



## Mack Models

**Mack Model** TE-TerraPro , LR , LEU , MRU , GR-Granite , PI-Pinnacle , AN-Anthem , CHU , CXU , GU , TD

## Volvo Models

**Volvo Model** VNR , VT , VNX , VNL , VNM , VHD , VAH

## Engine family

Engine family 11L Engine , 13L Engine , 16L Engine , MP7 , MP8 , MP10

## Emission Standard

Emission Standard 2018 , OBD2017 , US17 GHG , US16 , US15 , US07 , US10 , US13 OBD , US14 GHG

## \*\* SOLUTION \*\*

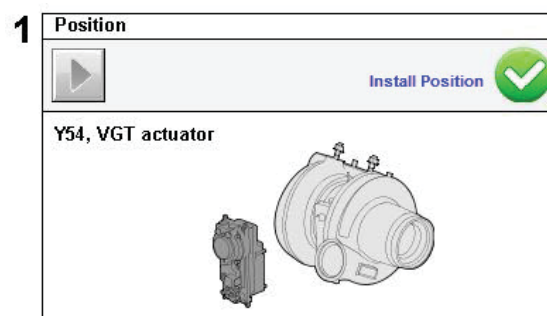
**Title** Variable Geometry Turbo (VGT) Calibration: Premium Tech Tool (PTT) Displays "Motor Disabled" Message, Operation Will Not Run, Will Not Complete When Running Operation; Poor Performance Following Calibration - **US10 And Newer Emissions, Common Model Years 2014 And Newer**

**Cause** If the Variable Geometry Turbo Calibration ( VGT ) operation is unsuccessful, the VGT may not respond normally and be stuck in a default position. This can cause poor performance with no fault codes. This can be solved by ensuring the calibration finishes correctly.

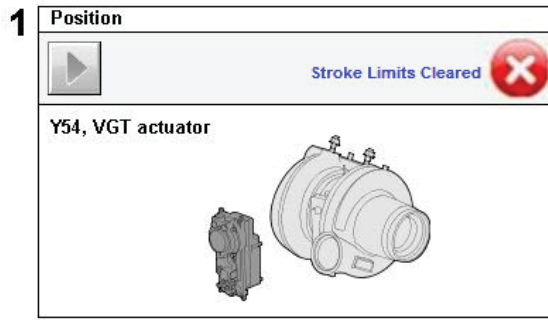
**Solution** **I. Run PTT Operation 2551-07-03-01 Variable Geometry Turbo, located under the Calibrate tab.**

**II. Press the Play button for Step 1, Position. This step clears the end stops and pre-positions the output gear for installation.**

A. A **Green Circle with Check Mark** and **Install Position** message **must be displayed** as shown below before proceeding further. **If the correct status is observed, proceed to Step 3 of the PTT operation.**



B. If an error message and/or a **Red Circle with an X** is displayed as shown below, Operation Step 1 did not complete correctly.



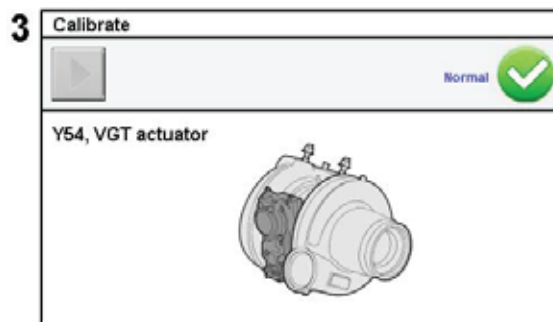
**If this condition is observed:**

1. Stop the calibration.
2. Exit the operation.
3. Restart the calibration operation.
4. Perform Operation Step 1 again until the conditions in Part A are observed.

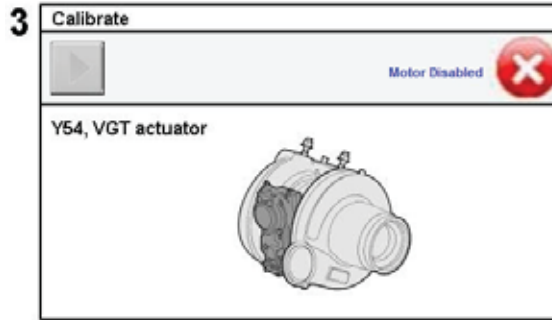
### III. Press the Play button for Step 3, Calibrate.

A. Allow the operation to run.

B. When the calibration completes, a **Green Circle with Check Mark** and **Normal** message should **display** after calibration completes. There may be a delay between the test completion and the message display.

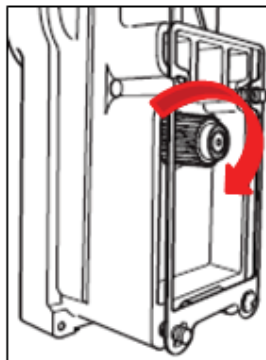


C. If the operation fails and a **Red Circle with an X** is displayed with a "Motor Disabled" message, proceed to Section IV below.



**IV. If a "Motor Disabled" message is observed (most common when the actuator is unbolted from the turbocharger) at any time during the Operation:**

- A. Ensure the ignition key is turned ON.
- B. **By hand**, spin the actuator output gear at least one full revolution as shown below. This allows the motor to find the internal reference magnet on the output shaft.



- C. Rerun Step 1 of the operation.

**Note: It may be necessary to perform the steps above more than once to achieve a successful result.**

|  |   |
|--|---|
| Solution visibility                      | Dealer distribution                               |
| <b>Function(s)/component(s) affected</b> |   |
| Function affected                        | Turbocharger , Diagnostic tool                    |
| <b>Function Group</b>                    |   |
| Function Group                           | 255 turbocharger                                  |
| <b>Customer effect</b>                   |   |
| Main customer effect                     | calibration/programming/pairing/missing operation |
| <b>Conditions</b>                        |   |
| Frequency of occurrence of problem       | random  |
| <b>Administration</b>                    |   |

|                     |                  |
|---------------------|------------------|
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