Top Topics - Powertrain

Recent Troubleshooting Changes of Note

- GEN5 Chapter 11 – Coolant Loss
  - Separated into exhaust and intake sides
  - Adds information about possible cup plug leaks
  - More clarity on when to run the Upper Liner O-Ring leak test
- DT12 Manual Chapter 10 – Identifying Transmission Failures
  - Provides more information on what is normal vs. abnormal
  - Offers information on possible failures such as improper tow, water contamination, shock load, etc
  - Can help identify if a failure would be covered under warranty

520349/14 – DPF Filtration Low(GEN5)

- Most Common PFP for this fault is software
- Software check was recently added to troubleshooting for this code
  - They are still investigating making more improvements to this troubleshooting
- Techs can sometimes mistake soot in the DPF for "Contamination".
  - This will then lead to skipping the software check
  - Soot is not contamination. It is a result of the failed DPF
- Section 2.3.3 of the DD15 Workshop manual has photos and information to verify DPF Failure.
  - Cracks can be very obvious or subtle.
  - Generally, if any soot is passing through the DPF, it would be considered failed
- There is no "Upstream Checklist" for a GEN5 Unit
  - If the DPF is failed, Software is up to date, and the troubleshooting did not find an issue, it may be necessary to contact DTTS to investigate the PFP
  - Things that will help us resolve the issue faster include a log file from when the truck first arrived and photos of the inlet and outlet of the DPF and DOC in addition to the typical information we need

Detroit™ Transmissions Manual

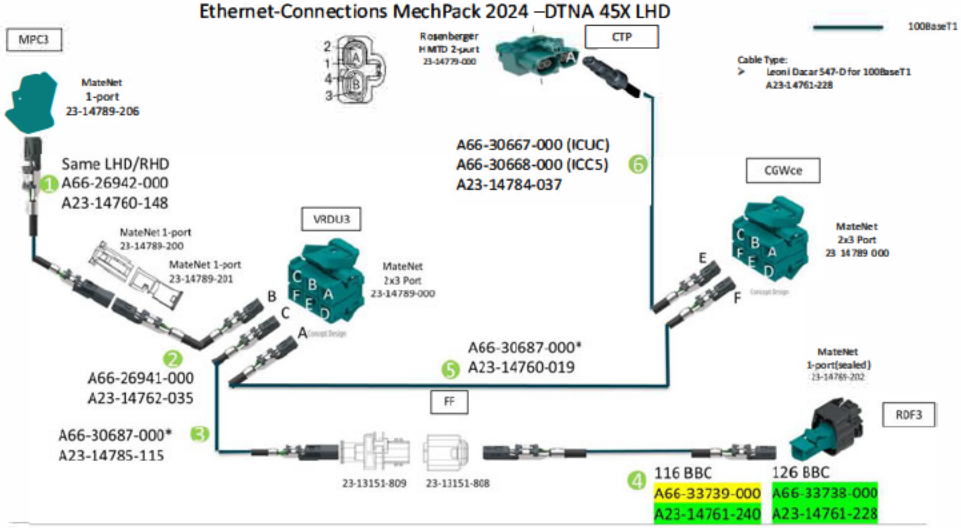
- Chapter 1: Caution Summary
- Chapter 2: DT12 Gear Ratios
- Chapter 3: DT12 Lift and Stand
- Chapter 4: Common Repairs A/B/C/D-Box
- Chapter 5: DT12 Transmission
- Chapter 6: DT12 Programming and Learning Matrix
- Chapter 7: Specific Repairs A/B-Box
- Chapter 8: Specific Repairs C/D-Box
- Chapter 9: Clutch
- Chapter 10: Identifying Transmission Failures
  - 10.1 Normal Appearance
  - 10.2 Low or Improper Lubricant Failure
  - 10.3 Water Contamination
  - 10.4 Improper Tow
  - 10.5 Shock Load
  - 10.6 Bent Oil Pump Gear (C/D Box Only)

Top Topics - Chassis

Gen 5 Cascadia Launch Updates

- Case volume increasing; questions on Maintenance and Tow mode
- Attempting to program an ECUs during PDI could result in fault codes
- Common issue related to Ethernet Adapters swapped

Ethernet-Connections MechPack 2024 –DTNA 45X LHD



TPMS

- Gen 5 Cascadia has LID cable system
- If TPMS not showing in cluster, likely cable wasn't installed tight, built before 5/7
- Contact DSM/FSM is any issues

BHM Programming Challenges

Programming to "Newest"

- Links software to what the physical hardware may accept

Programming to "Latest"

- Latest available software for the truck model year, ECUs, and features physically on the vehicle

When replacing a BHM, program to "Latest" to ensure no downtime

Vehicle Make	Variant	Model	HW	Erase Mask	120	130	130	206	207	208	210	211	220	241	246	610	640	650	660	660	710	730	741	743	Softwre PN
					THMBL	THMBL	THMBL	FRGHT	FRGHT	FRGHT	THMBL	THMBL	THMBL	THMBL	THMBL	FRGHT	FRGHT	FRGHT	FRGHT	FRGHT	FRGHT	FRGHT	FRGHT	FRGHT	
					F1	F1	G1	J0	J0	J0	A0	A0	A0	A0	A0	F1	F1	F1	F1	G1	A0	A0	A0	A0	
					0x70	0xF0	0xF8	0x7F0	0x7F0	0x7F0	0x7F0	0x7F0	0x7F0	0x7F0	0x7F0	0x70	0x70	0x70	0x70	0xF8	0x7F0	0x7F0	0x7F0	0x7F0	
Vehicle Make	120	THMBL	F1	0x70	F	U	U	I	I	I	I	I	I	I	I										A0024488558
	130	THMBL	F1	0x70	U	F	U	I	I	I	I	I	I	I	I										A0024488658
	130	THMBL	G1	0xF8	U	U	F	I	I	I	I	I	I	I	I										A0024488658
	206	FRGHT	J0	0x7F0				n/a	U	U															
	207	FRGHT	J0	0x7F0					F	U															A0014487058
	208	FRGHT	J0	0x7F0					M	F															A0014488158
	210	THMBL	A0	0x7F0	M	M	M				F	U	U	I	I										
	211	THMBL	A0	0x7F0	M	M	M				U	F	U	I	I										A0014488258
	220	THMBL	A0	0x7F0	M	M	M				M	M	F	I	I										A0014488358
	241	THMBL	A0	0x7F0	I	I	I				I	I	I	M	U										A0024488758
	246	THMBL	A0	0x7F0	I	I	I				I	I	I	M	F										A0014488458
	610	FRGHT	F1	0x70												F	I	I	I	I	I	I	I	I	A0014488758
	640	FRGHT	F1	0x70												M	F	U	U	U	I	I	I	I	A0024488858
	650	FRGHT	F1	0x70												M	U	F	U	U	I	I	I	I	A0014488858
	660	FRGHT	F1	0x70												M	U	U	F	U	I	I	I	I	A0014489058
	660	FRGHT	G1	0xF8												M	U	U	U	F	I	I	I	I	A0014489058
	710	FRGHT	A0	0x7F0												M	M	M	M	M	F	U	I	I	A0014489158
	730	FRGHT	A0	0x7F0												M	M	M	M	M	M	F	I	I	A0014489558
	741	FRGHT	A0	0x7F0												I	I	I	I	I	I	I	F	U	A0014489758
	743	FRGHT	A0	0x7F0												I	I	I	I	I	I	I	M	F	A0014489858

Legend
F Flash
U Upgrade
I Incompatible
M Migration