



# FIELD SERVICE NEWS

FUJI HEAVY INDUSTRIES LTD.

HEAD OFFICE

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## METHOD OF SNAP RING INSTALLATION

FOR

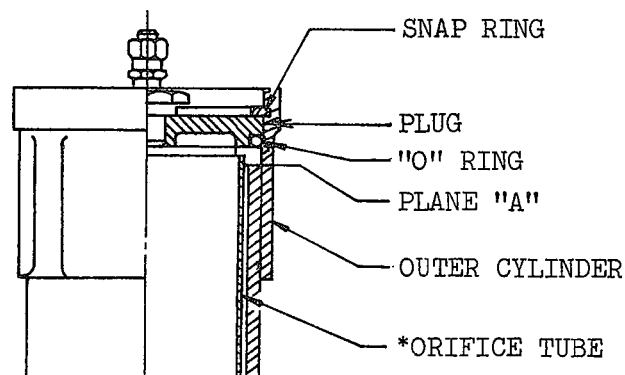
FA-200 NOSE AND MAIN LANDING GEARS

### 1. DESCRIPTION

Reports from the field reflect a requirement for clarification concerning proper installation of the snap rings used in FA-200 main and nose landing gears, since these snap rings, if improperly installed, may become disengaged from groove due to vibration during flight.

If snap ring, particularly one seated in groove in the top end of outer cylinder, becomes disengaged, hydraulic fluid and air pressure in oleo will bleed rapidly, resulting in a serious damage or accident. It is, therefore, recommended that the following precautions be kept in mind all the time when performing maintenance and inspection of snap rings.

Although the following paragraph 2 describes the snap ring used in groove in the top end of outer cylinder, the information contained is also applicable to snap ring installation at other portions, such as orifice tube, shimmy damper, etc.



\* Applicable to S/N 51 and on.

FIGURE 1. TOP END OF LANDING GEAR STRUT

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## 2. GENERAL PRECAUTIONS FOR SNAP RING INSTALLATION

- (1) Snap ring groove should be free from dirt or other foreign particles.
- (2) Snap ring seating portion in cylinder is designed to minimize clearance between plug and snap ring for increasing airtightness of oleo. (On some airplanes, shims are placed on plane "A" for this adjustment.) Due to the above design characteristic, such difficulty may be encountered as plug top surface interferes with snap ring when trying to seat in groove.
- (3) After installation, make sure the snap ring is seated snugly in groove as follows:
  - (a) Check for complete engagement in groove at the three points A, B, and C as shown in figure 2.
  - (b) Press the snap ring in the "arrow mark" direction.

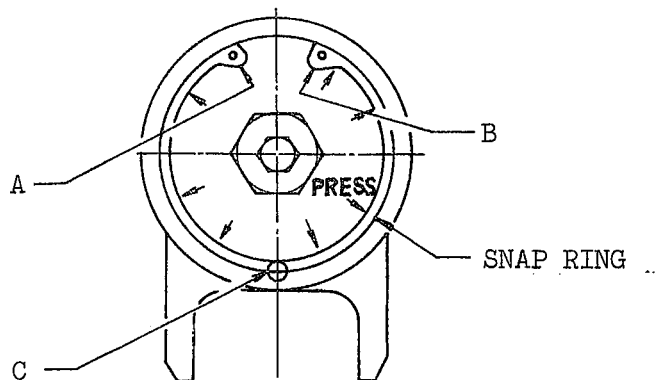


FIGURE 2. TOP END OF LANDING GEAR STRUT  
(VIEW LOOKING DOWN)

- (4) Normally snap rings are fabricated by "blanking" and have such cross section as shown in figure 3, section A-A. To prevent disengagement from groove, snap ring should be assembled with thrust load applied against its raised surface as illustrated in figure 4.

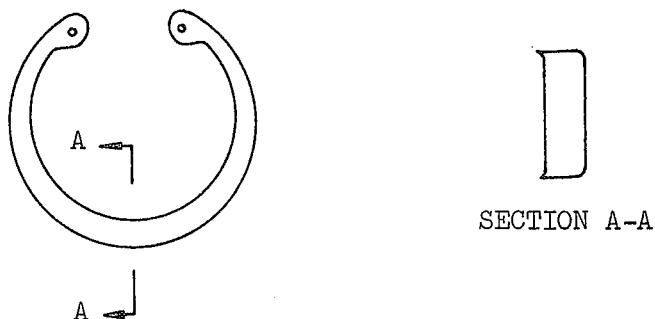


FIGURE 3. SNAP RING

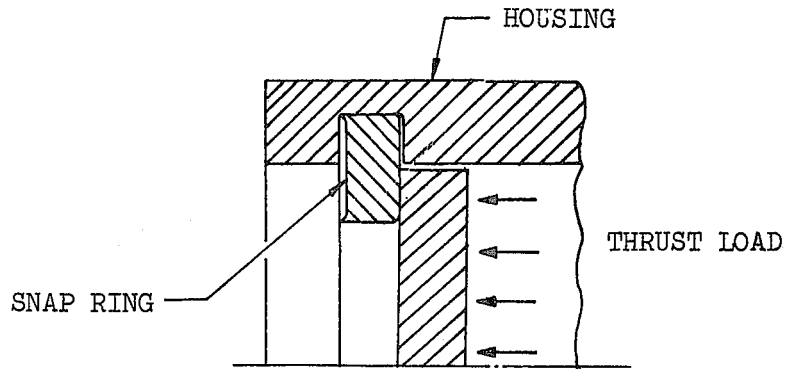


FIGURE 4. DETAILS FOR SNAP RING INSTALLATION

- (5) Do not chamfer or damage sharp edges at groove, as they are intentionally made sharp to hold ring securely in place.

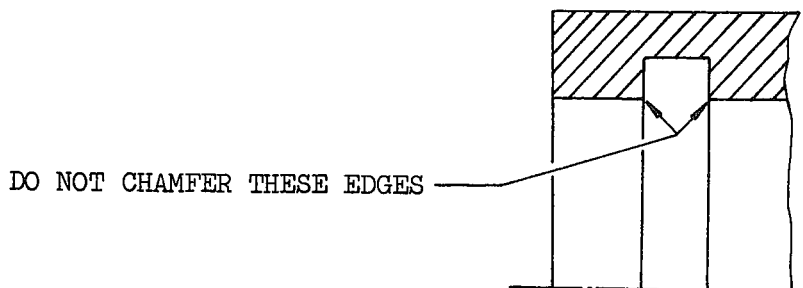


FIGURE 5. DETAILS FOR SNAP RING GROOVE

- (6) When reinstalling a snap ring that has been once used, check for deflection of ring outside diameter and, if found faulty, be sure to replace it with new serviceable item.