LUV

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DESCRIPTION

Clutch assembly is a single disc dry type using a diaphragm spring to disengage pressure plate. Clutch release system is hydraulic, using a firewall mounted master cylinder, a bell housing mounted slave cylinder, and a prelubricated clutch release bearing.

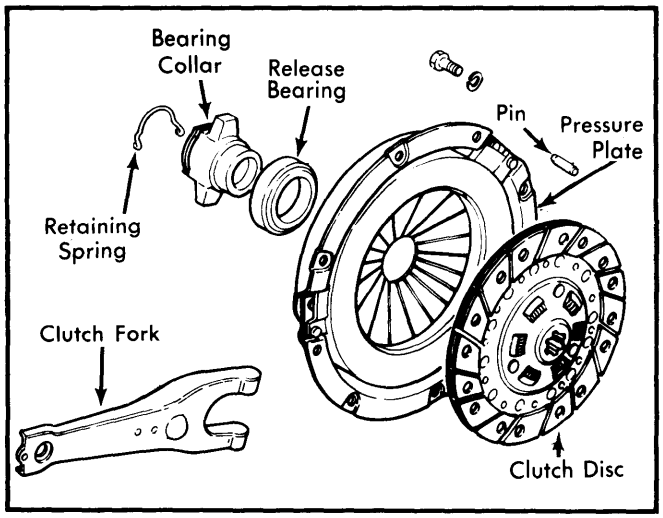

Fig. 1 Exploded View of LUV Clutch Assembly

REMOVAL & INSTALLATION

CLUTCH ASSEMBLY

1) Disconnect negative battery terminal and remove air cleaner assembly. Slide gearshift lever boot upwards on lever, remove gearshift lever attaching bolts, and remove lever assembly. Remove starter attaching bolts, and lay starter aside.

2) Raise vehicle on hoist and disconnect exhaust pipe hanger at transmission. Disconnect speedometer cable at transmission. Remove propeller shaft. NOTE – *Drain transmission oil or insert a plug into rear extension to prevent oil spillage.*

3) Disconnect clutch slave cylinder from transmission, and wire cylinder to frame. Remove flywheel inspection cover. Disconnect transmission from crossmember, raise transmission and engine assembly slightly, and remove crossmember. Lower engine and transmission assembly, and support rear of engine.

4) Disconnect electrical leads at transmission. Remove transmission to engine attaching bolts and remove transmission. NOTE – *When removing transmission, pull straight back until disengaged from clutch, then tip front of transmission downward to remove.*

5) Mark pressure plate and flywheel for reassembly reference. Loosen clutch to flywheel attaching bolts one turn at a time until spring pressure is released. Support clutch assembly with a suitable clutch aligning tool, remove bolts, and remove clutch.

6) To install, apply a thin coat of Lubriplate or equivalent to clutch disc splines. Install clutch assembly to flywheel, matching alignment marks made at disassembly. Use a suitable clutch alignment tool to center clutch assembly on flywheel, then install and tighten attaching bolts. To complete installation, reverse removal procedure.

CLUTCH MASTER CYLINDER

Disconnect clutch pedal arm from push rod, and disconnect hydraulic line from master cylinder. Remove nuts attaching master cylinder, and remove cylinder towards engine compartment. To install, reverse removal procedure, adjust pedal height, and bleed hydraulic system.

CLUTCH SLAVE CYLINDER

Remove slave cylinder mounting bolts and push rod from clutch fork. Disconnect hydraulic line from slave cylinder, and remove cylinder. To install, reverse removal procedure, adjust free play at clutch fork, and bleed hydraulic system.

CLUTCH RELEASE BEARING

1) Remove shift fork boot from transmission case. Disconnect shift fork spring clip from shift fork ball stud, and remove shift fork and release bearing. If necessary, remove shift fork ball stud from front cover.

2) Inspect all parts for wear, damage or distortion, replace as necessary. CAUTION – *Do not wash release bearing in any cleaning solution as bearing is permanently lubricated.* To install, lubricate all contact surfaces with graphite grease, and reverse removal procedure.

PILOT BEARING

Check pilot bearing for seizing, sticking, abnormal noise or wear. If replacement is required, use a suitable tool (J-23907) to remove bearing. NOTE – *Do not wash bearing in any cleaning solution as bearing is permanently lubricated.*

OVERHAUL

CLUTCH MASTER CYLINDER

1) Drain clutch fluid reservoir completely. Remove boot and retaining clip, and remove push rod. Remove stopper, piston, cup and return spring. Clean all parts in clean brake fluid.

2) Inspect all parts for wear or damage. Piston-to-bore clearance should be no more than .001-.004" (.025-.102 mm). NOTE – *Manufacturer recommends that cup seal be replaced any time master cylinder is disassembled.*

3) Lubricate all parts with clean brake fluid, then reassemble in reverse order of disassembly and note the following: Reinstall cup seal carefully to prevent scratching lipped portions.

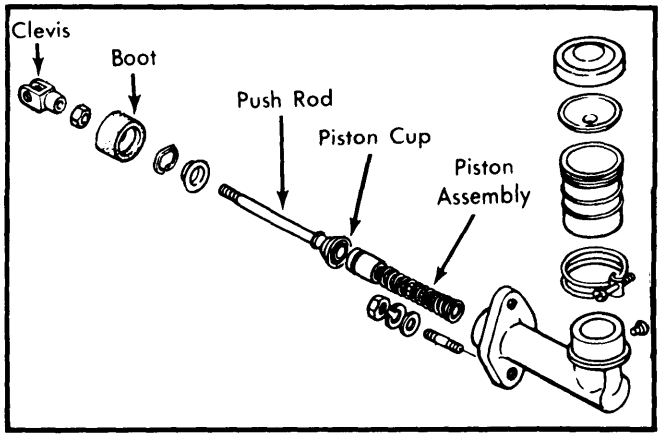

Fig. 2 Exploded View of Clutch Master Cylinder Showing Relationship of Internal Components

LUV (Cont.)

CLUTCH SLAVE CYLINDER

1) Remove push rod and boot, then force out piston by blowing compressed air into cylinder at hose connection. Clean all parts in clean brake fluid. Inspect all parts for wear or damage. Piston to bore clearance should be no more than .001-.004" (.025-.102 mm).

2) NOTE – *Manufacturer recommends that piston cup be replaced any time slave cylinder is disassembled.* Lubricate all parts with clean brake fluid, then reassemble in reverse order of disassembly and note the following: Reinstall cup seal carefully to prevent scratching lipped portions. Fill slave cylinder with brake fluid before bleeding.

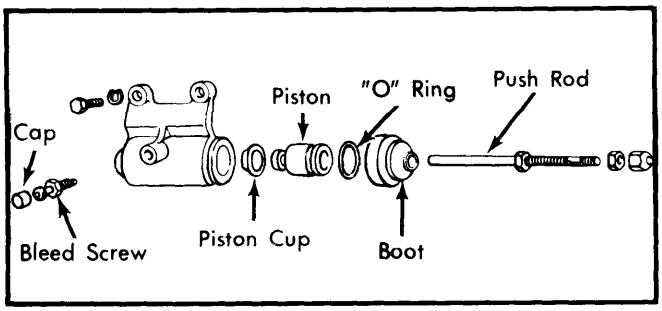

Fig. 3 Exploded View of Clutch Slave Cylinder

ADJUSTMENT

CLUTCH PEDAL HEIGHT

1) Disconnect battery ground cable. Measure clutch pedal height after making sure pedal is fully returned by pedal return spring. Correct pedal height is 5.9-6.3". If adjustment is required, disconnect clutch switch wiring, remove switch lock nut, and remove switch from bracket by rotating counterclockwise.

2) Loosen lock nut on pedal push rod, rotate push rod to obtain specified pedal height, and tighten lock nut. Install clutch switch. Adjust clearance between switch housing (not switch actuating pin) and clutch pedal tab to .02-.04", and tighten lock nut. Connect clutch switch wiring and battery cable. Insure clutch pedal has approximately $^{25}/_{32}$" free travel.

CLUTCH FORK FREE PLAY

Remove clutch fork return spring and move fork slightly rearward. Loosen adjusting nut and adjust push rod until it contacts clutch fork. Back off push rod approximately 1 ¾ turns and tighten lock nut. Clearance between push rod and clutch fork should be $^{5}/_{64}$".

HYDRAULIC SYSTEM BLEEDING

NOTE – *Bleeding procedures for master cylinder and slave cylinder are the same, however, each procedure is performed separately.*

Adjust fluid level in clutch fluid reservoir. Attach a suitable bleeder hose to bleeder screw, and place opposite end of hose into a clean container. Pump clutch pedal several times, hold pedal down, and open bleeder screw slowly. Tighten bleeder screw and release pedal. Continue operation until air bubbles no longer appear in fluid being pumped out. Refill fluid reservoir as necessary. NOTE – *Do not allow fluid reservoir to empty during bleeding operation.* Check operation of clutch assembly.

TIGHTENING SPECIFICATIONS

Application	Ft. Lbs. (mkg)
Clutch-to-Flywheel	13 (1.8)
Transmission-to-Engine	27 (3.7)
Shift Fork Ball Stud	30 (4.2)