Hydraulic Brake Actuation

REFER to: Brake System (206-00 Brake System - General Information, Diagnosis and Testing).

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Procedure revision date: 10/27/2015

Brake Master Cylinder

Base Part Number: 2A032

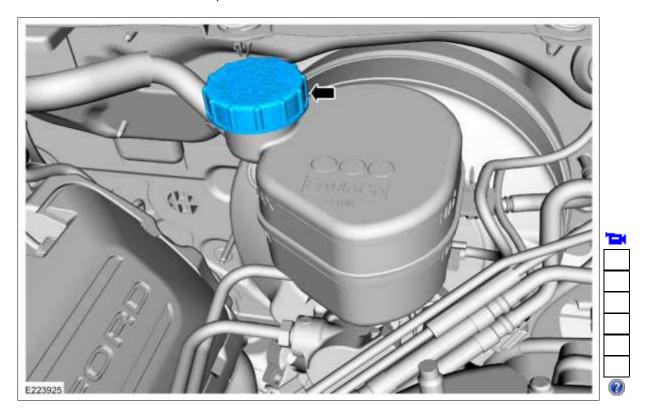
Removal

NOTICE: If the fluid is spilled on the paintwork, the affected area must be immediately washed down with cold water.

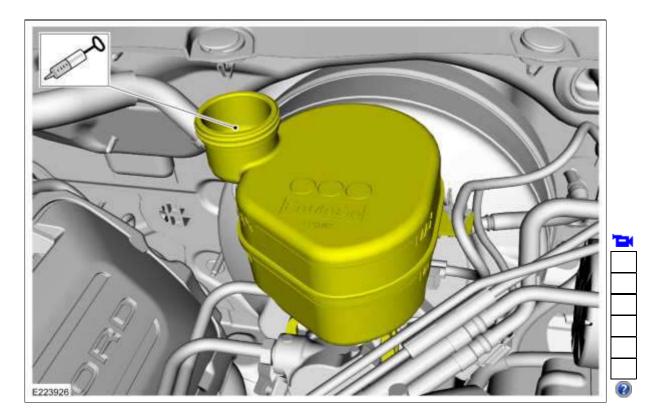
NOTE: Removal steps in this procedure may contain installation details.

Vehicles with manual transmission

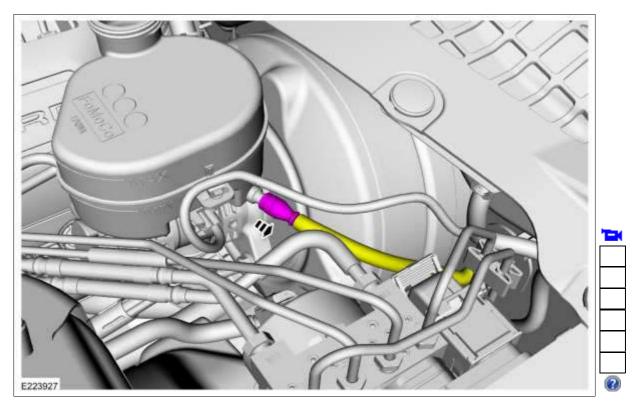
1. Remove the brake fluid reservoir cap.



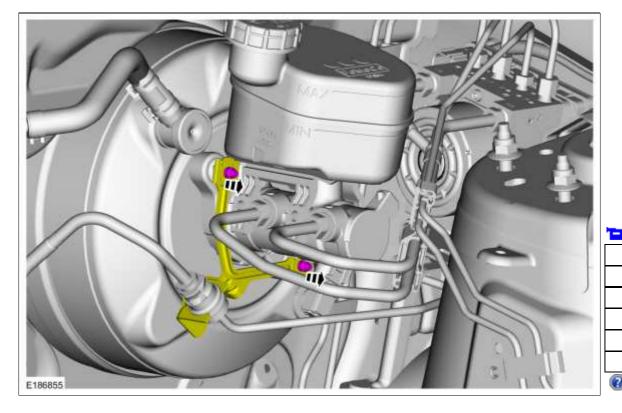
2. Using a suitable suction device, syphon the brake fluid from the brake fluid reservoir.



3. Disconnect the clutch master cylinder tube.

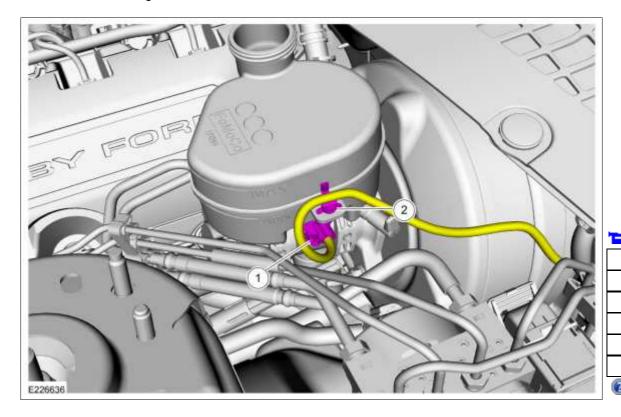


4. Detach the clutch master cylinder tube bracket from the master cylinder studs.



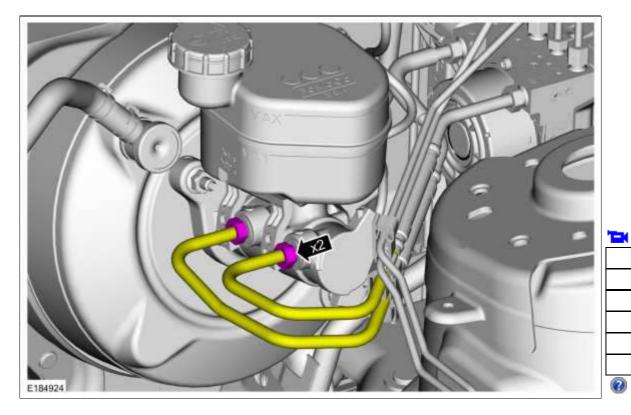
All vehicles

- 5. 1. Disconnect the brake fluid level sensor electrical connector.
 - 2. Detach the wiring harness retainer from the brake fluid reservoir.

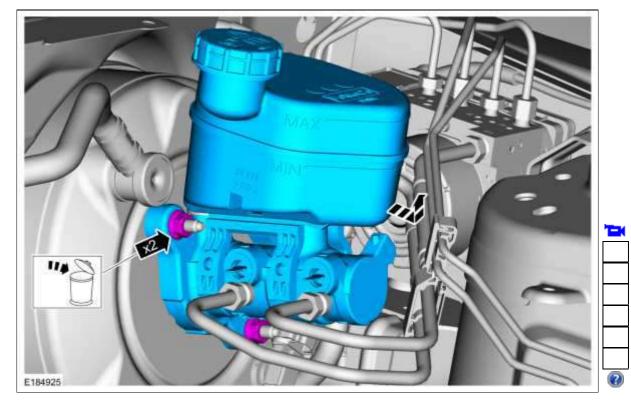


6. NOTICE: Make sure that all openings are sealed.

Disconnect the 2 brake tube fittings. *Torque*: 20 lb.ft (27.5 Nm)



7. Remove the 2 nuts and the brake master cylinder. Discard the nuts. *Torque*: 17 lb.ft (23 Nm)



Installation

- 1. To install, reverse the removal procedure.
- 2. If installing a new brake master cylinder, bleed the master cylinder.

 Refer to: Component Bleeding (206-00 Brake System General Information, General Procedures).
 - If the brake master cylinder was removed to access other components, bleed the brake system. Refer to: <u>Brake System Pressure Bleeding</u> (206-00 Brake System General Information, General Procedures).

3. If equipped with a manual transmission, bleed the clutch.

Refer to: Clutch System Bleeding (308-02 Clutch Controls, General Procedures).

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Brake Pedal and Bracket - 6-Speed Manual Transmission - 3160/6-Speed Manual Transmission - MT82

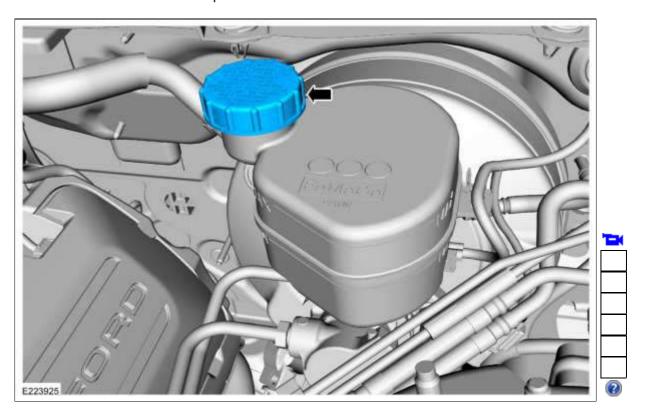
Base Part Number: 2455

Removal

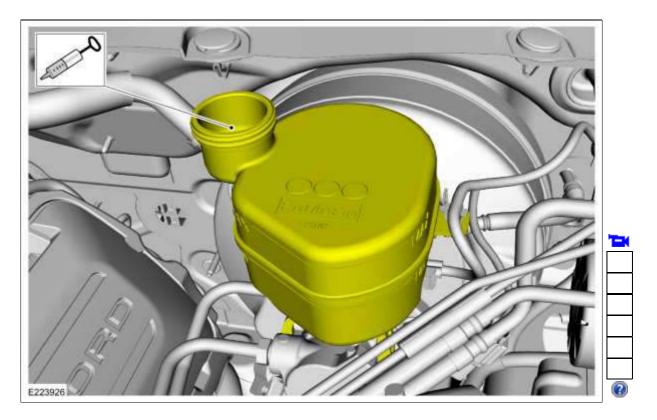
NOTICE: If the fluid is spilled on the paintwork, the affected area must be immediately washed down with cold water.

NOTE: Removal steps in this procedure may contain installation details.

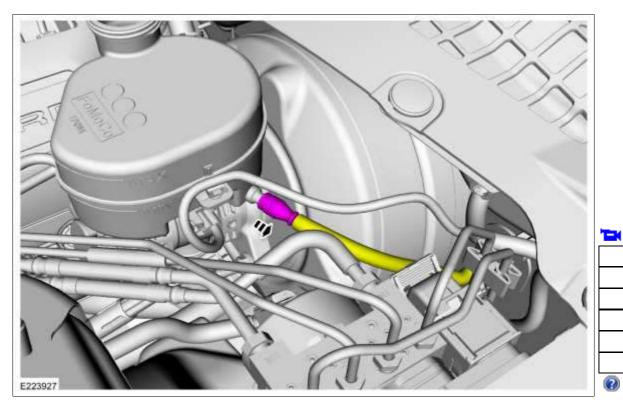
1. Remove the brake fluid reservoir cap.



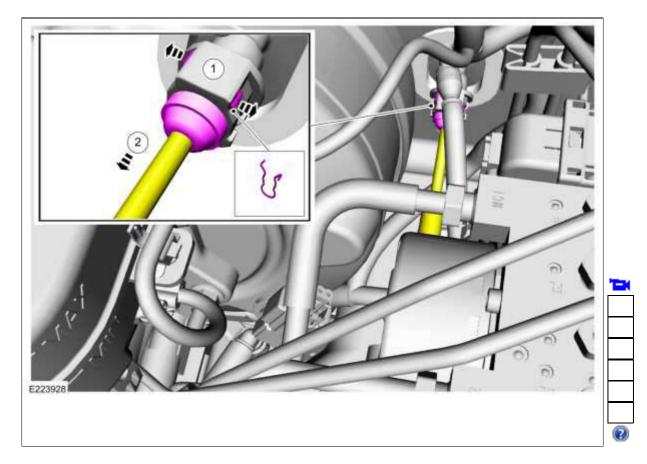
2. Using a suitable suction device, syphon the brake fluid from the brake fluid reservoir.



 ${\it 3. Disconnect the clutch master cylinder supply tube from the brake fluid reservoir.}\\$



- 4. 1. Spread the clip and push the clip downward into the released position.
 - 2. Disconnect the clutch master cylinder tube.



5. NOTICE: Do not service the brake pedal or brake booster without first removing the stoplamp switch. This switch must be removed with the brake pedal in the at-rest position. The switch plunger must be compressed for the switch to rotate in the bracket. Attempting to remove the switch when the plunger is extended (during pedal apply) will result in damage to the switch.

Remove the stoplamp switch.

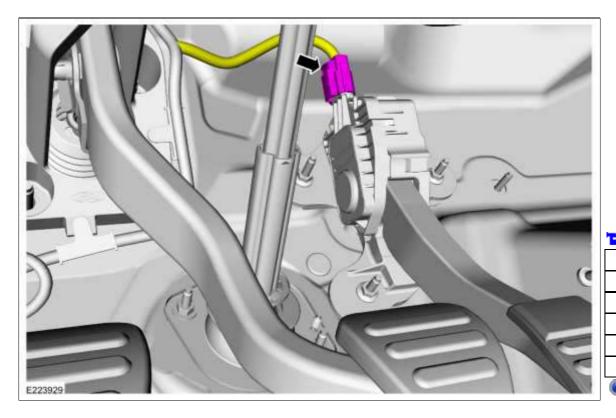
Refer to: Stoplamp Switch (417-01 Exterior Lighting, Removal and Installation).

6. NOTICE: Do not service the brake pedal or brake booster without first removing the cruise control deactivator switch. This switch must be removed with the clutch pedal in the at-rest position. The switch plunger must be compressed for the switch to rotate in the bracket. Attempting to remove the switch when the plunger is extended (during pedal apply) will result in damage to the switch.

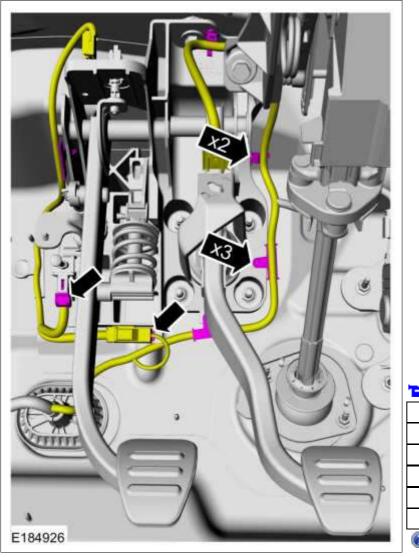
Remove the cruise control deactivator switch.

Refer to: <u>Cruise Control Deactivator Switch</u> (419-03B Cruise Control - Vehicles With: Adaptive Cruise Control, Removal and Installation).

7. Disconnect the accelerator pedal electrical connector.



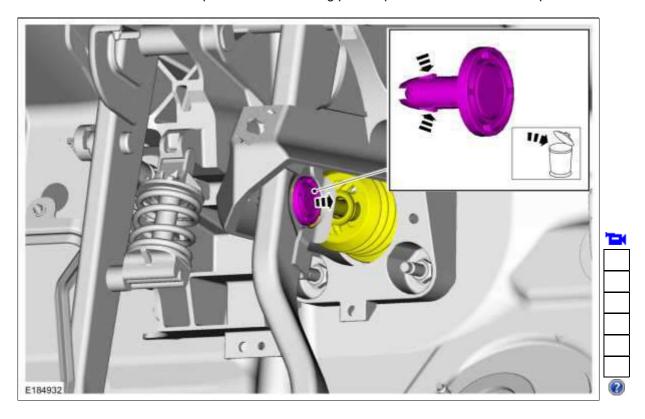
8. Disconnect the starter inhibitor switch electrical connector and detach the 6 wiring harness retainers. Position the wiring harness aside.





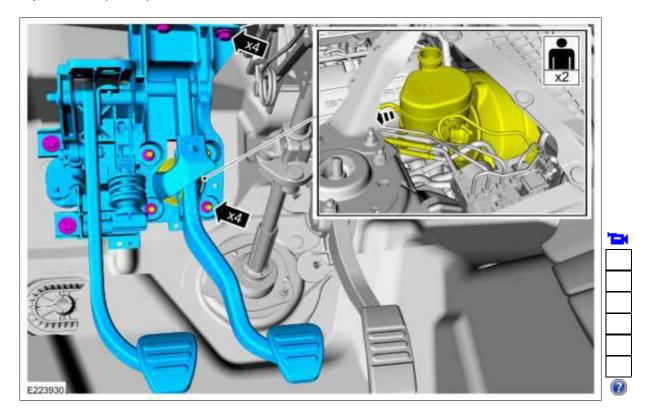
9. **NOTE:** The booster push rod clevis-locking pin is a one-time use only part. Any time the booster push rod clevis-locking pin is removed, a new booster push rod clevis-locking pin should be used.

Remove and discard the booster push rod clevis-locking pin and position aside the booster push rod.



10. NOTICE: Do not pry on the brake booster or damage to the brake booster may occur.

Have an assistant pull the brake booster and master cylinder assembly away from the dash panel. Remove the 4 bolts, 4 nuts and remove the brake pedal/clutch pedal assembly. *Torque*: 17 lb.ft (23 Nm)



Installation

1. NOTICE: Do not press, pull or otherwise move the brake pedal while installing the stoplamp switch.

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The switch must be installed with the booster push rod attached to the brake pedal and with the brake pedal in the at-rest position. Installing the switch with the brake pedal in any other position will result in incorrect adjustment and may damage the switch.

To install, reverse the removal procedure.

2. Bleed the clutch.

Refer to: <u>Clutch System Bleeding</u> (308-02 Clutch Controls, General Procedures).

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Procedure revision date: 02/11/2015

Brake Pedal and Bracket - 6-Speed Automatic Transmission - 6R80

Base Part Number: 2455

Removal

NOTICE: If the fluid is spilled on the paintwork, the affected area must be immediately washed down with cold water.

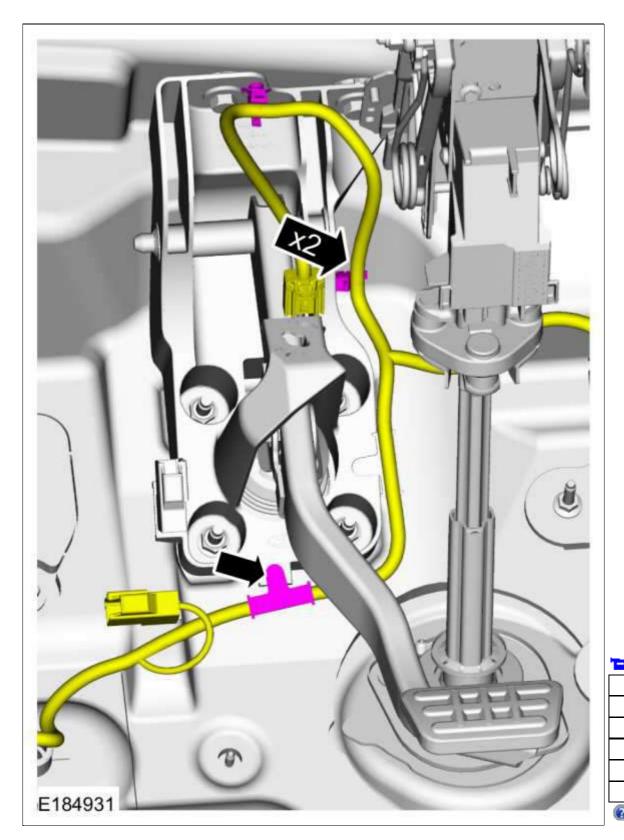
NOTE: Removal steps in this procedure may contain installation details.

1. NOTICE: Do not service the brake pedal or brake booster without first removing the stoplamp switch. The switch must be removed with the brake pedal in the at-rest position. The switch plunger must be compressed for the switch to rotate in the bracket. Attempting to remove the switch when the plunger is extended (during pedal apply) will result in damage to the switch.

Remove the stoplamp switch.

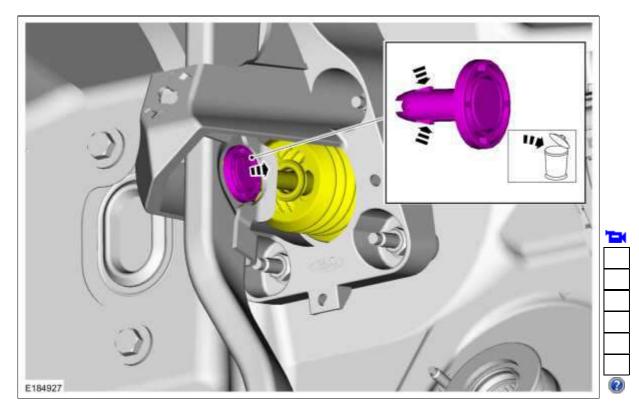
Refer to: Stoplamp Switch (417-01 Exterior Lighting, Removal and Installation).

2. Detach the 3 wiring harness retainers.

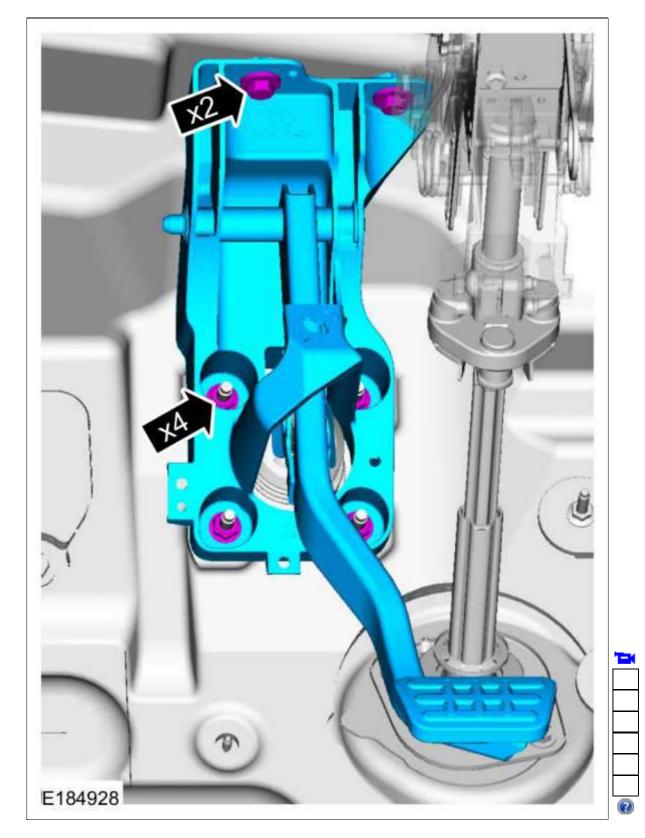


3. **NOTE:** The booster push rod clevis-locking pin is a one-time use only part. Any time the booster push rod clevis-locking pin is removed, a new booster push rod clevis-locking pin should be used.

Remove and discard the booster push rod clevis-locking pin and position aside the booster push rod.



4. Remove the 2 bolts, 4 nuts and remove the brake pedal and bracket. *Torque*: 17 lb.ft (22.5 Nm)



Installation

1. NOTICE: Do not press, pull or otherwise move the brake pedal while installing the stoplamp switch. The switch must be installed with the booster push rod attached to the brake pedal and with the brake pedal in the at-rest position. Installing the switch with the brake pedal in any other position will result in incorrect adjustment and may damage the switch.

To install, reverse the removal procedure.