assembly as shown in Figure 25.10 and secure it to the helicopter with the two PN 290-505-00 or 511-076-00 cap secure.



- o Torque scrows to 26 th-lbs.
- Safety-wire the cap screws to the cars on the pillow black.
- \*\* If installing Suspension Amenably P.N 232-292-00, Pellow Block P.N 291-108-00, and Pin P.N 291-107-00 perform the following.



- Greene the Pin (PN 201-107-00) with Mebilgrense 28 or equivalent before assembly.
- betteral assembly.

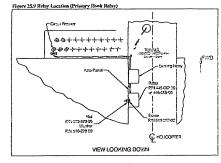
  Partially intent the Plin ious the Pillow Block.

  Partially intent the Plin ious the Pillow Block.

  Hold the Surpeasion Assembly (PA 232-292-09) in the existation as shown in Figure 2.3.11, position in which the lots of the Pillow Block, and the pillow Block and the Pillow Block of the Pillow Block of the Pillow Block.

# 25.16 Component Removal continued

Relay Removal
The relay [PN 445-692-80 (14 volt) or PN 445-693-80 (28 volt)) is because
on the feed panel in the trained hardened has a reds and below the filter (see
below). To remove the relay;
1. Directment the balancy.
2. Source of the 4 space commences at the Aday.
3. Remove the 4 space commences at the Aday.
4. The remove the form and a secure and vonders.



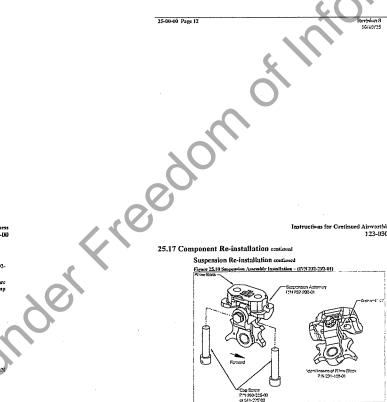
Remote Hook Relay Removal
The relay (PN 445-013-99) for the remain book is to
bracket insuls the aft and of the off inspection justed of
1. Remove the aff inspection panel on the belly.

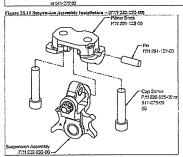
- If treatment to facilitate reasonal of the raisy remove the creatment bracket from the belly by reasoning the three cream and lower the contactor bracket as much as its enumerical wires allow.
- evaluate us train as its connected wires allow.

  Remarks the two 4-40 pairs receiving the relay to the study of the relay socket and unplug the relay.

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Instructions for Continued Airworthiness 123-030-00





# 25.17 Component Re-installation anxious

- mponent Rec-installation

  Attach the Carpo Host to the expension system by installing the Attach

  Attach the Carpo Host to the expension system by installing the Attach

  Belt FN 20-31/2506 and outsider FN 10-183-00 as illustrated in

  Fluor 25.12. If the Na Lead Cell is installed refer to Figure 25.13.

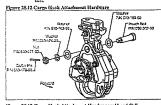
  Install suches PN 510-183-00, sucher FN 10-10-174-00, and mt FN

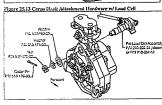
  510-176-00 once but out for pix load cell cody.

  J. Tiphon and on expensions describe hold or pix load cell suff first seated,
  finger fight only. Back off not to pressors exactlesticn, if noded, when
  allowing worker pix for installation. Install and source out/or pix FN

  500-176-40.







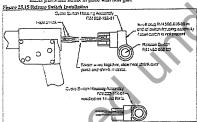
Revision 7 06/16/15

# Instructions for Continued Airworthiness 123-030-00

# 25.17 Component Re-installation opationed

- Release Switch Re-installation

  1. Solder 22 ps. M22757 wices only early embely transieal, throad makes
  the mental branches, and fleet wires through the resides brunder, as2. Side 1" long piece of bent shrink over each wire and solder news wires
  2. Let 21 be the cause up decough cyclic. Pacificm heat shrink over
  eacher jehous and shrink in piaco with heat gen.



25.17 Component Re-installation autimed

- Mannal Release Cubbe Re-installation
  1. Roote the cable forward through the loop clamps and greatenet (ref Figure 25.6).
  - Reme the cable through the loop clamp on the last panel and to the hole in the cyclic coast of cover and secure with nut. Install T-handle (ref. Figure 25.5).
  - 3. Remove the mount release cover from the cargo book.
  - Serve the manual release orbit into the cargo book.

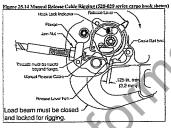
    Serve the manual release orbit into the cargo book by helding the cable and turning the cargo book or vice versa.
  - 5. Tempurarily install the eargo book onto the suspension



- Include the release lever in the clockwise direction to remove free play and head for from the release lever in the clockwise direction to remove free play and head file from lept is frommend when the book hest indicated (\$28-\$29\$ series corpo back only) begins to newer). This is also madify fall as the lever rotates relatively easily for several degrees as the free play for traveved. Measurem the pape between the release lever first and the callo ball end with the T-handle in the nockeji in the mer-release perision. The gap should measure a mixturem of 1.25 fee belown.

  If the gap does not measure as least 1.25°, make adjustments at the cargo hosely by remarking the cargo hosels from the required direction.

- When extract setting is achieved, tighten the jam and securely against the cargo hook and re-install the massal release cover.



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Instructions for Continued Airworthiness 123-030-00

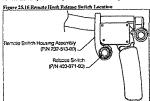
# el Filesolulion of 25.17 Component Re-installation continued Left Seat Release Switch Re-installation The left seat installation is an explorat installation.

- Ford elsetrical harress vires through not (provided with switch FXS 4:9:059-09), up through hole in side of left seat, and through switch guard (PXS 290-478-01).
- Solder values onto switch (refer to Figure 25.3 for electrical achievants).
- 3. Insert maitch through switch goard and into hole in ride of scat.
- 4. Held the craitch and thread on the nut to separe.

- Remote Hook Release Switch Re-installation

  1. The remote heek release easiest (neededed with the optimal kit 250-396-00) is located on the piles's cyclic, to the left of the control grip.
  - Thread the release excitch into the busing, use a pair of peatle was pliers on the backside of the switch to thread it all the way in.
  - Salder two 5" long 22 ga. M22759 wines to the terminals on the back of the switch, slale 1" long pieces of 118" heat shrink over each wire and shrink in place over the robber joints. Food the wining skrough the hale in the artich hearing. Use RTV silicense in secure the wires at the hole to prevent chaffing.
  - Classe the release match bearing appendix uses the cyclic with the two screws (P23 511-011-00) and torque to 12-15 in-lbs.

  - Ransone the cyclic canst of grip cover to access the wiring.
     Food the wiring from the cartists through the hole in the cyclic braving, skile a piece of 1/8" heat shink over each wire and swider to the wires from the internal hances (rofe to wiring dispars) in Figure 25.4). Slide heat strink over solder joints and shrink into place.
  - 7. Re-install exelic cover (refer to Robinson Helicopter does



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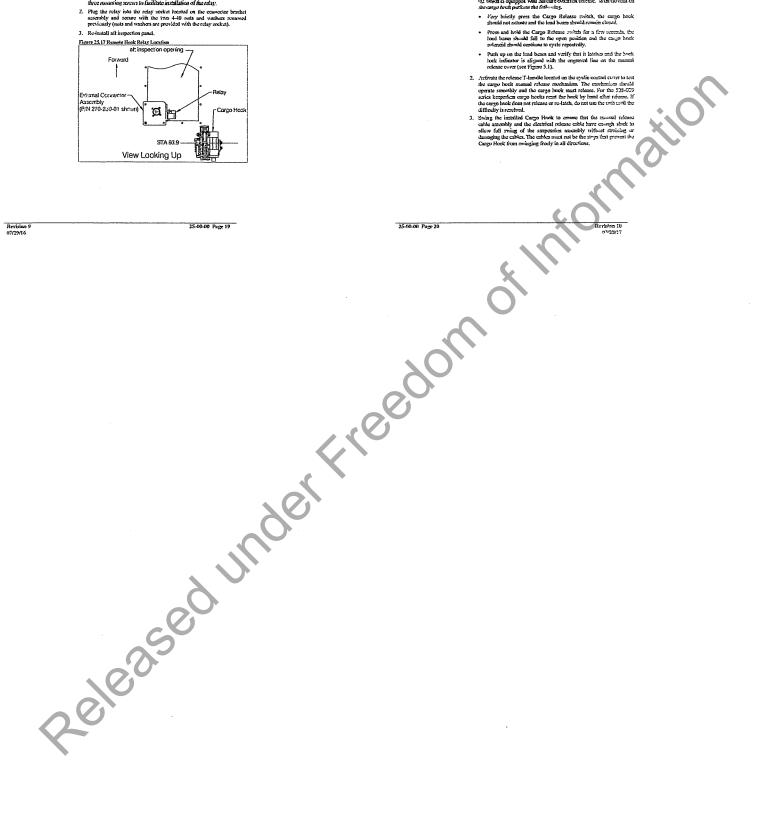
# 25.17 Component Re-installation continued

- Relay Re-installation
  1. Securo relay to keel panel in humed with two screws (P.N 510-277-00), washers (P.N 510-273-00), and ratis (P.N 510-279-00).
  - Connect the four spade connectors to the relay. Refer to electrical schematic (Figure 25.3) for pin out information.

Remote Hook Relay Re-installation
The remote book relay (TN 445-013-07) is installed on the Connector Bracket Assembly (Pri 2012-20-00 or Pri 270-230-01) lecated at the affirity corner of the all impection posed opining on the belly of the Indicapter (see Figure 25.17 below). Install the relay per the following:

\*P/N 270-230-01 supersedes P/N 270-230-00 and provides with Robinson panel P/N C794-3 with air inlet.

- If necessary reserve the Connector Bracket Assembly by re-three mounting screens to furtilistic installation of the relay.
- Plug the relay into the relay socket feethed on the commetter bracket assembly and secure with the two 4-40 rats and washers removed previously (nots and washers are provided with the relay socket).
- 3. Re-install all inspection panel.



25.18 General Procedural Instructions-Testing

After re-installation of the cargo bank or manual release cable, perform the

Activate the electrical system and press the Corgo Release batters to ensure the eargo break cleatrical release system is operating currently. The eargo back toxist release. Reset the book by hand other release.



The following instructions are applicable to cargo book PN 523-027-© which is equipped with Surefire decirical release. With no lead on the eargo book parties the following.

- Very briefly press the Cargo Release rwitch, the eargo heek sheald not actuate and the lead button shrank remain clinted.
- Press and hold the Cargo Reference resists for a few screenist, the load beam should fall to the open position and the cargo back solenoid should continue to cycle repeateilly.

# PLEASE CHECK WEB SITE AT WWW.ONBOARDSYSTEMS.COM FOR THE LATEST REVISION OF THIS MANUAL

# FAA APPROVED ROTORCRAFT FLIGHT MANUAL SUPPLEMENT

STC SR01808SE

Onboard Systems
Cargo Hook Suspension System
with Keeperless Cargo Hook

Robinson R44, R44 II

R/N	S/N
FAA Approved	S 22  Manager, Scattle Areast Certification Office Federal Aviation Administration Renton, Washington

Date: MAY 19 2017

GNBDARD	RFM Supplement	Document Number 121-048-00		
SYSTEMS	Cargo Hook	Page 1 of 24	Rev. 5	

# Record of Revisions

	Rev.	Date	Page(s)	Reason for Revision
	0	Jan. 07, 2008	All	Initial Release.
	1	Feb. 25, 2009	All	Added Load Weigh System and accompanying instructions.
	2	July 1, 2009	All	Added figure for manual release rigging check, revised figure for hook lock indicator for clarification.
	3	March 29, 2016	All	Added remote hook electrical release system, re-formatted document, updated limitations section.
	4	Oct. 24, 2016	All	Added "Warning" regarding long line recoil, updated pre-flight check for the C-39 load indicator, added "NOTICE" to note that the Remote Hook is not included with the kits.
	5	May 19, 2017	All	Added cargo hook (P/N 528-029-02) with Surefire Release and associated instructions.

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# **SECTION 1** GENERAL

# INTRODUCTION

This supplement must be attached to the appropriate FAA approved Rotorcraft Flight Manual (RFM) when an Onboard Systems 200-326-00, 200-327-00, 200-327-01, 200-327-10, or 200-327-11 Cargo Hook Suspension Kit and/or 200-396-00 Remote Hook Release Kit is installed in accordance with Supplemental Type Certificate (STC) NO. SR01808SE, The information contained herein supplements or supersedes the basic manual only in those areas listed herein. For limitations, procedures and performance information not contained in this supplement, consult the basic RFM.

# SYSTEM DESCRIPTION

The cargo hook suspension kit provides a means to transport jettisonable external loads. The kit includes the cargo hook, a structural linkage assembly (referred to as suspension assembly) which connects the cargo hook to the existing hard point on the belly of the helicopter and the cargo hook's primary and backup quick release systems for jettisoning of the external load.

In addition to the basic cargo hook suspension kits (P/N 200-326-00 (for 14 volt aircraft) and P/N 200-327-00 (for 28 volt aircraft)) a second kit configuration (P/N 200-327-01) for 28 volt aircraft includes a load weigh system. The load weigh system includes a load cell above the cargo hook which serves as part of the structural linkage, a load weigh indicator and an internal electrical wiring harness. This system provides the pilot with an indication of the weight of the external load being carried.

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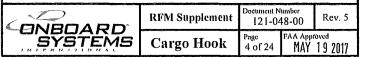
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# SYSTEM DESCRIPTION continued

Kit P/Ns 200-327-10 and 200-327-11 are the same as 200-327-00 and 200-327-01 respectively except they include a cargo hook (P/N 528-029-02) with a delay circuit to help protect against inadvertent load release as a result of accidental contact with the Cargo Release switch or inadvertently pressing this switch. This delay circuit requires that the release switch be held for approximately 1/2 second in order to release the cargo hook load. This feature is referred to as Surefire Release.

Either of the basic kit configurations may be complemented by a remote hook release kit (P/N 200-396-00). The remote hook release kit provides the fixed electrical provisions including a release switch on the cyclic grip for the release of a load from a remote cargo hook at the end of a long line.

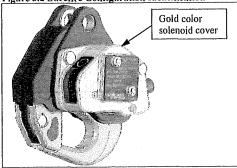


# PRE-FLIGHT CHECK continued



By design (to help protect against inadvertent load release) cargo hook P/N 528-029-02 requires that the switch on the cyclic be held for at least 1/2 second to release the load.

Figure 3.2 Surefire Configuration Identification



9. If the optional co-pilot switch is installed on the outboard side of the co-pilot's seat (ref. Figure 3.7) repeat the previous step except use this switch.



The co-pilot switch is an optional installation which is intended primarily for external load training. If this switch is installed but rarely used, take precautions to protect the switch from being inadvertently contacted.



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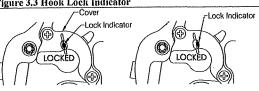
# PRE-FLIGHT CHECK continued

10. Cycle the manual release mechanism to ensure proper operation. Pull up on the manual release T-handle located between the pilot and co-pilot seat. The cargo hook load beam must open. Return the cargo hook load beam to the locked position by manually pushing up on the load beam. The load beam should snap shut. Verify that the hook lock indicator on the side of the hook returns to the fully locked position.



In the fully locked position the hook lock indicator must align with the lines on the manual release cover (see Figure 3.3).

Figure 3.3 Hook Lock Indicator



**ACCEPTABLE** LOCK INDICATOR DIAMOND IS ALIGNED WITH ENGRAVED LINES ON THE COVER.

NOT ACCEPTABLE LOCK INDICATOR DIAMOND IS NOT VISIBLE OR IS VISIBLE BUT IS NOT ALIGNED WITH ENGRAVED LINES ON THE COVER (AS SHOWN ABOVE).

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Cargo Hook

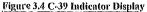
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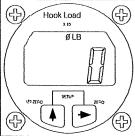
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# PRE-FLIGHT CHECK continued

If the Load Weigh System is installed, perform the following additional procedure.

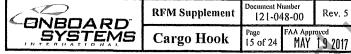
 Power on the C-39 Load Indicator. After a brief selfdiagnostic routine is complete the indicator display should indicate "0" as shown below (with no load on the cargo hook).







Refer to Owner's Manual 120-039-00 for setup instructions including changing the units, changing the calibration code, zeroing the display, changing the dampening level, etc.



# PRE-FLIGHT CHECK continued

If the Remote Hook Electrical Release Kit is installed and the external load operation involves a remote hook, perform the following additional procedure.

 Connect the electrical cable from the remote hook to the connector on the electrical cable suspended from the belly mounted connector. Press the "REMOTE HOOK" release switch on the cyclic and verify that the remote hook releases.

# NOTICE

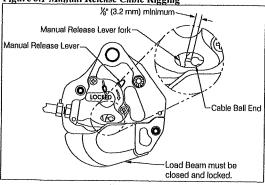
The remote hook is NOT included with the remote hook electrical release kit, Consult the remote hook manual for its operation instructions.

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# PRE-FLIGHT CHECK continued

7. Check the manual release cable rigging through the window in the cargo hook manual release cover. Rotate the manual release lever clockwise to remove the free play (the free play is taken up when the hook lock indicator begins to move, this is also readily felt as the lever rotates relatively easily for several degrees as the free play is taken up) and hold it in this position while checking the gap between the release lever fork and the cable ball end as shown below. Visually check that there is approximately a minimum gap of 1/8" (3.2 mm) as shown in Figure 3.1.

Figure 3.1 Manual Release Cable Rigging





The load beam must be closed and locked when checking the free play in the release cable.



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# PRE-FLIGHT CHECK continued

8. Cycle the electrical release system to ensure proper operation. The following instructions are applicable to cargo hook P/N 528-029-00.



If Cargo Hook with Surefire Release (P/N 528-029-02) is installed, the electrical release includes a ½ second time delay. See specific procedures in this step for this cargo hook model.

- Press the CARGO RELEASE switch on the cyclic (ref. Figure 3.6) and the cargo hook should open with no load on it.
- Return the cargo hook to the closed and locked position by manually pushing up on the load beam. The load beam should snap shut.

The following instructions are applicable to the cargo hook P/N 528-029-02. This cargo hook can also be identified by its gold color solenoid cover (see Figure 3.2).

- Very briefly press the Cargo Release switch, the cargo hook should not actuate and the load beam should remain closed.
- Press and <u>hold</u> the Cargo Release switch for several seconds, the load beam should fall to the open position and the cargo hook solenoid should continue to cycle repeatedly.
- Return the cargo hook to the closed and locked position by manually pushing up on the load beam. The load beam should snap shut.



# PLACARDS continued



Adhered adjacent to the cockpit cargo release switch if optional Cargo Hook with Surefire Release P/N 528-029-02 is installed.



Adhered on the solenoid housing of optional cargo hook P/N 528-029-02 which is equipped with Surefire Release.

# **ELECTRONIC WEIGHING SYSTEM**

DECAL P/N 215-010-00

When 200-327-01 or 200-327-11 kit is installed, mounted adjacent to both the power switch and the circuit breaker in view of the pilot and co-pilot.

TURN THE WEIGHING SYSTEM OFF WHEN NAVIGATION EQUIPMENT IN USE. NO AIRCRAFT OPERATION SHOULD BE PREDICATED ON THE READING OF THE ONBOARD WEIGHING SYSTEM.

(DECAL P/N 215-012-00)

When 200-327-01 or 200-327-11 kit is installed, mounted adjacent to the load weigh indicator in view of the pilot and copilot.



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Cargo Hook

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# SECTION 3 NORMAL PROCEDURES

# STATIC DISCHARGE

Prior to attaching an external load, instruct the ground crew to ensure that the helicopter has been electrically grounded to discharge static electricity. If possible, maintain ground contact until hook up is completed.

# PRE-FLIGHT CHECK

Before a flight involving external load operations perform the following procedures.

- 1. Check all mounting fasteners to ensure that they are tight.
- Check the electrical connector and harness for damage and security.
- Check the external portion of the manual release cable for damage with close attention to the transition at the cargo hook for tearing or splitting or exposed inner wires.



Manual release cables are wearable items and must be replaced as condition requires. Broken or kinked conduit or sticky operation are cause for immediate replacement.

- 4. Check the cargo hook case for cracks and damage.
- 5. Check the cargo hook load beam for gouges and cracks.
- 6. Swing the cargo hook to its full extremes to verify that it does not reach the limit of the manual release cable and electrical release harness range of motion. The manual release cable and electrical release harness must not be the stops that prevent the cargo hook from moving freely in all directions.



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# KINDS OF OPERATION LIMITATIONS continued

The helicopter may also be operated with the fixed provisions portion of the kit installed only. This includes the suspension assembly, stowed manual release cable, and all Cargo Hook related equipment in the cockpit.

# **PLACARDS**

The following placards are included with the kits.

# **AWARNING**

EXTERNAL LOAD LIMIT 800 LB (363 KG)

Mounted on the belly of the aircraft adjacent to the cargo hook attachment point in clear view of the ground support personnel.

FOR FAR PART 133.35(A) OPERATIONS:

NO PERSON MAY BE CARRIED UNLESS HE IS:

(1) A FLIGHT CREW MEMBER OR TRAINEE;

(2) PERFORMS AN ESSENTIAL FUNCTION IN CONNECTION WITH THE EXTERNAL LOAD OPERATION; OR

(3) IS NECESSARY TO ACCOMPLISH THE WORK ACTIVITY DIRECTLY ASSOCIATED WITH THAT OPERATION.

Mounted in the cockpit in view of the pilot.

CARGO RELEASE Mounted adjacent to the manual release in clear view of the pilot.

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SYSTEMS	-

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PLACARDS continued Mounted adjacent to the electrical release switch in clear view of the pilot. CARGO RELEASE. Mounted adjacent to the co-pilot's CARGO electrical release switch (if optional copilot's release switch is installed). RELEASE Mounted adjacent to the manual release in clear view of the pilot. PULL Mounted adjacent to the Cargo Hook circuit breaker in clear view of the pilot. **CARGO** When the P/N 200-396-00 kit is installed, REMOTE mounted adjacent to the circuit breaker in full view of the pilot and co-pilot. HOOK When the P/N 200-396-00 kit is installed, REM mounted on the face of the remote hook release switch housing in full view of the pilot and co-pilot. OTE Н 0 Ŏ



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# SECTION 2 LIMITATIONS

# AIRSPEED LIMITS

Vne = 80 KIAS, or less with external load. Do not exceed Vne of basic helicopter (Vne determined from maximum demonstrated airspeed with dense cargo).



Maximum operational air speed with external loads is dependent upon the load configuration and sling length. It is the operator's responsibility to establish the maximum operational speed for each specific configuration.

# WEIGHT LIMITS

The maximum Cargo Hook load is 800 lbs (363 kgs). Consult the basic Rotorcraft Flight Manual for weight limits for the rotorcraft.

# CENTER OF GRAVITY LIMITS

Center of gravity limits must be checked with and without the external load to verify that the rotorcraft is within the approved center of gravity limits.

ONBOARD.	RFM Supplement	Document N 121-04	Re	
, şyştêms	Cargo Hook	Page 5 of 24	FAA Appr MAY	oved 19.2

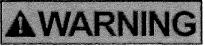
# KINDS OF OPERATION LIMITATIONS

The basic Flight Manual remains applicable. With a load attached to the cargo hook, operation shall be conducted in accordance with the respective national operational requirements.

These cargo hook kits (as installed per this STC) <u>do not</u> meet the 14 CFR part 27 certification requirements for Human External Cargo (HEC).

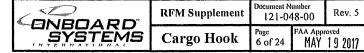
# NOTICE

The cargo hook equipment certification approval does not constitute operational approval; operational approval for external load operations must be granted by the local Aviation Authority.



The suspension assembly is designed to allow the cargo hook to pivot and align with the external load in all directions with limits to protect the electrical and manual release cables from damage. Take precautions to prevent external load angles which exceed the limits of rotation provided by the suspension as the load may not be releasable in this position.

The optional remote hook electrical release kit (P/N 200-396-00) is limited for use with intermittent electrical loads only such as electrical release of a remote cargo hook.



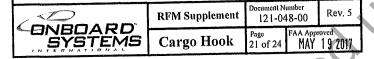
# IN-FLIGHT OPERATION continued

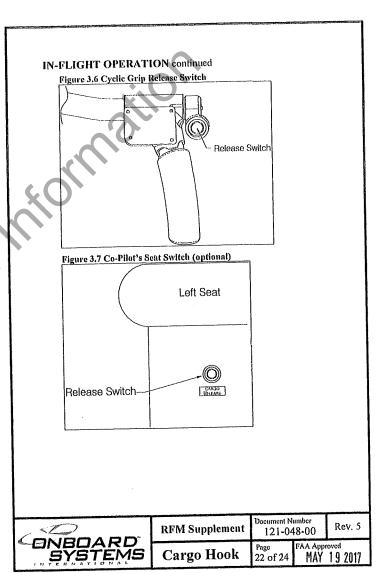
Approach with and release of external load continued

4. Visually check to ensure that the external load has been released.



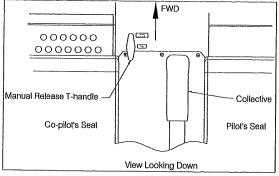
Verify that the external load and long line has dropped free from the rotorcraft before departing the drop-site.

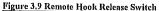


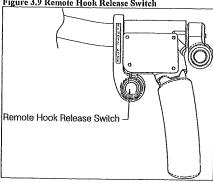


## **IN-FLIGHT OPERATION** continued

Figure 3.8 Manual Release Handle **∩** (33) 000000







ONBOARD	RFM Supplement	Document N 121-04		Rev. 5
SYSTEMS	Cargo Hook	Page 23 of 24	ғал Аррг МАҮ	oved 19 2017

## **SECTION 4 EMERGENCY PROCEDURES**

Cargo Fails to Release Electrically

In the event that the Cargo Hook will not release the external load electrically, proceed as follows:

- 1. Maintain tension on the sling.
- 2. Pull the manual release T-handle upwards to release the external load.

### **SECTION 5 PERFORMANCE**

The basic Flight Manual issued by Robinson remains applicable.

There is no change from basic flight performance with no load attached to the Cargo Hook. Performance will be reduced depending on the size, weight and shape of the external load.

The Load Weigh System is designed and installed as a means of MONITORING the load (weight) suspended from the Cargo Hook. Functional and performance characteristics have not been determined on the basis of Load Cell indication or display, Therefore, this instrument shall NOT be used as a primary indication of performance and flight operation must NOT be predicated on its use.

ONBOARD	RFM Supplement	Document N 121-04		Rev. 5
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## Aircraft Run Out (Components)

To Run % Rem. Tolerance Notes

**Pearl Coast Heli Maintenance** 

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Component Type	Install Date	Install	Install Hrs Limit	Interval	Interval Counters	TSO	TSN	AF Off	-
VH-NBY AF Date 03-07-2020 AF Hours - 291									
TACHOMETER Part #-C792-4 Serial # -			Life Limit	2,200	Hours, Days				
R44 Raven I Carburettor Part #-AV10-6035-11 (MA-4-5MF) Serial # - AV124732464	30/04/2018	0	OH Limit	2,000	Hours, Days	291	291	2000, 27-04-2028	
R44 24v Skytec Starter Motor Part #-149-24HT-H Serial # -H-R100035		0	OH Limit	2,200	Hours	291	291	2200	
R44 28V Clutch Actuator Part #-C051-2 Serial # -8769		0	Life Limit	2,200	Hours		291	2200	
R44 28V Plane Power Alternator Part #-RH24-70 Serial # -H-R110102		0	OH Limit	2,200	Hours	291	291	2200	
R44 Aux Bladder Tank Part #-D028-2 Serial # -	?	0	OH Limit	2,200	Hours	291	291	2200	
R44 Clutch Shaft Part #-C166-5 Serial # -0869	19/07/2018	0	Life Limit	2,200	Hours, Days		291	2200, 16-07-2030	
R44 Fanwheel Assy Part #-Ď174-2 Serial # -NSN	19/07/2018	0	Life Limit	2,200	Hours, Days		291	2200, 16-07-2030	
R44 Raven I Engine Part #-O-540-F1B5 Serial # -L-27772-40E	30/04/2018	0	OH Limit	2,200	Hours, Days	291	291	2200, 27-04-2030	
R44 Raven I Governor Part #-D278-1 Serial # -3107	19/07/2018	0	Life Limit	2,200	Hours, Days		291	2200, 16-07-2030	
R44 Hydraulic Pump Part #-D500-1 Serial # -6835	19/07/2018	0	Life Limit	2,200	Hours, Days		291	2200, 16-07-2030	
R44 28V Hydraulic Reservoir Part #-D211-2 Serial # -6568	19/07/2018	0	Life Limit	2,200	Hours, Days		291	2200, 16-07-2030	
R44 Hydraulic Servo Part #-D212-1 Serial # -32203		0	Life Limit	2,200	Hours		291	2200	
R44 Hydraulic Servo Part #-D212-1 Serial # -32214		0	Life Limit	2,200	Hours		291	2200	
R44 Hydraulic Servo Part #-D212-1 Serial # -32215		0	Life Limit	2,200	Hours		291	2200	
R44 Lower Bearing Part #-C181-3 Serial # -9465	19/07/2018	0	Life Limit	2,200	Hours, Days		291	2200, 16-07-2030	
R44 -7 M/R Blade Part #-C016-7 Serial # -9818	19/07/2018	0	Life Limit	2,200	Hours, Days		291	2200, 16-07-2030	
R44 -7 M/R Blade Part #-C016-7 Serial # -9863	19/07/2018	0	Life Limit	2,200	Hours, Days	<b>.</b>	291	2200, 16-07-2030	
R44 M/R Gbox Part #-C006-7 Serial # -9838	19/07/2018	0	Life Limit	2,200	Hours, Days	1	291	2200	
R44 M/R Hub Part #-C154-1 Serial # -10510		0	Life Limit	2,200	Hours		291	2200	
R44 M/R Spindle Part #-C158-1 Serial # -23398	19/07/2018	0	Life Limit	2,200	Hours, Days		291	2200, 16-07-2030	
R44 M/R Spindle Part #-C158-1 Serial # -23396	19/07/2018	0	Life Limit	2,200	Hours, Days	,	291	2200, 16-07-2030	
R44 R/H Magneto Part #-10-600646-201 Serial # -E171A029	30/04/2018	0	OH Limit	2,200	Hours, Days	291	7 291	2200, 27-04-2030	
R44 Main Bladder Tank Part #-D028-1 Serial # -		0	OH Limit	2,200	Hours	291	291	2200	
R44 Oil Cooler Part #-C649-2 Serial # -4947209	30/04/2018	0	OH Limit	2,200	Hours, Days	291	291	2200, 27-04-2030	

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# Aircraft Run Out (Components)

Pearl Coast Heli Maintenance

Component Type	Install Date	Install H	Install Hrs Limit	Interval	Counters	150	TSN	AF Off	To Run	% Rem.	% Rem. Tolerance Notes
R44 Sprag Clutch Part #-C188-3 Serial # -11844	19/07/2018	0	Life Limit	2,200	Hours, Days		291	2200, 16-07-2030	1,909	% 28	
R44 -6 Swashplate Assy Part #-C017-6 Serial # -4226	19/07/2018	0	Life Limit	2,200	Hours, Days		291	2200	1,909	87 %	
R44 T/R Blade Part #-C029-3 Serial # -8160	19/07/2018	0	Life Limit	2,200	Hours, Days		291	2200, 16-07-2030	1,909	% 28	
R44 T/R Blade Part #-C029-3 Serial # -8162	19/07/2018	0	Life Limit	2,200	Hours, Days		291	2200, 16-07-2030	1,909	87 %	
R44 T/R Gbox Part #-C021-1 Serial # -8702	19/07/2018	0	Life Limit	2,200	Hours, Days		291	2200, 16-07-2030	1,909	87 %	
R44 T/R Gbox Gearset Part #-C545-2 Serial # -11002		0	Life Limit	2,200	Hours		291	2200	1,909	% 28	
R44 T/R Guard Part #-D079-1 Serial # -11137	?	0	Life Limit	2,200	Hours		291	2200	1,909	% 28	
R44 T/R Hub Part #-G062-2 Serial # -5025	6	0	Life Limit	2,200	Hours		291	2200	1,909	% 28	
R44 T/R Pitch Control Assy Part #-C031-1 Serial # -10873	19/07/2018	0	Life Limit	2,200	Hours, Days		291	2200, 16-07-2030	1,909	% 28	
R44 Upper Frame Part #-C020-1 Serial # -9317	19/07/2018	0	Life Limit	2,200	Hours, Days		291	2200, 16-07-2030	1,909	% 28	
R44 Raven I L/H Magneto Part #-10-600616-3 Serial # -E17EA097	30/04/2018	0	OH Limit	2,200	Hours, Days	291	291	2200, 27-04-2030	1,909	% 28	
R44 Horizontal Stabiliser Part #-C044-1 Serial # -9423		0	Life Limit	4,400	Hours		291	4400	4,109	93 %	
R44 T/R Driveshaft Part #-D196-1 Serial # -8521		0	Life Limit	4,400	Hours		291	4400	4,109	93 %	
R44 Tailcone Part #-C023-1 Serial # -10109		0	Life Limit	4,400	Hours		291	4400	4,109	93 %	
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Aircraft Run Out (Components)

To Run % Rem. Tolerance Notes

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Component Type	Install Date	Install	Install Hrs Limit	Interval	Counters	TSO	LSN	AF Off
VH-NBY AF Date 03-07-2020 AF Hours - 291								<b>;</b>
TACHOMETER Part #-C792-4 Serial # -			Life Limit	2,200	Hours, Days			
R44 Raven I Carburettor Part #-AV10-6035-11 (MA-4-5MF) Serial # - AV124732464	30/04/2018	0	OH Limit	2,000	Hours, Days	291	291	2000, 27-04-2028
R44 24v Skytec Starter Motor Part #-149-24HT-H Serial # -H-R100035		0	OH Limit	2,200	Hours	291	291	2200
R44 28V Clutch Actuator Part #-C051-2 Serial # -8769		0	Life Limit	2,200	Hours		291	2200
R44 28V Plane Power Alternator Part #-RH24-70 Serial # -H-R110102		0	OH Limit	2,200	Hours	291	291	2200
R44 Aux Bladder Tank Part #-D028-2 Serial # -	<b>S</b>	0	OH Limit	2,200	Hours	291	291	2200
R44 Clutch Shaft Part #-C166-5 Serial # -0869	19/07/2018	0	Life Limit	2,200	Hours, Days		291	2200, 16-07-2030
R44 Fanwheel Assy Part #-D174-2 Serial # -NSN	19/07/2018	0	Life Limit	2,200	Hours, Days		291	2200, 16-07-2030
R44 Raven I Engine Part #-0-540-F1B5 Serial # -L-27772-40E	30/04/2018	0	OH Limit	2,200	Hours, Days	291	291	2200, 27-04-2030
R44 Raven I Governor Part #-D278-1 Serial # -3107	19/07/2018	0	Life Limit	2,200	Hours, Days		291	2200, 16-07-2030
R44 Hydraulic Pump Part #-D500-1 Serial # -6835	19/07/2018	0	Life Limit	2,200	Hours, Days		291	2200, 16-07-2030
R44 28V Hydraulic Reservoir Part #-D211-2 Serial # -6568	19/07/2018	0	Life Limit	2,200	Hours, Days		291	2200, 16-07-2030
R44 Hydraulic Servo Part #-D212-1 Serial # -32203		0	Life Limit	2,200	Hours		291	2200
R44 Hydraulic Servo Part #-D212-1 Serial # -32214		0	Life Limit	2,200	Hours		291	2200
R44 Hydraulic Servo Part #-D212-1 Serial # -32215		0	Life Limit	2,200	Hours		291	2200
R44 Lower Bearing Part #-C181-3 Serial # -9465	19/07/2018	0	Life Limit	2,200	Hours, Days		291	2200, 16-07-2030
R44 -7 M/R Blade Part #-C016-7 Serial # -9818	19/07/2018	0	Life Limit	2,200	Hours, Days		291	2200, 16-07-2030
R44 -7 M/R Blade Part #-C016-7 Serial # -9863	19/07/2018	0	Life Limit	2,200	Hours, Days	ţ. <b>\</b>	291	2200, 16-07-2030
R44 M/R Gbox Part #-C006-7 Serial # -9838	19/07/2018	0	Life Limit	2,200	Hours, Days	1	291	2200
R44 M/R Hub Part #-C154-1 Serial # -10510		0	Life Limit	2,200	Hours		291	2200
R44 M/R Spindle Part #-C158-1 Serial # -23398	19/07/2018	0	Life Limit	2,200	Hours, Days		291	2200, 16-07-2030
R44 M/R Spindle Part #-C158-1 Serial # -23396	19/07/2018	0	Life Limit	2,200	Hours, Days	•	291	2200, 16-07-2030
R44 R/H Magneto Part #-10-600646-201 Serial # -E17IA029	30/04/2018	0	OH Limit	2,200	Hours, Days	291	291	2200, 27-04-2030
R44 Main Bladder Tank Part #-D028-1 Serial # -		0	OH Limit	2,200	Hours	291	291	2200
R44 Oil Cooler Part #-C649-2 Serial # -4947209	30/04/2018	0	OH Limit	2,200	Hours, Days	291	291	2200, 27-04-2030

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# Aircraft Run Out (Components)

Pearl Coast Heli Maintenance

Component Type	Install Date	Install H	Install Hrs Limit	Interval	Counters	150	TSN	AF Off	To Run	% Rem.	% Rem. Tolerance Notes
R44 Sprag Clutch Part #-C188-3 Serial # -11844	19/07/2018	0	Life Limit	2,200	Hours, Days		291	2200, 16-07-2030	1,909	% 28	
R44 -6 Swashplate Assy Part #-C017-6 Serial # -4226	19/07/2018	0	Life Limit	2,200	Hours, Days		291	2200	1,909	87 %	
R44 T/R Blade Part #-C029-3 Serial # -8160	19/07/2018	0	Life Limit	2,200	Hours, Days		291	2200, 16-07-2030	1,909	% 28	
R44 T/R Blade Part #-C029-3 Serial # -8162	19/07/2018	0	Life Limit	2,200	Hours, Days		291	2200, 16-07-2030	1,909	87 %	
R44 T/R Gbox Part #-C021-1 Serial # -8702	19/07/2018	0	Life Limit	2,200	Hours, Days		291	2200, 16-07-2030	1,909	87 %	
R44 T/R Gbox Gearset Part #-C545-2 Serial # -11002		0	Life Limit	2,200	Hours		291	2200	1,909	% 28	
R44 T/R Guard Part #-D079-1 Serial # -11137	?	0	Life Limit	2,200	Hours		291	2200	1,909	% 28	
R44 T/R Hub Part #-G062-2 Serial # -5025	6	0	Life Limit	2,200	Hours		291	2200	1,909	% 28	
R44 T/R Pitch Control Assy Part #-C031-1 Serial # -10873	19/07/2018	0	Life Limit	2,200	Hours, Days		291	2200, 16-07-2030	1,909	% 28	
R44 Upper Frame Part #-C020-1 Serial # -9317	19/07/2018	0	Life Limit	2,200	Hours, Days		291	2200, 16-07-2030	1,909	% 28	
R44 Raven I L/H Magneto Part #-10-600616-3 Serial # -E17EA097	30/04/2018	0	OH Limit	2,200	Hours, Days	291	291	2200, 27-04-2030	1,909	% 28	
R44 Horizontal Stabiliser Part #-C044-1 Serial # -9423		0	Life Limit	4,400	Hours		291	4400	4,109	93 %	
R44 T/R Driveshaft Part #-D196-1 Serial # -8521		0	Life Limit	4,400	Hours		291	4400	4,109	93 %	
R44 Tailcone Part #-C023-1 Serial # -10109		0	Life Limit	4,400	Hours		291	4400	4,109	93 %	
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	. 100	Heli bíz					n Certificate of	empliance and all Fou					3					Quantity 9		<b>Date:</b> 11/09/2018	
	Accordance with CAR42ZE as a Loose Leaf Log Book Entry	Job No: H5015 NBY Maintenance Release No: A210444	Expired M/Release No: N/A		irworthiness # E472473. ation 30 April 2018. y Lycoming.		- 100 Hr. Engine Inspection Carried out IAW R.H.C. Maintenance Manual Table 1 and Lycoming Operators Manual Sect. 4 for the Initial Issue of an Australian Certificate of Airworthiness.	t SB 480E, SI 1080C, SI 1129B – Nil Defects Evident. 7, 612, 613, 614A, 615, 617, 619, 608-S1, 621B, 622, 623, 625, 627C, 632B, Checked for Compliance and all Found	) & 2.200.		Action Taken	series Complied With - Nil Defect Evident enance	Complied With - Nil Defect Evident	dix A/C Complied With - Nil Defect Evident	Complied With - Nil Defect Evident	Complied With - Nil Defect Evident		GRM Task AB2249		Licence: 222950	
		uding	TSO: 4		<ul> <li>Engline Date of Manufacturer. 29 January 2018.</li> <li>Textron Lycoming Engine 0-540-F185, S/N: L-27772-40E received on U.S.A Export Certificate of Airworthiness # E472473.</li> <li>Installed into RHC R44 RAVEN I, S/No. 2544 (VH-NBY) by R.H.C. AT Aircraft Manufacture Linstallation 30 April 2018.</li> <li>All Applicable FAA Bi-weelky A/D's and Lycoming Service Bulletins Complied with at Manufacture by Lycoming.</li> <li>FAA Bi-weelky Airworthiness Directives in the 2018-14 complied with by R.H.C. During Production</li> </ul>	<ul> <li>FAA Bi-weekly Airworthiness Directive's to 2018-18 Checked – Nil Applicable.</li> <li>Following Maintenance Carried Out:</li> </ul>	R.H.C. Maintenance Manual Table 1 and Lycoming Ope	uctions Carried out SB 480E, SI 1080C, SI 1129B – Nil Defects Evident. Defects Evident. ID, 530B-51, 593B, 612, 613, 614A, 615, 617, 619, 608-51, 621B, 622	Engine De-preserved IAW Lycoming Service Instruction 1472. Satisfactorily Carried Out Ground Run and Leak Check IAW R44 Maintenance Mahual Section 1.700 & 2.200.	nd special inspections carried out:	Description	AIRFRAME - Reassembling and Flight Testing R44 Series Helicopters After Crating For Export IAW R44 Maintenance Manual Section 1.700	ENGINE - 100 Hr Engine Inspection IAW Lycoming Operator's Manual Section 4	100 Hour Maintenance Intervals For All TCM & Bendix A/C Complied With - Nil Defect Evident Magnetos & Related Equipment (Includes TCM SB 636/653)	100 Hour Maintenance Items for Special Attention	100 Hour Alternator/Generator Belt Tension		300012254)	ser C582366	Signature:	ANCE CERTIFICATION LOG
2	This Constitutes a Final Certification in	Serial #:	Component Serial #: L-27772-40E TSN: 4  Reassemble / CofA - Engine VH-NBY 11/0972018		<ul> <li>Engine Date of Manufacturer 29 January 2018.</li> <li>Textron Lycoming Engine 0-540-F185, S/N: L-Installed into RHC R44 RAVEN 1, S/No. 2544 (N-Installed into RHC R48 RAVEN 1, S/No. 2544 (N-Installed Into RAM Bi-weekly Alf) S and Lycomic AR Bi-weekly Alf).</li> <li>FAA Bi-weekly Alivorithiness Directive's up to 3.</li> </ul>	- FAA Bi-weekly Airworthiness Directive's to 20 Following Maintenance Carried Out:	- 100 Hr. Engine Inspection Carried out IAW R. Airworthiness.	<ul> <li>Lycoming Service Bulletins and Service Instructions Carried ou</li> <li>TCM Service Bulletin 643B Carried Out – Nil Defects Evident.</li> <li>Newly Issued Lycoming Service Bulletins 411D, 530B-51, 593B to he Not Annicable</li> </ul>	Satisfactorily Carried Out Ground Run and Leak Check IAW R4	The following airworthiness directives and special inspections carried out:		0000 Inspection	0110 Inspection	0113 TCM SB 643C Part 1	0114 Lycoming SI 1080C	0115 Lycoming SI 1129D	lowing relevant parts	Part # Description AEROSHELL OIL 100 Straight Oil (300012254)	For and on behalf of Helibiz C of A Number C582366	Co-ordinator's Name:	ENGINE MAINTENANCE CE
***************************************	TSO		S. S. T.	1		/	_														
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Date TSN	TSO	Cycles	Maintenance Details and Certifications
15/5/19 88.62		9	This Gonstitutes a Final Certification in Accordance with CAR42ZE as a Loose Leaf Log Book Entry
			2544 AF Landings: Ma
			Component Serial #: L-27772-40E TSN: 88.62 TSO: 100Hrly Inspection/300Hrly Valve Inspection/M/R Tack & Balance
			100Hrly Inspection C/O IAW Aircraft Logbook Statement, Lycoming O-540 Operators Manual & RHC R44 RTR 460 Maintenance Manual Latest Revisions  The following maintenance tasks carried out:
			017 (100HRLY) 109 Hrly Maintenance & Inspection IAW Lycoming Operators Manual C/O NDF , 018 (TCM S/B 643C) 100Hrly Magneto Inspection C/O NDF , 019 (300HRLY) 300 Hrly Maintenance & Inspection IAW Lycoming Operators Manual C/O Within Limits NDF #1 0.021 #2 0.019 #3 0.020 #4 0.019 #5 0.020 #6 0.018 #5 0.020 #6 0.018 #6 0.019 #5 0.020 #6 0.018 #6 0.019 #6
			NDF, CARL MANUAL MINISTER MANUAL MANU
			#2 0.019" #3 0.020" #4 0.019" #5 0.020" C/O Within Limits NDF
			#1 0.021 #2 0.019 #3 0.020 #4 0.019 #3 0.020 #3 0.016 / 0.02 (10.1 3/B 0.0) Pragneto Distribution Book Inspection (20 no.) 0.03 (1.1.0 3/B 0.016) Procedures & Service Limitations For Valves (20 Within Units NDF #1 0.021 #2 0.019 #3 0.020 #4 0.019 #5 0.020
			C/O NDF, 038 (LYC.S/B 595) Torque Values Ignition Harness Attach Screws C/O NDF  The following relevant parts were used:
			Cylinder compression test/80 PSI:
			₩.
			Co-ordinator's Name: Signature: Signature: Signature: Maintenance PTY LTD
			0000 TH TO THE PROPERTY OF THE
			ENGINE MAINTENANCE CERTIFICATION LOG

247/19 186·41	This Constitutes a Final Certification in Accordance with CAR42ZE as a Loose Lough WH-NBY Model: R44 AF Serial #: 2544  Job AFTIS: 186.41 AF Cycles: AF Landings:  Component Serial #: L-27772-40E TSN: 186.41 TSO:  LOOHrly Inspection  100Hrly Engine Inspection C/O IAW Aircraft Logbook Statement, Lycoming O-540 Operators Manual & RHC R44 RTR 460 Mainte The following maintenance tasks carried out:  The following maintenance Raispection IAW Lycoming Operators Manual C/O NDF, 017 (TCM S/B 643C) 100Hrly 480F) 4Monthly Oil & Filter Change Entered MR, 019 (50HRLY) 50 Hrly Maintenance & Inspection IAW Lycoming Operators Manual RAW Lycomin	Entry & Coast
25. 41 18C · 41	Rutes a Final Certification in Accordance with CAR42ZE as a Loose L.  Bata AF Serial #: 2544  AF Landings:  AF Cycles:  AF Landings:  AF Cycles:  AF Landings:  AF Cycles:  AF Landings:  AF Landings:  Baintenance Release  Expired M/Release  Stion  Bigection C/O IAW Aircraft Logbook Statement, Lycoming O-540 Operators Manual & RHC R44 RTR 460 Maintenance Lasks carried out:  An All Committenance & Inspection IAW Lycoming Operators Manual C/O NDF, 017 (TCM S/B 643C) 100Hrly Maintenance Lasks carried out:  AN All Committenance & Inspection IAW Lycoming Operators Manual C/O NDF, 017 (TCM S/B 643C) 100Hrly Maintenance & Inspection IAW Lycoming Operators Manual C/O NDF, 017 (TCM S/B 643C) 100Hrly Section IAW Lycoming Operators Manual C/O NDF, 017 (TCM S/B 643C) 100Hrly Section IAW Lycoming Operators Manual C/O NDF, 017 (TCM S/B 643C) 100Hrly Section IAW Lycoming Operators Manual C/O NDF, 017 (TCM S/B 643C) 100Hrly Section IAW Lycoming Operators Manual C/O NDF, 017 (TCM S/B 643C) 100Hrly Section IAW Lycoming Operators Manual C/O NDF, 017 (TCM S/B 643C) 100Hrly Maintenance & Inspection IAW Lycoming Operators Manual C/O NDF, 017 (TCM S/B 643C) 100Hrly Section IAW Lycoming Operators Manual C/O NDF, 017 (TCM S/B 643C) 100Hrly Section IAW Lycoming Operators Manual C/O NDF, 017 (TCM S/B 643C) 100Hrly Section IAW Lycoming Operators Manual C/O NDF, 017 (TCM S/B 643C) 100Hrly Section IAW Lycoming Operators Manual C/O NDF, 017 (TCM S/B 643C) 100Hrly Section IAW Lycoming Operators Manual C/O NDF, 017 (TCM S/B 643C) 100Hrly Section IAW Lycoming Operators Manual C/O NDF, 017 (TCM S/B 643C) 100Hrly Section IAW Lycoming Operators Manual C/O NDF, 017 (TCM S/B 643C) 100Hrly Section IAW Lycoming Operators Manual C/O NDF, 017 (TCM S/B C/O NDF) 1017 ntry & Goast	
	R44 AF Serial #: 2544  R44 AF Serial #: 2544  AF Landings:  AF Landings:  AF Cycles:  AF Landings:  Baptection C/O IAW Aircraft Logbook Statement, Lycoming O-540 Operators Manual & RHC R44 RTR 460 Mainta maintenance tasks carried out:  AB AFRECTION NOTE, 017 (TCM S/B 643C) 100Hrly ONE Aircraft Logbook Statement Departors Manual C/O NDF, 017 (TCM S/B 643C) 100Hrly Maintenance & Inspection IAW Lycoming Operators Manual C/O NDF, 017 (TCM S/B 643C) 100Hrly ONE Aircraft Logbook Statement Departors Manual C/O NDF, 017 (TCM S/B 643C) 100Hrly ONE S/B 643C) 100Hrly ONE S/B 643C) 100Hrly Maintenance & Inspection IAW Lycoming Operators No. 018 Filter Change Entered M/R via (1904) Air Maintenance & Inspection IAW Lycoming Operators No. 018 Filter Change Entered M/R via (1904) Air Maintenance & Inspection IAW Lycoming Operators No. 018 Filter Change Entered M/R via (1904) Air Maintenance & Inspection IAW Lycoming Operators No. 018 Filter Change Entered M/R via (1904) Air Maintenance & Inspection IAW Lycoming Operators No. 018 Filter Change Entered M/R via (1904) Air Maintenance & Inspection IAW Lycoming Operators Maintenance & Inspection IAW Lycoming Operators No. 018 Filter Change Entered M/R via (1904) Air Maintenance & Inspection IAW Lycoming Operators No. 018 Filter Change Entered M/R via (1904) Air Maintenance & Inspection IAW Lycoming Operators No. 018 Filter Change Entered M/R via (1904) Air Maintenance & Inspection IAW Lycoming Operators No. 018 Filter Change Entered M/R via (1904) Air Maintenance & Inspection IAW Lycoming Operators No. 018 Filter Change Entered M/R via (1904) Air M/R via (1904) Air M/R via (1904) Air M/R via (1904) Air M/R via (1904) Air M/R via (1904) Air M/R via (1904) Air M/R via (1904) Air M/R via (1904) Air M/R via (1904) Air M/R via (1904) Air M/R via (1904) Air M/R via (1904) Air M/R via (1904) Air M/R via (1904) Air M/R via (1904) Air M/R via (1904) Air M/R via (1904) Air M/R via (1904) A	Permissions of
	R44 AF Serial #: 2544  AF Landings:  AF Landings:  AF Landings:  AF Landings:  AF Landings:  AF Landings:  AF Landings:  AF Landings:  Bit 1.27772-40E  TSN: 186.41  TSO:  Expired M/Release  Expired M/Release  Expired M/Release  Animal RHC R44 RTR 460 Maintanance tasks carried out:  OID HMW Maintenance tasks carried out:  OID HMW Maintenance Range Clon IAW Lycoming Operators Manual C/O NDF, 017 (TCM S/B 643C) 100Hrly Oil & Filter Change Entered M/R. 019 (50HRLY) 50 Hrly Maintenance & Inspection IAW Lycoming Operators Nanual C/O NDF, 017 (TCM S/B 643C) 100Hrly Oil & Filter Change Entered M/R. 019 (50HRLY) 50 Hrly Maintenance & Inspection IAW Lycoming Operators Nanual C/O NDF, 017 (TCM S/B 643C) 100Hrly Oil & Filter C/O NDF, 017 (TCM S/B 643C) 100Hrly SHC C/O NDF, 017 (TCM S/B C/O NDF, 017 (TCM S/B 643C) 100Hrly SHC C/O NDF, 017 (TCM S/B C/O NDF, 017 (TCM S/B C/O NDF, 017 (TCM S/B C/O NDF, 017 (TCM S/B C/O NDF, 017 (TCM S/B C/O NDF, 017 (TCM S/B C/O NDF, 017 (TCM S/B C/O NDF, 017 (TCM S/B C/O NDF, 017 (TCM S/B C/O NDF, 017 (TCM S/B C/O NDF, 017 (TCM S/B C/O NDF, 017 (TCM S/B C/O NDF, 017 (TCM S/B C/O NDF, 017 (T	Pearl - Coast
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	V Aircraft Logbook Statement, Lycoming O-540 Operators Manual & RHC R44 RTR 460 Maints  iks carried out:  Ne & Inspection IAW Lycoming Operators Manual C/O NDF, 017 (TCM s/B 643C) 100Hrly  Entered M/R, 019 (50HRLY) 50 Hrly Maintenance & Inspection IAW Lycoming Operators No. 1 (LYC SI 1129B) Alternator Belt Tension Check C/O NDF, 022 (100HRLY)12MONTHS) AIR  D Throttle Body Screw Inspection C/O NDF, 024 (100HRLY)12MONTHS) Carburettor Inspec  N80 #2 75/80 #3 77/80 Within Limits NDF, 1	
	100Hriy Engine Inspection C/O IAW Aircraft Logbook Statement, Lycoming O-540 Operators Manual & RHC R44 RTR 460 Maintenance Manual Lates  The following maintenance tasks carried out:  The following maintenance tasks carried out:  016 (100HRLY) 100 Hriy Maintenance & Inspection IAW Lycoming Operators Manual C/O NDF, 017 (TCM S/B 643C) 100Hriy Magneto Inspection A80F) 480F) 480F) 480F) 480F) 480F 480F 480F 480F 480F 480F 480F 480F	
	The following maintenance tasks carried out:  106 (100HRLY) 100 Hity Maintenance & Inspection IAW Lycoming Operators Manual  107 (TCM S/B 643C) 100Hrly Magneto Inspection IAW Lycoming Operators Manual  108 (100HRLY) 100 Hity Maintenance & Inspection IAW Lycoming Operators Manual  109 (100HRLY) 100 Hity Maintenance & Inspection IAW Lycoming Operators Manual  109 (100HRLY) 120 (1	Revisions
	016 (100HRLY) 100 Hrly Maintenance & Inspection IAW Lycoming Operators Manual C/O NDF, 017 (TCM S/B 643C) 100Hrly Magneto Inspection 480F) 4Monthly Oil & Filter Change Entered M/R, 019 (50HRLY) 50 Hrly Maintenance & Inspection IAW Lycoming Operators Manual C/O NDF, 02 (100HRLY/12MONTHS) Alternator Inspection, Airbox Clean/Inspect C/O NDF, 022 (100HRLY/12MONTHS) Alternator Inspection C/O NDF, 02 (100HRLY/12MONTHS) Alternator Inspection C/O NDF, 02 (100HRLY/12MONTHS) Carburettor Inspection C/O NDF, 02 (100HRLY/12MC) COMDF, 02 (100HRLY/12MC) CARBURETTO NDF,	
	480F) 4Monthly Oll & Filter Change Entered M/R, 019 (50HRLY) 50 Hrly Maintenance & Inspection IAW Lycoming Operators Manual CJC NuP., v. Airbox Clean/Inspect. C/O NDE, 021 (LYC SI 1129B) Alternator Belt Tension Check. C/O NDF, 022 (100HRLY/12MONTHS) Alternator Inspection. C/O NDF, 022 (100KLY/12MONTHS) Carburettor Inspection. C/O NDF, 022 (100KLY/12MONTHS) Carburettor Inspection. C/O NDF, 022 (100KLY/12MC) APPRING #2 78/80 #3 77/80 #3 77/80 #5 78/80	C/O NDF, 018 (LYC S/B
	C/O NDF , 023 (LYC S/B 366C) Carb Throttle Body Screw Inspection C/O NDF , 024 (100HRLY/12MONTHS) Carburettor Inspection C/O NDF , 024 (100HRLY/12MONTHS) Carburettor Inspection C/O NDF , 026 (100HRLY/12MC) Compression Check C/O *#1 78/80 #2 75/80 #3 77/80 #4 78/80 #5 76/80 #6 77/80 Within Limits NDF , 026 (100HRLY/12MC)	20 (100HRLY/12MON1HS) Belt Inspect/Adjust/Replace
	Compression Check C/O #1 78/80 #2 75/80 #3 77/80 #4 78/80 #5 77/80 #0 7	(LYC SI 1191A) Cylinder
	27 (TCM S/B 653) Hot Magneto Test C/O NDF , 028 (TCM S/B 670) Magneto Distributor Block Inspection	OZO (LOUREL) IZINOMINIO Engine Compression G/O NDF, 029 (LYC S/B 480F) OII Filter Change & C/O NDF 039 (MPF 032
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	(1000RLI) Lenguinos plantes relocuizantes rangides a imprecional control para control services agricultural control control transfer and control contr	
	CH4R10R-1 OI FIITE (OTY- 2, GRN-PC484), AERO XPD120 OIL (OTY- 12, GRN-PC437)	
	Colinder communection feet (80 DG):	
	CM 1:78 CM 2:75 CM 3:77 CM 4:78 CM 5:76 CM 6:77	
	For and on behalf of Pearl Coast Heli Maintenance Pty Ltd C of A dumber UB86	
		Date: 20/07/2019
	Opt Of Approval No. U886	
	000000000000000000000000000000000000000	
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	ENGINE MAINTENANCE CERTIFICATION LOG	m /

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	l Certifications	142ZE as a Loose Leaf Log Boo	Job No. 304	Expired M/Release No:			Action Taken Systems C/O Installed 1 x New 28v Onboard Systems Cargo Hook System P/N 200-327-00 B/N PC508 NDF	Nac		PC357	PC357	PC357	PG57	PG329		17/2	ticence: 594/07	Heil		(		
	Maintenance Details and Certifications	This Constitutes a Final Certification in Accordance with CAR42ZE as a Loose Leaf Log Book Entry	WH-NBY Model: R44 AF Serial #: 2544		Onboard Systems Hook Install	C/O Install Of Onboard Systems 28v Hook Kit The following maintenance tasks carried out:	- Task Code Description 001 ADDITIONAL WORK Install Onbord Cargo Hook System IAW Onboard Systems 5.7	The following relevant parts were used:	00-	Pin Crimp	B263-12 (Ph) Housing B263-13 2 Pinfologing	B263-14 3 Pin Housing	8263-15 3 Pin Housing Condest Crimo	9WDG2	/	For and on behalf of Pearl Coast Heli Maintenance Pty Ltd C of a Nimher A686	34	Maintenance PTV	Cert.Ot Approva X.		U	ENGINE MAIN LENANCE CERTIFICATION LOG
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Date	TSN	TSO	Oycles	This Constitutes a Final Certification in Accordance with CAR42ZE as a Loose Leaf Log Book Entry
4/10/14	248.8	New Production of the Control of the	<b>D</b> .	Serial #: 2544  AF Landings:  AF Landings:  AF Landings:
				Component Serial #: L-27772-40E TSN: 248.8 150: 100Hrly) Annual Inspection
				100Hirty Inspection C/O IAW Aircraft Logbook Statement, Lycoming 0-540 Operators Manual & RHC R44 RTR 460 Maintenance Manual Latest Revisions
				ction IAW Lycoming Operators Manual C/O NDF , 012 (50HRLY) 50 Hitly Maintenance & Inspection IAW Lycoming Operators Manual C/O NDF , 012 (50HRLY) 50 Hitly Maintenance & Inspection IAW Lycoming Operators Manual C/O NDF , 012 (50HRLY) 50 Hitly Maintenance & Inspection IAW Lycoming Operators Manual C/O NDF , 012 (50HRLY) 50 Hitly Maintenance & Inspection IAW Lycoming Operators Manual C/O NDF , 012 (50HRLY) 50 Hitly Maintenance & Inspection IAW Lycoming Operators Manual C/O NDF , 012 (50HRLY) 50 Hitly Maintenance & Inspection IAW Lycoming Operators Manual C/O NDF , 012 (50HRLY) 50 Hitly Maintenance & Inspection IAW Lycoming Operators Manual C/O NDF , 012 (50HRLY) 50 Hitly Maintenance & Inspection IAW Lycoming Operators Manual C/O NDF , 012 (50HRLY) 50 Hitly Maintenance & Inspection IAW Lycoming Operators Manual C/O NDF , 012 (50HRLY) 50 Hitly Maintenance & Inspection C/O NDF , 012 (50HRLY) 50 Hitl
				Manual C/O NDF, 013 (TCM S/B 643C) 100Hrly Magneto Inspection C/O NDF, 014 (LTC SI 1123P) Attention Distributor Block Toxing Volumes (JO NDF, 016 (LYC SI 1191A) Cylinder Compression Check C/O Within Limits NDF, 017 (TCM S/B 653) Hot Magneto Test C/O NDF, 018 (TCM S/B 604) Sarew Inspection C/O NDF, 019 (LYC SI 1080C) Special Attention Maintenance Items C/O NDF, 020 (LYC S/B 595) Torque Values Ignition Harness 670) Magneto Distributor Block Inspection C/O NDF, 019 (LYC SI 1080C) Special Attention Maintenance Items C/O NDF, 020 (LYC S/B 595) Torque Values Ignition Maintenance Items C/O NDF, 020 (LYC S/B 595) Torque Values Ignition Maintenance Items C/O NDF, 020 (LYC S/B 595) Torque Values Ignition Maintenance Items C/O NDF, 020 (LYC S/B 595) Torque Values Ignition Maintenance Items C/O NDF, 020 (LYC S/B 595) Torque Values Ignition Maintenance Items C/O NDF, 020 (LYC S/B 595) Torque Values Ignition Maintenance Items C/O NDF, 020 (LYC S/B 595) Torque Values Ignition Maintenance Items C/O NDF, 020 (LYC S/B 595) Torque Values Ignition Maintenance Items C/O NDF, 020 (LYC S/B 595) Torque Values Ignition Maintenance Items C/O NDF, 020 (LYC S/B 595) Torque Values Ignition Maintenance Items C/O NDF, 020 (LYC S/B 595) Torque Values Ignition Maintenance Items C/O NDF, 020 (LYC S/B 595) Torque Values Ignition Maintenance Items C/O NDF, 020 (LYC S/B 595) Torque Values Ignition Maintenance Items C/O NDF, 020 (LYC S/B 595) Torque Values Ignition Maintenance Items C/O NDF, 020 (LYC S/B 595) Torque Values Ignition Maintenance Items C/O NDF, 020 (LYC S/B 595) Torque Values Ignition Maintenance Items C/O NDF, 020 (LYC S/B 595) Torque Values Ignition Maintenance Items C/O NDF, 020 (LYC S/B 595) Torque Values Ignition Maintenance Items C/O NDF, 020 (LYC S/B 595) Torque Values Ignition Maintenance Items C/O NDF, 020 (LYC S/B 595) Torque Values Ignition Maintenance Items C/O NDF, 020 (LYC S/B 595) Torque Values Ignition Maintenance Items C/O NDF, 020 (LYC S/B 595) Torque Values Ignition Maintenance Items C/O NDF, 020 (LYC S/B 595) Torqu
				Attach Screws C/O NDF, 021 (LYC S/B 480F) Oil Filter Change & Inspection Entered MR, 022 (LYC S/B 480F) 4Monthly Oil & Filter Change Entered MK, 023 (ADD1110) WORK) CHT Probe Found U/S. Renewed CHT Probr PN:3080-38 GRN:PC457 NDF
				Cylinder compression test/80 PSI: Cyl 1:77 Cyl 2:72 Cyl 3:76 Cyl 4:77 Cyl 5:75 Cyl 6:77
				1,4
				Co-ordinator's Name: Signature Signature Co-ordinator's Name: Date: 09/10/2019 2000 Co-ordinator's Name: Date: 09/10/2019
16/20	286.9			og Book Entry
	_			VH-NBY Model: R44 RAVEN I AF Serial #: 2544  Weight a serial #: 2544  Weight a serial #: 2544  Weight a serial #: 2544  Weight a serial #: 2544  Weight a serial #: 2544  Weight a serial #: 2544
-				Component Serial #: L-27772-40E TSN: 286.9 TSO:
				100Hrly/Annual Inspection 100Hrly Inspection C/O IAW Aircraft Logbook Statement, Lycoming O-540 Operators Manual & RHC R44 RTR 460 Maintenance Manual Latest Revisions 100Hrly Inspection C/O IAW Aircraft Logbook Statement, Lycoming O-540 Operators Manual & RHC R44 RTR 460 Maintenance Manual Latest Revisions
				The following maintenance tasks carried out:  The following maintenance tasks carried out:  06 (50HRLY) 50 Hrly Maintenance & Inspection IAW Lycoming Operators Manual  C/O NDF , 007 (100HRLY) 50 Hrly Maintenance & Inspection IAW Lycoming Operators Manual  C/O NDF , 008 (TOM 5/B 643C) 100Hrly Magneto Inspection  C/O NDF , 008 (TOM 5/B 643C) 1014 (LYC SI 1191A) Cylinder Compression Check  C/O NDF , 007 (LYC SI 8480F) Alonchity Oil & Filter Change  C/O NDF , 007 (LYC SI 8480F) Alonchity Oil & Filter Change  C/O NDF , 007 (LYC SI 8480F) Alonchity Oil & Filter Change  C/O NDF , 007 (LYC SI 8480F) Alonchity Oil & Filter Change  C/O NDF , 007 (LYC SI 8480F) Alonchity Oil & Filter Change  C/O NDF , 007 (LYC SI 8480F) Alonchity Oil & Filter Change
				ed #2 PN:05K2
				mpression test/80 PSI: 12: Cyl 3:76 Cyl 4:76 Cyl 5:76 Cyl 6:75
				For and on behalf of Pearl Coast Heli Maintenance Pty Ltc  Co-partinator's Name:  Signature:  Signature:
				ENGINE MAINTENANCE CERTIFICATION LOG

The state of the s	eaf Log Book Entry	Job No: H5015 NBY	7					magical sections and sections and sections and sections and sections and sections and sections are sections and sections and sections are sections and sections are sections as a section of sections and sections are sections as a section of sections are sections as a section of sections are sections as a section of sections are sections as a section of sections are sections as a section of sections are sections as a section of sections are sections as a section of sections are sections as a section of sections are sections as a section of sections are sections as a section of sections are sections as a section of sections are sections as a section of sections are sections as a section of sections are sections as a section of sections are sections as a section of sections are sections as a section of section of sections are sections as a section of section of sections are sections as a section of section of sections are sections as a section of section of sections are sections as a section of section of sections are sections as a section of section of sections are sections as a section of section			ne Initial Issue of an Australian Certificate of		, 627C, 632B, Checked for Compliance and all Found				Complied With - Nil Defect Evident	7	700	ii Defect Evident	Compiled With - Nil Defect Evident	Complied With - Nil Defect Evident		Task Quantity	3		Date: 11/09/2018	
	cation in Accordance		AF Landings: Maintenance Release No: A210444			σi.	<ul> <li>Textron Lycoming Engine O-546-F185, S/N: L-27772-40E received on U.S.A Export Certificate of Airworthiness # E472473.</li> <li>Installed into RHC R44 RAVEN I, S/No. 2544 (VH-NBY) by R.H.C. AT Aircraft Manufacture – Installation 30 April 2018.</li> </ul>	<ul> <li>- All Applicable FAA BI-weekly A/D's and Lycoming Service Bulletins Compiled with at Manufacture by Lycoming.</li> <li>- FAA BI-weekly Airworthiness Directives up to 2018-14 compiled with by R. H.C. During Production.</li> </ul>			- 100 Hr. Engine Inspection Carried out IAW R.H.C. Maintenance Manual Table 1 and Lycoming Operators Manual Sect. 4 for the Initial Issue of an Australian Certificate of	- Lycoming Service Bulletins and Service Instructions Carried out SB 480E, SI 1080C, SI 1129B - Nil Defects Evident.	- TCM Service Bulletin 643B Carried Out - Nil Defects Evident Newly Lycoming Service Bulletins 411D, 530B-51, 5938, 612, 613, 614A, 615, 617, 619, 608-51, 621B, 622, 623, 625, 627C, 632B, Checked for Compliance and all Found	o be not Applicable. Engline De-preserved IAW Lycoming Service Instruction 1472. Satisfactionity Carried Out Ground Run and Leek Check IAW R44 Maintenance Mahual Sertion 1 700 % 2 200		•	Reassembling and Flight Testing R44 Series	Manual Section 1.700	ENGINE - 100 Hr Engine Inspection IAW Lycoming Complied With - Nil Defect Evident Operator's Manual Section 4	100 Hour Maintenance Intervals For All TCM & Bendix A/C Complied With - Nil Defect Evident Magnetos & Related Equipment (Includes TCM SB	636/653) 100 Hour Maintenance Items for Special Attention Complied With -	100 Hour Alternator/Generator Belt Tension Complied With -		GRW	00012254) AB2249	r C582366	Signature: Licence: 222950	ANCE CERTIFICATION LOG
	This Constitutes a Final Certi	el: R44 Raven J AF Serial #:	AF 111S: 4,00 AF Cycles: Al	Reassemble / CofA - Engine	VH-NBY 11/09/2018	- Engine Date of Manufacture: 29 January 2018.	- Textron Lycoming Engine 0-540-F185, S/N: 1 Installed into RHC R44 RAVEN I, S/No, 2544	- All Applicable FAA BI-weekly A/D's and Lycoming Servi - FAA BI-weekly Airworthiness Directive's up to 2018-14	- FAA Bi-weekly Airworthiness Directive's to 2018-18 Checked - Nil Applicable.	Following Maintenance Carried Out:	- 100 Hr. Engine Inspection Carried out IAW R.	- Lycoming Service Bulletins and Service Instru	<ul> <li>TCM Service Bulletin 643B Carried Out — Nil Defects Evident.</li> <li>Newly Issued Lycoming Service Bulletins 411D, 530B-51, 59</li> </ul>	Engine De-presente:     Engine De-presented IAW Lycoming Service Instruction 1472.     Engine De-presented Oil Ground Run and Leak Check IAW R4     Satisfactorily Carried Oil Ground Run and Leak Check IAW R4		Tack Code			0110 Inspection	0113 TCM SB 643C Part 1	0114 Lycoming SI 1080C	0115 Lycoming SI 1129D	The following relevant parts were used:	Part # Description	AEROSHELL OIL 100 Straight Oil (300012254)	For and on behalf of Helibiz C of A Number C582366	Co-ordinator's Name:	ENGINE MAINTENANC
	TSN TSO	State of the state	1		CIOCH ONT			\		/	_				_	_		_			3557							
	Date	0	1109/19	2	7375																_		_		/	+		

Date TSN	TSO	Cycles	Maintenance Details and Certifications
15/5/19 88.62	,	9	This Constitutes a Final Certification in Accordance with CAR42ZE as a Loose Leaf Log Book Entry
			I: R44 AF Serial #: 2544
			Ar 1 LS: 68.52 Ar Cycles: Ar Landings: Component Serial #: L-27772-40E TSN: 88.62 TSO: Expired M/Release No: A210444
			100Hrly Inspection/300Hrly Valve Inspection/M/R Tack & Balance
			The following maintenance tasks carried out:
			<ul> <li>017 (100HRLY) 100 Hrly Maintenance &amp; Inspection IAW Lycoming Operators Manual C/O NDF, 018 (TCM S/B 643C) 100Hrly Magneto Inspection C/O NDF, 019 (300HRLY)</li> <li>300 Hrly Maintenance &amp; Inspection IAW Lycoming Operators Manual C/O Within Linits NDF</li> <li>310 Hrly Maintenance &amp; Inspection IAW Lycoming Operators Manual C/O Within Linits NDF</li> <li>310 Hrly Maintenance &amp; Inspection IAW Lycoming Operators Manual C/O NDF, 020 (LYC S/B 480F) 4Monthly Oil &amp; Filter Change C/O NDF, 021 (50HRLY) 50 Hrly Maintenance &amp; Inspection IAM Proceeding Manual C/O NDF, 021 (50HRLY) 50 Hrly Maintenance &amp; Inspection IAM Proceeding Manual C/O NDF, 021 (20HRLY) 50 Hrly Maintenance &amp; Inspection IAM Proceeding Manual C/O NDF, 022 (LYC SI 1229B) Alternator Belt Tension Check C/O</li> </ul>
			NDF , 024 (100HRLY/12MONTHS) Alternator Inspection, Belt Inspect/Adjust/Replace C/O NDF , 025 (LYC S/B 366C) Carb Throttle Body Screw Inspection C/O NDF , 026 (100HRLY/12MONTHS) Carburettor Inspection C/O NDF , 027 (LYC SI 1191A) Cylinder Compression Check C/O #1 74/80 #2 75/80 #3 76/80 #4 76/80 #5 78/80 #6 78/80 Within Limits NDF , 028 (100HRLY/12MONTHS) Engine Compression Check C/O NDF , 029 (LYC S/B 388C) Exhaust Valve & Guide Inspection C/O Within Limits
			#2 0.019" #3 0.020" #4 0.019" #5 0.020" C/O Within Limis NDF
			*#1 0.021" #2 0.019" #3 0.020" #4 0.019" #5 0.020" #6 0.018", 032 (TCM S/B 670) Magneto Distributor Block Inspection C/O NDF, 033 (LYC S/B 301B) Maintence Procedures & Service Limitations For Valves C/O-Within Limits NDF #1 0.021" #3 0.020" #4 0.019" #5 0.020" #5
			C/O NPF, 038 (LYC.S/B 595) Torque Values Ignition Harriess Attach Screws C/O NDF  The following relevant parts were used:  CLOONER, 038 (LYC.S/B 595) Torque Values Ignition Harriess Attach Screws C/O NDF  The following relevant parts were used:  CLOONER, 038 (LYC.S/B 595) Torque Values Ignition Harriess Attach Screws C/O NDF
			Cylinder compression test/80 PSI:
			<b>-</b>
			Co-ordinator's Name: Signature: Signature: Signature: Maintenance PTY LTD
			CC+ C+ Variable 1918
			ENGINE MAINTENANCE CERTIFICATION LOG

Date TSN	TSO Cycles	Maintenance Details and Certifications
28/2/19 186.41	30	This Constitutes a Final Certification in Accordance with CAR42ZE as a Loose Leaf Log Book Entry
		. 2544 AF Landings: Ma
		Component Serial #: L-27772-40E TSN: 186.41 TSO: Expired M/Release No: A158251 100Hrly Inspection
		100NHry Engine Inspection C/O IAW Aircraft Logbook Statement, Lycoming O-540 Operators Manual & RHC R44 RTR 460 Maintenance Manual Latest Revisions The following maintenance tasks carried out:
		016 (100HRLY) 100 Hrly Maintenance & Inspection IAW Lycoming Operators Manual C/O NDF, 017 (TCM S/B 643C) 100Hrly Magneto Inspection C/O NDF, 018 (LYC S/B 480F) 4Monthly Oh & Filter Change Entered M/R, 019 (50HRLY) 50 Hrly Maintenance & Inspection IAW Lycoming Operators Manual C/O NDF, 020 (100HRLY)12MONTHS) Alternator Belt Tension Check C/O NDF, 022 (100HRLY)12MONTHS) Alternator Inspection, Belt Inspect/Adjust/Replace And C/O NDF, 021 (100HRLY)12MONTHS) Alternator Inspection, Belt Inspect/Adjust/Replace And C/O NDF, 021 (100HRLY)12MONTHS) Alternator Inspection, Description, Descr
		Compression Check (2) # 390c, Total Inforte Body Screw Inspection (2) No. 1, 127 (2001). Candidate Check (2) # 42 75/80 # 5 75/80 # 6 77/80 Within Limits NDF, 0.26 (1004RLY)/L2MONTHS) Engine Compression Check (2) # 41 78/80 # 5 78/80 # 5 76/80 # 6 77/80 Within Limits NDF, 0.26 (1004RLY)/L2MONTHS) Engine Compression Check (2) MDF, 0.27 (TCM \$/8.63) Hot Magneto Test (2) NDF, 0.28 (TCM \$/8.67) Magneto Distributor Block Inspection (2) NDF, 0.29 (LVC \$/8.480F) Oil Filter Change & Inspection C/O NDF, 0.39 (1004RLY)/L2MONTHS) Spark Plug Clean/Gap/Test (2) ONDF, 0.31 (LYC \$1.1080C) Special Attention Maintenance Items (2) ONDF, 0.32
		(100HRLY/12MONTHS) Starter Motor/Starter Ring Gear Inspection C/O NDF , 033 (LYC S/B 595) Torque Values Ignition Harness Attach Screws C/O NDF  The following relevant parts were used:
		- CH48108-1 Oil Fifter (QTY- 2, GRN-PC484), AEKO XPD120 OIL (QTY- 12, GRN-PC437)  Cylinder compression test/80 PSI:  CM 1-78 CM 2-75 CM 3-77 CM 4-78 CM 6-77
		li Mainten
		Co-ordinator's Name: Signature Signa
		Cert.Of Approval No: 0686
		ENGINE MAINTENANCE CERTIFICATION LOG

		ok Entry	Pearl Moast				Systems Cargo Hook System P/N	Tack Outsubliv		10	2 2	-	10	÷ ==1	शन् <del>य</del>	•	Date: 29/07/2019	/				4
	Certifications	422E as a Loose Leaf Log Boo	Joh No. 304	Expired M/Release No:			Action Taken Systems C/O Installed 1 x New 28v Onboard Systems Cargo Hook System P/N 200-327-40 B/N PC508 NDF	NQU		PC357	PC357	PC357	PCS57	PG29	C PCS83		ticence: 594407	reil	9993	6		50
	Maintenance Details and Certifications	This Constitutes a Final Certification in Accordance with CAR42ZE as a Loose Leaf Log Book Entry	WH-NBY Model: R44 AF Serial #: 2544		Onboard Systems Hook Install	C/O Install Of Onboard Systems 28v Hook Kit The following maintenance tasks carried out:	Task Code Description 001 ADDITIONAL WORK Install Onbord Cargo Hook System IAW Onboard Systems 5TC # SRQ1308SE	The following relevant parts were used:	00-1	Pin Crimp	B263-12 (Ph) Housing B263-13 2 Pm (olyang)		8263-15 3 Pin Housing Socket Crimp .	9WDG2	MS27039C0868 Screw	For and on behalf of Pearl Coast Heli Maintenance Pty Ltd Cof A Number 0686	Co-ordinator's Name:	Maintenance DTV	Cert.Or Approva. X.			ENGINE MAINTENANCE CERTIFICATION LOG
	Cycles	S					SAN S															
	OSI																				NAME OF THE PROPERTY OF THE PR	
	TSN	15 · CS							1													
en de la company	Date	य्यभित																				

			<b>\</b>	
Date	TSN	TSO	Cycles	This Constitutes a Final Certification in Accordance with CAR42ZE as a Loose Leaf Log Book Entry
1/10/14	7488	- Andrewskie de	). 	ndings: Maintenance Release No: A222878 (Sr.
3 7				Component Serial #: L-27772-40E TSN: 248.8 TSO:
				100Hrly Inspection C/O IAW Aircraft Logbook Statement, Lycoming O-540 Operators Manual & RHC R44 RTR 460 Maintenance Manual Latest Revisions
				The following maintenance tasks carried out:  On 1 (100 NDF, 0.12 (50HRLY) 50 Hily Maintenance & Inspection IAW Lycoming Operators Manual  C/O NDF, 0.12 (50HRLY) 50 Hily Maintenance & Inspection IAW Lycoming Operators
				4Monthly Oil & Filter Change Entered MR, 023 (ADDITIONAL
				Cylinder compression test/80 PSI:  Cylinder compression test/80 PSI:  Cylinder Compression test/80 PSI:
				For and on behalf of Pearl Coast Heli Maintenance Pty L
2/6/20	286.9			Accordance with CAR42ZE as a Loose Leaf Log Book Entry
				10b No; 357   1257
-				#: L-27772-40E TSN: 286.9 TSO:
				100Hrly Inspection C/O IAW Aircraft Logbook Statement, Lycoming O-540 Operators Manual & RHC R44 RTR 460 Maintenance Manual Latest Revisions  (2-6-7-100Hrly Inspection C/O IAW Aircraft Logbook Statement, Lycoming O-540 Operators Manual & RHC R44 RTR 460 Maintenance Manual Latest Revisions
				The following maintenance tasks carried out:  The following maintenance tasks carried out:  006 (50HRLY) 50 Hrly Maintenance & Inspection IAW Lycoming Operators Manual C/O NDF , 007 (100HRLY) 100 Hrly Maintenance & Inspection IAW Lycoming Operators Manual C/O NDF , 007 (100HRLY) 50 Hrly Maintenance & Inspection IAW Lycoming Operators Manual C/O NDF , 007 (100HRLY) 100HRLY) 100HRLY Magneto Inspection C/O NDF , 009 (100HRLY) 100HRLY Magneto Inspection C/O NDF , 012 (100HRLY) 100HRLY Magneto Inspection C/O NDF , 012 (100HRLY) 100HRLY Magneto Inspection C/O NDF , 012 (100HRLY) 100HRLY Magneto Inspection C/O NDF , 012 (100HRLY) 100HRLY Magneto Inspection IAW Lycoming Operators Manual C/O NDF , 012 (100HRLY) 100HRLY Magneto IAW (100HRLY) 100HRLY MAGNETO IAW (100HRLY) 100HRLY MAGNETO IAW (100HRLY) 100HRLY MAGNETO IAW (100HRLY) 100HRLY MAGNETO IAW (100HRLY) 100HRLY MAGNETO IAW (100HRLY) 100HRLY MAGNETO IAW (100HRLY) 100HRLY MAGNETO IAW (100HRLY) 100HRLY MAGNETO IAW (100HRLY) 100HRLY MAGNETO IAW (100HRLY) 100HRLY MAGNETO IAW (100HRLY) 100HRLY MAGNETO IAW (100HRLY) 100HRLY MAGNETO IAW (100HRLY) 100HRLY MAGNETO IAW (100HRLY) 100HRLY MAGNETO IAW (100HRLY) 100HRLY MAGNETO IAW (100HRLY) 100HRLY MAGNETO IAW (100HRLY) 100HRLY MAGNETO IAW (100HRLY) 100HRLY MAGNETO IAW (100HRLY) 100HRLY MAGNET
				Attention Maintenance Items (CO NDF, 015 (LYC s/B 595) Torque Values Ignition Harness Attach Screws, CO NDF, 015 (LYC s/B 480F) Oil Filter Change & Inspection C/O NDF, 018 (Additional Work) #2 Cylinder Low Compression Renewed #2 PN:05K21245.GRN.PC580.ARC.MS- NDF, 017 (LYC s/B 480F) Oil Filter Change & Inspection C/O NDF, 018 (Additional Work) #2 Cylinder Low Compression Renewed #2 PN:05K21245.GRN.PC580.ARC.MS- NDF, 017 (LYC s/B 480F) Oil Filter Change & Inspection C/O NDF, 018 (Additional Work) #2 Cylinder Low Compression Renewed #2 PN:05K21245.GRN.PC580.ARC.MS- PORT CARREST PROPERTY OF THE PROPERTY
				mpression test/80 PSI: 12: Cyl 3:76 Cyl 4:76 Cyl 5:76 Cyl 6:75
				For and on behalf of Pearl Coast Heli Maintenance Pty Ltc
				Signature:
				ENGINE MAINTENANCE CERTIFICATION LOG