TOPIx Cloud Diagnostics

Toolbox and Applications User Guide

Diagnostic Device Agent

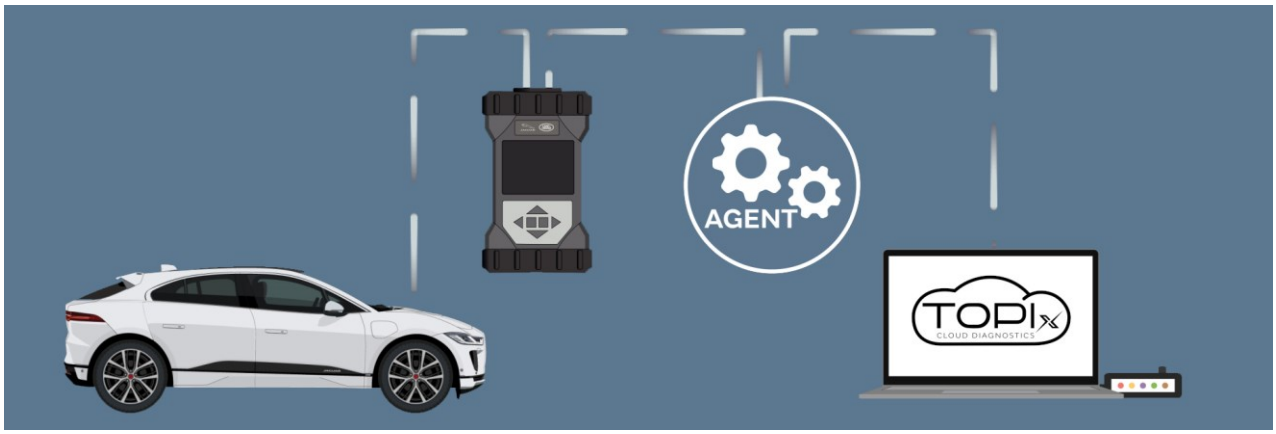
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1 Overview of TOPIx Cloud Diagnostics

1.1 What is TOPIx Cloud Diagnostics?

- TOPIX Cloud Diagnostics is an integrated diagnostic cloud-based tool within the TOPIx environment.
- It is always up-to-date for both Jaguar and Land Rover Retailers to connect directly to vehicles.
- TOPIx Cloud Diagnostics is software that utilises current diagnostic equipment to connect to applicable vehicles.
- No need for large software installations that provide out of date solutions.
- Delivers new experiences to users with time efficiency benefits.
- The Diagnostic Device Agent synchronises with TOPIx Cloud Diagnostics to display vehicle data and all expected features and functions of Jaguar Land Rover approved diagnostic tools.



1.2 Who is it for?

- Intended for users who want to connect TOPIx to maintain Jaguar Land Rover vehicles.
- **For the best user experience Jaguar Land Rover recommend to use Google Chrome browser.**
- Provide user guidance to the correct and latest information.
- To provide users all the information, parts and labour details at the start of the repair.

1.3 Installation of TOPIx Diagnostic Device Agent (DDA)

- Access TOPIx by means of URL address https://topix.jaguar.jlrext.com/ or https://topix.landrover.jlrext.com/
- Click 'Links' located within the lower toolbar.
- Click 'Diagnostic Device Agent'.
- Follow prompts shown on the screen to run and complete the installation of the Diagnostic Device Agent.
- Upon completion of the software installation the Diagnostic Device Agent icon will be shown in the Windows lower tool tray (as shown in image below ).



- If the icon is not shown, click the hidden icon triangle  to expand image to show the icon tray.

1.4 Auto Update of the Diagnostic Device Agent (DDA)

- Once the DDA is installed, all later versions will be delivered automatically.
- The user will be shown an option to install or cancel. Install update is recommended so that the latest version is being used.
- If the user decides to cancel the offered update, the DDA can still be used at the current level without enhancement installed. However, the fourth day from the initial delivery of an update the use of the DDA will be inhibited until the latest update is applied.
- For the installation to take place, the vehicle must not be connected and the DDA must be logged out.
- A pop-up messages may occur that detail the stages of update and completion.
- Please refer to TOPIx Cloud Diagnostics – Diagnostic Device Agent User and Troubleshoot Guide for additional information if needed. [**TOPIx Document navigation path** – Browse all > Diagnostics > General > Enhanced Diagnosis & Testing].

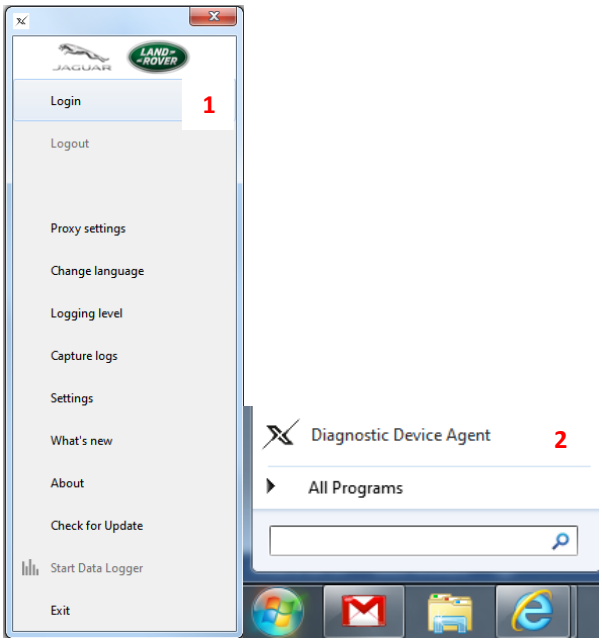
1.5 What functions are available?

This user guide covers key enhancements available within TOPIX Cloud Diagnostics Toolbox and Applications.

1.5.1 TOPIx Login

- As a TOPIx user you may already be logged into TOPIx. However, to use TOPIx Cloud Diagnostics, login via the Diagnostic Device Agent is required.
    - You will notice that if you are already logged into TOPIx, a new tab is rendered to allow you to login and to use TOPIx Cloud Diagnostics.
- You are able to login from the DDA Tray icon or the Windows Start menu.

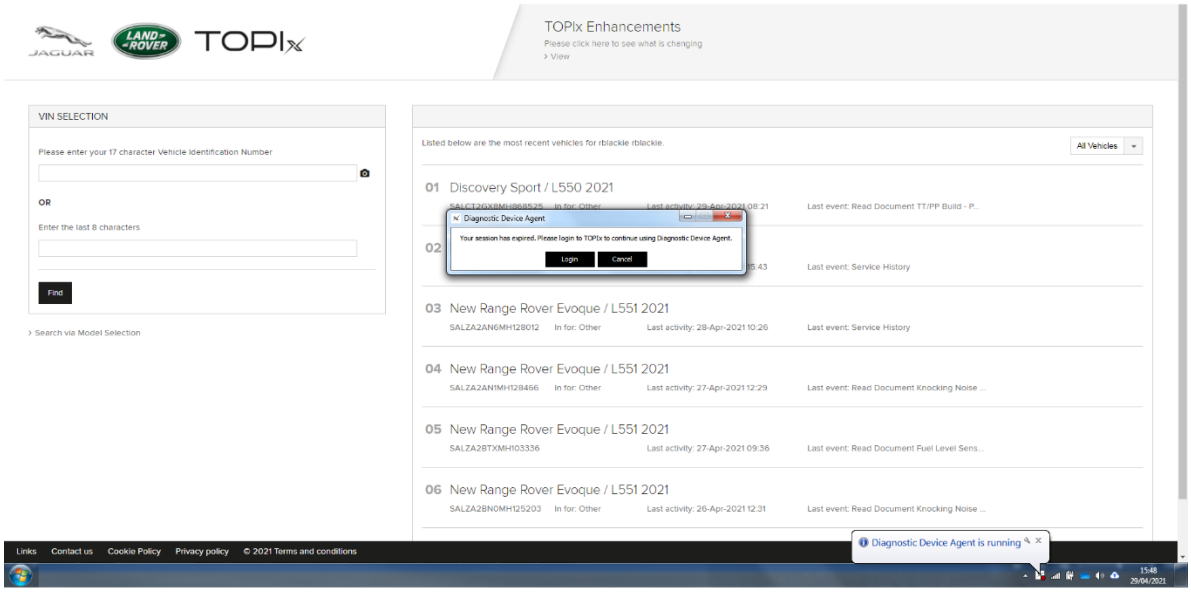
Item	Description
1	DDA Login
2	Start Menu Login

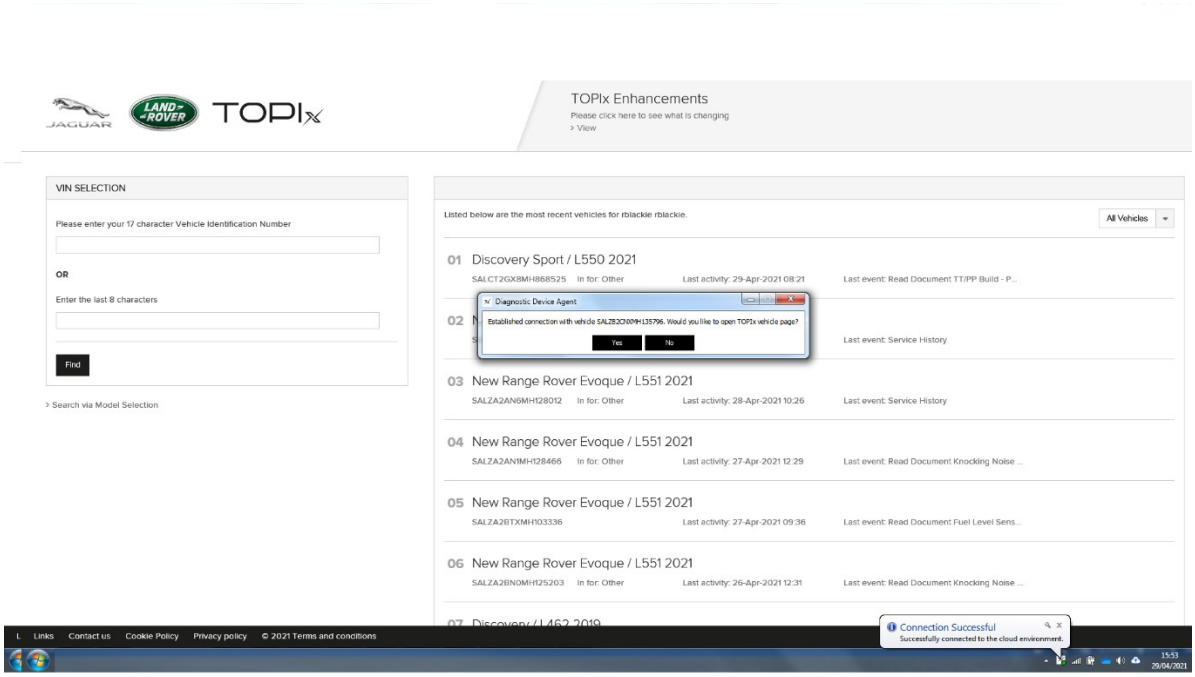


- Upon Login via the DDA you will see pop-ups from the Diagnostic Device Agent Tray icon that inform the user login has been achieved and if a vehicle is connected a pop-up is shown of the Vehicle Identification Number (VIN) and connection status.

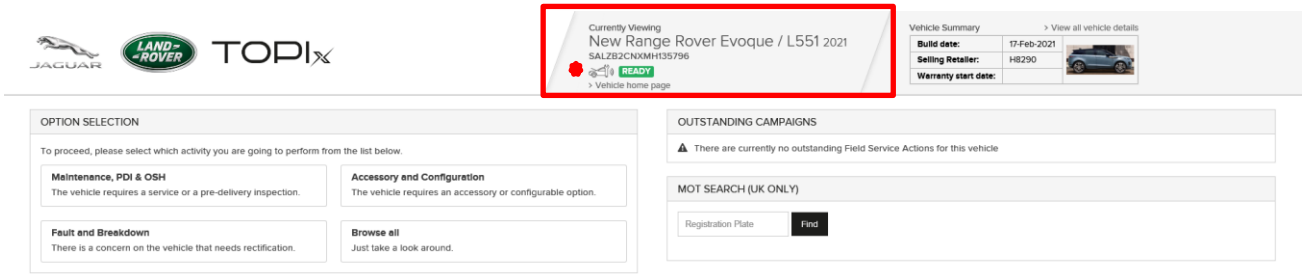
1.5.2 Vehicle connection

- Connect the latest Jaguar Land Rover Vehicle Communication Interface (VCI) to the vehicle and diagnostic computer.
- The DDA will detect VCI connection to the vehicle and will read the VIN from the vehicle.
- A VIN popup message will be shown, "Established connection with vehicle xxxxxxxxxxxxxxxxx. Would you like to open a TOPIx vehicle page?"
- Click 'Yes' to open a new TOPIx page or 'No' to remain on the same TOPIx page and the 'Diagnostics' tab must be clicked or a refresh of the retained TOPIx page will be needed to show the connected vehicle status.
- The red indicator on the DDA icon will go to green upon successful connection to a vehicle.
- The DDA will indicate TOPIx Cloud is connected and a *'Currently Viewing'* vehicle with a spanner icon will be shown with READY highlighted in green (within the TOPIx banner). Next the automatic vehicle module data collect occur. This is called Automatic Network Integrity Test (ANIT).
- The DDA will do an Automatic Network Integrity Test (ANIT) if this has not been done within the last 24 hours, if an ANIT has been done within the last 24 hours then the last data read will be shown.
- **Note:** If an Automatic Network Integrity Test (ANIT) or Network Integrity Test (NIT) is not completed, then it will not be possible to run any other application that needs communication to the vehicle. (See section 3 **'Frequently Asked Questions'** for additional help).
- Should you choose not to wait (this is acceptable) you can continue to use other TOPIx features. However, you will not be able to use any applications within the 'Diagnostics' tab in TOPIx until the READY icon is shown and an ANIT or NIT completed.



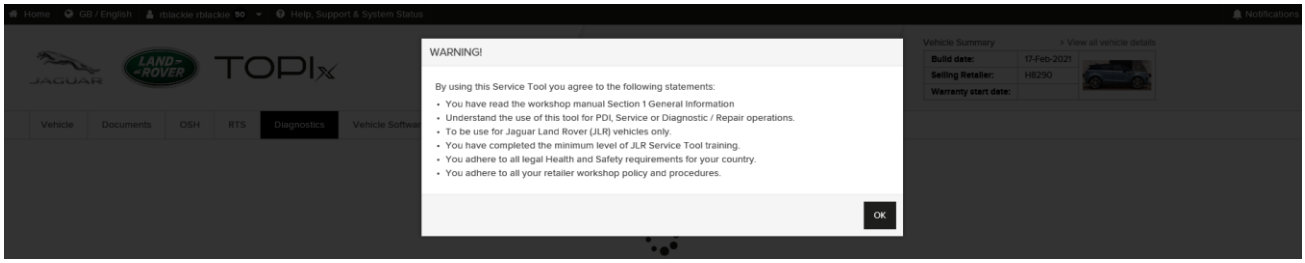


- At this point you need to wait for the Vehicle Ready Icons to appear as shown below.



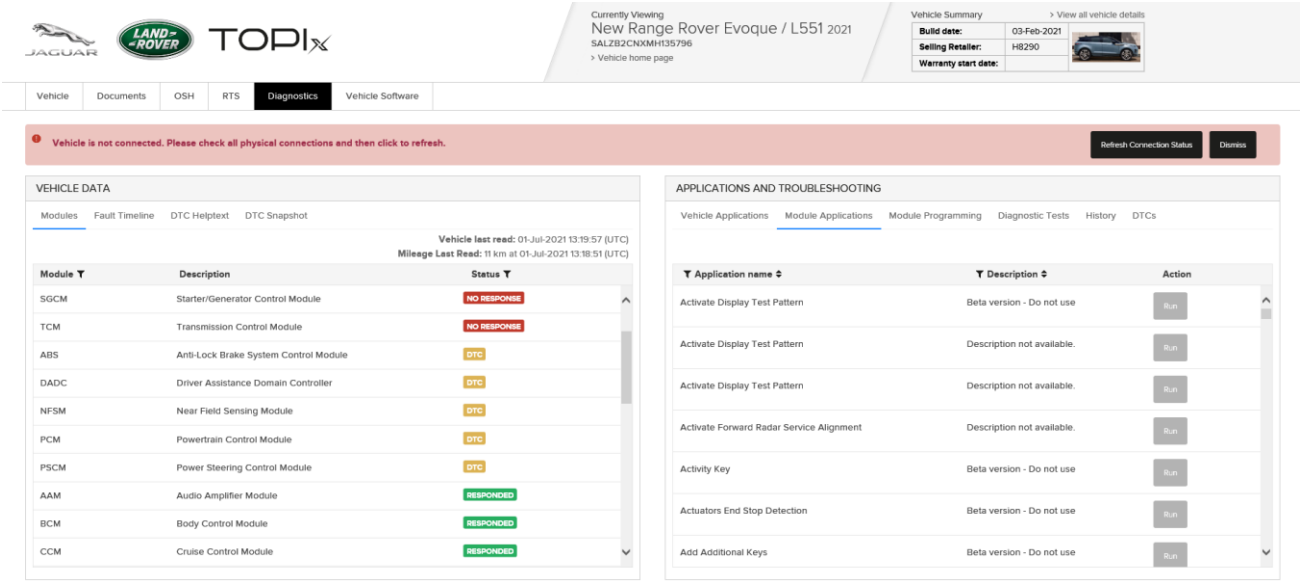
1.5.3 Diagnostic Toolbox

- Click 'Browse all' selection box and then all TOPIx features and content tabs will be shown next.
- Click 'Diagnostics'.
- Upon selecting the 'Diagnostics' tab a warning message will be seen. This message will appear every 24 hours.
- Click 'OK' to agree and continue.

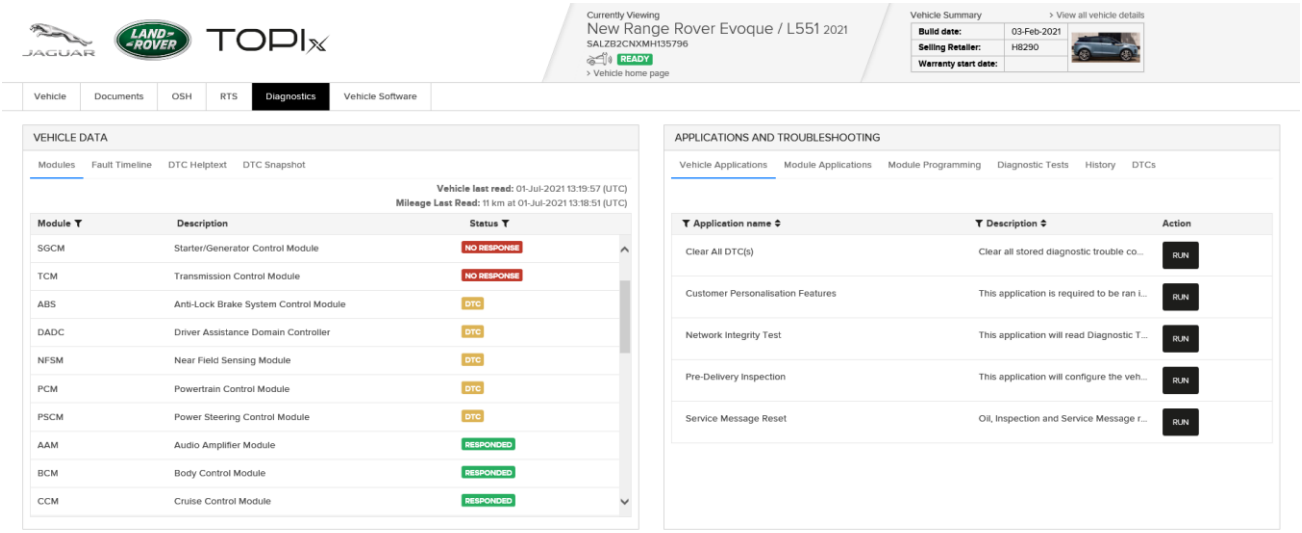


- Should you decide to proceed to the Diagnostics tab without the READY icon being shown, a red warning message is displayed.
- Please wait a short period of time (10 - 20 seconds) before selecting **'Refresh Connection Status'**.

- The **'Dismiss'** button will clear the warning message but will not manually refresh the status. However, once vehicle connection and module data collect has been achieved the READY icon will be shown.



- When the READY Icon is shown, this indicates the vehicle is ready to run Diagnostics

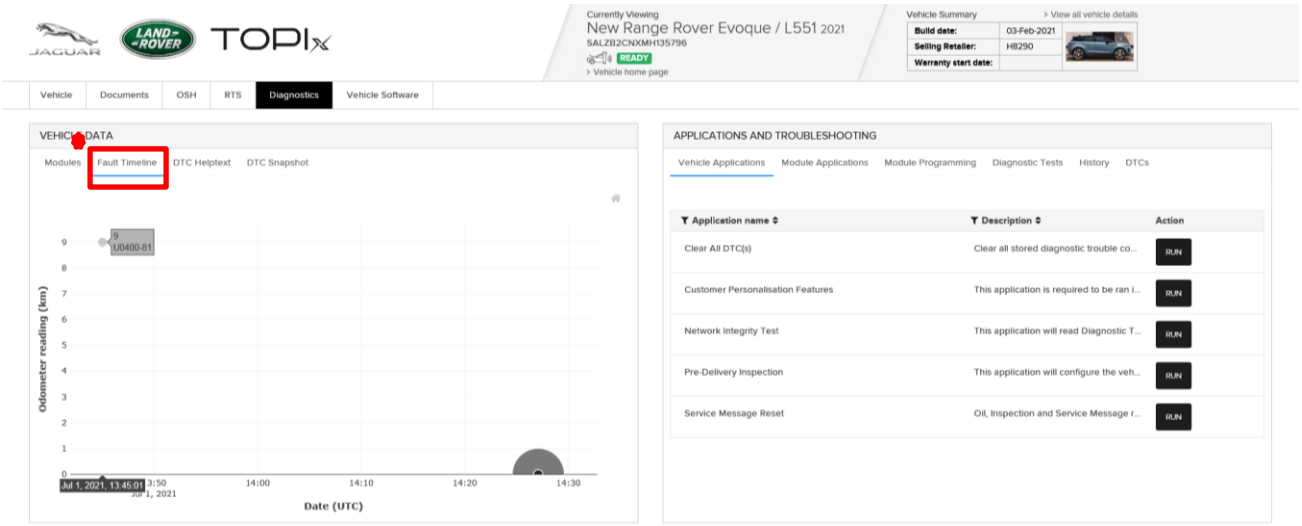


- If a collection has not occurred within the last 24 hours a message will be displayed within the **'VEHICLE DATA'** panel to inform that a Network Integrity Test is in progress, to wait a few seconds allow the screen to automatically refresh or manually refresh the TOPIx page.
- A timestamp and distance is shown within the **'VEHICLE DATA'** panel, this informs the user of the last time the vehicle was read and module data acquired.
    - Green RESPONDED = Achieved communication to a module and no DTC stored.
    - Amber DTC = Achieved communication to a module and one or more DTC is stored.
    - Red NO RESPONSE = Communication to a module has not been achieved and needs to be investigated.

1.5.4 Fault Timeline

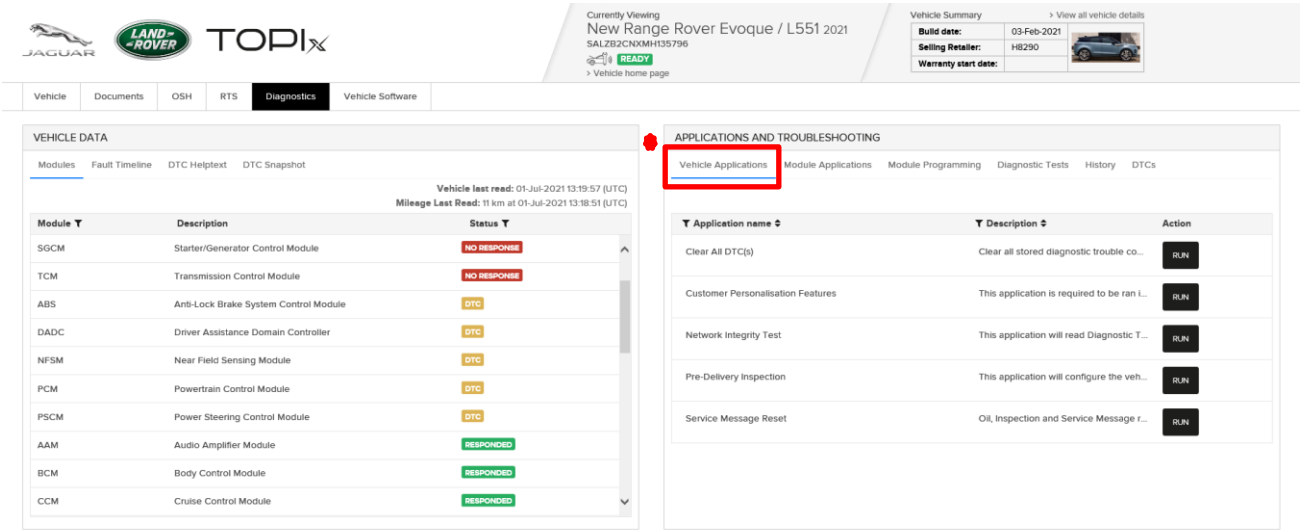
- The 'Fault Timeline' feature shows the occurrence of DTCs and reference to a date and time for each event.
- The computer curser can be used to hover over each delta point and more information will be shown.
- You can zoom in by creating a box around a DTC

- 'DTC Helptext' and 'DTC Snapshot' becomes active when the 'DTCs' function is in use within the **'APPLICATIONS AND TROUBLESHOOTING'** panel. Refer to section **1.5.9 DTCs**



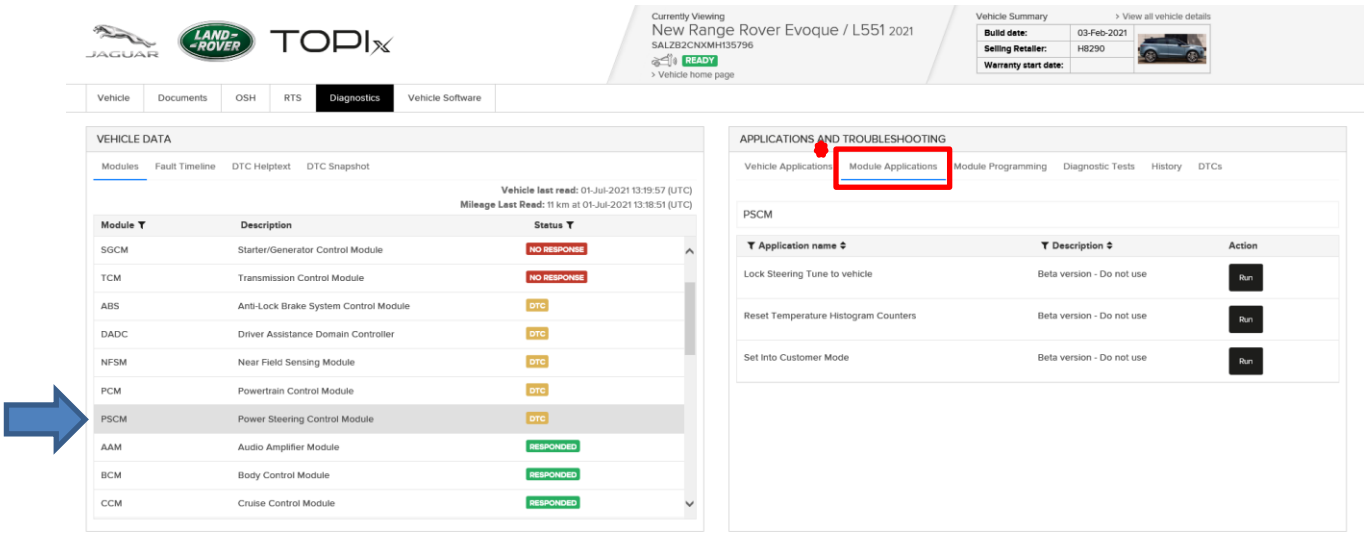
1.5.5 Vehicle Applications

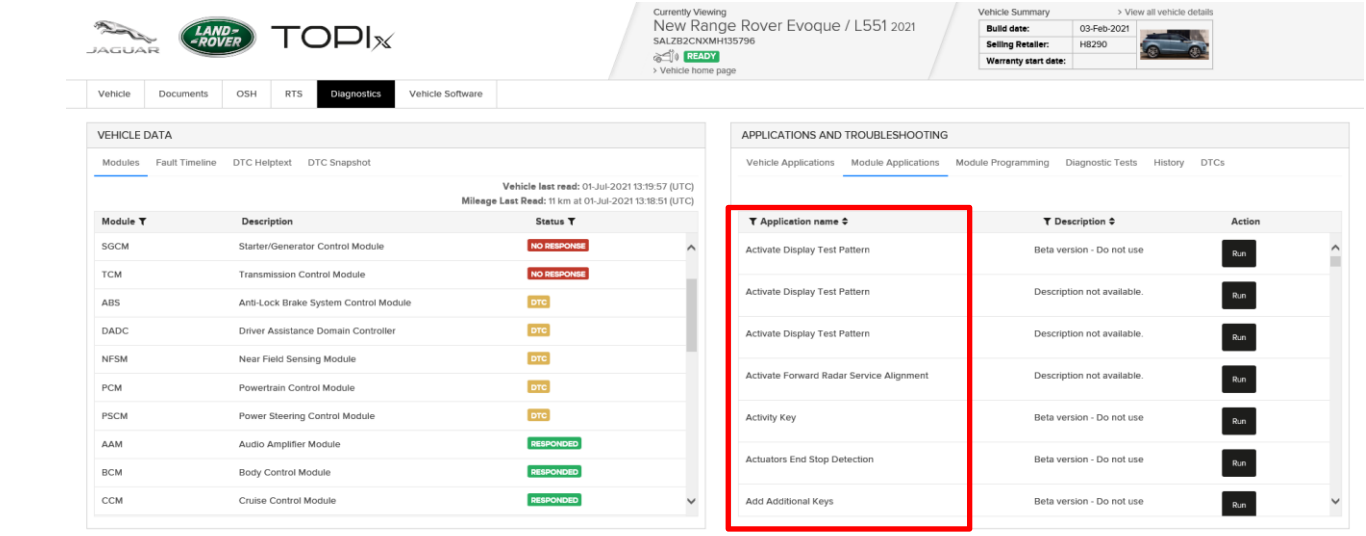
- The 'Vehicle Applications' toolbox will display all applicable applications which are generic vehicle functions and not specific to one module or vehicle specification. As an example *Network Integrity Test, Pre-Delivery Inspection and Service Message Reset.*
- Click 'RUN' on the desired application to launch and apply changes to the vehicle.
    - Note: A short delay will be seen whilst the selected application data is downloaded from the cloud server, applied to the DDA and launched within TOPIx.
- Follow the instructions and complete the commands given by TOPIx for the selected application.



1.5.6 Module Applications

- The 'Module Applications' toolbox will show all applicable applications that are assigned to a specific module. *This was previously known as ECU Diagnostics when viewed on Pathfinder.*
- To access this please select a module from the left-hand side shown within the **VEHICLE DATA** panel. *This was previously known as ECU Functions when viewed on Pathfinder.*
- Double clicking on any module will enable a list of all module applications to be seen.



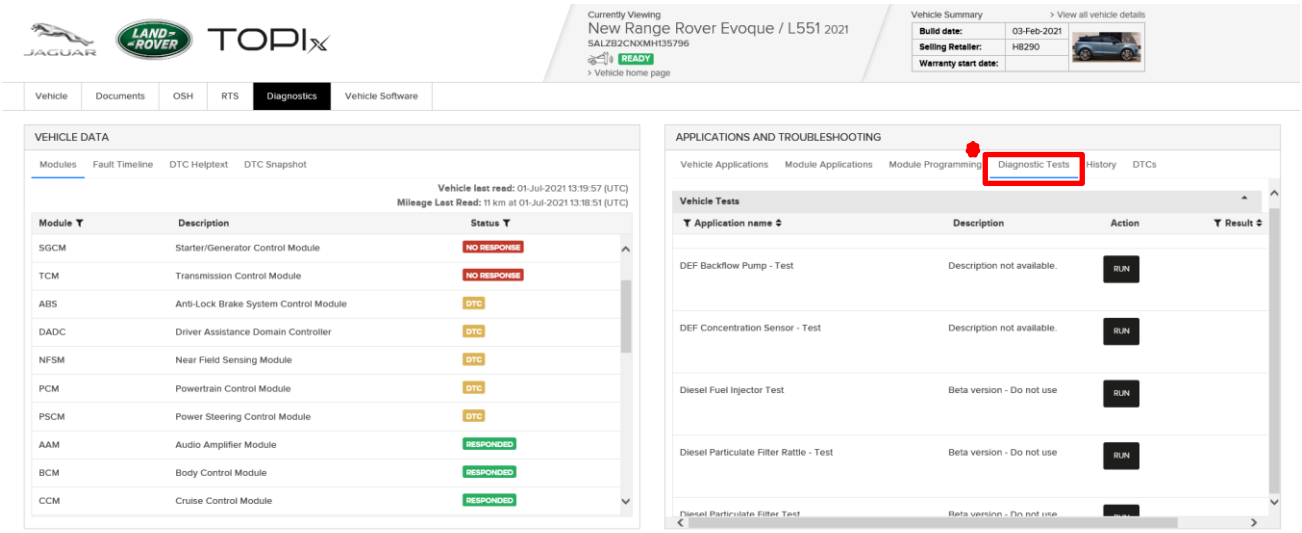


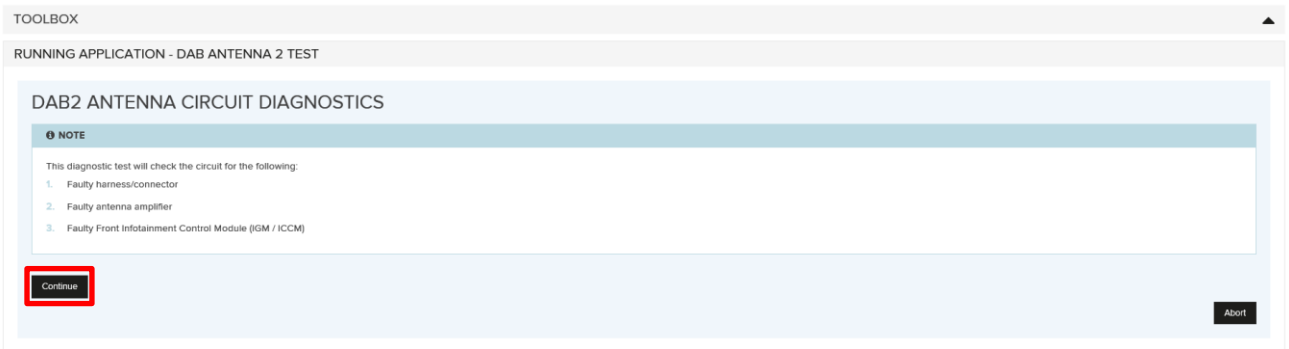
1.5.7 Diagnostic Tests

- The 'Diagnostic Tests' toolbox contains specific tests which that can be selected and executed from TOPIx. *This was previously known as Guided Diagnostics when viewed on Pathfinder.*
- Most diagnostic tests will not need communication to a vehicle as they include physical and visual checks to be done on a vehicle. The instructions will inform the user if the VCI is required and diagnostic communication has to be done.
- Follow the on-screen instructions to carry out a test.
- Test can be re-run to validate a repair if required.

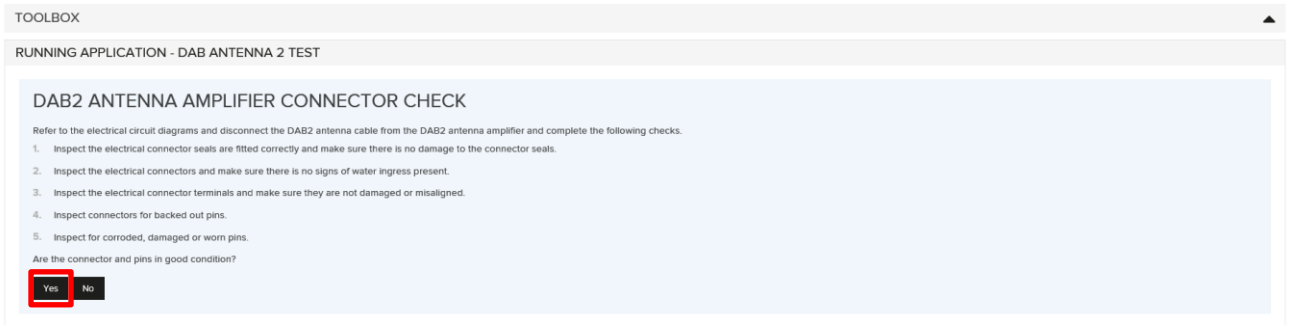
JLR Retailers ONLY

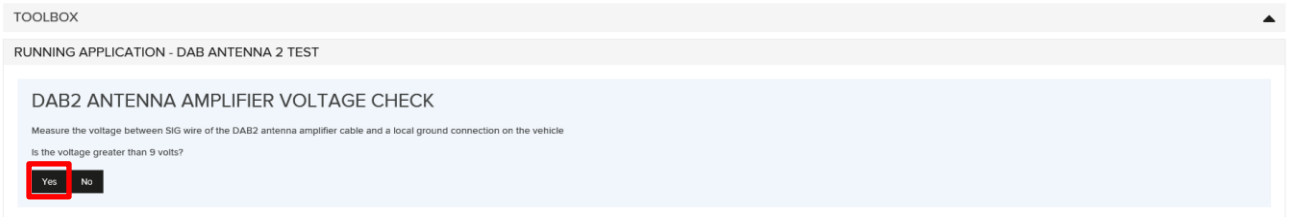
  - If a fault is found, TOPIx will create a **Repair Validation Code (RVC)** and show on screen for the user to record on their job card and warranty claim submission. Each RVC is unique to a retailer user group, diagnostic test and repair to a fault found. This means that individual approved users at the retailer can continue/resume/re-run the same test and use the same RVC code for the warranty repair claim.
  - This code confirms that you can carry out the repair identified by TOPIx, based on the diagnostic outcome.



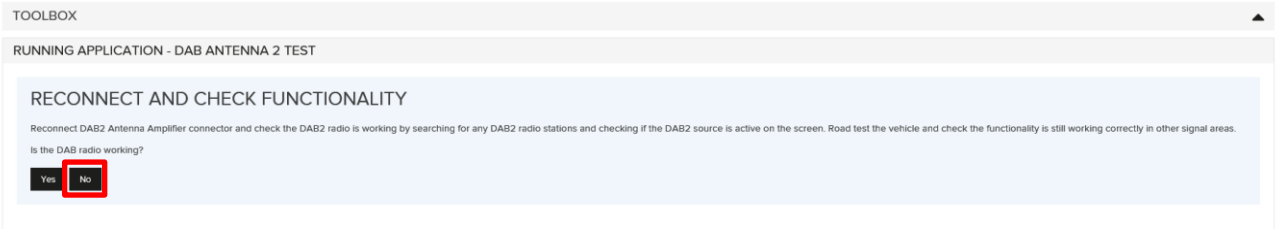


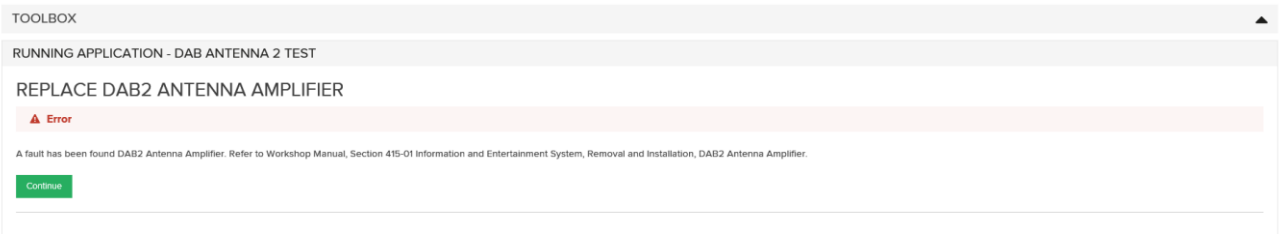

TOOLBOX
RUNNING APPLICATION - DAB ANTENNA 2 TEST
DAB SYSTEM FUNCTIONALITY CHECK
Check the DAB radio is working by searching for any DAB radio stations and checking if the DAB source is active on the screen. Road test the vehicle and check the functionality is still working correctly in other signal areas.
Is the DAB radio working?
Yes
No


TOOLBOX
RUNNING APPLICATION - DAB ANTENNA 2 TEST
DAB2 ANTENNA AMPLIFIER CONNECTOR CHECK
Refer to the electrical circuit diagrams and disconnect the DAB2 antenna cable from the DAB2 antenna amplifier and complete the following checks.
1. Inspect the electrical connector seals are fitted correctly and make sure there is no damage to the connector seals.
2. Inspect the electrical connectors and make sure there is no signs of water ingress present.
3. Inspect the electrical connector terminals and make sure they are not damaged or misaligned.
4. Inspect connectors for backed out pins.
5. Inspect for corroded, damaged or worn pins.
Are the connector and pins in good condition?
Yes
No

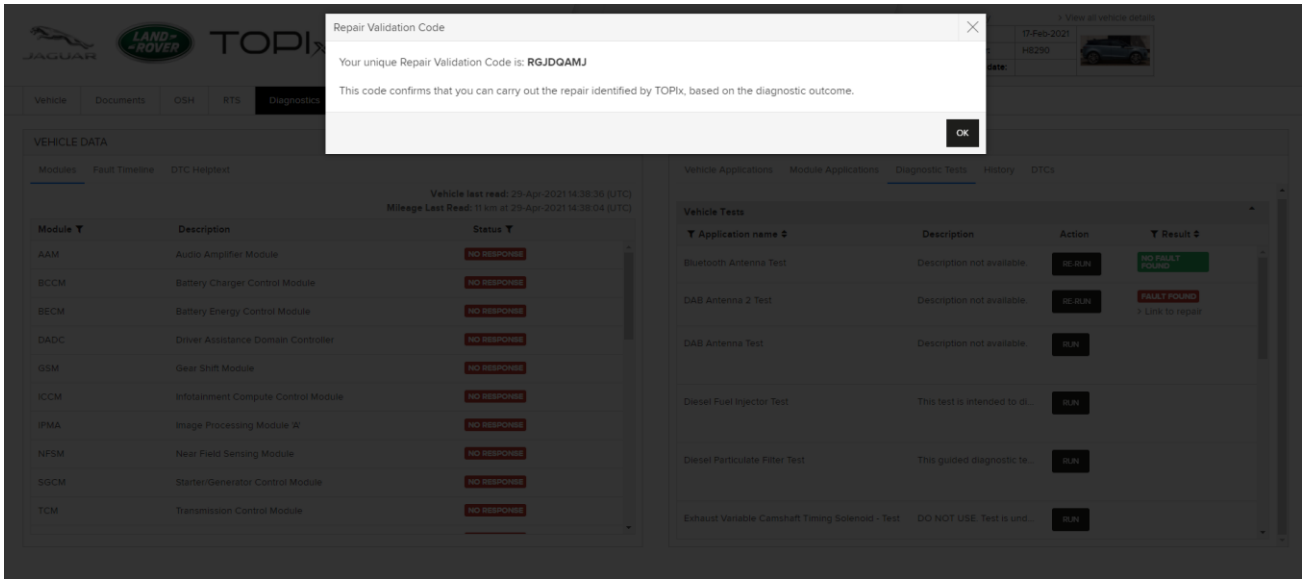

TOOLBOX
RUNNING APPLICATION - DAB ANTENNA 2 TEST
DAB2 ANTENNA AMPLIFIER VOLTAGE CHECK
Measure the voltage between SIG wire of the DAB2 antenna amplifier cable and a local ground connection on the vehicle
Is the voltage greater than 9 volts?
Yes
No


TOOLBOX
RUNNING APPLICATION - DAB ANTENNA 2 TEST
DAB2 ANTENNA AMPLIFIER VOLTAGE CHECK
Measure the voltage between SIG wire of the DAB2 antenna amplifier cable and a local ground connection on the vehicle
Is the voltage less than battery voltage?
Yes
No

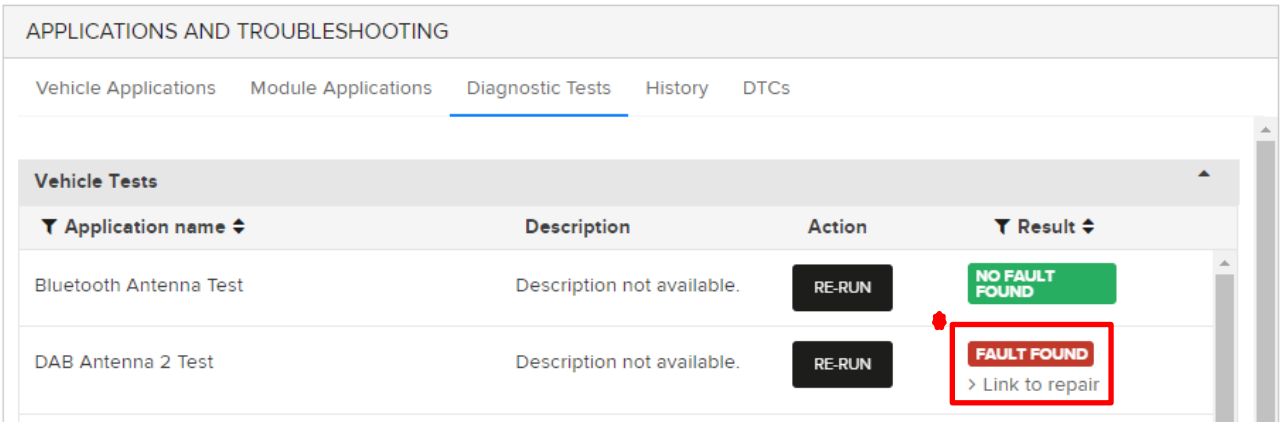

TOOLBOX
RUNNING APPLICATION - DAB ANTENNA 2 TEST
RECONNECT AND CHECK FUNCTIONALITY
Reconnect DAB2 Antenna Amplifier connector and check the DAB2 radio is working by searching for any DAB2 radio stations and checking if the DAB2 source is active on the screen. Road test the vehicle and check the functionality is still working correctly in other signal areas.
Is the DAB radio working?
Yes
No

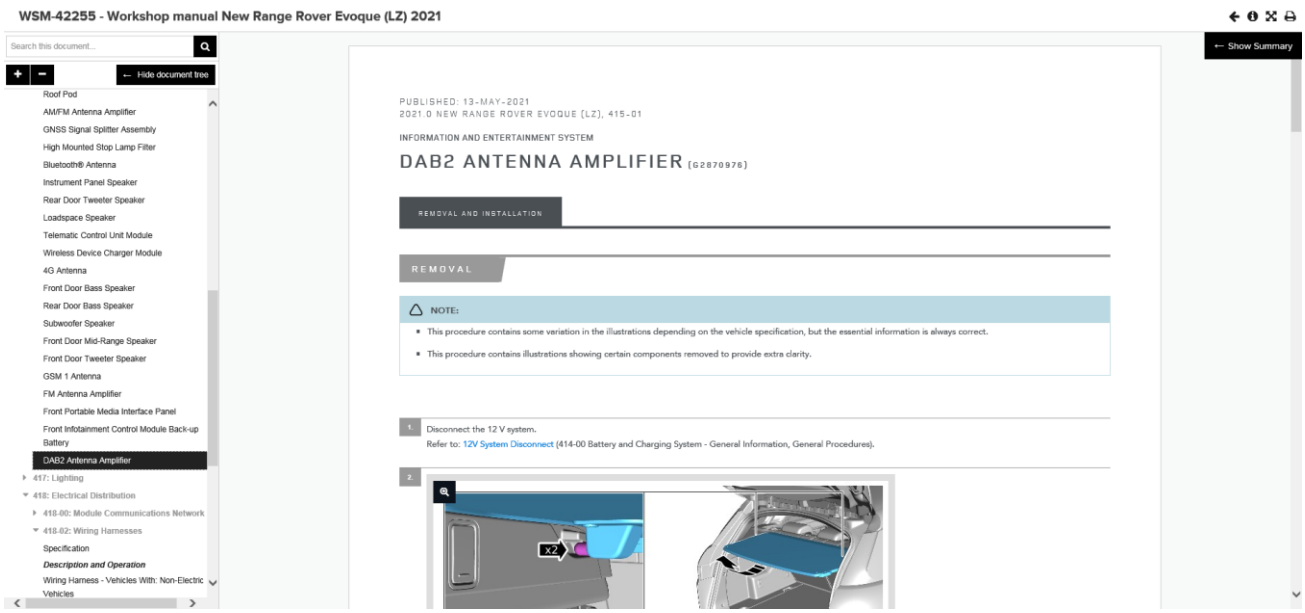

TOOLBOX
RUNNING APPLICATION - DAB ANTENNA 2 TEST
REPLACE DAB2 ANTENNA AMPLIFIER
Error
A fault has been found DAB2 Antenna Amplifier. Refer to Workshop Manual, Section 415-01 Information and Entertainment System, Removal and Installation, DAB2 Antenna Amplifier.
Continue

- **Repair Validation Code (RVC)**



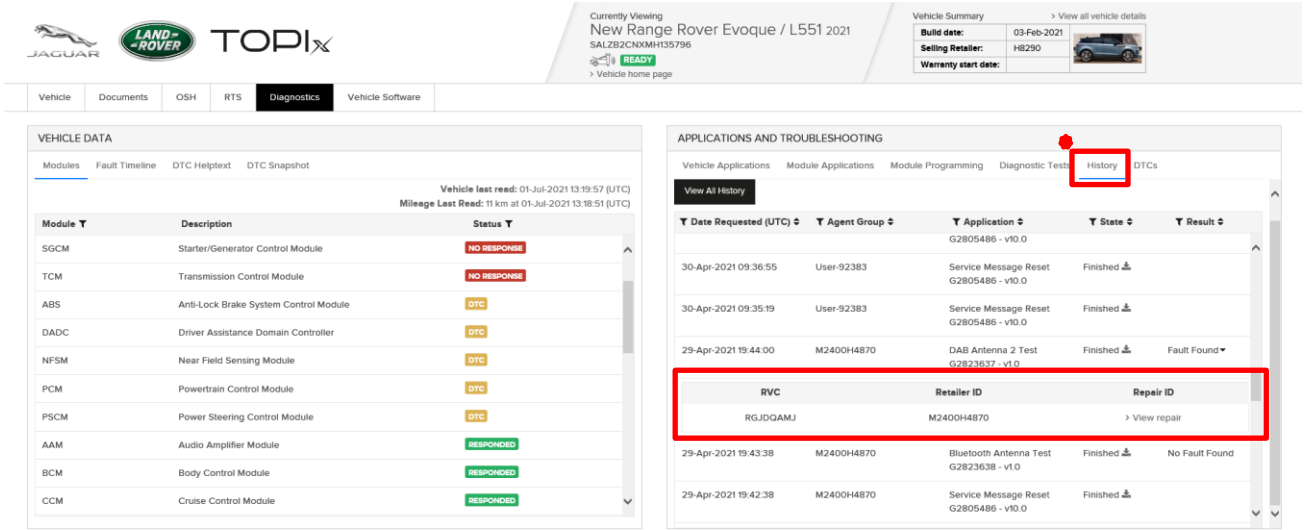
- Click '> Link to repair' and this will hyperlink to the repair procedures within TOPIx workshop manual.





1.5.8 History

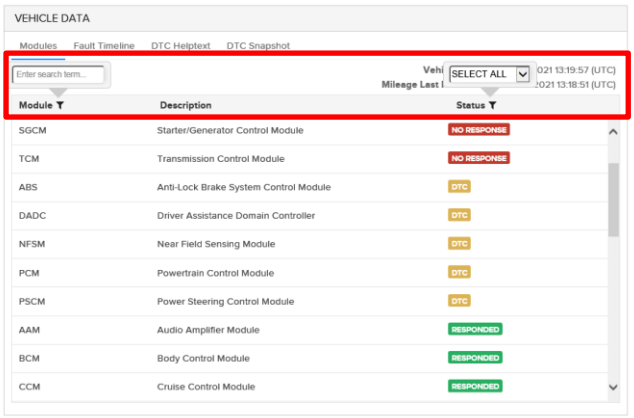
- The ‘History’ toolbox provides the previous activities that have been ran or applied to the vehicle VIN entered in to TOPIx over time.
- This function can additionally be used show the history on the vehicle which has been connected to TOPIx Cloud Diagnostics on one or more sessions over time.
- History details are not isolated to a user or retailer. It will present all activities performed over time in regards to the VIN in session. This is a time efficiency feature for retailers as it shows quickly and easily what has been ran on a vehicle and its outcome.
- Click **‘View All History’** that toggles to **‘View Recent History’** to expand or contract the diagnostic session start points that have occurred on the vehicle regardless of TOPIx user or location.
- Expand ‘Fault Found’ to show the RVC code, Retailer ID code and direct link to the advised repair instructions within TOPIx

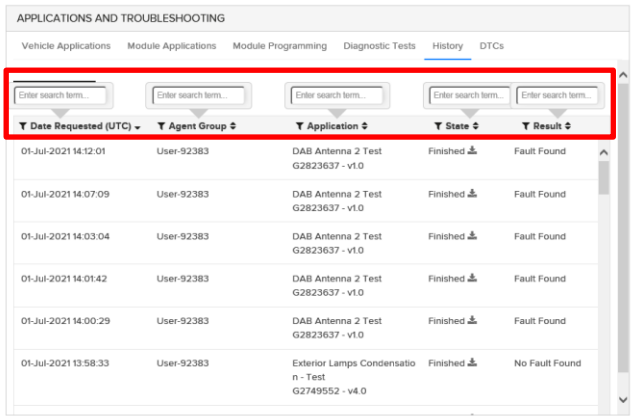


- The data view can be sorted as follows:
  - Date Requested – oldest to newest
  - Agent Group – A-Z
  - Application Name – A-Z

- State – A-Z
- Result – A-Z

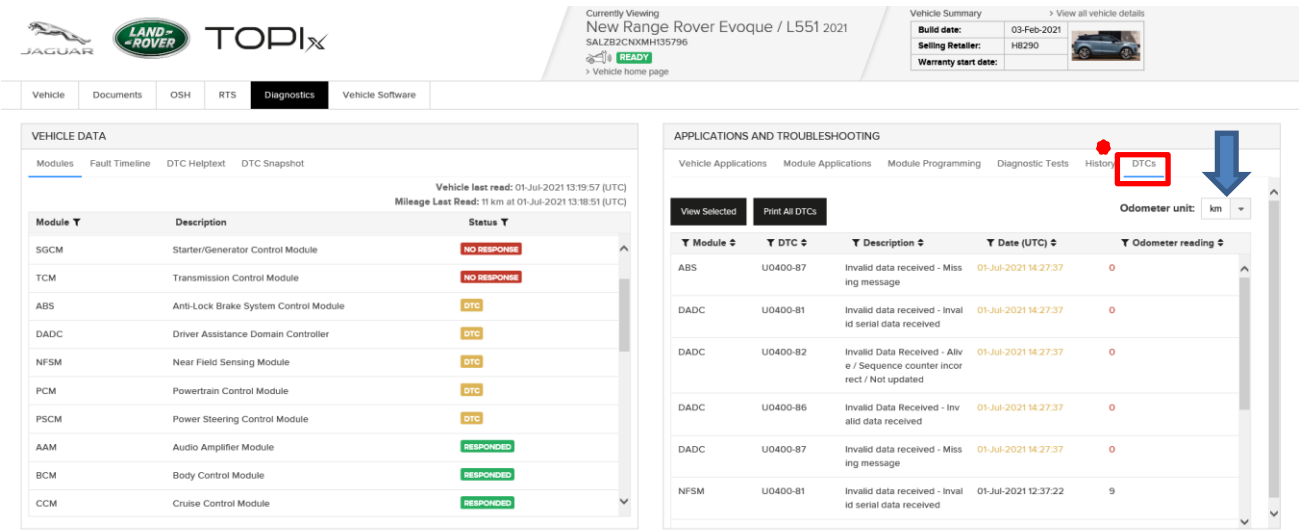
- **Note:** Filter and sort capability is available on all lists shown within the **'VEHICLE DATA'** and **'MODULE APPLICATIONS AND TROUBLESHOOTING'** panels.

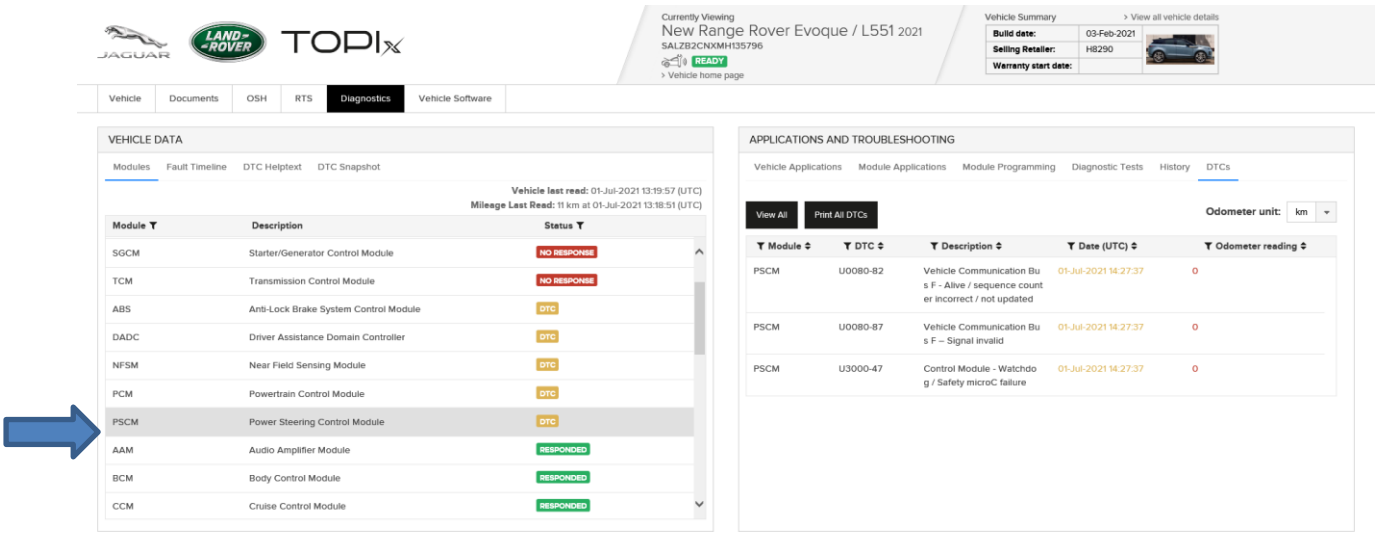




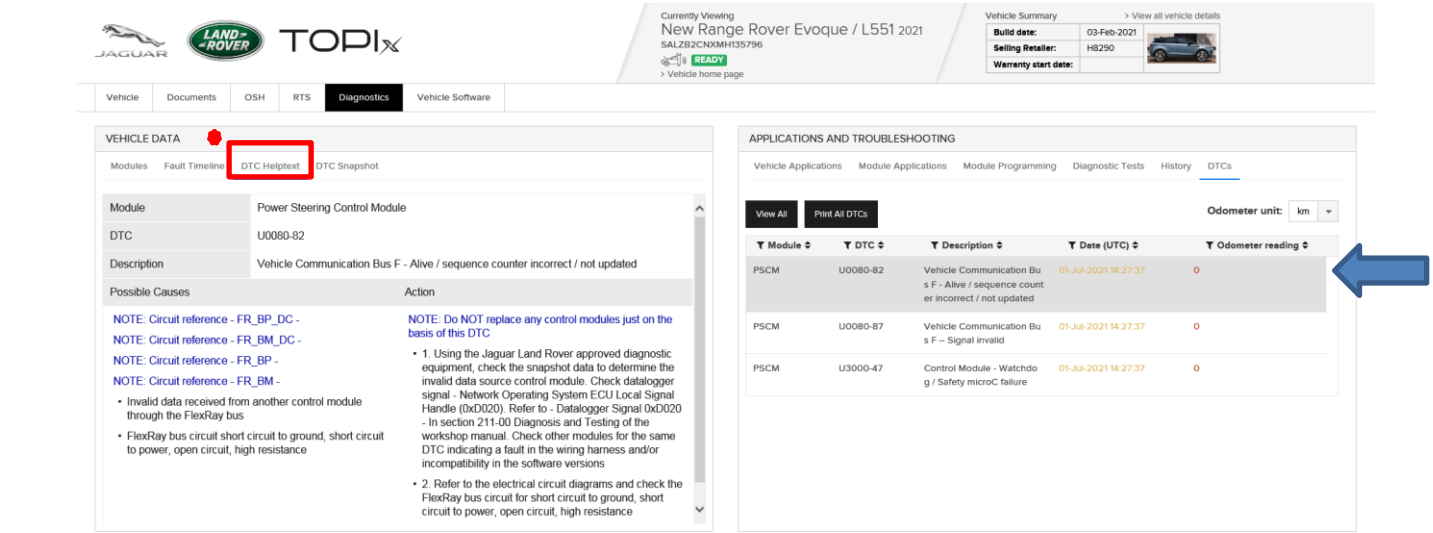
1.5.9 DTCs

- The 'DTC' toolbox displays DTC codes, descriptions, timestamps and odometer value in kilometres or miles by use of the 'Odometer unit' preference selector.
- Upon selection of the 'Odometer unit' preference, it changes the odometer value for the DTCs shown within the 'Odometer reading' column and the 'Mileage Last Read' timestamp value.
- **Note:** If **no** DTCs are read from the vehicle, then this option is **not** available.
- The standard view is to show all captured DTCs from modules that have responded to communication requests by TOPIx Cloud Diagnostics.

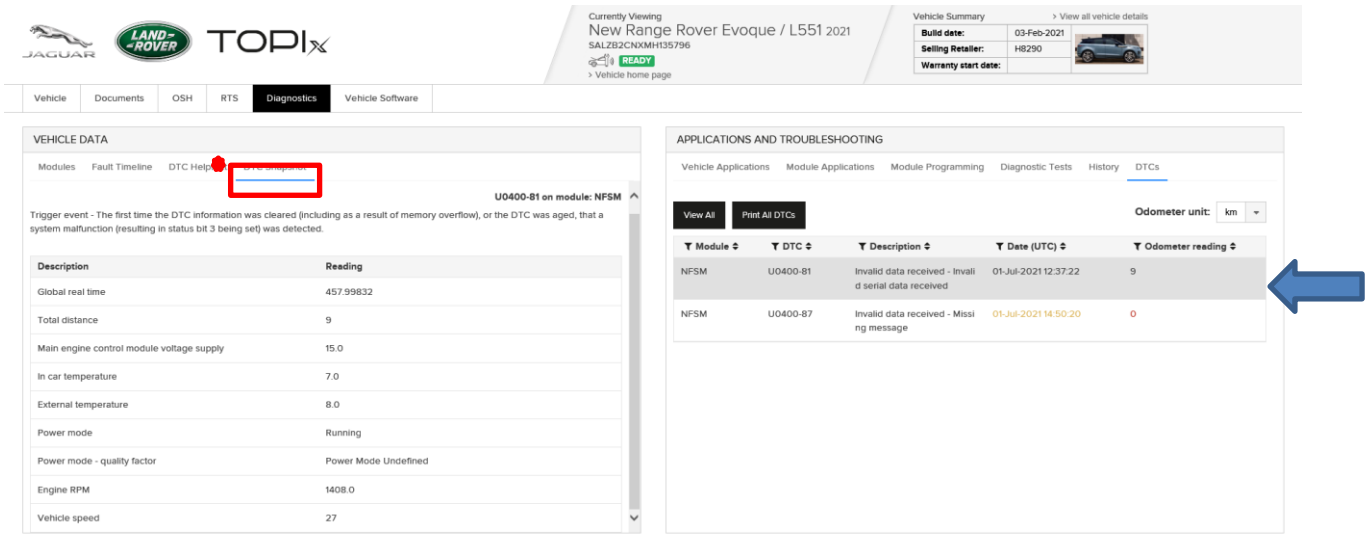




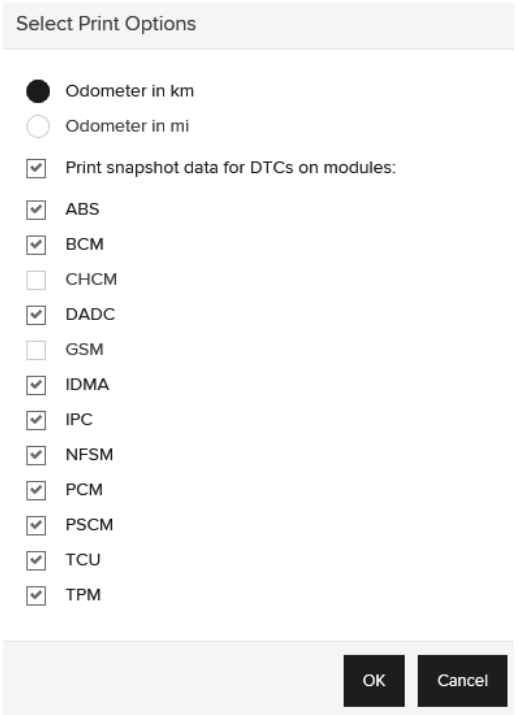
- Select a DTC within the **APPLICATIONS AND TROUBLESHOOTING** panel and then click 'DTC Helptext', TOPIx Diagnostics will show the DTC Helptext within the **VEHICLE DATA** panel.



- **New feature!** Select a DTC within the **APPLICATIONS AND TROUBLESHOOTING** panel and then click 'DTC Snapshot', TOPIx Diagnostics will show the DTC Snapshot data within the **VEHICLE DATA** panel.
- **Note:** DTC Snapshot data is shown if available to read from the selected module and DTC. Some DTCs do not capture the snapshot data.



- The DTC information can be printed or saved to the local device by use of 'Print All DTCs'
- There are print options to choose that affect how the DTC data values are shown when printed or saved as a pdf document on the user device.
    - Odometer Kilometres/miles
    - Include snapshot data for DTCs on modules
    - Check box to select all modules with DTCs, singular module or multiple modules
- Select 'OK' and another pop-up window will be shown to request the device user to locate and select a connected printer or to print to a pdf document and rename the document if desired, which will be saved to a selected destination on the user's device.



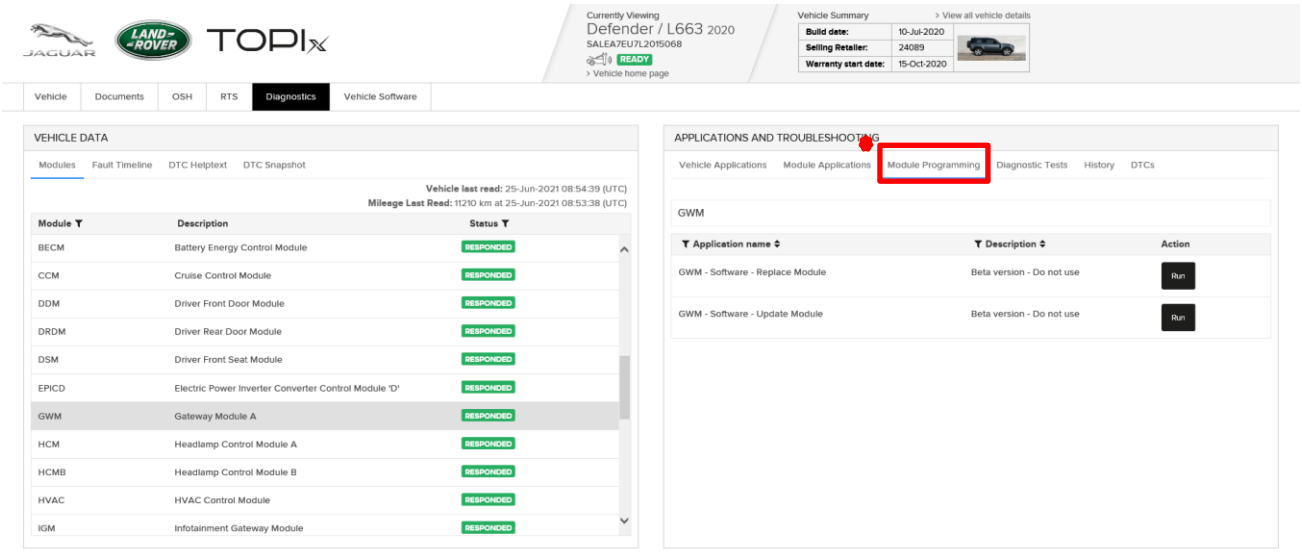
B1974-86	Rear View Mirror Module - Signal Invalid
Snapshot Data	

Description	Reading
Global real time	148189.94
Total distance	8955
Main engine control module voltage supply	14.25
In car temperature	5.0
External temperature	5.0
Power mode	Ignition On
Power mode - quality factor	Power Mode Undefined
Engine RPM	0.0
Vehicle speed	0

- Click ‘View All’ and this will return the view to the complete list of captured DTCs.
- ‘View All’ toggles to ‘View Selected’ when the DTC panel shows all DTCs
- Should you double click a module, within the **VEHICLE DATA** panel, this will return the view to the complete list of captured DTCs.

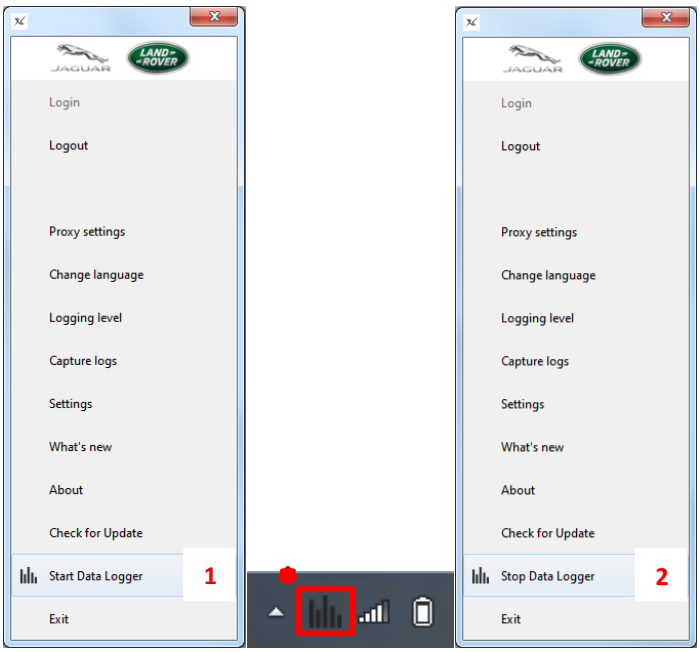
1.6.1 Module Programming

- The ‘Module Programing’ tab ***(new feature in development)*** will show a list of modules where content is available within TOPIx Diagnostics to replace or update a module.
- To apply the latest available software and necessary set-up and configuration data to the selected module.



1.6.2 Data Logger

- **User must 'Login' to the Diagnostic Device Agent to activate the 'Start Data Logger' function.**
- 'Start Data Logger' is used for real-time monitoring of vehicle sensors and signals.
- 'Start Data Logger' will launch a new internet window/tab/screen for Data Logger use.
- For the best user experience Jaguar Land Rover recommend to use Google Chrome browser.
- **Note: If the new internet window/tab/screen launches by Internet Explorer, it may not work, the URL address will need to be copied to Chrome browser.**
- The Diagnostic Device Agent icon, within the lower tool tray, changes to a bar graph icon  when Data Logger has started.
- Screen shows the Diagnostic Device Agent is connected and works correctly with connected vehicle VIN.
- Function tab changes to 'Stop Data Logger' to exit the mode when selected.
- The Diagnostic Device Agent will reconnect to the cloud environment upon 'Stop Data Logger' being clicked and Wi-Fi connection made.
- Refer to TOPIx Cloud Diagnostics – Data Logger User Guide for additional information.



Item	Description
1	Start Data Logger
2	Stop Data Logger

1.6.3 Summary of other features

- Built-in log capture capability for delivery or functionality issues located within the DDA as 'Capture logs'.
- Simple refresh function shown on TOPIx screen if connection to a vehicle is lost.

2 Troubleshoot Guide

2.1 TOPIx Cloud Diagnostics does not deliver to expectations

2.1.1 Internet concerns

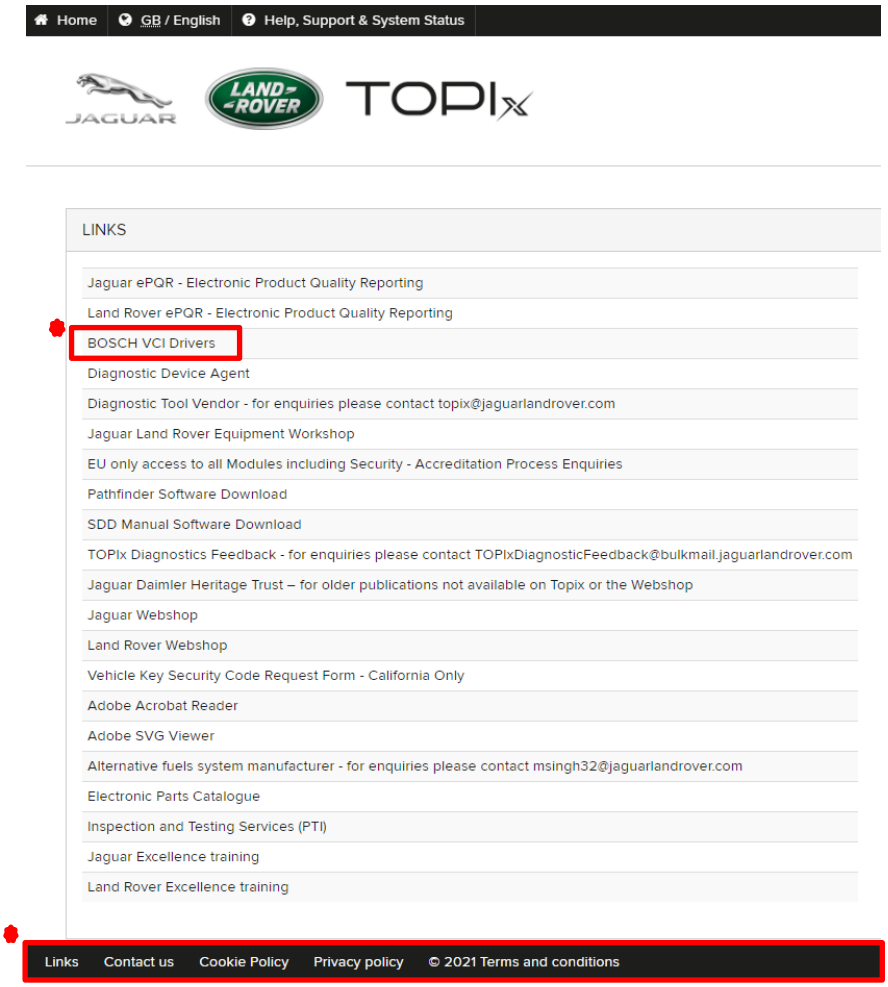
- Internet has lost connection to your provider – check internet connection is complete and you can access TOPIx.
- Internet browser is incompatible or not up to date – check system specifications and update if required.
- **For the best user experience Jaguar Land Rover recommend to use Google Chrome browser.**

2.1.2 Fitted module on vehicle is shown as no response

- the TOPIx Diagnostic screen by photo or screen print methods.
- Run 'Network Integrity Test' to refresh the vehicle module data collect.
- Check if the module with no response is Capture the subject of the customer complaint or symptoms of a vehicle feature/function that does not work.
    - If the above checks have been done and the cause of no module response has not been resolved, then report the concern to Jaguar Land Rover by means of TOPIx feedback or TOPIx Technical Support. Report the error message, actions done with images and data attached.

2.1.3 Vehicle Communication Interface (VCI) and vehicle communications

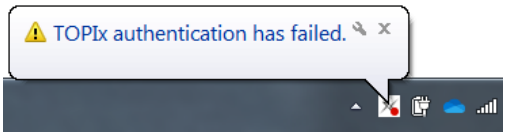
- Unable to connect to a vehicle – check the VCI function lights indicate correct operation and connection to the vehicle. Resolve if there is an error with the mechanical connection to the vehicle.
- Unable to connect to a vehicle – click Refresh Connection Status on the TOPIx screen to reset connection to the vehicle. It is normal for a delay to occur before the TOPIx screen refreshes. This is to allow for the TOPIx system to re-establish its connection.
- Make sure the Bosch VCI drivers are installed, especially if the user's machine does not have Pathfinder already installed.
- If the designated machine does not have Pathfinder installed the VCI drivers can be obtained by the link 'BOSCH VCI Drivers' (as shown in image below).
- There is a 3 minute system timeout if connection to the vehicle is not made after login. User will need to logout and login again the DDA to retry for vehicle communication.



2.2 Unexpected operation of the Diagnostic Device Agent

- The Diagnostic Device Agent may automatically logout should any of the following occur:
    - A significant duration of inactivity
    - TOPIx session has expired
    - Internet connection has been interrupted or lost over time

- Pathfinder does not communicate to a connected vehicle – the computer Ethernet port may be still connected to the Diagnostic Device Agent. Right click the Diagnostic Device Agent icon and select Exit.
- Refer to **1.4.12 Exit** in the Diagnostic Device Agent – User and Troubleshoot Guide.
- Diagnostic Device Agent Login has a **3 minute timeout to complete**. User credentials are expected to be entered within 3 minutes after 'Login' is clicked. Failure to authenticate will occur if the login is not completed within 3 minutes and the login process must be restarted.



- **Note:** Use of diagnostic applications may timeout after 10 minutes of user inactivity of TOPIx Cloud Diagnostics.
- A user may have to resume or restart a new session if inactivity has occurred.

3 Frequently Asked Questions

Q - Does TOPIx Diagnostics and the Diagnostic Device Agent need additional hardware?

A - No – TOPIx cloud base diagnostics hosts the core software and does not require excessive hard disk space.

The latest Vehicle Communication Interface (VCI) is supported by the Diagnostic Device Agent.

Q - Will there be future demands from Jaguar Land Rover to retailers for new computer devices to be purchased as a minimum standard?

A - The vision is TOPIx Cloud Diagnostics and the Diagnostic Device Agent to be compatible with compatible devices.

Q - What internet browsers are required?

A - For the best possible experience Jaguar Land Rover recommend to use Google Chrome browser.

Q - Is there an offline capability?

A - No – TOPIx and the Diagnostic Device Agent require an internet connection at all times. To allow authentication, latest information and functionality to be available to the user. Offline capability can be used with Data Logger upon this new feature being released soon.

Q - How does a user extract vehicle diagnostic session data?

A - In the future, this is done automatically whilst the session is active and on closure of a session. Data is passed from the user device to the TOPIx system. Session data could be viewed within TOPIx by the user and Jaguar Land Rover Engineers.

Q - User is not able to run any applications in the list and are greyed out / inactive. How is this resolved?

A - If an Automatic Network Integrity Test (ANIT) or Network Integrity Test (NIT) is not completed, then it will not be possible to run any other application that needs communication to the vehicle.

Refresh the screen as this may provide the completed ANIT data to be shown on screen.

If the Network Integrity Test (NIT) is available to click ‘Run’ then select and allow to complete.

Logout the DDA, select Login and start a new session.

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