



DiagnosticLink 8.19 Features

Service Diagnostics & Tools

12/5/2023

DAIMLER TRUCK
North America



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- DiagnosticLink® 8.16 and 8.17 to be Sunset February 6, 2024
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DiagnosticLink® 8.19 Features Summary

- The help file will now be downloaded from the server when the tool is initially installed and a server connection is established. The tool can be used during the help file download.
- New Proximity Sensor panel added to monitor and troubleshoot the Obstacle Proximity Sensor Rear (OPSR01T).
- The Trailer Lights panel has been removed for eM2 (not applicable).
- The eTransmission Oil Pump Controls panel has been improved to display the correct number of visible oil pumps.
- Updates/enhancements included to eMobility panels to show the correct number of BMS:
 - HV Battery State of Health
 - HV Measurement
 - HV Battery Safe to Ship
 - Battery Management
 - Isolation Resistance Measurement
 - DC/DC Converter

DiagnosticLink® 8.19 Features Summary cont.

- Issue resolved where the Advanced Driver Assistance System (ADAS) Side Radar Calibration would fail for certain vehicles.
- The warning message for individual troubleshooting manuals have been removed and replaced for one generic message.
- The Enable MVI Server checkbox has been added to DiagnosticLink® Professional via the Tools > Options > Server menu.
- The override of display precision is allowed where diagnostic instrument panel data is inappropriate for aftersales use cases.
- The Dyno Mode panel includes revisions.
- The Temperature and Speed Monitors include revisions.
- An eMobility Cruise Control panel has been added.
- An ePTO Diagnostic Instrument panel has been added for eMobility (eP4/eM2) diagnostics.
- A Low Voltage Instrument panel has been added.
- The Inverter Resolver Learn Procedure service routine panel has been modified. The number of resolver learn routines displayed is dynamically set by the number of Electric Motors (EmotNum parameter).

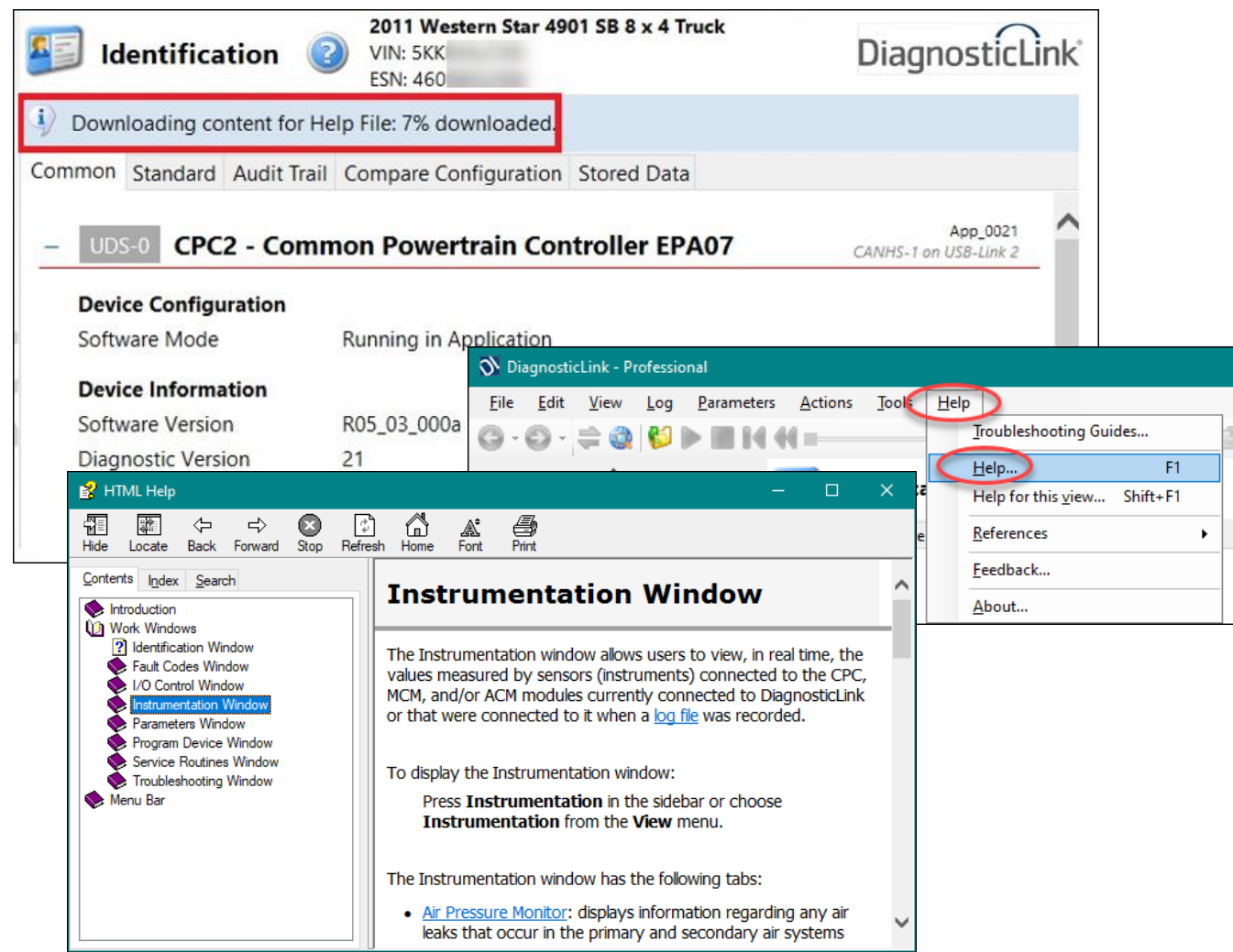
DiagnosticLink® 8.19 Features Summary cont.

- The eDrive Temperature and Speed Monitoring instrument panel has been modified. The number of motors and inverters displayed is dynamically set by the number of Electric Motors (EmotNum parameter) and the number of inverters.
- An AC Clutch Function instrument panel has been added for M2+.
- An EMG MSC Switch inputs panel has been added.
- The HVIL Interlock instrument panel includes revisions. Instruments now dynamically display based on configuration.
- A warning display has been added for routines that have high exhaust temperature.
- The High Voltage Measurement panel includes revisions to display the correct number of BMS and inverters.
- The CBF files have been updated for powertrain, chassis, EMG powertrain, ECPC01T for R23.3 final 2, and SAS03T.

Help File Download Feature

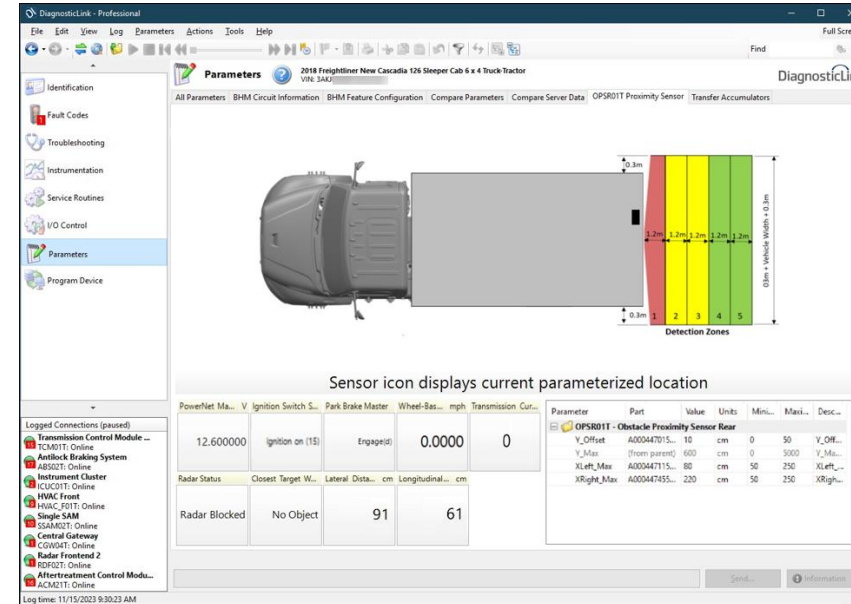
DRIVING THE UPTIME REVOLUTION

- Upon the initial install, when a server connection is established, DiagnosticLink® will now download the help file from a server location.
- This will provide better support, allowing the help file to be updated independently of DiagnosticLink® releases as well as a smaller DiagnosticLink MSI installer.
- The help file download progress will be displayed when a new help file is released.



OPSR01T Proximity Sensor Panel

- The OPSR01T Proximity Sensor panel is used to monitor and troubleshoot the proximity sensor.
- The black rectangle is positioned on the selected parameter values.



Parameter	Part	Value	Un...	Mini...	Maxi...	Description
OPSR01T - Obstacle Proximity Sensor Rear						
Y_Offset	A0004470156-001	10	cm	0	50	Y_Offset defines the longitudinal inset distance from the rear en...
Y_Max	(from parent)	600	cm	0	5000	Y_Max corresponds to the maximum longitudinal detection war...
XLeft_Max	A0004471156-001	80	cm	50	250	XLeft_Max defines the lateral distance between the center of the...
XRight_Max	A0004474556-001	220	cm	50	250	XRight_Max defines the lateral distance between the center of th...

Trailer Lights Panel Removed for eM2

- The Trailer Lights panel has been removed for eM2 (not applicable).

Trailer Lights		Utility Lamps	Windshield Wiper/Washer	XMC - Digital Pinouts
Trailer Lights				<input type="checkbox"/> <input type="checkbox"/> Return Control to Vehicle
I/O Interlocks	Trailer Lights Monitor		Trailer Lights Output	
Park Brake		STATUS		OUTPUT
SET	Trailer Power Switch Request	Signal not available	Tail Lamp Trailer	OFF ON OFF
or	Trailer Power Switch Response	Off	Stop Lamp Trailer	OFF ON OFF
Vehicle Speed mph	Trailer Work Light Request	Signal not available	Turn Lamp Trailer Left	OFF ON OFF
0.0000	Trailer Work Light Response	Off	Turn Lamp Trailer Right	OFF ON OFF
	PowerNet Management System Voltage	OK		


Updates/ Enhancements to EMobility Panels

- Updates/enhancements included to eMobility panels to show the correct number of BMS:
 - HV measurement
 - HV Battery Safe to Ship
 - Battery Management
 - Isolation resistance measurement
 - DC/DC converter
 - HV Battery State of Health

High Voltage Measurement

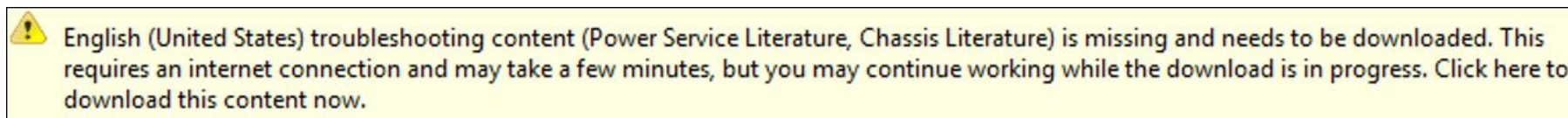
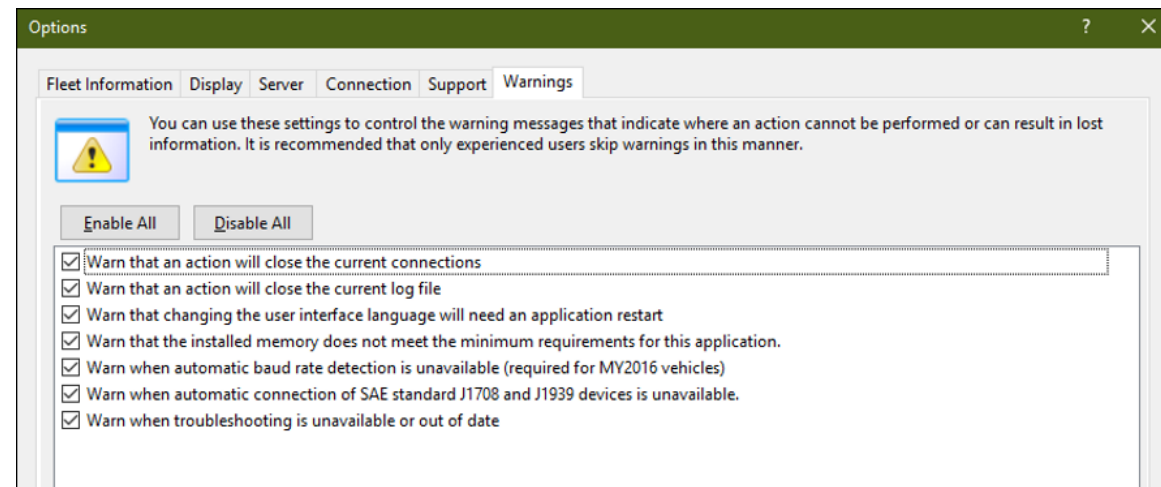
WARNING: ELECTRICAL SHOCK
 To avoid injury from electrical shock, do not rely on voltages displayed by DiagnosticLink®. These values can be in error and should only be used for diagnosis. Some components may retain a high voltage charge, so always verify the decommissioning procedure has been completed correctly and electrical components are fully discharged, before handling (Reference the DTNA Vehicle Decommissioning Checklist).

BMS 1	V	25.00	PTI Inverter 1	V	12.00
BMS 2	V	12.00	PTI Inverter 2	V	50.00
BMS 3	V	50.00			
BMS 4	V	50.00	DCL - DC/DC Converter	V	20.00
BMS 5	V	12.00	Battery PTC 1	V	14
BMS 6	V	50.00	Battery PTC 2	V	5
			Cab PTC 1	V	12
			Cab PTC 2	V	10
			EAC - Electric Air Compressor	V	50
			ERC - Electric Refrigerant Compressor	V	250

 OTF HV Readout: Procedure in progress High Voltage Measurement

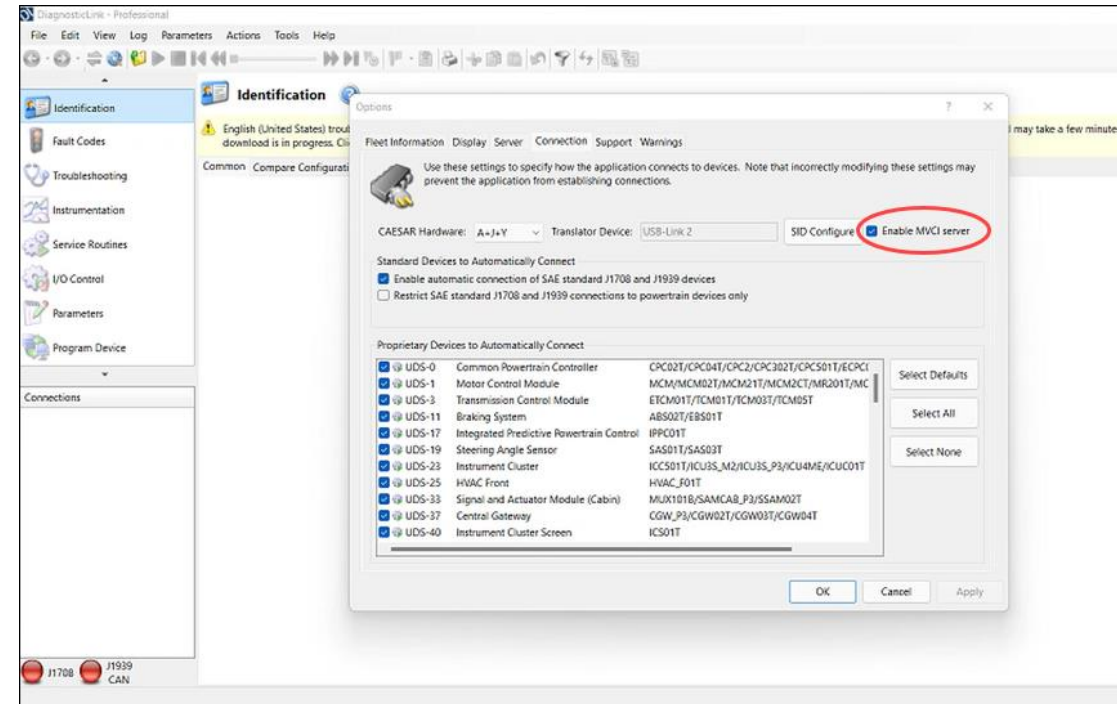
Warning Message for Individual Manuals

- The warning message configuration for individual manuals have been replaced with one generic message.
- When checked, DiagnosticLink® will display the yellow warning banner.



Enable MVCI Server Checkbox

- The 'Enable MVCI Server' checkbox is present and checked for DiagnosticLink® Professional.
- This feature is required to connect to future ECUs



Override of Display Precision

- The override of display precision is allowed where diagnostic instrument panel data content is inappropriate for aftersales use cases.
- The mapping file can be updated for DiagnosticLink® to modify precision value of a decimal amount from qualifier on an Instrumentation panel.

Before

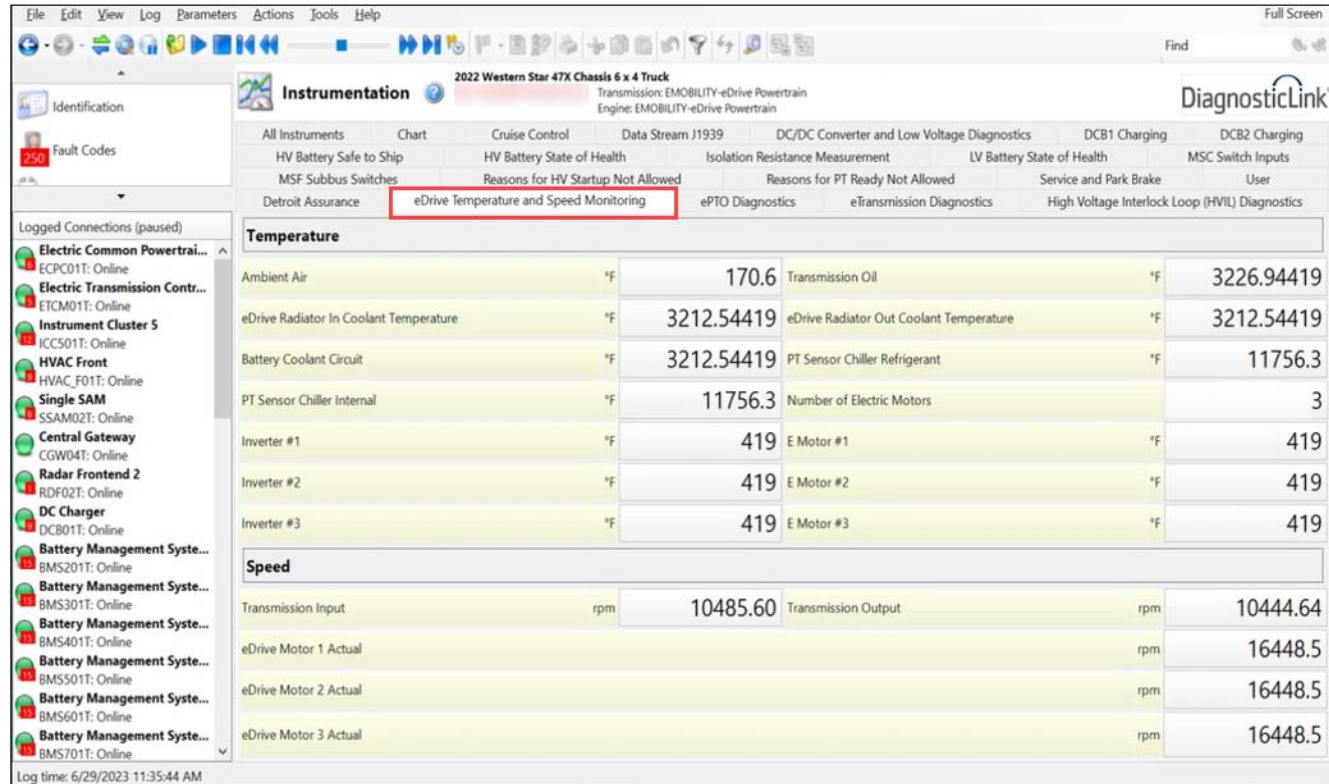
DC/DC Converter and Low Voltage Diagnostics		
CL15 at eCPC	V	27.636320
CL30 at eCPC	V	27.672260

After

DC/DC Converter and Low Voltage Diagnostics		
CL15 at eCPC	V	27.64
CL30 at eCPC	V	27.67

eDrive Temp and Speed Monitoring Panel

- The eMobility Instrument panel has been modified for eP4/eM2.
- The number of motors and inverters displayed is dynamically set by the number of Electric Motors (EmotNum parameter) and the number of Inverters.



The screenshot shows the DiagnosticLink Instrumentation interface for a 2022 Western Star 47X Chassis 6 x 4 Truck. The 'eDrive Temperature and Speed Monitoring' tab is selected and highlighted with a red box. The interface displays real-time data for temperature and speed across various components.

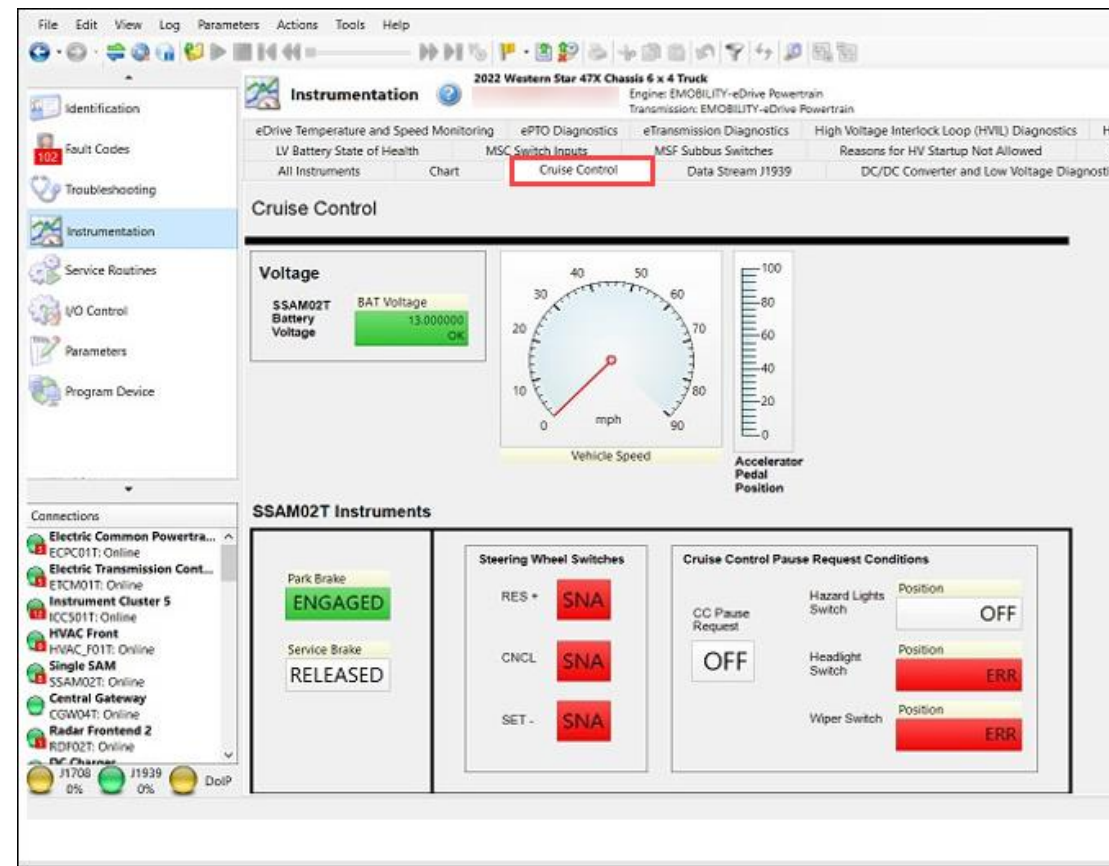
Temperature					
Ambient Air	*F	170.6	Transmission Oil	*F	3226.94419
eDrive Radiator In Coolant Temperature	*F	3212.54419	eDrive Radiator Out Coolant Temperature	*F	3212.54419
Battery Coolant Circuit	*F	3212.54419	PT Sensor Chiller Refrigerant	*F	11756.3
PT Sensor Chiller Internal	*F	11756.3	Number of Electric Motors		3
Inverter #1	*F	419	E Motor #1	*F	419
Inverter #2	*F	419	E Motor #2	*F	419
Inverter #3	*F	419	E Motor #3	*F	419

Speed					
Transmission Input	rpm	10485.60	Transmission Output	rpm	10444.64
eDrive Motor 1 Actual	rpm	16448.5			
eDrive Motor 2 Actual	rpm	16448.5			
eDrive Motor 3 Actual	rpm	16448.5			

Log time: 6/29/2023 11:35:44 AM

eMobility Cruise Control Panel

- A new Cruise Control panel has been added for eCascadia and eM2 troubleshooting.



eMobility ePTO Diagnostics

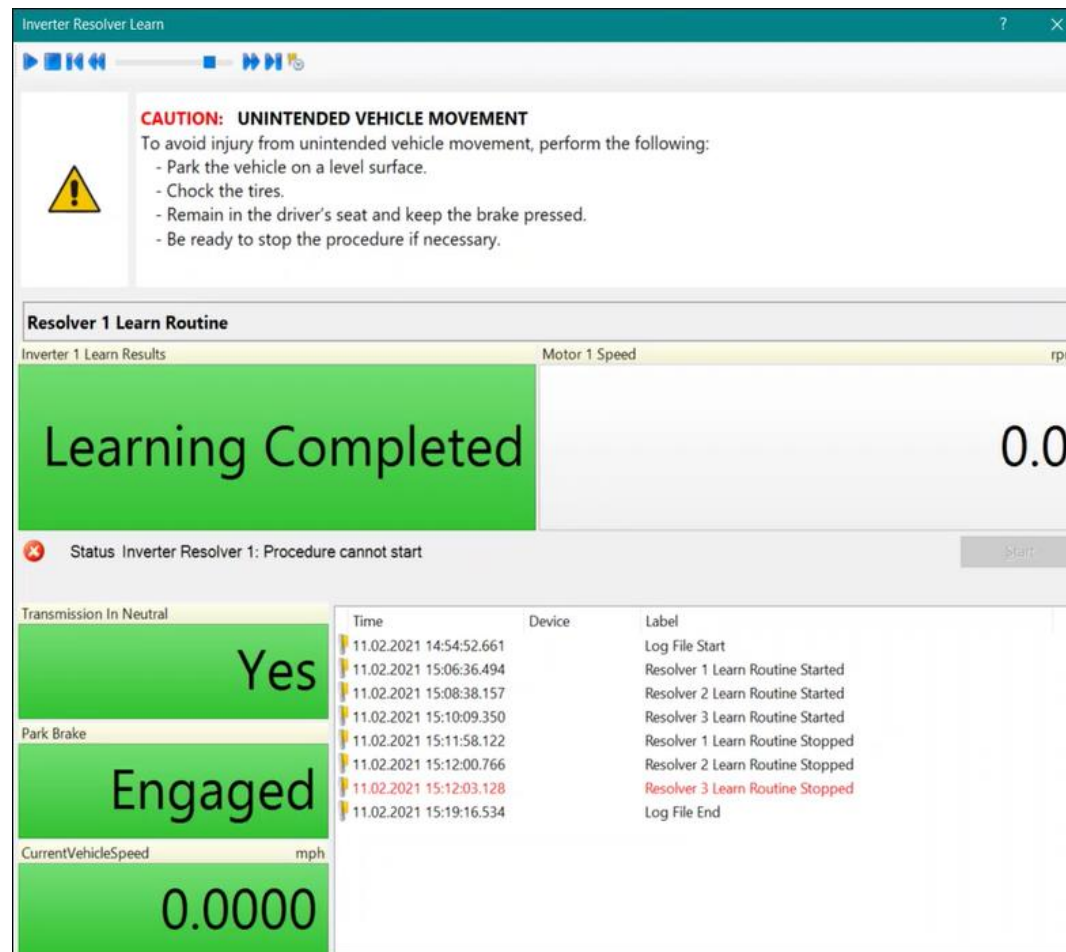
DRIVING THE UPTIME REVOLUTION

- A new ePTO Diagnostics Instrument panel has been added for eMobility (eP4/eM2) diagnostics.

Inverter Resolver Learn Procedure

DRIVING THE UPTIME REVOLUTION

- The Inverter Resolver Learn Procedure Service Routine panel has been modified for eMobility (eP4/eM2).
- The number of Resolver Learn Routines displayed is dynamically set by the number of Electric Motors (EmotNum parameter).



CAUTION: UNINTENDED VEHICLE MOVEMENT
To avoid injury from unintended vehicle movement, perform the following:

- Park the vehicle on a level surface.
- Chock the tires.
- Remain in the driver's seat and keep the brake pressed.
- Be ready to stop the procedure if necessary.

Resolver 1 Learn Routine

Inverter 1 Learn Results Motor 1 Speed rpm

Learning Completed

0.0

Status: Inverter Resolver 1: Procedure cannot start Start

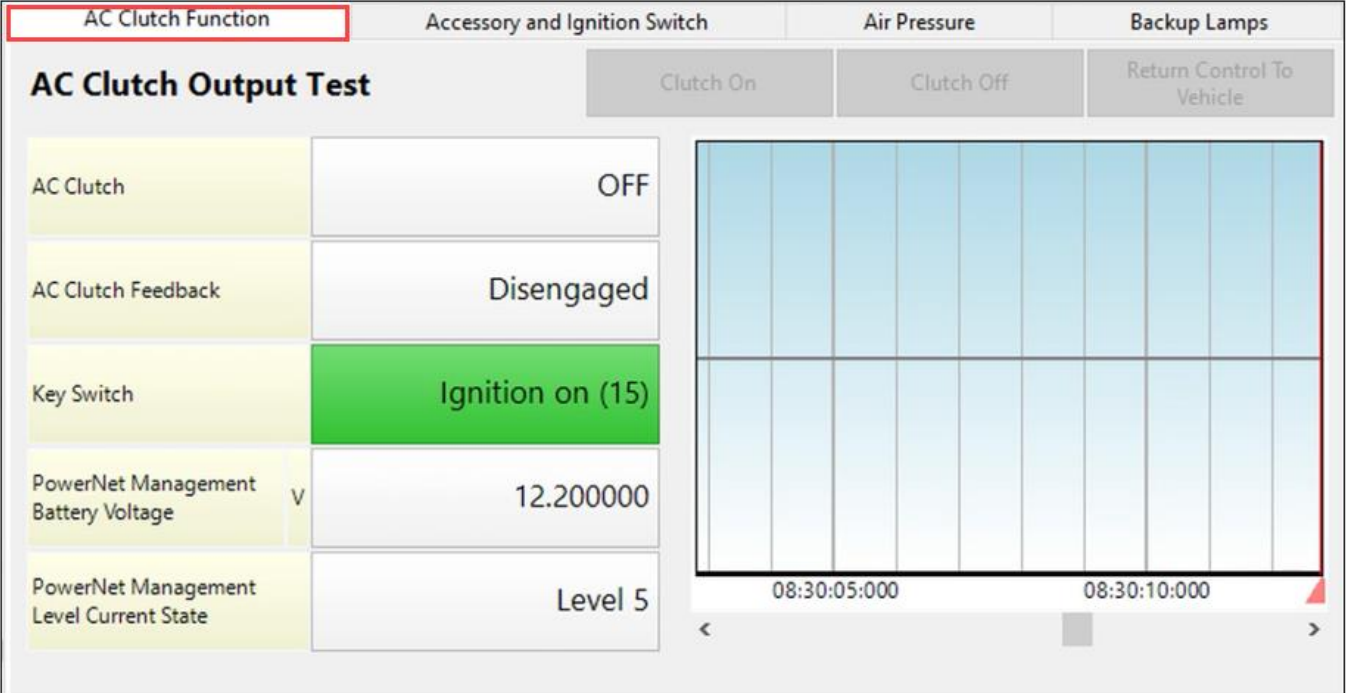
Transmission In Neutral	Time	Device	Label
Yes	11.02.2021 14:54:52.661		Log File Start
	11.02.2021 15:06:36.494		Resolver 1 Learn Routine Started
	11.02.2021 15:08:38.157		Resolver 2 Learn Routine Started
	11.02.2021 15:10:09.350		Resolver 3 Learn Routine Started
	11.02.2021 15:11:58.122		Resolver 1 Learn Routine Stopped
	11.02.2021 15:12:00.766		Resolver 2 Learn Routine Stopped
	11.02.2021 15:12:03.128		Resolver 3 Learn Routine Stopped
	11.02.2021 15:19:16.534		Log File End

Park Brake Engaged

CurrentVehicleSpeed mph 0.0000

AC Clutch Function Panel

- A new AC Clutch Function Instrumentation panel has been added for M2+.
- The instrumentation and controls are sourced from SSAM02T for M2+.



AC Clutch Function		Accessory and Ignition Switch	Air Pressure	Backup Lamps
AC Clutch Output Test		Clutch On	Clutch Off	Return Control To Vehicle
AC Clutch		OFF		
AC Clutch Feedback		Disengaged		
Key Switch		Ignition on (15)		
PowerNet Management Battery Voltage	V	12.200000		
PowerNet Management Level Current State		Level 5		

Graph showing a timeline from 08:30:05:000 to 08:30:10:000. The graph area is currently blank.

EMG MSC Switch Inputs Panel

- A new EMG MSC Switch Inputs panel has been added for eMobility.

Isolation Resistance Measurement	MSC Switch Inputs	MSF Subbus Switches
MSC Switch Inputs: Hazard, Rotary, Stalk and Steering Wheel Switches		
Left Stalk Switch Position		
Turn Left	Turn Right	Wiper Switch
OFF	OFF	OFF
Right Stalk Switch Position		
Auto/Manual	Neutral State	Driving Mode
OFF	ON	Neutral
Flash-to-Pass	High Beams	Windshield Washer
OFF	OFF	OFF
Headlamps / Markers		
Main Lamps		
OFF		
Fog Lamps		
SNA		
Hazard Lights		
Switch Position		
OFF		

High Voltage Interlock Loop (HVIL) Diagnostics

DRIVING THE UPTIME REVOLUTION

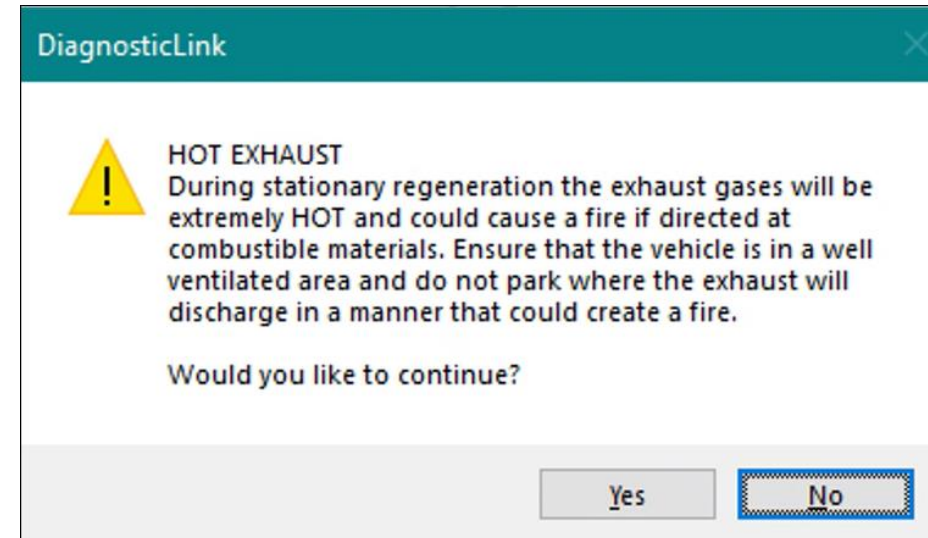
- The HVIL Interlock Loop panel includes revisions. Instruments now dynamically display based on configuration:
 - Inverters (e.g., 2 inverters shown).
 - Batteries/Layers (e.g., 3 batteries 2 layers shown).
- DC Chargers now display aggregate of fault codes 2DB700, 2DB900, 2DBA00 (Active = any fault present).

High Voltage Interlock Loop (HVIL) Diagnostics

Global	Battery Management System
Global HVIL State HVIL Complete	BMS 1 HVIL State HVIL Complete
	BMS 2 HVIL State HVIL Complete
	BMS 3 HVIL State HVIL Complete
	BMS 4 HVIL State HVIL Complete
	BMS 5 HVIL State HVIL Complete
	BMS 6 HVIL State HVIL Complete
Inverters	
Inverter 1 HVIL State HVIL Complete	
Inverter 2 HVIL State HVIL Complete	
DC Chargers	
DCB1 HVIL Fault Not Active	

Warning Display Added for High Exhaust Temp.

- A warning display has been added to DiagnosticLink® for Service Routines with high exhaust temperature.
- “HOT EXHAUST” warning dialog has been added to all applicable panels:
 - Parked Regeneration
 - NOx Verification Procedure
 - Desaturation Routine
 - SCR Efficiency Test
 - Perform Performance Check – Low Temp ATD
- Acknowledgement recorded in log file.



DiagnosticLink® 8.16 and 8.17 To be Sunset

- In the past, DiagnosticLink® was supported up to *two* versions back.
- Due to the complexity and increased number of logical controllers, the number of supported versions of will be reduced to one version back starting with the release of DiagnosticLink® 8.19.
- On January 9th, 2024, an update patch will be released which will include a reminder for all users of versions 8.16 and 8.17 to update to version 8.18 or later.
- On **February 6, 2024**, DiagnosticLink® versions 8.16 and 8.17 will be sunset.
- It is imperative to inform your customers to update their workstations to the latest version to maintain a working copy of the tool.

Tech Service Suite (TSS) Updates

12/5/2023

Cummins INSITE License Renewal 4/1/2024

- To help improve the renewal process, a change request has been submitted to Cummins in which the Cummins INSITE licenses can be extended by a year. This means the expiration dates of the existing Cummins INSITE licenses can potentially be extended from the current expiration date of 4/1/2024 to **4/1/2025**.
- More details to follow on the progress of the change request .

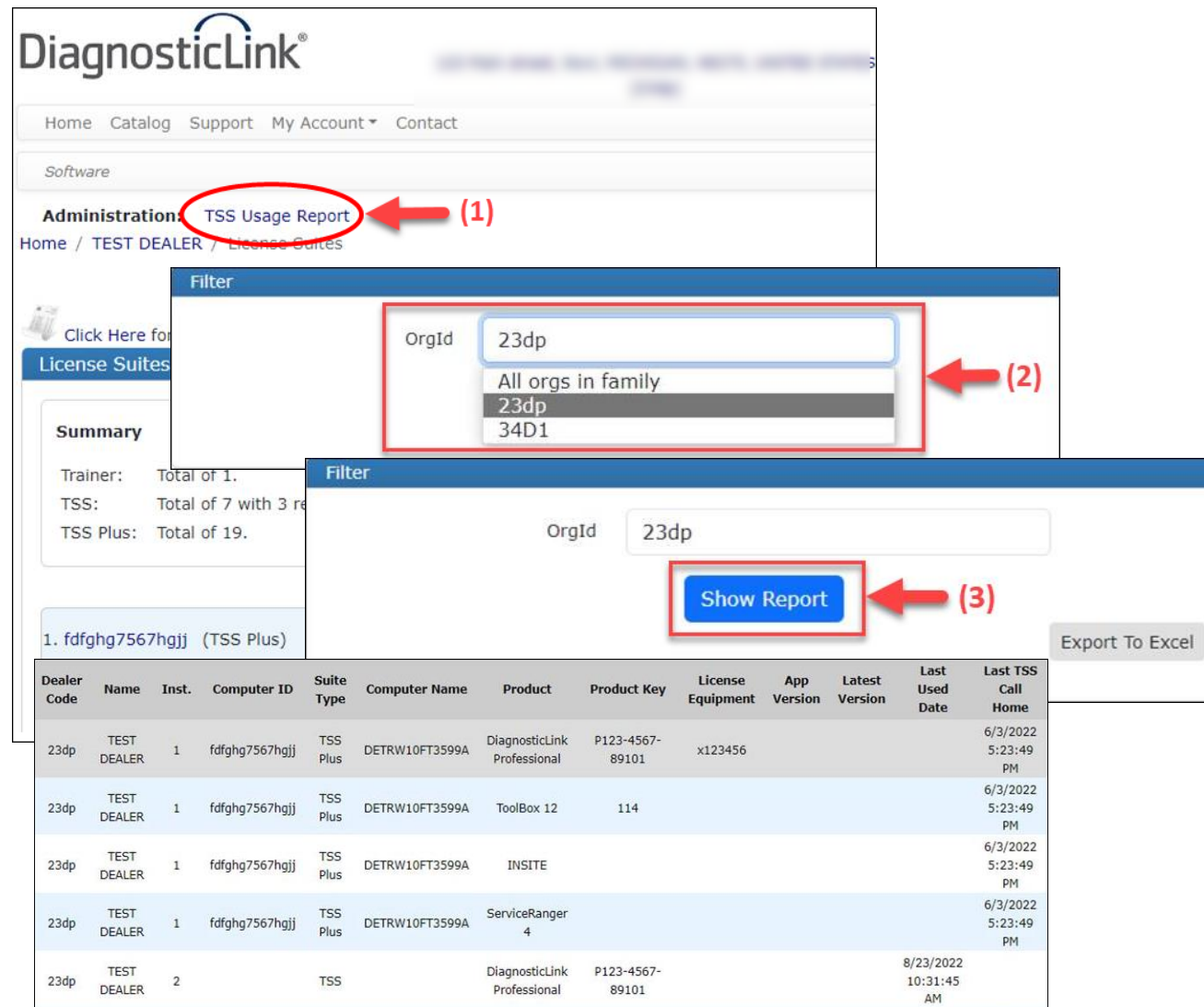
TSS Usage Reports

- The *TSS Usage Report* will be accessible to order system IT Administrators in the next web site update (eta January 2024).The report provides TSS/TSS Plus license usage information
- To access the report, the order system IT Administrator must logon to the order site.

- Click *TSS Usage Report*.
- Select the dealer code or *All orgs in family*.
- Click *Show Report*.

For Support, email:

DTNASSD@Daimlertruck.com.



The screenshot shows the DiagnosticLink web application interface. The navigation menu includes Home, Catalog, Support, My Account, and Contact. The main content area is titled 'Administration' and features a 'TSS Usage Report' link, which is circled in red with an arrow labeled (1). Below this, there is a 'Filter' section with an 'OrgId' dropdown menu. The dropdown menu is open, showing options: '23dp', 'All orgs in family', '23dp', and '34D1'. The 'All orgs in family' option is highlighted, and the dropdown is circled in red with an arrow labeled (2). Below the dropdown, there is a 'Show Report' button, which is also circled in red with an arrow labeled (3). To the right of the 'Show Report' button is an 'Export To Excel' button. Below the filter section, there is a 'Summary' section with the following information:

Trainer: Total of 1.
TSS: Total of 7 with 3 re
TSS Plus: Total of 19.

Below the summary, there is a list of items:

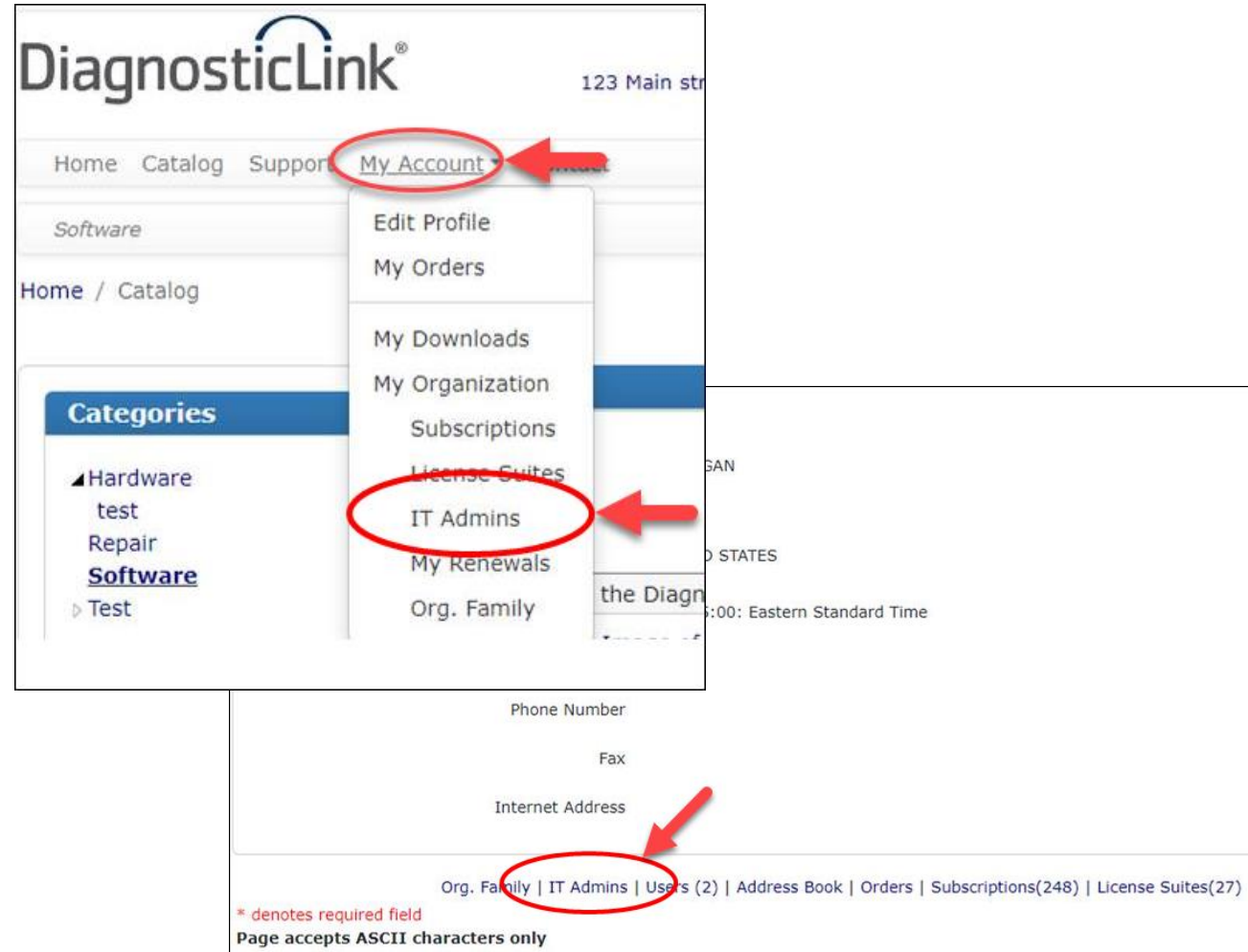
1. fdfghg7567hgjj (TSS Plus)

At the bottom of the screenshot, there is a table with the following columns: Dealer Code, Name, Inst., Computer ID, Suite Type, Computer Name, Product, Product Key, License Equipment, App Version, Latest Version, Last Used Date, and Last TSS Call Home. The table contains five rows of data:

Dealer Code	Name	Inst.	Computer ID	Suite Type	Computer Name	Product	Product Key	License Equipment	App Version	Latest Version	Last Used Date	Last TSS Call Home
23dp	TEST DEALER	1	fdfghg7567hgjj	TSS Plus	DETRW10FT3599A	DiagnosticLink Professional	P123-4567-89101	x123456				6/3/2022 5:23:49 PM
23dp	TEST DEALER	1	fdfghg7567hgjj	TSS Plus	DETRW10FT3599A	ToolBox 12	114					6/3/2022 5:23:49 PM
23dp	TEST DEALER	1	fdfghg7567hgjj	TSS Plus	DETRW10FT3599A	INSITE						6/3/2022 5:23:49 PM
23dp	TEST DEALER	1	fdfghg7567hgjj	TSS Plus	DETRW10FT3599A	ServiceRanger 4						6/3/2022 5:23:49 PM
23dp	TEST DEALER	2		TSS		DiagnosticLink Professional	P123-4567-89101				8/23/2022 10:31:45 AM	

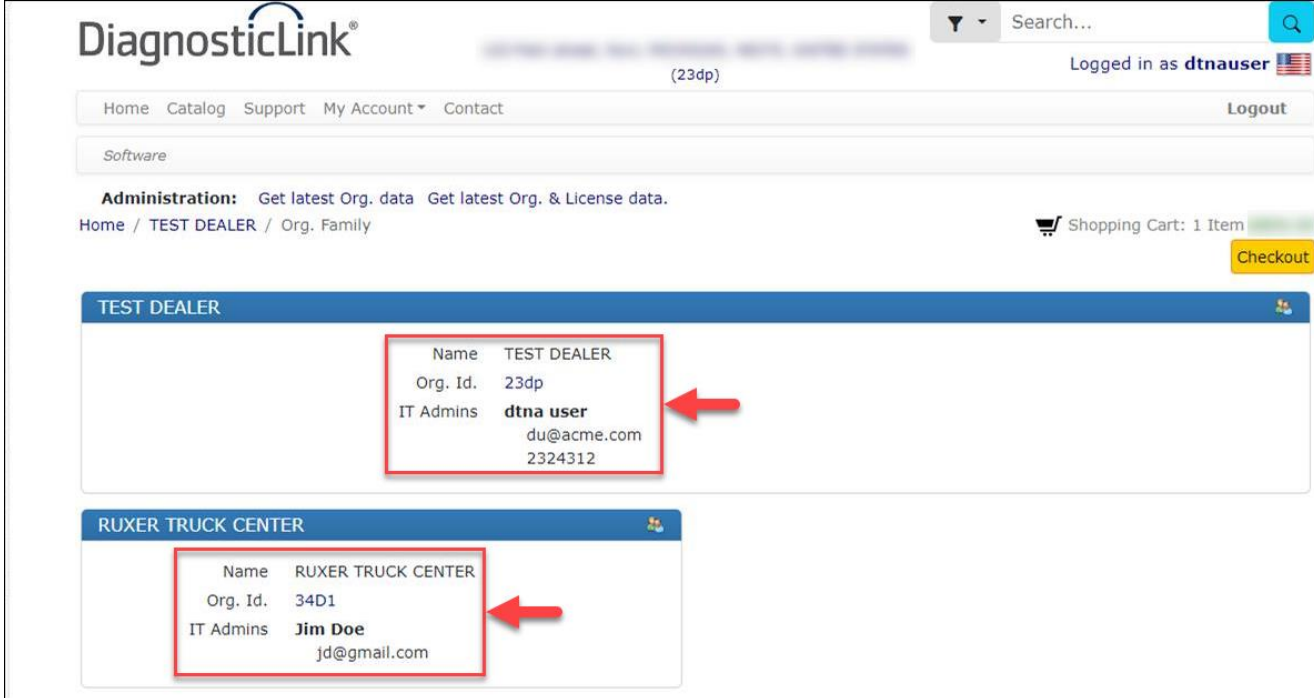
Locate the Order System IT Administrator

- If the order system IT Administrator (Admin) role is assigned to an org family, certain features will be limited to the admin only such as transferring a TSS license suite or upgrading a license suite to TSS Plus.
- To locate your dealer's order system IT admin (if assigned), logon to the ordering site and click *My Account* > *IT Admins* or, click the *IT Admins* link at the bottom of the page when viewing your org.



Locate the Order System IT Administrator (cont.)

- A hierarchy of orgs listing the order system IT Admins will be displayed.



The screenshot shows the DiagnosticLink web application interface. The header includes the DiagnosticLink logo, a search bar, and the user is logged in as 'dtnauser'. The main content area displays a hierarchy of organizations. Two organizations are highlighted with red boxes and red arrows pointing to their IT Admins:

Organization Name	IT Admin Name	IT Admin Email	IT Admin Phone
TEST DEALER	dtna user	du@acme.com	2324312
RUXER TRUCK CENTER	Jim Doe	jd@gmail.com	

Nexiq USB-Link 3 Updates

12/5/2023

Nexiq USB-Link 3 Updates

- The Nexiq® USB-Link 3 device driver update has been made available to download from the [Nexiq.com](https://www.nexiq.com) product site:

Release Notes:

- Added draft RP1210 and J2534 DoIP Support
- Added draft RP1210 and J2534 CAN FD / ISO15765 FD Support
- Added ability to update gray PLC adapter firmware



Thank you

12/5/2023