
Ring Gear

Removal

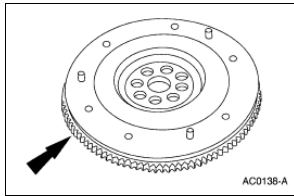
⚠ WARNING: This procedure should be performed only by a properly equipped and experienced acetylene torch operator. To avoid personal injury, use tongs or wear welding gloves and safety goggles when handling the heated flywheel ring gear.

1. Remove the transmission. For additional information, refer to [Section 308-03](#) .
2. Remove the clutch pressure plate and clutch disc. For additional information, refer to [Disc and Pressure Plate](#) in this section.
3. Remove the flywheel (6375). For additional information, refer to [Flywheel](#) in this section.
4. **⚠ CAUTION:** Do not heat the flywheel ring gear (6384) beyond 278°C (500°F). Use heat indicating crayons to prevent over heating.

⚠ CAUTION: Tap the flywheel ring gear evenly to prevent binding.

Remove the flywheel ring gear from the flywheel.

- Evenly heat the flywheel ring gear and use a brass drift to drive the flywheel ring gear off the flywheel.



Installation

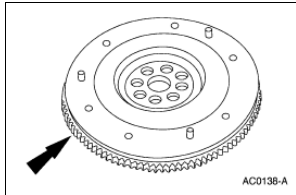
⚠ WARNING: This procedure should be performed only by a properly equipped and experienced acetylene torch operator. To avoid personal injury, use tongs or wear welding gloves and safety goggles when handling the heated flywheel ring gear.

1. **⚠ CAUTION:** Do not heat the flywheel ring gear beyond 278°C (500°F). Use heat indicating crayons to prevent over heating.

⚠ CAUTION: Keep the torch moving to prevent hot spots.

Evenly heat the flywheel ring gear.

2. Install the flywheel ring gear.
 - The bevel on the flywheel ring gear must face the rear of the flywheel.
 - Use a brass drift.



3. Install the flywheel. For additional information, refer to [Flywheel](#) in this section.
 4. Install the clutch pressure plate and clutch disc.
 5. Install the transmission.
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General Specifications

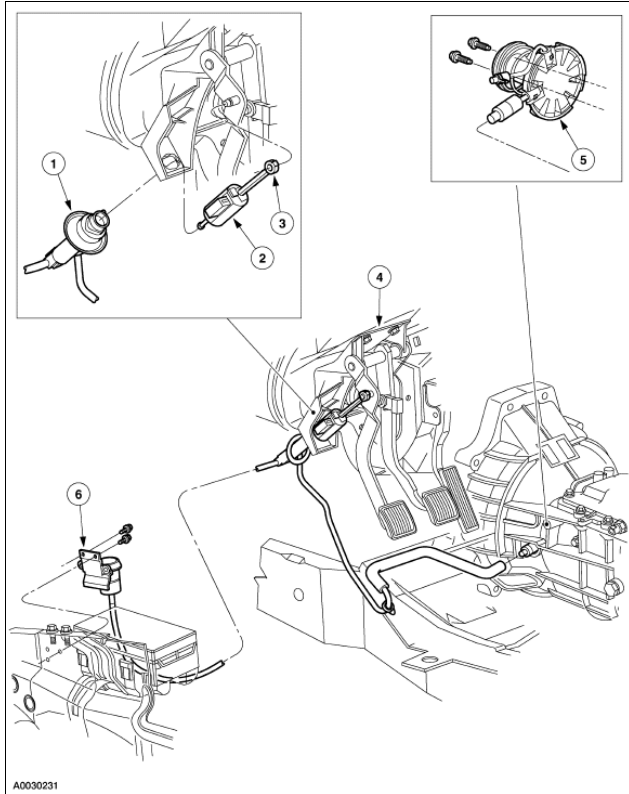
Item	Specification
Clutch System	
Clutch control	Hydraulic
System adjustment	Automatic
Clutch pedal type	Suspended
Fluid and Lubricant	
Ford High Performance DOT 3 Motor Vehicle Brake Fluid C6AZ-19542-AB	ESA-M6C25-A
Premium Long-Life Grease XG-1-C, XG-1-K	ESA-M1C75-B

Torque Specifications

Description	Nm	lb-ft	lb-in
Clutch slave cylinder bolts	20	15	
Clutch master cylinder reservoir bolts	2.2		18

Clutch Controls

Component Location



Item	Part Number	Description
1	7A543	Clutch master cylinder
2	11A152	Clutch pedal position (CPP) switch
3	7A581	Clutch master cylinder push rod bushing
4	2450	Brake and clutch pedal support bracket
5	7A508	Clutch slave cylinder/clutch release hub and bearing
6	7K500	Clutch master cylinder reservoir and tubing

The clutch control system actuates the clutch system. When the clutch pedal is depressed it pushes the clutch master cylinder plunger which transmits hydraulic pressure to the clutch slave cylinder. The clutch slave cylinder engages and compresses the clutch pressure plate diaphragm spring, releasing the pressure on the clutch disc which in turn disengages the transmission from the engine.

- The hydraulic clutch system adjusts automatically to compensate for clutch disc wear.
- The clutch pedal position (CPP) switch is attached to the clutch pedal via the push rod assembly. Depressing the clutch pedal manually closes the switch and allows engine cranking. The switch also deactivates the speed control system and signals the EEC module when the clutch pedal is depressed.

Clutch Controls

Refer to Section 308-00 .

Clutch Pedal


Removal and Installation

NOTE: The clutch pedal is serviced with the brake pedal as an assembly only.

For additional information, refer to Section 206-06.

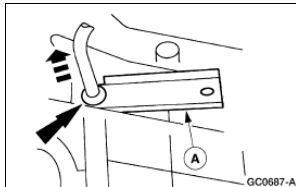
Clutch Master Cylinder/Reservoir

Special Tool(s)

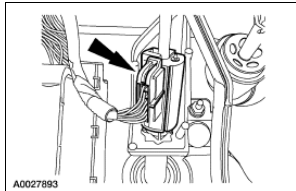
 <p>ST1318-A</p>	<p>Remover, Hydraulic Line Connector 308-182 (T88T-70522-A)</p>
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Removal and Installation

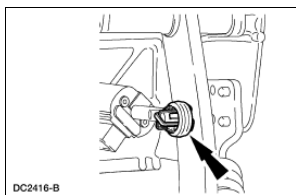
1. Raise and support the vehicle. For additional information, refer to [Section 100-02](#).
2. Using the special tool, disconnect the hydraulic line from the clutch slave cylinder.



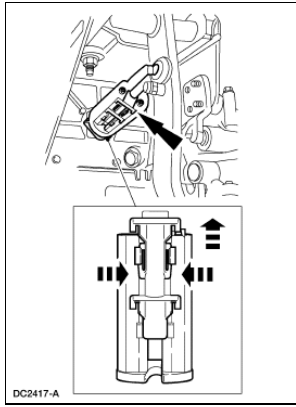
3. Lower the vehicle.
4. Disconnect the clutch pedal position (CPP) switch electrical connector.



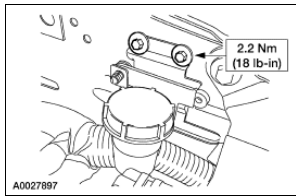
5. Disconnect the clutch master cylinder rod from the clutch pedal arm.
 - Remove and discard the clutch master cylinder push rod bushing.



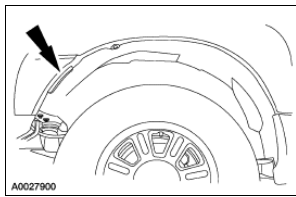
6. Remove the CPP switch.
 - Pinch the lock tabs and pull the clip forward.
 - Rotate and snap the CPP switch from the clutch master cylinder rod.



7. Remove the reservoir.



8. Remove the three pushpins, four bolts, four screws and the inner fender splash shield.

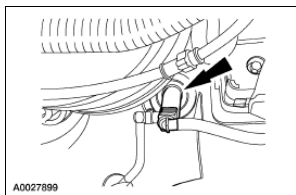


9. Unclip the hydraulic line-to-frame retainer.

10. **⚠ CAUTION: Brake fluid is harmful to painted and plastic surfaces. If brake fluid is spilled onto a painted or plastic surface, wash the surface with water immediately.**

Unlock and remove the clutch master cylinder assembly.

- Twist the clutch master cylinder clockwise 45 degrees to unlock it from the support bracket.
- Remove the reservoir, the hydraulic line and the clutch master cylinder as an assembly.
- Install a new clutch master cylinder push rod bushing.



11. **⚠ CAUTION: Brake fluid is harmful to painted and plastic surfaces. If brake fluid is spilled onto a painted or plastic surface, wash the surface with water immediately.**

To install, reverse the removal procedure.

- Bleed the clutch hydraulic system. For additional information, refer to [Section 308-00](#).
- Rotate the clutch master cylinder 45 degrees counterclockwise.

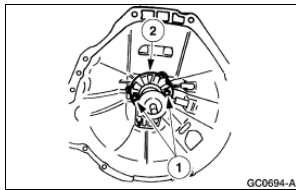
Slave Cylinder

Removal

1. Remove the transmission. For additional information, refer to [Section 308-03](#) .
2. **NOTE:** Inspect the clutch housing for traces of fluid. If brake fluid is visible, install a new clutch slave cylinder.

Remove the clutch slave cylinder.

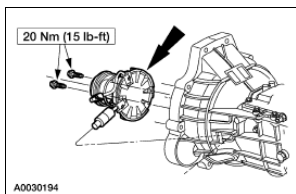
1. Remove the bolts.
2. Remove the clutch slave cylinder.



3. Inspect the clutch slave cylinder for the following:
 - Worn or damaged boot.
 - Leaking fluid.
 - Worn or damaged bearing.
4. Inspect the clutch release bearing as follows:
 - Rotate the outer race while applying pressure. If the bearing rotation is rough, install a new clutch slave cylinder.
 - Inspect for wear or damage.

Installation

1. To install, reverse the removal procedure.
 - Position the clutch slave cylinder to the transmission and install the bolts.



2. Install the transmission. For additional information, refer to [Section 308-03](#) .
 3. Depress and release the clutch pedal five full strokes.
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