DiagnosticLink 8.18 Features

Service Diagnostics & Tools

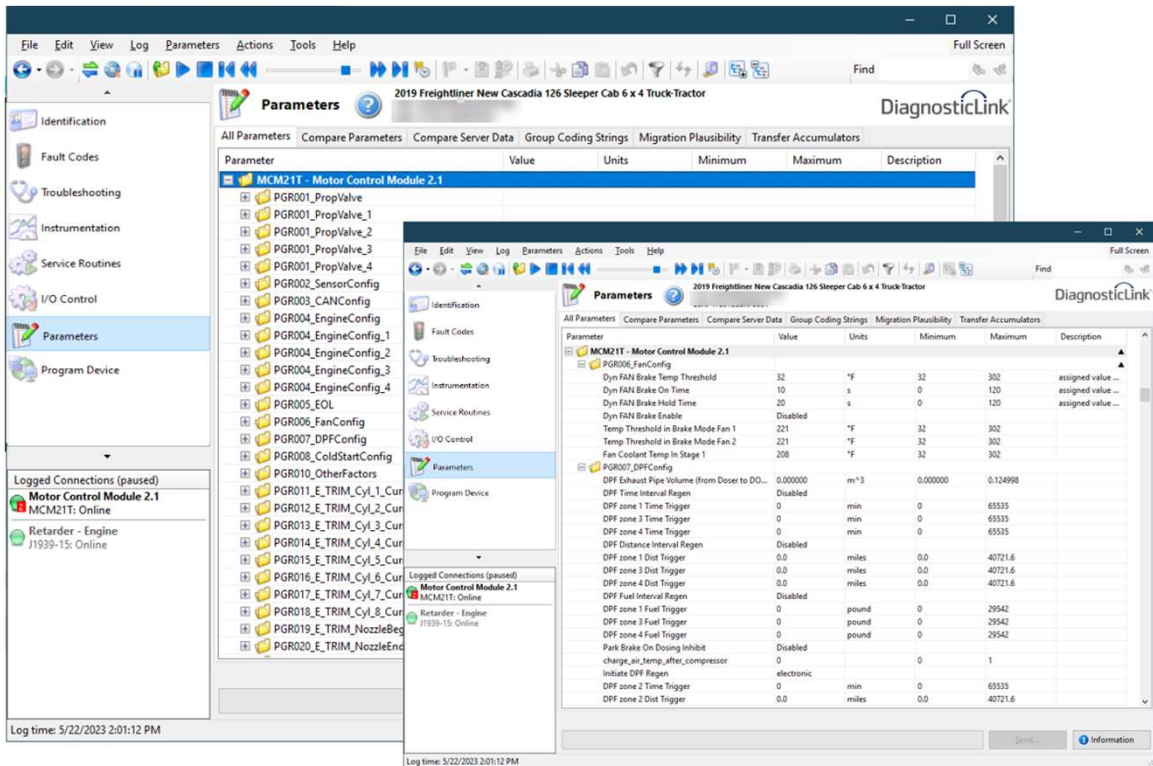6/20/2023

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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.

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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®.

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.

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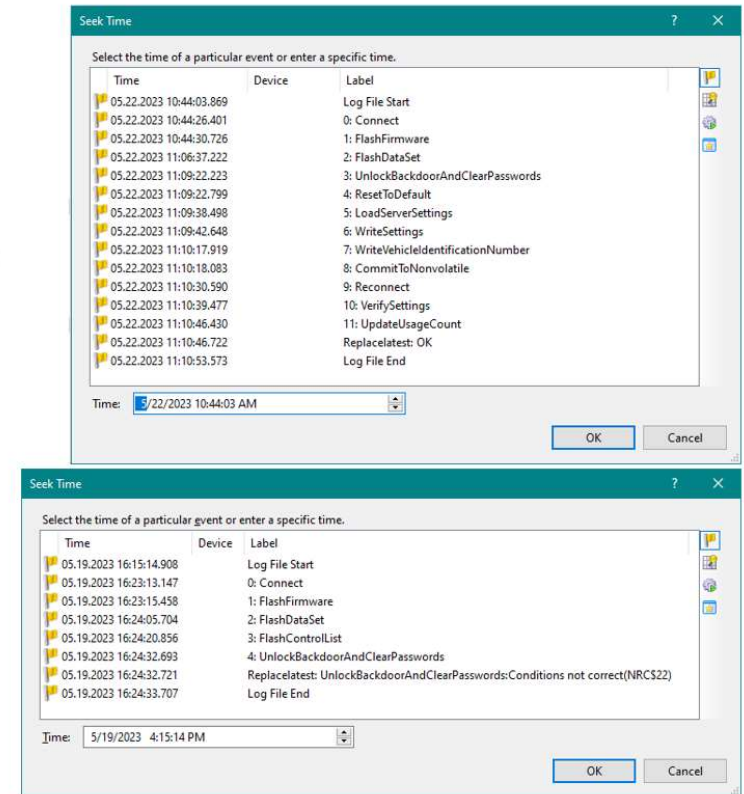
DiagnosticLink® Uses Internet Explorer (IE) for Troubleshooting Material Display

- 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.
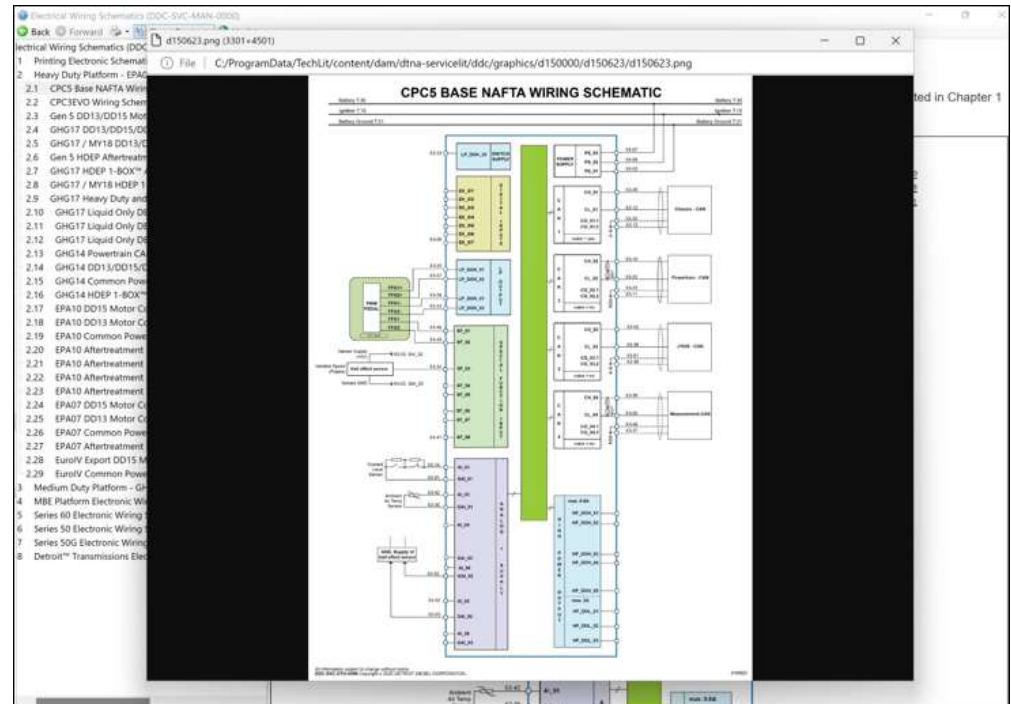
# Virtual Technician Data Tab Migrated to Open in WebView2

- 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.

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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.
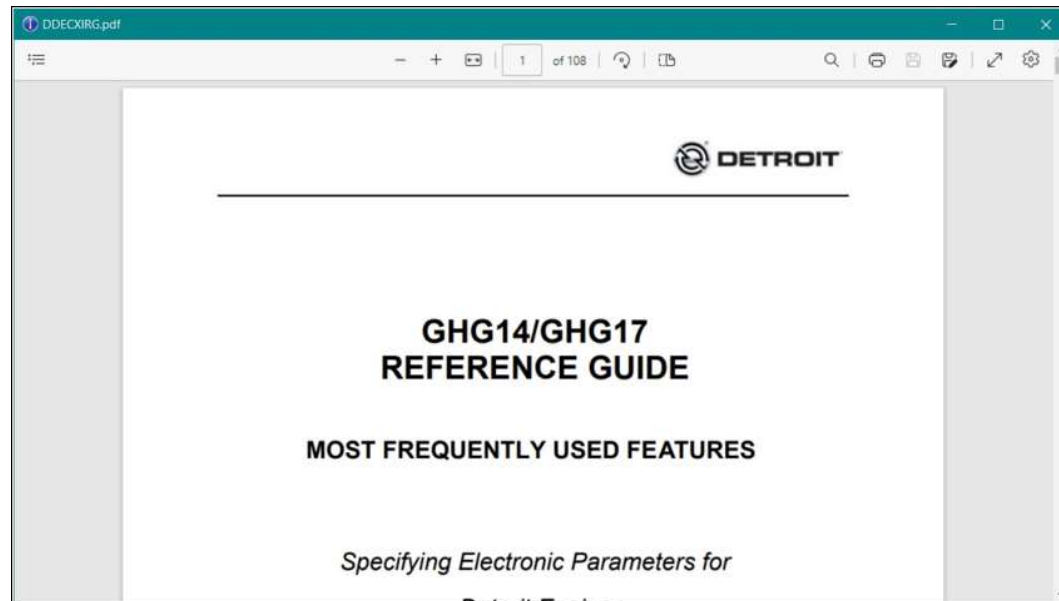
PTO Speed Control Panel

- CEEA+ - New Parameter panel "PTO Speed Control".

- Existing "PTO" panel modified to not display for CPC302T & CPC501T.
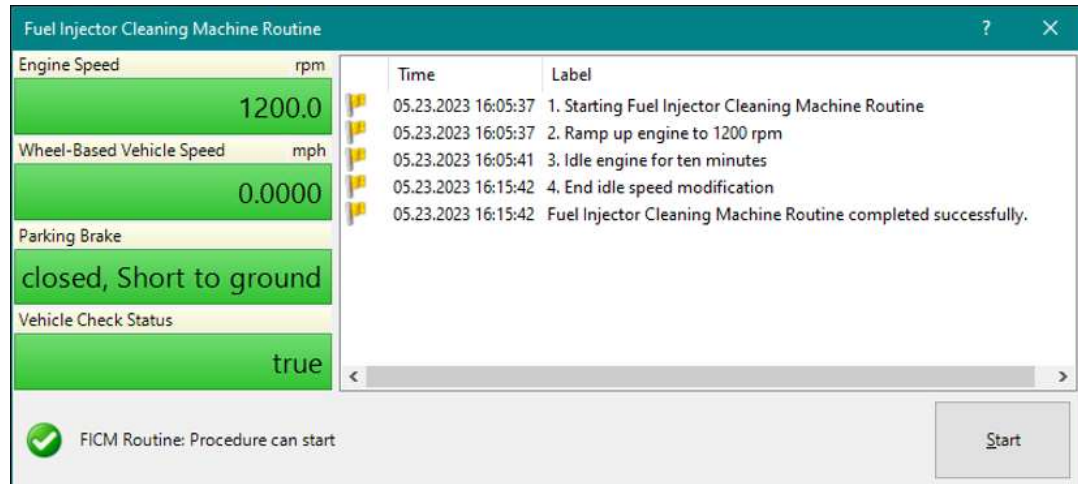
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PTO1 Engagement Parameter Panel

- 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	Mi...	Maximum	Description	
⊟ 📁 PTO1 Request...							
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	
⊞ 📁 PTO1 Engagement Interlocks...							
⊟ 📁 PTO1 Engagement Events...							
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_DelayTimeClutchPdlValv	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...	
⊞ 📁 PTO1 Limiters...							
⊟ 📁 Signal Routing...							
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...	

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PTO2 Engagement Parameter Panel

- CEEA+ - New Parameter panel "PTO2 Engagement".

- Existing "PTO" panel modified to not display for CPC302T & CPC501T.

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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.

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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.

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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.

All Parameters	Compare Parameters		Compare Server Data		Cruise Control	Engine Protection	Fan
Parameter		Part	Value	Units	Minimum	Maximum	Description
CPC501T - Common Powertrain Controller 5							▲
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 ...

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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.

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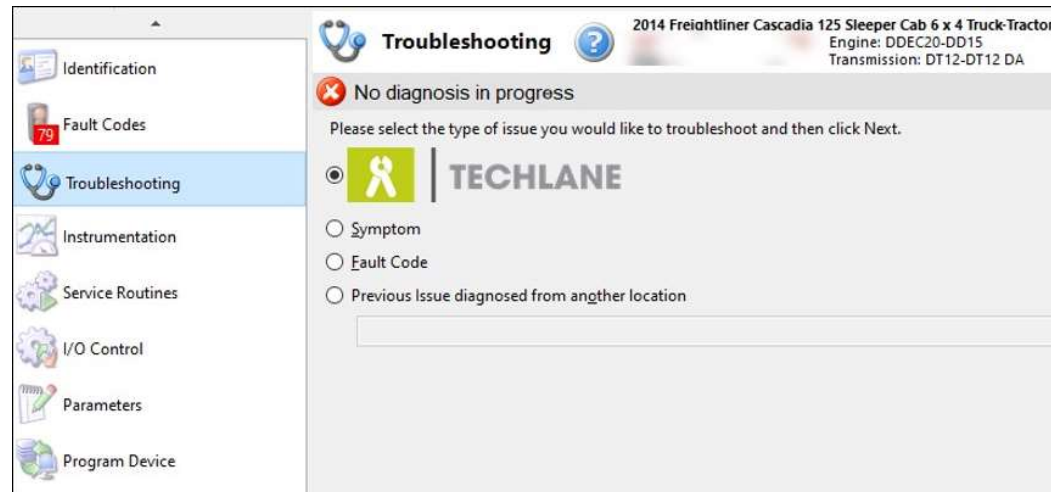
Support for PCUMT50E Controller

- Support included for PCUMT50E new controller.
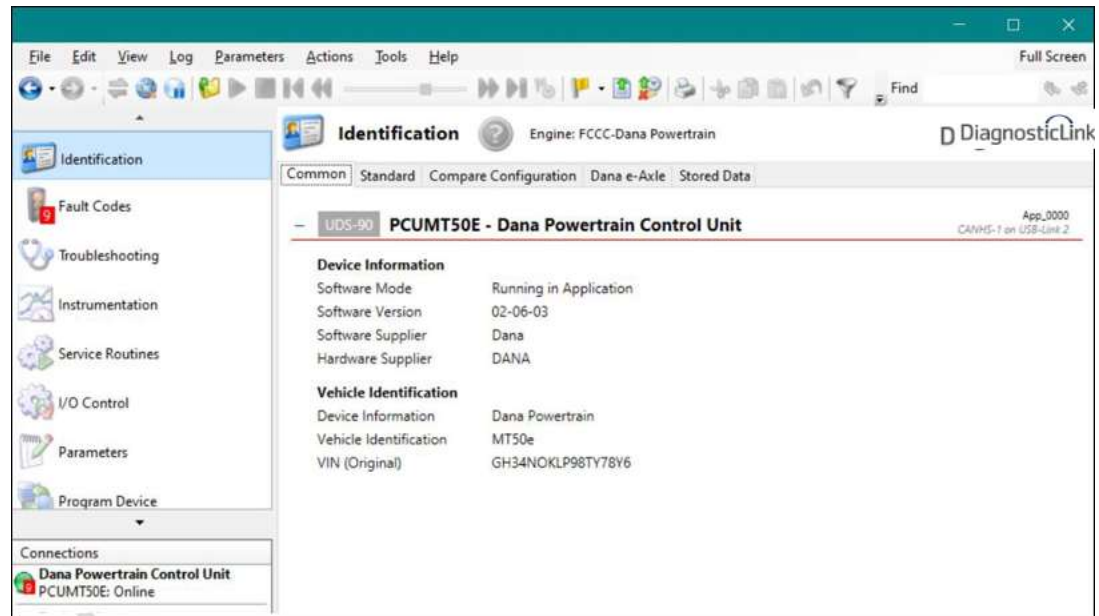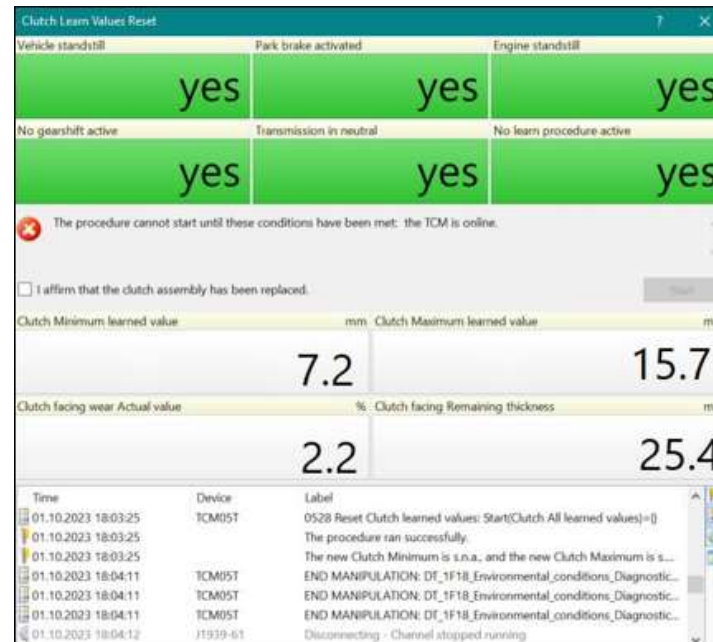
Increase the Connections List Default Window Size

- 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

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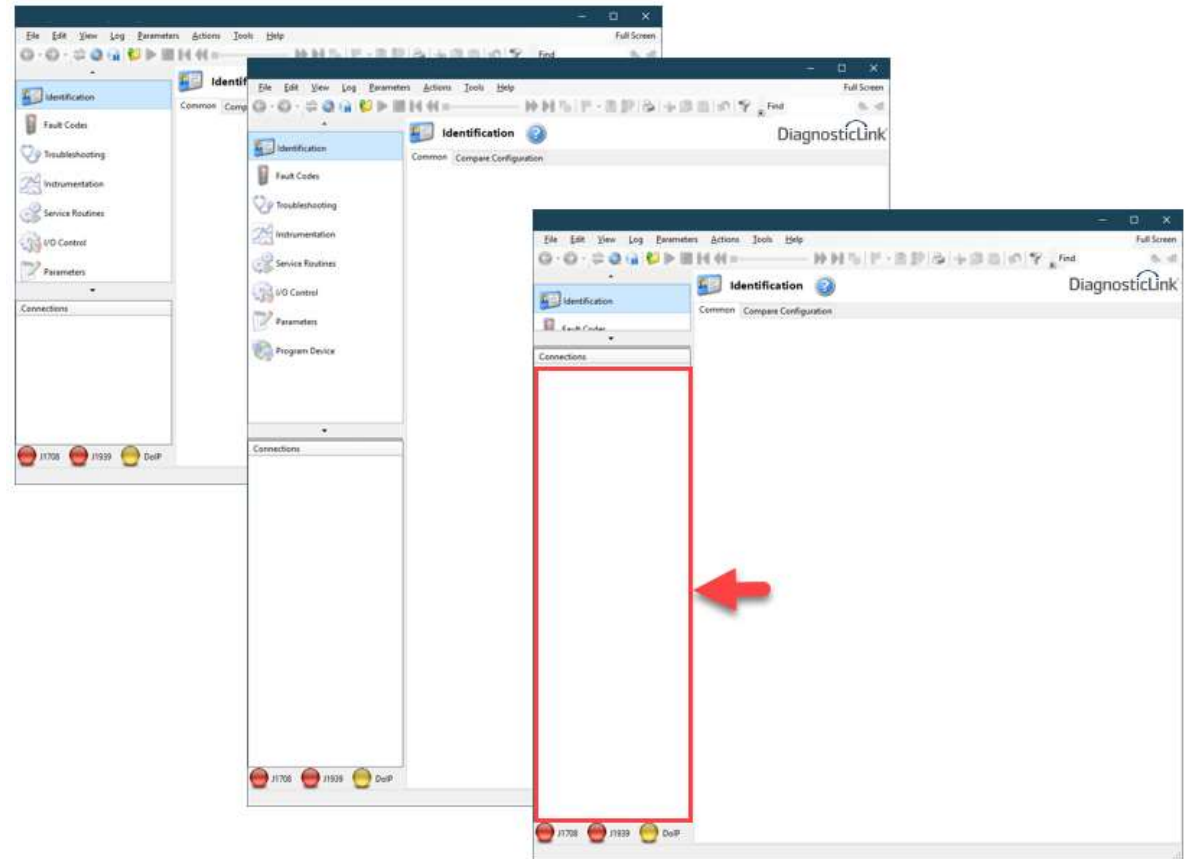
Service Routine Dialog Panel: Clutch Learn Values Reset

- 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

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Advanced 6x4 Dyno Service Routine Panel Changes

- Two rows of instruments were removed

- Instruments were relocated

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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.

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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

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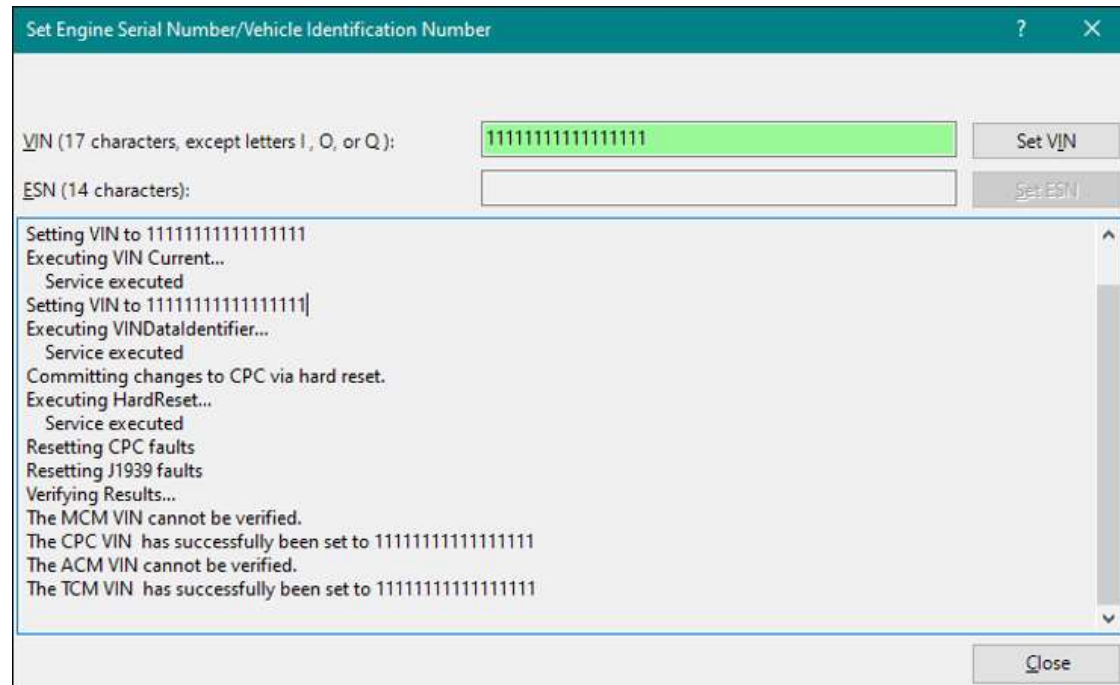
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Extended CPC5 Panel Support for CPC502T

6/20/2023

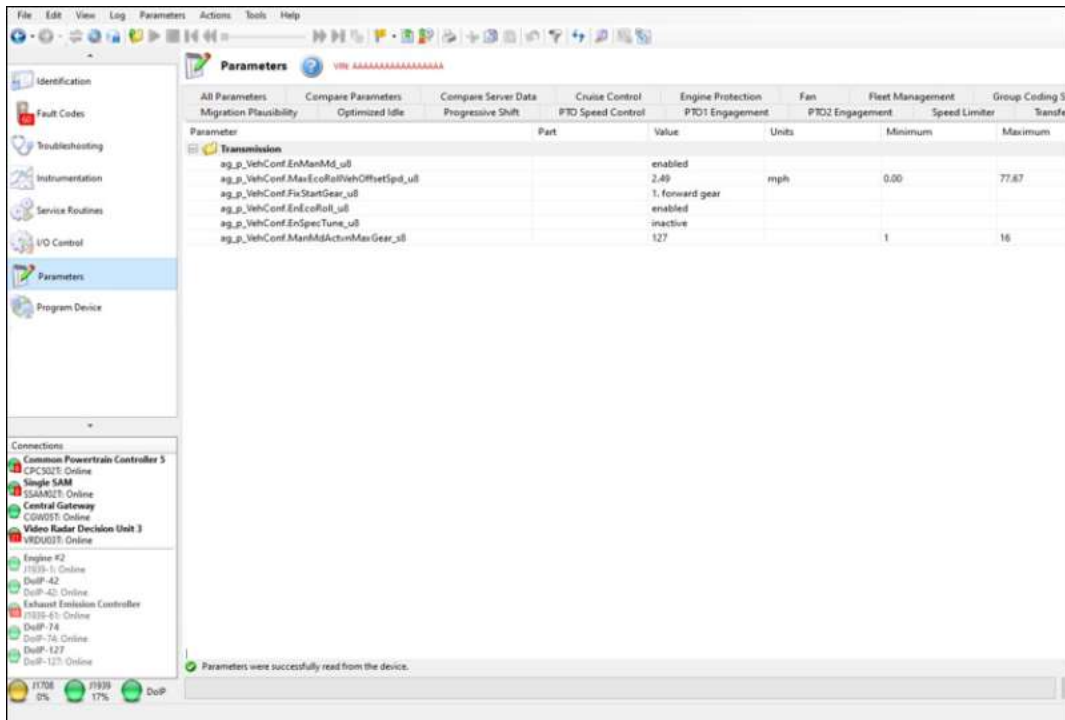**DAIMLER TRUCK**
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Set ESN/VIN Service Routine Panel for CPC5ce (CPC502T)

- Western Star 45X - CPC502T VIN setting now supported.

- Applies to all HDEP equipped vehicles from EPA07 to present.

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Service Diagnostics & Tools

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
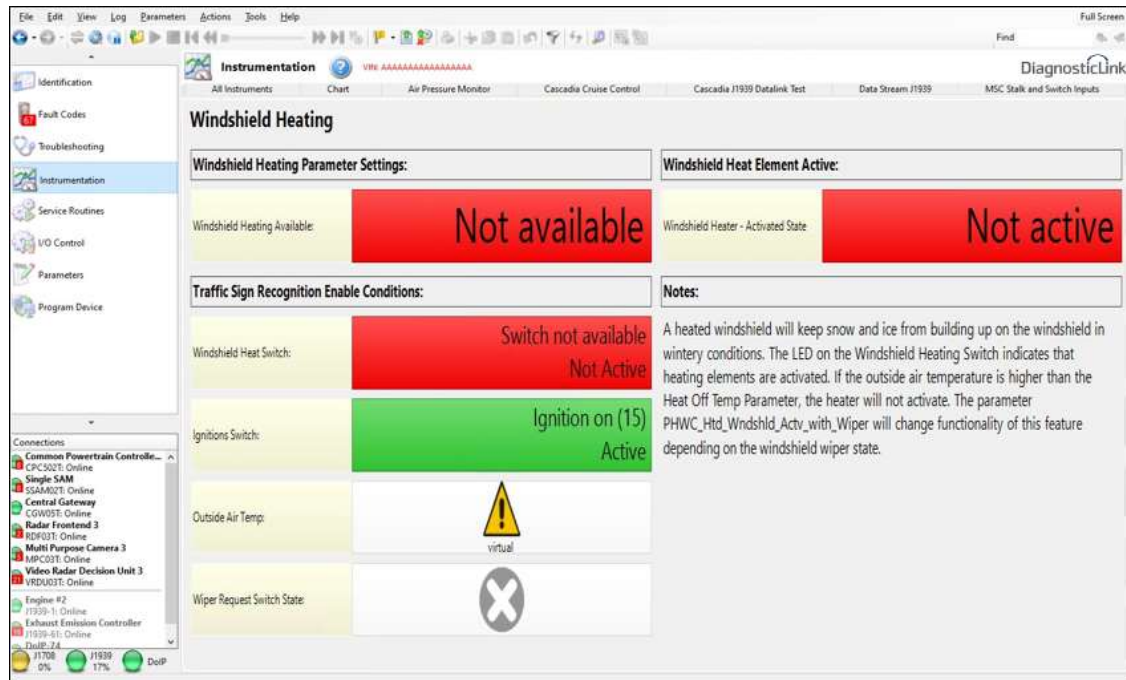
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Instrumentation Diagnostic Panels for CPC5ce (CPC502T)

- The instrumentation panels below are now supported for CPC502T:

- Service and Park Break

- Switches

- Transmission

- Windshield Heating

Optimized Idle Input Output Panel for CPC5ce (CPC502T)

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

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Engine Idle Shutdown Service Routine for CPC5ce (CPC502T)

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

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