

Clutch Controls -

Torque Specifications

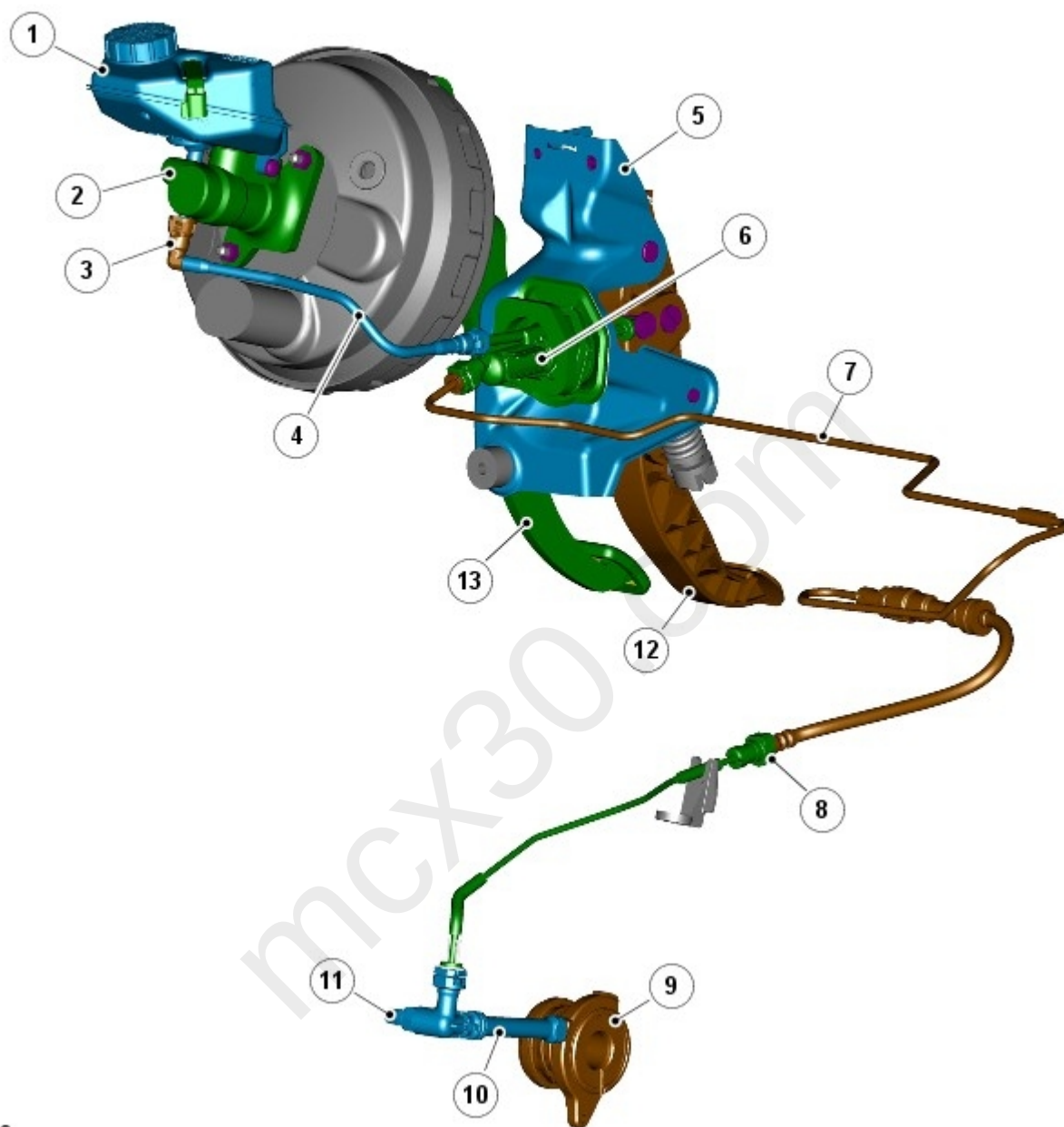
Description	Nm	lb-ft
Clutch bleed screw	10	7
Clutch pedal box nuts	24	18
Clutch slave cylinder bolts	11	8

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Clutch Controls - Clutch Controls

Description and Operation

COMPONENT LOCATION



E77343

Item	Part Number	Description
1	-	Brake/clutch reservoir
2	-	Brake master cylinder
3	-	Connector
4	-	Low pressure hose
5	-	Clutch pedal bracket
6	-	Clutch master cylinder
7	-	High pressure hose
8	-	Connector
9	-	Clutch slave cylinder and release bearing
10	-	Hydraulic adaptor and peak torque limiter
11	-	Bleed screw
12	-	Clutch pedal
13	-	Brake pedal

OVERVIEW

The clutch is a conventional single, damped driven plate and a self-adjusting diaphragm spring clutch cover assembly

which is hydraulically actuated from the clutch pedal.

Pressing the clutch pedal pressurizes the hydraulic fluid in the master cylinder. The fluid pressure is transferred via a pipe from the master cylinder to the slave cylinder in the transmission. The fluid pressure operates the slave cylinder which in turn pushes the fingers of the clutch cover, releasing the driven plate and disengaging the drive from the engine crankshaft to the transmission.

A hydraulic clutch bleed adaptor is located on the front of the transmission. The adaptor provides the connection between the pressure pipe from the master cylinder to the slave cylinder. The adaptor contains a bleed screw to purge the clutch hydraulic system of air after service replacement of one of the hydraulic components. The adaptor also includes a peak torque limiter. This prevents instant clutch engagement if the driver accidentally releases the clutch lever to prevent damage to the driveline components.

Stop/Start Vehicles - From 2010 MY

Clutch Master Cylinder and Linear Clutch Sensor

The linear clutch sensor, located on the clutch master cylinder and hardwired to the CJB, is used to sense the position of the clutch pedal. It is used in conjunction with other sensor outputs to trigger an engine restart, engine stop or stall recovery on Stop/Start vehicles. It is also used along with the first and reverse gear switches to complete clutch plausibility.

A magnet inside the clutch master cylinder provides the position indicator for the linear clutch sensor. For this reason, if the master cylinder is replaced the correct replacement master cylinder must be identified and fitted. For additional information, refer to: [Starting System](#) (303-06C Starting System - TD4 2.2L Diesel, Vehicles Built From: 01-03-2009, Description and Operation).

Linear Clutch Sensor



E115181

Clutch Controls - Clutch Controls

Diagnosis and Testing

Principles of Operation

For additional information.

REFER to: [Manual Transaxle and Clutch](#) (308-00 Manual Transmission/Transaxle and Clutch - General Information, Diagnosis and Testing).

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Clutch Controls - Clutch Slave Cylinder

Removal and Installation

Removal

- NOTE: The clutch slave cylinder and release bearing are a combined assembly and cannot be serviced separately.

1. Disconnect the battery ground cable.

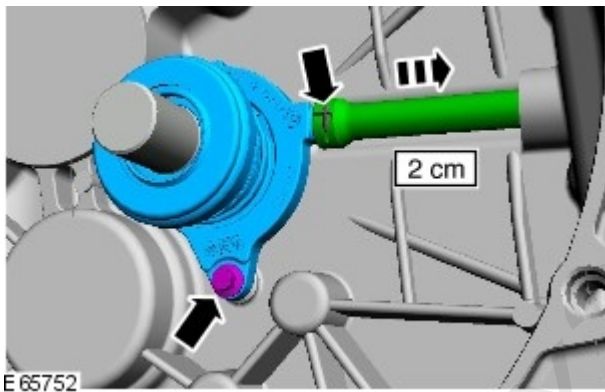
Refer to: [Specifications](#) (414-00 Battery and Charging System - General Information, Specifications).

2.  **WARNING:** Make sure to support the vehicle with axle stands.

Raise and support the vehicle.

3. Remove the transmission assembly.

Refer to: [Transmission](#) (308-03 Manual Transmission/Transaxle, Removal).



4.  **CAUTION:** If brake fluid is spilt on the paintwork, the affected area must be immediately washed down with cold water.

Torque: 11 Nm

Installation

1. To install, reverse the removal procedure.

2. Bleed the clutch system.

Refer to: [Clutch System Bleeding](#) (308-00 Manual Transmission/Transaxle and Clutch - General Information, General Procedures).

3. Install the transmission.

Refer to: [Transmission](#) (308-03 Manual Transmission/Transaxle, Removal).

4. Connect the battery ground cable.

Refer to: [Specifications](#) (414-00 Battery and Charging System - General Information, Specifications).

Clutch Controls - Clutch Master Cylinder RHD AWD

Removal and Installation

Removal

1. Remove the clutch pedal assembly.

Refer to: [Clutch Pedal - RHD AWD](#) (308-02 Clutch Controls, Removal and Installation).

Installation

1. Install the clutch pedal assembly.

Refer to: [Clutch Pedal - RHD AWD](#) (308-02 Clutch Controls, Removal and Installation).

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Clutch Controls - Clutch Master Cylinder LHD AWD

Removal and Installation

Removal

1. Remove the clutch pedal assembly.

Refer to: [Clutch Pedal - LHD AWD](#) (308-02 Clutch Controls, Removal and Installation).

Installation

1. Install the clutch pedal assembly.

Refer to: [Clutch Pedal - LHD AWD](#) (308-02 Clutch Controls, Removal and Installation).

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Clutch Controls - Clutch Pedal RHD AWD

Removal and Installation

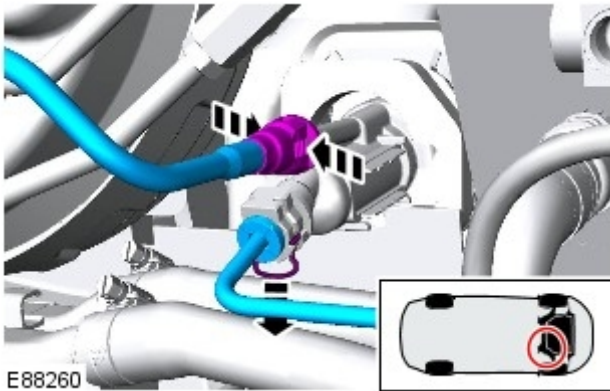
Removal

1. Disconnect the battery ground cable.

Refer to: [Specifications](#) (414-00 Battery and Charging System - General Information, Specifications).

2. Remove the secondary bulkhead center panel.

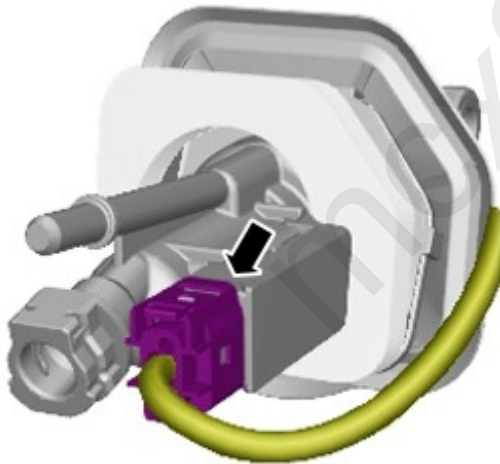
Refer to: [Secondary Bulkhead Center Panel - TD4 2.2L Diesel](#) (501-02 Front End Body Panels, Removal and Installation).



3.  **CAUTION:** Brake fluid will damage paint finished surfaces. If spilled, immediately remove the fluid and clean the area with water.

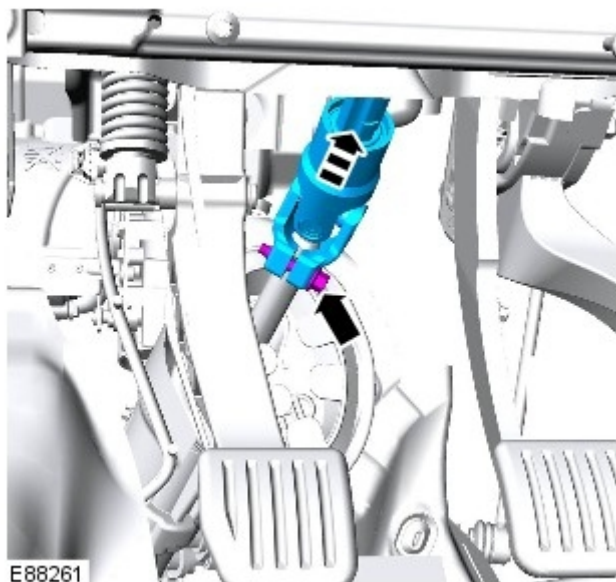
- **NOTE:** Position cloth to collect fluid spillage.

4. **NOTE:** If equipped



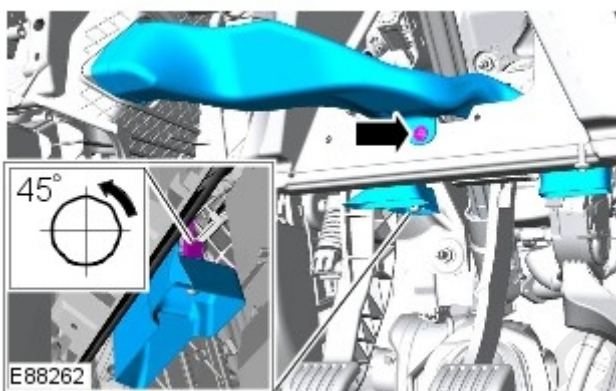
5. Remove the driver lower air bag.

Refer to: [Driver Lower Air Bag Module](#) (501-20B Supplemental Restraint System, Removal and Installation).

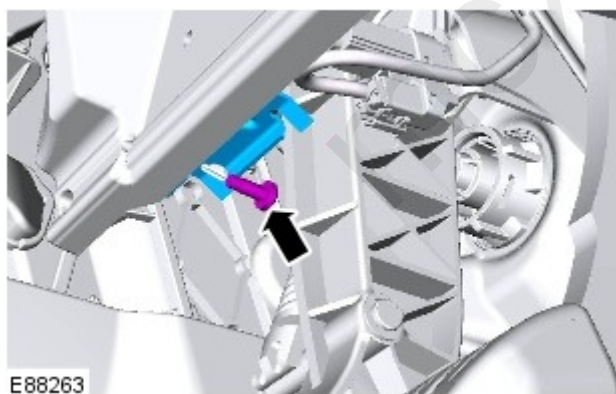


6. **6.**  **WARNING:** Make sure that a new bolt is installed.

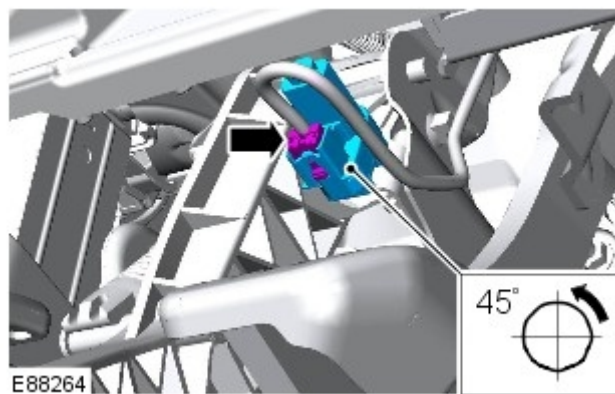
Torque: 25 Nm



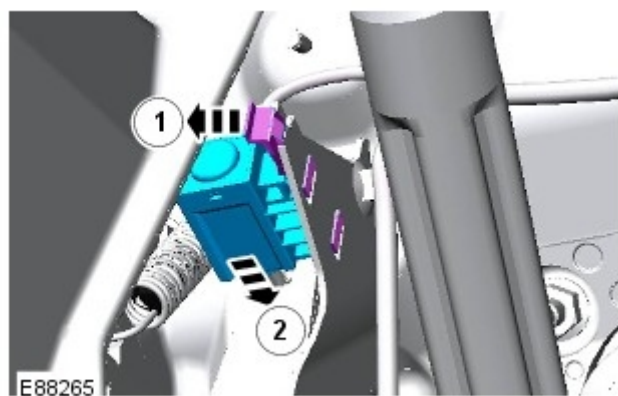
7.



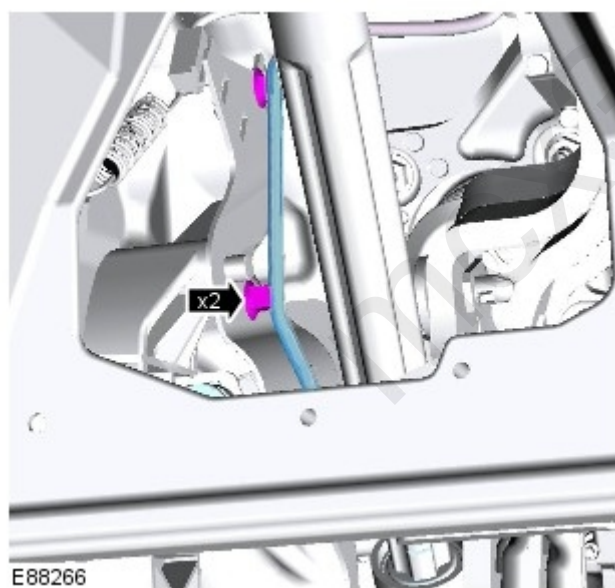
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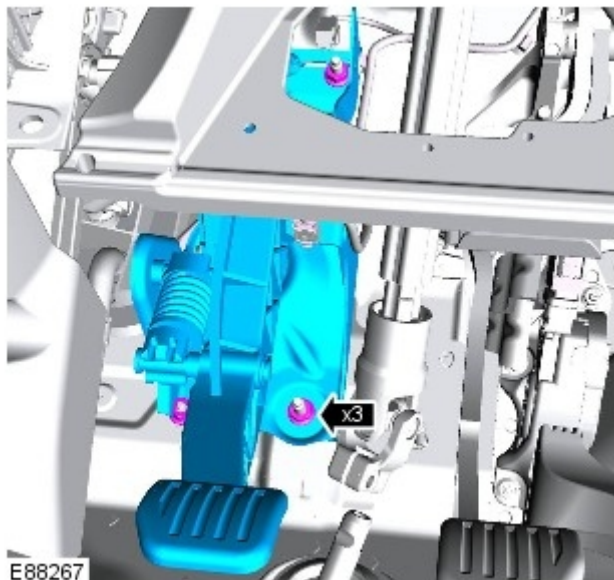
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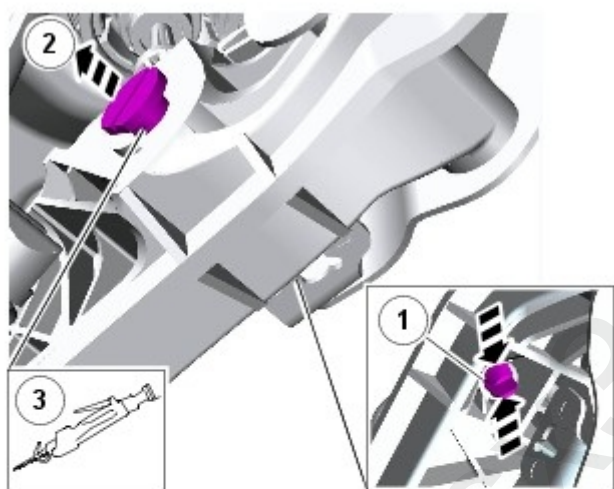
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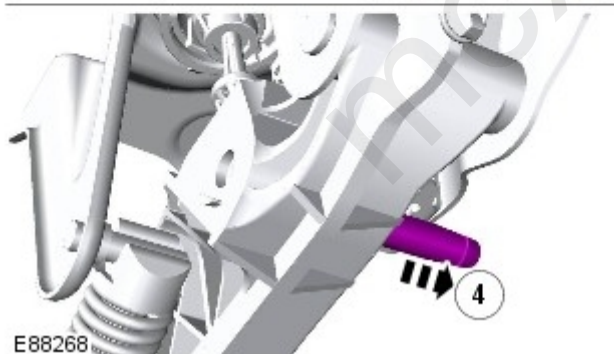
11.



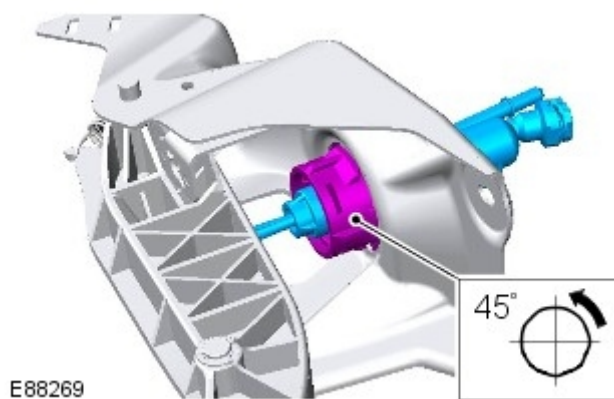
12. Torque: 24 Nm



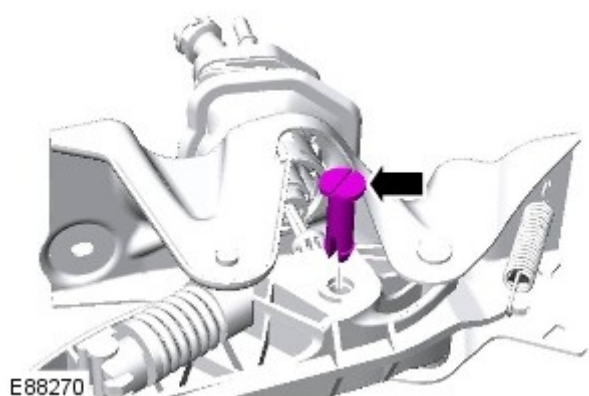
13. **13.**  CAUTION: "Make sure that a new component is installed. "
- NOTE: Do not disassemble further if the component is removed for access only.



14.



Installation



1.  CAUTION: "Make sure that a new component is installed."

2. To install, reverse the removal procedure.

3. Bleed the clutch system.

Refer to: [Clutch System Bleeding](#) (308-00 Manual Transmission/Transaxle and Clutch - General Information, General Procedures).

Clutch Controls - Clutch Pedal LHD AWD

Removal and Installation

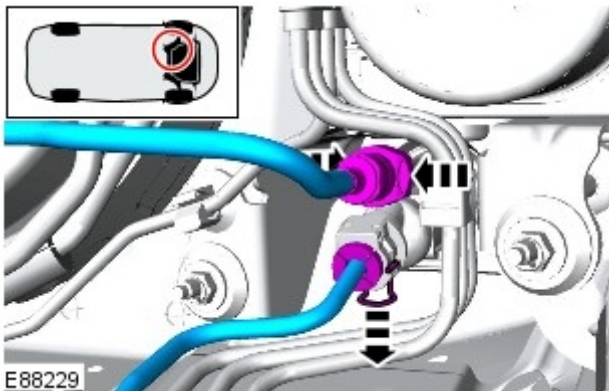
Removal

1. Disconnect the battery ground cable.

Refer to: [Specifications](#) (414-00 Battery and Charging System - General Information, Specifications).

2. Remove the battery tray.

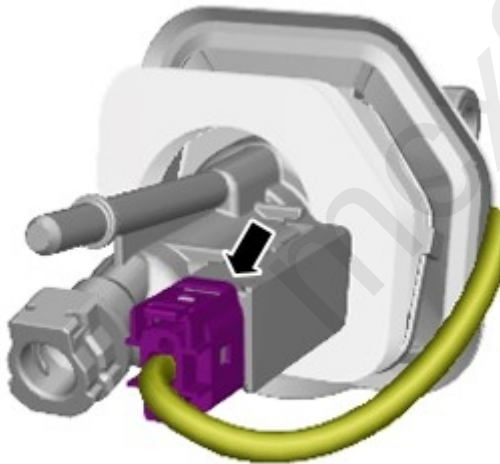
Refer to: [Battery Tray](#) (414-01 Battery, Mounting and Cables, Removal and Installation).



3.  **CAUTION:** Brake fluid will damage paint finished surfaces. If spilled, immediately remove the fluid and clean the area with water.

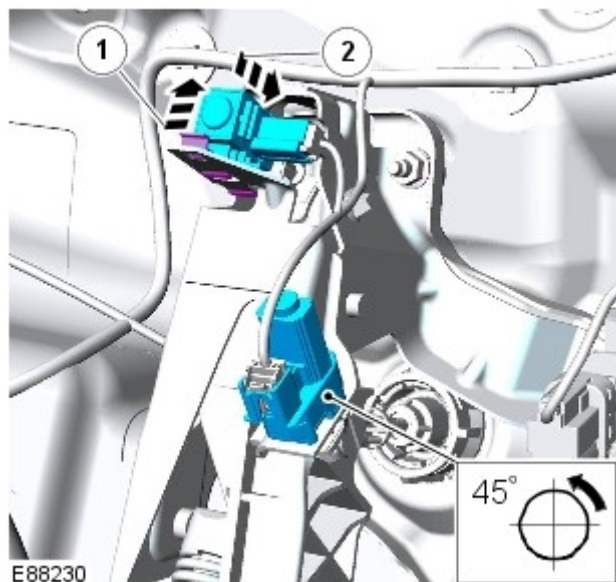
- **NOTE:** Position cloth to collect fluid spillage.

4. **NOTE:** If equipped

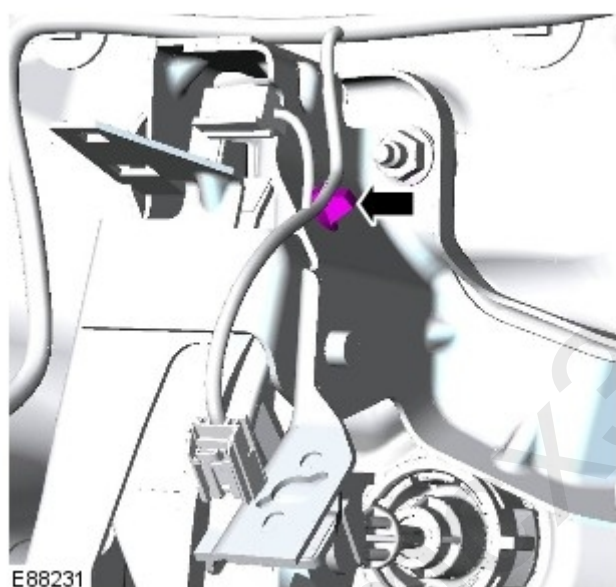


5. Remove the instrument panel assembly.

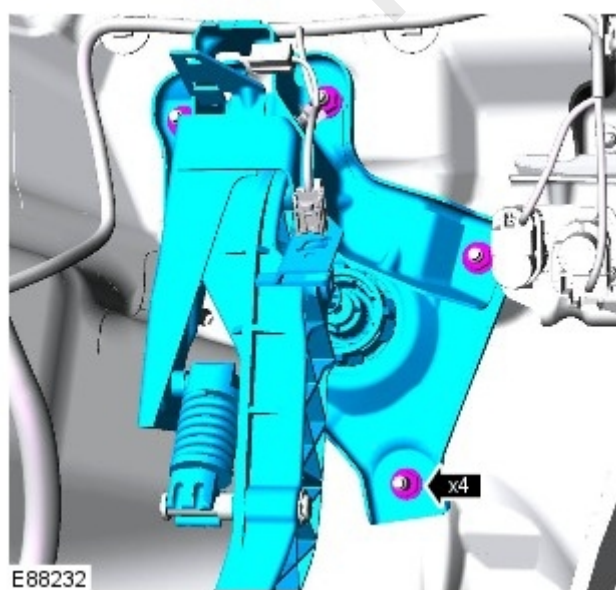
Refer to: [Instrument Panel - TD4 2.2L Diesel](#) (501-12 Instrument Panel and Console, Removal and Installation).



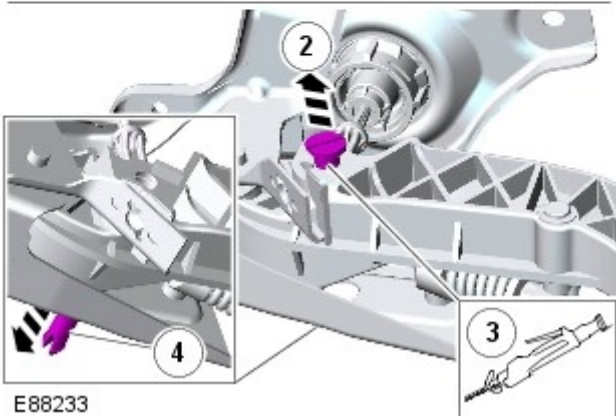
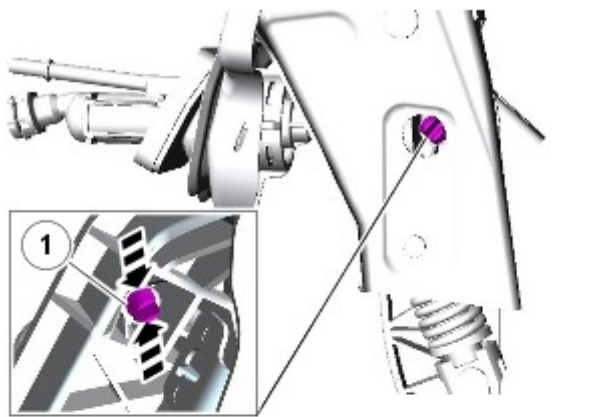
6.



7.



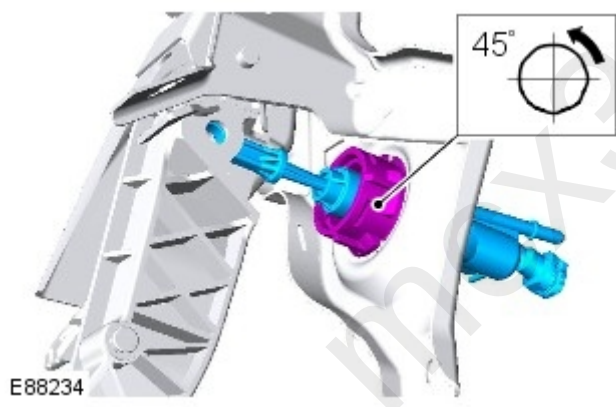
8. Torque: 24 Nm



E88233

9.  **CAUTION:** "Make sure that a new component is installed. "

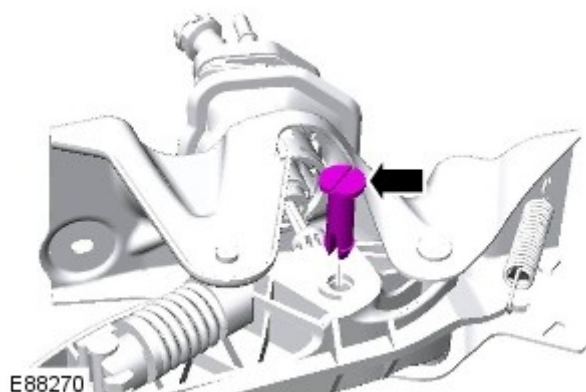
Cut the head off the clevis pin to allow removal.



E88234

10.

Installation



E88270

1.  **CAUTION:** "Make sure that a new component is installed. "

2. To install, reverse the removal procedure.

3. Bleed the clutch system.

Refer to: [Clutch System Bleeding](#) (308-00 Manual Transmission/Transaxle and Clutch - General Information, General Procedures).

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