

Civil Aviation SafetyAuthority

### Lycoming cylinder durability investigation group - defect report

- **Issue:** Increase in instances of R22 and /or R44 engine cylinder removals due to valve and/or valve seat erosion.
  - For registered operators <u>who have not</u> experienced related issues as described within CASA Airworthiness bulletin's AWB 82-024 and/or AWB 85-025, complete Sections 1 and 2 and submit form.
  - For registered operators <u>who have</u> experienced a related issue complete Sections 1, 2 and 6 (One Time Only) and complete Sections 3, 4 and 5 for each defect occurrence.
  - **Note:** Where occurrence data has previously been supplied to CASA via the DRS system insert the DRS number in the assigned block and simply complete other data fields not previously provided.

DRS number	Sequence number (CASA use only)	
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#### 1. Operator details

Registered operator name	
Address	
Contact person	
Contact number	
Email address	

#### 2. Aircraft fleet details

Model quantity	R22 Beta:		R22 Beta II:		R44 Raven I	
Model registrations	VH-		VH-		VH-	
-	VH-		VH-		VH-	
	VH-		VH-		VH-	
	VH-		VH-		VH-	
	VH-		VH-		VH-	
	VH-		VH-		VH-	
	VH-		VH-		VH-	
Primary operating area (refer Figure 1 to designate) (e.g. f2)						
Primary operating purposes (e.g. Agricultural-mustering)						
Average annual utilisation	Hrs		Hrs		Hrs	



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3. Aircraft details									
Helicopter model (select)	R22 Beta			R22 Beta II			R44 Raven I		
Serial number									
Registration			-						
Engine model (select)	O-320-B2C			O-360-J2A			O-540-F1B5		
Engine serial number									
Engine history	TSN			TSO			TSLMC		
	Hrs			Hrs			Hrs		
	Date			Date			Date		
- Time in current	Hrs		Previous operating		Area				
operating area (Figure 1)				area/time		Hrs			
Engine oil		Br	and	Grade					
<ol> <li>Provide details on seasonal oil grade changes, if applicable, e.g. W100 in winter and W120 in Summer</li> </ol>	1								
- Oil change interval	Hrs		Oil anal	ysis program Yes			No		
Spark plug	Brand			Part no					
Carburettor	Manuf.			Model		Setting			
Air cleaner	Manuf.	anuf.		Part no.					
- Clean and replace interval	Clean hrs (as applicable)			Replace hrs					
Digital engine monitor fitted	Yes		No						
- EMS files available	Yes		No						
- Engine STC and/or non- standard modification details									



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4. Defect details									
Occurrence date									
When discovered (select)	Pre-Flt		Take off		Climb		Descent		
	Landing		Schedule n	nainte	nance		Other		
Operating conditions	OAT				AGL				
	CHT				Oil temp				
	MAP			RPM					
	Est. fuel bu	ırn (lb	s/hr)						
Defect description - Symptoms - Cause - Other contributing Factors									
5. Affected part details (Incl	ude other relev	vant in	formation, suc	h as pl		ports o	or sketches if	avail	lable)
Cylinder assembly	Part no				Serial no				
Cylinder position (select)	No.1		No.2		No.3		No.4		
	No.5		No.6						
Cylinder history	TSN hrs				TSO hrs				
Part available for inspection	Yes		No						
Warranty claim details									
Rectification action									
Previous Maintenance History for Affected Cylinder and Valve Train									
(e.g. Exhaust Valve Guide Reamed and Valve Re-Seated @ 296 Hrs TSO. Pushrod also replaced due to tip wear and scoring)									
Maintenance Organisation Name									
Maintenance Contact Person	L								
Contact Number									
Email Address									



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### 6. Fuel supply details

Supplier company name(s)				
Fuel source	Airfield tanker	Airfield bowser		
(select)	Drum stock	Independent storage (2)		
(2) Provide details of onsite storage capacity, fuel change-over frequency and quality control procedures.				

### 7. Submit completed form

Mail the completed form to:

Civil Aviation Safety Authority Defect Report Reply Paid 2005 Canberra ACT 2601

Alternatively E-mail to: defect.reports@casa.gov.au

You may also deliver the completed form to any CASA office - see CASA web site for locations www.casa.gov.au

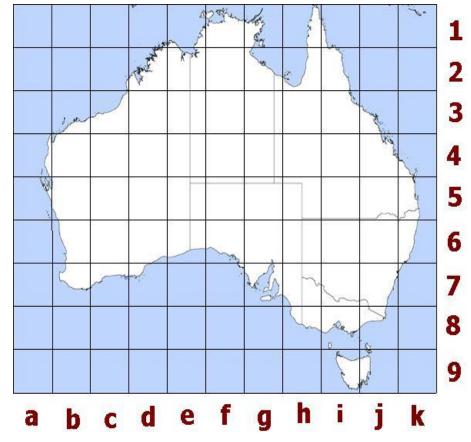


Figure 1: Aircraft operating area chart

Designate a grid reference which best encompasses the primary operating area