

## AIRWORTHINESS

## DIRECTIVES

19 JANUARY 2006

**PART 39-105  
LIGHTER THAN AIR**

There are no amendments to Part 39-105 - Lighter than Air this issue

**PART 39-105 - ROTORCRAFT****Aircraft - General**

AD/GENERAL/56 Amdt 3 - Cable Operated Control Systems - Duplicate Inspection - CANCELLED

**Bell Helicopter Textron Canada (BHTC) 206 and Agusta Bell 206 Series Helicopters**

AD/BELL 206/158 Amdt 1 - Fuel Distribution System  
AD/BELL 206/160 Amdt 1 - High Forward and High Aft Crosstubes

**Eurocopter AS 332 (Super Puma) Series Helicopters**

AD/S-PUMA/54 Amdt 1 - Plug Doors

**Eurocopter AS 350 (Ecureuil) Series Helicopters**

AD/ECUREUIL/115 - Tail Rotor Drive Shaft Rivets

**Eurocopter BK 117 Series Helicopters**

AD/GBK 117/6 Amdt 3 - Main Rotor Blade

**Eurocopter SA 360 and SA 365 (Dauphin) Series Helicopters**

AD/DAUPHIN/62 Amdt 1 - Wheel Brake Hose

**McDonnell Douglas (Hughes) and Kawasaki 369 Series Helicopters**

AD/HU 369/113 Amdt 1 - Main Rotor Blade Torque Events and Life Limit

**Sikorsky S-76 Series Helicopters**

AD/S-76/74 - Main Rotor Assembly Lower Bifilar Support

**PART 39-105  
BELOW 5700 KGS****Aircraft - General**

AD/GENERAL/56 Amdt 3 - Cable Operated Control Systems - Duplicate Inspection - CANCELLED

**Diamond DA40 Series Aeroplanes**

AD/DA40/6 - Nose Landing Gear Leg

**PART 39-105  
ABOVE 5700 KGS****Aircraft - General**

AD/GENERAL/56 Amdt 3 - Cable Operated Control Systems - Duplicate Inspection - CANCELLED

**Airbus Industrie A319, A320 and A321 Series Aeroplanes**

AD/A320/187 - Nose Landing Gear Steering  
AD/A320/188 - Fuel System - Twin Motor Low Pressure Valve Actuator

**Boeing 727 Series Aeroplanes**

AD/B727/199 - AFM Amendment - Fuel Pump Circuit Breaker  
AD/B727/200 - Forward Cargo Door Cutout Frames

**Boeing 737 Series Aeroplanes**

AD/B737/239 Amdt 1 - Engine Fuel Feed System Electrical Bonding  
AD/B737/270 - Aft Pressure Bulkhead Web - 2  
AD/B737/271 - Aileron Control Transfer Mechanism  
AD/B737/272 - Thrust Reverser Ground Logic  
AD/B737/273 - Air Leakage into the Fuel Feed Lines

**Boeing 747 Series Aeroplanes**

AD/B747/163 Amdt 3 - Fuselage Internal Structure  
AD/B747/259 - Trailing Edge Flap Actuator Attach Fittings - CANCELLED  
AD/B747/290 Amdt 1 - Trailing Edge Flap Actuator Attach Fittings - 2  
AD/B747/337 - Upper Chords of the Upper Deck Floor Beams

**Boeing 767 Series Aeroplanes**

AD/B767/18 Amdt 1 - Off-Wing Escape Slide System - CANCELLED

**Bombardier (Boeing Canada/De Havilland) DHC-8 Series Aeroplanes**

AD/DHC-8/105 - Elevator Trim and Gust Lock Chains

**Dornier 328 Series Aeroplanes**

AD/DO 328/3 - RVSM Operations  
AD/DO 328/4 - De-icing/Anti-icing Fluids  
AD/DO 328/5 - Landing Gear Uplocks  
AD/DO 328/6 - Engine Control Cable Heating Tubes  
AD/DO 328/7 - Relays 32HB and 36HB  
AD/DO 328/8 - Proximity Switch Electrical Unit  
AD/DO 328/9 - DC Power Unit 1VE Electrical Connections  
AD/DO 328/10 - DC Power Unit 1VE Bus Bar  
AD/DO 328/11 - Rudder Pedal Unit  
AD/DO 328/12 - Jet Booster Pump  
AD/DO 328/13 - Engine Controls Power and Condition Control Cables  
AD/DO 328/14 - Engine Air Intake De-icing System  
AD/DO 328/15 - Relief Restrictor Valve  
AD/DO 328/16 - Engine Control Rod Ends  
AD/DO 328/17 - Circuit Breaker Panels 10VE & 11VE Fuses  
AD/DO 328/18 - Aft Avionics Cooling Fan  
AD/DO 328/19 - Propeller Blade Overheat Protection  
AD/DO 328/20 - Circuit Breaker Panels 10VE & 11VE Sealing  
AD/DO 328/21 - Ground Spoiler Actuator  
AD/DO 328/22 - Ground Spoiler Valve Block  
AD/DO 328/23 - Roll Spoiler Double Shuttle Valve  
AD/DO 328/24 - Ground Cooling Fan  
AD/DO 328/25 - Propeller Control Unit Bearing  
AD/DO 328/26 - Ice and Rain Protection Systems  
AD/DO 328/27 - FDR & CVR Impact G-Switches  
AD/DO 328/28 - Airfoil De-ice Tube  
AD/DO 328/29 - Fuel Pump Wiring  
AD/DO 328/30 - Stick Pusher Disarm Switch/Light  
AD/DO 328/31 - Flight Attendant's Panel 19VE  
AD/DO 328/32 - Honeywell GP-300 Guidance and Display Controller  
AD/DO 328/33 - Cabin Pressure Control System  
AD/DO 328/34 - Fuselage Drain Installation  
AD/DO 328/35 - Rudder Spring Tab Lever Assembly  
AD/DO 328/36 - Passenger Seat Frame Attach Caps  
AD/DO 328/37 - MLG Main Body Assembly  
AD/DO 328/38 - Main Landing Gear Trailing Arm Bushes

AD/DO 328/15 - Relief Restrictor Valve  
AD/DO 328/16 - Engine Control Rod Ends  
AD/DO 328/17 - Circuit Breaker Panels 10VE & 11VE Fuses

AD/DO 328/18 - Aft Avionics Cooling Fan  
AD/DO 328/19 - Propeller Blade Overheat Protection

AD/DO 328/20 - Circuit Breaker Panels 10VE & 11VE Sealing  
AD/DO 328/21 - Ground Spoiler Actuator  
AD/DO 328/22 - Ground Spoiler Valve Block

AD/DO 328/23 - Roll Spoiler Double Shuttle Valve  
AD/DO 328/24 - Ground Cooling Fan  
AD/DO 328/25 - Propeller Control Unit Bearing

AD/DO 328/26 - Ice and Rain Protection Systems  
AD/DO 328/27 - FDR & CVR Impact G-Switches

AD/DO 328/28 - Airfoil De-ice Tube  
AD/DO 328/29 - Fuel Pump Wiring  
AD/DO 328/30 - Stick Pusher Disarm Switch/Light

AD/DO 328/31 - Flight Attendant's Panel 19VE  
AD/DO 328/32 - Honeywell GP-300 Guidance and Display Controller

AD/DO 328/33 - Cabin Pressure Control System  
AD/DO 328/34 - Fuselage Drain Installation  
AD/DO 328/35 - Rudder Spring Tab Lever Assembly

AD/DO 328/36 - Passenger Seat Frame Attach Caps  
AD/DO 328/37 - MLG Main Body Assembly

AD/DO 328/38 - Main Landing Gear Trailing Arm Bushes  
**Fokker F100 (F28 Mk 100) Series Aeroplanes**  
AD/F100/53 Amdt 2 - Main Landing Gear Sliding Member

**PART 39-106****PISTON ENGINES**

There are no amendments to Part 39-106 - Piston Engines this issue

**PART 39-106****TURBINE ENGINES****General Electric Turbine Engines - CF6 Series**

AD/CF6/60 - High Pressure Compressor Case

**Rolls Royce Turbine Engines - Tay Series**

AD/TAY/12 Amdt 5 - Low Pressure Compressor Ice Impact Panels

**Rolls Royce Turbine Engines - RB211 Series**

AD/RB211/34 - High Pressure Compressor

**Turbomeca Turbine Engines - Arriel Series**

AD/ARRIEL/22 - HP/LP Fuel Pump Drive Components

**PART 39-107  
EQUIPMENT****Propellers - Variable Pitch - Hartzell**

AD/PHZL/82 - Hub Certified Service Life  
AD/PHZL/83 - Propeller Hub Cracks  
AD/PHZL/84 - Propeller Control Unit  
AD/PHZL/85 - Propeller Blade Thrust Bearing

**Propellers - Variable Pitch - McCauley**

AD/PMC/48 - Propeller Hub Socket Retention Threads

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**PART 39-105****LIGHTER THAN AIR**

There are no amendments to Part 39-105 - Lighter than Air this issue

**PART 39-105 - ROTORCRAFT****Agusta A109 Series Helicopters**

AD/A109/48 Amdt 1 - Rescue Hoist Assembly

**Bell Helicopter Textron Canada (BHTC) 206 and Agusta Bell 206 Series Helicopters**

AD/BELL 206/162 - Main Rotor Blade Grip Plate Tang

**Bell Helicopter Textron 412 Series Helicopters**

AD/BELL 412/46 - External Rescue Hoist Cable Cut Electrical Circuit

**Eurocopter AS 350 (Ecureuil) Series Helicopters**

AD/ECUREUIL/116 - Battery Overheat Sensing Circuit Wiring

**Eurocopter EC 120 Series Helicopters**

AD/EC 120/13 Amdt 1 - Pilot's Cyclic Stick Friction Washers

**Eurocopter EC 135 Series Helicopters**

AD/EC 135/11 - Emergency Flotation System

**Robinson R22 Series Helicopters**

AD/R22/53 - Main Rotor Blades

**PART 39-105****BELOW 5700 KGS****Pacific Aerospace 750XL Series Aeroplanes**

AD/750XL/6 - Centre Console Wiring Loom  
AD/750XL/7 Amdt 1 - MTOW Restriction

**Dornier 228 Series Aeroplanes**

AD/DO 228/5 - Overhead Panels 5VE &

## 6VE Wiring

AD/DO 228/6 - Horizontal Stabiliser Leading Edge and Ribs

**Pilatus Britten-Norman BN-2 Series Aeroplanes**

AD/BN-2/84 Amdt 1 - Pitot/Static Pressure Head

**Pilatus PC-12 Series Aeroplanes**

AD/PC-12/43 Amdt 1 - Crew Seats Backrest Tubes

**Airbus Industrie A319, A320 and A321 Series Aeroplanes**

AD/A320/162 Amdt 1 - Integrated Standby Instrument System

AD/A320/189 - Forward Passenger Doors - Escape Slide Raft

**Airbus Industrie A330 Series Aeroplanes**

AD/A330/31 Amdt 1 - Airworthiness Limitations Items - Time Limits/Maintenance Checks

**Boeing 737 Series Aeroplanes**

AD/B737/12 Amdt 1 - Supplemental Structural Inspection Program

AD/B737/40 Amdt 1 - Structural Modification and Inspection Program

AD/B737/274 - Wing Centre Tank Wire Bundles

AD/B737/275 - P15 Refuel Panel Wire Chafing

AD/B737/276 - Nacelle Support Fitting Attachment Fasteners

AD/B737/277 - Splice Fitting between Windows 1 and 2

**Boeing 747 Series Aeroplanes**

AD/B747/338 - Station 488 Frame Web

**Boeing 767 Series Aeroplanes**

AD/B767/216 - Frequency Converters - Medical and Galley Utility Outlets

AD/B767/217 - Outboard Overhead Stowage Bin Hinge Assemblies

**Bombardier (Boeing Canada/De Havilland) DHC-8 Series Aeroplanes**

AD/DHC-8/105 - Elevator Trim and Gust Lock Chains - CANCELLED

AD/DHC-8/106 - Control Column Torque Tube Rivets

**British Aerospace BAe 146 Series Aeroplanes**

AD/BAe 146/52 Amdt 3 - Fuselage Frame 29

**Embraer EMB-120 (Brasilia) Series Aeroplanes**

AD/EMB-120/40 - Elevator Torque Tubes

**Fokker F50 (F27 Mk 50) Series Aeroplanes**

AD/F50/92 Amdt 2 - Engine Mounting Frame Welds

**Learjet 45 Series Aeroplanes**

AD/LJ45/8 - Engine Electrical Wire Bundles

**SAAB SF340 Series Aeroplanes**

AD/SF340/98 - Main Landing Gear Shock Strut Uplock Axle

**PART 39-106****PISTON ENGINES**

There are no amendments to Part 39-106 - Piston Engines this issue

**PART 39-106****TURBINE ENGINES**

There are no amendments to Part 39-106 - Turbine Engines this issue  
Part 39-107 - Equipment

Instruments and Automatic Pilots  
AD/INST/53 - Shadin ADC-2000 Units

## SERVICE DIFFICULTY REPORTS

### Selected reports received for Nov-Dec 2005

#### AIRCRAFT ABOVE 5,700 KG

**BAC 146300 Landing gear retract/extension system hose failed 510002205**  
Nose landing gear retraction actuator flexible hydraulic hose ruptured. Loss of Green System hydraulic fluid.  
P/NO: SA7670006127

**BAC Jetstm3107 Hydraulic system clamp broken 510002203**  
Hydraulic pipes PNo 1379007D441 and PNo 1379007D443 located in LH wing leading edge rubbing together due to a broken clamp. One pipe was worn through. Loss of hydraulic fluid. Further investigation found pipes P/No 1379007D450 and P/No 1379007D452 in the RH wing also had clamps in poor condition. TSN: 32618 Hours/28292 Cycles/252 Months/29205 Landings

**Boeing 737229 Fuel wiring worn 510002227**

Fuel temperature probe wiring worn in approximately four places. wiring bared and strands broken.

**Boeing 737229 Pitot/static system fitting cracked 510002186**

Airspeed switch pitot "T" fitting cracked and leaking on small diameter end.  
P/NO: BACT16AS060406D

**Boeing 737476 Elevator control system spring failed 510002152**

Elevator feel spring broken.  
P/NO: 6933691

**Boeing 737476 Fuselage frame cracked 510002177**

Fuselage frames (21off) cracked at Passenger Service Unit (PSU) attachment points. Found during eddy current inspection iaw EI 737-53-68R3 and NDT Techniques E-13 and E-18.

**Boeing 737476 Fuselage frame web cracked 510002184**

Forward cargo door cutout aft frame web cracked. Crack length approximately 17.78mm (0.700in). Found during eddy current inspection iaw AD/737/242 and Boeing SB 737-53A1228.

**Boeing 7377BX Air conditioning system contaminated 510002216**

Strong oil smell in cockpit and cabin. Investigation found engine oil contamination of the air conditioning and pneumatic systems. Engine oil retention led to over-servicing of the engine oil system.

**Boeing 7377BX Horizontal stabilizer spar pin worn 510002150**

Horizontal stabiliser rear spar pins (3 of LH and 3 of RH) worn beyond limits. Forward spar RH lower bolt worn beyond limits. Found during inspection iaw AD/B737/224.

**Boeing 7377Q8 Pressure regulator relief valve faulty 510002088**

Pressurisation system problems. Investigation found inboard and outboard positive pressure relief valves to be unserviceable. Both valves replaced.

Outboard valve currently considered to be the primary cause of the cabin depressurisation event. Investigation continuing.

**Boeing 7377Q8 Wing, centre box - fume barrier out of limits 510002076**

Secondary fuel vapour barrier out of limits in the following areas:- TP3-R 0.001, TP3-L 0.001, TP6-R 0.001, TP6-L 0.001, TP9-R 0.001, TP9-L 0.003, SF2-R 0.005, SF1-L 0.003, SF2-L 0.002, SF3-R 0.002, SF4-R 0.004, SF3-L 0.002, SF4-L 0.006 Found during inspection iaw AD/737/245 and SB 737-57-1250.

**Boeing 73786N Stabilizer actuator electric motor failed 510002164**

Stabiliser trim motor failed. Circuit breaker tripped.  
P/NO: 6355B000103 TSN: 16380 Hours/8546 Cycles

**Boeing 7474H6 Fuselage skin cracked 510002263**

Investigation of severe scoring around the footprint of the Satcom antenna found multiple cracks at various locations. Cracking was confirmed by NDT.

**Boeing 767277 Escape slide cartridge deficient 510002234**

LH overwing escape slide compartment door actuator cartridge assemblies (2of) had serial numbers within the range considered suspect. Found during inspection iaw AD/B767/199 and Boeing SB 767-25-0299.  
P/NO: 5262200

**Boeing 767277 Fuselage bulkhead chord cracked 510002225**

LH bulkhead outer chord cracked. Crack found during High Frequency Eddy Current Inspection following redrilling of misaligned fastener holes. Bulkhead is located at Stn 1809.5. Found during inspection iaw AD/B767/146 and Boeing SB B76-53A0078 Rev 4.  
P/NO: STA18095

**Boeing 767338ER Trailing edge flap fitting sheared 510002115**

LH inboard trailing edge flap outboard hinge fitting outboard lug sheared. Found during inspection iaw AD/B767/188 (EI 767-57-073).  
P/NO: 113T2271Y44

**Bombdr DHC8102 Landing gear retract/extension line failed 510002120**

Nose landing gear actuator flexible hydraulic line ruptured. Loss of No2 system hydraulic fluid.  
P/NO: DSC252B40124

**Bombdr DHC8315 Landing gear retract/extension hose failed 510002207**

Nose landing gear drag strut retraction actuator flexible hose ruptured. Loss of No2 hydraulic system fluid.  
P/NO: DSC252B40124 TSN: 10711 Hours/10676 Cycles

#### AIRCRAFT BELOW 5700 KG

**Beech 58 Alternator failed 510002244**

RH alternator failed. Investigation found the inner and outer casings had moved. A gap was discovered under the casing attachment bolts. The casing attachment bolts were lockwired.  
P/NO: 649304A1 TSO: 140 Hours

**Beech D55 Power lever cable failed 510002160**

LH engine throttle cable failed in area under sheath.  
P/NO: 5038901219

**BNorm BN2A8 Engine exhaust pipe missing 510002200**

Approximately 457.2mm (18in) of LH engine RH tailpipe bank and clamp missing. Further investigation also found cracking on No3 and No5 cylinder exhaust risers. Engine lower cowl also suffered scorching damage.

**Cessna 172R Rudder control system tube worn 510002154**

Rudder to nose wheel steering tube worn. Tube is a sealed unit but when it was cut open for investigation it was found that the steering rod end fitting had almost pulled through the washer that transfers the load to the spring. If the rod pulled completely through the washer the rod end could pick up on the spring and cause rudder control problems.  
P/NO: 04330222 TSN: 5601 Hours

**Cessna 172R Engine starter gear broken 510002122**

Engine starter drive gear disintegrated.  
P/NO: 2005001 TSN: 179 Hours

**Cessna 208B Horizontal stabilizer attach bolt sheared 510002165**

Horizontal stabiliser forward LH attachment bolt sheared. Aircraft is PNG registered.  
P/NO: S346161 TSN: 12084 Hours

**Cessna 310R Landing gear downlock faulty 510002129**

LH and RH main landing gear downlocks found to be in an unsafe condition.

**Cessna 404 Landing gear position & warning connector faulty 510002176**

RH main landing gear down microswitch wire connector faulty. Suspect connector was not an approved item.

**Cessna 441 Pressure control system valve faulty 510002173**

Cabin emergency pressurisation valve had uncommanded actuation.  
P/NO: 47061RX TSN: 1414 Hours/1345 Cycles

**Cessna 441 Landing gear uplock hook cracked 510002204**

RH main landing gear uplock hook cracked.  
P/NO: 574122214 TSN: 17180 Hours/13003 Cycles

**Cessna 560 Air intake anti-ice system bellows broken 510002092**

LH engine air intake anti-ice system bellows broken at weld.  
P/NO: 65525026 TSN: 3778 Hours/2921 Cycles

**Cirrus SR20 Aircraft fuel distribution system pipe damaged 510002183**

Fuel pipes PNo 11443-005 and PNo 11444-005 cracked/damaged on flares at the "T" fitting ends. Swarf was also found on the flares.  
P/NO: 11443005 TSN: 498 Hours

**DHav DH82A Main landing gear fork broken 510002123**

RH main landing gear compression leg lower fork end fitting failed. Lower end of leg contacted the ground.  
P/NO: HF5000 TSN: 5419 Hours

**Giplnd GA8 Elevator trim system faulty 510002133**

Runaway elevator trim system. Aircraft

is foreign registered.

**Gulstm 500S Landing gear retract/extension seal worn 510002170**

RH main landing gear ram seals worn and leaking. Loss of hydraulic fluid.

**Pilats PC12 Hydraulic system manifold corroded 510002231**

Hydraulic manifold block contained exfoliation corrosion.  
P/NO: 5291312029 TSN: 9184 Hours/9656 Cycles

**Pilats PC12 Passenger door hinge corroded 510002229**

Passenger door scuff plate hinge severely corroded.  
P/NO: 5531412027 TSN: 10719 Hours/14506 Cycles

**Piper PA24250 Wing spar rivet missing 510002132**

Wing rear spar attachment plate rivets (7off) missing. Investigation continuing.  
TSN: 6730 Hours

**Piper PA32300 Wing support corroded 510002147**

LH wing rear support corroded. Found during inspection iaw AD/PA32/27 Amdt2.

**Piper PA34200t Rudder structure hinge corroded 510002146**

Rudder hinge bracket corroded.  
P/NO: 95539000 TSN: 2751 Hours

**Reims F406 Wheel cracked 510002238**

New wheel assembly NDT tested as per CMM 32-45-44. Eddy current inspection found anomaly in bead seat area adjacent to web lightening hole. Web lightening hole is located next to the wheel half date stamp.  
P/NO: 313721 TSN: 0 Hours TSO: 0 Hours

**Swrngrn SA227AC Hydraulic system pipe worn 510002199**

Hydraulic pipes located in LH engine bay chafing together. One pipe worn through and leaking. Loss of hydraulic fluid.  
P/NO: 2781032777

**Swrngrn SA227AC Cabin cooling system aircycle machine failed 510002242**

RH Air Cycle Machine (ACM) failed. Smoke in cabin. RH engine oil temperature wiring defective resulting in high indicated oil temperature.  
P/NO: 20475546 TSO: 6635 Hours

**Swrngrn SA227DC Fire detection system probe high resistance 510002250**

RH engine 480deg fire probe high resistance. False fire warning resulted in fire bottle being fired.

**Swrngrn SA227DC Landing gear bolt sheared 510002198**

LH main landing gear uplock roller bolt sheared.  
P/NO: NAS660421

#### ROTORCRAFT

**Bell 47 Tail rotor blade corroded 510002143**

Tail rotor blade corroded and delaminated. Delamination is located at the outboard tip of the leading edge abrasion strip.  
P/NO: 047642117105 TSN: 1581 Hours

**Bell 47G2 Power lever shaft cracked 510002119**

Throttle/collective control shaft cracked in area hidden by gear.

P/NO: 477271611 TSN: 11475 Hours

**MDHC369D Tail rotor gearbox metal contamination 510002144**

Tail rotor gearbox metal contamination. Investigation found the input shaft rear bearing PNo 369D25417 to be unserviceable. Input shaft PNo 369D25434 cracked in area under bearing.

P/NO: 369D25434 TSN: 7461 Hours  
TSO: 4261 Hours

**MDHC369E Tail rotor blade delaminated 510002099**

Tail rotor blade delaminated. Area of delamination approximately 38.1mm long by 9.525mm wide (1.5in by 0.375in).

P/NO: 500P3100101 TSN: 2582 Hours  
TSO: 842 Hours

**Robsin R22Alpha Engine oil filter faulty manufacture 510002172**

Engine oil filter element incorrectly bonded. Cardboard filter seam was only just holding together.

P/NO: ES48108 TSN: 27 Hours

**Robsin R22Beta Engine/transmission coupling seal dislodged 510002095**

Engine/transmission clutch assembly forward and aft seals dislodged in housing. No oil loss was noticed. Suspect seals are being hydraulically pressed out due to the excess oil in the clutch being unable to bleed back to the reservoir.

P/NO: A9661

**Skrsky S76C Fire detection system connector contaminated 510002121**

No1 engine fire warning system gave false indications. Suspect connector contaminated.

## PISTON ENGINES

**Cont GTSIO520M Exhaust turbocharger bellows leaking 510002247**

RH engine Variable Absolute Pressure Controller (VAPC) bellows leaking dampening fluid.

P/NO: 4771230000 TSO: 153 Hours

**Cont IO520F Engine crankshaft damaged 510002212**

Crankshaft damaged. Magnetic particle inspection of crankshaft fol-

lowing No2 main bearing failure (see SDR510002211) found indications of heat cracks on the radius of No2 main journal. Crankshaft was rejected.

P/NO: 631716 TSO: 1429 Hours

**Cont IO520F Engine power section bearing failed 510002211**

Crankshaft No2 main bearing shell protruding more than normal outside of the crankcase saddle. When the engine was stripped down the No2 bearing shell located in the LH crankcase fell apart into at least five pieces. Damage to the crankcase was also found due to the fore and aft movement of the bearing. Severe wear in the tang locating area.

**P/NO: SA642720 TSN: 1429 Hours**

**Cont IO520F Engine cylinder cracked 510002085**

No2 cylinder cracked and leaking in area located between the second and third fins back from the top spark plug hole. Cracks also found under the top spark plug hole, between the spark plug and exhaust valve seat inside the cylinder and inside the exhaust port from the exhaust valve seat heading towards the lower side of the cylinder. Cylinder falls outside the range covered by ECI SB SI04-1.

P/NO: AEC631397A TSN: 1044 Hours

**Cont IO520F Engine Oil Sump Worn 510002169**

Oil dipstick wore a hole in the sump. Oil leaking.

P/NO: 633412 TSO: 690 Hours

**Cont IO520L Magneto impulse coupling damaged 510002145**

Magneto impulse coupling cam flyweight tip broken off. Return spring missing from under flyweight. Found during inspection iaw AD/Elect/75.

P/NO: 10400309

**Cont LTSIO360RB Engine fuel pump contaminated 510002135**

RH engine driven fuel pump contaminated and worn internally. Suspect caused by contamination from electric fuel pump vanes and/or brush material.

P/NO: 6543511A1 TSN: 126 Hours

**Cont O470R Engine cylinder faulty 510002094**

Piston rings prematurely worn and deteriorated causing high oil consumption and power loss. Cylinder valve guides worn and exhaust valve replaced.

P/NO: AEC642068STA TSN: 396 Hours  
TSO: 396 Hours

**Lyc IO540E1B5 Engine crankshaft broken 510002155**

Crankshaft broken completely through at No1 crankpin journal.

P/NO: 75038 TSO: 774 Hours

**Lyc IO540K1A5 Engine crankshaft faulty 510002073**

Crankshaft removed and replaced due to applicability with AD/Lyc/112 and Lycoming SB 566.

P/NO: 13F27727 TSN: 2193 Hours  
TSO: 145 Hours

**Lyc O320B2C Engine oil filter faulty manufacture 510002172**

Engine oil filter element incorrectly bonded. Cardboard filter seam was only just holding together.

P/NO: ES48108 TSN: 27 Hours

**Lyc O360A1G6 Magneto points unserviceable 510002074**

RH magneto contact breaker point loose on spring assembly. Contacts had been replaced approximately 13 hours previously. Suspect breaker incorrectly swaged onto spring.

P/NO: 10382585 TSN: 13 Hours

**Lyc O540E4C5 Fuel control valve faulty manufacture 510002180**

Carburettor mixture valve faulty manufacture. Inspection found the brass valve end of the mixture valve assembly had not been correctly swaged causing the brass end to turn on the cable.

P/NO: 242528 TSO: 0 Hours

## TURBINE ENGINES

**Garrtt TPE33111U Engine accessory drive bearing failed 510002151**

RH engine gearbox fuel pump drive bearing failed.

**Garrtt TPE33112UH Engine fuel distribution pipe cracked 510002221**

LH engine fuel pipe located between the start pressure regulator and the fuel flow transmitter cracked and leaking.

P/NO: 8945682

**GE CFM567B Fuel control valve faulty 510002182**

No2 engine Hydro-mechanical Unit (HMU) fuel metering valve faulty.

**GE CT75A Turbine engine oil system metal contamination 510002091**

LH engine oil system chip detector contaminated with metal fuzz. Analysis found the metal to be M50 bearing material.

P/NO: 6053T87G01

**PWA JT8D15 Turbine engine NGV fractured 510002077**

No1 engine first stage Nozzle Guide Vane (NGV) burnt through. NGV was located adjacent to no9 combustion chamber. Suspect caused by cracking on the leading edge allowing hot air to penetrate the NGV. Found during inspection of the combustion chambers iaw AD/JT8D/20 (PW SB5639).

**RRoyce RB211524G Engine fuel distribution pipe broken 510002158**

No3 engine manifold fuel drain line broken and leaking at welded joint located between the fuel drain tube and the end fitting at the manifold end of the assembly.

P/NO: UL37981

## PROPELLERS

**Hartzell HCE3YR2 Propeller governor failed 510002090**

RH engine propeller governor coupling gear PNo A-3181 drive teeth (8of) sheared.

P/NO: F624 TSO: 186 Hours

**McCaulley 4HFR34C652 Propeller blade - lightning strike 510002084**

Lightning strike on aircraft exited through LH propeller blade. Unknown point of entry. Engine and propeller removed for lightning strike inspection.

ADVERT