

# CLUTCH

## 1993 Jeep Cherokee

1993 Clutch  
Hydraulic

Cherokee, Grand Cherokee, Wrangler

### DESCRIPTION

The clutch assembly consists of a single dry-disc driven plate and a one-piece diaphragm spring-type clutch cover. The clutch is actuated through a hydraulic master cylinder and a slave cylinder.

On Cherokee and Wrangler models, slave cylinder and clutch release bearing are combined in an assembly. Slave cylinder and clutch release bearing must be replaced as a complete unit. On Grand Cherokee models, slave cylinder and clutch release bearing are of conventional design and may be serviced separately.

### ADJUSTMENTS

#### HYDRAULIC SYSTEM BLEEDING

Cherokee & Wrangler

1) Fill master cylinder reservoir with DOT 3 brake fluid. Raise and support vehicle. Attach bleeder hose to bleeder screw on bleed line of slave cylinder. See Fig. 1. Place other end of hose in glass container half full of brake fluid. Loosen bleeder screw while holding bleeder screw fitting.

CAUTION: DO NOT allow bleed line to bend or flex when loosening bleeder screw.

2) Have an assistant depress clutch pedal to the floor. Tighten bleeder screw and release clutch pedal. Repeat bleeding procedure until fluid entering container is free of bubbles. DO NOT allow reservoir to run out of fluid during bleeding. Refill clutch master cylinder reservoir.

Grand Cherokee

Bleeding procedure not available from manufacturer.

NOTE: No other adjustments are necessary or possible.

### TROUBLE SHOOTING

NOTE: See TROUBLE SHOOTING - BASIC PROCEDURES article in the GENERAL TROUBLE SHOOTING section.

### REMOVAL & INSTALLATION

#### TRANSMISSION

Removal (Cherokee & Wrangler)

1) Place transmission in 1st or 3rd gear. Raise and support vehicle. Drain fluid from transfer case. Support the engine with adjustable jack stand. Remove rear crossmember.

2) Disconnect transmission shift linkage, speedometer cable, transfer case vacuum lines, electrical wiring and clutch hydraulic lines. Plug hydraulic lines to prevent fluid loss and contamination.

Mark drive shaft yokes and transfer case yokes for reassembly reference. Disconnect drive shafts.

3) Support transfer case with jack and lower (NOT MORE than 3 inches). Reaching up and around transmission case, move boot upward to access shift lever retainer.

NOTE: DO NOT remove shift lever from floor pan boot.

4) Disengage shift lever from transmission by pressing down and turning retainer counterclockwise to release it. Lift retainer out of transmission shift tower. Remove clutch housing to engine bolts. Remove transmission and transfer case.

Installation (Cherokee & Wrangler)

To install, reverse removal procedure. Fill transmission with proper lubricant. Fill and bleed hydraulic clutch system. Refer to HYDRAULIC SYSTEM BLEEDING under ADJUSTMENTS.

Removal (Grand Cherokee)

1) Shift transmission into neutral. Raise and support vehicle. Remove skid plate. Mark drive shafts for installation reference. Remove drive shafts. Disconnect transfer case shaft linkage. Disconnect wire harness and vent hoses from transmission and transfer case. Drain fluid from transfer case.

2) Support engine using adjustable jackstand. Support transmission on jack. Secure transmission on jack using safety chains. Remove rear crossmember. Support transfer case. Remove transfer case mounting bolts. Remove transfer case.

3) Disconnect speedometer cable, vacuum lines, and engine timing sensor. Remove clutch slave cylinder from clutch housing. Hang slave cylinder aside with wire. Lower transmission slightly (NOT MORE than 3 inches). Reaching up and around transmission case, move boot upward to access shift lever retainer.

NOTE: DO NOT remove shift lever from floor pan boot.

4) Disengage shift lever from transmission by pressing down and turning retainer counterclockwise to release it. Lift retainer out of transmission shift tower. Remove clutch housing-to-engine bolts. Remove transmission.

Installation (Grand Cherokee)

To install, reverse removal procedure. Tighten bolts to specification. See TORQUE SPECIFICATIONS table. Fill transmission with proper lubricant.

## CLUTCH ASSEMBLY

Removal

Remove transmission. See TRANSMISSION. Place reference marks on clutch cover and flywheel for reassembly reference. Evenly loosen clutch cover bolts until clutch cover spring tension is released. Remove cover bolts, clutch cover and clutch disc.

Installation

Replace all worn or damaged parts. Align clutch cover with reference marks on flywheel. Using clutch alignment shaft, align clutch disc. Tighten each cover bolt a few turns at a time to specification. See TORQUE SPECIFICATIONS table.

NOTE: Flywheel cannot be resurfaced. If service is required, replace flywheel.

## CLUTCH MASTER CYLINDER

### Removal

Disconnect hydraulic line at master cylinder. On Grand Cherokee, disconnect hydraulic line from remote reservoir to master cylinder. Plug all hydraulic lines and openings. On all models, remove cotter pin or spring clip holding push rod on clutch pedal. Slide push rod off pedal pivot. Remove master cylinder retaining nuts. Remove master cylinder.

### Installation

To install, reverse removal procedure. Bleed hydraulic system. See HYDRAULIC SYSTEM BLEEDING under ADJUSTMENTS.

## CLUTCH SLAVE CYLINDER

### Removal (Cherokee & Wrangler)

1) Drain clutch master cylinder. Disconnect line at clutch master cylinder and clutch slave cylinder lines. Remove transmission and transfer case. Remove insulator bolts and slide insulator and bracket off lines. See Fig. 1.

2) Remove retaining nut. Pry nut upward and off mounting pin on transmission front case. Remove assembly.

### Installation (Cherokee & Wrangler)

To install, reverse removal procedure. Bleed hydraulic system. See HYDRAULIC SYSTEM BLEEDING under ADJUSTMENTS.

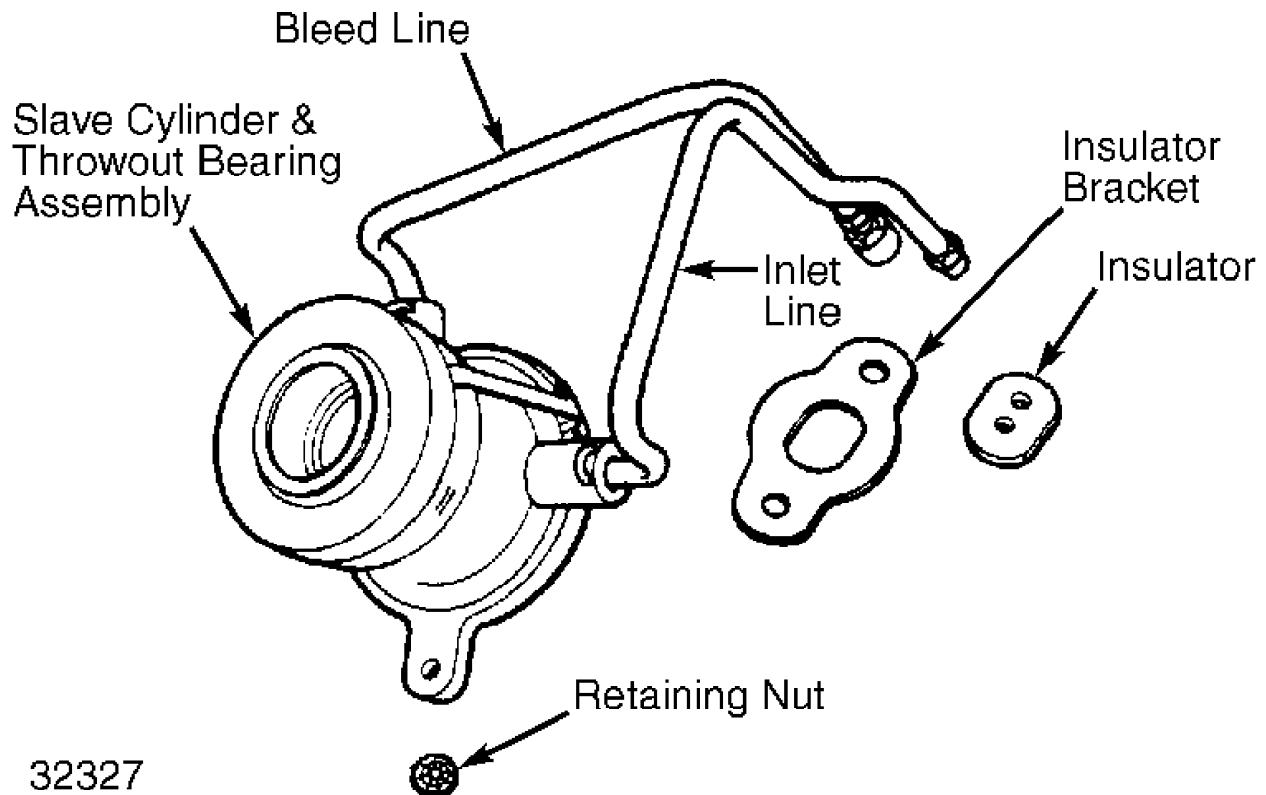


Fig. 1: Clutch Release Bearing & Slave Cylinder (Cherokee & Wrangler)  
Courtesy of Chrysler Motors.

### Removal & Installation (Grand Cherokee)

Disconnect hydraulic line at slave cylinder. Plug line to

prevent fluid loss and contamination. Remove slave cylinder mounting bolts. Remove slave cylinder. To install, reverse removal procedure.

## PILOT BEARING

### Removal & Installation

Remove clutch assembly. Using slide hammer and internal puller, remove pilot bearing. To install, lubricate pilot bearing with wheel bearing grease. Using clutch alignment shaft, install pilot bearing. Reverse removal procedure to install remaining components.

## OVERHAUL

### CLUTCH MASTER & SLAVE CYLINDERS

NOTE: No overhaul procedures are available. Replace defective or leaking units with new parts.

## TORQUE SPECIFICATIONS

### TORQUE SPECIFICATIONS TABLE

Application	Ft. Lbs. (N.m)
Clutch Cover Bolt	
4-Cylinder .....	23 (31)
6-Cylinder .....	40 (54)
Clutch Housing-To-Engine Bolt	
Except Grand Cherokee .....	28 (38)
Grand Cherokee .....	45 (61)
Clutch Housing-To-Transmission Bolts .....	27 (37)
Crossmember-To-Frame Bolt .....	30 (41)
Master Cylinder Mounting Nut .....	19 (26)
Rear Support-To-Crossmember Bolt .....	33 (45)