

L. A. Beihl

SERVICE

Service Letter No. 492



"F.A.A. DOA EA-1 Approved"

LETTER

September 6, 1967

Subject:

I General Instructions for Inspection and Operation of Landing Gear Selector Handle and Associated Link Rod to Powerpak

II Replacement of Nose Gear Idler Link Assembly

Models Affected:

PA-31 Navajo

Serial Numbers Affected:

See Below

I - Inspection and Operation of Landing Gear Selector
Handle and Associated Link Rod to Powerpak

Serial Numbers Affected:

31-2 to 31-7 incl., 31-9 to 31-17 incl., 31-20 to 31-24 incl., 31-27 to 31-30 incl., 31-32, 31-34 and 31-36

Place aircraft on jacks. The landing gear selector handle must be operated through its entire travel, both up and down. The operation of the selector handle must give the "feel" of having made a positive engagement with a detent. With the selector handle in the up or down position and in the detent, a force of 3 1/2 to 6 lbs. applied perpendicular to the center line of the handle at the center line of the knob will be required to move the handle from the detent and return to neutral position.

The following instructions must be accomplished in obtaining selector handle force requirements:

1. Should the landing gear selector handle not release at the required force of 3 1/2 to 6 lbs., the linkage should be checked for adequate clearances. Several areas which should be checked for clearances in regard to the selector handle and powerpak link rods are as follows:
 - a. Ascertain that the landing gear selector handle, when actuated to the extremes of its travel, does not contact the ends of the slot in the instrument panel.
 - b. Inspect and be certain of adequate clearance between landing gear selector lever mechanism and wiring harness which runs laterally across the aircraft.
 - c. Ascertain sufficient clearances between control rod and alternate air control cable and control rod and manifold pressure lines.
 - d. Determine adequate clearance between the lateral channel section which supports hydraulic brake lines etc. and the control rod.
 - e. Maintain positive clearance between control rod and hole through bulkhead at station 81.

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1. f. Determine that there is no interference of rubber boot with control rod and ascertain that there is no interference between the boot retainer and the control rod.
2. If the clearances are adequate, then determine if the handle linkage rods and/or the handle release mechanism on the powerpak are out of adjustment. Check the adjustment of the selector handle linkage rods first. The short rod that is attached to the selector handle mechanism directly forward of the instrument panel is adjusted to allow the center line of both the selector mechanism arm and the torque tube arm to align parallel. The long rod, between the torque tube and the control arm on the right side of the powerpak is adjusted to allow the selector handle to be neutral; that is, position itself midway between up and down as shown in the attached sketch, when the arm on the powerpak is at neutral. Depress the button of the solenoid lock to allow the handle to travel freely between the two neutral positions. To check the handle release mechanism, disconnect the control rod from the arm and the powerpak, connect a spring scale to the arm and pull both fore and aft, perpendicular to the center line of the arm, to determine that it will leave the detent at a force of 9 + 1 - 2 pounds. If it does not release at the required force, adjust the mechanism per paragraph 6-40 of the PA-31 Service Manual.
3. Again check that the handle will leave the detent at 3 1/2 to 6 lbs.

A Warranty and Credit Claim may be submitted for five (5) hours of labor to accomplish inspection and adjustments.

II - Replacement of Nose Gear Idler Link Assembly

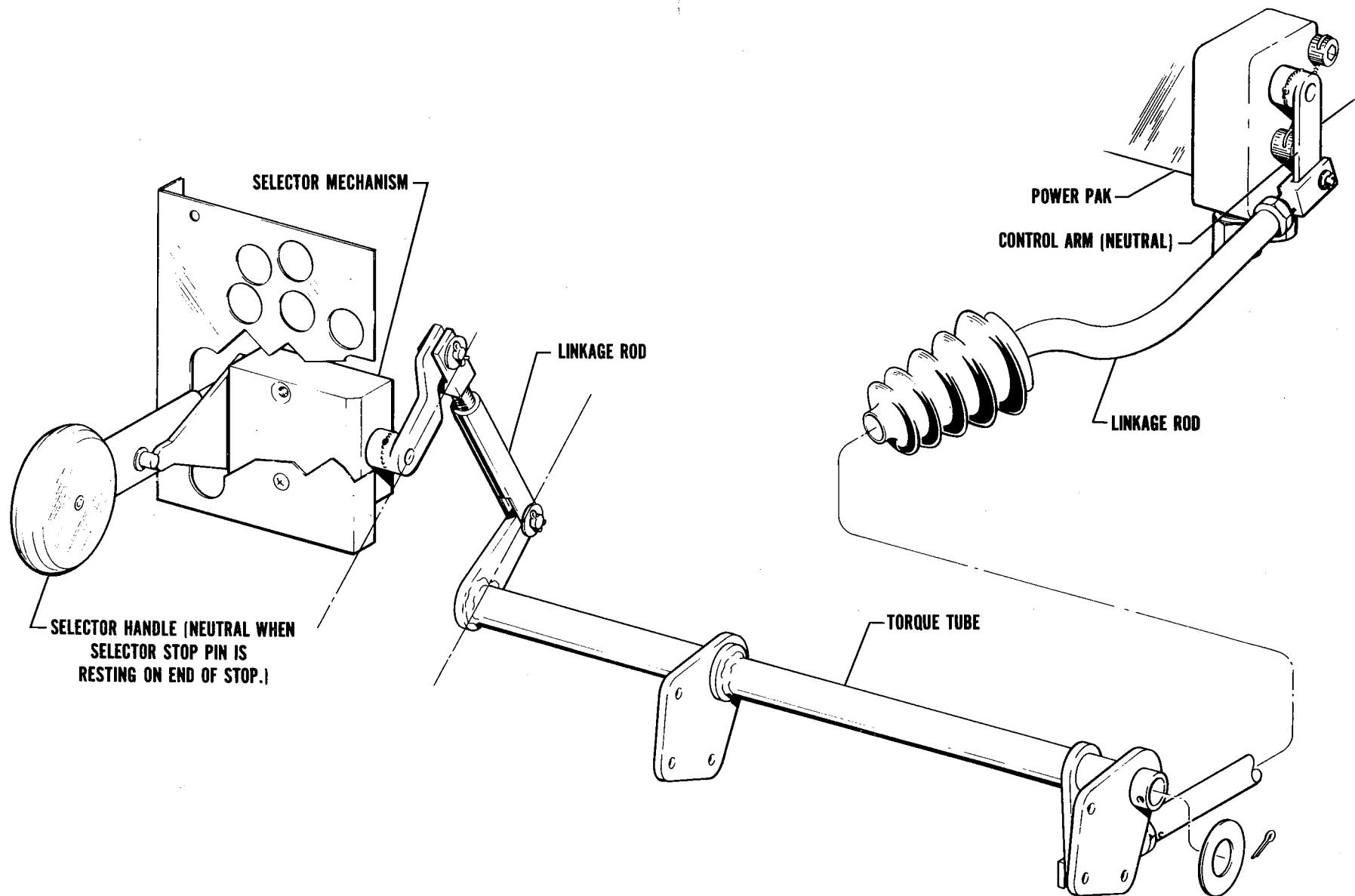
Serial Numbers Affected: 31-2 to 31-7 incl., 31-9 to 31-17 incl., 31-20 to 31-24 incl., 31-27 to 31-29 incl., 31-31, 31-32.

The Nose Gear Idler Link Assembly, part number 40296-00, must be replaced in the subject aircraft as soon as possible. NOTE: Aircraft must be placed on jacks prior to removal and replacement of Nose Gear Idler Link Assembly.

After installation of the link assembly, it must be adjusted in accordance with the Navajo Service Manual Page 7-11, paragraphs J and K. However, the through center figures called out in paragraph K shall be changed to .180 to .250 through center.

A Warranty and Credit Claim may be submitted for the Nose Gear Idler Link Assembly, part number 40296-00 and two (2) hours of labor to accomplish this replacement.

The inspections and adjustments mentioned in this letter indicate aircraft serial number effectivity only, however, all of these items should be retained as general maintenance information and followed when any changes are made in these areas on any Navajo aircraft.



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