

ALLISON HYBRID

DIAGNOSTICS — DOC™ ADVANCED

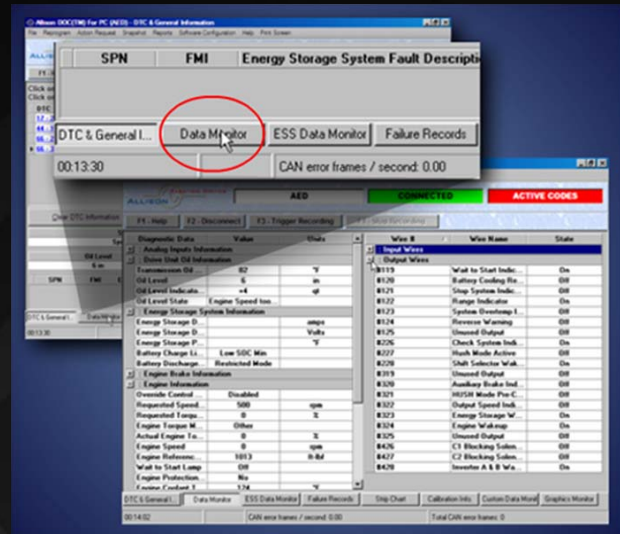


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Diagnostics — DOC™ for PC (H 40/50 EP) Advanced

Data Monitor

- Accessed with the Data Monitor button at the bottom of the program window.
 - Data changes are displayed as they occur.
 - Diagnostic information is listed on the left side of the window.
 - PBSS category added for Allison 4th Gen equipped systems.
 - This category is not displayed when connected to pre-4th Gen systems.
 - TCM Input/Output Wire information is listed on the right side of the window.
- The Data Monitor presents a real time look at what is occurring in the transmission system.



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1 of 11



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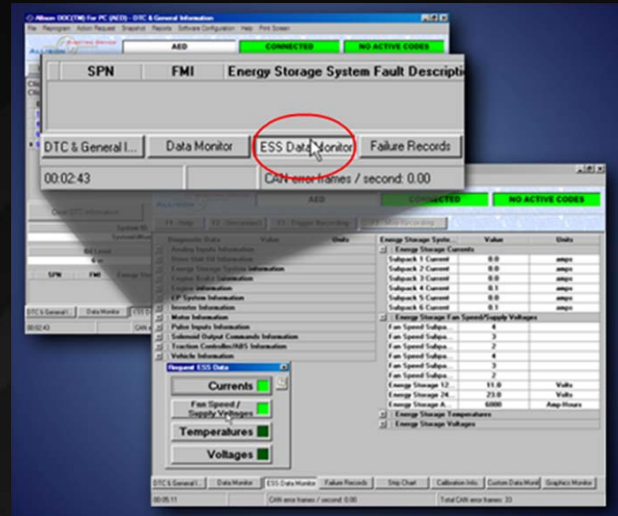


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ESS Data Monitor

- Accessed with the ESS Data Monitor button at the bottom of the program window.
 - Expand an ESS data category using the Plus sign.
 - Select the data category to be requested from the ESS.
 - A green light illuminates indicating the category is selected
 - Real-time data is transmitted via the J1939 Datalink from the ESS.
 - Real-time data populates the expanded data category.
 - Closing the Request ESS Data window terminates all information requests from the ESS.



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2 of 11



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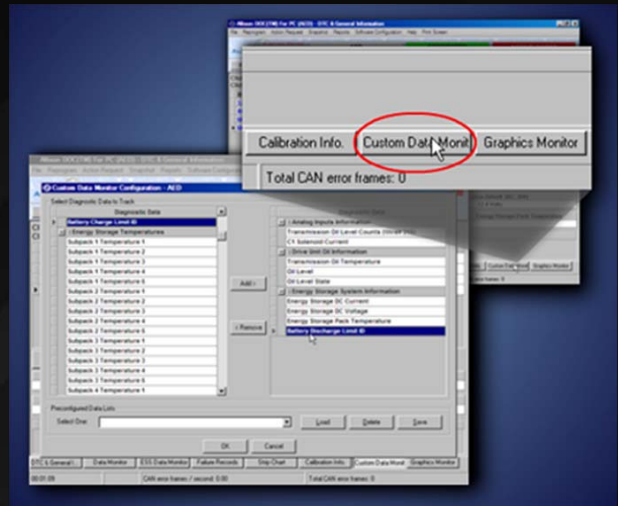


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Custom Data Monitor

- Accessed with the Custom Data Monitor button at the bottom of the program window.
- Allows technicians to choose the data points to display in the Data Monitor window.
 - Select the data to track from the left window and add the data to the monitor.
 - Data list configurations can be saved and recalled for later use.
 - ESS Data must be requested before being displayed.
 - Use the popup window to turn On/Off what data is requested from the ESS.
- This feature allows a more focused view of diagnostic information.



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3 of 11



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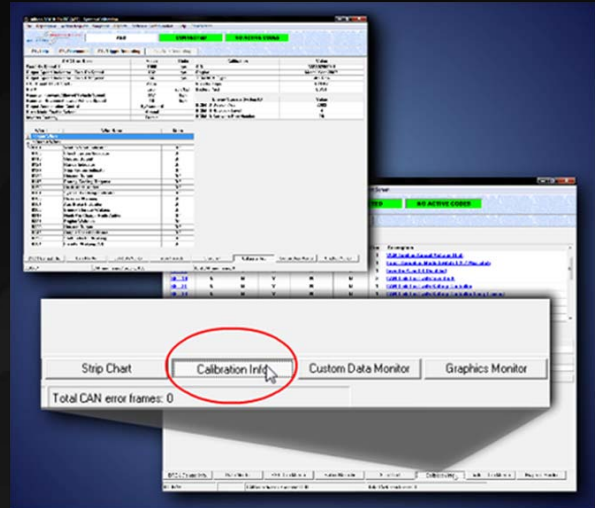


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Calibration Information

- Accessed with the Calibration Info. button at the bottom of the program window.
- Displays current calibration information including:
 - Customer Modifiable Constants (CMCs).
 - ESS System ID.
 - Software version 3.1 and later displays DPIM and ESS versions installed in system.
 - DPIM or DPIM2.
 - ESS or ESS2.
 - Input/Output wire states.
 - SID (System Identification Number).
 - ID number assigned to all of the controllers in the H 40/50 EP System including the TCM, VCM, DPIM and ESS
 - Similar to the CIN used in traditional Allison Transmission Product Families.



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4 of 11



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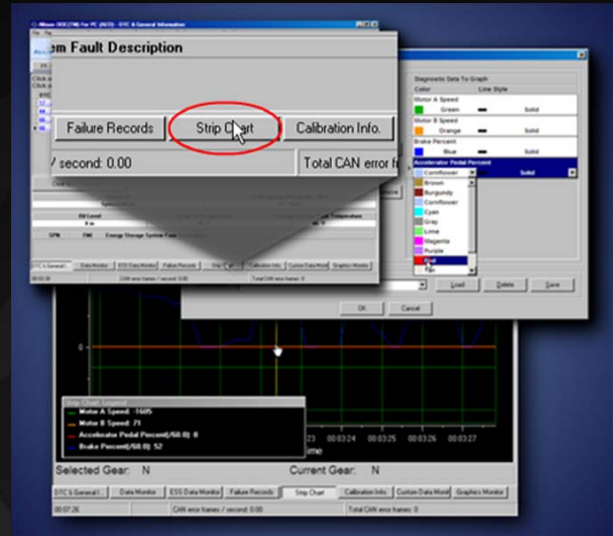


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Strip Chart

- Accessed with the Strip Chart button at the bottom of the program window.
- Graphically displays data changes in real time for selected parameters.
- Parameters to track are selected with drop-down lists.
 - *Configurations can be saved and loaded for future use.*
- Line graph tracks and displays selected data points over time.
 - *Cursor control allows parameter values to be displayed at various points in time.*



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5 of 11



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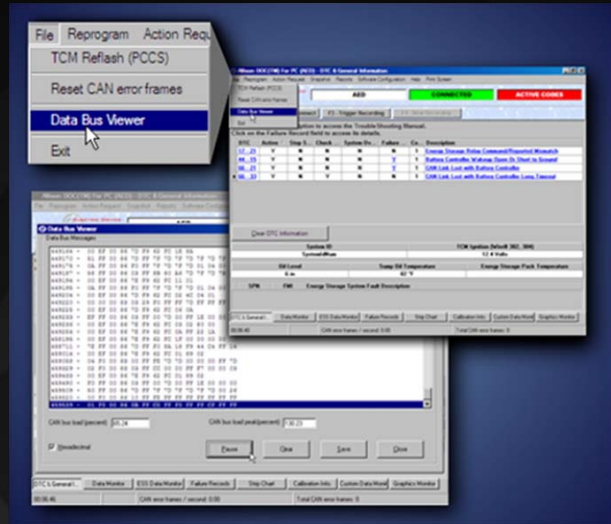


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Data Bus Viewer

- Accessed from the File pull down menu.
- Displays traffic traveling along the J1939 data bus in real time.
 - CAN bus loading and peak information is displayed below the Data Bus Messages pane.
 - Snapshots of the data stream can be saved and played back.
- Data bus information snapshots can be forwarded to Allison TAC for detailed engineering analysis.



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6 of 11



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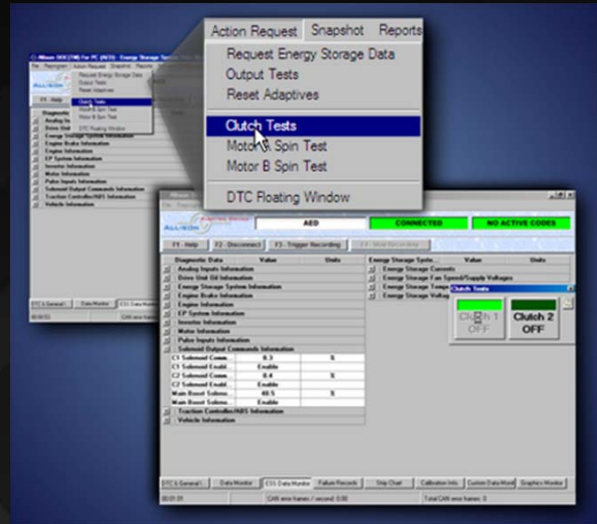


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Clutch Tests

- Accessed from the Action request pull down menu.
- Allows clutch circuits to be energized for diagnostic purposes and pressure testing.
 - *Vehicle must be in Drive.*
 - *Select clutch to test from Clutch Test popup window.*
 - *Selected clutch indicator light turns green when circuit is energized.*



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7 of 11



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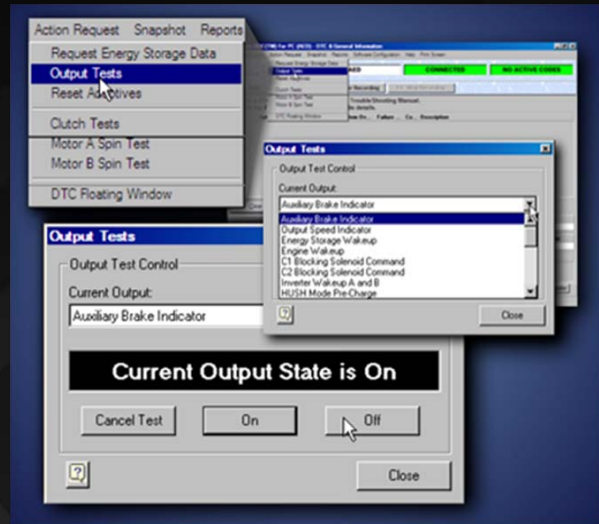


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Output Tests

- Accessed from the Action request pull down menu.
 - Select *Output Function* to test from drop down menu.
 - Current state of circuit is displayed below selected output.
 - On and Off buttons energize and de-energize selected circuit.
 - Circuit on/off state is displayed in real time.
- Allows output wire circuits connected to the TCM/VCM to be energized and de-energized for diagnostic purposes.



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8 of 11



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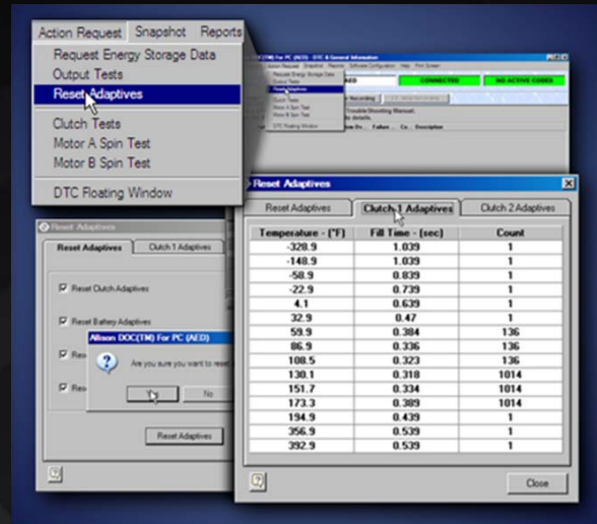


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Reset Adaptives

- Accessed from the Action request pull down menu.
- Reset Adaptives window displays tabs containing each set of adaptive values.
 - *Reset Adaptives tab allows selection of adaptives to be reset.*
 - *Clutch 1 and Clutch 2 tabs display currently stored adaptive values.*
- Allows learned adaptive parameters to be reset to factory defaults.
 - *Use after component overhaul, exchange or internal repair.*
 - *Resetting individual range shifts aids in troubleshooting shift performance complaints.*



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9 of 11



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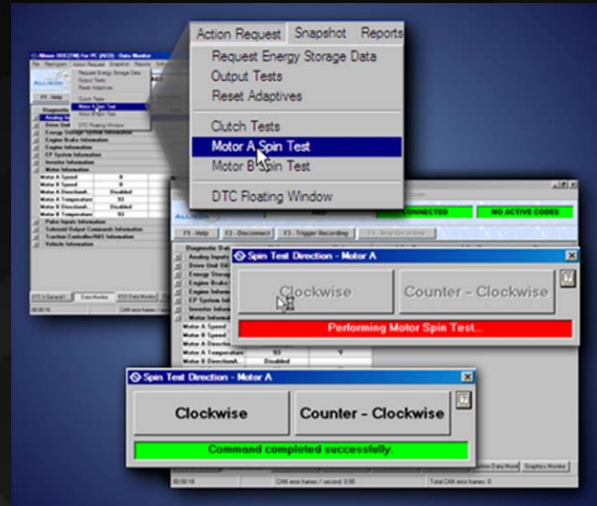


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Motor Spin Tests

- Accessed from the Action request pull down menu.
 - Select Motor A or Motor B for testing.
 - Popup window allows selected motor to be spun clockwise or counter-clockwise.
 - Use the Data Monitor to view the rpm values for each motor during the test.
 - Values will read negative during a counter-clockwise test.
- Allows technicians to verify the motors spin when commanded, and in the direction commanded.



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10 of 11



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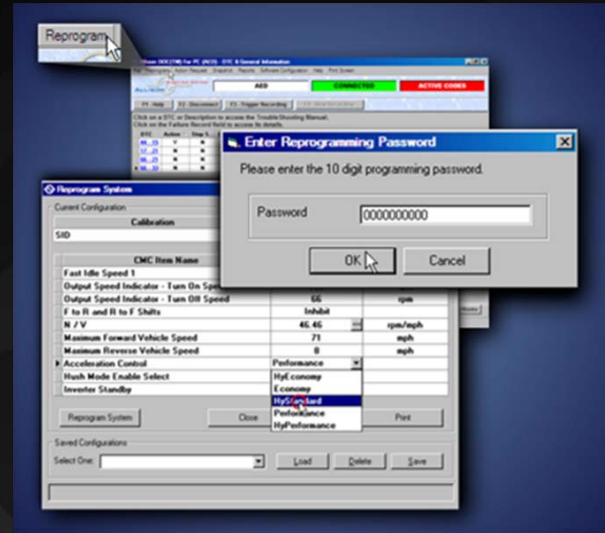


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Reprogramming

- Accessed by selecting the Reprogram menu.
 - Enter password when prompted.
 - The password is specific to the computer running the Allison DOC™ software, not the TCM/VCM being programmed.
- Reprogram window displays current CMC values.
- Current values can be saved for later retrieval.
- Click on a CMC value to be changed and enter the new value.
- Click the Reprogram System button to commit the changes to the TCM/VCM.



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11 of 11

