



# DiagnosticLink 8.18 Features

Service Diagnostics & Tools

6/20/2023

DAIMLER TRUCK  
North America

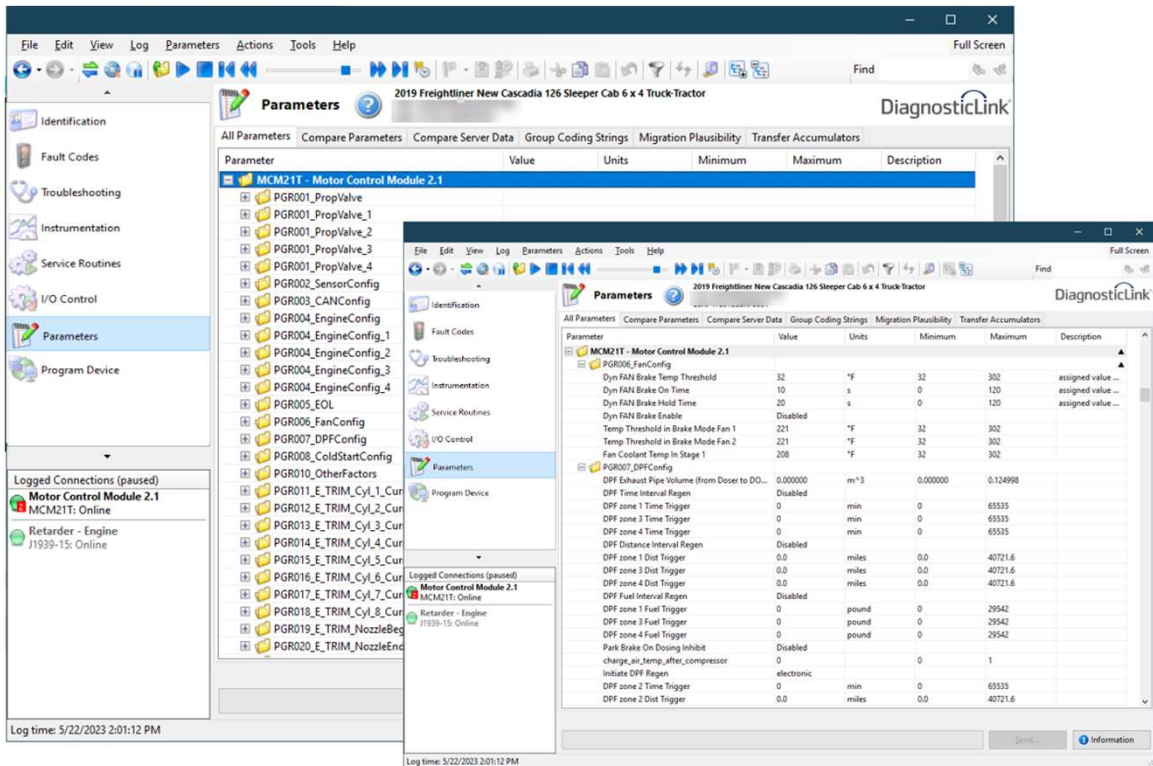
# DiagnosticLink® 8.18 Features Summary



- Support for uploading the parameter data to summary log files after programming.
- Program Device support to store complete operation in one log file.
- Added Webview2 support for troubleshooting content display.
- Added Webview2 support to the Virtual technical tab.
- Support included for viewing PDF content in DiagnosticLink®.
- PTO Parameter panels included for DiagnosticLink® Professional and TEM use case.
- Injector Cleaning Routine panel made available for service diagnostics.
- Clear Event log when panel is opened
- Support part number based parameters on parameter panels.
- Make ECU names become header of long lists.
- Techlane access made more visible in DiagnosticLink®.
- Support included for new PCUMT50E controller.
- Increase the Connections list default window size.
- New Service Routine Dialog Panel: Clutch Learn Values Reset.
- Advanced 6x4 Dyno Service Routine panel changes.
- XMC Digital I/O Panel.
- Support included for eMobility panel updates.
- Extended CPC5 panel support for CPC502T.

# Upload Parameter Data to Summary Log Files

- After programming, parameters are written to the Summary log file.
- Summary log files are uploaded to the server for the connected VIN.
- The parameters can be examined by opening the Summary log file in DiagnosticLink®.

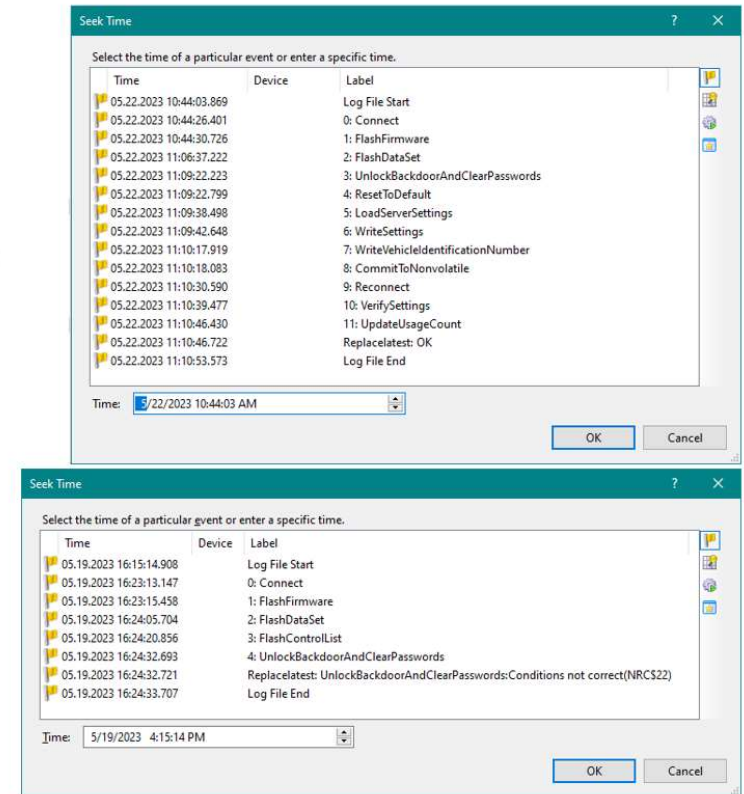


The image displays two screenshots of the DiagnosticLink software interface. The left screenshot shows the 'Parameters' tree for a 2019 Freightliner New Cascadia 126 Steeper Cab 6 x 4 Truck-Tractor. The right screenshot shows a detailed view of the parameters for the 'MCM21T - Motor Control Module 2.1'.

Parameter	Value	Units	Minimum	Maximum	Description
Dyn FAN Brake Temp Threshold	32	°F	32	302	assigned value ...
Dyn FAN Brake On Time	10	s	0	120	assigned value ...
Dyn FAN Brake Hold Time	30	s	0	120	assigned value ...
Dyn FAN Brake Enable	Disabled				
Temp Threshold in Brake Mode Fan 1	221	°F	32	302	
Temp Threshold in Brake Mode Fan 2	221	°F	32	302	
Fan Coolant Temp in Stage 1	208	°F	32	302	
DPF Exhaust Pipe Volume (from Doser to DO...	0.000000	m <sup>3</sup>	0.000000	0.124998	
DPF Time Interval Regen	Disabled				
DPF zone 1 Time Trigger	0	min	0	65535	
DPF zone 3 Time Trigger	0	min	0	65535	
DPF zone 4 Time Trigger	0	min	0	65535	
DPF Distance Interval Regen	Disabled				
DPF zone 1 Dist Trigger	0.0	miles	0.0	40721.6	
DPF zone 3 Dist Trigger	0.0	miles	0.0	40721.6	
DPF zone 4 Dist Trigger	0.0	miles	0.0	40721.6	
DPF Fuel Interval Regen	Disabled				
DPF zone 1 Fuel Trigger	0	pound	0	29542	
DPF zone 3 Fuel Trigger	0	pound	0	29542	
DPF zone 4 Fuel Trigger	0	pound	0	29542	
Park Brake On Dosing Inhibit	Disabled				
charge_air_temp_after_compressor	0		0	1	
Inhibit DPF Regen	electronic				
DPF zone 2 Time Trigger	0	min	0	65535	
DPF zone 2 Dist Trigger	0.0	miles	0.0	40721.6	

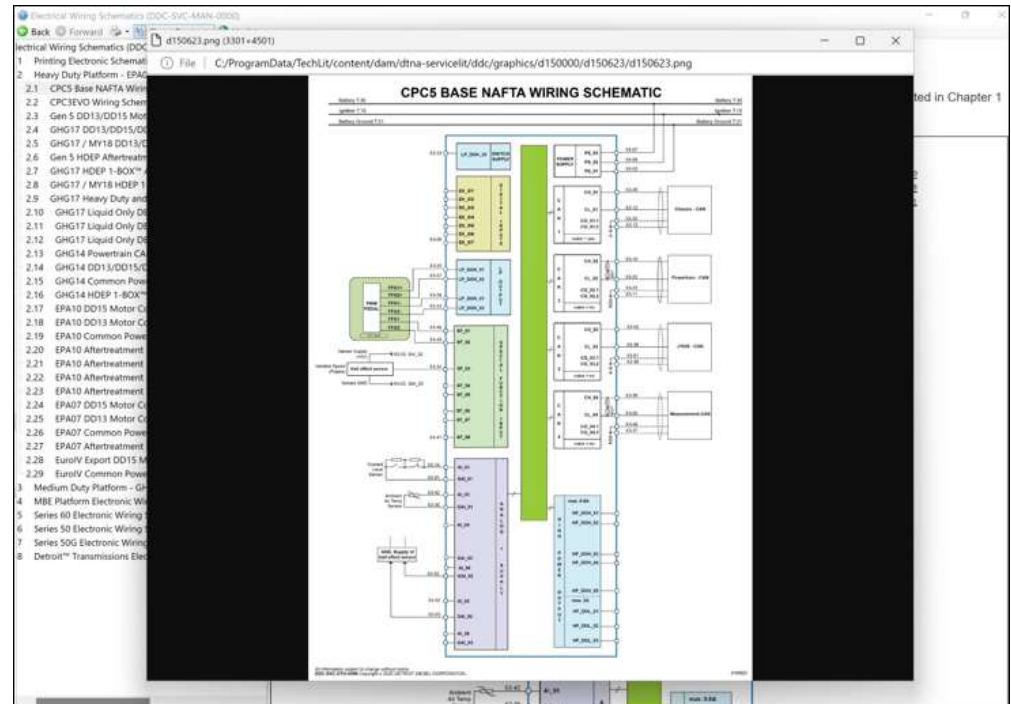
# Program Device: Store Complete Operation in One Log File

- Below are several pain points when attempting to track down information about a programming operation in a log file:
  - Program Device would disconnect everything before starting. The programming operation would be processed with a few complete disconnects within.
  - These complete disconnects would result in multiple log files and thus, difficult to follow sequence.
  - The "steps" in the Program Device operation were not documented in the .DrumrollLog.
  - The final result was not documented in the .DrumrollLog.
- As an improvement, the .DrumrollLog is now held open for the duration of the Program Device operation. Each step is documented to the final result. This content is also present in summary files uploaded to the server.



# DiagnosticLink® Uses Internet Explorer (IE) for Troubleshooting Material Display

- In the past, DiagnosticLink® used IE to display and access troubleshooting material from TechLit.
- IE was end-of-life as of June 2022, and various messages would be shown by the operating system when using it.
- The embedded control within the DiagnosticLink® window had no issue, but links that would open a separate window would show a warning.
- DiagnosticLink® 8.18 now uses WebView2 (Microsoft Edge) to display troubleshooting content. This requires an extra download, but that is already required for TechLane access.



# Virtual Technician Data Tab Migrated to Open in WebView2



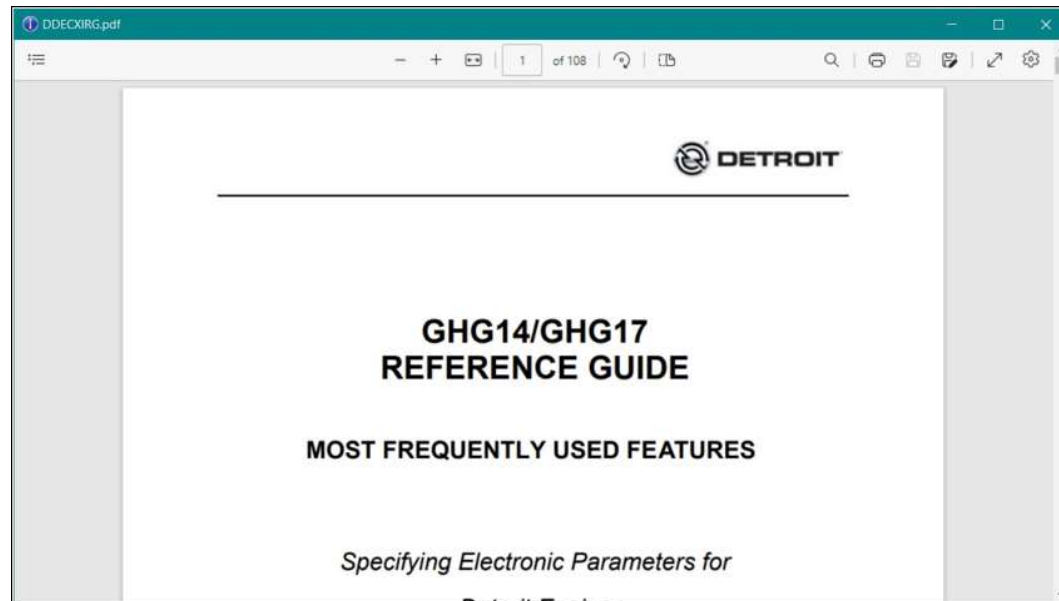
- DiagnosticLink® now uses Microsoft WebView2 to display Virtual Technician web pages.
- WebView2 should be automatically installed on any devices running the most current versions of Windows 10 and Windows 11.
- If needed, WebView2 Runtime installer is available for download from Microsoft.



# Support Included for Viewing PDF Content in DiagnosticLink®



- In the past, DiagnosticLink® required Adobe Acrobat to be installed to display troubleshooting PDF content. If not installed, an error would be displayed “Acrobat Reader not recognized”.
- DiagnosticLink® no longer requires Adobe Acrobat to be installed to display troubleshooting PDF content.



# PTO Speed Control Panel

- CEEA+ - New Parameter panel “PTO Speed Control”.
- Existing “PTO” panel modified to not display for CPC302T & CPC501T.

PTO Speed Control		PTO1 Engagement		PTO2 Engagement		Transfer Accumulators
Parameter	Part	Value	Units	Minimum	Maximum	Description
<b>PTO Speed Control Interlocks...</b>						
Vehicle Speed Control Interlock, a...	n/a					Vehicle Speed must be below "VehicleSpeedValue" Activa...
Vehicle Speed Control Interlock V...	n/a		mph	0.0000	155.9617	Vehicle Speed Activation Interlock Value
Service Brake Speed Control Inter...	n/a					Consider Service Brake Interlock for WESC (Former PPTC...
Parking Brake Speed Control Inte...	n/a					Park Brake Speed Control Activation Engagement Interlo...
Neutral Gear Speed Control Interl...	n/a					Neutral Gear Speed Control Activation Engagement Interl...
Vehicle not Moving Speed Contr...	n/a					Vehicle must not be moving activation Interlock (based o...
Idle Cab Throttle Speed Control L...	n/a					Idle Cab Throttle Activation Interlock - Throttle must be a...
PPTC_wesc_TPTOfbEmPTO12TMax	n/a					Consider Max Activation Timer for Working Engine Spee...
PPTC_wesc_TimePeriodTMaxValue	n/a		s	0.00	3276.75	Max Value of Time Working Engine Speed Control Can B...
Top of Clutch Interlock, Post Clos...	n/a		s	0.00	3276.75	Amount of time that Interlock stays active after Top of Cl...
Top of Clutch Speed Control Inter...	n/a					Top of Clutch Speed Control Activation Interlock (Manua...
TEM Interlock for Speed Control, ...	n/a					TEM XMC PIN Activation Interlock. Speed control will no...
PPTC_wesc_PTO1InputPinReqXMC	n/a					Consider XMC PTO1 Input Pin Request
PPTC_wesc_EngSpdCtrlReIsB	n/a					Consider Body CAN Engine Speed Control Release Reque...
CAN Event Interlock for Speed C...	n/a					Consider CAN Event Interlock for Working Engine Speed ...
PPTC_apl_Doors_Req	n/a					Created in R2001 42N
<b>PTO Speed Control Limiters...</b>						
<b>Cluster Set Speeds...</b>						
<b>Cab Accelerator Pedal</b>						
<b>Increment Decrement Controls...</b>						
<b>Fixed Engine Speed Control (FES)...</b>						
<b>Fixed Engine Speed Maximums...</b>						
<b>Remote Throttle...</b>						
<b>PTO Status Signals...</b>						
<b>PTO Governor Type</b>						



# PTO1 Engagement Parameter Panel

- CEEA+ - New Parameter panel “PTO1 Engagement”.
- Existing “PTO” panel modified to not display for CPC302T & CPC501T.

PTO Speed Control	PTO1 Engagement					PTO2 Engagement
Parameter	Part	Value	Units	Min...	Maximum	Description
<b>PTO1 Request...</b>						
PTO1 Dash Switch or SAM Input PIN	n/a					PTO1 Dash Switch or Remote Switch, SAM PIN - Request Engagement of PTO1
Assumed Feedback After x seconds	n/a		s	0.00	3276.75	Time to wait, in seconds, before feedback is assumed. September 2020 forward "...
Operator request must be after Interlocks s...	n/a					Request for activation must come after all Interlocks are satisfied
PTO2 Dash Switch	n/a					PTO2 Dash Switch - Request Engagement of PTO1
PPTC_pto1_PTO_2_In_Pin_Rq_XMC	n/a					Consider XMC PTO2 Input Pin Rq for PTO1
PTO3 Dash Switch	n/a					PTO3 Dash switch - Request Engagement of PTO1
XMC 1, X2-47 PTO Input Pin is Grounded	n/a					Consider XMC PTO3 Input Pin Rq for PTO1
PPTC_pto1_PTO_1_In_Pin_Rq_XMC	n/a					Consider XMC PTO1 Input Pin Rq for PTO1
<b>PTO1 Engagement Interlocks...</b>						
<b>PTO1 Engagement Events...</b>						
USE PTO1 ECP/Solenoid	n/a					Command ECP and Solenoid to Activate to engage PTO
PTO Valve Type	n/a					Define If the PTO Solenoid is Single or Double Acting For PTO1
Speed Control Activation Request	n/a					Activation of Engine Speed Control Mode Request Output for PTO (Used in all m...
Request DT Clutch to open for Engagement	n/a					Clutch Open Command to Detroit Transmission to aid in Engagement
Transmission Clutch Wait time (seconds)	n/a		s	0.00	3276.75	Time clutch will stay open while attempting to engage a PTO to a DT12.
PPTC_pto1_DelayTimeClutchPdValv	n/a		s	0.00	3276.75	Value of Time to Wait After All Input Conditions Fulfilled to Request Clutch Peda...
DT Split Group Command	n/a					Transmission Split Selection "Split_Group_Slow_Fast" Command for Detroit Trans...
Value of split selection	n/a					Value of split group Command
Activate XMC 1, X2-24 in PTO	n/a					Activation of Body Function XMC Output Pin when all conditions fulfilled for PT...
<b>PTO1 Limiters...</b>						
<b>Signal Routing...</b>						
Switch_036	n/a					Common PTO1 Dash Switch Input
PFSC_output_pin0002_sel	n/a					Select Signal for Output Pin 2. Standard PTO1 Solenoid Output
PFSC_SvcOut_PTO1Fdbk_sel	n/a					Select signal for service output PTO 1 Feedback. Standard PTO1 Feedback Input i...

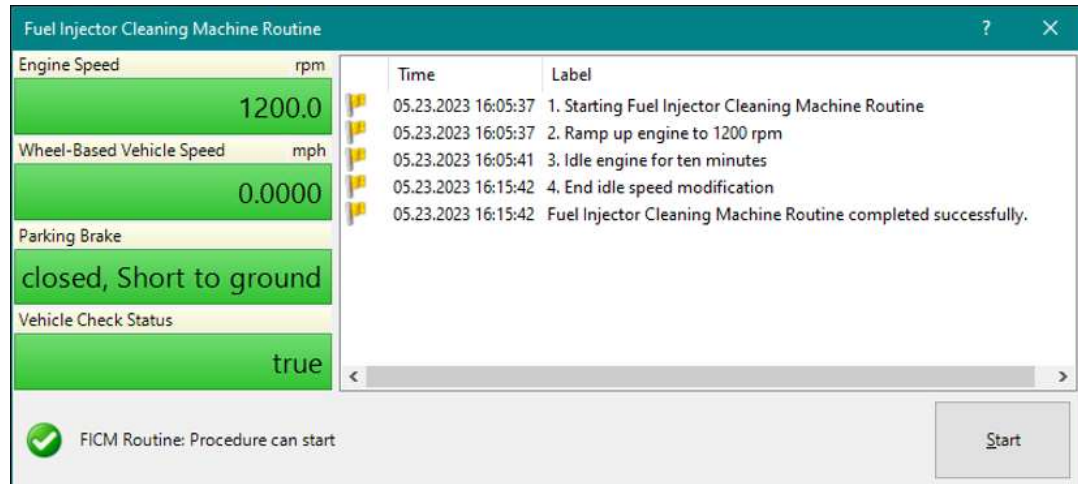
# PTO2 Engagement Parameter Panel

- CEEA+ - New Parameter panel “PTO2 Engagement”.
- Existing “PTO” panel modified to not display for CPC302T & CPC501T.

PTO Speed Control		PTO1 Engagement		PTO2 Engagement		Transfer A
Parameter	Part	Value	Units	Minimum	Maximum	Description
<b>PTO2 Request...</b>						
<b>PTO2 Engagement Interlocks</b>						
<b>Requirements for engagement</b>						
Park Brake Interlock	n/a					Do not disengage PTO, after engagement, if park brake, Neutral Gear, Idle C...
Neutral Gear Interlock	n/a					Neutral Gear Engagement Interlock
Engine Speed Interlock	n/a					Engine RPM must be below "EngineSpeedValue" Engagement Interlock
Engine Speed Interlock Value	n/a		rpm	0.0	8031.9	Engine RPM Engagement Interlock Value
Vehicle not Moving Interlock	n/a					Vehicle must not be moving Interlock (based on Speedometer signal)
Vehicle Speed Interlock	n/a					Vehicle Speed must be below "VehicleSpeedValue" Engagement Interlock
Vehicle Speed Interlock Value	n/a		mph	0.0000	155.9617	Vehicle Speed Engagement Interlock Value
Transmission Input Shaft Speed Interlock (DT12 only)	n/a					Transmission Input Shaft Speed Engagement Interlock (Used with DT trans...
Transmission Input Shaft Speed Interlock Value (RPM)	n/a		rpm	0.0	8031.9	Transmission Input Shaft Engagement Interlock Value (Used with DT Transm...
Transmission Bottom of Clutch Interlock (Manual an...	n/a					Bottom of Clutch Engagement Interlock Used with DT, Used with Manual Tr...
PPTC_pto2_Clutch_Closed	n/a					Consider Clutch Status in PTO Engagement for PTO2
TEM Pin Interlock, SAM PIN X7-25	n/a					TEM Engagement Interlock PIN - Note the same pin is used for PTO1, 2, 3 a...
TEM SPN 3457 (Rx)	n/a					TEM J1939 Engagement Interlock SPN 3457 Input Shaft 2
Idle Cab Throttle Interlock	n/a					Idle Cab Throttle Engagement Interlock - Throttle must be at idle
PTO - RSS handshaking	n/a					Disengage PTO with Engine Shutdown of Remote Stop Start Feature for PTO2
Disengage PTO while using Detroit Optimized Idle	n/a					Disengage PTO While Optimized Idle is Active or reporting fault
Disengage PTO while Cranking Engine	n/a					Disengage PTO When Engine Cranking
Use R-C-S handshaking (Allison, Eaton Endurant) In...	n/a					Eaton Endurant and Allison Request-Consent-Status handshaking over J193...
CAN Message SPN 3453 (Rx)	n/a					TEM J1939 Transmission Input Shaft 2 Switch Request for PTO2 SPN 3453
CAN Message SPN 3454 (Rx)	n/a					TEM J1939 Transmission Output Shaft Switch Request for PTO2 SPN 3454
CAN Message SPN 3455 (Rx)	n/a					TEM J1939 Transfer Case Output Shaft Switch Request for PTO2 SPN 3455
<b>PTO2 Engagement Events...</b>						
<b>PTO2 Limiters...</b>						
<b>Signal Routing...</b>						

# Injector Cleaning Routine Panel

- New Fuel Injector Cleaning Machine Routine panel added as part of Fuel Injector Cleaning maintenance.
- Applies to all HDEP equipped vehicles from EPA07 to present.



**Fuel Injector Cleaning Machine Routine**

Engine Speed	rpm	1200.0
Wheel-Based Vehicle Speed	mph	0.0000
Parking Brake		closed, Short to ground
Vehicle Check Status		true

Time	Label
05.23.2023 16:05:37	1. Starting Fuel Injector Cleaning Machine Routine
05.23.2023 16:05:37	2. Ramp up engine to 1200 rpm
05.23.2023 16:05:41	3. Idle engine for ten minutes
05.23.2023 16:15:42	4. End idle speed modification
05.23.2023 16:15:42	Fuel Injector Cleaning Machine Routine completed successfully.

FICM Routine: Procedure can start Start

# Clear Event Log when Panel is Opened

- When a diagnostic panel dialog is opened, the event log in the panel may show events from before the procedure was started (e.g. if the panel had previously been opened).
- The diagnostic panel dialogs will now only show events that have occurred since that panel was opened. Closing and re-opening a panel will clear that event history.
- History remains available when viewing a log file, or by viewing the event log in the chart control.



# Support Part Number Based Parameters on Parameter Panels

- This change adds the ability to fully support part number based parameters within custom/grouped parameter panels.
- Those panels were traditionally only defined for powertrain ECUs, but in 8.17SP1 some PTO panels were added, which exposed a limitation in the handling of SSAM parameters.
- The Part column will now display the correct content (formerly, this was always 'n/a').
- A choice is added to the editing dropdown to allow the user to select the parent group/domain value for a given parameter.

Parameter	Part	Value	Units	Minimum	Maximum	Description
<b>PTO Speed Control Interlocks...</b>						
Vehicle Speed Control Interlock, any PTO	(from parent)	Function not available				Vehicle Speed mu...
Vehicle Speed Control Interlock Value	(from parent)	PTO (1.671875, from parent)	mph	0.0000	155.9617	Vehicle Speed Acti...
Service Brake Speed Control Interlock, PTO1	(from parent)	A0144430458-001 PTC PTO W - Any PTO (1.671875, from parent)				Consider Service B...
Service Brake Speed Control Interlock, PTO2	(from parent)	A0414473458-001 PTC WESC VehicleSpeedValue - 1 km/h				Consider Service B...
Service Brake Speed Control Interlock, PTO3	(from parent)	A0764470058-001 PPTC wesc VehicleSpeedValue = 2				Consider Service B...
Service Brake Speed Control Interlock, EmPTO1	(from parent)	A0764470758-001 PPTC wesc VehicleSpeedValue = 3				Consider Service B...
Service Brake Speed Control Interlock, EmPTO2	(from parent)	A0764471458-001 PPTC wesc VehicleSpeedValue = 5				Consider Service B...
Parking Brake Speed Control Interlock, PTO1	(from parent)	A0764472158-001 PPTC wesc VehicleSpeedValue = 6				Park Brake Speed ...
Parking Brake Speed Control Interlock, PTO2	A0414474758-001	A0034433258-001 PPTC wesc VehicleSpeedValue = 7				Park Brake Speed ...
Parking Brake Speed Control Interlock, PTO3	(from parent)	A0034433958-001 PPTC wesc VehicleSpeedValue = 8				Park Brake Speed ...
Parking Brake Speed Control Interlock, EmPTO1	(from parent)	A0414473558-001 PTC WESC VehicleSpeedValue - 8 km/h				Park Brake Speed ...
Parking Brake Speed Control Interlock, EmPTO2	(from parent)	A0034434658-001 PPTC wesc VehicleSpeedValue = 10				Park Brake Speed ...
Neutral Gear Speed Control Interlock, PTO1	(from parent)	A0034435358-001 PPTC wesc VehicleSpeedValue = 15				Park Brake Speed ...
Neutral Gear Speed Control Interlock, PTO2	(from parent)	A0034436058-001 PPTC wesc VehicleSpeedValue = 18				Neutral Gear Spee...
Neutral Gear Speed Control Interlock, PTO3	(from parent)	A0034436758-001 PPTC wesc VehicleSpeedValue = 20				Neutral Gear Spee...
Neutral Gear Speed Control Interlock, EmPTO1	(from parent)	A0034437458-001 PPTC wesc VehicleSpeedValue = 25				Neutral Gear Spee...
Neutral Gear Speed Control Interlock, EmPTO2	(from parent)	A0034438158-001 PPTC wesc VehicleSpeedValue = 30				Neutral Gear Spee...
Neutral Gear Speed Control Interlock, EmPTO2	(from parent)	A0034438858-001 PPTC wesc VehicleSpeedValue = 50				Neutral Gear Spee...
Vehicle not Moving Speed Control Interlock, any PTO	(from parent)	Function not available				Vehicle must not b...
Idle Cab Throttle Speed Control Interlock, any PTO	(from parent)	Function not available				Idle Cab Throttle ...
PPTC_wesc_TPTOfbEmPTO12TMax	(from parent)	Function not available				Consider Max Acti...
PPTC_wesc_TimePeriodTMaxValue	(from parent)	0.00	s	0.00	3276.75	Max Value of Time...
Top of Clutch Interlock, Post Close Time Delay (seconds)	(from parent)	0.00	s	0.00	3276.75	Amount of time th...
Top of Clutch Speed Control Interlock, any PTO	(from parent)	Function not available				Top of Clutch Spe...
TEM Interlock for Speed Control, XMC Input Pin	(from parent)	Function not available				TEM XMC PIN Acti...
PPTC_wesc_PTO1InputPinRqXMC	(from parent)	Function not available				Consider XMC PT...
PPTC_wesc_EngSpdCtrlReIsB	(from parent)	Function not available				Consider Body CA...
CAN Event Interlock for Speed Control	(from parent)	Function not available				Consider CAN Eve...
<b>PTO Speed Control Limiters...</b>						
Engine Speed Upper Limit Command	A0414475458-001	Function not available				Engine Upper Spe...
Value of Maximum Engine Speed Command, PTO1	(from parent)	2200.0	rpm	0.0	8031.9	Value of Engine S...

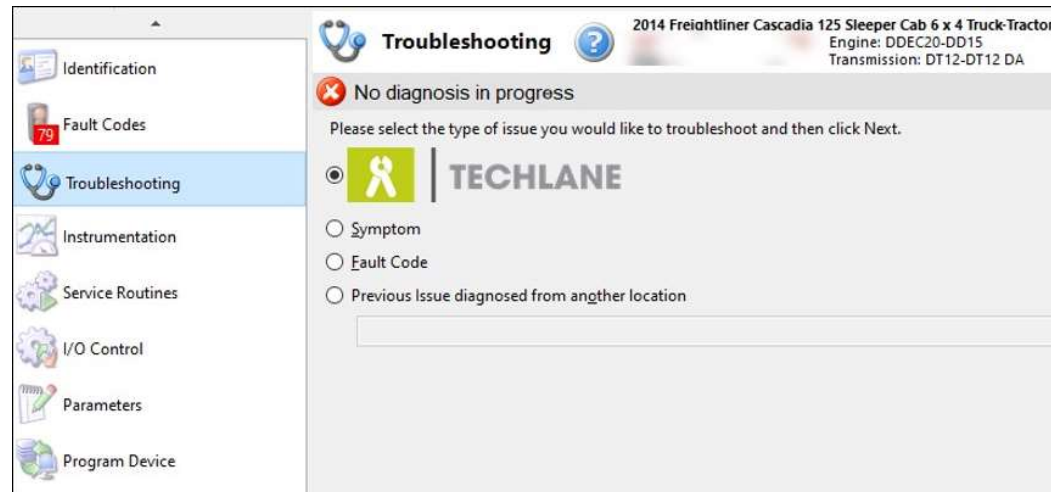
# Make ECU Names Become Header of Long Lists

- As the number of items displayed in lists within DiagnosticLink® has grown, it has become difficult to keep oriented. Furthermore, when doing a search you sometimes have no idea if the item has been located in the correct ECU.
- DiagnosticLink® will now show any headings (ECU or group name) that are related to and preceding the selected item at the top of the window. These headings remain “sticky” as the list is scrolled up and down.
- A visual indication is added to denote when the top item is not at the beginning of the group and the user can quickly navigate to the item at the actual top of the group by clicking on the heading.

Parameter	Part	Value	Units	Minimum	Maximum	Description
<b>CPC501T - Common Powertrain Controller 5</b>						
45 - Progressive Shift						
PS Gear 15 Max RPM Limit		1900.0	rpm	0.0	8000.0	(045/015) Pro...
PS Gear 16 Max RPM Limit		1900.0	rpm	0.0	8000.0	(045/016) Pro...
PS Gear 17 Max RPM Limit		1900.0	rpm	0.0	8000.0	(045/017) Pro...
PS Gear 18 Max RPM Limit		1900.0	rpm	0.0	8000.0	(045/018) Pro...
Progressive Shift Enable		disabled				(045/021) Pro...
50 - PTO						
PTO Min Engine Speed Ramp		304.0	rpm/s	0.0	8000.0	(050/001) Allo...
Idle Adjust Speed Increment		24	rpm	0	100000	(050/005) PTO...
Idle Adjust Speed Ramp		256	rpm/s	0	4000	(050/006) PTO...
PTO Mode Governor type		Type 1				(050/013) PTO...
PTO Accelerator Pedal Enable		disable				(050/015) PTO...
Idle Adjust Service Brake Dropout		enabled				(050/017) Para...
Idle Adjust Park Brake Dropout		enabled for pa...				(050/018) Para...
74 - Fan						
Enable Fan Activation on PTO		PTO Fan Requ...				(074/036) Ena...
PTO Fan On Delay Time		2	s	1	10	(074/037) Del...
PTO Fan On Percent		100.0	%	0.0	100.0	(074/038) Fan ...
Enable Manual Fan Override Switch		Manual Fan Re...				(074/039) Ena...
Enable Automatic Fan with Engine Brakes		Fan Request in...				(074/050) Para...
Enable Automatic Fan with Engine Brak...		31.1	mph	0.0	155.3	(074/051) Vehi...
Enable Automatic Fan with Engine Brak...		0.0	%	0.0	100.0	(074/052) Fan ...
Enable Automatic Fan with Engine Brak...		0.0	%	0.0	100.0	(074/053) Fan ...
Enable Automatic Fan with Engine Brak...		0.0	%	0.0	100.0	(074/054) Fan ...
Enable Automatic Fan with Engine Brak...		0.0	%	0.0	100.0	(074/055) Fan ...

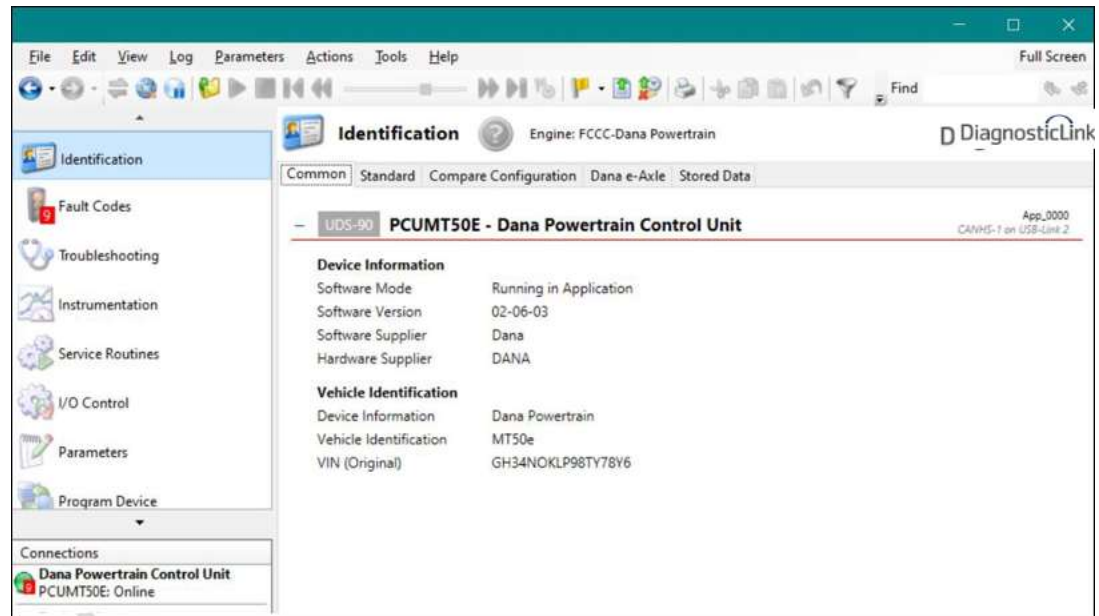
# Techlane Access Point

- For easy visualization and navigation to the Techlane system for accessing the guided troubleshooting path, the Techlane image is embedded in the troubleshooting view for the Guided Troubleshooting option.



# Support for PCUMT50E Controller

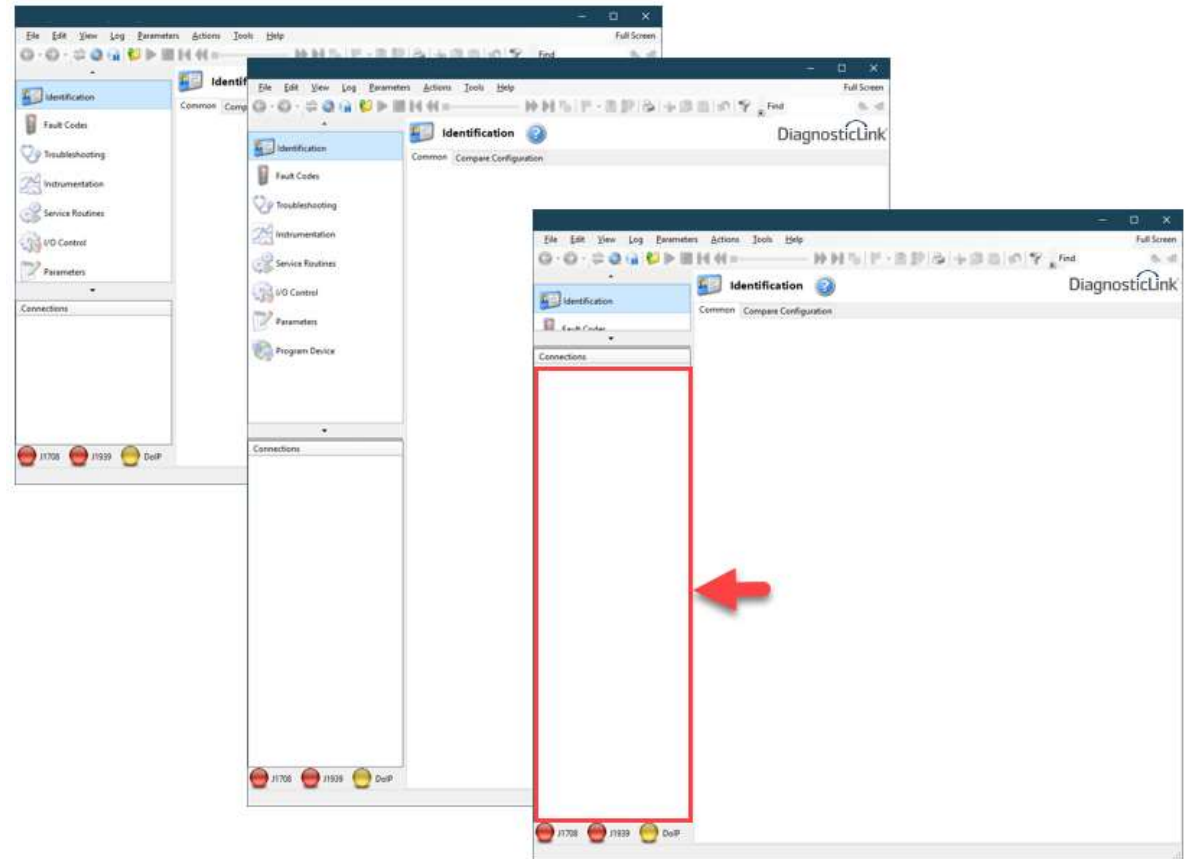
- Support included for PCUMT50E new controller.





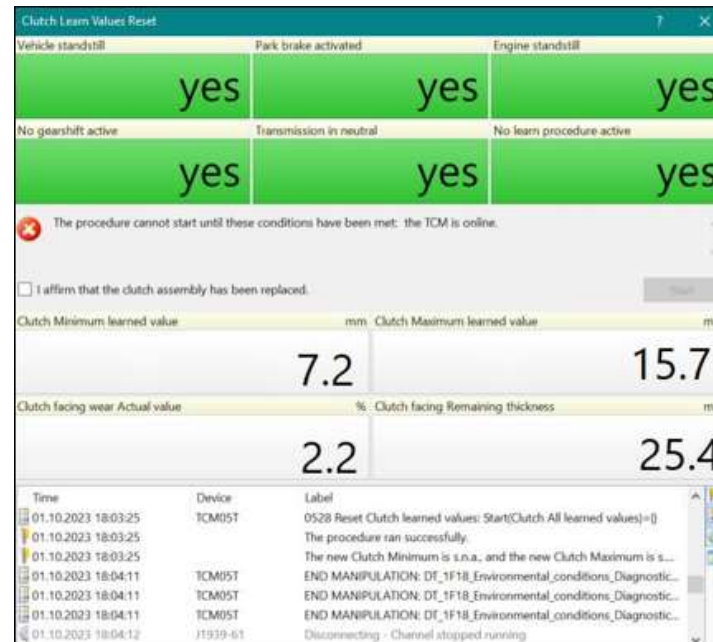
# Increase the Connections List Default Window Size

- The initial size of the Connections window is similar to the current version of the tool
- DiagnosticLink will remember the size of the Connections window and set it accordingly the next time the tool is opened



# Service Routine Dialog Panel: Clutch Learn Values Reset

- This panel is used when a clutch has been replaced
- It resets the percent of the clutch facing wear and the clutch facing remaining thickness
- This panel was specified to work with the TCM05T, not the TCM01T



Vehicle standstill	Park brake activated	Engine standstill
yes	yes	yes
No gearshift active	Transmission in neutral	No learn procedure active
yes	yes	yes

The procedure cannot start until these conditions have been met: the TCM is online.

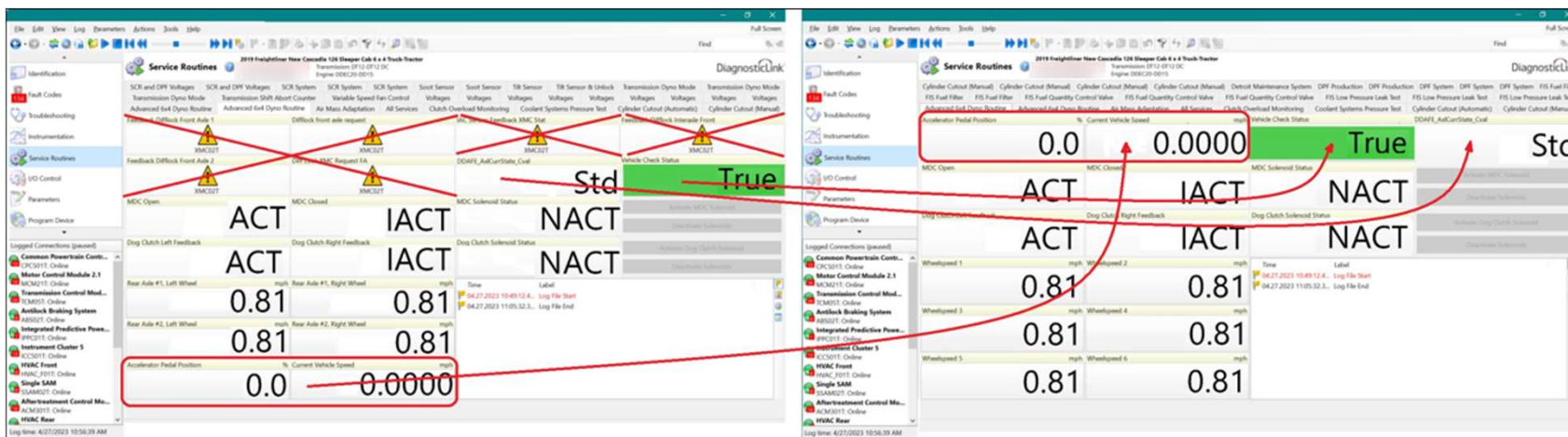
I affirm that the clutch assembly has been replaced.

Clutch Minimum learned value	mm	Clutch Maximum learned value	mm
7.2		15.7	
Clutch facing wear Actual value	%	Clutch facing Remaining thickness	mm
2.2		25.4	

Time	Device	Label
01.10.2023 18:03:25	TCM05T	0528 Reset Clutch learned values: Start(Clutch All learned values)=[]
01.10.2023 18:03:25		The procedure ran successfully.
01.10.2023 18:03:25		The new Clutch Minimum is s.n.a., and the new Clutch Maximum is s...
01.10.2023 18:04:11	TCM05T	END MANIPULATION: DT_1F18_Environmental_conditions_Diagnostic...
01.10.2023 18:04:11	TCM05T	END MANIPULATION: DT_1F18_Environmental_conditions_Diagnostic...
01.10.2023 18:04:11	TCM05T	END MANIPULATION: DT_1F18_Environmental_conditions_Diagnostic...
01.10.2023 18:04:12	J1939-61	Disconnecting - Channel stopped running

# Advanced 6x4 Dyno Service Routine Panel Changes

- Two rows of instruments were removed
- Instruments were relocated



The image displays two screenshots of the DiagnosticLink Service Routines panel for a 2019 Freightliner New Cascadia 128 Sleeper Cab 4x4 Truck-Tractor. The left screenshot shows the panel with two rows of instruments (MDC Open/Closed and Accelerator Pedal Position) crossed out with red X's. The right screenshot shows the updated panel with these instruments removed and relocated. Red arrows indicate the movement of the 'Std' and 'True' labels from the left panel to the right panel.

Instrument	Value	Status
Accelerator Pedal Position	0.0	0.0000
MDC Open	ACT	True
MDC Closed	IAC	True
MDC Solenoid Status	NACT	True
Drag Clutch Left Feedback	ACT	True
Drag Clutch Right Feedback	IAC	True
Drag Clutch Solenoid Status	NACT	True
Rear Axle #1, Left Wheel	0.81	0.81
Rear Axle #1, Right Wheel	0.81	0.81
Rear Axle #2, Left Wheel	0.81	0.81
Rear Axle #2, Right Wheel	0.81	0.81
Wheel Speed 1	0.81	0.81
Wheel Speed 2	0.81	0.81
Wheel Speed 3	0.81	0.81
Wheel Speed 4	0.81	0.81
Wheel Speed 5	0.81	0.81
Wheel Speed 6	0.81	0.81

# XMC Digital I/O Panel

- New XMC panel added.
- Tabs for each XMC ECU.
- Controls for each Digital Output.
- Instrument display for each.
- Digital Output & Digital Input.
- Single Return Control button for each XMC ECU.

XMC - Digital Pinouts					
	Name	State	On	Off	
XMC02T Output Return Control	Digital Output 1(X3 - 12)	OFF	On	Off	
XMC202T Output Return Control	Digital Output 2(X3 - 18)	OFF	On	Off	
XMC302T Output Return Control	Digital Output 3(X3 - 15)	OFF	On	Off	
XMC402T Output Return Control	Digital Output 4(X3 - 3)	OFF	On	Off	
	Digital Output 5(X3 - 6)	OFF	On	Off	
	Digital Output 6(X3 - 9)	OFF	On	Off	
	Digital Output 7(X3 - 16)	OFF	On	Off	
	Digital Output 8(X3 - 10)	OFF	On	Off	
	Digital Output 9(X3 - 19)	OFF	On	Off	
	Digital Output 10(X3 - 13)	OFF	On	Off	
	Digital Output 11(X2 - 11)	OFF	On	Off	
	Digital Output 12(X2 - 24)	OFF	On	Off	
	Digital Output 13(X2 - 6)	OFF	On	Off	
	Digital Output 14(X2 - 19)	OFF	On	Off	
	Digital Output 15(X2 - 9)	OFF	On	Off	
	Digital Output 16(X2 - 22)	OFF	On	Off	
	Digital Output 17(X2 - 8)	OFF	On	Off	
	Digital Output 18(X2 - 21)	OFF	On	Off	
	Digital Input 1(X2 - 48)	SNA			
	Digital Input 2(X2 - 34)	SNA			
	Digital Input 3(X2 - 47)	SNA			
	Digital Input 4(X2 - 52)	SNA			
	Digital Input 5(X2 - 45)	SNA			
	Digital Input 6(X2 - 44)	SNA			

XCM02T XMC202T XMC302T XMC402T XMC502T XMC602T

# EMG - Added Current Transport Lock Status

- EMG – “Transport Lock Status” instrument added for each BMS ECU on panel.
- “HV Battery Safe to Ship”.

HV Battery Safe to Ship									
1. Key off, wait 3 seconds and then press the e-stop button.								Vehicle Speed	0.0000
2. Wait 3 seconds and then key on, internal isolation resistance can take up to 30 seconds to populate.								Parking Brake	Set
3. Once readings populate, key off, wait 3 seconds and then return e-stop to normal operation.								HV System	ON
Battery #1	Aux. Contactor Negative	Aux. Contactor Positive	Precharge Contactor	HV Contactor Negative	HV Contactor Positive	Internal Isolation Resistance kOhm	Minimum Cell Voltage V	Maximum Temp String °C	Transport Lock Status
BMS01T	Open	Open	Open	Closed	Closed	23746	3.650	22.5	unlocked
BMS201T	Closed	Closed	Open	Closed	Closed	23746	3.643	22.5	unlocked
BMS301T	Open	Open	Open	Closed	Closed	23746	3.648	22.4	unlocked
Battery #2	Aux. Contactor Negative	Aux. Contactor Positive	Precharge Contactor	HV Contactor Negative	HV Contactor Positive	Internal Isolation Resistance kOhm	Minimum Cell Voltage V	Maximum Temp String °C	Transport Lock Status
BMS401T	Closed	Closed	Open	Closed	Closed	23746	3.649	22.5	unlocked
BMS501T	Open	Open	Open	Closed	Closed	23746	3.640	22.5	unlocked
BMS601T	Open	Open	Open	Closed	Closed	23746	3.642	22.5	unlocked
Battery #3	Aux. Contactor Negative	Aux. Contactor Positive	Precharge Contactor	HV Contactor Negative	HV Contactor Positive	Internal Isolation Resistance kOhm	Minimum Cell Voltage V	Maximum Temp String °C	Transport Lock Status
BMS701T	Open	Open	Open	Closed	Closed	23746	3.631	22.4	unlocked
BMS801T	Open	Open	Open	Closed	Closed	23746	3.651	22.5	unlocked
BMS901T	Open	Open	Open	Closed	Closed	23746	3.645	22.5	unlocked



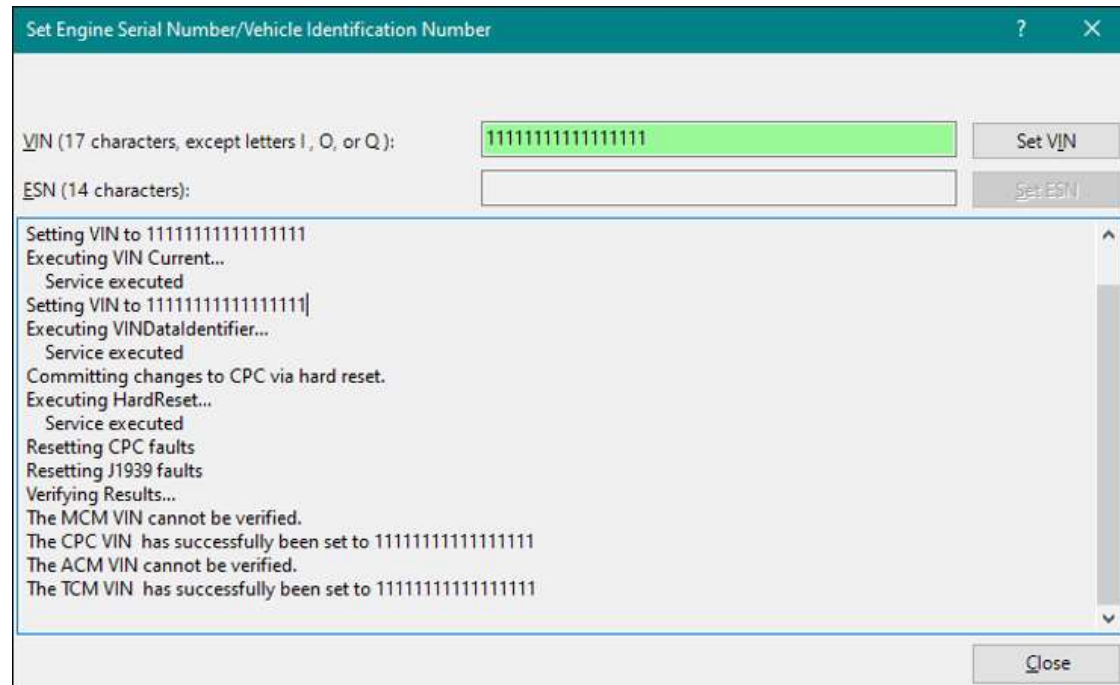
# Extended CPC5 Panel Support for CPC502T

6/20/2023

DAIMLER TRUCK  
North America

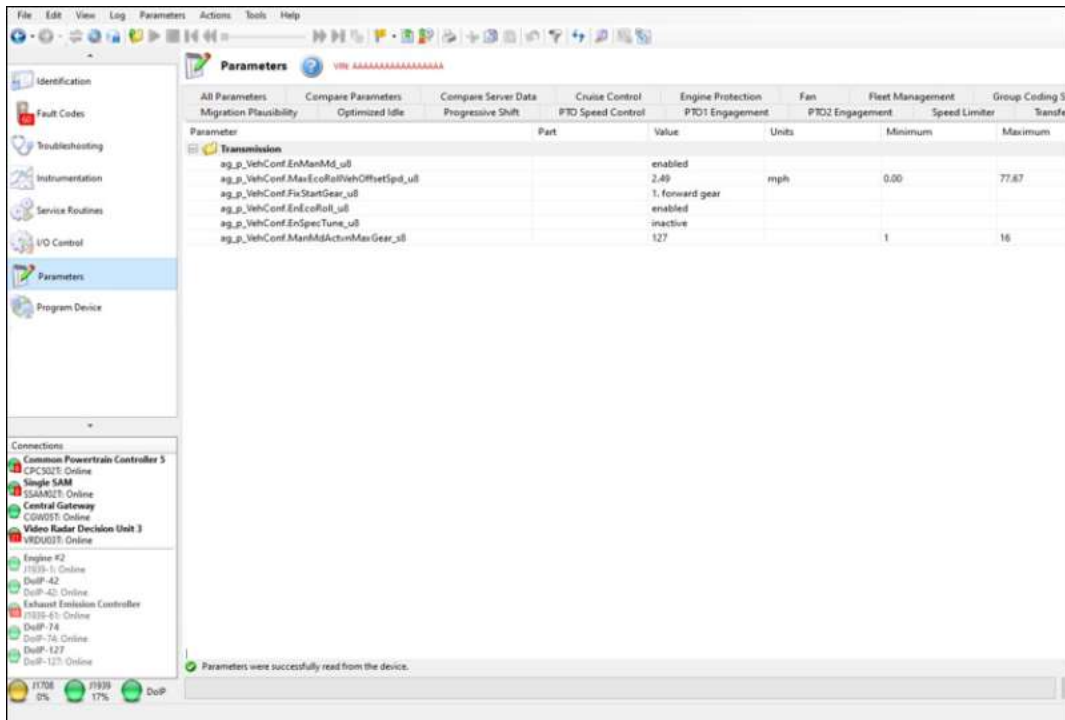
# Set ESN/VIN Service Routine Panel for CPC5ce (CPC502T)

- Western Star 45X - CPC502T VIN setting now supported.
- Applies to all HDEP equipped vehicles from EPA07 to present.



# Parameter Panels for CPC5ce (CPC502T)

- The parameter panels below are now supported for CPC502T:
- Cruise Control
- Engine Protection
- Fan
- Fleet Management
- Idle and PTO Shutdown
- Optimized Idle
- Progressive Shift
- Speed Limiter
- Transmission



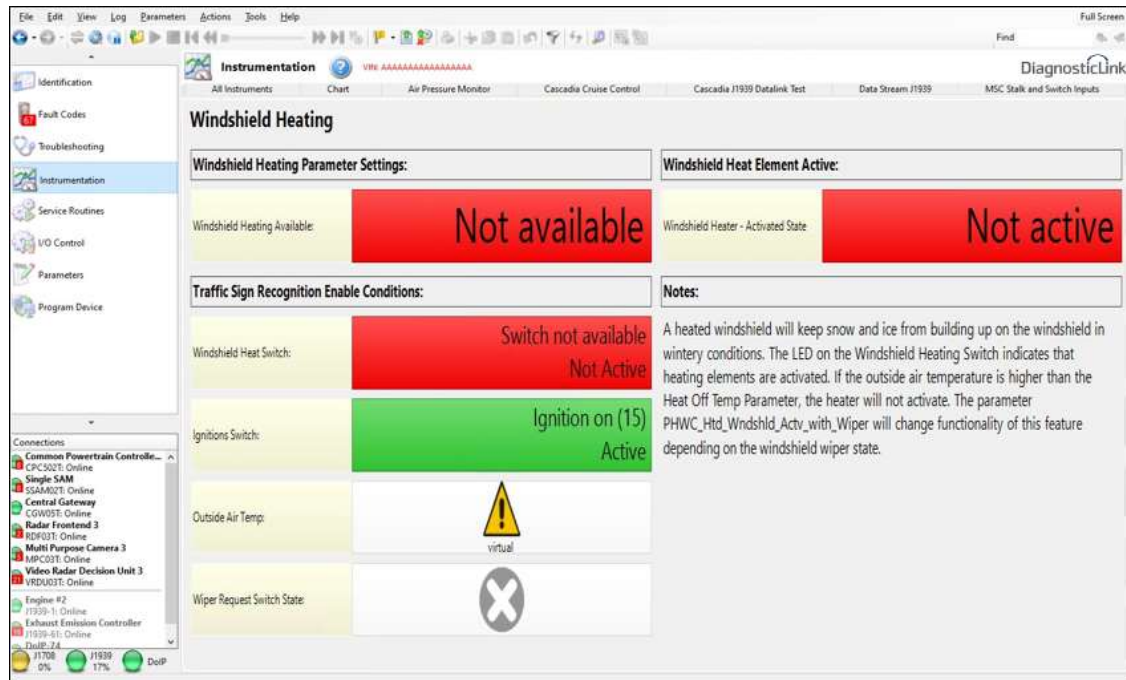
Parameter	Part	Value	Units	Minimum	Maximum
<b>Transmission</b>					
ag_p_VehConf.EnManMd_ul		enabled			
ag_p_VehConf.MaxEcoRallVehOffsetSpd_ul		2.49	mph	0.00	77.67
ag_p_VehConf.FaStartGear_ul		1, forward gear			
ag_p_VehConf.EnEcoRoll_ul		enabled			
ag_p_VehConf.EnSpecTune_ul		inactive			
ag_p_VehConf.ManMdActonMaxGear_ul		127		1	16

Parameters were successfully read from the device.



# Instrumentation Diagnostic Panels for CPC5ce (CPC502T)



- The instrumentation panels below are now supported for CPC502T:
- Service and Park Break
- Switches
- Transmission
- Windshield Heating



**Windshield Heating**

Windshield Heating Parameter Settings:	Windshield Heat Element Active:
Windshield Heating Available: <b>Not available</b>	Windshield Heater - Activated State: <b>Not active</b>

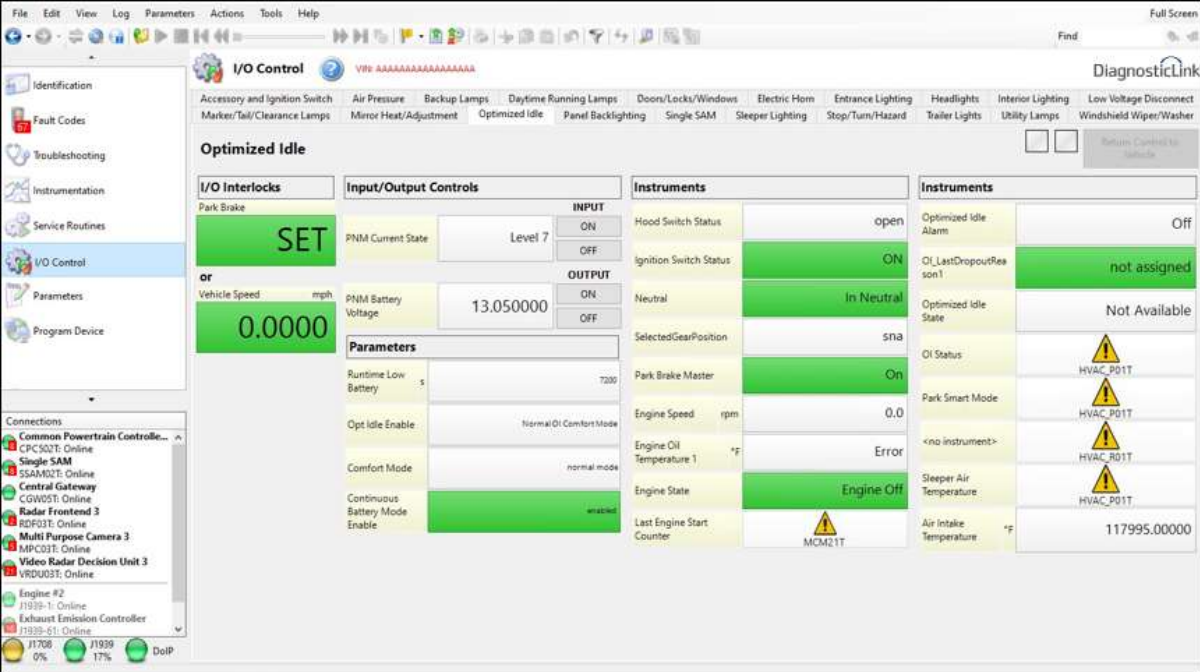
**Traffic Sign Recognition Enable Conditions:**

Windshield Heat Switch:	<b>Switch not available Not Active</b>
Ignitions Switch:	<b>Ignition on (15) Active</b>
Outside Air Temp:	 virtual
Wiper Request Switch State:	

**Notes:**  
A heated windshield will keep snow and ice from building up on the windshield in wintery conditions. The LED on the Windshield Heating Switch indicates that heating elements are activated. If the outside air temperature is higher than the Heat Off Temp Parameter, the heater will not activate. The parameter PHWC\_Htd\_Wndshld\_Actv\_with\_Wiper will change functionality of this feature depending on the windshield wiper state.

# Optimized Idle Input Output Panel for CPC5ce (CPC502T)

- The optimized idle service routine panel is now available for CP502T.



The screenshot displays the DiagnosticLink I/O Control interface for the CPC502T. The main window is titled "Optimized Idle" and contains several sections:

- I/O Interlocks:** Shows "Park Brake" with a "SET" button and "Vehicle Speed" at 0.0000 mph.
- Input/Output Controls:**
  - PNM Current State: Level 7 (INPUT ON/OFF)
  - PNM Battery Voltage: 13.050000 (OUTPUT ON/OFF)
  - Parameters: Runtime Low Battery (7200s), Opt Idle Enable (Normal/OI Comfort Mode), Comfort Mode (normal mode), Continuous Battery Mode Enable (enabled).
- Instruments:**
  - Hood Switch Status: open
  - Ignition Switch Status: ON
  - Neutral: In Neutral
  - Selected Gear Position: sna
  - Park Brake Master: On
  - Engine Speed: 0.0 rpm
  - Engine Oil Temperature 1: Error
  - Engine State: Engine Off
  - Last Engine Start Counter: MCM21T
- Additional Instruments:**
  - Optimized Idle Alarm: Off
  - OI\_LastDropoutReason1: not assigned
  - Optimized Idle State: Not Available
  - OI Status: HVAC\_P01T
  - Park Smart Mode: HVAC\_P01T
  - <no instrument>: HVAC\_P01T
  - Sleeper Air Temperature: HVAC\_P01T
  - Air Intake Temperature: 117995.00000

The left sidebar shows the "Connections" list, including CPC502T, Single SAM, CGW05T, Radar Frontend 3, Multi Purpose Camera 3, Video Radar Decision Unit 3, and Engine #2.

# Engine Idle Shutdown Service Routine for CPC5ce (CPC502T)

- Engine idle shutdown service routine dialog is now available for CP502T.

