



CLASS I

# SERVICE INSTRUCTIONS

76

No. 1147, Rev. I  
ATA Code 71-20  
Recurring Inspection

**SUBJECT:** POWERPLANT - INSPECTION AND/OR REPLACEMENT OF THE ENGINE MOUNT ASSEMBLIES

**SYNOPSIS OF CHANGE:**

Extended EFFECTIVITY, deleted kit requirement, revised man-hour requirements, provided an improved engine mount and added PART II.

**EFFECTIVITY:** BEEHCRAFT Duchess 76, serials ME-1 through ME-415.

**REASON:** To inspect for cracks in the lower tubes of the engine mount assemblies and to provide an improved engine mount assembly.

**COMPLIANCE:** Beech Aircraft Corporation considers this to be a mandatory inspection/modification and it should be accomplished as follows:

Airplanes noted under EFFECTIVITY which have accumulated 100 or more service hours should have the engine mount assemblies dye penetrant inspected as specified in PART I of the ACCOMPLISHMENT INSTRUCTIONS within the next 50 service hours, or at the next scheduled inspection, whichever occurs first. If cracks are found, replace the engine mount assemblies as specified in PART II of the ACCOMPLISHMENT INSTRUCTIONS. The engine mount assemblies should be visually inspected each 50 service hours and dye penetrant inspected each 100 hours thereafter until the assemblies are replaced as specified in PART II of the ACCOMPLISHMENT INSTRUCTIONS.

**NOTE**

Beech Aircraft Corporation recommends that P/N 105-910019-1 engine mount assemblies be installed the next time the engines are removed, whether cracks are found or not.

**APPROVAL:** Engineering data contained in these Service Instructions is FAA approved.

**MANPOWER:** The following information is for planning purposes only:

Estimated man-hours for inspection: 1 hour.  
Suggested number of men: 1 man.

D8-275  
890 I  
R 382 I

1 of 3

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

BEEHCRAFT 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 BEEHCRAFT 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 Instructions No. 1147, Rev. I**

Estimated man-hours for replacement of one engine mount assembly: 10 hours.  
Suggested number of men: 2 men.

**MATERIAL:** The P/N 105-910019-1 engine mount assemblies required for this modification may be ordered through BEEHCRAFT Aero or Aviation Centers and International Distributors and Dealers. The value of the parts, if required, for the incorporation of these Service Instructions on one airplane is to be advised. Prices, when issued, will be subject to change without notice.

**WARRANTY:** PART I.  
Warranty credit for labor to the extent noted under MANPOWER will be allowed for the initial inspection only on all claims submitted prior to December 1, 1982.

PART II.  
Warranty credit for parts and labor to the extent noted under MATERIAL and MANPOWER will be allowed on all affected airplanes which are within the normal BEEHCRAFT warranty period at the time these Service Instructions are released.

On airplanes that are not within the normal BEEHCRAFT warranty period, prorated warranty credit for parts and labor to the extent noted under MATERIAL and MANPOWER will be allowed, based on 2000 hours total time in service.

All warranty reimbursements are handled through franchised BEEHCRAFT Aero or Aviation Centers and International Distributors and Dealers. Owners and operators should arrange with these outlets to perform the work and have them submit the standard Beech Aircraft Corporation warranty claim form through BEEHCRAFT Parts and Equipment Wholesalers or International Distributors.

**SPECIAL TOOLS:** None.

**WEIGHT AND BALANCE:**

WEIGHT (LBS)	ARM (IN)	MOMENT (LBS/IN)
+ 2.83	+ 83.4	+ 236

Weight shown is for one engine mount assembly only.

The owner or operator is responsible to maintain compliance with FAR 23.25/CAR 3.74.

**REFERENCES:** BEEHCRAFT Duchess 76 Maintenance Manual copies, P/N 105-590000-7 or subsequent, Chapter 71-00;

AVCO LYCOMING Direct Drive Engine Overhaul Manual P/N 60294-7 or subsequent.

FAA Advisory Circular AC43.13-1A, Chapter 7, Acceptable Methods, Techniques and Practices - Aircraft Inspection and Repairs.

**PUBLICATIONS AFFECTED:**

It is recommended that a note to "See Service Instructions No. 1147, Rev. I" be made in all BEEHCRAFT Duchess 76 Parts Catalog copies, P/N 105-590000-9C or subsequent, Chapter 71-00.

**ACCOMPLISHMENT INSTRUCTIONS:**

These Service Instructions may be accomplished as follows:

**PART I**

1. Refer to the Maintenance Manual and remove the engine cowlings.

2. Refer to FAA Advisory Circular AC43.13-1A, Chapter 7, and dye penetrant inspect the two lower tubes of each engine mount assembly which extend from the firewall to the lower engine mounting pads. Visually inspect the part of the dynafocal ring which extends beneath the two lower engine attach points. If cracks are detected, replace the engine mount(s) as described in PART II of these ACCOMPLISHMENT INSTRUCTIONS.

**NOTE**

The area to be inspected should be thoroughly cleaned and degreased, however, it is not necessary to remove the paint.

3. Repeat the visual inspection each 50 service hours and the dye penetrant inspection each 100 service hours until the engine mounts are replaced as described in PART II of these Service Instructions.

**PART II**

1. Refer to the Maintenance Manual, Chapter 71-00 and 71-10 and remove the engine cowling. Position the engine hoisting sling to the engine and remove the engine from the engine mount.

**CAUTION**

When removing any parts from either engine, it is vitally important to check the part numbers of propellers, engines, engine components and engine accessories to ensure the correct component is installed on the proper engine.

**NOTE**

Refer to the AVCO LYCOMING Direct Drive Engine Overhaul Manual P/N 60294-7 or subsequent.

**NOTE**

Tag or identify all hoses, bolts, washers, nuts, electrical connectors and note harness clamp locations for reinstallation on the engine. Cap all open hoses and engine ports to prevent contamination.

2. Remove the engine mount assembly from the firewall.

3. Install a new P/N 105-910019-1 engine mount assembly to the firewall, using the hardware removed in step 3. Torque the engine mount assembly retaining bolts to 325 + 0 - 25 inch pounds.

**CAUTION**

Check the engine identification plate before installing the engine. The left engine is a O-360A1G6D and the right engine is a L0360A1G6D. Be certain that the correct engine is installed in the proper wing. The engines are not interchangeable.

4. Observe the WARNINGS and CAUTIONS as noted in ENGINE REMOVAL (Maintenance Manual).

5. Move the hoist into position in front of the firewall, align the engine shock mounts with the engine mount assemblies and install the engine attaching bolts. Torque the bolts to 475 +25 -25 inch pounds.

6. Disconnect the hoisting sling and move the hoist clear of the airplane.

7. Connect all electrical wiring, plumbing and ducting at the firewall.

8. Refer to Chapter 61-20 and 71-00 and adjust all engine controls.

9. Refer to Chapter 61-00 and install the propeller.

10. Reinstall the engine cowling.

**NOTE**

On some airplanes, the cowl flaps may have to be trimmed slightly to allow full travel and clear the new engine mount.

11. Perform an engine run-up and complete final adjustments. Refer to Chapter 71-00 for engine warm-up, idle speed and mixture adjustment and oil pressure adjustment.

**NOTE**

If a new or newly overhauled engine has been installed, the engine fuel and oil system must be depressured and serviced. (Refer to Chapter 12-10 of the Maintenance Manual.)

**RECORD**

**COMPLIANCE:** Upon completion of these Service Instructions, make an appropriate maintenance record entry.