

2012.0 RANGE ROVER (LM), 501-27

FRONT END SHEET METAL REPAIRS

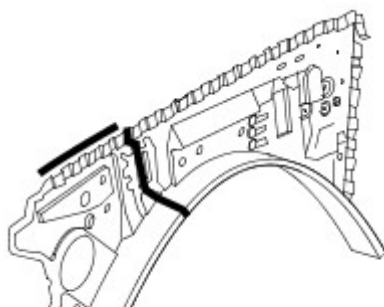
FENDER APRON PANEL REINFORCEMENT FRONT SECTION (G928700)

REMOVAL AND INSTALLATION

REMOVAL

1. Disconnect the battery ground cable.
For additional information, refer to: Specifications (414-00, Specifications).
2. Disconnect the generator electrical connector.
3. Remove the fender apron panel front extension.
For additional information, refer to: Fender Apron Panel Front Extension (501-27, Removal and Installation).
4. Release the wiring harness from the fender apron panel reinforcement front section.

5. 



M772223



Remove the fender apron panel reinforcement front section.

-
6. Prepare the new panel for installation.

For additional information, refer to: Body (501-00, Description and Operation).

INSTALLATION

-
1. Install the fender apron panel reinforcement front section.

-
2. Secure the wiring harness from the fender apron panel reinforcement front section.

-
3. Install the fender apron panel front extension.
For additional information, refer to: Fender Apron Panel Front Extension (501-27, Removal and Installation).

-
4. Connect the generator electrical connector.

-
5. Connect the battery ground cable.
For additional information, refer to: Specifications (414-00, Specifications).

2012.0 RANGE ROVER (LM), 501-27

FRONT END SHEET METAL REPAIRS

**FENDER APRON PANEL
REINFORCEMENT REAR
SECTION** (G928701)

REMOVAL



All vehicles

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

 2. Remove the fender apron panel.
For additional information, refer to: Fender Apron Panel (501-27, Removal and Installation).

 3. Remove the engine undershield.
For additional information, refer to: Engine Undershield (501-02, Removal and Installation).

 4. Remove the front bumper cover.
For additional information, refer to: Front Bumper Cover (501-19, Removal and Installation).

 5. Remove the front bumper.
For additional information, refer to: Front Bumper (501-19, Removal and Installation).

 6. Remove the coolant expansion tank. For additional information, refer to: (303-03) Coolant Expansion Tank (Removal and Installation), Coolant Expansion Tank (Removal and Installation), Coolant Expansion Tank (Removal and Installation).

 7. Remove the radiator. For additional information, refer to: (303-03) Radiator (Removal and Installation), Radiator (Removal and Installation),

Radiator (Removal and Installation),
Radiator (Removal and Installation).

8.

CAUTION:

Make sure if the air conditioning (A/C) components are damaged or contaminated during a collision, further investigation and replacement of components may be required. Failure to follow this instruction may result in damage to the vehicle.

Recover the A/C refrigerant.

For additional information, refer to: Air Conditioning (A/C) System Recovery, Evacuation and Charging (412-00, General Procedures).

9. Release the A/C pipes from the front side member.

10. Remove the transmission fluid cooler. For additional information, refer to: (307-02)

Transmission Fluid Cooler (Removal and Installation),

Transmission Fluid Cooler (Removal and Installation),

Transmission Fluid Cooler - 4.4L (Removal and Installation).



Vehicles with diesel engine

1. Remove the charge air cooler pipes.

- Release the charge air cooler pipes.



All vehicles

1. Remove the fuel fired booster heater.

For additional information, refer to: Fuel Fired Booster Heater (412-02, Removal and Installation).

2. Remove the plenum chamber.

For additional information, refer to: Plenum Chamber (412-01, Removal and Installation).

3. Remove the cowl panel grille.

For additional information, refer to: Cowl Panel Grille (501-02, Removal and Installation).

4. Remove the plenum chamber drain tube.
-

5. Remove the accelerator pedal. For additional information, refer to: (310-02)

Accelerator Pedal (Removal and Installation),
Accelerator Pedal (Removal and Installation).

6. Remove the fender.

For additional information, refer to: Fender (501-02, Removal and Installation).

7. Remove the power steering pipes from the access panel.
-

8. Remove the windscreen washer reservoir.

For additional information, refer to: Windshield Washer Reservoir (501-16, Removal and Installation).

9. Remove the generator. For additional information, refer to: (414-02)

Generator (Removal and Installation),
Generator (Removal and Installation),
Generator (Removal and Installation).

10. Remove the anti-lock brake system (ABS) module. For additional information, refer to: (206-09)

Anti-Lock Brake System (ABS) Module - Vehicles With: Standard Brakes (Removal and Installation),
Anti-Lock Brake System (ABS) Module - Vehicles With: High Performance Brakes (Removal and Installation),
Anti-Lock Brake System (ABS) Module - 3.6L (TdV8) Diesel (Removal and Installation).

-
11. Remove the brake booster. For additional information, refer to:
(206-07)
Brake Booster - Vehicles With: Standard Brakes (Removal and Installation),
Brake Booster - Vehicles With: High Performance Brakes (Removal and Installation).
-
12. Remove the fuel pipes from the side member.
-
13. Remove the fuel filter element. For additional information, refer to:
(310-01)
Fuel Filter (Removal and Installation),
Fuel Filter (Removal and Installation),
Fuel Filter Element (Removal and Installation).
-
14. Remove the battery tray.
For additional information, refer to: Battery Tray (414-01, Removal and Installation).
-
15. Remove the front air spring.
For additional information, refer to: Front Air Spring (204-05, Removal and Installation).
-
16. Remove the air suspension reservoir.
For additional information, refer to: Air Suspension Reservoir (204-05, Removal and Installation).
-
17. Remove the fuel pipes.
-
18. Remove the brake pipes.
-
19. Disconnect the wiring harness.
- Reposition the wiring harness.
-
20. Remove the insulation material from the instrument panel lower section.

21. Remove the heat shield from the transmission tunnel.

22. Remove the steering column.

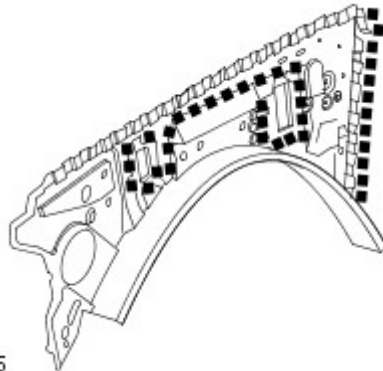
For additional information, refer to: Steering Column (211-04, Removal and Installation).

23. Remove the in-vehicle crossbeam.

For additional information, refer to: In-Vehicle Crossbeam (501-12, Removal and Installation).

24. Release the floor covering for access.

25.



M772215

Remove the fender apron panel reinforcement rear section.

26. Prepare the new panel for installation.

For additional information, refer to: Body (501-00, Description and Operation).

INSTALLATION



All vehicles

1. Install the fender apron panel reinforcement rear section.

2. Secure the floor covering.

3. Install the in-vehicle crossbeam.

For additional information, refer to: In-Vehicle Crossbeam (501-12, Removal and Installation).

4. Install the heat shield to the transmission tunnel.

5. Install the insulation material to the instrument panel lower section.

6. Connect the wiring harness.

- Reposition the wiring harness.

7. Install the brake pipes.

8. Install the fuel pipes.

9. Install the air suspension reservoir.

For additional information, refer to: Air Suspension Reservoir (204-05, Removal and Installation).

10. Install the front air spring.

For additional information, refer to: Front Air Spring (204-05, Removal and Installation).

11. Install the battery tray.

For additional information, refer to: Battery Tray (414-01, Removal and Installation).

12. Install the fuel filter element. For additional information, refer to: (310-01)

Fuel Filter (Removal and Installation),

Fuel Filter (Removal and Installation),

Fuel Filter Element (Removal and Installation).

13. Install the fuel pipes to the side member.

14. Install the brake booster. For additional information, refer to: (206-07)

Brake Booster - Vehicles With: Standard Brakes (Removal and

Installation),

Brake Booster - Vehicles With: High Performance Brakes (Removal and Installation).

-
15. Install the anti-lock brake system (ABS) module. For additional information, refer to: (206-09)
Anti-Lock Brake System (ABS) Module - Vehicles With: Standard Brakes (Removal and Installation),
Anti-Lock Brake System (ABS) Module - Vehicles With: High Performance Brakes (Removal and Installation),
Anti-Lock Brake System (ABS) Module - 3.6L (TdV8) Diesel (Removal and Installation).

-
16. Install the generator.
For additional information, refer to: Generator (414-02, Removal and Installation).

-
17. Install the windscreen washer reservoir.
For additional information, refer to: Windshield Washer Reservoir (501-16, Removal and Installation).

-
18. Install the power steering pipes to the access panel.

-
19. Install the fender.
For additional information, refer to: Fender (501-02, Removal and Installation).

-
20. Install the accelerator pedal. For additional information, refer to: (310-02)
Accelerator Pedal (Removal and Installation),
Accelerator Pedal (Removal and Installation).

-
21. Install the plenum chamber drain tube.

-
22. Install the cowl panel grille.
For additional information, refer to: Cowl Panel Grille (501-02, Removal and Installation).

23. Install the plenum chamber.

For additional information, refer to: Plenum Chamber (412-01, Removal and Installation).

24. Install the fuel fired booster heater.

For additional information, refer to: Fuel Fired Booster Heater (412-02, Removal and Installation).



Vehicles with diesel engine

1. Install the charge air cooler pipes.

- Secure the charge air cooler pipes.



All vehicles

1. Install the transmission fluid cooler. For additional information, refer to: (307-02)

Transmission Fluid Cooler (Removal and Installation),

Transmission Fluid Cooler (Removal and Installation),

Transmission Fluid Cooler - 4.4L (Removal and Installation).

2. Secure the A/C pipes to the front side member.

3.

CAUTION:

Make sure if the A/C components are damaged or contaminated during a collision, further investigation and replacement of components may be required. Failure to follow this instruction may result in damage to the vehicle.

Fill the A/C system.

For additional information, refer to: Air Conditioning (A/C) System Recovery, Evacuation and Charging (412-00, General Procedures).

4. Install the radiator. For additional information, refer to: (303-03)
Radiator (Removal and Installation),
Radiator (Removal and Installation),
Radiator (Removal and Installation),
Radiator (Removal and Installation).
-

5. Install the coolant expansion tank. For additional information, refer to: (303-03)
Coolant Expansion Tank (Removal and Installation),
Coolant Expansion Tank (Removal and Installation),
Coolant Expansion Tank (Removal and Installation).
-

6. Install the front bumper.
For additional information, refer to: Front Bumper (501-19, Removal and Installation).
-

7. Install the front bumper cover.
For additional information, refer to: Front Bumper Cover (501-19, Removal and Installation).
-

8. Install the engine undershield.
For additional information, refer to: Engine Undershield (501-02, Removal and Installation).
-

9. Install the fender apron panel.
For additional information, refer to: Fender Apron Panel (501-27, Removal and Installation).
-

10. Connect the battery ground cable.
For additional information, refer to: Specifications (414-00, Specifications).

2012.0 RANGE ROVER (LM), 501-27

FRONT END SHEET METAL REPAIRS

FRONT SIDE MEMBER AND SUSPENSION TOP MOUNT ASSEMBLY (G928702)

REMOVAL AND INSTALLATION

REMOVAL



All vehicles

CAUTION:

New front side member and suspension top mount assemblies are

supplied without the VIN stamping. The VIN must be stamped onto the suspension top mount assembly in the original position, in accordance with local market regulations. If in any doubt, check with vehicle homologation/government regulations co-ordinator (GRC).

NOTE:

In this procedure the front side member and suspension turret are replaced as an assembly.

1. Disconnect the battery ground cable.
For additional information, refer to: Specifications (414-00 Charging System - General Information, Specifications).
2. Remove the engine undershield.
For additional information, refer to: Engine Undershield (501-02 Front End Body Panels, Removal and Installation).
3. Remove the front bumper cover.
For additional information, refer to: Front Bumper Cover (501-19 Bumpers, Removal and Installation).
4. Remove the front bumper.
For additional information, refer to: Front Bumper (501-19 Bumpers, Removal and Installation).
5. Remove the coolant expansion tank. For additional information, refer to:
Coolant Expansion Tank (303-03 Engine Cooling - 3.6L (TdV8) Diesel, Removal and Installation),
Coolant Expansion Tank (303-03 Engine Cooling - 4.2L, Removal and Installation),
Coolant Expansion Tank (303-03 Engine Cooling - 4.4L, Removal and Installation).
6. Remove the radiator. For additional information, refer to:

Radiator (303-03 Engine Cooling - 3.6L (TdV8) Diesel, Removal and Installation),

Radiator (303-03 Engine Cooling - 4.2L, Removal and Installation),

Radiator (303-03 Engine Cooling - 4.4L, Removal and Installation),

Radiator (303-03 Supercharger Cooling, Removal and Installation).

7.

CAUTION:

Make sure if the air conditioning (A/C) components are damaged or contaminated during a collision, further investigation and replacement of components may be required. Failure to follow this instruction may result in damage to the vehicle.

Recover the 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).

8. Remove the transmission fluid cooler. For additional information, refer to:

Transmission Fluid Cooler (307-02 Transmission/Transaxle Cooling - 3.6L (TdV8) Diesel, Removal and Installation),

Transmission Fluid Cooler (307-02 Transmission/Transaxle Cooling - 4.2L, Removal and Installation),

Transmission Fluid Cooler - 4.4L (307-02 Transmission/Transaxle Cooling - 4.4L, Removal and Installation).

9. Release the A/C pipes from the front side member.

10. Remove the engine. For additional information, refer to:

Engine (303-01 Engine - 4.2L, Removal),

Engine (303-01 Engine - 4.4L, Removal),

Engine (303-01 Engine - 3.6L (TdV8) Diesel, Removal).



Vehicles with diesel engine

-
1. Remove the charge air cooler pipes.
 - Release the charge air cooler pipes.



All vehicles

-
1. Remove the fuel fired booster heater.
For additional information, refer to: Fuel Fired Booster Heater (412-02 Auxiliary Heating, Removal and Installation).

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

 3. Remove the cowl panel grille.
For additional information, refer to: Cowl Panel Grille (501-02 Front End Body Panels, Removal and Installation).

 4. Remove the plenum chamber drain tube.

 5. Remove the accelerator pedal. For additional information, refer to: Accelerator Pedal (310-02 Acceleration Control - 4.4L, Removal and Installation),
Accelerator Pedal (310-02 Acceleration Control - 3.6L (TdV8) Diesel, Removal and Installation).

 6. Remove the fender.
For additional information, refer to: Fender (501-02 Front End Body Panels, Removal and Installation).

 7. Remove the power steering pipes from the access panel.

 8. Remove the windscreen washer reservoir.
For additional information, refer to: Windshield Washer Reservoir (501-16 Wipers and Washers, Removal and Installation).
-

9. Remove the generator. For additional information, refer to:
Generator (414-02 Generator and Regulator - 3.6L (TdV8) Diesel, Removal and Installation),
Generator (414-02 Generator and Regulator - 4.2L, Removal and Installation),
Generator (414-02 Generator and Regulator - 4.4L, Removal and Installation).

10. Remove the anti-lock brake system (ABS) module. For additional information, refer to: (206-09 Anti-Lock Control - Traction Control) Anti-Lock Brake System (ABS) Module - Vehicles With: Standard Brakes (Removal and Installation),
Anti-Lock Brake System (ABS) Module - Vehicles With: High Performance Brakes (Removal and Installation),
Anti-Lock Brake System (ABS) Module - 3.6L (TdV8) Diesel (Removal and Installation).

11. Remove the brake booster. For additional information, refer to: (206-07 Power Brake Actuation) Brake Booster - Vehicles With: Standard Brakes (Removal and Installation),
Brake Booster - Vehicles With: High Performance Brakes (Removal and Installation).

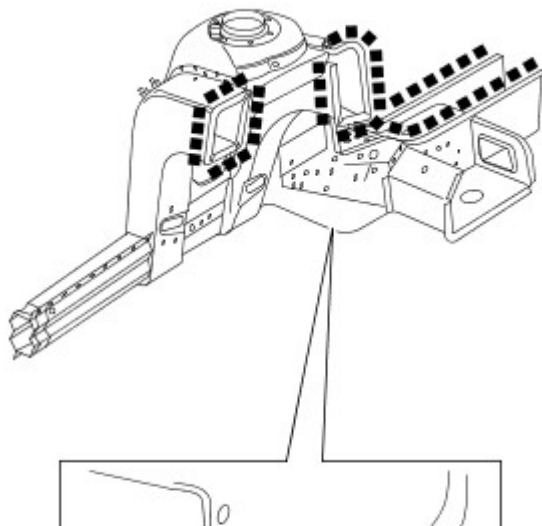
12. Remove the fuel pipes from the side member.

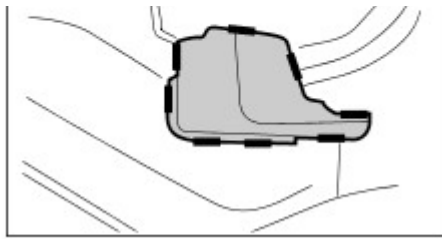
13. Remove the fuel filter element. For additional information, refer to:
Fuel Filter (310-01 Fuel Tank and Lines - 4.2L, Removal and Installation),
Fuel Filter (310-01 Fuel Tank and Lines - 4.4L, Removal and Installation),
Fuel Filter Element (310-01 Fuel Tank and Lines - 3.6L (TdV8) Diesel, Removal and Installation).

14. Remove the battery tray.
For additional information, refer to: Battery Tray (414-01 Battery, Mounting and Cables, Removal and Installation).

-
15. Remove the front air spring.
For additional information, refer to: Front Air Spring (204-05 Vehicle Dynamic Suspension, Removal and Installation).
-
16. Remove the air suspension reservoir.
For additional information, refer to: Air Suspension Reservoir (204-05 Vehicle Dynamic Suspension, Removal and Installation).
-
17. Remove the fuel pipes.
-
18. Remove the brake pipes.
-
19. Disconnect the wiring harness.
■ Reposition the wiring harness.
-
20. Remove the insulation material from the instrument panel lower section.
-
21. Remove the heat shield from the transmission tunnel.
-
22. Remove the in-vehicle crossbeam.
For additional information, refer to: In-Vehicle Crossbeam (501-12 Instrument Panel and Console, Removal and Installation).
-
23. Release the floor covering for access.
-

24. 





M772236

Remove the front side member and suspension top mount assembly.

-
25. Prepare the new panel for installation.

For additional information, refer to: Body (501-00 Body System - General Information, Description and Operation).

INSTALLATION



All vehicles

-
1. Install the front side member and suspension top mount assembly.

 2. Secure the floor covering.

 3. Install the in-vehicle crossbeam.
For additional information, refer to: In-Vehicle Crossbeam (501-12 Instrument Panel and Console, Removal and Installation).

 4. Install the heat shield to the transmission tunnel.

 5. Install the insulation material to the instrument panel lower section.

 6. Connect the wiring harness.
 - Reposition the wiring harness.

 7. Install the brake pipes.

 8. Install the fuel pipes.

-
9. Install the air suspension reservoir.
For additional information, refer to: Air Suspension Reservoir (204-05 Vehicle Dynamic Suspension, Removal and Installation).
-
10. Install the front air spring.
For additional information, refer to: Front Air Spring (204-05 Vehicle Dynamic Suspension, Removal and Installation).
-
11. Install the battery tray.
For additional information, refer to: Battery Tray (414-01 Battery, Mounting and Cables, Removal and Installation).
-
12. Install the fuel filter element. For additional information, refer to:
Fuel Filter (310-01 Fuel Tank and Lines - 4.2L, Removal and Installation),
Fuel Filter (310-01 Fuel Tank and Lines - 4.4L, Removal and Installation),
Fuel Filter Element (310-01 Fuel Tank and Lines - 3.6L (TdV8) Diesel, Removal and Installation).
-
13. Install the brake booster. For additional information, refer to: (206-07 Power Brake Actuation)
Brake Booster - Vehicles With: Standard Brakes (Removal and Installation),
Brake Booster - Vehicles With: High Performance Brakes (Removal and Installation).
-
14. Install the anti-lock brake system (ABS) module. For additional information, refer to: (206-09 Anti-Lock Control - Traction Control)
Anti-Lock Brake System (ABS) Module - Vehicles With: Standard Brakes (Removal and Installation),
Anti-Lock Brake System (ABS) Module - Vehicles With: High Performance Brakes (Removal and Installation),
Anti-Lock Brake System (ABS) Module - 3.6L (TdV8) Diesel (Removal and Installation).
-
15. Install the generator. For additional information, refer to:

Generator (414-02 Generator and Regulator - 3.6L (TdV8) Diesel, Removal and Installation),

Generator (414-02 Generator and Regulator - 4.2L, Removal and Installation),

Generator (414-02 Generator and Regulator - 4.4L, Removal and Installation).

-
16. Install the windscreen washer reservoir.

For additional information, refer to: Windshield Washer Reservoir (501-16 Wipers and Washers, Removal and Installation).

-
17. Install the power steering pipes to the access panel.

-
18. Install the fender.

For additional information, refer to: Fender (501-02 Front End Body Panels, Removal and Installation).

-
19. Install the accelerator pedal. For additional information, refer to: Accelerator Pedal (310-02 Acceleration Control - 4.4L, Removal and Installation),
Accelerator Pedal (310-02 Acceleration Control - 3.6L (TdV8) Diesel, Removal and Installation).

-
20. Install the plenum chamber drain tube.

-
21. Install the cowl panel grille.

For additional information, refer to: Cowl Panel Grille (501-02 Front End Body Panels, Removal and Installation).

-
22. Install the plenum chamber.

For additional information, refer to: Plenum Chamber (412-01 Air Distribution and Filtering, Removal and Installation).

-
23. Install the fuel fired booster heater.

For additional information, refer to: Fuel Fired Booster Heater (412-02 Auxiliary Heating, Removal and Installation).



Vehicles with diesel engine

1. Install the charge air cooler pipes.
 - Secure the charge air cooler pipes.



All vehicles

1. Install the engine. For additional information, refer to:
Engine (303-01 Engine - 4.2L, Installation),
Engine (303-01 Engine - 4.4L, Installation),
Engine (303-01 Engine - 3.6L (TdV8) Diesel, Installation).
2. Secure the A/C pipes to the front side member.
3. Install the transmission fluid cooler. For additional information, refer to:
Transmission Fluid Cooler (307-02 Transmission/Transaxle Cooling - 3.6L (TdV8) Diesel, Removal and Installation),
Transmission Fluid Cooler (307-02 Transmission/Transaxle Cooling - 4.2L, Removal and Installation),
Transmission Fluid Cooler - 4.4L (307-02 Transmission/Transaxle Cooling - 4.4L, Removal and Installation).

4.

CAUTION:

Make sure if the A/C components are damaged or contaminated during a collision, further investigation and replacement of components may be required. Failure to follow this instruction may result in damage to the vehicle.

Fill 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).

5. Install the radiator. For additional information, refer to:

5. Install the radiator. For additional information, refer to:
Radiator (303-03 Engine Cooling - 3.6L (TdV8) Diesel, Removal and Installation),
Radiator (303-03 Engine Cooling - 4.2L, Removal and Installation),
Radiator (303-03 Engine Cooling - 4.4L, Removal and Installation),
Radiator (303-03 Supercharger Cooling, Removal and Installation).
-

6. Install the coolant expansion tank. For additional information, refer to:
Coolant Expansion Tank (303-03 Engine Cooling - 3.6L (TdV8) Diesel, Removal and Installation),
Coolant Expansion Tank (303-03 Engine Cooling - 4.2L, Removal and Installation),
Coolant Expansion Tank (303-03 Engine Cooling - 4.4L, Removal and Installation).
-

7. Install the front bumper.
For additional information, refer to: Front Bumper (501-19 Bumpers, Removal and Installation).
-

8. Install the front bumper cover.
For additional information, refer to: Front Bumper Cover (501-19 Bumpers, Removal and Installation).
-

9. Install the engine undershield.
For additional information, refer to: Engine Undershield (501-02 Front End Body Panels, Removal and Installation).
-

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

2012.0 RANGE ROVER (LM), 501-27

FRONT END SHEET METAL REPAIRS

FRONT SIDE MEMBER EXTENSION (G928704)

REMOVAL AND INSTALLATION

REMOVAL

NOTE:

In this procedure the front section of the front side member extension, the front side member outer panel and the front side member reinforcement panel are replaced.

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

 2. Remove the engine undershield.
For additional information, refer to: Engine Undershield (501-02, Removal and Installation).

 3. Remove the front bumper cover.
For additional information, refer to: Front Bumper Cover (501-19, Removal and Installation).

 4. Remove the front bumper.

For additional information, refer to: Front Bumper (501-19, Removal and Installation).

-
5. Remove the coolant expansion tank. For additional information, refer to: (303-03)
Coolant Expansion Tank (Removal and Installation),
Coolant Expansion Tank (Removal and Installation),
Coolant Expansion Tank (Removal and Installation).

-
6. Remove the radiator. For additional information, refer to: (303-03)
Radiator (Removal and Installation),
Radiator (Removal and Installation),
Radiator (Removal and Installation),
Radiator (Removal and Installation).

-
7. **CAUTION:**

Make sure if the A/C components are damaged or contaminated during a collision, further investigation and replacement of components may be required. Failure to follow this instruction may result in damage to the vehicle.

Recover the A/C refrigerant.

For additional information, refer to: Air Conditioning (A/C) System Recovery, Evacuation and Charging (412-00, General Procedures).

-
8. Remove the transmission fluid cooler. For additional information, refer to: (307-02)
Transmission Fluid Cooler (Removal and Installation),
Transmission Fluid Cooler (Removal and Installation),
Transmission Fluid Cooler - 4.4L (Removal and Installation).

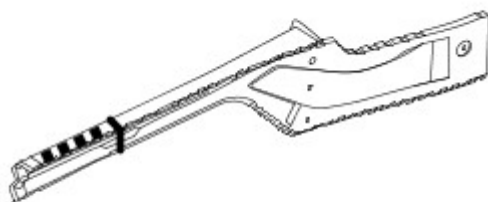
-
9. Remove the windscreen washer reservoir.
For additional information, refer to: Windshield Washer Reservoir (501-16, Removal and Installation).
-

10. Remove the generator. For additional information, refer to: (414-02) Generator (Removal and Installation), Generator (Removal and Installation), Generator (Removal and Installation).
-

11. Remove the fender splash shield.
For additional information, refer to: Fender Splash Shield (501-02, Removal and Installation).
-

12. Release the power steering pipes.
-

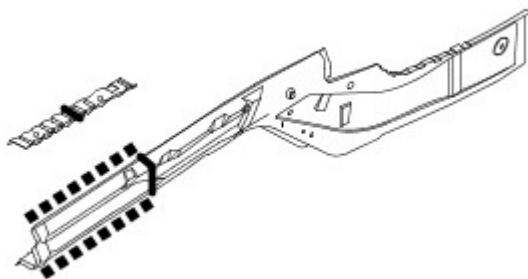
13. 



M772213

Remove the inner front side member extension.

14. 



M772214

Remove the front side member extension.

15. Prepare the new panel for installation.
For additional information, refer to: Body (501-00, Description and Operation).
-

INSTALLATION

-
1. Install the front side member extension.

 2. Install the inner front side member extension.

 3. Secure the power steering pipes.

 4. Secure the fender splash shield.
For additional information, refer to: Fender Splash Shield (501-02, Removal and Installation).

 5. Install the generator. For additional information, refer to: (414-02) Generator (Removal and Installation), Generator (Removal and Installation), Generator (Removal and Installation).

 6. Install the windscreen washer reservoir.
For additional information, refer to: Windshield Washer Reservoir (501-16, Removal and Installation).

 7. Install the transmission fluid cooler. For additional information, refer to: (307-02) Transmission Fluid Cooler (Removal and Installation), Transmission Fluid Cooler (Removal and Installation), Transmission Fluid Cooler - 4.4L (Removal and Installation).

8.

CAUTION:

Make sure if the A/C components are damaged or contaminated during a collision, further investigation and replacement of components may be required. Failure to follow this instruction may result in damage to the vehicle.

Fill the A/C system.

For additional information, refer to: Air Conditioning (A/C) System Recovery, Evacuation and Charging (412-00, General Procedures).

9. Install the radiator. For additional information, refer to: (303-03)
Radiator (Removal and Installation),
Radiator (Removal and Installation),
Radiator (Removal and Installation),
Radiator (Removal and Installation).

10. Install the coolant expansion tank. For additional information, refer to: (303-03)
Coolant Expansion Tank (Removal and Installation),
Coolant Expansion Tank (Removal and Installation),
Coolant Expansion Tank (Removal and Installation).

11. Install the front bumper.
For additional information, refer to: Front Bumper (501-19, Removal and Installation).

12. Install the front bumper cover.
For additional information, refer to: Front Bumper Cover (501-19, Removal and Installation).

13. Install the engine undershield.
For additional information, refer to: Engine Undershield (501-02, Removal and Installation).

14. Connect the battery ground cable.
For additional information, refer to: Specifications (414-00, Specifications).

2012.0 RANGE ROVER (LM), 501-27

FRONT END SHEET METAL REPAIRS

**SIDE MEMBER
DEFORMATION ELEMENT** (G935714)

REMOVAL



All vehicles

-
1. Disconnect the battery ground cable.
For additional information, refer to: Specifications (414-00, Specifications).
 2. Remove the generator. For additional information, refer to: (414-02) Generator (Removal and Installation), Generator (Removal and Installation), Generator (Removal and Installation).
 3. Remove the engine undershield.
For additional information, refer to: Engine Undershield (501-02, Removal and Installation).
 4. Remove the front bumper cover.
For additional information, refer to: Front Bumper Cover (501-19, Removal and Installation).
 5. Remove the front bumper.
For additional information, refer to: Front Bumper (501-19, Removal and Installation).
 6. Remove the coolant expansion tank. For additional information, refer to: (303-03) Coolant Expansion Tank (Removal and Installation), Coolant Expansion Tank (Removal and Installation), Coolant Expansion Tank (Removal and Installation).
 7. Remove the radiator. For additional information, refer to: (303-03) Radiator (Removal and Installation),

Radiator (Removal and Installation),
Radiator (Removal and Installation),
Radiator (Removal and Installation).

-
8. Remove the transmission fluid cooler. For additional information, refer to: (307-02)

Transmission Fluid Cooler (Removal and Installation),
Transmission Fluid Cooler (Removal and Installation),
Transmission Fluid Cooler - 4.4L (Removal and Installation).



Vehicles with diesel engine

-
1. Remove the charge air cooler pipes.
- Release the charge air cooler pipes.



All vehicles

-
1. Remove the windscreen washer reservoir.
For additional information, refer to: Windshield Washer Reservoir (501-16, Removal and Installation).

-
2. Remove the side member deformation element.

-
3. Prepare the new panel for installation.
For additional information, refer to: Body (501-00, Description and Operation).

INSTALLATION



All vehicles

-
1. Install the windscreen washer reservoir.
For additional information, refer to: Windshield Washer Reservoir (501-16, Removal and Installation).



Vehicles with diesel engine

-
1. Install the charge air cooler pipes.
 - Secure the charge air cooler pipes.



All vehicles

-
1. Install the transmission fluid cooler. For additional information, refer to: (307-02)
Transmission Fluid Cooler (Removal and Installation),
Transmission Fluid Cooler - 4.4L (Removal and Installation),
Transmission Fluid Cooler (Removal and Installation).

 2. Install the radiator. For additional information, refer to: (303-03)
Radiator (Removal and Installation),
Radiator (Removal and Installation),
Radiator (Removal and Installation),
Radiator (Removal and Installation).

 3. Install the coolant expansion tank. For additional information, refer to: (303-03)
Coolant Expansion Tank (Removal and Installation),
Coolant Expansion Tank (Removal and Installation),
Coolant Expansion Tank (Removal and Installation).

 4. Install the front bumper.
For additional information, refer to: Front Bumper (501-19, Removal and Installation).

 5. Install the front bumper cover.
For additional information, refer to: Front Bumper Cover (501-19, Removal and Installation).

 6. Install the engine undershield.
For additional information, refer to: Engine Undershield (501-02, Removal and Installation).

7. Install the generator. For additional information, refer to: (414-02)
Generator (Removal and Installation),
Generator (Removal and Installation),
Generator (Removal and Installation).

8. Connect the battery ground cable.
For additional information, refer to: Specifications (414-00,
Specifications).

2012.0 RANGE ROVER (LM), 501-28

ROOF SHEET METAL REPAIRS

ROOF PANEL (G928705)

REMOVAL AND INSTALLATION

REMOVAL

1. Disconnect the battery ground cable.
For additional information, refer to: Specifications (414-00, Specifications).
2. Disconnect the generator connector.
3. Remove the windshield glass.

For additional information, refer to: Windshield Glass (501-11, Removal and Installation).

4. Remove the liftgate assembly.

5. Remove the liftgate aperture seal.

6. Remove the front seats.

For additional information, refer to: Front Seat (501-10, Removal and Installation).

7. Remove the rear seat cushion cover.

For additional information, refer to: Rear Seat Cushion Cover (501-10, Removal and Installation).

8. Remove the headliner.

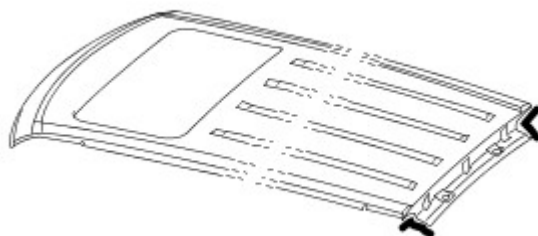
For additional information, refer to: Headliner (501-05, Removal and Installation).

9. Remove the roof opening panel.

For additional information, refer to: Roof Opening Panel (501-17, Removal and Installation).

10. Remove the wiring harnesses from the roof panel area.

11. 



M772204

Remove existing panel(s), prepare panel joint faces and install new panel(s) in accordance with the Panel Replacement Procedure.

Punch or drill holes in new panel for plug welding as shown.

For additional information, refer to: Body (501-00, Description and

Operation).

INSTALLATION

1. Install the wiring harnesses to the roof panel areas.

2. Install the roof opening panel.
For additional information, refer to: Roof Opening Panel (501-17, Removal and Installation).

3. Install the windshield glass.
For additional information, refer to: Windshield Glass (501-11, Removal and Installation).

4. Install the headliner.
For additional information, refer to: Headliner (501-05, Removal and Installation).

5. Install the liftgate assembly.

6. Install the liftgate aperture seal.

7. Install the rear seat cushion cover.
For additional information, refer to: Rear Seat Cushion Cover (501-10, Removal and Installation).

8. Install the front seats.
For additional information, refer to: Front Seat (501-10, Removal and Installation).

9. Connect the generator connector.

10. Connect the battery ground cable.
For additional information, refer to: Specifications (414-00, Specifications).

2012.0 RANGE ROVER (LM), 501-29

SIDE PANEL SHEET METAL REPAIRS

A-PILLAR ASSEMBLY (G928727)

REMOVAL AND INSTALLATION

REMOVAL

1. Disconnect the battery ground cable.
For additional information, refer to: Specifications (414-00, Specifications).
2. Disconnect the generator electrical connector.
3. Remove the fender apron panel.
For additional information, refer to: Fender Apron Panel (501-27, Removal and Installation).
4. Remove the battery tray.
For additional information, refer to: Battery Tray (414-01, Removal and Installation).
5. Remove the brake booster. For additional information, refer to:
(206-07)
Brake Booster - Vehicles With: Standard Brakes (Removal and Installation),
Brake Booster - Vehicles With: High Performance Brakes (Removal

and Installation).

-
6. Remove the plenum chamber.

For additional information, refer to: Plenum Chamber (412-01, Removal and Installation).

-
7. Remove the cowl panel grille.

For additional information, refer to: Cowl Panel Grille (501-02, Removal and Installation).

-
8. Remove the front seat.

For additional information, refer to: Front Seat (501-10, Removal and Installation).

-
9. Remove the front side air curtain module.

For additional information, refer to: Front Side Air Curtain Module (501-20, Removal and Installation).

-
10. Remove the front and rear door aperture weatherstrips.

-
11. Remove the front door check strap.

-
12. Remove the rocker panel moulding.

For additional information, refer to: Rocker Panel Moulding (501-08, Removal and Installation).

-
13. Release the floor covering for access.

-
14. Reposition the A-pillar wiring harness.

- Release the A-pillar wiring harness.

-
15. Remove the overhead console.

For additional information, refer to: Overhead Console (501-12, Removal and Installation).

-
16. Remove the insulation material from the instrument panel lower section.

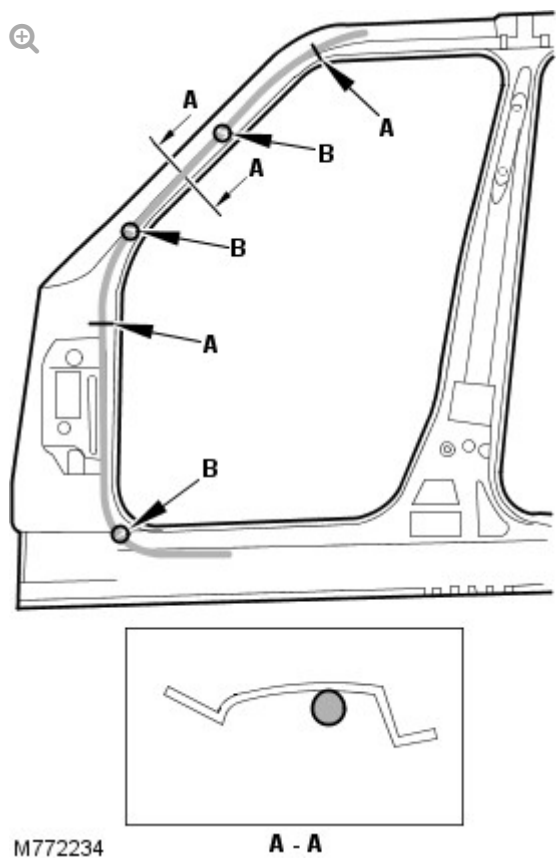
17.

CAUTION:

Make sure damage does not occur to the A-pillar drain tube when removing the A-pillar.

NOTE:

The A-pillar drain tube is located inside the A-pillar. The 'A' and 'B' arrows show the locations of the drain tube clips.

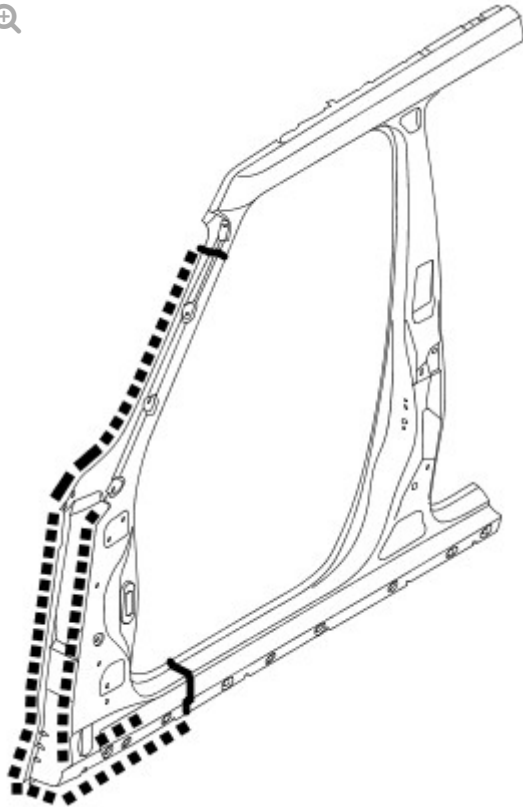


Remove the A-pillar drain tube.

18.

CAUTION:

Make sure damage does not occur to the A-pillar drain tube when removing the A-pillar.



M772211

Remove the A-pillar.

-
19. Prepare the new panel for installation.

For additional information, refer to: Body (501-00, Description and Operation).

INSTALLATION

-
1. Install the A-pillar trim panel.

 2. Install the A-pillar drain tube.

 3. Install the insulation material to the instrument panel lower section.

 4. Install the overhead console.
For additional information, refer to: Overhead Console (501-12, Removal and Installation).

 5. Reposition the A-pillar wiring harness.

- Secure the A-pillar wiring harness.

6. Secure the floor covering.

7. Install the rocker panel moulding.

For additional information, refer to: Rocker Panel Moulding (501-08, Removal and Installation).

8. Install the front door check strap.

9. Install the front and rear door aperture weatherstrips.

10. Install the front side air curtain module.

For additional information, refer to: Front Side Air Curtain Module (501-20, Removal and Installation).

11. Install the front seat.

For additional information, refer to: Front Seat (501-10, Removal and Installation).

12. Install the cowl panel grille.

For additional information, refer to: Cowl Panel Grille (501-02, Removal and Installation).

13. Install the plenum chamber.

For additional information, refer to: Plenum Chamber (412-01, Removal and Installation).

14. Install the brake booster. For additional information, refer to: (206-07)

Brake Booster - Vehicles With: Standard Brakes (Removal and Installation),

Brake Booster - Vehicles With: High Performance Brakes (Removal and Installation).

15. Install the battery tray.

For additional information, refer to: Battery Tray (414-01, Removal

and Installation).

-
16. Install the fender apron panel.

For additional information, refer to: Fender Apron Panel (501-27, Removal and Installation).

-
17. Connect the generator electrical connector.

-
18. Connect the battery ground cable.

For additional information, refer to: Specifications (414-00, Specifications).

2012.0 RANGE ROVER (LM), 501-29

SIDE PANEL SHEET METAL REPAIRS

A-PILLAR REINFORCEMENT

(00000000)

REMOVAL AND INSTALLATION

REMOVAL

NOTES:

- This procedure is the same as the procedure for A-pillar assembly.
- The A-pillar reinforcement is supplied as an assembly and includes the A-pillar assembly. Before installing the A-pillar reinforcement it is necessary to release it from the A-pillar assembly, this will allow access for welding to be carried out to the A-pillar reinforcement.

1. Disconnect the battery ground cable.
For additional information, refer to: Specifications (414-00, Specifications).
2. Disconnect the generator electrical connector.
3. Remove the A-pillar assembly.
For additional information, refer to: A-Pillar Assembly (501-29, Removal and Installation).
- 4.

CAUTION:

Make sure damage does not occur to the A-pillar drain tube when removing the A-pillar reinforcement.



M772233



Remove the A-pillar reinforcement.

-
5. Prepare the new panel for installation.

For additional information, refer to: Body (501-00, Description and Operation).

INSTALLATION

-
1. Install the A-pillar reinforcement.

-
2. Install the A-pillar assembly.

For additional information, refer to: A-Pillar Assembly (501-29, Removal and Installation).

-
3. Connect the generator electrical connector.

-
4. Connect the battery ground cable.

For additional information, refer to: Specifications (414-00, Specifications).

2012.0 RANGE ROVER (LM), 501-29

SIDE PANEL SHEET METAL REPAIRS

B AND C-PILLAR ASSEMBLY

[G928729]

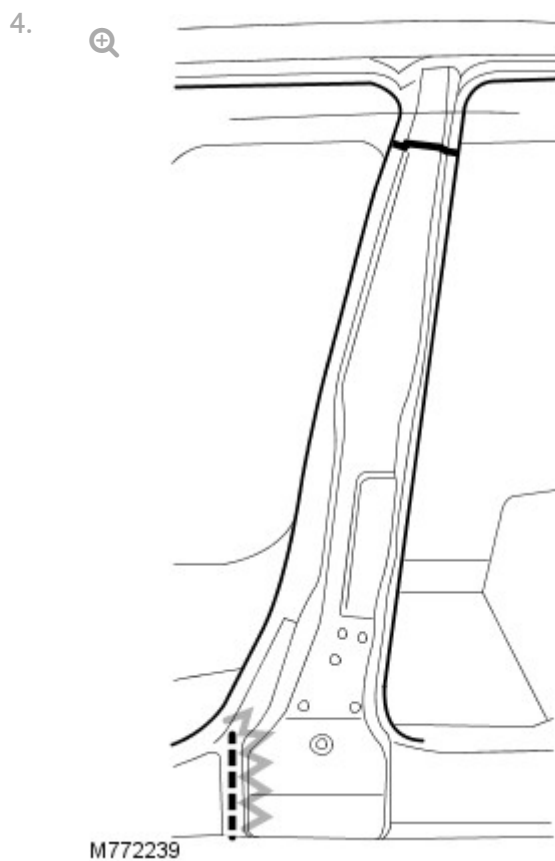
REMOVAL AND INSTALLATION

REMOVAL

NOTE:

This procedure includes the replacement of the rocker panel section.

1. Disconnect the battery ground cable.
For additional information, refer to: Specifications (414-00, Specifications).
2. Disconnect the generator electrical connector.
3. Remove the rocker panel section.
For additional information, refer to: Rocker Panel Section (501-29, Removal and Installation).



Remove the B and C-pillar assembly.

5. Prepare the new panel for installation.
For additional information, refer to: Body (501-00, Description and Operation).

INSTALLATION

1. Install the B and C-pillar assembly.

2. Install the rocker panel section.

For additional information, refer to: Rocker Panel Section (501-29, Removal and Installation).

3. Connect the generator electrical connector.

4. Connect the battery ground cable.

For additional information, refer to: Specifications (414-00, Specifications).

2012.0 RANGE ROVER (LM), 501-29

SIDE PANEL SHEET METAL REPAIRS

ROCKER PANEL (G928730)

REMOVAL AND INSTALLATION

REMOVAL

1. Disconnect the battery ground cable.
For additional information, refer to: Specifications (414-00, Specifications).
2. Disconnect the generator electrical connector.
3. Remove the rear wheel and tire.
For additional information, refer to: Wheel and Tire (204-04, Removal and Installation).
4. Remove the front and rear doors.
For additional information, refer to: Door (501-03, Removal and Installation).
5. Remove the B-pillar side impact sensor.
For additional information, refer to: B-Pillar Side Impact Sensor (501-20, Removal and Installation).

-
6. Remove the front safety belt retractor.
For additional information, refer to: Front Safety Belt Retractor (501-20, Removal and Installation).

 7. Remove the front scuff plate trim panel.
For additional information, refer to: Front Scuff Plate Trim Panel (501-05, Removal and Installation).

 8. Remove the rear scuff plate trim panel.
For additional information, refer to: Rear Scuff Plate Trim Panel (501-05, Removal and Installation).

 9. Remove the front and rear door aperture weatherstrips.

 10. Remove the front seat.
For additional information, refer to: Front Seat (501-10, Removal and Installation).

 11. Remove the rear seat.
For additional information, refer to: Rear Seat (501-10, Removal and Installation).

 12. Reposition the floor covering.

 13. Remove the air suspension reservoir.
For additional information, refer to: Air Suspension Reservoir (204-05, Removal and Installation).

 14. Remove the exhaust system. For additional information, refer to: (309-00) Exhaust System (Removal and Installation), Exhaust System (Removal and Installation), Exhaust System (Removal and Installation).

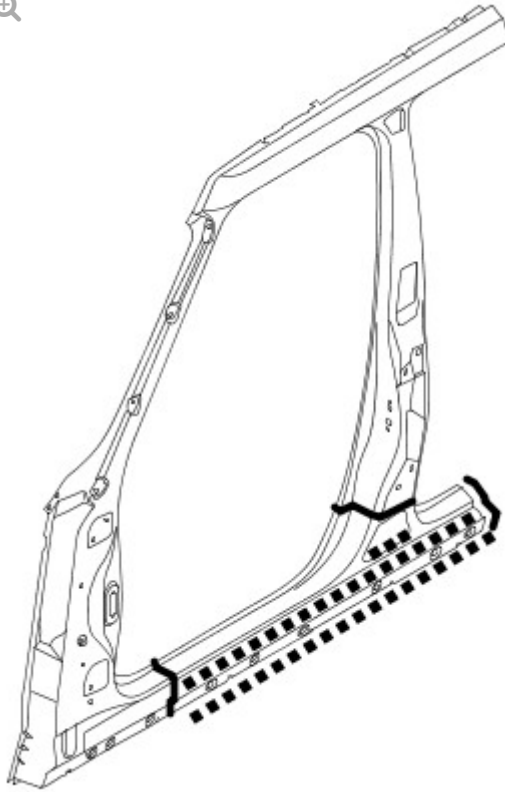
 15. Remove the fuel tank shield.

 16. Reposition the wiring harness from the sill

16. Reposition the wiring harness from the sill.

- Release the wiring harness.

17.



M772210

Remove the rocker panel.

18. Prepare the new panel for installation.

For additional information, refer to: Body (501-00, Description and Operation).

INSTALLATION

1. Install the rocker panel.

2. Reposition the wiring harness to the sill.

- Secure the wiring harness.

3. Install the exhaust system. For additional information, refer to: (309-00)

Exhaust System (Removal and Installation),

Exhaust System (Removal and Installation),

Exhaust System (Removal and Installation).

-
4. Install the air suspension reservoir.
For additional information, refer to: Air Suspension Reservoir (204-05, Removal and Installation).

 5. Reposition the floor covering.

 6. Install the rear seat.
For additional information, refer to: Rear Seat (501-10, Removal and Installation).

 7. Install the front seat.
For additional information, refer to: Front Seat (501-10, Removal and Installation).

 8. Install the front and rear door aperture weatherstrips.

 9. Install the rear scuff plate trim panel.
For additional information, refer to: Rear Scuff Plate Trim Panel (501-05, Removal and Installation).

 10. Install the front scuff plate trim panel.
For additional information, refer to: Front Scuff Plate Trim Panel (501-05, Removal and Installation).

 11. Install the front safety belt retractor.
For additional information, refer to: Front Safety Belt Retractor (501-20, Removal and Installation).

 12. Install the B-pillar side impact sensor.
For additional information, refer to: B-Pillar Side Impact Sensor (501-20, Removal and Installation).

 13. Install the front and rear doors.
For additional information, refer to: Door (501-03, Removal and Installation).

14. Install the rear wheel and tire.

For additional information, refer to: Wheel and Tire (204-04, Removal and Installation).

15. Connect the generator electrical connector.

16. Connect the battery ground cable.

For additional information, refer to: Specifications (414-00, Specifications).

2012.0 RANGE ROVER (LM), 501-29

SIDE PANEL SHEET METAL REPAIRS

ROCKER PANEL INNER

ROCKER PANEL INNER REINFORCEMENT (G928731)

REMOVAL AND INSTALLATION

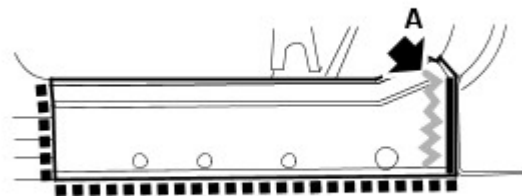
REMOVAL

NOTE:

This procedure includes the replacement of the rocker panel.

1. Disconnect the battery ground cable.
For additional information, refer to: Specifications (414-00, Specifications).
2. Disconnect the generator electrical connector.
3. Remove the rocker panel.
For additional information, refer to: Rocker Panel (501-29, Removal and Installation).

4. 



M772226

Remove the rocker panel inner reinforcement.

5. Prepare the new panel for installation.
For additional information, refer to: Body (501-00, Description and Operation).

INSTALLATION

1. Install the rocker panel inner reinforcement.

2. Install the rocker panel.
For additional information, refer to: Rocker Panel (501-29, Removal and Installation).

3. Connect the generator electrical connector.

4. Connect the battery ground cable.
For additional information, refer to: Specifications (414-00, Specifications).

2012.0 RANGE ROVER (LM), 501-29

SIDE PANEL SHEET METAL REPAIRS

ROCKER PANEL SECTION (G928732)

REMOVAL AND INSTALLATION

REMOVAL

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

2. Disconnect the generator electrical connector.

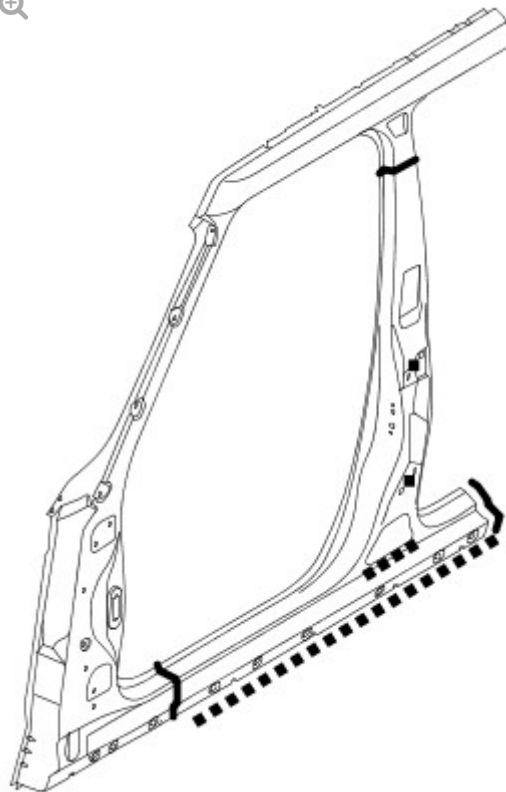
3. Remove the rocker panel.

For additional information, refer to: Rocker Panel (501-29, Removal and Installation).

4. Remove the headliner.

For additional information, refer to: Headliner (501-05, Removal and Installation).

5.



M772209

Remove the rocker panel section.

6. Prepare the new panel for installation.

For additional information, refer to: Body (501-00, Description and Operation).

INSTALLATION

1. Install the rocker panel section.

2. Install the headliner.

For additional information, refer to: Headliner (501-05, Removal and Installation).

3. Install the rocker panel.

For additional information, refer to: Rocker Panel (501-29, Removal and Installation).

4. Connect the generator electrical connector.

5. Connect the battery ground cable.

For additional information, refer to: Specifications (414-00, Specifications).

2012.0 RANGE ROVER (LM), 501-30

REAR END SHEET METAL REPAIRS

INNER QUARTER PANEL (G928765)

REMOVAL AND INSTALLATION

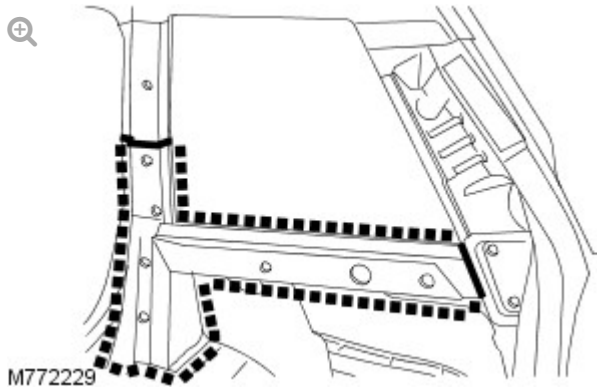
REMOVAL

NOTE:

In this procedure, the quarter panel and the rear quarter upper panel are replaced in conjunction with the C-pillar assembly.

-
1. Disconnect the battery ground cable.
For additional information, refer to: Specifications (414-00, Specifications).
 2. Disconnect the generator electrical connector.
 3. Remove the quarter panel.
For additional information, refer to: Quarter Panel (501-30, Removal and Installation).
-

4.



Prepare the new panel for installation.

For additional information, refer to: Body (501-00, Description and Operation).

INSTALLATION

-
1. Install the inner quarter panel.

For additional information, refer to: Body (501-00, Description and Operation).

-
2. Install the quarter panel.

For additional information, refer to: Quarter Panel (501-30, Removal and Installation).

-
3. Connect the generator electrical connector.

-
4. Connect the battery ground cable.

For additional information, refer to: Specifications (414-00, Specifications).

2012.0 RANGE ROVER (LM), 501-30

REAR END SHEET METAL REPAIRS

QUARTER PANEL (G928766)

REMOVAL AND INSTALLATION

REMOVAL

NOTE:

In this procedure, the rear outer body side panel is replaced in conjunction with the quarter panel.

1. Disconnect the battery ground cable.
For additional information, refer to: Specifications (414-00 Charging System - General Information, Specifications).
 2. Disconnect the generator electrical connector.
 3. Remove the wheel and tire.
For additional information, refer to: Wheel and Tire (204-04 Wheels and Tires, Removal and Installation).
 4. Remove the rear door.
For additional information, refer to: Door (501-03 Body Closures, Removal and Installation).
 5. Remove the rear door and tailgate aperture weatherstrips.
 6. Remove the rear door and tailgate strikers.
 7. Remove the rocker panel moulding.
For additional information, refer to: Rocker Panel Moulding (501-08 Exterior Trim and Ornamentation, Removal and Installation).
-

8. Remove the rear bumper.

For additional information, refer to: Rear Bumper (501-19 Bumpers, Removal and Installation).

9. Remove the rear fender splash shield.

For additional information, refer to: Rear Fender Splash Shield (501-08 Exterior Trim and Ornamentation, Removal and Installation).

10. Remove the exhaust system. For additional information, refer to:

Exhaust System (309-00 Exhaust System - 4.2L, Removal and Installation),

Exhaust System (309-00 Exhaust System - 4.4L, Removal and Installation),

Exhaust System (309-00 Exhaust System - 3.6L (TdV8) Diesel, Removal and Installation).

11. Remove the rear quarter panel moulding.

For additional information, refer to: Rear Quarter Panel Moulding (501-08 Exterior Trim and Ornamentation, Removal and Installation).

12. Remove the rear quarter window glass.

For additional information, refer to: Rear Quarter Window Glass (501-11 Glass, Frames and Mechanisms, Removal and Installation).

13. Remove the rear lamp assembly.

For additional information, refer to: Rear Lamp Assembly (417-01 Exterior Lighting, Removal and Installation).

- 14.

NOTE:

RH side only:

Drain the fuel tank.

For additional information, refer to: Fuel Tank Draining (310-00 Fuel System - General Information, General Procedures).

- 15.

NOTE:

NOTE:

RH side only:

Remove the fuel tank filler pipe. For additional information, refer to:
(310-01)

Fuel Tank Filler Pipe (Removal and Installation),

Fuel Tank Filler Pipe (Removal and Installation),

Fuel Tank Filler Pipe (Removal and Installation).

-
16. Remove the air suspension rear solenoid valve block.

For additional information, refer to: Air Suspension Rear Solenoid Valve Block (204-05 Vehicle Dynamic Suspension, Removal and Installation).

-
17. Remove the C-pillar lower trim panel.

For additional information, refer to: C-Pillar Lower Trim Panel (501-05 Interior Trim and Ornamentation, Removal and Installation).

-
18. Remove the rear safety belt retractor.

For additional information, refer to: Rear Safety Belt Retractor (501-20 Safety Belt System, Removal and Installation).

-
19. Remove the rear quarter trim panel.

For additional information, refer to: Rear Quarter Trim Panel (501-05 Interior Trim and Ornamentation, Removal and Installation).

-
20. Release the rear floor covering and reposition for access.

-
21. Remove all information and entertainment components from the rear quarter area.

-
22. Remove the luggage compartment floor covering.

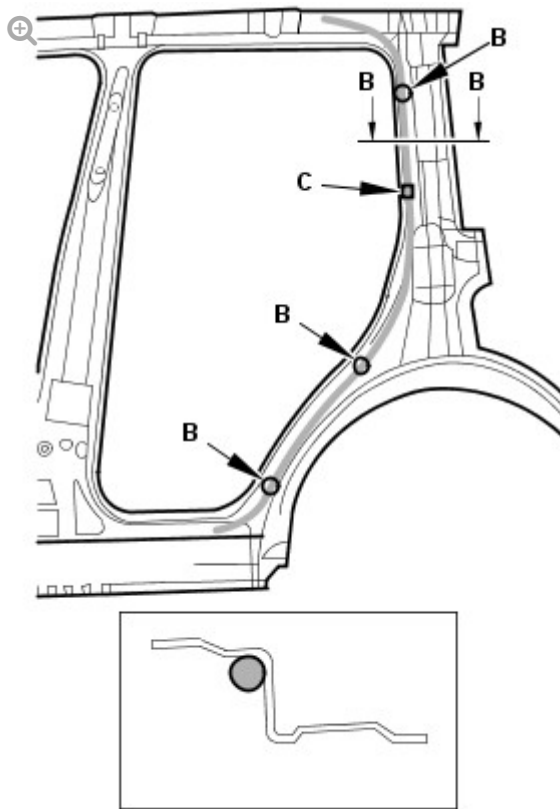
-
23. Remove the insulation from the rear quarter area.

-
24. Release the wiring harness from the D-pillar and rear quarter area.

25.

CAUTION:

Make sure when cutting out the body side panel, that you do not cut through the reinforcement panel, as a rubber drain tube is located behind it. The approximate position of the drain tube is shown in the illustration. Failure to follow this instruction will result in damage to the vehicle.

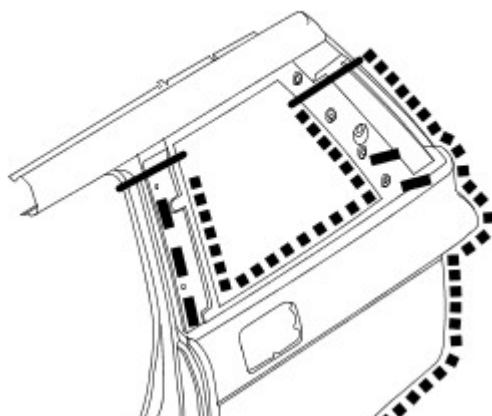


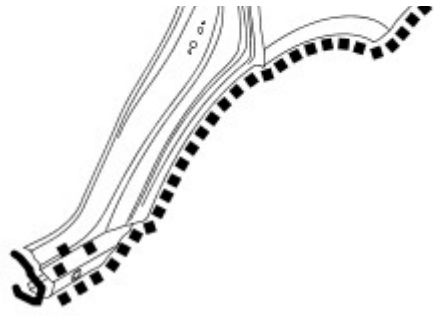
M772235

B - B

Release the drain tube.

26.





M772208

Remove the quarter panel.

-
27. Prepare the new panel for installation.

For additional information, refer to: Body (501-00 Body System - General Information, Description and Operation).

INSTALLATION

-
1. Install the insulation to the rear quarter area.

 2. Install the wiring harness to the D-pillar and rear quarter area.

 3. Install the luggage compartment floor covering.

 4. Install the information and entertainment components to the rear quarter area.

 5. Install the rear quarter trim panel.
For additional information, refer to: Rear Quarter Trim Panel (501-05 Interior Trim and Ornamentation, Removal and Installation).

 6. Secure the rear floor covering.

 7. Install the rear safety belt retractor.

 8. Install the C-pillar lower trim panel.
For additional information, refer to: C-Pillar Lower Trim Panel (501-05 Interior Trim and Ornamentation, Removal and Installation).

-
9. Install the air suspension rear solenoid valve block.

For additional information, refer to: Air Suspension Rear Solenoid Valve Block (204-05 Vehicle Dynamic Suspension, Removal and Installation).

10.

NOTE:

RH side only:

Install the fuel tank filler pipe. For additional information, refer to: (310-01)

Fuel Tank Filler Pipe (Removal and Installation),
Fuel Tank Filler Pipe (Removal and Installation),
Fuel Tank Filler Pipe (Removal and Installation).

11.

NOTE:

RH side only:

Fill the fuel tank with the amount of fuel recovered.

For additional information, refer to: Fuel Tank Draining (310-00 Fuel System - General Information, General Procedures).

-
12. Install the rear lamp assembly.

For additional information, refer to: Rear Lamp Assembly (417-01 Exterior Lighting, Removal and Installation).

-
13. Install the rear quarter window glass.

For additional information, refer to: Rear Quarter Window Glass (501-11 Glass, Frames and Mechanisms, Removal and Installation).

-
14. Install the rear quarter panel moulding.

For additional information, refer to: Rear Quarter Panel Moulding (501-08 Exterior Trim and Ornamentation, Removal and Installation).

-
15. Install the exhaust system. For additional information, refer to:
Exhaust System (309-00 Exhaust System - 4.2L, Removal and Installation),
Exhaust System (309-00 Exhaust System - 4.4L, Removal and Installation),
Exhaust System (309-00 Exhaust System - 3.6L (TdV8) Diesel, Removal and Installation).
-
16. Install the rear fender splash shield.
For additional information, refer to: Rear Fender Splash Shield (501-08 Exterior Trim and Ornamentation, Removal and Installation).
-
17. Install the rear bumper.
For additional information, refer to: Rear Bumper (501-19 Bumpers, Removal and Installation).
-
18. Install the rocker panel moulding.
For additional information, refer to: Rocker Panel Moulding (501-08 Exterior Trim and Ornamentation, Removal and Installation).
-
19. Install the rear door and tailgate strikers.
-
20. Install the rear door and tailgate aperture weatherstrips.
-
21. Install the rear door.
For additional information, refer to: Door (501-03 Body Closures, Removal and Installation).
-
22. Install the wheel and tire.
For additional information, refer to: Wheel and Tire (204-04 Wheels and Tires, Removal and Installation).
-
23. Connect the generator electrical connector.
-
24. Connect the battery ground cable.
For additional information, refer to: Specifications (414-00 Charging System - General Information, Specifications).

2012.0 RANGE ROVER (LM), 501-30

REAR END SHEET METAL REPAIRS

QUARTER PANEL LOWER EXTENSION [G928767]

REMOVAL AND INSTALLATION

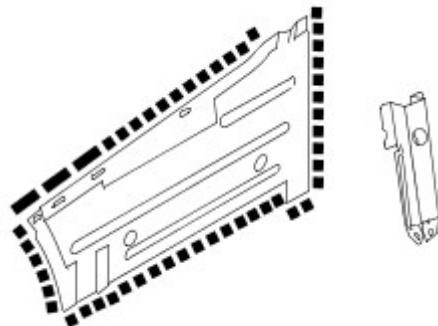
REMOVAL

NOTE:

In this procedure, the quarter panel lower extension is completed in conjunction with the quarter panel.

1. Disconnect the battery ground cable.
For additional information, refer to: Specifications (414-00, Specifications).
2. Disconnect the generator electrical connector.
3. Remove the quarter panel.
For additional information, refer to: Quarter Panel (501-30, Removal and Installation).

4.



M772230

Prepare the new panel for installation.

For additional information, refer to: Body (501-00, Description and Operation).

INSTALLATION

1. Install the quarter panel lower extension.
For additional information, refer to: Body (501-00, Description and Operation).
2. Install the quarter panel.
For additional information, refer to: Quarter Panel (501-30, Removal and Installation).

3. Connect the generator electrical connector.

4. Connect the battery ground cable.

For additional information, refer to: Specifications (414-00, Specifications).

2012.0 RANGE ROVER (LM), 501-30

REAR END SHEET METAL REPAIRS

REAR CROSSMEMBER (G928247)

REMOVAL AND INSTALLATION

REMOVAL

1. Disconnect the battery ground cable.
For additional information, refer to: Specifications (414-00 Charging System - General Information, Specifications).
2. Disconnect the generator electrical connector.
3. Remove the tailgate.
4. Remove the tailgate aperture weatherstrip.
5. Remove the rear bumper.
For additional information, refer to: Rear Bumper (501-19 Bumpers, Removal and Installation).

-
6. Remove the towbar.

For additional information, refer to: Towbar (501-08 Exterior Trim and Ornamentation, Removal and Installation).

7. Remove the exhaust system. For additional information, refer to: (309-00)

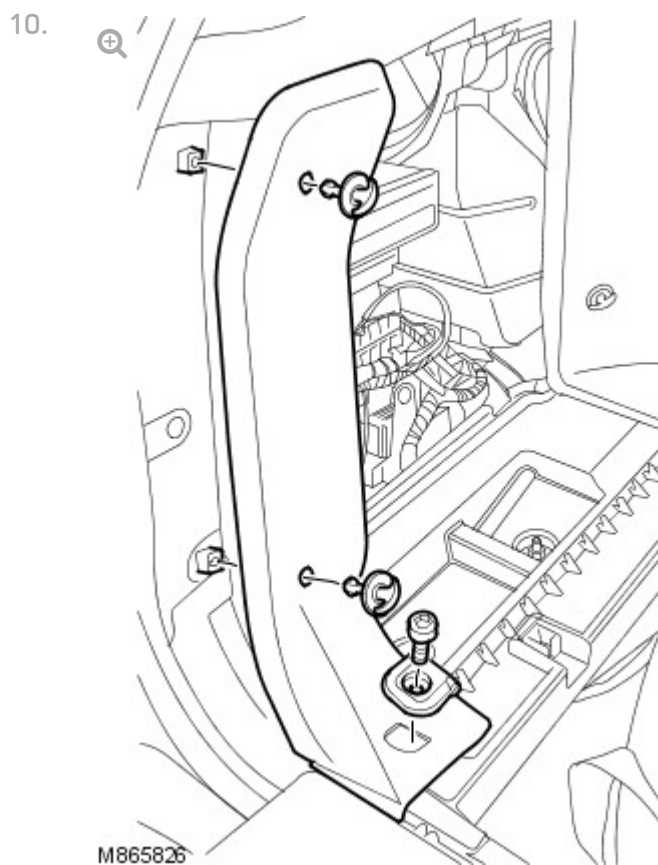
Exhaust System (Removal and Installation),
Exhaust System (Removal and Installation),
Exhaust System (Removal and Installation).

8. Remove both rear lamp assemblies.

For additional information, refer to: Rear Lamp Assembly (417-01 Exterior Lighting, Removal and Installation).

9. Remove the air suspension compressor assembly.

For additional information, refer to: Air Suspension Compressor (204-05 Vehicle Dynamic Suspension, Removal and Installation).

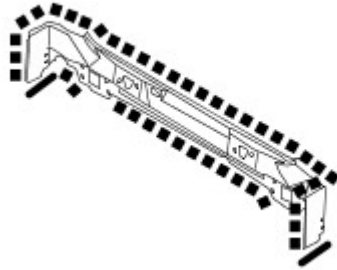


Remove the LH and RH finisher trim panels.

11. Remove the luggage compartment floor covering.

12. Release the wiring harness from the rear crossmember area.

13. 



M772205

Prepare the new panel for installation.

For additional information, refer to: Body (501-00 Body System - General Information, Description and Operation).

INSTALLATION

1. Install the rear crossmember.

For additional information, refer to: Body (501-00 Body System - General Information, Description and Operation).

2. Secure the wiring harness to the rear crossmember area.

3. Install the luggage compartment floor covering.

4. Install the LH and RH finisher trim panels.

5. Install the air suspension compressor assembly.

For additional information, refer to: Air Suspension Compressor (204-05 Vehicle Dynamic Suspension, Removal and Installation).

6. Install the rear lamp assemblies.

For additional information, refer to: Rear Lamp Assembly (417-01 Exterior Lighting, Removal and Installation).

7. Install the rear bumper.

For additional information, refer to: Rear Bumper (501-19 Bumpers, Removal and Installation).

8. Install the towbar.

For additional information, refer to: Towbar (501-08 Exterior Trim and Ornamentation, Removal and Installation).

9. Install the exhaust system. For additional information, refer to: (309-00)

Exhaust System (Removal and Installation),
Exhaust System (Removal and Installation),
Exhaust System (Removal and Installation).

10. Install the tailgate.

11. Install the tailgate aperture weatherstrip.

12. Connect the generator electrical connector.

13. Connect the battery ground cable.

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

REAR END SHEET METAL REPAIRS

REAR CROSSMEMBER SECTION [G928248]

REMOVAL AND INSTALLATION

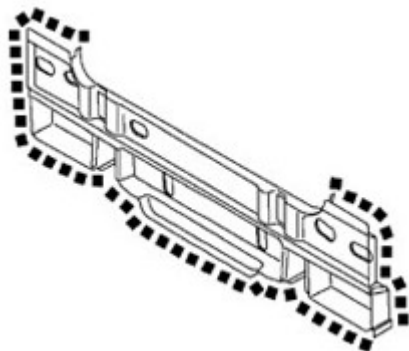
REMOVAL

NOTE:

The procedure to remove the rear crossmember section is the same as the rear crossmember.

1. Disconnect the battery ground cable.
For additional information, refer to: Specifications (414-00, Specifications).
2. Disconnect the generator electrical connector.
3. Remove the rear crossmember.
For additional information, refer to: Rear Crossmember (501-30, Removal and Installation).

4.



E84518

Prepare the new panel for installation.

For additional information, refer to: Body (501-00, Description and Operation).

INSTALLATION

1. Install the rear crossmember section.

For additional information, refer to: Body (501-00, Description and Operation).

2. Install the rear crossmember.

For additional information, refer to: Body (501-00, Description and Operation).

3. Connect the generator electrical connector.
-

4. Connect the battery ground cable.

For additional information, refer to: Specifications (414-00, Specifications).

2012.0 RANGE ROVER (LM), 501-30

REAR END SHEET METAL REPAIRS

REAR FLOOR PANEL SECTION (G928249)


REMOVAL AND INSTALLATION

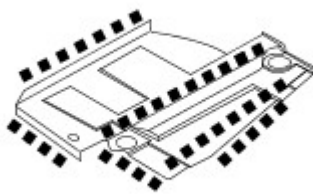
REMOVAL

NOTE:

The rear floor panel section is replaced with either the rear crossmember section or the quarter panel.

1. Disconnect the battery ground cable.
For additional information, refer to: Specifications (414-00, Specifications).
2. Disconnect the generator electrical connector.
3. Remove the rear crossmember section or the quarter panel. For additional information, refer to: (501-30) Rear Crossmember Section (Removal and Installation), Quarter Panel (Removal and Installation).
4. Remove the heat shield from the spare wheel well.

5. 



M772206

Prepare the new panel for installation.

For additional information, refer to: Body (501-00, Description and Operation).

INSTALLATION

1. Install the rear floor panel section.
For additional information, refer to: Body (501-00, Description and Operation)

Operation.

-
2. Install the heat shield to the spare wheel well.
-
3. Install the rear crossmember section or the quarter panel. For additional information, refer to: (501-30) Rear Crossmember Section (Removal and Installation), Quarter Panel (Removal and Installation).
-
4. Connect the generator electrical connector.
-
5. Connect the battery ground cable.
For additional information, refer to: Specifications (414-00, Specifications).

2012.0 RANGE ROVER (LM), 501-30

REAR END SHEET METAL REPAIRS

REAR LAMP MOUNTING PANEL (G928769)

REMOVAL AND INSTALLATION

REMOVAL

NOTE:

The rear lamp mounting panel may be changed with the quarter panel or the rear crossmember. The drain channel may also be changed in this procedure.

-
1. Disconnect the battery ground cable.
For additional information, refer to: Specifications (414-00, Specifications).
 2. Disconnect the generator electrical connector.
-

-
3. Remove the quarter panel.

For additional information, refer to: Quarter Panel (501-30, Removal and Installation).

-
- 4.

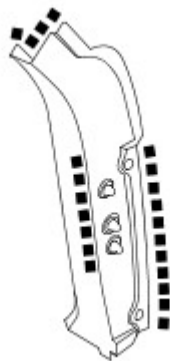


M772207

Prepare the new panel for installation.

For additional information, refer to: Body (501-00, Description and Operation).

-
- 5.



M772202

Prepare the new panel for installation.

For additional information, refer to: Body (501-00, Description and Operation).

INSTALLATION

-
1. Install the quarter panel.

For additional information, refer to: Quarter Panel (501-30, Removal and Installation).

2. Connect the generator electrical connector.

3. Connect the battery ground cable.

For additional information, refer to: Specifications (414-00, Specifications).

2012.0 RANGE ROVER (LM), 501-30

REAR END SHEET METAL REPAIRS

REAR QUARTER UPPER PANEL (G928770)

REMOVAL AND INSTALLATION

REMOVAL

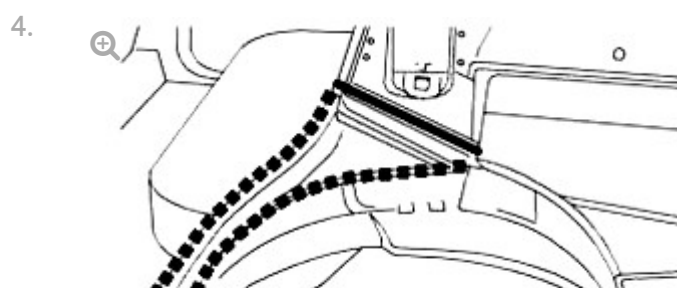
NOTES:

- In this procedure, the rear quarter upper panel is replaced with the quarter panel.
- The rear quarter upper panel must be removed before the rear wheelhouse assembly can be removed.

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

 2. Disconnect the generator electrical connector.

 3. Remove the quarter panel.
For additional information, refer to: Quarter Panel (501-30, Removal and Installation).





E84516



Prepare the new panel for installation.

For additional information, refer to: Body (501-00, Description and Operation).

INSTALLATION

-
1. Install the rear quarter upper panel.

For additional information, refer to: Body (501-00, Description and Operation).

-
2. Install the quarter panel.

For additional information, refer to: Quarter Panel (501-30, Removal and Installation).

-
3. Connect the generator electrical connector.

-
4. Connect the battery ground cable.

For additional information, refer to: Specifications (414-00, Specifications).

2012.0 RANGE ROVER (LM), 501-30

REAR END SHEET METAL REPAIRS

REAR SIDE MEMBER (G928771)

REMOVAL AND INSTALLATION

REMOVAL

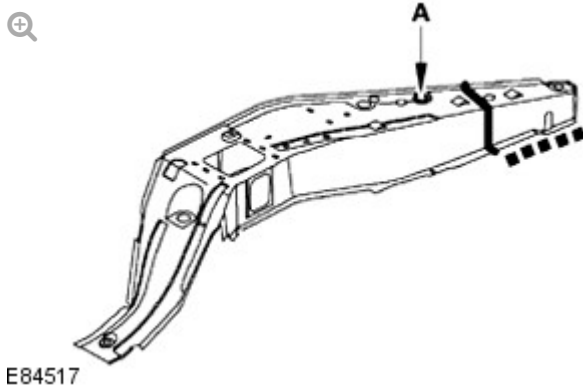
NOTE:

The rear side member section may also be changed with the rear side member.

1. Disconnect the battery ground cable.
For additional information, refer to: Specifications (414-00, Specifications).
2. Disconnect the generator electrical connector.
3. Remove the heat shield from the spare wheel well.

4. **WARNING:**

The panel must be cut rearward of the arrow 'A'. Cutting the panel forward of this point will structurally weaken the body.



Prepare the new panel for installation.

For additional information, refer to: Body (501-00, Description and Operation).

INSTALLATION

1. Install the rear side member.

For additional information, refer to: Body (501-00, Description and

For additional information, refer to: Body (501-00, Description and Operation).

2. Install the heat shield to the spare wheel well.

3. Connect the generator electrical connector.

4. Connect the battery ground cable.

For additional information, refer to: Specifications (414-00, Specifications).

2012.0 RANGE ROVER (LM), 501-30

REAR END SHEET METAL REPAIRS

REAR SIDE MEMBER SECTION (G928250)

REMOVAL AND INSTALLATION

REMOVAL

NOTE:

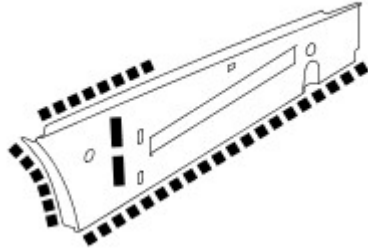
The rear side member may also be changed with the rear side member section.

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

2. Disconnect the generator electrical connector.

3. Remove the heat shield from the spare wheel well.

4. 



M772232

Prepare the new panel for installation.

For additional information, refer to: Body (501-00, Description and Operation).

INSTALLATION

1. Install the new rear side member section.

For additional information, refer to: Body (501-00, Description and Operation).

2. Install the heat shield to the spare wheel well.

3. Connect the generator electrical connector.

4. Connect the battery ground cable.

For additional information, refer to: Specifications (414-00, Specifications).

2012.0 RANGE ROVER (LM), 501-30

REAR END SHEET METAL REPAIRS

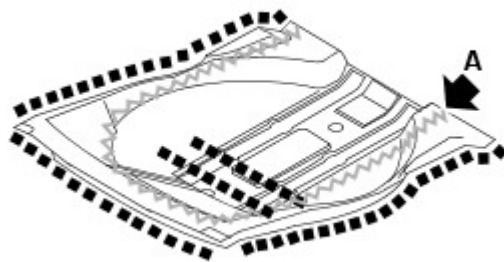
SPARE WHEEL WELL (G928251)

REMOVAL AND INSTALLATION

REMOVAL

1. Disconnect the battery ground cable.
For additional information, refer to: Specifications (414-00, Specifications).
 2. Disconnect the generator electrical connector.
 3. Remove the rear crossmember section.
For additional information, refer to: Rear Crossmember Section (501-30, Removal and Installation).
 4. Remove the heat shield from the spare wheel well.
-

5. 



M772203

Prepare the new panel for installation.

For additional information, refer to: Body (501-00, Description and

Operation).

INSTALLATION

-
1. Install the spare wheel well.

For additional information, refer to: Body (501-00, Description and Operation).

-
2. Install the heat shield to the spare wheel well.

-
3. Install the rear crossmember section.

For additional information, refer to: Rear Crossmember Section (501-30, Removal and Installation).

-
4. Connect the generator electrical connector.

-
5. Connect the battery ground cable.

For additional information, refer to: Specifications (414-00, Specifications).

2012.0 RANGE ROVER (LM), 501-36

PAINT - GENERAL INFORMATION

DESCRIPTION AND OPERATION

The following information provides the contact details of where suitable

application equipment can be obtained from recommended manufacturers and suppliers.

SUPPLIER	POSTAL ADDRESS	TELEPHONE NUMBER
3M	Automotive Trade Group	(0044) 01344 858611
	3M UK PLC	
	3M House	
	PO Box 1	
	Market Place	
	Bracknell	
	Berkshire	
	RG12 1JU	

SUPPLIER	POSTAL ADDRESS	TELEPHONE NUMBER
Cooper Pegler	Cooper Pegler	(0044) 01444 642526
	Burgess Hill	
	Sussex	
	RH15 9LA	

SUPPLIER	POSTAL ADDRESS	TELEPHONE NUMBER
SATA Spray Equipment	SATA Spray Equipment	(0044) 01284 760791
	Minden Industrial Ltd	
	16 Greyfriars Road	
	Moreton Hall	
	Bury St. Edmunds	
	Suffolk	
	IP32 7DX	

APPLICATION EQUIPMENT

3M Body Schutz Pistol Spray Gun 08996

A pistol type spray gun constructed from case and machined light alloy and designed for use with 3M screw fit Body Schutz containers.

3M Pneumatic Cartridge Gun 08012

Air line fed gun for applying 3M cartridge products. Excellent for ease of application to obtain a smooth bead. Regulator valve for additional control.

3M Pneumatic Applicator Guns 08006 and 08007

Air line fed gun for application of 3M sachet sealers (Part Number 08006 for 200 ml and 310 ml sachet applications, and Part Number 08007 for all size sachets including 600 ml). Also available: Heavy Duty Manual Gun 08013.

3M Applicator Gun 08190

For the application of 3M Structural Adhesive 08120.

3M Inner Cavity Wax Applicator Gun 08997

This equipment accepts 1 liter canisters and has a 750 mm flexible tube. The approved system is available from all 3M refinishing factors.

Cooper Pegler Falcon Junior Pneumatic Gun (Airless)

Intended primarily for applying transit wax, this pneumatic sprayer has a 5 liter container with integral hand pump and provides an effective means of wax spraying without the need for compressed air or additional services. A selection of nozzles, lances, hose lengths and a trigger valve assembly with integral filter allows flexibility in use. Additional applications include general maintenance, wax injection and paint application. Heavy bodied materials may also be applied. All parts are fully replaceable and a wide range of nozzle configurations is available.

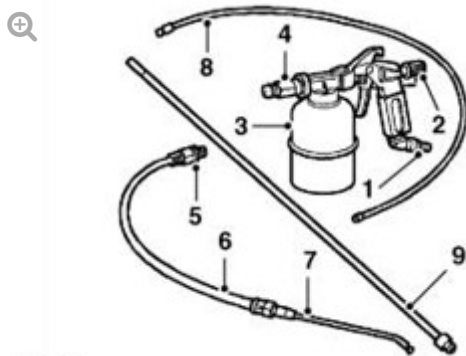
SATA Schutz Gun Model UBE

The SATA Schutz Gun is approved for the re-treatment of vehicle underbody areas with protective coatings as supplied in 1 liter, purpose designed 'one-way' containers. The screw thread fitting (female on the applicator gun) is standard to most Schutz type packs. Full operating details are supplied with the equipment.

SATA HKD1 Wax Injection Equipment

This equipment is approved for carrying out cavity wax re-treatment. The SATA HKD1 set comprises a high quality forged gun with 1 liter pressure feed container, a flexible nylon lance, a straight 1100 mm steel lance and hooked wand lance. A quick-change coupling is provided as a standard fitting to allow lances to be easily interchanged. Each lance has an integral, machined nozzle with specialized spray characteristics to suit the type of box section to be treated.

CAVITY WAX APPLICATION EQUIPMENT AND TECHNIQUES



E85373

ITEM	DESCRIPTION
1	Air inlet
2	Flow control (spray pattern adjustment)
3	Pressure cup (1 liter capacity). Maximum pressure 9.7 bar (140 psi) 9.84 Kg.cm
4	Gun connector
5	Lance nipple connection
6	Flexible lance
7	Rigid direction hook wand (forward cone spray pattern)
8	Flexible nylon lance (1100 mm) with a 360° spray pattern
9	Rigid lance (1100 mm) with a 360° spray pattern

When re-treating wax injected areas which have been disturbed during

repairs, it is necessary to use a compressed air spray gun with integral pressure cup and a selection of interchangeable lances.

The following points must be observed during use, according to the attachments fitted:

- Use the rigid or flexible lance attachments with 360° spray dispersal when treating enclosed areas, to make sure maximum coverage
- Where openings are restricted, use the hook nozzle to provide a more directional spray (e.g. inside narrow or short box sections)
- Spray exposed underbody surfaces directly from the gun less lance attachment and without disconnecting the fluid coupling

1100 MM FLEXIBLE NYLON LANCE

This lance is similar in pattern to the rigid version, but provides the additional penetration required for curved sections or in places where access is difficult. Its main limitation is a lack of positional accuracy inside box sections.

Carry out all spraying on the outward stroke of the lance. Withdraw the lance slowly to make sure sufficient coverage. Do not withdraw the lance too quickly.

Make sure that the nylon tube of the lance is kept away from the edges of the access hole to eliminate abrasion and extend the life of the tube. Take care to make sure that spraying ceases just before the nozzle emerges from the access hole. To assist in this process paint the final 30 mm of the nozzle with RED paint.

HOOK NOZZLE ON FLEXIBLE LANCE

The rigid hook produces a highly atomized, forward-directed, fully conical spray pattern having long range and good dispersion characteristics. This combination has good directional capabilities for treating short, narrow sections, and may also be used for direct spraying of inner wheel arches etc.

In use, position the flat area at the end of the lance at 180° to the nozzle spray direction. This will help to guide the spray more accurately when it is concealed in a box section or access hole.

For general spraying, move the nozzle in an arc from side to side as required, to make sure full coverage.

make sure that all wax injection and application equipment is kept clean. Use white spirit for this purpose immediately after wax injection operations.

BODY AND PAINT MATERIALS

Cavity Waxes

DESCRIPTION	SUPPLIER	PART NUMBER
Inner cavity wax (Amber)	3M	08901/11/21
Inner cavity wax (Transparent)	3M	08909/19/29
Cavity wax	Croda	PW57

Engine Bay Waxes and Lacquers

DESCRIPTION	SUPPLIER	PART NUMBER
Astrolan engine bay wax and cosmetic wax	Astors	DA3243/1
Engine bay and cosmetic wax / lacquer	Croda	PW197
Engine bay cosmetic wax / lacquer	Dinol	4010

Miscellaneous Materials

DESCRIPTION	SUPPLIER	PART NUMBER
Aerosol auto adhesive (Trim) - impact adhesive for trim parts	3M	08080
Flexible parts repair material - rubber modified polypropylene parts	3M	05900
Sound dampening foam	Gurit-Essex	Betacore 7999
Sound dampening pillar foam	Duramix	4330
Flexible foam (anti-flutter) - used between panels, allows for a degree of movement	Duramix	4320
Water shedder repair (Aerosol)	Teroson	-

Seam Sealers

Seam Sealers

DESCRIPTION	SUPPLIER	PART NUMBER
Body caulking - type (b) gaps between panels	3M	08568
Drip Chek Clear - bolted, spot welded and bonded panel edges; type (a) and (b) gaps between panels; type (c) clinch joints	3M	08401
Drip Chek Heavy - type (b) gaps between panels; type (c) clinch joints	3M	08531
Polyurethane seam sealer - bolted, spot welded and bonded panel edges; type (a) and (b) gaps between panels; type (b) clinch joints	3M	08684/89/94
Polyurethane sealer (Sachet) - bolted panel edges; type (b) clinch joints	3M	08703/83/88
Polyurethane sealer (Sachet) - bolted panel edges; type (b) clinch joints	3M	08800/23
Super seam sealer - lap joints; type (b) clinch joints	3M	08537
Weld Thru' sealer - between spot welded panels	3M	08626
Betafill clinch and brushable sealer - type (b) clinch joints	Gurit-Essex	10211/15/20
Clinch, Joint and Underbody coating - lap joints	Gurit-Essex	10101/1-707
Leak Chek Clear - between bolted panels; spot welded and bonded panel edges; type (c) clinch joints; type (a) gaps between panels	Kent Industries	10075
Putty - type (b) gaps between panels	Kent Industries	-
Polyurethane seam sealer - bolted, spot welded and bonded panel edges; between bonded panels; type (a) and (b) gaps between panels	PPG	6500
Polyurethane seam sealer - bolted, spot welded and bonded panel edges; between bonded panels; type (b) gaps between panels	Teroson	92
Terolan light seam sealer - bolted, spot welded and bonded panel edges; type (a) and (b) gaps between panels; between bonded panels; type (c) clinch joints	Teroson	-
Terolan special brushable seam sealer - lap joints	Teroson	-
Terostat sprayable seam sealer - bolted, spot welded and bonded panel edges; between bonded panels; type (b) gaps between panels	Teroson	9320

Terostat 1K Polyurethane seam sealer (SE 20) - type (a) and (b) gaps between panels; spot welded and bonded panel edges	Teroson	-
Sealing compound - bolted, spot welded and bonded panel edges; between bonded panels; type (b) gaps between panels	Wurths	8901001/-/6

Structural Adhesives

DESCRIPTION	SUPPLIER	PART NUMBER
Automotive structural adhesive - between bonded panels; type (a) clinch joints	3M	08122
Two part structural epoxy - between bonded and spot welded panels; type (a) clinch joints	Ciba-Geigy	XB5106/7

Underbody Sealers

DESCRIPTION	SUPPLIER	PART NUMBER
Body Schutz	3M	08861
Spray Schutz	3M	08877
Crodapol brushable underbody sealer	Croda	PV75
Terotex underseal (CP 02)	Teroson	9320

Underbody Waxes

DESCRIPTION	SUPPLIER	PART NUMBER
Stone-chip coating (smooth)	3M	08158/9
Underbody wax	Croda	PW61
Underbody wax	Dinol	Tectacote 205

Weld-Through Primers

DESCRIPTION	SUPPLIER	PART NUMBER
Weld Thru' Coating	3M	05913
Zinc spray	3M	09113
Zinc rich primer	ICI	P-565 634

2012.0 RANGE ROVER (LM), 502-00

UNI-BODY, SUBFRAME AND MOUNTING SYSTEM

FRONT SUBFRAME - V8 5.0L PETROL/V8 S/C 5.0L PETROL (G1224615)

REMOVAL AND INSTALLATION

60.35.78	SUBFRAME - FRONT SUSPENSION - RENEW	5000 CC, AJ V8	4.3	USED WITHINS	+
----------	--	-------------------	-----	-----------------	---

REMOVAL

NOTE:

Removal steps in this procedure may contain installation details.

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

2. **WARNING:**

Make sure to support the vehicle with axle stands.

Raise and support the vehicle.

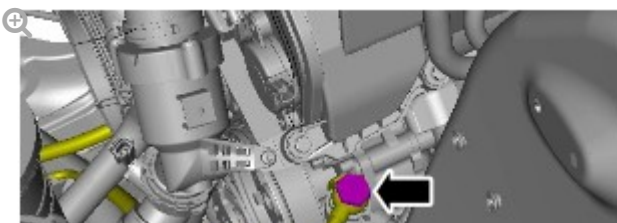
3. Refer to: Engine Undershield (501-02 Front End Body Panels, Removal and Installation).
4. Refer to: Radiator Splash Shield (501-02 Front End Body Panels, Removal and Installation).
5. Refer to: Power Steering Fluid Cooler - 5.0L (211-02 Power Steering, Removal and Installation).

6. **WARNING:**

Be prepared to collect escaping fluid.

CAUTIONS:

- Make sure that the mating faces are clean and free of foreign material.
- Install new o-ring seals





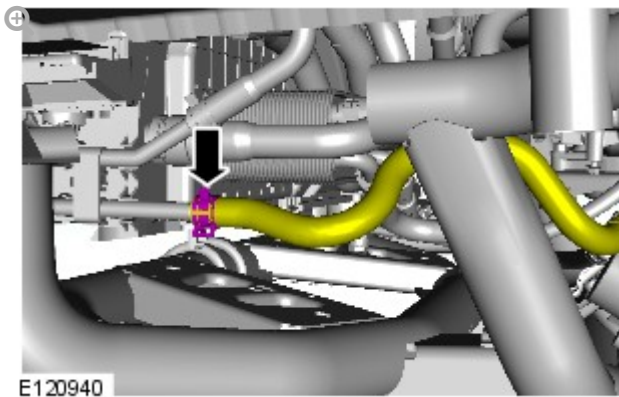
E120125

Torque: 25 Nm

7.

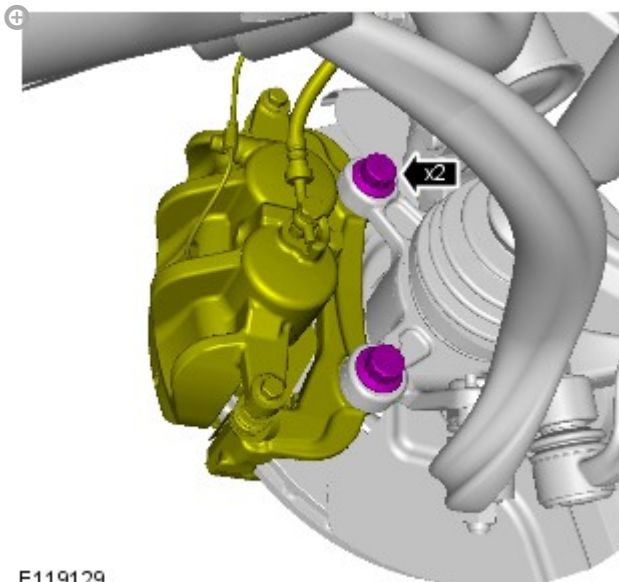
WARNING:

Be prepared to collect escaping fluid.



E120940

8.



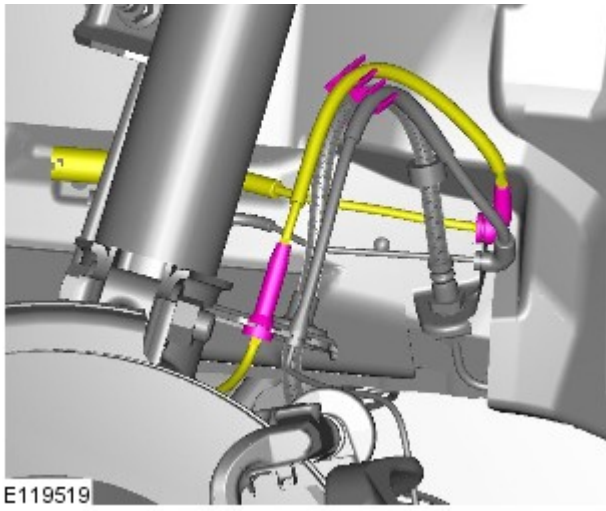
E119129

Torque: 275 Nm

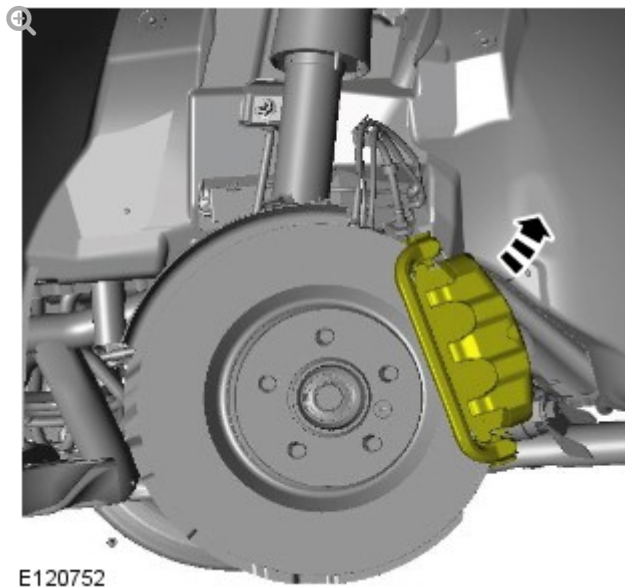
9.



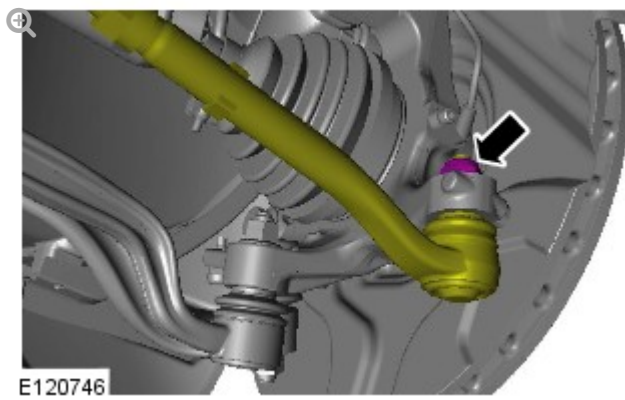
E119129



10.

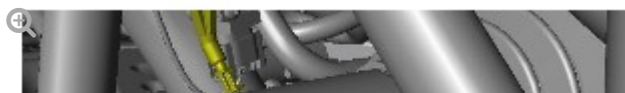


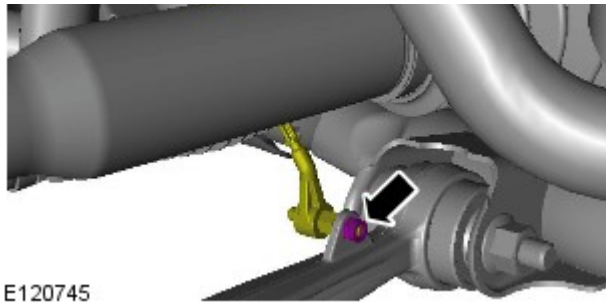
11.



Torque: 80 Nm

12.

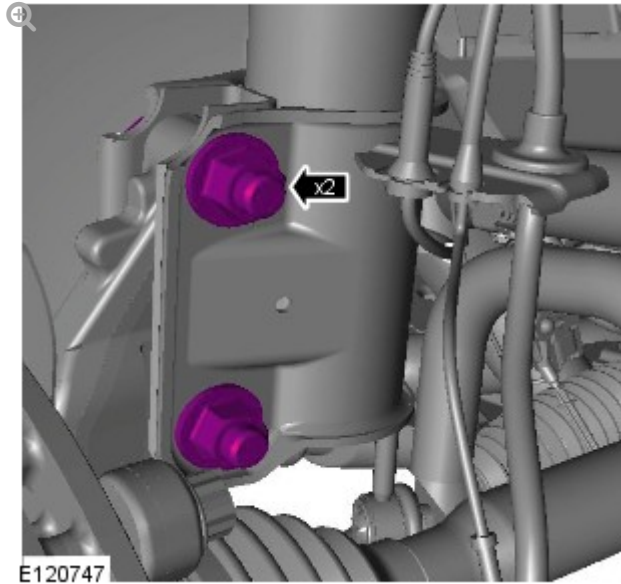




E120745

Torque: 3 Nm

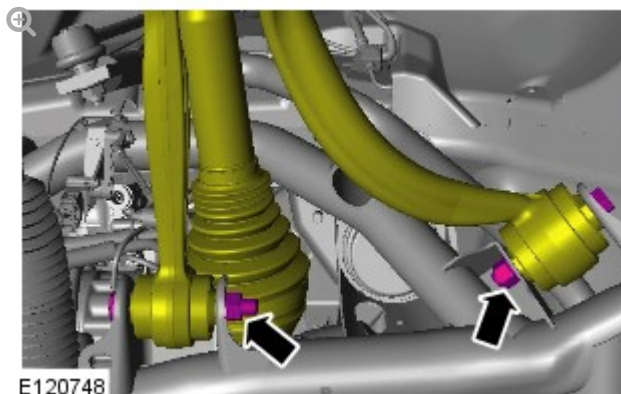
13.



E120747

Torque: 250 Nm

14.



E120748

Torque:

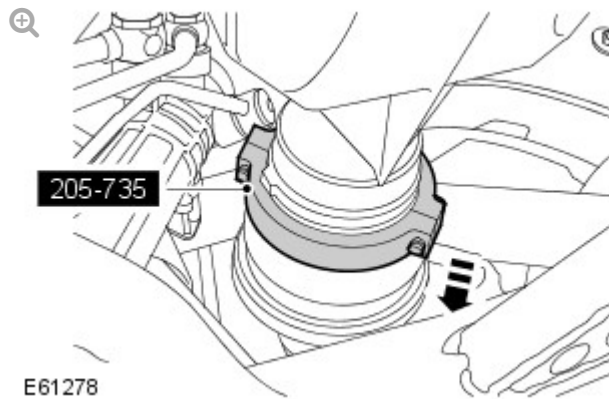
Stage 1: 165 Nm

Stage 2: 90°

15.

CAUTION:

Support the halfshaft.



LH side: Using the special tool, disconnect the halfshaft from the differential.

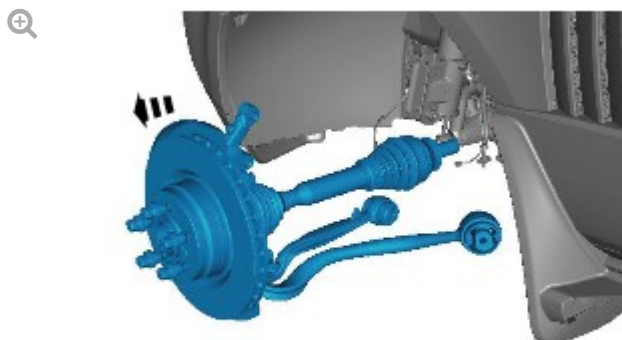
16.

CAUTIONS:

- Keep the halfshaft horizontal to avoid damaging the oil seal.
- Make sure no damage occurs to the halfshaft seal when installing the halfshaft.

NOTE:

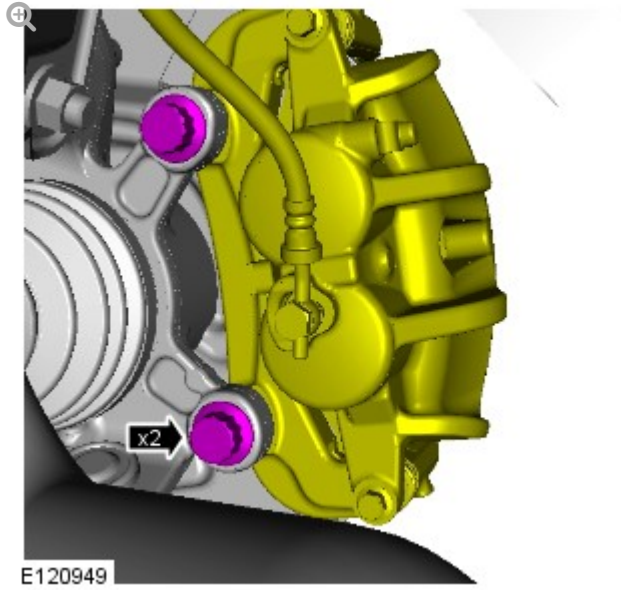
With assistance remove the components.



E120751

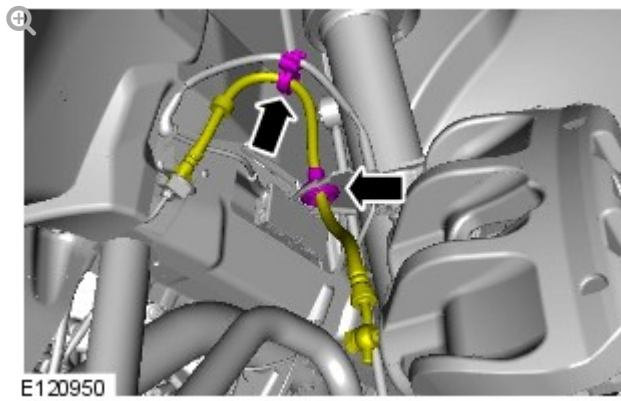
- Install a new halfshaft oil seal.

17.

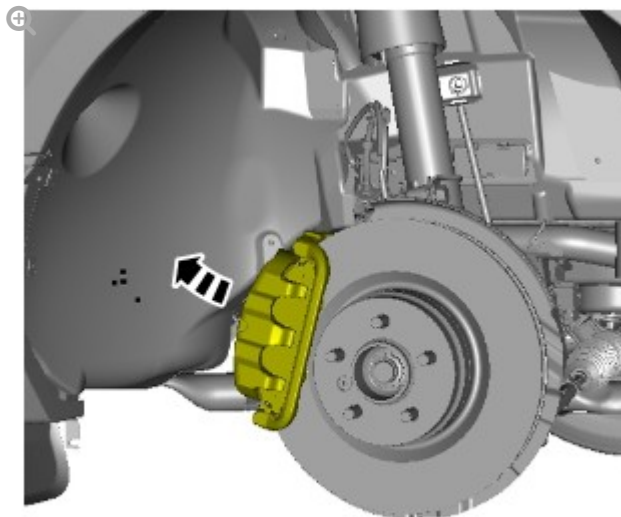


Torque: 275 Nm

18.

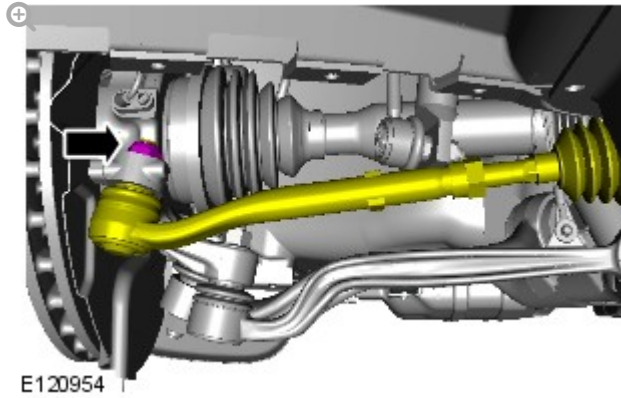


19.



E120938

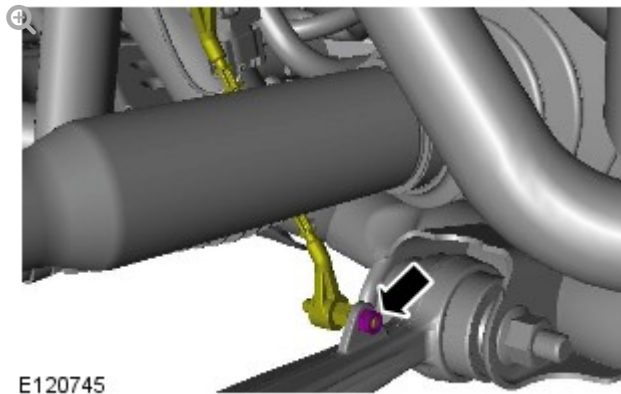
20.



E120954

Torque: 80 Nm

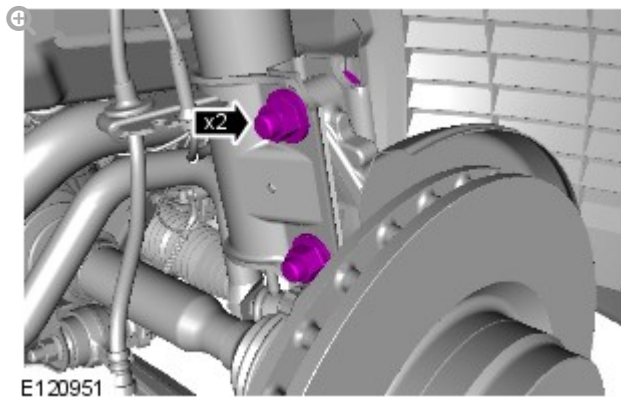
21.



E120745

Torque: 3 Nm

22.

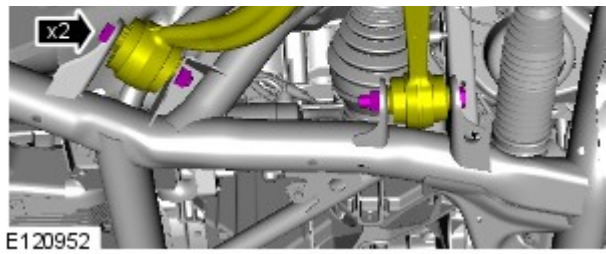


E120951

Torque: 250 Nm

23.





Torque:

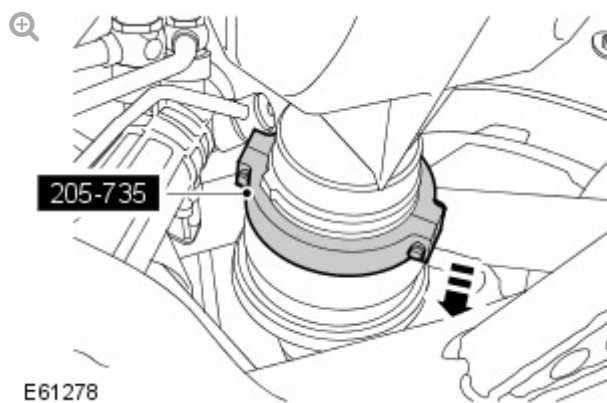
Stage 1: **165 Nm**

Stage 2: **90°**

24.

CAUTION:

Support the halfshaft.



LH side: Using the special tool, disconnect the halfshaft from the differential.

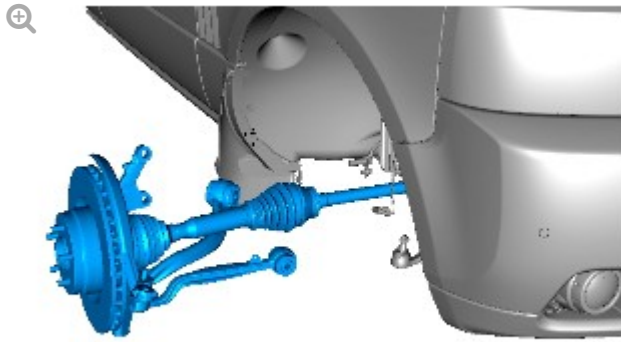
25.

CAUTIONS:

- Keep the halfshaft horizontal to avoid damaging the oil seal.
- Make sure no damage occurs to the halfshaft seal when installing the halfshaft.

NOTE:

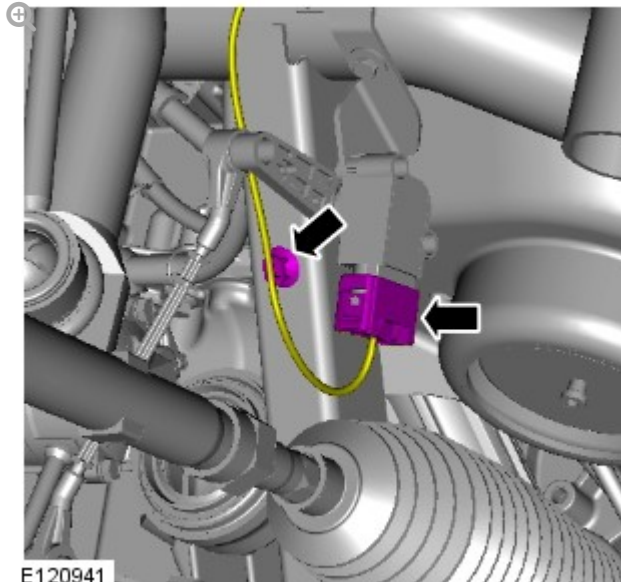
With assistance remove the components.



E120955

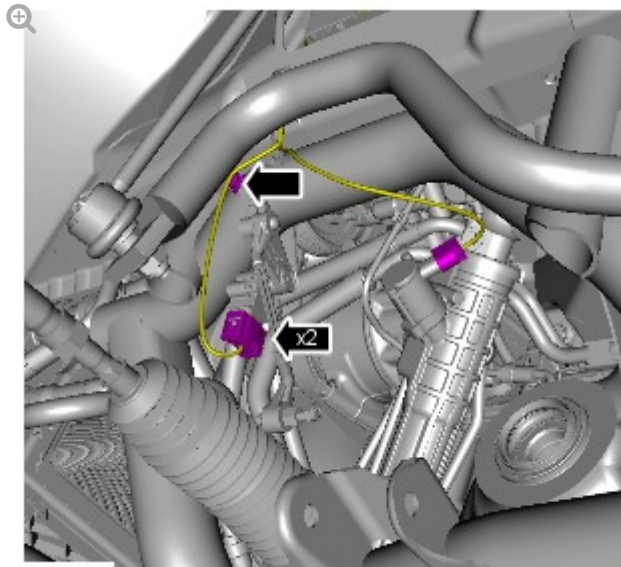
- Install a new halfshaft oil seal.

26.



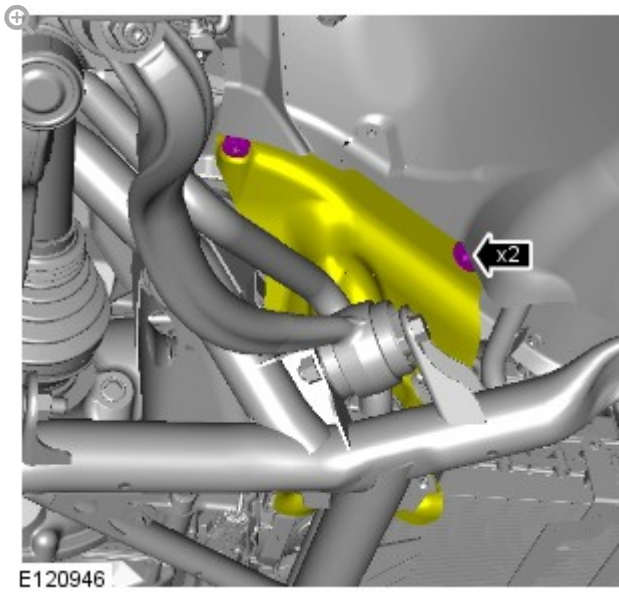
E120941

27.

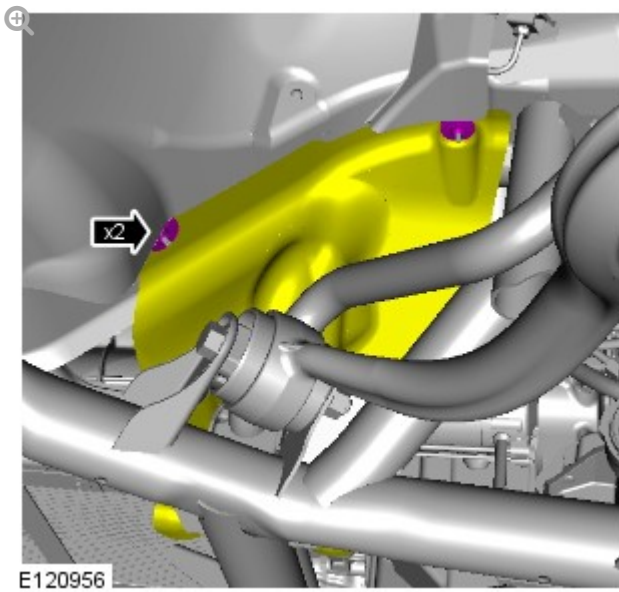


E120941

28.



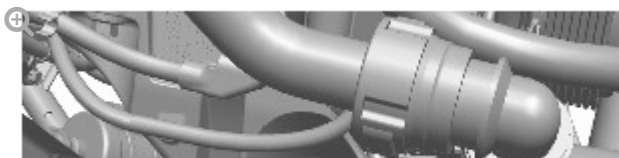
29.

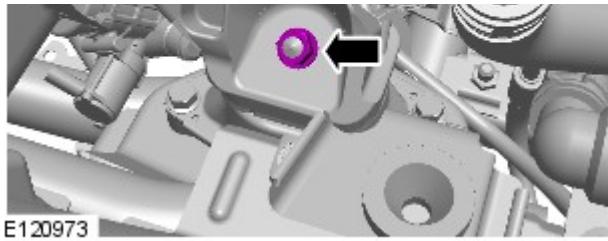


30.

NOTE:

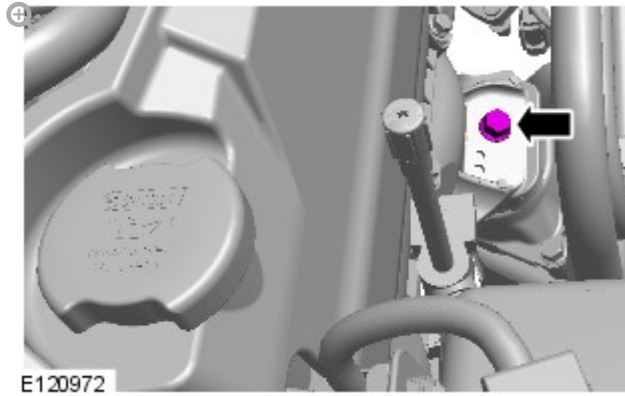
Engine shown removed for clarity.





Torque: 100 Nm

31.



Torque: 100 Nm

32. Support the engine.

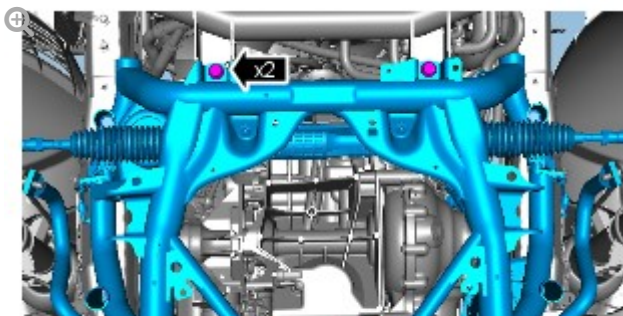
33.

WARNING:

Secure the component to the transmission jack.

CAUTION:

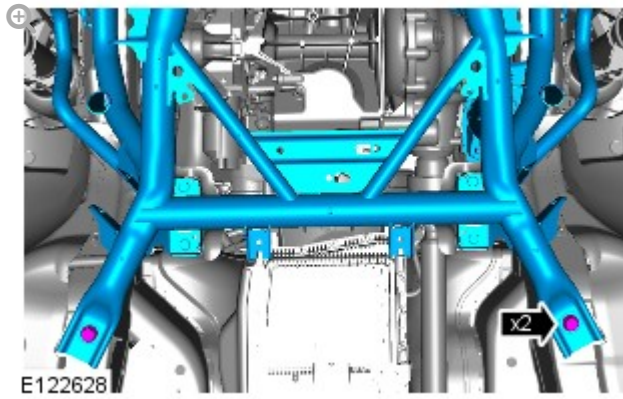
Take extra care not to damage the component surface, failure to follow this instruction may result in corrosion.





- Torque: 133 Nm

34.

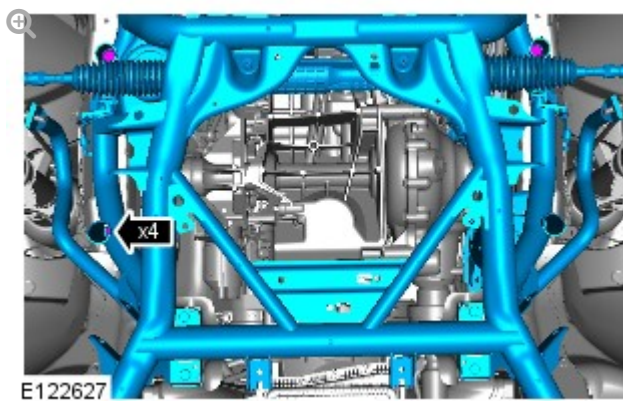


Torque:

Stage 1: 165 Nm

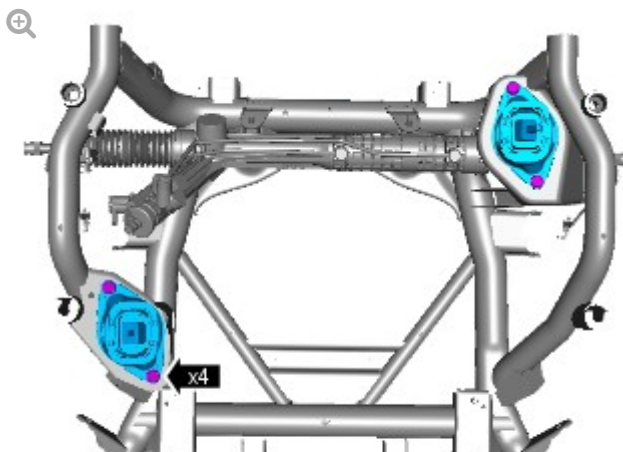
Stage 2: 90°

35.



- Torque: 165 Nm

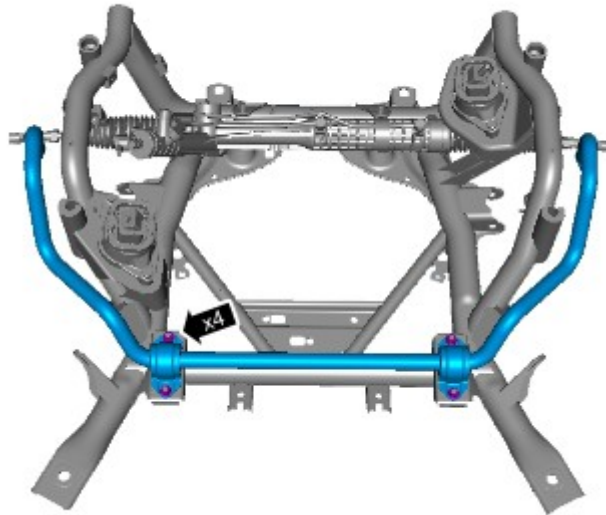
36.





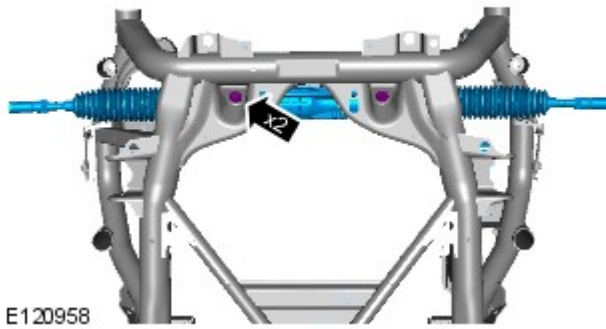
Torque: 56 Nm

37.



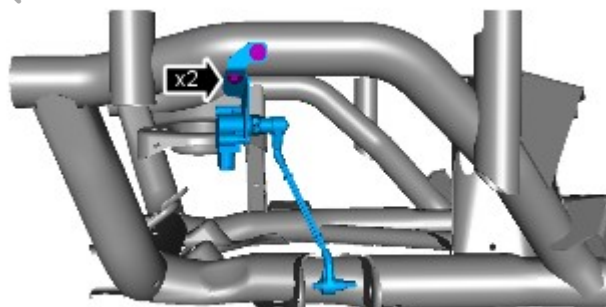
Torque: 56 Nm

38.



Torque: 100 Nm

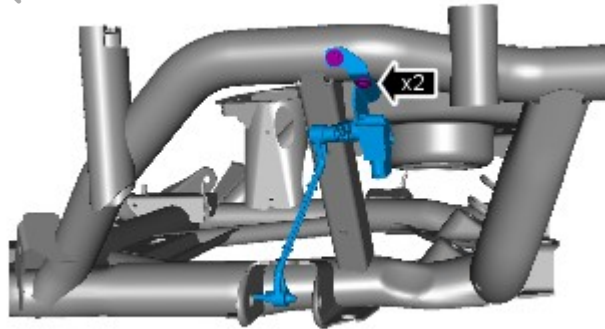
39.



E120945

Torque: 12 Nm

40.



E120953

Torque: 12 Nm

INSTALLATION

1. To install, reverse the removal procedure.

2012.0 RANGE ROVER (LM), 502-00

UNI-BODY, SUBFRAME AND MOUNTING SYSTEM

REAR SUBFRAME - V8 5.0L PETROL/V8 S/C 5.0L PETROL (G1225153)

REMOVAL AND INSTALLATION

REMOVAL

NOTE:

Removal steps in this procedure may contain installation details.

1. Disconnect the battery ground cable.
Refer to: Specifications (414-00, Specifications).

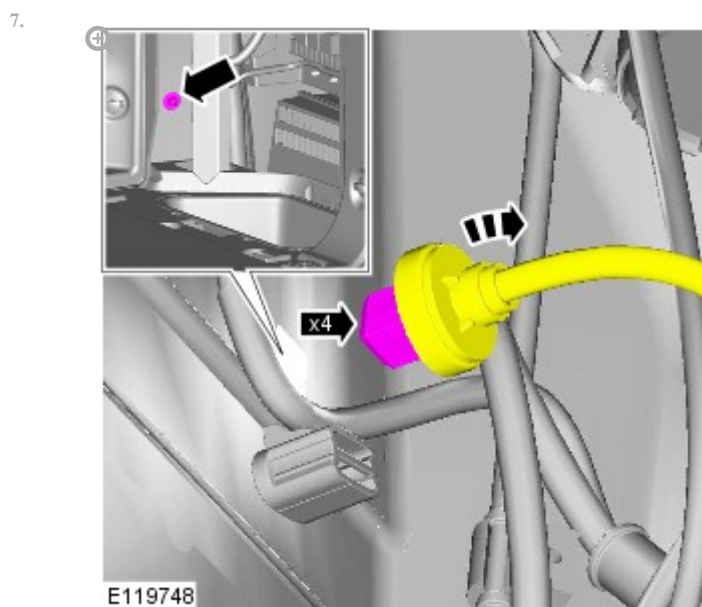
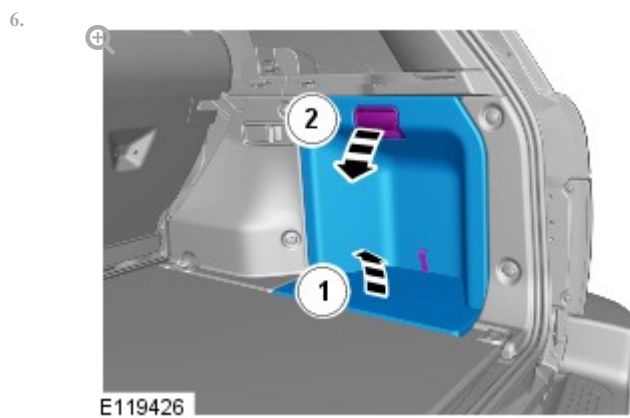
2. **WARNING:**

Make sure to support the vehicle with axle stands.

Raise and support the vehicle.

3. Refer to: Air Suspension System Depressurize and Pressurize (204-05, General Procedures).
4. Refer to: Rear Driveshaft - 5.0L (205-01, Removal and Installation).

5. Refer to: Rear Fender Splash Shield (501-08, Removal and Installation).

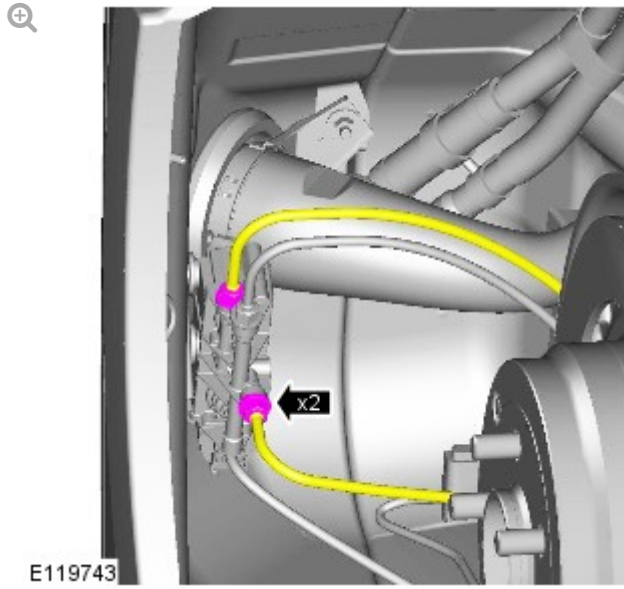


8. **CAUTIONS:**

- Before the disconnection or removal of any components, ensure the area around joint faces and connections are clean. Plug any open connections to prevent contamination.
- Visually inspect the air line ends for damage or wear. Repair or replace the air line as necessary.
- Make sure the new Voss connector is installed and fully tightened with the alignment plug installed.

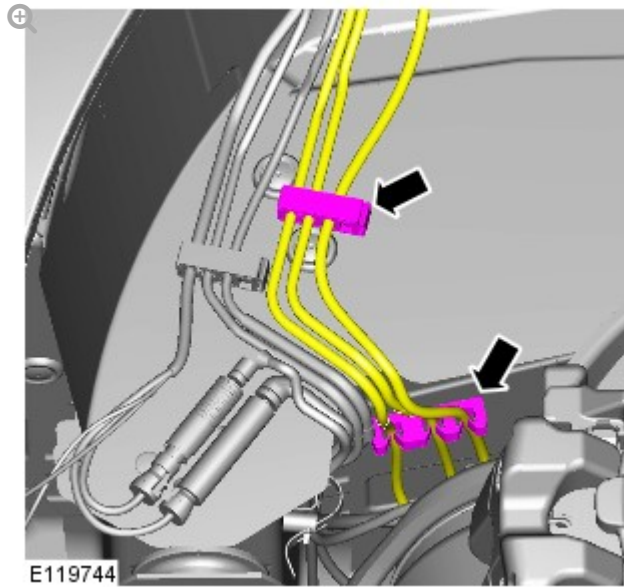
NOTE:

Note the air line fitted positions.



Torque: 3 Nm

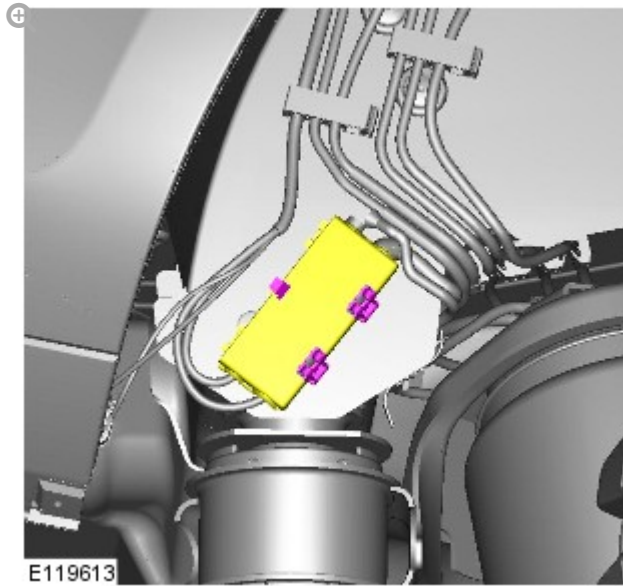
9.



10.

NOTE:

Right-hand shown, left-hand similar.

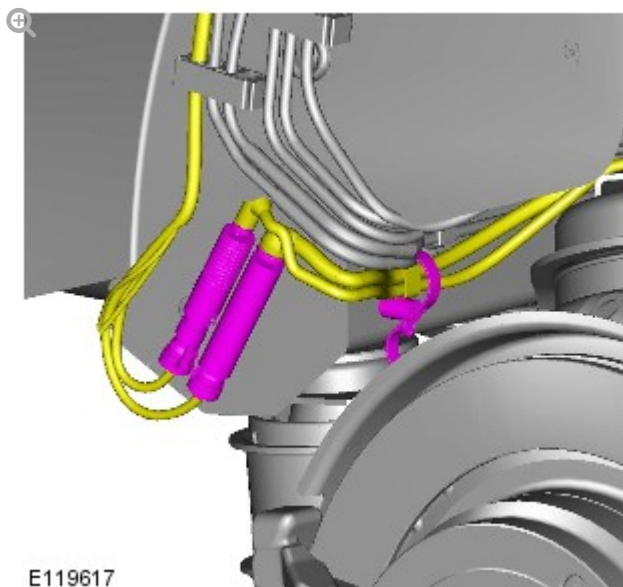


Open the electrical connector housing.

11.

NOTE:

Right-hand shown, left-hand similar.



12.

WARNING:

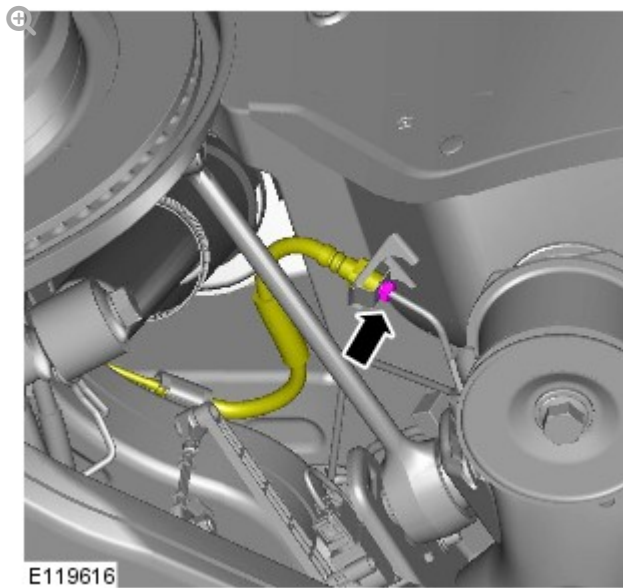
Be prepared to catch escaping fluid.

CAUTIONS:

- Before disconnecting or removing the components, ensure the area around the joint faces and connections are clean and dry. Plug open connections to prevent contamination.
- Brake fluid will damage paint finished surfaces. If spilled, immediately remove the fluid and clean the area with water.

NOTE:

Right-hand shown, left-hand similar.



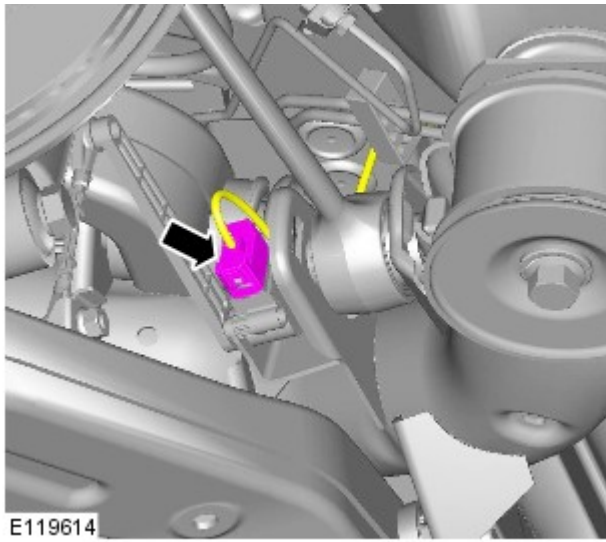
Torque: 15 Nm

13.

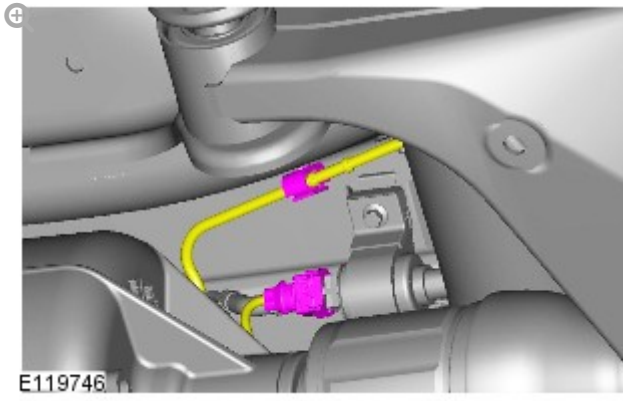
NOTE:

Right-hand shown, left-hand similar.

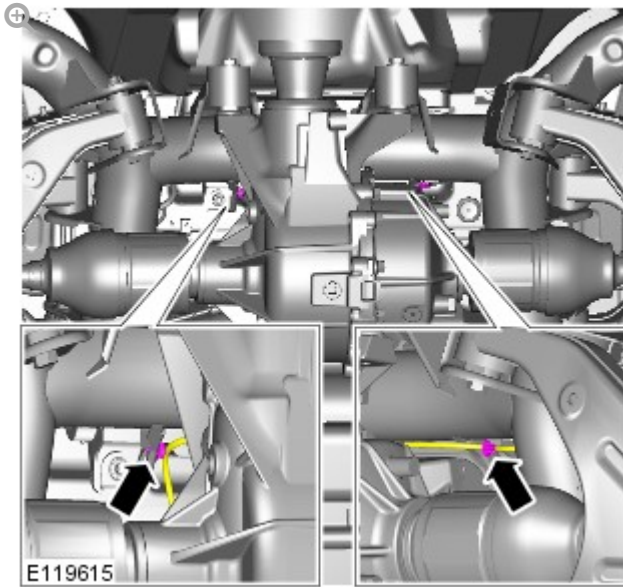




14.



15.



16.

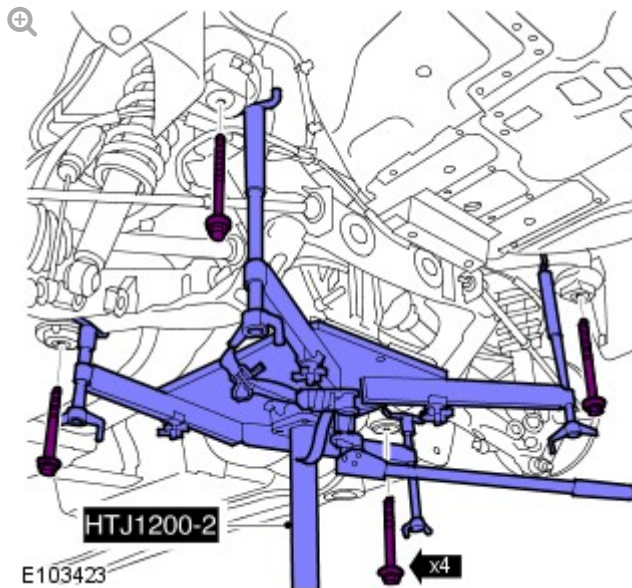
CAUTION:



Make sure that new subframe bolts are installed.

NOTE:

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

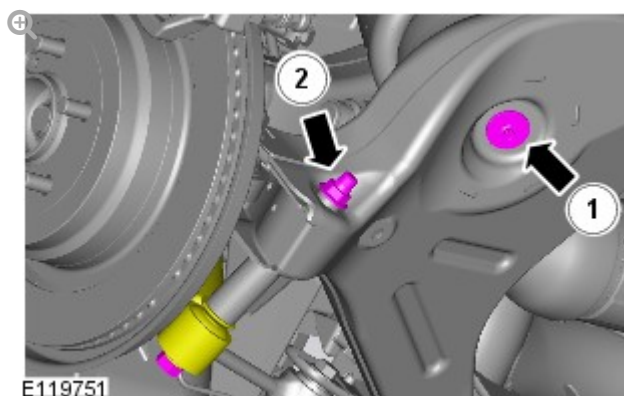


Torque: 165 Nm

17.

NOTES:

- Left-hand shown, right-hand similar.
- Make sure that new nuts and bolts are installed.



Torque:

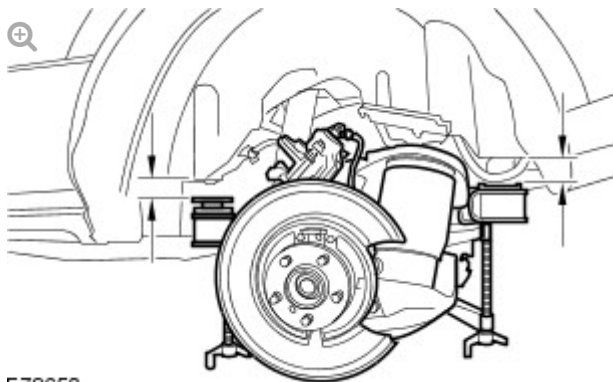
Screw 7 Nm

M14 90 Nm

18.

NOTE:

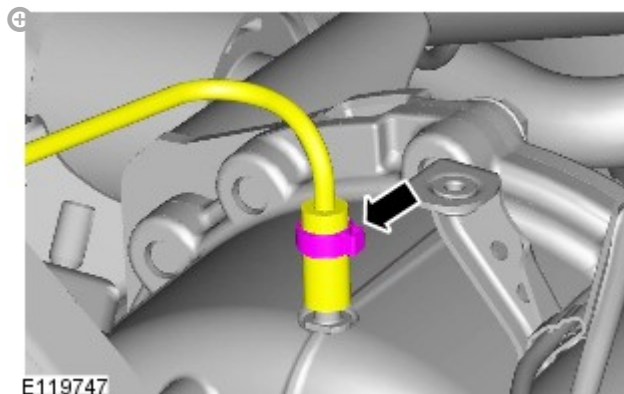
Some variation in the illustrations may occur, but the essential information is always correct.



E78650

Lower the subframe by a maximum of 100 mm.

19.

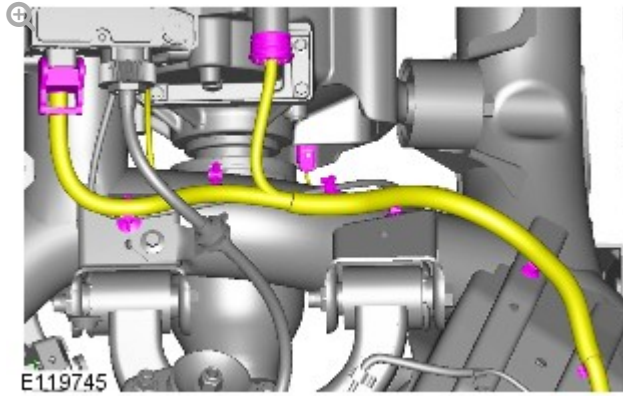


E119747

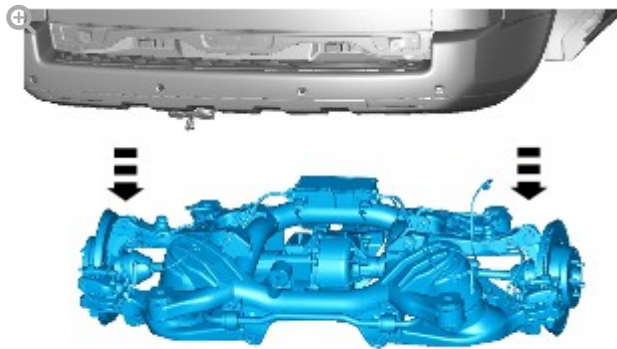
20.

CAUTION:

Before disconnecting or removing the components, ensure the area around the joint faces and connections are clean and dry. Plug open connections to prevent contamination.

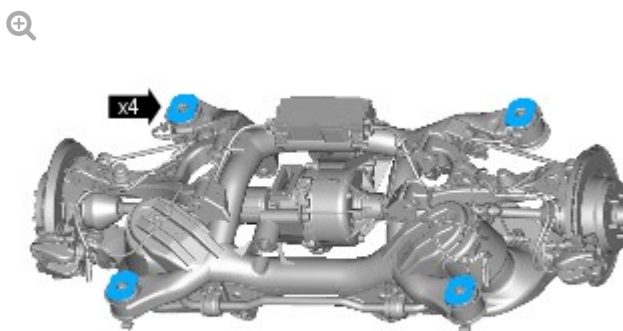


21.



With assistance, remove the rear subframe assembly.

22.



INSTALLATION



All vehicles

1. To install, reverse the removal procedure.



Vehicles with high performance brakes

1. Refer to: Brake System Bleeding - Vehicles With: High Performance Brakes (206-00, General Procedures).



Vehicles with standard brakes

1. Refer to: Brake System Bleeding - Vehicles With: Standard Brakes (206-00, General Procedures).



All vehicles

1. Refer to: Four-Wheel Alignment (204-00, General Procedures).

2012.0 RANGE ROVER (LM), 502-00


UNI-BODY, SUBFRAME AND MOUNTING SYSTEM

**REAR SUBFRAME BUSHING -
V8 5.0L PETROL/V8 S/C 5.0L
PETROL** (G1225156)

REMOVAL AND INSTALLATION

64.35.79	BUSHING - REAR SUBFRAME MOUNTING - ONE - RENEW	5000 CC, AJ V8	4.6	USED WITHINS	+
----------	---	-------------------	-----	-----------------	---

SPECIAL TOOL(S)



The diagram shows a blue mechanical tool labeled 205-709, which is a remover/installer for subframe bushings. It consists of a vertical shaft with a handle and a guide. To the left of the tool are two blue bushing components, one of which is labeled E120362. A magnifying glass icon is in the top left corner of the diagram area.

205-709

Remover/Installer,
Subframe Bushing
Guide

REMOVAL

CAUTION:

Take extra care not to damage the component surface, failure to follow this instruction may result in corrosion.

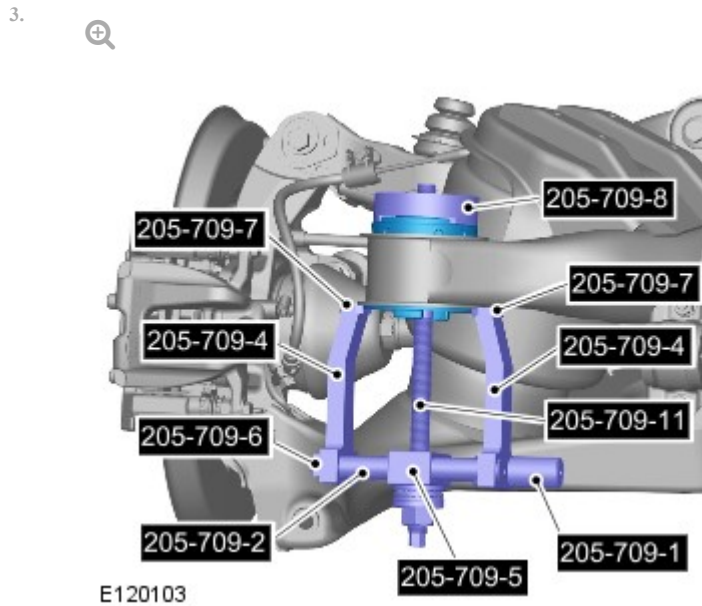
NOTE:

Removal steps in this procedure may contain installation details.

1. Remove the rear subframe assembly for access.
Refer to: Rear Subframe - 5.0L (502-00, Removal and Installation).

2. **NOTE:**

Note the orientation of the bushing before removal.

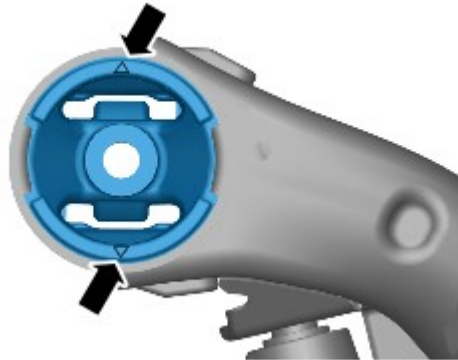


Special Tool(s): [205-709](#)

INSTALLATION

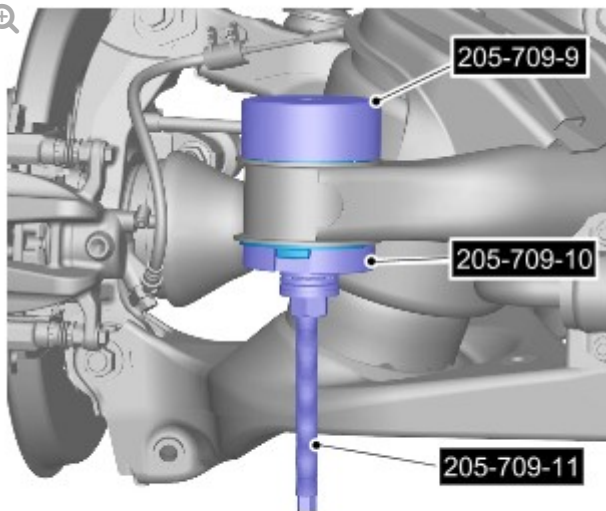
1. **NOTE:**

Make sure the bushing is correctly orientated.



E122275

2.



E120104

3. Refer to: Rear Subframe - 5.0L (502-00, Removal and Installation).

2012.0 RANGE ROVER (LM), 502-02

FULL FRAME AND BODY MOUNTING

SPECIFICATIONS

Torque Specifications

DESCRIPTION	NM	LB-FT
Transmission support crossmember damper	90	66
Transmission support crossmember to chassis bolts	68	50
Transmission support insulator through-bolt	100	74

2012.0 RANGE ROVER (LM), 502-02

FULL FRAME AND BODY MOUNTING

TRANSMISSION SUPPORT CROSSMEMBER - V8 5.0L PETROL/V8 S/C 5.0L PETROL (G1225392)

REMOVAL AND INSTALLATION

REMOVAL

NOTE:

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

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

-
2. **WARNING:**

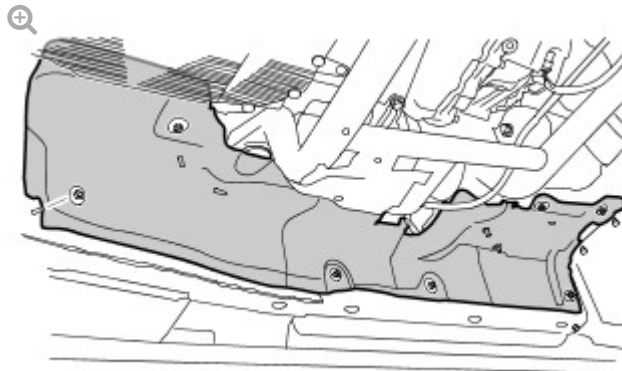
Do not work on or under a vehicle supported only by a jack.
Always support the vehicle on safety stands.

Raise and support the vehicle.

-
3. Remove the exhaust system.

For additional information, refer to: Exhaust System (309-00, Removal and Installation).

-
- 4.

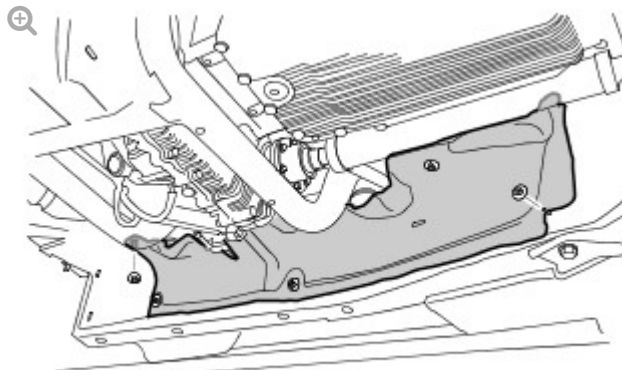


E59460

Remove the RH heat shield.

- Remove the 7 nuts.

-
- 5.

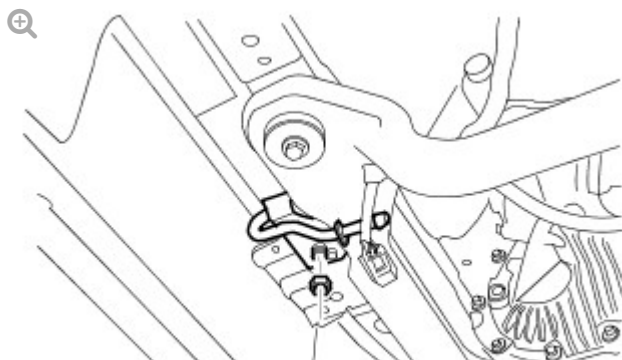


E59461

Remove the LH heat shield.

- Remove the 5 nuts.

-
- 6.

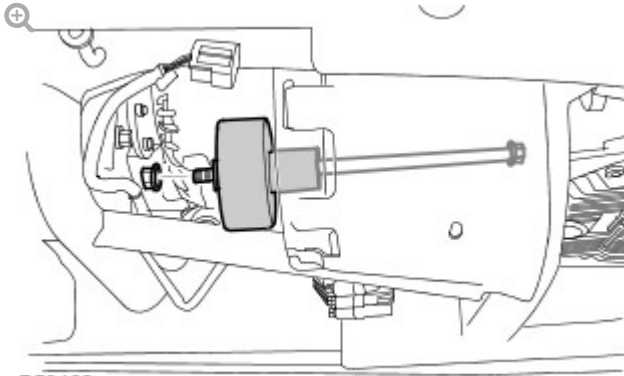


E59462

Remove the LH exhaust hanger.

- Remove the nut.

7.

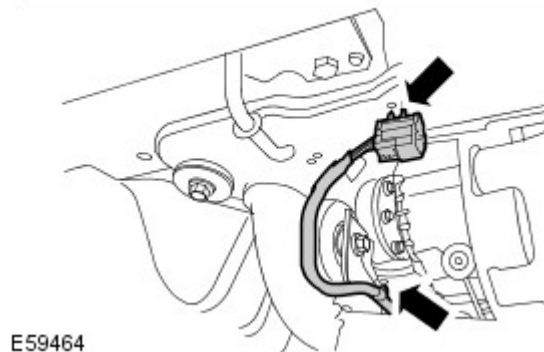
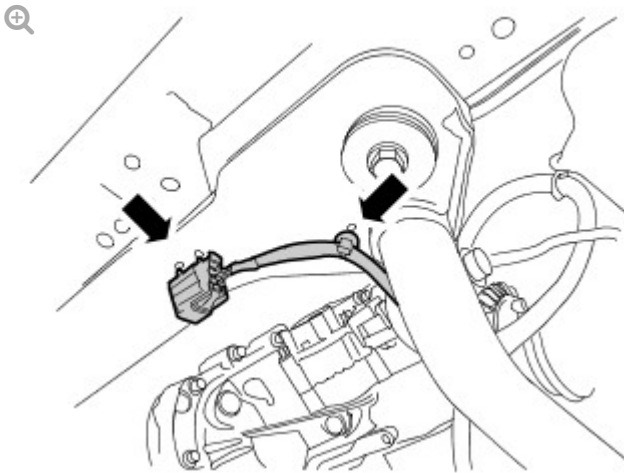


E59463

Remove the transmission support insulator nut, bolt and damper.

- Support the transmission.

8.

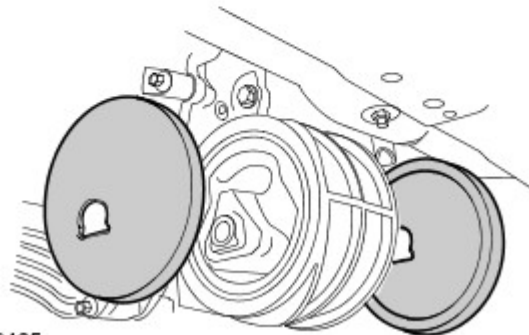
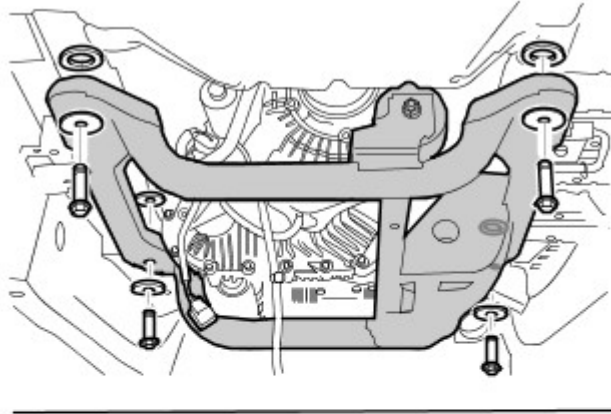


E59464

Release the catalyst monitor sensor wiring harness.

- Release the 4 clips.

9.



E59465

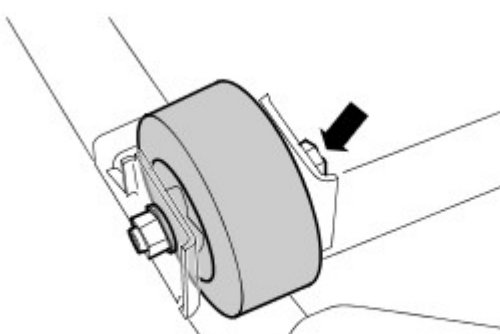
With assistance, remove the transmission support crossmember.

- Remove the 4 bolts and washers.
- Noting fitted position, remove the 4 spacers.
- Noting fitted position, remove the 2 transmission support insulator buffers.

10.

NOTE:

Do not disassemble further if the component is removed for access only.





Remove the transmission support crossmember damper.

- Remove the nut and bolt.

INSTALLATION

1. Install the transmission support crossmember damper.
 - Tighten the nut and bolt to 90 Nm (66 lb.ft).
2. With assistance, install the transmission support crossmember.
 - Install the transmission support insulator buffers.
 - Install the spacers.
 - Tighten the bolts to 68 Nm (50 lb.ft).
3. Attach the catalyst monitor sensor wiring harness.
 - Secure the clips.
4. Install the transmission support insulator nut, bolt and damper.
 - Lower the transmission.
 - Tighten the bolt to 115 Nm (85 lb.ft).
5. Install the exhaust hanger.
 - Tighten the nut to 45 Nm (33 lb.ft).
6. Install the heat shields.
 - Tighten the nuts.
7. Install the exhaust system.

For additional information, refer to: Exhaust System (309-00, Removal and Installation).
8. Connect the battery ground cable.

For additional information, refer to: Specifications (414-00,
Specifications).

