

JAGUAR

"E" Type Series 3
XJ6 Sedan

DESCRIPTION

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

REMOVAL & INSTALLATION

CLUTCH ASSEMBLY

NOTE — Engine and transmission must be removed from vehicle as an assembly to service clutch.

- 1) With engine assembly removed, separate transmission from bell housing. Remove flywheel inspection cover. Remove starter and bell housing.
- 2) Mark position of pressure plate, flywheel, and balance weights for reassembly reference. Alternately remove clutch attaching bolts in a criss-cross pattern and remove clutch assembly. Inspect all parts for wear or damage.
- 3) To install, reverse removal procedure and note the following: Use a suitable centering tool to align clutch disc to flywheel. When installing pressure plate, be sure to align marks made at disassembly. Adjust free play at clutch fork.

CLUTCH MASTER CYLINDER

"E" Type — Remove air cleaners. Remove cotter pin retaining clevis pin in pedal assembly and remove clevis pin. Disconnect hydraulic lines and nuts securing cylinder to pedal box. Remove master cylinder through sub-frame, then remove spacer from mounting studs. To install, reverse removal procedure and bleed hydraulic system.

XJ6 — Disconnect hydraulic line from master cylinder. Remove screws securing pedal box to firewall (accessible from inside driver compartment), and remove pedal box and master cylinder as an assembly. Remove locking screw and pedal pivot pin. Pull back pedal and remove cotter pin and clevis pin from push rod fork end. Remove attaching bolts and remove master cylinder from pedal box mounting. To install, reverse removal procedure and bleed hydraulic system.

CLUTCH SLAVE CYLINDER

Disconnect hydraulic line from slave cylinder and plug line to prevent entry of dirt. Note position of return spring anchor plate to transmission, and remove cylinder attaching nuts. Remove spring anchor plate, slide cylinder off mounting studs, pull rubber boot back on push rod, and remove cylinder from push rod. To install, reverse removal procedure, adjust free play at clutch fork, and bleed hydraulic system.

CLUTCH RELEASE BEARING & FORK ("E" TYPE)

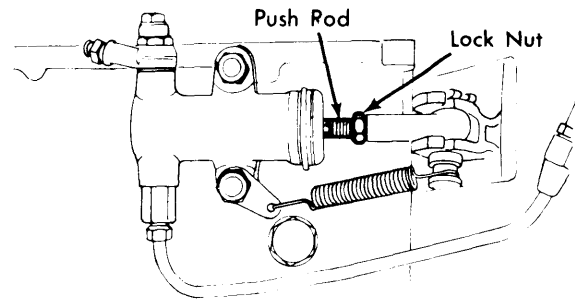
- 1) With bell housing removed from engine, remove spring clips securing release bearing to release fork, and disengage lugs from release fork. Remove clip and pivot pin at clutch slave cylinder push rod.
- 2) Drive roll pin from release fork fulcrum shaft. Drill out upper seal from fulcrum boss, then drive shaft downward through release fork. Remove fork from bell housing. Inspect release fork bushings for wear and replace as necessary.

- 3) To install, reverse removal procedure and note the following: When replacing fulcrum shaft bushings, ream new bushings to size using shaft as a guide. Install new seal plugs at top and bottom of shaft. When installing release bearing, make sure lugs of bearing are fully seated in clutch fork.

ADJUSTMENT

CLUTCH FORK FREE PLAY

- 1) Move slave cylinder push rod and measure total free movement between slave cylinder and clutch fork. Free play should be $\frac{1}{4}$ " on "E" Type, and $\frac{1}{16}$ " on XJ6.
- 2) To adjust, disconnect return spring, loosen lock nut on push rod, and turn rod in or out to obtain correct amount of free play. Tighten lock nut and connect return spring.



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SLAVE CYLINDER ADJUSTMENT

HYDRAULIC SYSTEM BLEEDING

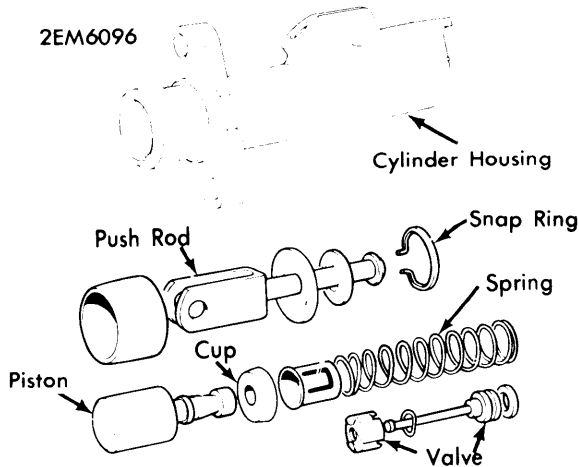
- 1) Fill master cylinder reservoir to correct level with hydraulic fluid. Attach one end of a bleed tube to slave cylinder bleeder screw, and immerse opposite end in a clean container partially full of hydraulic fluid.
- 2) Open slave cylinder bleeder screw, and pump clutch pedal slowly up and down, pausing between each stroke. Refill master cylinder reservoir after every three pedal strokes. **CAUTION** — Do not use fluid bled from system, as it will contain air.
- 3) Pump clutch pedal until pedal becomes firm, tighten bleeder screw. Refill master cylinder reservoir, operate clutch pedal for two or three minutes, and check system for leaks.

OVERHAUL

CLUTCH MASTER CYLINDER

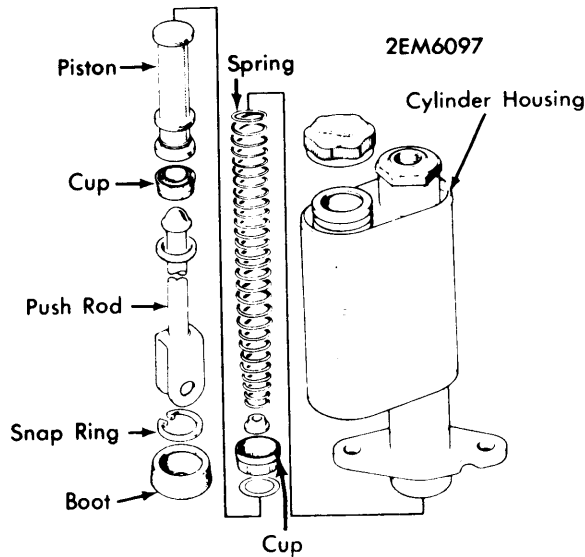
- "E" Type** — 1) Remove metal boot and retaining washer from cylinder body, and remove push rod, rubber dust cover and washer. Apply low air pressure to inlet port and remove piston assembly. Lift tab on spring support and remove piston.
- 2) Remove and discard cup seal from piston. Move valve stem sideways in spring support and remove valve and spring. Slide nylon spring support off valve stem, remove wave washer, and remove and discard valve seal.
 - 3) Clean all components in denatured alcohol and dry using a lint-free cloth. Inspect all parts for scoring, replace as necessary. Inspect spring for distortion, replace as necessary.
 - 4) To assemble, reverse disassembly procedure using a new cup seal and new valve seal. Check free play at clutch fork.

JAGUAR (Cont.)



MASTER CYLINDER ASSEMBLY ("E" TYPE)

XJ6 - 1) Remove boot from cylinder body and slide along push rod. Depress push rod to relieve spring pressure, remove retaining clip, and remove push rod, piston, piston washer, main cup and spring. Remove secondary cup from piston.



MASTER CYLINDER ASSEMBLY (XJ6)

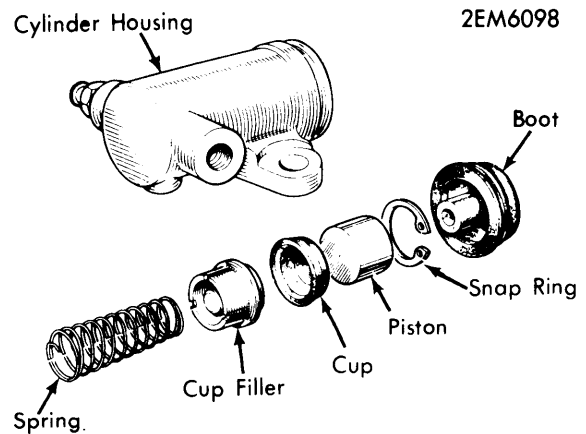
2) Thoroughly clean and dry all parts, and inspect for wear or damage. Replace parts as necessary. To assemble, reverse disassembly procedure and note the following: Make sure retaining clip is fully seated in its groove in cylinder.

3) Fill master cylinder reservoir to within 1/2" of top and install cap. Push in on push rod and allow to return unassisted. After one or two application, fluid should flow from outlet.

SLAVE CYLINDER

1) Remove retaining clip. Apply low air pressure to inlet port and remove piston, cup, cup filler and spring. Clean all parts in denatured alcohol and dry with a lint-free cloth. Inspect all parts for wear or damage, replace as necessary.

2) To assemble, reverse disassembly procedure and note the following: Apply Girling rubber grease to all components. Always use a new cup when assembling cylinder.



SLAVE CYLINDER COMPONENTS