## **Hydraulic Clutch System Bleeding**

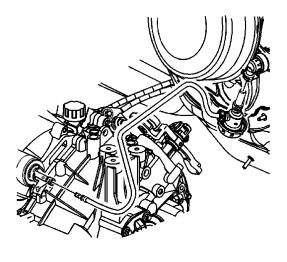
### **Special Tools**

- <u>J-35555</u> Metal Mityvac
- <u>J 43485</u> Power Steering Bleeder Adapter
- 1. Verify that all the lines and fittings are dry and secure.
- 2. Clean the dirt and grease from the reservoir cap in order to ensure that no foreign substances enter the system.
- 3. Remove the reservoir cap.
- 4. Fill the reservoir to the proper level with the required fluid.

  Some manual transmission equipped vehicles have a combined brake and clutch fluid reservoir.
- 5. Attach the <u>J 43485</u> to the <u>J-35555</u>, or equivalent.
  - **Important:** Brake fluid will deteriorate the rubber on the <u>J 43485</u>. Use a clean shop cloth to wipe away the fluid after each use.
- 6. Place and hold the adapter on the reservoir filler neck to ensure a tight fit. In some cases, the adapter will fit into the reservoir opening.
- 7. Apply a vacuum of 51–68 kPa (15–20 hg) and remove the adapter.
- 8. Refill the reservoir to the proper level.
- 9. Repeat steps 6 and 7.
- 10. If needed, refill the reservoir and continue to pull a vacuum until no more bubbles can be seen in the reservoir or until the fluid level no longer drops.
  - **Caution:** The vehicle will move if started in gear before the Actuator Cylinder is refilled and operational. Start the vehicle the first time in neutral to help prevent personal injury from vehicle movement and see if the transmission will shift easily into gear.
- 11. Pump the clutch pedal until firm (to refill actuator cylinder).
- 12. Add additional fluid if needed.
- 13. Test drive the vehicle to ensure proper operation.

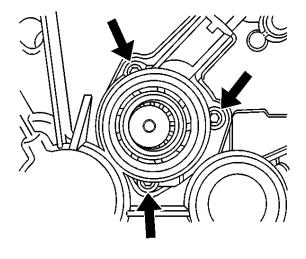
# **Clutch Actuator Cylinder Replacement**

### **Removal Procedure**





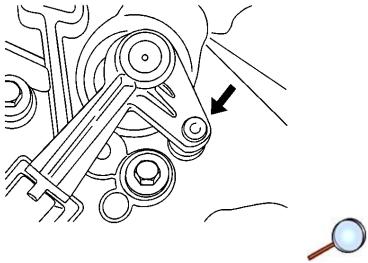
- 1. Disconnect the clutch actuator cylinder line.
- 2. Remove the transmission. Refer to <u>Transmission Replacement</u>.





3. Remove the clutch actuator cylinder bolts from the transmission.

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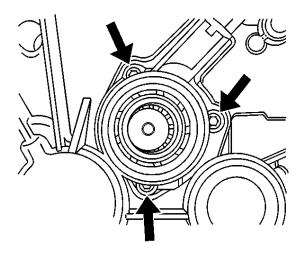


- 4. Remove the following components from the transmission:
  - The upper bolt
  - The clutch actuator cylinder

## **Installation Procedure**

**Important:** Excessive amounts of lubricant on the input shaft splines can contaminate the clutch disc and cause clutch shudder.

- 1. Lubricate the inside diameter of the bearing.
- 2. Install the clutch actuator cylinder to the transmission.

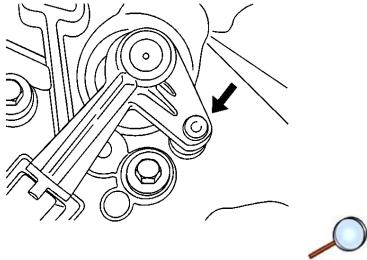


**Notice:** Refer to <u>Fastener Notice</u>.

3. Install the clutch actuator cylinder bolts **Tighten** 

Tighten the bolts to 10N·m (89lbin).

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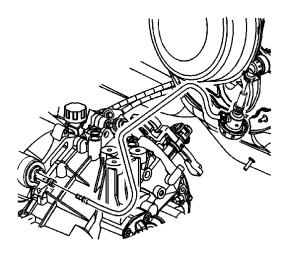


4. Install the upper line release bolt.

## **Tighten**

Tighten the bolt to 10N·m (89lbin).

5. Install the transmission. Refer to <u>Transmission Replacement</u>.





- 6. Connect the clutch actuator cylinder line.
- 7. Bleed the hydraulic system. Refer to <u>Hydraulic Clutch System Bleeding</u>.

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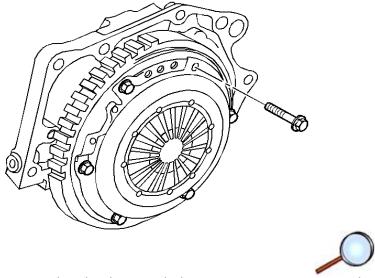
## **Clutch Pressure and Driven Plate Replacement (MU3)**

### **Special Tools**

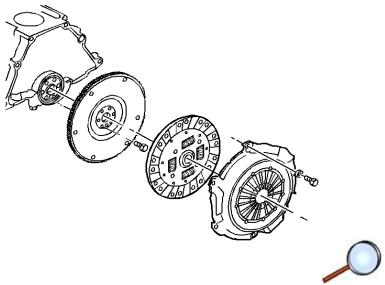
J 43482 Clutch Alignment Arbor

#### **Removal Procedure**

1. Remove the transmission. Refer to <u>Transmission Replacement</u>.



2. Remove the clutch cover bolts one turn at a time, until spring pressure is relieved.

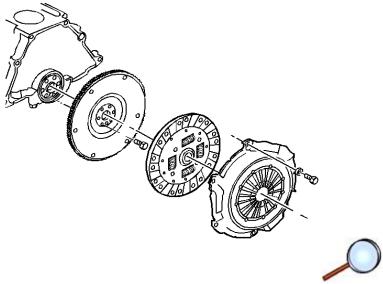


3. Remove the clutch cover and the clutch disc.

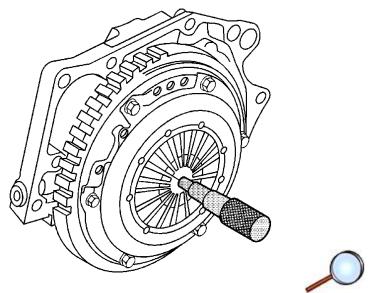
#### **Installation Procedure**

1. Adjust the clutch pressure plate, if necessary. Refer to <u>Clutch Pressure Plate</u> <u>Adjustment</u>.

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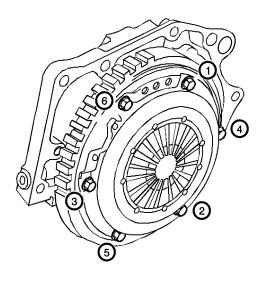


- 2. Install the clutch disc and the clutch cover.
- 3. Hand start the clutch cover to flywheel bolts, leaving the clutch cover loose enough to reposition for alignment.



4. Install the <u>J 43482</u> in order to support the clutch cover to the flywheel assembly.

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### Notice: Refer to Fastener Notice.

5. Tighten the clutch cover to flywheel bolts in the sequence shown.

## **Tighten**

Tighten the bolts to 30N·m (22lbft).

- 6. Recheck each bolt torque using the tightening sequence.
- 7. Remove the **J 43482**.
- 8. Install the transmission. Refer to <u>Transmission Replacement</u>.
- 9. Bleed the hydraulic system. Refer to Hydraulic Clutch System Bleeding.
- 10. Connect the negative battery cable.