


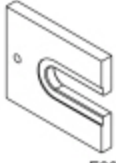
303-01G Electric Motor - 3.5L V6 PowerBoost (CN)
Removal and Installation

2023 F-150

Procedure revision date: 09/23/2020

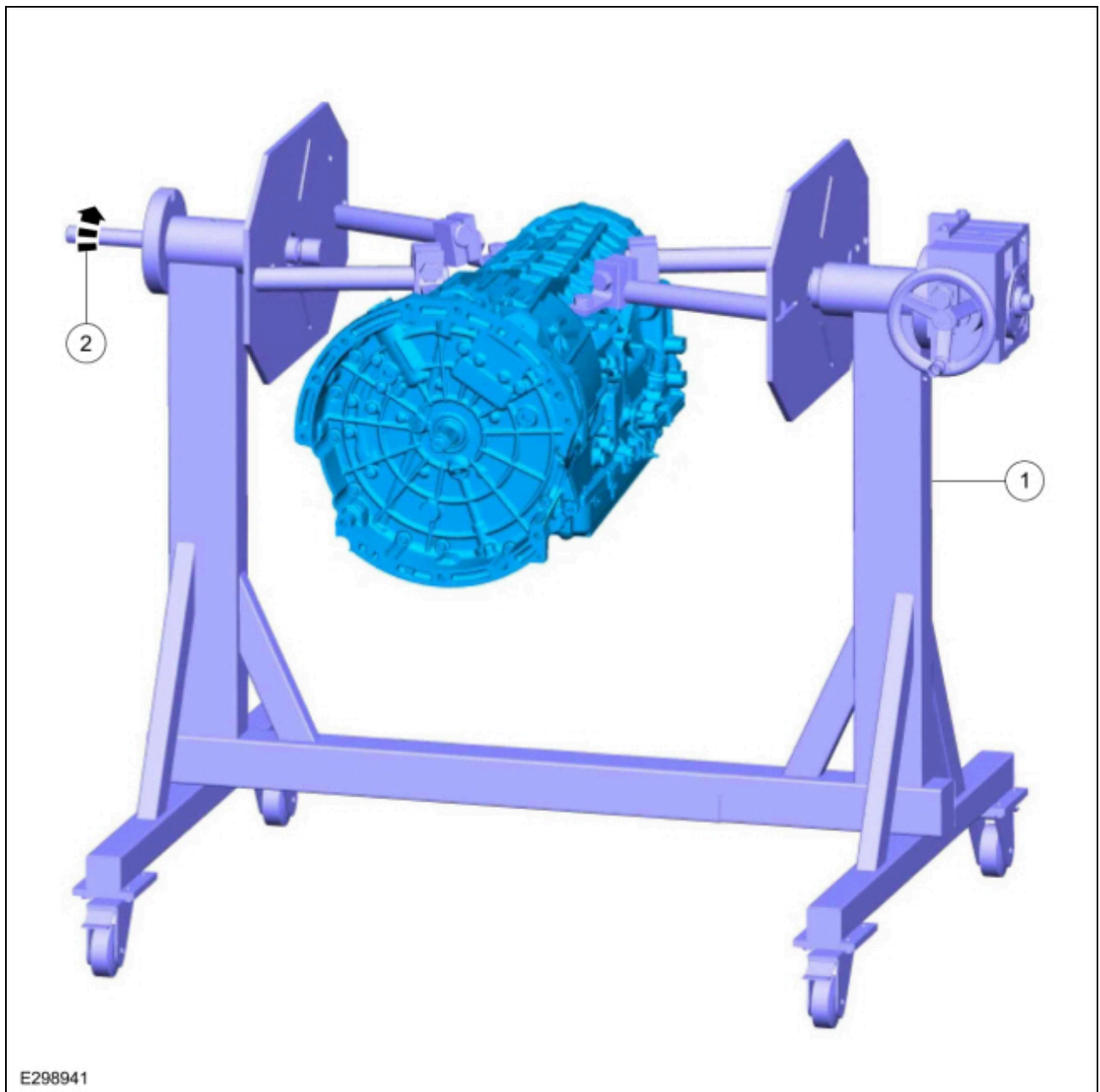
Hybrid Drive Unit

Special Tool(s) / General Equipment

 <p>E270044</p>	<p>307-651 Bracket, Pump Remover/Installer</p>
 <p>E302610</p>	<p>307-651-03 Lift Fixture Adapter (MHT)</p>
Floor Crane	
Mounting Stand	
Wooden Block	

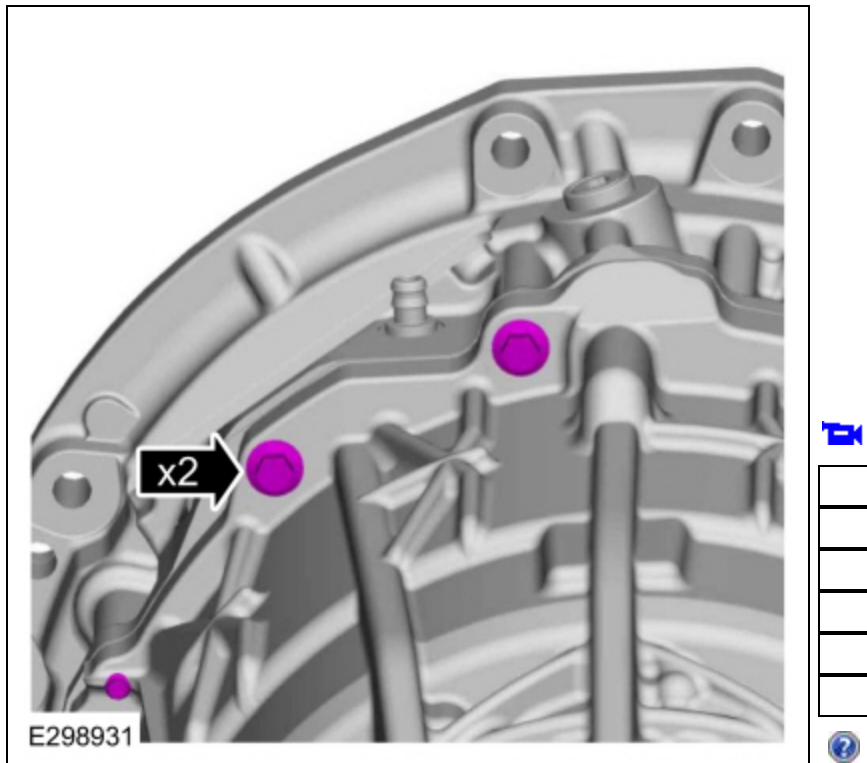
Removal

1. Remove the transmission.
Refer to: [Transmission](#) (307-01B Automatic Transmission - 10-Speed Automatic Transmission – 10R80 MHT, Removal and Installation).
2.
 1. Using a floor crane, mount the transmission to a mounting stand.
Use the General Equipment: Mounting Stand
Use the General Equipment: Floor Crane
 2. Rotate the transmission to the upright position.



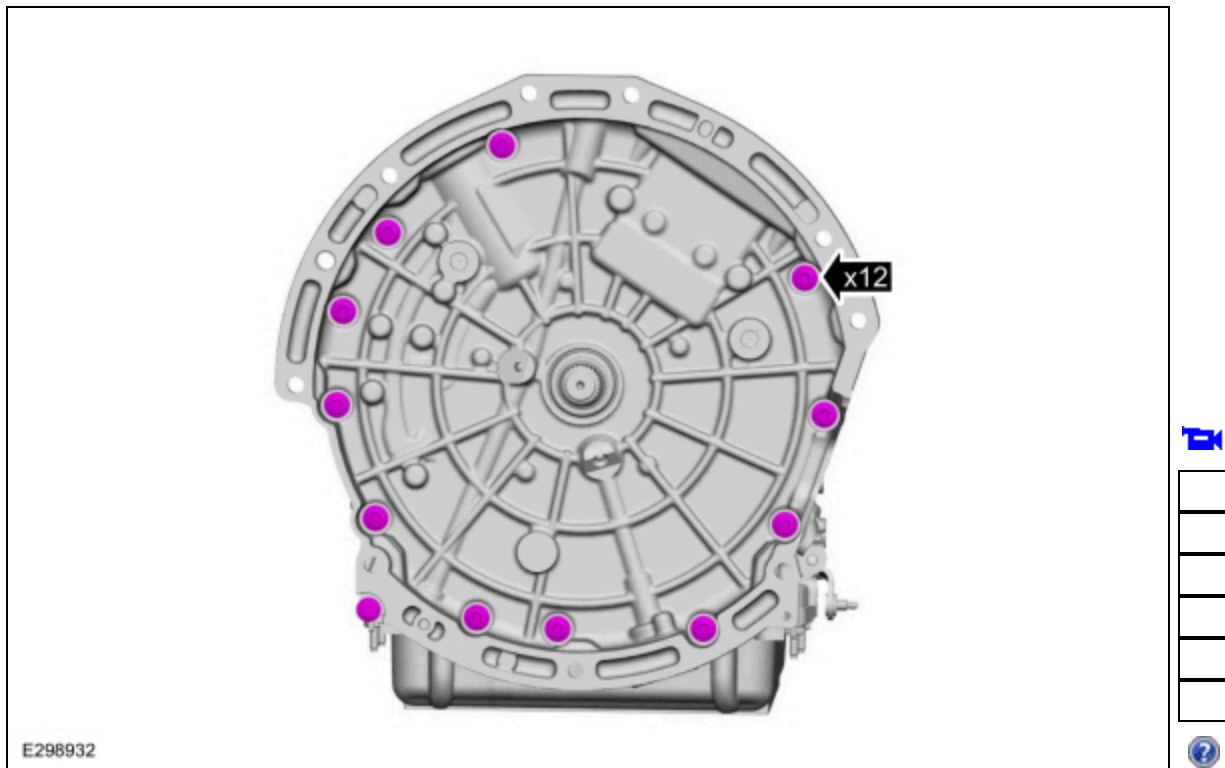
3. **NOTE:** Note the position of the components before removal.

Remove the back hybrid drive unit bolts.



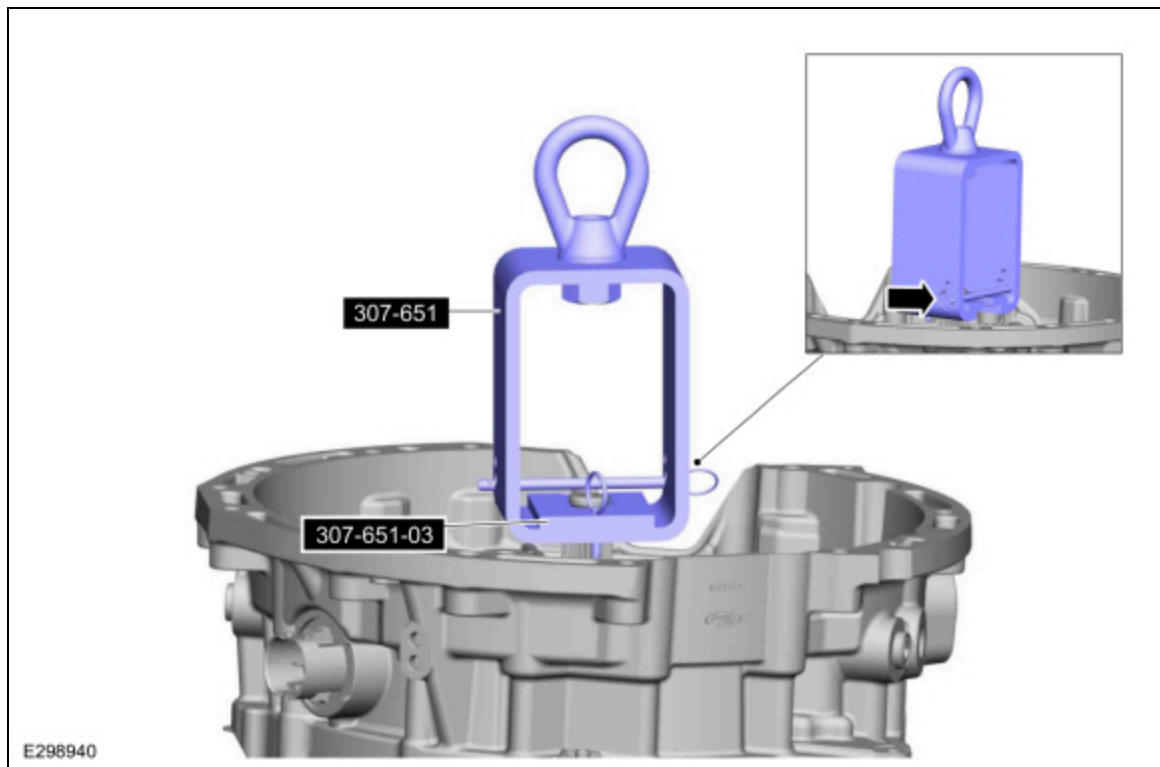
4. **NOTE:** Note the position of the components before removal.

Remove the front hybrid drive unit bolts.



5. Install the special tools.

Use Special Service Tool: [307-651 Bracket, Pump Remover/Installer.](#) , [307-651-03 Lift Fixture Adapter \(MHT\).](#)

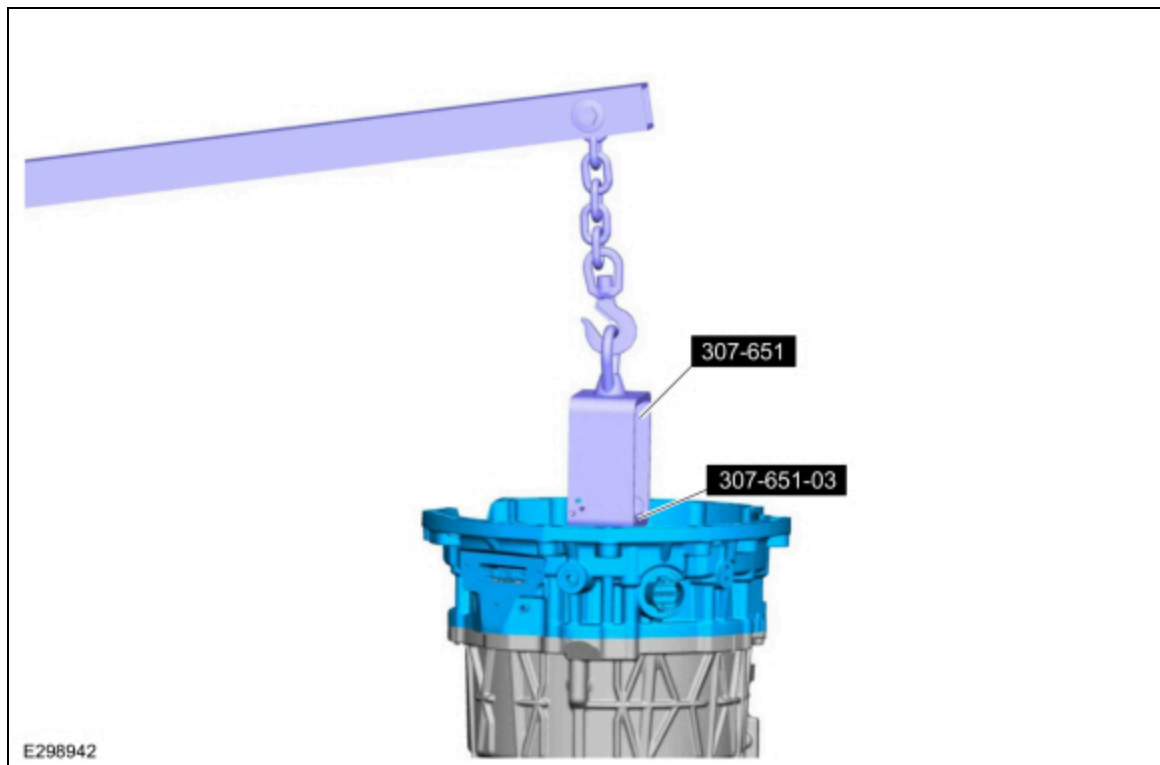


6. **NOTICE:** Hold the hybrid drive unit in the upright position. Failure to hold the hybrid drive unit in the upright position can damage the electric motor.

Using a floor crane and the special tools, remove the hybrid drive unit.

Use Special Service Tool: [307-651 Bracket, Pump Remover/Installer](#) , [307-651-03 Lift Fixture Adapter \(MHT\)](#).

Use the General Equipment: Floor Crane



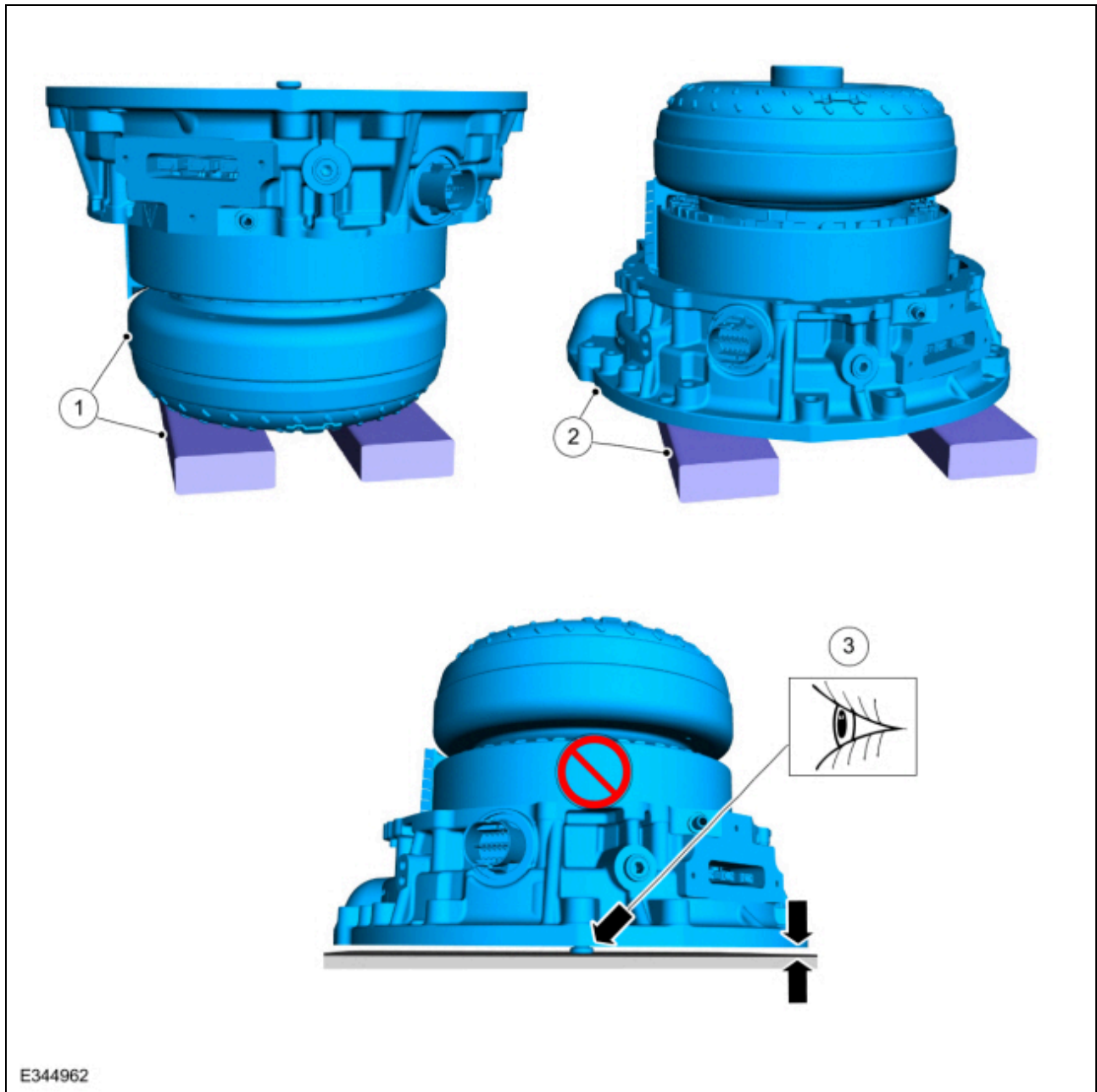
7. Position the hybrid drive unit on 2 blocks of wood.

1. Correct

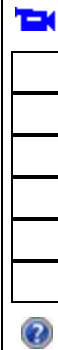
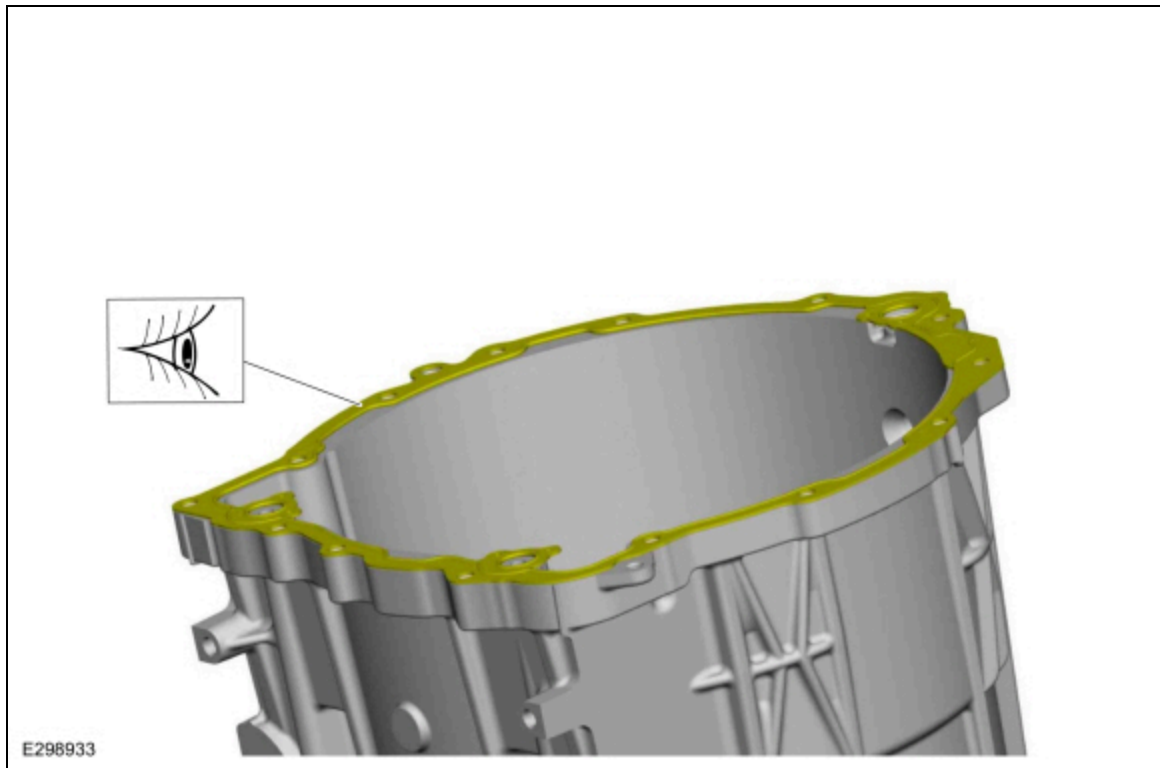
Use the General Equipment: Wooden Block

2. Correct
Use the General Equipment: Wooden Block
3. **NOTICE: Do not place the hybrid drive unit with the torque converter facing up without using wooden blocks or damage to the input shaft snap ring can occur.**

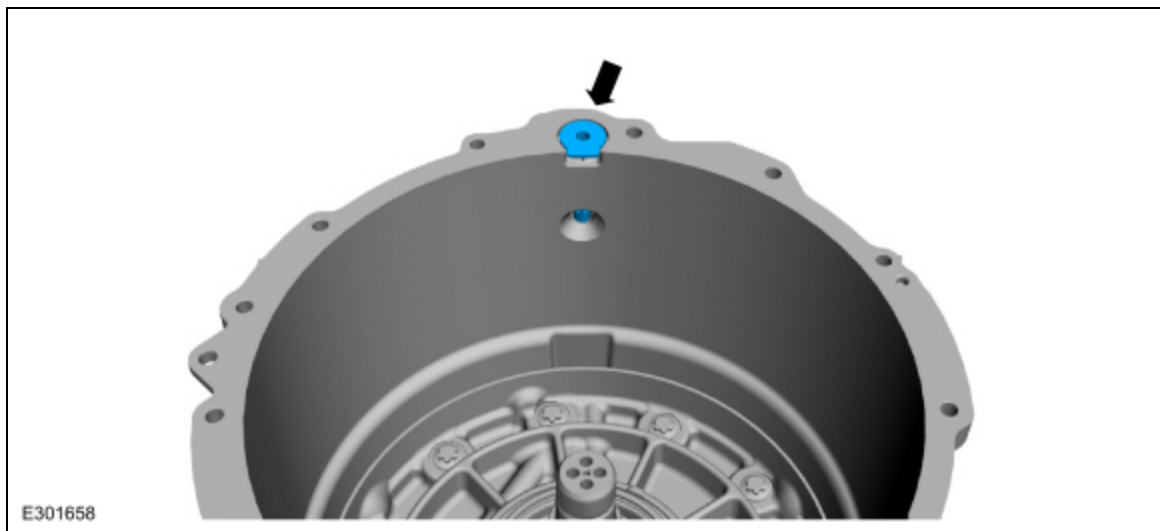
Incorrect



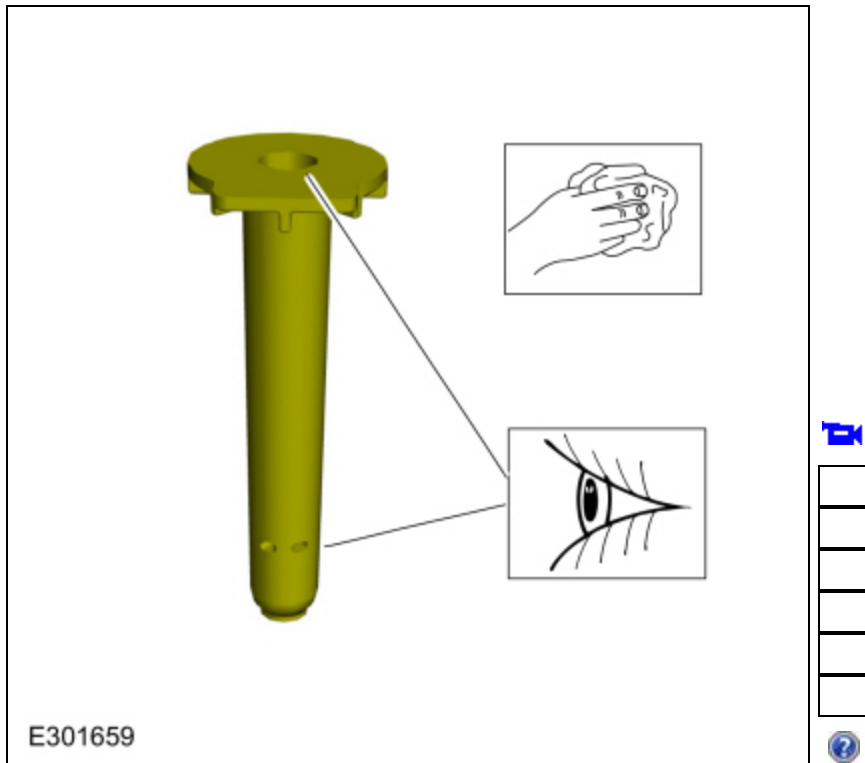
8. Clean and inspect the hybrid drive unit gasket. Replace if necessary.



9. Remove the transmission fluid spray nozzle.

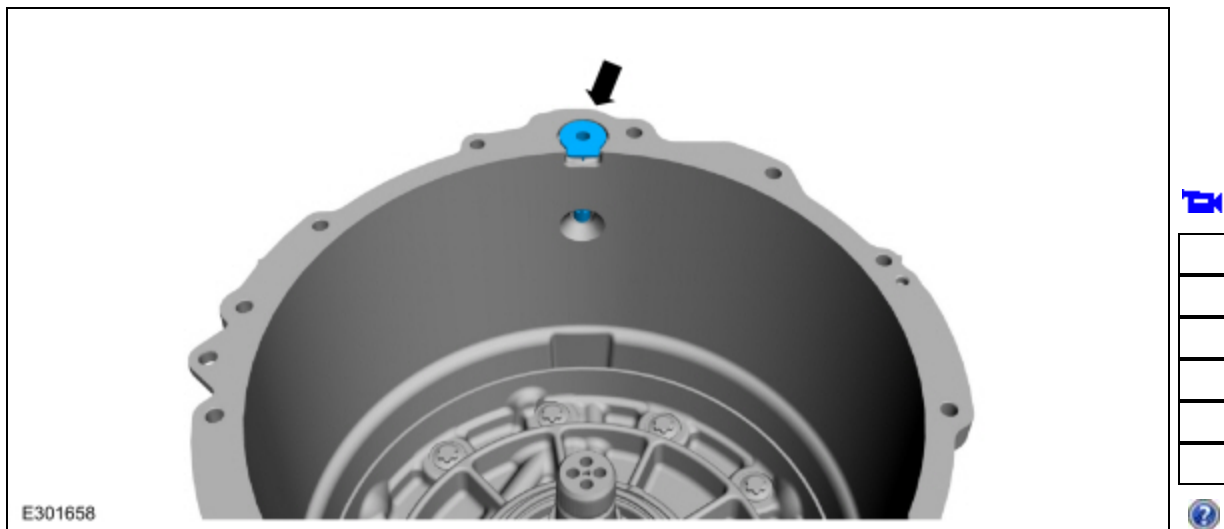


10. Clean and inspect the transmission fluid spray nozzle.



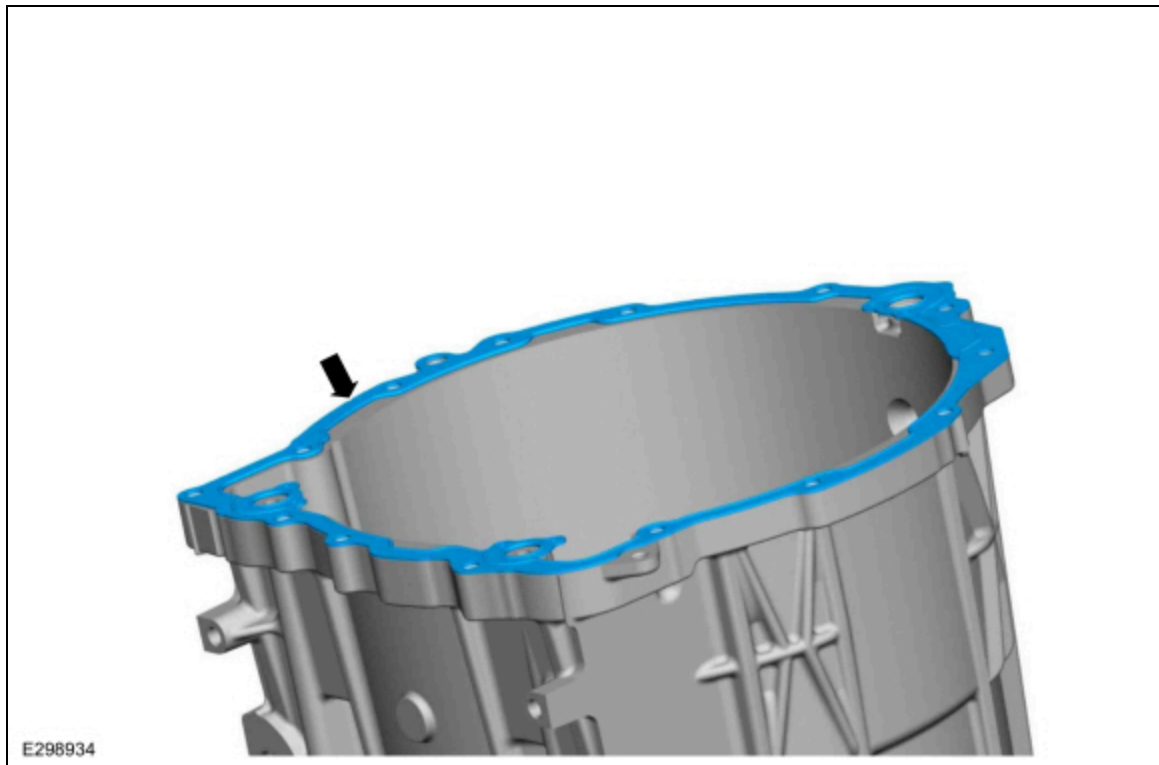
Installation

1. If a new hybrid drive unit was installed, the Transmission Identification (TRID) file must be updated with characterization data for the new hybrid drive unit.
 1. Locate the hybrid drive unit 2D barcode located near the input shaft.
 2. Scan the 2D barcode on the new hybrid drive unit using a QR or 2D barcode reader app.
 3. Record the last 7 digits of the barcode.
2. Install the transmission fluid spray nozzle.



3. **NOTE:** Make sure the gasket is free of oil residue prior to installing.

Wipe the transmission sealing surface with a lint free shop towel. Install the hybrid drive unit gasket.



4. **NOTICE:** Hold the hybrid drive unit in the upright position. Failure to hold the hybrid drive unit in the upright position can damage the electric motor.

If installing a new hybrid drive unit, drive the alignment pins flush with the front of the hybrid drive unit.

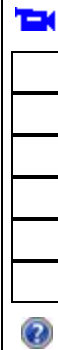
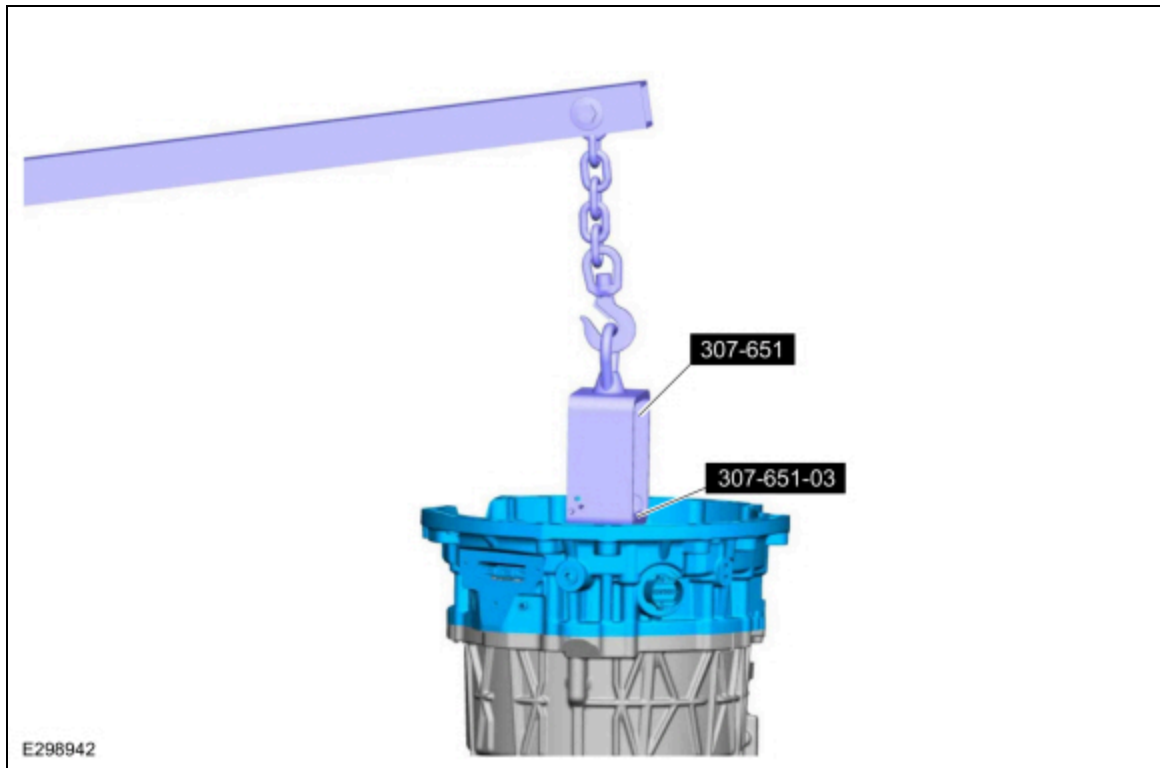


5. **NOTE:** Visually inspect and align the 4 flats on the torque converter with the flats on the pump when installing the hybrid drive unit.

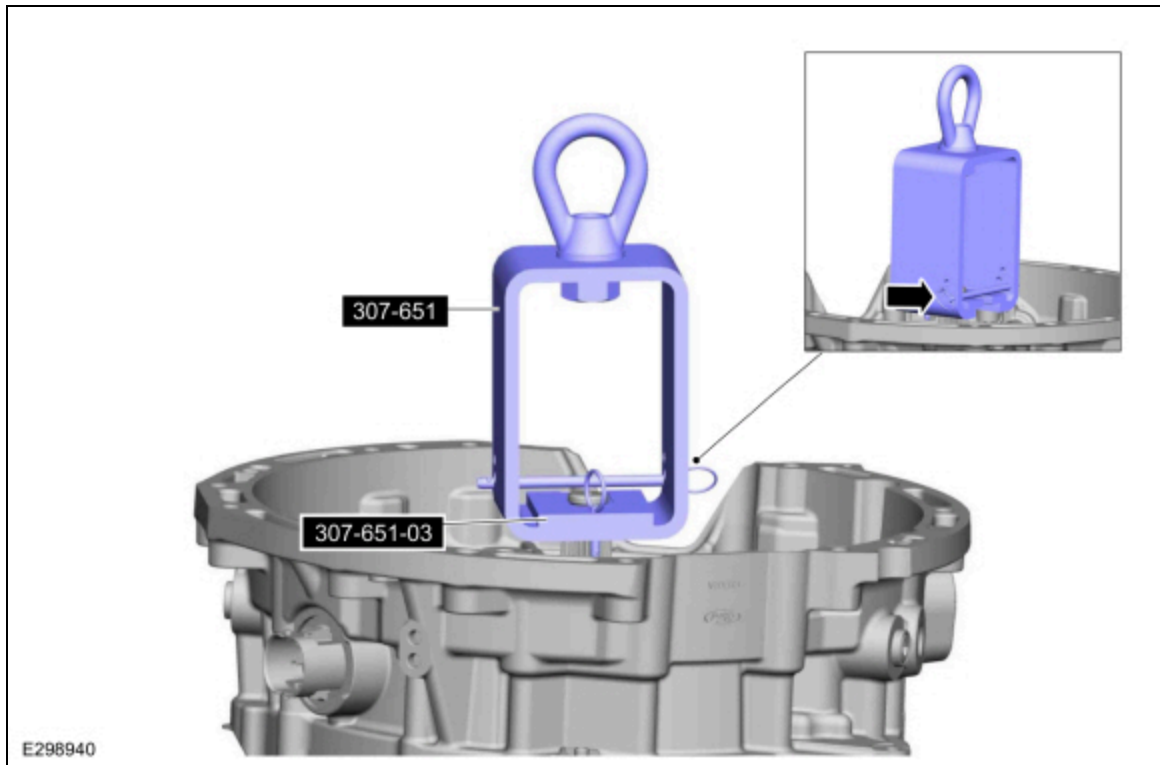
Wipe the hybrid drive unit sealing surface with a lint free shop towel. Using a floor crane and the special tools, install the hybrid drive unit.

Use Special Service Tool: [307-651 Bracket, Pump Remover/Installer](#), [307-651-03 Lift Fixture Adapter \(MHT\)](#).

Use the General Equipment: Floor Crane



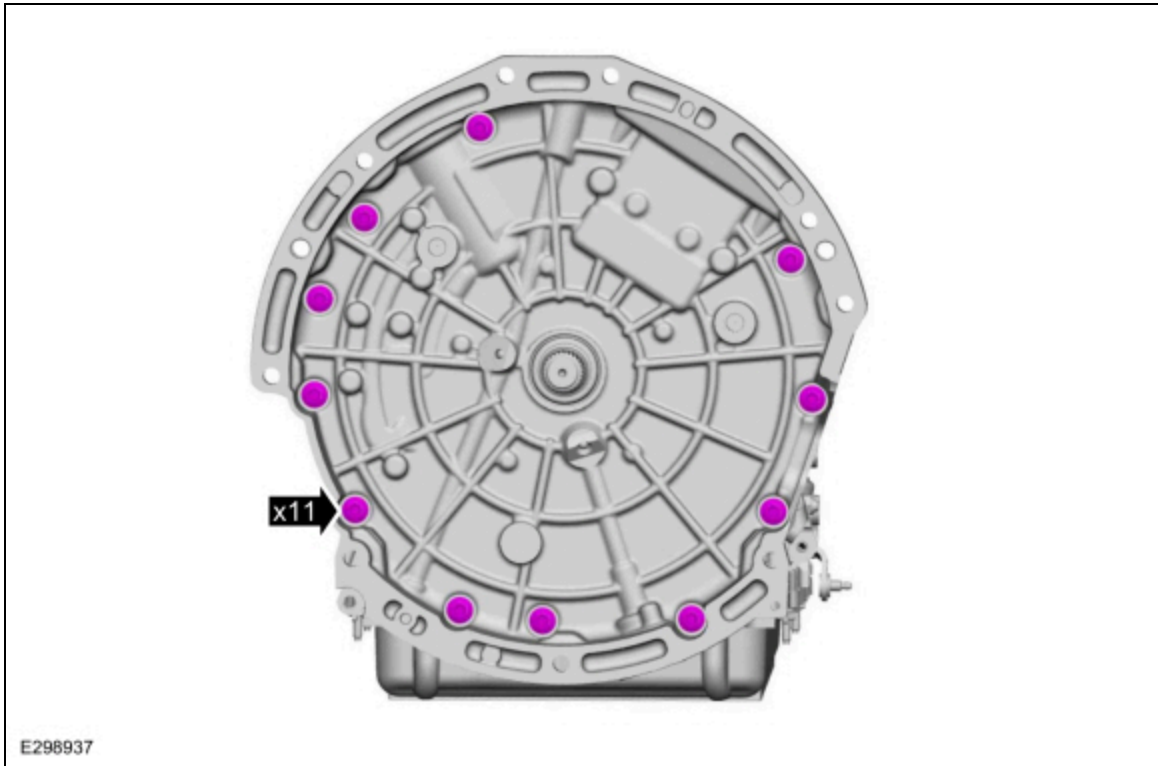
6. Remove the special tools.
Use Special Service Tool: [307-651 Bracket, Pump Remover/Installer](#) , [307-651-03 Lift Fixture Adapter \(MHT\)](#).



7. **NOTE:** Make sure the components are installed to the position noted before removal.

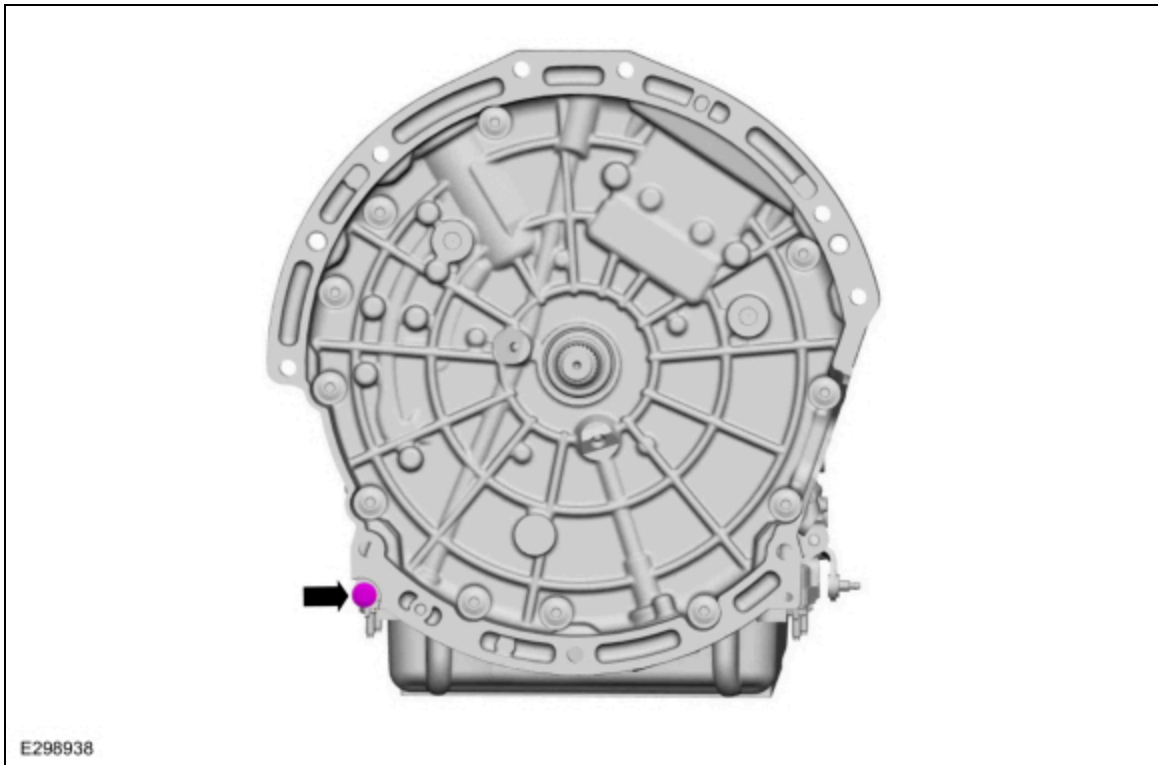
Install the bolts shown in the graphic.

Torque: 18 lb.ft (25 Nm)

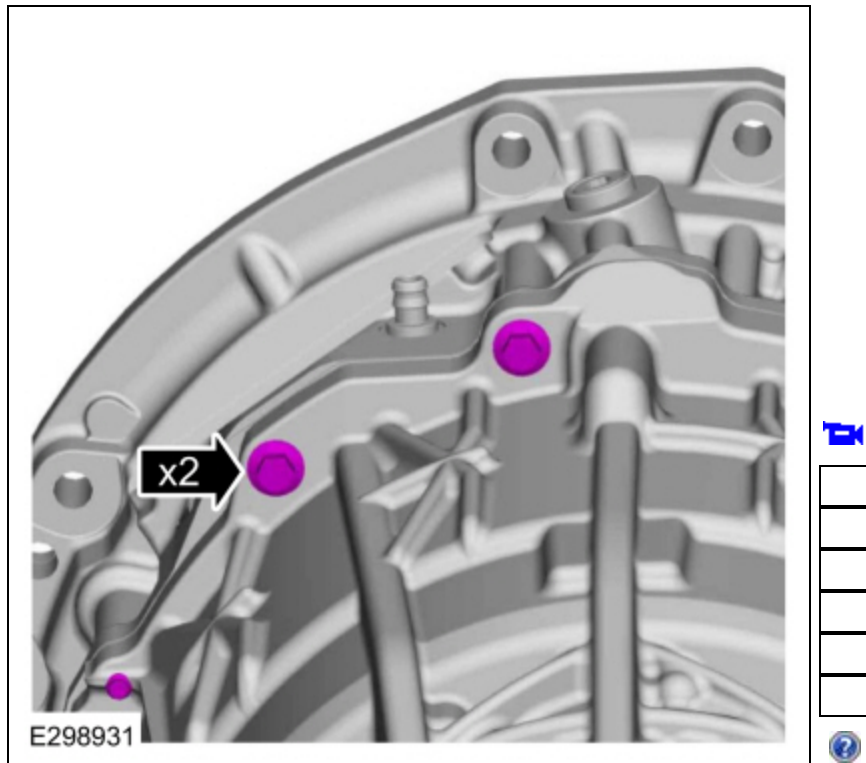


8. **NOTE:** Make sure the components are installed to the position noted before removal.

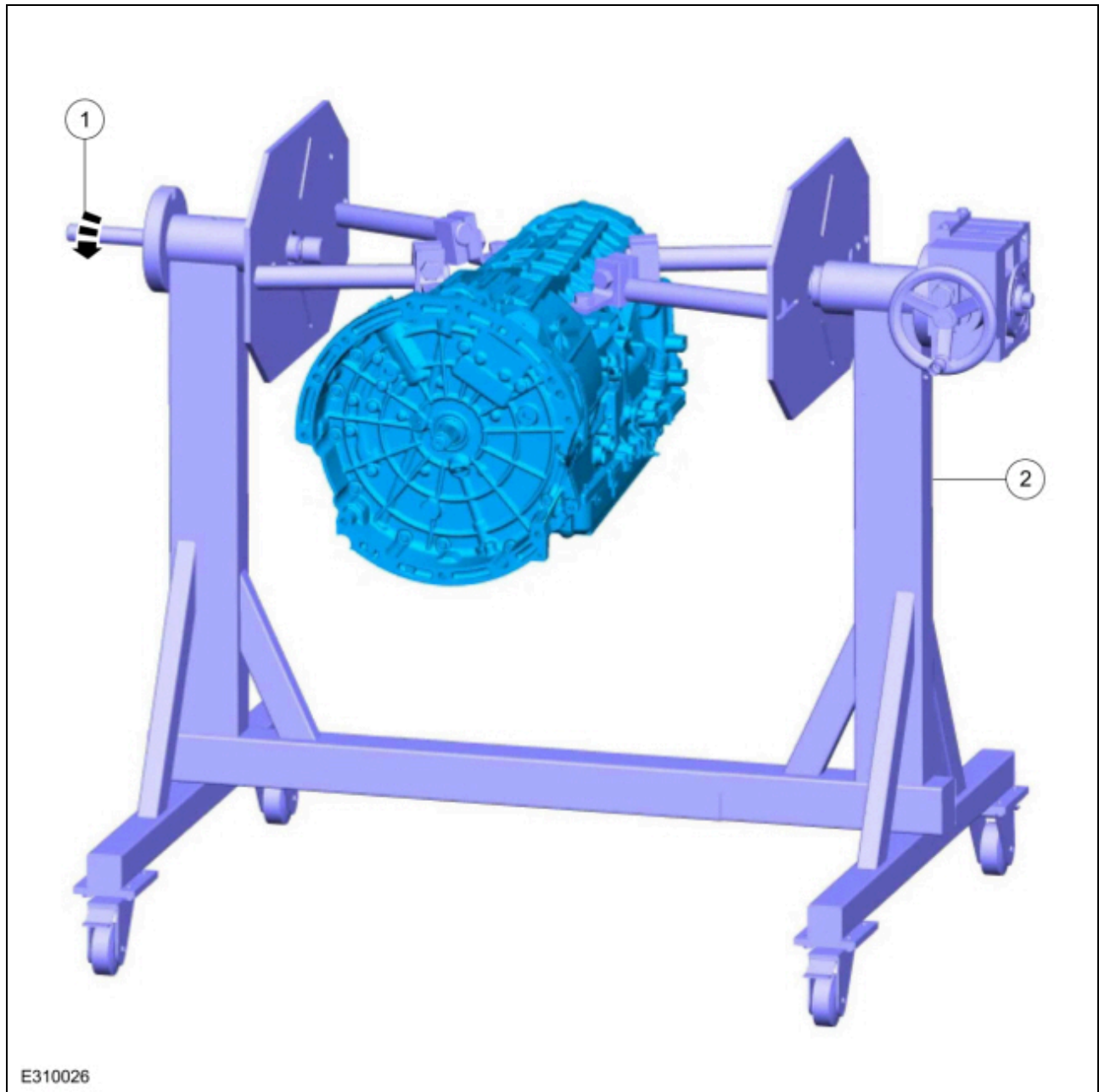
Install the front short hybrid drive unit bolt.
Torque: 18 lb.ft (25 Nm)



9. Install the back hybrid drive unit bolts.
Torque: 18 lb.ft (25 Nm)



10.
 1. Rotate the transmission to the horizontal position.
Use the General Equipment: Mounting Stand
 2. Using a floor crane, remove the transmission from the mounting stand.
Use the General Equipment: Floor Crane



11. Install the transmission.

Refer to: [Transmission](#) (307-01B Automatic Transmission - 10-Speed Automatic Transmission – 10R80 MHT, Removal and Installation).

12. If a new hybrid drive unit was installed, the Transmission Identification (TRID) file must be updated with characterization data for the new hybrid drive unit.

Refer to: [Transmission Strategy Download](#) (307-01B Automatic Transmission - 10-Speed Automatic Transmission – 10R80 MHT, General Procedures).

© Copyright 2024, Ford Motor Company.

