CLUTCH

TABLE OF CONTENTS

	page
CLUTCH	
DESCRIPTION	1
OPERATION	1
WARNING	2
DIAGNOSIS AND TESTING - CLUTCH	2
SPECIFICATIONS - CLUTCH	5
CLUTCH DISC	
REMOVAL	6
INSTALLATION	6
CLUTCH RELEASE BEARING	
REMOVAL	6
INSTALLATION	6
FLYWHEEL	
DESCRIPTION	7
OPERATION	7
DIAGNOSIS AND TESTING - FLYWHEEL	8
PILOT BEARING	
REMOVAL	8
INSTALLATION	8
LINKAGE	
REMOVAL	8
INSTALLATION	9
MASTER CYLINDER	
INSPECTION	9
CLUTCH PEDAL	
REMOVAL	10
INSTALLATION	10
CLUTCH SWITCH OVERRIDE RELAY	
DESCRIPTION	10
OPERATION	10
REMOVAL	10
INSTALLATION	10
CLUTCH PEDAL POSITION SWITCH	
DESCRIPTION	11
OPERATION	11
DIAGNOSIS AND TESTING - CLUTCH PEDAL POSITION SWITCH	11

CLUTCH

DESCRIPTION

The clutch mechanism consists of a flywheel, dry-type disc, diaphragm style pressure plate and hydraulic linkage. The flywheel is bolted to the rear flange of the crankshaft. The clutch pressure plate is bolted to the flywheel with the clutch disc between these two components. The clutch system provides the mechanical, link between the engine and the transmission. The system is designed to transfer the torque output of the engine, to the transmission while isolating the transmission from the engine firing pulses to minimize concerns such as gear rattle.

OPERATION

The clutch operates with leverage, clamping force and friction. The disc serves as the friction element, the diaphragm spring and pressure plate provide the clamping force. The clutch pedal, hydraulic linkage, release lever and bearing provide the leverage.

The clutch master cylinder push rod is connected to the clutch pedal. When the clutch pedal is depressed, the slave cylinder is operated by the clutch master cylinder mounted on the dash panel. The release fork is actuated by the hydraulic slave cylinder mounted on the transmission housing. The release bearing is operated by a release fork pivoting on a ball stud mounted in the transmission housing. The release bearing then depresses the pressure plate spring fingers, thereby releasing pressure on the clutch disc and allowing the engine crankshaft to spin independently of the transmission input shaft.

CLUTCH (Continued)

WARNING

WARNING:: EXERCISE CARE WHEN SERVICING CLUTCH COMPONENTS. FACTORY INSTALLED CLUTCH DISCS DO NOT CONTAIN ASBESTOS FIBERS. DUST AND DIRT ON CLUTCH PARTS MAY CONTAIN ASBESTOS FIBERS FROM AFTERMARKET COMPONENTS. BREATHING EXCESSIVE CONCENTRATIONS OF THESE FIBERS CAN CAUSE SERIOUS BODILY HARM. WEAR A RESPIRATOR DURING SERVICE AND NEVER CLEAN CLUTCH COMPONENTS WITH COMPRESSED AIR OR WITH A DRY BRUSH. EITHER CLEAN THE COMPONENTS WITH A WATER DAMPENED RAGS OR USE A VACUUM CLEANER SPECIFICALLY DESIGNED FOR REMOVING ASBESTOS FIBERS AND DUST. DO NOT CREATE DUST BY SANDING A CLUTCH DISC. REPLACE THE DISC IF THE FRICTION MATERIAL IS DAMAGED OR CONTAMINATED. DISPOSE OF ALL DUST AND DIRT CONTAINING ASBESTOS FIBERS IN SEALED BAGS OR CONTAINERS. THIS WILL HELP MINIMIZE EXPOSURE TO YOURSELF AND TO OTHERS. FOLLOW ALL RECOMMENDED SAFETY PRACTICES PRESCRIBED BY THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND THE ENVIRONMENTAL SAFETY AGENCY (EPA), FOR THE HANDLING AND DISPOSAL OF PRODUCTS CONTAINING ASBESTOS.

DIAGNOSIS AND TESTING - CLUTCH

Drive the vehicle at normal speeds. Shift the transmission through all gear ranges and observe clutch action. If the clutch chatters, grabs, slips or does not release properly, remove and inspect the clutch components. If the problem is noise or hard shifting, further diagnosis may be needed as the transmission or another driveline component may be at fault.

NOTE: Vehicles equipped with a Dual Mass Flywheel may produce a rattle when the engine is shut off. This noise is considered normal.

CLUTCH CONTAMINATION

Fluid contamination is a frequent cause of clutch malfunctions. Oil, water or clutch fluid on the clutch disc and pressure plate surfaces will cause chatter, slip and grab. Inspect components for oil, hydraulic fluid or water/road splash contamination.

Oil contamination indicates a leak at either the rear main seal or transmission input shaft. Clutch fluid leaks are usually from damaged slave cylinder push rod seals. Heat buildup caused by slippage between the pressure plate, disc and flywheel can bake the oil residue onto the components. The glaze-like residue ranges in color from amber to black.

Road splash contamination is dirt/water entering the clutch housing due to loose bolts, housing cracks. Driving through deep water puddles can force water/road splash into the housing through such openings.

IMPROPER RELEASE OR CLUTCH ENGAGEMENT

Clutch release or engagement problems are caused by wear or damage clutch components. A visual inspection of the release components will usually reveal the problem part.

Release problems can result in hard shifting and noise. Look for leaks at the clutch cylinders and interconnecting line and loose slave cylinder bolts. Also worn/loose release fork, pivot stud, clutch disc, pressure plate or release bearing.

Engagement problems can result in slip, chatter/shudder and noisy operation. The causes may be clutch disc contamination, wear, distortion or flywheel damage. Visually inspect to determine the actual cause of the problem.

CLUTCH MISALIGNMENT

Clutch components must be in proper alignment with the crankshaft and transmission input shaft. Misalignment caused by excessive runout or warpage of any clutch component will cause grab, chatter and improper clutch release.

PRESSURE PLATE AND DISC RUNOUT

Check the clutch disc before installation. Axial (face) runout of a **new** disc should not exceed 0.50 mm (0.020 in.). Measure runout about 6 mm (1/4 in.) from the outer edge of the disc facing. Obtain another disc if runout is excessive.

Check condition of the clutch before installation. A warped cover or diaphragm spring will cause grab and incomplete release or engagement. Be careful when handling the cover and disc. Impact can distort the cover, diaphragm spring, release fingers and the hub of the clutch disc.

Use an alignment tool when positioning the disc on the flywheel. The tool prevents accidental misalignment which could result in cover distortion and disc damage.

A frequent cause of clutch cover distortion (and consequent misalignment) is improper bolt tightening.

FLYWHEEL RUNOUT

Check flywheel runout whenever misalignment is suspected. Flywheel runout should not exceed 0.08 mm (0.003 in.). Measure runout at the outer edge of the flywheel face with a dial indicator. Mount the indicator on a stud installed in place of one of the flywheel bolts.

CLUTCH (Continued)

Common causes of runout are:

- heat warpage
- improper machining
- incorrect bolt tightening
- improper seating on crankshaft flange shoulder
- foreign material on crankshaft flange

Flywheel machining is not recommended. The flywheel clutch surface is machined to a unique contour and machining will negate this feature. Minor flywheel scoring can be cleaned up by hand with 180 grit emery or with surface grinding equipment. Remove only enough material to reduce scoring (approximately 0.001 - 0.003 in.). Heavy stock removal is **not recommended.** Replace the flywheel if scoring is severe and deeper than 0.076 mm (0.003 in.). Excessive stock removal can result in flywheel cracking or warpage after installation; it can also weaken the flywheel and interfere with proper clutch release.

Clean the crankshaft flange before mounting the flywheel. Dirt and grease on the flange surface may cock the flywheel causing excessive runout. Use new bolts when remounting a flywheel and secure the bolts with Mopar Lock And Seal or equivalent. Tighten flywheel bolts to specified torque only. Overtightening can distort the flywheel hub causing runout.

DIAGNOSIS CHART

The diagnosis charts Diagnosis Chart describe common clutch problems, causes and correction. Conditions, causes and corrective action are outlined in the indicated columns.

DIAGNOSIS CHART

CONDITION	POSSIBLE CAUSES	CORRECTION
Disc facing worn out	1. Normal wear.	1. Replace cover and disc.
	2. Driver frequently rides (slips) the clutch. Results in rapid overheating and wear.	2. Replace cover and disc.
	3. Insufficient clutch cover diaphragm spring tension.	3. Replace cover and disc.
Clutch disc facing contaminated with oil, grease, or clutch fluid.	1. Leak at rear main engine seal or transmission input shaft seal.	1. Replace appropriate seal.
	2. Excessive amount of grease applied to the input shaft splines.	2. Remove grease and apply the correct amount of grease.
	3. Road splash, water entering housing.	3. Replace clutch disc. Clean clutch cover and reuse if in good condition.
	4. Slave cylinder leaking.	4. Replace hydraulic clutch linkage.
Clutch is running partially disengaged.	1. Release bearing sticking or binding and does not return to the normal running position.	1. Verify failure. Replace the release bearing and transmission front bearing retainer as necessary.
Flywheel below minimum thickness specification.	1. Improper flywheel machining. Flywheel has excessive taper or excessive material removal.	1. Replace flywheel.
Clutch disc, cover and/or diaphragm spring warped or distorted.	1. Rough handling. Impact bent cover, spring, or disc.	1. Replace disc or cover as necessary.
	2. Improper bolt tightening procedure.	2. Tighten clutch cover using proper procedure.

CLUTCH (Continued)

CONDITION	POSSIBLE CAUSES	CORRECTION
Facing on flywheel side of disc torn, gouged, or worn.	1. Flywheel surface scored or nicked.	2. Correct surface condition if possible. Replace flywheel and disc as necessary.
	2. Clutch disc sticking or binding on transmission input shaft.	2. Lubricate splines with high temperature graese.
Clutch disc facing burnt. Flywheel and cover pressure plate surfaces heavily glazed.	1. Frequent operation under high loads or hard acceleration conditions.	1. Correct condition of flywheel and pressure plate surface. Replace clutch cover and disc. Alert driver to problem cause.
	2. Driver frequently rides (slips) clutch. Results in rapid wear and overheating of disc and cover.	2. Correct condition of flywheel and pressure plate surface. Replace clutch cover and disc. Alert driver to problem cause.
Clutch disc binds on input shaft splines.	1. Clutch disc hub splines damaged during installation.	1. Clean, smooth, and lubricate hub splines if possible. Replace disc if necessary.
	2. Input shaft splines rough, damaged, or corroded.	2. Clean, smooth, and lubricate shaft splines if possible. Replace input shaft if necessary.
Clutch disc rusted to flywheel and/or pressure plate.	1. Clutch not used for and extended period of time (e.g. long term vehicle storage).	1. Sand rusted surfaces with 180 grit sanding paper. Replace clutch cover and flywheel if necessary.
Pilot bearing seized, loose, or rollers are worn.	1. Bearing cocked during installation.	1. Install and lubricate a new bearing.
	2. Bearing defective.	2. Install and lubricate a new bearing.
	3. Bearing not lubricated.	3. Install and lubricate a new bearing.
	4. Clutch misalignment.	4. Inspect clutch and correct as necessary. Install and lubricate a new bearing.
Clutch will not disengage properly.	1. Low clutch fluid level.	1. Replace hydraulic linkage assembly.
	2. Clutch cover loose.	2. Follow proper bolt tightening procedure.
	3. Clutch disc bent or distorted.	3. Replace clutch disc.
	4. Clutch cover diaphragm spring bent or warped.	4. Replace clutch cover.
	5. Clutch disc installed backwards.	5. Remove and install clutch disc correctly.
	6. Release fork bent or fork pivot loose or damaged.	6. Replace fork or pivot as necessary.
	7. Clutch master or slave cylinder failure.	7. Replace hydraulic linkage assembly.

CLUTCH (Continued)

CONDITION	POSSIBLE CAUSES	CORRECTION
Clutch pedal squeak.	1. Pivot pin loose.	1. Tighten pivot pin if possible. Replace clutch pedal if necessary.
	2. Master cylinder bushing not lubricated.	2. Lubricate master cylinder bushing.
	3. Pedal bushings worn out or cracked.	3. Replace and lubricate bushings.
Clutch master or slave cylinder plunger dragging andør binding	1. Master or slave cylinder components worn or corroded.	1. Replace clutch hydraulic linkage assembly.
Release bearing is noisy.	1. Release bearing defective or damaged.	1. Replace release bearing.
Contact surface of release bearing damaged.	1. Clutch cover incorrect or release fingers bent or distorted.	1. Replace clutch cover and release bearing.
	2. Release bearing defective or damaged.	2. Replace the release bearing.
	3. Release bearing misaligned.	3. Check and correct runout of clutch components. Check front bearing sleeve for damage/ alignment. Repair as necessary.
Partial engagement of clutch disc. One side of disc is worn and the other side is glazed and lightly worn.	1. Clutch pressure plate position incorrect.	1. Replace clutch disc and cover.
	2. Clutch cover, spring, or release fingers bent or distorted.	2. Replace clutch disc and cover.
	3. Clutch disc damaged or distorted.	2. Replace clutch disc.
	4. Clutch misalignment.	4. Check alignment and runout of flywheel, disc, pressure plate, andør clutch housing. Correct as necessary.

SPECIFICATIONS - CLUTCH

TORQUE SPECIFICATIONS

DESCRIPTION	N·m	Ft. Lbs.	In. Lbs.
Pressure Plate Bolts - 2.4L	31	23	-
Pressure Plate Bolts - 3.7L	50	37	-
Clutch Cylinder Bolts	23	-	200
Flywheel Bolts - 2.4L	81	60	-
Flywheel Bolts - 3.7L	81	60	-

CLUTCH DISC

REMOVAL

(1) Remove transmission.
(2) Mark position of pressure plate on flywheel with paint or a scriber for assembly reference, if clutch is not being replaced.
(3) Loosen pressure plate bolts evenly and in rotation to relieve spring tension and avoid warping the plate.
(4) Remove pressure plate bolts and pressure plate and disc.

INSTALLATION

(1) Lightly scuff sand flywheel face with 180 grit emery cloth, then clean with a wax and grease remover.
(2) Lubricate pilot bearing with Mopar high temperature bearing grease or equivalent.
(3) Check runout and operation of **new** clutch disc.

NOTE: Disc must slide freely on transmission input shaft splines.

(4) With the disc on the input shaft, check face runout with dial indicator. Check runout at disc hub 6 mm (1/4 in.) from outer edge of facing. Obtain another clutch disc if runout exceed 0.5 mm (0.020 in.).
(5) Position clutch disc on flywheel with side marked flywheel against the flywheel.

NOTE: If not marked, the flat side of disc hub goes towards the flywheel on the 3.7L engine and towards the transmission on 2.4L engine.

(6) Insert clutch alignment tool through the clutch disc and into the pilot bearing (Fig. 1).
(7) Position clutch pressure plate over disc and on the flywheel (Fig. 1).
(8) Install pressure plate bolts finger tight.

CAUTION: Use only the factory bolts to mount the pressure plate. The bolts must be the correct size. If bolts are too short, there isn't enough thread engagement, if too long bolts interfere with the Dual Mass Flywheel.

(9) Tighten pressure plate bolts evenly and in rotation a few threads at a time.

CAUTION: The bolts must be tightened evenly and to specified torque to avoid distorting the pressure plate.

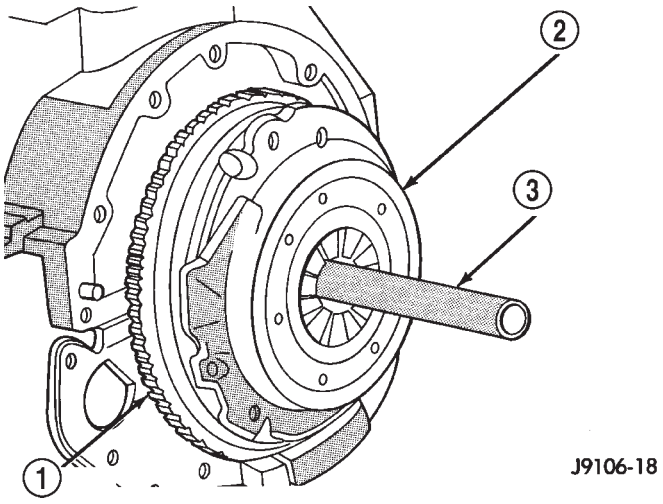

Fig. 1 ALIGNING CLUTCH DISC

1 - FLYWHEEL
2 - PRESSURE PLATE
3 - CLUTCH DISC ALIGNMENT TOOL

(10) Tighten pressure plate bolts to 31 N·m (23 ft. lbs.) on 2.4L engines and 50 N·m (37ft. lbs.) on 3.7L engines.
(11) Apply light coat of Mopar high temperature bearing grease or equivalent to clutch disc hub and splines of transmission input shaft.

CAUTION: Do not over lubricate shaft splines. This will result in grease contamination of disc.

(12) Install transmission.

CLUTCH RELEASE BEARING

REMOVAL

(1) Remove transmission.
(2) Disconnect release bearing from release lever and remove the bearing (Fig. 2).
(3) Inspect bearing slide surface of transmission front bearing retainer. Replace retainer if slide surface is scored, worn, or cracked.
(4) Inspect release fork and fork pivot. Be sure pivot is secure and in good condition. Be sure fork is not distorted or worn. Replace release fork retainer spring if bent or damaged.

INSTALLATION

(1) Lubricate crankshaft pilot bearing with Mopar high temperature bearing grease or equivalent. Apply grease to end of long shank, small diameter flat blade screwdriver. Then insert tool through clutch disc hub to reach bearing.

CLUTCH RELEASE BEARING (Continued)

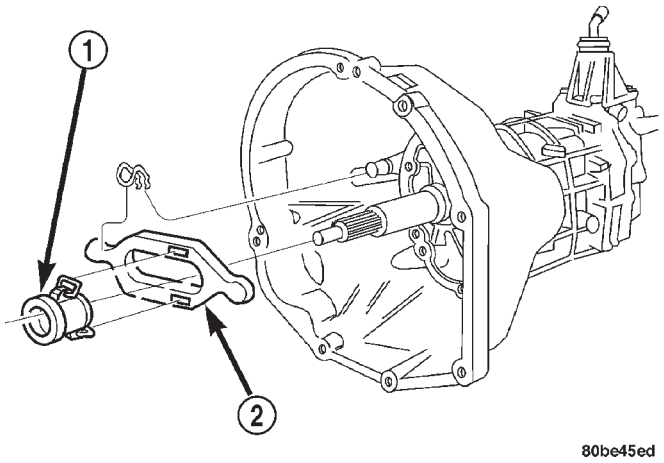

Fig. 2 CLUTCH RELEASE BEARING

1 - RELEASE BEARING
2 - RELEASE FORK

(2) Lubricate input shaft splines, bearing retainer slide surface, fork pivot and release fork pivot surface.

(3) Install new release bearing. Be sure bearing is properly secured to release fork.

(4) Install transmission.

FLYWHEEL

DESCRIPTION

STANDARD FLYWHEEL

The standard flywheel is used on the 3.7L engine. The flywheel (Fig. 3) is a heavy plate bolted to the rear of the crankshaft. The flywheel incorporates the ring gear around the outer circumference to mesh with the starter to permit engine cranking. The rear face of the flywheel serves as the driving member to the clutch disc.

DUAL MASS FLYWHEEL

The Dual Mass Flywheel is used on the 2.4 l engine (Fig. 4). The flywheel incorporates the ring gear around the outer circumference to mesh with the starter to permit engine cranking. The primary flywheel side is bolted to the crankshaft. The secondary flywheel face serves as the driving member to the clutch disc. Internal springs between the flywheels are use to dampen energy.

OPERATION

The flywheel serves to dampen the engine firing pulses. The heavy weight of the flywheel relative to the rotating mass of the engine components serves to stabilize the flow of power to the remainder of the drivetrain. The crankshaft has the tendency to attempt to speed up and slow down in response to the cylinder firing pulses. The flywheel dampens these impulses by absorbing energy when the crankshaft speeds and releasing the energy back into the system when the crankshaft slows down.

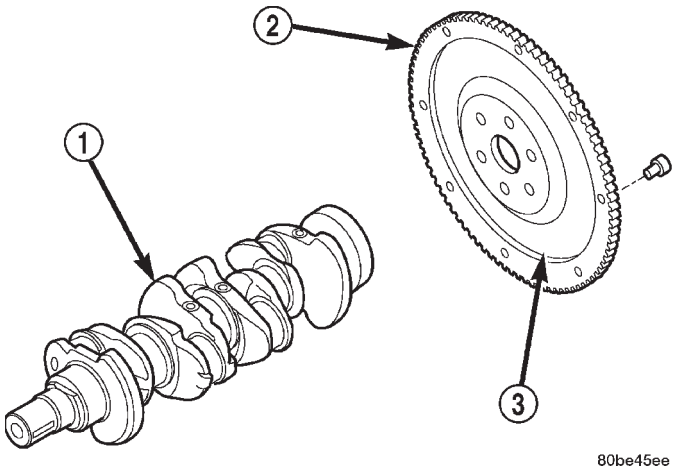

Fig. 3 FLYWHEEL

1 - CRANKSHAFT
2 - RING GEAR
3 - FLYWHEEL

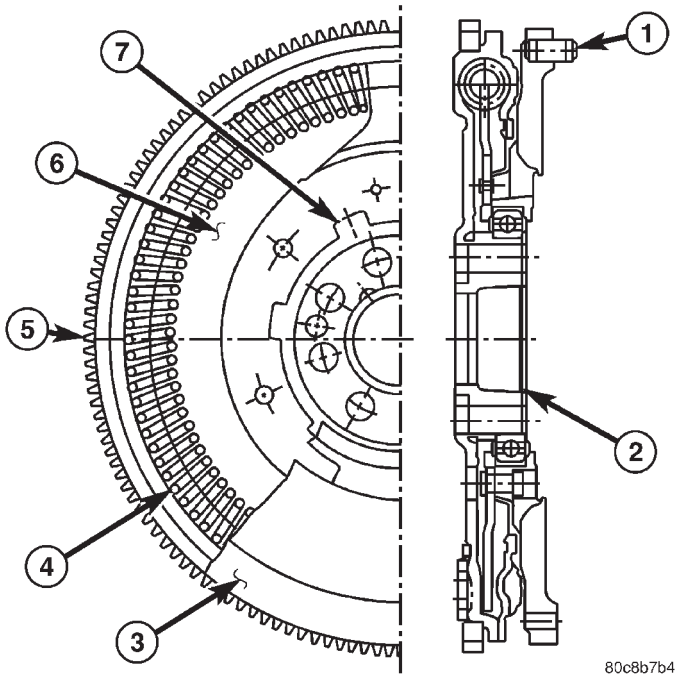

Fig. 4 DUAL MASS FLYWHEEL

1 - LOCATING STUD
2 - BEARING
3 - SECONDARY FLYWHEEL
4 - DAMPER SPRING
5 - RING GEAR
6 - PRIMARY FLYWHEEL
7 - FRICTION DISC

FLYWHEEL (Continued)

On a Dual Mass Flywheel the additional secondary mass coupled to the transmission lowers the natural frequency of the transmission rotating elements. This decreases the transmission gear rattle. The damper springs between the two flywheel masses replace the clutch disc damper springs and assist in a smooth transfer of torque to the transmission.

CAUTION: The Dual Mass Flywheel is serviced as an assembly only and should never be taken apart.

DIAGNOSIS AND TESTING - FLYWHEEL

Check flywheel runout whenever misalignment is suspected. Flywheel runout should not exceed 0.08 mm (0.003 in.). Measure runout at the outer edge of the flywheel face with a dial indicator. Mount the indicator on a stud installed in place of one of the flywheel bolts.

Common causes of runout are:

- heat warpage
- improper machining
- incorrect bolt tightening
- improper seating on crankshaft flange shoulder
- foreign material on crankshaft flange

Flywheel machining is not recommended. The flywheel clutch surface is machined to a unique contour and machining will negate this feature. Minor flywheel scoring can be cleaned up by hand with 180 grit emery or with surface grinding equipment. Remove only enough material to reduce scoring (approximately 0.001 - 0.003 in.). Heavy stock removal is **not recommended.** Replace the flywheel if scoring is severe and deeper than 0.076 mm (0.003 in.). Excessive stock removal can result in flywheel cracking or warpage after installation; it can also weaken the flywheel and interfere with proper clutch release.

Clean the crankshaft flange before mounting the flywheel. Dirt and grease on the flange surface may cock the flywheel causing excessive runout. Use new bolts when remounting a flywheel and secure the bolts with Mopar Lock And Seal or equivalent. Tighten flywheel bolts to specified torque only. Overtightening can distort the flywheel hub causing runout.

PILOT BEARING

REMOVAL

(1) Remove the transmission.
(2) Remove pressure plate and clutch disc.
(3) Remove pilot bearing with an internal (blind hole) puller.

INSTALLATION

(1) Lubricate new bearing with Mopar high temperature bearing grease or equivalent.
(2) Start new bearing into crankshaft by hand. Then seat bearing with clutch alignment tool (Fig. 5).

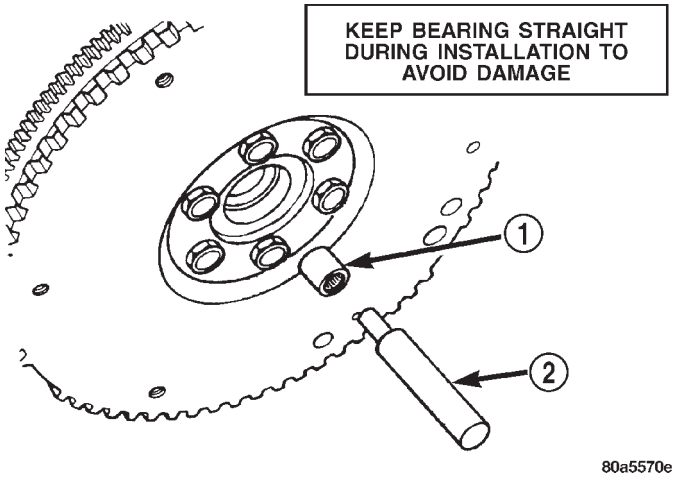

Fig. 5 Pilot Bearing Installer

1 - PILOT BEARING
2 - ALIGNMENT TOOL

(3) Lightly scuff sand flywheel surface with 180 grit emery cloth. Then clean surface with wax and grease remover.
(4) Install clutch disc and pressure plate.
(5) Install the transmission.

LINKAGE

REMOVAL

NOTE: The clutch master cylinder, slave cylinder and connecting line are serviced as an assembly only. The linkage components cannot be overhauled or serviced separately. The cylinders and connecting line are sealed units.

(1) Raise vehicle.
(2) Remove fasteners attaching slave cylinder to clutch housing.
(3) Remove slave cylinder from clutch housing (Fig. 6).
(4) Disengage clutch fluid line from body clips, if applicable.
(5) Lower vehicle.
(6) Verify cap on clutch master cylinder reservoir is tight to avoid spilling fluid during removal.
(7) Remove clutch master cylinder attaching nuts (Fig. 7).
(8) Disengage captured bushing on clutch master cylinder actuator from pivot pin on pedal arm.

LINKAGE (Continued)

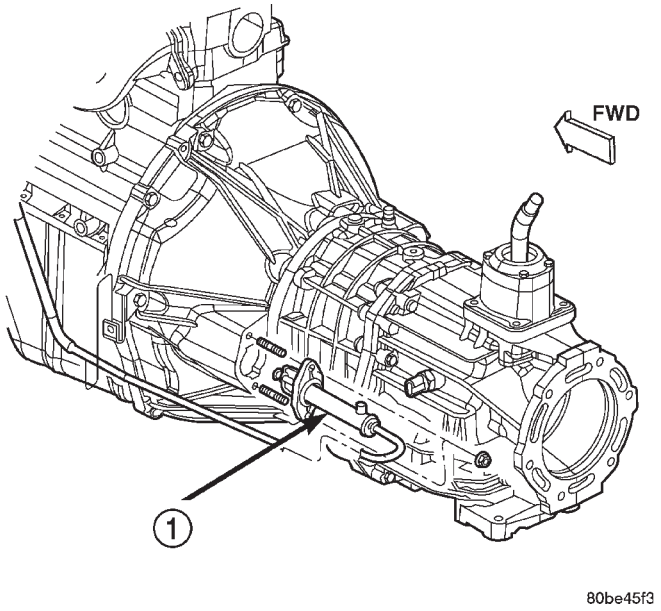

Fig. 6 SLAVE CYLINDER

1 - CLUTCH SLAVE CYLINDER

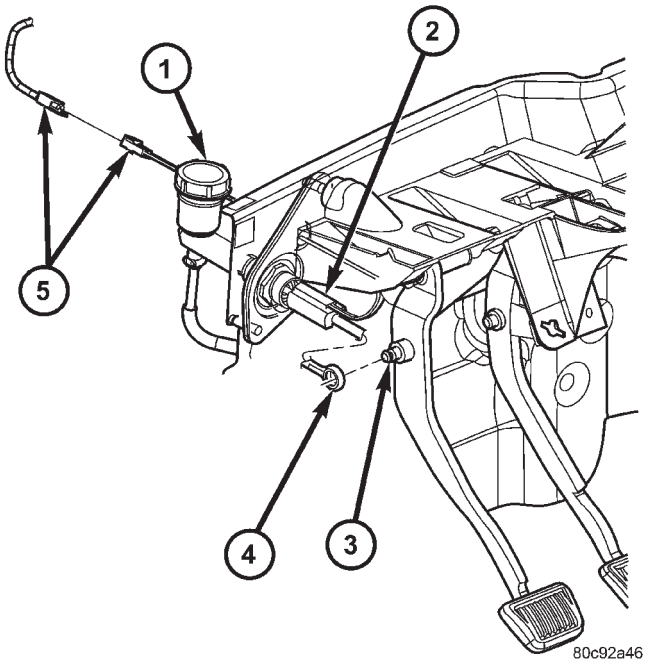

Fig. 7 CLUTCH PEDAL

1 - CYLINDER
2 - ACTUATOR SHAFT
3 - ACTUATOR EYE
4 - PEDAL PIN
5 - CONNECTOR

(9) Slide actuator off pivot pin.

(10) Disconnect clutch interlock safety switch wires.

(11) Remove clutch hydraulic linkage through engine compartment.

INSTALLATION

NOTE: The clutch master cylinder, slave cylinder and connecting line are serviced as an assembly only. The linkage components cannot be overhauled or serviced separately. The cylinders and connecting line are sealed units.

(1) Be sure reservoir cover on clutch master cylinder is tight to avoid spills.

(2) Position clutch linkage components in vehicle. Work connecting line and slave cylinder downward past engine and adjacent to clutch housing.

(3) Position clutch master cylinder on dash panel.

(4) Attach clutch master cylinder actuator to pivot pin on clutch pedal.

(5) Install and tighten clutch master cylinder attaching nuts to 38 N·m (28 ft. lbs.).

(6) Raise vehicle.

(7) Insert slave cylinder push rod through clutch housing opening and into release lever. Be sure cap on end of rod is securely engaged in lever. Check this before installing cylinder attaching nuts.

(8) Install and tighten slave cylinder attaching nuts to 23 N·m (17 ft. lbs.).

(9) Secure clutch fluid line in body and transmission clips.

(10) Lower vehicle.

(11) Connect clutch interlock safety switch wires.

MASTER CYLINDER

INSPECTION

The clutch fluid reservoir, master cylinder, slave cylinder and fluid lines are pre-filled with fluid at the factory during assembly operations.

The hydraulic system should not require additional fluid under normal circumstances. **The reservoir fluid level will actually increase as normal clutch wear occurs. Avoid overfilling or removing fluid from the reservoir.**

Clutch fluid level is checked at the master cylinder reservoir. An indicator ring is provided on the outside of the reservoir. With the cap and diaphragm removed, fluid level should not be above indicator ring.

To avoid contaminating the hydraulic fluid during inspection, wipe reservoir and cover clean before removing the cap.

CLUTCH PEDAL

REMOVAL

(1) Remove steering column lower cover and knee blocker for access.

(2) Disconnect clutch pedal position switch wires.

(3) Disengage captured bushing lock tabs attaching clutch master cylinder actuator to pedal pivot.

(4) Remove nuts attaching pedal and bracket to dash panel and upper cowl support (Fig. 8).

(5) Separate pedal assemble from vehicle.

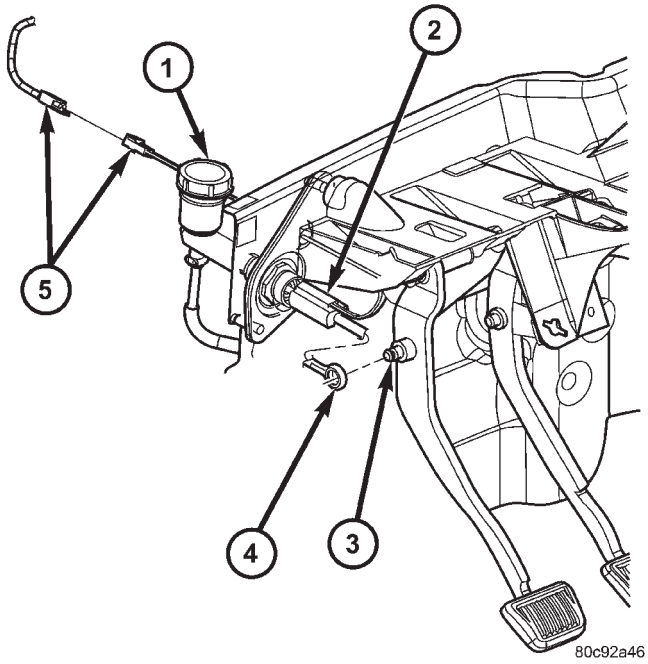

Fig. 8 CLUTCH PEDAL

1 - CYLINDER
2 - ACTUATOR SHAFT
3 - ACTUATOR EYE
4 - PEDAL PIN
5 - CONNECTOR

INSTALLATION

(1) Place clutch pedal and bracket over studs on dash panel and cowl support.

(2) Install nuts to attach pedal and bracket to dash panel and upper cowl support. Tighten nuts to 39 N·m (29 ft. lbs.) torque

(3) Engage captured bushing and actuator on brake pedal pivot.

(4) Connect clutch pedal position switch wires.

CLUTCH SWITCH OVERRIDE RELAY

DESCRIPTION

The clutch pedal position switch override relay is located in the Power Distribution Center (PDC). Refer to PDC cover label for location within PDC.

OPERATION

Refer to Clutch Pedal Position Switch Operation for information.

REMOVAL

The Clutch Switch Override Relay is located in the Power Distribution Center (PDC) (Fig. 9). Refer to label on PDC cover for relay location.

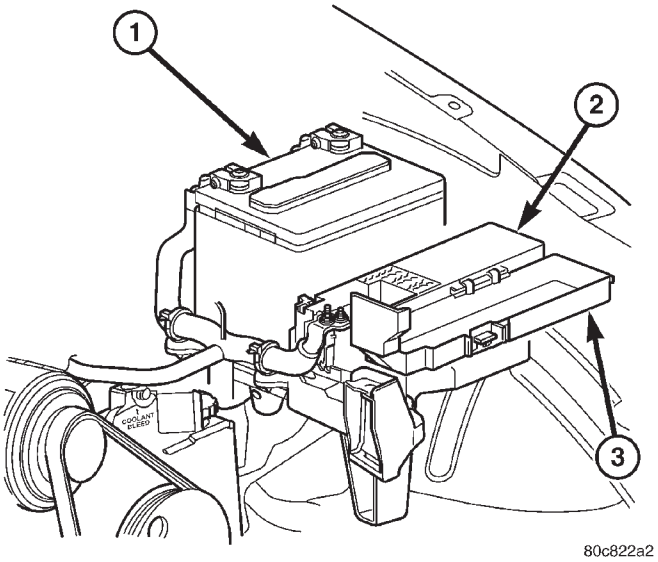

Fig. 9 POWER DISTRIBUTION CENTER (PDC)

1 - BATTERY
2 - PDC
3 - PDC COVER

(1) Remove PDC cover.

(2) Remove relay from PDC.

(3) Check condition of relay terminals and PDC connector terminals for damage or corrosion. Repair if necessary before installing relay.

(4) Check for pin height (pin height should be the same for all terminals within the PDC connector). Repair if necessary before installing relay.

INSTALLATION

The Clutch Switch Override Relay is located in the Power Distribution Center (PDC). Refer to label on PDC cover for relay location.

(1) Install relay to PDC.

(2) Install cover to PDC.

CLUTCH PEDAL POSITION SWITCH

DESCRIPTION

The clutch pedal position switch is located under the instrument panel. It is attached to the clutch master cylinder push rod (Fig. 10). The wiring harness connection for the switch is made in the engine compartment (Fig. 10).

The clutch pedal position switch override relay is located in the Power Distribution Center (PDC). Refer to PDC cover label for location within PDC.

OPERATION

The clutch pedal position switch is used to prevent starter motor engagement unless the clutch pedal is depressed.

4WD Feature: The clutch pedal position switch override relay will inhibit operation of the position switch when the vehicle transfer case is in the four–wheel–drive (4WD) low-range position (only). This feature will allow operation of the starter motor, without the need for depressing the clutch pedal, for certain off-road applications. If any Diagnostic Trouble Codes (DTC's) for either the override relay or transfer case switch are stored, the override relay feature will be inhibited.

An input from this switch is also used to either shut down and/or prevent operation of the speed control system when the clutch pedal is depressed.

DIAGNOSIS AND TESTING - CLUTCH PEDAL POSITION SWITCH

(1) Locate switch 2–wire electrical connector in engine compartment (Fig. 10). Disconnect wiring at this point.

(2) Check for switch continuity with an ohmmeter while operating clutch pedal up and down. Continuity should be broken and reapplied each time pedal is pressed.

(3) If continuity is not present, or is always present at any pedal position, replace switch. Switch is not serviced separately. Replace clutch master cylinder.

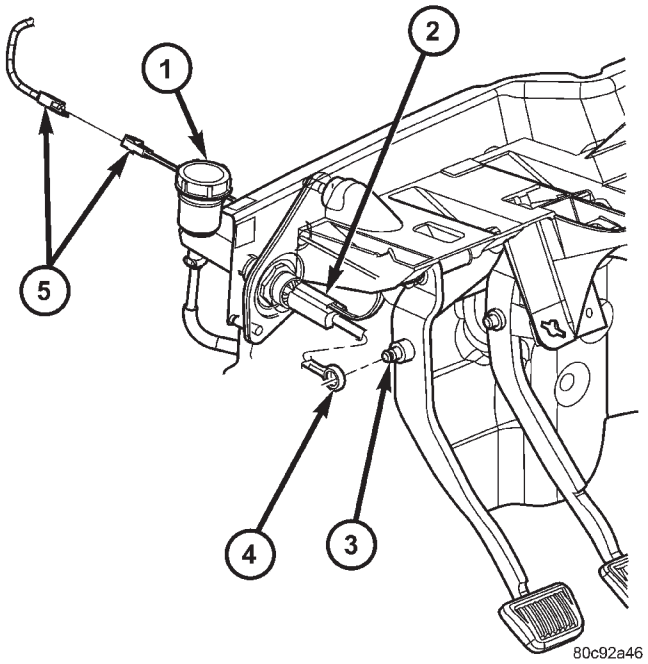

Fig. 10 CLUTCH PEDAL POSITION SWITCH

1 - CLUTCH MASTER CYLINDER
2 - CLUTCH PEDAL POSITION SWITCH
3 - CLUTCH PEDAL PIN
4 - MASTER CYLINDER PUSHROD
5 - ELECTRICAL CONNECTION (IN ENGINE COMPARTMENT)