


Front Suspension - Front Stabilizer Bar Bushing

Removal and Installation

Removal

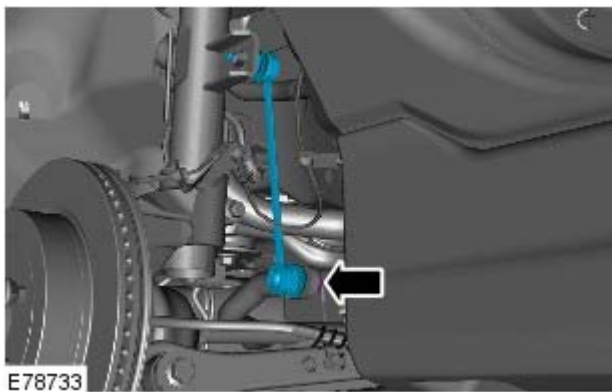
1.  **WARNING:** Make sure to support the vehicle with axle stands.
Raise and support the vehicle.


2. Remove the front wheels and tires.

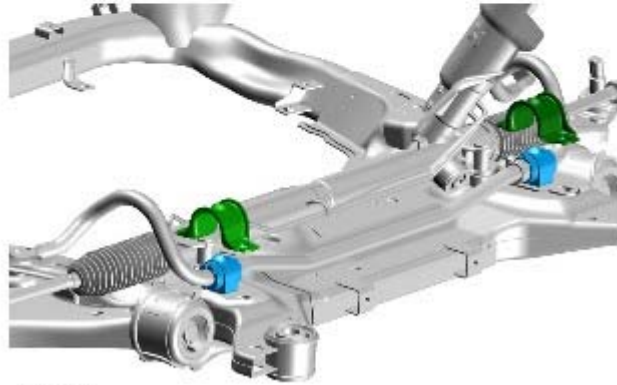
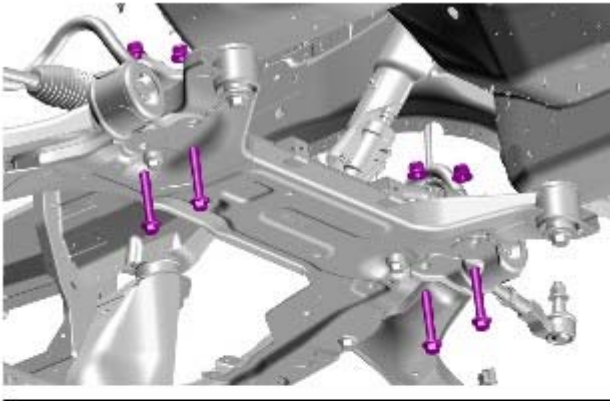
Refer to: [Wheel and Tire](#) (204-04 Wheels and Tires, Removal and Installation).

3. Remove the engine undershield.


Refer to: [Engine Undershield](#) (501-02 Front End Body Panels, Removal and Installation).



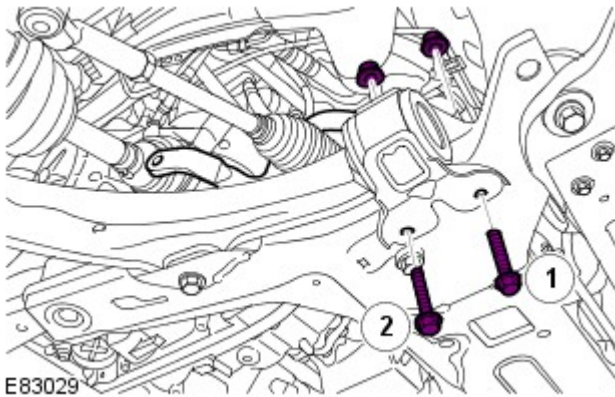
4.  **CAUTION:** Make sure that the ball joint ball does not rotate.
 - Disconnect both front stabilizer bar links from the stabilizer bar.
 - Discard the nuts.




E 81203

5.  **WARNING:** Make sure that new nuts are installed.
Remove the stabilizer bar bushing.


Installation




E83029

1.  **WARNING:** Make sure that new nuts are installed.
Install the stabilizer bar bushings.

Torque: 175 Nm

2.  **WARNING:** Make sure that new nuts are installed.

 **CAUTION:** Make sure that the ball joint ball does not rotate.

Install the stabilizer link bar.

Torque: 60 Nm

3. Install the engine undershield.

Refer to: [Engine Undershield](#) (501-02 Front End Body Panels, Removal and Installation).


4. Install the wheels and tires.

Refer to: [Wheel and Tire](#) (204-04 Wheels and Tires, Removal and Installation).

Front Suspension - Front Stabilizer Bar Link

Removal and Installation

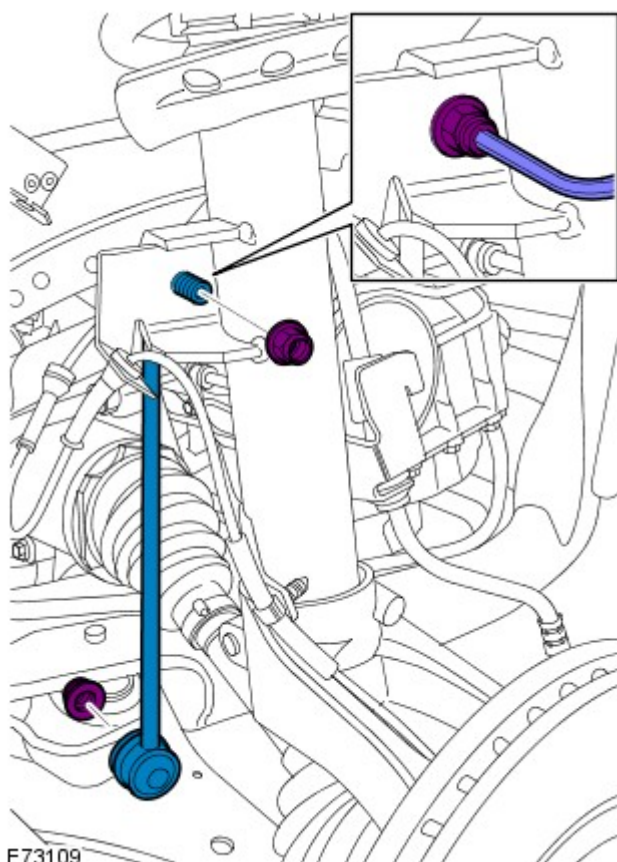
Removal

1.  **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.

2. Remove the front wheel.

Refer to: [Wheel and Tire](#) (204-04 Wheels and Tires, Removal and Installation).



3.  **WARNING:** Make sure that new nuts are installed.

 **CAUTION:** Use an Allen key to prevent the ball joint rotating whilst removing the nut.

Torque: 60 Nm

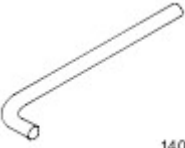

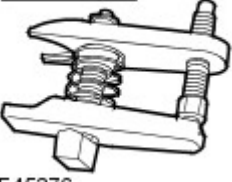
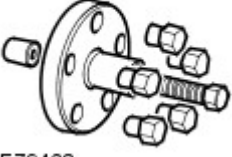
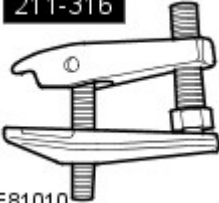
Installation

1. To install, reverse the removal procedure.

Front Suspension - Wheel Knuckle

Removal and Installation

Special Tool(s)

 <p>14039</p>	<p>204-159 Lever, Wheel Knuckle</p>
 <p>204-619</p> <p>E82091</p>	<p>204-619 G-Clamp</p>
 <p>205-754A</p> <p>E45276</p>	<p>205-754A Splitter, Ball Joints</p>
 <p>205-857</p> <p>E79462</p>	<p>205-857 Remover, Halfshaft</p>
 <p>211-316</p> <p>E81010</p>	<p>211-316 Separator, Ball Joint</p>

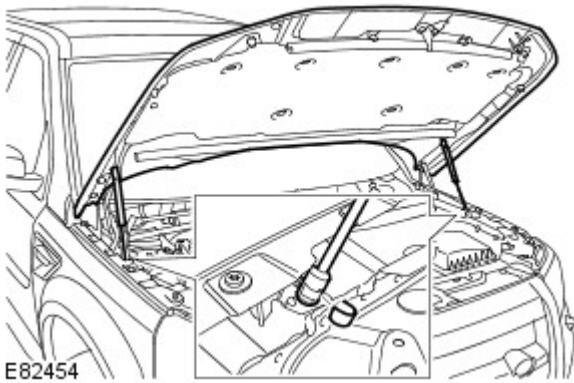
Removal


NOTE: Removal steps in this procedure may contain installation details.

1. Remove the plenum chamber panel.

Refer to: [Plenum Chamber](#) (412-01 Climate Control, Removal and Installation).

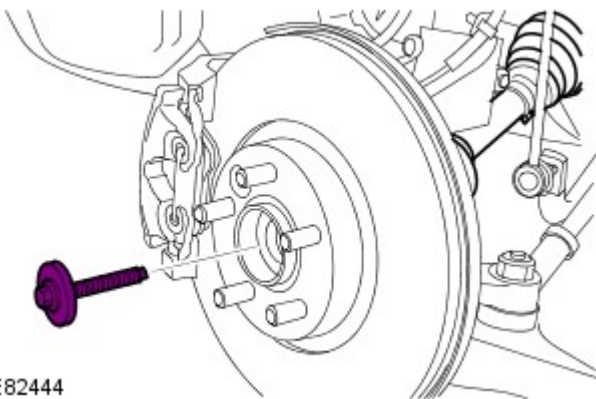
2. Release the hood support struts and secure the hood in an upright position.



3.  **WARNING:** Make sure to support the vehicle with axle stands.
Raise and support the vehicle.


4. Remove the wheel and tire.

Refer to: [Wheel and Tire](#) (204-04 Wheels and Tires, Removal and Installation).



5. **CAUTIONS:**

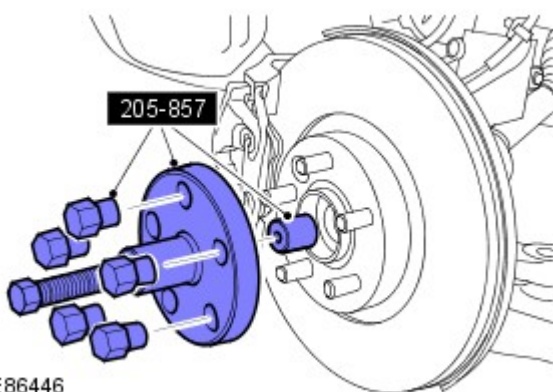
 Discard the bolt.


 Do not use air tools to install the bolt. Failure to follow this instruction may result in damage to the component.

Torque:

Stage 1: 45 Nm

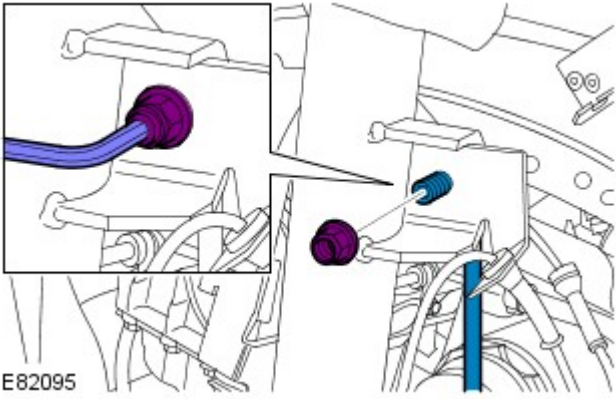
Stage 2: 60°




6.  **CAUTION:** Do not use a hammer to detach the halfshaft from the hub assembly, failure to follow this instruction may result in damage to the halfshaft.

Partially release the front halfshaft from the wheel knuckle.

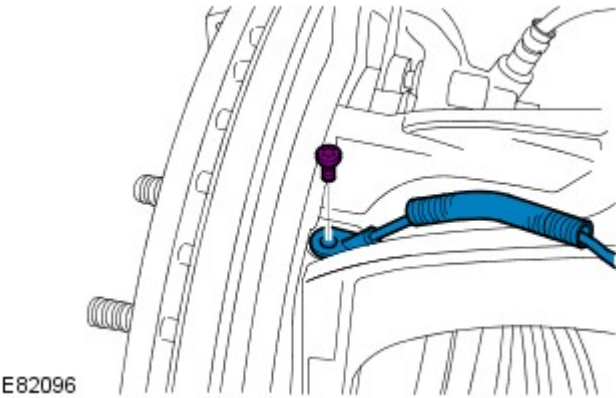
Special Tool(s): [205-857](#)



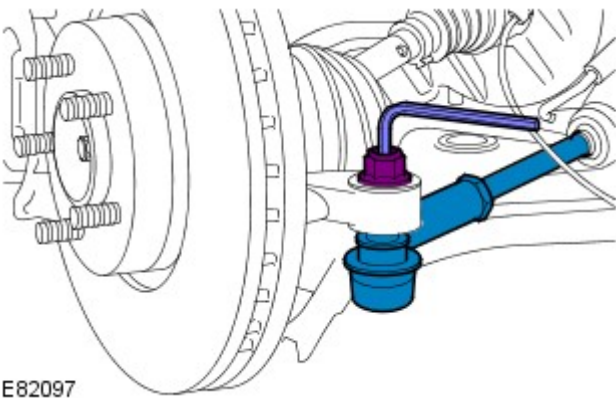
7.  **WARNING:** Make sure that a new nut is installed.

 **CAUTION:** Make sure that the ball joint ball does not rotate.


Torque: 60 Nm



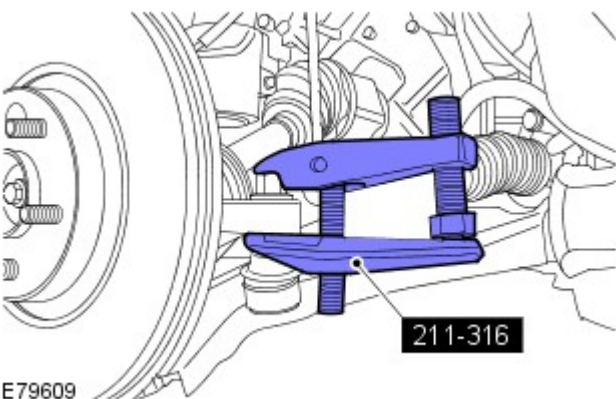
8. *Torque:* 5 Nm



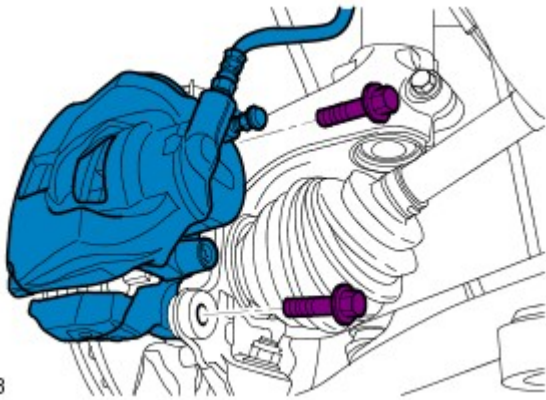
9.  **WARNING:** Make sure that a new tie-rod end nut is installed.

 **CAUTION:** Make sure that the ball joint ball does not rotate.

Torque: 80 Nm



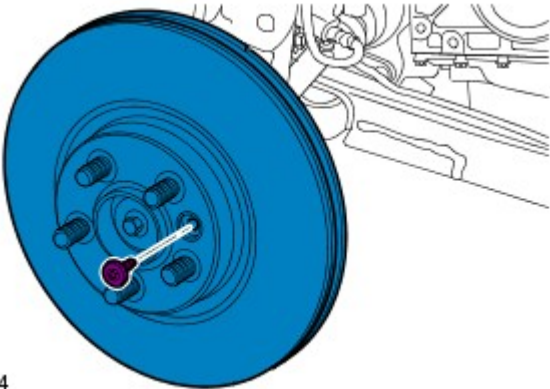
10. *Special Tool(s):* 211-316



E73108

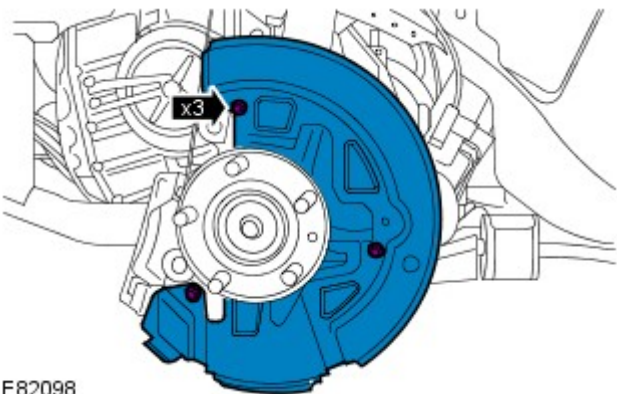
11.  **CAUTION:** Make sure that no load is placed on the brake hose.

Torque: 200 Nm



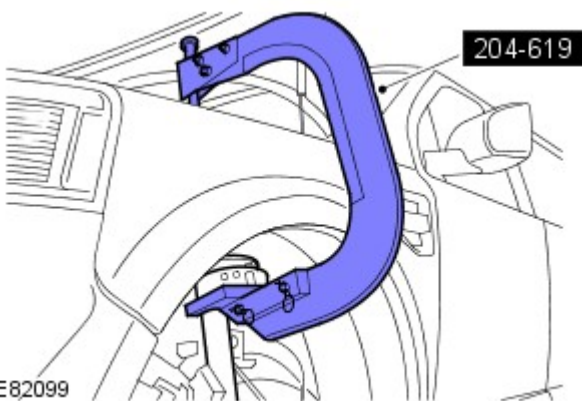
E73104

12. *Torque:* 35 Nm



E82098

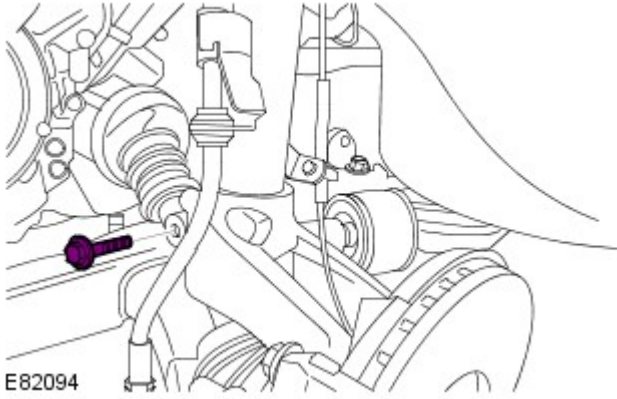
13. *Torque:* 10 Nm



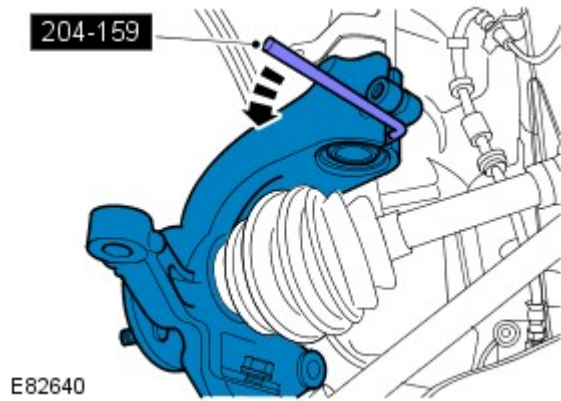
E82099

14. **NOTE:** This step requires the aid of another technician.

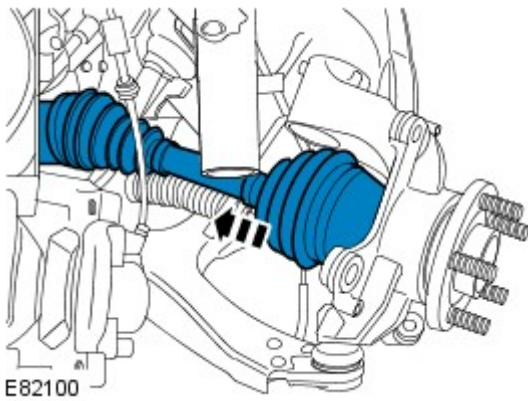
Special Tool(s): 204-619




15. Torque: 110 Nm




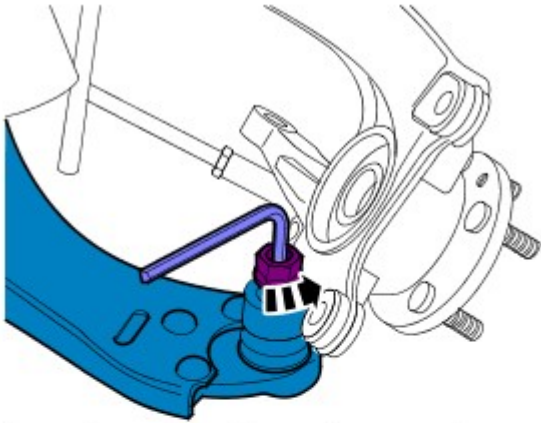
16. Special Tool(s): [204-159](#)




17. CAUTIONS:

 Do not allow halfshafts to hang unsupported at one end or joint damage will occur.

 Do not use a hammer to detach the halfshaft from the hub assembly, failure to follow this instruction may result in damage to the halfshaft.

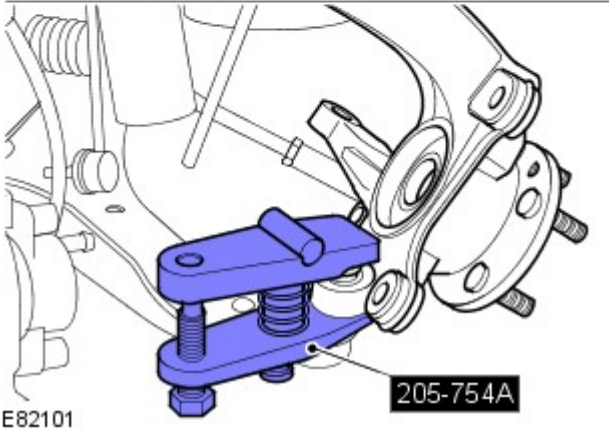


18.  **WARNING:** Make sure that a new lower arm ball joint nut is installed.

 **CAUTION:** Make sure that the ball joint ball does not rotate.


Special Tool(s): [205-754A](#)

Torque: 100 Nm



Installation

1. **CAUTIONS:**

 Make sure that the brake hose is not twisted and is correctly located.

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

 Install the halfshaft bolt finger tight.

NOTE: Make sure that all the component mating faces are clean.

To install, reverse the removal procedure.

Front Suspension - Front Shock Absorber

Removal and Installation

Removal

WARNINGS:



Ensure the spring compressor Safe Working Load (SWL) meets or exceeds the spring rating quoted in the Specifications section.



Always follow the spring compressor manufacturer's instructions.

1. **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.

2. Remove the road wheel.

Refer to: [Wheel and Tire](#) (204-04 Wheels and Tires, Removal and Installation).

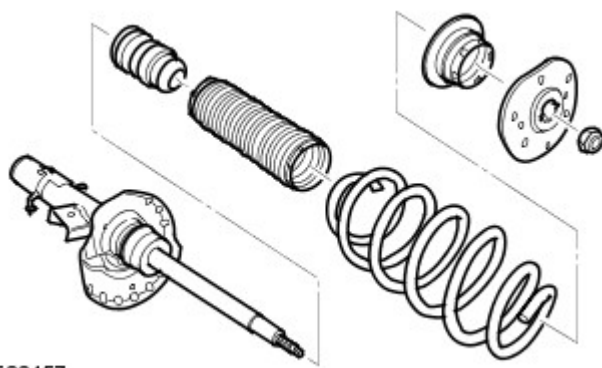
3. Remove the spring and damper assembly.

Refer to: [Shock Absorber and Spring Assembly](#) (204-01 Front Suspension, Removal and Installation).

4. Install the spring compressor in a vise.

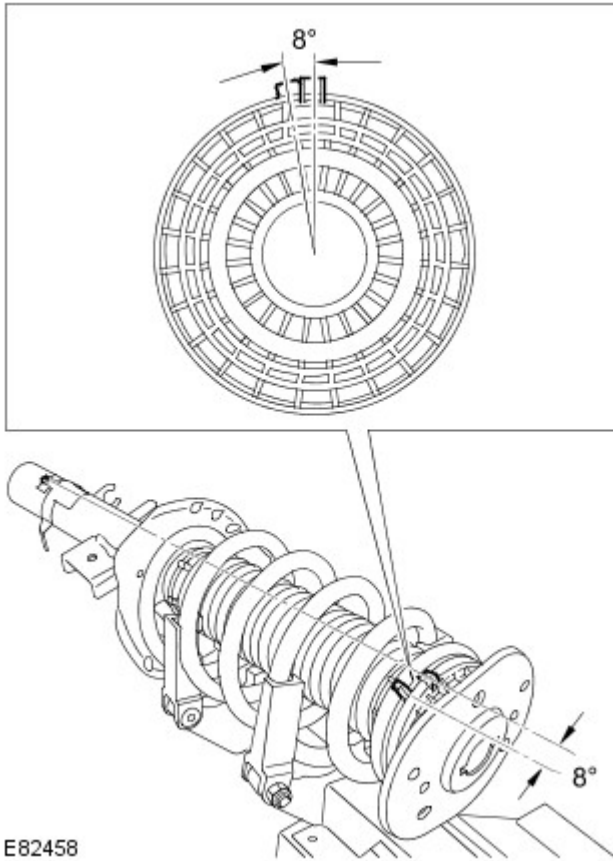
5. Install the shock absorber and spring assembly in the spring compressor.

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





E82457

Installation



1. WARNINGS:

 Make sure that a new nut is installed.

 It is imperative that the timing marks are aligned as shown in illustration.

Torque: 80 Nm

2. Release the tension from the spring and damper assembly and remove from the special tool.

3. Remove the spring compressor from a vise.

4. Install the spring and damper assembly.

Refer to: [Shock Absorber and Spring Assembly](#) (204-01 Front Suspension, Removal and Installation).

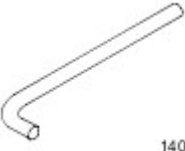
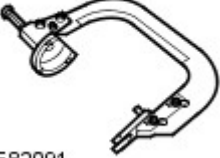
5. Install the road wheel.

Refer to: [Wheel and Tire](#) (204-04 Wheels and Tires, Removal and Installation).

Front Suspension - Shock Absorber and Spring Assembly

Removal and Installation

Special Tool(s)

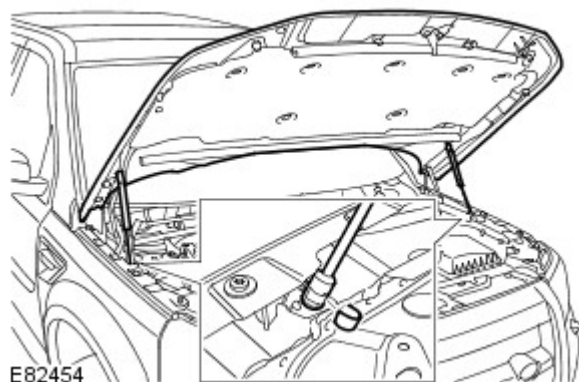
 <p>14039</p>	<p>204-159 Lever, Wheel Knuckle</p>
 <p>204-619</p> <p>E82091</p>	<p>204-619 G-Clamp</p>

Removal

1. Remove the plenum chamber panel.

Refer to: [Plenum Chamber](#) (412-01 Climate Control, Removal and Installation).

2. Release the hood support struts and secure the hood in an upright position.

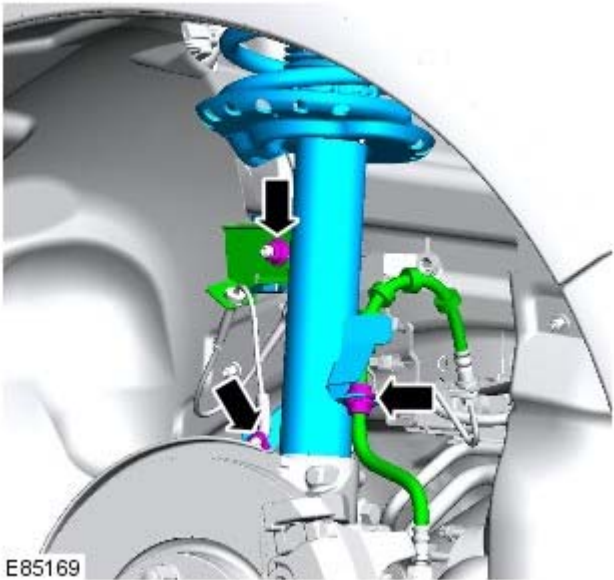


3.  **WARNING:** Make sure to support the vehicle with axle stands.

Raise and support the vehicle.

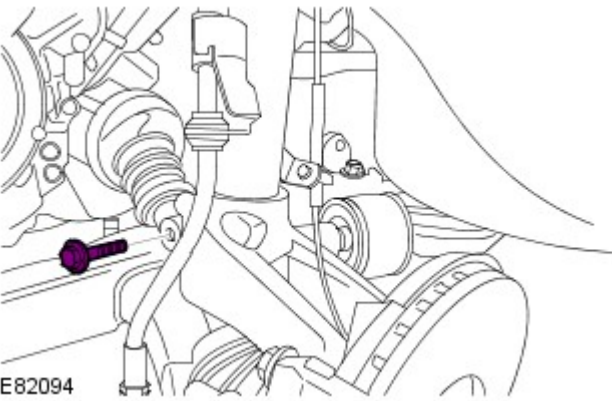
4. Remove the wheel and tire.

Refer to: [Wheel and Tire](#) (204-04 Wheels and Tires, Removal and Installation).

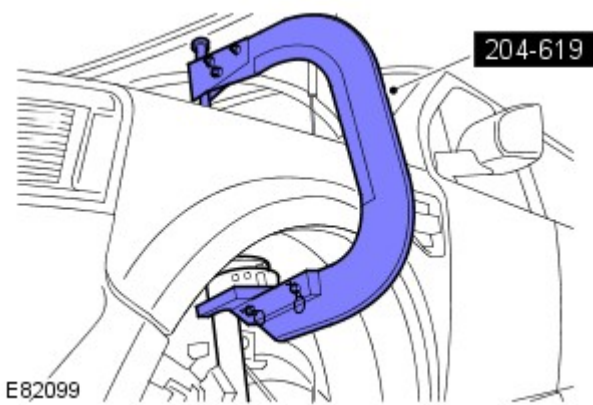


5.  **WARNING:** Make sure that a new nut is installed.

Torque: 60 Nm



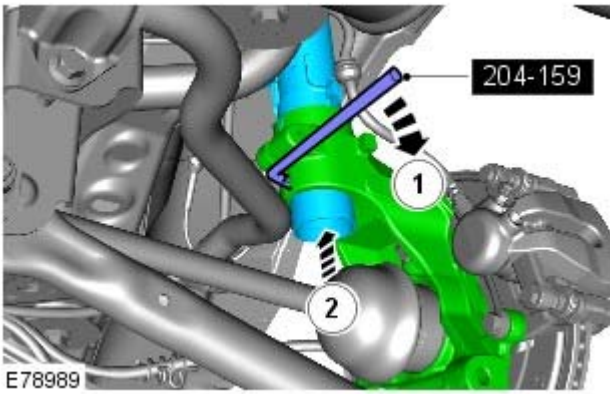
6. *Torque:* 110 Nm



7. **NOTE:** This step requires the aid of another technician.

Compress the spring and damper assembly.

Special Tool(s): [204-619](#)

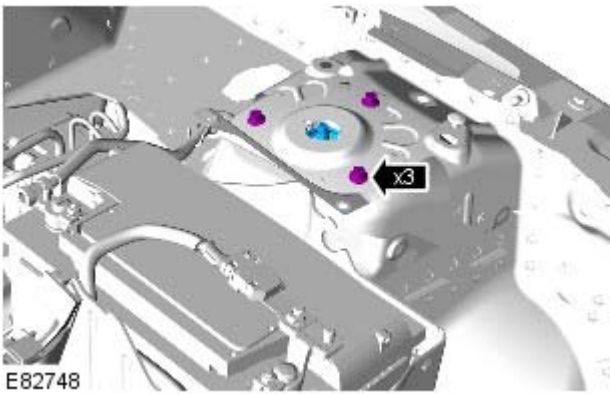


8. Release the damper from the knuckle assembly.

Special Tool(s): [204-159](#)

9. **NOTE:** This step requires the aid of another technician.

Release the tension from the spring and damper assembly and remove the tool.



10. Remove the spring and damper assembly.

Torque: [30 Nm](#)

Installation

1. **CAUTIONS:**



Make sure that the brake hose is not twisted and is correctly located.



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

NOTE: Make sure that the component is clean, free of foreign material and lubricant.

To install, reverse the removal procedure.

Front Suspension - Spring

Removal and Installation

Removal


WARNINGS:



Ensure the spring compressor Safe Working Load (SWL) meets or exceeds the spring rating quoted in the Specifications section.



Always follow the spring compressor manufacturer's instructions.

1.  **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.

2. Remove the road wheel.

Refer to: [Wheel and Tire](#) (204-04 Wheels and Tires, Removal and Installation).

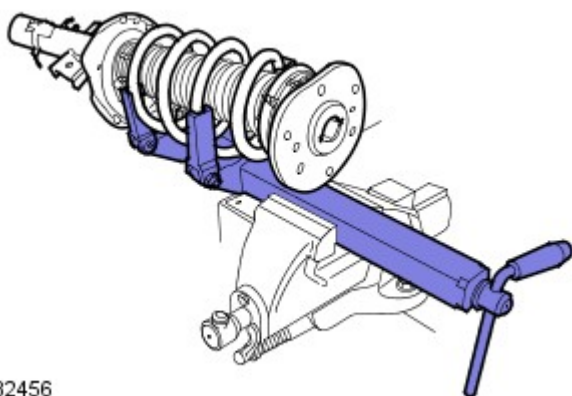
3. Remove the spring and damper assembly.

Refer to: [Shock Absorber and Spring Assembly](#) (204-01 Front Suspension, Removal and Installation).

4. Install the spring compressor in a vise.

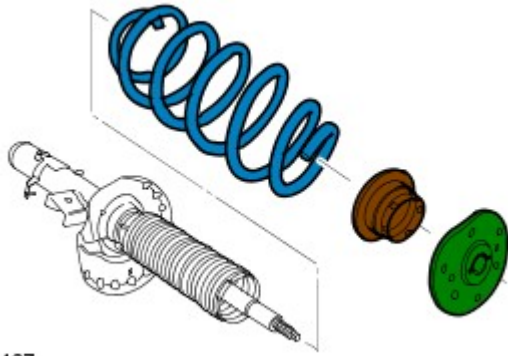
5. Install the shock absorber and spring assembly in the spring compressor.

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



E82456

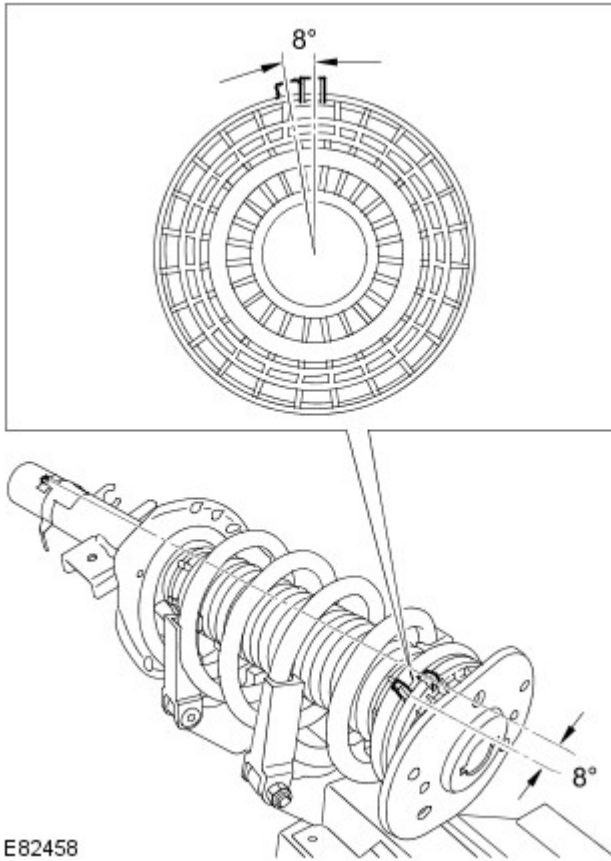
7. Remove old spring from the spring compressor.



E82467

Installation


1. Install the new spring to the compressor and compress sufficiently.



E82458

2. **WARNINGS:**

 Make sure that a new nut is installed.

 It is imperative that the timing marks are aligned as shown in illustration.

Torque: 80 Nm

3. Release the tension from the spring and damper assembly and remove from the special tool.
4. Remove the spring compressor from a vise.
5. Install the spring and damper assembly.

Refer to: [Shock Absorber and Spring Assembly](#) (204-01 Front Suspension, Removal and Installation).

6. Install the road wheel.

Refer to: [Wheel and Tire](#) (204-04 Wheels and Tires, Removal and Installation).