



Service Bulletin

TECHNICAL

Subject: Front Lower Ball Joint and Knuckle Inspection After Road Hazard Tire/Wheel Damage and/or Noise from Front End

Attention: This Bulletin also applies to any of the models that may be Export vehicles.

Brand:	Model:	Model Year:		VIN:		Engine:	Transmission:
		from	to	from	to		
Chevrolet	Corvette	2014	2016			All	All

Condition	Some customers may comment on a ticking/clicking/metallic grinding noise heard from front suspension area or lash in steering wheel after a severe road or track front suspension impact.
Cause	This condition may be due to damage on the lower ball joint to steering knuckle connection.

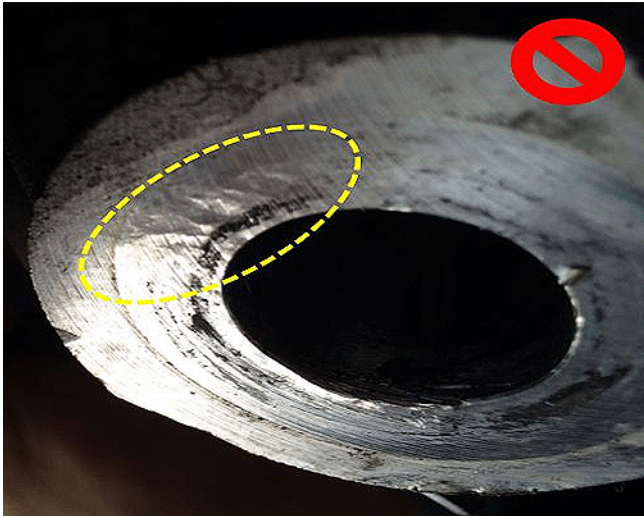
Correction

The front steering knuckle and lower ball joint need to be inspected following the procedure below.

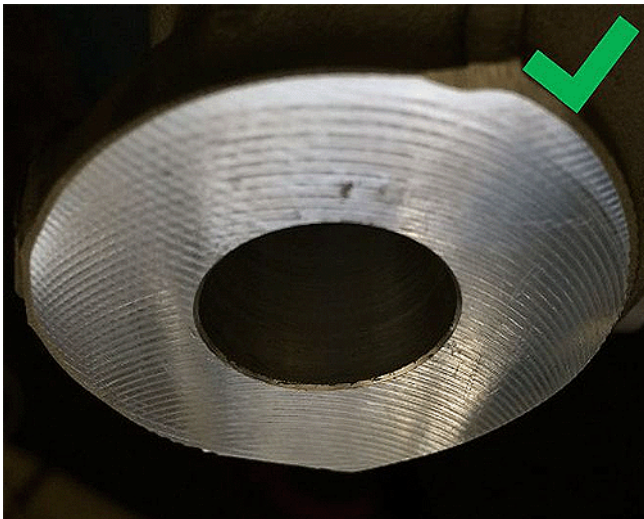
Service Procedure:

1. Raise and support the vehicle. Refer to Lifting and Jacking the Vehicle in SI.
2. Starting on left front, grab the wheel and tire at the top and bottom, pushing on one side and pulling on the opposite side to manually test the tire/wheel for lateral movement.
Note: There should be **NO** perceived movement.
3. Complete the same lateral movement test on the right front wheel and tire.
Note: The right side should also display **NO** perceived movement and should mimic the left side.
 - If **NO** discernible lateral movement is noted, continue to step #4 and inspect the knuckle/lower control arm joint interface.
 - If discernible lateral movement IS noted, jump ahead to the Lower Control Arm and Steering Knuckle Replacement procedure in SI.
4. Inspect the knuckle to lower control arm joint interface, following the steps below:
 - 4.1. Remove the appropriate front tire and wheel assembly. Refer to Tire and Wheel Removal and Installation in SI.
 - 4.2. Support the lower control arm with a suitable jack stand.
 - 4.3. Loosen the lower ball joint nut at the knuckle. The lower control arm should separate from the knuckle.
Note: If the link does not automatically separate from the knuckle, use Special Tool CH-42188-B separator.
Note: If Special Tool CH-42188-B separator alone fails to separate the joint, the use of an impact device may be required on the surface of the boss while under load from the separator tool. If this method is used and the knuckle boss is damaged in the process of separating, jump ahead to the Lower Control Arm and Steering Knuckle Replacement procedure in SI.

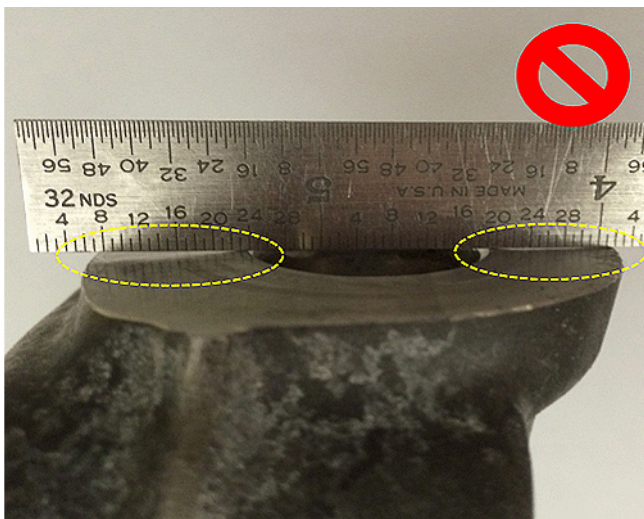
- 4.4. Remove and discard the lower ball joint nut.
- 4.5. Clean the upper and lower boss surfaces with an approved parts cleaner and rag.
- 4.6. Start by visually inspecting the tapered-hole edges on both top and bottom surfaces of the lower boss of the knuckle, looking for evidence of oblong wear/damage.

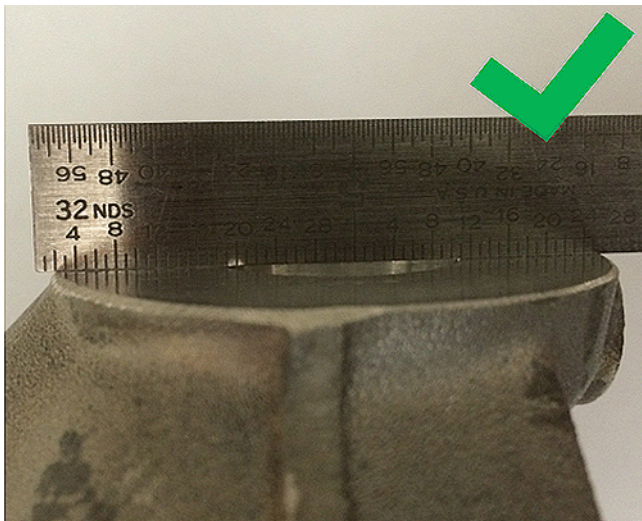


- 4.7. Next, visually inspect the knuckle's machined lower boss face, looking for evidence of material yielding. Yielding will manifest itself visually on this surface as a "bubbling" condition.



Note: The surface will likely show a uniform pattern of machining marks across the entire face, which should **NOT** be confused with the "bubbling" condition.





4.8. Finally, using a straight edge, check the flatness of the lower boss surface. Check for flatness across the boss in at least 5-6 different angular positions about the centerline of the hole. Look for light passing between the straight edge and boss surface to indicate a **FAILED** straight edge test.

- If the knuckle shows **NO** evidence of hole elongation, “bubbling” from yielding, or a failed straight edge test, as indicated throughout step 4 above, continue on to step #5 of this inspection procedure.
- If the knuckle **DOES** show evidence of hole elongation, “bubbling” from yielding, or a failed straight edge test, it will be necessary to replace the lower control arm and knuckle. Jump ahead to the Lower Control Arm and Steering Knuckle Replacement procedure in SI.

5. Re-seat the ball stud into the tapered hole.

6. Install the **NEW** lower ball joint nut.

Tighten:

- First Pass, 50 Y (37 lb ft)
- Final Pass, plus 120°-135° degrees

7. Reinstall the tire and wheel assembly. Refer to Tire and Wheel Removal and Installation in SI.

Parts Information

Description	Part Number	Qty
NUT	11546368	1 (As Required)
KNUCKLE-STRG (LH)	84036208	1 (As Required)
KNUCKLE-STRG (RH)	84036209	1 (As Required)
ARM ASM-FRT LWR CONT (LH)	23490421	1 (As Required)
ARM ASM-FRT LWR CONT (RH)	23490422	1 (As Required)

Warranty Information

Labor and the reconfiguration fee associated with these procedures should **NOT** be charged under warranty. Rather, this should be customer pay.

If one of the above parts gets damaged while performing the steps related to the inspection, warranty for part replacement will be covered by GM.

Version	2
---------	---

Modified	December 1, 2015 – adding step 4.2 under the Service Procedure.
----------	-----------------------------------------------------------------

GM bulletins are intended for use by professional technicians, NOT a "do-it-yourselfer". They are written to inform these technicians of conditions that may occur on some vehicles, or to provide information that could assist in the proper service of a vehicle. Properly trained technicians have the equipment, tools, safety instructions, and know-how to do a job properly and safely. If a condition is described, DO NOT assume that the bulletin applies to your vehicle, or that your vehicle will have that condition. See your GM dealer for information on whether your vehicle may benefit from the information.



WE SUPPORT VOLUNTARY TECHNICIAN CERTIFICATION