JEEP – HYDRAULIC

4 Cyl. CJ Models

DESCRIPTION

Clutch assembly consists of a single dry-disc driven plate and a one-piece diaphragm spring type clutch cover. The clutch cover is 9" in diameter and the driven plate is 8½" in diameter. No internal adjustment for driven plate is provided. Clutch is actuated through a hydraulic clutch cylinder and slave cylinder.

REMOVAL & INSTALLATION

CLUTCH ASSEMBLY

Removal – 1) Raise and support vehicle under frame and remove transmission. See *appropriate article in MANUAL TRANSMISSION SERVICING Section.* Remove bolts attaching slave cylinder to clutch housing.

2) Disengage push rod from clutch fork and move cylinder out of way, securing to underside of vehicle. Remove throw-out bearing from clutch fork. Remove bolts attaching clutch housing to engine and remove housing.

3) Mark position of clutch cover on flywheel for reassembly in same position. Loosen clutch cover bolts 1 or 2 turns at a time until clutch cover spring tension is released. Remove cover bolts and remove clutch cover and disc.

Installation – Check all components for wear or damage and replace as necessary. Using a suitable clutch alignment tool, align clutch disc and loosely install clutch cover, noting alignment marks made during removal. Reverse removal procedure to complete installation.

CLUTCH MASTER CYLINDER

Removal – 1) Disconnect hydraulic line at clutch master cylinder and cap line and cylinder opening to prevent dirt from entering. From inside vehicle, remove cotter pin and washer retaining cylinder push rod on clutch pedal.

2) Slide push rod off pedal pivot. Remove nuts attaching clutch master cylinder to mounting studs on dash panel and remove cylinder.

Installation – Reverse removal procedure and bleed hydraulic system.

CLUTCH SLAVE CYLINDER

Removal – 1) Disconnect hydraulic line at clutch slave cylinder and cap line to prevent fluid loss. Remove clutch fork lever-to-cylinder push rod retaining spring.

2) Remove bolts attaching slave cylinder to clutch housing and remove slave cylinder, heat shield, clutch fork pivot, washer and seal.

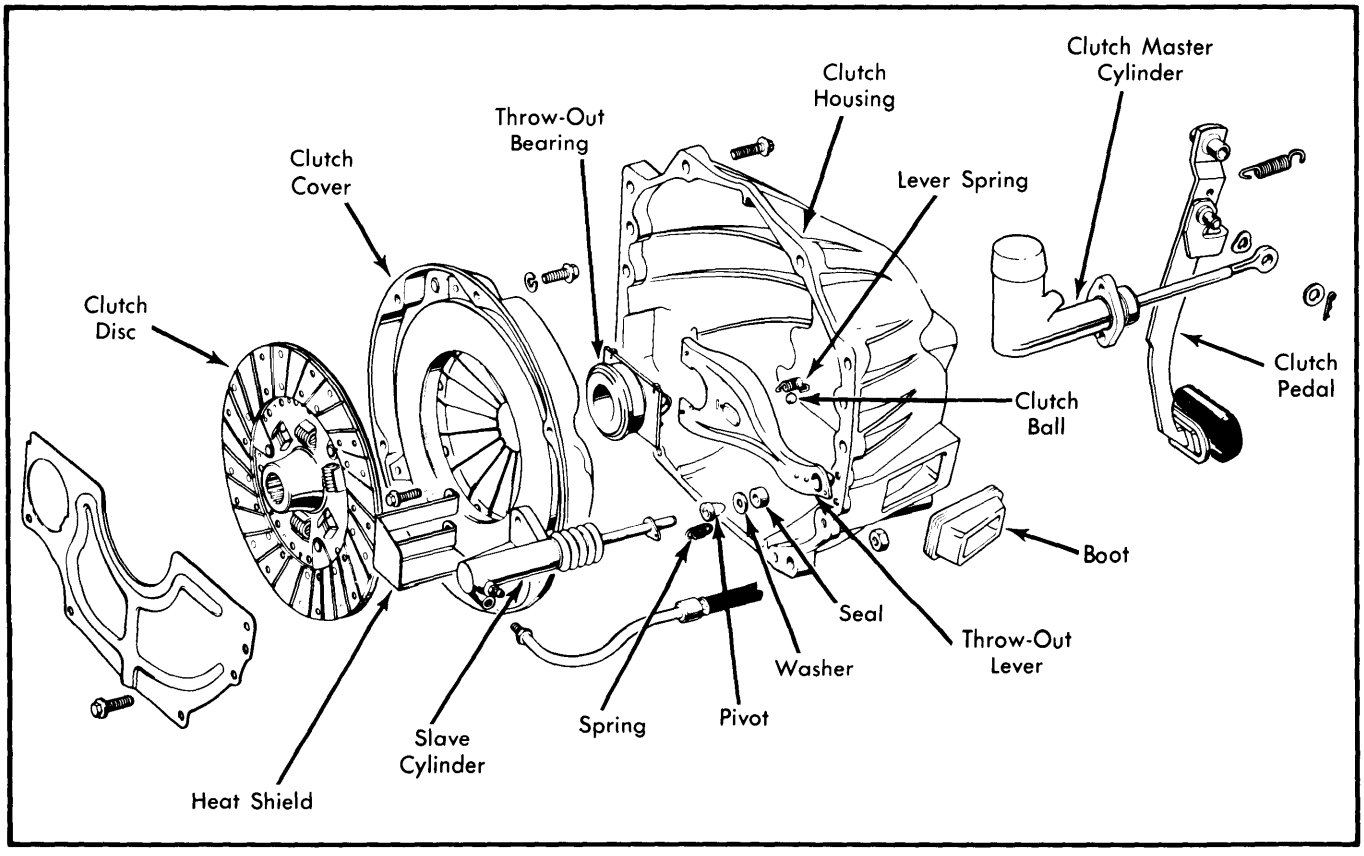

Fig. 1 Exploded View of Jeep Hydraulic Clutch Assembly ("CJ" Models With 4 Cylinder Engine)

JEEP – HYDRAULIC (Cont.)

Installation – Reverse removal procedure and bleed hydraulic system.

OVERHAUL

CLUTCH MASTER CYLINDER

Disassembly – 1) Remove reservoir cap and rubber cover. Remove push rod dust cover using screwdriver to pry cover off cylinder and discard dust cover. Remove snap ring retaining push rod in cylinder bore and discard snap ring.

2) Remove push rod, retaining washer and seal as an assembly. Discard push rod seal. Remove plunger, valve spring and valve stem assembly from cylinder bore by lightly tapping cylinder body on wood block.

3) Compress valve spring slightly and pry tab of valve stem retainer upward to release retainer, spring and stem assembly from plunger. Remove seal from plunger and discard. Remove spring retainer and valve stem from valve spring.

NOTE – *Retainer tab is located in rectangular slot in side of stem retainer. Use thin blade screwdriver to pry upward.*

4) Remove valve stem from retainer and remove spring washer and stem tip seal from end of valve stem amd discard stem tip seal and spring washer. Clean all parts thoroughly with brake fluid or brake cleaning solvent only. Inspect cylinder bore for wear and/or nicks, scores or damage. Replace if necessary.

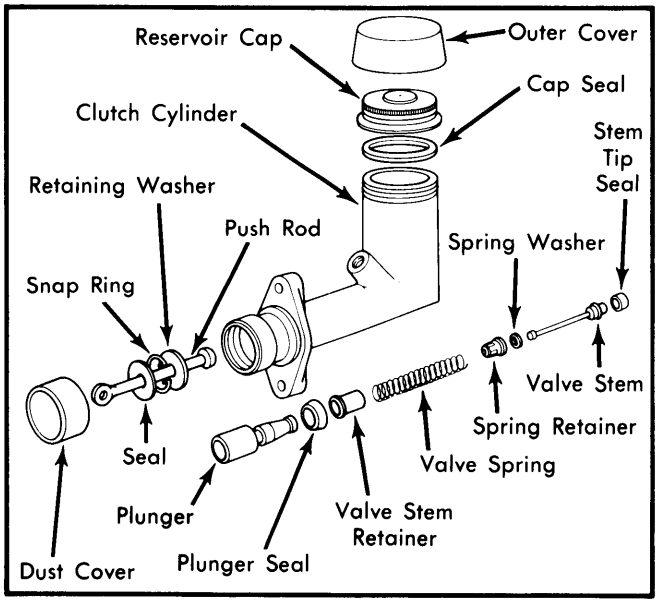

Fig. 2 Exploded View of Clutch Master Cylinder Assembly

Reassembly – Reverse disassembly procedure and note the following:

1) Lubricate cylinder bore with brake fluid. Make sure lip of plunger seal faces stem end of plunger and stem tip seal is installed so seal shoulder fits in undercut at end of valve stem.

2) When end of valve stem passes through stem retainer and seats in small bore in end of plunger, bend retainer tab downward to lock stem and retainer on plunger.

CLUTCH SLAVE CYLINDER

Disassembly – 1) Clean cylinder exterior thoroughly. Remove dust boot from cylinder. Remove cylinder push rod, plunger and spring as an assembly. Remove spring and seal from plunger.

2) Remove snap ring retaining push rod in plunger and remove push rod and boot. Remove boot from push rod. Clean all parts thoroughly with brake fluid or brake cleaning solvent. Inspect cylinder bore for wear and/or nicks, scores or damage. Replace if necessary.

Reassembly – Reverse disassembly procedure and note the following: Lubricate cylinder bore and seal with brake fluid and assemble.

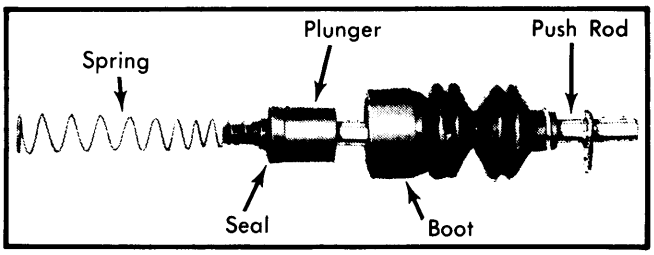

Fig. 3 Exploded View of Clutch Slave Cylinder

ADJUSTMENT

NOTE – *Due to automatic wear adjustment, no adjustment is necessary except bleeding of hydraulic system.*

HYDRAULIC SYSTEM BLEEDING

1) Make sure clutch master cylinder is full of brake fluid (SAE J-1703 or DOT 3 or equivalent). Compress slave cylinder plunger by pushing forward on clutch fork as far as possible. Attach rubber hose to bleeder screw, then immerse other end of hose in glass container ½ full of brake fluid.

2) Loosen bleeder screw. Depress and hold clutch pedal to end of its travel. Tighten bleeder screw and release pedal. Repeat bleeding operation until fluid entering container is free of bubbles. Refill clutch master cylinder to level mark on reservoir.

NOTE – *DO NOT allow reservoir to run out of fluid during bleeding operation.*

TIGHTENING SPECIFICATIONS

Application	Ft. Lbs.
Clutch Cover-to-Flywheel Bolts	23
Clutch Housing-to-Engine Bolts	54
Clutch Housing-to-Transmission Bolts	54
Flywheel-to-Engine Bolts	65
Clutch Cylinder-to-Dash Panel	11
Clutch Cylinder-to-Clutch Housing	15