

## IMMEDIATE ACTION

# SERVICE



# BULLETIN

Service Bulletin #109

November 9, 1948

**SUBJECT:** CRACKING OF WING AILERON BELLCRANK (PIPER PART NO. 40092 Left, 40092-1 Right)  
AND FLAP BELLCRANK (PIPER PART NO. 40092-10 Left, 40092-9 Right)  
LOCATED AFT OF REAR SPAR.

**TO:** OWNERS OF PIPER AIRPLANES MODELS PA-12 SERIAL NOS. 12-1 and up,  
AND PA-14 SERIAL NOS. 14-1 to 14-193 Incl.

Several reports have been received of cracks in the cast aluminum aileron bellcranks installed in the Model PA-12 airplanes.

These cracks are due to excessively tightening of the bolt which attaches the aileron push rod to the bellcrank thereby bending the ears on the casting causing them to crack. (See Fig. 1).

It is requested that you inspect your airplanes and if the ears of the casting appear bent inspect the castings for cracks in the areas shown on the sketch. If the casting is cracked it should be replaced.

Inspection can be made with a light and mirror through the rectangular openings provided in the wing. The use of any penetrating oil with a fine red or blue powder will show up the crack if present. Wipe casting clean, rub oil on ears of casting and then rub on the powder. Wipe clean. If casting is cracked the colored powder carried into the crack by the oil will show very clearly.

Inasmuch as the Model PA-14 flap has the same type of attachment, of the flap push rod to the flap bellcrank, it is recommended that the flap bellcranks be inspected also.

**NOTE:** When installing push rods in the aforementioned bellcranks, do not tighten up bolt enough to bend the ears on the casting. Also see that shim washers are properly installed. (see Fig. 2).

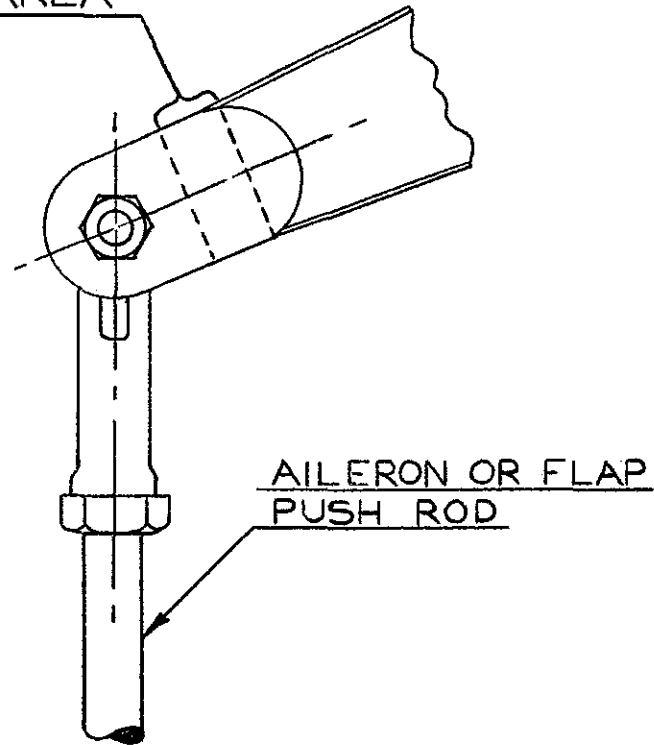
Upon completion of inspection called for herein, an appropriate entry should be made in the aircraft logbook, indicating that an inspector has been accomplished in accordance with this bulletin.

New parts which may be needed in order to comply with this bulletin can be procured for 90 days from the date of this bulletin, or until February 9, 1948, at cost, through your nearest Piper Distributor or Dealer.

SERVICE DEPARTMENT

**PIPER AIRCRAFT CORPORATION, LOCK HAVEN, PA., U. S. A.**

INSPECT FOR  
CRACKS WITHIN  
THIS AREA



EARS BENT  
AS SHOWN  
DOTTED  
DUE TO  
EXCESSIVE  
TIGHTENING  
OF BOLT

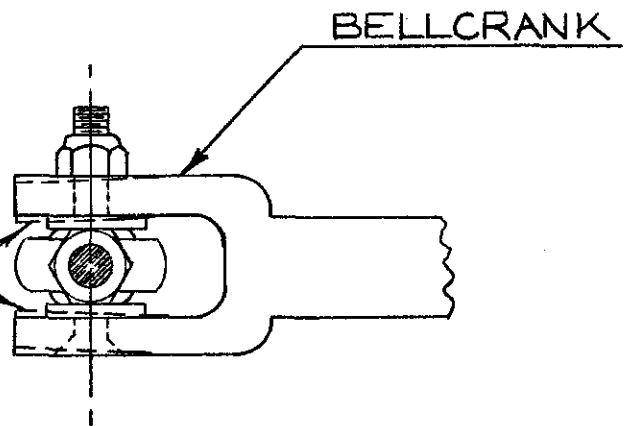


FIG.1  
INCORRECT ATTACHMENT

TOTAL CLEARANCE  
.015 MAX.

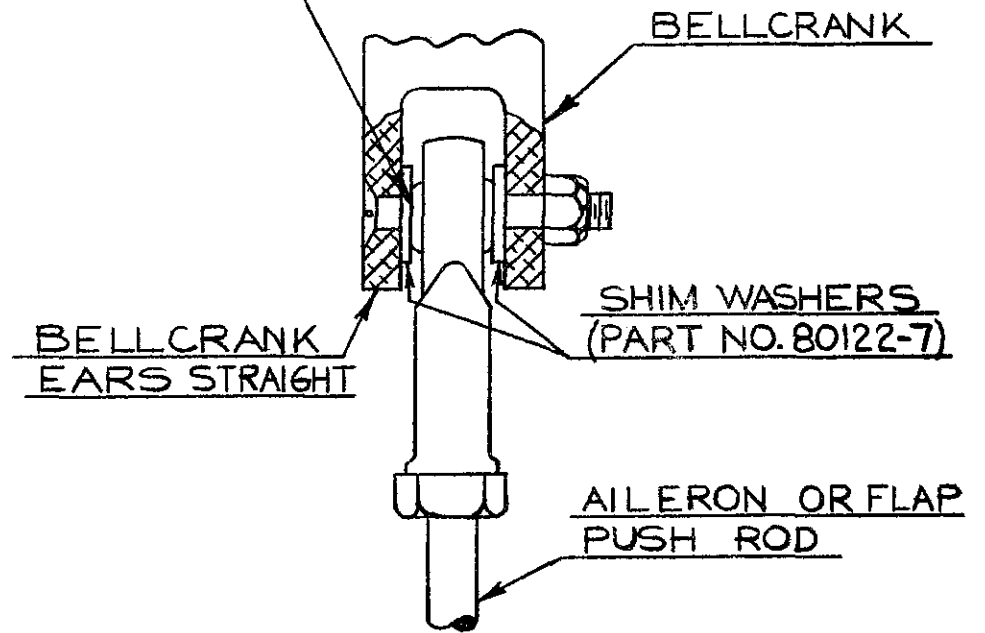


FIG.2  
CORRECT ATTACHMENT