

ON-VEHICLE SERVICE

NOTE: See Fig. 52 and Fig. 53 for exploded view of internal parts, thrust washer and needle bearing locations.

VALVE BODY ASSEMBLY

Removal

1. Raise vehicle on hoist. Remove exhaust system, if necessary. Loosen oil pan retaining bolts and allow transmission fluid to drain. Remove oil pan and gasket. Discard gasket.
2. Remove 3 filter-to-valve body retaining bolts and remove filter, grommet and gasket. Remove detent spring retaining bolt and spring. Remove retaining bolts. Note positions and lengths of bolts for reassembly reference.
3. Remove valve body and gasket from transmission. For service or repair of valve body assembly, see VALVE BODY ASSEMBLY under COMPONENT DISASSEMBLY & REASSEMBLY.

Installation

1. Using guide pins, position valve body (with new gasket) in case. Ensure inner manual lever and inner T.V. lever are engaged. Install and tighten valve body retaining bolts to specification. See TORQUE SPECIFICATIONS.
2. Install and tighten detent spring and retaining bolts. Remove guide pins and install 2 remaining valve body retaining bolts to specification. Load throttle lever torsion spring against separator plate. Install new filter and gasket. Install oil pan with new gasket and refill with fluid. Install exhaust system, if removed.

OVERDRIVE SERVO ASSEMBLY

Removal

1. Remove valve body. See VALVE BODY ASSEMBLY. Hold overdrive band against drum with screwdriver to prevent band movement when servo is removed. Depress overdrive servo piston cover and remove retaining snap ring. See Fig. 2.
2. Using Remover (T80L-77030-B), apply air pressure to servo piston release passage to remove piston cover and spring. See Fig. 23. Separate piston from cover. Remove rubber seals from piston and cover.

Installation

1. Install new seals on piston and cover. Lubricate piston seals with ATF or petroleum jelly, then install piston into cover.
2. Lubricate cover seals and overdrive servo pocket in transmission case. Assemble spring to piston. Install assembly into case pocket. Ensure servo rod contacts overdrive band apply pocket. Depress servo cover and install retaining snap ring. Install valve body.

LOW-REVERSE SERVO ASSEMBLY

Removal

1. Remove valve body, see **VALVE BODY ASSEMBLY** . Depress low-reverse servo piston cover and remove retaining snap ring and cover. See **Fig. 2** .
2. Remove piston and spring from case by applying compressed air to low-reverse servo release passage in case. See **Fig. 23** . Cover piston pocket to prevent piston from falling out of case. Using Remover (T80L-77030-B), apply air to servo piston release passage to remove piston, if necessary.

CAUTION: Low-reverse servo piston is under spring pressure and may spring free from case when cover is removed.

Installation

To install, reverse removal procedure. Ensure servo piston is installed with same length rod as was removed.

2-3 ACCUMULATOR PISTON

Removal

Remove valve body. See **VALVE BODY ASSEMBLY** . Depress 2-3 accumulator piston cover. Remove retaining snap ring, cover, and spring. See **Fig. 2** . Remove accumulator piston. Remove accumulator seals from piston.

Installation

To install, reverse removal procedure. Prior to installation, lubricate piston seals and piston pocket in case.

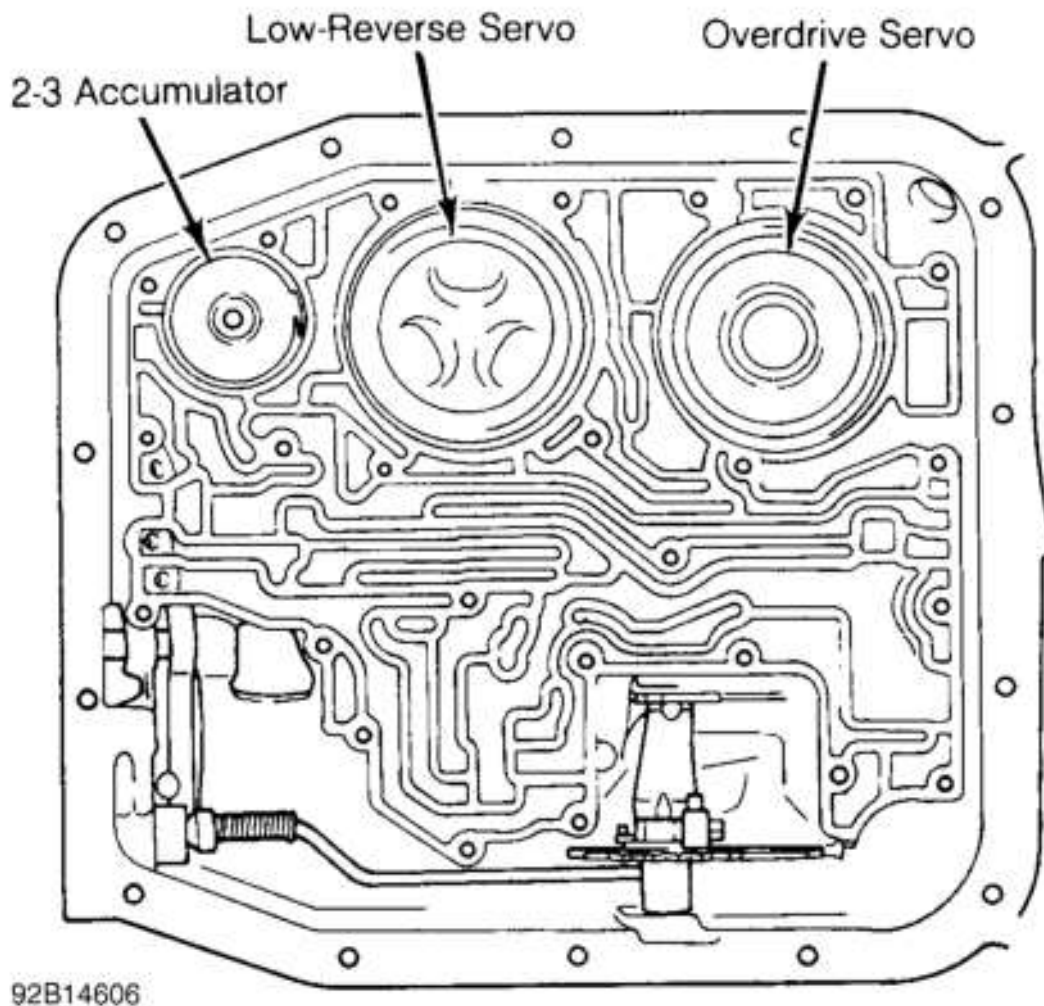


Fig. 2: Identifying Accumulator & Servo Locations
 Courtesy of FORD MOTOR CO.

EXTENSION HOUSING BUSHING & REAR OIL SEAL

Removal

1. Raise vehicle on hoist. Mark drive shaft yoke and axle companion flange for reassembly reference. Disconnect drive shaft from transmission. Remove oil seal using Puller (T74P-77248-A).
2. Remove bushing using Puller (T77L-7697-A), taking care not to damage output shaft splines.

Installation

Install new bushing into extension housing using Driver (T80L-77034-A). Install new seal into housing using appropriate seal installer. Coat inside diameter of rubber portion of seal and yoke splines with lubricant. Install drive shaft.

EXTENSION HOUSING

Removal

1. Raise and support vehicle. Remove exhaust system components as necessary for access. Disconnect parking brake cable from equalizer (if equipped). Mark drive shaft yoke and axle companion flange for reassembly reference. Remove drive shaft and disconnect speedometer cable from extension housing.
2. Remove engine rear support-to-extension housing retaining bolts. Raise transmission just enough to remove weight from rear support. Remove rear support-to-crossmember retaining bolt and remove rear support.
3. Lower transmission and remove extension housing retaining bolts. Slide housing off output shaft and allow fluid to drain. Remove and discard extension housing-to-case gasket.

Installation

1. Clean mating surface on transmission and extension housing. Position new gasket on transmission. Slide extension housing into place.
2. Clean bolts and case holes for 2 bottom bolts and lower right hand corner bolt (as viewed from rear of extension housing). Coat bolts with Teflon tape and install. Install remaining bolts and tighten all to specification. See **TORQUE SPECIFICATIONS** . To complete installation, reverse removal procedure.

GOVERNOR ASSEMBLY

Removal

1. Remove extension housing. See REMOVAL procedure under **EXTENSION HOUSING** . Remove governor-to-output shaft retaining snap ring. Using a mallet, tap governor assembly off output shaft. See **Fig. 3** .
2. Remove governor drive ball. Remove governor-to-counterweight retaining screws and lift governor from counterweight. For complete repair and servicing, see **GOVERNOR ASSEMBLY** under COMPONENT DISASSEMBLY & REASSEMBLY.

Installation

1. Lubricate governor parts with clean transmission fluid. Ensure valve moves freely in bore. Position governor body on counterweight with cover facing toward front of vehicle. Install and tighten 2 retaining screws to specification. See **TORQUE SPECIFICATIONS** .
2. Position governor drive ball into pocket on output shaft. Align keyway in counterweight with drive ball and drive assembly onto output shaft with mallet. Install governor-to-output shaft retaining snap ring. To complete installation, reverse removal procedure.

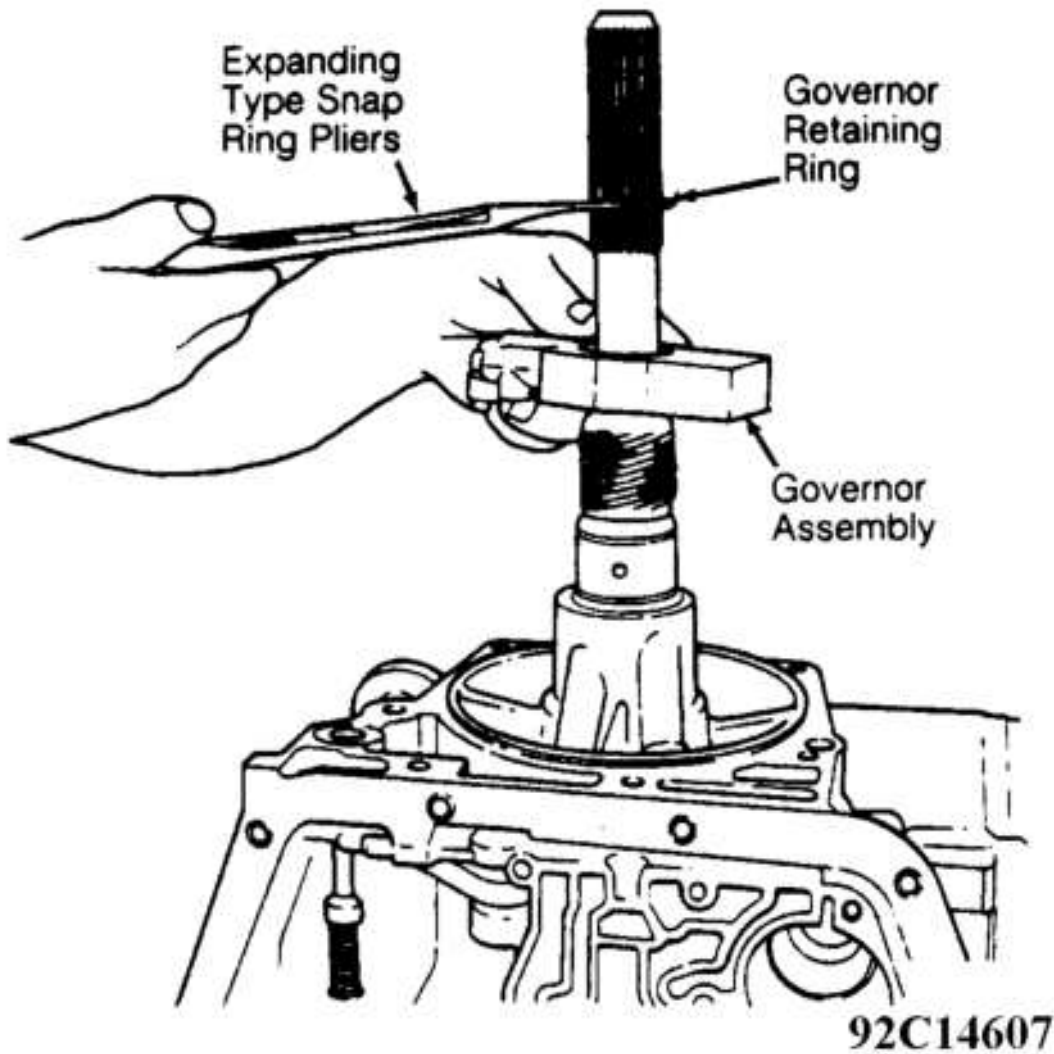


Fig. 3: Removing Governor Assembly
Courtesy of FORD MOTOR CO.

INTERNAL & EXTERNAL SHIFT LINKAGE

NOTE: On some vehicles it may be necessary to loosen fan shroud and lower transmission to remove linkage.

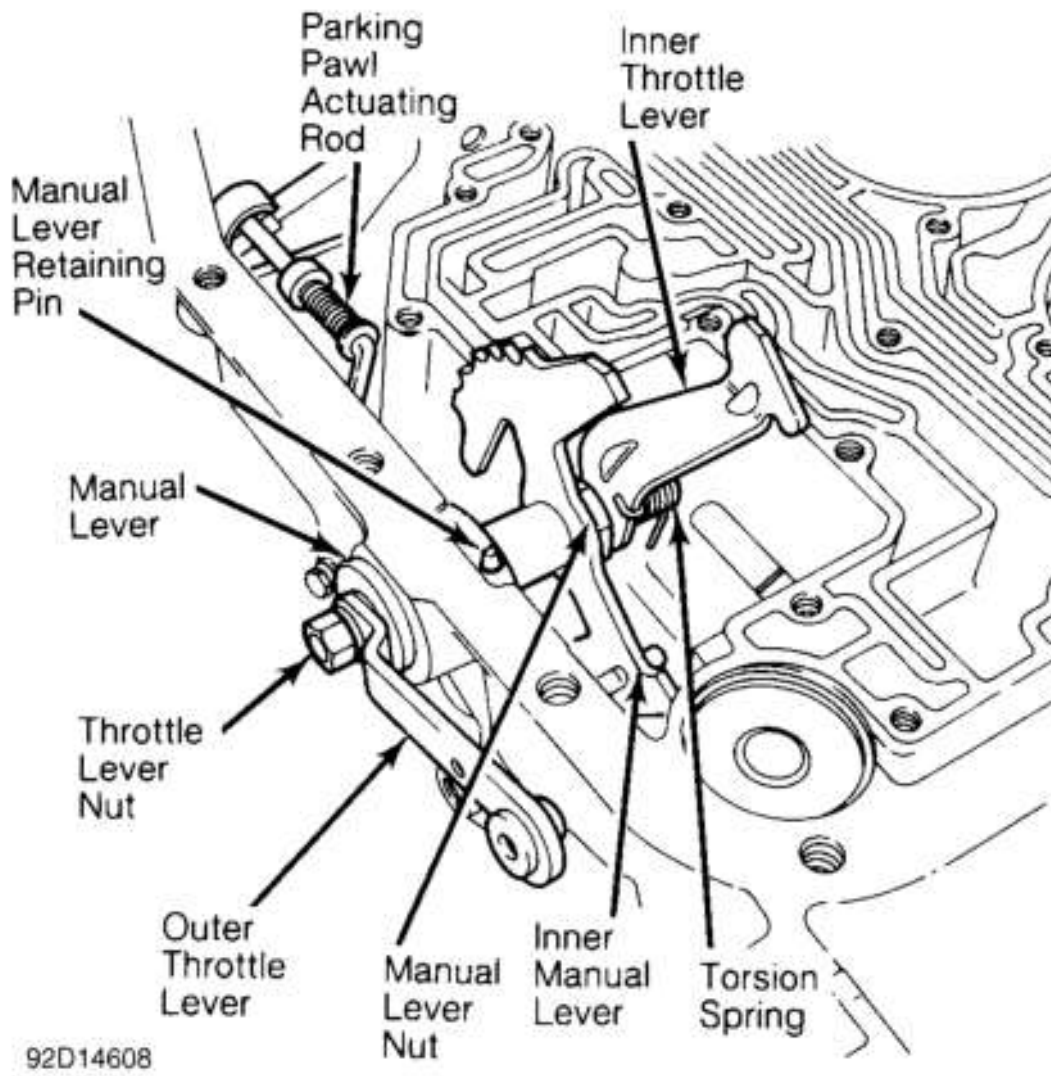
Removal

1. Raise vehicle on hoist. Disconnect any interfering exhaust system components. Apply penetrating oil to outer throttle lever retaining nut to prevent breaking inner throttle lever. See **Fig. 4**.
2. Hold outer throttle lever stationary and remove retaining nut and lock washer. Move lever and T.V. rod or cable out of way for clearance. Disconnect manual rod from manual lever at transmission.
3. Loosen oil pan retaining bolts and allow fluid to drain. Remove oil pan. Remove manual lever detent spring and roller assembly.

4. Remove manual lever retaining pin carefully using a sharp narrow screwdriver. Note assembled position of T.V. lever torsion spring. Remove torsion spring.
5. Securely hold inner manual lever and use a 21 mm wrench to break manual lever attaching nut free. **DO NOT** allow tools to contact detents. Remove outer manual lever from case.
6. Remove inner throttle lever and shaft assembly. Remove inner manual lever and parking pawl rod assembly. Disconnect parking pawl rod from inner manual lever. Remove manual lever oil seal using a screwdriver.

Installation

1. Install new manual lever oil seal into case using appropriate driver. With manual lever nut on inner throttle lever, slide inner throttle lever through inner manual lever. See **Fig. 5**.
2. Install outer manual lever in case ensuring lever is in proper position (either up or down). Install inner throttle lever and shaft into outer manual lever.
3. Tighten manual lever attaching nut to specification. See **TORQUE SPECIFICATIONS**. Ensure flats are aligned. Install T.V. lever torsion spring. Push manual lever into case. Ensure inner manual lever pin is engaged on manual valve detent slot and inner throttle lever is engaged on T.V. valve.
4. Neutral start switch plunger must also contact cam surface of inner manual lever. Install new manual lever retaining pin in case. Pin must be flush or below pan gasket surface. Install new throttle lever seal.
5. Install detent spring. Install throttle valve outer lever. **DO NOT** push inner lever past throttle valve, lock washer and nut. Tighten retaining nut to specification. See **TORQUE SPECIFICATIONS**.
6. Check Park function and operation of T.V. and manual levers. Connect shift linkage. Adjust linkage as necessary. See appropriate TRANSMISSION SERVICING - A/T article in TRANSMISSION SERVICING section.



92D14608

Fig. 4: Identifying Manual & Throttle Linkage Components
Courtesy of FORD MOTOR CO.

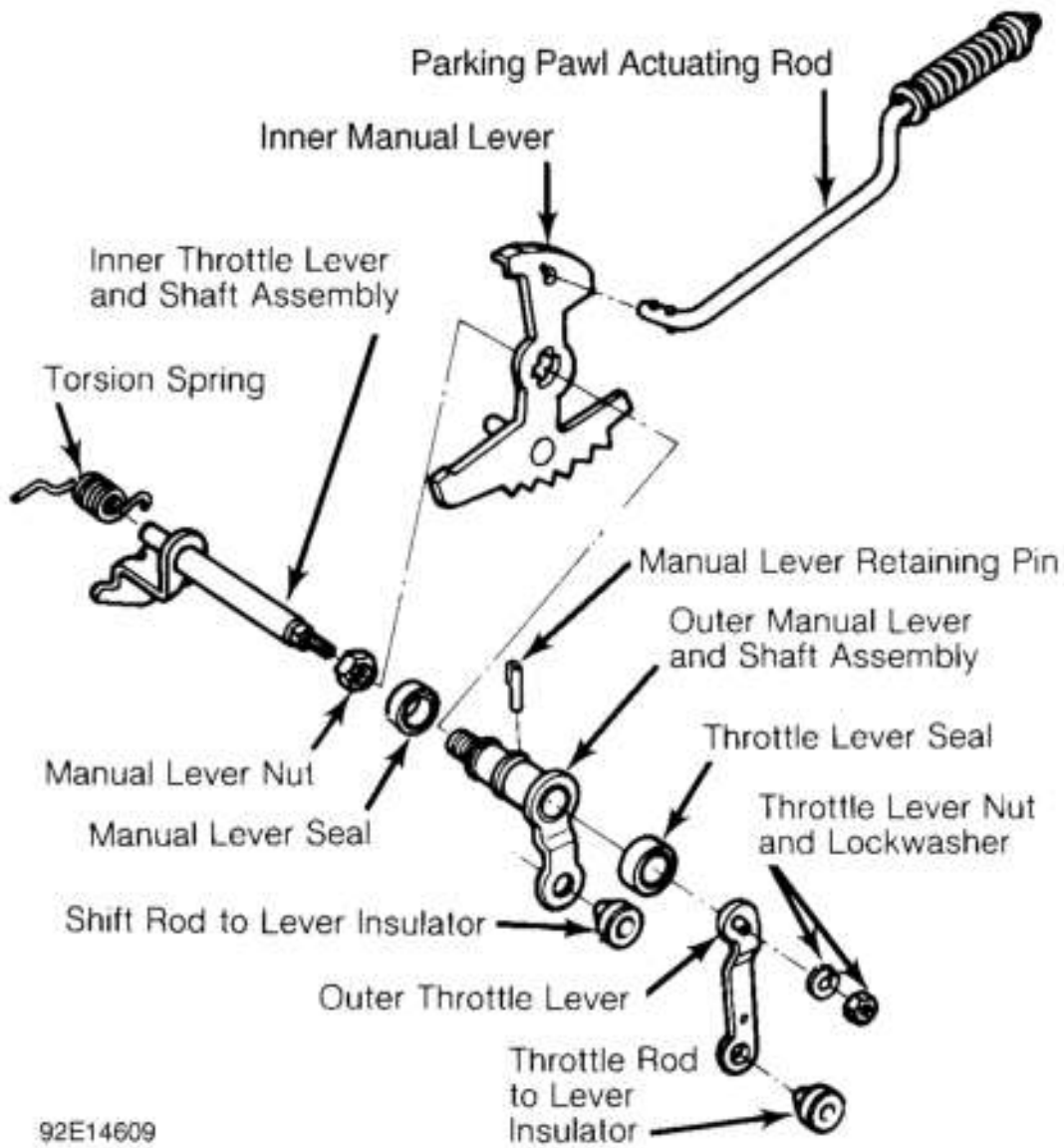


Fig. 5: Exploded View of Manual & Throttle Linkage
 Courtesy of FORD MOTOR CO.

NEUTRAL SAFETY SWITCH

See appropriate TRANSMISSION SERVICING - A/T article in TRANSMISSION SERVICING.