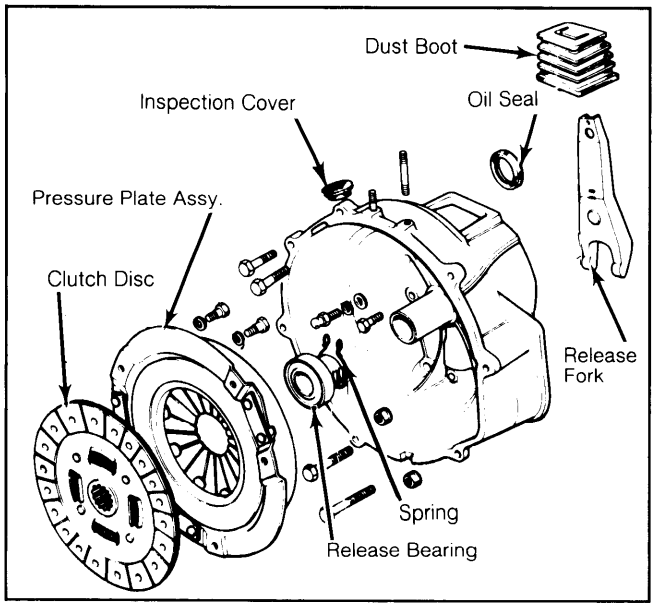
MAZDA — EXCEPT GLC

DESCRIPTION

Clutch is a dry, single disc, diaphragm spring type. Clutch system is hydraulic using a firewall mounted master cylinder and a slave cylinder attached to clutch housing. Release bearing is prelubricated and sealed.

Fig. 1: Exploded View of Mazda Clutch Assembly



REMOVAL & INSTALLATION

CLUTCH ASSEMBLY

Removal

1) Disconnect negative battery cable. Place gearshift lever in neutral and remove gearshift knob. Remove console box (if equipped).

2) Remove gearshift lever dust boot, retainer (if equipped) and gearshift lever. Pickup gearshift lever components include wave washer, shim and bushing. On RX7, remove air cleaner.

3) Raise and support vehicle and drain transmission. Remove propeller shaft. Disconnect and/or remove under covers, exhaust and catalytic converter as required.

4) Remove clutch slave cylinder and place out of the way without removing fluid line. Disconnect and remove starter, speedometer cable, back-up lights and other electrical connections.

5) Place jack under rear end of engine, protecting oil pan with wooden block. Position transmission jack under transmission and remove transmission-to-engine mounting bolts.

6) If equipped, remove transmission-to-crossmember bolts, crossmember-to-frame bolts and crossmember. Slide transmission back until input shaft is cleared and remove from vehicle.

7) Install flywheel holding tool and loosen pressure plate mounting bolts evenly until assembly can be removed. Separate clutch disc and pressure plate. Remove release bearing and fork.

Inspection

1) Inspect surface of pressure plate for burns, cracks or rivet scoring. Also check for defective spring and fingers. Flywheel surface may be refaced if burnt or scored.

2) Inspect disc surface for oil contamination. Minimum depth of rivet heads below face of disc is .012" (.3 mm). Check fit of disc hub on input shaft splines for excessive play.

Installation

1) Lightly coat input shaft splines and release bearing contact areas with grease. Use clutch alignment tool to center clutch assembly. Clutch cover and flywheel "O" alignment marks must be aligned at installation.

2) Torque pressure plate bolts in a crisscross pattern to specifications. To complete installation, reverse removal procedure.

RELEASE BEARING & FORK

Check the release bearing by pressing and turning the front race slowly by hand. Replace if bearing feels rough or noisy. Inspect the release fork for cracks or bends and replace if necessary.

CLUTCH MASTER CYLINDER

Removal & Installation

Disconnect hydraulic line from master cylinder. Remove nuts mounting cylinder to firewall. Unhook clutch pedal from cylinder push rod. Remove cylinder. To install, reverse removal procedure and bleed hydraulic system.

CLUTCH SLAVE CYLINDER

Removal & Installation

Raise vehicle and support. Disconnect fluid hose. Remove nuts mounting slave cylinder to clutch housing and slide off cylinder. To install, reverse removal procedure and bleed clutch.

PILOT BEARING

RX7

Remove bearing and seals with slide hammer. Use driver to install new bearing. Apply multipurpose grease and install seal.

All Other Models

Pilot bearing is pressed into flywheel. To replace, remove flywheel and using arbor press and driver, press old bearing out and new bearing in. Lubricate with multipurpose grease.

OVERHAUL

CLUTCH MASTER CYLINDER

NOTE: Master cylinder used on B2000 & B2200 has different external appearance. Disassembly procedure is identical.

Disassembly

1) Clean outer portion of cylinder. Remove reservoir cap assembly and drain brake fluid. On 626 & RX-7, remove reservoir connector bolt and reservoir.

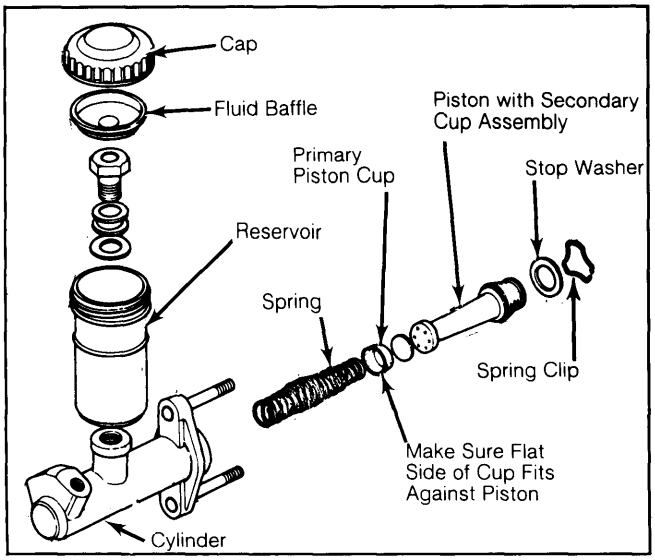
2) On B2000 & B2200, remove hydraulic line adapter, washer, oneway valve, spring and pin.

3) Remove piston stop ring, washer and piston assembly. Separate piston, cups and return spring. Clean all parts in alcohol or brake fluid and blow dry with compressed air.

MAZDA — EXCEPT GLC (Cont.)

4) Check all parts for wear, damage or deformation. If cylinder bore-to-piston clearance exceeds .006" (.15 mm), replace defective part. Replace parts as required and coat all components with clean brake fluid before assembly.

Fig. 2: Exploded View of Clutch Master Cylinder



B2000 & B2200 external appearance is slightly different.

Reassembly

Reverse disassembly procedure. Install primary cup with flat side of cup against piston and ensure compensating port is open. After assembly, fill reservoir with clean brake fluid and operate piston with screwdriver until fluid is ejected at outlet port.

CLUTCH SLAVE CYLINDER

Disassembly

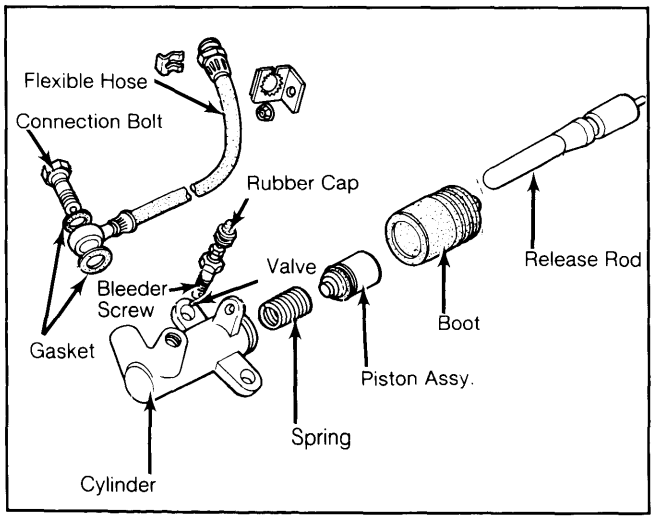
Clean outside of cylinder. Remove dust boot and release rod. Remove piston and cup assembly from cylinder, using compressed air if required. Remove spring, bleeder screw and valve.

Reassembly

1) Clean all parts in brake fluid or alcohol and dry with compressed air. Check all parts for wear or damage. If cylinder bore-to-piston clearance exceeds .006" (.15 mm), replace piston or cylinder.

2) Before assembly, coat pistons and cups with clean hydraulic fluid. To reassemble, reverse disassembly procedure.

Fig. 3: Exploded View of Typical Slave Cylinder

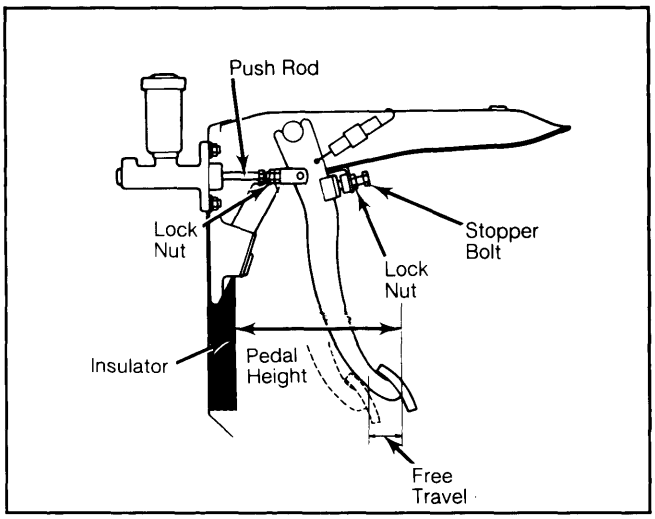


ADJUSTMENTS

CLUTCH PEDAL FREE PLAY

Adjust clutch pedal free play, measured at pedal pad, to .02-.12" (0.6-3.0 mm) by loosening lock nut and turning pedal stopper bolt. Tighten lock nut. *See Fig. 4.*

Fig. 4: Clutch Adjustment Locations



CLUTCH PEDAL HEIGHT

Measure the distance from the center of the upper surface of pedal pad to the dash insulator. To adjust the pedal height, loosen lock nut and turn stopper bolt. Tighten lock nut after adjustment is made. *See Fig. 4.*

CLUTCH PEDAL HEIGHT SPECIFICATIONS

Application	In. (mm)
626	7.6-7.8 (193-198)
RX7	7.5-7.7 (190-195)
B2000	8.1-8.3 (205-210)
B2200	8.5-8.7 (215-220)

TIGHTENING SPECIFICATIONS

Application	Ft. Lbs. (N.m)
Flywheel-to-Crankshaft	
Gasoline Engines	108-117 (155-163)
Diesel Engines	95-137 (131-190)
Flywheel-to-Eccentric Shaft	
Rotary Engines	289-362 (393-492)
Pressure Plate-to-Flywheel	13-20 (18-27)