		Tesla, Inc. Service Bulletin		<i>Inspect Front And Rear Chassis Abnormalities (Tire Pressure, Bolted Joint, Wheel Alignment)</i>	
SB-25-31-004 June 24, 2025					
Classification		Section/Group		Mobile Service	Configuration
Repair Bulletin		31 - Suspension		Cannot Perform	All
Model	Model Year	Country/Region		Build Location	
Model 3	2017+	North America, Australia		Giga Shanghai, Fremont	
Model Y	2020+				
The model(s) and model year(s) listed are a general approximation of the affected VIN list. Refer to the VIN/Bulletin Tracker or Customer/Vehicle profile to determine applicability of this bulletin for a particular vehicle.					

Repair Bulletin: This repair bulletin provides instructions on addressing a possible customer concern regarding the operation of Tesla vehicles. These instructions should only be performed by trained professionals.

Condition




A firmware diagnosis feature is being introduced on Model 3 and Model Y vehicles that monitors wheel alignment over time. This feature detects changes in wheel alignment that may be related to incorrect tire pressures, degraded ball joints, bushings or damaged suspension links.

If the feature determines that an inspection at a Tesla Service Center is required, a customer-facing alert will appear on the touchscreen.

Correction

Inspect the tire pressure, ball joints, bushings, suspension links and front and/or rear subframe; and replace the component(s) if needed.

Correction Description	Correction	Time			
		2017-2023 Model 3	2024+ Model 3	2020-2024 Model Y	2025+ Model Y
Customer Declined Inspection	S012531004	0.00	0.00	0.00	0.00
Inspect Vehicle: No Replacement Needed	S022531004	0.72	0.72	0.72	0.72
Inspect Vehicle: Customer Declined Repairs	S032531004	0.72	0.72	0.72	0.72
Inspect Vehicle: Parts Replaced	S042531004	0.72	0.72	0.72	0.72

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NOTE: If inspection determines that replacements are necessary, follow the instructions below:
- If only suspension links (and not subframes) require replacement:
 - Add correction code S042531004 to the Service Visit.
 - Add the Service (Remove and Replace) correction code for the affected suspension part to a separate activity.
- 
NOTE: If needed, Pair or Set correction codes may exist. Refer to the [Correction Code database](#) for more information.
- 
NOTE: The parts required for this repair should be automatically populated to the repair order according to the correction performed. If parts are not automatically added to the repair order, refer to the [Parts Catalog](#) to add the required parts.

3. If more than 1 suspension part requires replacement, and a pair/set correction code does not exist, add correction code 31000000 “Additional Suspension Link (Access Already Performed) (Remove and Replace)” to a separate activity in the Service Visit, one time for each additional suspension link replaced.



NOTE: Refer to the [Parts Catalog](#) to add the required parts.

- If the front and/or rear subframe require replacement, add S042531004 to the Service Visit, and then add the corresponding subframe replacement Service correction code(s) to a separate activity in the Service Visit. Refer to the [Correction Code database](#) for more information.



NOTE: If the front and/or rear subframe **and** suspension components require replacement, add only the subframe correction code to a separate activity.



Procedure

1. Check the vehicle tire pressure and adjust if needed.
2. Remove the rear wheels (refer to Service Manual procedure: [2017-2023 Model 3](#), [2024+ Model 3](#), [2020-2024 Model Y](#), [2025+ Model Y](#)).
3. Inspect the ball joints in the following components for cracks, grease leakage, improperly seated boots, or punctured boots. Use a pry bar to verify that the ball joint does not rotate freely. Note your findings:
 - a. The LH and RH tie rod ends.



Figure 1 – RH tie rod end, LH similar

- b. The LH and RH front upper control arms.

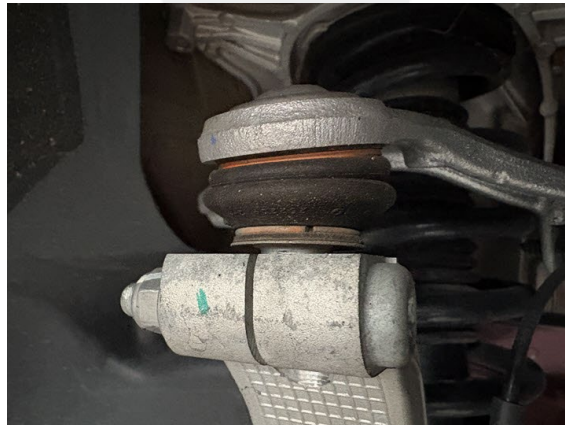


Figure 2 – RH upper control arm, LH similar

4. Remove the front aero shield panel (refer to Service Manual procedure: [2017-2023 Model 3](#), [2024+ Model 3](#), [2020-2024 Model Y](#), [2025+ Model Y](#)).
5. Inspect the inner bushings in the following components for unusual cracks. Use a pry bar to verify that there is no excessive movement. Note your findings:



NOTE: If cracking is observed in the red area outlined in the images below, replace the component.



TIP: Click [here](#) to watch a video that shows how to inspect the bushings for cracks.

- a. The LH and RH front compliance links.

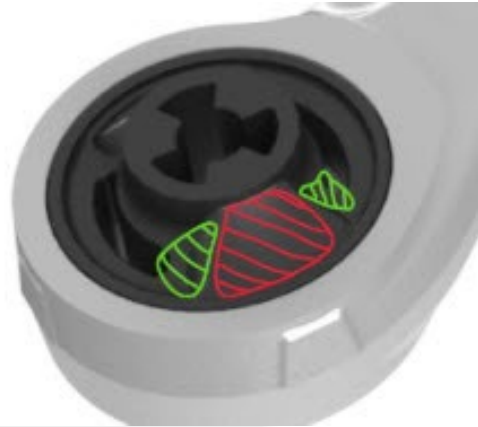
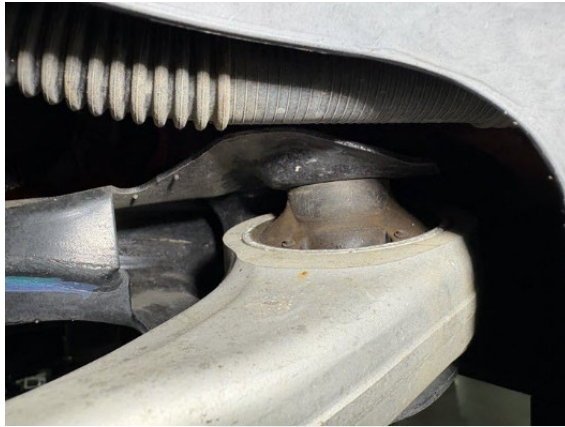


Figure 3 – LH front compliance link, RH Similar Figure 4 – Cracking in compliance link

- b. The LH and RH front lower lateral links.



Figure 5 – RH front lower lateral link, LH similar Figure 6 – Cracking in lateral link

6. Inspect the ball joints in the following components for cracks, grease leakage, improperly seated boots, or punctured boots. Use a pry bar to verify that the ball joint does not rotate freely. Note your findings:
- a. The LH and RH front compliance link to knuckle ball joints.



Figure 7 – LH front compliance link to knuckle ball joint, RH similar

- b. The LH and RH front lower lateral link to knuckle ball joints.



Figure 8 – LH front lower lateral link to knuckle ball joint, RH similar

- 7. Remove the mid aero shield panel (refer to Service Manual procedure: [2017-2023 Model 3](#), [2024+ Model 3](#), [2020-2024 Model Y](#), [2025+ Model Y](#)).
- 8. Remove the LH and RH rear suspension covers (refer to Service Manual procedure: [2017-2023 Model 3](#), [2024+ Model 3](#), [2020-2024 Model Y](#), [2025+ Model Y](#)).
- 9. Inspect the bushings in the LH rear toe link for unusual cracks. Use a pry bar to verify that there is no excessive movement. Note your findings:
 - a. The inner bushing of the LH rear toe link to the subframe.




Figure 9 – Inner bushing of the LH rear toe link

- b. The outer bushing of the LH rear toe link to the knuckle.



Figure 10 – Outer bushing of the LH rear toe link

10. Inspect the bushings in the LH rear lower aft link for unusual cracks. Use a pry bar to verify that there is no excessive movement. Note your findings:

 **NOTE:** Inspect both sides of the bushings.

- a. The inner bushing of the LH rear lower aft link to the subframe.




Figure 11 – Inner bushing of the LH rear lower aft link

- b. The outer bushing of the LH rear lower aft link to the knuckle.



Figure 12 – Outer bushing of the LH rear lower aft link

11. Inspect the bushings in the LH rear upper aft link for unusual cracks. Use a pry bar to verify that there is no excessive movement. Note your findings:

 **NOTE:** Inspect both sides of the bushings.

- a. The inner bushing of the LH rear upper aft link to the subframe.



Figure 13 – Inner bushing of the LH rear upper aft link

- b. The outer bushing of the LH rear upper aft link to the knuckle

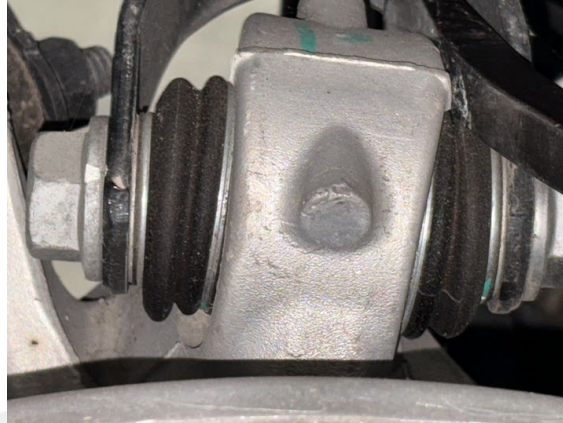


Figure 14 – Outer bushing of the LH rear upper aft link

12. Repeat step 9 through step 11 for the RH side of the vehicle.

13. Check the torque of the following fasteners:

- If the fasteners rotate less than 180 degrees, torque the fasteners to standard value listed in the service manual.
- If the fasteners rotate more than 180 degrees, remove the fasteners and check their associated components for damages. Install new fasteners and replace any damaged components as needed.

! CAUTION: All removed fasteners must be replaced with new ones.

- The nut that attaches the LH front upper control arm to the front knuckle. Refer to the Service Manual Procedure: [2017–2023 Model 3](#), [2024+ Model 3](#), [2020–2024 Model Y](#), [2025+ Model Y](#).

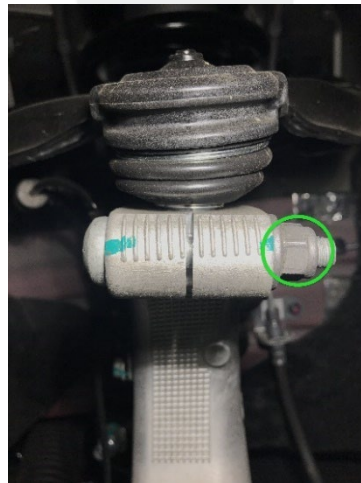


Figure 15 – Nut that attaches the LH upper control arm to the knuckle

- The bolt that attaches the LH front lower compliance link to the front subframe. Refer to the Service Manual Procedure: [2017–2023 Model 3](#), [2024+ Model 3](#), [2020–2024 Model Y](#), [2025+ Model Y](#).



Figure 16 – Bolt that attaches the LH front lower compliance link to the subframe

- The bolts (x2) that attach the LH front lower lateral link to the front subframe. Refer to the Service Manual Procedure: [2017–2023 Model 3](#), [2024+ Model 3](#), [2020–2024 Model Y](#), [2025+ Model Y](#).



NOTE: If the bolt rotation is less than 180 degrees, retighten the bolts to 135 Nm; otherwise replace the bolts and tighten them to the standard torque value listed in the service manual.



Figure 17 – Bolts that attach the LH front lower lateral link to the front subframe

- The nut that attaches the LH rear toe link to the rear subframe. Refer to the Service Manual Procedure: [2017–2023 Model 3](#), [2024+ Model 3](#), [2020–2024 Model Y](#), [2025+ Model Y](#).



Figure 18 – Nut that attaches the LH rear toe link to the rear subframe

- The bolt that attaches the LH rear toe link to the rear knuckle. Refer to the Service Manual Procedure: [2017–2023 Model 3](#), [2024+ Model 3](#), [2020–2024 Model Y](#), [2025+ Model Y](#).

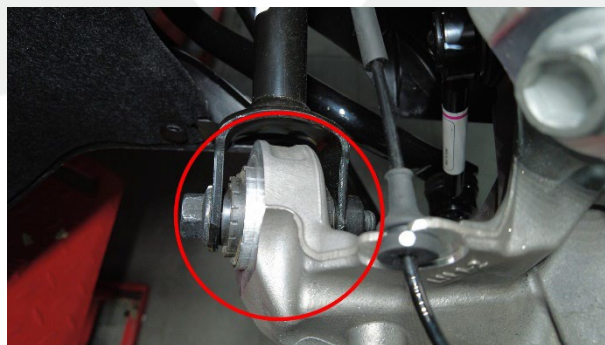


Figure 19 – Bolt that attaches the LH rear toe link to the rear knuckle

- The bolt that attaches the LH rear lower aft link to the rear subframe. Refer to the Service Manual Procedure: [2017–2023 Model 3](#), [2024+ Model 3](#), [2020–2024 Model Y](#), [2025+ Model Y](#).



Figure 20 – Bolt that attaches the LH rear lower aft link to the rear subframe

- The bolt that attaches the LH rear lower aft link to the rear knuckle. Refer to the Service Manual Procedure: [2017–2023 Model 3](#), [2024+ Model 3](#), [2020–2024 Model Y](#), [2025+ Model Y](#).

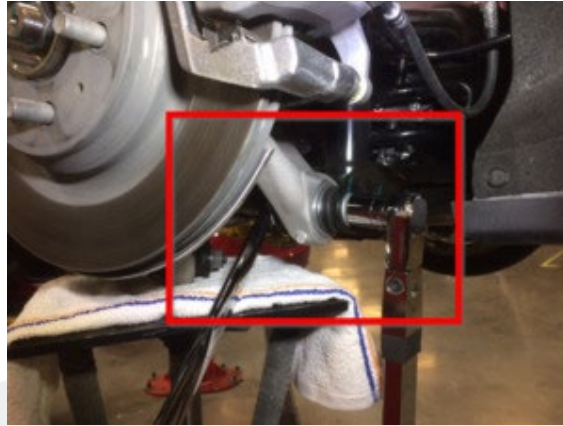


Figure 21 – Bolt that attaches the LH rear lower aft link to the rear subframe

- The bolt that attaches the LH rear upper aft link to the rear subframe. Refer to the Service Manual Procedure: [2017–2023 Model 3](#), [2024+ Model 3](#), [2020–2024 Model Y](#), [2025+ Model Y](#).

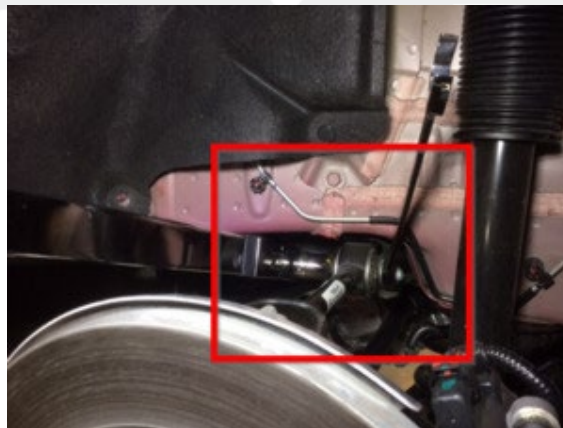


Figure 22 – Bolt that attaches the LH rear upper aft link to the rear subframe

- The bolt that attaches the LH rear upper aft link to the rear knuckle. Refer to the Service Manual Procedure: [2017–2023 Model 3](#), [2024+ Model 3](#), [2020–2024 Model Y](#), [2025+ Model Y](#).



Figure 23 – Bolt that attaches the LH rear upper aft link to the rear knuckle

- Repeat step 13 on the RH side of the vehicle.

14. Install the LH and RH rear suspension covers (refer to Service Manual procedure: [2017-2023 Model 3](#), [2024+ Model 3](#), [2020–2024 Model Y](#), [2025+ Model Y](#)).

15. Install the mid aero shield panel (refer to Service Manual procedure: [2017-2023 Model 3](#), [2024+ Model 3](#), [2020–2024 Model Y](#), [2025+ Model Y](#)).

16. Install the front aero shield panel (refer to Service Manual procedure: [2017-2023 Model 3](#), [2024+ Model 3](#), [2020–2024 Model Y](#), [2025+ Model Y](#)).
17. Install the rear wheels (refer to Service Manual procedure: [2017-2023 Model 3](#), [2024+ Model 3](#), [2020–2024 Model Y](#), [2025+ Model Y](#)).
18. Connect a laptop with Toolbox 3 to the vehicle (refer to Service Manual procedure: [2017-2023 Model 3](#), [2024+ Model 3](#), [2020–2024 Model Y](#), [2025+ Model Y](#)).
19. In Toolbox, click on the Actions/Autodiag tab, and then search for "Clear Alert".
20. Click **PROC_ICE_X_CLEAR-SERVICE-ALERT**, click **Run**, and allow the routine to complete.
21. Disconnect Toolbox and remove the laptop from the vehicle.
22. If a suspension component was replaced, refer to the Alignment Requirement tables to determine whether an alignment check is necessary (refer to Service Manual procedure; [2017-2023 Model 3](#), [2024+ Model 3](#), [2020-2024 Model Y](#), [2025+ Model Y](#)).
23. If a suspension component was not replaced, perform a four-wheel alignment check (refer to Service Manual procedure; [2017-2023 Model 3](#), [2024+ Model 3](#), [2020-2024 Model Y](#), [2025+ Model Y](#)).



NOTE: If needed, add the alignment correction code to a separate activity in the Service Visit.



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