

- ATTENTION:**
- GENERAL MANAGER
 - PARTS MANAGER
 - CLAIMS PERSONNEL
 - SERVICE MANAGER

IMPORTANT - All Service Personnel Should Read and Initial in the boxes provided, right.

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QUALITY DRIVEN® SERVICE

SERVICE BULLETIN

APPLICABILITY: 2017-19MY Impreza
2017-19MY Crosstrek

NUMBER: 16-121-19R

DATE: 05/09/19

SUBJECT: "Tapping" -Type Sound Coming from Engine to CVT Connection

REVISED: 07/09/19

INTRODUCTION:

This bulletin provides a procedure for addressing a limited number of concerns involving a tapping -type sound originating from the area where the engine and CVT are joined. On affected vehicles, the sound can be heard easiest after the engine is fully warmed up.

SERVICE PROCEDURE / INFORMATION:

REMINDER: Customer satisfaction and retention starts with performing quality repairs. Always refer to the applicable Service Manual and review the full requirements of the repair being performed. The Service Manual procedures contain information critical to performing an effective repair the first time and every time. This includes but is not limited to: important SAFETY precautions, proper inspection criteria, necessary special tools, required processes and related one-time-use parts needed for a complete and lasting repair.

This procedure involves removing the 6 (six) converter to drive plate bolts, rotating the drive plate 180 degrees on the converter and re-securing / torquing the bolts.

Step 1: Confirm the customer's concern. The sound will not be heard after starting a cold engine. As the engine warms up, the sound will become louder and easier to duplicate. **IMPORTANT:** The engine oil temperature must be up to at least 100 degrees C (212 F) or higher.

Step 2: After confirming the sound, remove the v-belt following the procedure in the applicable Service Manual and restart the engine to confirm the sound persists. If the sound is no longer present, proceed to **Step 3.**

CAUTION: VEHICLE SERVICING PERFORMED BY UNTRAINED PERSONS COULD RESULT IN SERIOUS INJURY TO THOSE PERSONS OR TO OTHERS.

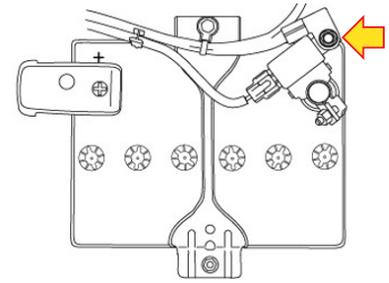
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ISO 14001 is the international standard for excellence in Environmental Management Systems. Please recycle or dispose of automotive products in a manner that is friendly to our environment and in accordance with all local, state and federal laws and regulations.

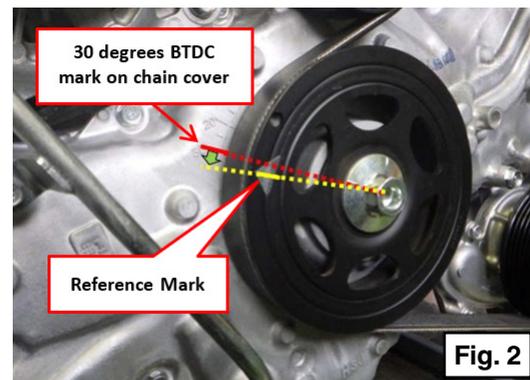
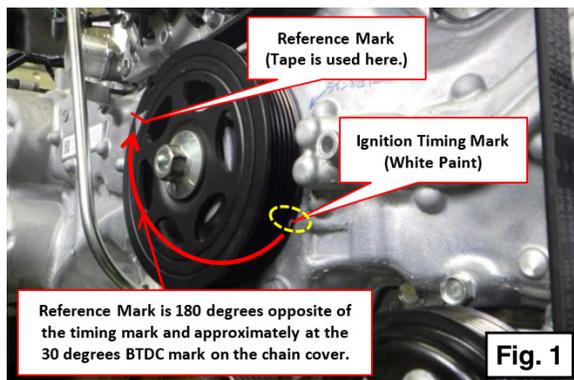
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Step 3: Record the customer's radio station presets (and Navigation favorites where applicable) then disconnect the negative (ground) cable from the battery sensor.



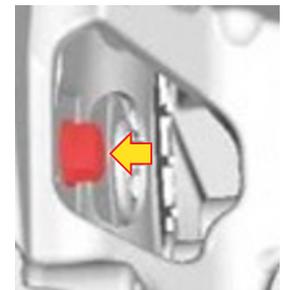
Step 4: Remove / disconnect the necessary components to gain access to the rubber service hole plug in the top of the converter housing and the 6-torque converter retaining bolts.

Step 5: Locate the small ignition timing mark on the back edge of the crankshaft pulley as shown below (**Fig. 1**). Put a mark with a grease pencil or use a small piece of tape **180 degrees opposite** of the timing mark for reference. As a general guideline, this mark should approximately align with the 30 degrees before TDC mark on the timing chain cover (**Fig. 2**) and will be much easier to see and refer to than the timing mark.

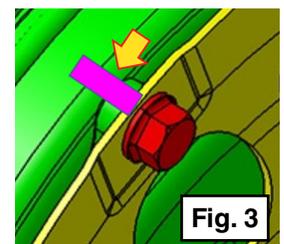


Step 6: Turn the crankshaft pulley (**ALWAYS in the direction of engine rotation**) as needed to align the first converter bolt with the service hole.

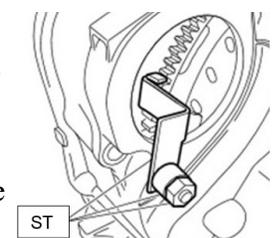
Step 7: Add a paint mark as shown in **Fig. 3** below to "bridge" both the torque converter and drive plate. This paint mark will be used for reference once all 6 converter bolts have been removed.



Step 8: **CAREFULLY** remove all 6 torque converter bolts taking extra care to not drop any of them into the torque converter housing once they are removed. **REMINER:** **ALWAYS** rotate the crankshaft pulley in the direction of engine rotation.



Step 9: Once all 6 bolts are removed, rotate the crankshaft pulley and using the paint mark applied in **Step 7**, confirm the torque converter remains stationary and only the drive plate is turning. There is a small possibility the drive plate and torque converter could be seized together. Use a screw driver or small pry bar through the service hole to engage the ring gear teeth on the torque converter while turning the crankshaft pulley to free-up the seizure. If unsuccessful, remove the starter following the procedure in the applicable Service Manual. Install the special tool (**498277200**) to lock the torque converter in position while turning the crankshaft pulley to free-up the seizure.



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Step 10: With the torque converter now loose from the drive plate, rotate the crankshaft pulley 180 degrees from the initial starting point when the additional Reference Mark was applied to it and, the paint mark was applied to the drive plate and torque converter as shown in **Steps 5 and 7**. The paint mark on the torque converter (NOT the paint mark on the drive plate) should be visible at the service hole. The goal is to have the drive plate 180 degrees from the original position on the torque converter.

Step 11: Align the first torque converter bolt hole with the drive plate and reinstall the first bolt fully but DO NOT tighten it. Rotate the crankshaft pulley (in the direction of engine rotation) and install the remaining 5 bolts. Once all 6 bolts are installed, torque all to 25Nm (18.4 ft. lbs.).

Step 12: Reinstall any components removed to access the rubber service hole plug in reverse order of removal.

Step 13: Reconnect the battery ground cable, torque the nut to 7.5 Nm (5.5 ft. lbs. or 66 inch-lbs.) and start the engine to confirm the repair.

Step 14: Reset the customer's radio station presets (and Navigation favorites where applicable) to complete the procedure.

WARRANTY / CLAIM INFORMATION:

For vehicles within the Basic New Car Limited or Powertrain Limited Warranty period or covered by an active Subaru Added Security Powertrain, Classic or Gold plan, this repair may be submitted using the following claim information:

Labor Description	Labor Operation #	Labor Time	Fail Code
TORQUE CONVERTER DRIVE PLATE TAPPING SOUND REPAIR	A303-128	0.8	LAE-25

IMPORTANT REMINDERS:

- SOA strongly discourages the printing and/or local storage of service information as previously released information and electronic publications may be updated at any time.
- Always check for any open recalls or campaigns anytime a vehicle is in for servicing.
- Always refer to STIS for the latest service information before performing any repairs.