

2007 CLUTCH

Clutch - Nitro

WARNING

CLUTCH

WARNING: DaimlerChrysler does not manufacture any vehicles that utilize asbestos containing products. Manual clutches on older model vehicles and aftermarket manual clutch facings may contain asbestos. Refer to aftermarket product packaging for product information. Regardless if the product contains asbestos or not, dust and dirt can accumulate on manual clutch parts during normal use. 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. Failure to follow these instructions may result in personal injury

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

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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.

Common causes of runout are:

- Heat warpage
- Improper machining
- Incorrect bolt tightening
- Improper seating on crankshaft flange shoulder
- Foreign material on crankshaft flange

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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 Chart** describes 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 | <ol style="list-style-type: none">1. Normal wear.2. Driver frequently rides (slips) the clutch. Results in rapid overheating and wear.3. Insufficient clutch cover diaphragm spring tension. | <ol style="list-style-type: none">1. Replace cover and disc.2. Replace cover and disc.3. Replace cover and disc. |
| Clutch disc facing contaminated with oil, grease, or clutch fluid. | <ol style="list-style-type: none">1. Leak at rear main engine seal or transmission input shaft seal.2. Excessive amount of grease applied to the input shaft splines.3. Road splash, water entering housing.4. Slave cylinder leaking. | <ol style="list-style-type: none">1. Replace appropriate seal.2. Remove grease and apply the correct amount of grease.3. Replace clutch disc. Clean clutch cover and reuse if in good condition.4. Replace hydraulic clutch linkage. |
| Clutch is running partially disengaged. | <ol style="list-style-type: none">1. Release bearing sticking or binding and does not return to the normal running position. | <ol style="list-style-type: none">1. Verify failure. Replace the release bearing and transmission front bearing retainer as necessary. |
| Flywheel below minimum thickness specification. | <ol style="list-style-type: none">1. Improper flywheel machining. Flywheel has excessive taper or excessive material removal. | <ol style="list-style-type: none">1. Replace flywheel. |
| Clutch disc, cover and/or diaphragm spring warped or distorted. | <ol style="list-style-type: none">1. Rough handling. Impact bent cover, spring, or disc.2. Improper bolt tightening procedure. | <ol style="list-style-type: none">1. Replace disc or cover as necessary.2. Tighten clutch cover using proper procedure. |
| Facing on flywheel side of disc torn, gouged, or worn. | <ol style="list-style-type: none">1. Flywheel surface scored or nicked. | <ol style="list-style-type: none">1. Correct surface condition if possible. Replace flywheel and |

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| | | |
|--|---|--|
| | 2. Clutch disc sticking or binding on transmission input shaft. | disc as necessary. 2. Lubricate splines with high temperature grease. |
| Clutch disc facing burnt. Flywheel and cover pressure plate surfaces heavily glazed. | 1. Frequent operation under high loads or hard acceleration conditions. 2. Driver frequently rides (slips) clutch. Results in rapid wear and overheating of disc and cover. | 1. Correct condition of flywheel and pressure plate surface. Replace clutch cover and disc. Alert driver to problem cause. 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. 2. Input shaft splines rough, damaged, or corroded. | 1. Clean, smooth, and lubricate hub splines if possible. Replace disc if necessary. 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 an 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. 2. Bearing defective. 3. Bearing not lubricated. 4. Clutch misalignment. | 1. Install and lubricate a new bearing. 2. Install and lubricate a new bearing. 3. Install and lubricate a new bearing. 4. Inspect clutch and correct as necessary. Install and lubricate a new bearing. |
| Clutch will not disengage properly. | 1. Low clutch fluid level. 2. Clutch cover loose. 3. Clutch disc bent or distorted. 4. Clutch cover diaphragm spring bent or warped. 5. Clutch disc installed backwards. 6. Release fork bent or fork pivot loose or damaged. 7. Clutch master or slave cylinder failure. | 1. Replace hydraulic linkage assembly. 2. Follow proper bolt tightening procedure. 3. Replace clutch disc. 4. Replace clutch cover. 5. Remove and install clutch disc correctly. 6. Replace fork or pivot as necessary. 7. Replace hydraulic linkage assembly. |
| Clutch pedal squeak. | 1. Pivot pin loose. 2. Master cylinder bushing not | 1. Tighten pivot pin if possible. Replace clutch pedal if necessary. 2. Lubricate master cylinder |

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| | | |
|--|---|---|
| | lubricated. 3. Pedal bushings worn out or cracked. | bushing. 3. Replace and lubricate bushings. |
| Clutch master or slave cylinder plunger dragging or 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. 2. Release bearing defective or damaged. 3. Release bearing misaligned. | 1. Replace clutch cover and release bearing. 2. Replace the release bearing. 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. 2. Clutch cover, spring, or release fingers bent or distorted. 3. Clutch disc damaged or distorted. 4. Clutch misalignment. | 1. Replace clutch disc and cover. 2. Replace clutch disc and cover. 3. Replace clutch disc. 4. Check alignment and runout of flywheel, disc, pressure plate, and clutch housing. Correct as necessary. |

STANDARD PROCEDURE

CLUTCH

Use Mopar® brake fluid, or an equivalent quality fluid meeting SAE J1703-F and DOT 3 standards only. Use fresh, clean fluid from a sealed container at all times.

Do not allow the master cylinder to run out of fluid during bleed operations. An empty cylinder will allow additional air to be drawn into the system. Check the cylinder fluid level frequently and add fluid as needed.

BLEED CLUTCH HYDRAULIC CIRCUIT

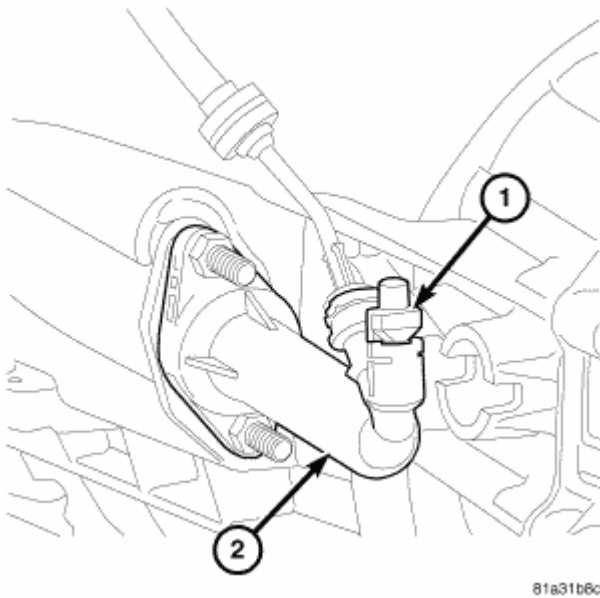


Fig. 1: Identifying Bleeder & Slave Cylinder
Courtesy of CHRYSLER LLC

1. Verify fluid level in brake master cylinder, top off brake fluid as necessary.
2. Open bleeder (1) on slave cylinder (2) and install a length of clear hose to divert fluid into suitable container. Push and hold clutch pedal down then close bleeder. Repeat this step several times.
3. Remove slave cylinder from transmission.
4. Hold slave cylinder with actuator rod pointing down and open bleeder. Push cylinder actuator rod in completely then close bleeder. Repeat this step several times.
5. Remove drain hose and replace dust cap on bleeder and install slave cylinder on transmission.
6. Actuate clutch pedal 25 times, then start engine and verify clutch operation and pedal feel.

If pedal feels spongy or clutch does not fully disengage, air is still trapped in the hydraulic circuit and must be bleed again.

PRESSURE BLEED CLUTCH HYDRAULIC CIRCUIT

Follow manufacturers instructions carefully when using pressure equipment. Do not exceed the tank manufacturers pressure recommendations. Generally, a tank pressure of 15-20 psi is sufficient for bleeding.

Fill bleeder tank with recommended DOT 3 fluid and purge air from the tank lines before bleeding.

Do not pressure bleed without a proper master cylinder adapter. The wrong adapter can lead to leakage, or drawing air back into the system. Use adapter provided with the equipment or Adapter 6921.

NOTE: When pressure bleeding system slave cylinder must be removed and actuator rod pointing downward to remove trapped air.

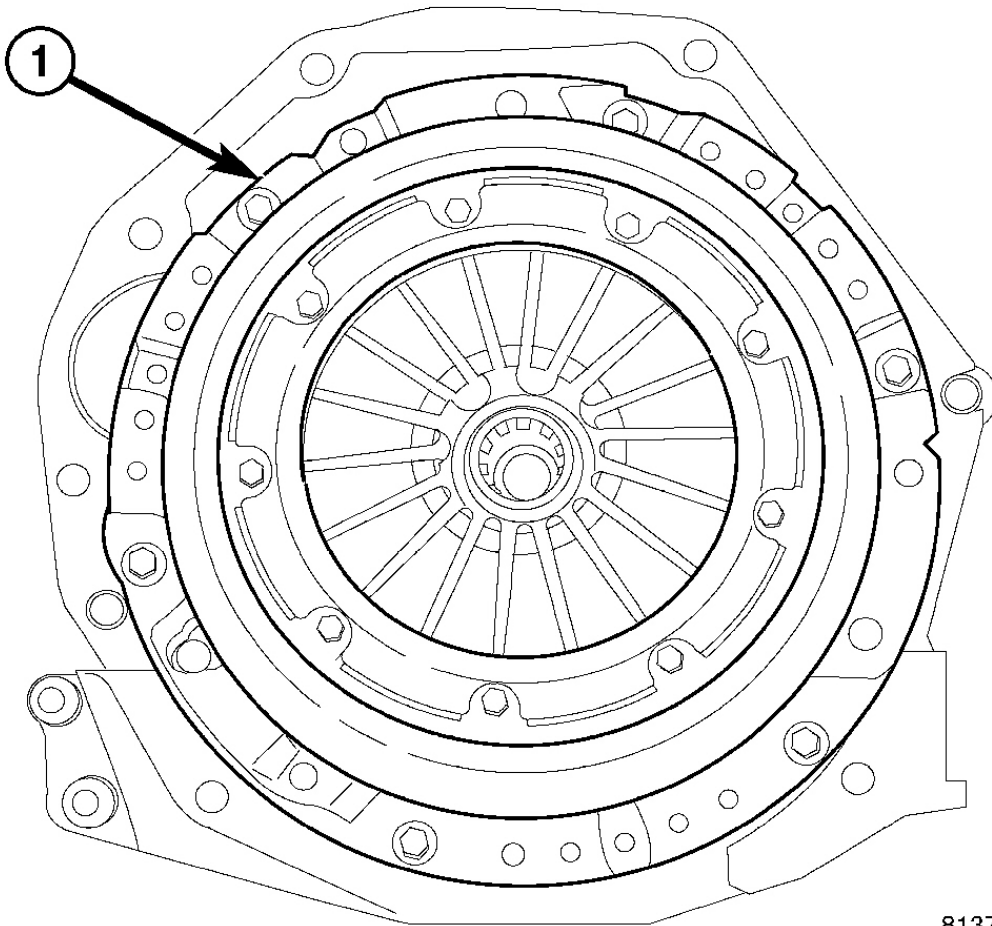
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SPECIFICATIONS**CLUTCH****TORQUE SPECIFICATIONS**

| DESCRIPTION | N.m | Ft. Lbs. | In. Lbs. |
|---------------------------------------|---------------------------|---------------------------|-----------------|
| Pressure Plate Bolts - 4.0L | 33 | 24 | - |
| Pressure Plate Bolts - 3.7L | 33 | 24 | - |
| Pressure Plate Bolts - 2.8L Diesel | 33 | 24 | - |
| Flywheel Bolts - 4.0L | 95 | 70 | - |
| Flywheel Bolts - 3.7L | 95 | 70 | - |
| Flywheel Bolts - 2.8L Diesel | 25 then rotate wrench 60° | 18 then rotate wrench 60° | - |
| Slave Cylinder Nuts | 23 | 17 | - |
| Pedal Bracket Nuts | 39 | 29 | - |

DISC-CLUTCH**REMOVAL****DISC CLUTCH/PRESSURE PLATE**



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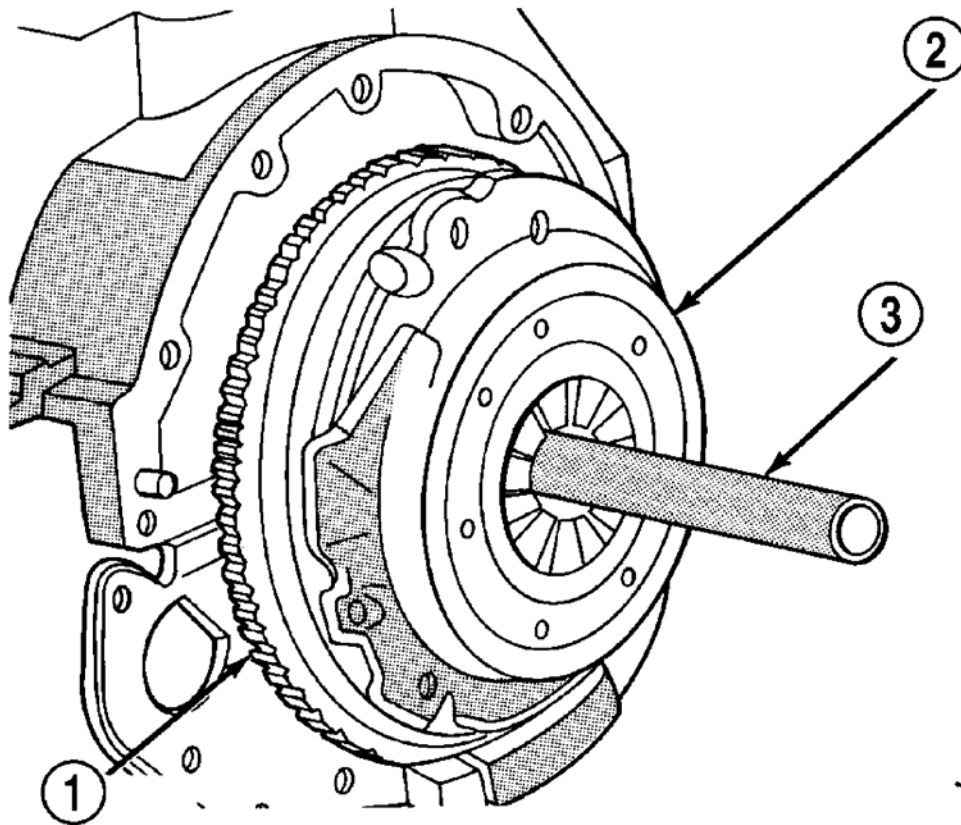
Fig. 2: Pressure Plate

Courtesy of CHRYSLER LLC

1. Remove transmission.
2. Mark position of pressure plate (1) on flywheel with paint or a scribe 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

DISC CLUTCH/PRESSURE PLATE



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Fig. 3: Identifying Flywheel, Clutch Pressure Plate & Clutch Alignment Tool
 Courtesy of CHRYSLER LLC

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.

6. Insert clutch alignment tool (3) through the clutch disc and into the pilot bearing.
7. Position clutch pressure plate (2) over disc and on the flywheel (1).
8. Install pressure plate bolts finger tight.

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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. Failure to follow these instructions will distort the pressure plate.

10. Tighten pressure plate bolts 33 N.m (24 ft. lbs.).
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.

DISC CLUTCH/PRESSURE PLATE - 2.8L DIESEL

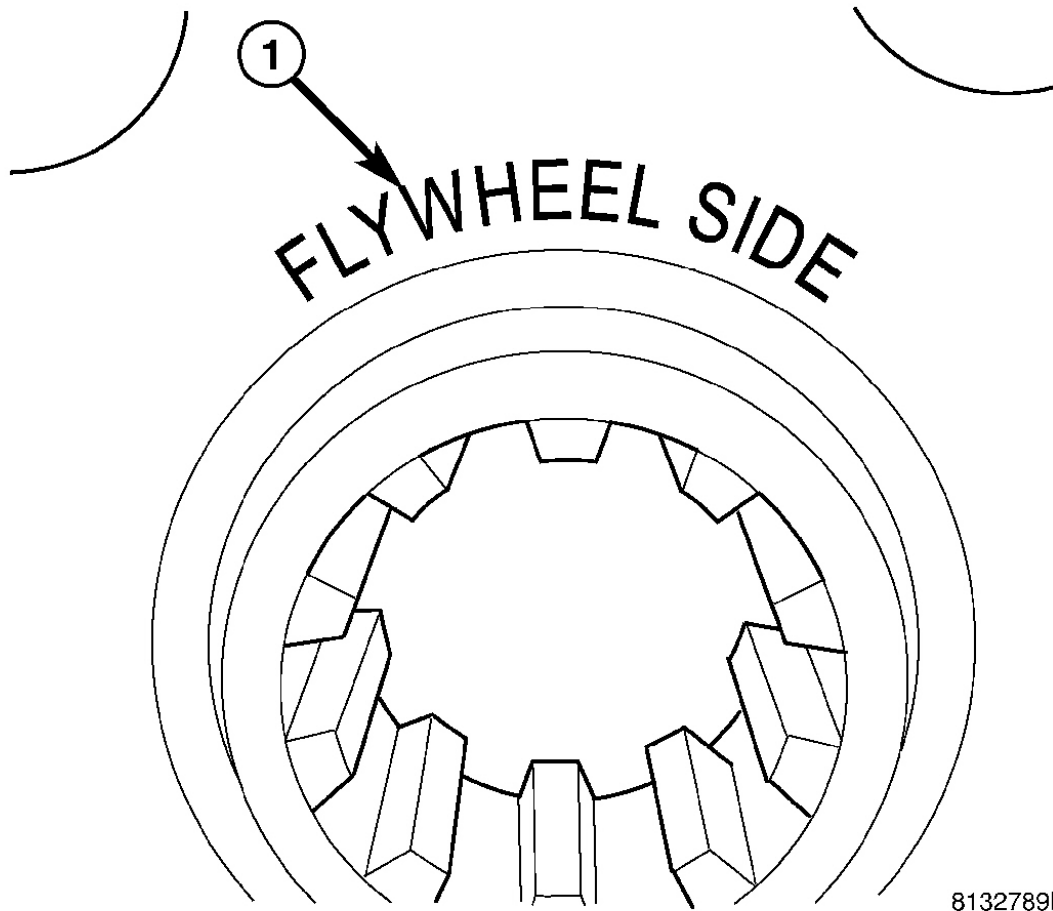
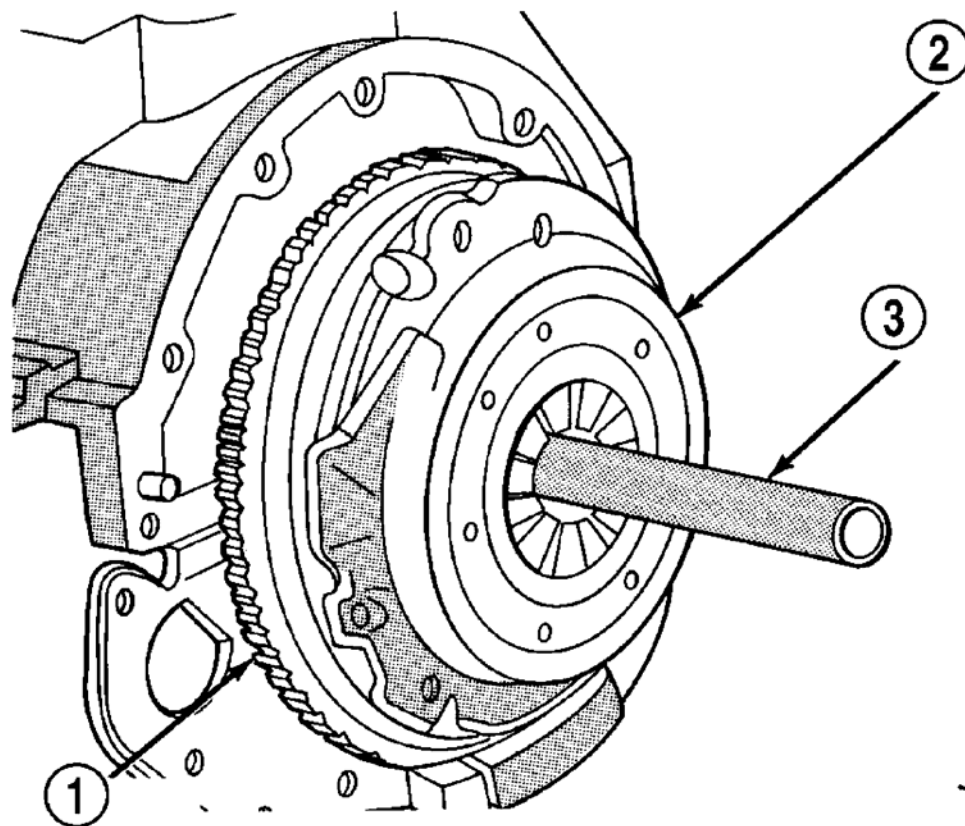


Fig. 4: Identifying Flywheel With Side Marked Flywheel Side
Courtesy of CHRYSLER LLC

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 side (1) against the flywheel. If not marked, the flat side of disc hub goes towards the flywheel.



J9106-18

Fig. 5: Identifying Flywheel, Clutch Pressure Plate & Clutch Alignment Tool
Courtesy of CHRYSLER LLC

6. Insert clutch alignment tool (3) through the clutch disc and into the pilot bearing.
7. Position clutch pressure plate (2) over disc and on the flywheel (1).

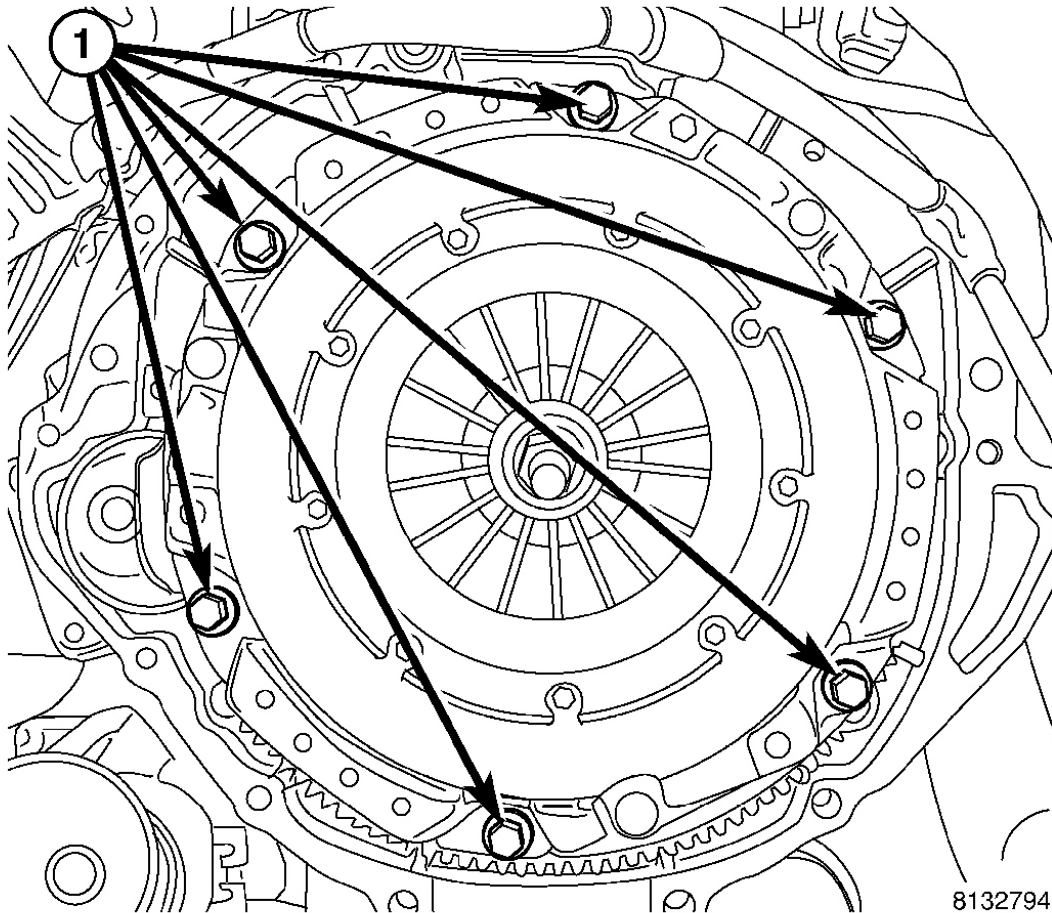


Fig. 6: Pressure Plate Bolts
Courtesy of CHRYSLER LLC

8. Install pressure plate bolts (1) finger tight.
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. Failure to follow these instruction will distort the pressure plate.

10. Tighten pressure plate bolts to 33 N.m (24 ft. lbs.).
11. Apply light coat of Mopar® high temperature bearing grease or equivalent to clutch disc hub and splines of transmission input shaft.

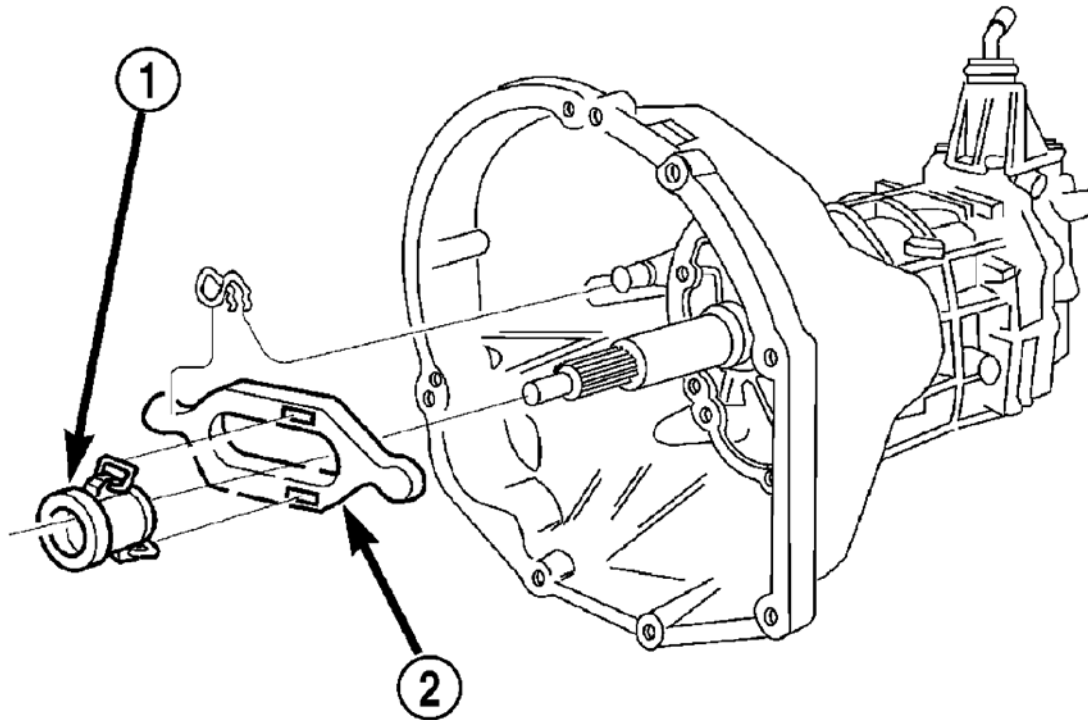
CAUTION: Do not over lubricate shaft splines. Failure to follow these instructions will contaminate the disc.

12. Install transmission.

BEARING-CLUTCH RELEASE

REMOVAL

BEARING-CLUTCH RELEASE



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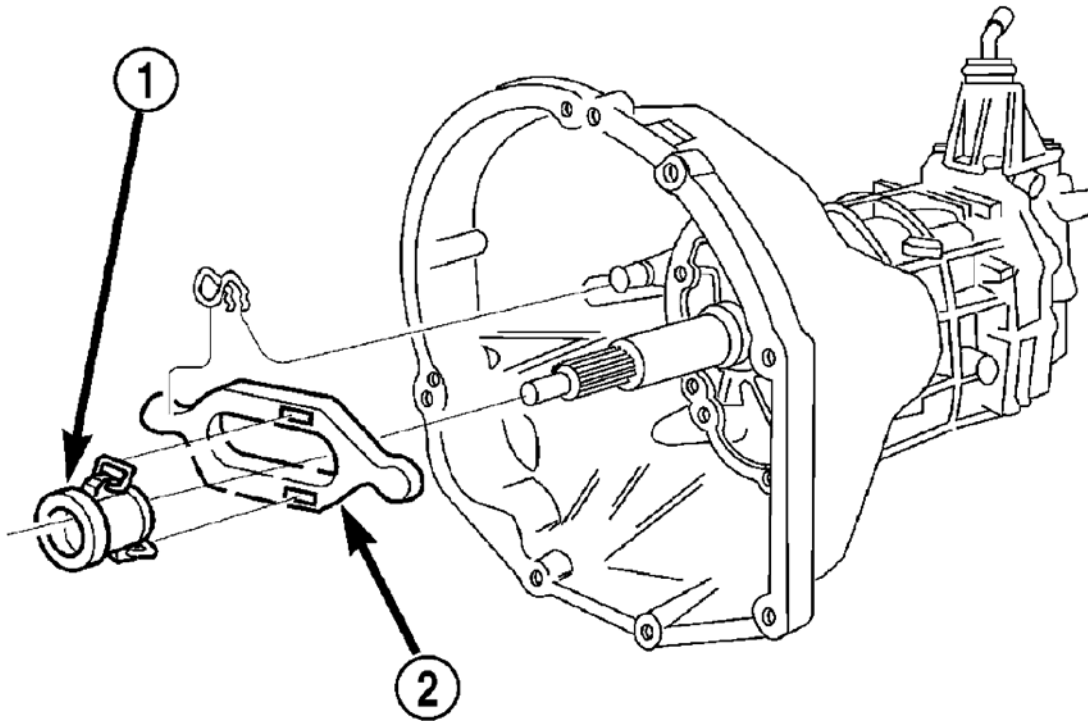
Fig. 7: Identifying Release Bearing & Release Fork

Courtesy of CHRYSLER LLC

1. Remove transmission.
2. Disconnect release bearing (1) from release fork (2) and remove the bearing.
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

BEARING-CLUTCH RELEASE



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Fig. 8: Identifying Release Bearing & Release Fork

Courtesy of CHRYSLER LLC

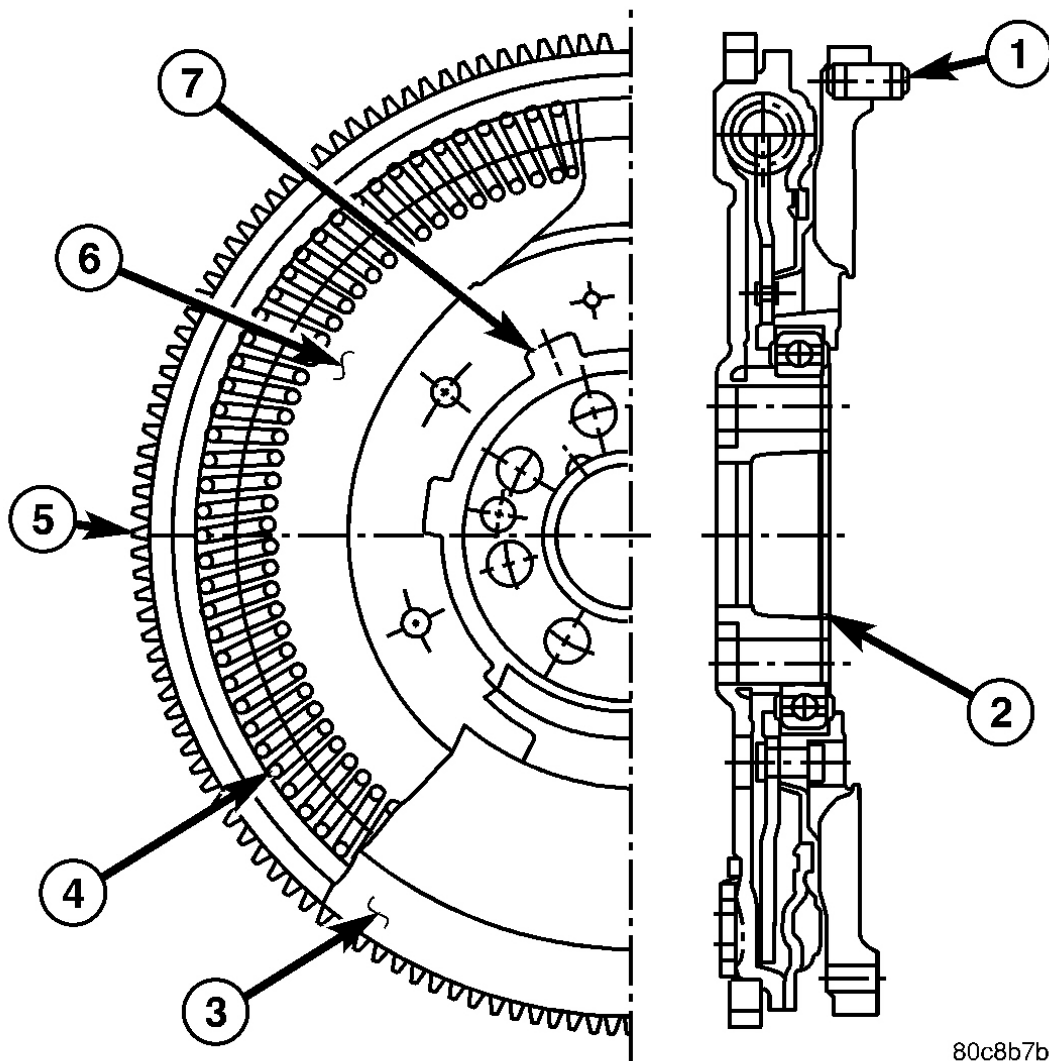
1. Lubricate crankshaft pilot bearing with Mopar® high temperature bearing grease or equivalent. Apply grease to end of long shank, small diameter flat blade screwdriver. Then insert tool through clutch disc hub to reach bearing.
2. Lubricate input shaft splines, bearing retainer slide surface, fork pivot and release fork pivot surface.
3. Install new release bearing (1) and secure to release fork (2).
4. Install transmission.

FLYWHEEL

DESCRIPTION

FLYWHEEL

DUAL MASS FLYWHEEL



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Fig. 9: Dual Mass Flywheel
 Courtesy of CHRYSLER LLC

The Dual Mass Flywheel is used on all engines. The flywheel incorporates the ring gear (5) around the outer circumference to mesh with the starter to permit engine cranking. The primary flywheel (6) side is bolted to the crankshaft. The secondary flywheel (3) side serves as the driving member to the clutch disc. Internal springs (4) between the flywheels are used to dampen energy. The Dual Mass Flywheel is serviced as an assembly only and should never be taken apart.

DIAGNOSIS AND TESTING

FLYWHEEL

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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.

REMOVAL

REMOVAL

1. Remove transmission.
2. Remove clutch pressure plate and disc.
3. Remove flywheel-to-crankshaft bolts and remove flywheel assembly.

INSTALLATION

INSTALLATION

1. Clean the surfaces of the flywheel and pressure plate.
2. Install flywheel with **new** bolts and tighten in a criss-cross pattern. Tighten bolts to 95 N.m (70 ft. lbs.). On 2.8L diesel engine tighten bolts to 25 N.m (180 ft. lbs.) then rotate wrench 60°.
3. Install clutch disc and pressure plate.
4. Install transmission.

BEARING-PILOT

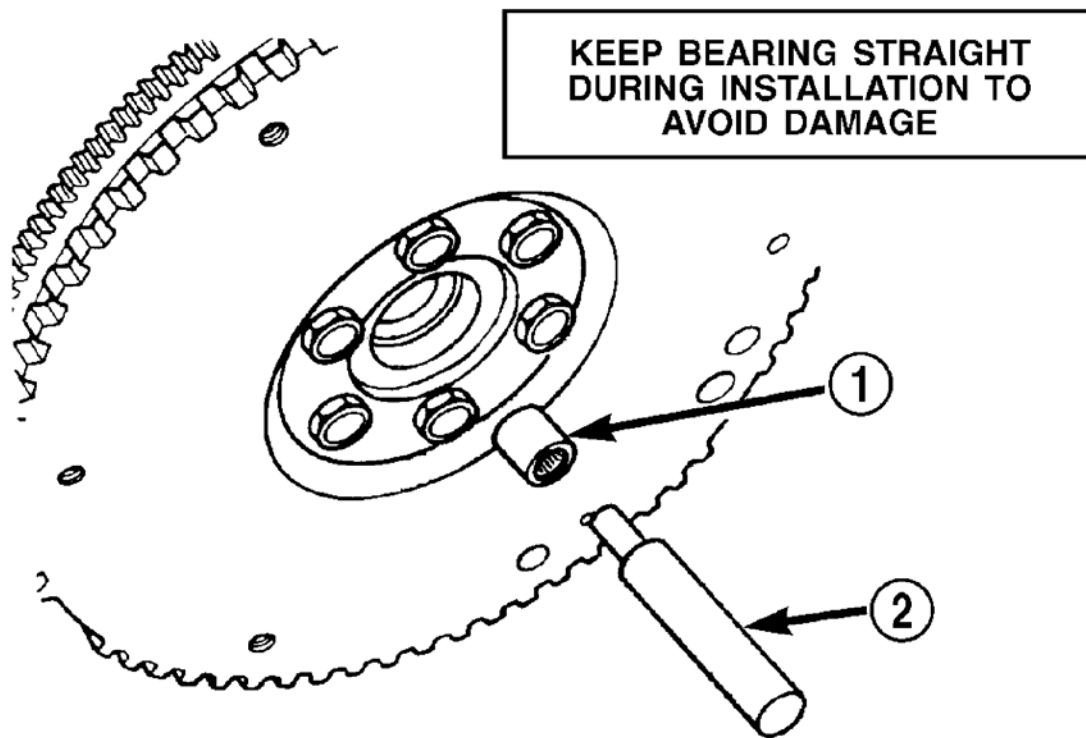
REMOVAL

BEARING-PILOT

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

INSTALLATION

BEARING-PILOT



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Fig. 10: Identifying New Pilot Bearing & Clutch Alignment Tool

Courtesy of CHRYSLER LLC

1. Lubricate new bearing with Mopar® high temperature bearing grease or equivalent.
2. Start new pilot bearing (1) into crankshaft by hand. Then seat bearing with clutch alignment tool (2).
3. Install clutch disc and pressure plate.
4. Install transmission.

CYLINDER-MASTER

REMOVAL

REMOVAL

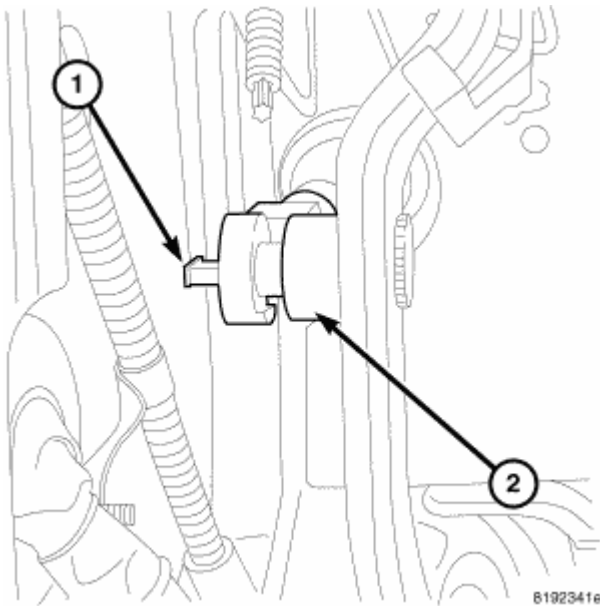


Fig. 11: Identifying Actuator Rod & Clutch Pedal Pin
Courtesy of CHRYSLER LLC

1. Pry actuator rod (1) off clutch pedal pin (2).

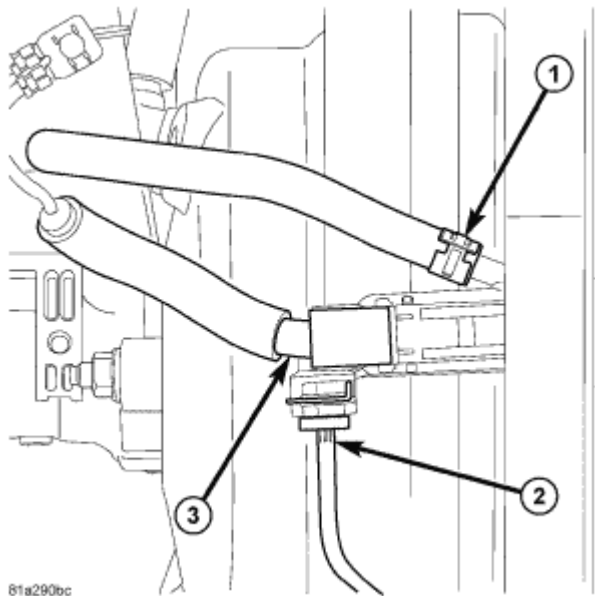


Fig. 12: Identifying Hose, Wiring Harness & Hydraulic Line
Courtesy of CHRYSLER LLC

2. Remove hose (1) from clutch master cylinder and plug hose to prevent fluid loss.
3. Disconnect wiring harness (3) from pedal position switch.
4. Pull the hydraulic line (2) clip and remove line from bottom of clutch master cylinder.

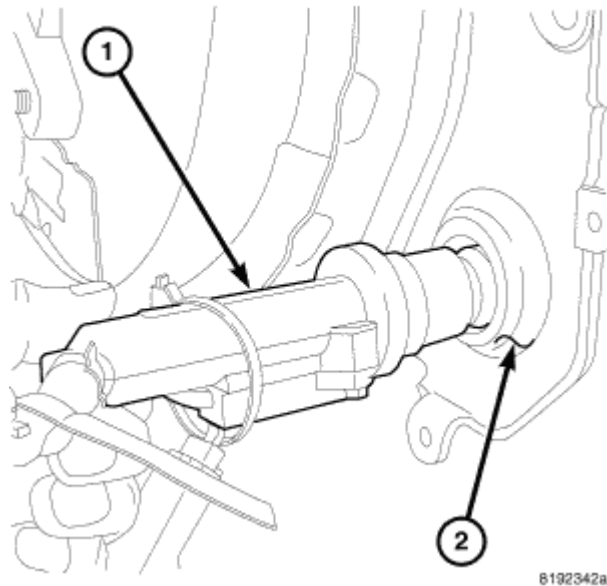


Fig. 13: Identifying Clutch Master Cylinder Assembly & Brake Booster Mounting Plate
Courtesy of CHRYSLER LLC

5. Turn clutch master cylinder assembly (1) clockwise a quarter turn and remove from brake booster mounting plate (2).

INSTALLATION

INSTALLATION

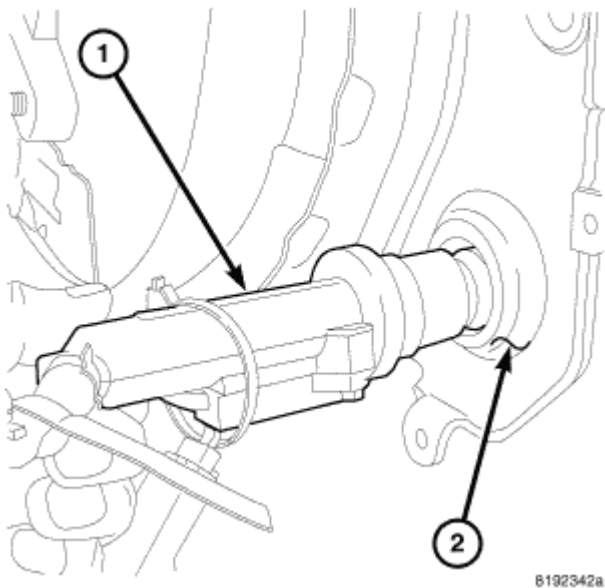


Fig. 14: Identifying Clutch Master Cylinder Assembly & Brake Booster Mounting Plate
Courtesy of CHRYSLER LLC

1. Install clutch master cylinder (1) through brake booster mounting plate (2) and turn counter clockwise a quarter turn.

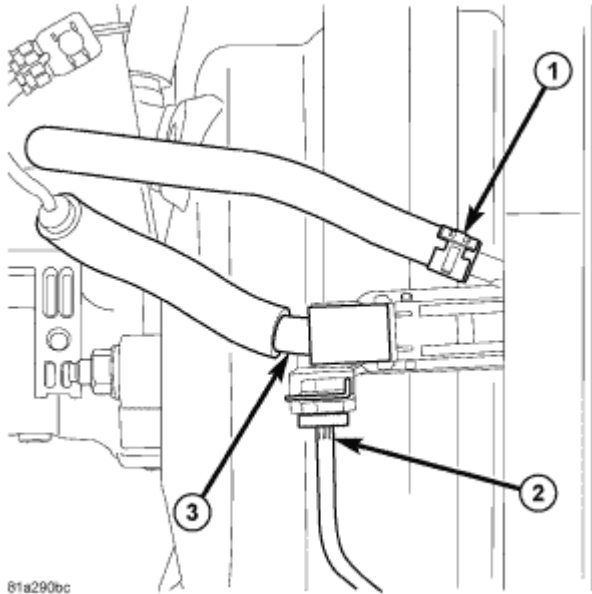


Fig. 15: Identifying Hose, Wiring Harness & Hydraulic Line
Courtesy of CHRYSLER LLC

2. Install actuator hose (1) to clutch master cylinder.
3. Install hydraulic line (2) to the bottom of clutch master cylinder.

NOTE: Verify O-ring is on hydraulic line.

4. Connect wiring harness (3) to pedal position switch.

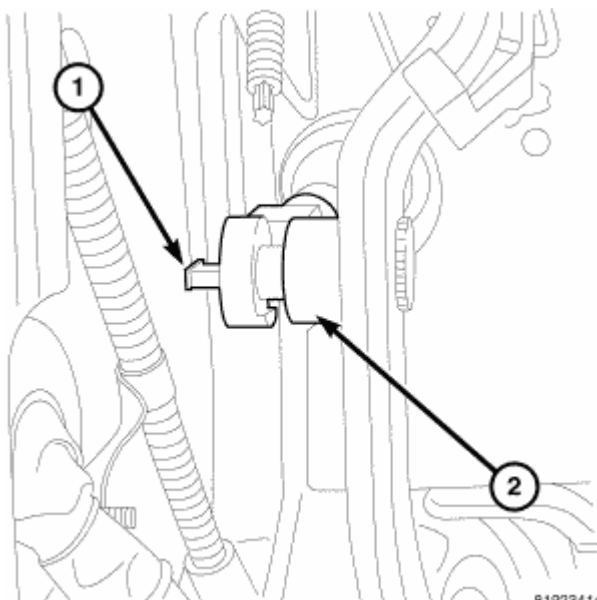


Fig. 16: Identifying Actuator Rod & Clutch Pedal Pin
Courtesy of CHRYSLER LLC

5. Install actuator rod (1) on clutch pedal pin (2).
6. Bleed clutch hydraulic circuit.

CYLINDER-SLAVE

REMOVAL

REMOVAL

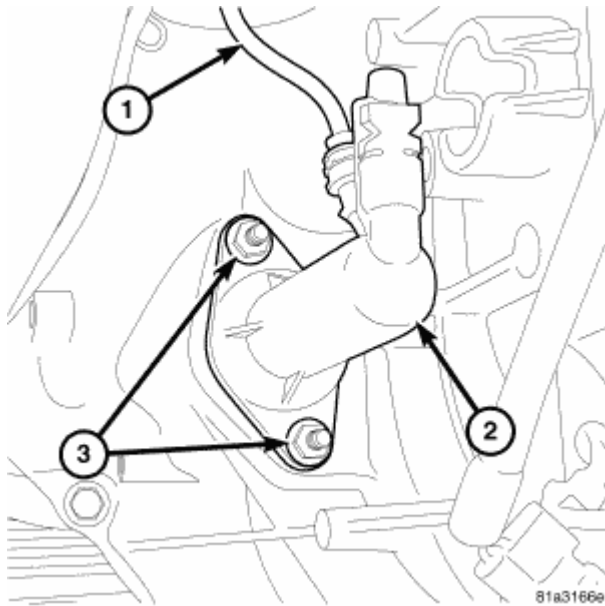


Fig. 17: Identifying Hydraulic Line, Slave Cylinder & Mounting Nuts
Courtesy of CHRYSLER LLC

1. With transmission in neutral, position vehicle on hoist.
2. Pull clip from hydraulic line (1) at the slave cylinder (2) and remove the line.
3. Remove mounting nuts (3) from slave cylinder (2).
4. Remove the slave cylinder.

INSTALLATION

INSTALLATION

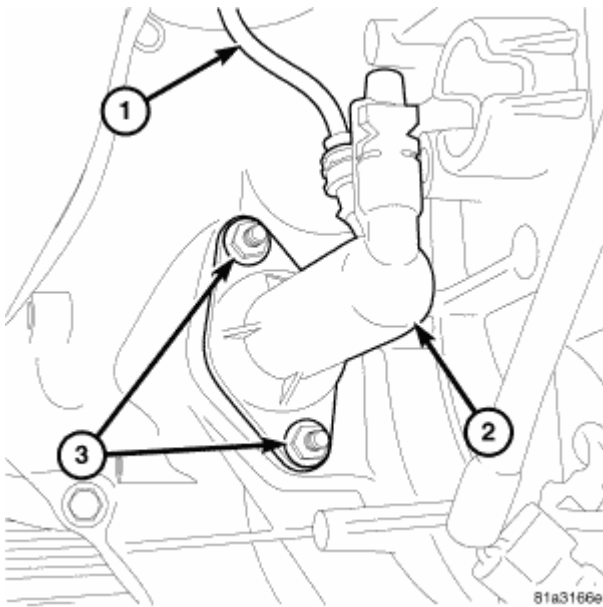


Fig. 18: Identifying Hydraulic Line, Slave Cylinder & Mounting Nuts
Courtesy of CHRYSLER LLC

1. Install slave cylinder (2) in transmission.
2. Install slave cylinder nuts (3) and tighten to 23 N.m (17 ft. lbs.).
3. Install hydraulic line (1) to slave cylinder (2).

NOTE: Verify O-ring is on hydraulic line.

4. Bleed hydraulic system.

PEDAL-CLUTCH

REMOVAL

PEDAL-CLUTCH

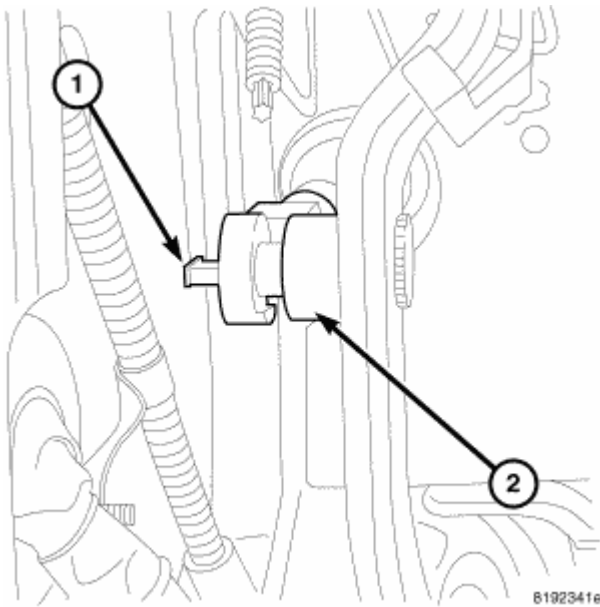


Fig. 19: Identifying Actuator Rod & Clutch Pedal Pin
Courtesy of CHRYSLER LLC

1. Remove steering column lower cover and knee blocker for access.
2. Disengage bushing (1) attaching clutch master cylinder actuator to pedal pivot (2).
3. Remove nuts attaching pedal and bracket to dash panel and upper cowl support.
4. Separate pedal assembly from vehicle.

INSTALLATION

PEDAL-CLUTCH

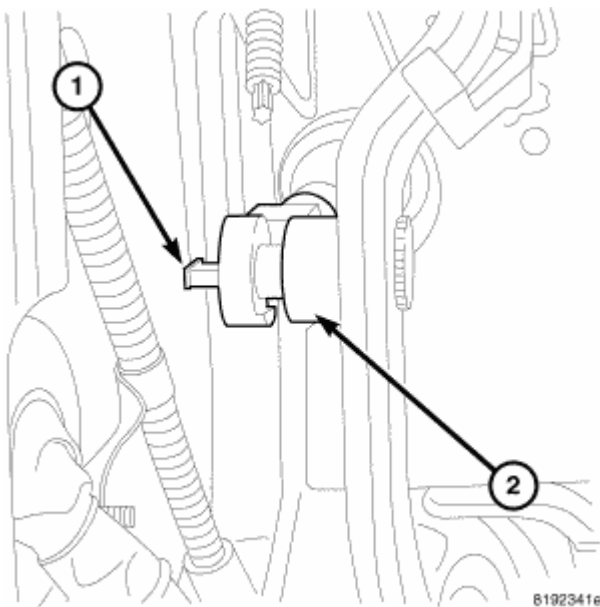


Fig. 20: Identifying Actuator Rod & Clutch Pedal Pin

Courtesy of CHRYSLER LLC

1. Place clutch pedal and bracket over studs on dash panel and cowl support.
2. Install pedal and bracket to dash panel nuts and tighten to 39 N.m (29 ft. lbs.).
3. Install actuator (1) on brake pedal pivot (2).

SWITCH-CLUTCH PEDAL POSITION

DESCRIPTION

SWITCH-CLUTCH PEDAL POSITION

The clutch pedal position switch is attached to the side of the clutch master cylinder.

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

SWITCH-CLUTCH PEDAL POSITION

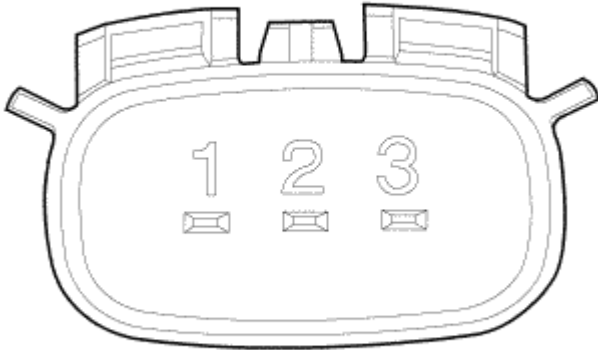
The clutch pedal position switch is used to prevent starter motor engagement unless the clutch pedal is depressed. An input from this switch is also used to either shut down/prevent operation of the speed control system when the clutch pedal is depressed.

Four Wheel Drive Feature: The clutch pedal position switch override relay, inhibits operation of the position switch when the vehicle transfer case is in the four wheel drive low-range position. This enables the starter motor to operate without depressing the clutch pedal, for off-road applications. If Diagnostic Trouble Codes (DTC's) for the override relay or transfer case switch are stored, override relay will be inhibited.

DIAGNOSIS AND TESTING

SWITCH-CLUTCH PEDAL POSITION

START INTERLOCK TEST - DIESEL AND GAS



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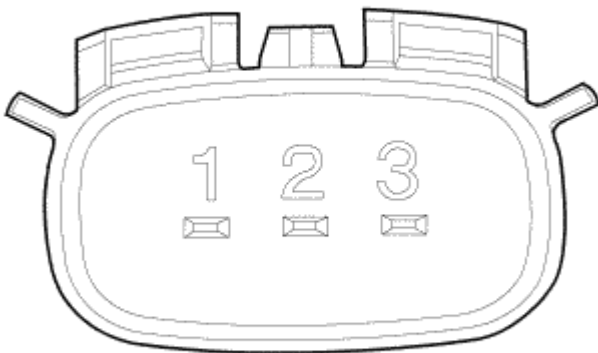
Fig. 21: Clutch Pedal Switch Connector
Courtesy of CHRYSLER LLC

Ohm meter set on continuity: One lead on switch START INTERLOCK post 2 and second lead on COMMON post 3.

Pedal Released - No Continuity

Pedal Depressed End Of Stroke - Continuity

CRUISE TEST - DIESEL ONLY



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Fig. 22: Clutch Pedal Switch Connector
Courtesy of CHRYSLER LLC

Ohm meter set on continuity: One lead on switch CRUISE post 1 and second lead on COMMON post 3.

Pedal Released - Continuity

Pedal Depressed Beginning Of Stroke - No Continuity

REMOVAL

REMOVAL

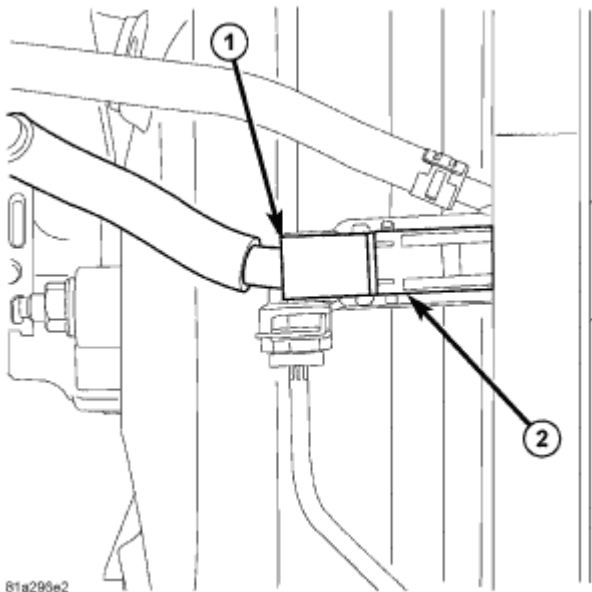


Fig. 23: Identifying Wiring Harness & Pedal Position Switch
Courtesy of CHRYSLER LLC

1. Disconnect wiring harness (1) from pedal position switch (2).

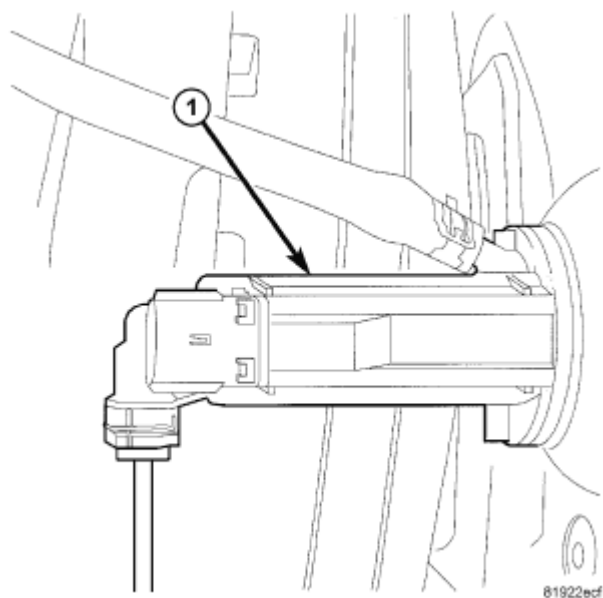


Fig. 24: Identifying Pedal Position Switch
Courtesy of CHRYSLER LLC

2. Pry pedal position switch (1) off clutch master cylinder.

INSTALLATION

INSTALLATION

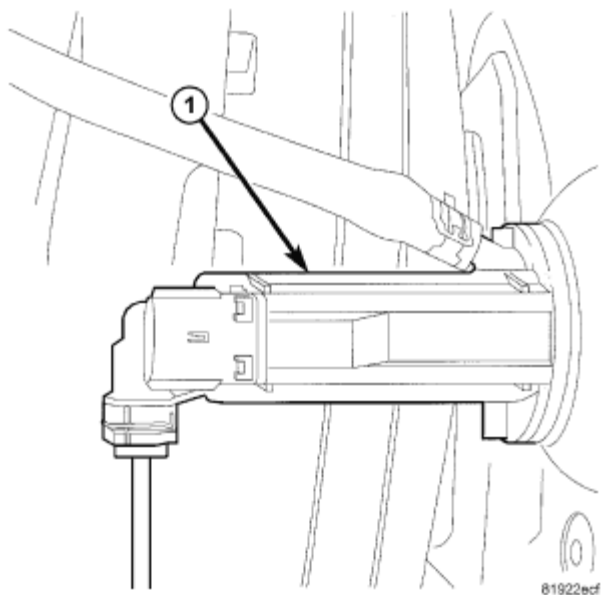
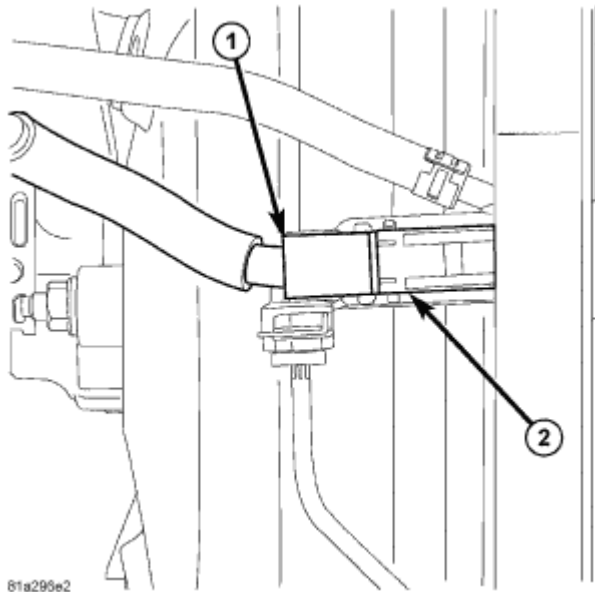


Fig. 25: Identifying Pedal Position Switch
Courtesy of CHRYSLER LLC

1. Snap pedal position switch (1) on clutch master cylinder.



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Fig. 26: Identifying Wiring Harness & Pedal Position Switch
Courtesy of CHRYSLER LLC

2. Connect harness (1) to clutch pedal position switch (2).