



Rear Axle Nut Washer Installation

Classification	Repair Bulletin - Level II	Section/Group	31 - Suspension	Country/Region	North America
Year	2012	Model	Model S	Version	All

Bulletin Classification: Repair Bulletin – Level II is issued to address a known non-safety related condition and provide recommended technical diagnosis & repair procedures. Apply this procedure to all vehicles in the affected VIN range listed below.

This Service Bulletin supersedes SB-12-31-001 R1, dated 15-Apr-13. The content changes are identified with double vertical lines. Please discard the previous Service Bulletin and replace with this one.

Condition

Over time, repeated heavy acceleration can cause the rear wheel axle nuts to lose proper torque. This might cause improper preload on the rear wheel bearings, possibly leading to premature bearing wear. Symptoms of this issue include a grinding noise audible to the driver and caused by loose rear wheel axle nuts. If not addressed, the noise will get progressively worse, leading to the need for premature bearing replacement.

Correction

Install wedge-lock washers beneath the left and right rear axle nuts. Install new axle nuts. Check the rear wheel bearings for axial play. Replace the rear wheel hub and bearing assemblies, if necessary.

Procedure

1. Close all doors.
2. Touch CONTROLS > DRIVING > JACK on the touchscreen to enable jack mode.
3. Raise and support the vehicle.
4. Shift into Neutral to release the parking brake.
5. Touch CONTROLS > E-BRAKE & POWER OFF > POWER OFF on the touchscreen to prevent the vehicle from shifting into Park when the driver's door is opened.

6. Face one of the rear wheels. Grasp the wheel/tire assembly with both hands, at the left and right edges. Check for free play by trying to rock the wheel from side to side (Figure 1).



Figure 1

7. Grasp the wheel/tire at the top and bottom. Check for free play by trying to rock the wheel up and down (Figure 2).



Figure 2

8. Repeat steps 6 and 7 on the other rear wheel.
9. If no axial play is noted, continue to the Inspecting the Axle Nut section of this document. If axial play is noted, skip to the Replacing Rear Wheel Hub and Bearing Assembly section of this document.

Inspecting the Axle Nut

1. Use a small trim tool or other non-marring pry tool to remove the center cap from one of the rear wheels.
2. Inspect the axle nut. If the axle nut has a visible white nylon ring, locking washers and new axle nuts need to be installed (Figure 3). Continue this procedure. If there is no white nylon ring, the nut is up to date and the lock washer is already installed; no further action is required (Figure 4).



Figure 3 (Old axle nut)

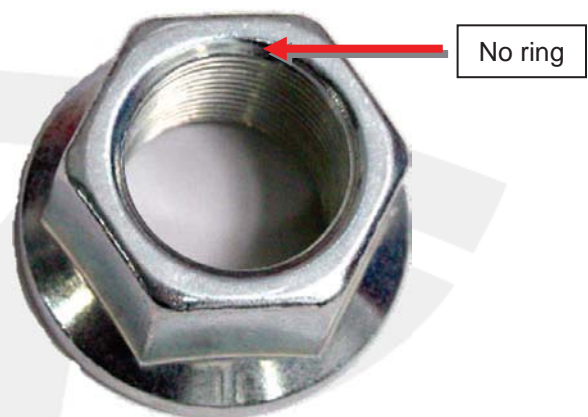


Figure 4 (New axle nut)

Installing Axle Nut Washers

1. Shift into Park to engage the parking brake.
2. Remove and discard the left and right rear axle nuts.
3. Install wedge-lock washers (Figure 5) on the left and right axle shaft splines.



Figure 5

4. Install new axle nuts on the left and right rear axle shaft splines. Torque the axle nuts to 245 Nm.

Replacing Rear Wheel Hub and Bearing Assembly

NOTE: The wheel hub and bearing assemblies only need to be replaced if free play was found using the procedure listed earlier in this document.

1. Refer to procedure 31030702 in the Service Manual for rear wheel hub removal instructions.

NOTE: The installation procedure is the reverse of removal, except for the following:

- Use new bolts when reinstalling the brake caliper and the parking brake caliper. Do not reuse the old bolts.
- Place wedge-lock washers over the left and right axle splines, then install new axle nuts. Do not reuse the old axle nuts. Using a torque wrench, torque the left and right axle nuts to 245 Nm.

Affected Part(s) 1020296-00-A WASHER ASSY LCK M24X39 ZNFL-W (Qty. 2 Required)
1020297-00-A NUT HF M24X1.5 [8.8] ZNFL-W (Qty. 2 required)


If hub and bearing assembly needs to be replaced:

6006796-00-A RR SUSP HUB AND BEARING ASSY
6006796-01-A RR SUSP HUB AND BEARING ASSY PERFORMANCE
2007068 BOLT HF M12X1.75X45 [10.9]-G720 (Qty. 2 required)
1004355-00-B BLT H M10X1.50X86 [8.8] ZNAL-W (Qty. 2 required)

Affected VIN(s) 5YJSA1DP8CFF00001 - 5YJSA1DP0CFF00042
5YJSA1DP6CFP01201 - 5YJSA1CP9CFP01999
5YJSA1CN9CFP02200 - 5YJSA1CN1CFP03163
5YJSA1DP7CFP03197 - 5YJSA1DN2CFP03199
5YJSA1DP3CFP03228 - 5YJSA1CN5CFP03229
5YJSA1AP7CFR00102 - 5YJSA1AP9CFR00117
5YJSA1DP2CFS00001 - 5YJSA1DP0CFS01096
5YJSA1DPXCFS02000 - 5YJSA1DP9CFS02120

Warranty/DMS Coding:

Description	Complaint	Cause	Correction	Time
Vehicle Inspection Only; Rear Axle Nut Washer Installation Not Required	A091	B053	S011231001	0.5
Install Rear Axle Nut Washers, LH and RH	A091	B053	S021231001	0.7
Replace 1 Rear Wheel Hub/Bearing Assy; Install Rear Axle Nut Washers, LH and RH	A091	B053	S031231001	1.25
Replace 2 Rear Wheel Hub/Bearing Assys; Install Rear Axle Nut Washers, LH and RH	A091	B053	S041231001	2.0

 The parts in this Service Bulletin are currently not required to be returned through the MRB program. Do not submit an MRB Parts Return claim; scrap these parts on site.

For feedback on the accuracy of this document, email ServiceBulletinFeedback@teslamotors.com.