[Federal Register: June 17, 1996 (Volume 61, Number 117)]
[Page 30501]
DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [61 FR 30501 NO. 117 06/17/96]

Docket No. 93-CE-54-AD; Amendment 39-9665; AD 96-12-22

RIN 2120-AA64

Airworthiness Directives; Cessna Aircraft Company Engine Oil Filter Adapter Assemblies Installed on Aircraft

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD) that applies to Cessna Aircraft Company (Cessna) engine oil filter adapter assemblies installed on aircraft. This action requires inspecting the oil filter and adapter assembly (or torque putty, if installed) for oil leakage and proper installation of the adapter retaining nut and fretting of associated threads (security), and replacing any oil filter adapter assembly with security problems; applying torque putty between the engine filter adapter assembly, nut, and oil pump housing (unless already equipped with torque putty); and repetitively inspecting the torque putty for misalignment, evidence of oil leakage, or torque putty cracks, and reinspecting the oil filter and adapter assembly threads if misalignment, evidence of oil leakage, or torque putty cracks are found. Reports of loose or separated engine oil filter adapters on several airplanes prompted this action. The actions specified by this AD are intended to prevent loss of engine oil caused by loose or separated oil filter adapters, which, if not detected and corrected, could result in engine stoppage while in flight and loss of control of the airplane.

EFFECTIVE DATE: July 31, 1996.

ADDRESSES: Information that applies to this AD may be examined at the Federal Aviation Administration (FAA), Central Region, Office of the Assistant Chief Counsel, Attention: Rules Docket 93-CE-54-AD, Room 1558, 601 E. 12th Street, Kansas City, Missouri 64106.

FOR FURTHER INFORMATION CONTACT: Mr. Paul O. Pendleton, Aerospace Engineer, FAA, Wichita Aircraft Certification Office, 1801 Airport Road, Room 100, Wichita, Kansas 67209; telephone (316) 946-4143; facsimile (316) 946-4407.

SUPPLEMENTARY INFORMATION:

Events Leading to the AD

A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an AD that would apply to airplanes of any type design that utilize any Cessna engine oil filter adapter was published in the Federal Register on January 22, 1996 (61 FR 1534). The action proposed to require (1) inspecting the oil filter and adapter assembly (or torque putty, if installed) for oil leakage and proper installation of the adapter retaining nut and fretting of

associated threads (security), and replacing any oil filter adapter assembly with security problems; (2) applying torque putty between the engine filter adapter assembly, nut, and oil pump housing (unless already equipped with torque putty); and (3) repetitively inspecting the torque putty for misalignment, evidence of oil leakage, or torque putty cracks, and reinspecting the oil filter and adapter assembly threads if misalignment, evidence of oil leakage, or torque putty cracks are found. This proposal revised a previous proposal that was published in the Federal Register on September 19, 1994 (59 FR 47821).

Reports of loose or separated engine oil filter adapters on several airplanes prompted the proposal.

Interested persons have been afforded an opportunity to participate in the making of this amendment. No comments were received on the proposed rule or the FAA's determination of the cost to the public.

After careful review of all available information related to the subject presented above, the FAA has determined that air safety and the public interest require the adoption of the rule as proposed except for minor editorial corrections. The FAA has determined that these minor corrections will not change the meaning of the AD and will not add any additional burden upon the public than was already proposed.

Cost Impact
The FAA estimates that 70,000 airplanes in the U.S. registry incorporate one of the affected engine oil filter adapter assemblies and will, therefore, be affected by this AD; that it will take approximately 1 workhour per airplane to accomplish the initial inspection and torque putty application; and that the average labor rate is approximately $60 an hour. Based on these figures, the total cost impact of this AD on U.S. operators is estimated to be $4,200,000. This figure is based on the assumption that no operator has accomplished the initial inspection, and does not take into account the cost for the repetitive inspections. Since the pilot is allowed to repetitively inspect the torque putty, the only cost of the repetitive inspections is the time incurred by the pilot and the cost of an inspection required if misalignment, evidence of oil leakage, or torque putty cracks are found. The FAA has no way of determining how many repetitive inspections each individual operator will incur over the life of the airplane.

Regulatory Impact
The regulations adopted herein will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this final rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

For the reasons discussed above, I certify that this action (1) is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A copy of the final evaluation prepared for this action is contained in the Rules Docket. A copy of it may be obtained by contacting the Rules Docket at the location provided under the caption "ADDRESSES".

List of Subjects in 14 CFR Part 39
Air transportation, Aircraft, Aviation safety, Safety.

Adoption of the Amendment
Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39 - AIRWORTHINESS DIRECTIVES
1. The authority citation for part 39 continues to read as follows:
Authority: 49 USC 106(g), 40113, 44701.

Section 39.13 - [AMENDED]
2. Section 39.13 is amended by adding a new airworthiness directive (AD) to read as follows:

AIRWORTHINESS DIRECTIVE

Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
Federal Aviation Administration

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Federal Aviation Regulations, Part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference FAR Subpart 39.3).

96-12-22 CESSNA AIRCRAFT COMPANY: Amendment 39-9665; Docket No. 93-CE-54-AD.

Applicability: Cessna Engine Oil Filter Adapters Assemblies, part numbers 0450404-(all dash numbers), 0556004-(all dash numbers), 0556010-(all dash numbers), 0756023-(all dash numbers), 0756024-(all dash numbers), 1250403-(all dash numbers), 1250417-(all dash numbers), 1250418(all dash numbers), 1250921-(all dash numbers), and 1250922-(all dash numbers), installed on, but not limited to, the following:

(1) Cessna Models 100, 200, 300, and 400 Series airplanes (all serial numbers), certificated in any category, that are equipped with at least one Teledyne Continental Motors (TCM) engine.

(2) Airplanes that have an affected full flow engine oil adapter installed by field approval, including, but not limited to, the following model or series airplanes, certificated in any category:

Manufacturer	**Series/Models**
Rockwell/Aero Commander/Meyers	200 Series
Twin Commander	Models 500A and 685
Beech	33, 35, 36, and 55 Series
Piper	PA46 Series
Navion	Rangemaster 17 Series
Wren	Model 460
Bellanca	260 and 300 Series

(3) Airplanes equipped with any of the following Teledyne Continental Motors model or model series engines:

O-200	O-470	IO-470
TSIO-470	O-520	IO-520
TSIO-520	GTSIO-520	IO-550
TSIO-550		

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision,

regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (f) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

NOTE 2: This AD does not apply to engine oil filter adapter assemblies manufactured by Teledyne Continental Motors (See Figure 1 of this AD).

Compliance: Required initially as specified in both of the following, and thereafter as indicated in the body of this AD:

1. Within the next 100 hours time-in-service (TIS) after the effective date of this AD or when the engine oil filter is removed, whichever occurs first; and

2. Every time the engine oil filter is removed.

To prevent loss of engine oil caused by loose or separated oil filter adapters, which could result in engine stoppage while in flight and loss of control of the airplane, accomplish the following:

(a) For airplanes with engine oil filter adapter assemblies that do not have torque putty between the engine filter adapter assembly, nut, and oil pump housing, accomplish the following:

(1) Inspect the adapter locking nut installation for evidence of oil leakage.

(2) Check the torque of the adapter nut installation and ensure that the torque value is within the limits of 50 through 60 foot pounds.

(3) If evidence of oil leakage is found or the torque is not within the 50 through 60-foot pound limit, prior to further flight, remove the adapter and filter assembly, and:

(i) Inspect the threads of the adapter assembly and engine for signs of damaged or cracked threads; and

(ii) Replace any adapter assembly and engine oil pump housing (if necessary) that have evidence of thread damage or cracks.

(4) Apply torque putty between the engine filter adapter assembly, nut, and oil pump housing as specified in Figure 1 of this AD.

(5) Reassemble the engine oil filter assembly.

(b) For airplanes with torque putty between the engine filter adapter assembly, nut, and oil pump housing, inspect the torque putty for misalignment, evidence of oil leakage, or cracks.

(1) If any misalignment, evidence of oil leakage, or torque putty cracks are found, prior to further flight, accomplish the requirements specified in paragraph (a) of this AD, including all subparagraphs.

(2) If no misalignment, evidence of oil leakage, or torque putty cracks are found, reinspect at intervals not to exceed 100 hours TIS until the engine oil filter is removed.

(c) Replacing the engine oil filter adapter assembly does not eliminate the repetitive inspection requirement of this AD.

(d) The repetitive inspections of the torque putty as required by this AD may be performed by the owner/operator holding at least a private pilot certificate as authorized by section 43.7 of the Federal Aviation Regulations (14 CFR 43.7), and must be entered into the aircraft records showing compliance with this AD in accordance with section 43.11 of the Federal Aviation Regulations (14 CFR 43.11).

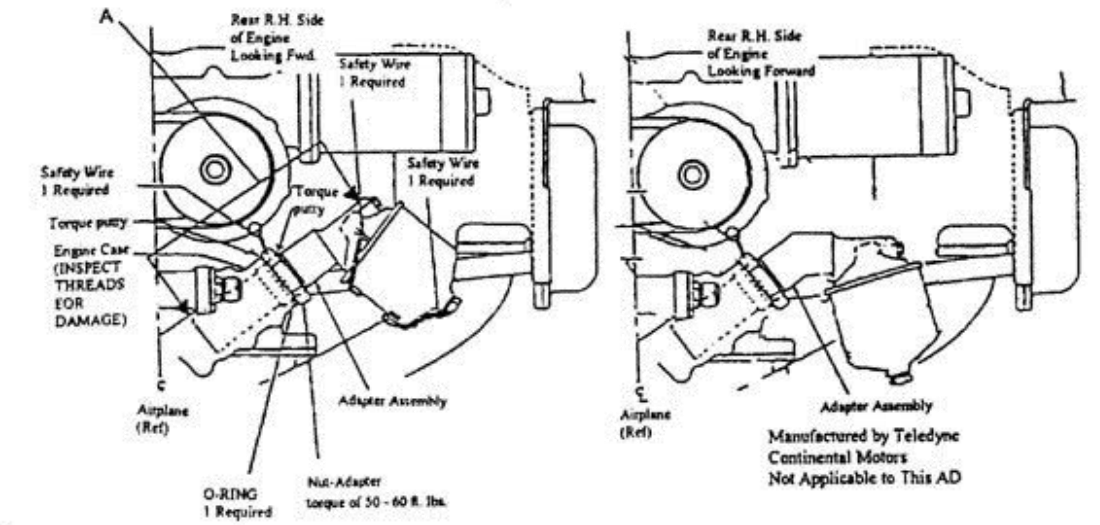
(e) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

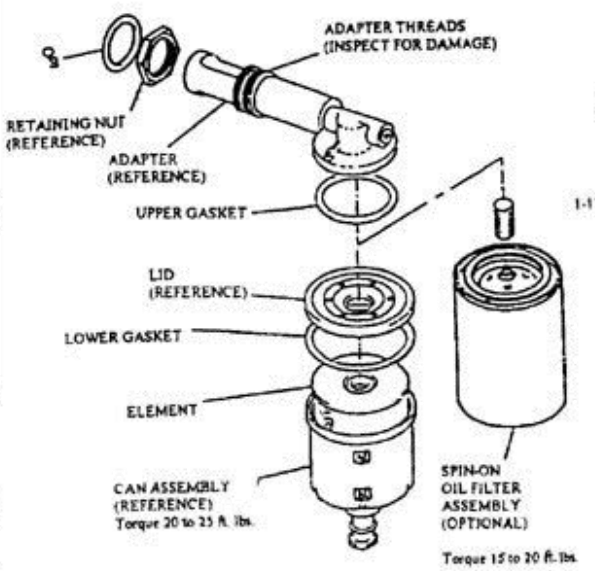
(f) An alternative method of compliance or adjustment of the initial or repetitive compliance time that provides an equivalent level of safety may be approved by the Manager, Wichita Aircraft Certification Office (ACO), 1801 Airport Road, Room 100, Mid-Continent Airport, Wichita, Kansas 67209. The request shall be forwarded through an appropriate FAA Maintenance Inspector, who may add comments and then send it to the Manager, Wichita ACO.

NOTE 3: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Wichita ACO.

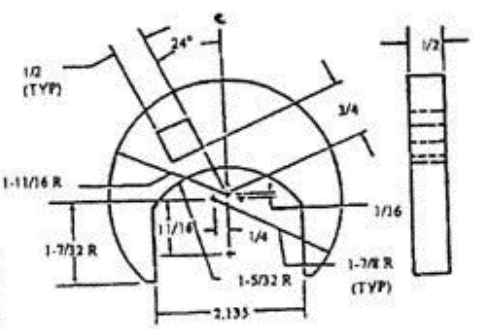
(g) Information related to this AD may be examined at the FAA, Central Region, Office of the Assistant Chief Counsel, Room 1558, 601 E. 12th Street, Kansas City, Missouri 64106.

(h) This amendment becomes effective on July 31, 1996.





DETAIL A



ALL DIMENSIONS ARE INCHES

MATERIAL: 4130 (Rc. 35-38)

TOOL NUMBER SE709 IS AVALIABLE FROM THE CESSNA SERVICE PARTS CENTER

Snap-On crows foot P/N AN8508-34A.

have ground down the ends for clearance.

Figure 1. Oil Filter Adapter Installation
AD 96-12-22