



# Inspect Front Air Spring Modules

**Classification** Repair Bulletin      **Section/Group** 31 - Suspension      **Country/Region** All

**Year** 2017 - 2018      **Model** Model S      **Version** All

**Bulletin Classification:** *This repair bulletin provides instructions and guidelines for a noted condition or a customer concern. The information provided can address a broad range of known or perceived issues with the operation of Tesla vehicles. This bulletin might not be VIN-specific. These instructions assume knowledge of motor vehicle and high voltage electrical component repairs, and should only be executed by trained professionals. Tesla assumes no liability for injury or property damage due to a failure to properly follow these instructions or repairs attempted by unqualified individuals.*

*This Service Document supersedes SB-18-31-009 R1, dated March 30, 2019. Each content change is marked by a vertical line in the left margin. Discard the previous version and replace it with this one.*

## Condition

On some Model S vehicles equipped with air suspension, a front-end rattle noise might come from behind the IP carrier when traveling over road transitions at low speed. For example, the noise might be heard when traveling from a driveway to a street, or from an asphalt surface to a concrete surface. The noise is generated from a normal mechanical operation that has no detrimental effect on the vehicle.

**NOTE:** All moving parts are expected to create some operational noise during normal use.

## Correction

Upon customer complaint, inspect that the front air spring modules currently installed in the vehicle are not the same part number revision as those listed in this document, or later. If after a temporary modification the vehicle symptoms related to the condition described in this document are significantly reduced, replace both front air spring modules with the revision described in this document

Correction Description	Correction	Time
SB-18-31-009 Not Applicable	S011831009	0.00
Inspect Vehicle, Front-End Rattle Noise Remains During Temporary Modification	S021831009	0.50
Inspect Vehicle And Replace Front Air Spring Modules	S031831009	1.35
Inspect Vehicle, Part Number Revisions Are The Same Or Later	S041831009	0.05

Required Part(s) If necessary:	Part Number	Description	Quantity
	1067361-77-C	AIR SPRING MODULE FR - MS2 DM SRVC	2
	1067362-77-B	AIR SPRING MODULE FR - MS2 RWD SRVC	2

These part numbers were current at the time of publication. Use the revisions listed or later, unless otherwise specified in the Parts Manual.

**Special Tool(s):** 1129405-00-A Video Scope, OTC 3880X

## Procedure

1. Temporarily set the air suspension to the highest setting, and then use the video scope to inspect the front air spring modules for their part numbers (Figure 1).
  - If the part number revisions are the same as those listed in this bulletin, or are a later revision, then this bulletin does not apply. Discontinue this procedure and refer to Toolbox articles, for example [#27522](#), [#27520](#), and [#31344](#), to help identify the source of the noise.
  - If the part number revisions are not the same as those listed in this bulletin, nor a later revision, or the revisions are not discernable, continue to the next step.



Figure 1

2. Remove the rear underhood apron (refer to Service Manual procedure [12251102](#)).
3. Remove the LH and RH underhood aprons (refer to Service Manual procedure [12251202](#)).
4. Bring two shop towels, a 13 mm socket, and a torque wrench during the road test to perform a temporary modification as follows:
  - a. Locate a street or parking lot where a short road test that reproduces the noise can be safely and consistently conducted at speeds of 6 – 12 mph (10 – 20 Km/h) in observance of local traffic laws.
  - b. Repeat the road test several times to establish a course, and to familiarize yourself with the front-end rattle noise.

- c. Open the hood, and then remove the bolts (x2) that attach the LH shock tower brace to the LH shock tower (Figure 2).



**Figure 2 (LH shock tower shown)**

- d. Remove the bolts (x2) that attach the RH shock tower brace to the RH shock tower.
- e. Lift the shock tower braces away from the shock towers, and then insert a double-folded shop towel between the braces and towers so that they do not make contact or transfer vibration to each other (Figure 3).

**NOTE:** Do not reinstall the shock tower brace bolts.



**Figure 3 (LH shock tower shown)**

- f. Perform the road test again, listen, and note the condition of the front-end rattle noise.
- g. Remove the shop towels, move the shock tower braces back to the LH and RH shock towers, and then install the bolts (x4) that attach the braces to the towers (torque 20 Nm) (Figure 2).

5. If during the road test (after removing the shock tower brace bolts):

- **The front-end rattle noise was significantly reduced:** Discontinue this procedure and replace the LH and RH front air spring modules (refer to Service Manual procedure [31105002](#)).

**NOTE:** After replacing the LH and RH air spring modules, some noise will still be present. Inform the customer that no further work will remove this residual noise, nor is it required.

- **The front-end rattle noise was not reduced:** The noise is not resolved by this bulletin. Continue to the next step.

**NOTE:** Refer to Toolbox articles, for example [#27522](#), [#27520](#), and [#31344](#), to help identify the source of the noise.

6. Install the LH and RH underhood aprons (refer to Service Manual procedure [12251202](#)).

7. Install the rear underhood apron (refer to Service Manual procedure [12251102](#)).

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**Affected VIN(s)** Affected Model S vehicles built between approximately January 29, 2017 and November 4, 2018.

**NOTE:** This is a simplified summary 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.

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