COURIER

Pickup

DESCRIPTION

Clutch is of single dry disc type. Clutch assembly consists of clutch disc, clutch cover and pressure plate assembly, and clutch release mechanism. Clutch housing also acts as the transmission input shaft bearing retainer, and contains the input shaft bearing oil seal and a selective fit thrust washer for controlling input shaft end play. Clutch release mechanism is hydraulic, consisting of a firewall mounted master cylinder and a slave cylinder mounted on flywheel housing. To control clutch engagement, a one-way valve is mounted on clutch master cylinder to control the flow of return fluid when pressure on clutch pedal is released (2300 cc engine).

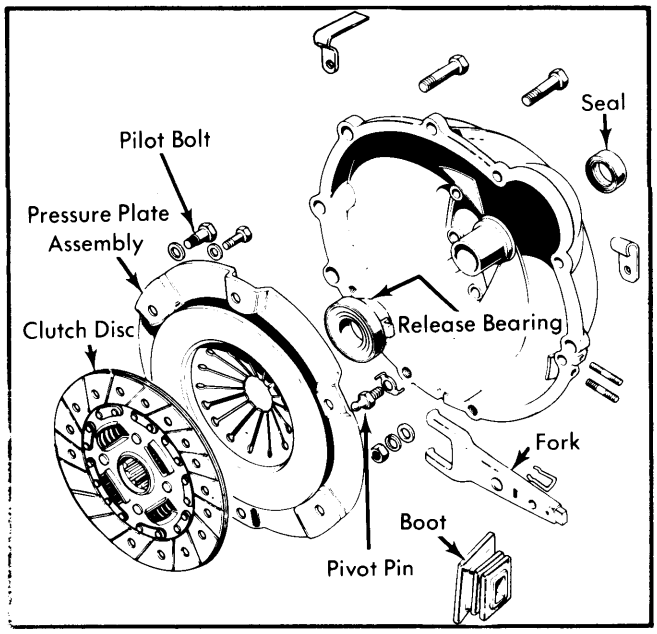

Fig. 1 Exploded View of Clutch Assembly with Detail of Internal Components

REMOVAL & INSTALLATION

CLUTCH ASSEMBLY

Removal – 1) Disconnect negative battery cable. Place transmission in neutral and remove shift lever, tower and boots as an assembly; cover hole. Raise vehicle. Disconnect drive shaft and remove from transmission.

2) Disconnect exhaust pipe brackets from transmission case and clutch housing. Remove exhaust pipe and catalytic assembly. Disconnect clutch release lever return spring. Remove clutch slave cylinder and secure to one side.

3) Remove speedometer cable from extension housing and disconnect wiring from starter and transmission. Using a suitable jack, support engine and remove starter. Support transmission and remove transmission-to-engine rear plate attaching bolts.

4) Remove crossmember attaching bolts at transmission and frame side rails, and remove crossmember. Lower jack supporting engine and remove transmission by sliding rearward and downward. Mark location of two pilot bolt holes on flywheel and pressure plate and remove clutch attaching bolts and clutch assembly.

NOTE – *Transmissions have aluminum cases. Install flat washer between case and attaching bolt or nut.*

Installation – To install, reverse removal procedure and note: Align clutch disc and flywheel with centering tool. Install pressure plate and bolts finger tight, then tighten bolts a few turns at a time in a criss-cross pattern. Bleed hydraulic system and adjust clutch pedal free play.

RELEASE LEVER & BEARING

Removal – With transmission removed, disconnect release collar spring and slide out release lever, boot and bearing. Inspect all parts for wear or damage.

Installation – To install, apply lubricant to input shaft bearing retainer of clutch housing and pivot bolt. Seat release lever on pivot. Apply lubricant to bearing contact surface of lever. Install release bearing and hook release collar spring. Lubricate face of release bearing. Lever and bearing must operate freely.

CLUTCH MASTER CYLINDER

Removal – Disconnect and plug hydraulic lines. Remove master cylinder attaching nuts. Remove master cylinder.

Installation – To install, start pedal push rod into cylinder, then position cylinder against firewall. Install and tighten attaching nuts. Connect hydraulic line. Bleed hydraulic system and check pedal free play.

CLUTCH SLAVE CYLINDER

Removal – 1) Disconnect brake fluid inlet hose at slave cylinder.

2) Unhook release lever from push rod.

3) Remove nuts attaching slave cylinder to clutch housing. Remove cylinder.

Installation – 1) Locate cylinder on studs in housing. Tighten nuts.

2) Connect fluid inlet hose.

3) Fill master cylinder. Bleed hydraulic system.

4) Hook clutch release lever into slave cylinder push rod.

OVERHAUL

CLUTCH MASTER CYLINDER

1) Clean outside of cylinder, drain fluid and remove dust boot. Using a screwdriver, remove piston stop ring and washer. Remove piston, piston cup and return spring from cylinder.

2) Wash all parts in clean alcohol or brake fluid. Check all rubber components and replace if damaged, worn, softened or swollen. Check cylinder bore for wear or damage, and check clearance between cylinder bore and piston. Replace cylinder or piston if clearance is more than .004" (.102 mm).

3) To assemble, dip all parts in clean brake fluid and reverse disassembly procedure. When assembled, fill reservoir with fluid and operate piston with a screwdriver until fluid is ejected at outlet fitting.

COURIER (Cont.)

CLUTCH MASTER CYLINDER ONE-WAY VALVE

Disassembly – Remove cap from side of clutch master cylinder. See *Fig. 2*. Slide out washer, one-way valve and spring.

Reassembly – Position spring along with one-way valve into cylinder housing. Fit cap and washer.

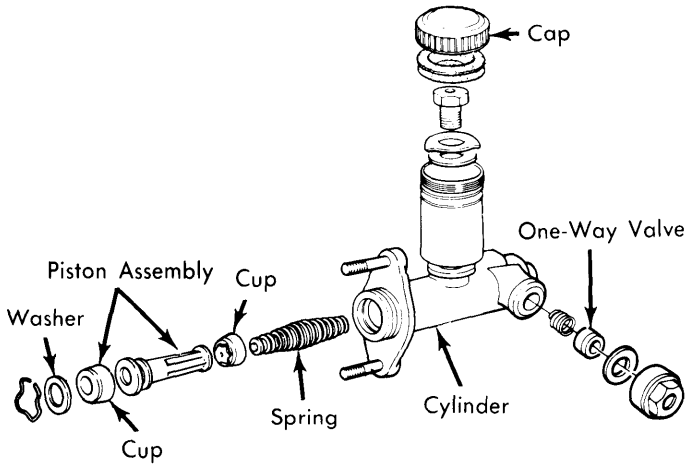

Fig. 2 Exploded View of Clutch Master Cylinder Assembly with Detail of One-Way Valve Used on Models Equipped with 2300 cc Engine

SLAVE CYLINDER

Disassembly – **1)** Clean outside of housing. Remove dust boot and clutch release rod.

2) Remove piston assembly and return spring. Remove bleeder screw cap, bleeder screw and steel ball.

Inspection – Check cylinder bore and piston for roughness, wear or scoring. Clearance between cylinder bore and piston should be .004" (.102 mm). Replace piston or cylinder if specification is exceeded.

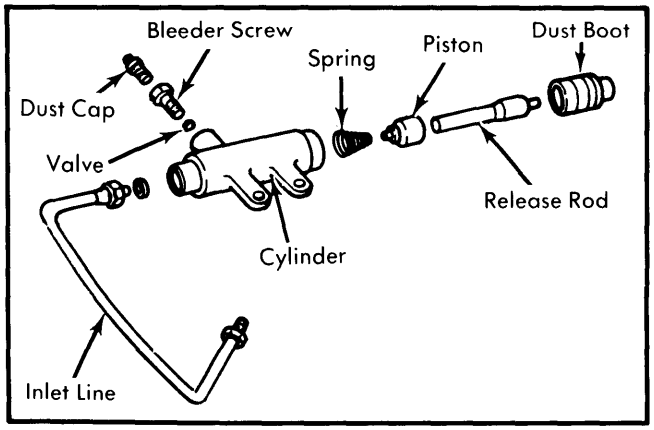

Fig. 3 Exploded View of Courier Slave Cylinder

Reassembly – **1)** Lightly coat piston and cups with brake fluid. Fit cups to piston. Install piston into cylinder.

2) Install release rod and boot. Place steel ball into cylinder. Screw in bleeder and fit dust cap.

ADJUSTMENTS

CLUTCH PEDAL

Pedal free play is adjusted by loosening lock nut on push rod and rotating rod until .025-.121" (.64-3.07 mm) free travel is obtained at pedal pad. See *Fig. 4*. Tighten lock nut when adjustment is completed.

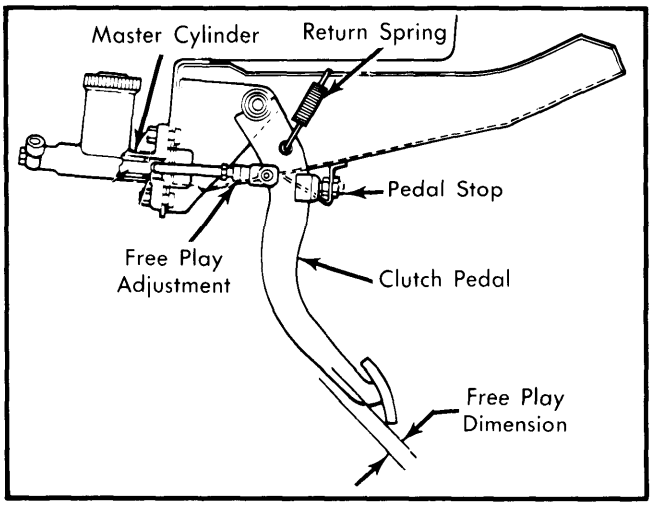

Fig. 4 Clutch Pedal Adjustment Procedure

HYDRAULIC SYSTEM BLEEDING

Remove rubber cap from bleeder valve and attach a bleeder tube and fixture to bleeder screw. Place other end of tube in a glass jar of brake fluid and open bleeder screw. Depress clutch pedal and allow to return slowly. Continue pumping action until air bubbles cease to appear in glass jar, then close bleeder screw. Install rubber cap on bleeder screw and fill master cylinder.

NOTE – *During bleeding, master cylinder must be kept ¾ full of brake fluid.*

TIGHTENING SPECIFICATIONS

Application	Ft. Lbs. (mkg)
Clutch Housing-to-Engine	
2000 cc Engine	34-45 (4.7-6.2)
2300 cc Engine	28-40 (3.9-5.5)
Pressure Plate-to-Flywheel	13-20 (1.8-2.8)
Slave Cylinder-to-Clutch Housing	12-17 (1.7-2.4)
Pivot Pin	23-34 (3.2-4.7)
Master Cylinder Attaching Bolts	13-18 (1.8-2.4)