Single Engine

Service Bulletin

May 31, 1985

TITLE

PROPELLER HUB MODIFICATION AND REPLACEMENT

EFFECTIVITY

Model 185 thru 207 Series Aircraft (normally aspirated and turbocharged models equipped with three bladed McCauley D3A32C90 propellers affected by McCauley Service Bulletin 138C)

Serial numbers . . .

185-0968 thru 18503153 (1966 thru 1976)
18801375 thru 18802745 (1974 thru 1976)
P206-0161 thru P206-0306 (1966)
U206-0438 thru U20603521 (1966 thru 1976)
20700001 thru 20700362 (1969 thru 1976)

PURPOSE

McCauley Service Bulletin 138C provides information for modifying three bladed propeller models D3A32C90 to the "oil filled" configuration.

This latest version of bulletin 138 has simplified the modification and replacement requirements of the previous issues to aid field service personnel in establishing compliance requirements.

COMPLIANCE

Mandatory, shall be accomplished in accordance with McCauley Service Bulletin 138C.
Compliance is to modify applicable propellers to the "oil filled" configuration at 1200 hours total time in service, with some propeller hubs requiring replacement at the 1200 hour time interval.

Refer to Table 1 of McCauley Service Bulletin 138C for requirements on specific hub designations and disposition.

APPROVAL

FAA approval has been obtained on technical data in this publication that affects airplane type design.

MAN-HOURS

Not determined. Negligible when accomplished during propeller overhaul.

MATERIAL

Parts for modifying propellers to the "oil filled" configuration are obtainable only by propeller repair stations through McCauley.

ACCOMPLISHMENT INSTRUCTIONS

Guidelines for accomplishing the modification are provided in the attached McCauley Service Bulletin 138C. The work must be accomplished by an FAA approved propeller repair station.

CREDIT

Not applicable.

OWNER NOTIFICATION

A copy of the advisory to owners of record is attached.

* * * * * * * *

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

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SEB85-10
May 31, 1985
Dear Cessna Owner,

The modification and replacement criteria for the hub on McCauley three blade propellers (model D3A32C90) has been revised to simplify the requirements for compliance.

The current requirements are mandatory and are basically to modify the propeller hub to the "oil filled" configuration at 1200 hours total time in service, with some propeller hubs requiring replacement at the 1200 hour time interval.

If you have an applicable three blade propeller (model D3A32C90) with 1200 or more hours total time in service, or are unsure of applicability, please contact your Cessna Dealer or FAA approved propeller repair station for verification and to have any required work accomplished.

SEB85-10A
June 14, 1985
McCauley Accessory Division
Cessna Aircraft Company

SERVICE BULLETIN 138C

May 3, 1985

MANDATORY ACTION

(This bulletin replaces Service Bulletin 138B dated February 15, 1985.)

TO: FAA Approved Propeller Repair Stations

SUBJECT: Propeller Hub Modification and Replacement

PROPELLER MODEL AFFECTED: D3A32C90-*

*Hub models are affected regardless of change letters stamped at the end of the model designation except for "oil filled" versions of affected models (see Table 1 for specific affectivity).


SERVICE MANUAL AFFECTED: 720415

NOTE
This bulletin replaces Service Bulletin 138B to further simplify and apply more stringent compliance requirements.

CONDITION: Since the introduction of shot peening of hub retention threads in 1970, incidents of hub cracks and failures has substantially declined. However, a few recent incidents indicate that the increased fatigue strength from shot peening has not totally eliminated hub cracking. Although the source of the problem may involve operation and maintenance of the engine and propeller, treatment of the problem is necessary. "Oil filled" hubs provide improved lubrication and servicability as well as a "built-in" means of crack detection.

CORRECTION: Propellers which are not "oil filled" must be modified to the oil filled configuration. This requires major disassembly and must be accomplished by a FAA approved propeller repair station. Procedures for this modification are specified in Supplement #1 to McCauley Constant Speed Service Manual #720415. Additional modification instructions are found in Service Letters 1977-9, 1978-2, 1979-9, and 1984-10. After modification, make a logbook entry to indicate compliance.

(continued)
COMPLIANCE: Criteria for compliance is total time in service of the propeller hub.

(1) Less than 1200 hours - No action is required.

(2) 1200 hours or more OR if service history is unknown - Modify propeller to "oil filled" configuration within next 50 hours of service.

Compliance is also required during any major disassembly (ferrules removed) or overhaul of the propeller.

Table 1. Hub Stamping and Compliance Requirement

<table>
<thead>
<tr>
<th>Hub Stamping*</th>
<th>Hub Shot Peened</th>
<th>Compliance requirements, based on total hours in service of propeller hub.</th>
<th>0-1200</th>
<th>1200 or more</th>
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</table>

CODE: NA - No action required.
R - Hub replacement required per Service Bulletin 88 and Service Letter 1984-6A, then modify propeller to oil filled hub.
M - Modify propeller to oil filled hub.

* If any hub is found with letter changes not listed, contact McCauley Service Department for disposition.

**The oil filled hub concept is basically a sealed hub which is partially filled with oil mixed with red dye. This oil is isolated (independant of engine oil) replacing grease as the internal lubricating medium. Oil filled D3A32C90 propellers are identified by a letter change "N" in the model designation. They are also identifiable by a filler plug in the hub which is unique to the oil filled models.