

DTC	Description	Possible causes	Action
			Turbocharger, Removal and Installation). Clear the DTCs and test for normal operation.
P256327	Right-hand turbocharger boost control position sensor A circuit range/performance - signal rate of change above threshold	Turbocharger position sensor circuit: high resistance	Check the turbocharger circuits. Refer to the electrical guides. Rectify as necessary. Clear the DTCs and test for normal operation.
P256421	Right-hand turbocharger boost control position sensor A circuit low - signal amplitude less than minimum	Turbocharger position sensor circuit: short circuit to ground Turbocharger failure	Check the turbocharger circuits. Refer to the electrical guides. Rectify as necessary. If no fault is found in the circuits, install a new turbocharger. REFER to: Turbocharger RH (303-04D Fuel Charging and Controls - Turbocharger, Removal and Installation). Clear the DTCs and test for normal operation.
P256522	Right-hand turbocharger boost control position sensor A circuit high - signal amplitude greater than maximum	Turbocharger position sensor circuit: short circuit to power Turbocharger failure	Check the turbocharger circuits. Refer to the electrical guides. Rectify as necessary. If no fault is found in the circuits, install a new turbocharger. REFER to: Turbocharger RH (303-04D Fuel Charging and Controls - Turbocharger, Removal and Installation). Clear the DTCs and test for normal operation.
P258727	Left-hand turbocharger boost control position sensor B circuit range/performance - signal rate of change above threshold	Turbocharger position sensor circuit: high resistance	Check the turbocharger circuits. Refer to the electrical guides. Rectify as necessary. Clear the DTCs and test for normal operation. If any DTCs reset, recheck the circuits.
P258821	Left-hand turbocharger boost control position sensor B circuit low - signal amplitude less than minimum	Turbocharger position sensor circuit: short circuit to ground Turbocharger failure	Check the turbocharger circuits. Refer to the electrical guides. Rectify as necessary. If no fault is found in the circuits, install a new turbocharger. REFER to: Turbocharger LH (303-04D Fuel Charging and Controls - Turbocharger, Removal and Installation). Clear the DTCs and test for normal operation.
P258922	Left-hand turbocharger boost control position sensor B circuit high - signal amplitude greater than maximum	Turbocharger position sensor circuit: short circuit to power Turbocharger failure	Check the turbocharger circuits. Refer to the electrical guides. Rectify as necessary. If no fault is found in the circuits, install a new turbocharger. REFER to: Turbocharger LH (303-04D Fuel Charging and Controls - Turbocharger, Removal and Installation). Clear the DTCs and test for normal operation.


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Fuel Charging and Controls - Turbocharger - Turbocharger LH

Removal and Installation

Removal

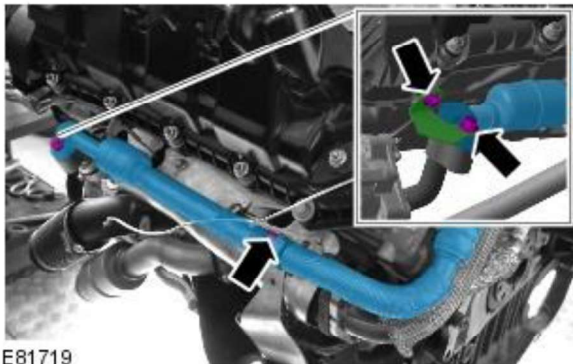
1. Disconnect the battery ground cable.
For additional information, refer to: Specifications (414-00 Charging System - General Information, Specifications).

2.  **WARNING:** Do not work on or under a vehicle supported only by a jack. Always support the vehicle on


safety stands.

Raise and support the vehicle.

3. Recover the air conditioning (A/C) refrigerant.
For additional information, refer to: [Air Conditioning \(A/C\) System Recovery, Evacuation and Charging](#) (412-00 Climate Control System - General Information, General Procedures).
4. Remove the front differential.
For additional information, refer to: [Axle Assembly - TDV8 3.6L Diesel, RHD AWD](#) (205-03 Front Drive Axle/Differential, Removal and Installation).
5. Remove the air cleaner.
For additional information, refer to: [Air Cleaner](#) (303-12C Intake Air Distribution and Filtering - TDV8 3.6L Diesel, Removal and Installation).



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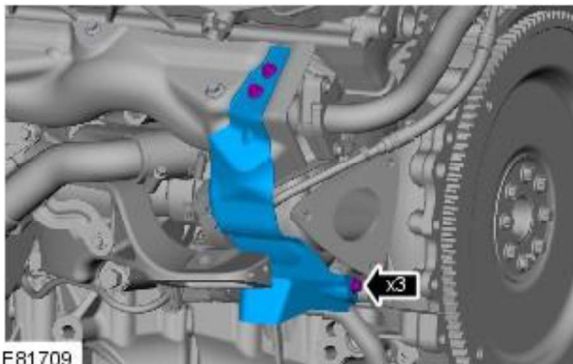
6.  **CAUTION:** Make sure that all openings are sealed. Use new blanking caps.

Disconnect the A/C refrigerant line from the A/C compressor.

Remove the 3 bolts.

Remove and discard the O-ring seal.

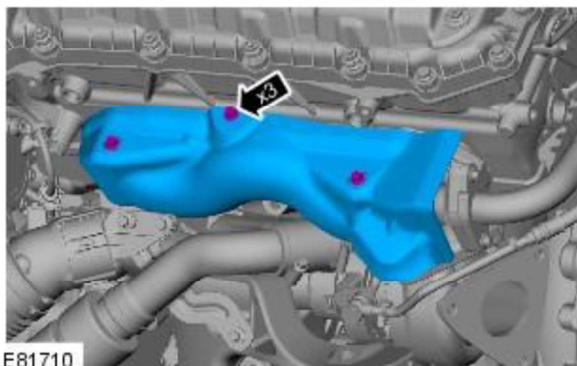
7. Remove the LH catalytic converter.
For additional information, refer to: [Catalytic Converter LH - Vehicles Without: Diesel Particulate Filter \(DPF\)](#) (309-00C Exhaust System - TDV8 3.6L Diesel, Removal and Installation) / [Catalytic Converter LH - Vehicles With: Diesel Particulate Filter \(DPF\)](#) (309-00C Exhaust System - TDV8 3.6L Diesel, Removal and Installation).



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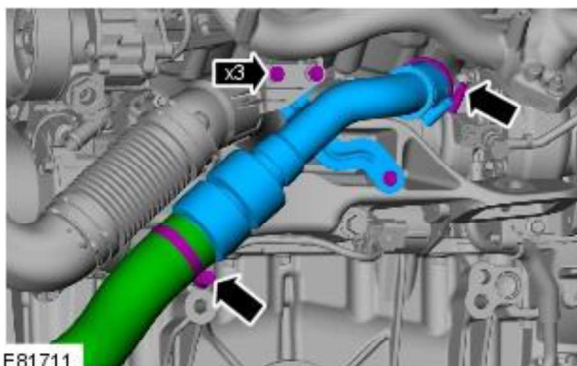
8. Remove the LH turbocharger heat shield.

Remove the 3 bolts.



9. Remove the LH exhaust manifold heat shield.

Remove the 3 bolts.

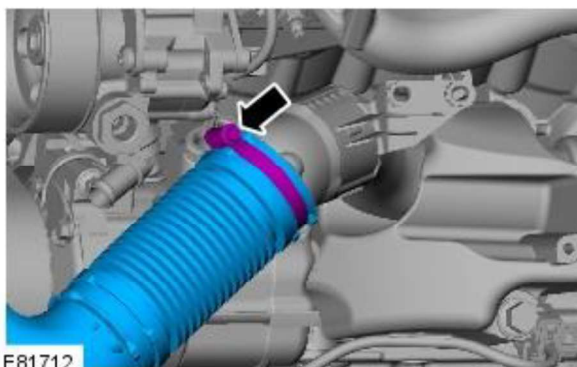


10.  CAUTION: Make sure that all openings are sealed. Use new blanking caps.

Remove the LH turbocharger outlet pipe to charge air cooler connecting hose.

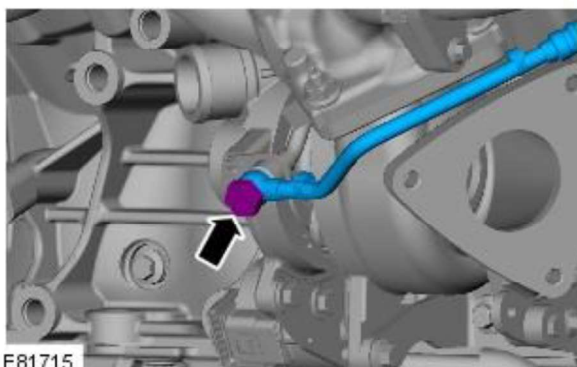
Remove the 3 bolts.

Release the 2 clips.



11. Disconnect the LH turbocharger intake tube.

Release the clip.

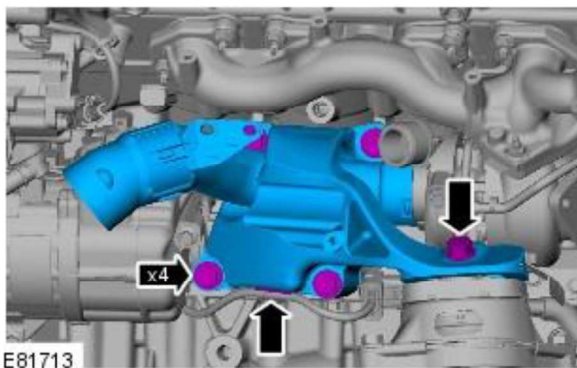


12.  CAUTION: Make sure that all openings are sealed. Use new blanking caps.

Disconnect the LH turbocharger oil supply pipe.

Remove the banjo bolt.

Remove and discard the sealing washers.



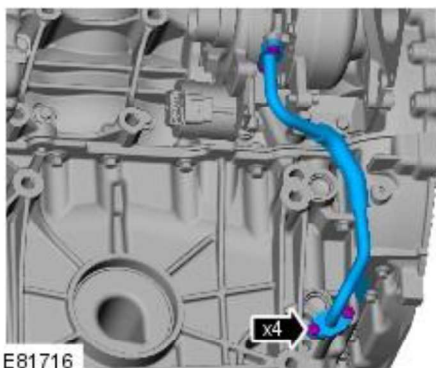
13. **CAUTION:** Make sure that all openings are sealed. Use new blanking caps.

Remove the LH engine mount bracket and turbocharger intake tube.

Support the engine.

Release the engine wiring harness.

Remove the 5 bolts.

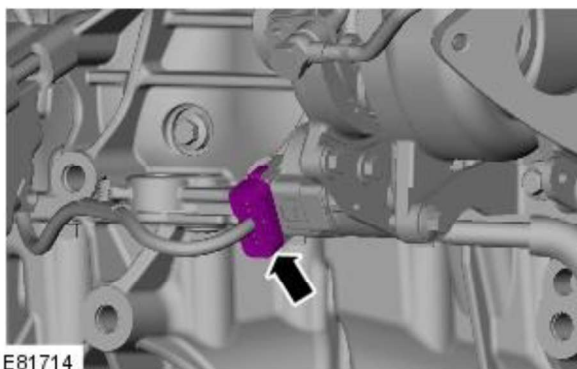


14. **CAUTION:** Make sure that all openings are sealed. Use new blanking caps.

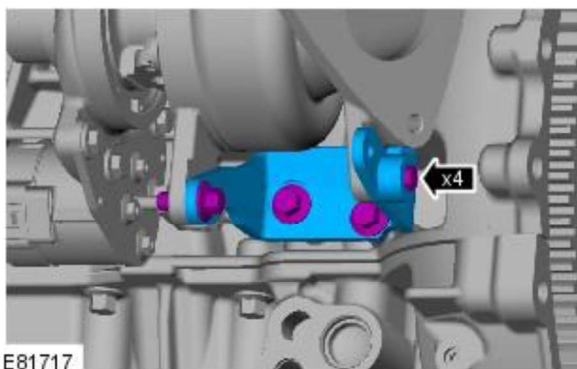
Remove the LH turbocharger oil return tube.

Remove the 4 bolts.

Remove and discard the 2 gaskets.

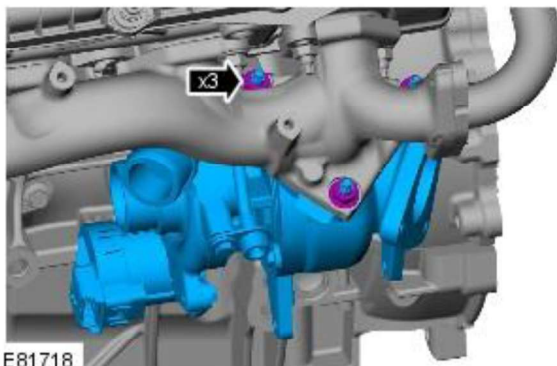


15. Disconnect the LH turbocharger electrical connector.



16. Remove the LH turbocharger support bracket.

Remove the 4 bolts.



- 17.**  **CAUTION:** Make sure that all openings are sealed. Use new blanking caps.

Remove the LH turbocharger.

Remove and discard the 3 nuts.

Remove and discard the gasket.

Installation


- 1.** **NOTE:** Remove and discard the blanking caps.

Install the LH turbocharger.

Clean the component mating faces.

Install a new gasket.

Loosely install the nuts.

- 2.**  **CAUTION:** Install but do not fully tighten the turbocharger support bracket bolts. This will allow for movement of components during the final torque stages. Failure to follow this instruction may result in damage to the vehicle.

Install the LH turbocharger support bracket.

Install the bolts.

- 3.** Secure the LH turbocharger.

Tighten the nuts to 24 Nm (18 lb.ft).

- 4.** Secure the LH turbocharger support bracket.

Stage 1: Tighten the LH turbocharger support bracket bolts at the turbocharger to 24 Nm (18 lb.ft).

Stage 2: Tighten the LH turbocharger support bracket bolts at the cylinder block to 24 Nm (18 lb.ft).

- 5.** Check tightness of the turbocharger nuts.

Tighten the nuts to 24 Nm (18 lb.ft).

- 6.** Connect the LH turbocharger electrical connector.

- 7.** **NOTE:** Remove and discard the blanking caps.

Install the LH turbocharger oil return tube.

Clean the component mating faces.

Install new gaskets.

Tighten the bolts to 10 Nm (7 lb.ft).

8. NOTE: Remove and discard the blanking caps.

Install the LH engine mount bracket and turbocharger intake tube.

Tighten the engine mount bracket bolts to 115 Nm (85 lb.ft).

Tighten the engine mount bolt to 100 Nm (85 lb.ft).

Secure the engine wiring harness.

9. Install the LH exhaust manifold heat shield.

10. NOTE: Remove and discard the blanking caps.

Connect the LH turbocharger oil supply pipe.

Clean the component mating faces.

Install new sealing washers.

Tighten the banjo bolt to 24 Nm (18 lb.ft).

11. Connect the LH turbocharger intake tube.

Tighten the clip.

12. NOTE: Remove and discard the blanking caps.

Install the LH turbocharger outlet pipe to charge air cooler connecting hose.

Tighten the bolts to 10 Nm (7 lb.ft).

Tighten the clips.

13. Secure the LH exhaust manifold heat shield.

Tighten the bolts to 10 Nm (7 lb.ft).

14. Install the LH turbocharger heat shield.

Tighten the bolts to 10 Nm (7 lb.ft).

15. Install the LH catalytic converter.

For additional information, refer to: [Catalytic Converter LH - Vehicles Without: Diesel Particulate Filter \(DPF\)](#) (309-00C Exhaust System - TDV8 3.6L Diesel, Removal and Installation) / [Catalytic Converter LH - Vehicles With: Diesel Particulate Filter \(DPF\)](#) (309-00C Exhaust System - TDV8 3.6L Diesel, Removal and Installation).

16. NOTE: Remove and discard the blanking caps.

Connect the A/C refrigerant line to the A/C compressor.

Install a new O-ring seal.

Tighten the bolts to 23 Nm (17 lb.ft).

17. Install the air cleaner.

For additional information, refer to: [Air Cleaner](#) (303-12C Intake Air Distribution and Filtering - TDV8 3.6L Diesel, Removal and Installation).

18. Install the front differential.

For additional information, refer to: [Axle Assembly -](#)

[TDV8 3.6L Diesel, RHD AWD](#) (205-03 Front Drive Axle/Differential, Removal and Installation).

19. Recharge the A/C system.
For additional information, refer to: [Air Conditioning \(A/C\) System Recovery, Evacuation and Charging](#) (412-00 Climate Control System - General Information, General Procedures).
20. Connect the battery ground cable.
For additional information, refer to: Specifications (414-00 Charging System - General Information, Specifications).


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Fuel Charging and Controls - Turbocharger - Turbocharger RH

Removal and Installation

Removal

1. Disconnect the battery ground cable.
For additional information, refer to: Specifications (414-00 Charging System - General Information, Specifications).

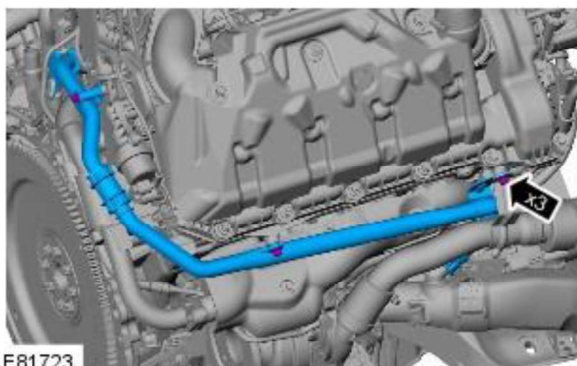
2.  **WARNING:** Do not work on or under a vehicle supported only by a jack. Always support the vehicle on safety stands.

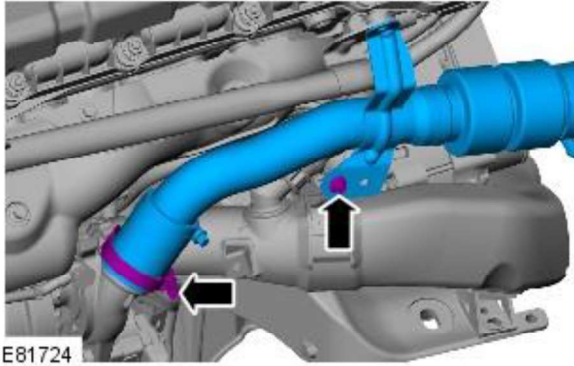
Raise and support the vehicle.


3. Remove the RH catalytic converter.
For additional information, refer to: [Catalytic Converter RH - Vehicles With: Diesel Particulate Filter \(DPF\)](#) (309-00C Exhaust System - TDV8 3.6L Diesel, Removal and Installation) / [Catalytic Converter RH - Vehicles Without: Diesel Particulate Filter \(DPF\)](#) (309-00C Exhaust System - TDV8 3.6L Diesel, Removal and Installation).
4. Remove the starter motor.
For additional information, refer to: [Starter Motor](#) (303-06C Starting System - TDV8 3.6L Diesel, Removal and Installation).

5. Disconnect the breather line.

Remove the 3 bolts.



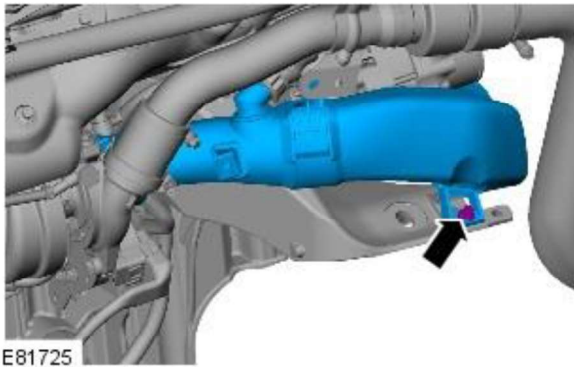


6.  **CAUTION:** Make sure that all openings are sealed. Use new blanking caps.

Disconnect the charge air cooler RH intake pipe.

Remove the bolt.

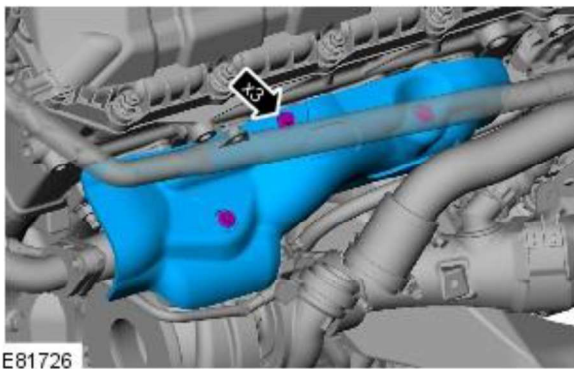
Release the clip.



7.  **CAUTION:** Make sure that all openings are sealed. Use new blanking caps.

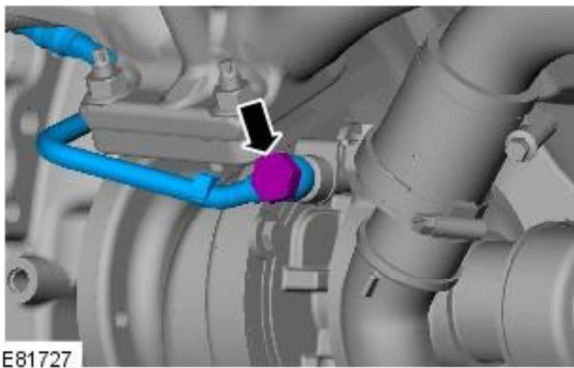
Disconnect the RH turbocharger intake tube.

Remove the nut.



8. Remove the RH exhaust manifold heat shield.

Remove the 3 bolts.

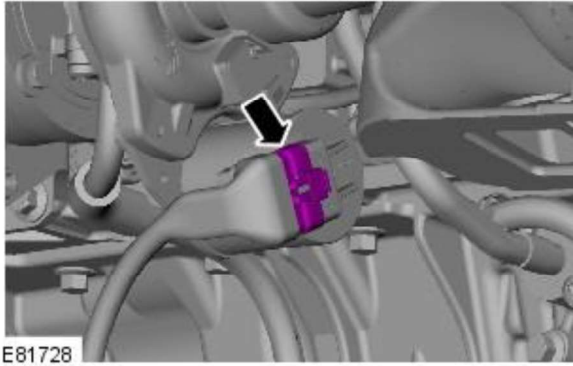


9.  **CAUTION:** Make sure that all openings are sealed. Use new blanking caps.

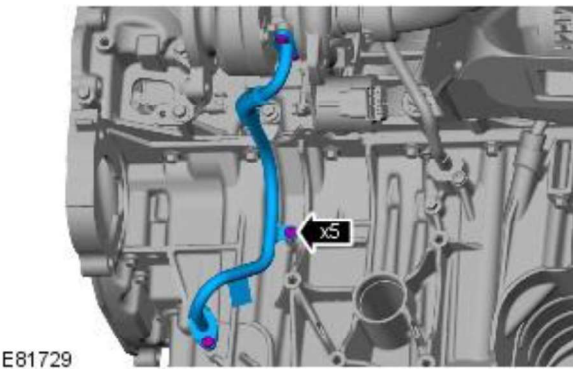
Disconnect the RH turbocharger oil supply pipe.

Remove the banjo bolt.

Remove and discard the sealing washers.



10. Disconnect the RH turbocharger electrical connector.

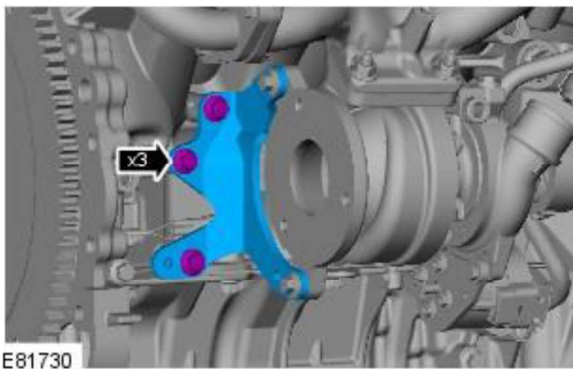


11.  **CAUTION:** Make sure that all openings are sealed. Use new blanking caps.

Remove the RH turbocharger oil return tube.

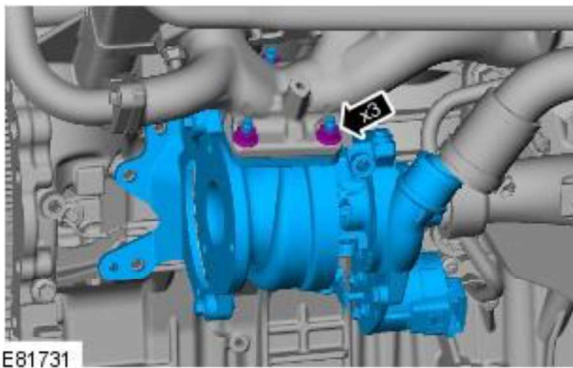
Remove the 5 bolts.

Remove and discard the 2 gaskets.



12. Release the RH turbocharger support bracket.

Remove the 3 bolts.

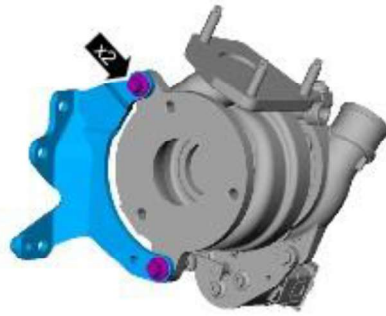


13.  **CAUTION:** Make sure that all openings are sealed. Use new blanking caps.

Remove the RH turbocharger.

Remove and discard the 3 nuts.

Remove and discard the gasket.



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14. Remove the RH turbocharger support bracket.

Remove the 2 bolts.

Installation


1. NOTE: Remove and discard the blanking caps.

Install the RH turbocharger.

Clean the component mating faces.

Install a new gasket.

Loosely install the nuts.

2.  CAUTION: Install but do not fully tighten the turbocharger support bracket bolts. This will allow for movement of components during the final torque stages. Failure to follow this instruction may result in damage to the vehicle.

Install the RH turbocharger support bracket.

Install the bolts.

3. Secure the RH turbocharger.

Tighten the nuts to 24 Nm (18 lb.ft).

4. Secure the RH turbocharger support bracket.

Stage 1: Tighten the RH turbocharger support bracket bolts at the turbocharger to 24 Nm (18 lb.ft).

Stage 2: Tighten the RH turbocharger support bracket bolts at the cylinder block to 24 Nm (18 lb.ft).

5. Check tightness of the turbocharger nuts.

Tighten the nuts to 24 Nm (18 lb.ft).

6. NOTE: Remove and discard the blanking caps.

Install the RH turbocharger oil return tube.

Clean the component mating faces.

Install new gaskets.

Tighten the bolts to 10 Nm (7 lb.ft).

7. Connect the RH turbocharger electrical connector.

8. NOTE: Remove and discard the blanking caps.

Connect the RH turbocharger oil supply pipe.

Clean the component mating faces.

Install new sealing washers.

Tighten the banjo bolt to 24 Nm (18 lb.ft).

9. Install the RH exhaust manifold heat shield.

Tighten the bolts to 10 Nm (7 lb.ft).

10. NOTE: Remove and discard the blanking caps.

Connect the RH turbocharger intake tube.

Tighten the nut to 10 Nm (7 lb.ft).

11. NOTE: Remove and discard the blanking caps.

Connect the charge air cooler RH intake pipe.

Tighten the clip.

Tighten the bolt to 10 Nm (7 lb.ft).

12. Connect the breather line.

Tighten the bolts to 10 Nm (7 lb.ft).

13. Install the starter motor.

For additional information, refer to: [Starter Motor](#) (303-06C Starting System - TDV8 3.6L Diesel, Removal and Installation).

14. Install the RH catalytic converter.

For additional information, refer to: [Catalytic Converter RH - Vehicles Without: Diesel Particulate Filter \(DPF\)](#) (309-00C Exhaust System - TDV8 3.6L Diesel, Removal and Installation) / [Catalytic Converter RH - Vehicles With: Diesel Particulate Filter \(DPF\)](#) (309-00C Exhaust System - TDV8 3.6L Diesel, Removal and Installation).

15. Connect the battery ground cable.

For additional information, refer to: Specifications (414-00 Charging System - General Information, Specifications).

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Fuel Charging and Controls - Turbocharger - Turbocharger Actuator Rod

Removal and Installation

Removal



CAUTION: Always plug any open connections to prevent contamination.

- NOTE: Some variation in the illustrations may occur, but the essential information is always correct.

1. Remove the left hand turbocharger or right hand turbocharger as necessary. For additional information, refer to: (303-04D Fuel Charging and Controls -