

**** SOLUTION ****

Title	Volvo Chassis - Vehicles Equipped With AMT-C, AMT-D, And AMT-F (I-Shift) Transmissions - Hill Start Assist (HSA) Engaging On Flat Ground, Inclination Sensor Calibration
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Volvo Models

Volvo Model	VN , VNL , VNM , VNR , VNX , VAH , VHD , VT
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Transmission

Transmission	AMT-C , AMT-D , AMT-F With Crawler Gears , AMT-F Without Crawler Gears
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**** SOLUTION ****

Cause	Following a Transmission ECU (TECU) replacement or programming operation, the Grade Gripper function may be found to be activating and holding the brakes even though the vehicle is on flat ground. This is most often due to the inclination sensor's calibration data getting reset during the programming operation, or not yet being calibrated in the case of a new TECU installation.
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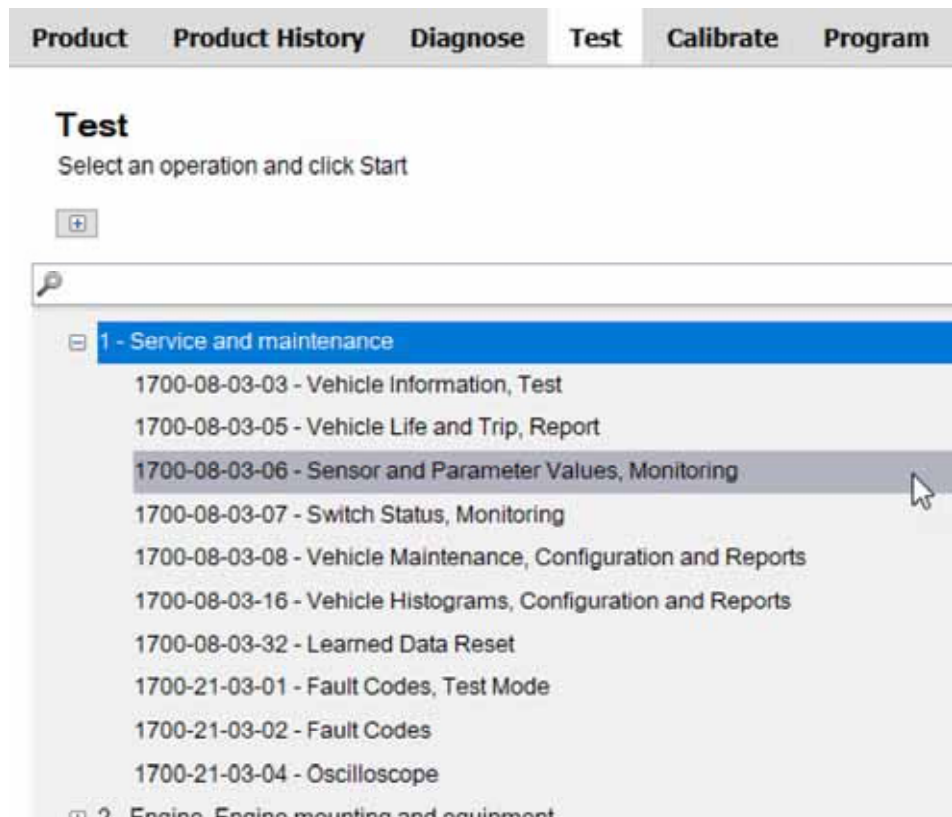
Solution**Sensor Calibration****AMT-C And AMT-D models:**

1. Program the TECU using Premium Tech Tool, Operation [1700-08-03-39 Program Electronic Control Unit](#) under the Program tab.
2. Calibrate the transmission, Operation [4320-07-03-01 Transmission, clutch, engagement point](#) under the Calibrate tab.

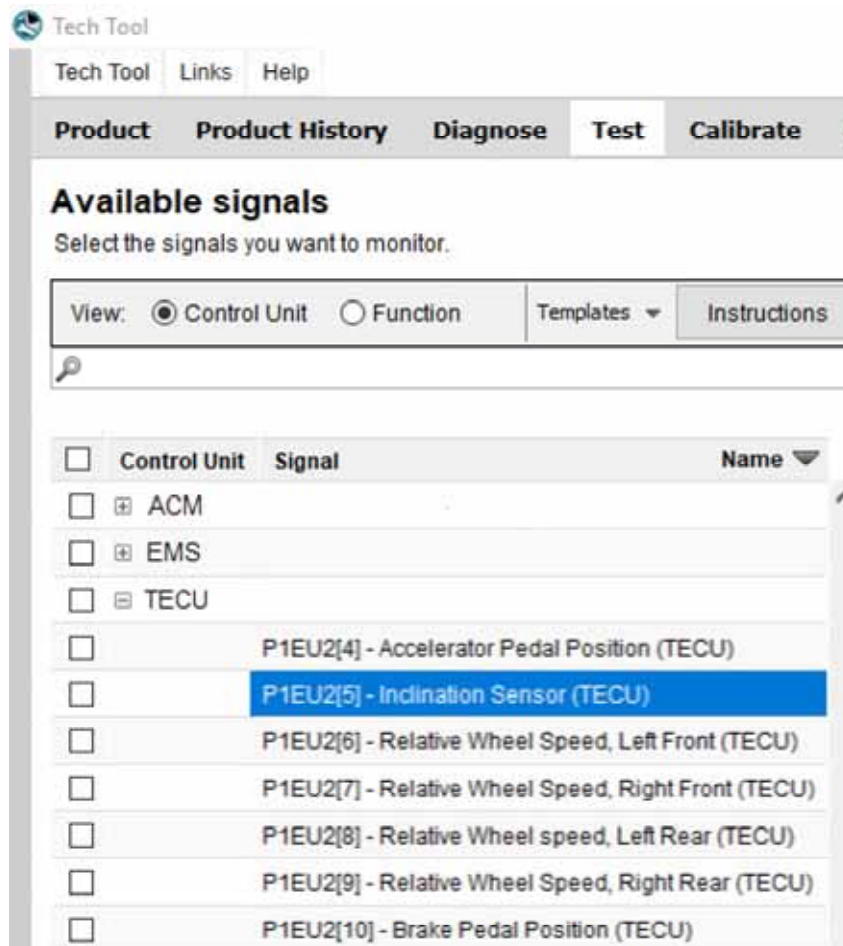
AMT-F models:

1. Program the TECU using Premium Tech Tool, Operation [1700-08-03-39 Program Electronic Control Unit](#) under the Program tab.
 - **DO NOT** attempt to calibrate the AMT at this time.
2. Drive the vehicle on a route that is between 1-1.5 kilometers (approximately ¾ to 1 mile) long.
3. When the proper distance is reached, turn around and follow the same route from the finish back to the start.
4. When parking, ensure the vehicle is on flat ground.

5. With the driving portion completed, connect to the vehicle with PTT.
6. Under the Test tab, select Operation [1700-008-03-06 Sensor and Parameter Values, Monitoring](#).



7. Locate and select parameter [P1EU2\[5\] - Inclination Sensor \(TECU\)](#).



8. Verify the inclination sensor is reading between -1.5° and 1.5°.

Internal comments (BO)	Check the shift SW in the unit to verify it didn't get caught in the replacement chain error that changed Varients to TP-BAS
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NA_Sister solutions	K04706208
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Solution visibility	Dealer distribution
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Function(s)/component(s) affected

Function affected	Braking/Auxiliary Pneumatic Circuits , HSA
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Function Group

Function Group	5 brake
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Customer effect

Main customer effect	calibration/programming/pairing/missing operation
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Conditions

Vehicle operating mode	acceleration
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Administration

Author	A241298
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Dealer ID	A241298
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Last modified by	RU4469V
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Status	Published
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