



Service Bulletin

File in Section: -

Bulletin No.: 18-NA-031

Date: February, 2018

TECHNICAL

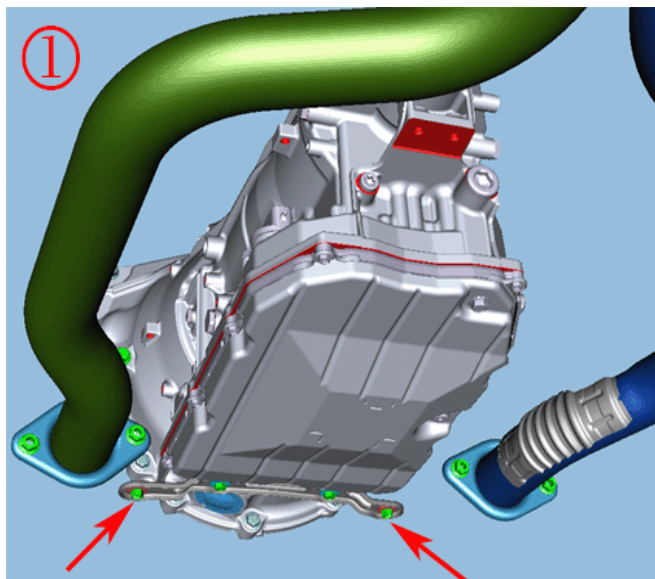
Subject: Brief Rattle or Tick When Revving Engine in Park/Neutral or Rattle from Turbocharger on Cold Start

Brand:	Model:	Model Year:		VIN:		Engine:	Transmission:
		from	to	from	to		
Cadillac	ATS	2016	2019			3.6L (LF4)	
	CTS Sedan (VIN A)	2014	2019			3.6L (LF3)	

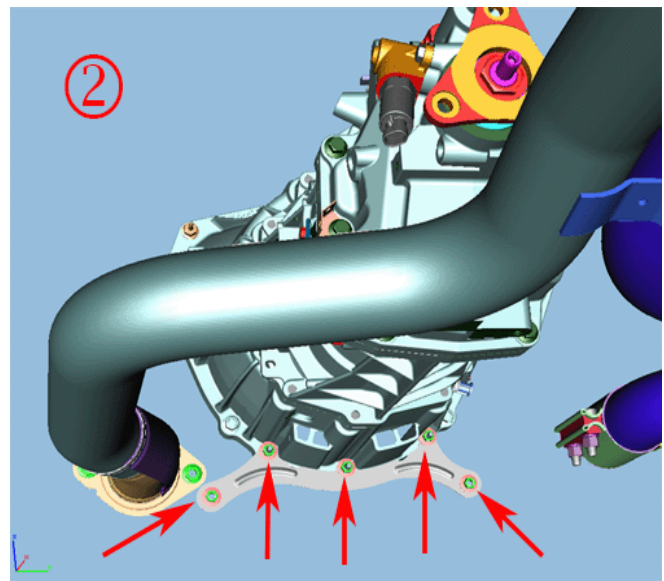
Involved Region or Country	North America, Europe, Russia, Middle East, Israel, Japan, Korea, China
Condition	<p>Some customers may comment of a brief rattle or ticking noise can be heard when revving the engine in Park/Neutral. The same rattle or tick can sometimes be heard at the beginning or end of a vehicle acceleration while in D (Drive).</p> <p>Some customers may also comment that a rattle or ticking noise can be heard when cold, but goes away when warmed up.</p> <p>Some technicians may notice the rattle or tick noise during Pre- Delivery Inspection (PDI) and determine the source to be coming from a loose wastegate actuator arm for the turbocharger or loose catalytic converter bracket nuts.</p>
Cause	This condition may be caused by loose converter bracket nuts or a possible issue with the turbocharger wastegate actuator arm.
Correction	To correct this condition, please follow this diagnostic or repair process thoroughly and complete each step.

Service Procedure

Loose Converter Bracket Nuts



4693305



4693302

Inspect the M8 nuts that secure the catalytic converters to the exhaust bracket. RPO LF3 (1) and RPO LF4 (2) as shown above.

- If technician finds the M8 nuts are loose, it will be necessary to replace them with new torque prevailing nuts. Refer to the latest version of PI1234.
- If the technician finds that the nuts are torqued correctly, this is not the concern. Proceed to Loose Wastegate Actuator Arm procedure in this bulletin.

Loose Wastegate Actuator Arm

Note: If you have verified the rattle noise is coming from the wastegate actuator arm when cold or while revving engine in Park or Neutral, it will be necessary to get the part number off the turbo that is currently installed. There have been several improvements in hardware within the turbochargers to eliminate the rattle noise.

Turbocharger - ATS

1. Remove Bank 1 and Bank 2 turbocharger heat shields. Refer to *Turbocharger Heat Shield Replacement* in SI.
2. Inspect the part number on the turbocharger:

Important: If only one turbocharger needs replacing, 1 cup spring must be installed on the new turbocharger and 1 on the turbocharger already installed on the vehicle.

- If P/N 12658344 or 12658345 is currently installed, replace the turbocharger and install cup springs.
- If P/N 12658344 or 12658345 is not installed, proceed to Cup Spring Installation in this bulletin.

Turbocharger - CTS

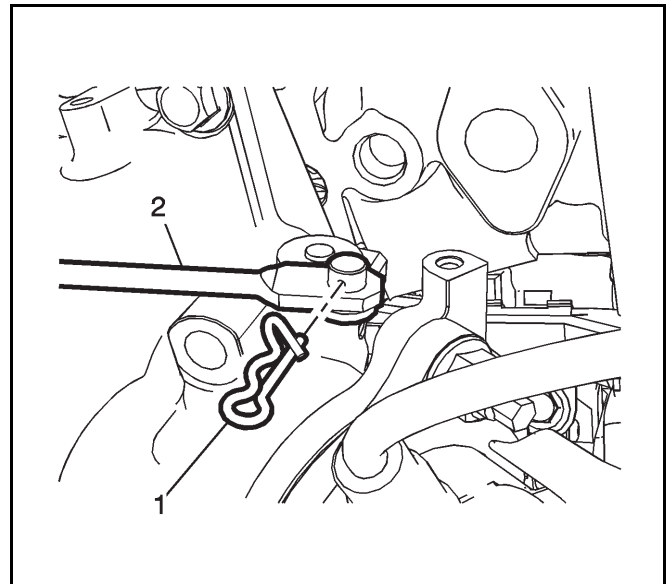
1. Remove Bank 1 and Bank 2 turbocharger heat shields. Refer to *Turbocharger Heat Shield Replacement* in SI.
2. Inspect the part number on the turbocharger:

Important: If only one turbocharger needs replacing, 1 cup spring must be installed on the new turbocharger and 1 on the turbocharger already installed on the vehicle.

- If P/N 12659010 or 12659011 is currently installed, replace the turbocharger and install cup springs.
- If P/N 12659010 or 12659011 is not installed, proceed to Cup Spring Installation in this bulletin.

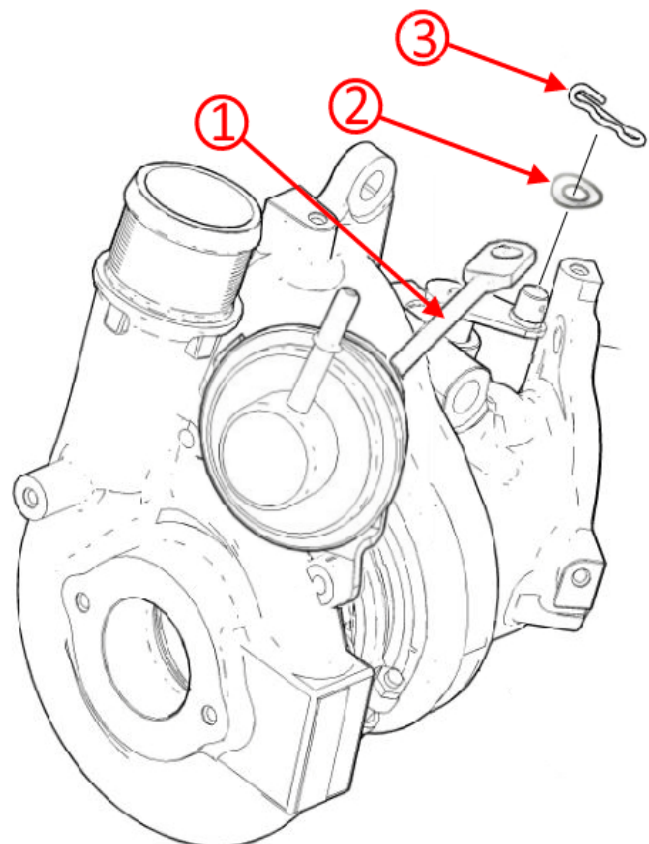
Cup Spring Installation

Note: Note the position of the retainer for future reinstallation.



3339414

1. Remove the actuator arm retainer (1) that secures the wastegate actuator arm (2) to the wastegate valve.



4952841

2. Remove turbo wastegate actuator arm (1) from the wastegate valve.

Important: It is vital that the spring washer is installed properly with the concave side pushing upwards against the actuator arm.

3. Install the cup spring washer (2) onto the wastegate valve with the concave side facing up.
4. Install the turbo wastegate actuator arm to the shaft.
5. Install the arm retainer (3).
6. Install previously removed components.

Parts Information

Causal Part	Description	Part Number	Qty
	SPRING, TURBO WASTEGATE ACTR ROD	12686941	2
	TURBO-CHARGER, ENG (L)	Refer to EPC	1
	TURBO-CHARGER, ENG (R)		1

Warranty Information (ATS)

For vehicles repaired under the Emission coverage, use the following labor operation. Reference the Applicable Warranties section of Investigate Vehicle History (IVH) for coverage information.

Important: Only select the labor operation that coincides with the repair performed.

Labor Operation	Description	Labor Time
4086038*	Turbocharger Inspection, Repair and/or Replacement	2.4 hrs
Add	Bank 1 Turbocharger Replacement (Includes Actuator Arm Cup Spring Installation)	5.6 hrs
Add	Bank 2 Actuator Arm Cup Spring Installation	0.2 hr
Add	Bank 2 Turbocharger Replacement (Includes Actuator Arm Cup Spring Installation)	5.6 hrs

Labor Operation	Description	Labor Time
Add	Bank 1 Actuator Arm Cup Spring Installation	0.2 hr
Add	Bank 1 and 2 Turbocharger Replacement (Includes Installation of Both Actuator Arm Cup Springs on Bench)	7.9 hrs

*This is a unique Labor Operation for Bulletin use only.

Warranty Information (CTS)

For vehicles repaired under the Emission coverage, use the following labor operation. Reference the Applicable Warranties section of Investigate Vehicle History (IVH) for coverage information.

Important: Only select the labor operation that coincides with the repair performed.

Labor Operation	Description	Labor Time
4086038*	Turbocharger Inspection, Repair and/or Replacement	1.6 hrs
Add	Bank 1 Turbocharger Replacement (Includes Actuator Arm Cup Spring Installation)	5.2 hrs
Add	Bank 2 Actuator Arm Cup Spring Installation	0.2 hr
Add	Bank 2 Turbocharger Replacement (Includes Actuator Arm Cup Spring Installation)	5.2 hrs
Add	Bank 1 Actuator Arm Cup Spring Installation	0.2 hr
Add	Bank 1 and 2 Turbocharger Replacement (Includes Installation of Both Actuator Arm Cup Springs on Bench)	6.2 hrs

*This is a unique Labor Operation for Bulletin use only.

Version	1
Modified	Released January 31, 2018

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