

Last modified: 09/09/2020 13:38:11

## Damper Assembly - Front - LH (Remove and Replace)



Correction code 31151002

FRT 0.35

**NOTE:** Unless otherwise explicitly stated in the procedure, the above correction code and FRT reflect all of the work required to perform this procedure, including the linked procedures. **Do not stack correction codes unless explicitly told to do so.**

**NOTE:** See [Flat Rate Times](#) to learn more about FRTs and how they are created. To provide feedback on FRT values, email [LaborTimeFeedback@tesla.com](mailto:LaborTimeFeedback@tesla.com). Make sure to wear proper PPE when performing below procedure.

- 1467109-00-A Strut Removal Socket, 13mm, M3

## Torque Specifications

Table 1. Torque Specifications: Damper Assembly - Front - LH (Remove and Replace)

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Description	Torque Value	Recommended Tools	Reuse/Replace	Notes
Nuts that attach the front upper control arm mount to the front spring and damper	 <b>Torque 23 Nm</b>	<ul style="list-style-type: none"> <li>• 13 mm deep socket</li> <li>• 3 in extension</li> </ul>	Reuse	
Bolt that attaches the front wheel speed sensor to the knuckle	 <b>Torque 5 Nm</b>	<ul style="list-style-type: none"> <li>• 10 mm deep socket</li> <li>• 4 in extension</li> </ul>	Reuse	
Nut that attaches the front jounce bracket to the stud on the body	 <b>Torque 6 Nm</b>	<ul style="list-style-type: none"> <li>• 10 mm deep socket</li> <li>• 4 in extension</li> </ul>	Reuse	
Bolt and nyloc nut that attach the front upper control arm to the knuckle	 <b>Torque 56 Nm</b>	<ul style="list-style-type: none"> <li>• T47 socket</li> <li>• 15 mm wrench</li> </ul>	Replace nut (111145-00-A), reuse bolt	
Nyloc nut that attaches the front stabar link to the front strut	 <b>Torque 98 Nm</b>	<ul style="list-style-type: none"> <li>• 18 mm wrench</li> <li>• 18 mm socket (torque)</li> <li>• T40 socket</li> <li>• 6 in extension</li> </ul>	Replace (1111543-00-A or later)	Hold the joint in place with the T40

Description	Torque Value	Recommended Tools	Reuse/Replace	Notes
Bolt and nut that attach the strut to the lower control arm	 <b>Torque</b> <b>106 Nm</b>	<ul style="list-style-type: none"> <li>• 21 mm socket</li> <li>• 21 mm wrench</li> </ul>	Reuse	

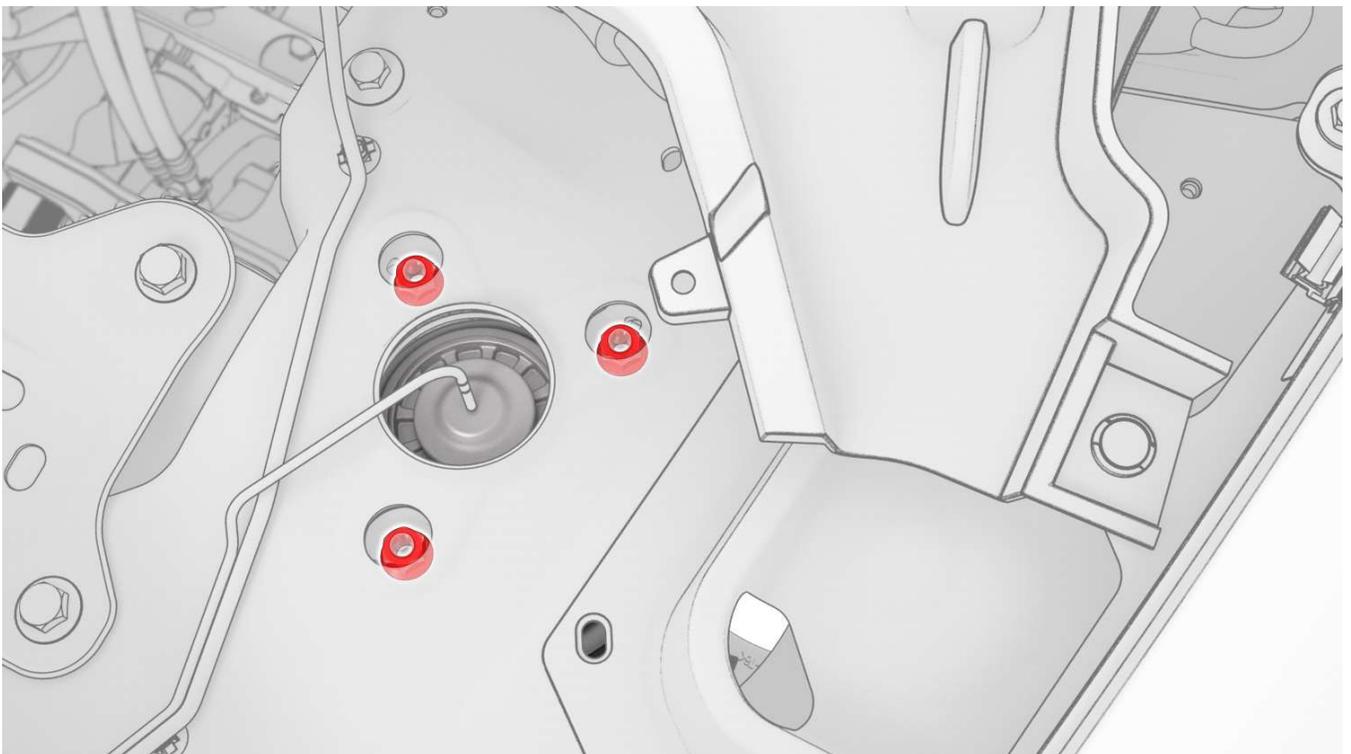
## Remove

1. Place the vehicle on a lift but do not raise it at this time.
2. Remove the windshield washer reservoir filler neck. See [Filler Neck - Reservoir - Windshield Washer \(Remove and Replace\)](#).
3. Remove the nuts (x3) that attach the front upper control arm mount to the LH front spring and damper assembly.

### Note

Use of the following tool(s) is recommended:

- 13 mm deep socket
- 3 in extension



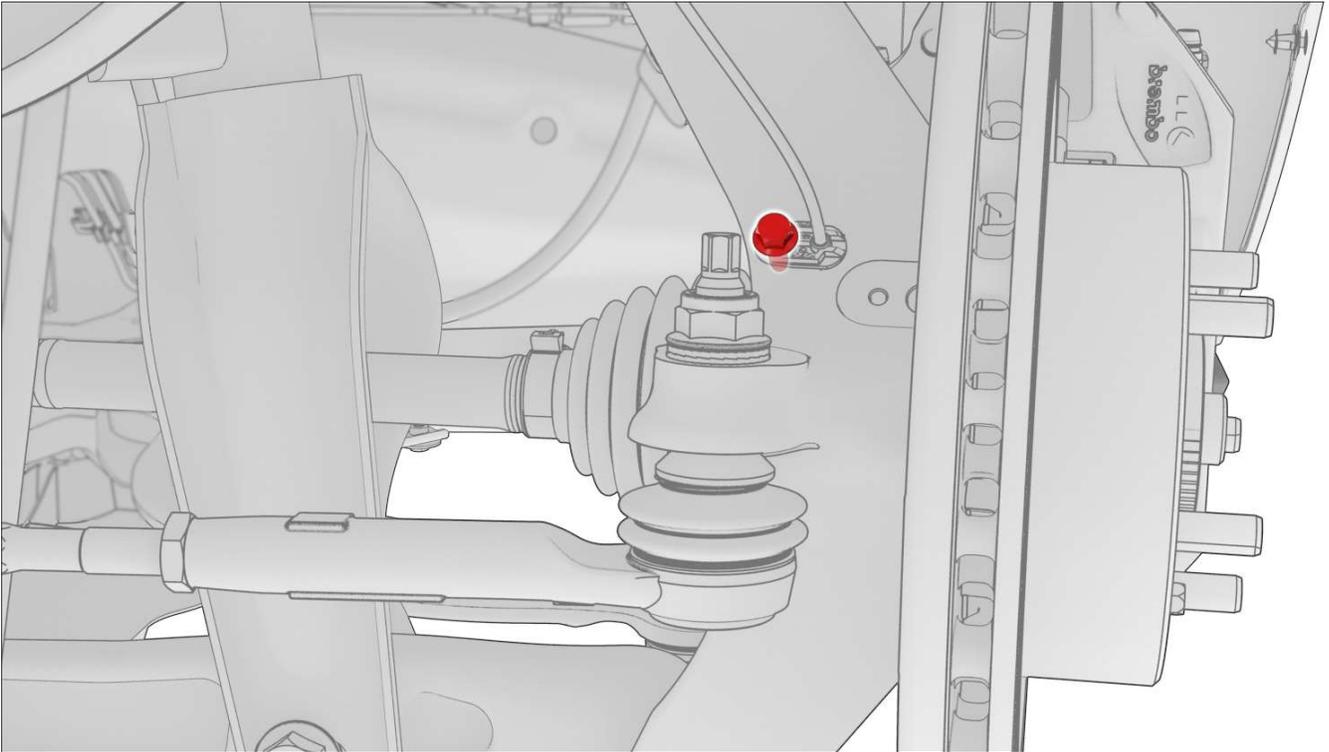
4. Remove the front LH wheel. See [Wheel \(Remove and Install\)](#).

5. Remove the bolt that attaches the front wheel speed sensor to the knuckle.

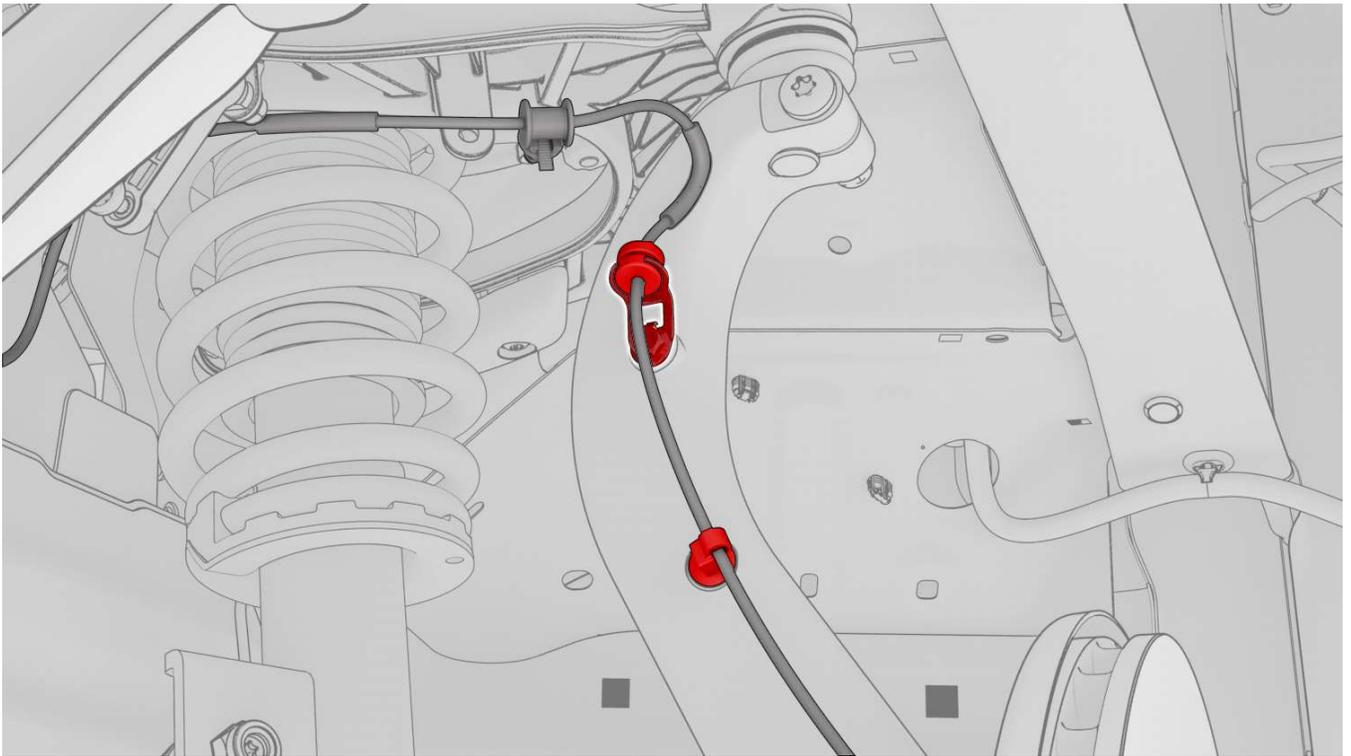
**i Note**

Use of the following tool(s) is recommended:

- 10 mm deep socket
- 4 in extension



6. Release the clips (x2) that attach the front wheel speed sensor harness to the knuckle, and then move the wheel speed sensor harness out of the way.



7. Remove the nut that attaches the front jounce bracket to the stud on the body, and then release the jounce bracket.

**i Note**

Use of the following tool(s) is recommended:

- 10 mm deep socket
- 4 in extension



8. Remove the bolt and nyloc nut (discard the nut) that attach the front upper control arm to the knuckle.

Tip: Compress the joint to allow the bolt to be fully removed.



**Note**

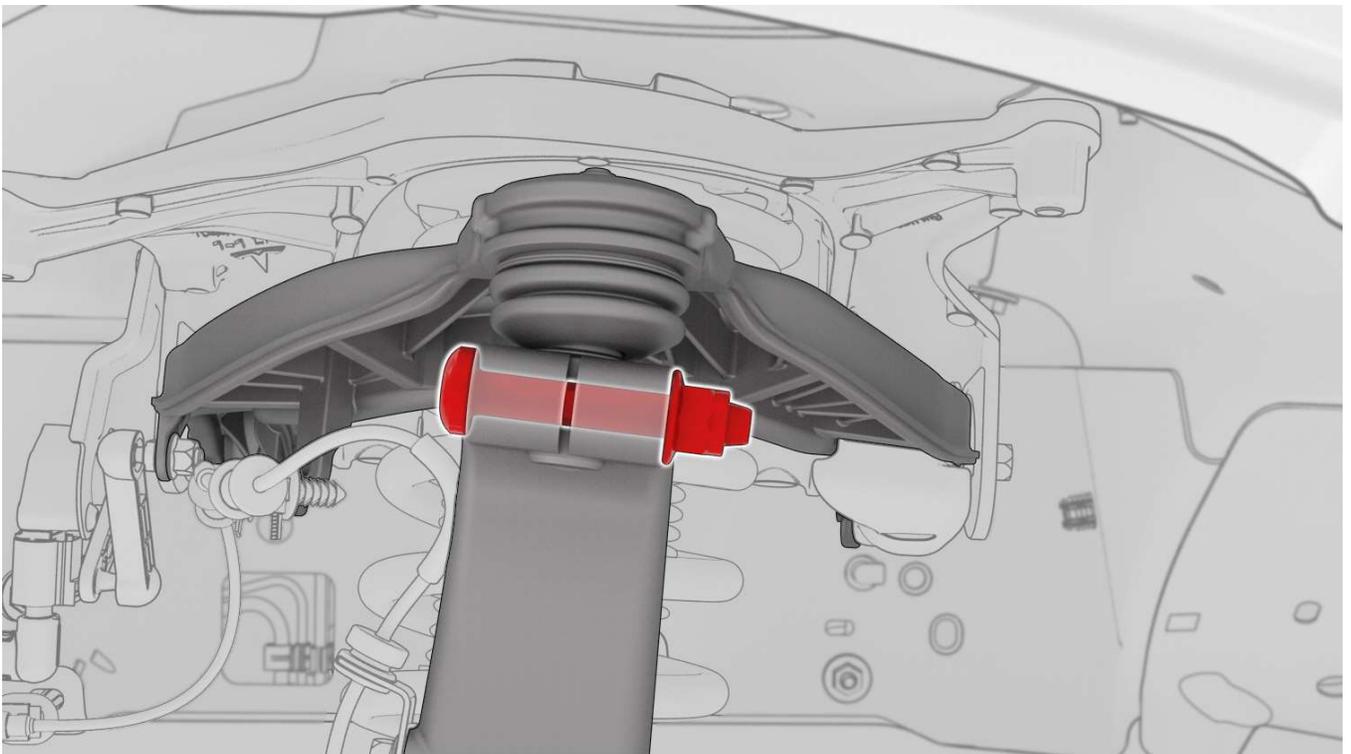
Note the direction of the bolt and nut before removal.



**Note**

Use of the following tool(s) is recommended:

- T47 socket
- 15 mm wrench



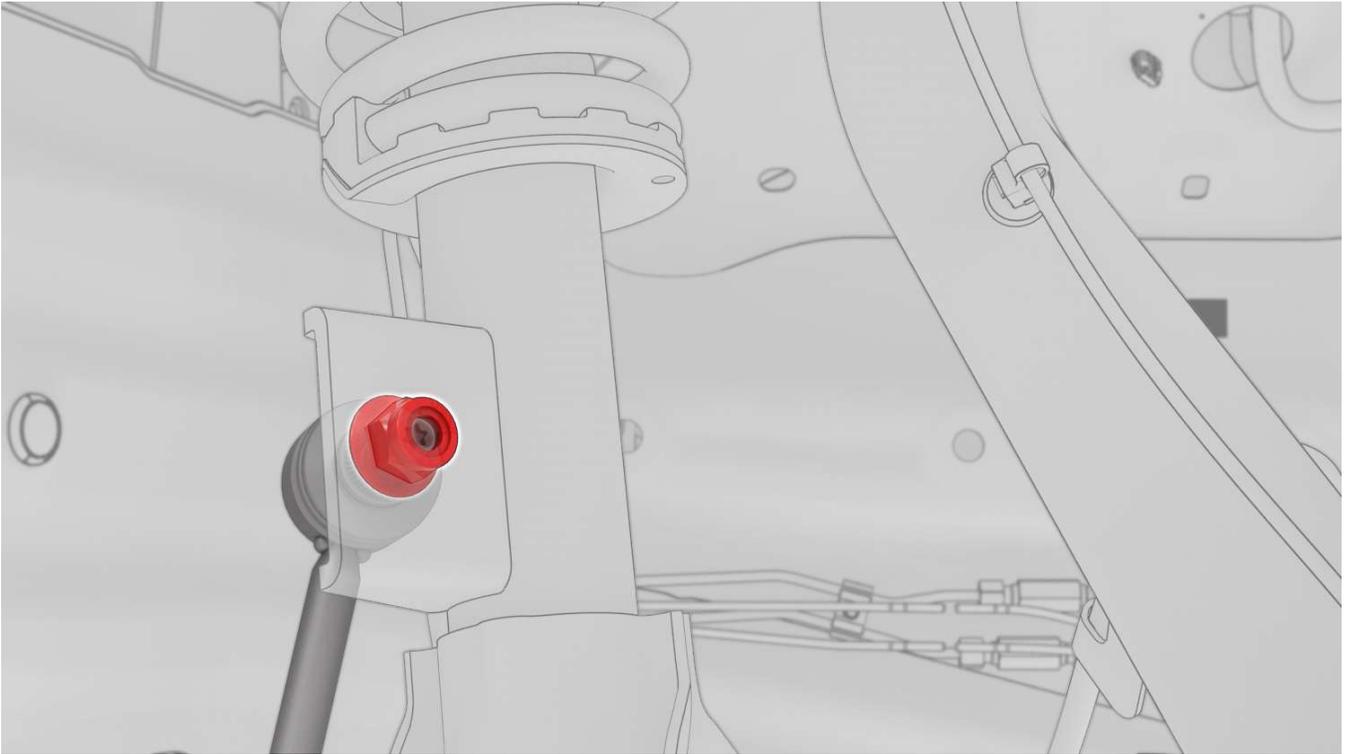
9. While holding the joint in place, remove and discard the nyloc nut that attaches the front stabar link to the front strut.



**Note**

Use of the following tool(s) is recommended:

- 18 mm wrench
- 18 mm socket (torque)
- T40 socket
- 6 in extension



**10.** Move the front stabar link assembly away from the working area.

Tip: Move the stabar up and/or down to get the correct angle needed to remove the link.

**11.** Remove the bolt and nut that attach the strut to the lower control arm.



**Note**

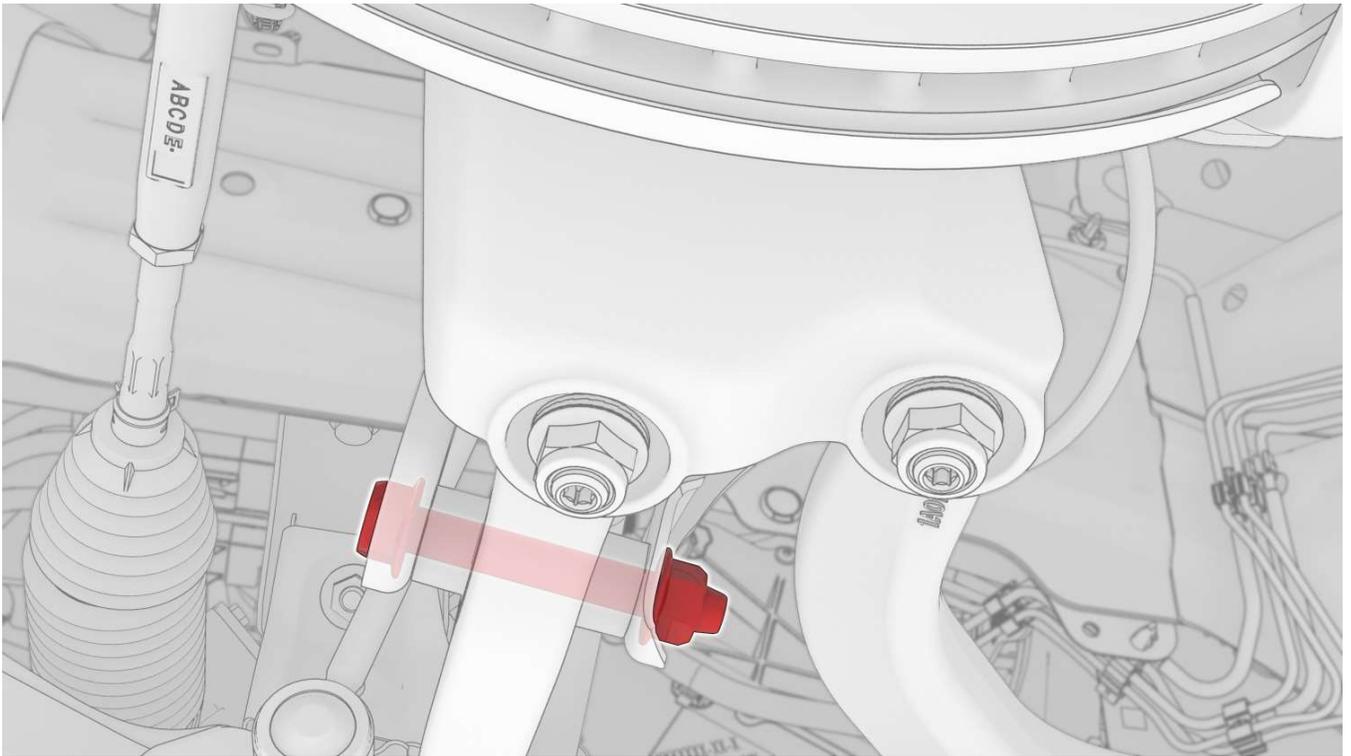
Note the direction of the bolt and nut before removal.



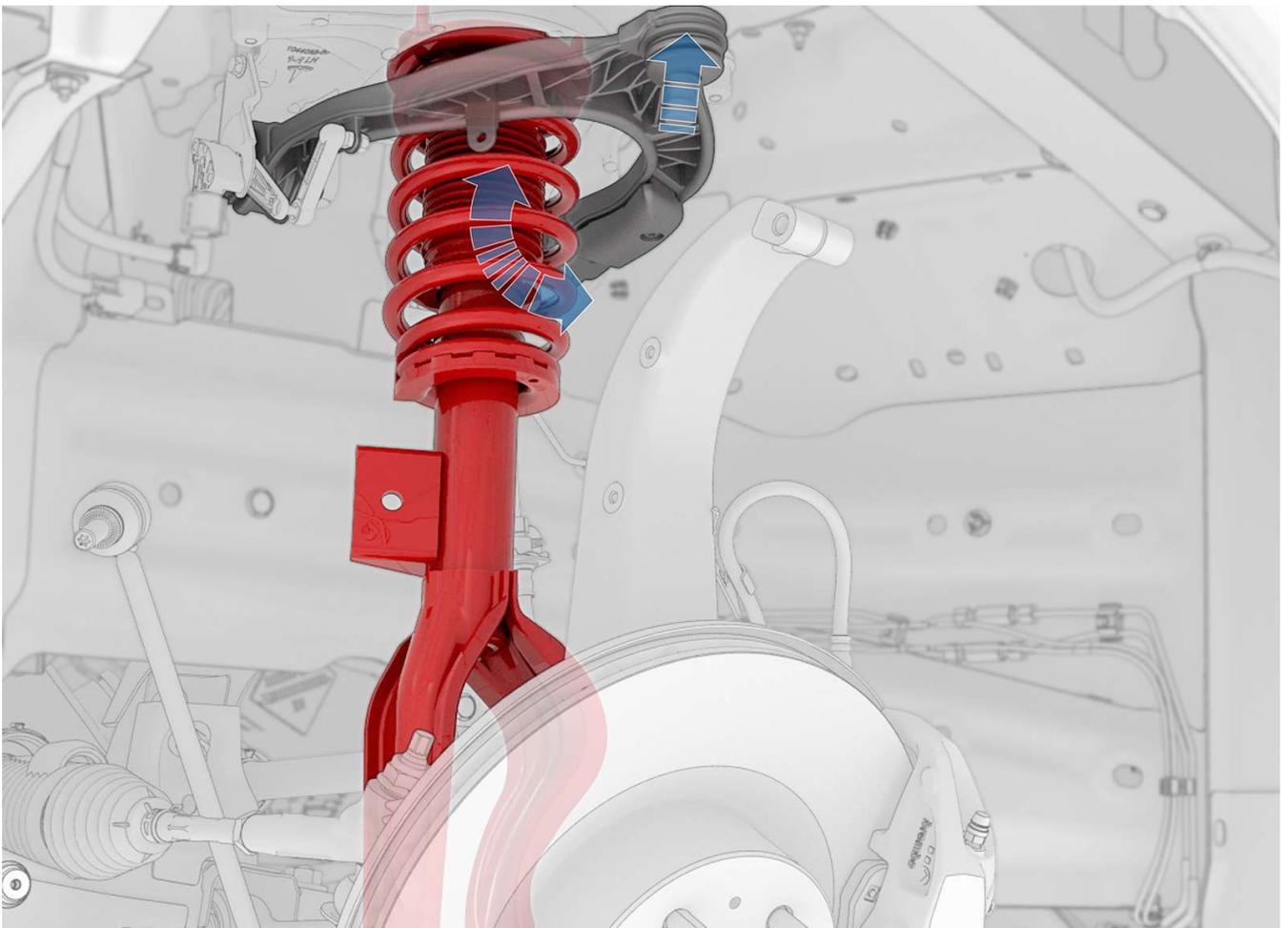
**Note**

Use of the following tool(s) is recommended:

- 21 mm socket
- 21 mm wrench



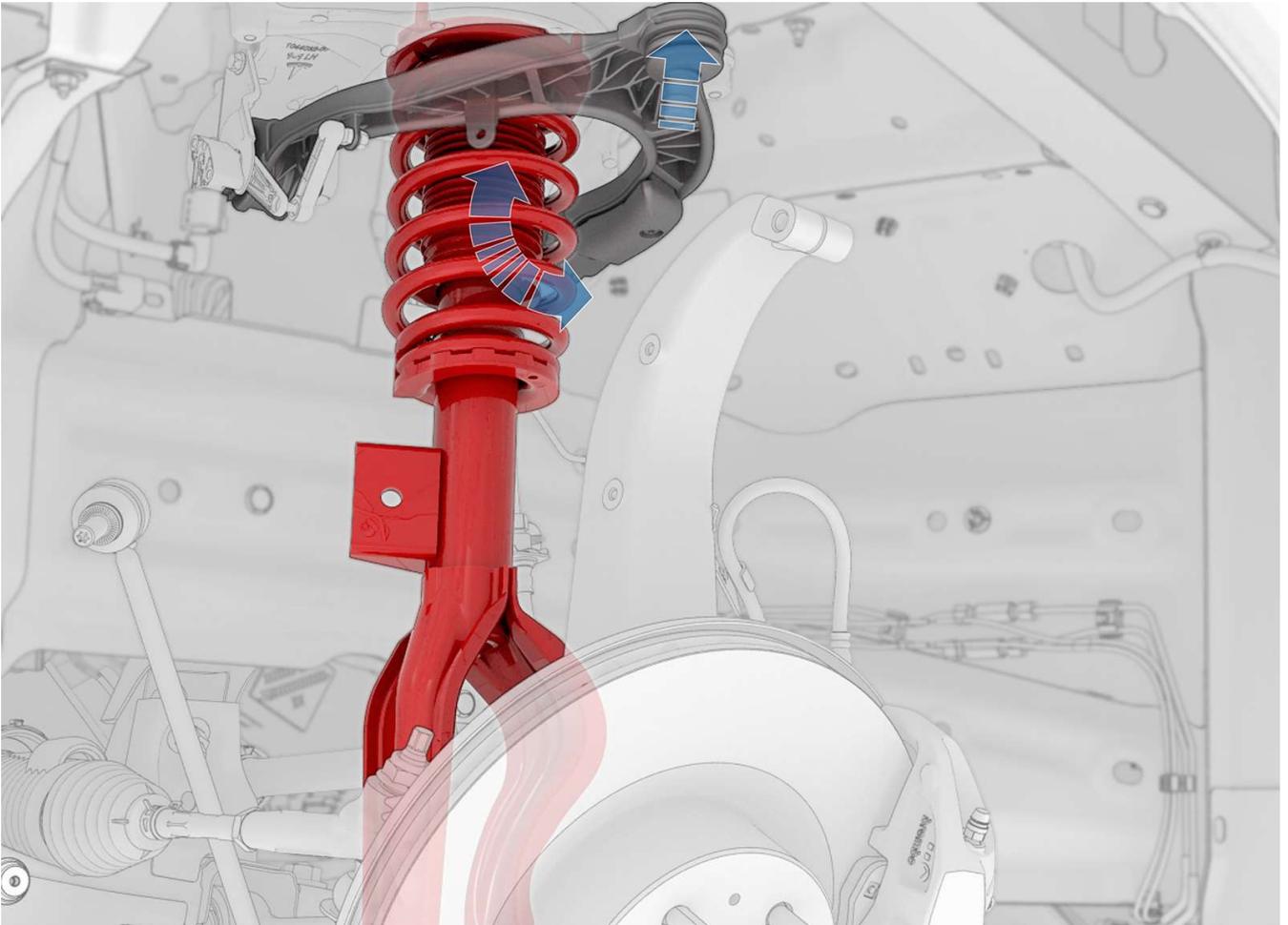
- 12.** Remove the coil spring and damper assembly from the vehicle.  
Tip: Lift the upper control arm to create clearance for removal.



# Install

1. Maneuver the coil spring and damper assembly into place.

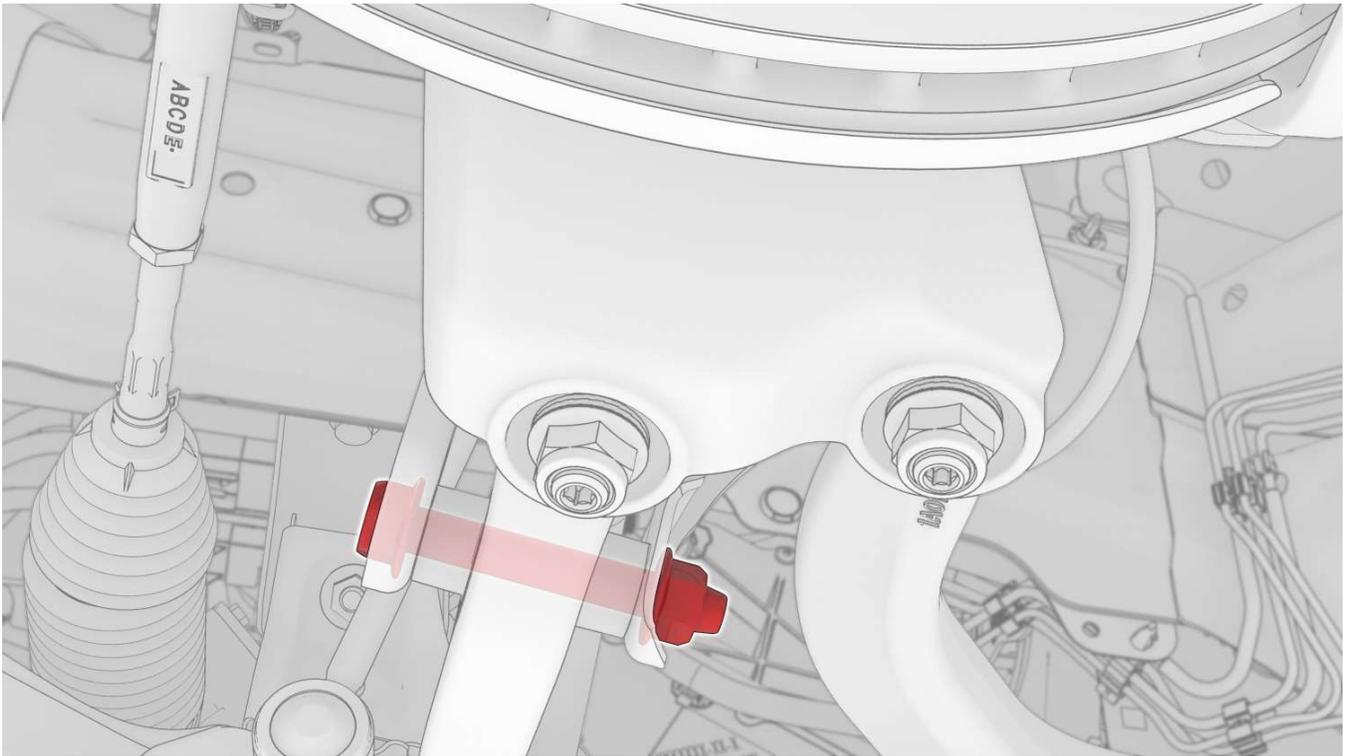
Tip: Lift the upper control arm to create clearance for installation.



2. Hand tighten the bolt and nut that attach the strut to the lower control arm.

**i Note**

The fasteners are fully tightened later in the procedure with the vehicle on the alignment rack.



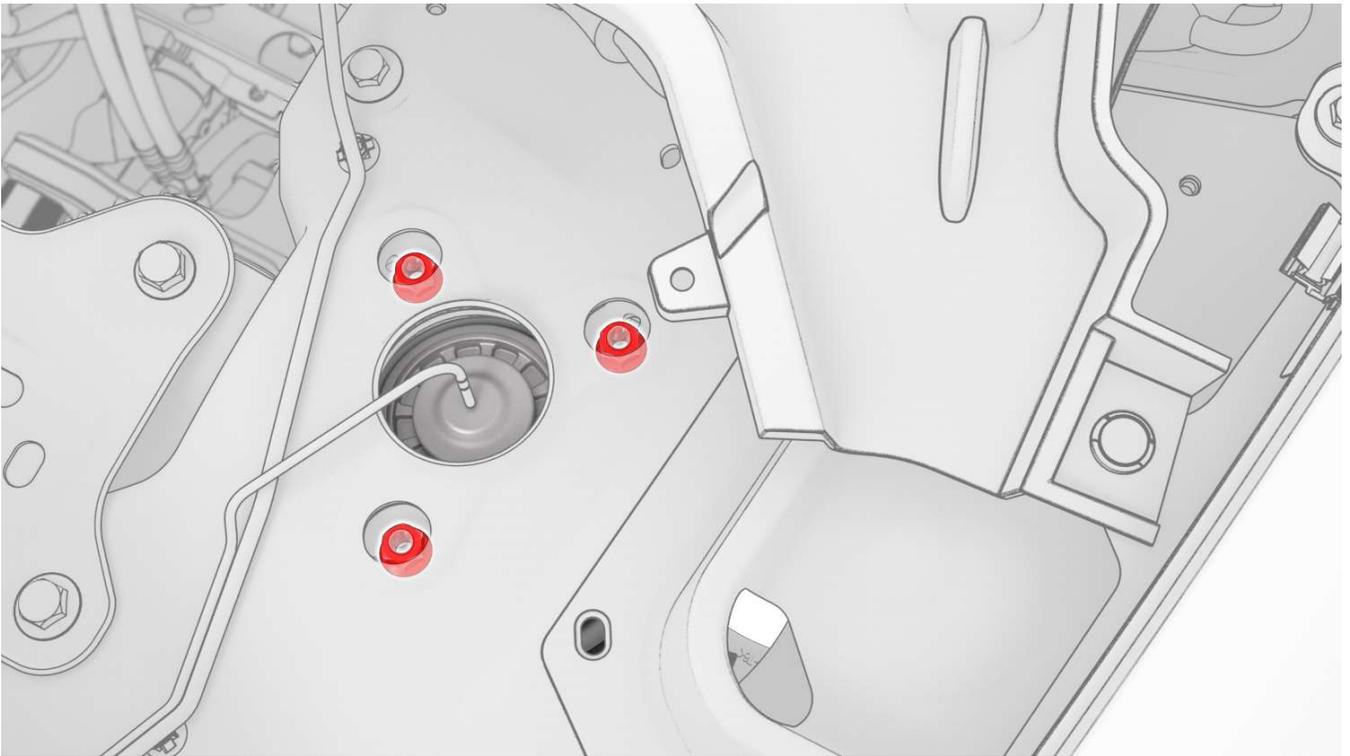
3. Lower the vehicle to a comfortable working height and support on locks.
4. Install the nuts (x3) that attach the front upper control arm mount to the LH front spring and damper assembly.

 **Torque 23 Nm**

**i Note**

Use of the following tool(s) is recommended:

- 13 mm deep socket
- 3 in extension



5. Raise the vehicle to a comfortable working height and support on locks.
6. Maneuver the front stabar link assembly for installing to the front strut.  
Tip: Move the stabilizer bar up and/or down to get the correct angle for installation.
7. Install a new nyloc nut that attaches the front stabar link to the front strut.



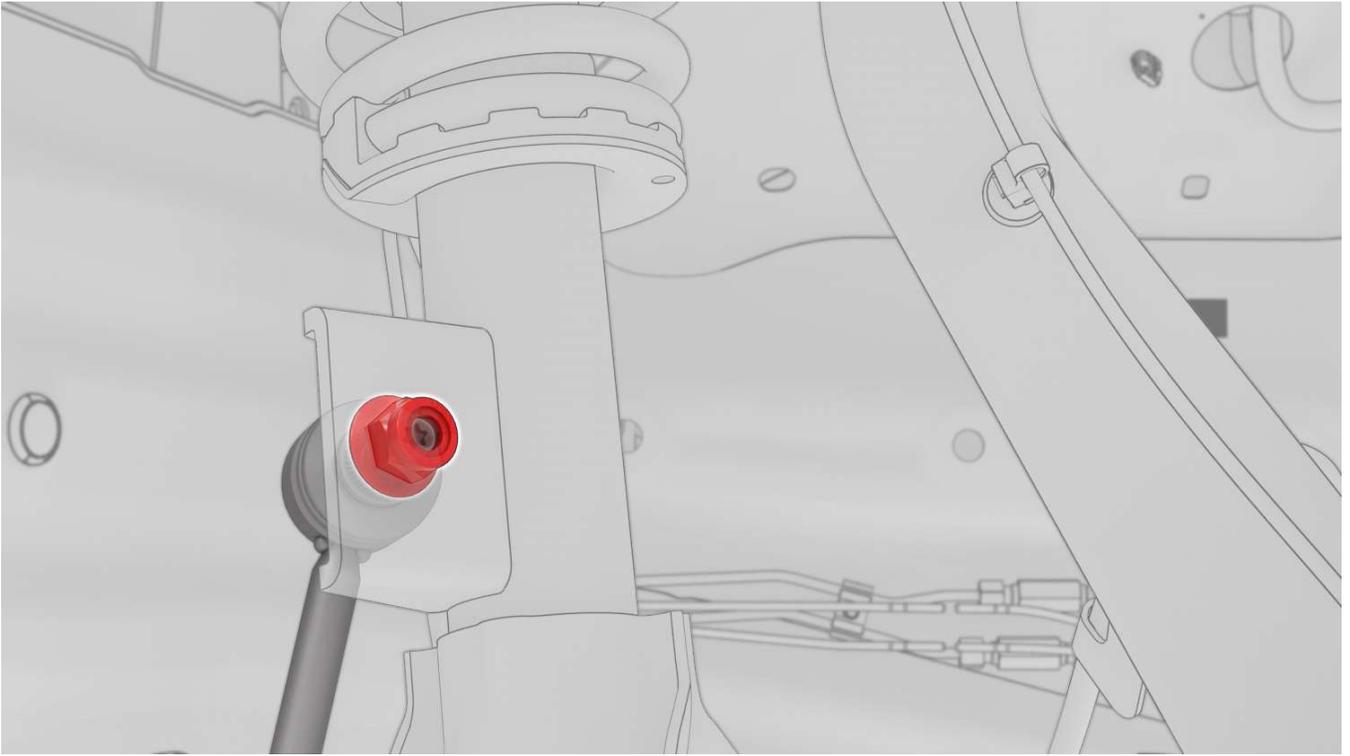
**Torque 98 Nm**



**Note**

Use of the following tool(s) is recommended:

- 18 mm wrench
- 18 mm socket (torque)
- T40 socket
- 6 in extension



8. Install the bolt and a new nyloc nut that attach the front upper control arm to the knuckle.



**Torque 56 Nm**

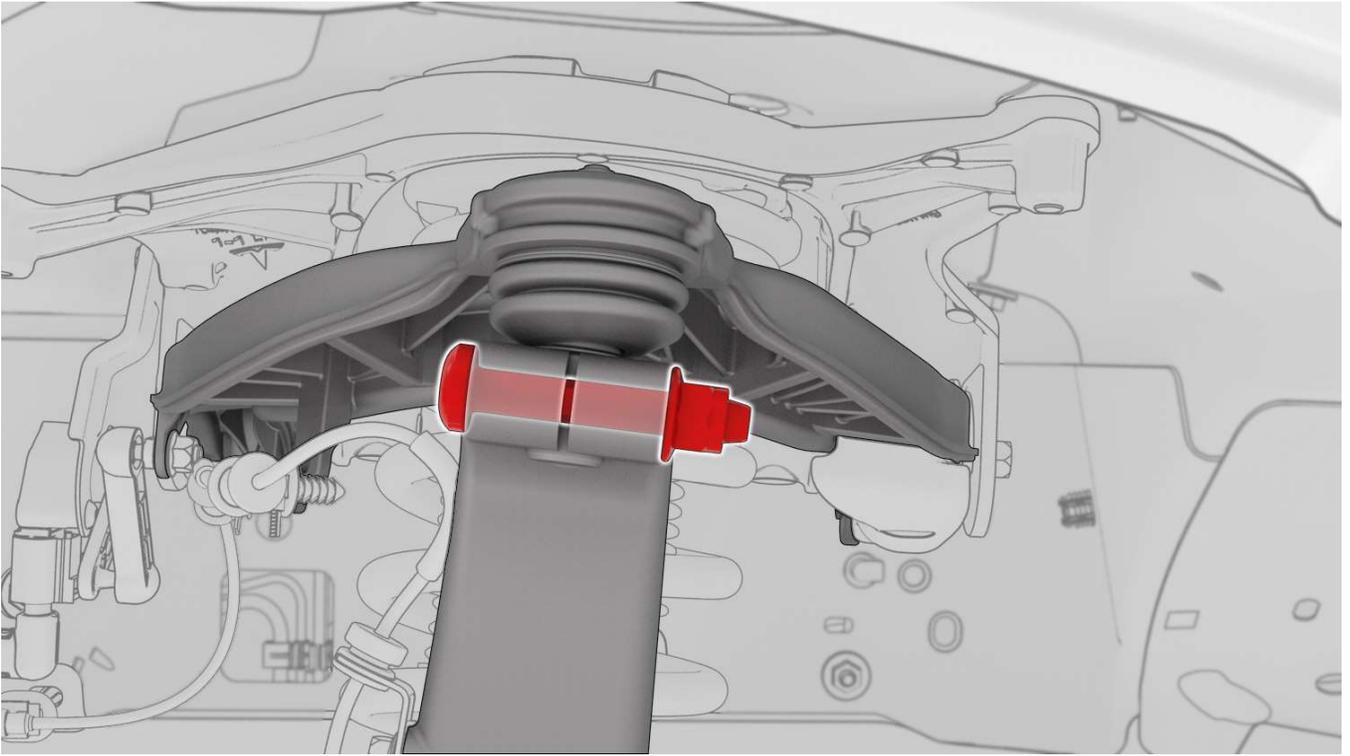
Tip: Compress the joint to allow the bolt to be installed.



**Note**

Use of the following tool(s) is recommended:

- T47 socket
- 15 mm wrench



9. Install the nut that attaches the front jounce bracket to the stud on the body.



**Torque 6 Nm**



**Note**

The bracket has an alignment tab to aid installation.



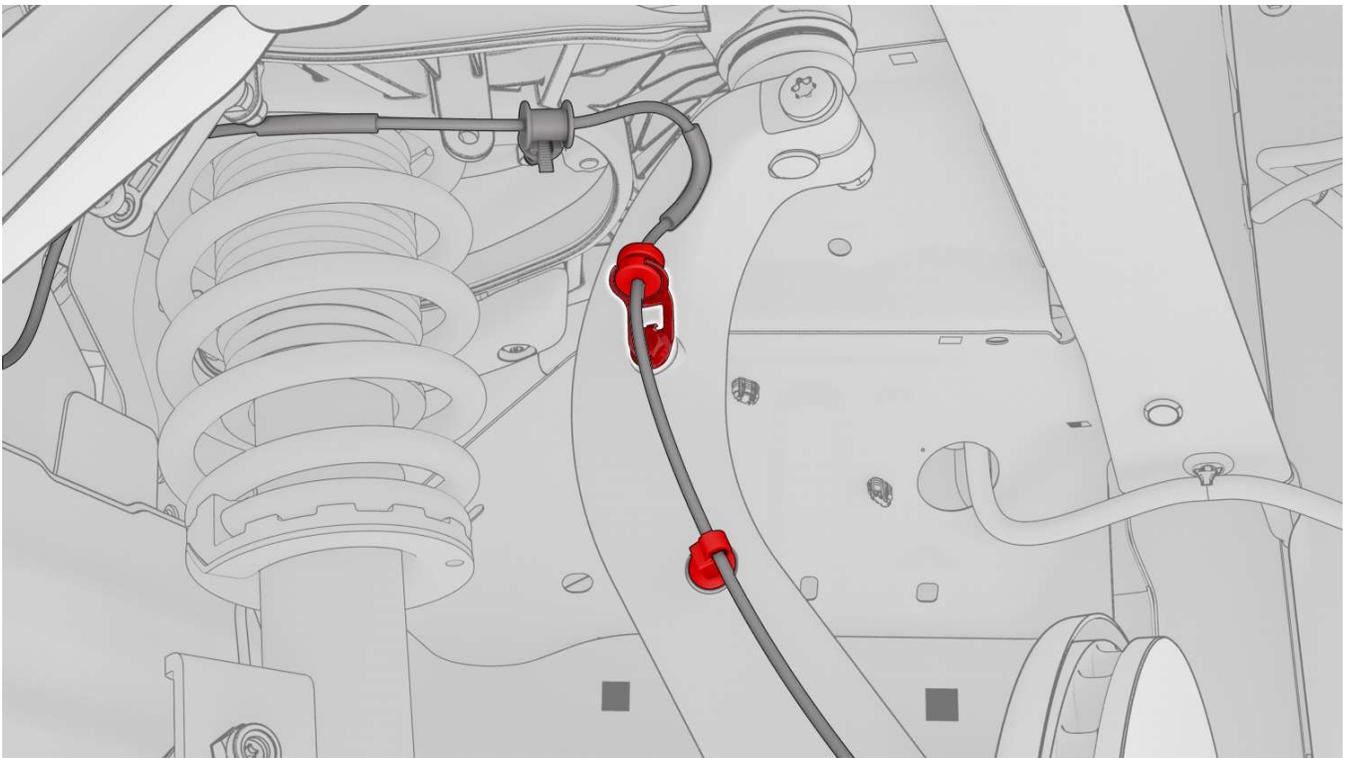
**Note**

Use of the following tool(s) is recommended:

- 10 mm deep socket
- 4 in extension



10. Install the clips (x2) that attach the front wheel speed sensor harness to the knuckle.



11. Install the bolt that attaches the front wheel speed sensor to the knuckle.



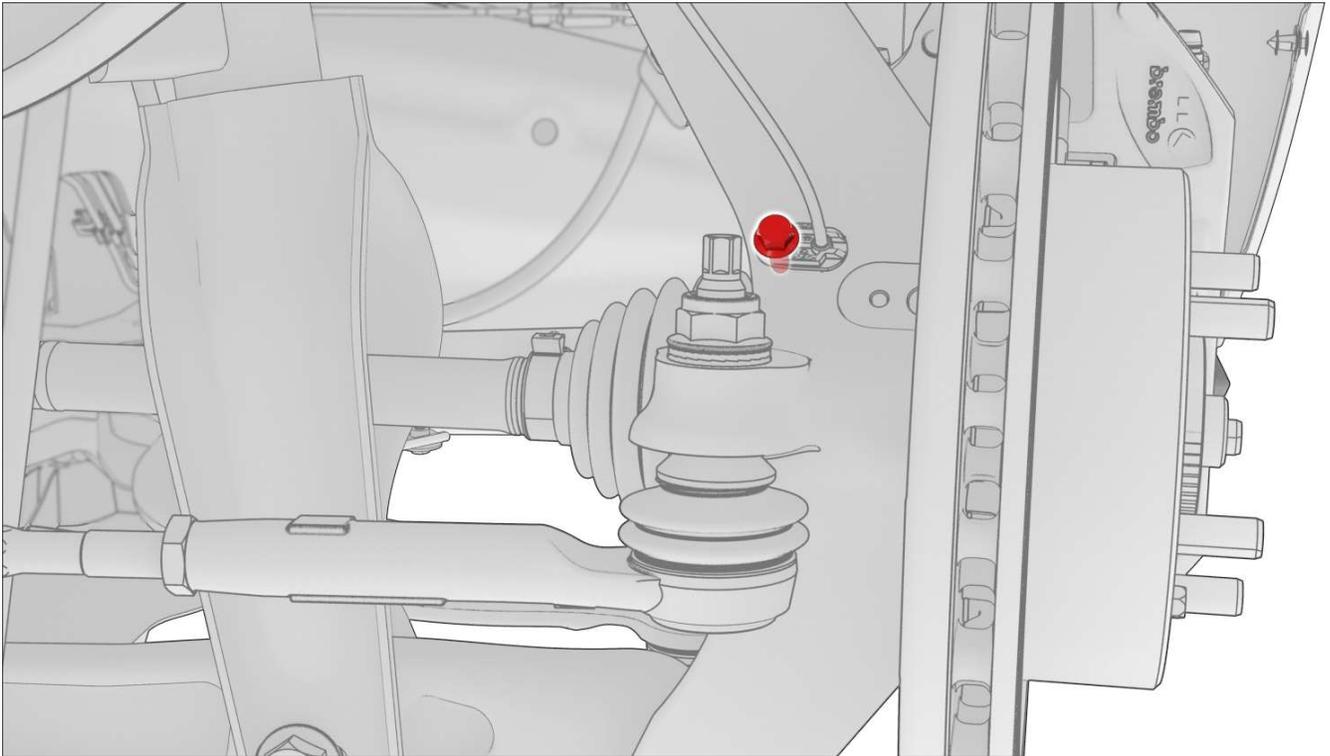
**Torque 5 Nm**



**Note**

Use of the following tool(s) is recommended:

- 10 mm deep socket
- 4 in extension



12. Install the front LH wheel. See [Wheel \(Remove and Install\)](#).
13. Install the windshield washer reservoir filler neck. See [Filler Neck - Reservoir - Windshield Washer \(Remove and Replace\)](#).
14. Install the rear underhood apron. See [Underhood Apron - Rear \(Remove and Replace\)](#).
15. Move the vehicle to the alignment rack.
16. Fully tighten the bolt and nut that attach the strut to the lower control arm.

 **Torque 106 Nm**



**Note**

Use of the following tool(s) is recommended:

- 21 mm socket
- 21 mm wrench

