

DAIMLER

DiagnosticLink 8.09 Features

Daimler Trucks



BHARATBENZ

DiagnosticLink 8.09 supported software packages:

- **MY2019 Heavy Duty (HD) software:**

- MCM21T - m6.7.0.2
- ACM21T - e7.59.2.0
- CPC04T - R42_00_000a
- TCM01T - NAMT150600
- CPC302T - R31.23.00

- **MY2019 Medium Duty (MD) (DD5 and DD8) software:**

- MCM21T - m12.02.02.02
- ACM21T - e13.54.02.00
- CPC04T - R42_00_000a

- **MY2019 ECONIC 44K Software Release:**

- MCM21T - m12.02.02.02
- ACM21T - e13.54.02.00
- CPC302T - R31.83.02

DiagnosticLink 8.09 supported software packages (continued):

- **MY2019 Euro V - HD software:**

- MCM21T - m12.12.0.3
- ACM21T - e7.59.2.0
- CPC04T - R42_00_000a
- TCM01T - NAMT150600
- CPC302T - R31.23.00

- **MBE900 Euro V – MR2 software:**

- MR201T - V30
- CPC04T - R42_00_000a

New service routines

- Service routine panels have been added to support pre-series vehicles:
 - MPC02T Calibration Panel
 - Side Radar Calibration Panel
 - Detroit Assurance panel updates

New panels added:

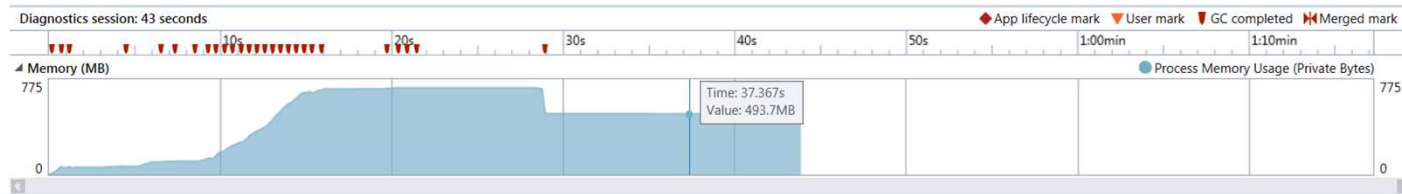
- New panels have been added to support **CPC501T**
 - Instrumentation panels
 - Service Routine panels
 - Detroit Transmission Dyno mode
 - Countershaft Brake test
 - DPF system
 - SCR System
 - Set CPC Odometer
 - Set ESN/VIN
 - I/O Control Panels
 - Parameter Panels

New panels added:

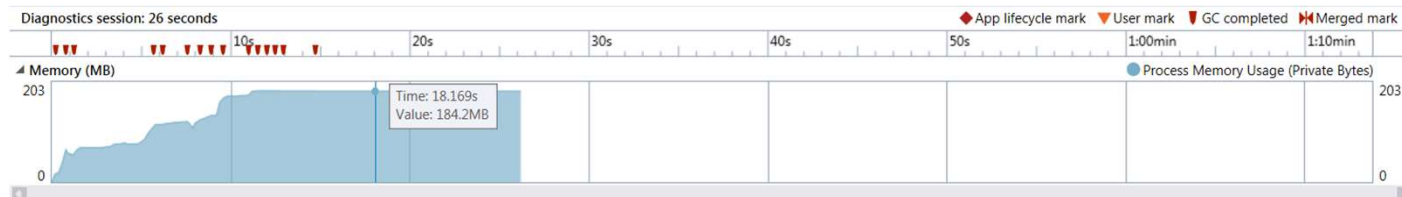
- Additional panel support for **StageV Off highway HD engine (MTU)** has been added
 - Inducement System Activation
 - ATS test routine
 - Server based Clear Non Erasable faults
 - FIS fuel filter
 - Set VIN/PIN panel support extended for ACM3
 - EGR actuator Slow learn routine
 - Pressure limiting valve
 - Voltages
 - FIS Fuel Quantity Control
 - FIS Water in Fuel
 - FIS Low Pressure Leak Test
 - FIS Fuel Filter

DiagnosticLink memory management

- In extended diagnostic sessions, or when using certain features of the tool, DiagnosticLink could run out of memory.
- A change has been made which reduces memory usage (after display of the Caution dialog) from **494MB** to **184MB**.
- The change also results in a vastly reduced startup time (after the first run of the tool)



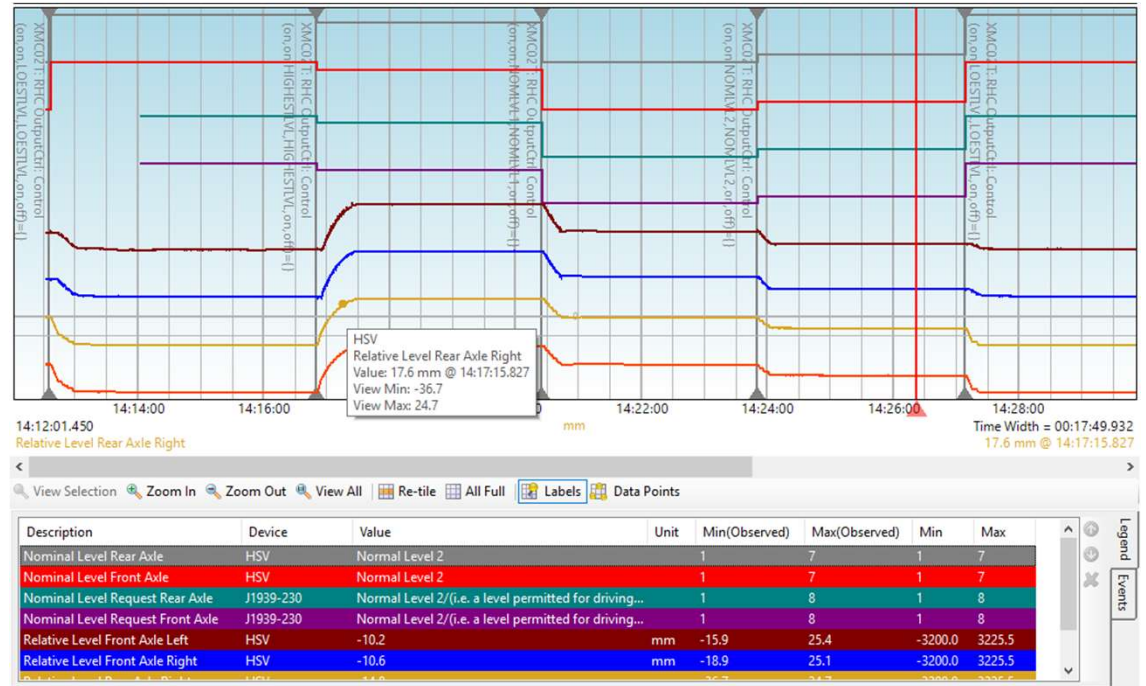
BEFORE
494MB



AFTER
184MB

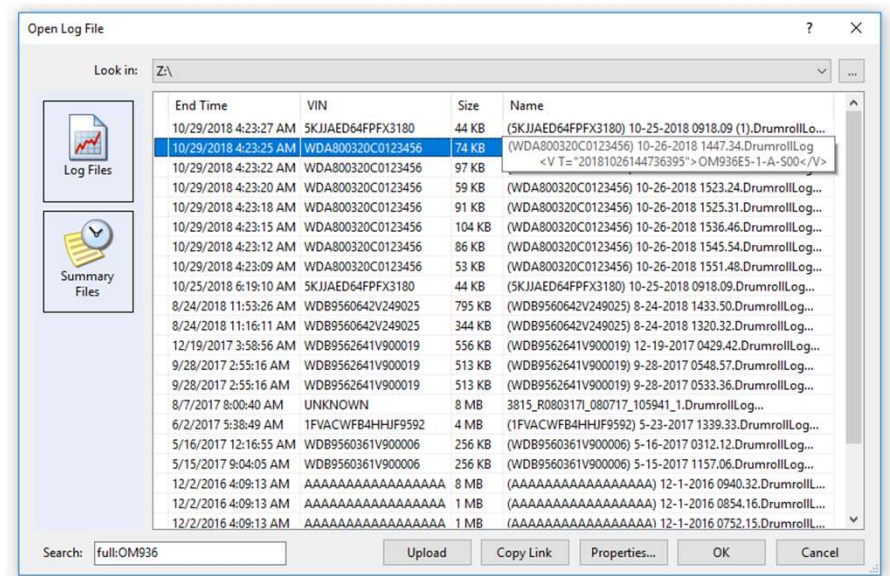
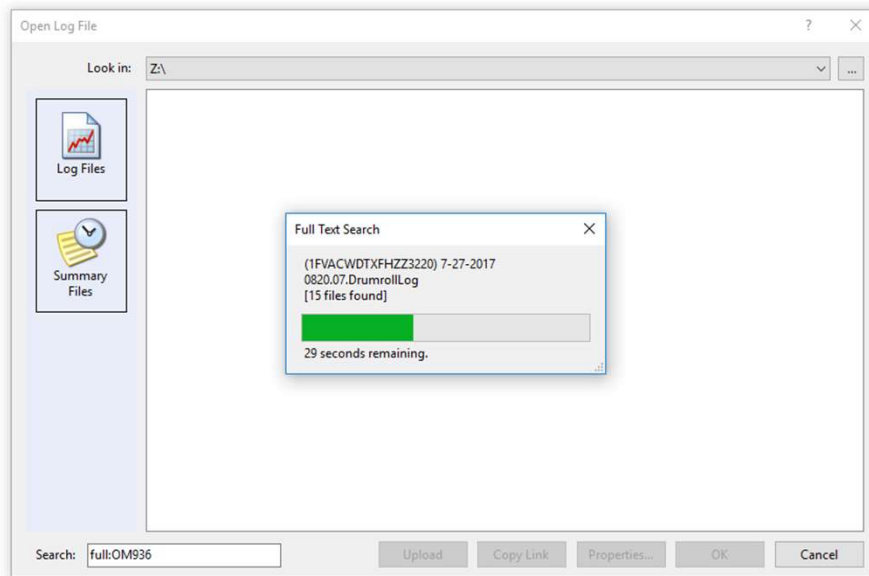
Support Hadley Smart Valve and XMC J1939 Messaging

- DiagnosticLink 8.09 includes messaging support for the Hadley Smart Valve / Dynamic Ride Height control.
- This device is present on 43JYST vehicles.
- A future release of the tool will contain calibration and manipulation panels.



Open Log File full text search

- The Open Log File dialog has always had a search functionality but, for speed, the search ability was limited to a predefined set of data (fault codes, labels, ECU names).
- This has been expanded to a full text search that will look for any instances of the entered string or regular expression.
- The found content can be viewed by hovering over the name column of the list.








Presentation of Software and Dataset information

- When trying to diagnose programming issues, it's useful to see what software and datasets the user has (or would have, when the vehicle data is downloaded).
- The presentation of that content was previously not optimal.
- This change results in a clearer/grouped view where errors are more clearly indicated.

Device	Part Number	For Software Version	File name	Description
CPC302T	0234489802_001	29.23.00	A0234489802_001.CFF	000110_CPC3EVO_R29_CASCADIA_KDN_OFF_84734
MCM21T	0494482835_003	6.6.0.1	A0494482835_003.CFF	472LA_13A_505-475 @ 1650 1BOX DTNA
ICUC01T	0134485521_002	ICUC_Application_LG3	0134485521_002.cff	ICUC LG3 Preseries Image compatible with 17.30.01 Application or later
	0134485521_002	ICUC_Application_LG3	0134485521_002.cff	ICUC LG3 Preseries GUIDE compatible with 17.30.01 Application or later
	0134485521_002	ICUC_Application_LG3	0134485521_002.cff	ICUC LG3 Preseries Language compatible with 17.30.01 Application or later
	0134485521_002	ICUC_Application_LG3	0134485521_002.cff	ICUC LG3 Preseries SMF DTC Data compatible with 17.30.01 Application or later
	0134485521_002	ICUC_Application_LG3	0134485521_002.cff	ICUC LG3 Preseries Internal SMF compatible with 17.30.01 Application or later
HVAC_F01T	0004486028_001	R1702_app	0004486028_001.cff	R1702_17_25_01
	0004486028_001	R1702_cal	0004486028_001.cff	R1702_17_25_01
SSAM02T	0024482158_001	SSAM02T_IO_2_app_172900	0024482158_001.cff	app IO extender SW node 2 block 0x05
	0024482358_001	SSAM02T_IO_3_app_172900	0024482358_001.cff	config IO extender SW node 3 block 0x07
	0014486058_001	SSAM02T_MQ_154100	0014486058_001.cff	SW MQ
	0024485158_001	SSAM02T_main_174800	0024485158_001.cff	SSAM_FF_MAIN_APP, 174800
	0024485258_001	SSAM02T_IO_0_config_174800	0024485258_001.cff	config IO extender SW node 0 block 0x02
	0024485358_001	SSAM02T_IO_1_config_174800	0024485358_001.cff	config IO extender SW node 1 block 0x04
	0024485458_001	SSAM02T_IO_2_config_174800	0024485458_001.cff	config IO extender SW node 2 block 0x06
	0024485558_001	SSAM02T_IO_3_config_174800	0024485558_001.cff	config IO extender SW node 3 block 0x08
	0024481658_001	SSAM02T_IO_0_app_172900	0024481658_001.cff	app IO extender SW node 0 block 0x01
	0024481858_001	SSAM02T_IO_1_app_172900	0024481858_001.cff	app IO extender SW node 1 block 0x03
CGW04T	0004486727_001	17_46_01_SOP	0004486727_001.cff	FLASH FILE,CGW,FPT,174600
RDF02T	0004484349_001	ARS430DC_R170x_SOPx	0004484349_001.cff	⚠ WARNING: Specified file is missing
ACM21T	0174488954_001	7.58.2.0	A0174488954_001.cff	e7.58.2.0 ROM SOFTWARE
VRDU02T	0004487251_001	CODE_171700	0004487251_001.cff	VRDU2 SOFTWARE 171700
DCMD02T	0004487332_001	DATA	0004487332_001.cff	DCMD02T
	0004487532_001	DATA	0004487532_001.cff	DCMD02T
DCMP02T	0004480619_001	DATA	0004480619_001.cff	DCMP02T
	0004480719_001	DATA	0004480719_001.cff	DCMP02T
ACM21T	0194485254_001	7.58.2.0	A0194485254_001.CFF	DD15 1-BOX 0.4G NOX STD REGEN 18 PROD/SRV

Device	Part Number	Version	File name	Description
CPC302T	0234481102_001	29.23.00	A0234481102_001.cff	29.23.00
MCM21T	0404484535_001	6.6.0.1	A0404484535_001.cff	6.6.0.1
TCM01T	0504481209_003	NAMT130800	A0504481209_003.cff	NAMT130800
ICUC01T	0134485121_002	ICUC_Application_LG3	0134485121_002.cff	FLASH FILE,ICUC,173001
	0134485221_002	ICUC_INT_SMF_LG3	0134485221_002.cff	ICUC LG3 Preseries Internal SMF compatible with 17.30.01 Application or later
	0134485121_004	ICUC_Application_LG3_004	0134485121_004.cff	FLASH FILE,ICUC,182500
	0134485421_002	ICUC_Language_LG3	0134485421_002.cff	ICUC LG3 Preseries Language compatible with 17.30.01 Application or later
	0134485521_002	ICUC_Guide_LG3	0134485521_002.cff	ICUC LG3 Preseries GUIDE compatible with 17.30.01 Application or later
	0134485621_002	ICUC_Image_LG3	0134485621_002.cff	ICUC LG3 Preseries Image compatible with 17.30.01 Application or later
HVAC_F01T	0004485928_001	R1702_app	0004485928_001.cff	FLASH FILE-HVAC,FCU,APP,FPT
	0004486028_001	R1702_cal	0004486028_001.cff	R1702_17_25_01
SSAM02T	0024482158_001	SSAM02T_IO_2_app_172900	0024482158_001.cff	app IO extender SW node 2 block 0x05
	0024482358_001	SSAM02T_IO_3_app_172900	0024482358_001.cff	config IO extender SW node 3 block 0x07
	0014486058_001	SSAM02T_MQ_154100	0014486058_001.cff	SW MQ
	0024485158_001	SSAM02T_main_174800	0024485158_001.cff	SSAM_FF_MAIN_APP, 174800
	0024485258_001	SSAM02T_IO_0_config_174800	0024485258_001.cff	config IO extender SW node 0 block 0x02
	0024485358_001	SSAM02T_IO_1_config_174800	0024485358_001.cff	config IO extender SW node 1 block 0x04
	0024485458_001	SSAM02T_IO_2_config_174800	0024485458_001.cff	config IO extender SW node 2 block 0x06
	0024485558_001	SSAM02T_IO_3_config_174800	0024485558_001.cff	config IO extender SW node 3 block 0x08
	0024481658_001	SSAM02T_IO_0_app_172900	0024481658_001.cff	app IO extender SW node 0 block 0x01
	0024481858_001	SSAM02T_IO_1_app_172900	0024481858_001.cff	app IO extender SW node 1 block 0x03
CGW04T	0004486727_001	17_46_01_SOP	0004486727_001.cff	FLASH FILE,CGW,FPT,174600
RDF02T	0004484349_001	ARS430DC_R170x_SOPx	0004484349_001.cff	⚠ WARNING: Specified file is missing
ACM21T	0174488954_001	7.58.2.0	A0174488954_001.cff	e7.58.2.0 ROM SOFTWARE
VRDU02T	0004487251_001	CODE_171700	0004487251_001.cff	VRDU2 SOFTWARE 171700
DCMD02T	0004487332_001	DATA	0004487332_001.cff	DCMD02T
	0004487532_001	DATA	0004487532_001.cff	DCMD02T
DCMP02T	0004480619_001	DATA	0004480619_001.cff	DCMP02T
	0004480719_001	DATA	0004480719_001.cff	DCMP02T

Read out the activation status from the CTP device itself

Initialize Truck Data Center		Optimized Idle	Progressive Shift	PTO	Speed Limiter	Transfer Accumulators	Transmission		
VIN	3AKJGLD59ESFZ0857		Truck Data Center current status						
ECU Serial Number	2950006835		CTP Activation Status from server: Active Re-request from Server						
Truck Data Center Initialization			CTP Activation Status from ECU: Installation started						
<ul style="list-style-type: none">  Device is not busy  Save server data is disabled via options  Server connection is not in use  A valid Vehicle Identification Number is read  Other connected VINs are identical 			RDA Activation: rdaStatus: Disabled						
<input type="button" value="Initialize"/>			<table border="1" style="width: 100%;"> <tr> <th style="text-align: center;">List installed RDA jobs</th> </tr> <tr> <td style="text-align: center;">No data available</td> </tr> </table>					List installed RDA jobs	No data available
List installed RDA jobs									
No data available									
			<table border="1" style="width: 100%;"> <tr> <th style="text-align: center;">List installed CTM triggers</th> </tr> <tr> <td style="text-align: center;">No data available</td> </tr> </table>					List installed CTM triggers	No data available
List installed CTM triggers									
No data available									
			<table border="1" style="width: 100%;"> <tr> <th style="text-align: center;">List installed CDL jobs</th> </tr> <tr> <td style="text-align: center;">No data available</td> </tr> </table>					List installed CDL jobs	No data available
List installed CDL jobs									
No data available									
			Last updated at 10/31/2018 10:56:25 AM						

- Displays the activation status from the device as well as the server.

DPF system service routine for CPC5

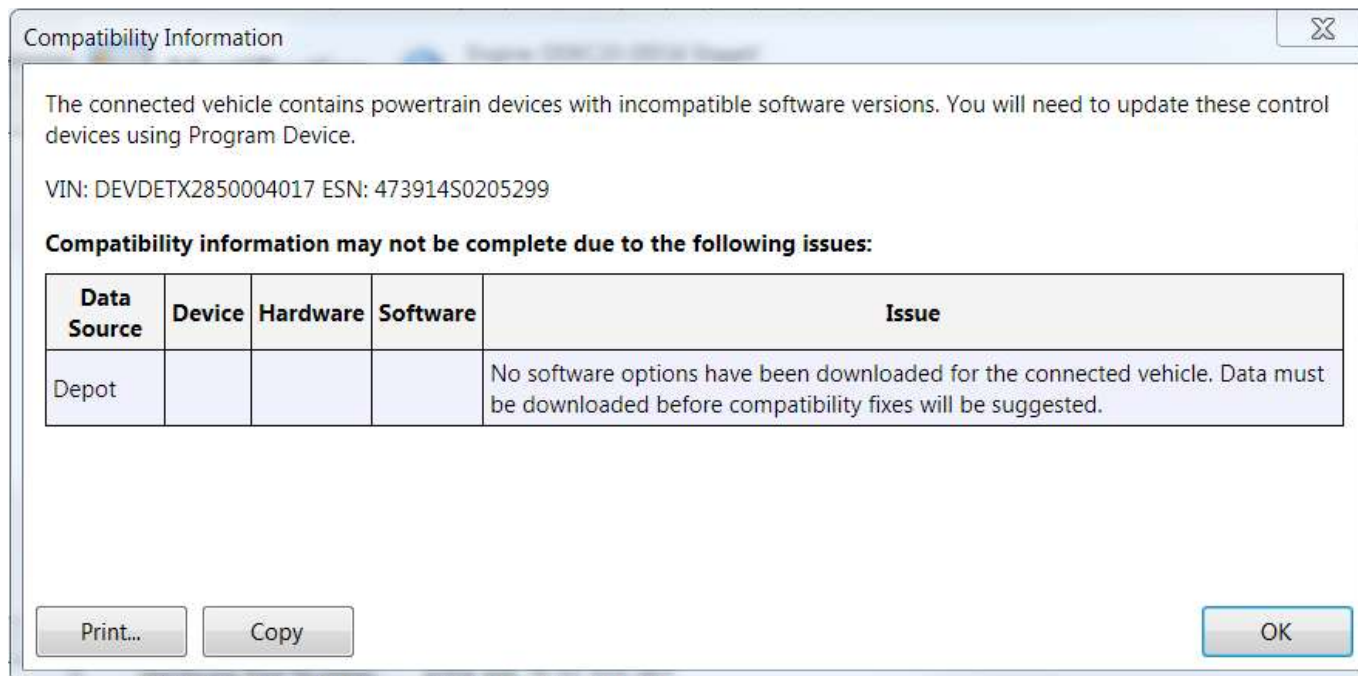
The screenshot displays the DiagnosticLink software interface for performing a DPF system service routine. The interface is divided into several sections:

- Left Panel:** Contains navigation options such as Instrumentation, Service Routines, I/O Control, Parameters, Program Device, Flash, and Connections. The Connections list shows:
 - Common Powertrain Control: CPC501T: Online (14)
 - Motor Control Module 2.1: MCM21T: Online (6)
 - Aftertreatment Control Module: ACM21T: Online (16)
 - Common Powertrain Control: CPC501T: Online (15)
 - Motor Control Module 2.1: MCM21T: Online (14)
 - Aftertreatment Control Module: ACM301T: Online (12)
- Top Section:** Shows 'All Services' and 'Cylinder Cutout (Manual)' tabs. It includes gauges for Engine Speed (rpm), Vehicle Speed (mph), Active Governor Type (Idle speed governor), and Accelerator Pedal Position (%).
- Middle Section:** Displays various temperature and pressure gauges:
 - DOC Inlet Temperature: -40 °F
 - DOC Outlet Temperature: -40 °F
 - DPF Outlet Temperature: -40 °F
 - Coolant Temperature: 235 °F
 - FIS Water in Fuel: <no instrument>
 - Barometric Pressure: 14.29 psi
 - Inlet Manifold Pressure: 15.23 psi
 - DOC Inlet Pressure: 0.000 psi
 - DPF Outlet Pressure: 0.000 psi
- Bottom Section:** Features a 'Perform Parked Regeneration' dropdown menu, a status message: 'Perform Parked Regeneration: Procedure cannot start: AAS: Engine Speed is not valid', and 'Stop' and 'Stop All' buttons.

- Available for CPC5 + MCM21T + ACM21T and CPC5 + MCM21T + ACM301T

Software Compatibility Table Popup Improvements

- Compatibility warning dialog will now always be available if there is a compatibility issue
- If a valid compatibility set cannot be suggested, the reason will be provided



Maintenance Data Monitor Value Reset Panel

- Allows a service technician to reset the following accumulators, independently:
 - Engine Oil
 - Transmission Oil
 - Axle 1
 - Axle 2

FIS Water in Fuel	Idle Speed Balance	On Board Diagnostics	On Board Diagnostics J1939	SCR and DPf Voltages	SCR System	Soot Sensor	Voltages
All Services	Cylinder Cutout (Manual)	Detroit Maintenance System	DPF System	FIS Fuel Filter	FIS Fuel Quantity Control Valve	FIS Low Pressure Leak Test	
Engine Oil System							
✓ Driven Distance	✓ Operating Time	✓ Ignition Switch					
✓ System Active		✓ Vehicle Speed					
✓ Ready to reset			Fluid Reset				
Transmission Oil System							
✓ Driven Distance	✓ Operating Time	✓ Ignition Switch					
✓ System Active		✓ Vehicle Speed					
✓ Ready to reset			Fluid Reset				
Rear Axle 1 Oil System							
✓ Driven Distance	✓ Operating Time	✓ Ignition Switch					
✓ System Active		✓ Vehicle Speed					
✓ Ready to reset			Fluid Reset				
Rear Axle 2 Oil System							
✓ Driven Distance	✓ Operating Time	✓ Ignition Switch					
✗ System Active		✓ Vehicle Speed					
✗ Cannot reset Axle 2 System. Oil System Inactive.			Fluid Reset				
Engine Oil System Values							
Description	Value						
Estimated Replacement Date	Minimum drive time required to estimate not met						
Driven Distance	.00 miles						
Operating Time	.00 days						
System Active	yes						
Estimated Remaining Driving Distance	Minimum drive time required to estimate not met						
Estimated Remaining Operating Time	Minimum drive time required to estimate not met						
Life cycle consumption	.00 %						
Load life cycle consumption	.00 %						
Transmission Oil System Values							
Description	Value						
Estimated Replacement Date	Minimum drive time required to estimate not met						
Driven Distance	.00 miles						
Operating Time	.00 days						
System Active	yes						
Estimated Remaining Driving Distance	Minimum drive time required to estimate not met						
Estimated Remaining Operating Time	Minimum drive time required to estimate not met						
Life cycle consumption	.00 %						
Rear axle 1 Oil System Values							
Description	Value						
Estimated Replacement Date	Minimum drive time required to estimate not met						
Driven Distance	.00 miles						
Operating Time	.00 days						
System Active	yes						
Estimated Remaining Driving Distance	Minimum drive time required to estimate not met						
Estimated Remaining Operating Time	Minimum drive time required to estimate not met						
Life cycle consumption	.00 %						

New Service panel for DEF pump priming

- A new service panel to allow the technician to fully prime the DEF pump for compatible software on ACM21T or ACM301T

Actions Tools Help

- Aftertreatment
- EGR
- Fleet Management
- Fuel System

- Accumulated Fuel Mass Sync
- DEF Coolant Valve Control
- DEF Pump Priming
- DEF Quantity Test

Ambient Air Temp	°F	DEF Tank Temperature	°F	Vehicle Speed	mph
68		32		0.0000	

ADS Pump Speed	rpm	ADS DEF Pressure 2	psi
1200.0		290.08	

Time	Label
------	-------

Warning: This service panel should not be used if the DEF system is frozen. Please allow system to thaw before executing.

DEF Pump Priming: Procedure can start

Start

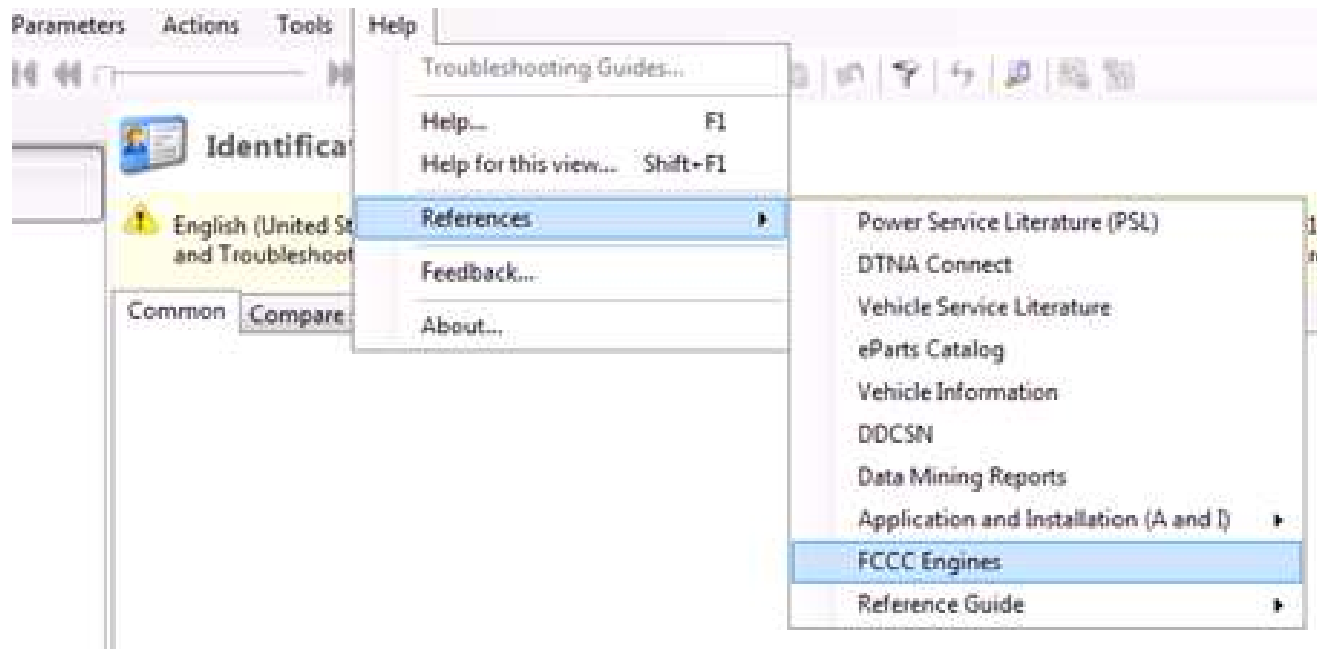
Message added to indicate if the VCP tool is not installed

- If the VCP tool is not installed and if the user wants to read/write the PSI MT88 parameters then DiagnosticLink will indicate that the VCP tool will need to be installed.



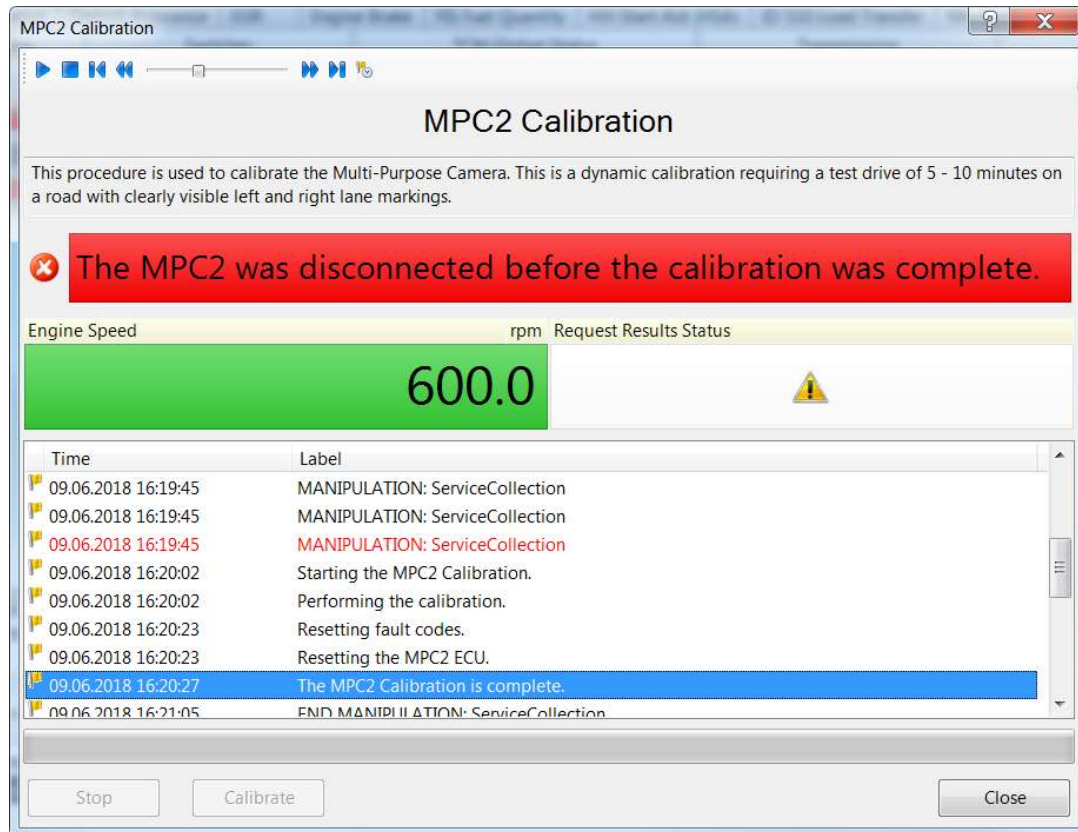
Link to PSI service manuals added to DiagnosticLink

- References to include link to troubleshooting material for PSI-MT88 engines.



MPC2 Calibration Panel

- The panel is an update to the MPC1 Calibration Panel for use with the MPC2 multipurpose camera.
- The results of the test are highly visible making it easier for the technician to see.



Countershaft Brake Panel Enhancement

- Service requested that the results of the Countershaft Brake Test Panel be more evident
- It was argued that the result was lost in a long list of text
- We did not want to set aside space just to display the result

The screenshot shows the 'Countershaft Brake Test' window. At the top left is a gauge for 'Engine Speed rpm' with markings at 500, 750, 1000, 1250, 1500, 1750, and 2000. Below the gauge is a large red box with the number '0'. To the right is a log window with the following entries:

Time	Label
13:04:03.9	Log File Start
13:05:55.3	[Step 1 - set clutch position to 0%]
13:05:55.5	[Step 1 - set clutch position to 0%]) Started
13:05:55.5	[Step 1 - set clutch position to 0%]) Pass - 0 %
13:05:55.5	[Step 2 - set engine speed to 1900 rpms]
13:06:03.2	[Step 2 - set engine speed to 1900 rpms]) Pass - 1881 rpm
13:06:03.2	[Step 3 - set clutch position to 100%]
13:06:03.3	[Step 3 - set clutch position to 100%]) Started
13:06:04.4	[Step 3 - set clutch position to 100%]) Pass - 98 %
13:06:04.4	[Step 4 - Run countershaft brake test]
13:06:04.8	[Step 4 - Run countershaft brake test)) Started
13:06:04.9	[Step 4 - Run countershaft brake test)) Pass - -5543 rpm/s
13:06:04.9	[Step 5 - Return to idle]
13:06:05.0	[Step 6 - Return clutch to 0%]
13:06:05.1	Complete - pass
13:06:37.8	Log File End

Below the log is a summary table:

Speed countershaft rpm	Engine State	Maximal gradient countershaft-spe... rpm/s
0	Engine Stop	-5543

Below the summary table are three more rows:

gear engaged	percentual clutch displacement	% Air Supply pressure psi
0	2	124.2

At the bottom is a green bar for 'Parking Brake Switch Sum Signal' with the text 'active (OK)'. A status bar at the very bottom shows an error icon and the message: 'CountershaftBrakeTest: Procedure cannot start: AAS: Engine State is not valid'. A 'Start' button is also visible.

Countershaft Brake Panel Enhancement (continued)

- The solution was to make a prominent display of the result
- But display the result only when the test is complete.

Complete - Pass

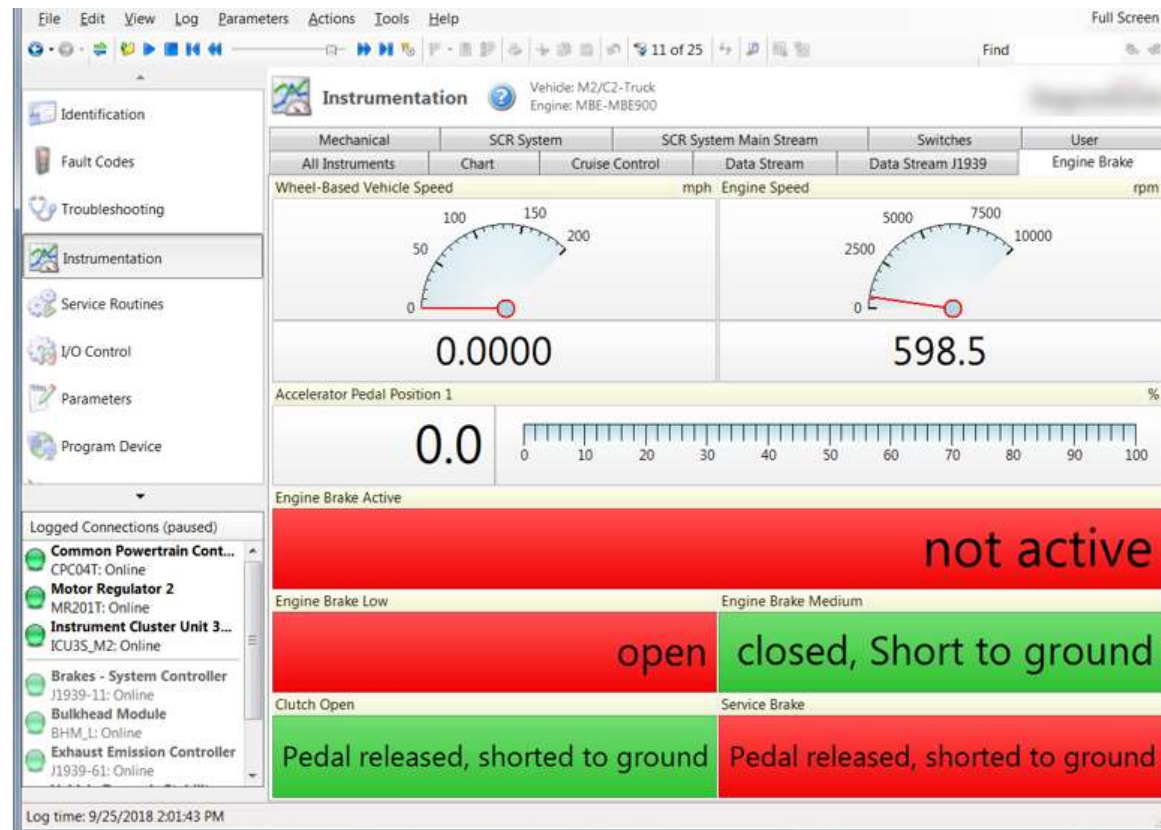
Time	Label
13:04:03.9	Log File Start
13:05:55.3	[Step 1 - set clutch position to 0%]
13:05:55.5	[Step 1 - set clutch position to 0%] Started
13:05:55.5	[Step 1 - set clutch position to 0%] Pass - 0 %
13:06:03.3	[Step 3 - set clutch position to 100%] Started
13:06:04.4	[Step 3 - set clutch position to 100%] Pass - 98 %
13:06:04.4	[Step 4 - Run countershaft brake test]
13:06:04.8	[Step 4 - Run countershaft brake test]) Started
13:06:04.9	[Step 4 - Run countershaft brake test]) Pass - -5543 rpm/s
13:06:04.9	[Step 5 - Return to idle]
13:06:05.0	[Step 6 - Return clutch to 0%]
13:06:05.1	Complete - pass
13:06:37.8	Log File End

Speed countershaft	rpm	Engine State	Maximal gradient countershaft-spe...	rpm/s
0	rpm	Engine Stop	-5543	rpm/s
gear engaged	percentual clutch displacement	%	Air Supply pressure	psi
0	2	%	124.2	psi
Parking Brake Switch Sum Signal				
active (OK)				

CountershaftBrakeTest: Procedure cannot start: AAS: Engine State is not valid

Engine Brake Panel for the Euro V MBE 900

- Engine brake panel has been added to support the Euro V MBE 900.



Detroit Assurance Panel updated

The screenshot displays the Detroit Assurance diagnostic panel with the following sections:

- Streams:** Data Stream, Data Stream J1939, Detroit Assurance, EGR, Engine Brake, FIS Fuel Quantity, Hill Start Aid (HSA), Intelligent Powertrain Management, MecharF.
- Voltages:**
 - VRDU02T: Ignition Power Supply (14.067 OK), Battery Power Supply (14.003 OK).
 - RDF02T: Supply Voltage (13.95 OK).
 - SRRR01T:** Supply Voltage (13.7 OK).
 - SRRR01T:** Object Type (STAT), Object Longitudinal Distance (1.699), Object Lateral Velocity (0.0000), Object Longitudinal Velocity (0.0146).
- Engine Speed:** Gauge showing 0 to 10000 rpm.
- Vehicle Speed:** Gauge showing 0 to 90 mph.
- Accelerator Pedal Position:** Scale from 0 to 100.
- Relevant Object:**
 - VRD02T: Relative Speed to Object (mph) - speed not available; Object Type (s.n.a.); Object Classification (s.n.a.); Distance to Object X (m) - distance not available.
 - RDF02T: Distance Longitudinal (m) - sna; Relative Speed Longitudinal (mph) - sna.
- Stationary Object:**
 - VRD02T: Relative Speed to Object (mph) - speed not available; Object Type (s.n.a.); Object Classification (s.n.a.); Distance to Object X (m) - distance not available.
 - RDF02T: Distance Longitudinal (m) - sna.
- Driver Activities:** Accelerator Pedal Kickdown, Accelerator Pedal Positiv, Accelerator Pedal Pressed, Brake Pedal Pressed, Turn Signal Left, Turn Signal Right (all OFF).
- Alignment:** Azimuth (service aligned), Elevation (service aligned), **FoV_AnglFt_Cval_SRRX (13.0)**, **FoV_AnglRear_Cval_SRRX (13.0)**.

Added instruments to Detroit Assurance panel when connected to SRRR01T ECU.