



STAR ONLINE PUBLICATION



Case Number: S2109000011 REV. A

Release Date: July 2023

Symptom/Vehicle Issue: Squeak, Chirp, Or Tick Noise From The Serpentine Belt Area. Additional Diagnostics.

Discussion: A small number of customers may experience a squeak, chirp, or tick noise from the serpentine belt. Upon further investigation a technician may notice the noise coming from the AC Compressor or Belt Tensioner area. In some instances, it may be noted that the concern may have started after AC compressor replacement.

The cause of the noise may be due to AC compressor alignment. Varying tolerances in the AC compressor mounting may cause slight misalignment of the belt leading to belt noise. If you receive a vehicle with this concern, please perform the following repair procedure.

Repair Procedure:

1. Is the vehicle a 2019-2020 Model Year?
 - a. Yes>>> Proceed to [Step 2](#).
 - b. No>>> Proceed to [Step 3](#).
2. Ensure that the vehicle is equipped with the latest design crankshaft pulley. The latest design pulley can be identified by not having paint on the belt groove surface. Please refer to all published TSBs regarding crankshaft pulley induced belt chirp for additional detail. Is the concern resolved?
 - a. Yes>>> The vehicle is now repaired. No further action is required.
 - b. No>>> Proceed to [Step 3](#).
3. Remove the belt in accordance with all published service information. Inspect for any abnormal wear and replace it if necessary.

This document does not authorize warranty repairs. This communication documents a record of past experiences. STAR Online does not provide any conclusions about what is wrong with the vehicle. Rather, it captures all previous cases known that appear to be similar or related to the vehicle symptom / condition. You are the expert, and you are responsible for deciding on the appropriate course of action.

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4. Loosen the 3, AC compressor mounting bolts 3-4 turns. Do not fully remove the bolts.
5. Using a suitable tool push the AC compressor rearward against the mounting bolts as far as it will go.
6. While holding the compressor rearward against the mounting bolts, torque the bolts to 21 ft lbs. (28 nm) in the following sequence. Please see (**Figure 1.**)
 - a. Upper Front Bolt
 - b. Lower Rear Bolt
 - c. Lower Front Bolt

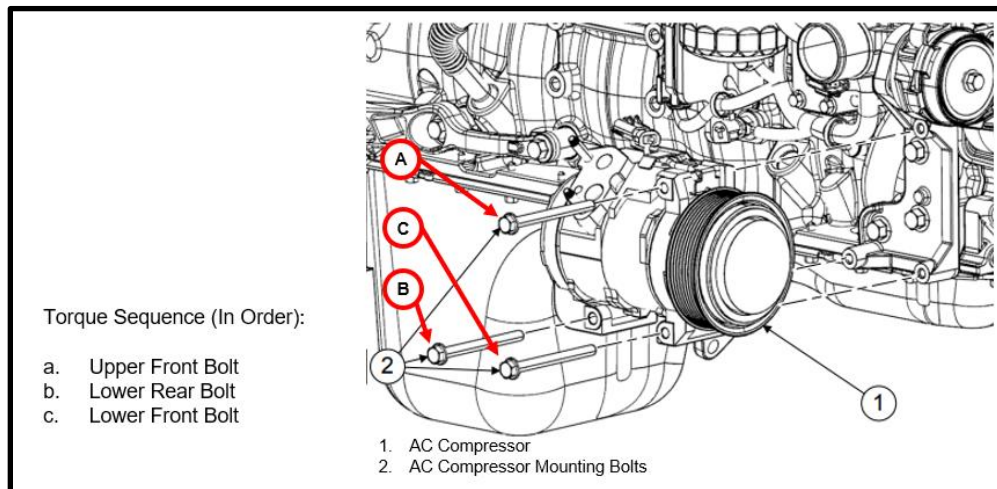


Figure 1.

7. Reinstall the belt in accordance with all published service information.
8. Perform the verification procedure to verify the noise is repaired.

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Verification Procedure:

2. Start the vehicle and place it in a suitable location.
3. Using the cruise control buttons, raise the RPM to 1250 RPM.
 - a. With the vehicle at idle, press the cruise control “On” button
 - b. Press the “Set” button. This will increase the engine speed to 1000 RPM.
 - c. Press and hold the “Resume/+” button until the engine reaches the desired RPM.
4. Turn on all vehicle accessories to put a load on the system (e.g. headlights, radio, Max AC on)
5. Allow the vehicle to run at 1250 RPM for 15 minutes.
6. Turn the steering wheel to the full right lock position and hold for 5 seconds.
7. Turn the steering wheel to the full left lock position and hold for 5 seconds.
8. Repeat steps 4-6, one additional time.

NOTE: In some instances, it may be necessary to move the compressor forward slightly from the most rearward position to provide better alignment, and fully eliminate the noise.

9. Is the squeak, chirp, tick noise from the belt still present?
 - a. Yes>>> Further diagnosis is required. This document no longer applies.
 - b. No>>> The vehicle is now repaired. No further action is required.

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