SERVICE No. 955
BULLETIN

Piper Aircraft Corporation
Vero Beach, Florida, U.S.A.

PIPER CONSIDERS

COMPLIANCE MANDATORY

Date March 3, 1992


SUBJECT: Engine Mount and Nose Landing Gear Attachment.

MODELS AFFECTED:
PA-32R-300 Lance
PA-32RT-300 Lance II
PA-32RT-300T Turbo Lance II
PA-32R-301 Saratoga SP
PA-32R-301T Turbo Saratoga SP

SERIAL NUMBERS AFFECTED:
32R-7680001 through 32R-7880068
32R-7885001 through 32R-7985105
32R-7887001 through 32R-7987126
32R-8013001 through 32R-8613005
3213001 through 3213037
32R-8029001 through 32R-8629006
3229001 through 3229003

PART I: Within the next 100 hours time in service, and every 100 hours thereafter until compliance with Part II of this Service Bulletin is accomplished.

PART II: Prior to further flight IF cracks are found in Part I, otherwise at the next regularly scheduled maintenance event, not to exceed twelve (12) months from the date of this Service Bulletin.

PART III: Within the next 100 hours Time in Service.

APPROVAL: The technical contents of this Service Bulletin have been approved by the F.A.A.

PURPOSE: Field reports of cracks developing in engine mount cluster welds near the upper nose gear drag brace bushings have been received. Initial efforts to prevent cracks were focused on strengthening the engine mount in these areas.

Further investigations of aircraft in service reveal that time, as well as wear and tear on the landing gear retraction mechanism and surrounding aircraft structure, is contributing to the engine mount cracks.

It was also discovered that some aircraft may have been assembled with an improperly secured nose gear actuator attach bracket.

This Service Bulletin consists of three (3) PARTS, for inspection, repair and modification of airframe and engine mount supporting structure.

(OVER)
ATA: 7120
PURPOSE (CONT'D):

PART I requires a repetitive inspection of the engine mount to determine if cracks have developed.

PART II provides a modification to the airframe structure to strengthen the landing gear and engine mount attach areas.

PART III requires an inspection and reinforcement of the nose gear actuator attachment bracket.

Failure to comply with each part within the compliance times indicated could result in structural damage and/or nose gear collapse occurring during normal operations.

INSTRUCTIONS:

PART I

1. Place the aircraft on jacks.
2. Gain access to the engine mount lower inboard attach fittings where the nose gear main drag brace attaches. It may be necessary to remove the nose gear doors for access.
3. Refer to Sketch "A". Remove paint from the fitting, the cluster weld and about 1 to 2 inches up each attached engine mount tube.
4. Using a suitable dye penetrant method, inspect the engine mount fittings, cluster welds and tubes for cracks in the area shown in Sketch "A".
5. Visually inspect the firewall and supporting structure around the fittings for cracks or distortion.
6. If cracks or damage are NOT found, proceed to Instruction 12.
7. If cracks or damage are found in the engine mount, firewall or airframe structure, they must be repaired and Part II of this Service Bulletin must be complied with PRIOR TO FURTHER FLIGHT.
8. Minor cracks in the engine mount may be repaired on the aircraft using T.I.G. welding per the following instructions in conjunction with FAA AC43.13-1A, Section 2. Major damage, such as complete separation of a mount tube, will require replacement of the engine mount.
9. With aircraft on jacks, attach an engine hoist to the engine and raise just enough to support the engine weight. Remove the nose gear drag brace; note position of any shims installed.
10. To prevent warping of the engine mount during welding, insert a 3/8 inch threaded rod through both engine mount drag brace bushings and secure in place with a nut on either side of the bushings.
11. Protect all surrounding structure and components. Repair engine mount cracks using T.I.G. welding process to reduce the possibility of warping the engine mount assembly.
12. Clean, prime and paint the repaired area.
13. Remove the threaded rod. Reinstall the nose gear drag brace and shims, and the nose gear doors. Conduct a landing gear retraction check in accordance with the Service Manual instructions.
14. Remove the aircraft from jacks.

PART II

All instructions are contained in the kits: "Engine Mount Drag Link Installation, Piper Part Number 766-252 (Turbo Charged Models); and 766-253 (Normally Aspirated Models).
INSTRUCTIONS (Cont'd):

PART III

1. Refer to Sketch "B1". At the right rear side of the nose gear wheel well, locate the inner most line of rivets attaching the bottom fuselage skin to the wheel well side web. Locate the 2nd, 3rd and 4th rivets in this line, counting forward from the rear wall of the wheel well. These are shown as "Existing Rivets" on Sketch "B1".

2. Measure the dimension from the center of these rivets inboard to the edge of the wheel well. If the dimension for all three rivets is 0.45 inch +/- 0.03 inch, no further action is required. Proceed to Instruction 5.

3. If the dimension for any (or all) of the rivets is other than 0.45 inch +/- 0.03 inch, locate and drill three (3) additional rivet holes as shown using a #30 drill.

   **CAUTION**
   Use a .25 inch drill stop to prevent damage to the duct above the skin

4. De-burr the holes and install three (3) NAS173884-3 blind rivets. (Piper Part Number 522-883).


MATERIAL REQUIRED:
One (1) each Engine Mount Drag Link Installation Kit, Piper Part Number 766-252 (Turbo Charged Models); and Piper Part Number 766-253 (Normally Aspirated Models) per aircraft.

AVAILABILITY OF PARTS:
Your Piper Field Service Facility

SUMMARY:
Any applicable Factory Participation will remain in effect for a period of time not to exceed 180 days from the date of this Service Bulletin.

Please contact your Factory Piper Field Service Facility to make arrangements for compliance with this Service Bulletin in accordance with the compliance time indicated.

NOTE:
If you are no longer in possession of this aircraft, please forward this information to the present owner/operator and notify the Factory of address/ownership corrections. Changes should include aircraft model, serial number, current owner's name and address.

Corrections/Changes should be directed to:

Piper Aircraft Corporation
ATTN: Customer Services
2926 Piper Drive
Vero Beach, FL 32960
INSPECT ENGINE MOUNT FOR TUBE CRACKS AT AREAS INDICATED.

SKETCH A
NOSE GEAR ACTUATOR FITTING (38047-5)

PLAN VIEW
RIGHT SIDE
NOSE WHEEL WELL

SKETCH B1
Check the dimension from the face of the wheel well web to the centerline of the three (3) existing rivets. If the dimension is greater than .48 in. (Tolerance is .45 in. ± .03 in.), Add three (3) additional rivets as shown in Sketch "B1".

SKETCH B2