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## AIRWORTHINESS DIRECTIVE

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For the reasons set out in the background section, the CASA delegate whose signature appears below issues the following Airworthiness Directive (AD) under subregulation 39.001(1) of CASR 1998. The AD requires that the action set out in the requirement section (being action that the delegate considers necessary to correct the unsafe condition) be taken in relation to the aircraft or aeronautical product mentioned in the applicability section: (a) in the circumstances mentioned in the requirement section; and (b) in accordance with the instructions set out in the requirement section; and (c) at the time mentioned in the compliance section.

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### Propellers - Variable Pitch - McCauley

**AD/PMC/51**
**CSE Aviation**
**6/2007**

Applicability: McCauley Propeller Systems (formerly Cessna Aircraft Co.) propellers that have a part number (P/N) and serial number (SN) listed in Table 1 of this AD, serviced by Oxford Aviation Limited, doing business as CSE Aviation.

For propellers listed by SN in Table 1 overhauled or repaired by CSE after November 2003, or overhauled by an approved propeller repair facility after October 2003, do not apply to this AD.

**Table 1. - McCauley Propellers by P/N and SN**

CSE Work Order Number	McCauley Propeller P/N	McCauley Propeller SN
Y04664	D2A34C67-NP	714384
Y04665	D2A34C67-NP	714390
Y03274	D2A34C67-NP	723093
Y04543	D2A34C67-NP	723094
Y02754	D2A34C67-NP	723112
Y04360	D3A32C90-MN	739415
Y02989	2A34C50-NP	743482
Y04285	2A34C203-C	744591
Y04467	D2A34C58-NO	745446
Y04279	3FF32L501-A	757134
Y04278	3FF32C501-A	757204
Y02802	3AF32C87-N	757861
Y04250	3FF32C501-A	761008
Y03294	2A36C23-P-E-G	761063
Y03724	D2A34C67-NP	766297
Y04251	3FF32C501-A	768699
Y03855	D2AF34C81-0	772113
Y04261	B2D34C214	775347
Y03963	B2D34C213	776696
Y04996	B2D34C213-B	783689
Y03060	D3A34C402	785093
Y04396	3FF32C501	787591

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Y03058	C2A34C204	788168
Y04100	3AF34C503	793041
Y04183	3AF34C503-B	794440
Y04084	2D34C215	795642
Y02771	B2D34C220	795939
Y03924	3AF34C502	798390
Y03202	2A34C216	798602
Y04255	3AF34C503	798788
Y04663	3AF34C503	798978
Y01682	B2D34C214-A	800359
Y04067	3AF34C502	801561
Y04256	3AF34C502	801583
Y02605	3AF34C502	801584
Y04459	2D34C215	801873
Y04959	3AF32C93-NR	803586
Y04112	3FF32C501A	803966
Y03725	2A34C203-C	805071
Y05013	C2A34C204	805223
Y05053	3AF34C503	805387
Y05052	3AF34C502	805405
Y03297	2AF34C55-0	805970
Y04113	3FF32C501A	806424
Y02575	3FF32C501A	961655
Y03923	2D34C215-B	808006
Y03824	3AF32C509	811678
Y04008	3AF32C508	811912
Y04782	3AF32C509	812482
Y04322	D2AF34C302-A	812874
Y05073	3AF32C509-B	814111
Y05087	3AF32C506	820138
Y02810	3AF32C506	820811
Y02809	3AF32C507	820812
Y03692	C2A34C204-BC	821916
Y04402	3AF32C508	823133
Y02248	3AF32C507	970209
Y05032	3AF32C508-B	840763
Y04033	3AF32C509-B	841002
Y04495	B2D34C213B	851122
Y04397	3FF32C501	860047

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AD/PMC/51 (continued)

Y04680	3AF34C502-B	860142
Y03847	D3A34C403-C	861694
Y04087	3A32C406-C	870695
Y03848	D3A32C90-R	881455
Y01748	D3A32C409	881583
Y05072	3AF32C508-C	890018
Y03723	D2A34C67-0	890108
Y05104	C3D36C415-C	890669
Y05032	D3A32C90-R	890683
Y05034	B3D34C405-C	891388
Y03410	3AF32C508-C	891956
Y04540	3AF34C502	891996
Y04063	2A34C203-B	900028
Y03196	3GFR34C701-DF	900684
Y04653	3A32C406-C	901189
Y03524	B2D3AC207-B	902858
Y04499	3AF32C509-C	911526
Y04498	3AF32C508-C	912012
Y04924	3AF32C509	912323
Y04305	3AF34C502	912386
Y04473	3AF32C508-C	921236
Y04474	3AF32C509-C	921239
Y04099	2D34C215-B	921659
Y04425	3AF32C509-C	930215
Y04991	D3A32C411-C	930228
Y02387	5JFR36C1003	930291
Y02386	5JFR36C1003	930294
Y03011	B2D37C229-B	930318
Y02632	B3D32C419	930644
Y03523	C2A34C204-BC	930703
Y03404	B2D34C213-B	931938
Y03474	4HFR34C762-H	940651
Y04116	3AF32C512-C	941278
Y04117	3AF32C512-C	941284
Y03475	4HFR34C762-H	941528
Y04941	3AF32C515	942101
Y03756	3AF32C515	942106
Y04825	B3D32C419-C	950588
Y04813	3FF34C501A	961655

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Y02608	D3A34C403-C	962466
Y04454	3AF32C508-C	962536
Y04757	3AF34C502-C	962541
Y04550	3AF32C509-C	970276
Y02583	3AF32C522	971311
Y02582	3AF32C523	971324
Y05082	B3D36C424-C	980136
Y02914	B2D34C214	980409
Y03894	3AF32C87-R	981955
Y03893	3AF32C87-R	982877
Y02752	B2D34C213	983395
Y03538	B2D34C213-B	983396
Y04137	B3D36C432-C	992420
Y04595	B2D34C214-B	7710604
Y02895	B2D34C213	7710613
Y03403	3AF34C503	7810116
Y04621	D2A34C98-0	7810684
Y05054	3AF34C503	7910085
Y04821	3AF34C503	7910363
Y02889	3AF32C87NR	7910688
Y02890	3AF32C87NR	7910690
Y04721	C2A34C204-C	000679
Y04452	D3A32C88	010463
Y04216	2A34C209	010522
Y04942	3AF32C523	020312
Y05007	2A34C201-C	022421

- Requirement:
1. Perform a document search of aeroplane and propeller records to determine if the propeller was involved in a ground strike.
  2. Perform the following requirements:
    - (a) Disassemble the propeller.
    - (b) Clean all disassembled propeller parts.
    - (c) Perform a visual inspection for the following conditions:
      - (i) Wear or damage such as cracks, corrosion, scratches or nicks.
      - (ii) Damage that indicates a previous ground strike (if applicable).

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- (iii) Unacceptable wear or damage in areas where shot peening is required; paying particular attention to hub internal shot peened surfaces and blade shank peening. It is not necessary to strip the paint and corrosion protective coatings from the external surface of the blade. It is also not necessary to perform dimensional measurements on the external surface of the blade unless there is evidence of damage that has occurred since CSE returned the propeller to service.
- (d) Inspect threaded surfaces of threaded blade shanks with a 10X magnifying glass for scratches parallel to retention threads in the thread root of the first four outboard blade threads. If the retention threads are scratched, repair is not allowed.
- (e) Confirm that CSE Aviation correctly performed repairs or modifications listed in the manufacturer's maintenance instructions.
- (f) Repair and replace with serviceable parts, as necessary.
- (g) Assemble and test.

### Definitions:

For the purposes of this AD:

- (1) Overhauling a propeller is not necessary to comply with the requirements specified in Requirement 2 of this AD. If you do not overhaul the propeller, the TSO does not change.
- (2) Unacceptable wear is wear or damage that can penetrate the shot peen compressive layer.

*Note: FAA AD 2006-24-07 Amdt 39-14836 dated 21 November 2006 refers.*

- Compliance:
- 1. Within 30 days after the effective date of this AD.
  - 2. If the propeller was involved in a ground strike, within 10 flight hours (FH) time-in-service (TIS) after the effective date of this AD, or 2 years after the effective date of this AD, whichever is earlier.

For all propellers listed by SN in Table 1 of this AD, not involved in a ground strike using the compliance schedule detailed in Table 2 of this AD.

**Propellers - Variable Pitch - McCauley**

AD/PMC/51 (continued)

**Table 2. - Compliance Schedule**

<b>If the time-since-overhaul (TSO) for the propeller on the effective date of this AD is ...</b>	<b>Then perform the requirements of paragraph (j) or paragraph (k) of this AD within ...</b>
(1) 1,500 FH TSO or more.	200 FH TIS after the effective date of this AD, but do not exceed 2 years after the effective date of this AD.
(2) More than 1,000 FH TSO, but fewer than 1,500 FH TIS.	350 FH TIS after the effective date of this AD, but do not exceed 2 years after the effective date of this AD.
(3) 1,000 FH TSO or fewer.	500 FH TIS after the effective date of this AD, but do not exceed 2 years after the effective date of this AD.

This Airworthiness Directive becomes effective on 7 June 2007.

**Background:** This AD pertains to certain McCauley propellers serviced by Oxford Aviation Services Limited, doing business as CSE Aviation, in the United Kingdom between September 1998 and October 2003. This AD requires inspecting the propeller blades and other critical propeller parts for wear and mechanical damage. This AD results from findings that CSE Aviation failed to perform some specific inspections and repairs. The issuing of this AD is to detect unsafe conditions that could result in a propeller blade separating from the hub and loss of control of the aeroplane.



David Punshon  
Delegate of the Civil Aviation Safety Authority

27 April 2007