

7-34. REMOVAL OF RETRACTION TRANSMISSION ASSEMBLY. (Refer to Figure 7-14.)

- a. Remove the gear retraction transmission assembly by using the following procedure:
 1. Place the airplane on jacks. (Refer to Jacking, Section II.)
 2. Open the retraction transmission access door located between the two front seats.
 3. Disconnect transmission motor electrical leads by sliding back the protective covering and uncoupling the quick disconnect terminals.
 4. Place the emergency retraction release handle (18) in the full up position.
 5. Disconnect the transmission retraction spring located on the left side of the transmission housing.
 6. Remove the cotter pin, washer and pin (12) attaching the transmission housing to the mounting bracket.
 7. Remove the transmission assembly from the well.

7-35. CLEANING, INSPECTION AND REPAIR OF GEAR RETRACTION TRANSMISSION. (Refer to Figure 7-13.)

- a. Remove the six screws attaching the transmission cover (7) to transmission housing and remove the cover noting the position of the mounting lug.
- b. Wipe the old grease from the transmission housing and from the actuator screw (4) and screw nut (3).
- c. Check the gear release arm (1) and ascertain that it will snap lock in place and will require a load of 6 to 12 pounds applied at the end of the arm to release. Adjust by spreading or compressing the arm sides at the round head rivets to obtain proper fit. Once the arm is released, ascertain that there is no binding through its travel.
- d. Inspect the transmission screw and tube nut (2) for end and side play and ascertain that they are not distorted or bent.
- e. Check that the screw bearing (9) is not loose on the transmission screw or within the transmission housing. A loose bearing can be determined by holding the transmission and moving the screw up and down. This check can also be made when the transmission is installed in the airplane, with the landing gear partially retracted, by applying a load to the emergency extension handle and noting play.
- f. Check for wear within the transmission by turning the transmission screw (4) by hand and noting end play in the transmission drive shaft (24). End play usually indicates a worn thrust bearing or a loose connection between the thrust bearing and drive shaft. If end play is in excess of 0.015 of an inch, the transmission should be replaced.

g. The coupling (10) between the transmission and motor may become worn to a point where the metal inserts in the coupling protrudes from the rubber, thus causing chatter. This chatter may be eliminated by grinding the metal inserts until they are 0.010 to 0.015 of an inch below the surface of the rubber. This grinding operation may be repeated until the coupling reaches a minimum diameter of one inch and then should be replaced.

h. Adjust the motor brake (20) (early type) by adjusting the nut on the brake support rod (22) until the brake disc (18) clears the highest point on the retraction transmission coupling. Hold the brake disc firmly against the brake solenoid while making this adjustment.

i. The only adjustment required for the later type motor is to align the brake solenoid unit with the transmission coupling which is accomplished by adjusting the nut on the brake support rod.

j. Fill the transmission housing with grease per special instruction found on Lubrication Chart in Section II of this Service Manual.

7-36. INSTALLATION OF RETRACTION TRANSMISSION ASSEMBLY. (Refer to Figure 7-14.)

a. Ascertain that the transmission is properly lubricated and position it in the transmission well.

b. Align the transmission mounting lug (27) with the hole in the mounting bracket (28) and secure with pin (12), washer and cotter pin.

c. Attach the retraction spring (22 or 23) to the transmission and adjust the cotter pin between the spring and floorboard to maintain enough tension on the spring to hold the transmission away from the retraction torque tube during emergency gear extension.

d. Lubricate the torque arm through bolt (13) and hook the transmission tube (19) over the bolt.

e. Place the emergency release handle (18) in the down and locked position, locking the transmission release tube around the through bolt.

f. Connect the electrical leads and slide the protective covering over the terminals and tie at both ends.

g. Check for proper operation and adjust. (Refer to Paragraph 7-44.)