

**U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

Airworthiness Directive

88-17-03 Teledyne Continental Motors (TCM): Amendment 39-5943.

Applies to IO-520- BA, BB, IO-550-B, and TSIO-520-BE, LB, UB, and WB series engines equipped with air conditioners.

Compliance is required as specified in the body of the AD, unless already accomplished.

To prevent possible starter adapter shaftgear assembly failure, accomplish the following:

(a) Before further flight, remove the top engine cowl and gain access to the air conditioner (freon compressor) drive pulley and with a light and mirror, determine if the sheave attach nut is a steel locking type (Reference paragraph II of TCM Service Bulletin (SB) M87-24, dated December 15, 1987).

(1) If the nut is a steel locking type, remove the freon compressor drive belt.

(2) If the nut is castellated, determine via log books and maintenance records that the castellated nut is the original nut and has not been substituted for a steel locking type nut.

(i) If the castellated nut is the original, no further action is required.

(ii) If the castellated nut is not the original, but a substitution for the original installed steel locking type nut, remove the freon compressor drive belt.

(iii) If it cannot be determined that the castellated nut is the original, remove the freon compressor drive belt.

NOTE: Compliance with paragraph (b) below before further flight, may be accomplished in lieu of paragraph (a) above.

(b) Within the next 25 flight hours, after the effective date of this AD, remove the starter adapter assembly (starter drive assembly) and replace in accordance with the following table:

Engine Model	Replacement Starter Drive Assembly P/N
IO-520-BA, BB, IO-550-B	642087A23R
TSIO-520-LB, WB	642087A22R
TSIO-520-BE	642087A24R
TSIO-520-UB	646757A4R

NOTE: Return the starter drive assembly (less drive sheave) to the manufacturer for replacement.

(1) Install the replacement assembly in accordance with paragraph 3 of TCM SB M88-5, dated April 4, 1988, and appropriate maintenance manuals.

(2) Install the drive belt and insure proper alignment of the sheaves in accordance with paragraphs 1 through 3 of TCM SB M88-6, dated April 4, 1988.

(c) Replace top engine cowl.

(d) Make appropriate log book entry showing compliance with this AD.

NOTE: Compliance with AD 87-14-02 issued against the starter drive assembly is not required when compliance with this AD is accomplished.

(e) Aircraft may be ferried in accordance with the provisions of FAR 21.197 and 21.199 to a base where the AD can be accomplished.

(f) Upon request, an equivalent means of compliance with the requirements of this AD may be approved by the Manager, Atlanta Aircraft Certification Office, Federal Aviation Administration, 1669 Phoenix Parkway, Suite 210C, Atlanta, Georgia 30349.

(g) Upon submission of substantiating data by an owner or operator, through an FAA maintenance inspector, the Manager, Atlanta Aircraft Certification Office, may adjust the compliance time specified in this AD.

NOTES:

1. New or rebuilt TSIO-520-BE engines (used on Piper PA46-310P Malibu) shipped from TCM as a replacement engine in conjunction with compliance to AD 87-26-08 (TCM SB M87-25) should not order a replacement starter drive assembly as these engines already have the replacement starter drive assembly installed.

2. Installation of the replacement starter drive assembly on the TSIO-520-BE engine (used on Piper PA46-310P Malibu) does not require engine removal (Piper Aircraft Corporation SB 876B refers to this subject).

TCM SB M88-5, dated April 4, 1988, and TCM SB M88-6, dated April 4, 1988, identified and described in this document, are incorporated herein and made a part hereof pursuant to 5 U.S.C. 552 (a)(1). All persons affected by this directive who have not already received these documents from the manufacturer may obtain copies upon request to Teledyne Continental Motors, P.O. Box 90, Mobile, Alabama 36601. The documents may also be examined at the Office of the Regional Counsel, Federal Aviation Administration, 12 New England Executive Park, Burlington, Massachusetts 01803, Room 311, Rules Docket Number 87-ANE-46, between the hours of 8:00 a.m. and 4:30 p.m., Monday through Friday, except federal holidays.

This amendment supersedes AD 87-26-01, Amendment 39-5882.

This amendment, 39-5943, becomes effective on August 10, 1988.