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DiagnosticLink 8.12 Features
Service Diagnostics & Tools

Daimler Trucks

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DiagnosticLink 8.12 Release Features Summary :

- **Full support included for Heavy Duty (HD) engines (DD13/15/16) for the MY2020 ECU software release.**
- **Full support included for Medium Duty (MD) engines (DD5 and DD8) for the MY2020 ECU software release**
- **Extended support included for New Cascadia units (ACM3+MCM21T+CPC5):**
  - MCM21T – m17.1.1.203
  - ACM301T - s8.50.0.203
  - CPC501T – R19.32.00
- Includes support for diagnostic panels
  - ACM3 programming
  - CPC5 software programming

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DiagnosticLink 8.12 Release Features Summary (Cont.)

- **Extended support for New Cascadia**
  - Includes support for ICC5 programming (Handling of Large file download support in zip files and CFF files)
  - Panel updates covered:
    - APS3 calibration to support sensor offset mitigation
    - ABS02T instrumentation panel update to support displaying 5 axles information

- **Support added for CTP updates - flash over the airwave (FOTA)**
  - CTP Initialization panel updates for capturing the VIN write, sending up configuration data etc.
  - CTP GPRS config panel
  - CTP Factory Reset panel

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DiagnosticLink 8.12 Release Features Summary (Cont.)

- **Enhancements or extended support added for the Guided Diagnostic work**
  - Enable TechLane radio button without a truck connection
  - Send TechLane fault codes in the prioritized order
  - Included DiagnosticLink tool version for Troubleshooting report uploaded to the TechLane system
  - Included the DiagnosticLink version and the language being used by the runtime as a metadata information for the TechLane server

- **Included support for warranty work analysis/customer driven enhancements**
  - Package programming support included for powertrain related ECUS
  - Support engine troubleshooting manuals from DTNAConnect
  - Automated the download of updating the troubleshooting content in background
  - Program Device description for multiple parameter settings
  - If a panel shows missing data because an ECU is missing, indicate missing ECU name in panel

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DiagnosticLink 8.12 Release Features Summary (Cont.)

- Program Device new UI should attempt to match target dataset part numbers to correct flash area / EcuInfo item
- Compare Parameters screen indicates incorrect variant
- Support for Drumroll 64-bit
- CTP Initialization Panel Improvements
- New “Telematics” Actions Menu
- TechLane Support Improvements
- DiagnosticLink digital signature
- Create and Install a Test panel in DL for troubleshooting connection issues to server
- Revise error messages shown in DiagnosticLink failure dialog when connection to DLBroker fails
- Improvements to Toolbar menu buttons in the main screen
- CTP GPRS Configuration Panel
- Upcoming Tool Release Dates

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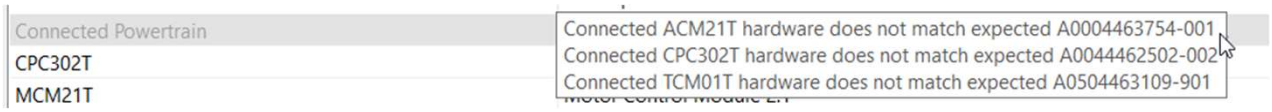
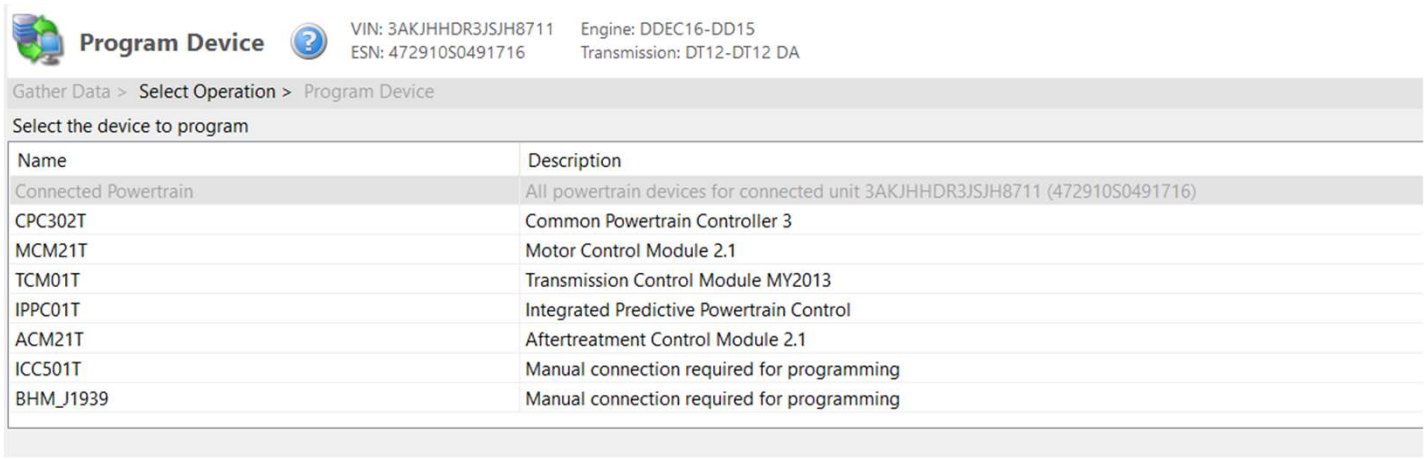
Program Device Package Programming (powertrain)

- Supports programming of all powertrain controllers with a single operation
- To begin programming all relevant controllers must be connected and have valid hardware for the data downloaded from the server
- New UI for programming that allows the user to see the progress of multiple controller programming





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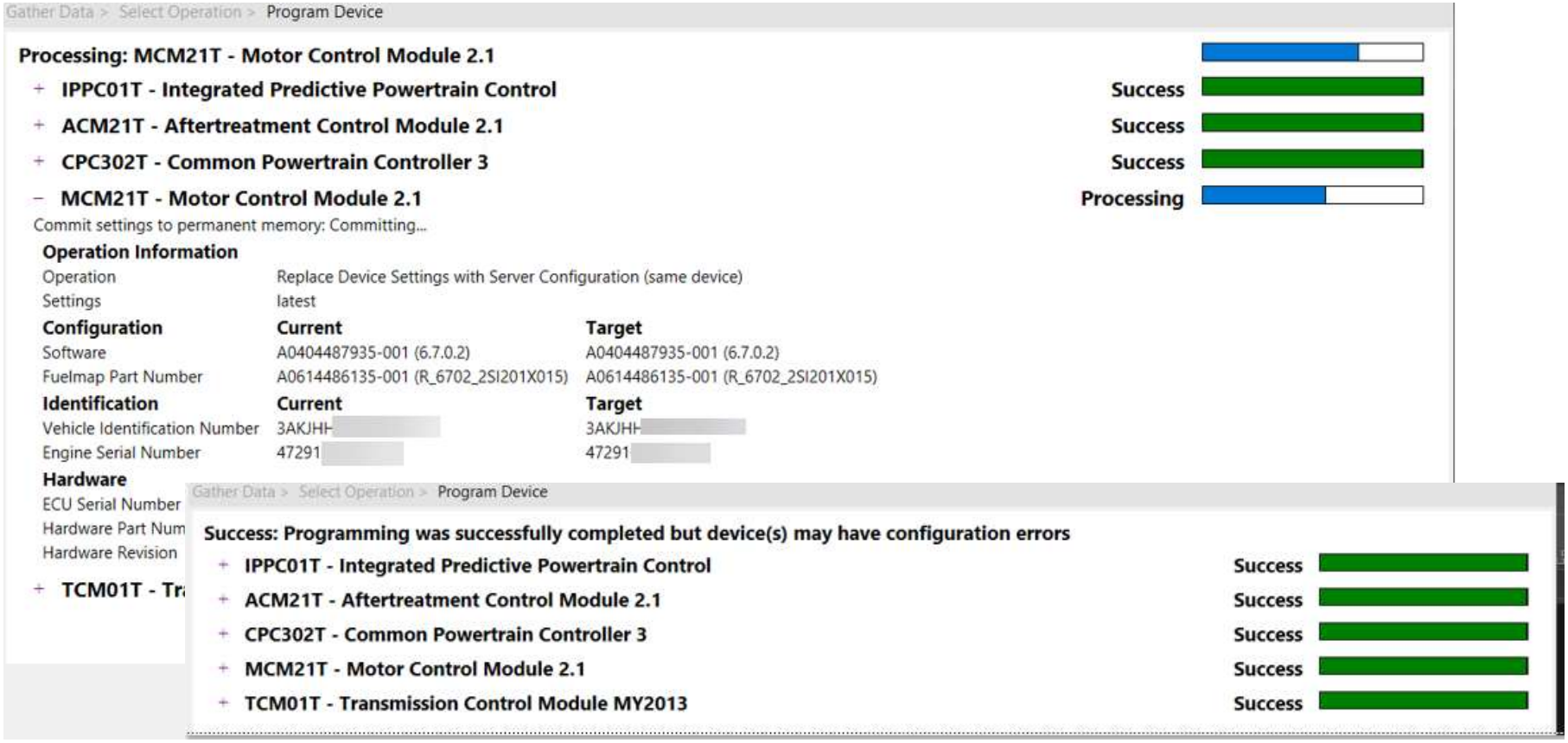
Program Device Package Programming (powertrain)



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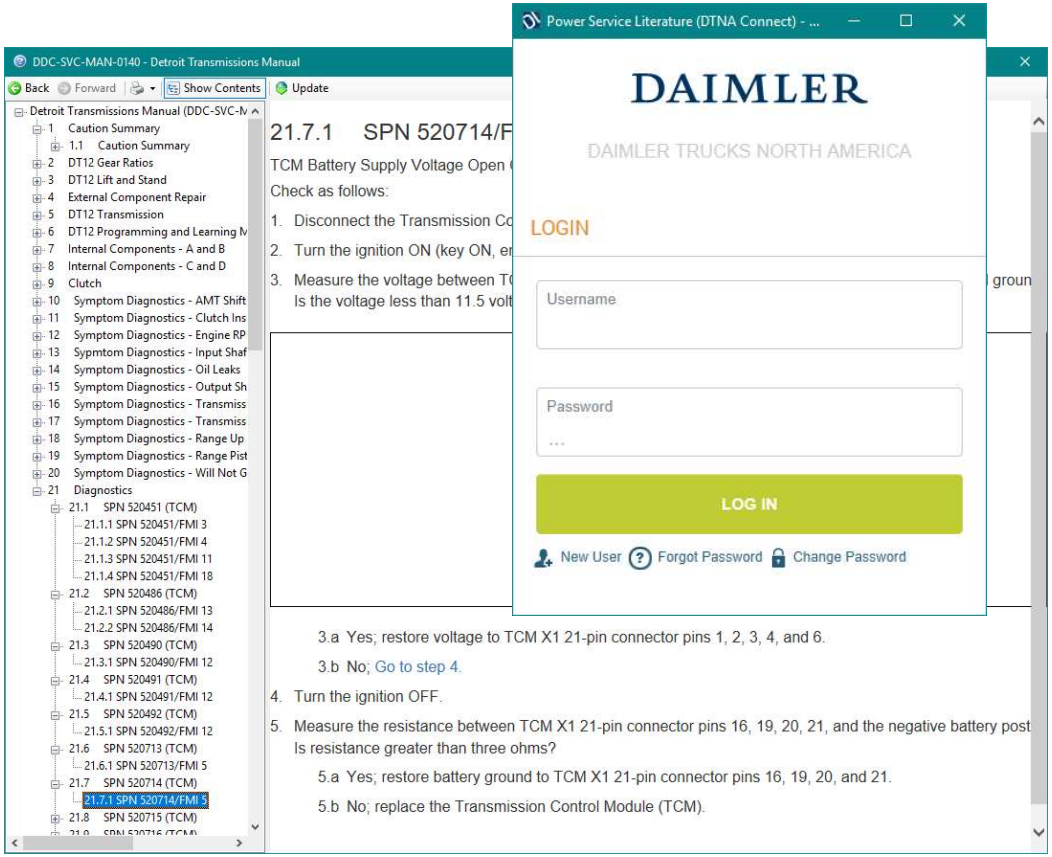
Support Engine manual downloads from DTNA Connect

- In preparation for the sundown of PSL the powertrain technical literature / troubleshooting manual content is now downloaded from DTNA connect.
- This solution is similar to that used for the chassis manuals and involves the scraping of the website itself.
- After development of the feature, the content was migrated to a new server. This required updates to our scraping algorithm.



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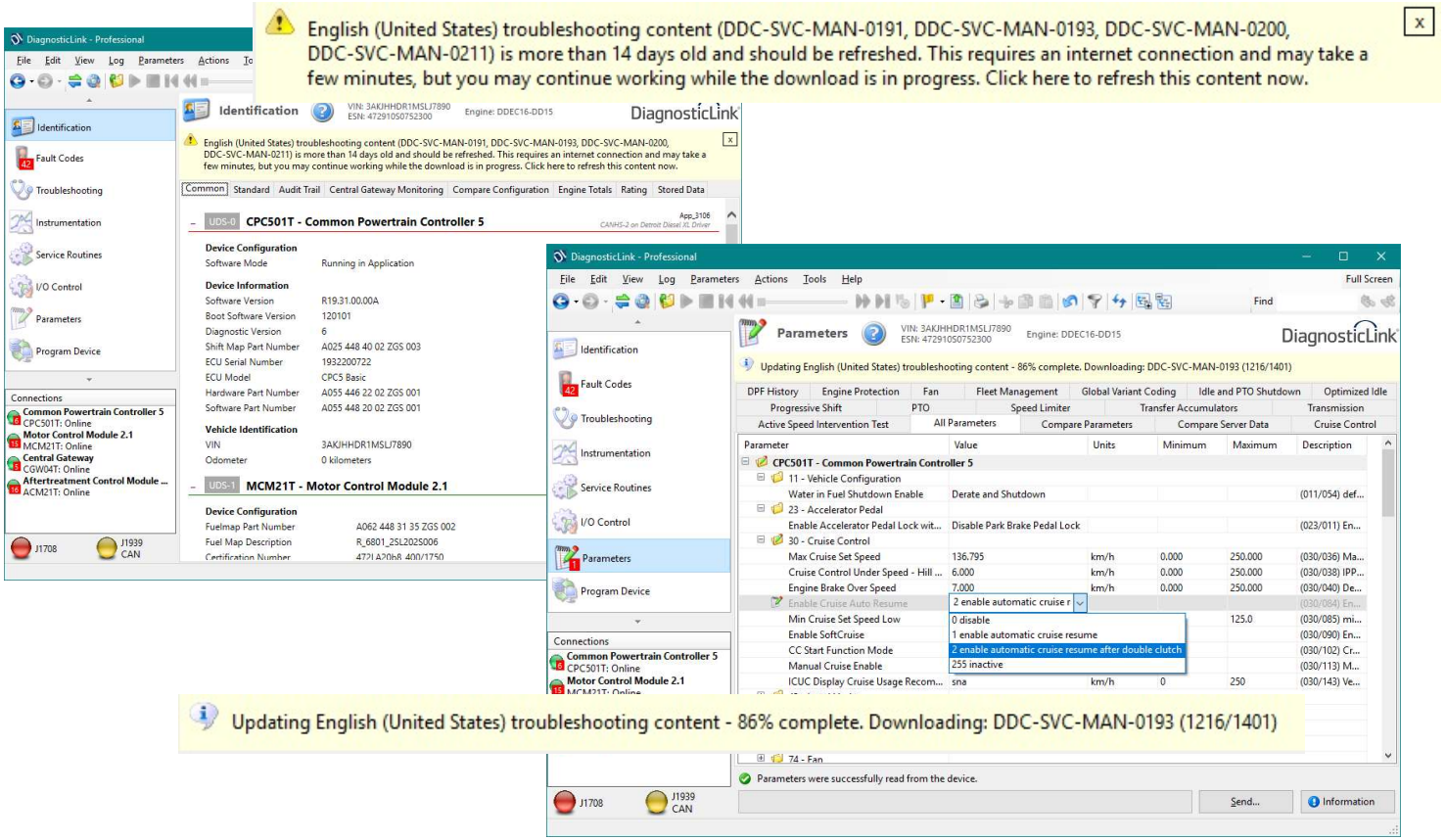
Download Troubleshooting content in the background

- DiagnosticLink has had the ability to update troubleshooting content from the server for some time.
- This required the user to wait while the content downloads.
- In this release the behavior is changed such that the user may continue using the tool while the content is downloaded in the background.
- The status of the download is indicated in the yellow bar.



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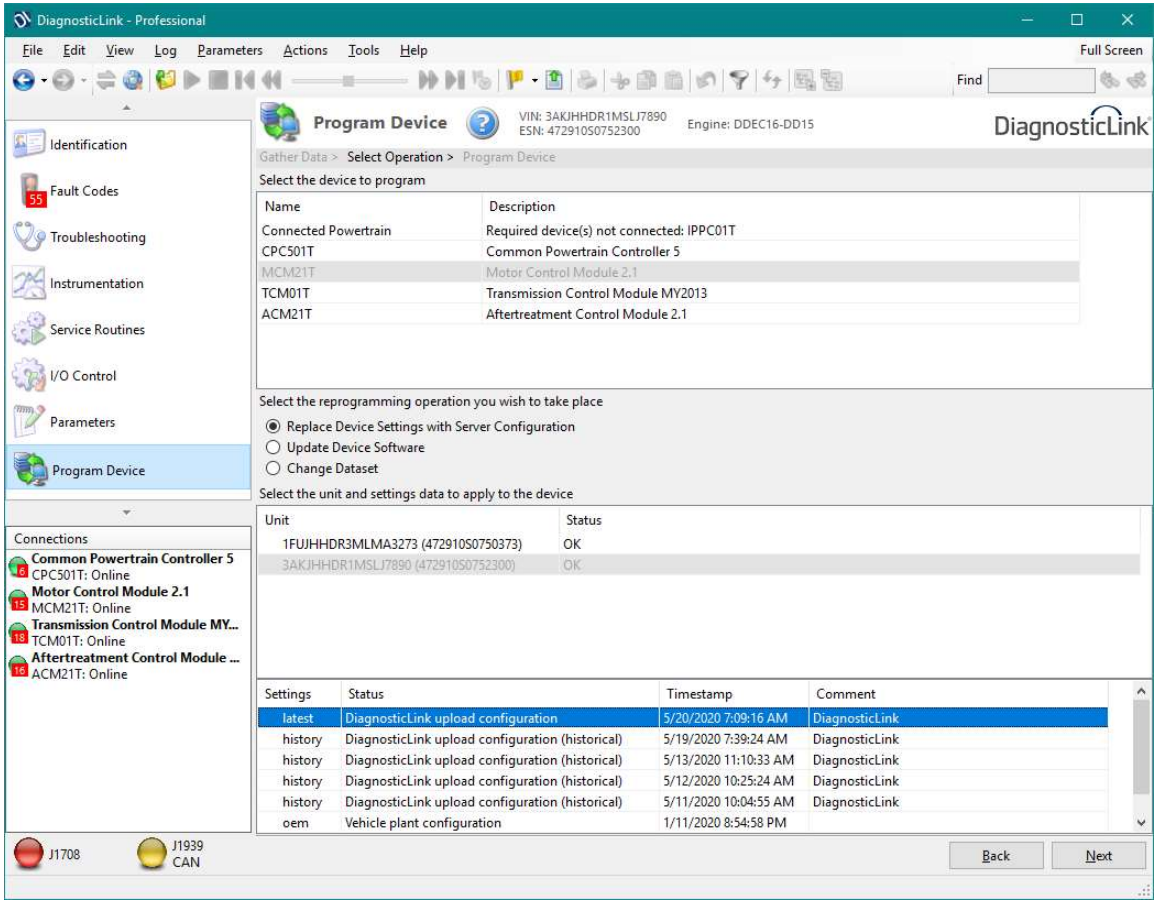
Program Device – description for multiple parameter settings

- The RESERVOIR (previously DEPOT) system is able to provide up to five sets of parameter settings content to DiagnosticLink, for powertrain devices.
- For each of those settings files, this ETI derives and displays a descriptive status information based on the type of setting indicated by the server.



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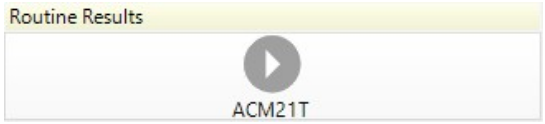
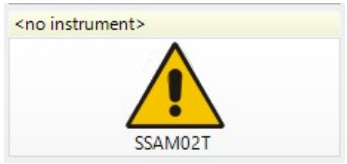
If a panel shows missing data (warning triangle) because an ECU is missing, indicate missing ECU name in panel

- Information displayed in DiagnosticLink can come from multiple sources/devices.
- Where this information is missing it has traditionally been indicated with a warning triangle. A tooltip/mouse-over provides more information as necessary.
- It was requested to add some of that information (the ECU name) to the main user interface itself so that the problematic device(s) can be identified at a glance.
- We expand on that requirement by also providing additional graphics that indicate the reason for the missing data.



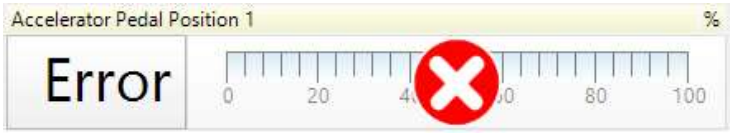
Grey arrow: data will become available once routine is run

Spinning wheel: device connected, waiting for pending data



Warning triangle: data not available/device not connected

Grey X: device connected but item not defined in variant



Red X: data available but out of scaling range

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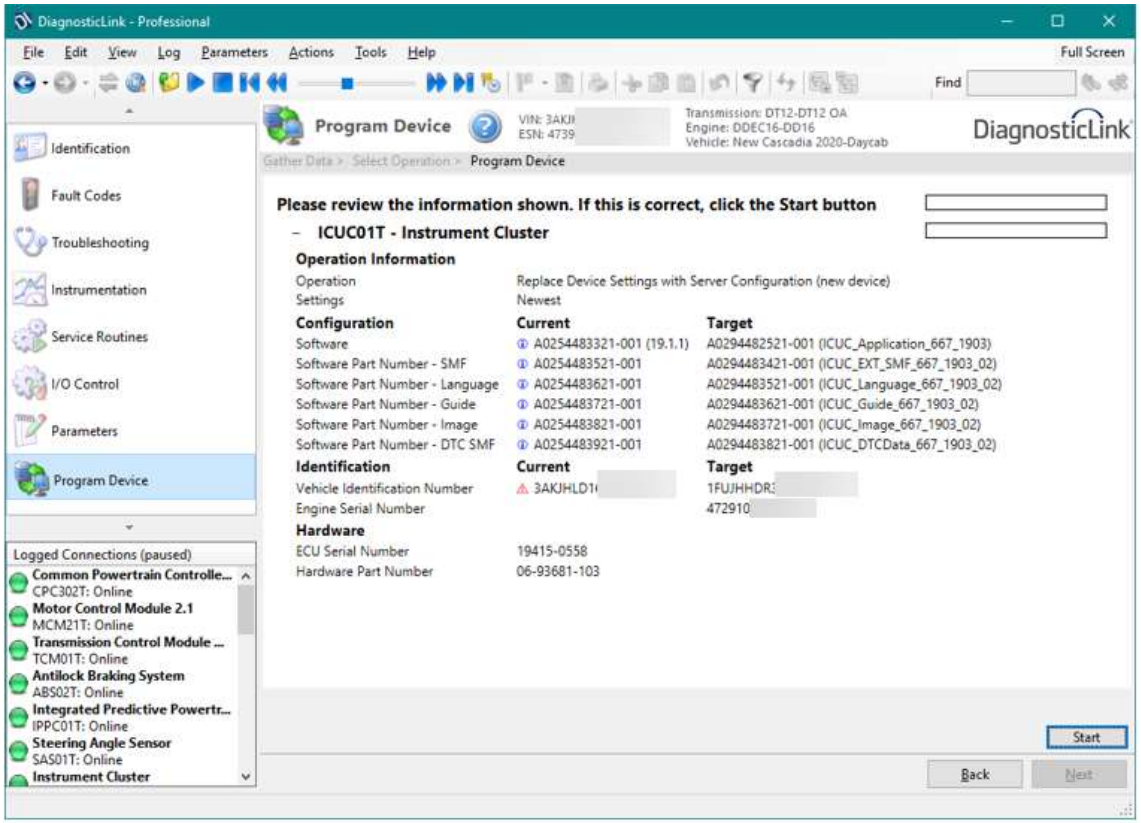
Program Device new UI should attempt to match target dataset part numbers to correct flash area / EcuInfo item

- Where an ECU requires multiple datasets to be programmed, these are not received from the server with any context (i.e. as to which flash area they relate to).
- In the new Program Device UI we show the Current and Target information to the user.
- To facilitate this a scheme was devised to allow the tool to match each reported part number with the target flash job/area. The target flash job can then be used to reference the flash data provided from the server.
- This gives a clear indication of exactly what the changes to the ECU will be.



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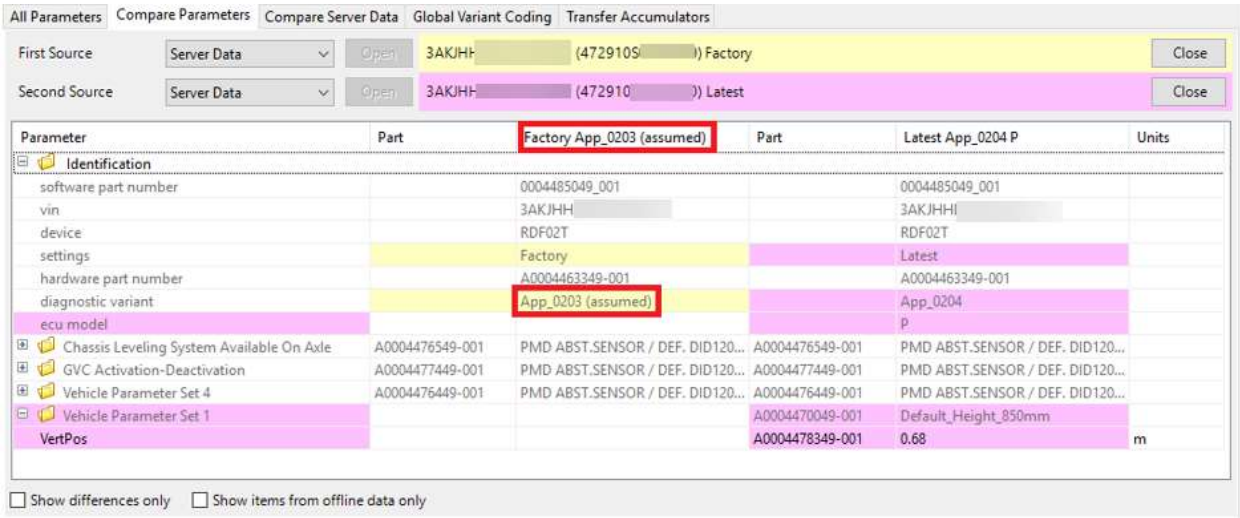
Compare Parameters screen indicates incorrect variant

- Some sources of data for the Compare Parameters screen do not indicate the variant from which the data was captured or created for.
- In order to compare the data, it must be loaded via a diagnostic variant. Where that variant is not available, we have code that makes the best guess at this.
- Where we have guessed at a variant, this is now clearly indicated in the user interface in order to not mislead the user.



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Drumroll x64 build

- In the 8.12 development lifecycle we have taken the steps necessary to build 64-bit versions of all versions of DiagnosticLink. All tools are now built as 32-bit and 64-bit versions.
- A 64-bit version of DiagnosticLink removes the 3GB process space (memory usage) limitation that applies to 32-bit processes. This will in particular be desirable when the MVCI kernel is used more widely and for more ECUs.
- Migration to 64-bit is a big step that comes with some risks and challenges.
  - We have to determine if there is a point at which we can release 64-bit only versions of DiagnosticLink to the field. It may not be practical to distribute and support both 32-bit and 64-bit versions in parallel (server side changes – e.g. ordering system, and for service pack distribution – would be necessary to support that).
  - A 64-bit version of DiagnosticLink can only be installed to a 64-bit version of the operating system. In 8.11SP2 we released a change that provides documentation back to our data mining system (dataloader) that will allow us to analyze what percentage of the DiagnosticLink user base is using a 64-bit operating system.
  - A 64-bit version of DiagnosticLink will require 64-bit RP1210 drivers. To our knowledge, only NEXIQ USB Link 2 and our internal DDXL32 driver (for Vector CAN devices) are provided as 64-bit versions. This may require further discussion with TMC.
  - Not all CBFs have yet been created in a way that is compatible with 64-bit CAESAR.
- As such, the 64-bit builds are currently accessible for internal/development level testing only.

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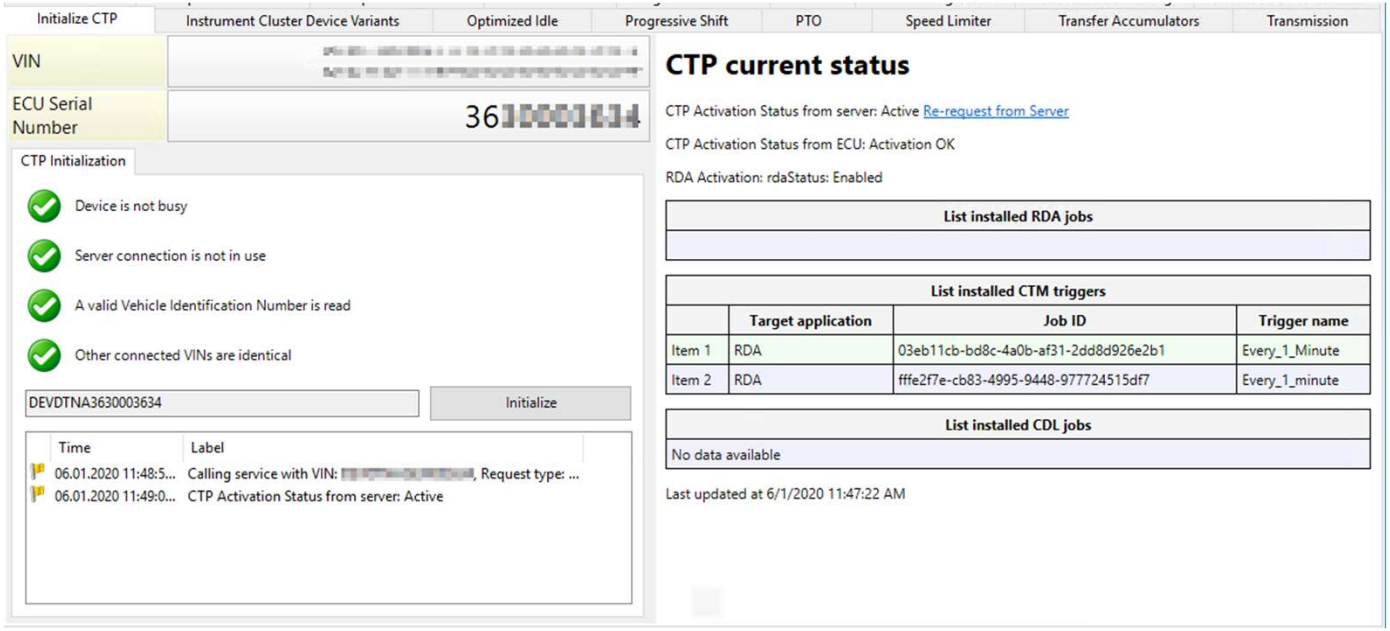
CTP Initialization Panel Improvements

- New service to explicitly register a CTP and give the user immediate feedback if it is not possible
- Better handling of high mileage devices that can no longer have the Vin number changed
- Corrected a number of bugs and corner cases that could prevent a device from completing registration



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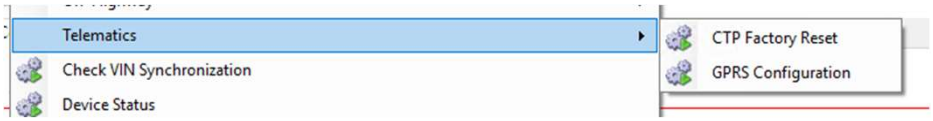
New “Telematics” Actions Menu

- Organized all of the Telematics related content into a single sub menu under the Actions menu



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TechLane Support Improvements

- Include “Major Component” with fault code information
- Include DiagnosticLink version and language used by runtime as metadata for TechLane
- Support download of ADF graphics when filename is not provided by server
- Improve authentication error handling when user does not have proper permissions to download files from TechLane file server

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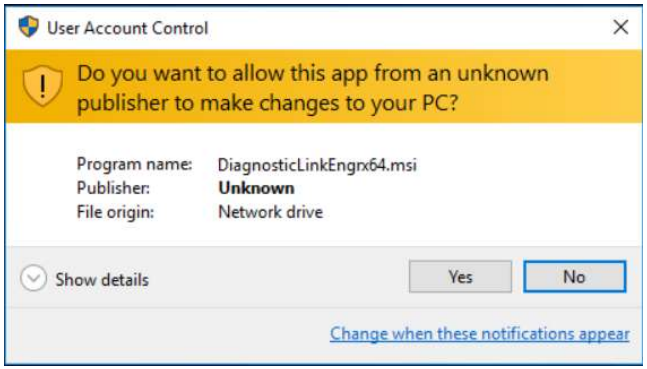
DiagnosticLink digital signature

- DiagnosticLink installation media is now signed with secure RSA key resulting in a recognized Program Name and Publisher*

Before



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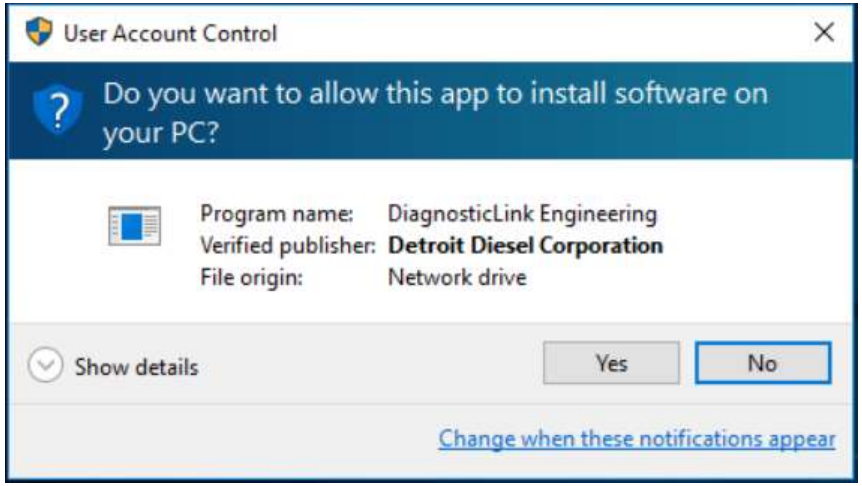
After



* Network connection may be required for Windows to verify the key.

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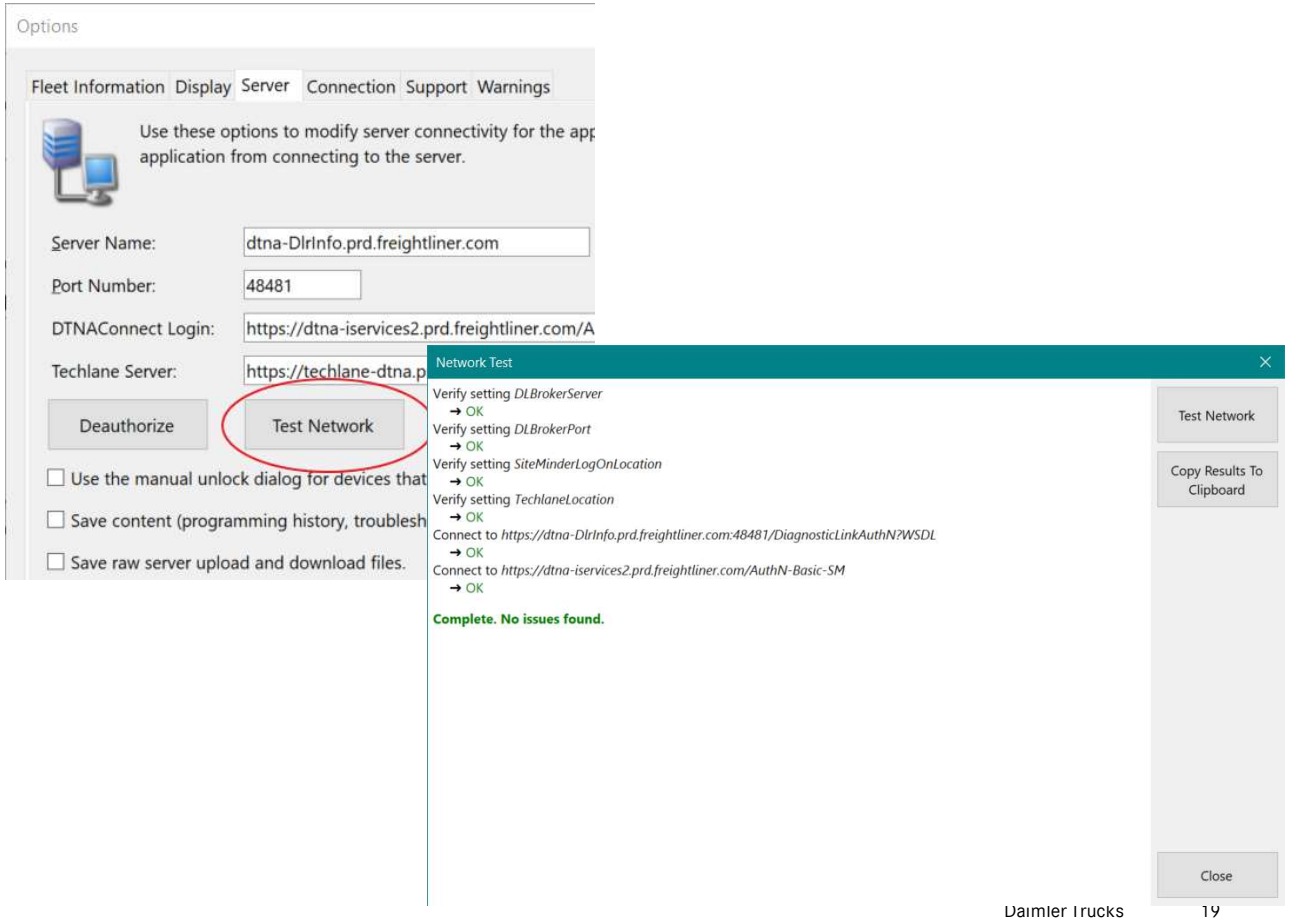
Create and Install a Test panel in DL for troubleshooting connection issues to server

- "Test Network" button is now available from Server Options.
- Tool will attempt to contact network locations used by DiagnosticLink and should allow faster and easier diagnoses of networking problems.



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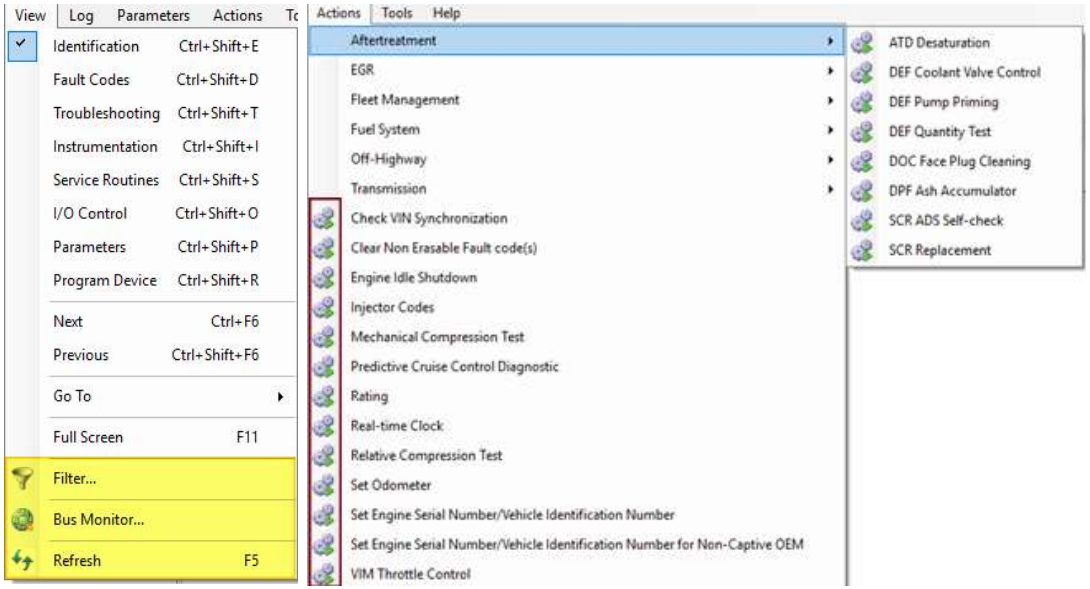
Improvements to Toolbar menu buttons in the main screen

- Added missing icons for menu items, Filter, Bus Monitor , Refresh (Under the View menu), that are also represented by a toolbar button
- Added icons for items in the Actions menu so that would show the image/icon (same as shown in the places bar) for the view from which the dialog originates (i.e. Service Routines, Parameters)



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CTP GPRS Configuration Panel

- Applicable only to CTP1 and CTP2 devices running supported software
- Verifies the GPRS configuration of the device is correct, if it is not correct the panel will write the correct configuration into the CTP