



CLASS I

SERVICE INSTRUCTIONS

19, 23, 24

No. 0382-190
ATA Code 37-00

SUBJECT: DRY AIR (VACUUM) PUMP, REPLACEMENT OF DRIVE OIL SEAL.

AIRCRAFT AFFECTED: BEECHCRAFT Musketeers, Models 23, B23, and C23, Serials M-1 through M-554, except M-3, and M-1095 through M-1295; Models A23-24 and A24, Serials MA-1 through MA-369; Models A23-19, 19A, and B19, Serials MB-1 through MB-491; and Model A24R, Serials MC-1 through MC-33.

REASON FOR INSTRUCTIONS: To reduce the possibility of pump damage due to oil seal leakage.

ACCOMPLISHMENT: As indicated by the attached Avco Lycoming Service Instruction No. 1221A and Airborne Manufacturing Company Service Letter No. 10, but within the next 50 hours of flight time.

DESCRIPTION: On the BEECHCRAFT Musketeers listed above the dry air (vacuum) pump should be inspected for leakage as described in the above noted attachments. If leakage is indicated replace the seal.

Should seal replacement be necessary the following part will be required. This part is available through the Beech Aircraft Corporation Dealer Organization.

PART NUMBER	DESCRIPTION	QUANTITY
STD-208	Seal	1

Upon completion of these Service Instructions make an appropriate entry in the engine log book and return a completed compliance card to Beech Aircraft Corporation.

Man-hours to accomplish modification: 4 hours.

Number of men required to accomplish modification: 1 man.

Suggested selling price of part: \$1.14 B.

(Price is for planning purposes only and is not a firm quotation.)

COMPLIANCE CARD RETURN REQUIRED

None

670

Beech Aircraft Corporation issues service information for the benefit of owners and fixed base operators in the form of three classes of Service Instructions. CLASS I (Red Border) are changes, inspections, and modifications that could affect safety. The factory considers compliance mandatory. CLASS II (Green Border) covers changes, modifications, improvements or inspections the factory feels will benefit the owner and although highly recommended, they are not considered mandatory compliance, unless specified at the time of issuance. Class I and II are mailed to:

- (a) BEECHCRAFT Aero or Aviation Centers and International Distributors and Dealers
- (b) Owners of record on the FAA Registration list and the

BEECHCRAFT International Owner Notification Service List
(c) Those having a publications subscription

CLASS III (No Border) covers changes which are optional, maintenance aids, product improvement kits and miscellaneous service information. Compliance is at the owner or operator's prerogative. Copies of Class III are distributed per a and c above. Information on Owner Notification Service or Subscriptions can be obtained through any BEECHCRAFT Aero or Aviation Center, International Distributor and Dealer, or the Factory. As Service Instructions are issued, temporary notation in the index should be made until the index is revised. Warranty will be allowed only when specifically defined in the Service Instructions and in accordance with Beech Warranty Policy.

98-34239D



Member of GAMA
General Aviation
Manufacturers Association

CLASS I



Service Instruction

LYCOMING DIVISION
WILLIAMSPORT, PA. 17701



DATE: October 30, 1969 Service Instruction No. 1221A
(Supersedes Service Instruction No. 1221)
Engineering Aspects are
FAA (DEER) Approved

SUBJECT: Dry Air Pump Drive Oil Seal Replacement

MODELS AFFECTED: All Avco Lycoming direct drive aircraft engines on which a dry air pump is installed.

TIME OF COMPLIANCE: As required by Airborne Manufacturing Co. Service Letter No. 10.

Malfunction of dry air pumps, due to oil seal leakage is evidenced by the Airborne Manufacturing Co. Service Letter No. 10, reprinted herewith in its entirety.

To reduce the possibility of air pump damage by oil seal leakage we have changed to a Chicago Rawhide seal for the dry air pump drive. This new seal is installed in all production engines beginning with serial numbers as follows:

O-235-C, 9841-15; O-290-D Series, 8550-21; O-320-A, -E Series, 26020-27A; O-320-B, -C, -D Series, 6499-39A; IO-320, 4366-55A; O-340, 436-30; O-360, 14258-36A; IO-360, 6517-51A; AIO-360, 131-63A; TIO-360, 109-64A; O-540, 13319-40; IO-540, 7453-48; TIO-540, 1148-61; TIO-541, 571-59; IO-720, 443-54.

It is recommended that all owners and operators of applicable aircraft inspect the dry air pump drive for leakage as explained in the Airborne Manufacturing Co. Service Letter. If leakage is indicated, replace the seal with an Avco Lycoming P/N STD-208, Chicago Rawhide Corp. Seal No. 515748. Seals may be obtained through your authorized Avco Lycoming distributor.

PARTS DATA:

STD-208 Seal, Chicago Rawhide No. 515748 (replaces Garlock Seal Nos. 21996-0215 and 21161-0215).

NOTE: Revision "A" to Service Instruction No. 1221 deletes application to geared and vertical drive engines.

15508 - This number for Avco Lycoming reference only.

SERVICE



LETTER

June 11, 1969

SERVICE LETTER NO. 10 - CANCELS 9 & 9A

SUBJECT: AIRBORNE AIR PUMP SERVICE INFORMATION

COMPLIANCE: AS INDICATED IN TEXT

Long life and dependable operation of the Airborne Dry Air Pumps relies on conscientious service personnel understanding the principles of the dry pump operation and the proper diagnosis of vacuum or pressure systems.

The Airborne Dry Air Pumps must operate free from oils or degreasing fluids. These fluids may be introduced from leaking drive seals in the engine, or high pressure degreasing guns directed at the pump drive area or unprotected ports. Oil detected on the lower side or drive area of the pump is a general indication of a leaking accessory drive seal. If this condition is observed, seal replacement should be accomplished immediately.

Oil entry into the pump may be indicated by inadequate or erratic vacuum or a complete loss of vacuum. With small amounts of oil in the pump, unusually low vacuum may be indicated during idle RPM and taxi while full vacuum may be present throughout that particular flight. During warm weather, this cycle may repeat many times before gumming of the pump interior results in complete loss of vacuum. In cold weather, failure can occur suddenly.

Inlet filters or pressure systems should be kept free of oil contaminants and serviced at intervals prescribed by the airframe manufacturers. These filters should be either replaced or carefully cleaned with a mild detergent soap solution, rinsed, and air dried. Inline system filters should also be replaced at the intervals prescribed by the airframe manufacturers or at pump replacement.

All Airborne Dry Air Pumps are produced with a flexible drive coupling designed to protect the engine gear train, absorb shock and to afford a mechanical "fuse" in the air system.

PRP/cac