

PUBLISHED: 18-OCT-2016
2011.0 RANGE ROVER (LM), 205-03

FRONT DRIVE AXLE/DIFFERENTIAL

AXLE ASSEMBLY – TDV8 3.6L DIESEL/TDV8 4.4L DIESEL, RHD (G915987)

REMOVAL AND INSTALLATION

SPECIAL TOOL(S)

308-005



E54134

308-005(LRT-37-004/2)

Axle oil seal remover

308-626/1



E54136

308-626/1

Installer halfshaft oil seal

308-626/2



E54137

308-626/2

Installer/Guide halfshaft oil seal



E54135

100-012(LRT-99-004)

Impulse extractor

REMOVAL

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

2.



WARNING:

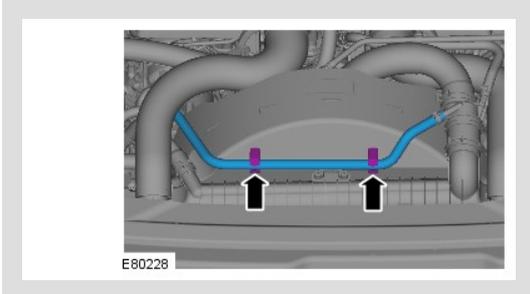
Do not work on or under a vehicle supported only by a jack. Always support the vehicle on safety stands.

Raise and support the vehicle.

3. Remove the plenum chamber. For additional information, refer to: [Plenum Chamber](#) (412-01A Air Distribution and Filtering, Removal and Installation).

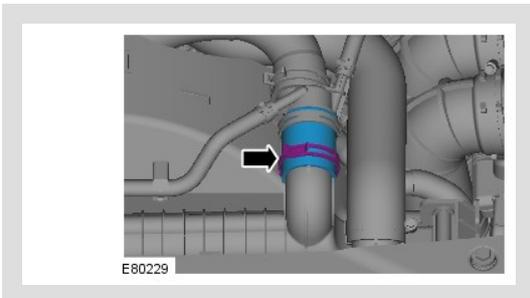
4. Drain the cooling system. For additional information, refer to: [Cooling System Partial Draining, Filling and Bleeding](#) (303-03A Engine Cooling - TDV8 4.4L Diesel, General Procedures).

5.



Release the coolant expansion hose.

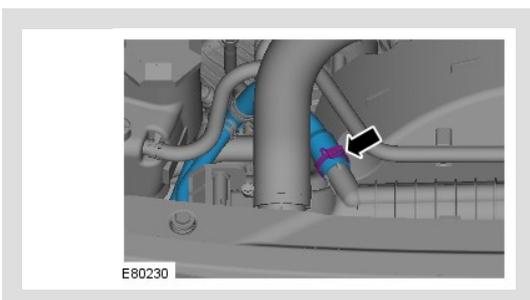
6.



Disconnect the radiator upper hose.

Release the clip.

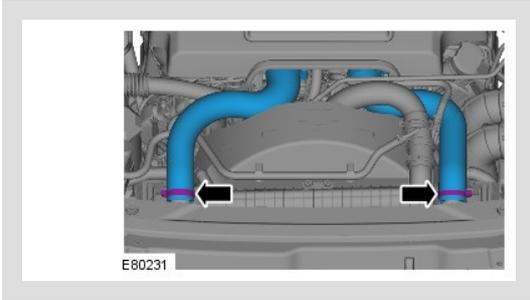
7.



Disconnect the auxiliary radiator coolant hose.

Release the clip.

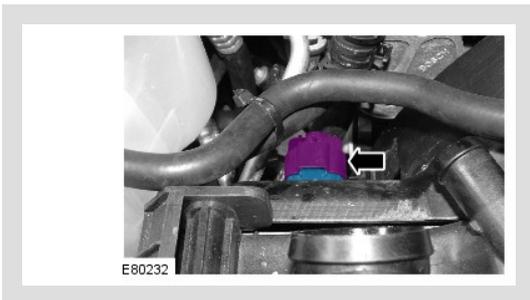
8.



Disconnect the charge air cooler outlet hoses.

Release the 2 clips.

9.



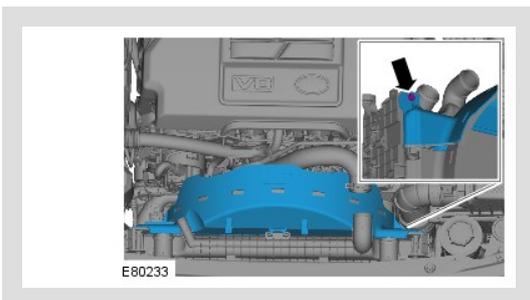
Disconnect the cooling fan control electrical connector.

Release the cooling fan control electrical connector from the cooling fan upper shroud.

10.

 **NOTE:**

Left-hand shown, right-hand similar.



Remove the cooling fan upper shroud.

Remove the 2 screws.

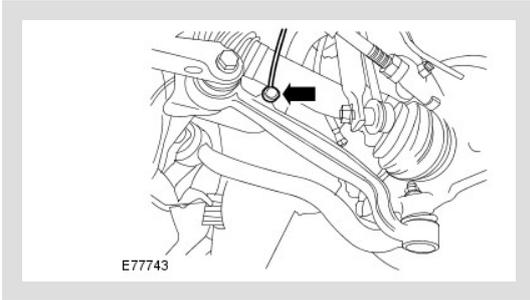
11. Remove the front wheels and tires.

12. Drain the differential fluid. For additional information, refer to: [Differential Draining and Filling](#) (205-03 Front Drive Axle/Differential, General Procedures).

13.

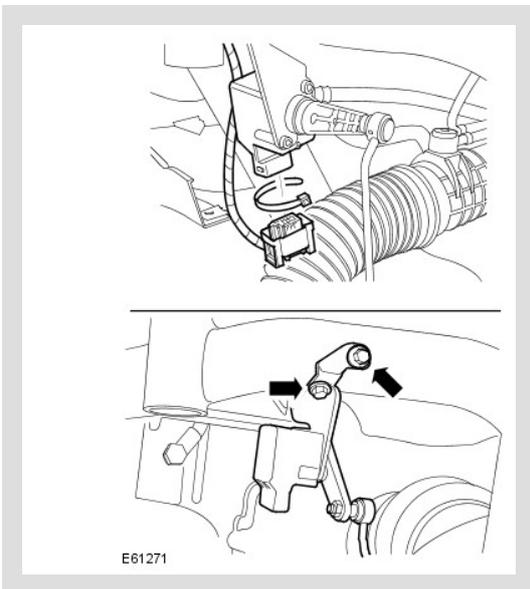
! CAUTION:

Do not use excessive force to disconnect the height sensor link.



LH front: Release the height sensor link.

14.



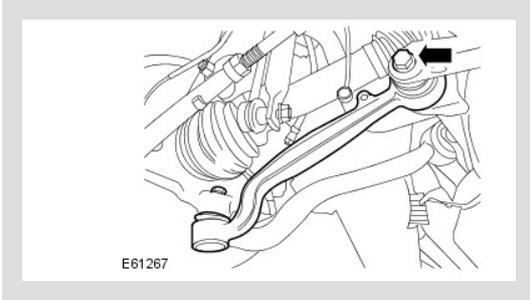
LH front: Remove the suspension height sensor.

Remove and discard the tie-strap.

Disconnect the electrical connector.

Remove the 2 bolts.

15.



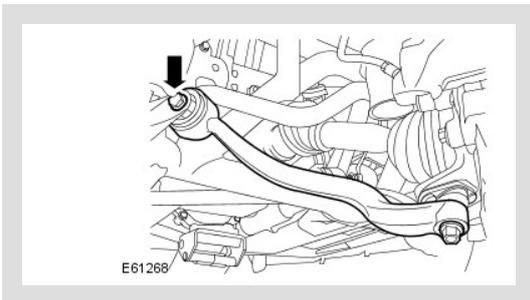
E61267

Release the LH front lower arm.

Remove and discard the nut.

Remove the bolt.

16.



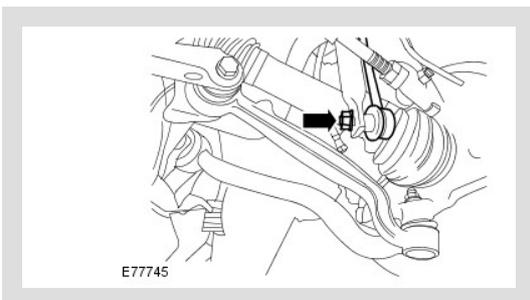
E61268

Release the LH rear lower arm.

Remove and discard the nut.

Remove the bolt.

17.

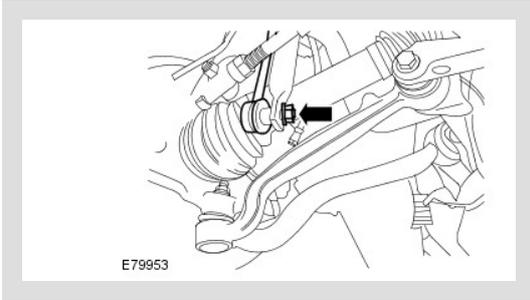


E77745

Release the LH stabilizer bar link.

Remove and discard the nut.

18.



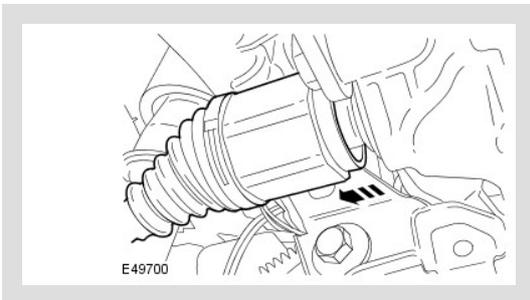
Release the RH stabilizer bar link.

Remove and discard the nut.

19.

⚠ CAUTION:

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



Release the LH halfshaft from the axle assembly.

Remove and discard the snap ring.

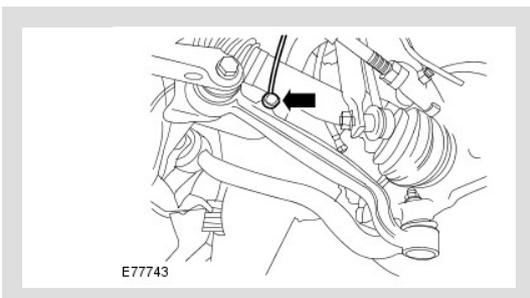
20.

⚠ CAUTION:

Do not use excessive force to disconnect the height sensor link.

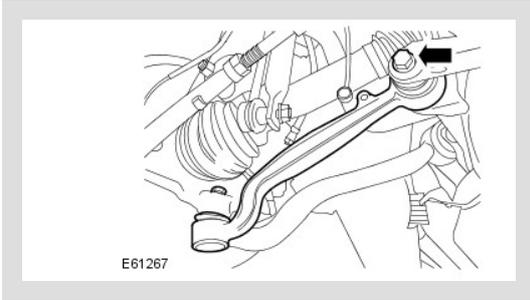
△ NOTE:

Left-hand shown, right-hand similar.



RH front: Release the height sensor link.

21.

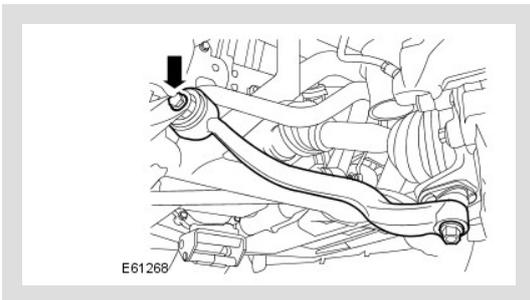


Release the RH front lower arm.

Remove and discard the nut.

Remove the bolt.

22.



Release the RH rear lower arm.

Remove and discard the nut.

Remove the bolt.

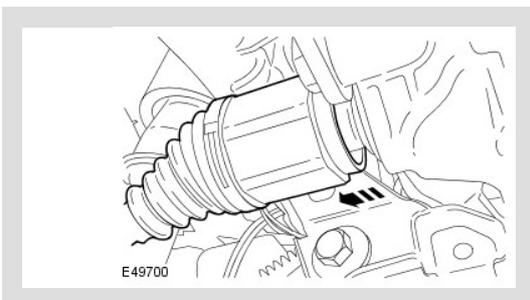
23.

⚠ CAUTION:

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

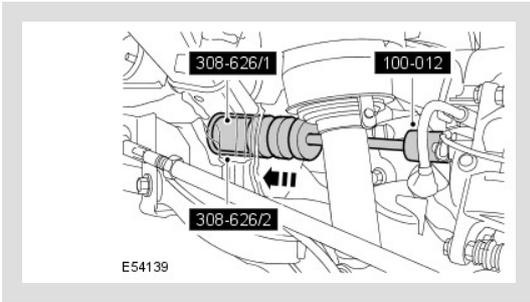
△ NOTE:

Left-hand shown, right-hand similar.



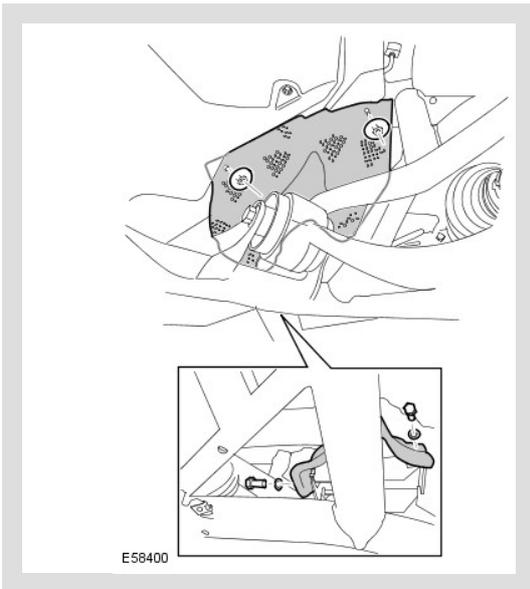
Release the RH halfshaft from the axle assembly.

24.



Using the special tools, remove and discard the halfshaft oil seal.

25.

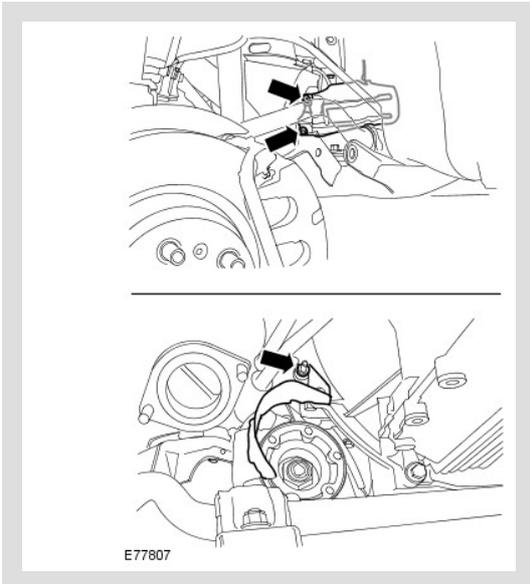


Remove the LH catalytic converter heat shield.

Remove the 2 bolts.

Remove the 2 nuts.

26.



Remove the front driveshaft joint shield.

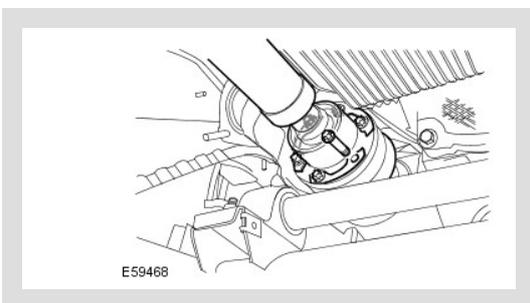
Remove the 2 bolts.

Remove the nut.

27.

! CAUTION:

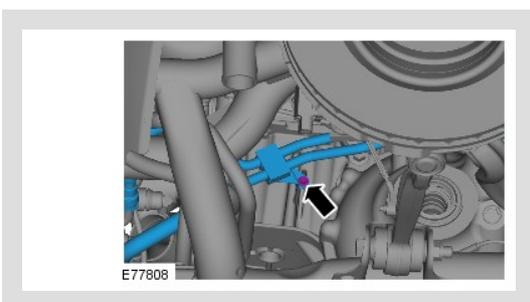
Mark the position of the driveshaft flange in relation to the drive pinion flange.



Release the front driveshaft from the axle assembly.

Remove and discard the 6 bolts.

28.



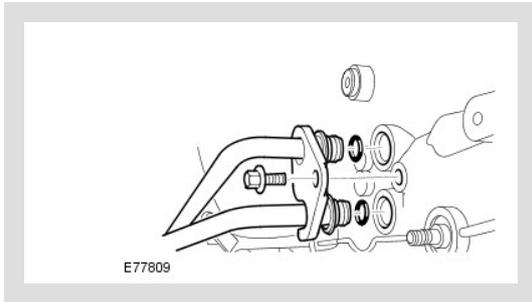
Release the transmission fluid lines.

Remove the bolt.

29.

! CAUTION:

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



Disconnect the transmission fluid lines.

Remove the bolt.

Position container to collect fluid loss.

Remove and discard the O-ring seals.

30.



Release the LH engine mount.

Remove the bolt.

31.



Release the RH engine mount.

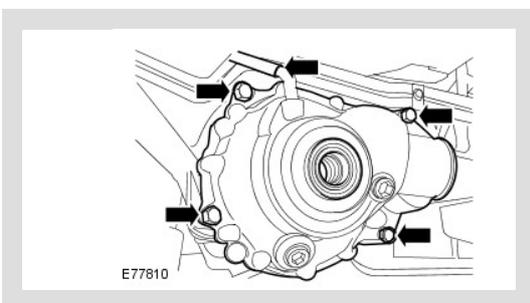
Remove the 2 bolts.

32. Raise the engine by 40 mm (1.57 in).

33.

 **NOTE:**

The upper rear bolt will remain in the differential.



Release the differential.

Disconnect the differential breather line.

Remove the 4 bolts.

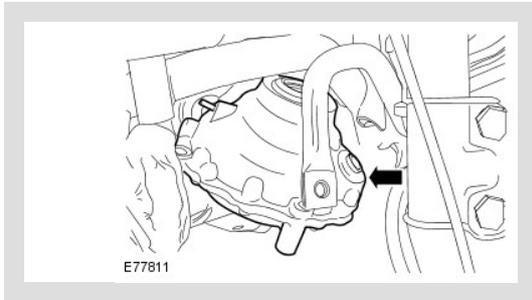
34.

⚠ CAUTION:

Make sure component mating faces are not damaged during removal.

△ NOTE:

Note the fitted position of the bolt.

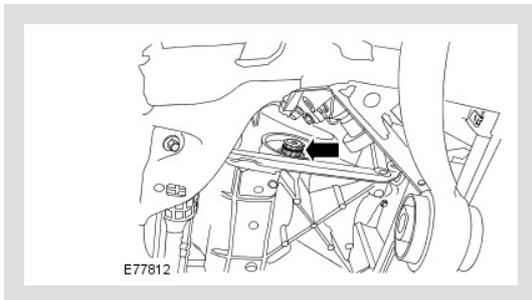


With assistance, remove the differential.

Remove the bolt.

Remove and discard the O-ring seal.

35.



Remove and discard the clip from the RH halfshaft.

INSTALLATION

1. Install a new clip to the RH halfshaft.

2. With assistance, install the differential.

Lubricate the O-ring seal.

Install a new O-ring seal.

Install the bolt.

3. With assistance, align and secure the differential.

4. Tighten the 100 mm length bolts.

Stage 1: Tighten the bolts to 50 Nm (37 lb.ft).

Stage 2: Tighten the bolts a further 90 degrees.

5. Tighten the 55 mm length bolts.

Stage 1: Tighten the bolts to 50 Nm (37 lb.ft).

Stage 2: Tighten the bolts a further 60 degrees.

Connect the differential breather line.

6.

 **NOTE:**

Remove and discard the blanking caps.

Connect the transmission fluid lines to the transmission.

Install new O-ring seals.

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

Remove the container.

7. Secure the transmission fluid lines.

Tighten the bolt to 6 Nm (4 lb.ft).

8. Carefully lower the engine onto the engine mounts.

9. Secure the RH engine mount.

Tighten the bolts to 56 Nm (41 lb.ft).

10. Secure the LH engine mount.

Tighten the bolt to 100 Nm (74 lb.ft).

11.

 **NOTE:**

Remove and discard the blanking caps.

Secure the driveshaft to the differential.

Stage 1: Tighten the bolts to 45 Nm (33 lb.ft).

Stage 2: Tighten a further 90 degrees.

12. Connect the differential breather line.

13. Install the front driveshaft joint shield.

Tighten the bolts to 3 Nm (2.2 lb.ft).

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

14. Install the LH catalytic converter heat shield.

Tighten the nuts to 8 Nm (6 lb.ft).

Tighten the bolts to 8 Nm (6 lb.ft).

15.

 **NOTE:**

Remove and discard the blanking caps.

Secure the RH inner halfshaft joint to the differential.

16.

 **CAUTION:**

Nuts and bolts must be tightened with the weight of the vehicle on the suspension.

 **NOTE:**

Do not fully tighten the locking nut at this stage.

Secure the RH rear lower arm.

Stage 1: Tighten to 165 Nm (122 lb.ft).

Stage 2: Tighten a further 90 degrees.

17.

 **CAUTION:**

Nuts and bolts must be tightened with the weight of the vehicle on the suspension.

 **NOTE:**

Do not fully tighten the locking nut at this stage.

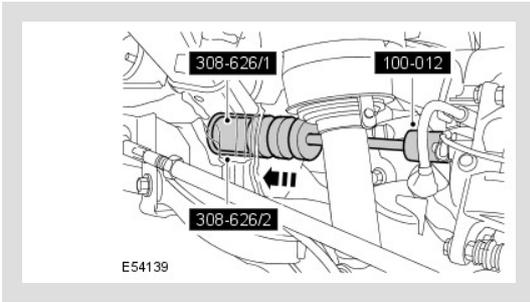
Secure the RH front lower arm.

Stage 1: Tighten to 165 Nm (122 lb.ft).

Stage 2: Tighten a further 90 degrees.

18. RH front: Secure the height sensor link.

19.



Using the special tools, install a new halfshaft oil seal.

The halfshaft oil seal protector must be left in place, until the halfshaft is fully installed.

20. Secure the LH halfshaft to the axle assembly.

Install a new snap ring.

21.

⚠ CAUTION:

Nuts and bolts must be tightened with the weight of the vehicle on the suspension.

⚠ NOTE:

Do not fully tighten the locking nut at this stage.

Secure the LH rear lower arm.

Stage 1: Tighten to 165 Nm (122 lb.ft).

Stage 2: Tighten a further 90 degrees.

22.

⚠ CAUTION:

Nuts and bolts must be tightened with the weight of the vehicle on the suspension.

⚠ NOTE:

Do not fully tighten the locking nut at this stage.

Secure the LH front lower arm.

Stage 1: Tighten to 165 Nm (122 lb.ft).

Stage 2: Tighten a further 90 degrees.

23. LH front: Install the suspension height sensor.

Tighten the bolts to 3 Nm (2.2 lb.ft).

Connect the electrical connector.

Using a suitable tie strap, secure the harness.

24. Connect the height sensor link.

25. Secure the LH stabilizer bar link.

Install a new nut.

Tighten the nut to 100 Nm (74 lb.ft).

26. Secure the RH stabilizer bar link.

Install a new nut.

Tighten the nut to 100 Nm (74 lb.ft).

27. Fill the front differential case with the correct amount of fluid. For additional information, refer to: [Differential Draining and Filling](#) (205-03 Front Drive Axle/Differential, General Procedures).

28. Check and top-up the transmission fluid level.

29. Install the front wheels and tires.

Tighten the wheel nuts to 140 Nm (103 lb.ft).

30. Install the plenum chamber. For additional information, refer to: [Plenum Chamber](#) (412-01A Air Distribution and Filtering, Removal and Installation).

31. Install the cooling fan upper shroud.

Tighten the screws.

32. Connect the cooling fan electrical connector.

Secure the cooling fan control electrical connector to the cooling fan upper shroud.

33. Connect the charge cooler outlet hoses.

Secure the clips.

34. Connect the auxiliary radiator coolant hose.

Secure the clip.

35. Connect the radiator upper hose.

Secure the clip.

36. Secure the coolant expansion hose.

37. Fill and bleed the cooling system. For additional information, refer to: [Cooling System Partial Draining, Filling and Bleeding](#) (303-03A Engine Cooling - TDV8 4.4L Diesel, General Procedures).

38. Check, and if necessary, adjust the wheel alignment. For additional information, refer to: [Four Wheel Alignment](#) (204-00 Suspension System - General Information, General Procedures).