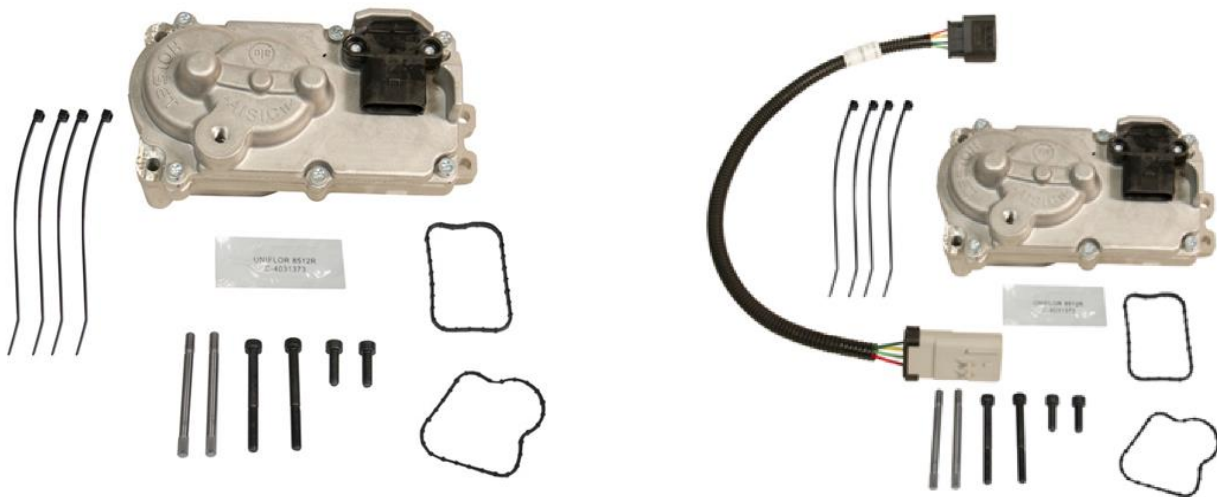




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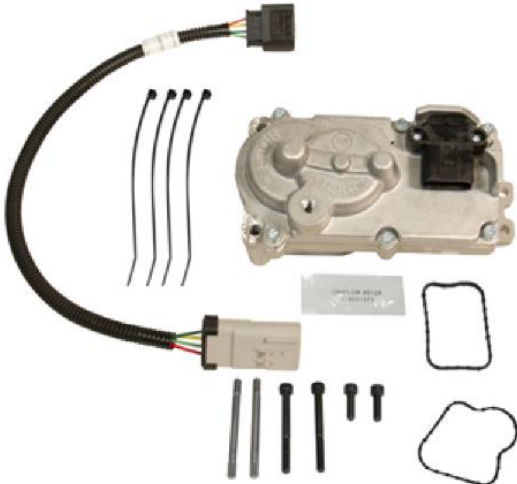
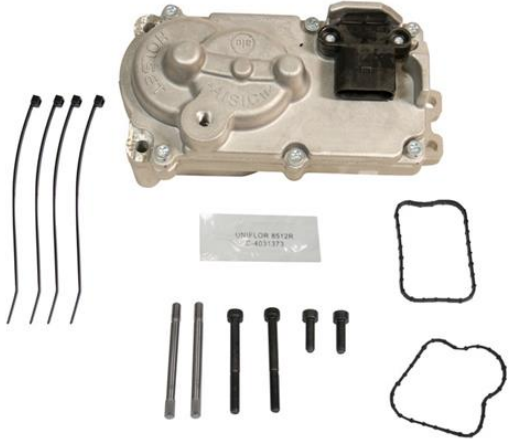


HE3xx Replacement Actuator

1045922	2007.5-12 HE351 Actuator
1045923	2013-2018 HE300 Actuator

Access to scan tool able to reprogram the actuator is required.

Kit Contents

1045922	1045923
	
Actuator Kit (w/ 1407046 Harness)	Actuator Kit

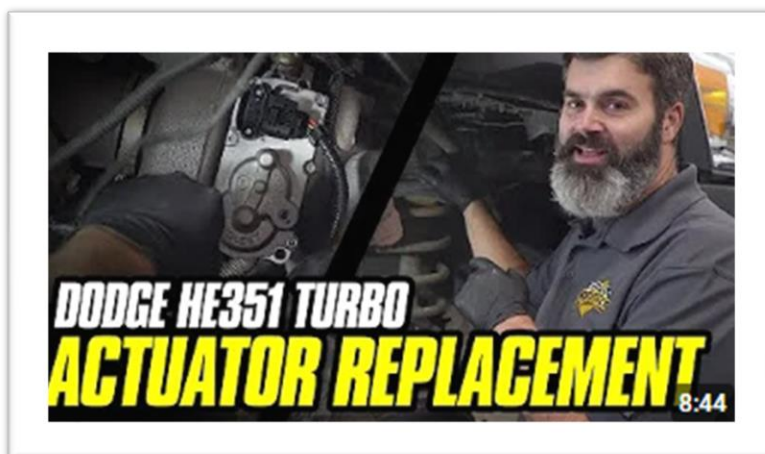
Introduction

If turbocharger actuator is removed for any reason, the actuator must be calibrated to the turbo with turbocharger actuator installation procedure. Reinstallation without calibrating turbo actuator may result in a DTC.

If turbocharger actuator calibration procedure is interrupted without completing, it may result in a P003A. Turbo actuator must be recalibrated using the turbo actuator installation procedure



Check out the following video on YouTube for a detailed walk-through on replacing and calibrating a VGT actuator on your Holset turbocharger



Turbocharger Actuator Installation Manual

https://www.youtube.com/watch?v=U9gP_qCk4Js&t=11s

Tools Required for Installation

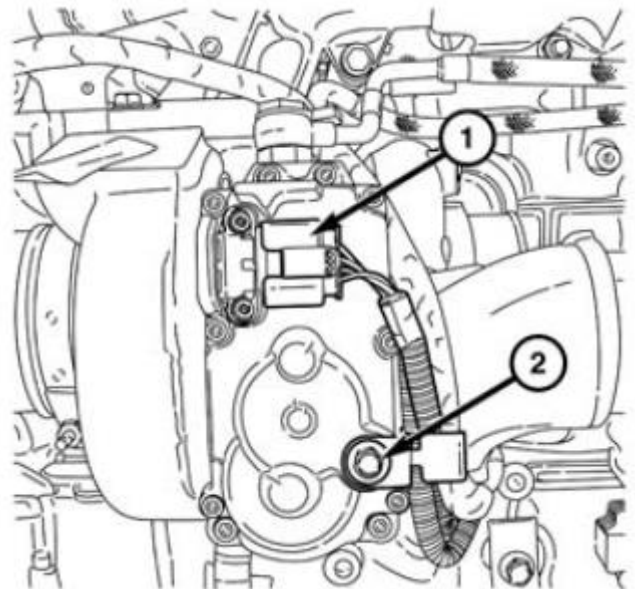
- Scan tool capable of Actuator Reprogramming

Removal

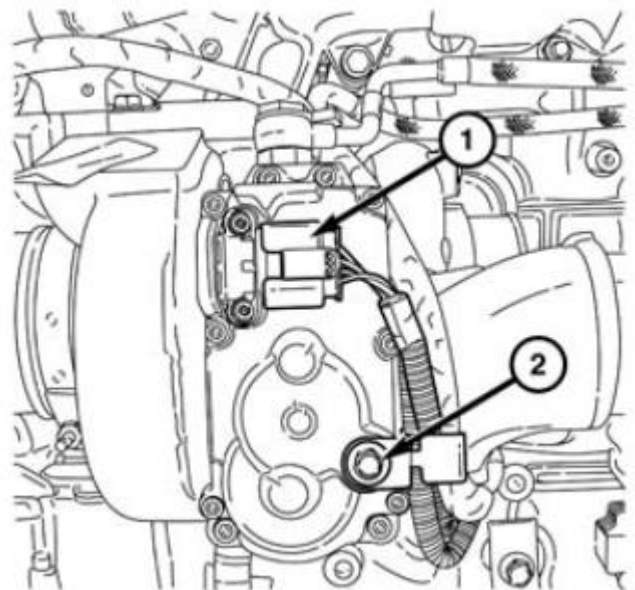
Disconnect both vehicle batteries before installation for safety.

Raise and support the vehicle. Drain the cooling system. Remove the right wheel house splash shield.

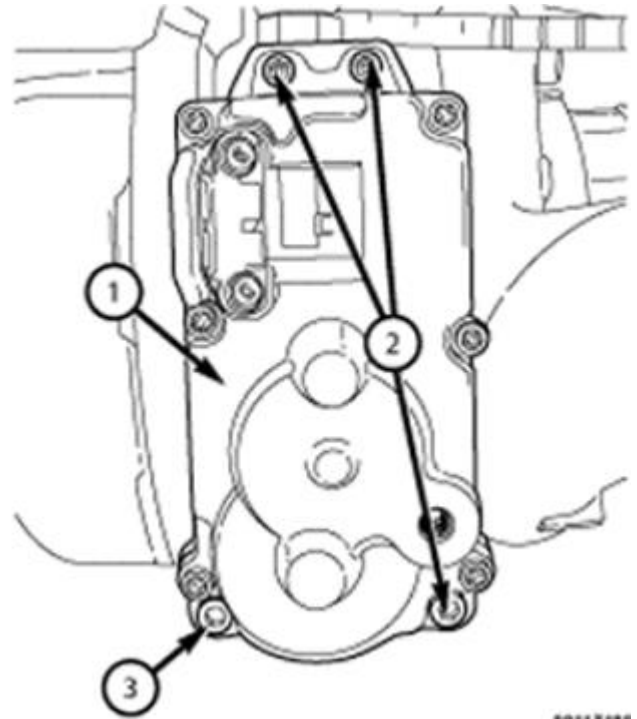
Remove the bolt (2) securing the wire harness to the turbocharger actuator.



Disconnect the turbocharger actuator wire harness connector (1) from the turbocharger by cleaning the connector to remove debris, pulling the light gray release lever away from the locked position with your thumb nail until it clicks into the unlocked position, then holding the light grey release lever down while pulling the connector apart.



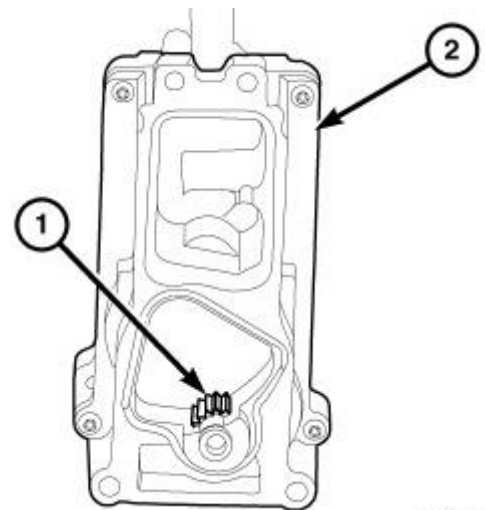
Remove the bolts (2, 3) and the turbocharger actuator (1).



Install

Clean turbocharger mounting surfaces.

Position the turbocharger actuator (2) into the engine compartment so the actuator gear (1) will be free to rotate



R1a39a82

Connect turbocharger actuator wire harness connector. Connect both negative battery cables.

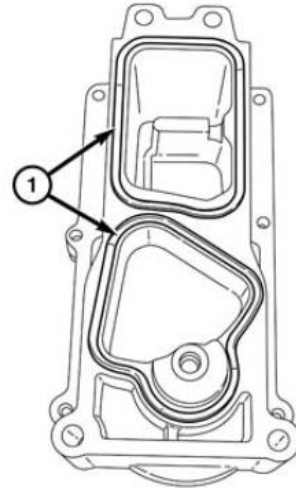
Turn ignition to on position, DO NOT START THE ENGINE. Using the scan tool, create a freeze frame of all current DTCs and then clear them.

Using a scan tool function “Misc. functions” under PCM, perform VG Turbocharger Actuator Pre-Alignment/Self Calibrate.

This is a two-step process; the tool will perform the Pre-align portion first (very quickly) followed by the Self Calibration portion.

Do not turn off the ignition or disconnect the tool after performing the turbocharger actuator pre-align portion of the routine.

Install a NEW O-ring seal (1) on the turbocharger actuator.



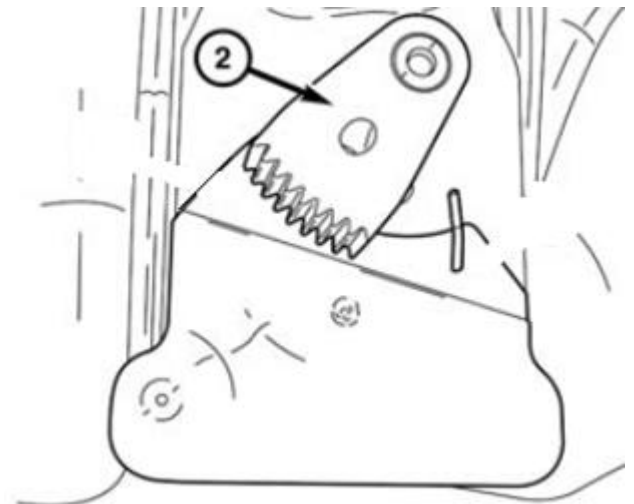
2007.5-2012 Model Year Trucks

Grasp the sector gear (2) by hand and rotate the sector gear (2) toward the turbocharger turbine housing.

Align the hole on the sector gear to the hole in the CHRA towards the turbine side. Keep in place, do not allow movement.

It is critical for smooth reliable operation of the actuator to use the full amount of the Holset® supplied grease.

Coat the teeth on the sector gear (1) with the full amount of grease supplied in the packet from installation kit.



2013-2018 Model Year Trucks

Line up the side of the sector gear, with the notch on the turbine side of the CHRA. Keep in place, do not move.

Note: Some model years may have alignment holes and not notches. Please see previous alignment method.

It is critical for smooth reliable operation of the actuator to use the full amount of the Holset® supplied grease.

Coat the teeth on the sector gear with the full amount of grease supplied in the packet from installation kit.



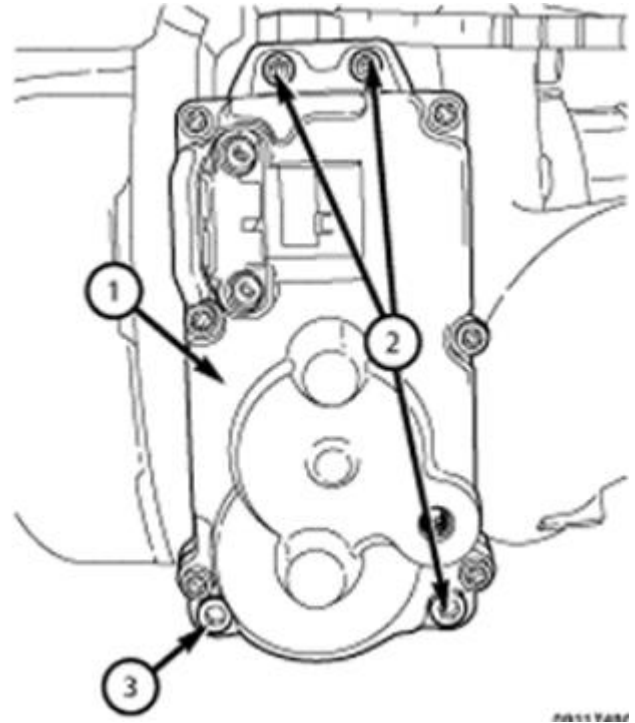
Install the guide pins onto turbocharger top two mounting screw holes.

Insert the bottom two NEW screws into actuator mounting holes before placing onto turbocharger

Remove the two guide pins from top holes and install NEW bolts finger tight.

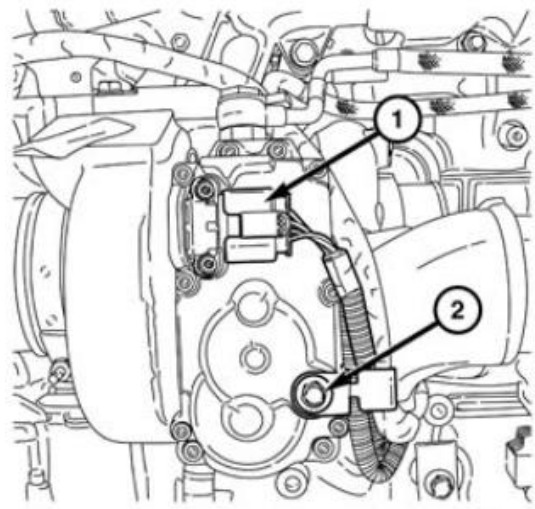
These are the only three screws that are accessible in the 3500 Chassis.

Tighten the three screws (2) to 9 N·m (80 in. lbs.).



Using an Allen Wrench, tighten the remaining cap screw (3) until it is flush with the actuator body. After screw (3) has been brought flush with the actuator housing, tighten the screw an additional 90° turn.

Install the bolt (2) securing the wire harness to the turbocharger actuator and tighten the bolt to 11 N·m (8 ft. lbs.).



Now, after actuator is installed, using scan tool, perform the self-calibration portion of the “VG Turbocharger Actuator Pre-Alignment/Self Calibrate routine.

Clear any DTCs that may appear after Pre-Alignment/Self Calibrate procedure is complete.

Note: Actuator may take multiple attempts to calibrate/learn with turbocharger.

If calibration fails, remove Electronic Turbocharger Actuator and go back to step 1 to repeat calibration.

Power down the PCM (key off). Automatic Transmission equipped trucks must have key off for at least 10 minutes. Manual Transmission trucks must have key off for at least 75 seconds.

Install the right wheelhouse splash shield. Install the air cleaner body.
Fill the cooling system
