

JAGUAR XJ6 & XJS

DESCRIPTION

Clutch is a dry disc type, using a diaphragm spring pressure plate. Clutch actuation is hydraulic through a master and slave cylinder. A sealed, prelubricated release bearing is also used.

REMOVAL & INSTALLATION

CLUTCH ASSEMBLY

Removal (XJ6)

1) Disconnect negative battery cable. Remove the gear shift knob and center console attaching screws. Disconnect console wiring and lift off console. Place gear selector in third gear.

2) Support the weight of the engine at the rear. Remove the rear engine mount, body cross member and transmission-to-engine bracket. Disconnect the exhaust pipe at the flange.

3) Disconnect the speedometer cable, slave cylinder, backup light connector and drive shaft. Place jack under transmission. Remove starter and all engine-to-transmission bolts. Pull transmission away from engine.

4) Mark relative positions of pressure plate to flywheel and balance weights to pressure plate. Balance weights are located under the pressure plate bolts. Loosen bolts gradually in a crisscross pattern and lift off clutch assembly.

Removal (XJS)

1) Disconnect battery cables. Remove hood and radiator lower grill. Drain cooling system. Remove fender-to-firewall braces.

NOTE: On XJS models, engine and transmission must be removed as an assembly.

CAUTION: The fuel system must be depressurized before disconnecting any fuel lines.

2) Disconnect the fuel pump relay located inside the trunk on the right hand side. Pull out the coil wire. Crank the engine for a few seconds.

3) After labelling for identification, disconnect all engine wiring, fuel lines, vacuum hoses and coolant hoses that will interfere with engine removal. Disconnect throttle cable.

4) Remove radiator and fan shroud. Disconnect exhaust pipe and EGR down pipes. Remove heat shields. Disconnect drive shaft and speedometer cable.

5) Disconnect power steering pump and cooler from engine and secure to one side. Attach chains to front and rear lifting eyes. Support weight of engine and remove all engine and transmission mounts.

6) Lift out engine and transmission. Remove starter and separate engine from transmission.

7) Mark relative positions of pressure plate to flywheel and balance weights to pressure plate. Balance weights are located under the pressure plate bolts. Loosen bolts gradually in a crisscross pattern and lift off clutch assembly.

Installation (All Models)

Install pressure plate and disc noting position of mating marks and balance weights if reusing old clutch assembly. Torque bolts gradually in a star pattern. To complete installation, reverse removal procedure.

RELEASE BEARING & FORK

Removal (XJ6)

1) Remove the release fork pivot bolt from the transmission housing using special tool ST1136. See Fig. 7. DO NOT pull lever off of the bolt. Carefully slide release fork off the release bearing taking care not to bend the spring clip.

Fig. 1: Removing Clutch Release Bearing

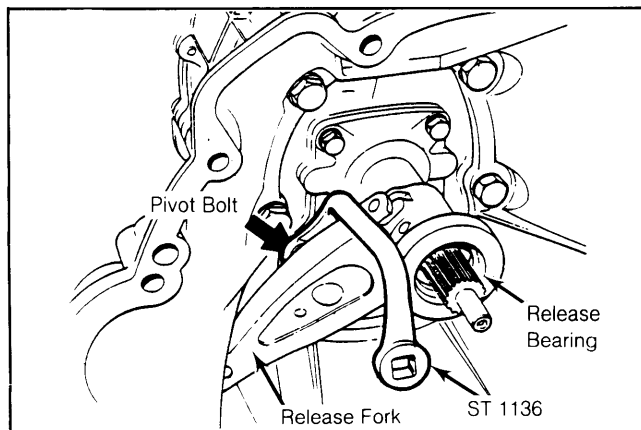


Illustration applies to XJ6 only.

2) Slide the bearing off of the input shaft. Remove the shield from over the slave cylinder and disconnect the release fork from the push rod.

Removal (XJS)

1) Release spring clips securing release bearing to release fork. Remove spring clip and pivot pin at clutch slave cylinder push rod. Drive roll pin from release fork pivot pin. See Fig. 2.

Fig. 2: Removing Release Fork & Bearing

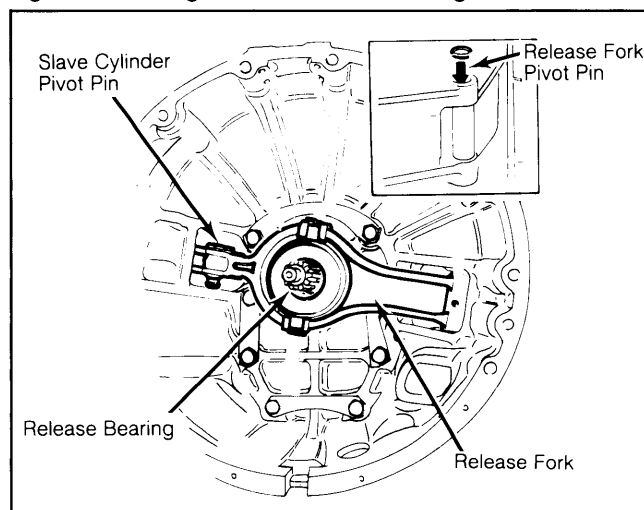


Figure applies to XJS model only.

2) Drill out upper seal plug from release fork pivot pin boss. Drive out pin. Remove fork and bearing. Pivot bushings in fork may be replaced if worn.

Installation (All Models)

Use a light coat of lithium based grease on the input shaft and all contact areas of bearing and fork. Complete assembly by reversing removal procedure. Adjust clutch free play.

Clutches

JAGUAR XJ6 & XJS (Cont.)

MASTER CYLINDER

Remove & Installation

Remove the spring clip and clevis pin attaching clutch pedal to push rod. Remove the master cylinder nuts and lock washers holding master cylinder to the pedal box. Record number and position of any shims that may be used. Install master cylinder in reverse order. Bleed hydraulic system.

SLAVE CYLINDER

Removal & Installation

Disconnect and plug hydraulic line from slave cylinder. On XJS, note position of spring anchor on slave cylinder mounting stud. Slide rubber boot up along push rod and remove mounting bolts. Slide slave cylinder off push rod and remove. Install cylinder in reverse order. Bleed hydraulic system.

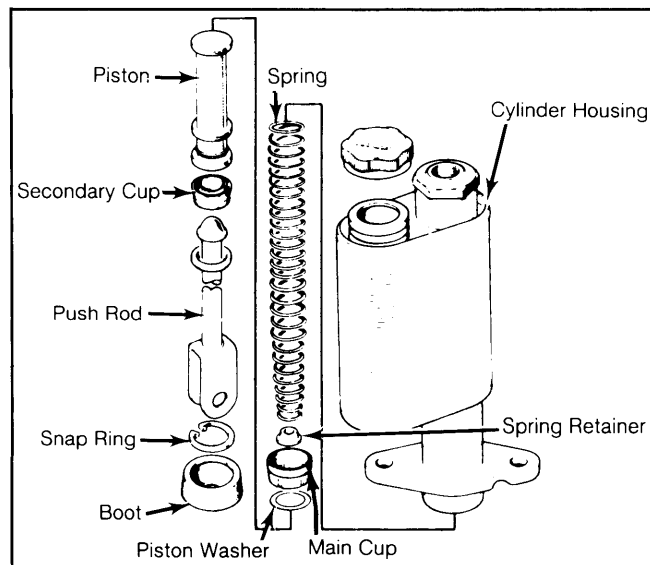
OVERHAUL

CLUTCH MASTER CYLINDER

Disassembly

Depress push rod and remove snap ring. Pull out push rod, piston, cups and springs. See Fig. 3. Clean all parts in denatured alcohol or clean brake fluid and dry using compressed air. Examine cylinder bore for scoring and replace if necessary.

Fig. 3: Exploded View of Clutch Master Cylinder



Reassembly

1) Replace main and secondary cups. Lubricate all parts in clean brake fluid before assembly. Fit spring retainer to small end of spring. If necessary, bend over retainer ears to secure.

2) Insert piston washer in into bore with curved towards main cup. Install remaining components in cylinder housing in reverse order of removal. Ensure cup lips are not damaged on snap ring groove.

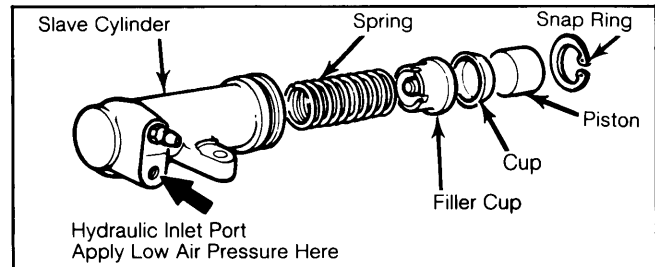
CLUTCH SLAVE CYLINDER

Disassembly

Depress piston and remove snap ring. Apply low air pressure to fluid inlet port and blow out piston, cup

and spring. Replace piston cup. Clean all parts in denatured alcohol or clean brake fluid and dry using compressed air. Examine cylinder bore for scoring and replace if necessary. See Fig. 4.

Fig. 4: Exploded View of Clutch Slave Cylinder



Reassembly

Coat all parts in clean brake fluid. Install components in reverse order of removal. Ensure that piston moves freely in bore.

ADJUSTMENTS

CLUTCH FREE PLAY

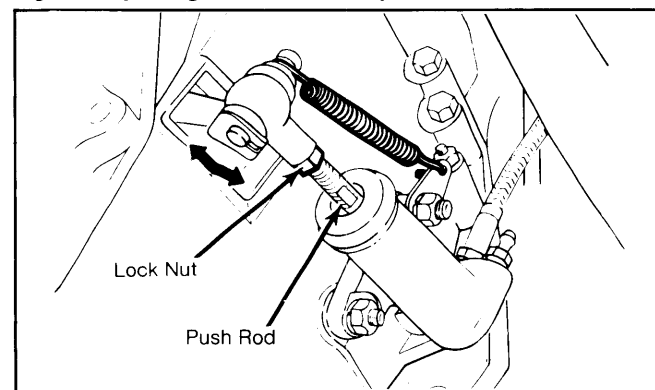
XJ6

On XJ6 models, no adjustment of clutch free play is provided.

XJS

Move slave cylinder push rod back and forth and measure free play at push rod end. Free play must be .125" (3 mm). Adjustment may be made by loosening lock nut and screwing push rod in or out. Operate clutch several times and recheck free play. See Fig. 5.

Fig. 5: Adjusting Clutch Free Play



Adjust free play to .125" (3 mm).

TIGHTENING SPECIFICATIONS

Application	Ft. Lbs. (N.m)
Flywheel	66 (90)
Engine-to-transmission	21 (29)
Master Cylinder-to-Pedal Box	13 (17)
Slave Cylinder-to-Bell Housing	
XJ6	13 (17)
XJS	25 (34)