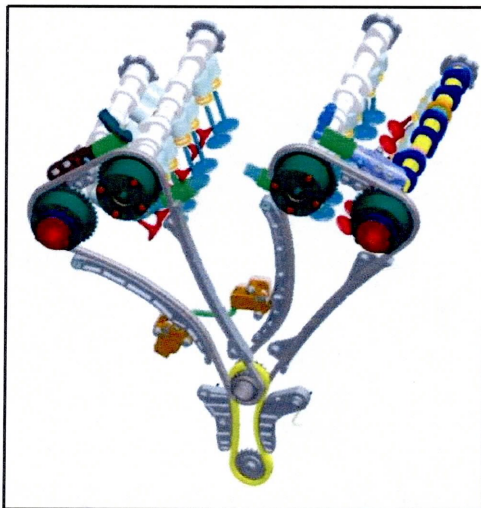


|                                                                                   |               |                                      |
|-----------------------------------------------------------------------------------|---------------|--------------------------------------|
|  | GROUP<br>ENG  | MODEL<br>2014~2015MY<br>Cadenza (VG) |
|                                                                                   | NUMBER<br>148 | DATE<br>September 2015               |
| <p align="center"><b>TECHNICAL SERVICE BULLETIN</b></p>                           |               |                                      |
| <p><b>SUBJECT: CHATTER/RATTLE NOISE FROM ENGINE AFTER COLD SOAK</b></p>           |               |                                      |

This bulletin provides information about the timing chain tensioner and tensioner arm replacement of some 2014~15MY Cadenza (VG) vehicles, which may experience a brief chattering or rattling noise concern from the engine on start-up, after a cold soak. After confirming the noise concern, follow the procedures outlined in this TSB to resolve the concern.



**\* NOTICE**

Due to initial limited parts availability, do NOT order parts unless you have an affected in-stock vehicle or a customer vehicle that requires the repair.

File Under: <Engine>

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Circulate To:    ☒ General Manager    ☒ Service Manager    ☒ Parts Manager

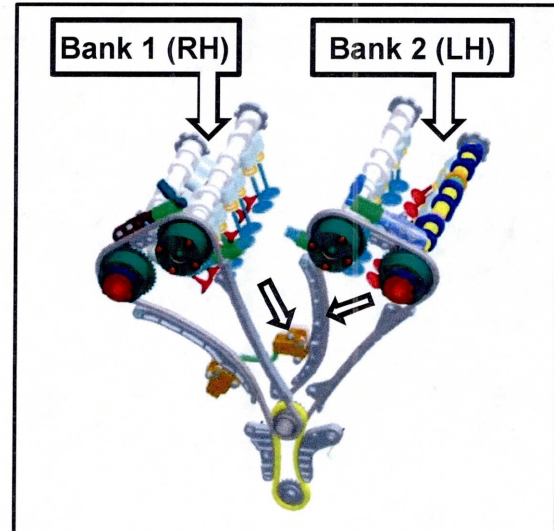
☒ Service Advisor(s)    ☒ Technician(s)    ☒ Body Shop Manager    ☒ Fleet Repair

**SUBJECT** CHATTER/RATTLE NOISE FROM ENGINE AFTER COLD SOAK

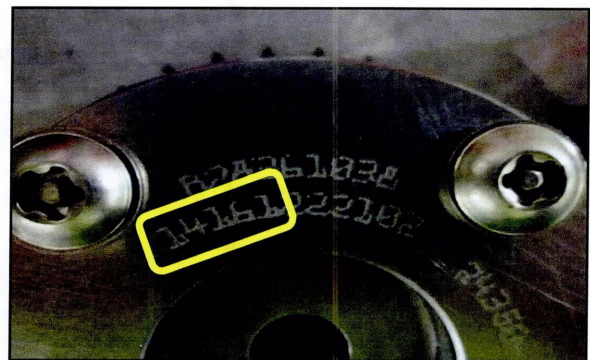
**Service Procedure:**

**★ NOTICE**

This Service procedure should ONLY be performed on engine bank 2 (LH), as shown.



1. Refer to the “Engine Mechanical System → Timing System → Timing Chain” section in the applicable Workshop Manual on KGIS, to install the improved parts. **NOTE: prior to installation, refer to steps 2~4 for supplementary inspection/installation information.**
2. After removal of timing chain cover, inspect CVVT’s on both engine banks to ensure the first five (5) digits of the eleven (11) digit serial number is equal or greater than “14111”, on both Intake and Exhaust CVVTs. If the serial number is greater than 14111, proceed to step 4. If the serial number is less than “14111”, replace the CVVT(s) prior to performing the remainder of this TSB procedure.



**★ NOTICE**

Additionally, inspect the replacement CVVTs to ensure the first five (5) digits of the serial number are greater than “14111”.



**SUBJECT: CHATTER/RATTLE NOISE FROM ENGINE AFTER COLD SOAK**
**★ NOTICE**

Prior to removing chain tensioners/adjusters, note position of the timing chain tensioner pawl to the rack grooves and count the number of teeth/grooves extending from the tensioner, as shown below. Make sure to record the count for later reference.

3. After installing the new tensioner, and timing chain guide, manually rotate the crankshaft three (3) full revolutions to securely seat the tensioner, then, check the number of grooves extending from the tensioner. When compared to the initial count, it should now be one (1) groove further out towards timing chain.

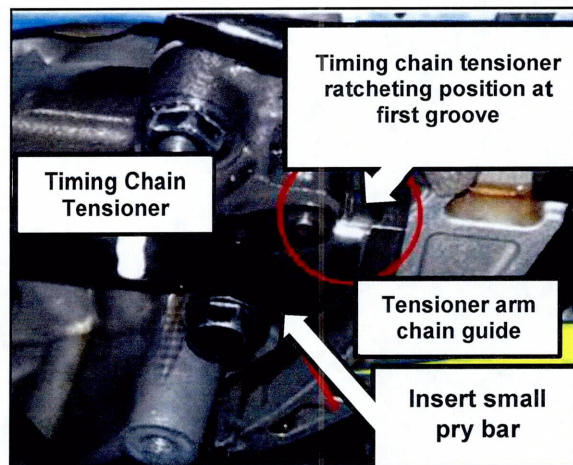
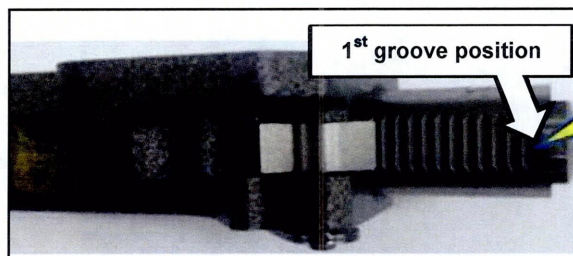


Image shown for illustration ONLY purposes. Actual conditions may vary.

4. If after tensioner and guide replacement the tensioner pawl rack is not extended one tooth/groove further out than before the repair, use a small pry bar to extend the tensioner out one (1) tooth/groove further towards timing chain, as shown.


**CAUTION**

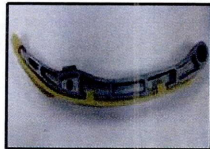
Do **NOT** extend the tensioner pawl rack out more than one tooth/groove or damage to timing chain may occur.



5. Once proper tensioner/guide installation has been completed, re-install all removed components by reversing the order of removal.
6. After confirming proper engine oil and coolant levels, start the engine and verify the rattle concern has been resolved.

**SUBJECT** CHATTER/RATTLE NOISE FROM ENGINE AFTER COLD SOAK

## REQUIRED PARTS:

| Part Name              | Part Number    | Figure                                                                              |
|------------------------|----------------|-------------------------------------------------------------------------------------|
| Timing Chain Tensioner | 24000 3CGA0FFF |  |
| Tensioner Arm          |                |  |

**\* NOTICE**

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## RELATED PARTS:

| Part Name               | Part Number | Comments |
|-------------------------|-------------|----------|
| Gasket – Rocker Cover   | 22453 3CGA2 |          |
| Gasket – Rocker Cover   | 22241 3CGA1 |          |
| Gasket – Outlet, LH     | 21354 3C510 |          |
| Gasket – Outlet, RH     | 21354 3C520 |          |
| Gasket – ETC Actuator   | 35101 3C000 |          |
| Gasket – Water Pump, RH | 21355 3C530 | Metal    |
| Gasket – Water Pump, LH | 21355 3C520 | Rubber   |
| Gasket – Surge Tank     | 29215 3CFA1 |          |



**SUBJECT:** CHATTER/RATTLE NOISE FROM ENGINE AFTER COLD SOAK

**AFFECTED VEHICLE RANGE:**

| Model        | Production Date Range |
|--------------|-----------------------|
| Cadenza (VG) | 2014~2015MY           |

**WARRANTY INFORMATION:**

**N CODE: Q72 C CODE: ZZ3**

| Claim Type | Causal P/N     | Qty. | Repair Description                                                                     | Labor Op Code | Op Time    | Replacement P/N   | Qty. |
|------------|----------------|------|----------------------------------------------------------------------------------------|---------------|------------|-------------------|------|
| W          | 24461<br>2G350 | 0    | (ENG 148)<br>Timing Chain<br>Tensioner<br>and<br>Tensioner<br>Arm Replace<br>(LH side) | 24410F00      | 6.0<br>M/H | 24000<br>3CGA0FFF | 1    |