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> SS 3083 Aero Height Control Interfering with RDF A...

SS 3083 Aero Height Control Interfering with RDF Alignment and 42/523004/13 and 232/524042/9 Active

Applicable Vehicles:

- Freightliner New Cascadia equipped with Hadley Smart Valve
- Western Star 49X equipped with Hadley Smart Valve

Symptoms:

- Unit is specified from factory with a Hadley Smart Valve (HSV)
 - This can be determined by navigating to subgroup/module 87D in PartsPro or Excelsior and look at the wiring schematics to see if there is a Hadley Smart Valve included in the wiring.
- Adaptive Cruise control inop/intermittent
- RDF will not run through EOL calibration
- The following codes are active:
 - 42-RDF/523004/13 - ECU not aligned
 - 232-VRDU/524042/9 - ECU RDF timeout

Issue:

The Aerodynamic Height Control feature on the New Cascadia is a feature that raises and lowers the air suspension with relation to vehicle speed in order to reduce drag and achieve better fuel efficiency. The Hadley Smart Valve (HSV) is the module that makes this possible by applying and exhausting air from the rear axle suspension as necessary.

The Frontend Radar (RDF) when aligned needs to maintain a stable height relative to the ground when performing calibration. The HSV lowering and raising the air suspension interferes with this positioning and thus interferes with the calibration leading to calibration failures.

Solution:

- Connect to the server in DiagnosticLink (If this is not done, parameters will not be editable)
- Find the parameter in the RDF titled 'Chassis Leveling System Available On Axle'

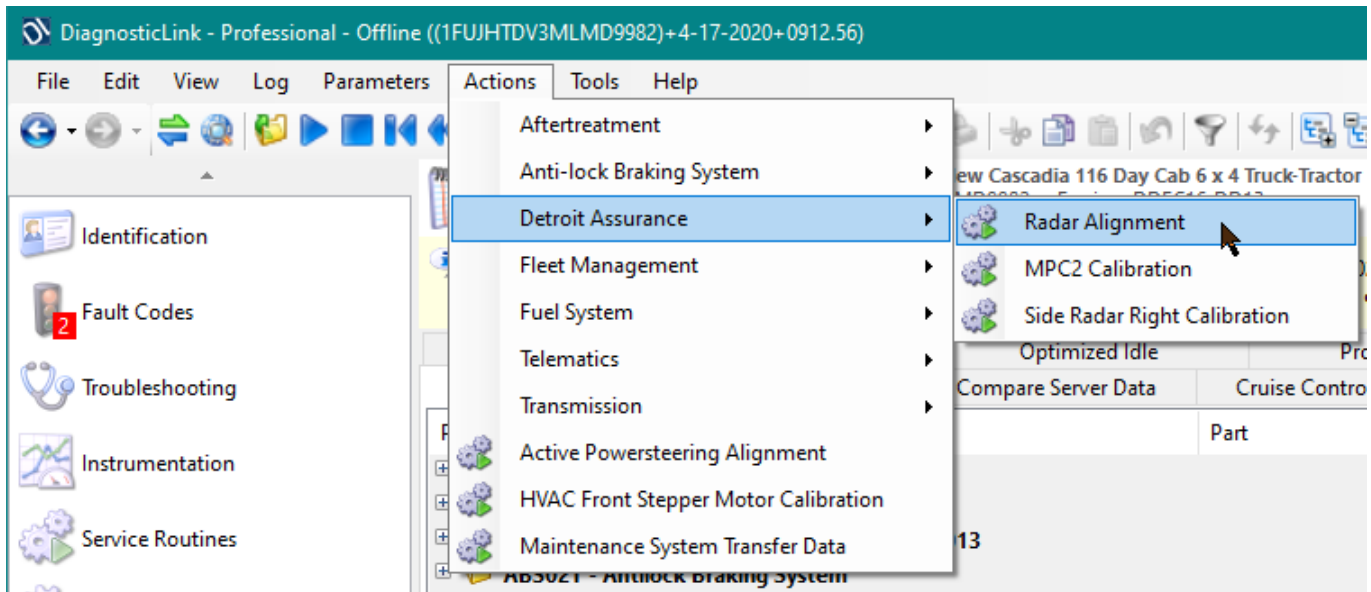
- Take note of what the parameter is set to.

All Parameters	Compare Parameters	Compare Server Data	Cruise Control	Engine Protection	Fan	Fleet Management	Global Variant Coding	Idle and PTO Shutdown	Initi
Parameter	Part	Value	Units	Minimum	Maximum	Description			
MCM21T - Motor Control Module 2.1									
TCM01T - Transmission Control Module MY2013									
ABS02T - Antilock Braking System									
ICUC01T - Instrument Cluster									
HVAC_F01T - HVAC Front									
SSAM02T - Single SAM									
CGW04T - Central Gateway									
RDF02T - Radar Frontend 2									
Broadcast Parameters	n/a								
Chassis Leveling System Available On Axle	A0004476849-001	PMD ABST.SENSOR / DEF. DID1208 LEVELING BOTH AXLES							
GVC Activation-Deactivation	A0004477449-001	PMD ABST.SENSOR / DEF. DID1205 GVC ACTIVATION							
MTS Disable									
Vehicle Parameter Set 1	n/a								
Vehicle Parameter Set 2	n/a								
Vehicle Parameter Set 3									
Vehicle Parameter Set 4	A0004476449-001	PMD ABST.SENSOR / DEF. DID1207 DTNA							
XCP-Access									

- Disable the 'Chassis Leveling System Available On Axle' by setting it to 'no leveling available'

Instrument Cluster Device Variants		Optimized Idle	Progressive Shift	PTO	Speed Limiter		Trail
All Parameters	Compare Parameters	Compare Server Data	Cruise Control	Engine Protection	Fan	Fleet Management	Global Variant Co
Parameter			Part	Value	Units	Minimum	Ma
+ MCM21T - Motor Control Module 2.1							
+ TCM01T - Transmission Control Module MY2013							
+ ABS02T - Antilock Braking System							
+ ICUC01T - Instrument Cluster							
+ HVAC_F01T - HVAC Front							
+ SSAM02T - Single SAM							
+ CGW04T - Central Gateway							
- RDF02T - Radar Frontend 2							
+ Broadcast Parameters			n/a				
- Chassis Leveling System Available On Axle			A0004476849-001	LEVELING BOTH AXLES		DID1208 LEVELING BOTH AXLES	
+ Chassis Leveling System Available On Axle			(from parent)	A0004476549-001 PMD ABST.SENSOR / DEF. DID1208 NO LEVELING AVAIL.			
+ GVC Activation-Deactivation			A0004477449-001	A0004476649-001 PMD ABST.SENSOR / DEF. DID1208 LEVELING FRONT AXLE			
+ MTS Disable				A0004476849-001 PMD ABST.SENSOR / DEF. DID1208 LEVELING BOTH AXLES			
+ Vehicle Parameter Set 1			n/a	A0004476749-001 PMD ABST.SENSOR / DEF. DID1208 LEVELING REAR AXLE			
+ Vehicle Parameter Set 2			n/a				

- Run the radar alignment in Actions > Detroit Assurance > Radar Calibration. See New Cascadia Workshop Manual section 54.11.100 for further details.



- Whether or not the alignment was successful, revert 'Chassis Leveling System Available On Axle' parameter back to how it was originally configured.
 - If the alignment was unsuccessful, see TS 382 to investigate possible issues further.
- The radar should now be aligned and the fault codes should go inactive.

Labels :

New Cascadia

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