Vehicle Speed Factor (K-Factor) Programming - Speed Factor Value Incorrect When Calculated In Premium Tech Tool (PTT); Speedometer Reading Incorrectly Following A Change To Vehicle Speed Factor - US17+OBD16 And Newer Emissions, Common Model Year 2018
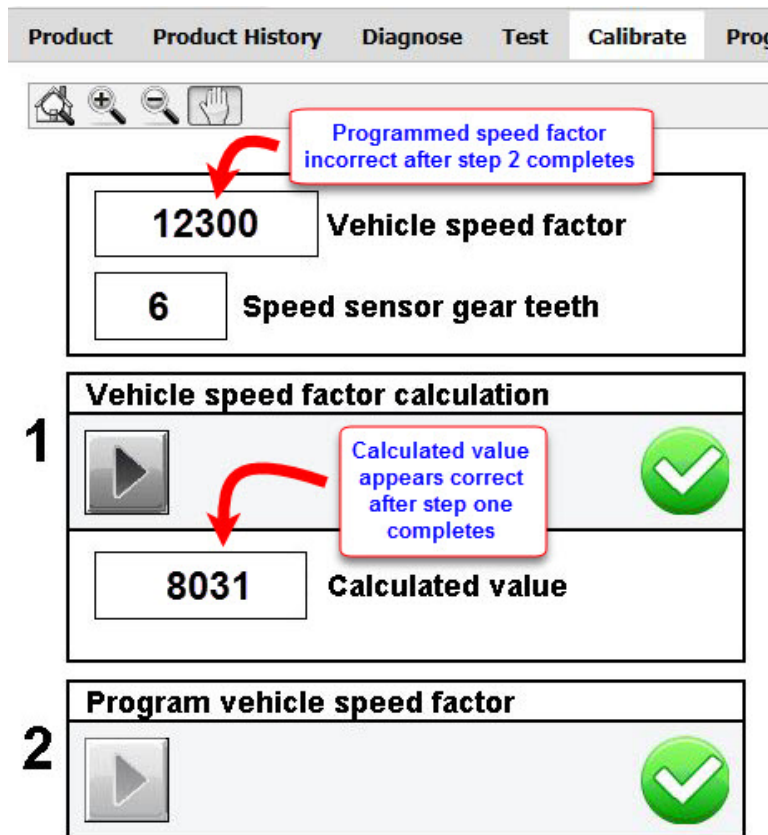
👍 👎

〉 **Internal Content**

Prior to performing any steps below, ensure that PTT is the current version. At the time of this solution's composition, PTT version 2.6.70 is the current release. The conversion error will be fixed in a future release. If a newer version is available, PTT should be updated and the issue confirmed to still exist prior to proceeding.

A. Calculate the Vehicle Speed Factor

1. Run PTT Operation 3829-08-03-06 Vehicle Speed Factor, located under the Calibrate tab.

2. Enter the Drive axle ratio and Tire Revolutions per Mile (Revolutions per Kilometer) as required

3. Press the Play button in the Step 1 box on the left-hand side of the screen. The Calculated Value box will display the Speed Factor. **This value is correctly calculated.**

4. DO NOT PRESS PLAY IN THE STEP 2 BOX. Copy or record the value displayed in the Step 1 box, then exit the Operation.

🔲 Live UI

B. Program the Calculated Value

1. Run PTT Operation 1700-22-03-03 Parameter Programming, located under the Program tab.

2. Once parameters have loaded, search for or locate parameter MH, Vehicle Speed Factor US.

Tags

3. Enter the value that was copied or recorded in Part A as the new value for

k49053322   `.`   p215a-64   p215a64   volvo   mack

4. Complete the parameter programming operation to save the new Vehicle Speed Factor value.

Related links and attachments
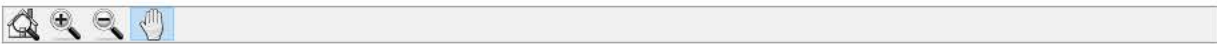
No links or attachments available

Live UI

Feedback

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to help improve the content of this article

Live UI

1700-22-03-03 Parameter, programming

View parameters

Information >> Conditions >> Execution

⚠ **WARNING**
Incorrectly set parameters could adversely affect vehicle or component operation and in some cases cause personal injury.

⬇ **CAUTION**
Make certain the vehicle is equipped with the appropriate components and features before resetting any parameters.

☑ I have read and understand the above advisory

Continue >   Cancel

Type here to search

3:51 PM
12/22/2021

1700-22-03-03 Parameter, programming

View parameters

Information >> Conditions >> Execution

Purpose

This operation is used to read and program parameter values

Description

If a parameter has a complex structure (more than two values) More>> will be displayed in the Value column

Incorrectly set parameters could adversely affect the operation of the vehicle or components and could cause personal injury in some cases. Make certain the vehicle is equipped with the appropriate components and features before resetting any parameters

The programmer is responsible for ensuring that all programming is carried out correctly and that the road speed limit complies with relevant legislation

📄 **Note:** Certification from relevant authorities is required to carry out road speed limit (RSL) programming

📄 **Note:** DTCs may be stored in some of the electronic control units (ECUs) during parameter programming. These DTCs should be erased before TechTool is disconnected

Continue >   Cancel

Product   Product History   Diagnose   Test   Calibrate   Program   Impact

1700-22-03-03 Parameter Programming

Find a parameter applying a filter using the options below or by searching for its ID or name. Change the parameter value directly in the table. Click Continue to confirm the changed parameter values.

Store Values   Parameter Templates

No parameters found for current filter (0 Items)

Filter Parameters

Search Parameter:	Filter by:	Control Unit:	Parameter Type:	Parameter State:
	Control Unit	All	All	All

Reading parameters...

ID	Name	Min	Value	Max	Unit	Details	State

Exit

Type here to search

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Tech Tool

Tech Tool | Links | Help

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Product | **Product History** | **Diagnose** | **Test** | **Calibrate** | **Program** | **Impact**

Calibrate

Select an operation and click Start

⊞ | Sort by function

🔍 [   ] ▽

⊞ 1 - Service and maintenance
⊞ 2 - Engine, Engine mounting and equipment
⊟ 3 - Electrical system and instruments
　　3829-08-03-06 Vehicle Speed Factor
　　3979-07-03-02 Telematics System SIM ID
⊟ 4 - Transmission
　　4000-07-04-01 Transmission (Transmission removed)
　　4320-07-03-01 Transmission, clutch, engagement point
⊞ 5 - Brakes
　　6 - Axles, suspension and steering
　　7 - Frame, springs, shocks and wheels
　　8 - Body, cab and interior
　　9 - Miscellaneous

3829-08-03-06 Vehicle Speed Factor

☑ Run the operation in simulation mode

Purpose

Calculate and calibrate the vehicle speed factor

Description

Calibrate the vehicle speed factor by entering the requested values and then program the calculated value into the Vehicle ECU (VECU)

The vehicle speed factor is calculated from

- Drive axle ratio
- Tire revolutions per km/mile
- Number of cogs on the transmission output shaft gear (automatic parameter readout)

Start > | Cancel

Chassis ID: M748 37585　VIN: 1M2AX07C9JM037585　Work Order: 00000　🔴 Product　✅ Online

Type here to search

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Product | **Product History** | **Diagnose** | **Test** | **Calibrate** | **Program** | **Impact**

3829-08-03-06 Vehicle Speed Factor

Simulation

Information >> Conditions >> Execution

Purpose

Calculate and calibrate the vehicle speed factor

Description

Calibrate the vehicle speed factor by entering the requested values and then program the calculated value into the Vehicle ECU (VECU)

The vehicle speed factor is calculated from

- Drive axle ratio
- Tire revolutions per km/mile
- Number of cogs on the transmission output shaft gear (automatic parameter readout)

Continue > | Cancel

Product   **Product History**   **Diagnose**   **Test**   **Calibrate**   **Program**   **Impact**

Select preferred input unit

◉ Mile

○ Km

Continue >

Product   **Product History**   **Diagnose**   **Test**   **Calibrate**   **Program**   **Impact**

3829-08-03-06 Vehicle Speed Factor

▭ Simulation

Information >> Conditions >> **Execution**

Action

1

Select preferred input unit

○ Mile
○ Km

Enter the values for the requested variables below

Drive axle ratio   0

Tire revs / mile   0

Click Start to calculate the vehicle speed factor

2

Press Start to program the vehicle speed factor using the calculated value

Results

Select one of the following alternatives

○ OK
○ Not OK

4675 imp/km	Vehicle speed factor
6	Speed sensor gear teeth

Vehicle speed factor calculation

1 ▶

0	Calculated value

Program vehicle speed factor

2 ▶

Continue >