

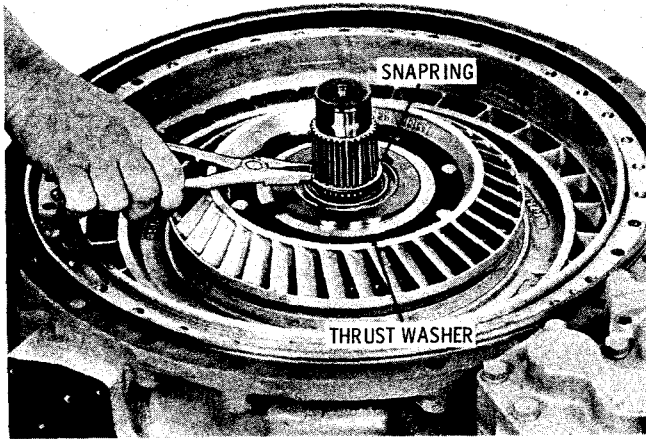


Fig. 7-77. Installing turbine shaft snapping (fixed-capacity, 4-element converter)

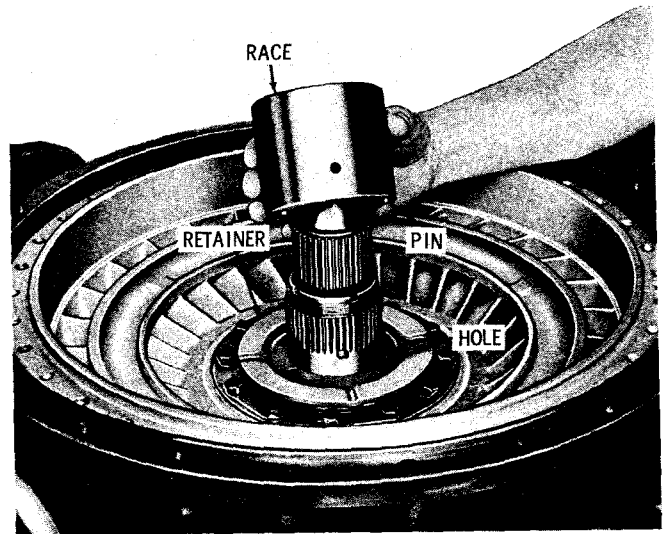


Fig. 7-79. Installing freewheel roller race (variable-capacity, 3-element converter)

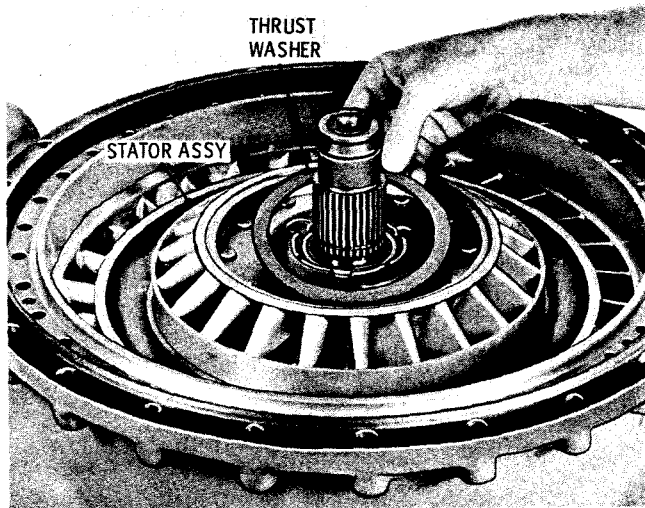


Fig. 7-78. Installing stator front thrust washer (fixed-capacity, 3-element converter)

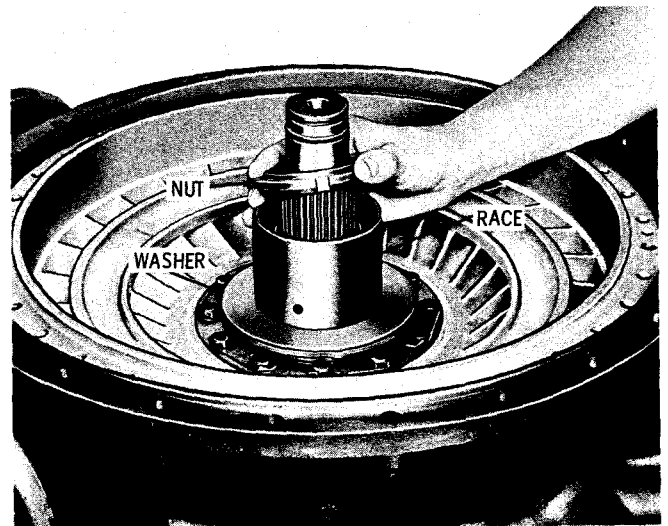


Fig. 7-80. Installing freewheel roller race spanner nut (variable-capacity, 3-element converter)

(7) On the 3-element, fixed-capacity converter install the converter stator assembly (fig. 7-78). Install the thrust washer. Check to make sure the stator freewheels clockwise—locks up in the opposite direction. If used, install the snapping into the groove in the turbine shaft.

(8) On the 3-element (variable-capacity) converter, install the retainer (fig. 7-79), smooth side up. Install the stator freewheel roller race, engaging the pins into the holes. Continue assembly through (11), below.

(9) Install the thrust washer onto the retainer (fig. 7-80). Install the spanner nut onto the

converter ground sleeve. Using a spanner wrench, tighten the nut to 275 to 325 pound feet torque. Stake the outer flange of the spanner nut into one of the notches in the stator freewheel race.

(10) With variable-capacity installation sleeve in place in the stator, install the variable stator assembly, bolt heads down (fig. 7-81). Remove the sleeve after the stator is firmly seated.

(11) Install the bronze thrust washer (fig. 7-82).

Para 7-3

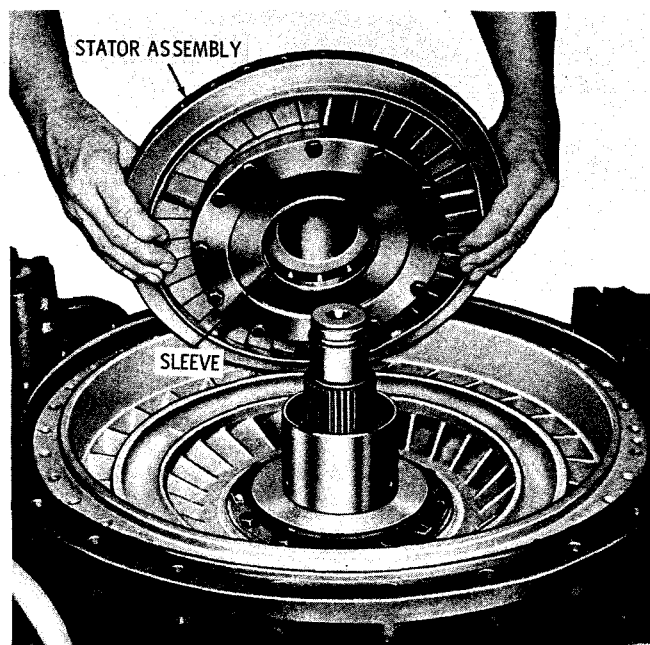


Fig. 7-81. Installing variable-capacity stator assembly S1721

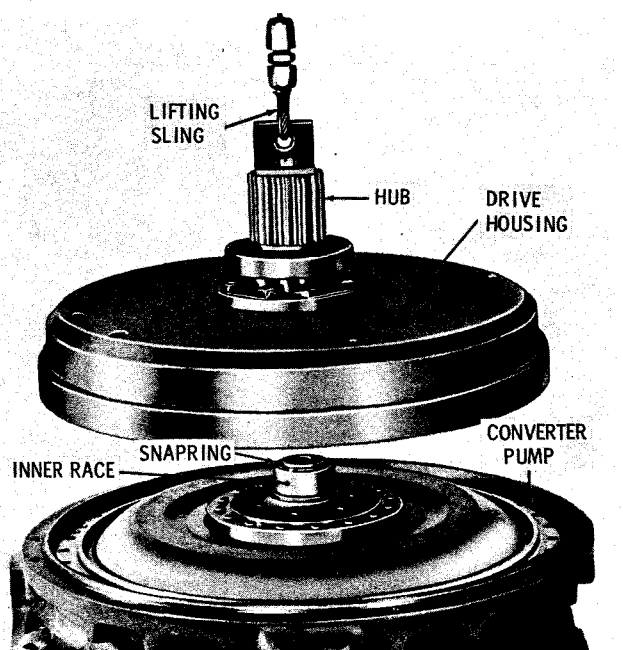


Fig. 7-83. Installing converter drive housing assembly (CT, CBT) S1722

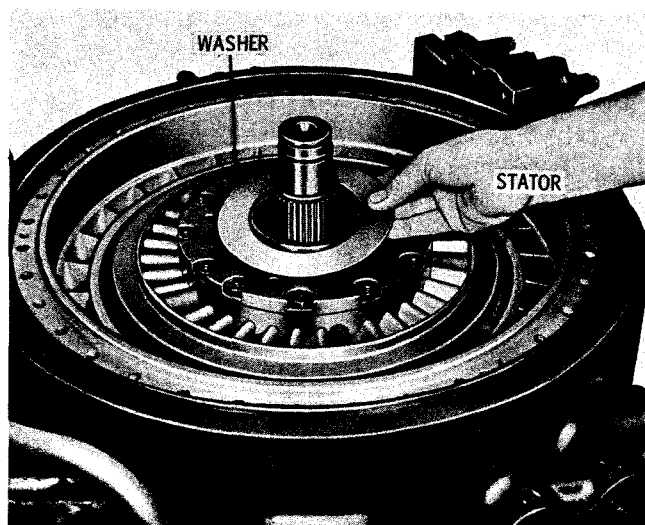


Fig. 7-82. Installing stator front thrust washer (variable-capacity converter) S1572

k. Installing Torque Converter Turbine, Lockup Clutch, and Input Components (remote mount)

(1) On models having no lockup clutch, install the torque converter turbine (fig. 7-83). Make sure that either an internal snapping is in the hub of the turbine or, in earlier models, an external snapping is in place on the turbine output shaft prior to turbine installation. Continue assembly through (4), below.

(2) On models having no lockup clutch, install bearing spacer 3(A, foldout 6) only when snapping 4 is used in the bore of turbine 8.

(3) Install the roller bearing inner race onto the turbine output shaft (fig. 7-83). Install the snapping that retains the race.

(4) Install the converter drive housing assembly onto the converter pump (fig. 7-83).

(5) On models having a lockup clutch, install the torque converter turbine (fig. 7-84). Make sure that either the internal snapping is in the turbine hub or, in earlier models, an external snapping is in place on the turbine output shaft. Continue assembly through (12), below.

(6) Install bearing spacer 3 (A, foldout 6) only when snapping (4) is installed in the hub of turbine 6.

(7) Install the roller bearing inner race (fig. 7-85). Install the snapping to retain the race. Install the step-joint (or hook-type) sealing onto the turbine output shaft.

(8) Install the lockup clutch back plate, flat side upward, onto the torque converter pump (fig. 7-85). Install the lockup clutch plate.

(9) Install the sealing onto the hub of the converter drive housing (fig. 7-86). Install

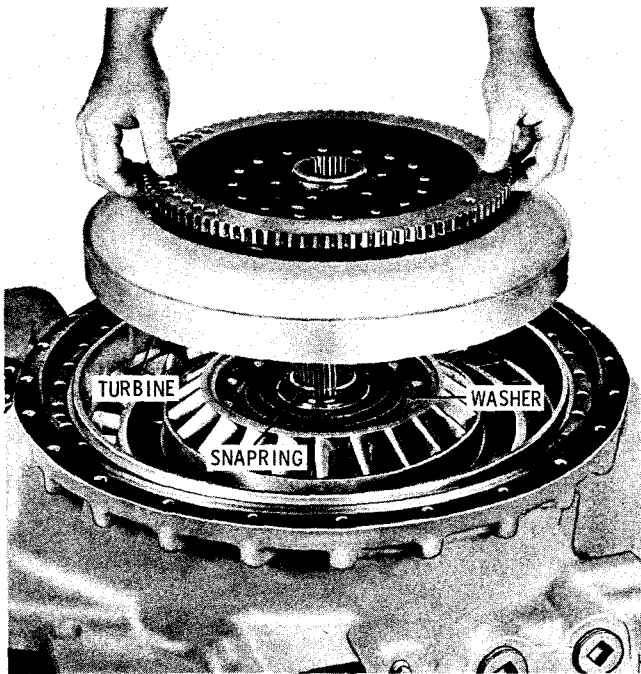


Fig. 7-84. Installing torque converter turbine (CLT, CLBT, VCLT, VCLBT)

S1723

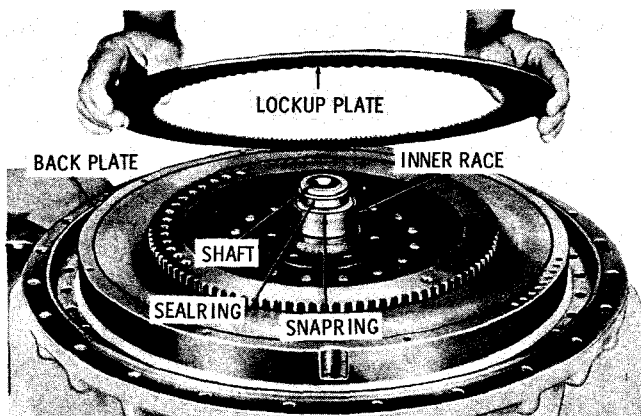


Fig. 7-85. Installing lockup clutch plate (CLT, CLBT, VCLT, VCLBT)

S1724

the sealring onto the piston. Install the piston, engaging the recesses in the piston with four dowel pins in the housing.

(10) On earlier models, install the wave-type clutch piston return spring onto the clutch piston. Use oil-soluble grease to retain the spring until housing is installed.

(11) Install two anchor keys 26 (C, fold-out 5). into the recesses in the bore of the converter drive housing. Retain them with oil-soluble grease. These keys are not required prior to S/N 19246.

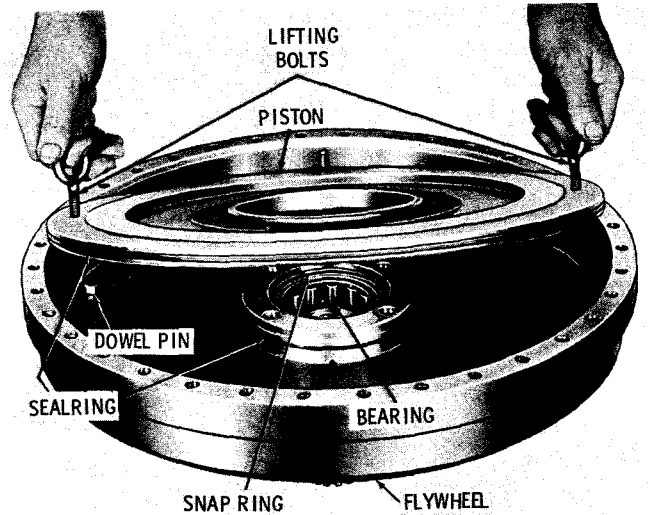


Fig. 7-86. Installing lockup clutch piston (CLT, CLBT, VCLT, VCLBT)

S1725

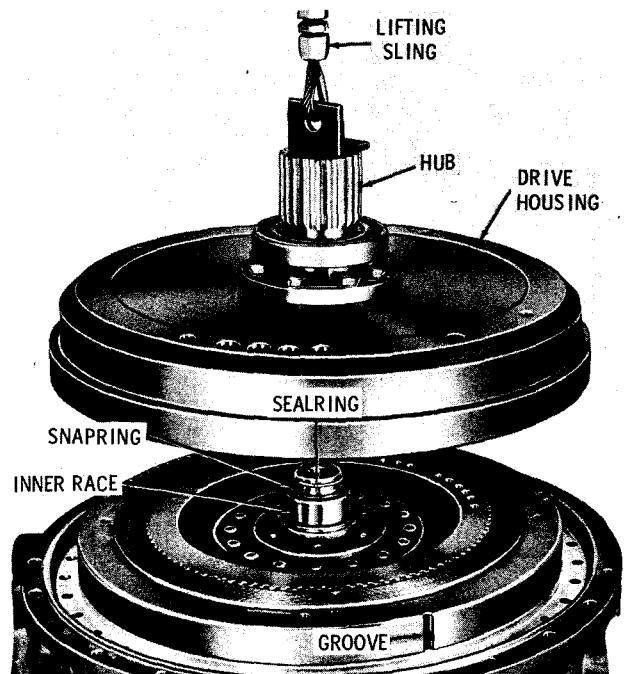


Fig. 7-87. Installing converter drive housing

S1726

(12) Install the converter drive housing, with clutch piston, anchor keys and return spring (if used) onto the torque converter pump (fig. 7-87). The single anchor key on models prior to S/N 19246, or two anchor keys on later assemblies must engage respective slots in the lockup clutch back plate.

Para 7-3

(13) On all remote-mount models, rotate the drive housing on the converter pump to align the bolt holes (fig. 7-88). Through the PTO opening, install four 3/8-24 x 1 1/4-inch, self-locking bolts, with flat washers, at 90° intervals. Tighten these bolts to 10 pound feet torque.

(14) Install the remaining 32 bolts and flat washers. Tighten all 36 bolts to 41 to 49 pound feet torque.

(15) Install the gasket and converter housing front cover, aligning the oil passages (fig. 7-89). Secure the cover with twenty-one 7/16-20

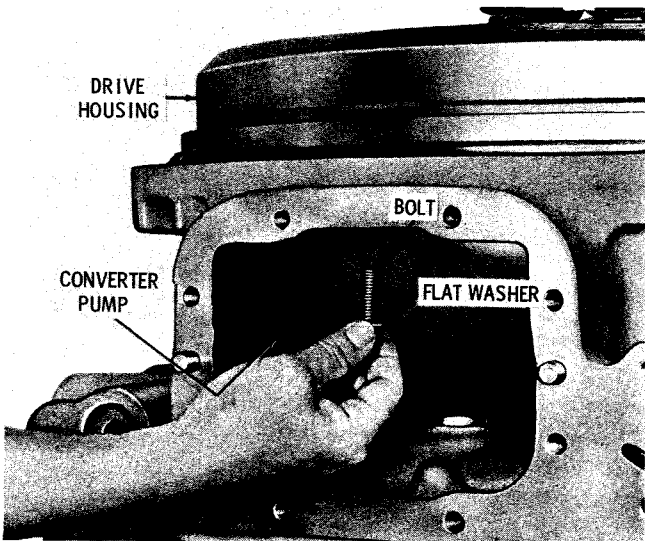


Fig. 7-88. Installing converter drive housing bolts S1727

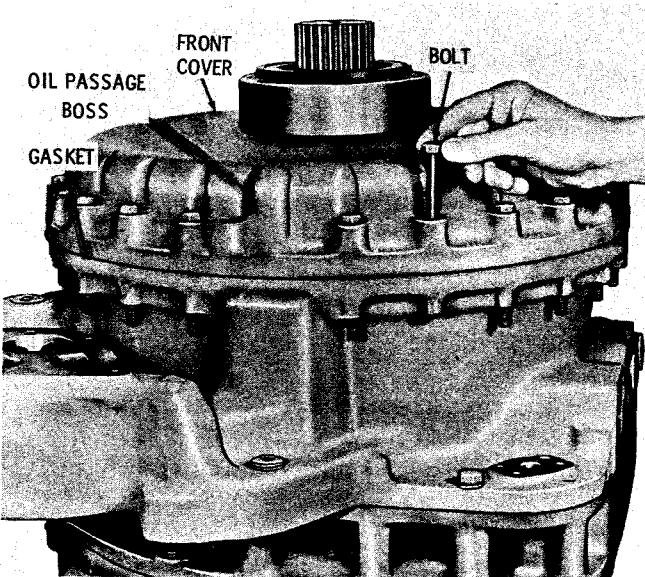


Fig. 7-89. Installing converter housing front cover bolts S1728

x 3 1/2-inch (CT, CBT) or 4-inch (CLT, CLBT) bolts, lockwashers and nuts. Tighten the nuts to 25 to 30 pound feet torque.

1. Installing Torque Converter Turbine, Lockup Clutch, and Input Components (direct mount)

(1) On models having no lockup clutch, install the torque converter turbine as outlined in k(1), (2) and (3), above.

(2) On models having no lockup clutch, position the transmission horizontally, and, using the flywheel hook shown in figure 4-1, install the flywheel assembly. Retain the flywheel as outlined in k(13) and (14), above.

(3) On models having a lockup clutch, install the torque converter turbine and lockup clutch back plate and clutch plate as outlined in k(5) through (8), above.

(4) On models with a lockup clutch, install the lockup clutch piston and related components into the flywheel as outlined in k(9), (10) and (11), above.

(5) Using the flywheel hook, shown in figure 4-1, install the flywheel with lockup clutch components onto the transmission (fig. 7-90). Refer to k(12), (13) and (14) for alignment of components during installation.

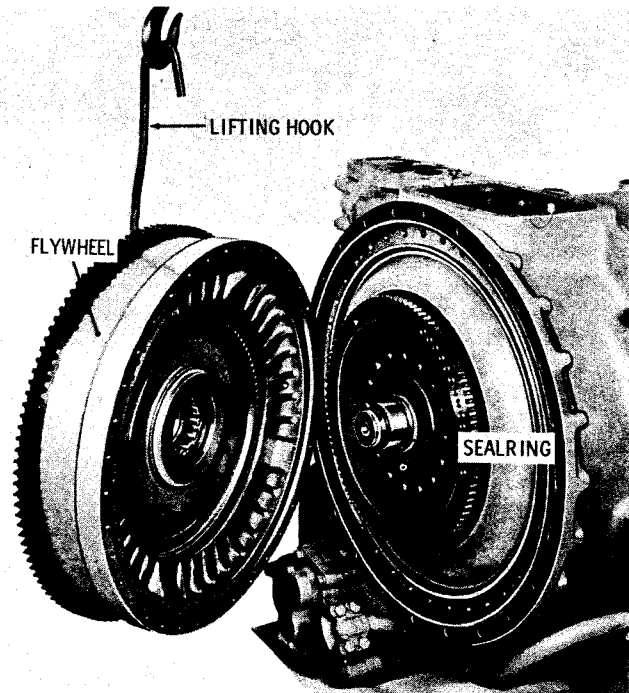


Fig. 7-90. Installing flywheel assembly (direct mount, lockup models) S1563

(6) Install four 3/8-24 x 1 1/4-inch, self-locking bolts, with flat washers, at 90° intervals (fig. 7-91). Tighten these bolts to 10 pound feet torque. Install the remaining 32 bolts and flat washers. Tighten all 36 bolts to 41 to 49 pound feet torque.

m. Installing Exterior Components (all models)

(1) Install the oil pump drive gear coupling onto the oil pump drive gear shaft (fig. 7-92). Install the oil pump gasket onto the converter housing. Install the oil screen, if removed during disassembly (ref para 5-3d(1)). Install the input-driven charging and

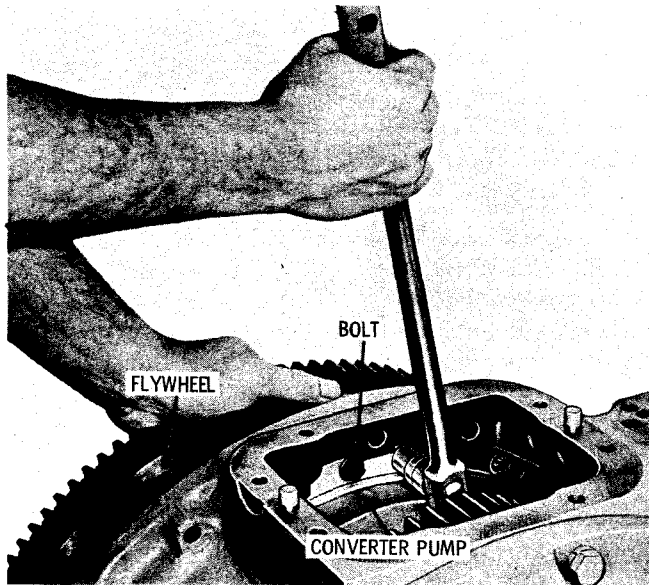


Fig. 7-91. Tightening flywheel bolts

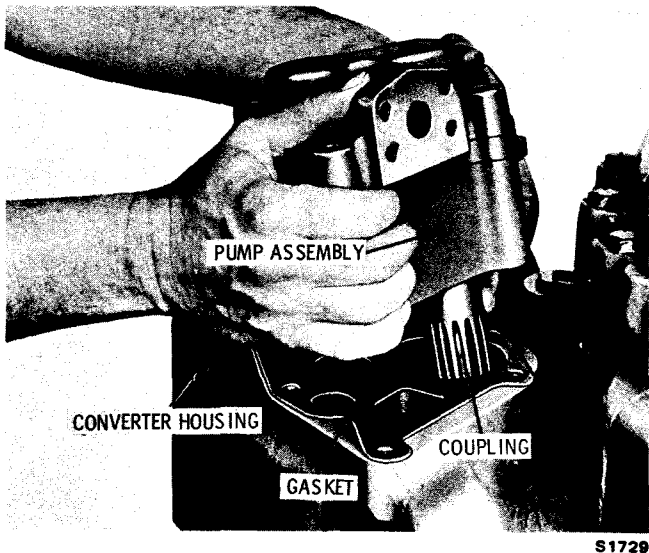


Fig. 7-92. Installing oil pump assembly

scavenge oil pump assembly onto the converter housing. Secure the pump with six 3/8-16 x 4 1/2-inch (earlier models) or 5-inch (later models) bolts and lockwashers (refer to items 21, 22 in B, foldout 7). Tighten the 4 1/2-inch bolts to 26 to 32 pound feet torque; the 5-inch bolts to 36 to 43 pound feet.

(2) Install two scavenge oil discharge tube gaskets. Install the tube (fig. 7-93) and secure it with four 3/8-16 x 1 3/4-inch bolts and lockwashers at the pump end of the tube, and four 3/8-16 x 1-inch bolts and lockwashers at the other end (refer to items 18 through 26 in B, foldout 7). Tighten the bolts to 26 to 32 pound feet torque.

NOTE

In the assembly of transmission with vertical transfer gear case, omit procedures (3) and (4), below.

(3) Install headless guide bolts into the bottom of the transmission housing (fig. 7-94). Install the transmission oil pan gasket onto the transmission housing. Install the transmission oil pan onto the transmission housing. Secure the oil pan with four evenly spaced 3/8-16 x 1 1/8-inch bolts and lockwashers. Remove the headless

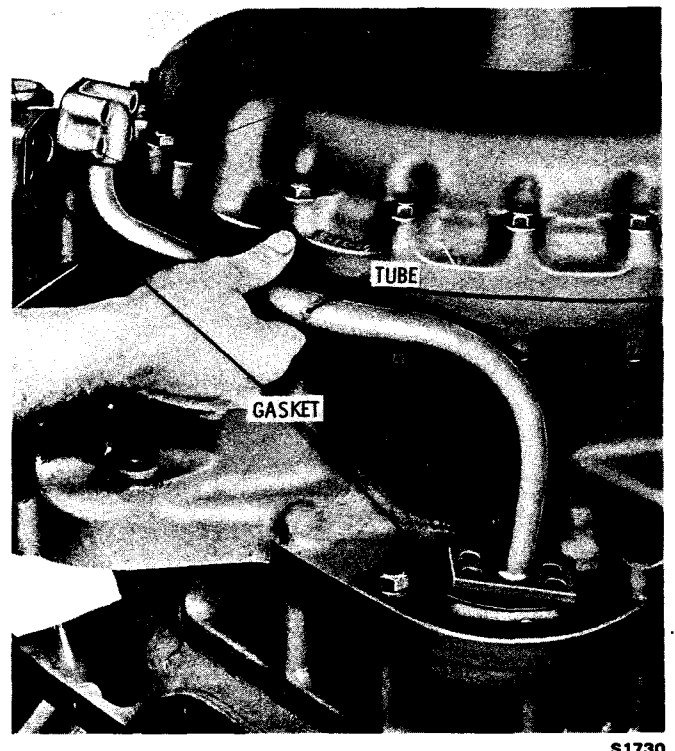


Fig. 7-93. Installing scavenge oil discharge tube

Para 7-3

guide bolts. Install the remaining twenty 1 1/8-inch bolts and lockwashers and four 3/8-16 x 5-inch bolts and lockwashers. Tighten the 1 1/8-inch bolts to 26 to 32 pound feet torque; tighten the 5-inch bolts to 36 to 43 pound feet.

(4) Install the oil strainer gasket and oil strainer assembly into the transmission oil pan (fig. 7-95). Secure the oil strainer with six 3/8-16 x 7/8-inch bolts and lockwashers. Tighten the bolts to 26 to 32 pound feet torque.

(5) Install the lockup shift valve body gasket. Install the lockup shift valve body as-

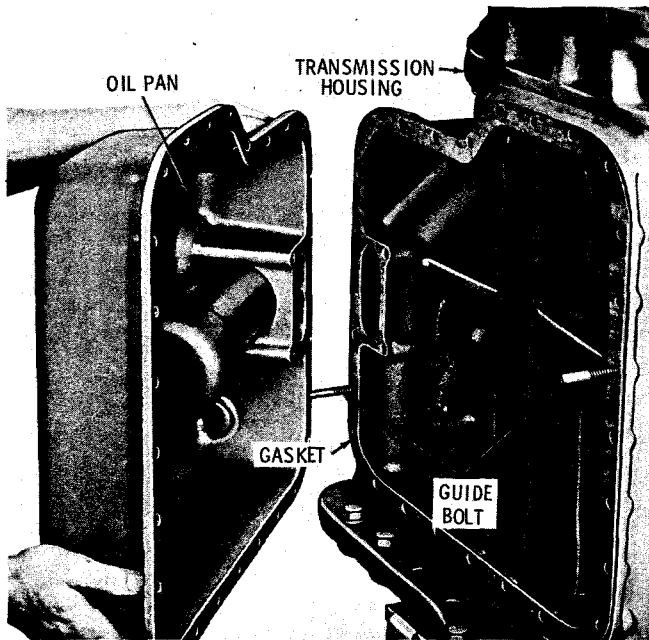


Fig. 7-94. Installing oil pan

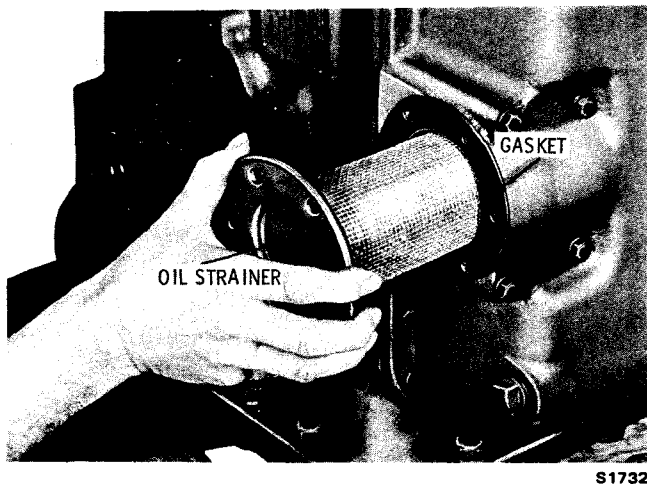


Fig. 7-95. Installing oil strainer assembly (straight-through models)

sembly onto the transmission (fig. 7-96). Install seven 3/8-16 x 2 3/4-inch bolts and lockwashers and two 3/8-16 x 1 1/8-inch bolts and lockwashers into the valve body. On CT and CBT models, cover 21 (B, foldout 10), and nine 3/8-16 x 1 1/2-inch bolts 23 and washers 22 are used here. Tighten the bolts to 26 to 32 pound feet torque.

(6) On 5660 and 5860 models, install two 3/8-16 headless guide bolts. Install the gasket and valve body assembly (fig. 7-97). If the valve body assembly is electrically actuated, refer to the supplement at the back of the manual.

(7) Install ten 3/8-16 x 1 1/2-inch bolts with lockwashers in locations A and B (fig. 7-98). (Start bolts in two locations and remove the guide bolts.) Install eight 3/8-16 x 2-inch bolts in locations C and D. Install six 3/8-16 x 3 1/2-inch bolts in location E. Tighten all bolts to 26 to 32 pound feet torque.

(8) On 5640 and 5840 models, install two 3/8-inch headless guide bolts into the oil transfer plate mounting pad (fig. 7-99). Install the oil transfer plate gasket onto the transmission. Install the oil transfer plate and secure it with ten 3/8-16 x 1 1/2-inch bolts and lockwashers (no bolts in machined surface where valve body mounts). When tightening the bolts, start with the one located in hole A, then proceed around the perimeter of the transfer plate. This is a precautionary measure to prevent the gasket from becoming distorted and damaged in use. Tighten the bolts to 26 to 32

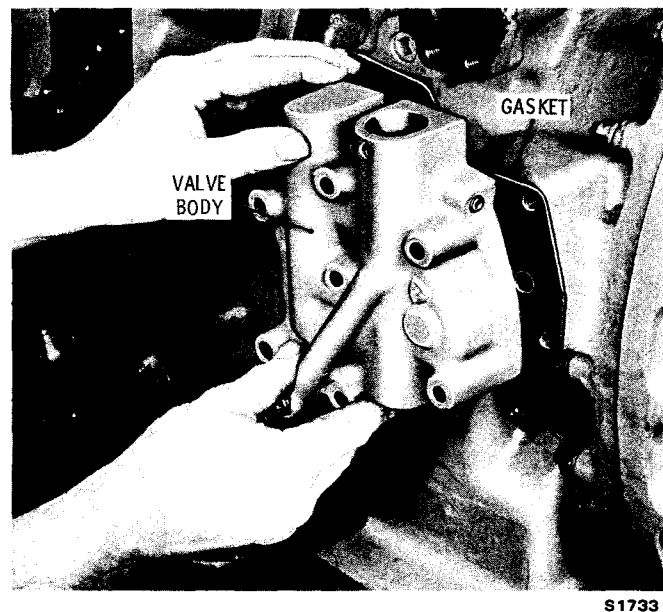


Fig. 7-96. Installing lockup shift valve body assembly

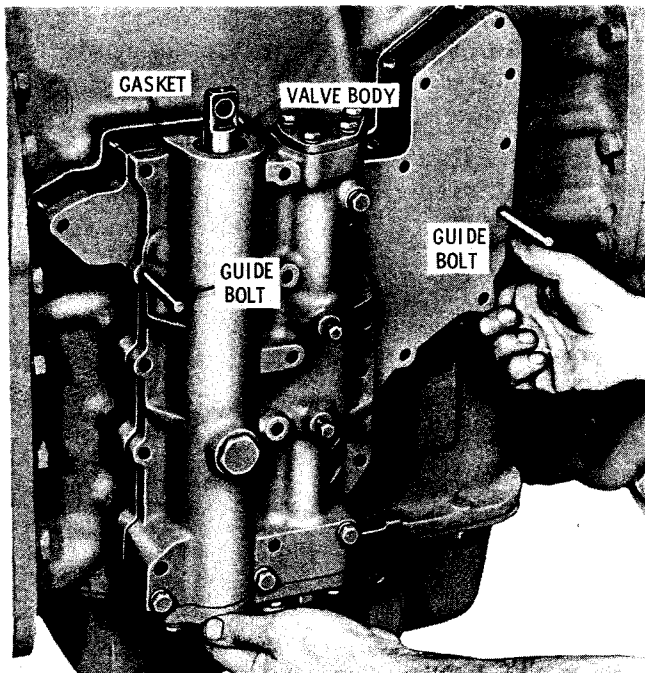


Fig. 7-97. Installing 6-speed control valve body assembly

S1734

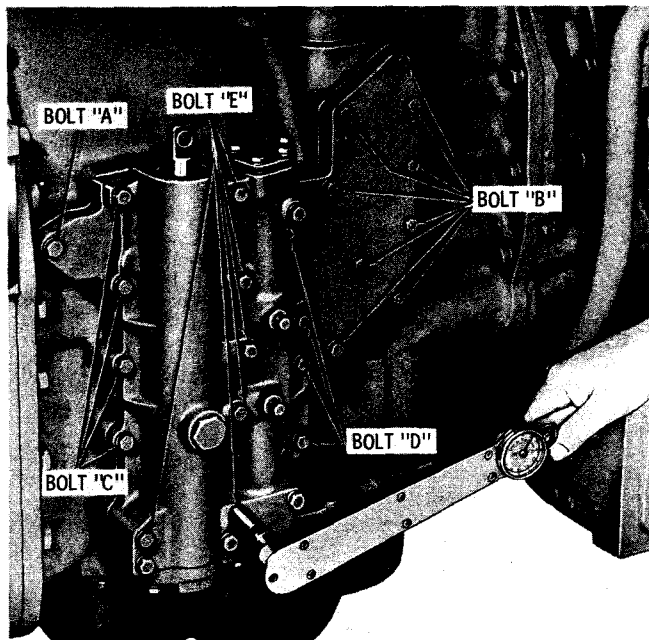


Fig. 7-98. Bolt locations for 6-speed control valve body assembly

S1735

pound feet torque. Do not remove the guide bolts. Complete the installation in (9), below.

(9) Install the control valve body gasket onto the oil transfer plate (fig. 7-100). Install the control valve body assembly onto the guide bolts. Install two 3/8-16 x 3 1/2-inch bolts and lockwashers into the valve body. Remove the guide bolts and install the remaining three 3 1/2-inch

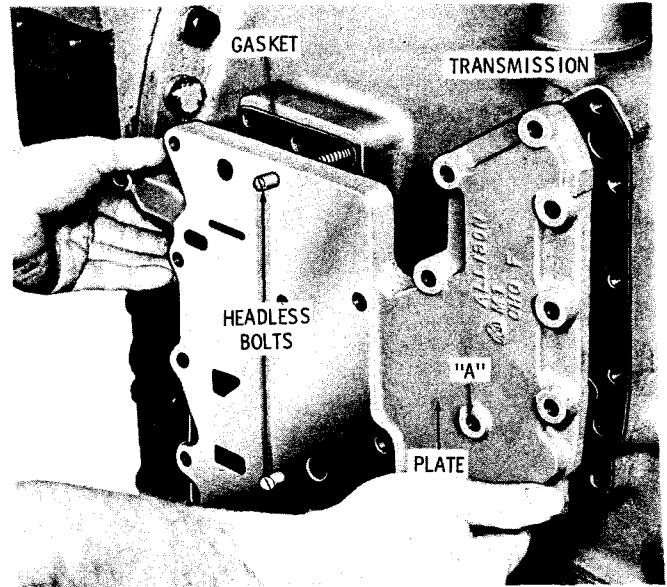


Fig. 7-99. Installing oil transfer plate (4-speed models)

S1736

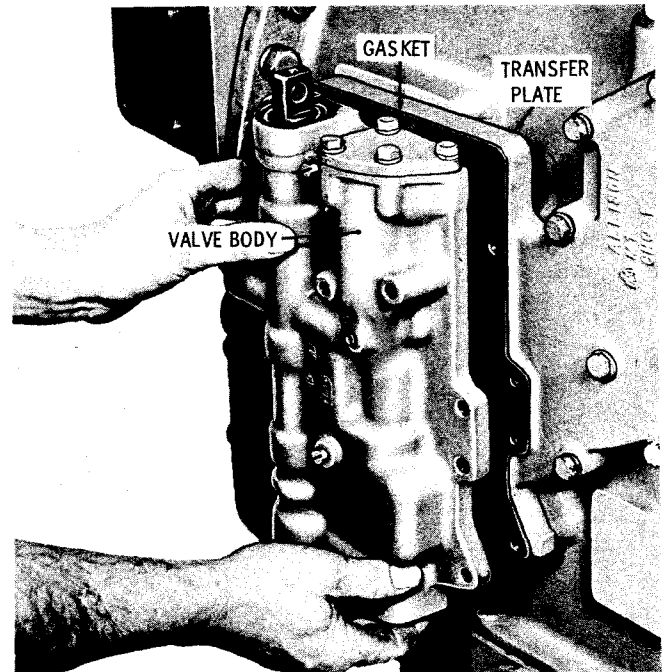


Fig. 7-100. Installing 4-speed control valve body assembly

S1737

bolts and lockwashers. Install eight 3/8-16 x 2-inch bolts and lockwashers. Tighten the bolts to 26 to 32 pound feet torque.

(10) Install the connecting block with a sealing at the upper location on the converter housing. Secure the block with two 7/16-14 x 2-inch and two 7/16-14 x 2 1/4-inch bolts and lockwashers (fig. 7-101). Tighten the bolts to 42 to 50 pound feet torque.

Para 7-3

(11) Install the pressure hose, sealrings and split flanges and retain with eight 7/16-14 x 1 1/4-inch bolts and lockwashers. Be sure the flanges and sealrings are properly seated. Shake the hose slightly and allow it to shift into position, free of binding.

(12) While holding the hose in its free position, tighten the bolts to 42 to 50 pound feet torque.

WARNING

Hose pressures and temperatures can exceed 350 PSI and 250°F. Protect them from vehicle physical contact. Abrasions will weaken the hose, and failure with possible personnel injury may occur.

NOTE

Earlier models used either the one piece or a flexible pressure hose assembly.

(13) On CLT, VCLT models only, install the lubrication regulator valve guide pin, spring, shims and valve (fig. 7-102). Note that the convex side of the valve is toward the converter housing. Refer to paragraph 3-15 for adjustment of lubrication pressure.

(14) Install the lubrication regulator valve cover gasket and cover, and secure with four 3/8-16 x 3/4-inch bolts and lockwashers. Tighten the bolts to 26 to 32 pound feet torque. Install two guide bolts into the retarder valve body mounting pad. Install the hydraulic retarder valve body gasket, restrictor plate 45 (B, foldout 11) and gasket 46. Earlier models require one gasket only. Install the retarder valve body assembly and secure with seven 3/8-16 x 4 1/4-inch (front port valve) or 3-inch (rear port valve) bolts and lockwashers, removing the guide

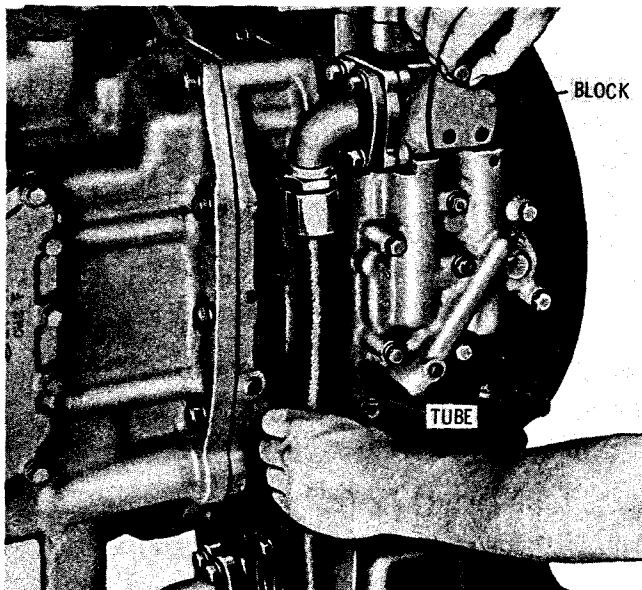


Fig. 7-101. Installing oil pump pressure tube S1738

bolts to install the final two retaining bolts (fig. 7-103). (Mounting bolts used on earlier models are 1/4-inch shorter.) Tighten the bolts to 26 to 32 pound feet torque.

(15) Install the power takeoff cover gasket, and cover. Secure with eight 7/16-14 x 7/8-inch bolts and lockwashers (fig. 7-104). Tighten the bolts to 42 to 50 pound feet torque.

NOTE

The main-pressure regulator and oil filter arrangement varies among transmission assemblies.

(a) When a separate pressure regulator assembly and remote-mounted filter are used, refer to (16), below, for current models or to (17) for earlier models.

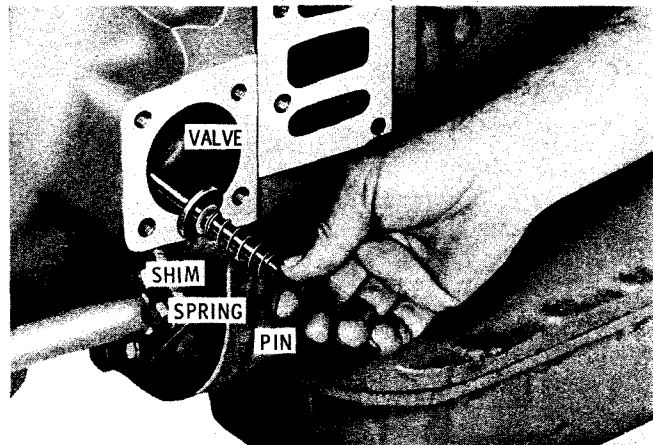


Fig. 7-102. Installing lubrication regulator valve components (CLT) S1739

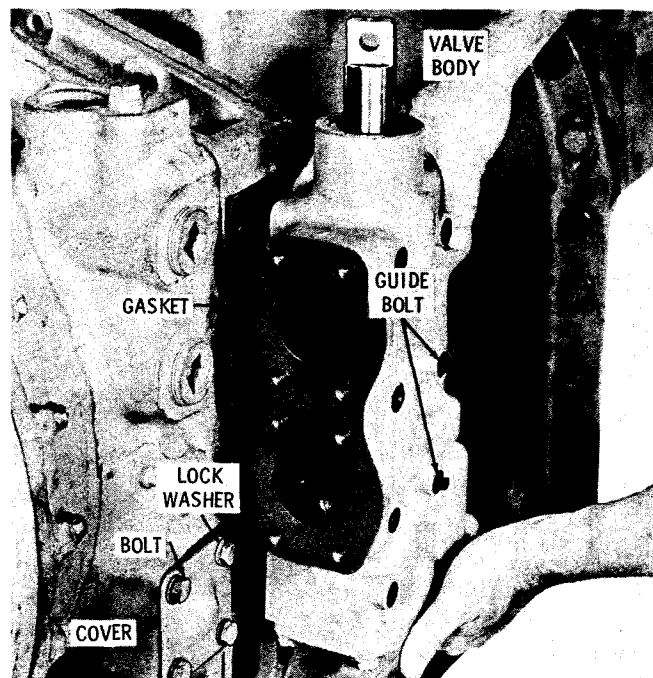


Fig. 7-103. Installing hydraulic retarder control valve body assembly S1740

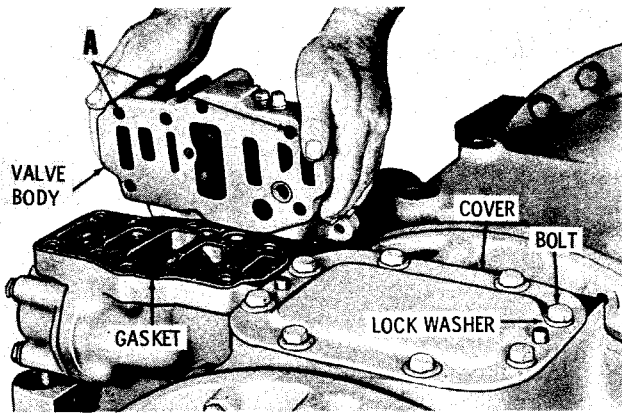


Fig. 7-104. Installing main-pressure regulator valve body assembly (current models except VCLT, VCLBT)

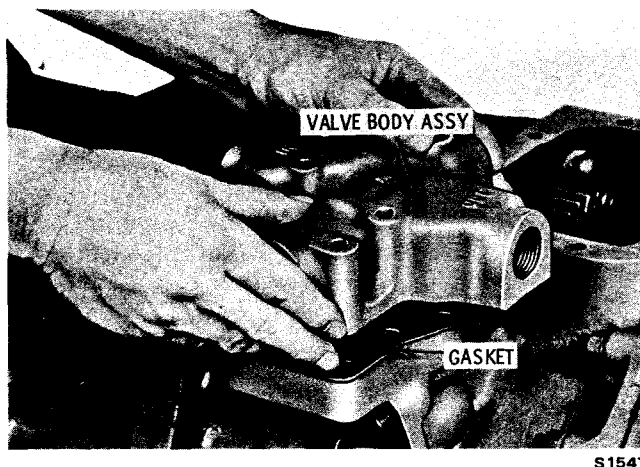


Fig. 7-105. Installing main-pressure regulator valve body assembly (early models)

(b) When a separate regulator, with filter mounted atop the regulator is used, refer to (16) and (18), below.

(c) For VCLT or VCLBT models, a stator control valve and adapter are required in addition to the main pressure regulator and filter. Refer to (19) through (22), below.

(d) When the filter assembly and main-pressure regulator are combined in one unit, and installed on an adapter 35, as shown in B, foldout 9, refer to (24) and (25), below.

(e) When a reversed filter assembly (filter shells toward front) is used, refer to (26), (27) and (28), below.

(f) For adjustment of the main-pressure regulator valve, refer to paragraph 3-14, above.

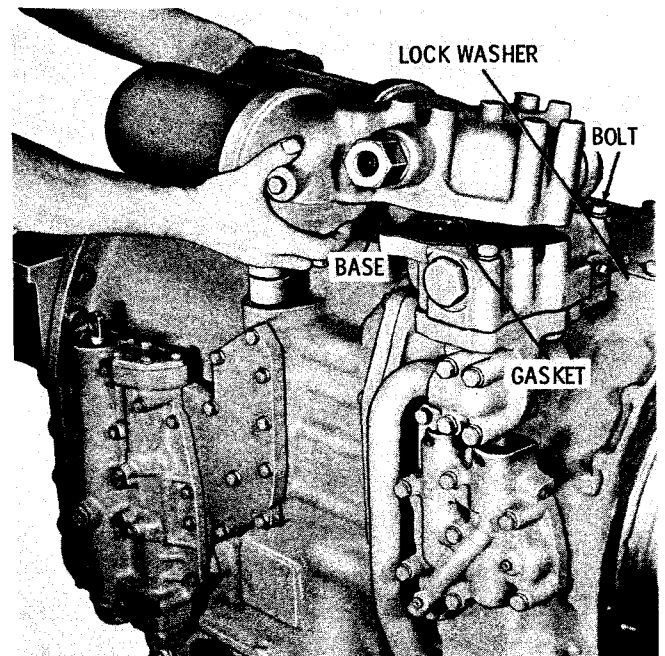


Fig. 7-106. Installing oil filter and base assembly

(16) Install the gasket and main-pressure regulator valve body assembly (fig. 7-104). When a remote-mounted filter is used, secure the regulator valve body with seven 7/16-14 x 3 1/2-inch bolts and lockwashers. Tighten the bolts to 42 to 50 pound feet torque. When a normal filter installation (filter shells toward the rear) is to be made atop the pressure regulator, install and tighten only two 7/16-14 x 3 1/2-inch bolts and lockwashers, in holes marked A (fig. 7-104).

(17) Install the gasket and main-pressure regulator valve body assembly (fig. 7-105). Secure the valve body with six 7/16-14 x 2 3/4-inch and one 7/16-14 x 1 1/4-inch bolts. Tighten the bolts to 42 to 50 pound feet torque.

(18) Install the oil filter and base assembly (fig. 7-106). Retain the assembly with five 7/16-14 x 8 1/4-inch, and two 7/16-14 x 4 1/2-inch bolts. Tighten the bolts to 42 to 50 pound feet torque.

(19) Install the gasket, adapter plate and sealing (fig. 7-107).

(20) Install the gasket and main-pressure regulator valve body assembly (fig. 7-108).

(21) Retain the main-pressure regulator valve body assembly with two 7/16-14 x 4 1/2-inch bolts and lockwashers (fig. 7-109). Tighten the bolts to 42 to 50 pound feet torque.

Para 7-3

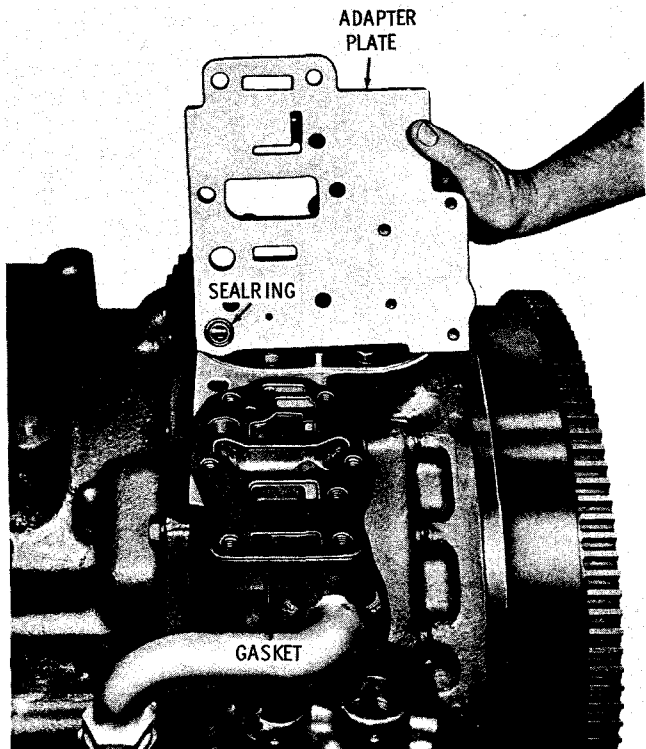


Fig. 7-107. Installing stator control valve adapter plate (VCLT, VCLBT)

S1743

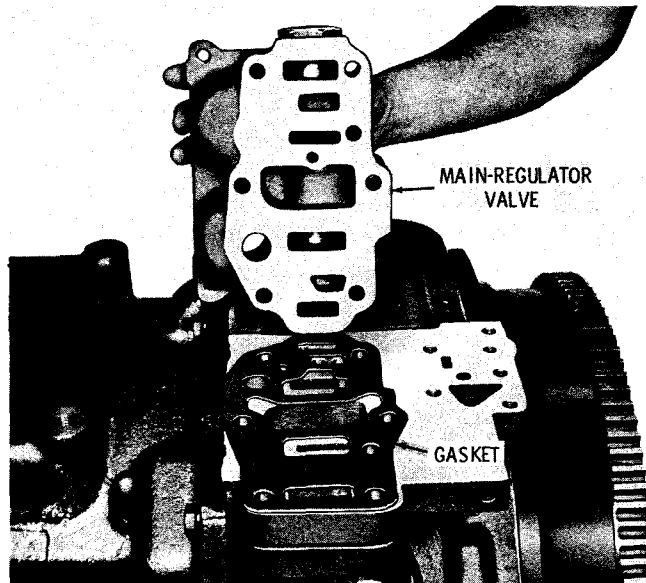


Fig. 7-108. Installing main-pressure regulator valve body assembly (VCLT, VCLBT)

S1744

(22) Install the spring and ball into the adapter plate (fig. 7-109). Install the stator control valve body assembly and gasket onto the adapter plate. Retain the valve body with five 3/8-16 x 2 1/4-inch bolts and lockwashers. Tighten the bolts to 26 to 32 pound feet torque.

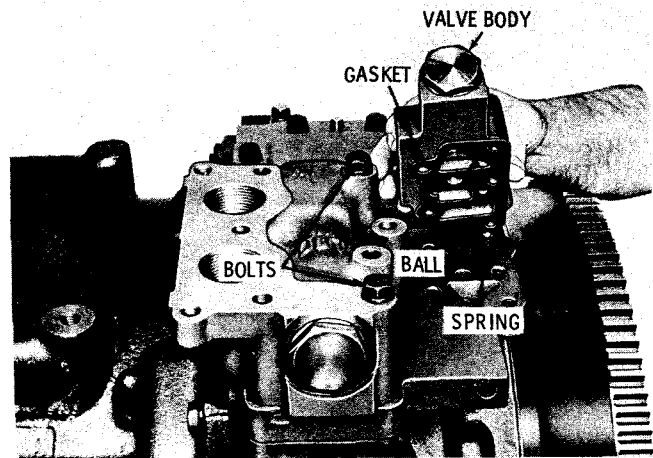


Fig. 7-109. Installing stator control valve body assembly (VCLT, VCLBT)

S1745

(23) Install the gasket and oil filter and adapter base assembly onto the main-pressure regulator valve body assembly. Retain it with five 7/16-14 x 8 1/4-inch, and two 7/16-14 x 4 1/2-inch bolts and lockwashers. Tighten the bolts to 42 to 50 pound feet torque.

(24) Install gasket 36 (B, foldout 9) and adapter plate 35. Install gasket 34 and filter adapter assembly 5.

(25) When plate 35 is 1.47 inches high, retain the filter adapter assembly with five 7/16-14 x 6-inch, and two 7/16-14 x 4 1/2-inch bolts. When plate 35 is 2.41 inches high, retain the filter adapter assembly with five 7/16-14 x 7-inch, and two 7/16-14 x 4 1/2-inch bolts. Tighten the bolts to 42 to 50 pound feet torque.

(26) Install the gasket and main-pressure regulator valve body assembly (fig. 7-104). Retain the valve body assembly with three 7/16-14 x 3 1/2-inch bolts and lockwashers. Tighten the bolts to 42 to 50 pound feet torque.

(27) Install gasket 32 (A, foldout 9) and oil filter adapter 55. Retain the adapter with one 7/16-14 x 1 1/2-inch bolt 52, three 7/16-14 x 4-inch bolts 51, and two 7/16-14 x 6 1/4-inch bolts 50 and lockwashers. Tighten the bolts to 42 to 50 pound feet torque.

(28) Install gasket 49 and filter assembly 7 (filter shells toward front). Retain the filter assembly with four 7/16-14 x 4 3/4-inch bolts 1 and three 7/16-14 x 5 1/4-inch bolts 2 and lockwashers. Tighten the bolts to 42 to 50 pound feet torque.

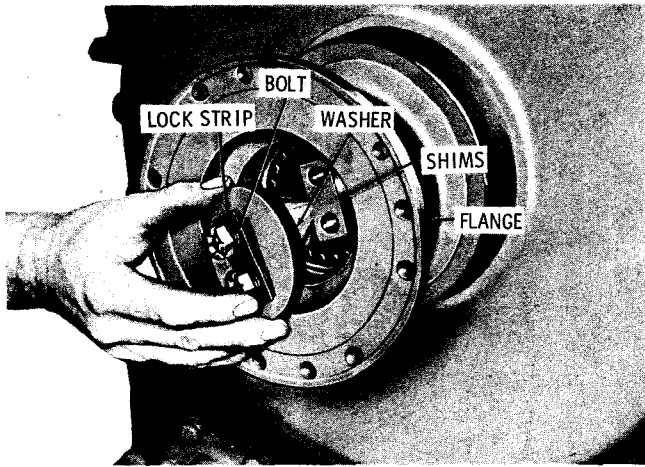


Fig. 7-110. Installing input flange retaining parts

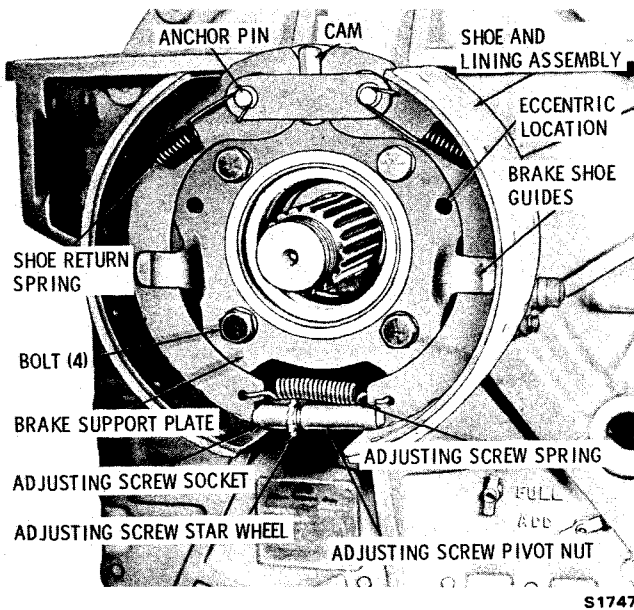


Fig. 7-111. Parking brake shoe assembly

NOTE

When assembling a transmission having a horizontal transfer gear housing (instructions in para 7-4), this completes assembly procedures. For transmission having a vertical transfer gear housing, refer to paragraph 7-4b(20).

(29) Install the input flange, shims, washer, lockstrip, and bolts. Refer to paragraph 4-8b for installation and shimming instructions (fig. 7-110).

(30) Install the brake band and support assembly and secure it with four 5/8-18 x 2-inch

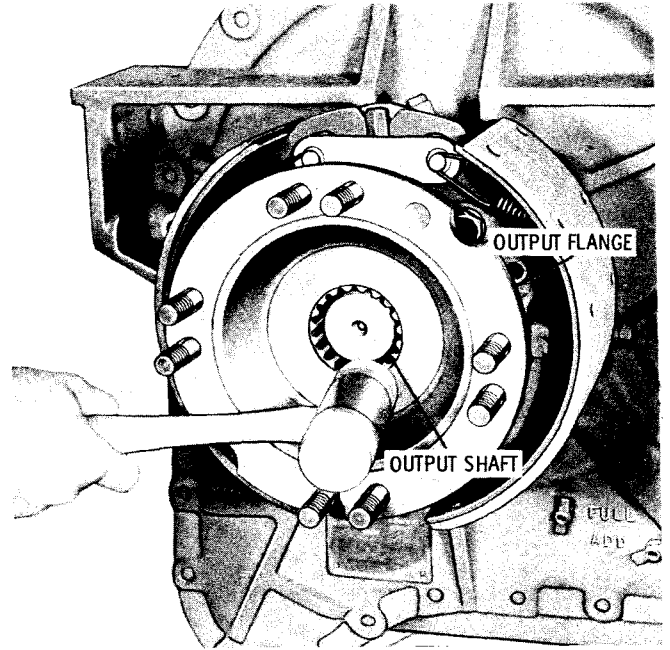


Fig. 7-112. Installing output flange

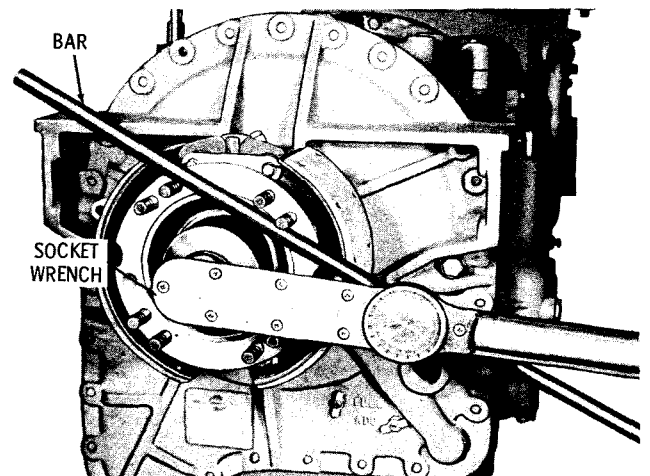


Fig. 7-113. Tightening output flange nut

bolts and eight flat washers (fig. 7-111). Tighten the nuts to 134 to 160 pound feet torque.

(31) Install the output flange on the output shaft (fig. 7-112). Tap lightly until the flange is seated. If the flange is a tight fit, refer to paragraph 4-8b for installation.

(32) Using a 3 1/8-inch socket and a suitable bar, install the output flange retaining nut (fig. 7-113). A very light coating of molybdenum disulphide grease will make installation of the nut easier. Tighten the nut 700 to 1000 pound feet torque.

Para 7-3/7-4

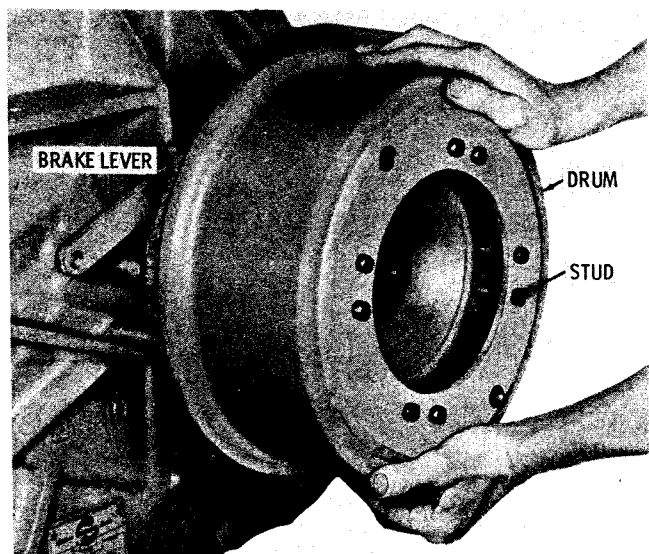


Fig. 7-114. Installing parking brake drum S1750

(33) Install the brake apply lever. Install the parking brake drum onto the output flange studs (fig. 7-114).

NOTE

On some installations, the brake is retained by eight 1/2-20 x 1-inch bolts 22 (B, foldout 19) and lockwashers 21. Tighten the bolts to 83 to 100 pound feet torque.

7-4. TRANSMISSION ASSEMBLY (ALL MODELS WITH TRANSFER GEAR OUTPUT)

a. **Dropbox Model Differences.** The dropbox model is the same as the straight-through model except in the output and oil pan areas. It is equipped with a transfer gear output (dropbox) instead of the straight-through type output. Various options and features within dropbox models are indicated by notes in the assembly (b, below).

b. Assembly Procedures

(1) For transmissions with the vertical transfer gear housing, follow the procedures outlined in paragraph 7-3a(1) through 7-3c(3), above. Then continue with (3), below.

(2) For transmissions with the horizontal transfer gear housing, follow the procedures in 7-3a(1) through 7-3c(3), above. Then continue with (3), below.

(3) Install lip-type searing 22 (A, foldout 16) onto reverse-range clutch piston 21. The



Fig. 7-115. Installing reverse-range clutch piston into transfer gear housing S1751

lip of the seal must face away from the clutch side of the piston. Earlier models use searing and expander 24, installed as outlined in paragraph 6-25.

(4) Install lip-type searing 23 (A, foldout 16) into the groove in the clutch piston cavity of housing 10 (A, foldout 18). The lip of the seal must face toward the cavity (rearward). Earlier models use seal and expander 25 (A, foldout 16), installed as outlined in paragraph 6-25.

(5) Install reverse-range clutch piston 21 (A, foldout 16) into the transfer gear housing (fig. 7-115).

(6) Install the gasket onto the transmission housing. Suspend the housing assembly on a sling, balancing it in a horizontal position. Install the housing assembly and retain it with twenty-seven 5/8-11 x 1 3/4-inch bolts and lockwashers (fig. 7-116). Tighten the bolts to 117 to 140 pound feet torque.

(7) Install the drive gear assembly onto the output shaft. Install the idler gear assembly into the housing (fig. 7-117).

NOTE

Speedometer drive plug 27 (B, foldout 18) will be upward on models so equipped.

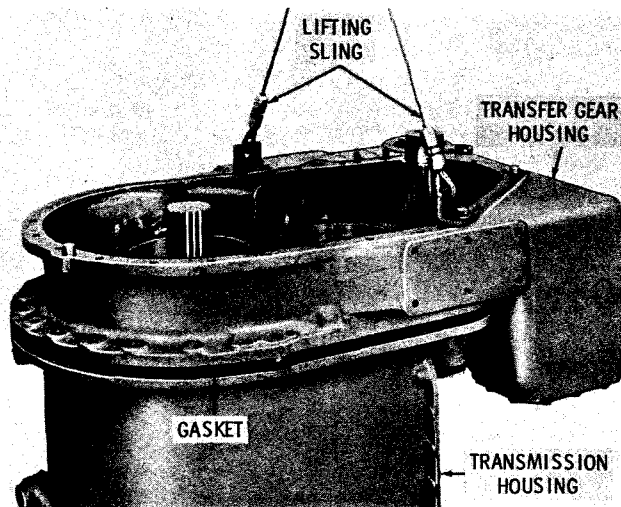


Fig. 7-116. Installing transfer gear housing

S1752

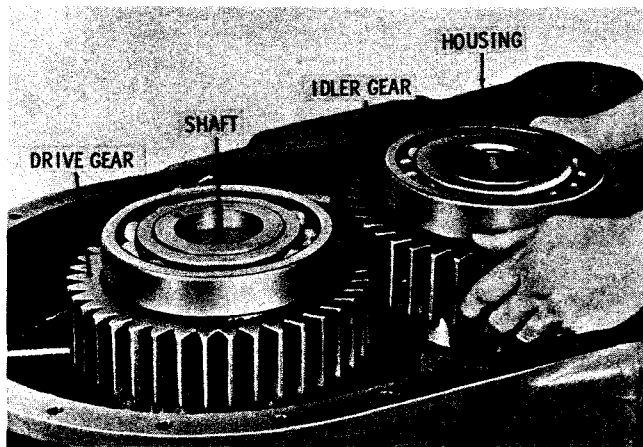


Fig. 7-117. Installing transfer idler gear assembly

S1753

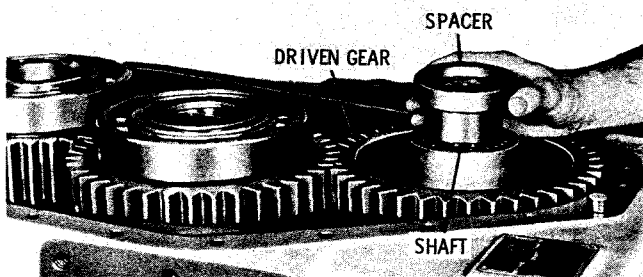


Fig. 7-118. Installing transfer driven gear rear spacer

S1754

(8) On vertical dropbox models, install the driven gear onto the shaft (gear previously installed on horizontal type). Install the spacer onto the shaft (fig. 7-118).

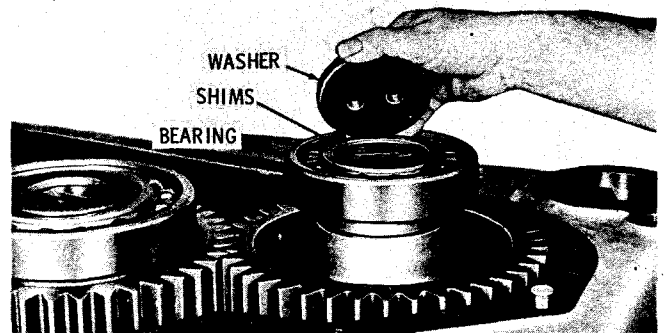


Fig. 7-119. Installing bearing retainer washer

S1755

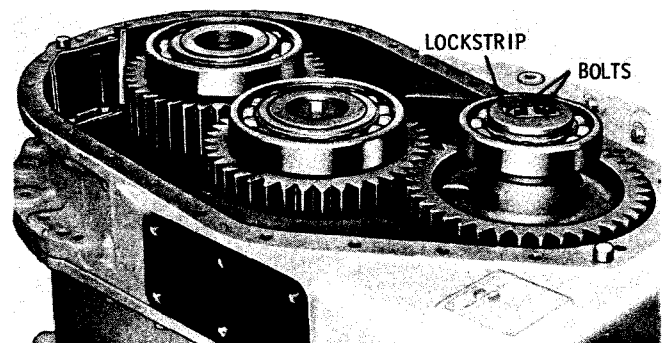


Fig. 7-120. Transfer driven gear rear bearing retaining parts

S1756

(9) On all models, install the bearing assembly (fig. 7-119). On models which do not have either a rear output or rear-mounted brake, install the shims and washer. Refer to paragraph 4-8b for shimming instructions.

NOTE

On models which have a rear output or rear mounted parking brake, continue assembly in (11), below, after installing the bearing assembly above.

(10) On models which do not have a rear output or brake, install the lockstrip and two 1/2-20 x 1 1/4-inch bolts. Tighten the bolts to 96 to 115 pound feet torque, and bend a corner of the lockstrip against each bolt head (fig. 7-120).

(11) On models equipped with an automatic-electric control system, install magnetic pickup 63 (A, foldout 18). Refer to the supplement at the back of the manual for adjustment procedures. Install the gasket onto the housing. Using a sling, install the cover. Retain the cover (and magnetic pickup shield 55 (B, foldout 18) if pickup is used) with twenty-six 1/2-13 x 1 3/4-inch bolts and lockwashers (fig. 7-121). Tighten the bolts to 67 to 80 pound feet torque.

Para 7-4

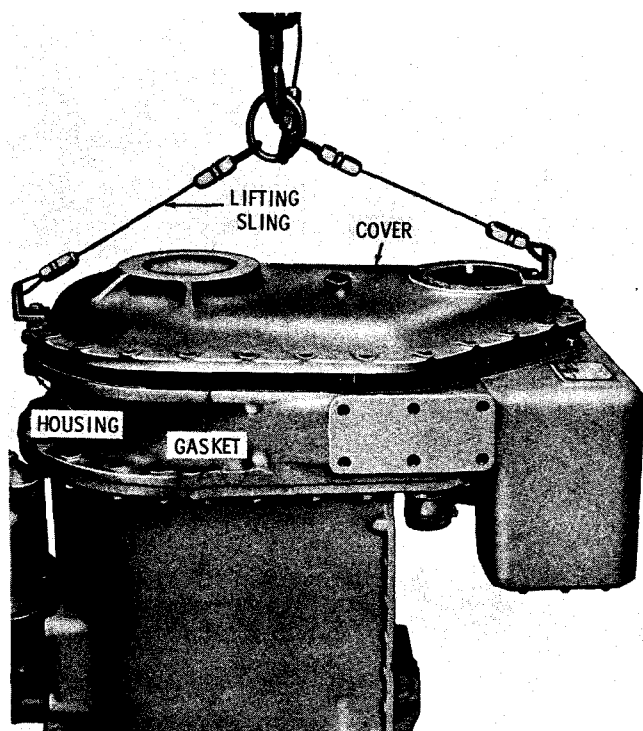


Fig. 7-121. Installing transfer gear housing cover

S1757

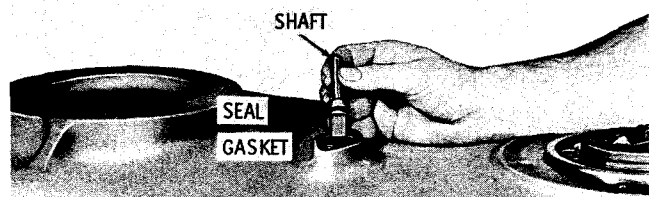


Fig. 7-122. Installing speedometer drive shaft

S1758

(12) On models which include a speedometer drive in the housing cover, install the gasket and seal onto the shaft. Install the shaft, engaging it with the speedometer drive plug in the idler gear hub (fig. 7-122).

(13) On models which have a speedometer drive in the housing cover, install the gasket and speedometer drive sleeve and retain it with two 5/16-18 x 7/8-inch bolts and lockwashers (fig. 7-123). Tighten the bolts to 13 to 16 pound feet torque. On models which have no rear output or brake, install the gasket and rear bearing cover. Retain the cover with six 1/2-13 x 1-3/8 (vertical housing) or 1-3/4-inch (horizontal housing) bolts. Tighten the bolts to 67 to 80 pound feet torque.

(14) On models which have a rear output or rear-mounted brake, install the gasket, spacer and bearing retainer assembly (fig. 7-124). Secure

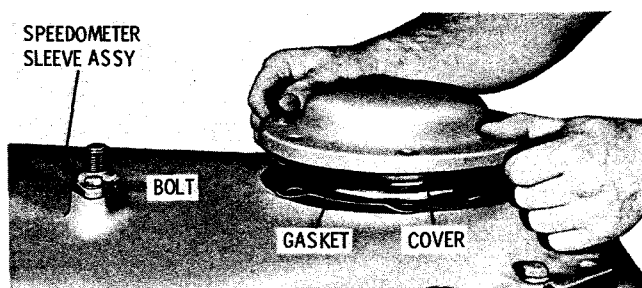


Fig. 7-123. Installing transfer driven gear rear bearing cover

S1759

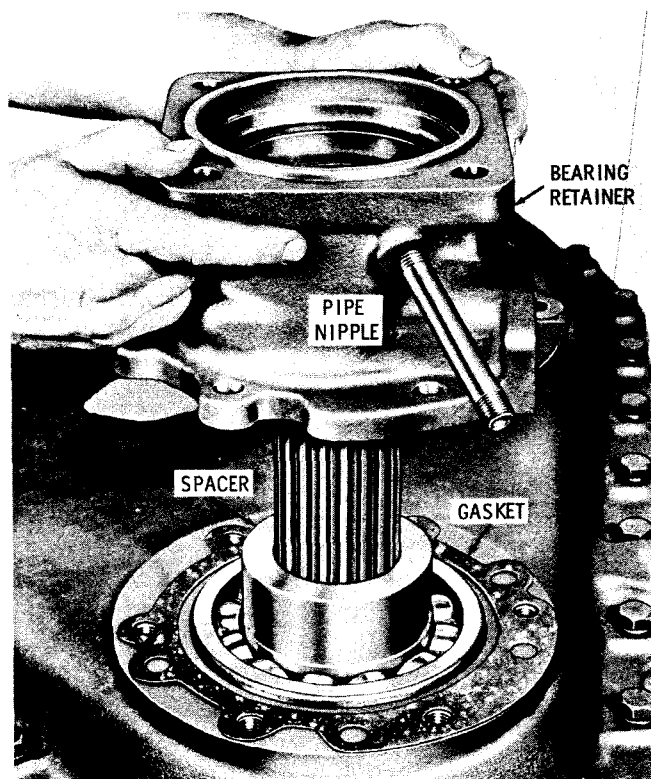


Fig. 7-124. Installing rear bearing retainer

S1760

the retainer assembly with six 1/2-13 x 1 3/8-inch bolts and lockwashers. Tighten the bolts to 67 to 80 pound feet torque. The pipe nipple should extend downward toward the lowest point.

(15) Install the brake assembly and retain it with four 5/8-18 x 2-inch bolts, flat washers and nuts. Put the flat washers under the heads of the bolts and under the nuts (fig. 7-125). Tighten the nuts to 134 to 160 pound feet torque.

(16) Install the flange, shims, washer, lockstrip and two 1/2-20 x 1 1/4-inch bolts (fig. 7-126). Refer to paragraph 4-8b for installation instructions.

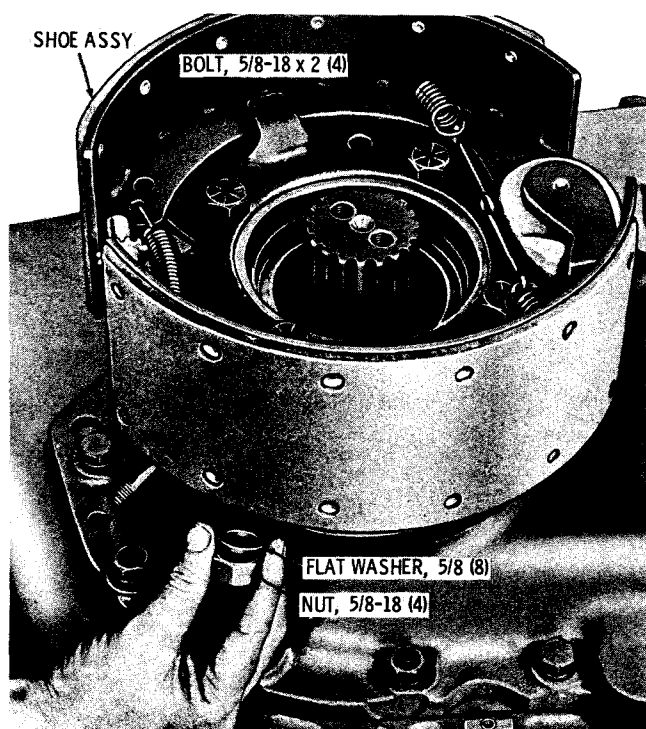


Fig. 7-125. Installing parking brake mounting bolt nuts S1761

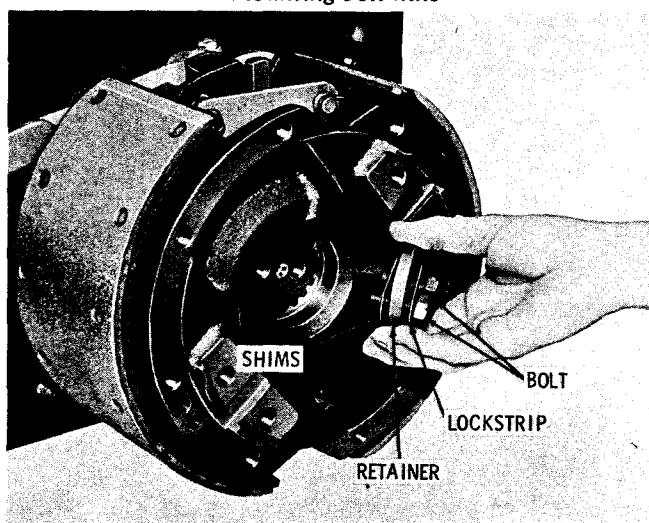


Fig. 7-126. Installing output flange retaining parts S1630

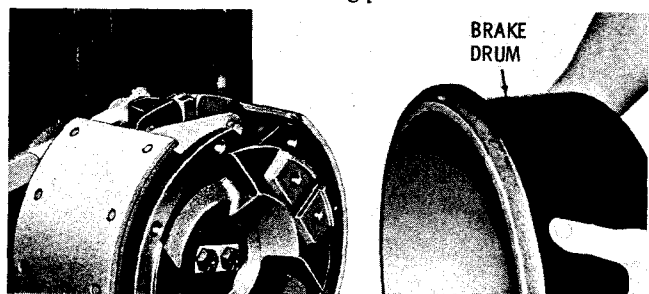


Fig. 7-127. Installing parking brake drum S1762

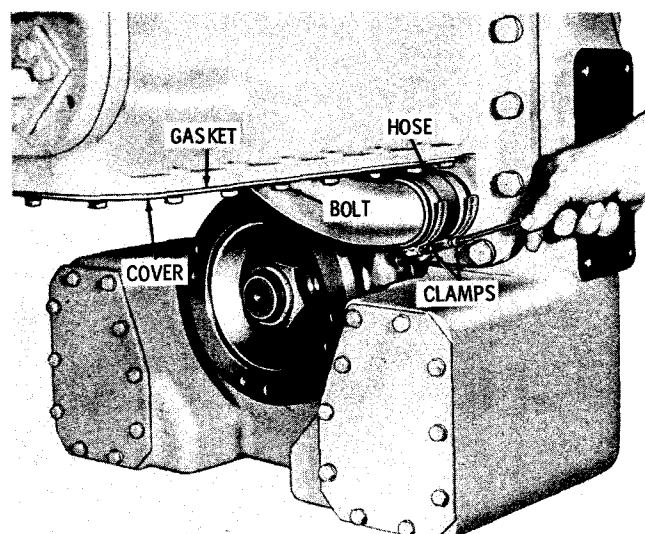


Fig. 7-128. Installing transmission drain pan hose clamps (vertical transfer housing) S1763

(17) Install the brake drum and retain it with eight 1/2-20 x 1-inch bolts and lockwashers (drum retained on some models by the output companion flange—no bolts are used). Tighten the bolts to 83 to 100 pound feet torque. See figure 7-127.

(18) Position the transmission to rest on the bottom of the transfer gear housing, keeping the front of the transmission slightly below horizontal.

NOTE

This is necessary to prevent shifting of internal parts until the splitter ring gear and hub are installed.

(19) Follow the procedures outlined in paragraph 7-3e(2), above, through 7-3m(26). Omit 7-3m(3) and (4) for assemblies having a vertical transfer housing.

NOTE

Position the transmission on the rear of the transfer case after installation of the snapping in paragraph 7-3e(2).

(20) On vertical dropbox models, install the oil drain cover gasket and cover. Retain the cover with twenty-eight 3/8-16 x 7/8-inch bolts and lockwashers. Tighten the bolts to 26 to 32 pound feet torque. Install the hose and retain it with two clamps (fig. 7-128):

7-5. POWER TAKEOFF GEAR BACKLASH

On models which include either a top-mounted or side-mounted power takeoff, refer to paragraph 4-9 for backlash recommendations and a method for measuring backlash.

Section 8. WEAR LIMITS AND SPRING DATA

8-1. KEYED TO EXPLODED VIEWS

The wear limits and spring data, below, are keyed to the exploded views (foldouts 5 through 20) in the back of this manual.

8-2. WEAR LIMITS DATA

a. **Maximum Variations.** The following wear limits information shows the maximum variations at which components are expected to function satisfactorily. The tolerances do not include a life factor for further periods of operation without replacing or reworking worn parts.

b. **See Cleaning, Inspection.** Parts must be clean to permit effective inspection for wear or damage. Refer to paragraph 4-6.

c. **Bearings, Bearing Journals and Bores.** The application of bearings to any product is based on the recommendations of the bearing manufacturer and, therefore, no diametral dimensional deviation should be permitted in the bearing or mated parts. Bearings should be carefully checked for signs of distress before reinstalling in the transmission.

d. **Gears.** Gears should be inspected for load pattern and signs of distress. Any distress indicates a possible future failure and re-using of such gears should be the decision of the individual customer, based on experience. Backlash cannot be used to establish critical wear of a gear since backlash tolerances are of such nature that a gear usually pits, scuffs, scores or galls long before the gear wears sufficiently that such wear can be determined by backlash measurement.

e. **Splines.** Unless severe, spline wear is not considered detrimental except where it affects

tightness of an assembly such as driveline flanges. Here, again, backlash cannot be used to establish critical wear since both mating parts must be concentrically located to obtain accurate measurement of backlash.

f. **Oil Seals.** Seals should be replaced if there are signs of hardening, scoring, cracking or other deterioration.

g. **Springs.** Springs should be replaced if there are signs of overheating, permanent set (see spring chart, end of this section, for load versus height dimensions), or wear due to rubbing adjacent parts.

h. **Piston-type Sealrings.** Sides of the sealring should be smooth; maximum wear 0.005 inch. The sides of the groove into which they fit should be smooth (50 micro-inch equivalent), and square with the axis of rotation within 0.002 inch. A new sealring should be installed if grooves are reworked, or sealring outside diameter wear causes the possibility of a closed gap between sealring hooks when the ring is installed.

8-3. WEAR LIMITS CHART

The wear limits chart, below, lists the wear limits data and is referenced to the exploded views (foldouts 5 through 20) in the back of the manual.

8-4. SPRING CHART

The chart at the end of this section gives spring specifications and aids in the proper identification of springs. Springs must not be interchanged. Springs which do not meet the load-length specifications should be replaced with new springs. For springs used in electric valve bodies, refer to the supplement at the back of the manual.

5640-5860 TRANSMISSIONS

Para 8-3

WEAR LIMITS DATA

Illustration	Description	Part number	Dimension	Wear limit	Cone (max)
C, foldout 5	FLYWHEEL, LOCKUP CLUTCH				
15	Flywheel bore	(all lockup models)	1.750/1.752	1.755	
22	Piston face wear	6774130		0.020	
23	Clutch plate thickness	6750270	0.173/0.183	0.155	
25	Back plate face wear	6770022, 6770587		0.020	
A, foldout 6	4-ELEMENT TORQUE CONVERTER (refer also to fig. 8-2)				
10, 16	Thrust washer thickness	6758485	0.1270/0.1315	0.117	
11	Roller race diameter	6756319	4.749/4.750	4.749	
12	First stator assembly:	(all models)			
	Inside diameter		4.760/4.764	4.768	
	Side washer thickness		0.058/0.062	0.048	
17	Second stator assembly:	(all models)			
	Inside diameter		4.760/4.764	4.768	
	Side washer thickness		0.058/0.062	0.048	
21	Stator back plate thickness	6759855 6774710	0.298/0.302 0.481/0.485	0.288 0.471	
B, foldout 6	3-ELEMENT TORQUE CONVERTER (refer also to fig. 8-1)				
2	Thrust washer thickness	6758485	0.1270/0.1315	0.117	
3	Roller race diameter	6774709	4.749/4.750	4.749	
4	Stator assembly:	6777223, 6778393			
	Inside diameter,		4.767/4.770	4.7685	
	Side plate thickness		0.308/0.313	0.303	
9	Stator back plate thickness	6774710	0.481/0.485	0.471	
A, foldout 7	VARIABLE-CAPACITY TORQUE CONVERTER				
2, 29	Thrust washer thickness	6778491	0.091/0.095	0.086	
4	Roller race diameter	6778460	3.7495/3.7500	3.7495	
11	Shroud	6830525	(holes must not be elongated)		
12	Stator vane crank pin diameter, 3 places	6779936	0.1775/0.1785	0.1765	
14	Piston crank pin groove width	6832168	0.1795/0.1825	0.184	
20, 27	Bushing bore	6778444	3.7525/3.7535	3.7565	
21	Housing, assembled, crank pin bores	6778456	0.179/0.181	0.182	
30	Retainer thickness	6778436	0.318/0.322	0.316	
B, foldout 7	INPUT-DRIVEN PUMP				
27	Gear end play in pump assy	6758392		0.010	
31	Gear bore dia in scavenge pump body	6758539	2.758	2.768	
40	Driven gear shaft diameter	6757564	1.000	0.9975	
41	Drive gear shaft diameter	6758528	1.000	0.9975	
45	Gear bore diameter in pump body	6757568	2.758	2.768	
B, foldout 8	MAIN-PRESSURE REGULATOR (earlier remote filter)				
9	Valve clearance in body 8	6770075		0.004	
13	Plug clearance in body 8	6776680		0.004	

WEAR LIMITS AND SPRING DATA

Para 8-3

WEAR LIMITS DATA—Continued

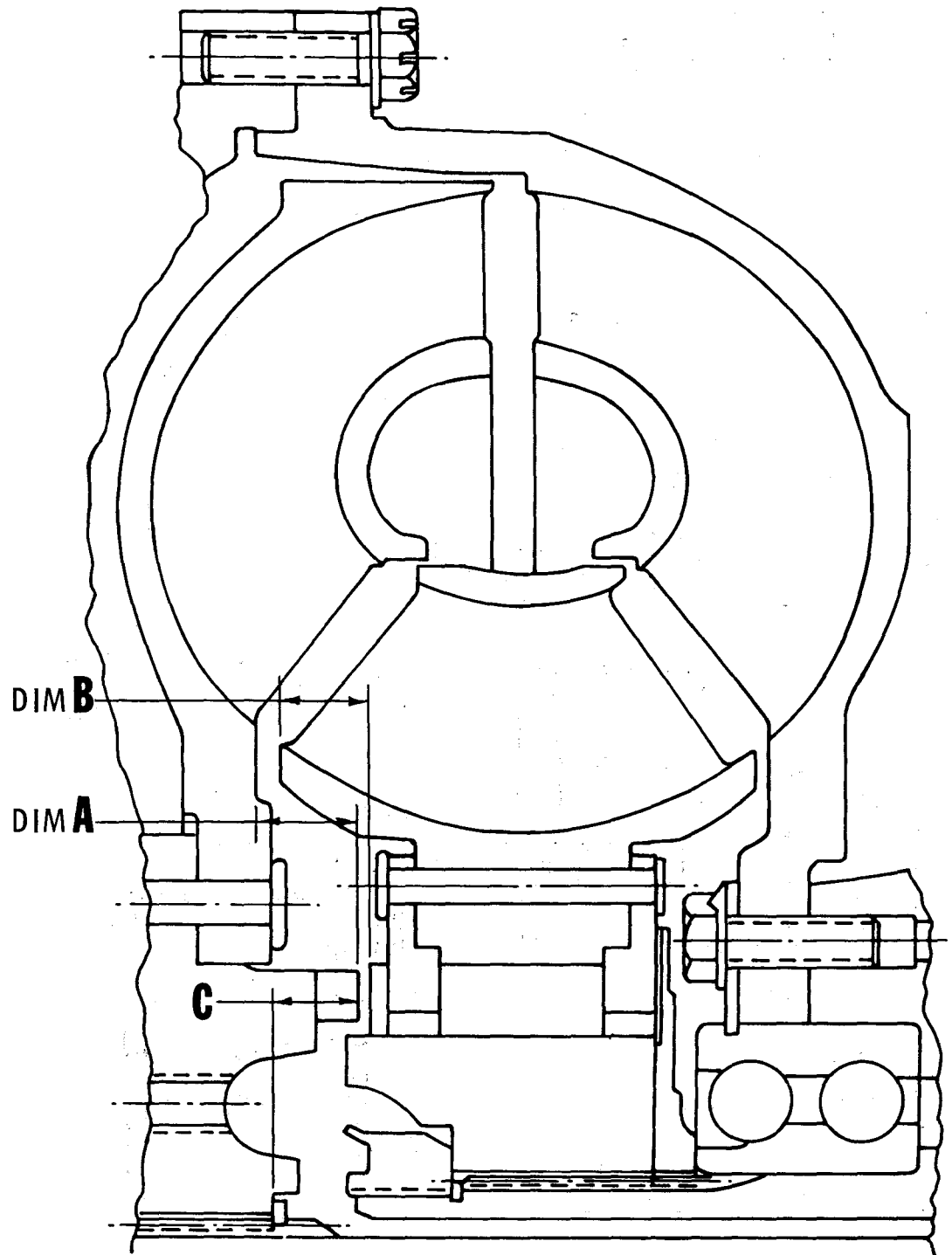
Illustration	Description	Part number	Dimension	Wear limit	Cone (max)
A, foldout 9	MAIN-PRESSURE REGULATOR (later remote or integral filter)				
36	Plug clearance in body 41	6776680		0.004	
40	Valve clearance in body 41	6770075		0.004	
B, foldout 9	MAIN-PRESSURE REGULATOR (in oil filter base)				
13	Valve clearance in base 11	6770075		0.004	
17	Plug clearance in base 11	6776680		0.004	
A, foldout 10	MAIN-PRESSURE REGULATOR AND STATOR CONTROL				
13	Valve clearance in body 12	6770075		0.004	
17	Plug clearance in body 12	6776680		0.004	
29	Valve clearance in body 30	6778430		0.003	
B, foldout 10	LOCKUP CONTROL VALVE				
3	Lockup valve clearance in body 2	6770023		0.004	
12	Lockup cutoff valve clearance in body 2	6771929		0.004	
A, foldout 11	TURBINE OUTPUT SHAFT, HYDRAULIC RETARDER (prior to S/N 35993)				
1, 6	Shaft spline clearance in rotor 10 (measure rotation at tip of one rotor vane, relative to stationary shaft—rotation should not exceed 0.150)	6774291, 6770841		0.025	
B, foldout 11	HYDRAULIC RETARDER CONTROL VALVE				
14	Retarder valve clearance in body 7	6770862		0.006	
37	Retarder valve clearance in body 38	6768550		0.006	
A, foldout 12	LOW-SPLITTER CLUTCH				
11	Clutch piston face wear	6775839		0.020	
14	Clutch plate, thickness	6830920	0.200/0.210	0.180	0.012
15	Clutch plate, thickness	6769326	0.197/0.213	0.187	0.030
16	Back plate face wear	6770848		0.020	
	Clutch plate pack, thickness			0.547	
B, foldout 12	HIGH-SPLITTER CLUTCH, PLANETARY				
2, 5	Thrust washer, thickness	6830257	0.0615	0.055	
3	Pinion end clearance in carrier 6	6771295		0.055	
17	Back plate face wear	6832869		0.020	
18	Clutch plate, thickness	6830920	0.200/0.210	0.180	0.012
19	Clutch plate, thickness	6769326	0.197/0.213	0.187	0.030
	Clutch plate pack, thickness			0.724	
B, foldout 13	HIGH-RANGE CLUTCH				
9	Clutch piston face wear	6775839		0.020	
12	Clutch plate, thickness	6830920	0.200/0.210	0.180	0.012
13	Clutch plate, thickness	6769326	0.197/0.213	0.187	0.030
14	Back plate face wear	6770848		0.020	
	Clutch plate pack, thickness			0.896	

5640-5860 TRANSMISSIONS

Para 8-3

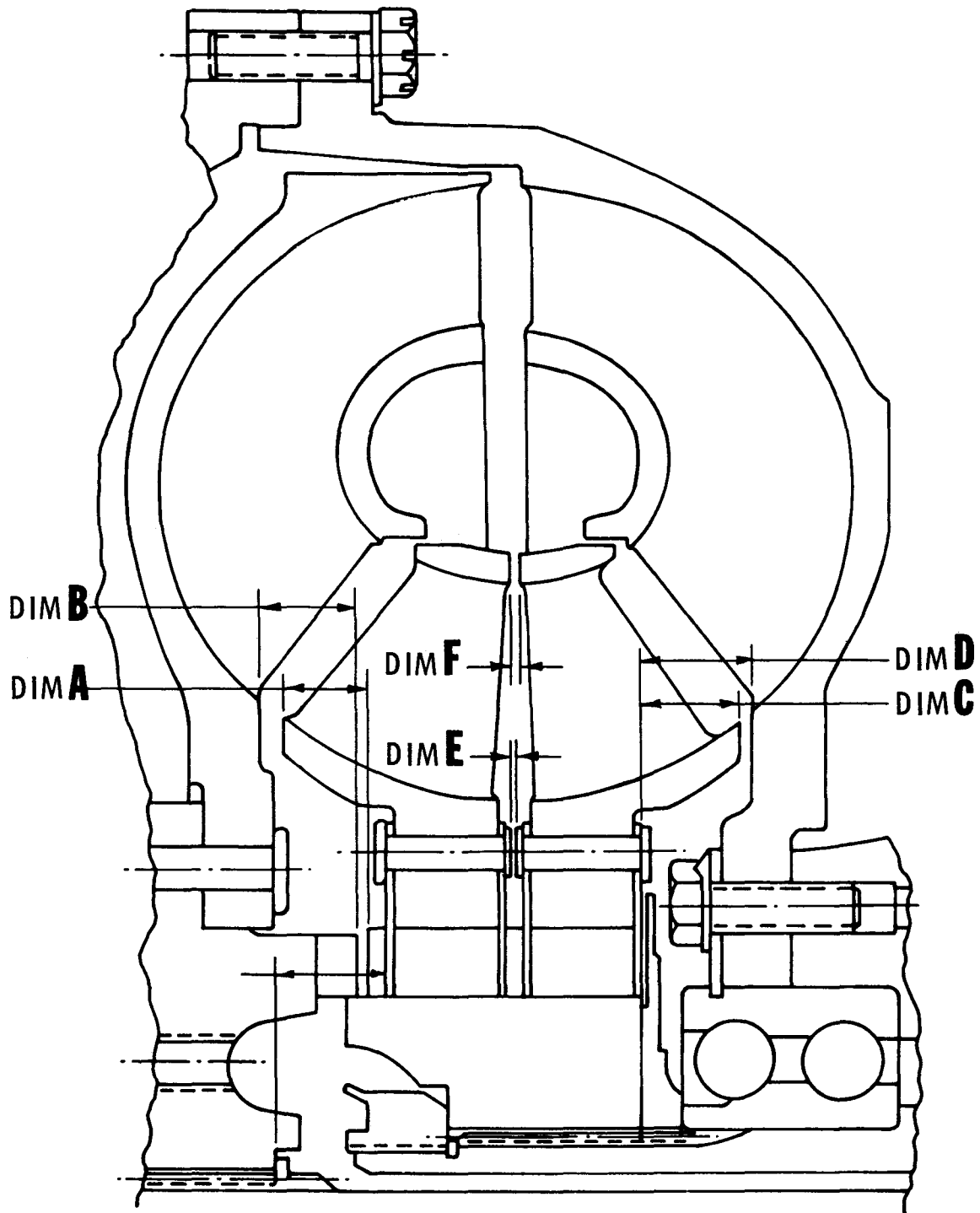
WEAR LIMITS DATA—Continued

Illustration	Description	Part number	Dimension	Wear limit	Cone (max)
C, foldout 13	CONTROL VALVE—4 speed				
15	Accumulator valve clearance in body 20	6769377		0.004	
19	Accumulator plug clearance in body 20	6759268		0.004	
31	Selector valve clearance in body 20	6758427		0.004	
36	Reverse relay valve clearance in body 20	6758601		0.004	
A, foldout 14	CONTROL VALVE—6 speed				
17	Trimmer plug clearance in body 31	6773192		0.003	
20	Trimmer plug clearance in body 31	6773191		0.003	
36	Selector valve clearance in body 31	6773207		0.004	
37	Trimmer valve clearance in body 31	6776679		0.003	
40	Trimmer valve clearance in body 31	6773192		0.003	
A, foldout 15	LOW-RANGE PLANETARY, CLUTCH				
9, 12	Thrust washer, thickness	6830130	0.0615	0.055	
11	Pinion end clearance in carrier 8	6832006		0.055	
15	Thrust washer, thickness	6758505	0.092	0.075	
20	Clutch plate, thickness	6830920	0.200/0.210	0.180	0.012
21	Clutch plate, thickness	6769326	0.197/0.213	0.187	0.030
27 (B, 15)	Piston housing, rear face wear	6831156		0.020	
	Clutch plate pack, thickness			1.468	
B, foldout 15	INTERMEDIATE-RANGE PLANETARY, CLUTCH				
6	Thrust washer, thickness	6768499	0.0615	0.055	
9	Pinion end clearance in carrier	6771316		0.055	
17	Back plate, face wear	6759339		0.020	
21	Clutch plate, thickness	6830920	0.200/0.210	0.180	0.012
22	Clutch plate, thickness	6769326	0.197/0.213	0.187	0.030
	Clutch plate pack, thickness			1.101	
A, foldout 16	REVERSE-RANGE PLANETARY, CLUTCH				
5	Thrust washer, thickness	6758505	0.092	0.075	
9	Thrust washer, thickness	6768499	0.0615	0.055	
11	Pinion end clearance in carrier	6771315		0.055	
19	Clutch plate, thickness	6830920	0.200/0.210	0.180	0.012
20	Clutch plate, thickness	6769326	0.197/0.213	0.187	0.030
26 (A, 15)	Piston housing, rear face wear	6831156		0.020	
	Clutch plate pack, thickness			1.743	
B, foldout 16	OUTPUT OIL PUMP ASSEMBLY				
4	Gear end clearance in body 3 and cover 6	6768350		0.004	
4	Gear outer diameter clearance in body 3	6768350		0.009	
5	Gear end clearance in body 3 and cover 6	6768441		0.004	
A, foldout 17	OUTPUT DRIVE HOUSINGS				
7, 51	Bushing, inside diameter	2222424	0.3740/0.3755	0.377	
A, foldout 19	TRANSFER GEAR HOUSING, FRONT OUTPUT				
10	Bushing, inside diameter	2222424	0.3740/0.3755	0.377	



Dimension "A" minus dimension "B" shall not be less than .040 inch.

Fig. 8-1. Three-element torque converter, showing wear limit points of measurement



Dimension B minus dimension A must not be less than 0.025 inch. Dimension D minus dimension C must not be less than 0.025 inch. Dimension E (distance between rivet heads) must not be less than 0.005 and can be measured by inserting a 0.005 shim between the rivet heads. A check can be made easily by rotating the first stator and noting if there is any rivet head interference. Dimension F (distance between 1st and 2nd stator outer shrouds) must not be less than 0.005.

8150

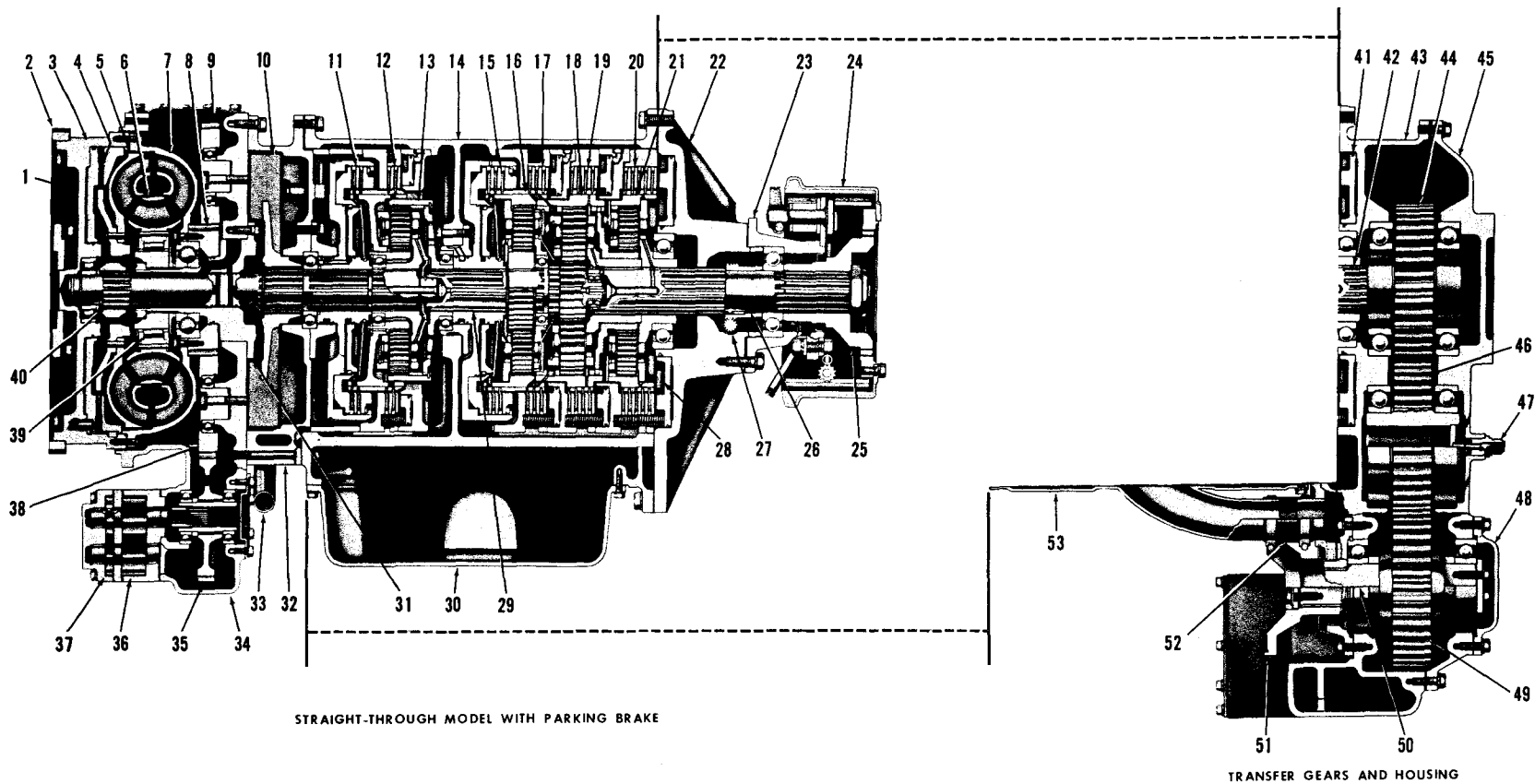
Fig. 8-2. Four-element torque converter, showing wear limit points of measurement

SPRING CHART

Model 5640, 5660, 5840, 5860

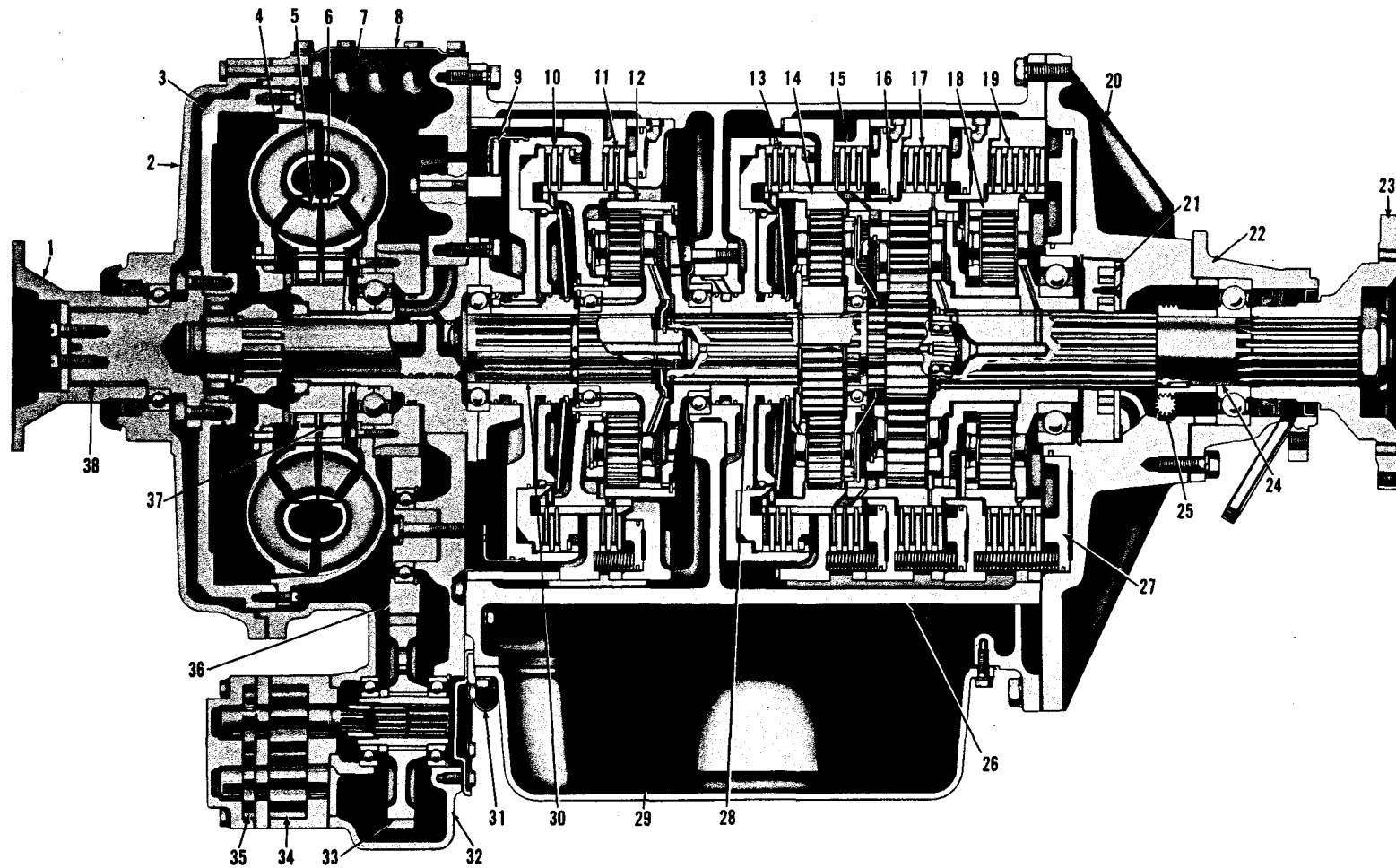
Fold-out	Ref	Spring	Part No.	No. coils	Diameter of wire	Outside diameter	Free length	under Length load	Pounds
A, 6	13, 19	Freewheel roller	6769469	33	0.0217/0.0223	0.230	1.92	0.94	1.06 to 1.28
A, 6	23, 27	Freewheel roller	6778184	44	0.0177/0.0183	0.156	1.429	1.07	0.45 to 0.55
A, 6	23, 27	Freewheel roller	6769966	43	0.0177/0.0183	0.156	1.87	1.07	1.01 to 1.23
B, 6	7	Freewheel roller	6769276	43	0.0177/0.0183	0.156	1.56	1.07	0.63 to 0.77
A, 7	8	Freewheel roller	6779083	5, 5	Convolutes		0.465	0.350	37 to 62
A, 8	32	Lubrication regulator valve	6771249	21	0.0905/0.0935	0.670	3.231	2.341	23.8 to 26.2
	32	Lubrication regulator valve	6754707	20	0.0895/0.0935	0.670	3.212	2.438	20.2 to 24.6
A, 8	35	Output pump check valve	6756458	18	0.031/0.033	0.312	1.34	0.900	0.9 to 1.1
B, 8	11	Main pressure regulator	6758508	20	0.133/0.137	0.800	4.499	3.51	85 to 93
A, 9	38	Main pressure regulator	6758508	20	0.133/0.137	0.800	4.499	3.51	85 to 93
B, 9	8	Filter bypass valve	6756623	34	0.046/0.048	0.375	3.34	2.000	7.5 to 9.1
B, 9	15	Main pressure regulator	6758508	20	0.133/0.137	0.800	4.499	3.51	85 to 93
B, 9	30	Filter shell stud	5187308	9	0.106	0.812	2.31	1.42	29.2 to 30.2
A, 10	15	Main pressure regulator	6758508	20	0.133/0.137	0.800	4.499	3.51	85 to 93
A, 10	23	Detent	6778422	8, 5	0.0465/0.0485	0.312	0.71	0.58	7.5 to 8.5
A, 10	28	Stator control valve	6830323	15	0.0785/0.0815	0.930	4.320	2.080	16 to 17
B, 10	6	Lockup valve	6769407	12	0.0900/0.0930	0.875	2.99	1.56	29.1 to 32.1
B, 10	7	Lockup valve	6758475	13, 5	0.078/0.080	0.690	2.838	1.578	26.9 to 27.1
B, 10	7	Lockup valve	6769252	14	0.0785/0.0815	0.690	2.65	1.62	21.1 to 23.3
B, 10	7	Lockup valve	6759889	16	0.040/0.042	0.602	2.90	1.49	2.16 to 2.64
B, 10	7	Lockup valve	6775812	14	0.0785/0.0815	0.690	2.56	1.62	19.2 to 21.4
B, 10	7	Lockup valve	6758597	13	0.118/0.122	0.794	2.81	2.11	57.2 to 63.6
A, 11	31	Primary converter press. regulator	6758519	12	0.053/0.055	0.554	2.410	1.50	8.0 to 9.8
B, 11	9, 32	Torque limiter	6772406	10, 5	0.1040/0.1070	0.670	1.656	1.32	37 to 41
B, 11	16	Secondary converter press. reg.	6772405	8	0.1335/0.1365	1.535	3.052	1.50	42 to 48
B, 11	23	Retarder control valve	6770860	24	0.0895/0.0935	1.06	7.00	4.80	10.4 to 11.6
B, 11	40	Secondary converter press. reg.	6765136	12, 5	0.078/0.082	0.625	1.903	1.322	17.87 to 21.83
A, 12	12	Splitter direct piston return	6756042	Disk-type spring		10.67	0.435		
B, 12	21	Splitter overdrive piston return	6758502	12	0.0895/0.0935	0.625	1.936	1.480	28.9 to 34.1
A, 13	6	Converter pressure relief valve	6769344	13	0.1040/0.1070	0.710	2.35	1.75	42 to 46
B, 13	10	Splitter high piston return	6756042	Disk-type spring		10.67	0.435		
C, 13	16	Clutch accumulator	6759269	10	0.124/0.126	1.100	2.92	2.52	18 to 22
C, 13	23, 26	Shift valve detent	6703162	9	0.062/0.064	0.563	1.381	0.812	13.5 to 16.5
A, 14	16	Inter. range trimmer valve plug	6776676	12	0.133/0.137	1.060	3.29	2.95	18.54 to 22.66
A, 14	18	Inter. range trimmer valve (inner)	6769825	12	0.0465/0.0485	0.667	3.26	2.22	2.90 to 3.50
A, 14	19	Inter. range trimmer valve (outer)	6759964	15	0.0615/0.0635	0.850	4.50	1.03	11.16 to 13.64
A, 14	28, 30	Detent	6774328	9, 5	0.0615/0.0635	0.450	1.099	0.76	16.2 to 17.8
A, 14	38	Neutral range trimmer valve (outer)	6759964	15	0.0615/0.0635	0.850	4.50	1.03	11.16 to 13.64
A, 14	39	Neutral range trimmer valve (inner)	6769825	12	0.0465/0.0485	0.667	3.26	2.22	2.90 to 3.50
A, 14	41	Neutral range trimmer valve plug	6772652	13	0.119/0.122	1.060	3.71	2.79	27 to 33
A, 15	18	Low piston return	6777897	20	0.0895/0.0935	0.625	2.380	1.994	41.1 to 50.1
B, 15	20	Intermediate piston return	6759336	16	0.0895/0.0935	0.625	2.645	1.65	39.6 to 48.4
B, 15	20	Intermediate piston return	6833203	16	0.0895/0.0935	0.625	2.645	1.65	39.6 to 48.4
A, 16	17	Reverse piston return	6758504	25	0.1035/0.1075	0.625	3.676	3.213	22.5 to 27.5
A, 18	44	Detent	5171417	12	0.0585/0.0595	0.437	2.125	1.5	18 to 22

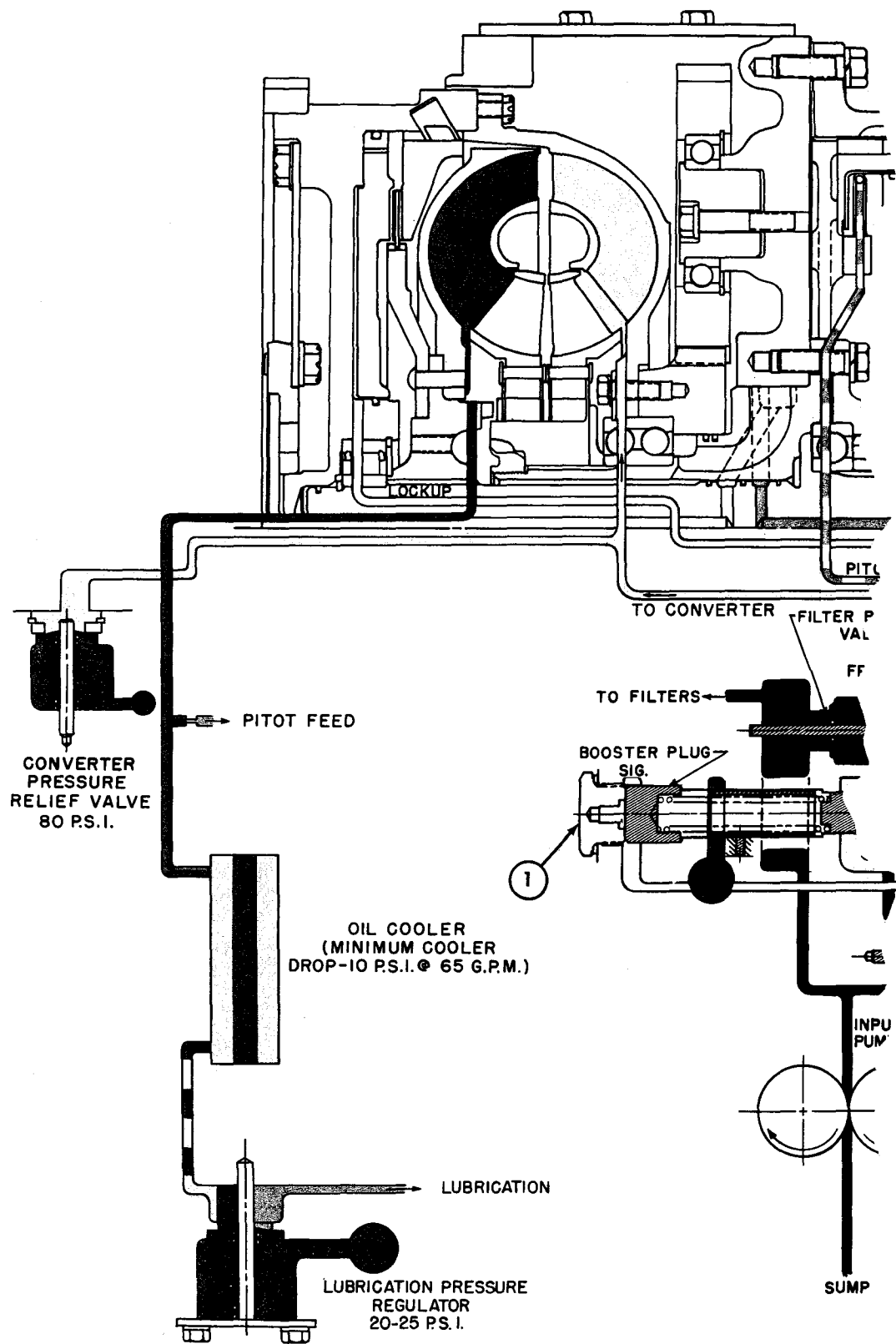
- | | |
|---------------------------------------|-----------------------------------|
| 1 - Flex disk assembly | 28 - Reverse-range clutch piston |
| 2 - Starter ring gear | 29 - Splitter output shaft |
| 3 - Flywheel | 30 - Transmission oil pan |
| 4 - Lockup clutch | 31 - Converter ground sleeve |
| 5 - Converter turbine assembly | 32 - Retarder housing |
| 6 - Stator assembly | 33 - Oil pump pressure tube |
| 7 - Torque converter pump | 34 - Torque converter housing |
| 8 - Input accessory drive gear | 35 - Oil pump drive gear |
| 9 - Power takeoff drive gear | 36 - Pressure-oil pump |
| 10 - Retarder rotor | 37 - Scavenge oil pump |
| 11 - Low-splitter clutch (direct) | 38 - Oil pump idler gear |
| 12 - High-splitter clutch (overdrive) | 39 - Freewheel roller |
| 13 - Splitter planetary | 40 - Turbine output shaft |
| 14 - Transmission housing | 41 - Reverse-range clutch piston |
| 15 - High-range clutch | 42 - Transmission output shaft |
| 16 - Intermediate-range planetary | 43 - Transfer gear housing |
| 17 - Intermediate-range clutch | 44 - Output transfer drive gear |
| 18 - Low-range planetary | 45 - Transfer housing cover |
| 19 - Low-range clutch | 46 - Output transfer idler gear |
| 20 - Reverse-range clutch | 47 - Speedometer drive sleeve |
| 21 - Reverse-range planetary | 48 - Bearing retainer |
| 22 - Output drive housing | 49 - Output transfer driven gear |
| 23 - Rear bearing retainer | 50 - Output shaft |
| 24 - Parking brake | 51 - Front output flange |
| 25 - Rear output flange | 52 - Oil drain hose |
| 26 - Transmission output shaft | 53 - Transmission oil drain cover |
| 27 - Speedometer driven gear | |



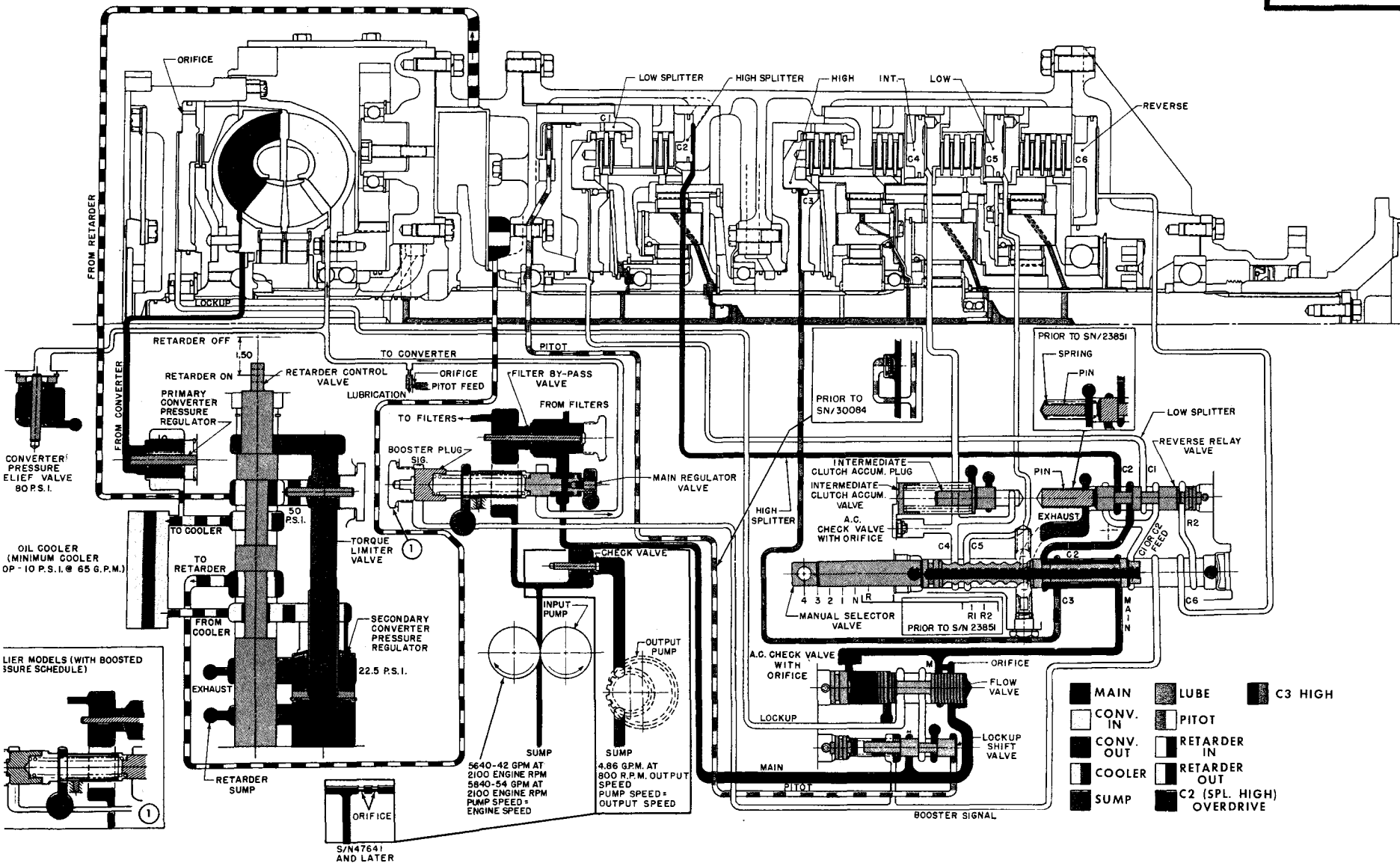
Foldout 1. CLBT 5000 S-series, direct-mount, straight-through transmission
(transfer gears in partial view)—cross-section view

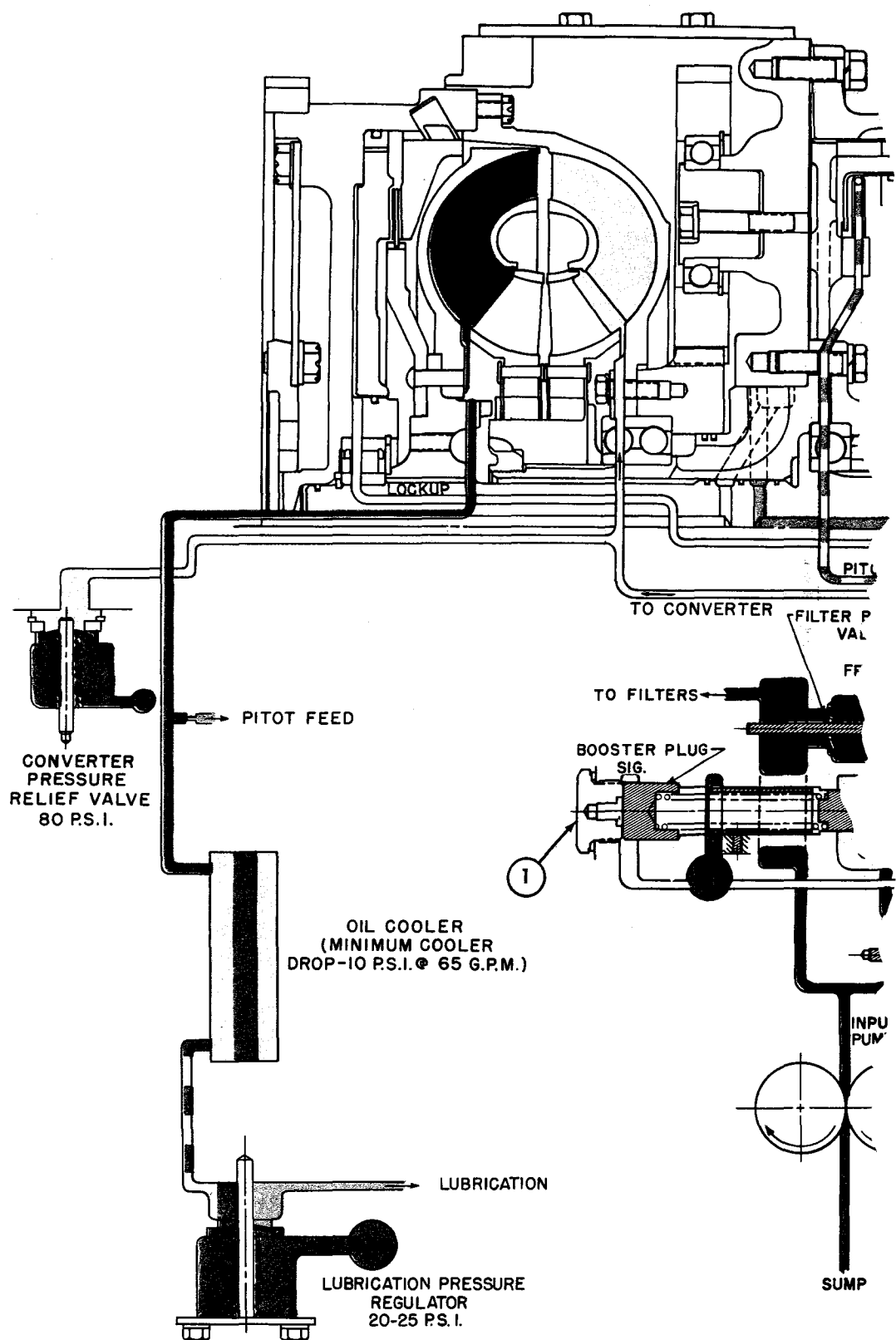
- | | |
|---------------------------------------|----------------------------------|
| 1 - Input drive flange | 20 - Output drive cover |
| 2 - Converter front cover | 21 - Rear oil pump assembly |
| 3 - Converter drive cover | 22 - Rear bearing retainer |
| 4 - Converter turbine | 23 - Rear output flange |
| 5 - First-stator assembly | 24 - Transmission output shaft |
| 6 - Second-stator assembly | 25 - Speedometer driven gear |
| 7 - Converter pump | 26 - Transmission housing |
| 8 - Power takeoff cover | 27 - Reverse-range clutch piston |
| 9 - Pitot tube (governor) | 28 - Splitter output shaft |
| 10 - Low-splitter clutch (direct) | 29 - Transmission oil pan |
| 11 - High-splitter clutch (overdrive) | 30 - Turbine output shaft |
| 12 - Splitter planetary | 31 - Oil pump pressure tube |
| 13 - High-range clutch | 32 - Converter housing |
| 14 - Intermediate-range planetary | 33 - Oil pump drive gear |
| 15 - Intermediate-range clutch | 34 - Pressure oil pump |
| 16 - Low-range planetary | 35 - Scavenge oil pump |
| 17 - Low-range clutch | 36 - Oil pump idler gear |
| 18 - Reverse-range planetary | 37 - Freewheel roller |
| 19 - Reverse-range clutch | 38 - Input shaft |

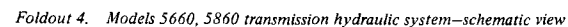




E
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A

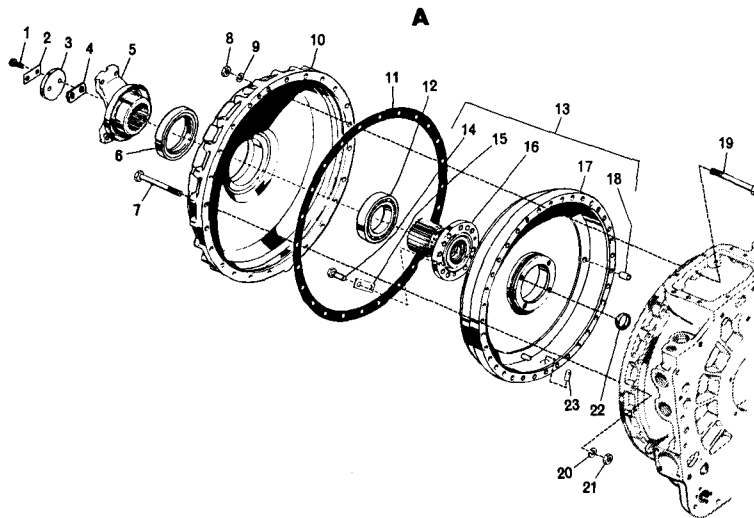
- 1 - Self-locking, hexagon-head bolt,
1/2-20 x 1 1/4 (2)
- 2 - Lockstrip
- 3 - Flange retainer washer
- 4 - Shim (ar):
0.025 thk
0.005 thk
- 5 - Input flange assembly
- 6 - Converter housing front cover oil seal
- 7 - Hexagon-head bolt
7/16-20 x 4 (18)
- 8 - Hexagon nut, 7/16-20 (3)
- 9 - Lockwasher, 7/16 (3)
- 10 - Converter housing front cover
- 11 - Converter housing front
cover gasket
- 12 - Single-row ball bearing assembly
- 13 - Converter drive housing assembly
- 14 - Hexagon-head bolt,
9/16-18 x 1 3/8 (8)
- 15 - Lockstrip (4)
- 16 - Converter drive housing hub
- 17 - Converter drive housing
- 18 - Dowel pin, 1/2 x 15/16 (4)
- 19 - Hexagon-head bolt,
7/16-20 x 4 1/4 (3)
- 20 - Lockwasher, 7/16 (18)
- 21 - Hexagon nut, 7/16-20 (18)
- 22 - Sleeve (used only when reworking
converter drive housing assembly,
item 13, above.)
- 23 - Anchor key (prior to A/N 19246)

B

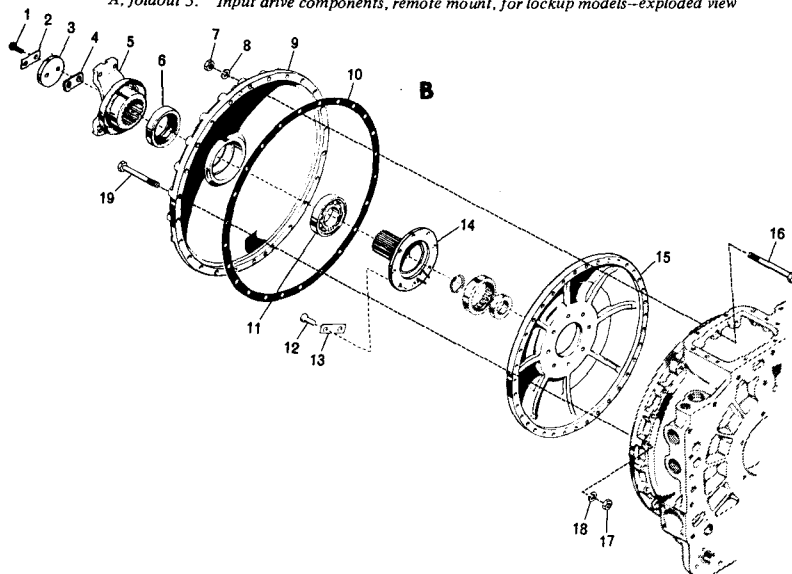
- 1 - Self-locking, hexagon-head bolt,
1/2-20 x 1 1/4 (2)
- 2 - Lockstrip
- 3 - Flange retainer washer
- 4 - Shim (ar):
0.025 thk
0.005 thk
- 5 - Input flange assembly
- 6 - Converter housing front cover
oil seal
- 7 - Hexagon nut, 7/16-20 (3)
- 8 - Lockwasher, 7/16 (3)
- 9 - Converter housing front cover
- 10 - Converter housing front cover gasket
- 11 - Single-row ball bearing assembly
- 12 - Hexagon-head bolt,
1/2-20 x 1 1/4 (8)
- 13 - Lockstrip (4)
- 14 - Converter drive housing hub
- 15 - Converter drive housing
- 16 - Hexagon-head bolt,
7/16-20 x 3 1/2 (3)
- 17 - Hexagon nut, 7/16-20 (18)
- 18 - Lockwasher, 7/16 (18)
- 19 - Hexagon-head bolt,
7/16-20 x 3 1/2 (18)

C

- 1 - Self-locking, hexagon-head bolt,
1/2-20 x 3/4 (12) (Use twelve
1/2-20 x 1 bolts on trans-
missions, if required)
- 2 - Flex disk assembly
- 3 - Flex disk hub assembly
- 4 - Flex disk hub
- 5 - Dowel pin
- 6 - Flex disk and washer assembly
- 7 - Flex disk washer (6)
- 8 - Flex disk
- 9 - Flex disk (4)
- 10 - Flex disk plate
- 11 - Self-locking, hexagon-head bolt,
1/2-20 x 3/4 (12) (Use twelve
1/2-20 x 1 bolts on trans-
missions, if required).
- 12 - Flywheel assembly
- 13 - Starter ring gear
- 14 - Dowel pin
- 15 - Flywheel
- 16 - Dowel pin (4) (CLT and CLBT
models)
- 17 - Converter housing gasket
- 18 - Sleeve (used only when reworking
flywheel assembly, item 12,
above)
- 19 - Lockup clutch piston inner seal-
ring
- 20 - Lockup clutch piston outer seal-
ring
- 21 - Bushing (used only when reworking
piston 22)
- 22 - Lockup clutch piston
- 23 - Lockup clutch plate
- 24 - Lockup clutch back plate anchor
key (after S/N 19245)
- 25 - Lockup clutch back plate
- 26 - Lockup clutch back plate anchor key
(after S/N 19245)
- 27 - Anchor key (prior to S/N 19246)

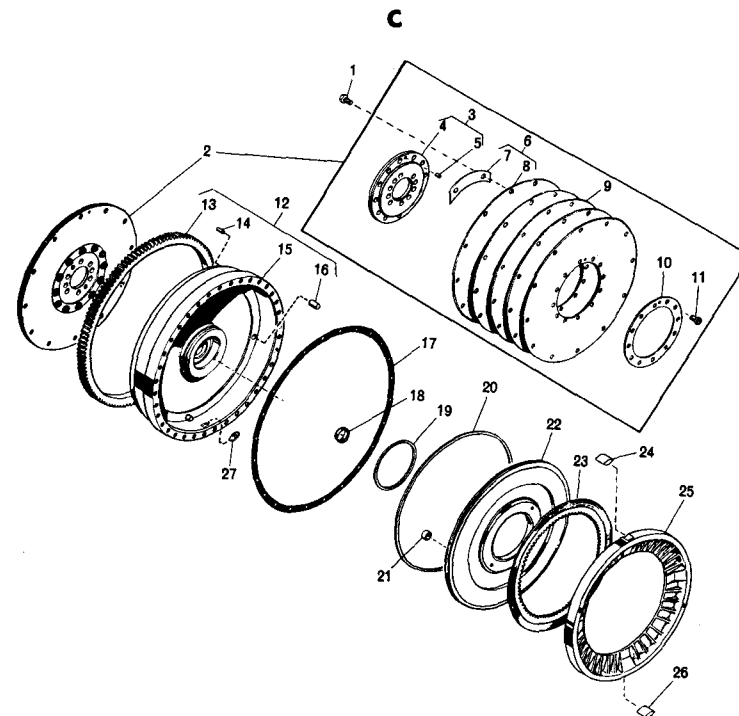


A, foldout 5. Input drive components, remote mount, for lockup models—exploded view



B, foldout 5. Input drive components, remote mount, no lockup—exploded view

8356A



C, foldout 5. Input drive components, direct mount, with lockup clutch—exploded view

8323

- 1 - Snapring
- 2 - Roller bearing assembly
- 3 - Bearing spacer
- 4 - Snapring
- 5 - Snapring
- 6 - Turbine assembly (CLT, CLB, VLCBT)
- 7 - Snapring
- 8 - Turbine assembly (CT, CBT)
- 9 - Spanner nut
- 10 - Thrust washer
- 11 - Stator freewheel roller race
- 12 - First-stator assembly
- 13 - Pin, 0.250 dia. x 0.70 lg (8)
- 14 - Stator freewheel spring (8)
- 15 - Stator freewheel roller (8)
- 16 - Thrust washer
- 17 - Second-stator assembly
- 18 - Pin, 0.250 dia x 0.70 lg. (8)
- 19 - Stator freewheel spring (8)
- 20 - Stator freewheel roller (8)

A

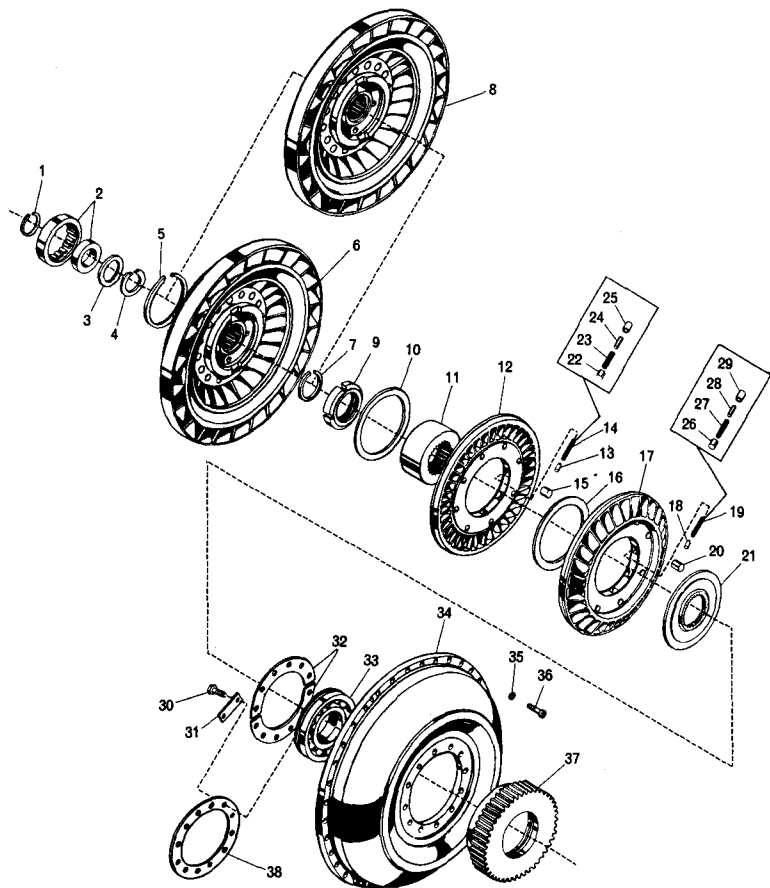
- 21 - Stator back plate
- 22 - Cup (12)
- 23 - Stator freewheel spring (12)
- 24 - Needle roller (12)
- 25 - Cup (12)
- 26 - Cup (12)
- 27 - Stator freewheel spring (12)
- 28 - Needle roller (12)
- 29 - Cup (12)
- 30 - Hexagon-head bolt, 3/8-24 x 1 1/8 (12)
- 31 - Lockstrip (6)
- 32 - Converter pump retainer (2)
- 33 - Double-row ball bearing
- 34 - Converter pump
- 35 - Plain flat washer (36)
- 36 - Self-locking, hexagon-head bolt, 3/8-24 x 1 1/4 (36)
- 37 - Input pump and power takeoff drive gear
- 38 - Converter pump retainer

B

- 1 - Spanner nut
- 2 - Thrust washer
- 3 - Stator freewheel roller race
- 4 - Stator assembly
- 5 - Cup (24)
- 6 - Needle roller (12)
- 7 - Stator freewheel spring (12)
- 8 - Stator freewheel roller (12)
- 9 - Stator back plate

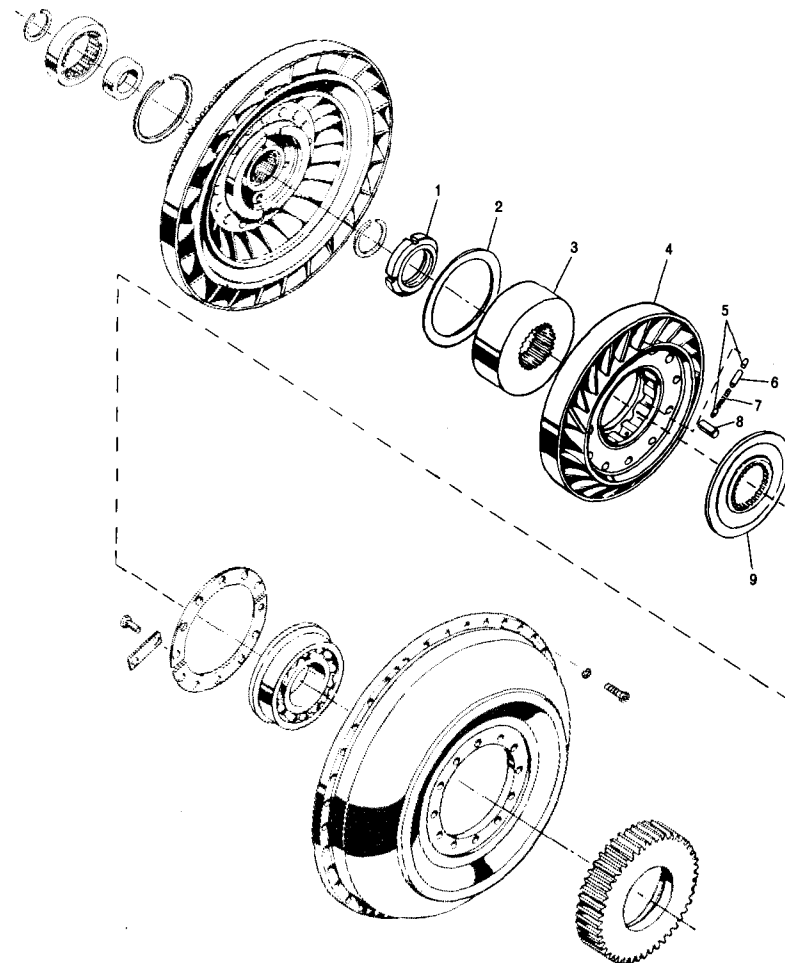
FOLDOUT 6

A



A, foldout 6. Four-element torque converter—exploded view

B



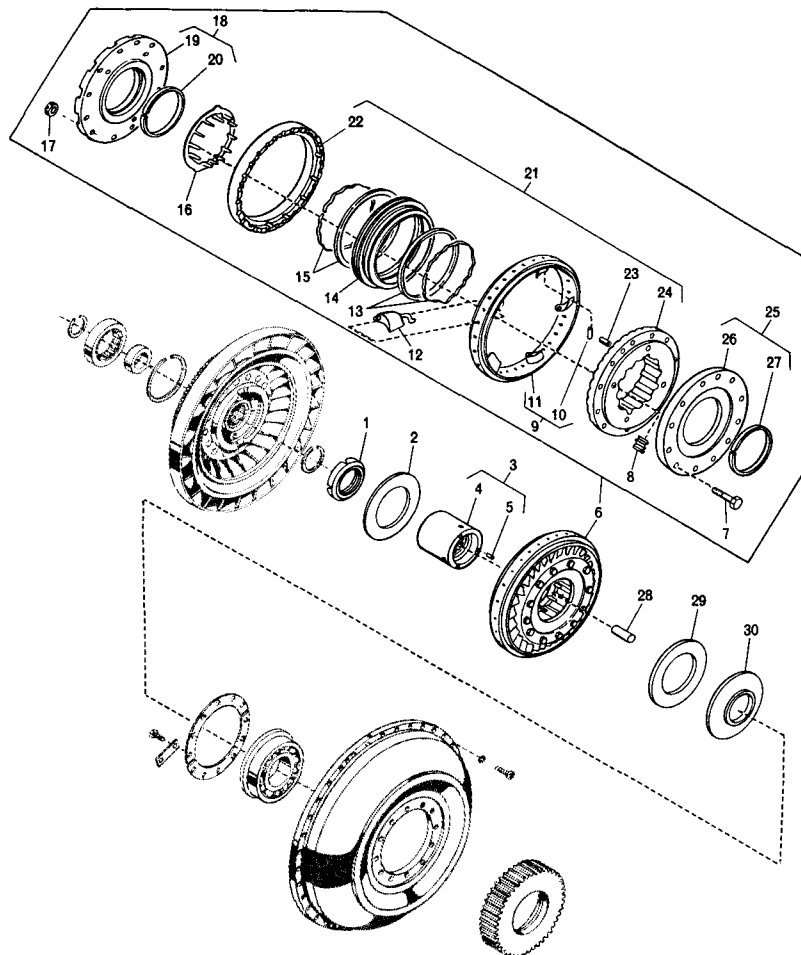
B, foldout 6. Three-element torque converter—exploded view

A

- 1 - Spanner nut
- 2 - Thrust washer
- 3 - Stator freewheel race assembly
- 4 - Stator freewheel race
- 5 - Stator freewheel race pin (3)
- 6 - Variable stator assembly
- 7 - Hexagon-head bolt, 5/16-24 x 2 3/4 (12)
- 8 - Freewheel roller spring (12)
- 9 - Shroud assembly
- 10 - Pin (5)
- 11 - Shroud
- 12 - Stator vane (30)
- 13 - Seal and expander kit
- 14 - Piston
- 15 - Seal and expander kit
- 16 - Retainer
- 17 - Locknut, 5/16-24 (12)
- 18 - Side plate assembly
- 19 - Side plate
- 20 - Bushing
- 21 - Machining housing assembly
- 22 - Piston housing
- 23 - Spring pin, 1/8 x 1 1/8 (3)
- 24 - Stator cam
- 25 - Side plate assembly
- 26 - Plate
- 27 - Bushing
- 28 - Freewheel roller (12)
- 29 - Thrust washer
- 30 - Retainer

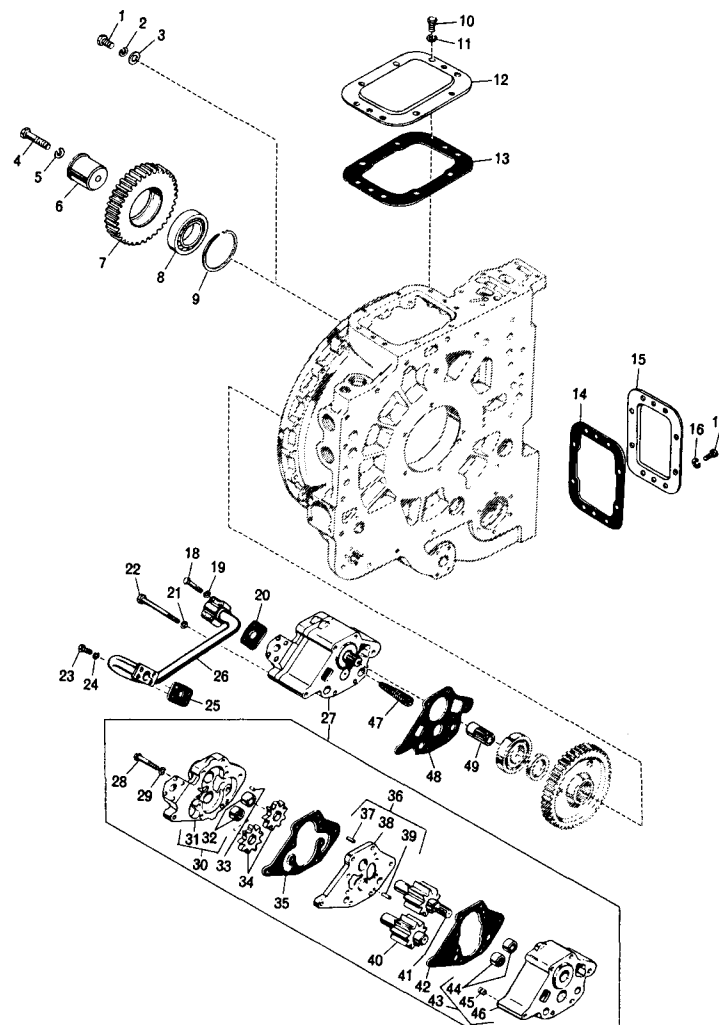
B

- 1 - Hexagon-head bolt, 1/2-13 x 3/4
- 2 - Lockwasher, 1/2
- 3 - Plain flat washer, 1/2
- 4 - Hexagon-head bolt, 1/2-13 x 2 1/2
- 5 - Lockwasher, 1/2
- 6 - Power takeoff idler gear spindle
- 7 - Power takeoff idler gear
- 8 - Single-row ball bearing
- 9 - Snapring
- 10 - Hexagon-head bolt, 7/16-14 x 7/8 (8)
- 11 - Lockwasher, 7/16 (8)
- 12 - Power takeoff top pad cover
- 13 - Power takeoff top pad cover gasket
- 14 - Power takeoff side pad cover gasket
- 15 - Power takeoff side pad cover
- 16 - Lockwasher, 7/16 (8)
- 17 - Hexagon-head bolt, 7/16-14 x 7/8 (8)
- 18 - Hexagon-head bolt, 3/8-16 x 1 3/4 (4)
- 19 - Lockwasher, 3/8 (4)
- 20 - Scavenge oil discharge tube gasket
- 21 - Lockwasher, 3/8 (6)
- 22 - Hexagon-head bolt, 3/8-16 x 4 1/2 (6) earlier models
3/8-16 x 5 (6) later models
- 23 - Hexagon-head bolt, 3/8-16 x 1 (4)
- 24 - Lockwasher, 3/8 (4)
- 25 - Scavenge oil discharge tube gasket
- 26 - Scavenge oil discharge tube
- 27 - Input pressure and scavenge pump assembly
- 28 - Hexagon-head bolt, 3/8-16 x 2 1/4 (4)
- 29 - Lockwasher, 3/8 (4)
- 30 - Scavenge pump body assembly
- 31 - Scavenge pump body
- 32 - Needle bearing (2)
- 33 - Needle roller
- 34 - Scavenge pump gear (2)
- 35 - Separating plate gasket
- 36 - Oil pump separating plate assembly
- 37 - Dowel pin
- 38 - Oil pump separating plate
- 39 - Dowel pin
- 40 - Oil pump driven gear
- 41 - Oil pump drive gear
- 42 - Separating plate gasket
- 43 - Input pressure pump body assembly
- 44 - Needle bearing (2)
- 45 - Star tolerance ring
- 46 - Input pressure pump body
- 47 - Scavenge pump suction tube
- 48 - Input pump gasket
- 49 - Oil pump drive gear assembly

A

A, foldout 7. Variable-capacity torque converter—exploded view

5632A

B

B, foldout 7. Power takeoff and input charging and scavenge oil pump—exploded view

8326A

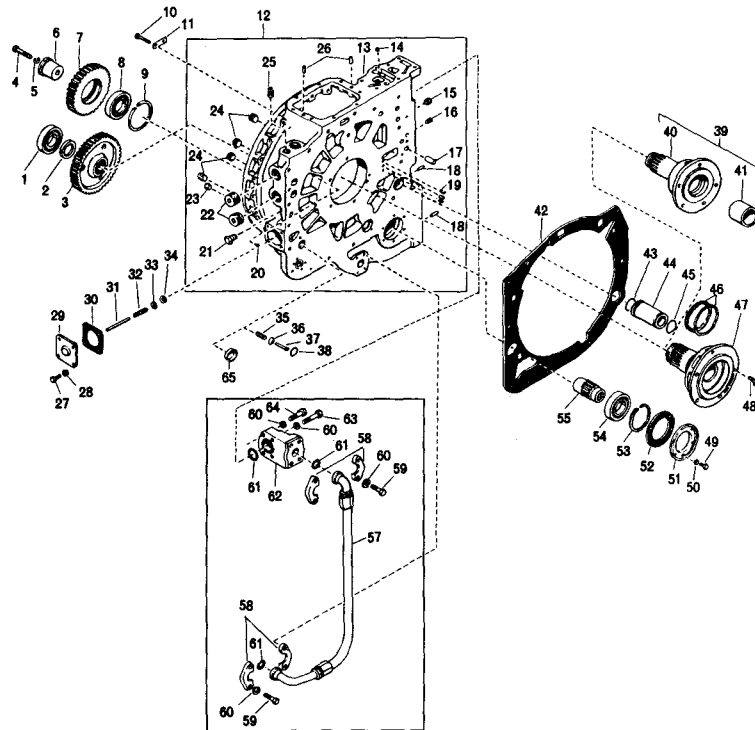
A

- 1 - Single-row ball bearing
- 2 - Spacer
- 3 - Oil pump drive gear
- 4 - Hexagon-head bolt, 1/2-13 x 2 1/2
- 5 - Lockwasher, 1/2
- 6 - Oil pump idler gear spindle
- 7 - Oil pump idler gear
- 8 - Single-row ball bearing
- 9 - Snapring
- 10 - Hexagon-head bolt, 5/16-24 x 2 1/2 (2)
- 11 - Lockstrip
- 12 - Converter housing assembly
- 13 - Converter housing
- 14 - Orifice plug (used prior to S/N 30084)
- 15 - Pipe plug, 1/2
- 16 - Pipe plug, 1/4
- 17 - Dowel pin, 3/4 x 1 1/4 (2)
- 18 - Dowel pin, 7/16 x 1 (2)
- 19 - Pipe plug, 1/8 (3)
- 20 - Drive screw, 1/8
- 21 - Pipe plug, 1/4
- 22 - Pipe plug, 1 1/4 (2)
- 23 - Pipe plug, 3/4
- 24 - Pipe plug, 1 (4)
- 25 - Pipe plug, 1/2
- 26 - Dowel pin, 7/16 x 1 (2)
- 27 - Hexagon-head bolt, 3/8-16 x 3/4 (4)
- 28 - Lockwasher, 3/8 (4)
- 29 - Lubrication valve cover
- 30 - Lubrication valve cover gasket
- 31 - Lubrication valve guide pin
- 32 - Lubrication valve spring
- 33 - Spring shim washer (ar)
- 34 - Lubrication regulator valve
- 35 - Output pump check valve spring
- 36 - Output pump check valve
- 37 - Check valve guide
- 38 - Sealring
- 39 - Converter ground sleeve assembly (VCLT, VCLBT)
- 40 - Converter ground sleeve (VCLT, VCLBT)
- 41 - Oil transfer sleeve (VCLT, VCLBT)
- 42 - Transmission housing gasket
- 43 - Sealring
- 44 - Oil pump suction tube
- 45 - Sealring
- 46 - Step-joint Teflon sealring (2) (quantity one on current models)
- 47 - Converter ground sleeve (except VCLT, VCLBT)
- 48 - Self-locking, hexagon-head bolt, 1/2-13 x 1 1/8 (5)
- 49 - Hexagon-head bolt, 3/8-16 x 7/8 (6)
- 50 - Lockwasher, 3/8 (6)
- 51 - Cover
- 52 - Gasket
- 53 - Snapring
- 54 - Single-row ball bearing
- 55 - Oil pump drive gear hub
- 56 - Hose assembly kit
- 57 - Oil pump pressure hose
- 58 - Split flange (4)
- 59 - Hexagon-head bolt, 7/16-14 x 1 1/4 (8)
- 60 - Lockwasher, 7/16 (12)
- 61 - Sealring (3)
- 62 - Hose connecting block
- 63 - Bolt, 7/16-14 x 2 1/4 (2)
- 64 - Bolt, 7/16-14 x 2 (2)
- 65 - Orifice plug

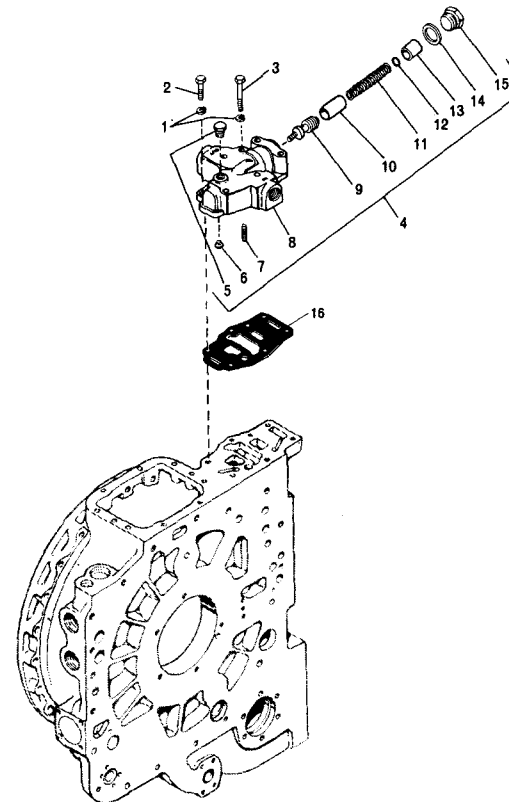
B

- 1 - Lockwasher, 7/16 (7)
- 2 - Hexagon-head bolt, 7/16-14 x 1 1/4
- 3 - Hexagon-head bolt, 7/16-14 x 2 3/4 (6)
- 4 - Main-pressure regulator valve body assembly
- 5 - Pipe plug, 1/4
- 6 - Valve (Used prior to S/N 30084)
- 7 - Setscrew, 5/16-18 x 9/16
- 8 - Main-pressure regulator body
- 9 - Main-pressure regulator valve
- 10 - Main-pressure regulator valve stop
- 11 - Main-pressure regulator spring
- 12 - Shim (ar)
0.0528 thk
0.0289 thk
- 13 - Main-pressure regulator plug
- 14 - Annular gasket
- 15 - Plug, 1 3/8-12
- 16 - Main-pressure regulator body assembly gasket

A



B



A. foldout 8. Torque converter housing—exploded view

4662G

B. foldout 8. Main-pressure regulator valve (remote filter)—exploded view

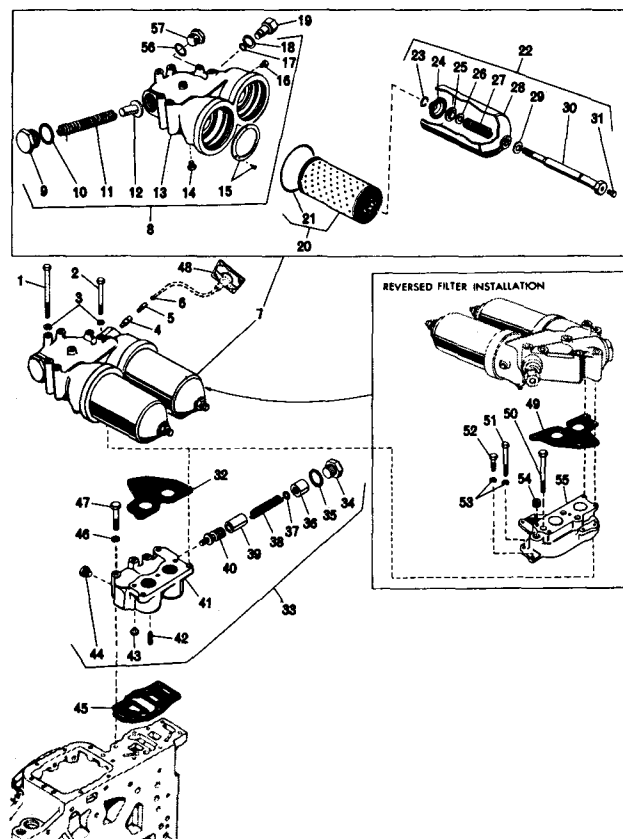
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A

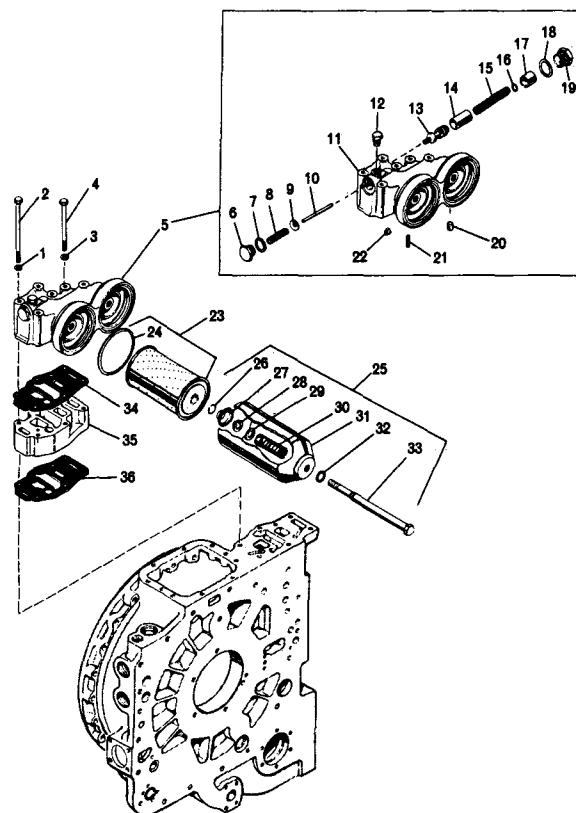
- 1 - Hexagon-head bolt, 7/16-14 x 7
(4 3/4 for reversed filter) (5)
- 2 - Hexagon-head bolt, 7/16-14 x 4 1/2
(5 1/4 for reversed filter) (2)
- 3 - Lockwasher, 7/16 (7)
- 4 - Single shell, 14 ga male
- 5 - Nylon sleeve
- 6 - Female terminal for 14-, 16-, or 18-
gage cable
- 7 - Oil filter assembly with oil
pressure switch
- 8 - Oil filter base assembly
- 9 - Bypass valve plug
- 10 - Bypass valve plug gasket
- 11 - Bypass valve spring
- 12 - Bypass valve
- 13 - Oil filter base
- 14 - Pipe plug (2)
- 15 - Base plate, screws (2)
- 16 - Pipe plug
- 17 - Pressure switch sealring
- 18 - Pressure switch gasket
- 19 - Oil pressure switch
- 20 - Oil filter element (2)
- 21 - Oil filter sealring (2)
- 22 - Shell and center stud assembly (2)
- 23 - Retainer snapring (2)
- 24 - Retainer (2)
- 25 - Seal (2)
- 26 - Washer (2)
- 27 - Spring (2)
- 28 - Shell (2)
- 29 - Center stud and shell gasket (2)
- 30 - Center stud (2)
- 31 - Plug (2)
- 32 - Regulator valve body and
oil filter gasket
- 33 - Main-pressure regulator valve body
assembly
- 34 - Plug, 1 3/8-12
- 35 - Annular gasket
- 36 - Main-pressure regulator plug
- 37 - Shim (ar):
0.0528 thk
0.0289 thk
- 38 - Main-pressure regulator spring
- 39 - Main-pressure regulator valve stop
- 40 - Main-pressure regulator valve
- 41 - Main-pressure regulator body
- 42 - Setscrew, 5/16-18 x 1 7/32
- 43 - Valve (used prior to S/N 30084)
- 44 - Pipe plug, 1/4
- 45 - Main-pressure regulator body gasket
- 46 - Lockwasher, 7/16 (2)
- 47 - Hexagon-head bolt, 7/16-14 x
3 1/2 (2)
- 48 - Transmission oil filter warning
light plate
- 49 - Oil filter base assembly gasket
- 50 - Hexagon-head bolt, 7/16-14 x
6 1/4 (2)
- 51 - Hexagon-head bolt, 7/16-14 x 4 (3)
- 52 - Hexagon-head bolt, 7/16-14 x 1 1/2
- 53 - Lockwasher, 7/16 (4)
- 54 - Pipe plug, 3/4
- 55 - Oil filter adaptor
- 56 - Gasket
- 57 - Plug

B

- 1 - Lockwasher, 7/16 (5)
- 2 - Hexagon-head bolt, 7/16-14 x 7 (5)
- 3 - Lockwasher, 7/16 (2)
- 4 - Hexagon-head bolt, 7/16-14 x
5 1/2 (2)
- 5 - Oil filter adapter assembly
- 6 - Plug, 1 1/4-12
- 7 - Annular gasket
- 8 - Filter bypass valve spring
- 9 - Filter bypass valve
- 10 - Filter bypass valve pin
- 11 - Oil filter adapter
- 12 - Pipe plug, 1/4
- 13 - Main-pressure regulator valve
- 14 - Main-pressure regulator valve stop
- 15 - Main-pressure regulator spring
- 16 - Shim (ar):
0.0528 thk
0.0289 thk
- 17 - Main-pressure regulator plug
- 18 - Annular gasket
- 19 - Plug, 1 3/8-12
- 20 - Pipe plug, 1/4
- 21 - Setscrew, 5/16-18 x 9/16
- 22 - Valve (used prior to S/N 30084)
- 23 - Oil filter element (2)
- 24 - Oil filter sealring (2)
- 25 - Shell and center stud assembly (2)
- 26 - Snapring (2)
- 27 - Retainer (2)
- 28 - Seal (2)
- 29 - Washer, (2)
- 30 - Spring (2)
- 31 - Shell (2)
- 32 - Gasket (2)
- 33 - Stud (2)
- 34 - Oil filter adapter gasket
- 35 - Oil filter adapter plate
- 36 - Oil filter adapter gasket

A

A, foldout 9. Main-pressure regulator valve and integral oil filter—exploded view

B

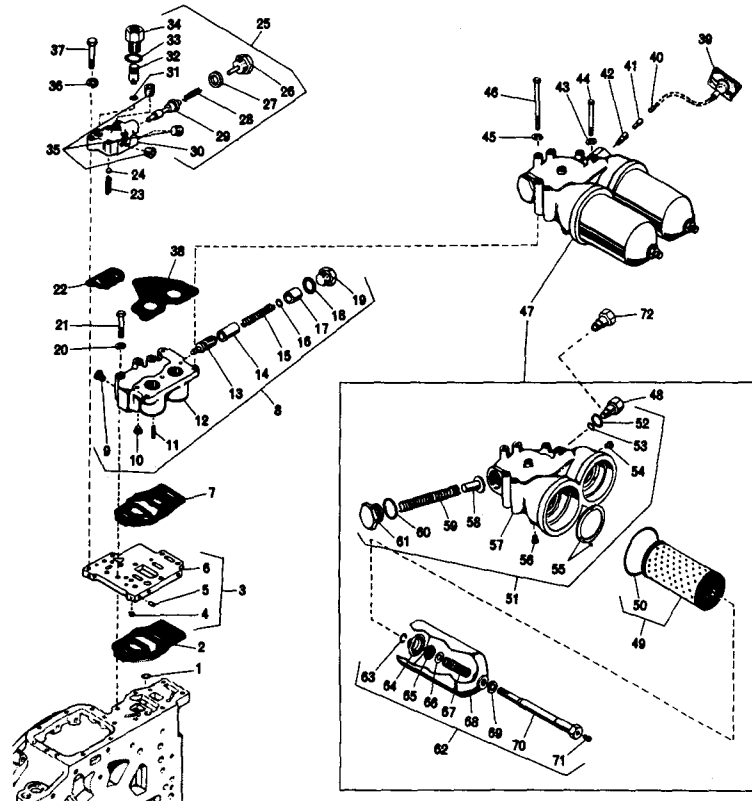
B, foldout 9. Main-pressure regulator valve (combined with filter)—exploded view

A

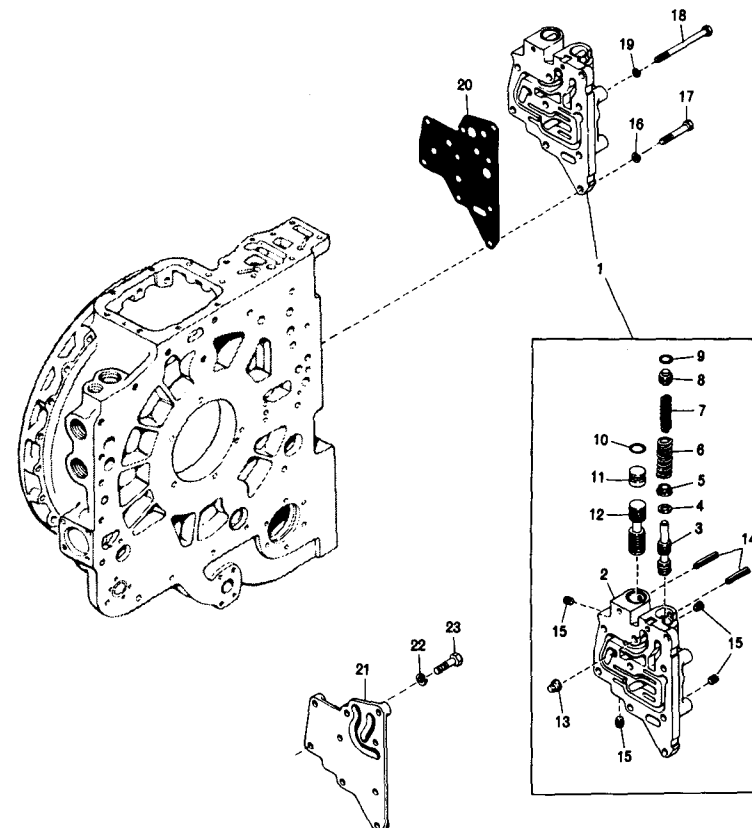
- 1 - Sealring
- 2 - Valve adapter gasket
- 3 - Adapter assembly
- 4 - Jumper tube
- 5 - Pin (5)
- 6 - Valve adapter
- 7 - Regulator valve body gasket
- 8 - Main-pressure regulator valve body assembly
- 9 - Pipe plug, 1/4
- 10 - Valve (used prior to S/N 29758)
- 11 - Setscrew, 5/16-18 x 1 7/32
- 12 - Main-pressure regulator body
- 13 - Main-pressure regulator valve
- 14 - Main-pressure regulator valve stop
- 15 - Main-pressure regulator spring
- 16 - Shim (ar):
 - 0.0528 thk
 - 0.0289 thk
- 17 - Main-pressure regulator plug
- 18 - Annular gasket
- 19 - Plug, 1 3/8-12
- 20 - Lockwasher, 7/16 (2)
- 21 - Hexagon-head bolt, 7/16-14 x 4 1/2 (2)
- 22 - Stator control valve body gasket
- 23 - Detent spring
- 24 - Detent ball
- 25 - Stator control valve body assembly
- 26 - Valve stop plug
- 27 - Washer
- 28 - Stator control valve spring
- 29 - Stator control valve
- 30 - Stator control valve body
- 31 - Copper gasket
- 32 - Stator control valve plug
- 33 - Sealring
- 34 - Adapter
- 35 - Hexagon socket plug, 1/4 (3)
- 36 - Lockwasher, 3/8 (5)
- 37 - Hexagon-head bolt, 3/8-16 x 2 1/4 (5)
- 38 - Regulator valve body and oil filter gasket
- 39 - Transmission filter warning light plate
- 40 - Female terminal for 14-, 16-, or 18 gage cable
- 41 - Nylon sleeve
- 42 - Single shell, 14 gage male
- 43 - Lockwasher, 7/16 (2)
- 44 - Hexagon-head bolt, 7/16-14 x 4 1/2 (2)
- 45 - Lockwasher, 7/16 (5)
- 46 - Hexagon-head bolt, 7/16-14 x 8 1/4 (5)
- 47 - Oil filter assembly
- 48 - Plug
- 49 - Oil filter element (2)
- 50 - Filter shell sealring (2)
- 51 - Oil filter base assembly
- 52 - Pressure switch gasket
- 53 - Pressure switch sealring
- 54 - Pipe plug
- 55 - Screw, base plate set (2)
- 56 - Pipe plug, 1/4 (2)
- 57 - Filter base
- 58 - Bypass valve
- 59 - Bypass valve spring
- 60 - Bypass valve plug gasket
- 61 - Bypass valve plug
- 62 - Shell and center stud assembly (2)
- 63 - Retainer snapping (2)
- 64 - Retainer (2)
- 65 - Seal (2)
- 66 - Washer (2)
- 67 - Spring (2)
- 68 - Shell (2)
- 69 - Center stud and shell gasket (2)
- 70 - Center stud (2)
- 71 - Plug (2)
- 72 - Oil pressure switch

B

- 1 - Lockup valve assembly
- 2 - Lockup valve body
- 3 - Lockup valve
- 4 - Shim, 0.025 (ar)
- 5 - Lockup spring washer
- 6 - Lockup valve spring
- 7 - Lockup valve spring
- 8 - Lockup body valve plug
- 9 - Sealring
- 10 - Sealring
- 11 - Lockup cutoff valve plug
- 12 - Lockup cutoff valve
- 13 - Check valve
- 14 - Spring pin (2)
- 15 - Pipe plug, 1/8 (3)
- 16 - Lockwasher, 3/8 (2)
- 17 - Hexagon-head bolt, 3/8-16 x 1 1/4 (2)
- 18 - Hexagon-head bolt, 3/8-16 x 2 3/4 (7)
- 19 - Lockwasher, 3/8 (7)
- 20 - Lockup valve body gasket
- 21 - Lockup pad cover
- 22 - Lockwasher, 3/8 (9)
- 23 - Hexagon-head bolt, 3/8-16 x 1 1/2 (9)

A

A. foldout 10. Main-pressure regulator valve and oil filter (with signal switch)—exploded view

B

B. foldout 10. Lockup clutch valve—exploded view

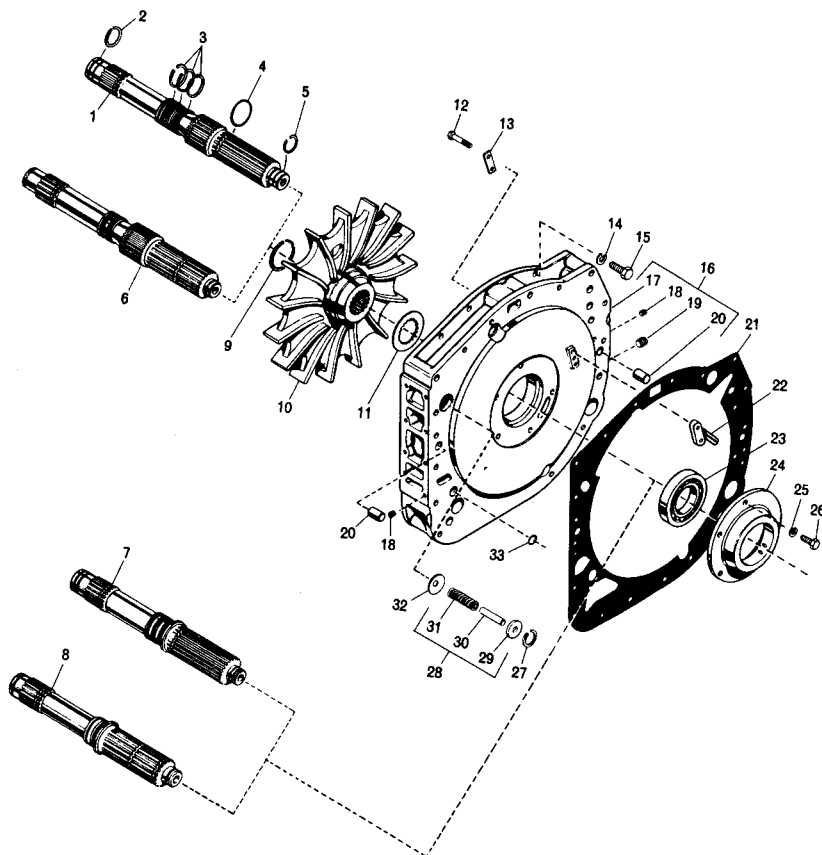
A

- 1 - Turbine output shaft (CLBT, VCLBT)
- 2 - Step-joint sealring
- 3 - Step-joint sealring (3)
- 4 - Sealring
- 5 - Step-joint sealring
- 6 - Turbine output shaft (CBT)
- 7 - Turbine output shaft (CLT, VCLT)
- 8 - Turbine output shaft (CT)
- 9 - External snapping
- 10 - Retarder rotor
- 11 - Washer
- 12 - Hexagon-head bolt, 5/16-24 x 2 (2)
- 13 - Lockstrip
- 14 - Lockwasher, 1/2 (7)
- 15 - Hexagon-head bolt 1/2-13 x 1 1/2 (7)
- 16 - Hydraulic retarder housing assembly
- 17 - Hydraulic retarder housing
- 18 - Pipe plug, 1/8 (2)
- 19 - Pipe plug, 1/4
- 20 - Dowel pin 3/4 x 1 1/4 (2)
- 21 - Transmission housing gasket
- 22 - Pitot tube
- 23 - Single-row ball bearing
- 24 - Oil transfer hub
- 25 - Lockwasher, 1/2 (5)
- 26 - Hexagon-head bolt, 1/2-13 x 1 1/4 (5)
- 27 - Snapping
- 28 - Primary converter pressure regulator guide assembly
- 29 - Primary converter pressure regulator guide
- 30 - Primary converter pressure regulator pin
- 31 - Primary converter pressure regulator spring
- 32 - Primary converter pressure regulator valve
- 33 - Sealring

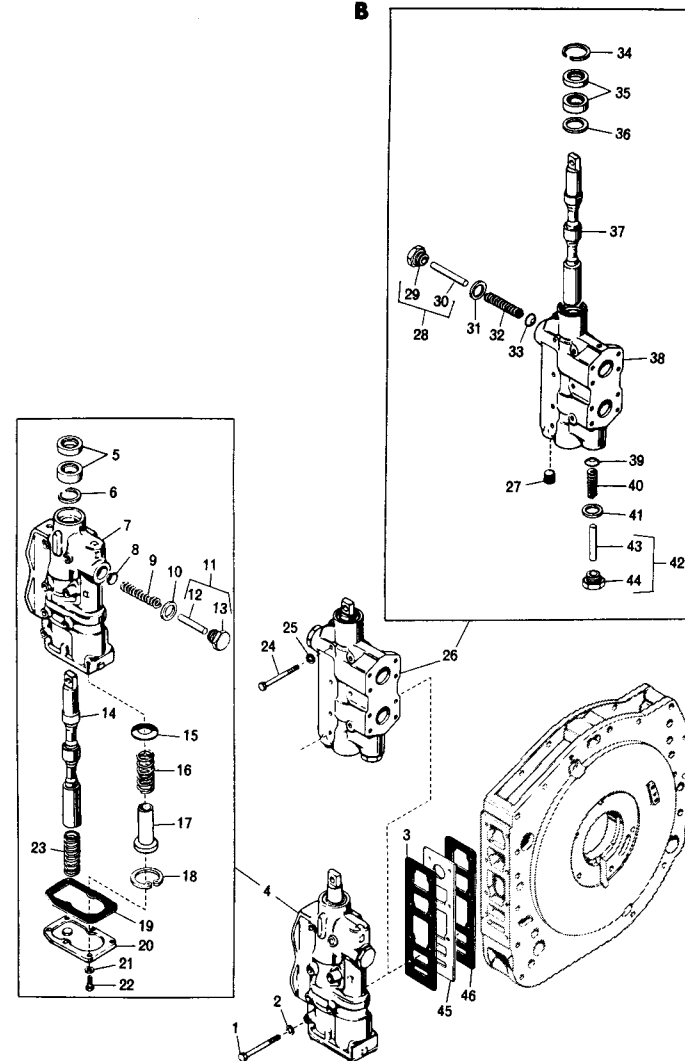
B

- 1 - Hexagon-head bolt, 3/8-16 x 4 (7)*
3/8-16 x 4 1/4 (7)
- 2 - Lockwasher, 3/8 (7)
- 3 - Retarder control valve body gasket
- 4 - Hydraulic retarder control valve body assembly (front ports)
- 5 - Wiper scraper and oil seal kit
- 6 - Snapping
- 7 - Retarder control valve body
- 8 - Torque limiter valve*
- 9 - Torque limiter spring*
- 10 - Annular gasket*
- 11 - Torque limiter valve plug assembly*
- 12 - Spring guide pin*
- 13 - Plug, 1 3/8-12*
- 14 - Retarder control valve
- 15 - Secondary-converter pressure regulator valve
- 16 - Secondary-converter pressure regulator spring
- 17 - Exhaust oil transfer tube
- 18 - Snapping
- 19 - Retarder control valve gasket
- 20 - Retarder control valve cover
- 21 - Lockwasher, 3/8 (6)
- 22 - Hexagon-head bolt, 3/8-16 x 1 (6)
- 23 - Retarder control valve spring
- 24 - Hexagon-head bolt, 3/8-16 x 2 3/4 (7)*
3/8-16 x 3 (7)
- 25 - Lockwasher, 3/8 (7)
- 26 - Hydraulic retarder control valve body assembly (rear ports)
- 27 - Pipe plug, 1/2
- 28 - Torque limiter valve plug assembly*
- 29 - Plug, 1 3/8-12*
- 30 - Spring guide pin*
- 31 - Annular gasket*
- 32 - Torque limiter spring*
- 33 - Torque limiter valve*
- 34 - Snapping
- 35 - Wiper-scraper and oil seal kit
- 36 - Valve stop
- 37 - Retarder control valve
- 38 - Retarder control valve body
- 39 - Secondary-converter pressure regulator valve
- 40 - Secondary-converter pressure regulator spring
- 41 - Annular gasket
- 42 - Secondary-converter pressure regulator plug assembly
- 43 - Spring guide pin
- 44 - Plug, 1 3/8-12
- 45 - Restrictor plate
- 46 - Gasket

*Used in earlier models only

A

A, foldout 11. Turbine output shafts and hydraulic retarder—exploded view

B

B, foldout 11. Hydraulic retarder control valves—exploded view

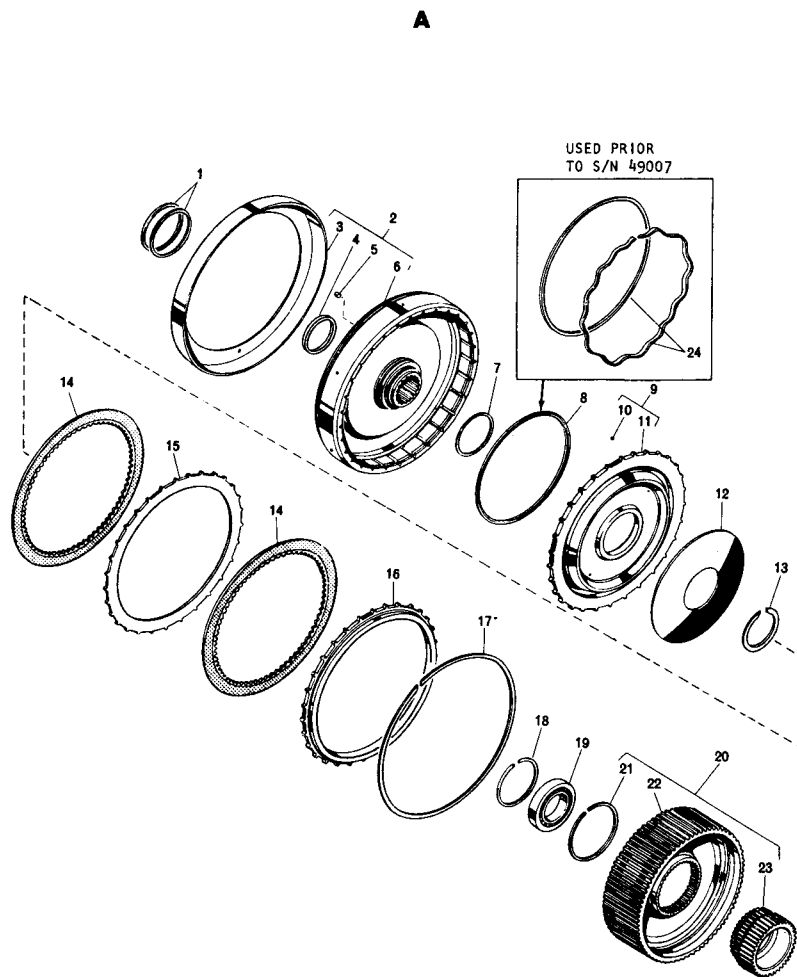
A

- | | |
|---|---|
| 1 - Step-joint sealring (2) | 13 - External snapping |
| 2 - Low-splitter clutch drum assembly | 14 - Internal-splined clutch plate (2) |
| 3 - Pitot collector ring | 15 - External-splined clutch plate |
| 4 - Wear ring | 16 - Splitter clutch back plate |
| 5 - Dowel pin, 5/16 x 5/16 (8) | 17 - Internal snapping |
| 6 - Low-splitter clutch drum | 18 - Internal snapping |
| 7 - Piston inner sealring | 19 - Single-row ball bearing |
| 8 - Lip-type sealring (after S/N 49006) | 20 - Low-splitter clutch hub and splitter sun gear assembly |
| 9 - Low-splitter clutch piston assembly | 21 - Internal snapping |
| 10 - Ball, 1/4 (4) | 22 - Low-splitter clutch hub |
| 11 - Low-splitter clutch piston | 23 - Splitter sun gear |
| 12 - Low-splitter piston return spring | 24 - Sealring and expander assembly (prior to S/N 49007) |

B

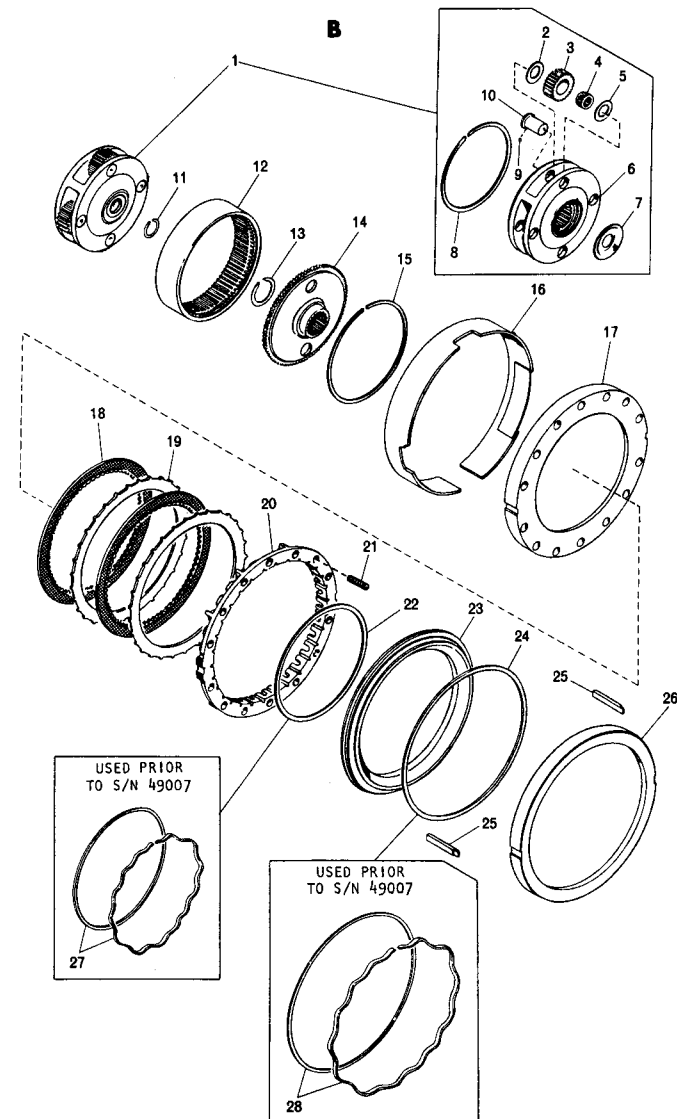
- | | |
|---|---|
| 1 - Splitter planetary carrier | 16 - Spacer |
| 2 - Pinion thrust washer (4) | 17 - Clutch back plate |
| 3 - Planetary pinion (matched set of 4) | 18 - Internal-splined clutch plate (2) |
| 4 - Needle bearing (4) | 19 - External-splined clutch plate |
| 5 - Pinion thrust washer (4) | 20 - Splitter clutch anchor |
| 6 - Splitter planetary carrier | 21 - High-splitter clutch piston return spring (14) |
| 7 - Oil shield | 22 - Lip-type internal sealring |
| 8 - Snapping | 23 - High-splitter clutch piston |
| 9 - Ball, 3/16 dia (4) | 24 - Lip-type external sealring |
| 10 - Planetary pinion spindle (4) | 25 - Key (2) |
| 11 - Snapping | 26 - High-splitter clutch piston housing |
| 12 - Splitter ring gear | 27 - Internal expander and sealring assembly (prior to S/N 49007) |
| 13 - Snapping | 28 - External expander and sealring assembly (prior to S/N 49007) |
| 14 - Splitter ring gear hub | |
| 15 - Snapping | |





8339

A, foldout 12. Low-splitter clutch—exploded view



9039

B, foldout 12. Splitter planetary, and high-splitter clutch—exploded view

A

- | | |
|---|---|
| 1 - Hexagon-head bolt, 3/8-16 x 3/4 (2) | 15 - Transmission housing |
| 2 - Clutch assembly retainer (2) | 16 - Oil drain tube (used with output transfer housing) |
| 3 - Internal snapping | 17 - Oil transfer tube (used with output-driven oil pump) |
| 4 - Converter pressure relief valve seat | 18 - Relief valve pin (2) |
| 5 - Converter pressure relief valve | 19 - Pipe reducer bushing (breather) |
| 6 - Converter pressure relief valve spring | 20 - Single-row ball bearing |
| 7 - Breather | 21 - Ball bearing retainer |
| 8 - Lockwasher, 1/2 (12) | 22 - Internal-tooth lockwasher, 1/2 (6) |
| 9 - Hexagon-head bolt, 1/2-13 x 5 (12) (CBT, CLBT, VCLBT) | 23 - Self-locking hexagon-head bolt, 1/2-20 x 1 7/8 (6) |
| 10 - Lockwasher, 1/2 (7) | 24 - Jumper hose (3) |
| 11 - Hexagon-head bolt, 1/2-13 x 1 3/4 (7) (CBT, CLBT, VCLBT) | 25 - Jumper tube (3) |
| 12 - Hexagon-head bolt, 5/8-11 x 1 3/4 (27) | 26 - Oil transfer hub |
| 13 - Lockwasher, 5/8 (27) | 27 - Oil level sight gage |
| 14 - Transmission housing assembly | 28 - Washer (2) |
| | 29 - Plug (2) |

B

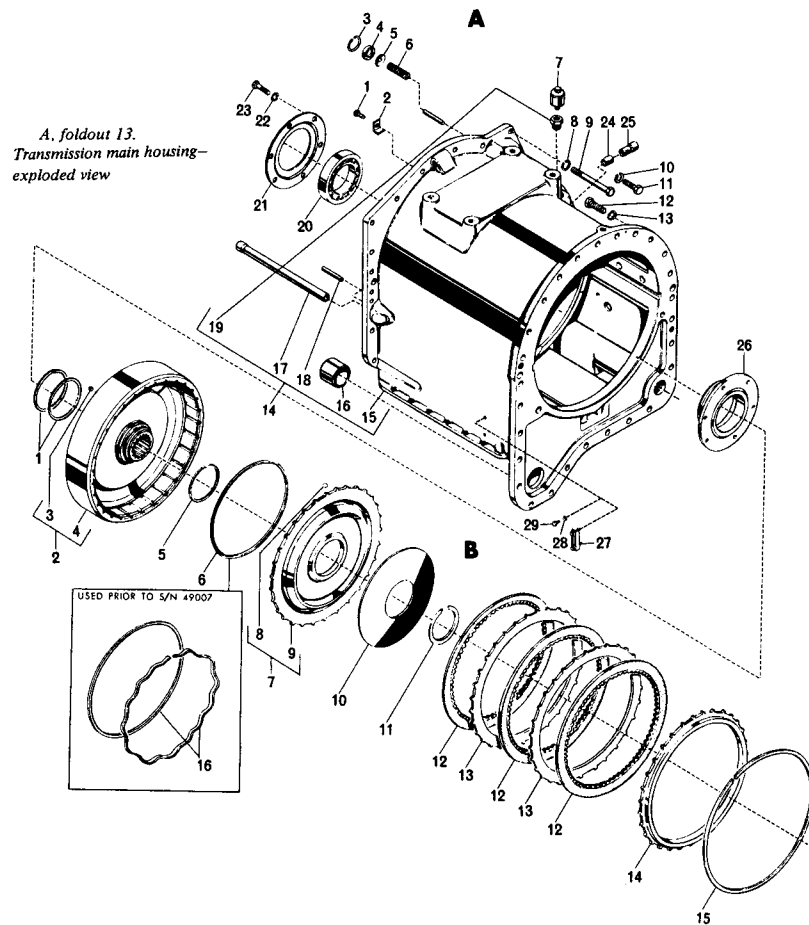
- | | |
|---------------------------------------|--|
| 1 - Step-joint sealring (2) | 10 - High-range clutch piston return spring |
| 2 - High-range clutch drum assembly | 11 - External snapping |
| 3 - Dowel pin, 5/16 x 5/16 (8) | 12 - Internal-splined clutch plate (3) |
| 4 - High-range clutch drum | 13 - External-splined clutch plate (2) |
| 5 - Piston sealring | 14 - Clutch back plate |
| 6 - Lip-type sealring | 15 - Internal snapping |
| 7 - High-range clutch piston assembly | 16 - Expander and sealring assembly (prior to S/N 49007) |
| 8 - Ball, 1/4 dia (4) | |
| 9 - High-range clutch piston | |

C

- | | |
|--|-------------------------------------|
| 1 - Oil transfer plate gasket | 17 - Oil seal |
| 2 - Oil transfer plate | 18 - Check valve |
| 3 - Lockwasher, 3/8 (10) | 19 - Clutch accumulator valve plug |
| 4 - Hexagon-head bolt, 3/8-16 x 1 1/2 (10) | 20 - Control valve body |
| 5 - Control valve gasket | 21 - Detent spring cap |
| 6 - Lockwasher, 3/8 (8) | 22 - Detent spring cap gasket |
| 7 - Hexagon-head bolt, 3/8-16 x 2 (8) | 23 - Selector valve detent spring |
| 8 - Lockwasher, 3/8 (5) | 24 - Selector valve detent pin |
| 9 - Hexagon-head bolt, 3/8-16 x 3 1/2 (5) | 25 - Selector valve detent ball (2) |
| 10 - Four-speed manual control valve body assembly | 26 - Selector valve detent spring |
| 11 - Hexagon-head bolt, 5/16-18 x 7/8 (4) | 27 - Pipe plug, 1/8 |
| 12 - Lockwasher, 5/16 (4) | 28 - Spring pin |
| 13 - Accumulator valve cover | 29 - Manual selector valve assembly |
| 14 - Accumulator valve cover gasket | 30 - Bushing |
| 15 - Clutch accumulator valve | 31 - Manual selector valve |
| 16 - Clutch accumulator valve spring | 32 - Steel ball, 15/32 |
| | 33 - Cap |
| | 34 - Reverse relay valve plug |
| | 35 - Sealring |
| | 36 - Reverse relay valve |
| | 37 - Reverse relay stop pin |

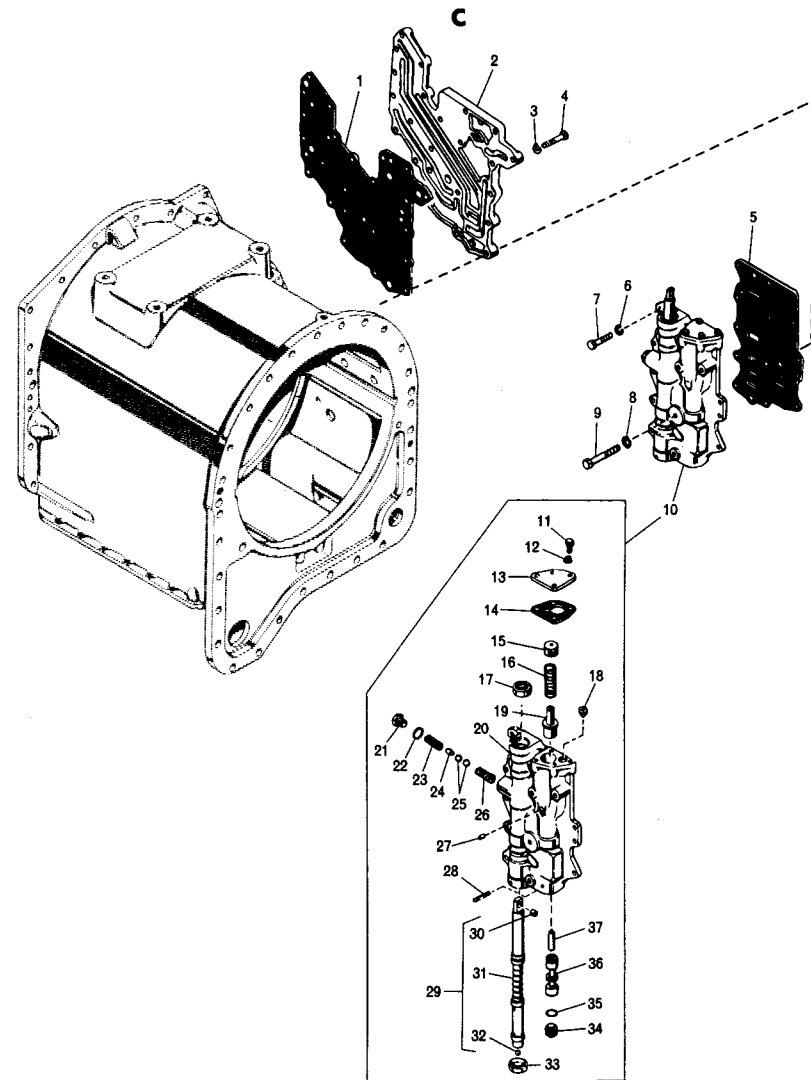
A, J
Transm
explodi





B, foldout 13. High-range clutch assembly—exploded view

8334A



C, foldout 13. Control valve body assembly (4-speed)—exploded view

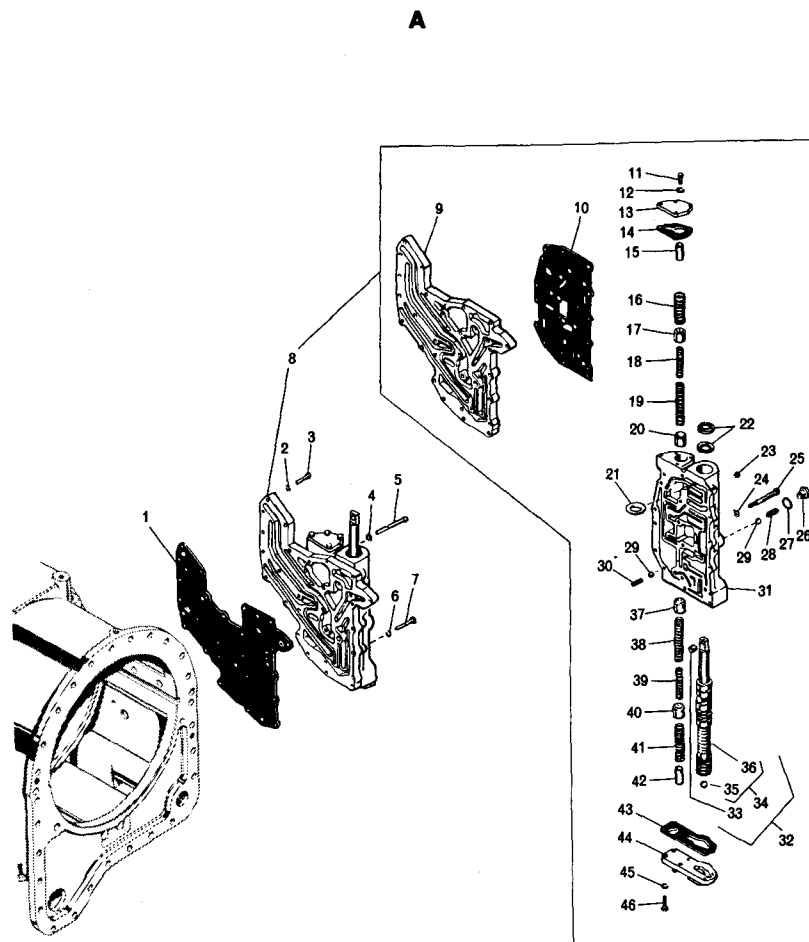
4480

A

- 1 - Oil transfer plate gasket
- 2 - Lockwasher, 3/8 (10)
- 3 - Hexagon-head bolt, 3/8-16 x 1 1/2 (10)
- 4 - Lockwasher, 3/8 (6)
- 5 - Hexagon-head bolt, 3/8-16 x 3 1/2 (6)
- 6 - Lockwasher, 3/8 (8)
- 7 - Hexagon-head bolt, 3/8-16 x 2 (8)
- 8 - Six-speed manual control valve body assembly
- 9 - Oil transfer plate
- 10 - Control valve body gasket
- 11 - Hexagon-head bolt, 5/16-18 x 7/8 (4)
- 12 - Lockwasher, 5/16 (4)
- 13 - Trimmer valve cover
- 14 - Trimmer valve cover gasket
- 15 - Intermediate-range trimmer valve stop
- 16 - Intermediate-range trimmer valve spring
- 17 - Intermediate-range trimmer valve plug
- 18 - Intermediate-range trimmer valve inner spring
- 19 - Intermediate-range trimmer valve outer spring
- 20 - Intermediate-range trimmer valve
- 21 - Valve stop
- 22 - Oil seal and scraper assembly
- 23 - Pipe plug, 1/8 (2)
- 24 - Lockwasher, 3/8 (4)
- 25 - Hexagon-head bolt, 3/8-16 x 2 3/4 (4)
- 26 - Detent plug
- 27 - Detent plug gasket
- 28 - Detent spring
- 29 - Detent ball (2)
- 30 - Detent spring
- 31 - Control valve body
- 32 - Manual selector valve assembly
- 33 - Bushing
- 34 - Manual selector valve assembly
- 35 - Steel ball, 9/16
- 36 - Manual selector valve
- 37 - Neutral trimmer valve
- 38 - Neutral trimmer valve outer spring
- 39 - Neutral trimmer valve inner spring
- 40 - Neutral trimmer plug valve
- 41 - Neutral trimmer valve spring
- 42 - Neutral trimmer valve stop
- 43 - Trimmer and selector valve gasket
- 44 - Trimmer and selector valve cover
- 45 - Lockwasher, 3/8 (6)
- 46 - Hexagon-head bolt, 3/8-16 x 1 1/4 (6)

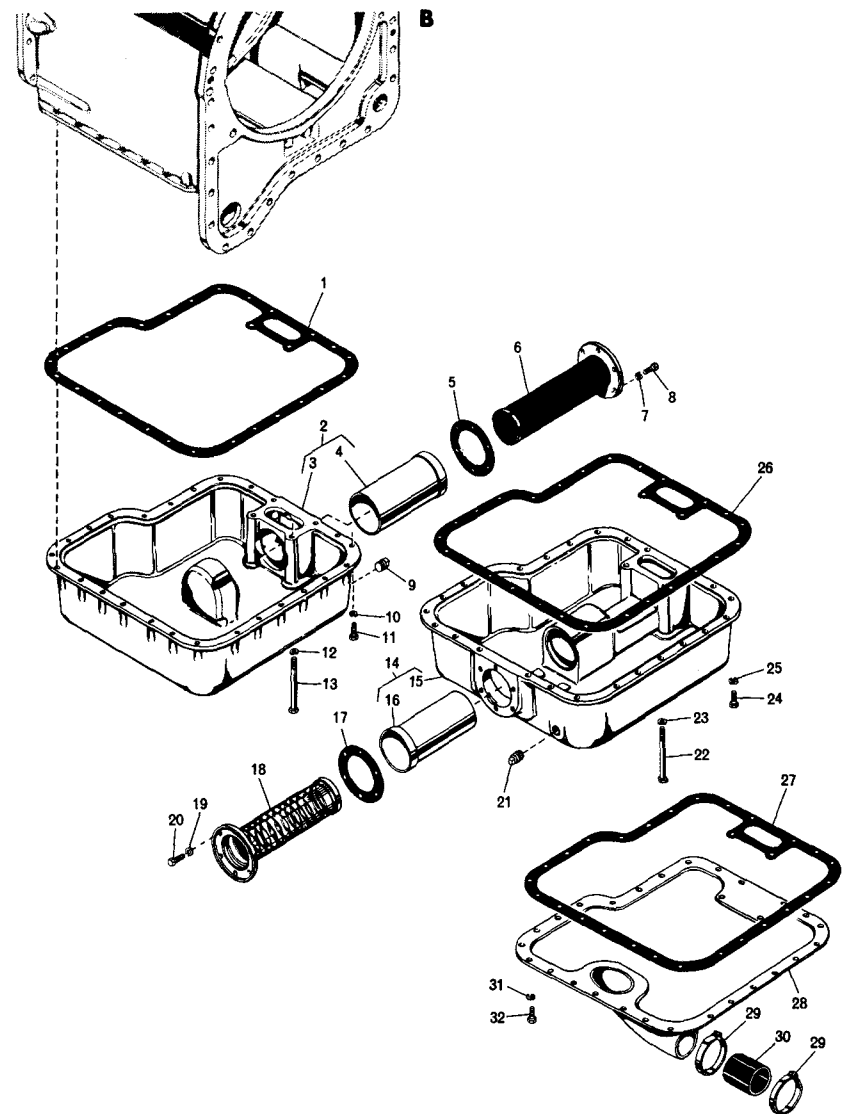
B

- 1 - Oil pan gasket
- 2 - Transmission oil pan assembly
- 3 - Transmission oil pan
- 4 - Oil strainer shield
- 5 - Oil strainer gasket
- 6 - Oil strainer
- 7 - Lockwasher, 3/8 (6)
- 8 - Hexagon-head bolt, 3/8-16 x 7/8 (6)
- 9 - Drain plug, 3/4
- 10 - Lockwasher, 3/8 (24)
- 11 - Hexagon-head bolt, 3/8-16 x 1 1/8 (24)
- 12 - Lockwasher, 3/8 (4)
- 13 - Hexagon-head bolt, 3/8-16 x 5 (4)
- 14 - Transmission oil pan assembly
- 15 - Transmission oil pan
- 16 - Oil strainer shield
- 17 - Oil strainer gasket
- 18 - Oil strainer
- 19 - Lockwasher, 3/8 (6)
- 20 - Hexagon-head bolt, 3/8-16 x 7/8 (6)
- 21 - Drain plug, 3/4
- 22 - Hexagon-head bolt, 3/8-16 x 5 (4)
- 23 - Lockwasher, 3/8 (4)
- 24 - Hexagon-head bolt, 3/8-16 x 1 1/8 (24)
- 25 - Lockwasher, 3/8 (24)
- 26 - Oil pan gasket
- 27 - Oil drain cover gasket
- 28 - Oil drain cover
- 29 - Hose clamp (2)
- 30 - Transmission drain hose
- 31 - Lockwasher, 3/8 (28)
- 32 - Hexagon-head bolt, 3/8-16 x 7/8 (28)



A, foldout 14. Control valve body assembly (6-speed)—exploded view

4340



B, foldout 14. Transmission oil pans—exploded view

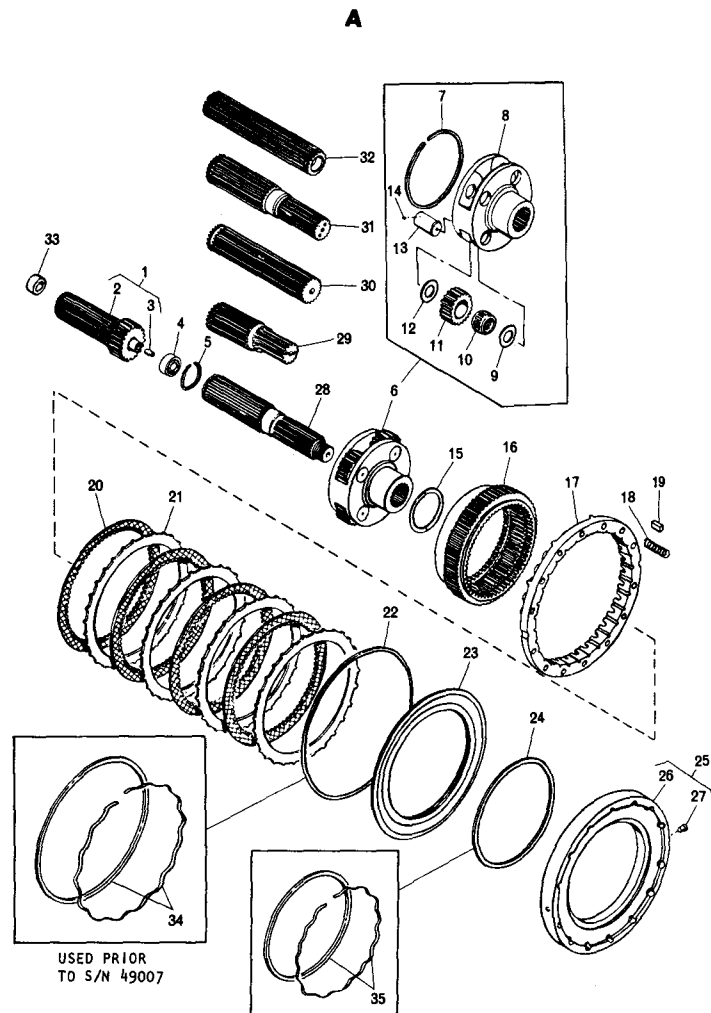
4485

A

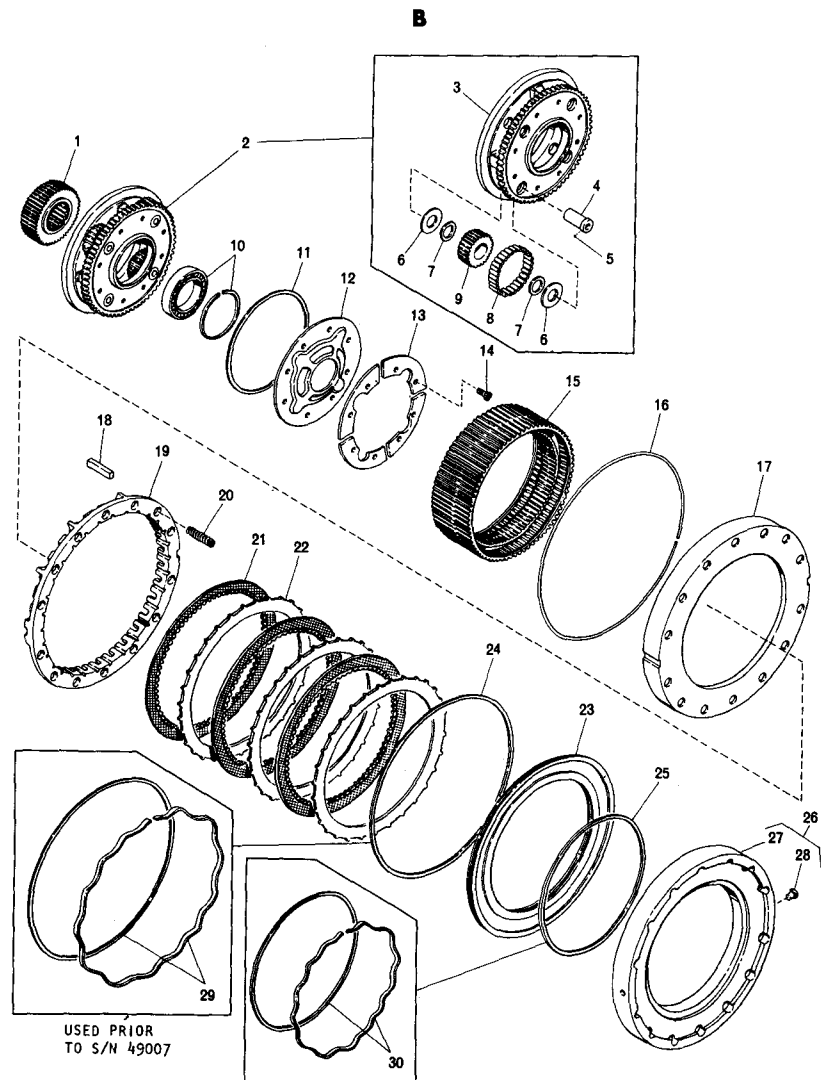
- 1 - Splitter shaft assembly
- 2 - Splitter shaft
- 3 - Orifice
- 4 - Double-row ball bearing
- 5 - External snapping
- 6 - Low-range planetary carrier assembly
- 7 - Internal snapping
- 8 - Low-range planetary carrier
- 9 - Pinion thrust washer
(5640,5840,5660,5860) (4)
(5865) (5)
- 10 - Pinion needle bearing assembly
(5640,5840,5660,5860) (4)
(5865) (5)
- 11 - Low-range planetary pinion
(5640,5840,5660,5860)
(matched set of 4)
(5865) (matched set of 5)
- 12 - Pinion thrust washer
(5640,5840,5660,5860) (4)
(5865) (5)
- 13 - Planetary pinion spindle
(5640,5840,5660,5860) (4)
(5865) (5)
- 14 - Steel ball, 3/16 dia
(5640,5840,5660,5860) (4)
(5865) (5)
- 15 - Thrust washer
- 16 - Low-range ring gear
- 17 - Low-range clutch anchor
- 18 - Low-range clutch piston
return spring (14)
- 19 - Low-range clutch anchor key (2)
- 20 - Low-range, internal-splined clutch plate (4)
- 21 - Low-range, external-splined clutch plate (4)
- 22 - Lip-type external sealring
- 23 - Low-range clutch piston
- 24 - Lip-type internal sealring
- 25 - Low-range clutch piston housing assembly
- 26 - Low-range clutch piston housing
- 27 - Pin (2)
- 28 - Transmission output shaft
(straight-through models with
nut-retained flange)
- 29 - Transmission output shaft
(straight-through model with
-8 suffix)
- 30 - Transmission output shaft
(transfer housing models
without upper disconnect)
- 31 - Transmission output shaft
(straight-through models with
bolt-retained flange)
- 32 - Transmission output shaft (trans-
fer housing models with upper
disconnect)
- 33 - Sleeve
- 34 - Sealring and expander assembly
(prior to S/N 49007)
- 35 - Sealring and expander assembly
(prior to S/N 49007)

B

- 1 - Intermediate-range sun gear
- 2 - Intermediate-range planetary carrier assembly
- 3 - Intermediate-range planetary carrier
- 4 - Planetary pinion spindle (4)
- 5 - Steel ball, 3/16 dia (4)
- 6 - Pinion thrust washer (8)
- 7 - Pinion roller spacer (8)
- 8 - Pinion roller (96)
- 9 - Planetary pinion (matched set of 4)
- 10 - Single-row ball bearing (with snapping)
- 11 - Sealring
- 12 - Oil collector ring
- 13 - Retainer (4)
- 14 - Self-locking, hexagon-head bolt, 3/8-24 x 5/8 (8)
- 15 - Intermediate-range ring gear
- 16 - Compression (crush) ring
- 17 - Intermediate-range clutch back plate
- 18 - Intermediate-range clutch anchor key (2)
- 19 - Intermediate-range clutch anchor
- 20 - Intermediate-range clutch piston return spring (14)
- 21 - Intermediate range clutch, internal-splined plate (3)
- 22 - Intermediate-range clutch, external-splined plate (3)
- 23 - Intermediate-range clutch piston
- 24 - Lip-type external sealring
- 25 - Lip-type internal sealring
- 26 - Intermediate-range clutch piston housing assembly
- 27 - Intermediate-range clutch piston housing
- 28 - Intermediate-range clutch piston housing pin
- 29 - Seal and expander assembly (prior to S/N 49007)
- 30 - Seal and expander assembly (prior to S/N 49007)



A, foldout 15. Output shafts, and low-range planetary and clutch—exploded view



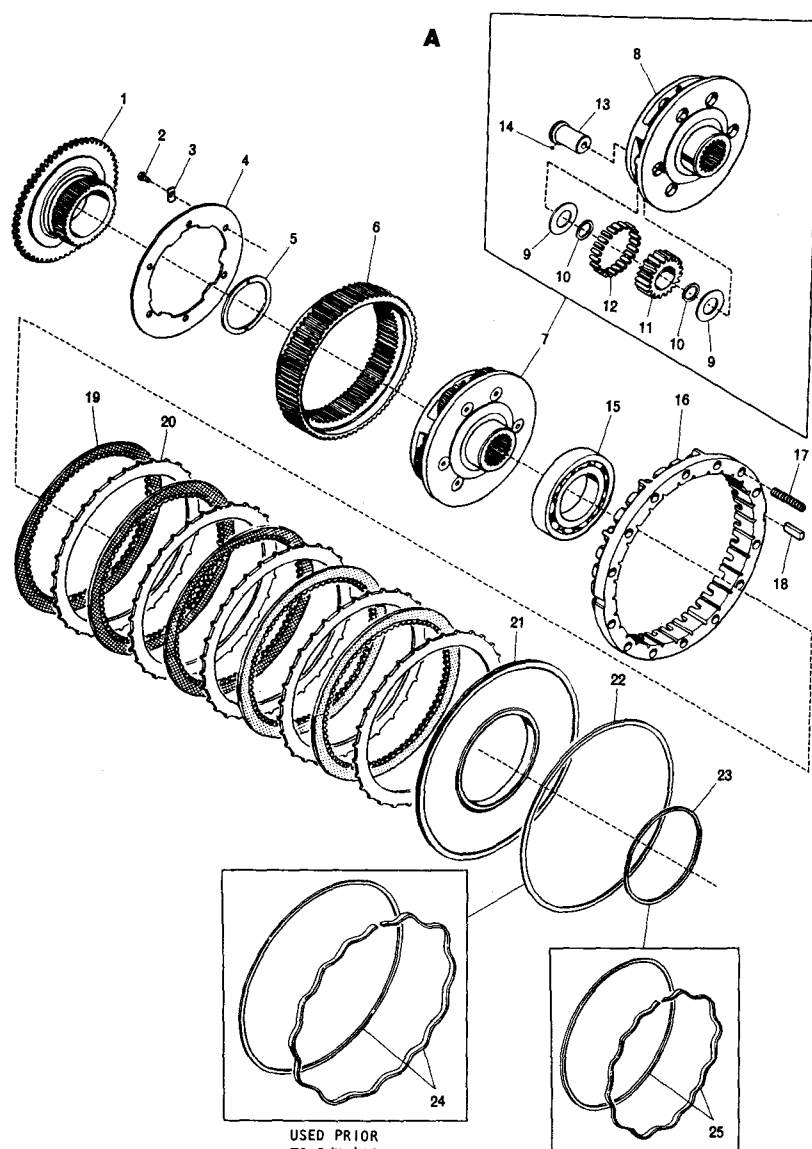
B, foldout 15. Intermediate-range planetary and clutch—exploded view

A

- | | |
|--|---|
| 1 - Reverse-range sun gear | 15 - Single-row ball bearing assembly |
| 2 - Self-locking, hexagon-head bolt,
3/8-24 x 5/8 (6) | 16 - Reverse-range clutch anchor |
| 3 - Lock tab washer (6) (not required
with self-locking bolt) | 17 - Reverse-range clutch piston
return spring (14) |
| 4 - Reverse-range carrier retainer | 18 - Reverse-range clutch anchor key
(2) |
| 5 - Thrust washer | 19 - Reverse-range, internal-splined
clutch plate (5) |
| 6 - Reverse-range ring gear | 20 - Reverse-range, external-splined
clutch plate (5) |
| 7 - Reverse-range planetary carrier
assembly | 21 - Reverse-range clutch piston |
| 8 - Reverse-range planetary carrier | 22 - Lip-type, external sealring |
| 9 - Pinion thrust washer (12) | 23 - Lip-type, internal sealring |
| 10 - Pinion roller spacer (12) | 24 - Sealring and expander assembly
(prior to S/N 49007) |
| 11 - Reverse-range planetary pinion
(matched set of 6) | 25 - Sealring and expander assembly
(prior to S/N 49007) |
| 12 - Planetary pinion roller (144) | |
| 13 - Planetary pinion spindle (6) | |
| 14 - Steel ball, 3/16 dia (6) | |

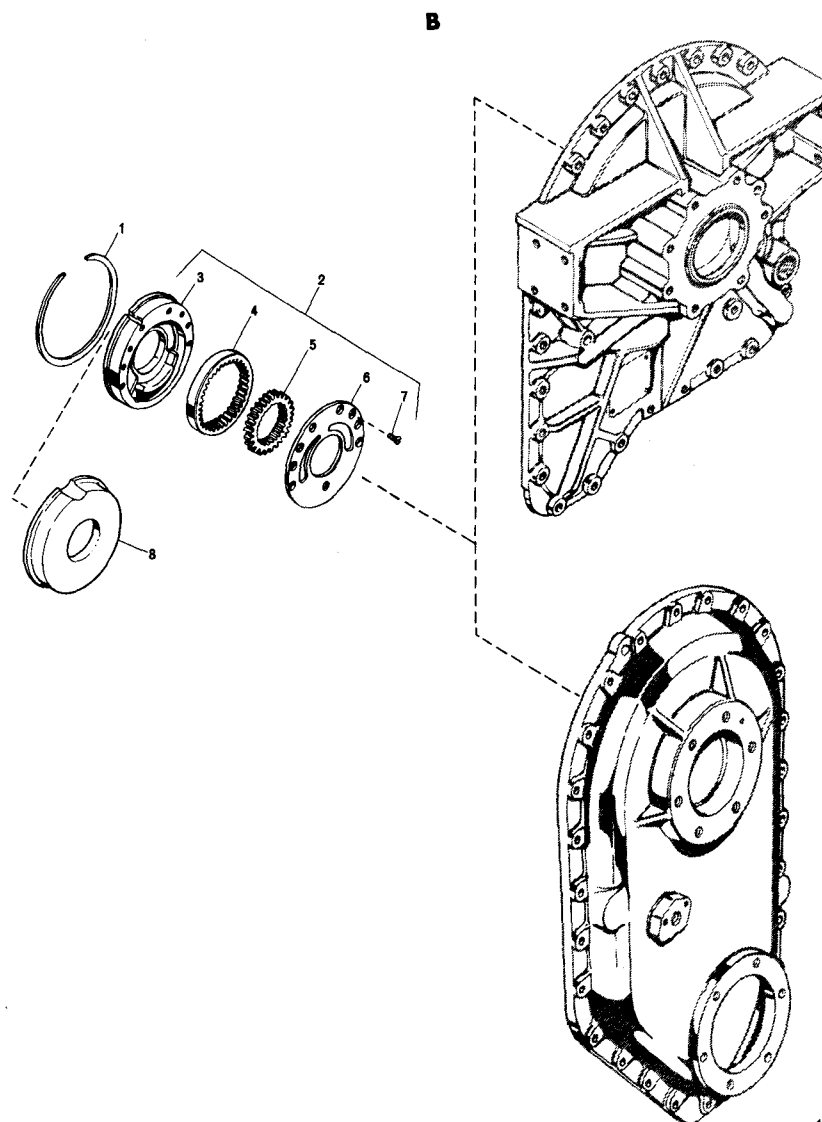
B

- | | |
|-------------------------------|--|
| 1 - Snapring | 5 - Rear oil pump drive gear |
| 2 - Rear oil pump assembly | 6 - Rear oil pump cover |
| 3 - Rear oil pump body | 7 - Flat-head screw, 1/4-20 x
5/8 (9) |
| 4 - Rear oil pump driven gear | 8 - Output oil pump spacer |



A, foldout 16. Reverse-range planetary and clutch—exploded view

8328



B, foldout 16. Output oil pump—exploded view

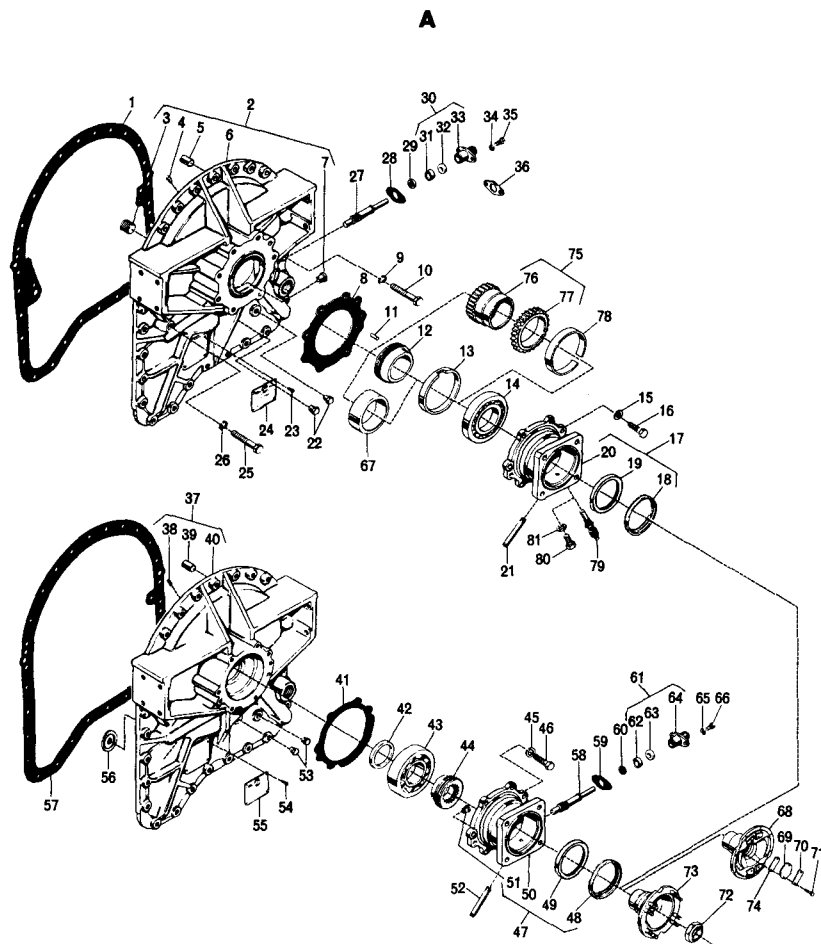
4484A

A

- 1 - Output drive housing gasket
- 2 - Output drive housing assembly
(after S/N 20548)
- 3 - Plug
- 4 - Dowel pin, 1/4 x 5/8
- 5 - Dowel pin, 3/4 x 1 1/4 (2)
- 6 - Output drive housing
- 7 - Speedometer driven shaft bushing
- 8 - Bearing retainer gasket
- 9 - Lockwasher, 5/8
- 10 - Hexagon-head bolt, 5/8-11 x
3 3/4
- 11 - Dowel pin (no longer required)
- 12 - Speedometer drive gear
- 13 - Bearing spacer
- 14 - Single-row ball bearing assembly
- 15 - Lockwasher, 5/8 (8)
- 16 - Hexagon-head bolt, 5/8-11 x
1 3/4 (8)
- 17 - Rear bearing retainer assembly
- 18 - Oil baffle
- 19 - Rear oil seal
- 20 - Rear bearing retainer
- 21 - Pipe nipple
- 22 - Oil level check plug, 1/4 (2)
- 23 - Drive screw (4)
- 24 - Transmission nameplate
- 25 - Hexagon-head bolt, 5/8-11 x
3 3/4
- 26 - Lockwasher, 5/8
- 27 - Speedometer drive shaft and gear
- 28 - Speedometer drive gasket
- 29 - Speedometer drive gasket washer
- 30 - Speedometer drive sleeve assembly
- 31 - Speedometer shaft oil seal
- 32 - Flat washer, 11/16 (use after
S/N 4685)
- 33 - Speedometer drive sleeve
- 34 - Lockwasher, 5/16 (2)
- 35 - Hexagon-head bolt, 5/16-18 x
7/8 (2)
- 36 - Speedometer drive mounting
pad cover
- 37 - Output drive housing assembly
(prior to transmission S/N 20549)
- 38 - Dowel pin, 1/4 x 5/8
- 39 - Dowel pin, 3/4 x 1 1/4 (2)
- 40 - Output drive housing
- 41 - Bearing retainer gasket
- 42 - Bearing spacer
- 43 - Single-row ball bearing assembly
- 44 - Speedometer drive gear
- 45 - Lockwasher, 1/2 (8)
- 46 - Hexagon-head bolt, 1/2-13 x
1 1/2 (8)
- 47 - Rear bearing retainer assembly
- 48 - Oil baffle
- 49 - Rear oil seal
- 50 - Rear bearing retainer
- 51 - Speedometer shaft bushing
- 52 - Pipe nipple
- 53 - Oil level check plug, 1/4 (2)
- 54 - Drive screw (4)
- 55 - Transmission nameplate
- 56 - Gasket
- 57 - Output drive housing gasket
- 58 - Speedometer drive shaft and gear
- 59 - Speedometer drive gasket
- 60 - Speedometer drive gasket washer
- 61 - Speedometer drive sleeve assembly
- 62 - Speedometer shaft oil seal
- 63 - Flat washer, 11/16
- 64 - Speedometer drive sleeve
- 65 - Lockwasher, 5/16 (2)
- 66 - Hexagon-head bolt, 5/16-18 x
7/8 (2)
- 67 - Spacer
- 68 - Rear output flange
- 69 - Flange retainer washer
- 70 - Lockstrip
- 71 - Self-locking, hexagon-head bolt,
1/2-20 x 1 1/4 (2)
- 72 - Self-locking nut
- 73 - Rear output flange assembly
- 74 - Shim (ar):
0.005 thk
0.025 thk
- 75 - Speedometer gear assembly
- 76 - Speedometer drive gear
- 77 - Magnetic pickup gear
- 78 - Spacer
- 79 - Magnetic pickup
- 80 - Bolt, 5/8-18 x 1
- 81 - Flat washer, 5/8

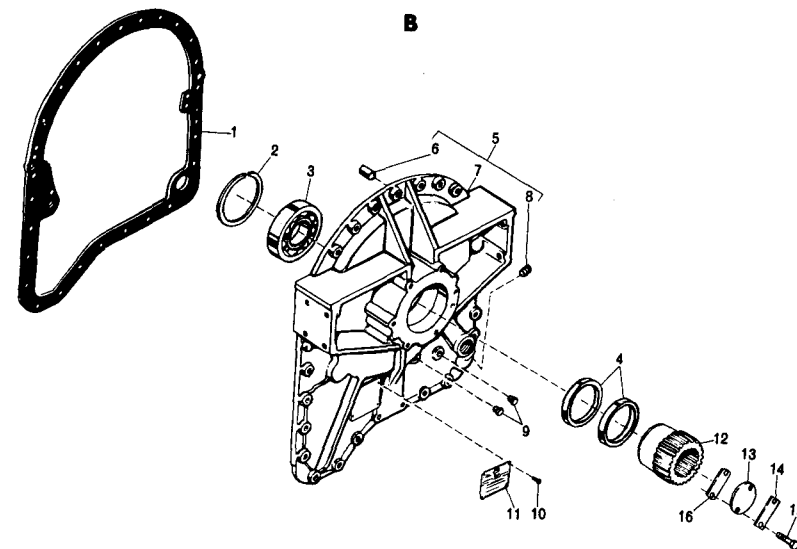
B

- 1 - Output drive housing gasket
- 2 - Internal snapping
- 3 - Single-row ball bearing
- 4 - Rear oil seal assembly (2)
- 5 - Output drive housing assembly
- 6 - Dowel pin (2)
- 7 - Output drive housing
- 8 - Pipe plug, 1/2
- 9 - Oil level check plug, 1/4 (2)
- 10 - Drive screw (4)
- 11 - Transmission nameplate
- 12 - Output coupling
- 13 - Flange retainer washer
- 14 - Lockstrip
- 15 - Self-locking bolt, 1/2-20 x
1 1/4 (2)
- 16 - Shim (ar):
0.005 thk
0.025 thk



8338A

A, foldout 17. Output drive housings (straight-through models) and flanges—exploded view



8345

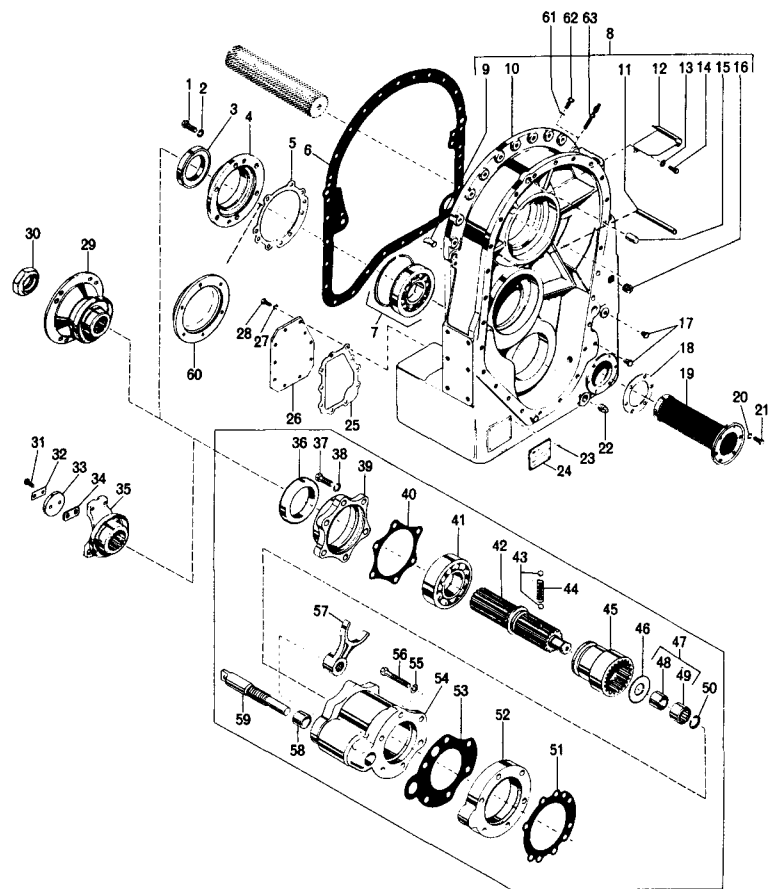
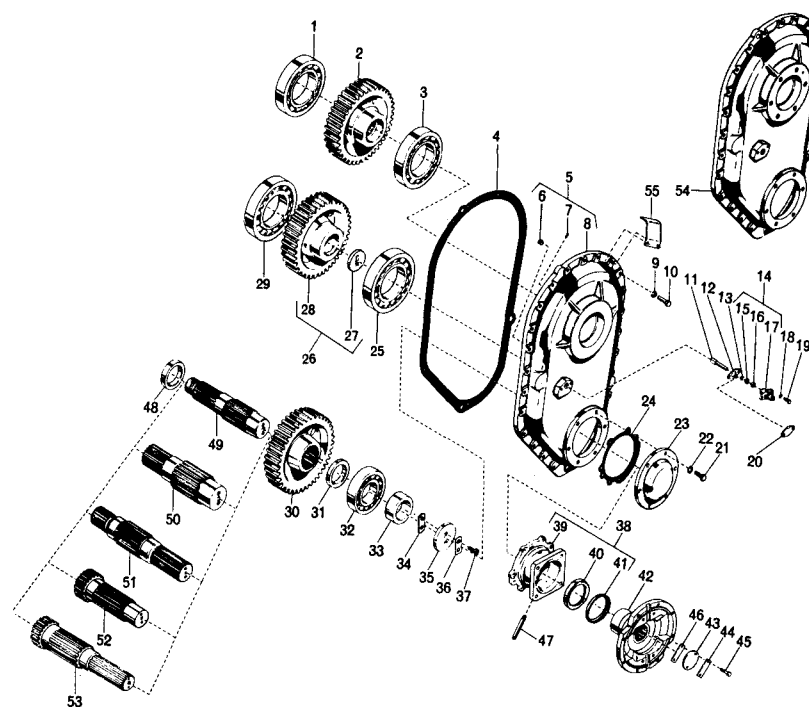
B, foldout 17. Output drive housing (straight-through model) and coupling—exploded view

A

- | | | |
|---|--|--|
| <ul style="list-style-type: none"> 1 - Hexagon-head bolt, 1/2-13 x 1 3/8 (6) 2 - Lockwasher, 1/2 (6) 3 - Oil seal 4 - Front bearing retainer 5 - Front bearing retainer gasket 6 - Transfer gear housing gasket 7 - Single-row ball bearing and snapping assembly 8 - Transfer gear housing assembly 9 - Dowel pin (2) 10 - Transfer gear housing 11 - Oil pump pressure tube 12 - Oil collector baffle 13 - Internal tooth lockwasher, 3/8 (2) 14 - Hexagon-head bolt, 3/8-16 x 5/8 (2) 15 - Dowel pin (2) 16 - Pipe plug, 1 17 - Oil level check plug, 1/4 (2) 18 - Oil strainer gasket 19 - Oil strainer 20 - Lockwasher, 3/8 (6) 21 - Hexagon-head bolt, 3/8-16 x 7/8 (6) 22 - Oil drain pipe plug, 3/4 | <ul style="list-style-type: none"> 23 - Drive screw (4) 24 - Transmission nameplate 25 - Inspection cover gasket (2) 26 - Inspection cover (2) 27 - Lockwasher, 3/8 (20) 28 - Hexagon-head bolt, 3/8-16 x 7/8 (20) 29 - Front output flange 30 - Self-locking nut 31 - Self-locking, hexagon-head bolt, 1/2-20 x 1 1/4 (2) 32 - Lockstrip 33 - Flange retainer washer 34 - Shim (ar):
0.005 thk
0.025 thk 35 - Front output flange 36 - Oil seal 37 - Hexagon-head bolt, 1/2-13 x 1 1/2 (6) 38 - Lockwasher, 1/2 (6) 39 - Bearing retainer 40 - Bearing retainer gasket 41 - Single-row ball bearing assembly | <ul style="list-style-type: none"> 42 - Output drive shaft 43 - Detent ball, 1/2 (2) 44 - Detent spring 45 - Disconnect coupling 46 - Thrust washer 47 - Needle roller bearing assembly 48 - Bearing inner race 49 - Needle bearing assembly 50 - External snapping 51 - Adapter gasket 52 - Output drive adapter 53 - Output drive housing gasket 54 - Output drive housing 55 - Lockwasher, 1/2 (6) 56 - Hexagon-head bolt, 1/2-13 x 2 3/4 (6) 57 - Shifter fork 58 - Oil seal 59 - Shifter shaft 60 - Front output cover 61 - Bolt, 5/8-18 x 1 62 - Washer 63 - Magnetic pickup |
|---|--|--|

B

- | | | |
|--|---|---|
| <ul style="list-style-type: none"> 1 - Single-row ball bearing assembly 2 - Output transfer drive gear 3 - Single-row ball bearing assembly 4 - Transfer gear housing cover gasket 5 - Output transfer gear housing cover assembly 6 - Pipe plug, 1 7 - Dowel pin (2) 8 - Transfer housing cover (w/o disconnect mounting) 9 - Lockwasher, 1/2 (26) 10 - Hexagon-head bolt, 1/2-13 x 1 3/4 (26) 11 - Speedometer drive shaft 12 - Gasket 13 - Washer 14 - Drive sleeve assembly 15 - Seal 16 - Washer, 11/16 17 - Speedometer drive sleeve 18 - Lockwasher, 5/16 (2) 19 - Hexagon-head bolt, 5/16-18 x 7/8 (2) 20 - Speedometer mounting cover | <ul style="list-style-type: none"> 21 - Hexagon-head bolt, 1/2-13 x 1 1/2 (6) 22 - Lockwasher, 1/2 (6) 23 - Retainer 24 - Retainer gasket 25 - Single-row ball bearing 26 - Output idler gear assembly 27 - Output idler gear plug 28 - Output idler gear 29 - Single-row ball bearing 30 - Output driven gear 31 - Spacer 32 - Single-row ball bearing 33 - Spacer 34 - Shim (ar):
0.005 thk
0.025 thk 35 - Output shaft retainer 36 - Lockstrip 37 - Hexagon-head bolt, 1/2-20 x 1 1/4 (2) 38 - Rear bearing retainer assembly 39 - Rear bearing retainer 40 - Oil seal | <ul style="list-style-type: none"> 41 - Oil baffle 42 - Output flange 43 - Retainer 44 - Lockstrip 45 - Hexagon-head bolt, 1/2-20 x 1 1/4 (2) 46 - Shim (ar):
0.005 thk
0.025 thk 47 - Nipple 48 - Spacer 49 - Output driven shaft (front output only—external thread) 50 - Output driven shaft (front output only—internal threads) 51 - Output driven shaft (front and rear output) 52 - Output driven shaft (front disconnect only) 53 - Output driven shaft (front disconnect; rear flange) 54 - Transfer housing cover (with disconnect mounting) 55 - Magnetic pickup shield |
|--|---|---|

A**B**

A, foldout 18. Vertical transfer gear housing and front output components—exploded view

8470A

B, foldout 18. Transfer gears, housing covers, and rear output components (for vertical housing)—exploded view

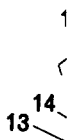
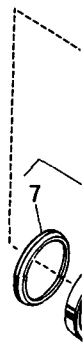
8346A

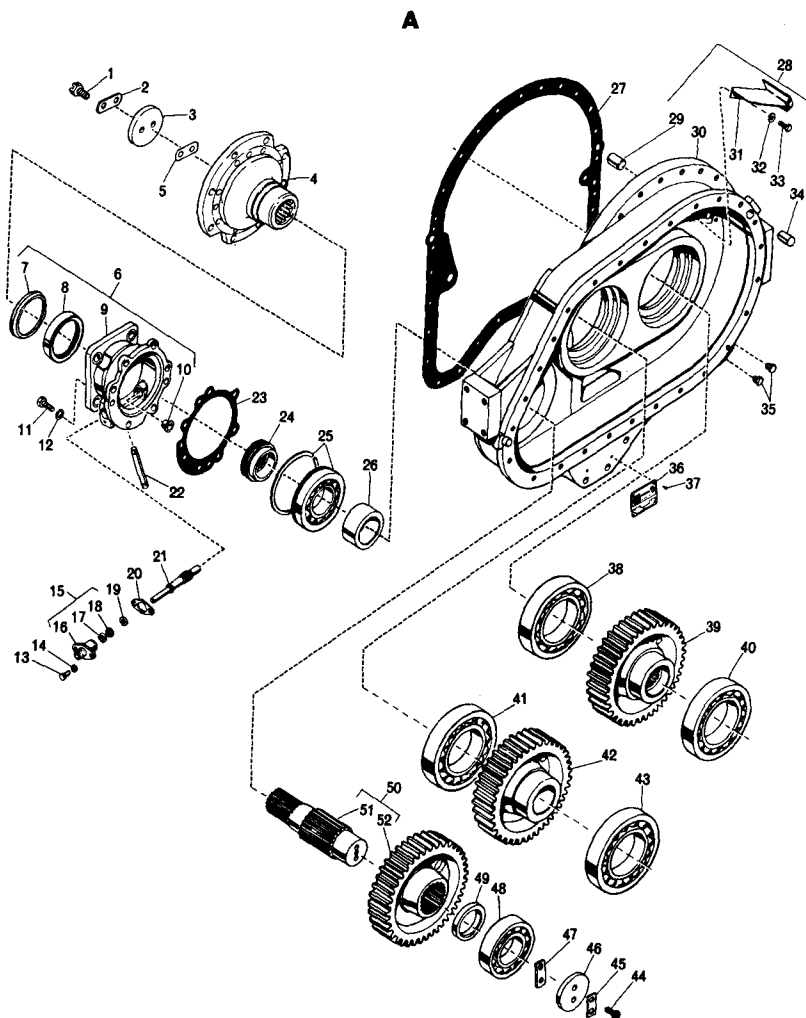
A

- | | |
|--|--|
| <ul style="list-style-type: none"> 1 - Self-locking, hexagon-head bolt, 1/2-20 x 1 1/4 (2) 2 - Lockstrip 3 - Flange retainer washer 4 - Front output flange 5 - Shim (ar):
0.005 thk
0.025 thk 6 - Bearing retainer assembly 7 - Oil baffle 8 - Oil seal 9 - Bearing retainer 10 - Speedometer driven shaft bushing 11 - Hexagon-head bolt, 1/2-13 x 1 1/2 (8) 12 - Lockwasher, 1/2 (6) 13 - Hexagon-head bolt, 5/16-18 x 7/8 (2) 14 - Lockwasher, 5/16 (2) 15 - Speedometer drive sleeve assembly 16 - Speedometer drive sleeve 17 - Washer, 11/16 (used after transmission S/N 4685) 18 - Speedometer shaft oil seal 19 - Washer 20 - Speedometer drive gasket 21 - Speedometer driven shaft and gear 22 - Pipe nipple 23 - Bearing retainer gasket 24 - Speedometer drive gear 25 - Single-row ball bearing assembly (with snapping) | <ul style="list-style-type: none"> 26 - Bearing spacer 27 - Transfer gear housing gasket 28 - Output transfer gear housing assembly 29 - Dowel pin (2) 30 - Transfer gear housing 31 - Oil collector baffle 32 - Internal-tooth lockwasher, 3/8 (2) 33 - Hexagon-head bolt, 3/8-16 x 5/8 (2) 34 - Dowel pin (2) 35 - Oil level check plug, 1/4 (2) 36 - Transmission nameplate 37 - Drive screw (4) 38 - Single-row ball bearing assembly 39 - Output transfer drive gear 40 - Single-row ball bearing assembly 41 - Single-row ball bearing assembly 42 - Output transfer idler gear 43 - Single-row ball bearing assembly 44 - Self-locking, hexagon-head bolt, 1/2-20 x 1 1/4 (2) 45 - Lockstrip 46 - Flange retainer washer 47 - Shim (ar):
0.005 thk
0.025 thk 48 - Single-row ball bearing assembly 49 - Bearing spacer 50 - Output shaft assembly 51 - Output shaft 52 - Output transfer driven gear |
|--|--|

B

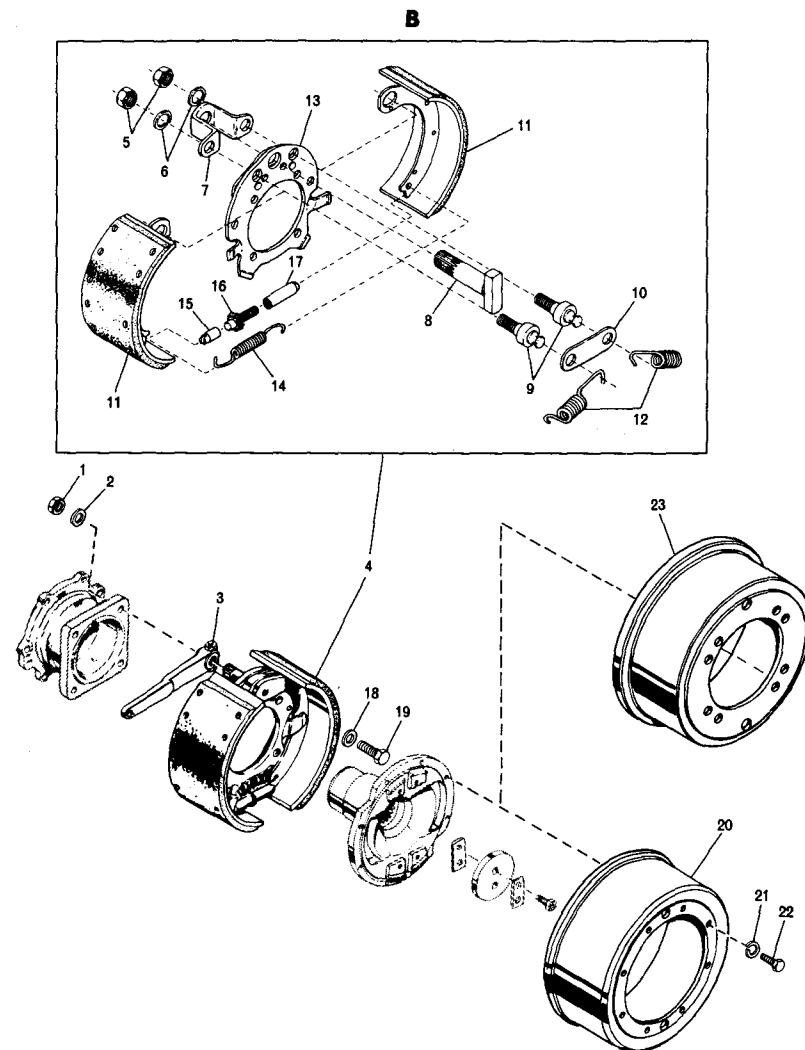
- | | |
|--|---|
| <ul style="list-style-type: none"> 1 - Hexagon nut, 5/8-18 (4) 2 - Special washer, 5/8 (4) 3 - Parking brake apply lever 4 - Mechanical-actuated parking brake assembly 5 - Hexagon nut, 3/4-16 (2) 6 - Lockwasher, 3/4 (2) 7 - Camshaft support 8 - Parking brake shaft cam 9 - Parking brake anchor pin (2) 10 - Anchor pin brace 11 - Parking brake shoe and lining (2) 12 - Brake shoe return spring (2) | <ul style="list-style-type: none"> 13 - Parking brake support plate 14 - Brake shoe centering spring 15 - Brake adjusting screw socket 16 - Brake adjusting screw 17 - Braking adjusting screw nut 18 - Special washer, 5/8 (4) 19 - Hexagon-head bolt, 5/8-18 x 2 (4) 20 - Parking brake drum 21 - Lockwasher, 1/2 (8) 22 - Hexagon-head bolt, 1/2-20 x 1 (8) 23 - Parking brake drum |
|--|---|





A, foldout 19. Horizontal transfer gear housing, gears, and front output components—exploded view

8351



B, foldout 19. Parking brake—exploded view

4659

- 1 - Output transfer gear housing
cover gasket
- 2 - Hexagon-head bolt, 3/8-24 x 1 (2)
- 3 - Oil transfer baffle
- 4 - Transfer gear housing cover
- 5 - Lockwasher, 1/2 (26)
- 6 - Hexagon-head bolt, 1/2-13 x
1 3/4 (26)
- 7 - Locknut, 3/8-24 (2)
- 8 - Speedometer drive mounting pad
cover gasket
- 9 - Speedometer drive mounting pad
cover
- 10 - Lockwasher, 5/16 (2)
- 11 - Hexagon-head bolt, 5/16-18 x
7/8 (2)
- 12 - Lockwasher, 1/2 (6)
- 13 - Hexagon-head bolt, 1/2-13 x
1 3/4 (6)
- 14 - Bearing retainer
- 15 - Bearing retainer gasket