ACom® PRO™ Diagnostics

2024 v1

Bendix®

FEATURE LIST

General Features

- Displays manufacturer faults and select data for Bendix components.
- Reads all standard SAE faults and data for all components on the supported data bus protocols.
- Enhanced VIN decoding for North American VINs.
    - Vehicle Series provided when available.
- Provides key data points in graphical displays for vehicle and components.
- Automatically displays all component parameters of interest in the Data Monitor.
    - Search, sort or filter capabilities to easily identify parameters of interest.
    - Graph parameter changes over time.
    - Export up to the last 5 minutes of graphed data to local file.
- Data can be displayed in Metric or English units of measurement.
- Automatically connects to all supported and available data buses on the vehicle.
- Vehicle Readiness List displays information about each identified component.
- Ability to install and/or update ACom Legacy from within ACom PRO.
- ECU images marked with red exclamation point when one or more active faults are reported.

Heavy-Duty Features

- Supports all standard Heavy-Duty vehicles. VIN is not required for vehicle connections.
- Supports the heavy-duty SAE J1587/J1708, J1939, and ISO 15765 messages.
- Support for trailer diagnostics using:
    - PLC 7-way connector combined with a Noregon Trailer Diagnostic Adapter or the Noregon DLA+ PLC adapter.
    - Nexiq Universal J560 PLC Adapter combined with a Noregon DLA+ 3.0, DLA+ 2.0, DLA+, DLA+ 3.0 Wireless, DLA+ 2.0 Wireless, DLA+ Wireless, DLA+ PLC, or Nexiq USB-Link™ 2 adapter.
    - 4-pin to 9-pin diagnostic extension cable combined with a Noregon DLA+ 3.0, DLA+ 2.0, DLA+,DLA+ 3.0 Wireless, DLA+ 2.0 Wireless, DLA+ Wireless, DLA+ PLC, or Nexiq USB-Link™ 2 adapter.
    - Trailers equipped with 9-Pin SAE J1939 connector using a Noregon DLA+ 3.0, DLA+ 2.0, DLA+, DLA+ 3.0 Wireless, DLA+ 2.0 Wireless, DLA+ Wireless, DLA+ PLC, or Nexiq USB-Link™ 2 adapter.
- Read faults from all vehicle components.
- Clear faults from all vehicle components or only from a selected Bendix component.
- Bendix proprietary fault codes will include the SAE SPN, or SID and FMI in the displayed fault description.
- Graphically displays data using thermometers, gauges, etc. on the Data Monitor.
- Display of data related to reported faults in Data Monitor.
- Pre-defined Data Groups in Data Monitor enables troubleshooting electrical problems and common performance complaints.
- Ability to define custom groups of related data parameters to display in Data Monitor.

- Clear indication of overall vehicle health considering:
  - ✓ No 1939 Data (on 2009 or newer vehicles)
  - ✓ Active Faults Present
  - ✓ Consumable Fluid(s) Low
  - ✓ Battery Voltage Low
  - ✓ Cannot Detect ABS (on 2001 or newer vehicles)
- Displays wheel speeds, road speed, vehicle and brake lamp status, Intellipark switches and lights, vehicle and ABS battery voltage, and primary and secondary brake pressure values on the tractor brake key data point's window.
- Displays percentage of estimated brake wear life (pads plus rotor) remaining on key data points window for:
  - ✓ iSense (Pad Wear Sensing)
  - ✓ iSense – Pro (ADB Continuous Pad Wear Sensing)
- Displays reported pad wear life status on the ABD Wear Sensing key data points window.
- Consumable Fluid screen to monitor fluids used by vehicle and inform user of low levels.
- ABS Monitor provides an at-a-glance assessment of Bendix braking system's health by monitoring related electrical and pneumatic components.
- EOL (End of Line) Test are available from main toolbar for:
  - ✓ TABS-6™ Advanced Single-Channel Trailer ABS
  - ✓ TABS-6™ Advanced Multi-Channel Trailer ABS
  - ✓ TABS-8™ Trailer ABS
- Lookup Codes replace blink codes for path-type faults for the EC-80.

Education and Troubleshooting Features

- Integrates with Noregon's NextStep™ NET for Bendix (internet connection required)
  - View troubleshooting information, wiring diagrams and step-by-step repair procedures for Bendix faults with one click in Bendix® ACom® PRO™ Diagnostics.
  - Enhanced integration features from the troubleshooting repair view:
    - View fault related data while simultaneously viewing repair procedures.
    - Clear faults to verify the repair without leaving the NextStep™ Bendix screen.
    - Access Bi-Directional functionality directly from the troubleshooting repair view.
    - Access to installed Service Data Sheets on the NextStep™ Bendix screen.
  - Works on vehicle without requiring a VIN.
  - Regular content updates to add more fault and component coverage.
- Link to Bendix Service Data Sheets from Fault display to support troubleshooting when internet connection is not available.
- Virtual Truck feature enables exercising Bendix® ACom® PRO™ Diagnostics features including bi-directional tests for training and educational purposes without the need for an actual truck connection.
- Bendix Demo Truck demonstrates the tests and data available for various Bendix ECU versions and configurations.
  - Demo Truck connections display a demonstration indicator below the Fault Code Information window.

NOTE: This is for demonstration purposes only. Tests and data may not function realistically.

- Fault Assistance providing technician friendly descriptions for fault status values from both the Fault Display and the Data Monitor.
- Diagnostic connector pinout diagrams for Heavy-Duty cable connectors to aid in troubleshooting connection issues.
- Provides data bus utilization statistics on live vehicle connections.
- Displays CAN error frame data to aid in diagnosing communication issues. NOTE: CAN error frame data is only available when using a DLA+ 3.0, DLA+ 2.0, DLA+, DLA+ 3.0 Wireless, DLA+ 2.0 Wireless, DLA+ Wireless, DAL+ PLC, or NEXIQ adapter.
- Power Diagram and Electrical Assistance available in Data Monitor to aid in the diagnosis of electrical problems for heavy-duty vehicle connections.
- FMI Assistance providing technician friendly descriptions for fault code FMI values from both the Fault display and the Data Monitor.
- Industry Terms definitions available from the Fault Grid, NextStep window, and the Data Monitor window.
- Lookup Code Assistant provides a reference for the equivalent term used in an ECU's Service Data Sheet.

Reporting Features

- Prints Bendix DTC Report and Bendix Trailer DTC Report, which contain faults and key data.
- Bendix proprietary fault codes will include the SAE SPN and FMI, or SID and FMI in the displayed fault description.
- Bendix Data Reporting (BDR) file is generated for EC-60 and EC-80 braking systems when the DTC report is created or submitted.
- Automatically captures a vehicle snapshot recording containing all available ECUs and parameters on every vehicle connection.
- Ability to manually record logs for up to 1 hour of vehicle data for later analysis. Log will contain all ECU and parameter data that is requested and reported during the recording.

NOTE: log recording time may be limited by computer system resources.

- Ability to playback recorded logs and monitor parameters via Data Monitor.

Integration Features

- Automatically detects OEM applications and provides convenient methods to launch them.
- Link to download ServiceMaxx from OEM Application Portal.
- Launches OEM component diagnostic applications in Fault Code Information. Simply click on the OEM application icon to launch the application for more information about that component.
- Launches ACom® Legacy by clicking on the "Launch ACom 6 Legacy with Trailer" icon.
- Support Warranty Submission by enabling you to submit a vehicle report via email.
- Ability to update or install ACom® Legacy from within Bendix® ACom® PRO™.

Configuration Features

- Ability to automatically switch between USB, Wi-Fi®, or Bluetooth® when connecting with a DLA+ 3.0 Wireless adapter.
- Ability to automatically switch between USB or Wi-Fi® when connecting with a DLA+ 2.0 Wireless, or DLA+ Wireless adapter.

Product Support Features

- Links to contact Bendix support or sales from within the application.
- Links to enable remote access for support.
- Support for automatic updates.
- Easy access to Noregon DLA+ family adapter test tools to aid in diagnosing connection problems.

Bendix ECU Features

- Supports identification of all Bendix components.
- Ability to launch ACom® Legacy to provide support for older Bendix ECUs not currently supported by the Bendix® ACom® PRO™ Diagnostics application.

Tractor Brakes

- Supports proprietary sensor data on all EC-60 and EC-80 braking systems, and iSense (Pad Wear Sensing) ECUs.
- Supports reading and clearing Bendix proprietary fault codes on all EC-60 and EC-80 braking systems.
- Supports reading fault codes and sensor data for Bendix EC-80 EAC (Electronic Air Control) components.
- Supports reading and clearing Bendix proprietary fault codes and data for Intellipark.
- Supports reading and clearing Event History records on all EC-60 and EC-80 braking systems.
- Event History supports reading:
  - ✓ Event Counters for EC-80 braking systems.
  - ✓ ESP Counters for EC-60 and EC-80 braking systems.
- CPC Configuration Layout displays a configuration diagram for the connected CPC-enabled (Central Pressure Controller) EC-80 ECU.
- Users will be automatically prompted to run the ABS ECU Recovery test when required, based on the configuration of the EC-80 ABS ECU.
- Bi-Directional support for Bendix tractor brakes:

Bi-Directional Test or Calibration	Supported On
ABS Air Bag Pressure Test	EC-60 Advanced braking systems EC-80 ESP braking systems

Bi-Directional Test or Calibration	Supported On
ABS Configuration • *ABS* • *Tire Size* • *ATC* • *ESP* • *Broadcast* *For the full list of supported parameters, see all 36 ABS Configuration Parameters*	EC-60 and EC-80 braking systems
ABS Engine Limiting Test	EC-60 Premium or Advanced braking systems EC-80 ATC or ESP braking systems
ABS Pressure Test	EC-60 Advanced braking systems EC-80 ESP braking systems
ABS ECU Recovery	EC-80 braking systems
ABS Self Config Test	EC-60 braking systems EC-80 ABS or ATC braking systems
ATC Configuration ✓ ATC Control ✓ Traction Control Switch	EC-80 ATC or ESP braking systems
Battery Voltage Test	EC-60 and EC-80 braking systems
Braking System Switches Test	EC-60 and EC-80 braking systems
Dashboard Lamp Tests	EC-60 and EC-80 braking systems
Drag Torque Test	EC-60 Premium or Advanced braking systems EC-80 ATC or ESP braking systems
ECU Reset	EC-60 and EC-80 braking systems
ESP Lamp Test	EC-80 ESP braking systems
Maintenance Mode	Intellipark systems
Modulator Valve (Chuff) Tests	EC-60 and EC-80 braking systems
Steering Angle Test and Calibration	EC-60 Advanced braking systems EC-80 ESP or ATC+ with EV Support braking systems
Wheel Speed Chart Test	All braking systems reporting wheel speed values
Wheel Speed Window Test	All braking systems reporting wheel speed values
Wiggle Test/Performance Issue Monitoring	EC-60 and EC-80 braking systems
Yaw Rate and Lateral Accel. Test and Calibration	EC-60 Advanced braking systems EC-80 ESP braking systems

ABS Configuration Parameters

NOTE: The exact ABS Configuration parameters available vary based on brake ECU type.

ABS:

- ✓ Configuration Additional Axle
- ✓ Engine Retarder Control
- ✓ Rail Mode

Tire Size:

- ✓ Tire Size (RPM)

ATC:

- ✓ ATC Control
- ✓ Traction Control Switch

ESP:

- ✓ Yaw Control
- ✓ RSP
- ✓ Steering Angle Sensor Orientation
- ✓ Lateral Acceleration Sensor Orientation
- ✓ Yaw Rate Sensor Orientation
- ✓ Trailer Modulator
- ✓ Air Bag

Broadcast:

- ✓ *High Resolution Wheel Speed*
- ✓ *Wheel Speed Information*
- ✓ *Electronic Brake Controller*
- ✓ *Cruise Control/Wheel Speed*
- ✓ *Brake Message*
- ✓ *J1939: High Resolution Wheel Speed*
- ✓ *J1939: Wheel Speed Information*
- ✓ *J1939: Electronic Brake Control*
- ✓ *J1939: Cruise Control/Wheel Speed*
- ✓ *J1587: PID 49 ABS Control Status*
- ✓ *J1587: PID 84 Road Speed Information*
- ✓ *J1587: PID 151 ATC Control Status*
- ✓ *J1587: PID 168 Battery Potential (Voltage)*
- ✓ *J1587: PID 194 Diagnostics Data Requests (Faults)*
- ✓ *J1587: PID 209 ABS Control Status (Trailer)*
- ✓ *J2497: PID 49 ABS Control Status*
- ✓ *J2497: PID 84 Road Speed Information*
- ✓ *J2497: PID 151 ATC Control Status*
- ✓ *J2497: PID 168 Battery Potential (Voltage)*
- ✓ *J2497: PID 194 Diagnostics Data Requests (Faults)*
- ✓ *J2497: PID 209 ABS Control Status (Trailer)*
- ✓ *J2497: PID 237 VIN (Trailer)*
- ✓ *J2497: PID 245 Odometer (Trailer)*

Trailer Brakes

- Supports reading and clearing proprietary fault codes and SAE sensor data for the following:
  - TABS-6™ Advanced Single-Channel Trailer ABS
  - TABS-6™ Multi-Channel (MC) Trailer ABS
  - TABS-8™ Trailer ABS
- Supports reading and clearing faults for iSense – Pro (ADB Continuous Pad Wear Sensing) ECUs.
- Supports trailer diagnostics over CAN for the following modules using the Bendix 4-pin to 9-pin diagnostic extension cable:
  - TABS-6™ Advanced Single-Channel Trailer ABS
  - TABS-6™ Multi-Channel Trailer ABS
  - TABS-8™ Trailer ABS
- The EOL (End of Line) Test provides a suite of tests used to validate if the trailer ABS and its sensors are installed and functioning properly, and are available for:
  - ✓ TABS-6™ Advanced Single-Channel Trailer ABS
  - ✓ TABS-6™ Multi-Channel (MC) Trailer ABS
  - ✓ TABS-8™ Trailer ABS
  - EOL Test report provides general ECU information, test results, and information gathered by individual tests.
  - Individual EOL tests are also available from the bi-directional test menu.
- ECU Configuration provides technicians the tools to set the configuration and parameters of TABS-6™ Multi-Channel (MC) Trailer ABS ECUs.
- Bi-Directional Support for Bendix Trailer Brakes:

Bi-Directional Test or Calibration	Supported On
ABS Indicator Lamp Test	TABS-6™ Advanced Single-Channel Trailer ABS TABS-6™ Multi-Channel (MC) Trailer ABS TABS-8™ Trailer ABS
Axle Load Test	TABS-6™ Advanced Single-Channel Trailer ABS TABS-6™ Multi-Channel (MC) Trailer ABS TABS-8™ Trailer ABS
Battery Voltage Test	TABS-6™ Advanced Single-Channel Trailer ABS TABS-6™ Multi-Channel (MC) Trailer ABS TABS-8™ Trailer ABS
Chuff Test	TABS-6™ Multi-Channel (MC) Trailer ABS TABS-8™ Trailer ABS
Door Switch Test	TABS-6™ Advanced Single-Channel Trailer ABS TABS-6™ Multi-Channel (MC) Trailer ABS TABS-8™ Trailer ABS
ECU Configuration ✓ ABS Configuration ✓ Load and Sensor Configuration ✓ TRSP ✓ Auxiliary IO	TABS-6™ Multi-Channel (MC) Trailer ABS

Bi-Directional Test or Calibration	Supported On
ECU Information Test*	TABS-6™ Advanced Single-Channel Trailer ABS TABS-6™ Multi-Channel (MC) Trailer ABS TABS-8™ Trailer ABS
General Output Functions Test	TABS-6™ Advanced Single-Channel Trailer ABS TABS-6™ Multi-Channel (MC) Trailer ABS TABS-8™ Trailer ABS
Installation Angle Test	TABS-6™ Advanced Single-Channel Trailer ABS TABS-6™ Multi-Channel (MC) Trailer ABS TABS-8™ Trailer ABS
Installation Configuration Test	TABS-6™ Advanced Single-Channel Trailer ABS TABS-6™ Multi-Channel (MC) Trailer ABS TABS-8™ Trailer ABS
Lift Axle Control Test ***NOTE:*** *Supports LAC1 and LAC2*	TABS-6™ Advanced Single-Channel Trailer ABS TABS-6™ Multi-Channel (MC) Trailer ABS TABS-8™ Trailer ABS
Lift Axle Sensing Test ***NOTE:*** *Supports LAS1 and LAS2*	TABS-6™ Advanced Single-Channel Trailer ABS TABS-6™ Multi-Channel (MC) Trailer ABS TABS-8™ Trailer ABS
Lift Lower Test	TABS-6™ Advanced Single-Channel Trailer ABS TABS-6™ Multi-Channel (MC) Trailer ABS TABS-8™ Trailer ABS
Low Pressure Warning Emergency Test	TABS-6™ Advanced Single-Channel Trailer ABS TABS-6™ Multi-Channel (MC) Trailer ABS TABS-8™ Trailer ABS
Low Pressure Warning Service Test	TABS-6™ Advanced Single-Channel Trailer ABS TABS-8™ Trailer ABS
P-21 Delivery Test	TABS-6™ Multi-Channel (MC) Trailer ABS TABS-8™ Trailer ABS
P-21 Modulator Test	TABS-6™ Advanced Single-Channel Trailer ABS TABS-6™ Multi-Channel (MC) Trailer ABS TABS-8™ Trailer ABS
P-22 Delivery Test	TABS-6™ Multi-Channel (MC) Trailer ABS
P-22 Modulator Test	TABS-6™ Multi-Channel (MC) Trailer ABS
Pad Wear Test	TABS-6™ Advanced Single-Channel Trailer ABS TABS-6™ Multi-Channel (MC) Trailer ABS TABS-8™ Trailer ABS

Bi-Directional Test or Calibration	Supported On
Pressure Sensor Test	TABS-6™ Advanced Single-Channel Trailer ABS TABS-6™ Multi-Channel (MC) Trailer ABS TABS-8™ Trailer ABS
S-C and S-D Sensor Tests	TABS-6™ Advanced Single-Channel Trailer ABS TABS-6™ Multi-Channel (MC) Trailer ABS TABS-8™ Trailer ABS
S-E and S-F Sensor Tests ***NOTE:*** *Supports 4 sensor configuration only*	TABS-6™ Multi-Channel (MC) Trailer ABS
Scratchpad Test*	TABS-6™ Advanced Single-Channel Trailer ABS TABS-6™ Multi-Channel (MC) Trailer ABS TABS-8™ Trailer ABS
Tire Inflation System Test	TABS-6™ Advanced Single-Channel Trailer ABS TABS-6™ Multi-Channel (MC) Trailer ABS TABS-8™ Trailer ABS
Wear Sensing Test ***NOTE:*** *Requires QWS on SENS IN 1 and 2*	TABS-6™ Multi-Channel (MC) Trailer ABS with minimum software version of TCWG.730.88
Wheel Speed Chart Test	All braking systems reporting wheel speed values
Wheel Speed Window Test	All braking systems reporting wheel speed values

*These tests are only displayed within the EOL Test dialog

Driver Assistance Systems (DAS)

- Supports reading and clearing fault codes and reading sensor data for the following:
  - ✓ AutoVue® 3G LDW System
  - ✓ SafetyDirect® Web Portal Processor (3G and 5G)
  - ✓ AutoVue® FLC20™ Camera
  - ✓ AutoVue® FLC25™ Camera
  - ✓ Wingman® FLR20™/FLR21™ Radar
  - ✓ Wingman® FLR25™ Radar
  - ✓ Blindspotter® Radar
  - ✓ Vorad VS500 Radar
  - ✓ Driver Interface Unit (DIU)
  - ✓ Steering Assist
- Supports reading and clearing Event History records on all FLR 21 ECUs.

- Bi-Directional support for Bendix Driver Assistance Systems:

Bi-Directional Test or Calibration	Supported On
AutoVue 3G Configuration ✓ Enable Startup Chirps ✓ Enable Radio Mute Discrete Output ✓ Allow Driver Volume Control ✓ LDW Warning Alert Type ✓ LDW Minimum Operating Speed ✓ TPMS Sampling Interval	AutoVue® 3G LDW System
Blindspotter Configuration ✓ Enable Auto Baud Rate ✓ Set J1939 Baud Rate ✓ Legacy Mode ✓ Hazard Lamp Suppression ✓ Fixed CCVS Acceptance Address ✓ Sensor Location ✓ Extra CAN Target Messages ✓ FOV Speed Threshold ✓ J1939 Base Source Address ✓ Suppress Side Object Display BIST	Blindspotter® Radar
Camera Snapshot Test	AutoVue® FLC20™ Camera
Clear Stored Events and Videos	AutoVue® 3G LDW System SafetyDirect® Web Portal Processor (3G and 5G)
DIU Configuration ✓ Minimum Volume Percentage ✓ Minimum Volume Retained ✓ Power-up Tone ✓ 2 Second Alert Tone ✓ 1 Second Alert Tone ✓ Headway Alerts When Breaking ✓ Collision Alert When Braking ✓ Wingman Advanced Alerts ✓ Left Speaker Diagnostics ✓ LDW Audio Support ✓ Right Speaker Diagnostics ✓ Blackout Mode	Driver Interface Unit
Indicator Component Tests	AutoVue® 3G LDW System SafetyDirect® Web Portal Processor (5G)
Lamp Component Tests	AutoVue® 3G LDW System SafetyDirect® Web Portal Processor (5G)

Bi-Directional Test or Calibration	Supported On
LDW Configuration ✓ LDW ✓ LDW Minimum Operating Speed ✓ LDW Sensitivity (Left Side) ✓ LDW Sensitivity (Right Side) ✓ LDW + Blindspotter 2 Integration	AutoVue® FLC20 Camera
Output Component Tests	AutoVue® 3G LDW System SafetyDirect® Web Portal Processor (3G and 5G)
Pressure Trimming and Coil Polarity Test	Steering Assist components
Radar Service Alignment	Wingman® FLR25™ Radar
Safety Direct Event Configuration • SD Event Collection • SD Event Triggers • SD Min Speeds *For the full list of supported parameters, see all 22 Safety Direct Event Configuration Parameters*	AutoVue® 3G LDW System SafetyDirect® Web Portal Processor (3G and 5G)
Safety Direct Event Selection Configuration • *Notification Beep* • *Video Recording* *For the full list of supported parameters, see all 18 Safety Direct Event Selection Configuration Parameters*	AutoVue® 3G LDW System SafetyDirect® Web Portal Processor (3G and 5G)
SDP3 Configuration ✓ Enable Startup Chirps ✓ Enable Radio Mute Discrete Output ✓ LDW Driver Disable Switch Type ✓ Alert Type ✓ Audio Sound Type ✓ TPMS Sampling Interval ✓ Video Input Camera Type	SafetyDirect® Web Portal Processor (3G)

Bi-Directional Test or Calibration	Supported On
SDP5 Configuration ✓ Enable Startup Chirps ✓ Enable Radio Mute Discrete Output ✓ LDW Driver Disable Switch Type ✓ Alert Type ✓ Audio Sound Type ✓ TPMS Sampling Interval ✓ Cellular Enable ✓ DVR Options ✓ Startup Chirp Volume ✓ Video Input Camera Type	SafetyDirect® Web Portal Processor (5G)
SDP5 System Configuration ✓ FLC Camera ✓ DFC Camera ✓ MPC2 Camera ✓ CTP OBC ✓ Private CAN ✓ Power Backup: Backup Battery ✓ Use Only CTP for Data Offloading ✓ Power Backup: Supercaps	SafetyDirect® Web Portal Processor (5G)
Speaker Volume Configuration	AutoVue® 3G LDW System SafetyDirect® Web Portal Processor (3G and 5G)
SPTAC Calibration	AutoVue® FLC20™ Camera
Startup Chirp Volume Setting	SafetyDirect® Web Portal Processor 3G version 21.19 and above SafetyDirect® Web Portal Processor 5G
TSR Configuration ✓ Traffic Sign Recognition ✓ TSR OverSpeed Alert ✓ TSR OverSpeed Alert and Action ✓ Source Address for the Country Select message	AutoVue® FLC20™ Camera

Bi-Directional Test or Calibration	Supported On
Wingman FLR Configuration *General Settings:* ✓ ACC Lateral Mounting Offset ✓ Stationary Object Warning ✓ Direct TSC1 Control ✓ Highway Departure Braking ✓ ACC Type ✓ Multi Lane AEB ✓ ACC Type Engine Mismatch *DFA Alerts/Following Distance Settings:* ✓ Following Distance Alert Table ✓ Momentary FDA	Wingman® FLR20™/FLR21™ Radar Wingman® FLR25™ Radar Vorad VS500 Radar
Wingman Fusion Blindness Adjustment	Wingman® FLR21™ Radar

Safety Direct Event Configuration Parameters

NOTE: The exact Safety Direct Event Selection Configuration parameters available vary based on ECU type.

SD Event Collection

- ✓ Safety Direct Event Reporting
- ✓ Transmit Time Before Event Trigger
- ✓ Transmit Time After Event Trigger
- ✓ SD Manual Event Video Length
- ✓ SD Overspeed Grace Threshold
- ✓ SD Overspeed Video Snapshots OTA

SD Event Triggers

- ✓ Hard Braking Force
- ✓ Severe Hard Braking Force
- ✓ Excessive Turning Force
- ✓ Severe Excessive Turning Force
- ✓ Following Distance Time
- ✓ Following Distance Duration
- ✓ Severe Following Distance Duration
- ✓ SD Severe Lane Mark No. Track Time
- ✓ Vehicle Overspeed Limit Threshold
- ✓ Vehicle Speeding Limit
- ✓ Severe Vehicle Overspeed Limit Threshold
- ✓ Speeding Trigger
- ✓ Severe Speeding Trigger

SD Min Speeds

- ✓ Braking Trigger Minimum Speed
- ✓ Excessive Turning Trigger Minimum Speed
- ✓ Following Distance Minimum Speed

Safety Direct Event Selection Configuration Parameters

NOTE: The exact Safety Direct Event Selection Configuration parameters available vary based on ECU type.

Notification Beep:

- ✓ Excessive Curve Speed
- ✓ Excessive Braking
- ✓ Distance Alert
- ✓ Forward Collision Warning
- ✓ Collision Mitigation Braking
- ✓ ESC
- ✓ RSC
- ✓ Over Speed Limit
- ✓ Vehicle Speeding

Video Recording:

- ✓ Excessive Curve Speed
- ✓ Excessive Braking
- ✓ Distance Alert
- ✓ Forward Collision Warning
- ✓ Collision Mitigation Braking
- ✓ ESC
- ✓ RSC
- ✓ Over Speed Limit
- ✓ Vehicle Speeding

Tire Pressure Monitoring System (TPMS)

- Supports reading and clearing Bendix proprietary fault codes on all SmarTire™ TPMS Solutions.
- Supports proprietary sensor data on all SmarTire™ TPMS Solutions.
- Supports reading and clearing of mileage accumulation statistics and sensor fault occurrences on all SmarTire™ NextGen TPMS Solutions.
- TPMS key data points screen displays tire pressure and temperature data for configured sensor ID's.
- Supports reading Event History Information and saving to local file.
- Bi-Directional support for Bendix TPMS:

Bi-Directional Test or Calibration	Supported On
TPMS Ambient Sensor Configuration *Global Settings:* ✓ Altitude Compensation *Ambient Application Configuration:* ✓ Ambient Sensor ID Code ✓ Ambient Condition Enable ✓ Ambient Pressure From Sensor ✓ Ambient Pressure Enable ✓ Ambient Pressure Source ✓ Ambient Sensor Fault Enable	All SmarTire™ TPMS solutions
TPMS Backup and Restore *For compatibility rules see TPMS Backup and Restore Compatibility*	All SmarTire™ TPMS solutions
TPMS Configuration	All SmarTire™ TPMS solutions
TPMS Lamp Display Configuration	SmarTire™ Standard and NextGen TPMS Solutions
TPMS Parameters • Global Settings • Sensor Fault Time Programming • Programming Restrictions • Dual Tire Imbalance • Low Power Mode • Vehicle and Trailer Settings • Antenna Configuration *For the full list of supported parameters, see all 36 TPMS Parameters*	All SmarTire™ TPMS solutions
TPMS Scratchpad	SmarTire™ NextGen TPMS solutions
TPMS Signal Strength Test	All SmarTire™ TPMS solutions (except for Standard TPMS models 200.0213, 200.0216, and 200.0219)
TPMS Statistics	SmarTire™ NextGen TPMS solutions

TPMS Parameters

NOTE: The TPMS Parameters available vary based on TPMS type and variant.

Global Settings:

- ✓ First Alert Level
- ✓ Temperature Compensate FAL
- ✓ Second Alert Level
- ✓ Temperature Compensate SAL
- ✓ High Temperature
- ✓ Auto Learn Setting
- ✓ Tire Condition Pressure Mode

Sensor Fault Time Programming:

- ✓ Sensor Fault Time Rolling Mode
- ✓ Custom Stationary Sensor Fault Time
- ✓ Sensor Fault Time Stationary Mode
- ✓ Custom Ambient Sensor Fault Time
- ✓ Sensor Fault Time for Ambient Sensor

Programming Restrictions:

- ✓ Gauge Units Menu
- ✓ Gauge Parameters Menu
- ✓ Gauge Axle Menu
- ✓ Gauge Altitude Menu
- ✓ Gauge Learn Menu
- ✓ Gauge Profile Menu
- ✓ Gauge Password Menu
- ✓ PIN Code to Unlock Display

Dual Tire Imbalance:

- ✓ Dual Tire Imbalance Enable
- ✓ Dual Tire Imbalance Pressure Limit

Low Power Mode:

- ✓ Vehicle Battery Check Interval
- ✓ Minimum Vehicle Battery
- ✓ Maximum Sensor Data Age

Low Power Mode Stage 1:

- ✓ Stage One Sleep Time
- ✓ Stage One Repetitions

Low Power Mode Stage 2:

- ✓ Stage Two Sleep Time
- ✓ Stage Two Repetitions

Low Power Mode Stage 3:

- ✓ Stage Three Sleep Time

Vehicle and Trailer Settings:

- ✓ Vehicle Type
- ✓ Vehicle ID
- ✓ Trailer Learn
- ✓ Exclusive Trailer
- ✓ Exclusive Trailer ID

Antenna Configuration:

- ✓ Internal Antenna

TPMS Backup and Restore Compatibility

The TPMS Backup and Restore allows configuration settings to be saved to and loaded from a local file. The following shows compatibility rules for transferring data between different TPMS controllers.

SmarTire™ Standard TPMS solutions:
May update Standard and NextGen controllers.

SmarTire™ iTPMS solutions:
May only update other iTPMS controllers.

SmarTire™ NextGen TPMS solutions:
May update Standard and NextGen controllers.

Air Treatment Systems

- Supports reading proprietary faults and data, and clearing faults for the following air treatment system components:
  - ✓ EAC (EC-80 Integrated)
  - ✓ EAC (Standalone)
- Supports reading and clearing proprietary fault codes for the following air treatment system components:
  - ✓ eAPU2
  - ✓ iAPU
  - ✓ ESM1
  - ✓ ESM2
  - ✓ EVM1
  - ✓ eIAG
- Bi-Directional support for Bendix Air Treatment Systems:

Bi-Directional Test or Calibration	Supported On
Cartridge Lifetime Prediction Reset Test	EAC (EC-80 Integrated) EAC (Standalone)
Cartridge Reset Test	eAPU2 iAPU
Oil Change Reset Test	eAPU2 iAPU

Auxiliary Components

- Supports reading and clearing Bendix proprietary fault codes and data for the PLC Relay.

System Requirements

Supported Operating Systems

- Windows 10 (32 or 64-bit English, 32-bit Spanish)
- Windows 11

Hardware Requirements

- Minimum: 4 GB RAM, 20 GB of available hard drive space, Intel Core i3, 1024 x 768 monitor
- Recommended: 8 GB RAM, 20 GB of available hard drive space, Intel Core i5
- USB port for Noregon DLA+ 3.0, DLA+ 2.0, DLA+, or port for another RP1210C-Compliant vehicle adapter

NOTE: Ensure the RP1210C-Compliant adapter driver and firmware is the most current available.

NOTE: Internet access required for registration, NextStep™ Bendix, and to automatically check for software updates.

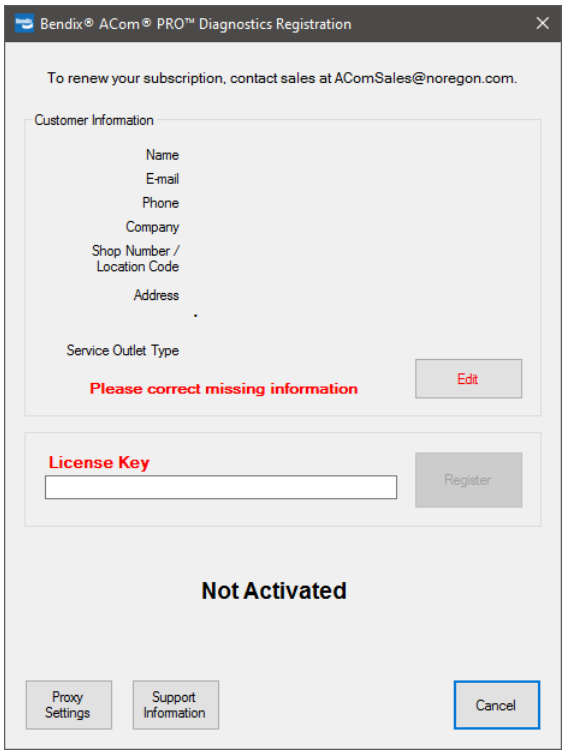
Registration

Bendix® ACom® PRO™ Diagnostics requires registration before the application may be used. Upon initial launch, you will be prompted to register the product. You will need to provide your contact information as well as the License Key that you received.

The information will be sent to licensing servers over the internet to register the product.

NOTE: Internet connectivity is required for registration.

If your company or business employs a proxy server to protect its internal network, then you may need to configure your proxy settings. Press the *Proxy Settings* button on the form and fill out the proxy settings.



Registration Screen

After initial registration, if you extend your subscription, you must update the Registration information. Select the *Applications Settings – Registration* button to display the registration form. Select the *Update Registration* button to update the registration information.

NOTE: Current subscription support is required to be eligible for Bendix® ACom® PRO™ Diagnostics product updates.

Setting Up Preferences

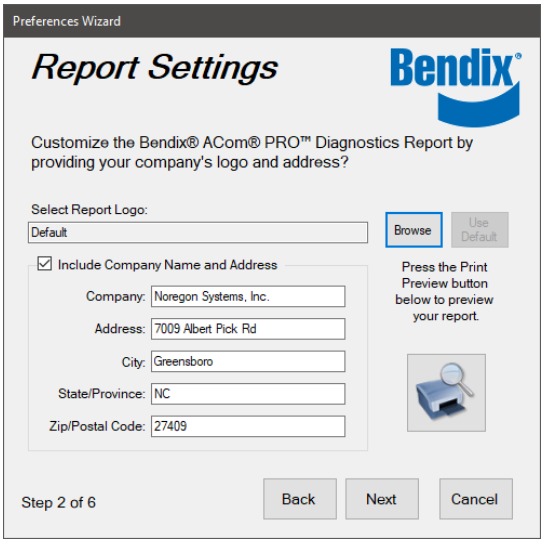
Preferences Wizard

After initial registration, Bendix® ACom® PRO™ Diagnostics will display the Preferences Wizard to help setup the application. The Preferences Wizard may be accessed at any time via the *Application Settings – Preferences Wizard* toolbar option.

1. On the Welcome Screen, choose the Units System and then select *Next.*

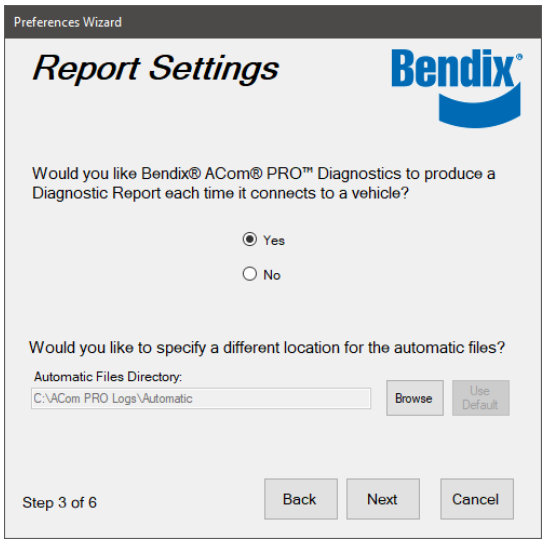
Preferences Wizard Welcome

2. From the Report Setting window you may customize your Bendix® ACom® PRO™ Diagnostic Report by specifying a logo and choosing to add your company name and address to the report header. The name and address fields will be pre-populated with the information provided at the time of registration but may be edited on this screen. You may select the *Print Preview* button see what the report header will look like.



Logo & Company Information

3. Select *Next* to configure Bendix® ACom® PRO™ Diagnostics to generate a report with each vehicle connection. You can view automatically generated reports from the Vehicle History window. You may also specify a different location for saving the automatic files now.



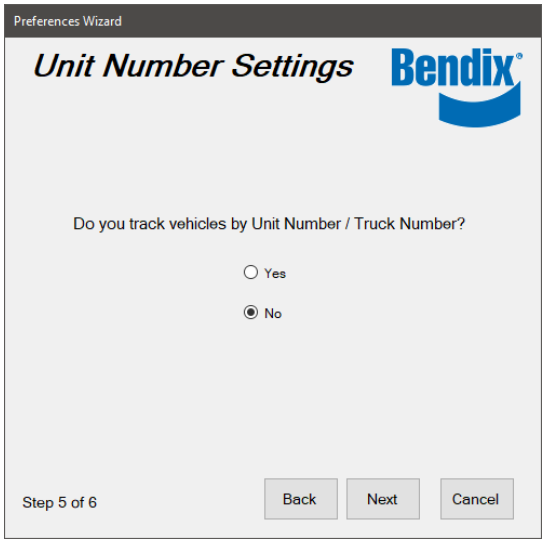
Report Settings

4. Select *Next* to specify the Location. If your company has multiple locations, setting the Location value enables you to easily identify the location of the vehicle. This value is used as a prefix to the name of the automatic files viewable in Vehicle History. Select *Next* when done.

Location

5. Next you will be asked if you track vehicles by Unit Number, also known as Truck or Bumper Number. If this is enabled, the application will attempt to read the Unit Number

from the vehicle and prompt the user for this information if it is unable to retrieve it from the vehicle. Select *Next*.

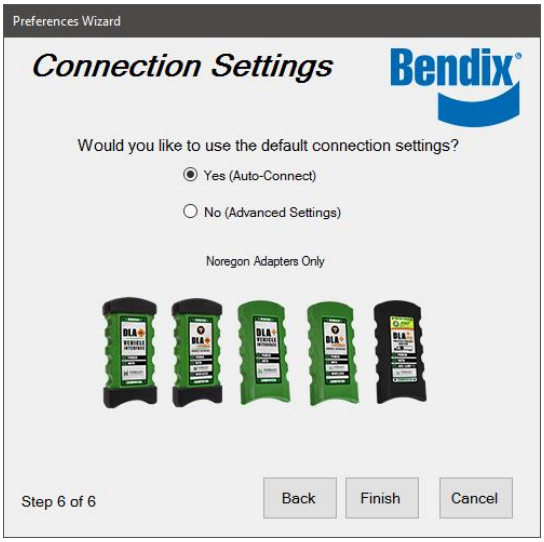


Unit Number Settings

6. Next is setting up adapter connections. If you are using a Noregon adapter, select “Yes (Auto-Connect”) on this screen.

NOTE: If you have a Demo license, then adapter selections will not be shown because live vehicle connections are not available.

7. If you are using a device other than a Noregon adapter, select “No, (Advanced Settings)” and specify the Vendor and Device with which to connect.



Connection Settings

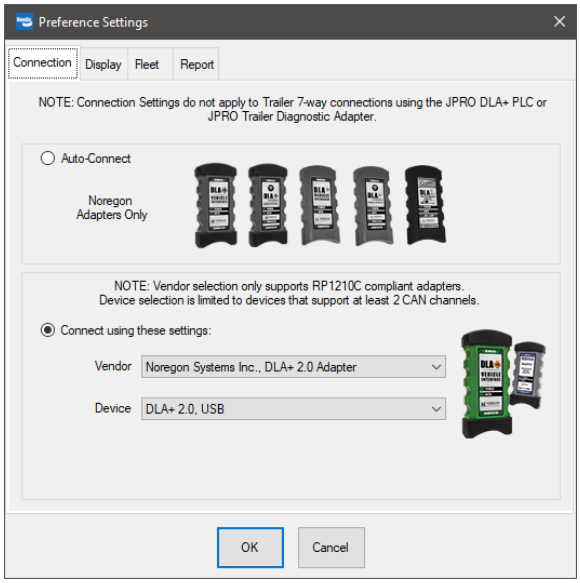
NOTE: Only adapters that are RP1210C compliant will be available for selection. The Device selection is limited to devices that support auto baud and at least 2 CAN channels.

8. Select *Finish* to save all your newly configured application settings.

Changing Preference Settings

At any time, you may choose to re-run the Preferences Wizard via the *Application Settings – Preferences Wizard* toolbar option.

You may also quickly access a single setting via the *Application Settings – Preferences* toolbar option which displays the Preferences window in a simple tabbed dialog.



Advanced Connection Settings

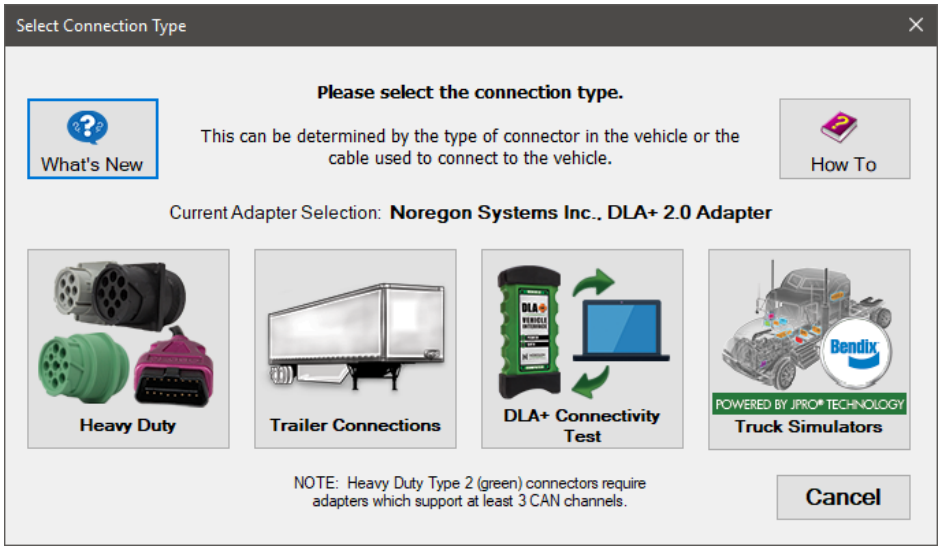
NOTE: If you have a Demo license, the Connection tab will not be shown because live vehicle connections are not available.

Working with Live Vehicle Data Bus

Connection to the Data Bus on Heavy Duty Vehicles

Connecting to the data bus establishes a connection from the PC through the vehicle adapter to the vehicle data bus that processes vehicle data.

1. Select the F8 key or the *Connect* button on the main toolbar.
2. You will be prompted for the connection type.



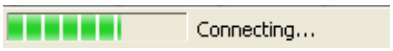
Select Connection Type

NOTE: If you have a Demo license, the vehicle connection buttons will be disabled because live vehicle connections are not available.

   a. Select the How To button to view this User's Guide document. This option requires Adobe Acrobat Reader.
   b. Select the What's New to view the What's New document which contains an overview of all features available in the Bendix® ACom® PRO™ Diagnostics application. This option requires Adobe Acrobat Reader.
   c. Select the DLA+ Connectivity Test button to launch the Noregon DLA+ Adapter Family Connectivity Test application. This may be useful to aid in troubleshooting connection issues. ***NOTE: If you have a Demo license, this button will not be available.***
   d. Select the Truck Simulators button to open a virtual or demo truck connection. See Virtual Truck Connection or Bendix Demo Truck Connection for more information.

3. Select the Heavy Duty button to connect to the vehicle data bus using all available protocols. ***NOTE: If you have a Demo license, this button will not be***

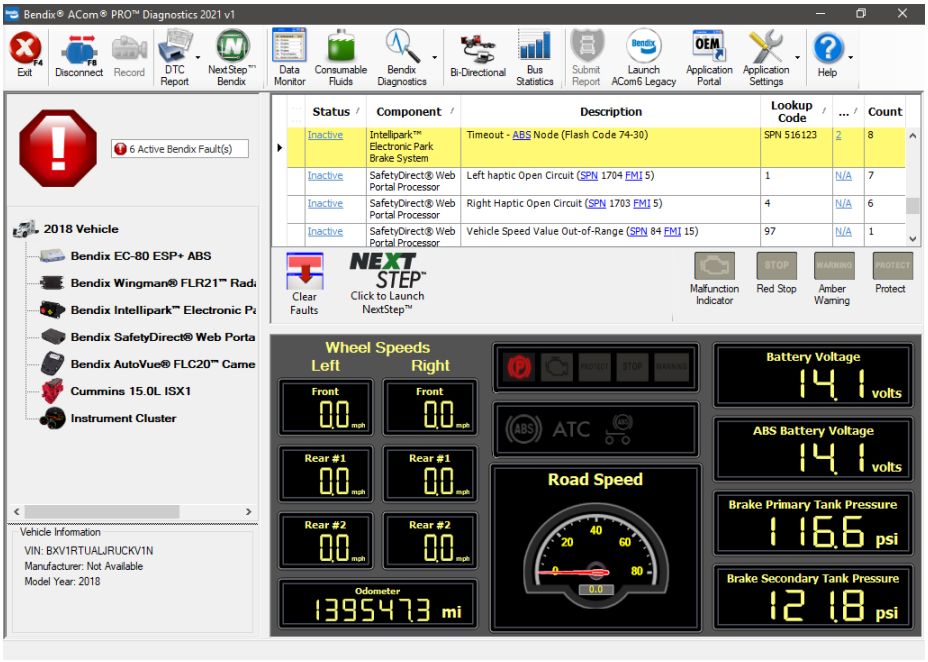
available. A progress bar in the lower left status bar will display the connection progress.



Connection Status Bar

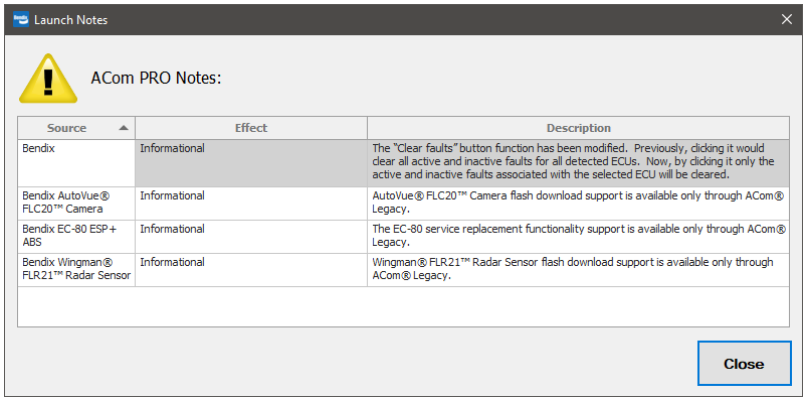
4. After connections, the Vehicle Readiness, Fault Code Information and Key Data Points windows are displayed.

   Initially, the top portion of the Vehicle Readiness window will indicate the gathering the vehicle's information. Once all vehicle information has been retrieved, the health of the vehicle is displayed.



Heavy-Duty Connection Main Screen

5. The application will verify the software version and display Launch Notes.



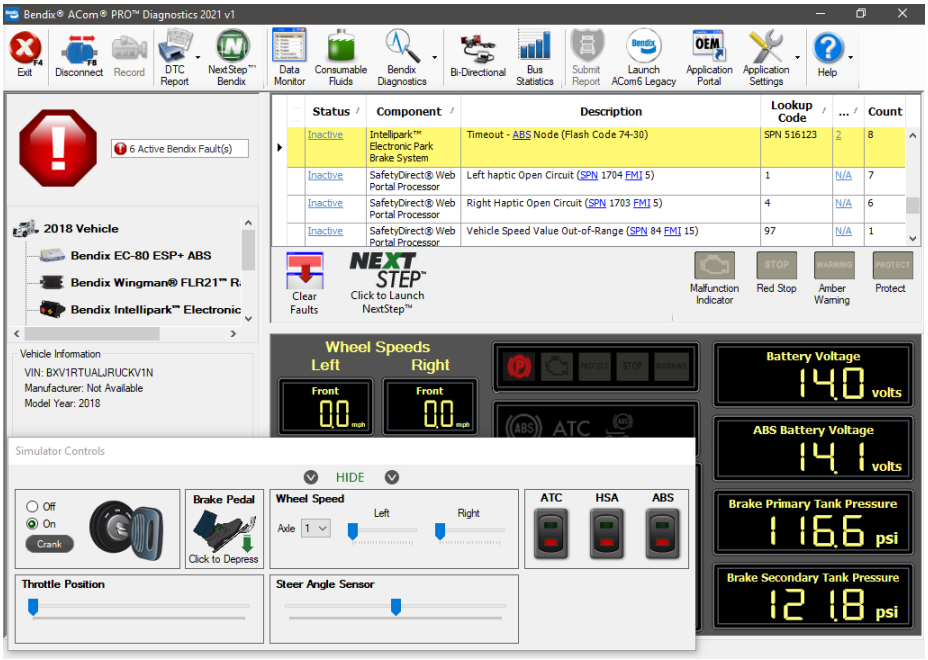
Launch Notes

Virtual Truck Connection

The virtual truck feature is designed to show the vehicle diagnostic and repair capabilities of ACom PRO without having to be physically connected to a vehicle. Any calibrations, configurations, testing, faults and functionality of ACom PRO in virtual truck are simulations.

1. Select the F8 key or the *Connect* button on the main toolbar.
2. You will be prompted for the connection type. Select the *Truck Simulators* button.
3. Choose *Virtual Truck* from the Select Virtual or Demo Truck screen.
4. The application will enter a truck simulation mode allowing you to exercise application features for training and educational purposes.
5. The simulation will behave like a Heavy-Duty vehicle connection. The Vehicle Readiness, Fault Code Information and Key Data Points windows are displayed.

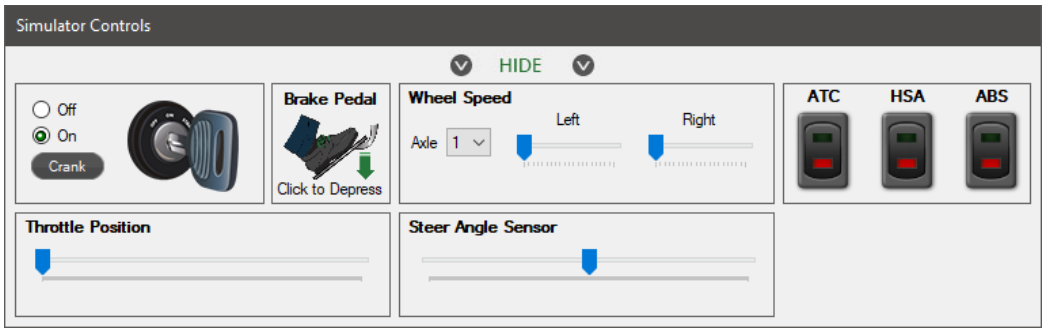
   Initially, the top portion of the Vehicle Readiness window will indicate the gathering the vehicle's information. Once all vehicle information has been retrieved, the health of the vehicle is displayed.



Heavy-Duty Connection Main Screen

6. Explore Bendix® ACom® PRO™ Diagnostics features such as NextStep™ Bendix, Data Monitor, Connector Info, Bus Statistics, Clearing Faults, as well as exercising bi-directional tests. These features will behave exactly as if you were connected to a normal Heavy-Duty vehicle connection.

7. Use the Simulator Controls to adjust wheel speeds, cycle ignition power, or perform other functions as instructed during some bi-directional tests. Click on the key to toggle the ignition state. Press and hold the *Crank* button to simulate engine cranking.



Simulator Controls

NOTE: The ability to initiate a Recording or Submit Warranty are not available when connected to a Virtual Truck.

8. Select the F8 key or the *Disconnect* button on the main toolbar to close the virtual truck simulation session.

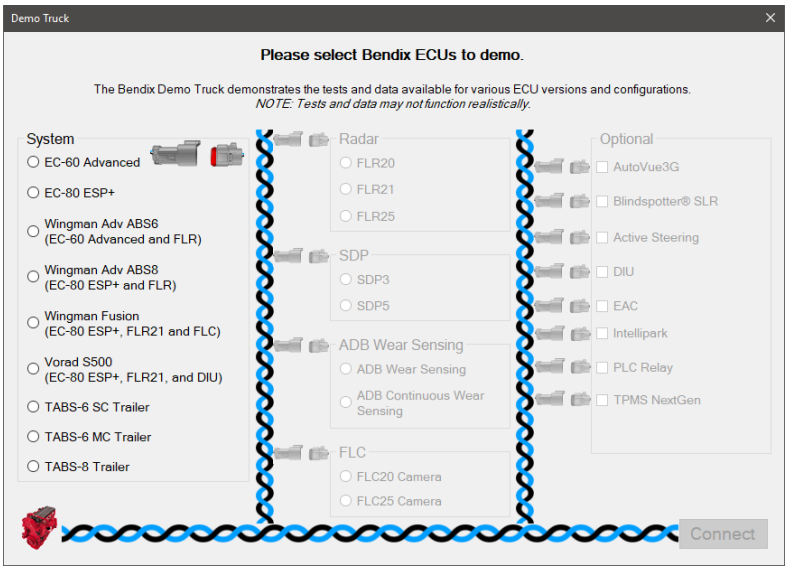
Bendix Demo Truck Connection

The demo truck feature demonstrates the tests and data available to various Bendix ECU versions and configurations. Select from the available options to create a custom demo connection to explore.

NOTE: This is for demonstration purposes only. Tests and data may not function realistically.

1. Select the F8 key or the *Connect* button on the main toolbar.
2. You will be prompted for the connection type. Select the *Truck Simulators* button.
3. Choose *Bendix Demo Truck* from the Select Virtual or Demo Truck screen.

4. Select the desired System option to enable appropriate required and optional ECU selections. Once all required selections have been made the Connect button will become available. Select *Connect* to begin the demonstration.

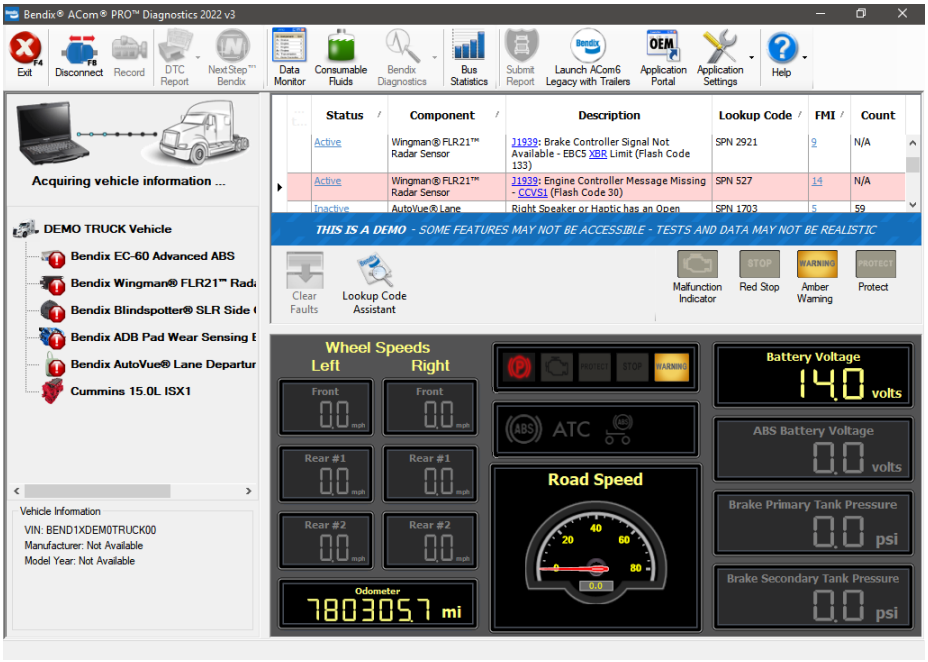


Bendix Demo Truck

5. The demonstration will behave like a Heavy-Duty vehicle connection. The Vehicle Readiness, Fault Code Information and Key Data Points windows are displayed with demo faults and data from the selected ECUs.

   Initially, the top portion of the Vehicle Readiness window will indicate the gathering the vehicle's information. Once all vehicle information has been retrieved, the health of the vehicle is displayed.

NOTE: Demo Truck connections display a demonstration indicator beneath the Fault Code Information window.



Bendix Demo Truck Connection Main Screen

6. Explore Bendix® ACom® PRO™ Diagnostics features such as Data Monitor and bi-directional tests to view the options available for the selected ECUs.
7. Select the F8 key or the *Disconnect* button on the main toolbar to close the demo truck session.

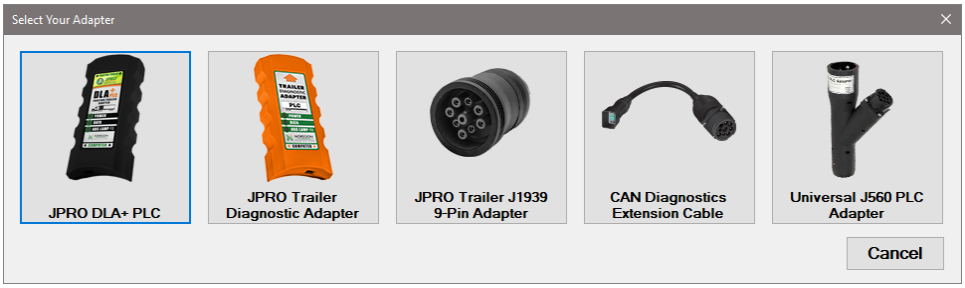
NOTE: The ability to initiate a Recording or Submit Warranty are not available when connected to the Bendix Demo Truck.

Connecting to the Data Bus on a Trailer

Connect a Noregon DLA+ PLC or Noregon Trailer Diagnostic Adapter using the PLC 7-way cable. Power must be provided to the trailer using either an auxiliary battery or the tractor.

Connections using the Universal J560 PLC Adapter combined with a Noregon DLA+ 3.0, DLA+ 2.0, DLA+, DLA+ 3.0 Wireless, DLA+ 2.0 Wireless, DLA+ Wireless or DLA+ PLC adapter are also supported.

1. Select the F8 key or the *Connect* button on the main toolbar.
2. You will be prompted for the connection type. Select the *Trailer Connections* button.
   NOTE: If you have a Demo license, this button will not be available.
3. If multiple PLC adapters are available, a selection screen will be displayed. Select the desired device to continue.

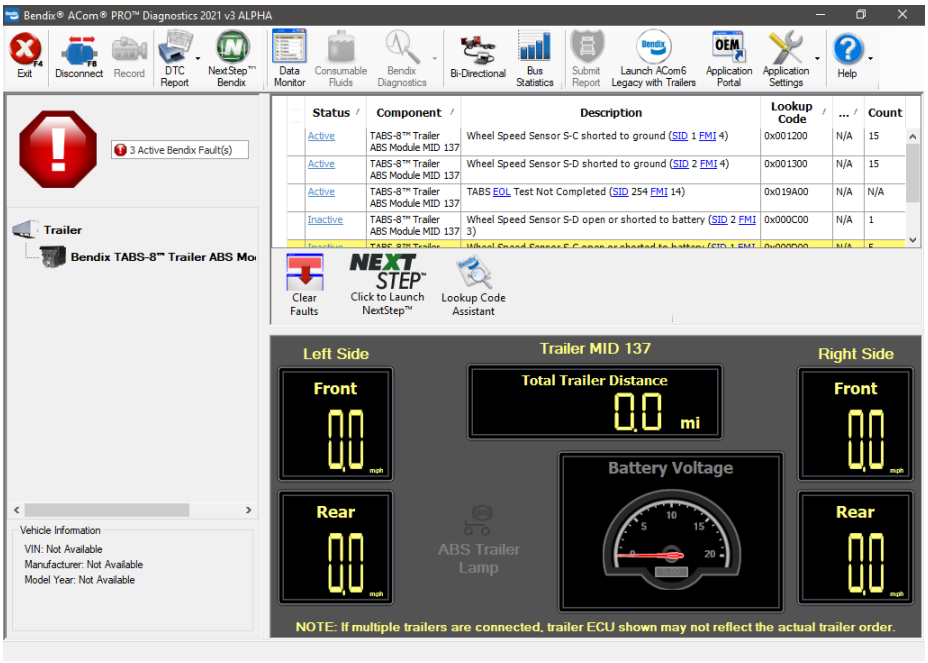


Select Your Adapter

4. The application will try to connect to the trailer using the selected trailer connection.

   If the Universal J560 PLC Adapter was selected, the application will connect to the trailer using the connection setting from Preferences.

5. The Vehicle Readiness, Fault Code Information and Key Data Points windows are displayed.



PLC Trailer Connection Main Screen

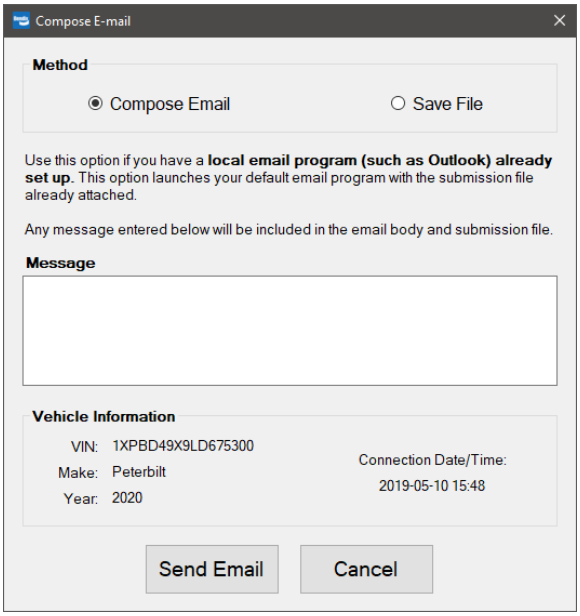
Disconnecting from the Data Bus

Disconnecting from the data bus closes the application's connection to the vehicle data bus.

1. Select the F8 key or the *Disconnect* button on the main toolbar.
2. The application disconnects from the data bus.
3. All data windows are closed.

Submit Report By E-mail

Bendix® ACom® PRO™ Diagnostics provides the ability to generate a comprehensive diagnostic report that can be viewed, saved, or emailed as needed. The BDR report is included in the submitted data. Select the Compose Email method if you are using a local email program like Outlook. Select Save File if you are using webmail like Gmail.



Compose E-mail for Submit Report

Compose Email

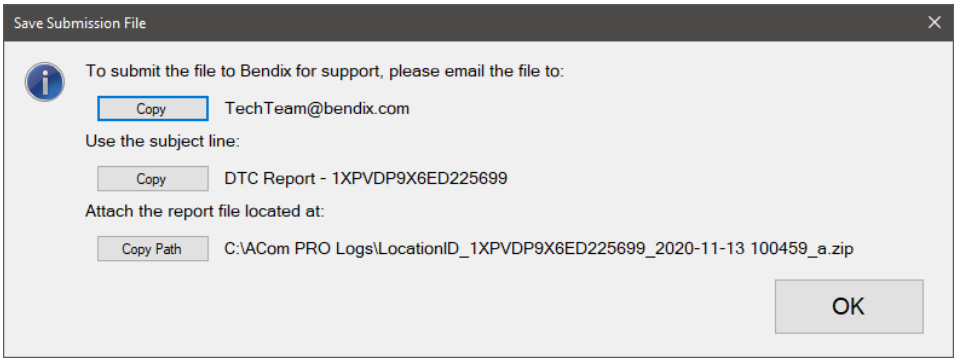
1. During a live vehicle connection select the *Submit Report* button on the main toolbar.
2. The Compose E-mail window is displayed. Select Compose Email. Type any desired text into the Message text area. *Select Send* Email when done.
3. A new email message opens containing the typed message and the log file for the current connection.

Save File

1. During a live vehicle connection select the *Submit Report* button on the main toolbar.
2. The Compose E-mail window is displayed. Select Save File. Type any desired text into the Message text area. Select *Send Email* when done.
3. A save file dialog will appear. Save the submission file to the desired location to be attached to a webmail message. The submission file will contain the typed message as a text document.

   Once the file has been saved a dialog will appear showing the Bendix Support email address, subject line to use, and path to the saved file,. Select the *Copy* or *Copy Path*

button to copy the displayed text to the clipboard so it can be pasted in the webmail message.



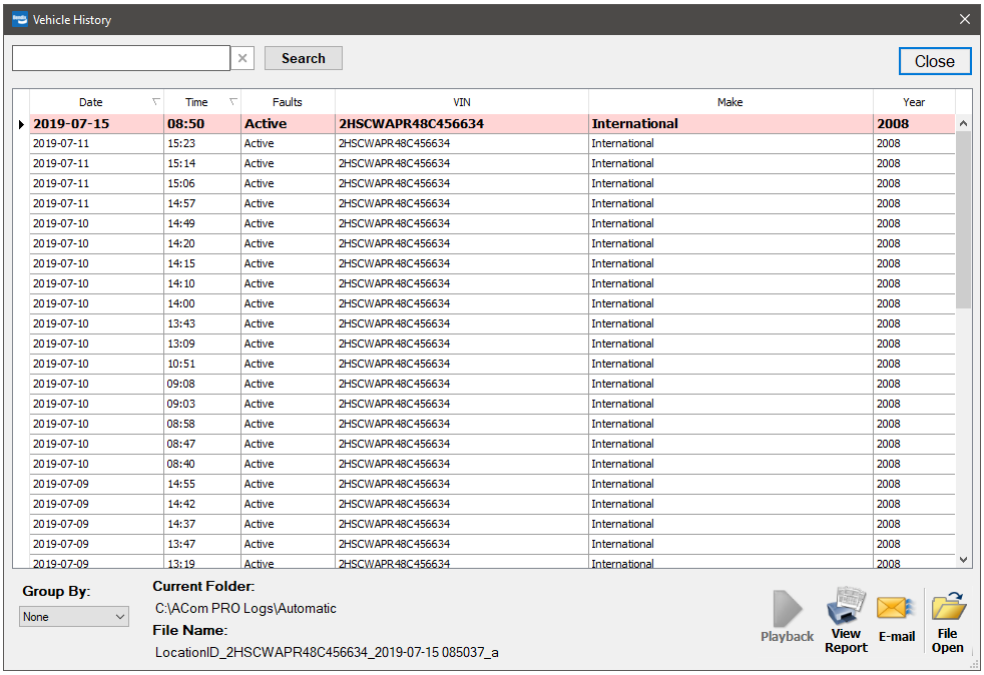
Save Submission File

Vehicle History

Vehicle History allows you to playback or view all the log files and reports located in the automatic log directory via the Connection History tab. The Inspection History tab allows you to view or edit PM Inspections. Data can also be sorted and grouped.

The Connection History tab also supports a Demo mode enabling you to explore application features quickly and easily without needing access to vehicles.

1. Select the *Vehicle History* button on the main toolbar.
2. The Vehicle History window appears with the Connection History tab selected and showing a listing of log files and reports located in the automatic log directory.



Vehicle History

NOTE: Unit Number will only display if enabled in Preferences.

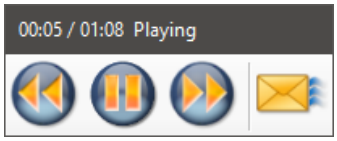
3. Use the *Search* at the top of the form to search all columns by Make, Unit Number, Customer Name, Comments or even a partial VIN. The displayed results will show only those items that meet all search criteria.
4. Use the *Group By* box to select which report heading to sort on.
5. Select the log file of interest from the Connection History tab.
    a. Select the *Play Log* button or double-click on a row to play back the previously recorded data. See “Playing Back Previously Recorded Data” for more details.
    b. Select the *View Report* button to view the Bendix® ACom® PRO™ Diagnostic Report if one is available.
    c. Select the *Email* button to attach and e-mail the playback file, Bendix® ACom® PRO™ Diagnostic Report if available.

d. Select the *File Open* button to playback a log file not in the automatic log file directory. The standard Windows Open File dialog appears and enables you to browse to the log file and select Open. See “Playing Back Previously Recorded Data” for more details.

Playing Back Previously Recorded Data

Playing back previously recorded data allows you to access all functionality as if you were connected to a live vehicle, but with the ability to start, stop, pause, and fast forward. This feature is often used to perform a more in-depth analysis when diagnosing and troubleshooting a vehicle.

1. Select a log file of interest from the Vehicle History list or via the Vehicle History *File Open* button.
2. The playback tool bar appears.



Playback Toolbar

3. The Vehicle Readiness, Fault Code Information and Key Data Points window are displayed.
4. The Application status bar is updated with the name of the playback file.
5. The playback toolbar functions as follows:
    a. **Rewind to beginning** of the playback file.
    b. **Play.** Begin file playback.
    c. **Pause**. Pause file playback.
    d. **Fast Forward** playback.
    e. **Attach and E-mail playback file**. This button displays the Compose E-mail dialog.
    f. The playback toolbar displays the current position in the file (MM:SS), the total length of the file, and the playback state.
6. To close the playback file, select the *Disconnect* button from the main toolbar. The toolbar and all data views will close.
7. The Vehicle History window will re-open.

Recording Live Vehicle Data

Recording the live vehicle data allows you to capture all data on the data bus to a file. This file can later be played back for a more in-depth analysis.

⚠ You cannot record data from a playback file. The Record option will only be available when connected to the live data bus.

Basic Recording

1. While connected to the live vehicle data bus, select the *Record* button from the main toolbar.
2. The data bus is recorded. “Record” displays in the lower right status bar.

Stop Recording

1. To stop recording, click the *Stop Recording* button on the main toolbar.
2. Recording stops.
3. The application prompts you to save the log file. Click *Yes*.
4. The standard Windows Save File dialog appears. Select a filename and a location for the file, and click *Save*. The default location is located at **C:\ACom PRO Logs**.
5. The log file is saved to disk and can be played using the Playback feature.

NOTE: Clicking the Disconnect or Exit button will also cause the application to prompt you to save the log file.

Automatic Recording

Upon making a live vehicle connection, Bendix® ACom® PRO™ Diagnostics immediately begins recording all data on the data bus. The recording will automatically be saved to a log file once all data has been read. The automatic recording will be a minimum of 60 seconds but may be longer if necessary to capture the full state of the vehicle.

Log files are saved to the computer’s hard drive in location configured in “Setting Up Preferences”. The default is:

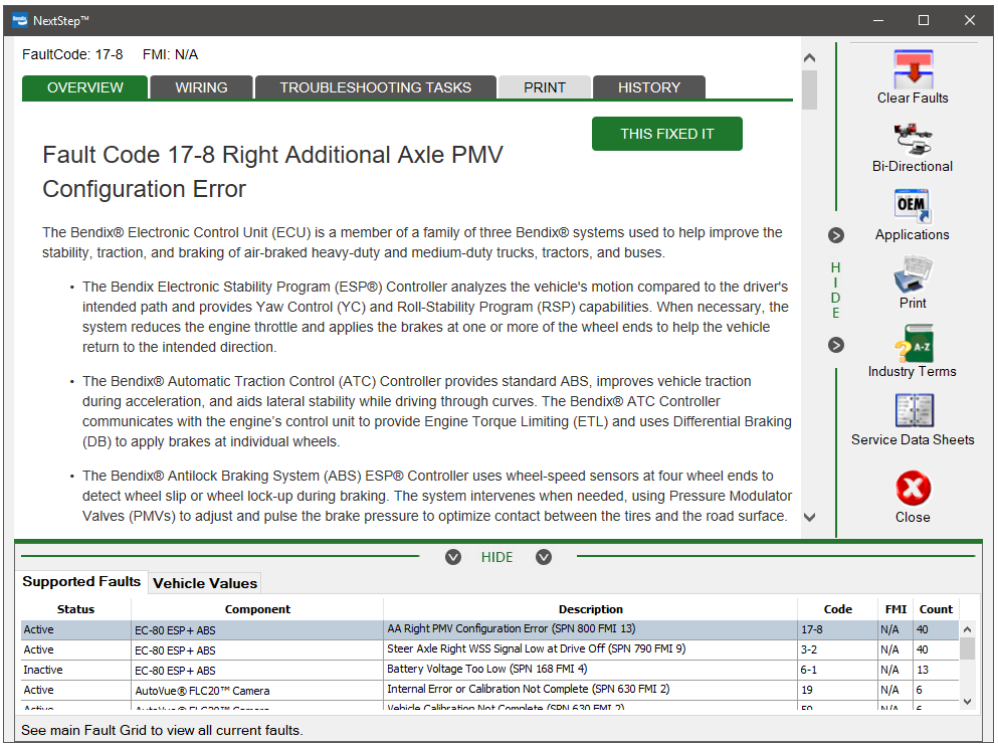
C: \ACom PRO Logs\Automatic

Automatically saved log files contain information in the filename that denotes the vehicle’s VIN, Unit Number (if required), the date and time of the recording, and the overall vehicle health. The filename will end with "a" if there were any active, pending or confirmed faults; an “i” if there any only inactive faults; and an “n” if there are no faults.

NextStep™ Bendix

The *NextStep™ Bendix* button on the main toolbar allows you to view troubleshooting information, wiring diagrams and step-by-step repair procedures for all reported Bendix faults as long as the computer has a reliable internet connection.

1. While connected to a heavy-duty vehicle, select the *NextStep™ Bendix* button on the main toolbar.
2. If any reported faults are supported, then the NextStep™ window appears. The Overview contains general information for the selected fault condition.

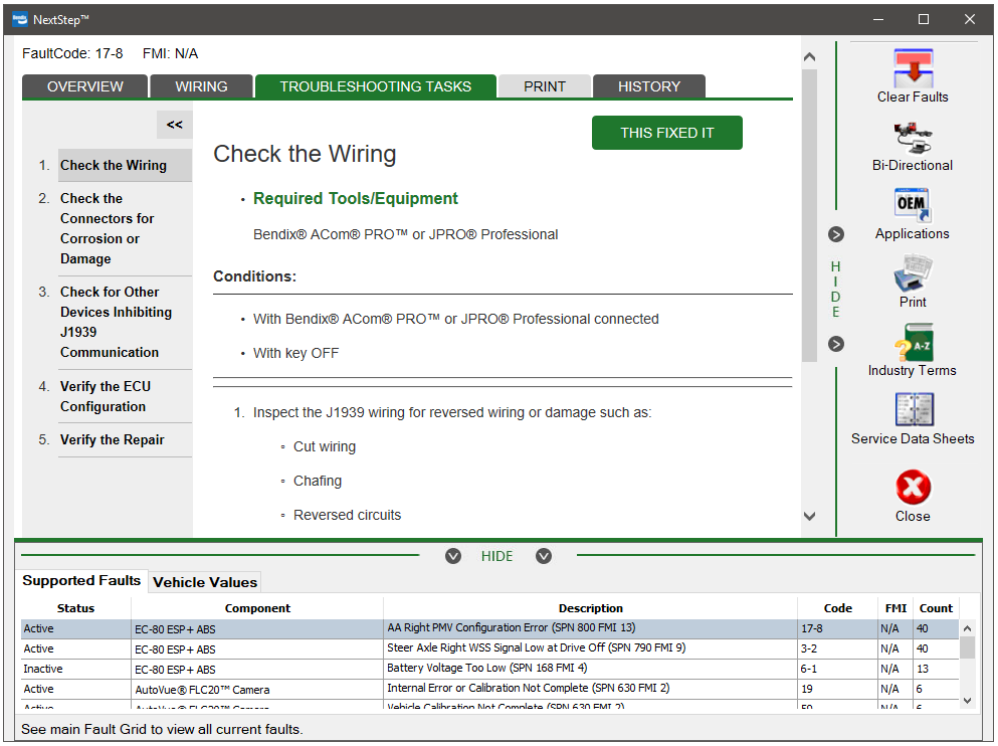


NextStep™ Overview

NOTE: Internet access is required for access to Noregon's NextStep™ NET Service Information.

3. To view information for a different fault, select the fault from the Supported Faults list.
4. Select the Wiring tab to view wiring diagrams for the selected fault.

5. Select the Troubleshooting Tasks tab to view step by step troubleshooting steps.



NextStep™ Troubleshooting Tasks

6. Select the R&I tab to view removal and installation instructions. A troubleshooting step may direct you to follow an R&I procedure.
7. Select the Vehicle Values tab to view fault related data.
8. Select the *Clear Faults* button to verify the repair procedure by forcing the ECU to re-evaluate the fault condition.
9. Select the *Bi-Directional* button to access Bendix® ACom® PRO™ Diagnostics Bi-Directional features as instructed by the troubleshooting tasks.

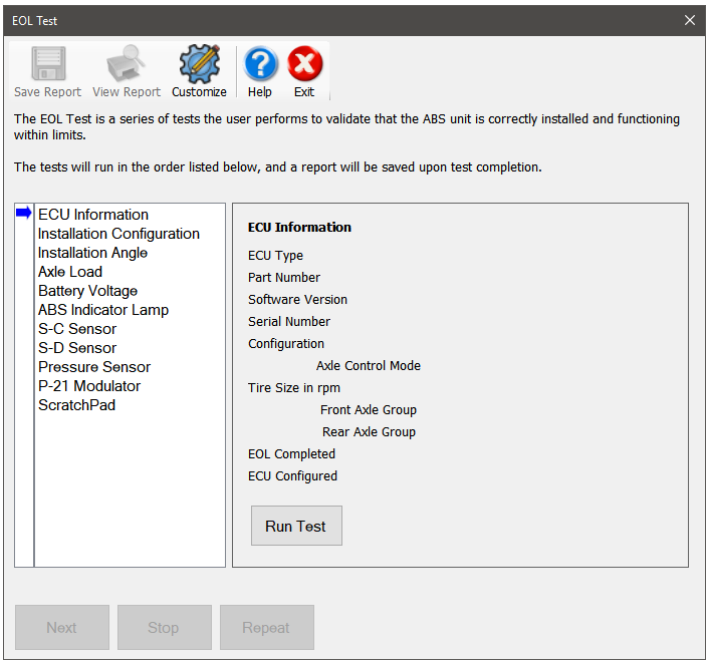
NOTE: Clear Faults and Bi-Directional buttons are not available during playback.

10. Select the *Applications* button to access Bendix® ACom® PRO™ Diagnostics Application Portal.
11. Select the *Print* button to print the current displayed information.
12. Select the *Industry Terms* button to view definitions for common industry terms.
13. Select the *Service Data Sheets* button to open the installed troubleshooting guide for the selected component.

EOL Test

The EOL (End of Line) Test button on the main toolbar allows you to perform the TABS EOL Test. The EOL Test is a series of End of Line (EOL) tests that confirm the trailer ABS unit is installed and configured correctly. This test may not be run with active faults present, except for “TABS EOL Test Not Completed (SID 254 FMI 14).”.

1. While connected to a TABS-6™ Advanced Single-Channel Trailer ABS, TABS-6™ Multi-Channel Trailer ABS, or TABS-8™ Trailer ABS unit, select the EOL Test button on the main toolbar.
2. If there are no active faults except for the “EOL Test Not Completed” fault, the EOL Test screen will appear.



EOL Test Customization Screen

3. See EOL Test for more information about the individual tests as well as the EOL Test as a whole.

Bendix Diagnostics

Bendix Diagnostics provides access to component specific diagnostic information screens. This can include:

- ABS Monitor
- TPMS Diagnostics
- Event History
- CPC Configuration Layout

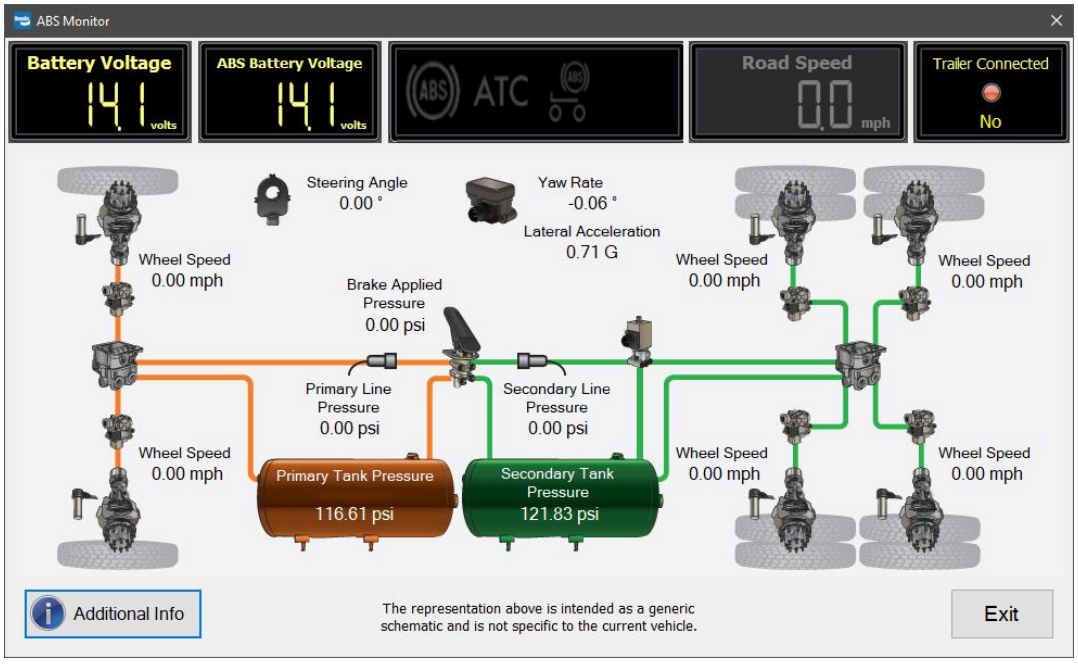
ABS Monitor

The Bendix ABS Monitor provides an at-a-glance assessment of the health of the related ABS pneumatic and electrical systems. This information can include:

- Wheel Speeds
- Electrical Voltages
- Pneumatic Tank Pressures
- ABS Dashboard Lamp Status

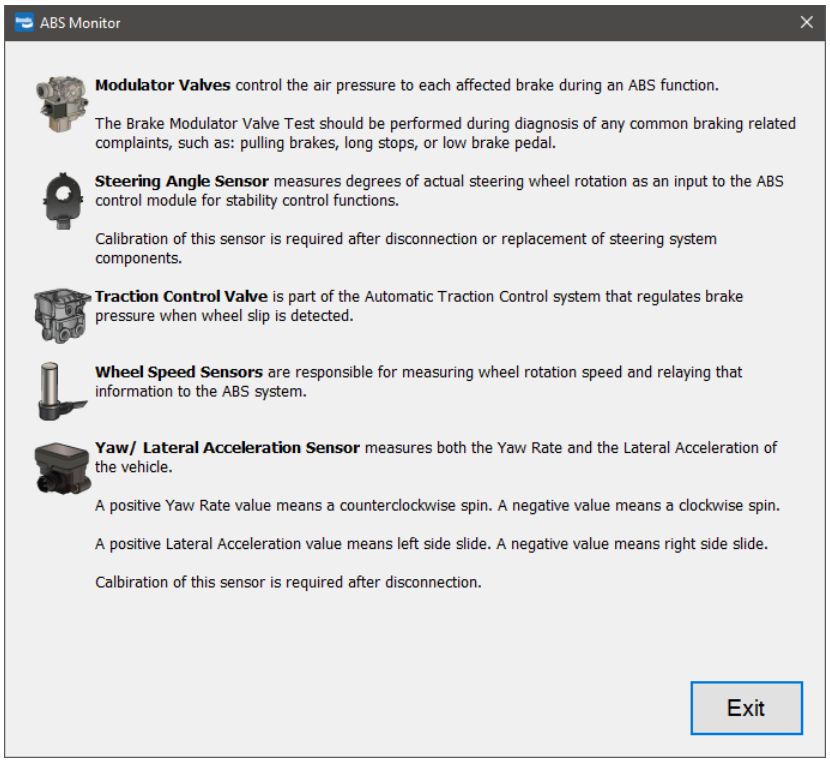
The following information is only displayed if the related components are detected on the vehicle:

- Steering Angle Sensor
- Yaw Rate/ Lateral Acceleration Sensor
- Hill Start Aid
- Pneumatic Line Pressure Sensors



ABS Monitor

Clicking the *Additional Info* button displays a new window with explanations of the various components displayed in the ABS Monitor. The components displayed will change based on which components are detected on the vehicle.



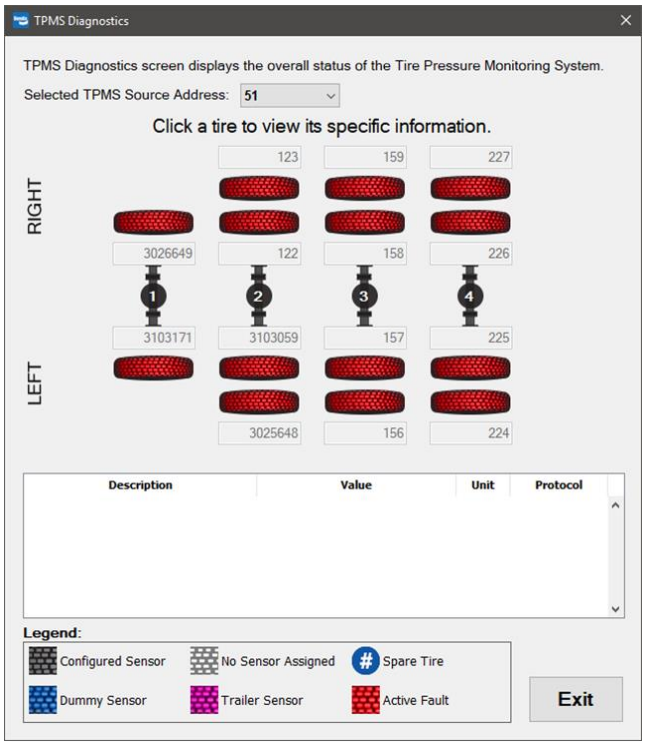
ABS Monitor Additional Info

TPMS Diagnostics

The Bendix TPMS Diagnostics displays the number and arrangement of tire sensors managed by the TPMS Controller. Clicking on a tire image will display the specific information for the selected tire sensor.

When there are multiple TPMS Controllers on a connection, a drop down control will be displayed. Select the desired component Source Address to view its information.

NOTE: The number and arrangement of axles reported may not match the physical truck layout.



TPMS Diagnostics

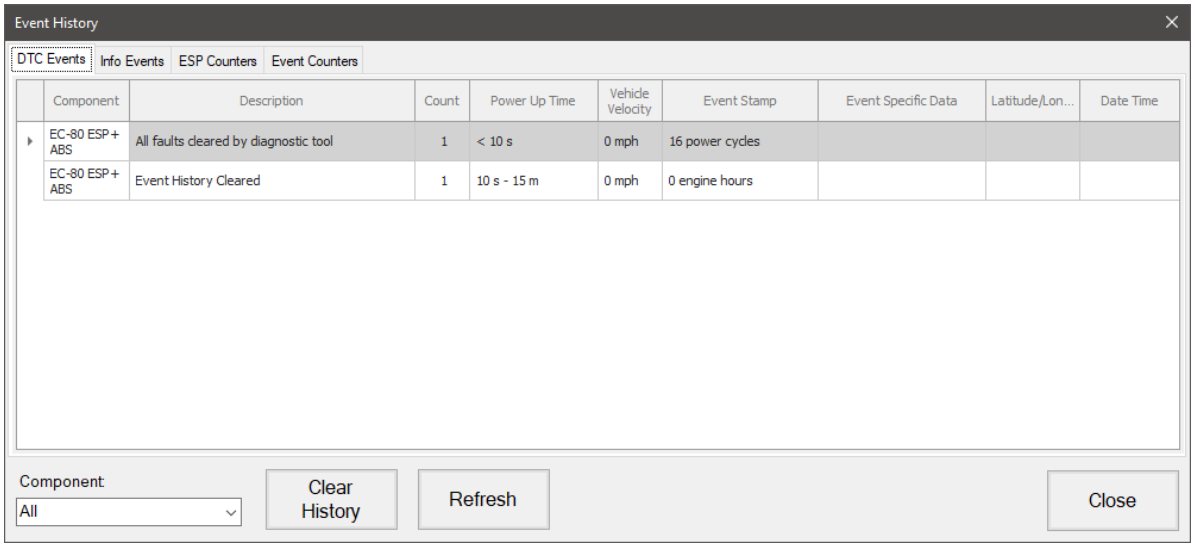
Event History

The Bendix Event History screen provides a detailed historical record of events reported by components that support this type of information. The *DTC Events* tab displays event information related to reported faults. The *Info Events* tab displays informational events logged by the component. The *ESP Counters* and *Event Counters* tabs display event occurrence counters for EC-60 or EC-80 event triggers.

The displayed events can be filtered by component by selecting an option from the *Component* drop down box. Clicking *Clear History* will erase the record of events for the selected tab when available.

NOTE: Bendix advises against clearing history records as it may negatively impact field issue investigation and/or your ability to be reimbursed for warranty returns.

The *Refresh* button rereads the Event History information from all supported components. The data is automatically refreshed every time the Event History screen is opened.

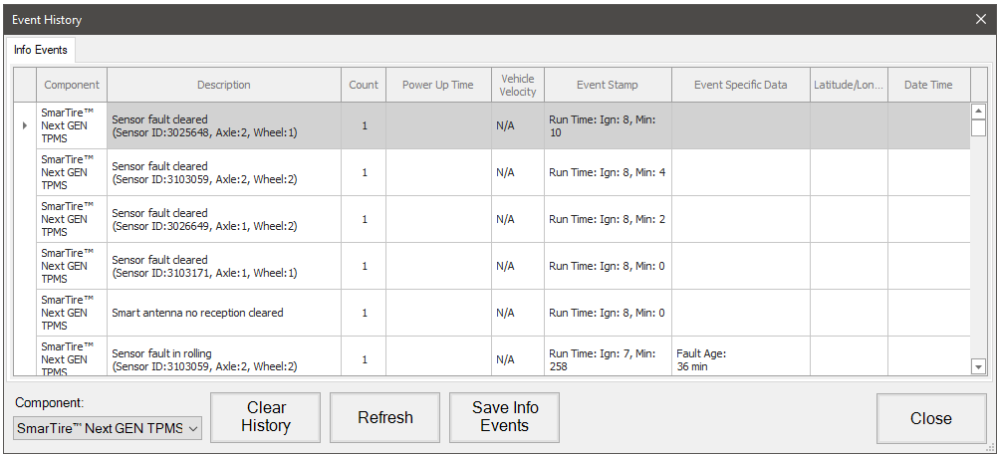


Event History

TPMS Save Info Events

Selecting a TPMS solution from the Component drop down box will enable *Save Info Events*, which allows saving the TPMS Info Events to a local file for Bendix Support.

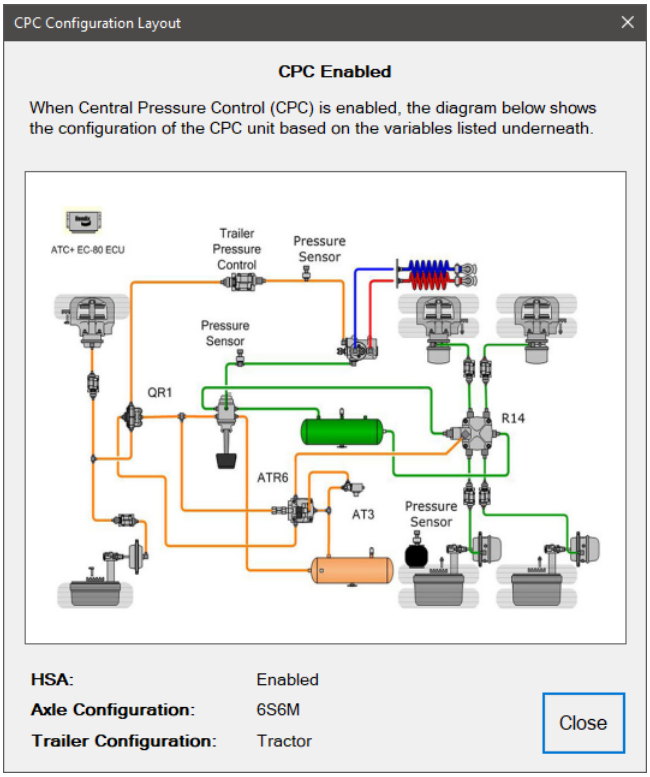
Selecting *Save Info Events* will open a Save As dialog, allowing the file to be saved to the desired directory location.



TPMS Save Info Events

CPC Configuration Layout

The Bendix CPC Configuration Layout displays the Central Pressure Controller diagram for the reported EC-80 CPC on the vehicle.



CPC Configuration Layout

OEM Application Portal

The OEM Portal provides access to 3rd party software and information. This can include:

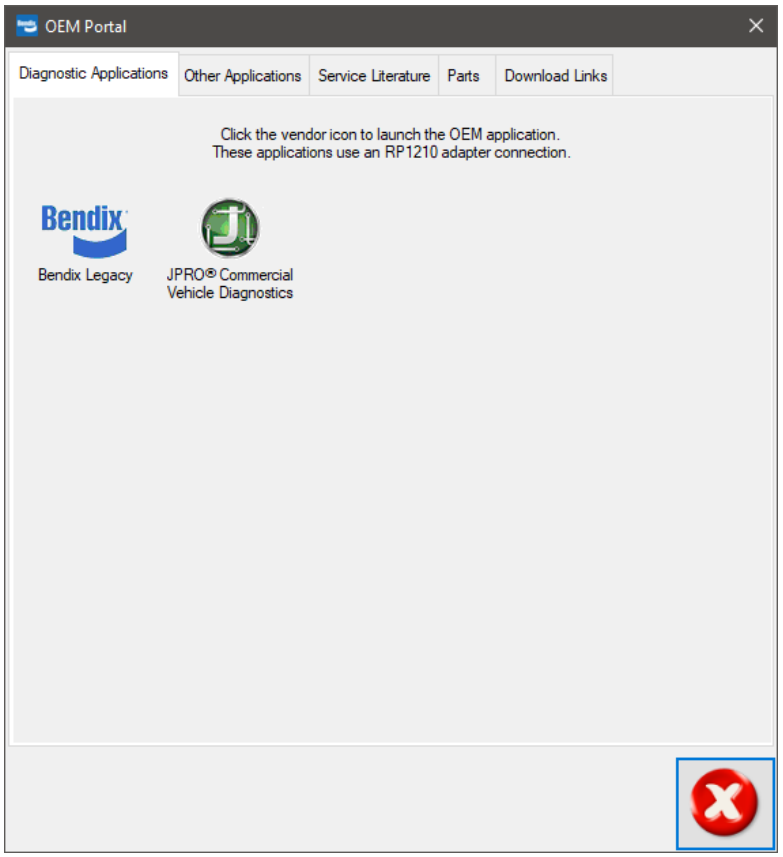
- OEM Applications
- Service Literature
- Parts website links
- Links for downloading 3rd party applications

OEM Applications

The *Diagnostic Applications* tab and *Other Applications* tab list all OEM Applications currently available on your computer.

The *Diagnostic Applications* tab contains standard OEM diagnostic applications for heavy duty trucks. All other OEM applications that are installed are available from the *Other Applications* tab.

Launch an OEM Application by clicking on the application Icon (i.e. Bendix). If there are multiple applications available for the OEM, a dialog will be presented allowing for the selection of the desired application. If Bendix® ACom® PRO™ Diagnostics has a current live vehicle connection, the application will disconnect from the data bus before launching the third-party program. Once the launched application is closed, Bendix® ACom® PRO™ Diagnostics will reconnect to the data bus.



OEM Portal Diagnostic Applications

The Service Literature tab contains links to OEM service literature websites. Several of the available websites require their own user accounts to access the information.

Parts

The Parts tab contains website links to manufacturer parts catalogues. Clicking a link will open a new internet browser window.

Download Links

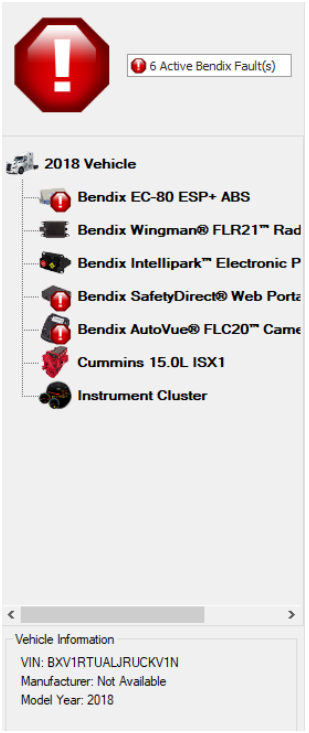
The website links in the Download Links tab navigate to OEM application websites where they can be downloaded.

Standard Data Views

Most views available are the same regardless of the protocol selected or whether you are analyzing live vehicle data (*Connect* button) or working with a playback file (*Playback* button).

Vehicle Readiness

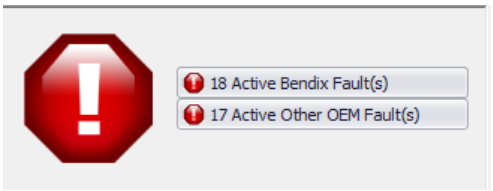
The Vehicle Readiness window is the heart of Bendix® ACom® PRO™® Diagnostics. This window displays a consolidated view of the entire vehicle across data buses. The window is divided into three panels that provide useful information.



- The top portion of the window displays overall vehicle health information.
- The Vehicle Tree shows the vehicle at the highest level and all components on the vehicle listed beneath it. Select any component in the Vehicle Tree to display the Fault Code Information and Key Data Points windows for the selected component. The ECU image will have a red exclamation point if active faults are reported by that ECU. The Vehicle/Component Information area is also updated to display information pertaining to the selected component.
- The Vehicle Information area at the bottom of the Vehicle Readiness window displays the VIN, manufacturer, model, model year and unit number if the vehicle node is selected, or component-specific information if a component is selected.

Vehicle Health

The Vehicle Health indicator assists in diagnostics by displaying high priority issues. Clicking on a vehicle issue will open the most appropriate diagnostic aid. Several issues are monitored in order to determine the overall vehicle health.



Vehicle Health Indicator

No J1939 Data

This issue only appears on vehicles from model year 2009 or newer where no J1939 data bus traffic is detected. Model year is determined by the VIN. This issue will not appear on any vehicle older than 2009, or on vehicles where the model year cannot be determined.

The diagnostics aid for the *No J1939 Data* issue is the Connector Info screen.

Active Bendix Faults Present

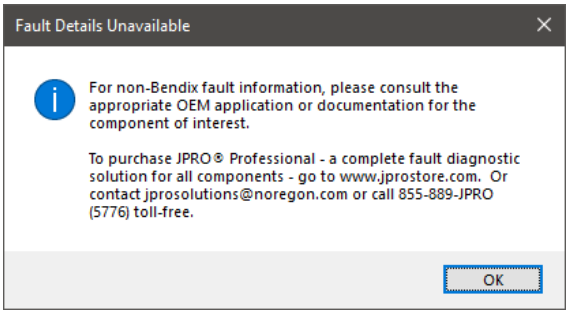
If there are any active Bendix faults present on the vehicle, then this issue will be displayed. If all the active Bendix faults are cleared or fixed (made inactive), then this issue will disappear.

When clicked NextStep™ Bendix will be launched to display troubleshooting information for the active Bendix faults.

Active Other OEM Faults Present

If there are any active non-Bendix faults present on the vehicle, then this issue will be displayed. If all the active faults are cleared or fixed (made inactive), then this issue will disappear.

The diagnostic aid for the *Active Other OEM Faults Present* is the following message.



Active Other OEM Faults Present

Consumable Fluid(s) Low

If any of the consumable fluids report as low, then this issue will be displayed. Replacing the fluids so that they no longer report as low will cause this issue to disappear.

The diagnostics aid for the *Consumable Fluid(s) Low* issue is the Consumable Fluids window.

Battery Voltage Low

This issue appears if the battery voltage is less than 11.9 volts in a running vehicle, or 10.5 volts if the engine is not running.

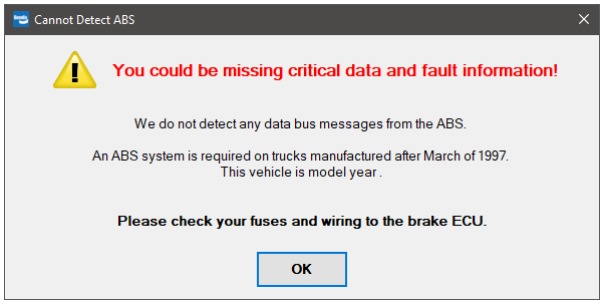
If the battery voltage is consistently above the threshold for 15 seconds or more, the issue will disappear.

The diagnostics aid for the *Battery Voltage Low* issue is Data Monitor's "Power Diagram" tab which displays all reported voltage data.

Cannot Detect ABS

This issue will be present on 2001 and newer vehicles if there are no data bus messages from the tractor's braking system. If a message is received, then this message will disappear.

The diagnostics aid for the *Cannot Detect ABS* issue is the following warning.



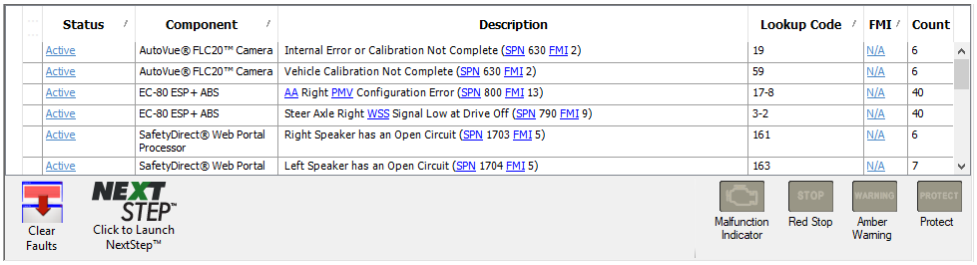
Cannot Detect ABS

Fault Code Information

The Fault Code Information window displays all active and inactive faults detected on the vehicle data bus. Each fault lists the status, component, description, Lookup Code, FMI and count. When selected, faults classified as active are highlighted in red and inactive faults in yellow. Additional information is displayed for the selected vehicle/component and fault at the bottom of the Fault Code Information window.

Full fault support is provided for all Bendix components. Standard SAE support is provided for all other vehicle components.

By default, the displayed faults are sorted by Status so that Active faults are first in the list.



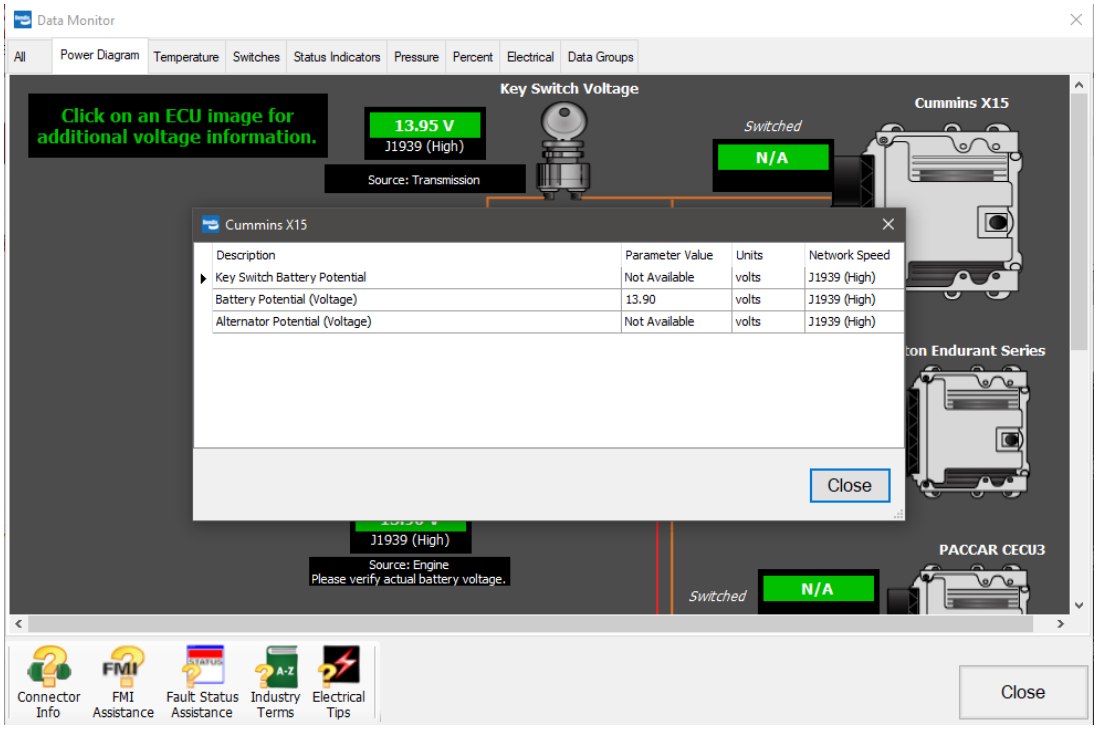
Heavy Duty Fault Code Information

Click in on a fault Description with a hyperlink to view the definition of the industry terms used in that fault description.

Industry Terms Popup Window

Electrical Fault Information

Click on the  button to view reported electrical data related to the fault.



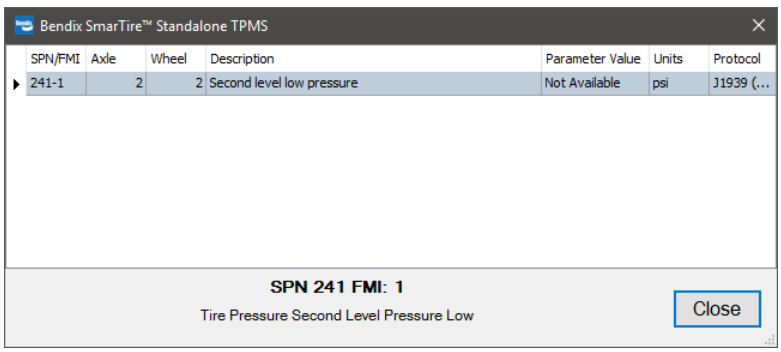
Electrical Fault Additional Information

TPMS Fault Information

Click on the  button in the fault grid for TPMS faults to view all the TPMS sensors reporting the fault.

Status	Component	Description	Lookup Code	...	Count
Active	SmarTire™ Next GEN TPMS	Tire Pressure Second Level Pressure Low	SPN 241	1	N/A
Active	SmarTire™ Next GEN TPMS	Tire Pressure First Level Pressure Low	SPN 241	18	N/A

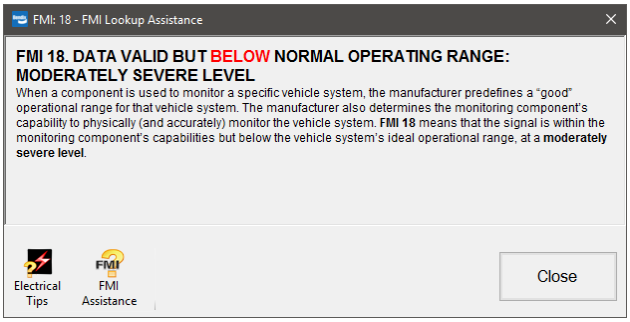
TPMS Fault Display



TPMS Fault Additional Information

FMI Assistance

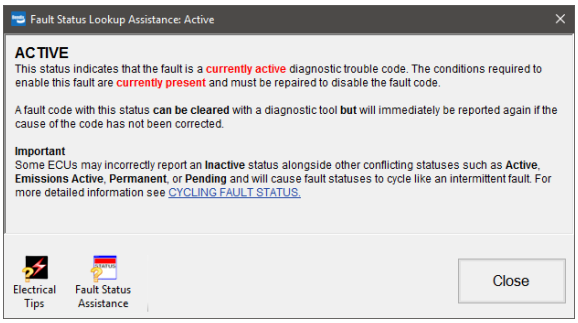
Click on the FMI value to see a technician friendly description for the fault code FMI value.



FMI Lookup Assistance

Fault Status Lookup Assistance

Click on the Fault Status value to see a technician friendly description for the status of a fault.



Fault Status Lookup Assistance

Clearing Faults Functions

Use the *Clear Faults* button to clear all active and inactive faults.

To clear faults only from a specific Bendix component, select the component from the Vehicle Tree and use the *Clear Faults* button. This will clear all active and inactive faults from the selected Bendix component only.

⚠ The Fault Code Information window displays information about all faults detected on the vehicle data bus. Additional information is displayed for the selected vehicle/component and fault at the bottom of the Fault Code Information window.

Click to Launch NextStep™

Click the *Click to Launch NextStep™* button to access the best troubleshooting information Bendix® ACom® PRO™ Diagnostics has available for the current selected Bendix fault.

NOTE: Internet access is required for NextStep™ Bendix to access Noregon's NextStep™ NET Service Information.

If the selected fault is supported by NextStep™ Bendix, then a window where you can view troubleshooting information, wiring diagrams and step-by-step repair procedures for the selected fault and all other reported faults supported by NextStep™ Bendix will be displayed. See NextStep™ Bendix for more information.

If the component or fault is not supported by NextStep™ Bendix, or an internet connection is not available, then Bendix® ACom® PRO™ Diagnostics will open the installed troubleshooting manual for the fault's component.

Launching OEM Applications

Launch a 3rd party (OEM) diagnostic application by clicking on the application Icon (i.e. ). If there are multiple applications available for a given component, a dialog will be presented allowing for the selection of the desired application.

The application will immediately launch while Bendix® ACom® PRO™ continues to execute. If Bendix® ACom® PRO™ is running in live connection mode, the application will disconnect from the data bus before launching the third-party program. Once the launched application is closed, Bendix® ACom® PRO™ Diagnostics will reconnect to the data bus.

NOTE: The automatic reconnect feature is not available when launching Detroit Diesel Diagnostic Link, International Diamond Logic Builder, or ServiceMaxx from Bendix® ACom® PRO™ Diagnostics. The user must reconnect manually after closing these applications.

Key Data Points

The Key Data Points window displays specific data items targeted to the component currently selected in the Vehicle Readiness window. Various Key Data Point collections exist for the following components: Bendix components, engines, and transmissions. The Bendix components Key Data Point collection is also used for the vehicle selection.

Each Key Data Point collection is graphically illustrated using gauges, thermometers, etc. If a component in the Vehicle Readiness window is connected on both high and low speeds, then the high-speed data is used to populate the gauges in the Key Data Points window. If the high-speed data is not available, then the low speed data is used. Data points for which no data is available are grayed out or disabled.

Lamp information is shown in each of the Key Data Point collections. The vehicle's current lamp status is expected to match what is displayed in all Key Data Points collections. If **any component or fault** indicates a lamp status change, the displayed lamp is updated to reflect that change.

The status of each of five lamps is shown:

 **Parking Brake Status:** Switch signal which indicates when the parking brake is set. Usually, the switch actuated by the operator's park brake control, whether a pedal, level or other control mechanism.

 **Malfunction Indicator Lamp:** Signals an emissions-related fault code is active.

Protect Lamp: Signals a fault code or condition from a vehicle system that is not usually related to an electronic subsystem, such as “Oil temperature too high”.

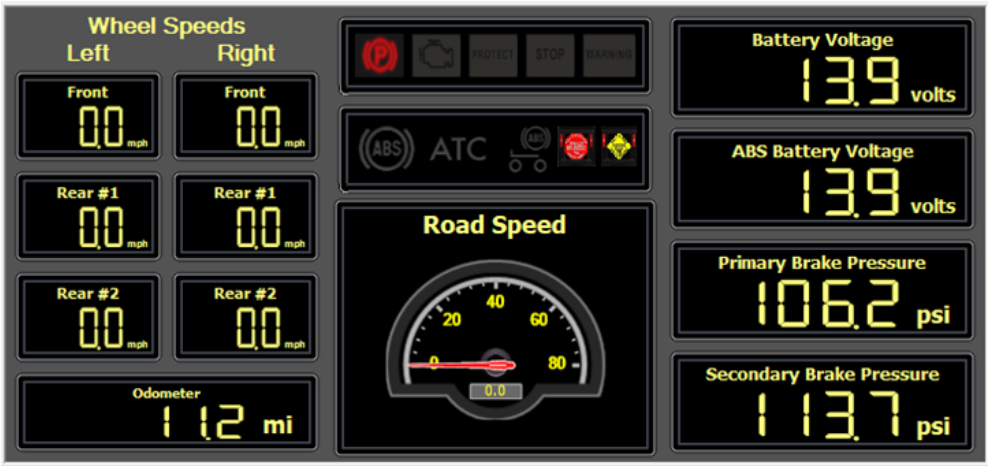
Red Stop Lamp: Signals a fault code is severe enough to stop the engine.

Amber Warning Lamp: Signals a fault code with a vehicle system but is not severe enough to disable the vehicle.

Each Lamp Status can be shown as: **Off** (least severe), **Flashing**, or **Steady On** (most severe).

Data Points for Bendix Tractor Components

When a vehicle or Bendix tractor component is selected in the vehicle readiness window, the following are the displayed data points: Wheel Speeds, odometer, vehicle lamps, ABS system lamps, Intellipark switches with diagnostic flash codes, road speed, battery voltage, ABS battery voltage, and primary and secondary brake pressures.



Key Data Points

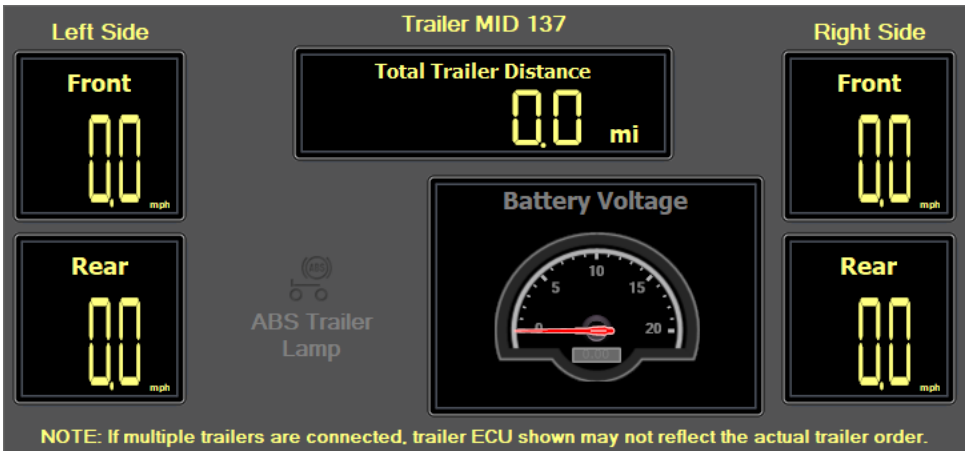
Intellipark switches are displayed for the components detected on the vehicle. The Intellipark lights will match those displayed by the ECU.

MultiValve: Displays reported switch positions for the red trailer or yellow tractor Intellipark switches.

Push/Pull Switch: Displays reported switch position in either the left or right position, which should match the position of the physical switch in the cab.

Data Points for Bendix Trailer Brakes

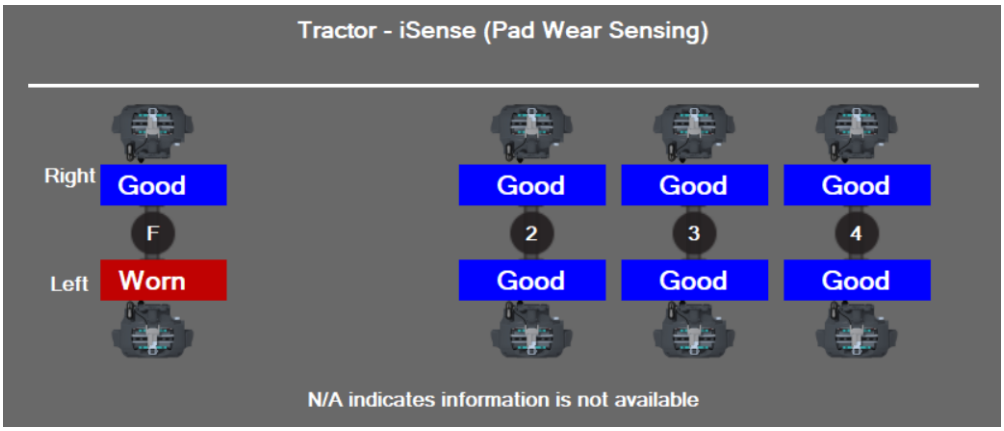
When a TABS component is selected the following data points are displayed: trailer MID address, wheel speeds, total trailer distance, battery voltage, and ABS trailer lamp status.



Trailer Key Data Points

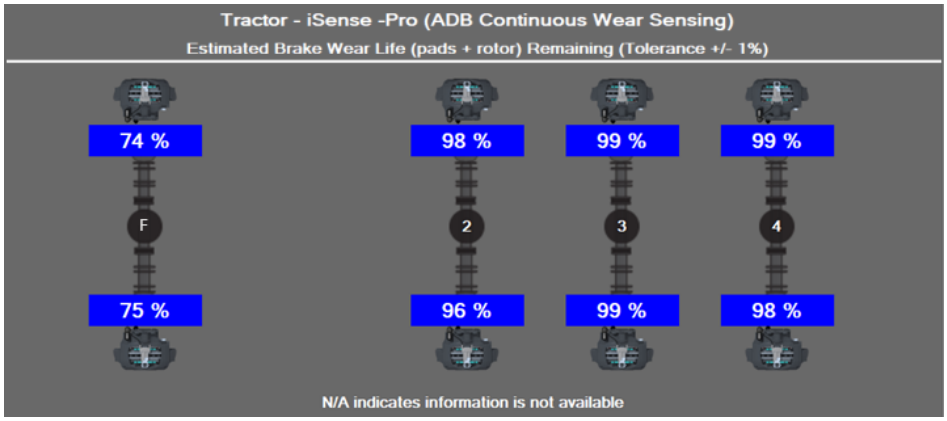
Data Points for Bendix iSense (Pad Wear Sensing)

When an iSense (Pad Wear Sensing) component is selected, the reported pad wear life status is displayed.



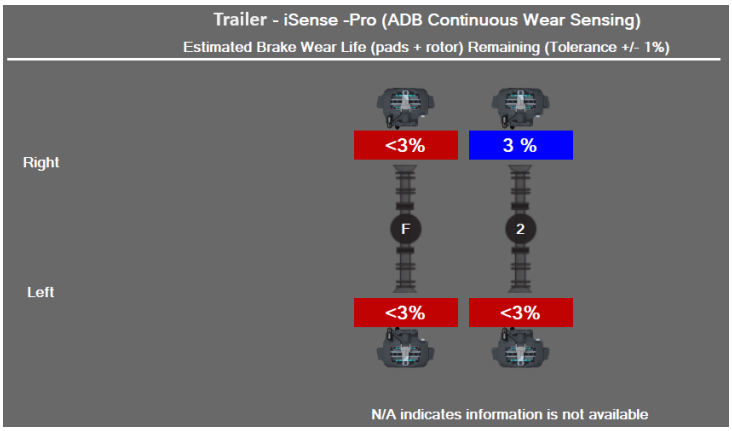
Key Data Points iSense

When a Bendix iSense – Pro (ADB Continuous Pad Wear Sensing) component is selected, the estimated brake wear life (pads plus rotor) remaining is displayed.



Key Data Points iSense - Pro

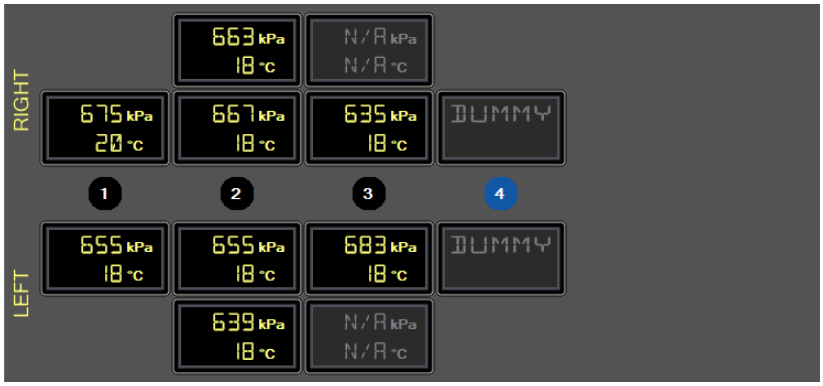
When a Trailer iSense – Pro (ADB Continuous Wear Sensing) component is selected, the estimated brake wear life (pads plus rotor) remaining is displayed.



Key Data Points Trailer iSense - Pro

Data Points for Bendix TPMS

When a TPMS component is selected the tire temperature and tire pressure for detected sensors is displayed. Blue axle numbers indicate Spare Tire sensors.



Key Data Points TPMS

Data Points for an Engine Component

Air inlet pressure, exhaust pressure, fuel pressure, boost pressure, oil pressure, oil temperature, coolant temperature, fuel temperature, exhaust temperature, air inlet temperature, and battery voltage.

Data Points for a Transmission Component

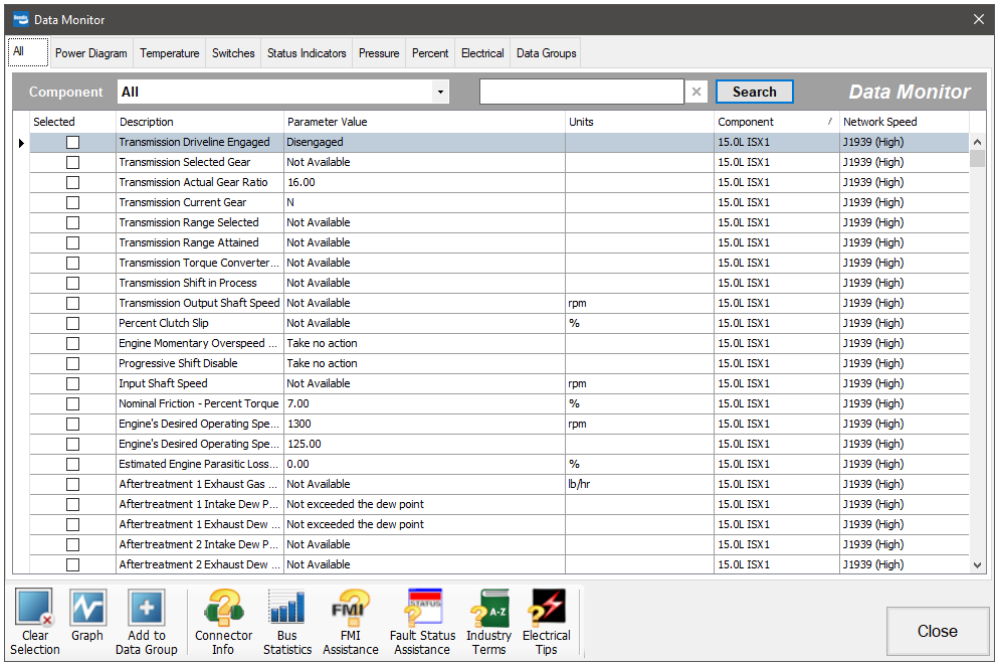
Transmission input speed, transmission output speed, transmission fluid temperature, gear selected, gear obtained, and battery voltage.

Data Monitor

The Data Monitor window displays various data items and parameters, converted to meaningful values with associated units. The data items shown will vary from vehicle to vehicle based on types of sensors available.

The Data Monitor group's messages into related categories by tabs located at the top of the Data Monitor window. Many of these tabs use graphical representations for displaying parameter values.

1. Select *Data Monitor* button on the main toolbar.
2. The Data Monitor window is displayed and the initial view defaults to the *All* tab. The *All* tab displays all available data items from all components on the data bus.



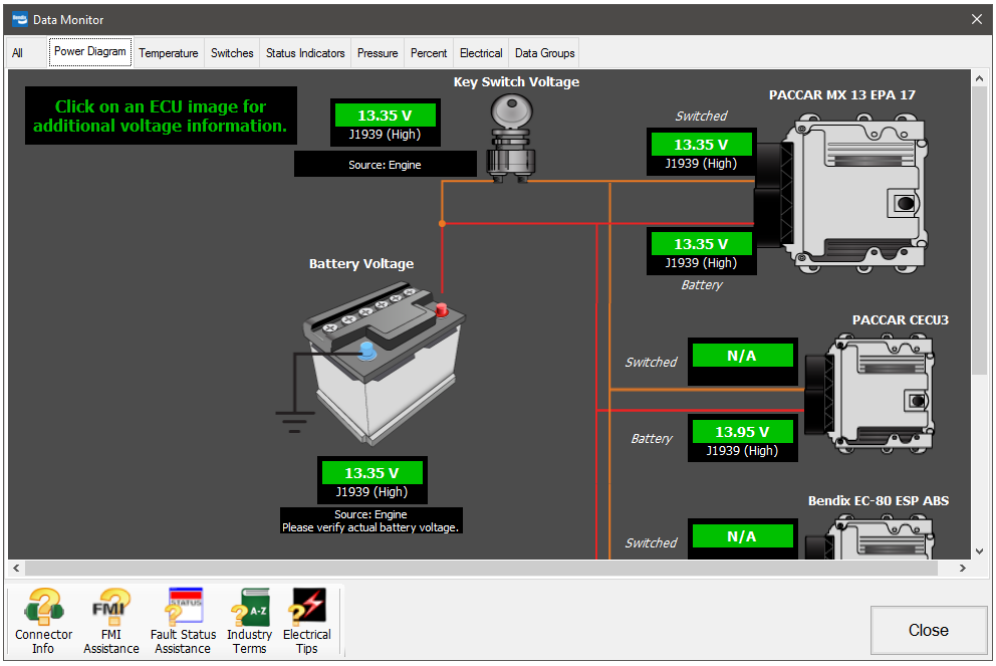
Data Monitor All Tab

3. Other Data Monitor tabs include: Power Diagram, Temperature, Switches, Status Indicators, Pressure, Percent, Electrical, and Data Groups.
4. Filter the Data Monitor list by selecting any component from the drop-down list at the top of the window.

5. Data Monitor items can be quickly found by typing in search criteria and clicking the Search button. Results will be displayed for all items that have the search criteria in at least 1 column.
6. The *Power Diagram* tab will display a graphical representation of the reported voltages for the various modules of the vehicle. This is to aid in the diagnosis of electrical problems.

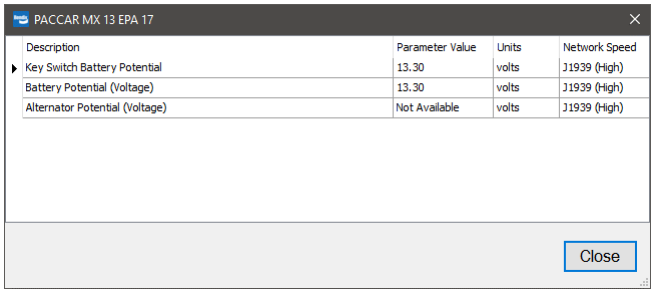
NOTE: *Power Diagram* is not available for Trailer connections.

7. Low voltages will be indicated by a red blinking highlight. An indicator may display next to ECUs with electrical faults. A red exclamation indicates active faults. A yellow triangle indicates inactive faults.



Data Monitor Power Diagram Tab

8. Select an ECU from the Power Diagram to see all electrical data reported by the selected ECU. Electrical data associated with a reported active fault will be highlighted red in the grid display. Data associated with inactive faults will be highlighted in yellow.



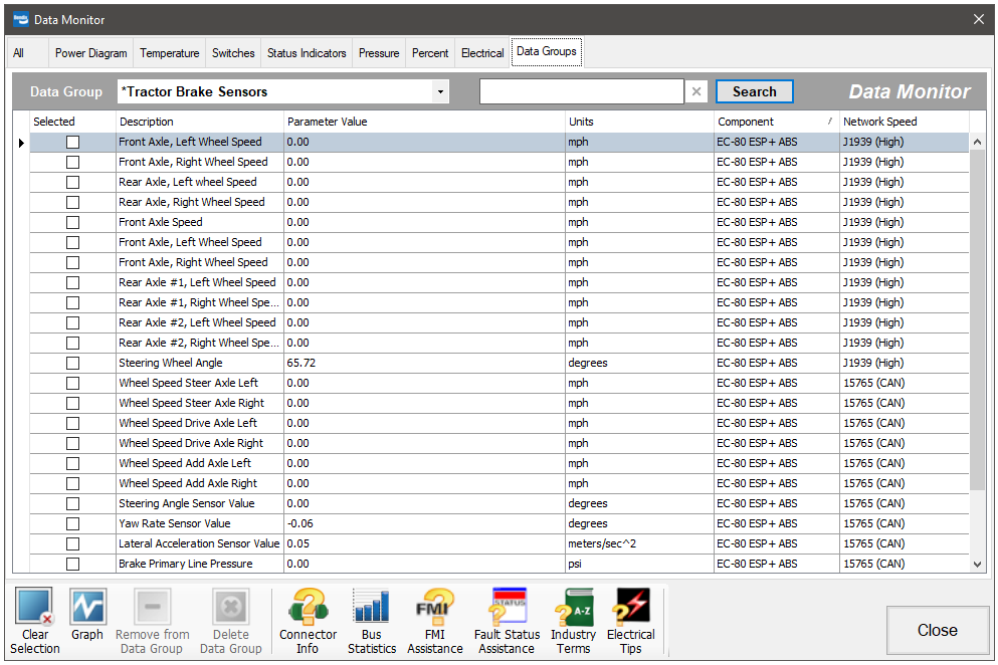
Data Monitor ECU Voltage Information

9. To view a graphical display of items in a specific category, select the *Temperature*, *Switches*, *Status Indicators*, *Pressure*, *Percent*, or *Electrical* tab.

Data Monitor Tabs and Graphical Representations

10. The *Data Group* tab will display defined sets of data. Bendix provides pre-defined sets of data to aid in the troubleshooting of electrical problems and common performance complaints. You can create custom user defined sets of data as well.

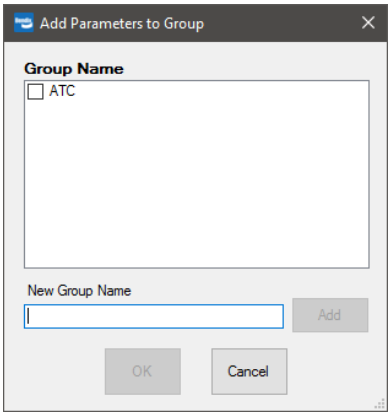
Data items that are available on the current vehicle will be displayed when the named group is selected in the Data Group dropdown.



Data Monitor Data Groups Tab

11. To add a data item to a custom user defined Data Group, simply select the 'Selected' checkbox on the *All* tab and then select the *Add to Data Group* button. The Add Parameters to Group window will display.

    Provide the group name or select from the list of previously defined groups. Selecting the OK button will then add the selected data items to the selected groups.



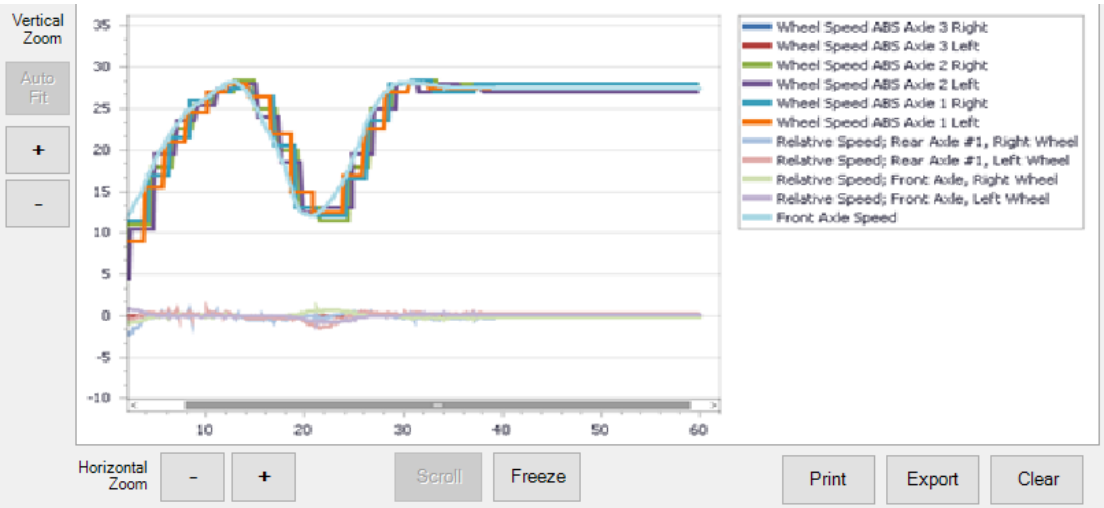
Add Parameters to Group

NOTE: Pre-defined Data Groups cannot be edited.

NOTE: Selected data items are component and protocol specific. For example, adding Battery Voltage will not automatically display Battery Voltage reported by every component. Only the selected components Battery Voltage from the selected protocol would display in the Data Group.

Graph

The Graph window is available from the Data Monitor screen and displays various data items and parameters in a constantly updating graph format, allowing you to view trending information.



Graph

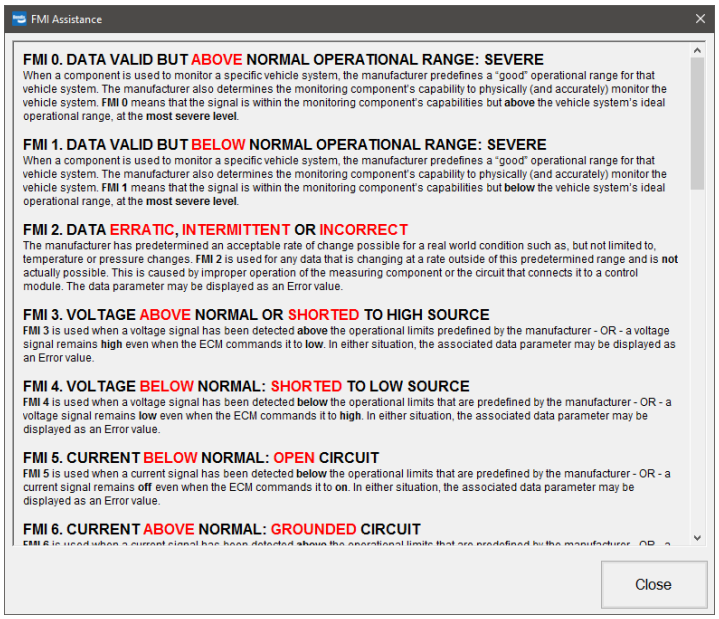
1. Select parameters of interest in the Data Monitor.
2. Click on the *Graph* icon .
3. The *Graph* window is displayed.
4. The data items you selected will be plotted on the graph over time.
5. To customize the display:
    a. Hover the cursor over the graph to see the value plotted.
    b. You can zoom each axis of the graph independently by clicking either the + or – button.
    c. Clicking the *Auto Fit* button will resize the graph to show all plotted data items.
    d. The *Scroll* button automatically moves the graph view to the most current information.
    e. The *Freeze* button allows you to keep the graph view from moving, letting you easily study the data while the graph continues to run.
    f. *Print* allows you to print the current graph view. A color printer is strongly recommended.
    g. *Export* displays a save file dialog. Up to the last 5 minutes of currently graphed data can be saved to the desired location as an XML file.
    h. The *Clear* button removes all data from the graph and begins capturing new data.

Connector Info

The *Connector Info* button will open the Connector Info window, displaying information about active communications for a live vehicle connection, and providing connector pinouts for diagnosing communication issues.

FMI Assistance

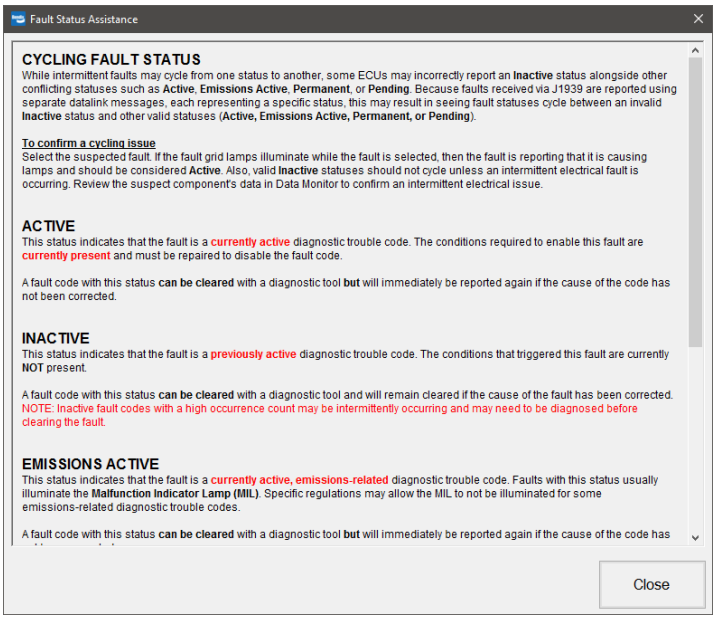
The *FMI Assistance* button will open a window containing extended FMI descriptions to aid technicians understanding of fault code FMI meaning.



FMI Assistance

Fault Status Assistance

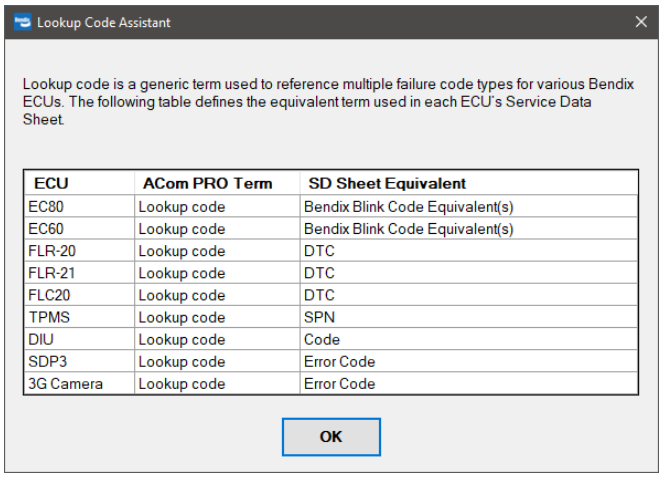
The *Fault Status Assistance* button will open a window containing extended Status descriptions for faults to aid technicians understanding of fault Status meaning.



Fault Status Assistance

Lookup Code Assistant

The *Lookup Code Assistant* button will open a window that provides the equivalent Service Data Sheet term for each Bendix ECU to aid technicians in referencing the SD Sheets.



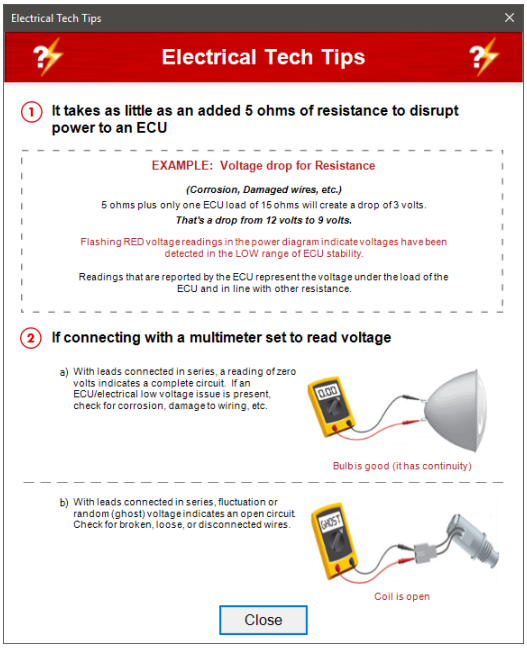
Lookup Code Assistant

Industry Terms

The *Industry Terms* button opens a PDF file containing common industry term definitions.

Electrical Tips

The *Electrical Tips* button displays information to help diagnose potential electrical problems.



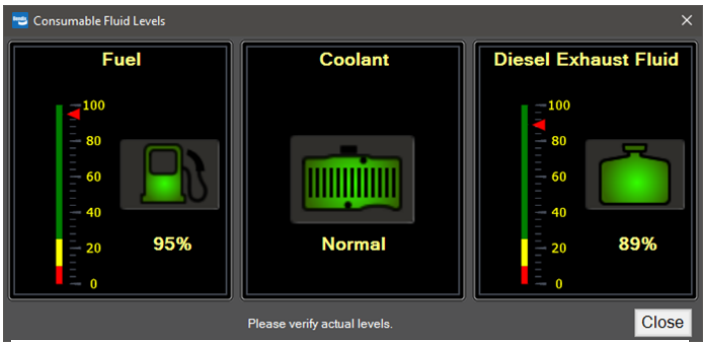
Electrical Tech Tips

Consumable Fluids

The Consumable Fluids view displays the status of fluids in the vehicle and allows you to quickly and easily determine the status of vehicle fluids in a single display.

The Consumable Status window displays fluids types:

- Coolant
- Diesel Exhaust Fluid
- Engine Oil
- Engine Oil Reservoir
- Fuel
- Hydraulic Brake Fluid
- Transmission Oil
- Washer Fluid



Consumable Fluids

NOTE: A fluid level is only shown if the value is measured and reported by the vehicle.

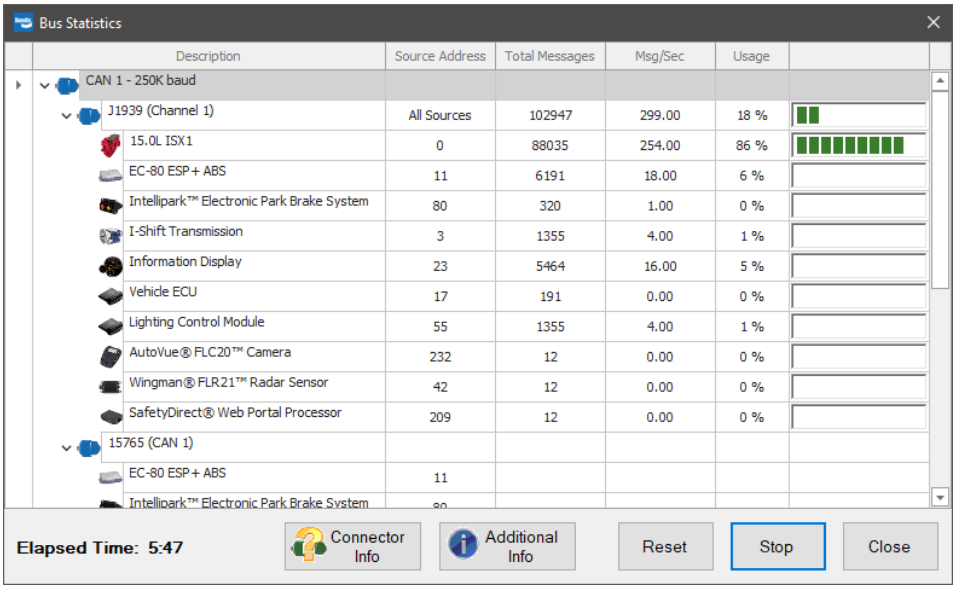
1. Select the *Consumable Fluids* button on the main toolbar. The button image will change to indicate fluid level status:
   - Normal
   - Low
   - Critically Low
2. The Consumable Fluids window displays data about important fluids in the vehicle. Status will be indicated by the color of the gauge. Green indicates the fluid level is normal. Yellow indicates the fluid level is low. Red indicates the fluid level is critically low.

Bus Statistics

Bus Statistics are only available on live vehicle connections. The window provides textual information regarding the total number of messages received by the vehicle adapter as well as the average number of messages per second. There is a graphical representation of the current bus utilization percentage Message statistics are provided for each ECU Bus as well.

1. Select the *Bus Statistics* button on the main toolbar or Connector Info window.

2. The Bus Statistics window is displayed and begins monitoring bus communications immediately.



Bus Statistics

NOTE: CAN Error Frame data is only available when using a DLA+ 3.0, DLA+ 2.0, DLA+, or Nexiq adapter.

3. To control the Bus Statistics window:
   a. Click *Stop* to stop updating device statistics.
   b. Click *Start* to begin updating device statistics again.
   c. Click *Reset* to reset the DLA and accompanying statistics.

Connector Info

For live heavy-duty connections, the active communication protocols are shown with which pins are used by the protocol, the amount of traffic and CAN error frame counts and rate (if available).

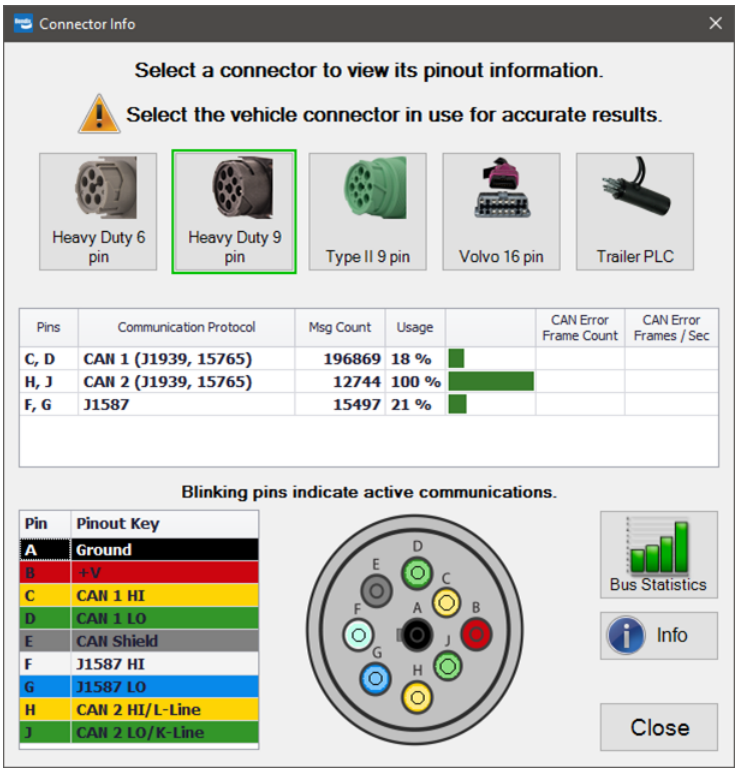
NOTE: Can Error Frame data is only available with using a DLA+ 3.0, DLA+ 2.0, DLA+ or Nexiq adapter.

Click *Bus Statistics* to see a detailed view of all communication protocols and which ECUs are present, along with their data bus usage.

Connector Pinout Key describes the pins and which communication protocol they relate to.

Connector Pinout Image provides the visual reference for pin identity on the connector. For live Heavy-Duty vehicle connections, blinking pins indicate active communications.

When playing back a previously recorded vehicle connection, the Bus Statistics snapshot and Bus Statistics button will not be displayed.



Connector Info- Heavy Duty Live Vehicle Connection

Click the Bus Statistics button to view additional information about data bus communications.

Bi-Directional Features for Bendix

Bi-Directional allows you to run tests and perform calibrations on the vehicle. This is only available if the current connected vehicle has Bendix components.

The following tests and calibrations are available to be run:

Bi-Directional Test or Calibration	Supported On
ABS Air Bag Pressure Test	EC-60 Advanced braking systems EC-80 ESP braking systems
ABS Configuration	EC-60 and EC-80 braking systems
ABS Engine Limiting Test	EC-60 Premium or Advanced braking systems EC-80 ATC or ESP braking systems
ABS Indicator Lamp Test	TABS-6™ Advanced Single-Channel Trailer ABS TABS-6™ Multi-Channel (MC) Trailer ABS TABS-8™ Trailer ABS
ABS Pressure Test	EC-60 Advanced braking systems EC-80 ESP braking systems
ABS Self Config Test	EC-60 braking systems EC-80 ABS or ATC braking systems
ATC Configuration	EC-80 ATC or ESP braking systems
AutoVue 3G Configuration	AutoVue® 3G LDW System
Axle Load Test	TABS-6™ Advanced Single-Channel Trailer ABS TABS-6™ Multi-Channel (MC) Trailer ABS TABS-8™ Trailer ABS
Battery Voltage Test (Tractor)	EC-60 and EC-80 braking systems
Battery Voltage Test (Trailer)	TABS-6™ Advanced Single-Channel Trailer ABS TABS-6™ Multi-Channel (MC) Trailer ABS TABS-8™ Trailer ABS
Blindspotter Configuration	Blindspotter® Radar
Braking System Switches Test	EC-60 and EC-80 braking systems
Camera Snapshot Test	AutoVue® FLC20™ Camera
Cartridge Lifetime Prediction Reset Test	EAC (EC-80 Integrated) EAC (Standalone)
Cartridge Reset Test	eAPU2 iAPU

Bi-Directional Test or Calibration	Supported On
Chuff Test	TABS-6™ Multi-Channel (MC) Trailer ABS TABS-8™ Trailer ABS
Clear Stored Events and Videos	AutoVue® 3G LDW System SafetyDirect® Web Portal Processor (3G and 5G)
Dashboard Lamp Tests	EC-60 and EC-80 braking systems
DIU Configuration	Driver Interface Unit
Door Switch Test	TABS-6™ Advanced Single-Channel Trailer ABS TABS-6™ Multi-Channel (MC) Trailer ABS TABS-8™ Trailer ABS
Drag Torque Test	EC-60 Premium or Advanced braking systems EC-80 ATC or ESP braking systems
ECU Configuration	TABS-6™ Multi-Channel (MC) Trailer ABS
ECU Reset Test	EC-60 and EC-80 braking systems
ESP Lamp Test	EC-80 ESP braking systems
General Output Functions Test	TABS-6™ Advanced Single-Channel Trailer ABS TABS-6™ Multi-Channel (MC) Trailer ABS TABS-8™ Trailer ABS
Indicator Component Test	AutoVue® 3G LDW System SafetyDirect® Web Portal Processor (5G)
Installation Angle Test	TABS-6™ Advanced Single-Channel Trailer ABS TABS-6™ Multi-Channel (MC) Trailer ABS TABS-8™ Trailer ABS
Installation Configuration Test	TABS-6™ Advanced Single-Channel Trailer ABS TABS-6™ Multi-Channel (MC) Trailer ABS TABS-8™ Trailer ABS
Lamp Component Tests	AutoVue® 3G LDW System SafetyDirect® Web Portal Processor (5G)
LDW Configuration	AutoVue® FLC20™ Camera
Lift Axle Control Test	TABS-6™ Advanced Single-Channel Trailer ABS TABS-6™ Multi-Channel (MC) Trailer ABS TABS-8™ Trailer ABS
Lift Axle Sensing Test	TABS-6™ Advanced Single-Channel Trailer ABS TABS-6™ Multi-Channel (MC) Trailer ABS TABS-8™ Trailer ABS
Lift Lower Test	TABS-6™ Advanced Single-Channel Trailer ABS TABS-6™ Multi-Channel (MC) Trailer ABS TABS-8™ Trailer ABS

Bi-Directional Test or Calibration	Supported On
Low Pressure Warning Service Test	TABS-6™ Advanced Single-Channel Trailer ABS TABS-8™ Trailer ABS
Maintenance Mode	Intellipark Systems
Modulator Valve (Chuff) Tests	EC-60 and EC-80 braking systems
Oil Change Reset Test	eAPU2 iAPU
Output Component Tests	AutoVue® 3G LDW System SafetyDirect® Web Portal Processor (3G and 5G)
P-21 Delivery Test	TABS-6™ Multi-Channel (MC) Trailer ABS TABS-8™ Trailer ABS
P-21 Modulator Test	TABS-6™ Advanced Single-Channel Trailer ABS TABS-6™ Multi-Channel (MC) Trailer ABS TABS-8™ Trailer ABS
P-22 Delivery Test	TABS-6™ Multi-Channel (MC) Trailer ABS
P-22 Modulator Test	TABS-6™ Multi-Channel (MC) Trailer ABS
Pressure Sensor Test	TABS-6™ Advanced Single-Channel Trailer ABS TABS-6™ Multi-Channel (MC) Trailer ABS TABS-8™ Trailer ABS
Pressure Trimming and Coil Polarity Test	Active Steering components
Radar Service Alignment	Wingman® FLR25™ Radar
Safety Direct Event Configuration	SafetyDirect® Web Portal Processor (3G and 5G)
Safety Direct Event Selection Configuration	AutoVue® 3G LDW System SafetyDirect® Web Portal Processor (3G and 5G)
S-C Sensor/S-D Sensor Tests	TABS-6™ Advanced Single-Channel Trailer ABS TABS-6™ Multi-Channel (MC) Trailer ABS TABS-8™ Trailer ABS
S-E Sensor/S-F Sensor Tests	TABS-6™ Multi-Channel (MC) Trailer ABS
SDP3 Configuration	SafetyDirect® Web Portal Processor (3G and 5G)
SDP5 Configuration	SafetyDirect® Web Portal Processor (5G)
SDP5 System Configuration	SafetyDirect® Web Portal Processor (5G)
Speaker Volume Configuration	AutoVue® 3G LDW System SafetyDirect® Web Portal Processor (3G and 5G)
SPTAC Calibration	AutoVue® FLC20™ Camera

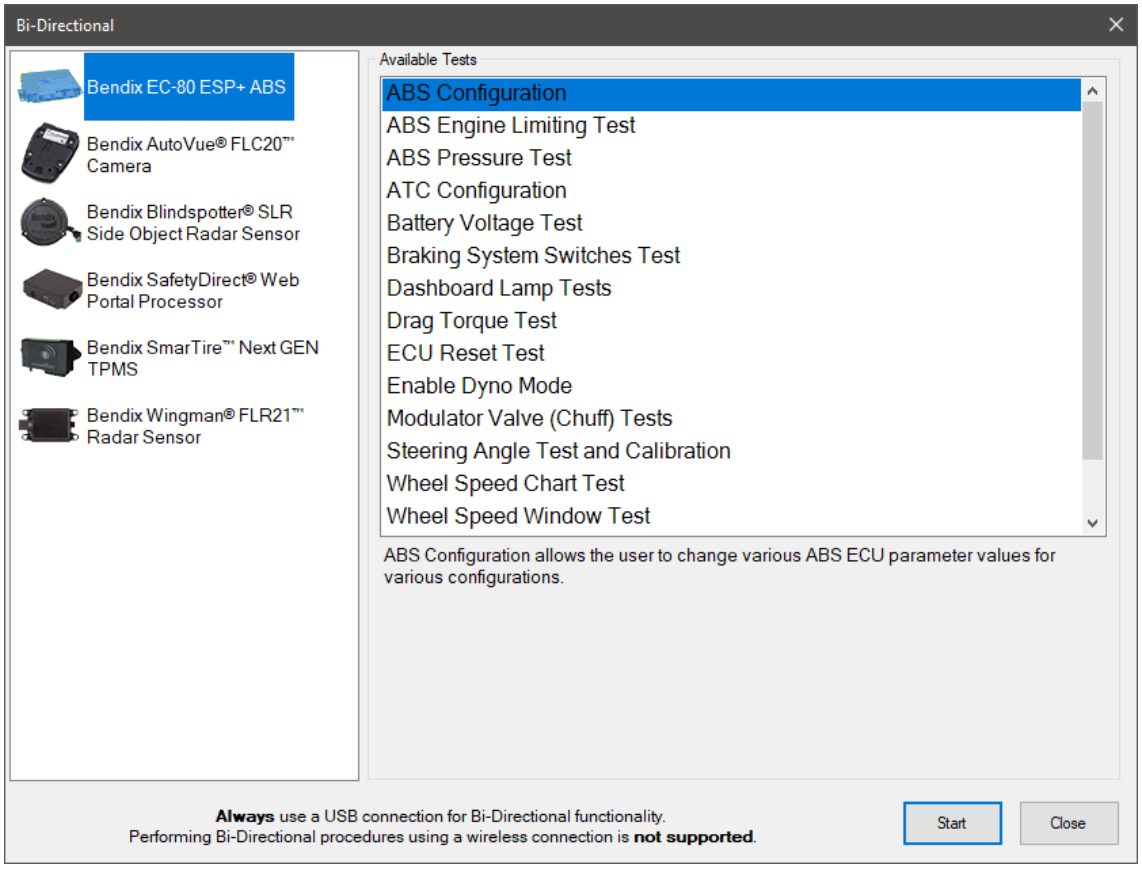
Bi-Directional Test or Calibration	Supported On
Startup Chirp Volume Setting	SafetyDirect® Web Portal Processor 3G version 21.19 and above SafetyDirect® Web Portal Processor (5G)
Steering Angle Test and Calibration	EC-60 Advanced braking systems EC-80 ESP or ATC+ with EV Support braking systems
Tire Inflation System Test	TABS-6™ Advanced Single-Channel Trailer ABS TABS-6™ Multi-Channel (MC) Trailer ABS TABS-8™ Trailer ABS
TPMS Ambient Sensor Configuration	All SmarTire™ TPMS solutions
TPMS Backup and Restore	All SmarTire™ TPMS solutions
TPMS Configuration	All SmarTire™ TPMS solutions
TPMS Lamp Display Configuration	SmarTire™ Standard and NextGen TPMS solutions
TPMS Parameters	All SmarTire™ TPMS solutions
TPMS Scratchpad	SmarTire™ NextGen TPMS solutions
TPMS Signal Strength Test	All SmarTire™ TPMS solutions (except for Standard TPMS models 200.0213, 200.0216, and 200.0219)
TPMS Statistics	SmarTire™ NextGen TPMS solutions
TSR Configuration	AutoVue® FLC20™ Camera
Wheel Speed Chart Test	All braking systems reporting wheel speed values
Wheel Speed Window Test	All braking systems reporting wheel speed values
Wiggle Test/Performance Issue Monitoring	EC-60 and EC-80 braking systems
Wear Sensing	TABS-6™ Multi-Channel (MC) Trailer ABS
Wingman FLR Configuration	Wingman® FLR20™/FLR21™ Radar Wingman® FLR25™ Radar Vorad VS500 Radar
Wingman Fusion Blindness Adjustment	Wingman® FLR21™ Radar
Yaw Rate and Lateral Accel. Test and Calibration	EC-60 Advanced braking systems EC-80 ESP braking systems

Bi-Directional Test Selection

Selecting the Bi-Directional button  displays the test selection dialog. The list of tests available will vary based on the vehicle connected.

To start a test, select the test of interest and press Enter or the *Start* button. Select *Close* to exit the Bi-Directional test selection dialog.

NOTE: The Bi-Directional button is available only on a live vehicle connection after a complete vehicle snapshot has been collected. This may take a minute or more.



Bi-Directional Test Selection

ABS / Brake Tests

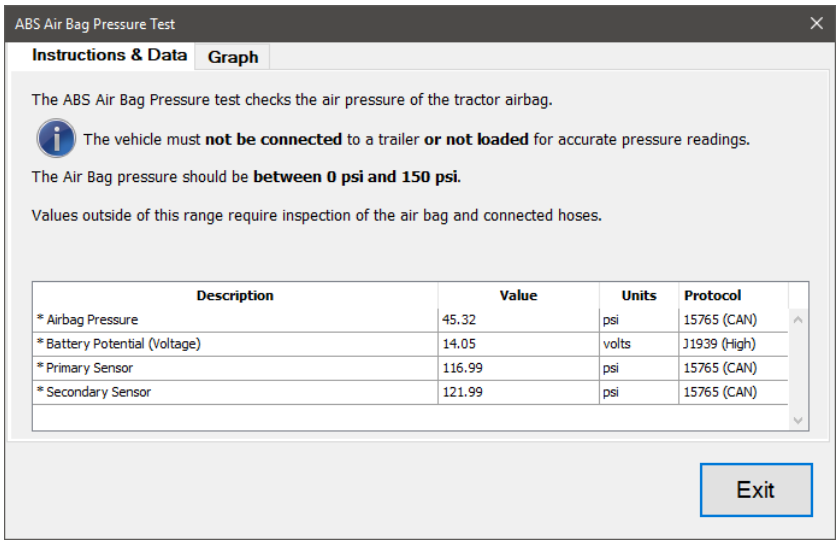
ABS Air Bag Pressure Test

The ABS Air Bag Pressure Test is available on:

- ✓ EC-60 Advanced braking systems
- ✓ EC-80 ESP braking systems

This test provides pressure ranges for determining the health of the tractor air bag.

1. Select the ABS Air Bag Pressure Test and press Enter or the *Start* button.
2. The test dialog will be displayed.



ABS Air Bag Pressure Test

3. Observe the Airbag Pressure data value and compare against the specified acceptable pressure range. Click the *Graph* tab at any time to view a graph of the monitored data values.
4. When done, press the *Exit* button to return to the test selection dialog.

ABS Configuration

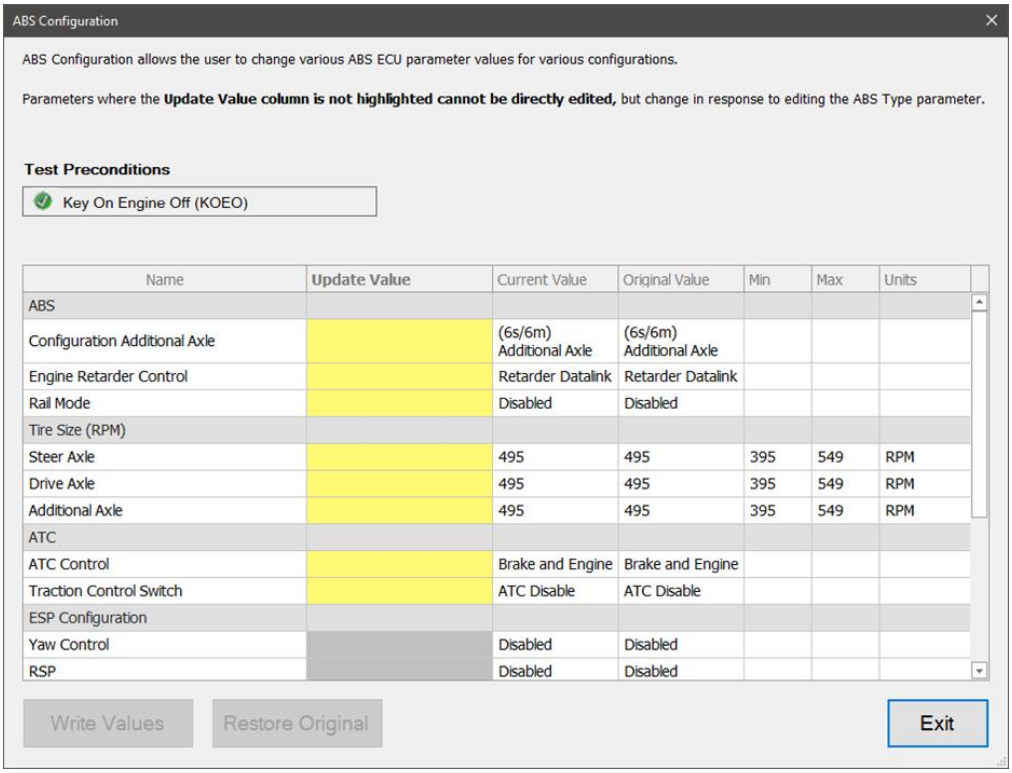
The ABS Configuration test is available on:

- ✓ EC-60 and EC-80 braking systems

This test allows the editing of ABS system parameters.

1. Select ABS Configuration and press Enter or the *Start* button.

2. The test dialog will be displayed.



ABS Configuration

3. Select a new value in one or more rows of the grid. Click *Write Values* button to have the new values sent to the vehicle. Once the programming is complete the **Current Value** column values will be updated and the *Restore Original* button will become enabled.
4. When done, press the Exit button to return to the test selection dialog.

ABS Engine Limiting Test

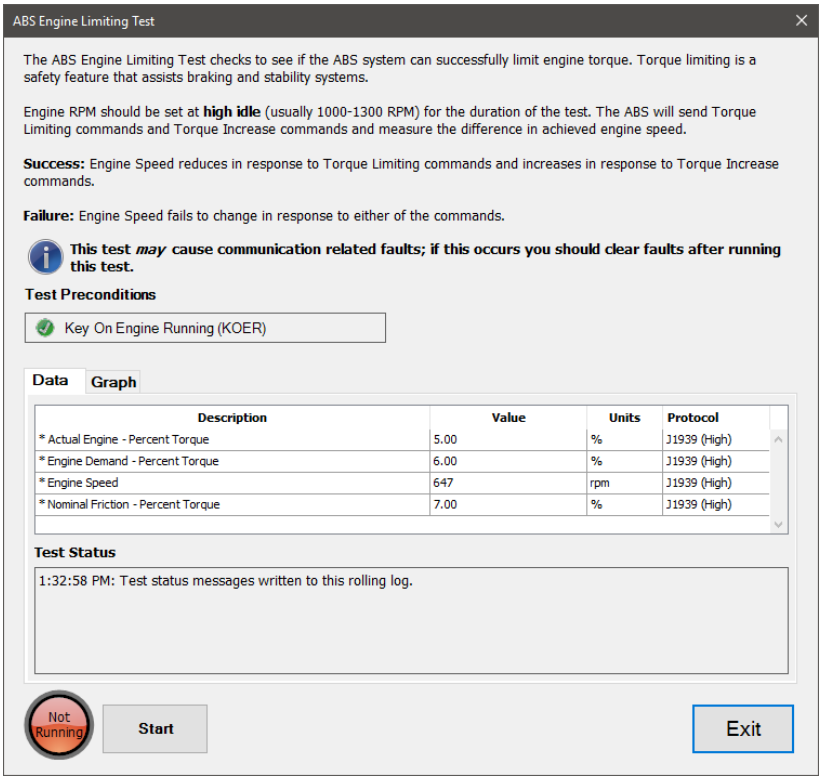
The ABS Engine Limiting Test is available on:

- ✓ EC-60 Premium or Advanced braking systems
- ✓ EC-80 ATC or ESP braking systems

This test checks if the ABS system can raise and lower torque limits on a running engine.

1. Select the ABS Engine Limiting Test and press Enter or the *Start* button.

2. The test dialog will be displayed.



ABS Engine Limiting Test

3. Select the *Start* button to initiate the test. Test Status will display the commands as they are sent to the engine. A difference in engine speed can be observed as well as a change in engine sound. Click the *Graph* tab at any time to view a graph of the monitored data values.
4. Select the *Stop* button to stop the test at any point. The test will automatically stop after it has performed an increase and decrease cycle twice. The braking system will reset when the test ends which can be observed by audible clicking from the brake modulator valves.
5. When done, press the *Exit* button to return to the test selection dialog.

ABS Pressure Test

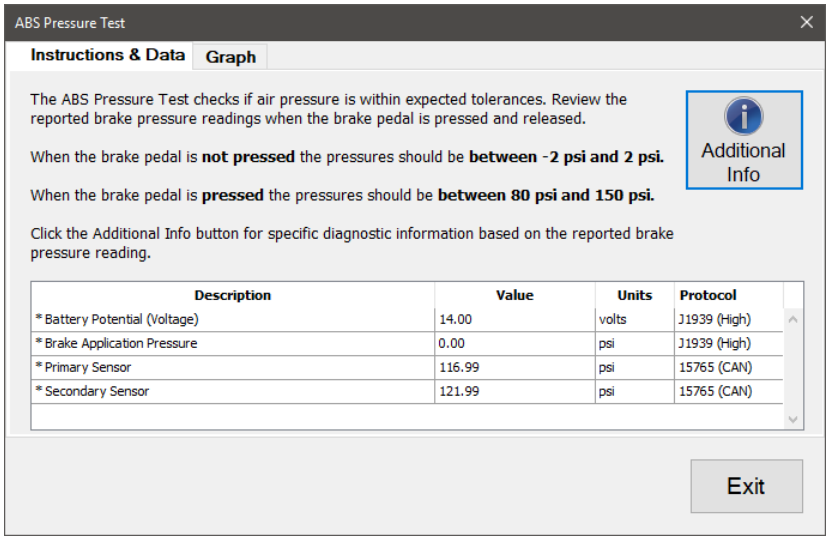
The ABS Pressure Test is available on:

- ✓ EC-60 Advanced braking systems
- ✓ EC-80 ESP braking systems

This test checks ABS system air pressure values when the brake pedal is pressed and released.

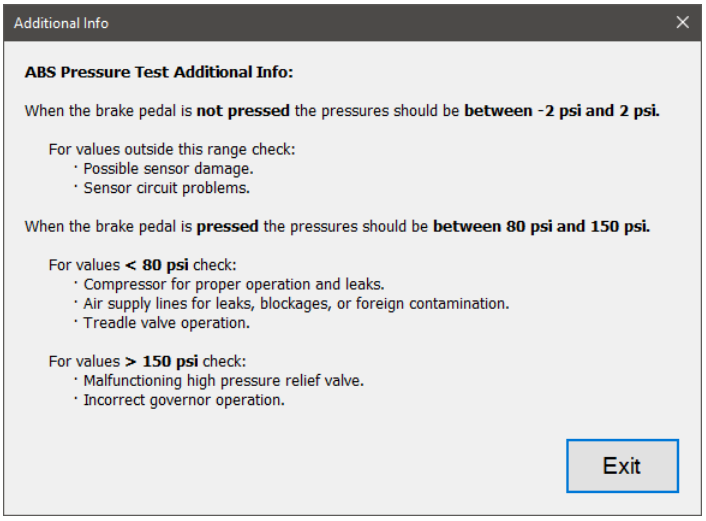
1. Select the ABS Engine Limiting Test and press Enter or the *Start* button.

2. The test dialog will be displayed.



ABS Pressure Test

3. Observe the Brake Application Pressure data value while the brake pedal is pressed and released, then compare against the specified acceptable pressure ranges. Click the *Graph* tab at any time to view a graph of the monitored data values.
4. Clicking the *Additional Info* button will display additional test information. Click *OK* to close this window.



ABS Pressure Test Additional Info

5. When done, press the *Exit* button to return to the test selection dialog.

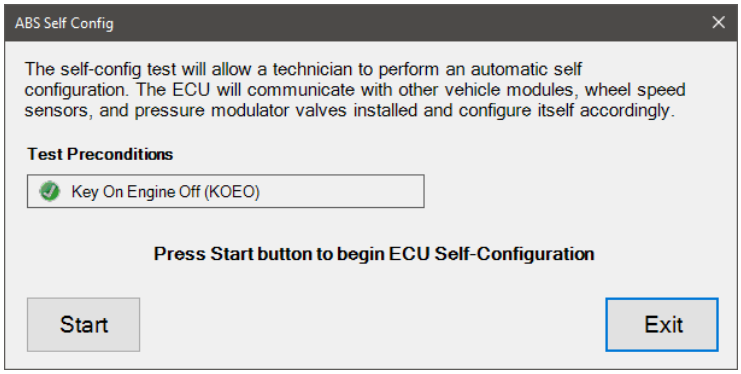
ABS Self Config Test

The ABS Self Config Test is available on:

- ✓ EC-60 braking systems
- ✓ EC-80 ABS or ATC braking systems

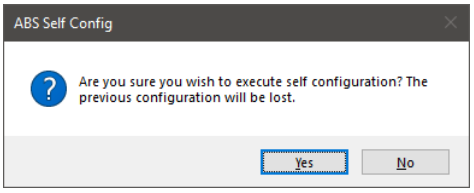
This test performs an automatic self-configuration of the ABS ECU based on all installed and detected components and sensors.

1. Select the ABS Self Config Test and press Enter or the *Start* button.
2. The test dialog will be displayed.



ABS Self Config

3. Click *Start* to begin the Self Config procedure, which will update the brake ECU configuration to match the currently detected ABS sensors and components. A confirmation window will display. Click *Yes* to begin the Self Config.



ABS Self Config Confirmation

4. The configuration process will begin. All controls on the test dialog will be disabled and a progress bar will be displayed. When configuration is completed a successful status message will appear and the controls will be enabled.
5. When done, press the *Exit* button to return to the test selection dialog.

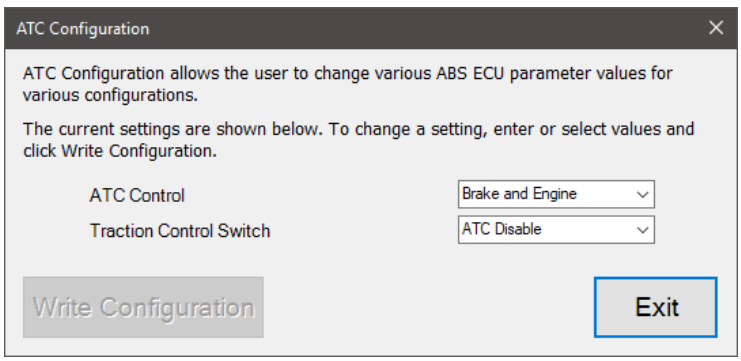
ATC Configuration Test

The ATC Configuration Test is available on:

- ✓ EC-80 ATC or ESP braking systems

This test allows editing of ATC parameters for EC-80 braking systems.

1. Select the ATC Configuration Test and press Enter or the *Start* button.
2. The test dialog will be displayed.



ATC Configuration

3. Select the new values and click *Write Configuration* button to have the new values sent to the vehicle.
4. When done, press the Exit button to return to the test selection dialog.

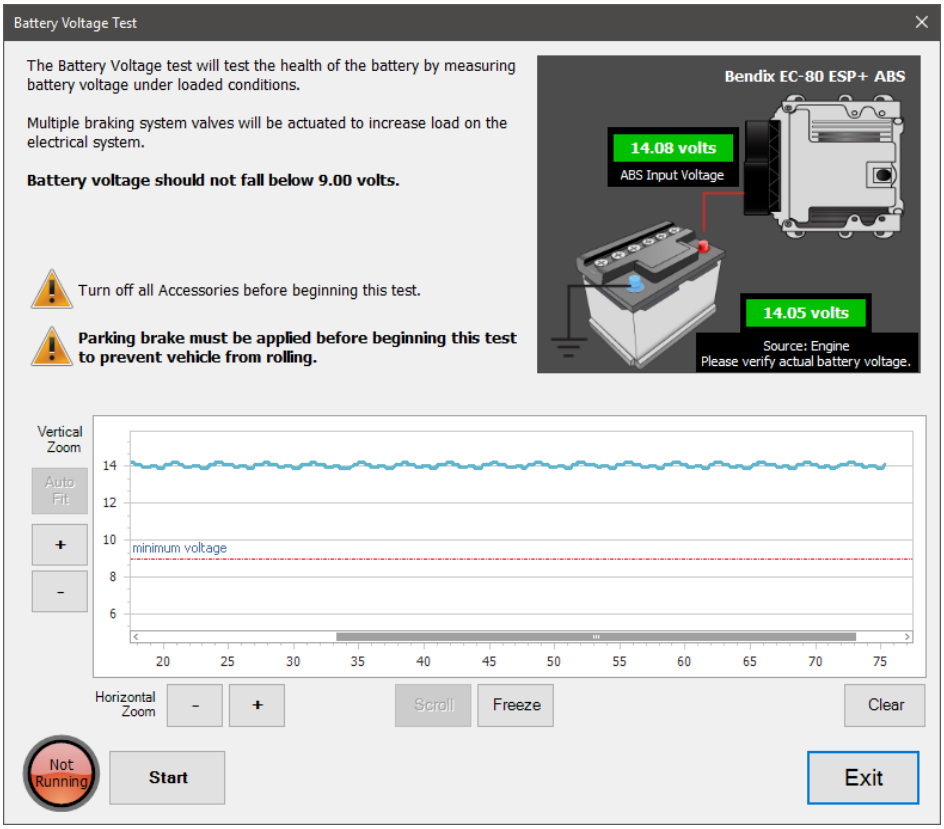
Battery Voltage Test

The Battery Voltage Test is available on:

- ✓ EC-60 and EC-80 braking systems

This test checks the health of the battery by measuring voltage levels under loaded conditions.

1. Select the Battery Voltage Test and press Enter or the *Start* button.
2. The test dialog will be displayed.



Battery Voltage Test

3. Select the *Start* button to begin the test. Multiple braking system valves will be actuated at the same time to increase load on the electrical system. Vertical lines will appear on the graph to indicate the start and end of the test. Observe the graphed battery voltage.

NOTE: The parking brake must be set before running this test. Simultaneous actuation of the braking system valves can cause the vehicle to freely roll during test duration.

4. Select the *Stop* button at any time to stop the test. The test will automatically stop after a few seconds.

5. When done, press the *Exit* button to return to the test selection dialog.

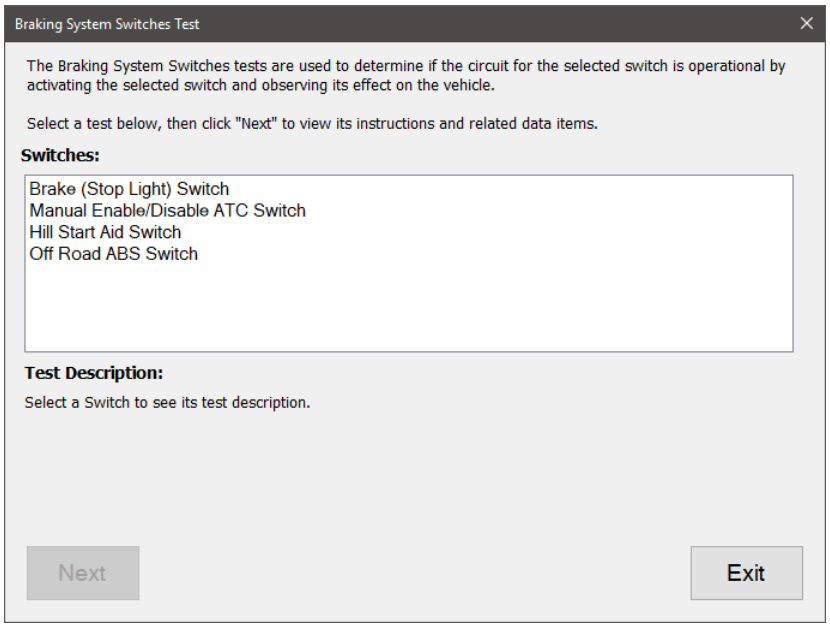
Braking System Switches Test

The Braking System Switches Test is available on:

- ✓ EC-60 and EC-80 braking systems

This test provides the ability to troubleshoot multiple switches that are part of the ABS system by toggling the selected switch and observing the effect on the vehicle.

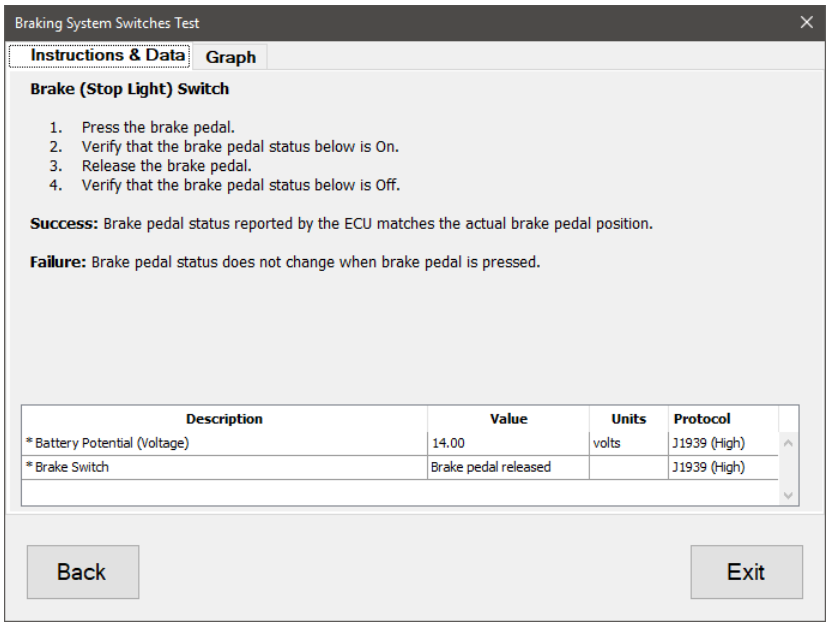
1. Select the Braking System Switches Test and press Enter or the *Start* button.
2. The test dialog will be displayed.



Braking System Switches Test

NOTE: The specific switches available for selection is dependent on the configuration of the ABS ECU.

3. Select a switch to test from the available options. Specific Test Description information will be displayed for the selected option. Click the *Next* button to begin the selected switch test.



Braking System Switches Test Instructions

4. Follow the test instructions and observe the data values as actions are performed on the vehicle. Click the *Graph* tab at any time to view a graph of the monitored data values.
5. Select the *Back* button to return to the switches test selection.
6. When done, press the *Exit* button to return to the test selection dialog.

Dashboard Brake Lamp Tests

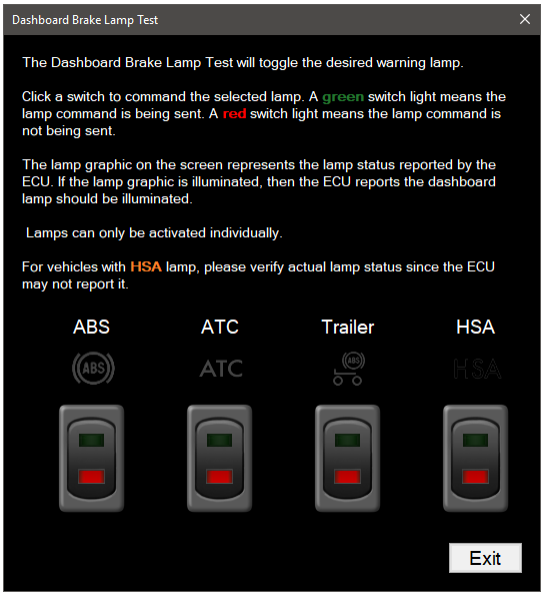
The Dashboard Brake Lamp test is available on:

- ✓ EC-60 and EC-80 braking systems

This test provides the ability to test the dashboard warning and information lamps related to the braking system.

1. Select Dashboard Brake Lamp Tests and press Enter or press *Start* Button.

2. The Dashboard Lamp Test dialog will be displayed.



Dashboard Brake Lamp Test Dialog

NOTE: If lamp status of a lamp is not available, the lamp test for that corresponding lamp will be disabled.

3. Click the button under the desired lamp. Observe the light change on the truck dashboard. Repeat for all lamps of interest.
4. When done, press the *Exit* button to return to the test selection dialog.

Drag Torque Test

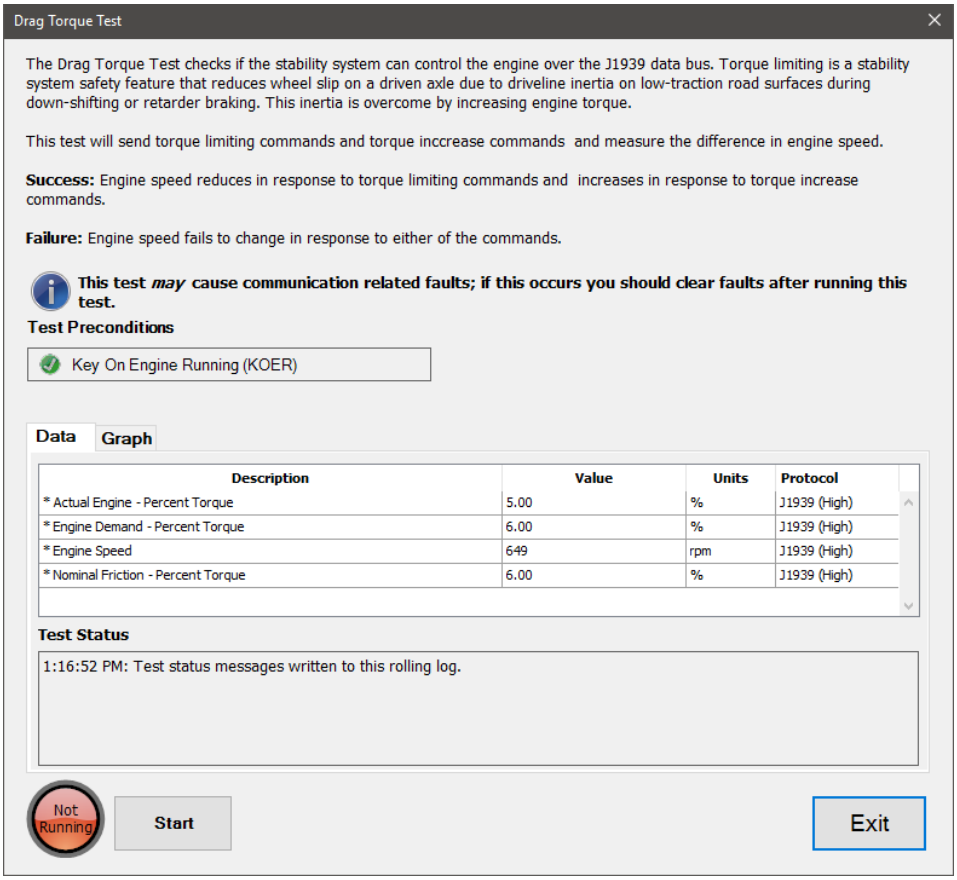
The Drag Torque Test is available on:

- ✓ EC-60 Premium or Advanced braking systems
- ✓ EC-80 ATC or ESP braking systems

This test raises and lowers torque limits and tests how the engine responds.

1. Select the Drag Torque Test and press Enter or the *Start* button.

2. The test dialog will be displayed.



Drag Torque Test

3. Select the *Start* button to initiate the test. Test Status will display the commands as they are sent to the engine. A difference in engine speed and torque values can be observed as well as a change in engine sound. Click the *Graph* tab at any time to view a graph of the monitored data values.
4. Select the *Stop* button to stop the test at any point. The test will automatically stop after it has performed an increase and decrease cycle twice. The braking system will reset when the test ends which can be observed by audible clicking from the brake modulator valves.
5. When done, press the *Exit* button to return to the test selection dialog.

ECU Reset Test

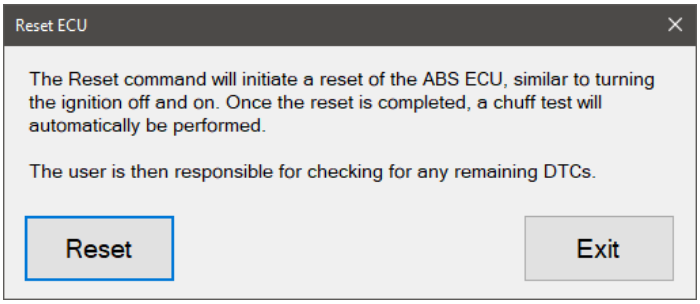
The ECU Reset Test is available on:

- ✓ EC-60 and EC-80 braking systems

This test resets the brake ECU, similar to turning the ignition off and on. During the reset any braking system related dashboard lamps will flash. Once the reset is completed, a chuff test will automatically be performed.

1. Select the ECU Reset Test and press Enter or the *Start* button.

2. The test dialog will be displayed.



ECU Reset Test

3. Select the *Reset* button to initiate the test. A confirmation message will appear.
4. Click *Yes* to perform the ECU reset. A countdown timer will be displayed while the reset is occurring. The test cannot be abandoned during the reset.
5. When done, press the *Exit* button to return to the test selection dialog.

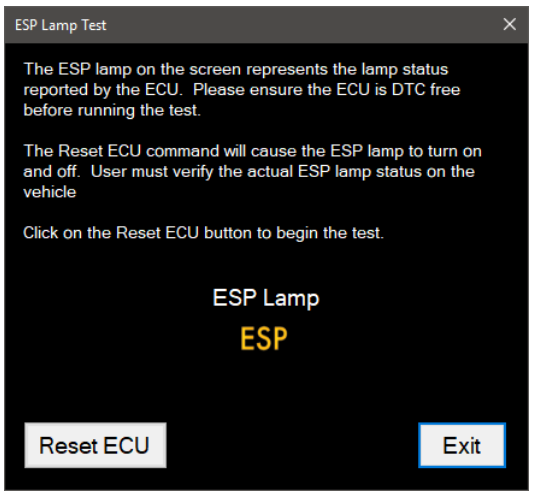
ESP Lamp Test

The ESP Lamp Test is available on:

- ✓ EC-80 ESP braking systems

This tests if the dashboard Enhanced Stability Program (ESP) lamp is functioning properly by commanding the lamp to change status. User must verify that the dashboard ESP lamp changes to match the test commands.

1. Select the ESP Lamp Test and press Enter or the *Start* button.
2. The test dialog will be displayed.



ESP Lamp Test

3. Click *Reset ECU* to cause the ESP lamp to turn off and on. This will also reset the braking system which can be observed by audible clicking from the brake modulator valves. Compare the ESP Lamp status reported by the ECU to the dashboard ESP lamp.
4. When done, press the *Exit* button to return to the test selection dialog.

Maintenance Mode

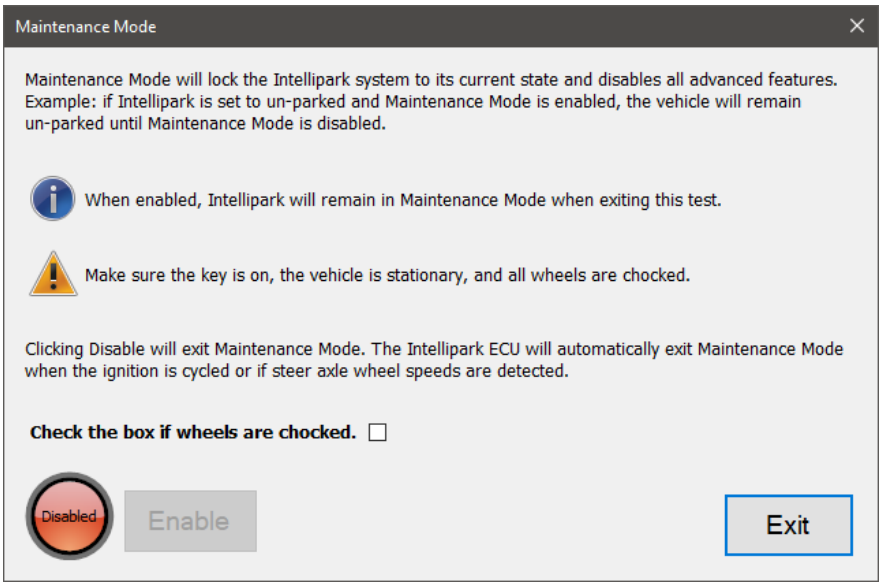
The Maintenance Mode test is available on:

- ✓ Intellipark systems

This test puts the Intellipark ECU into maintenance mode, which locks the ECU to its current state and disables all advanced features.

NOTE: When enabled, Intellipark will remain in maintenance mode when exiting this test. Maintenance mode can be disabled by performing this test again, cycling the ignition, or when steer axle wheel speeds are detected.

1. Select Maintenance Mode and press Enter or the *Start* Button.
2. The test dialog will be displayed.



Intellipark Maintenance Mode

NOTE: Vehicle must be secured from rolling before enabling maintenance mode.

3. Click the checkbox to confirm that the vehicle's wheels have been chocked. The *Enable* button will become available.
4. Click *Enable* to set maintenance mode to the Intellipark's current state. Maintenance mode will remain enabled even after this test dialog is closed, allowing other tests and maintenance procedures to be performed.
5. Maintenance mode will remain enabled until this test is run again to disable maintenance mode. Maintenance mode will automatically disable if the ignition is cycled or if steer axle wheel speeds are detected.
6. When done, press the *Exit* button to return to the test selection dialog.

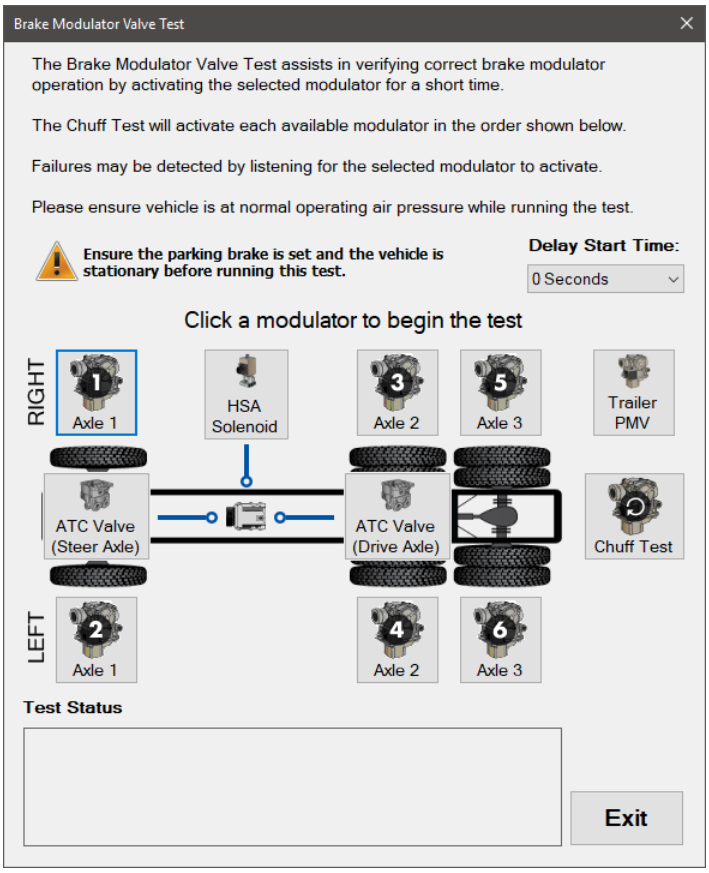
Modulator Valve (Chuff) Test

The Modulator Valve (Chuff) test is available on:

- ✓ EC-60 and EC-80 braking systems

This test assists in verifying correct brake modulator operation by activating the selected modulator for a short time. Ensure the vehicle is at normal operating air pressure while running the test.

1. Select the Modulator Valve (Chuff) Test and press Enter or the *Start* button.
2. The test dialog will be displayed.



Modulator Valve (Chuff) Test

NOTE: The modulator valves displayed is dependent on the ABS system ECU and the number of physical brake modulator valves installed on the vehicle.

3. If desired, select a delay start time. This allows you to leave the computer and get closer to the modulator valve, so you can better hear the actuations.
4. Select the modulator to test. You should hear a clicking or chuffing sound indicating successful actuation. While the test is running the selected button will have a green background and all other modulator buttons will be disabled. The Test Status window will update to indicate progress. Click the selected button again to stop the test early.
5. Selecting the *Chuff Test* button will activate all modulators in the order indicated. The application will actuate each valve in sequence. You should hear a clicking or chuffing sound indicating a successful actuation. The Test Status window will update to indicate progress.
6. The braking system will reset after each modulator test ends which can be observed by audible clicking from the brake modulator valves.
7. When done, press the *Exit* button to return to the test selection dialog.

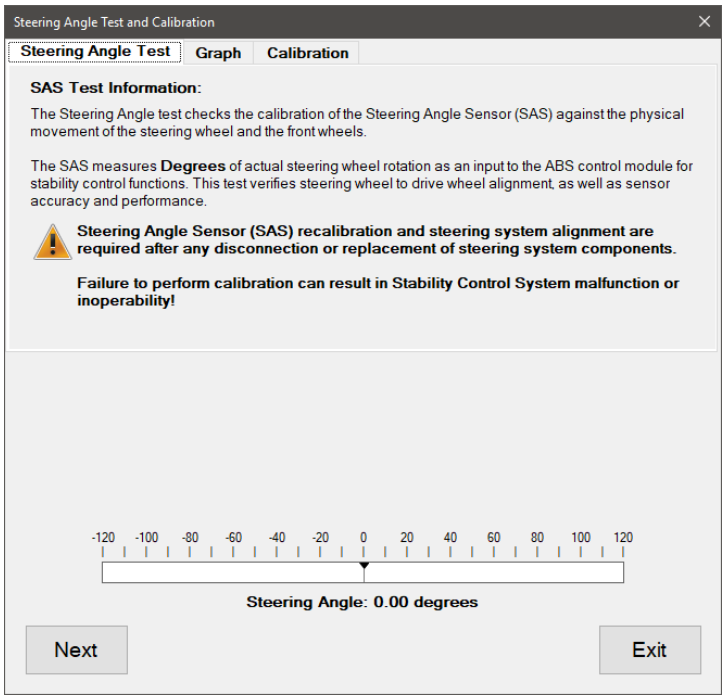
Steering Angle Test and Calibration

The Steering Angle Test and Calibration is available on:

- ✓ EC-60 Advanced braking systems
- ✓ EC-80 ESP or ATC+ with EV Support braking systems

This test allows for verification of steering angle sensor functionality and provides recalibration ability if necessary.

1. Select the Battery Voltage Test and press Enter or the *Start* button.
2. The test dialog will be displayed.



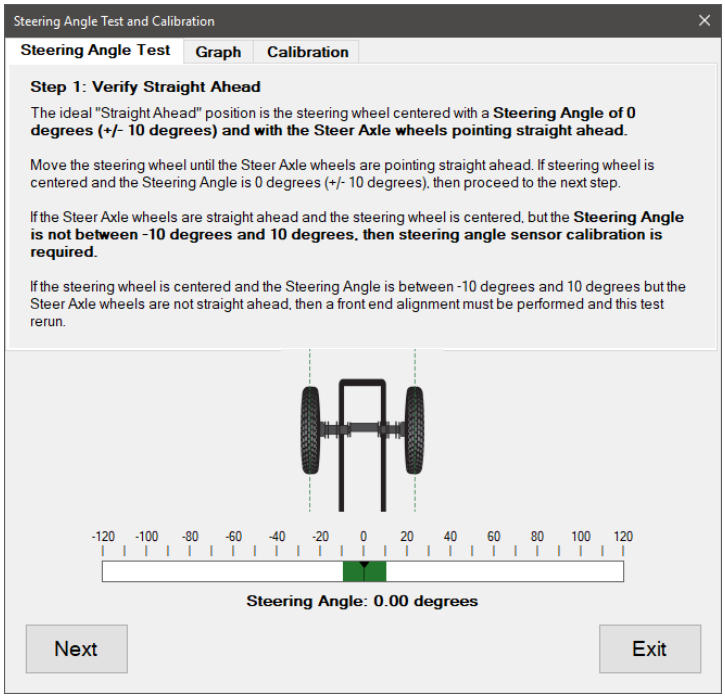
Steering Angle Test and Calibration

3. The *Steering Angle Test* tab guides the user through the diagnostic steps for ensuring proper steering angle alignment.

   Select the *Graph* tab to view a graph of the monitored steering angle.

   Select *Calibration* to run the recalibration procedure which relearns the current steering angle position as 0 degrees.

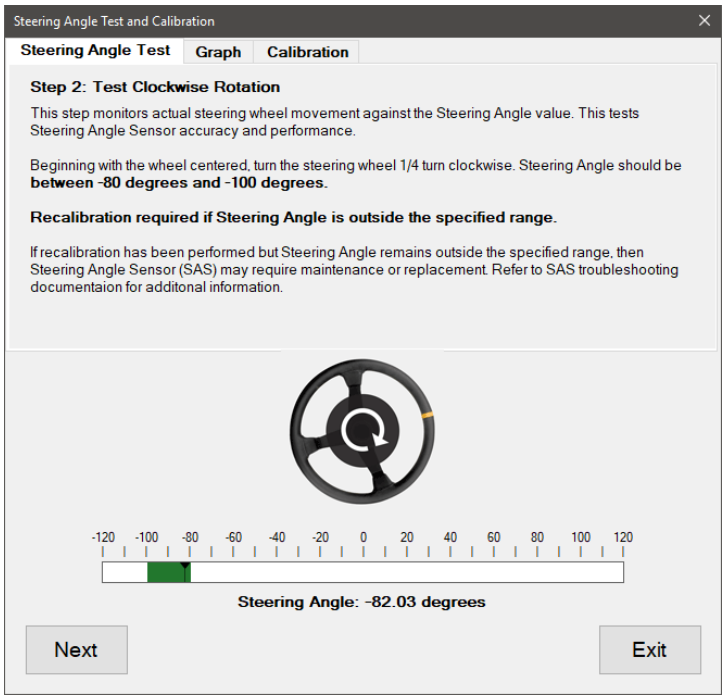
4. To begin the Steering Angle Test, select the *Next* button. Step 1 of the procedure provides instructions to verify straight ahead position of the steer axle wheels compared to the steering wheel. The green area on the steering angle number line shows the acceptable target range.



Steering Angle Test Verify Straight Ahead

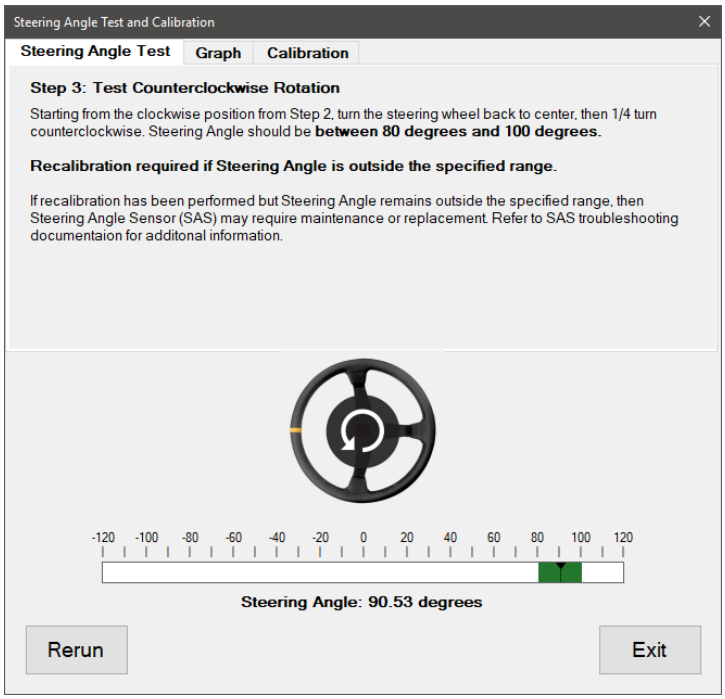
5. Select the *Next* button to continue.

6. Step 2 requires turning the steering wheel ¼ turn clockwise to the position indicated by the graphic. Compare the steering angle to the acceptable range which is also noted by the green target area on the number line.



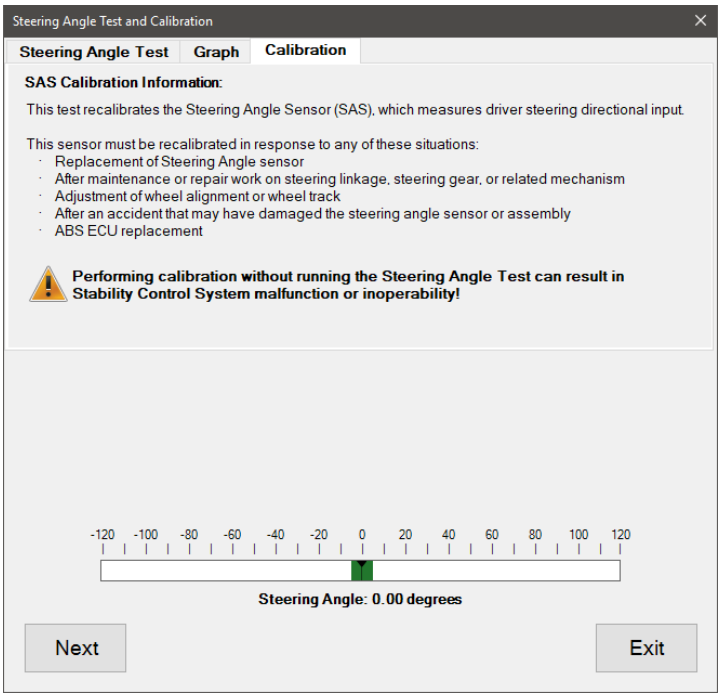
Steering Angle Test Clockwise Rotation

7. Click the *Next* button to continue.
8. Step 3 requires turning the steering wheel ½ turn counterclockwise to the position indicated by the graphic. Compare the steering angle to the acceptable range which is also noted by the green target area on the number line.



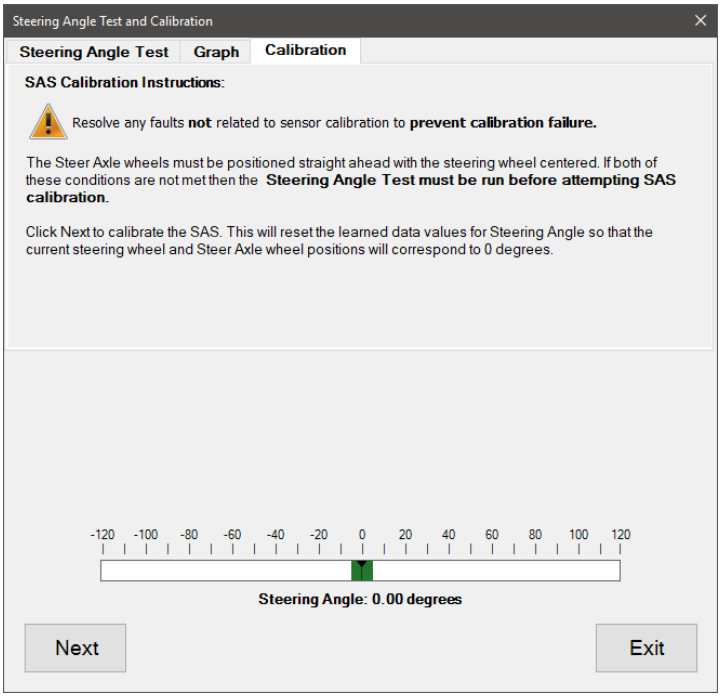
Steering Angle Test Counterclockwise Rotation

9. Selecting *Rerun* will return to step 1 of the Steering Angle Test.
10. To perform Steering Angle Calibration, select the *Calibration* tab. Click *Next* to begin the calibration test.



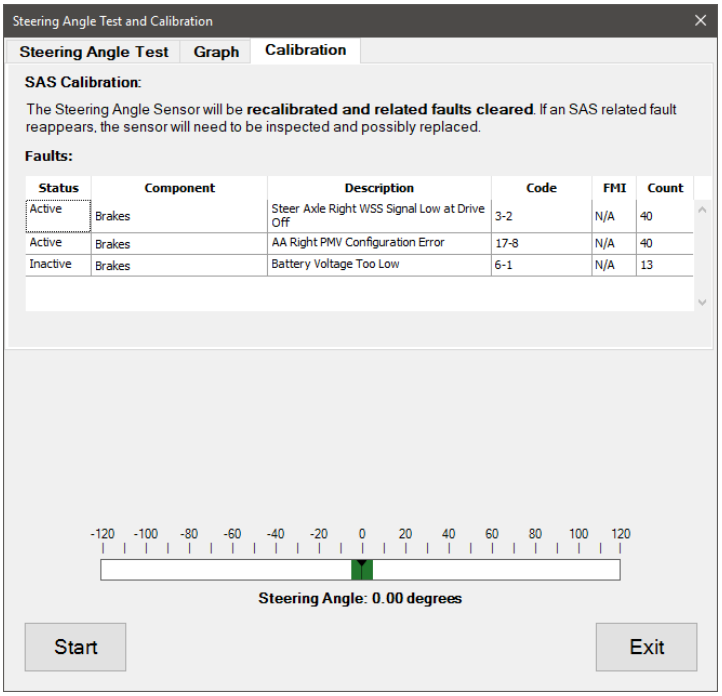
Steering Angle Calibration

11. Test instructions are displayed which must be followed to ensure successful calibration. Any faults not related to the steering angle sensor must be resolved before attempting calibration. The steer axle wheels must also be positioned straight ahead with the steering wheel centered. Click *Next*.



Steering Angle Calibration Instructions

12. The SAS Calibration screen provides a fault grid that will only display braking system related faults. Click the *Start* button to perform the calibration.



Steering Angle Calibration

13. When the test is completed a *Calibration Successful* message will be displayed. Click *OK* to dismiss this message.
14. When done, press the Exit button to return to the test selection dialog.

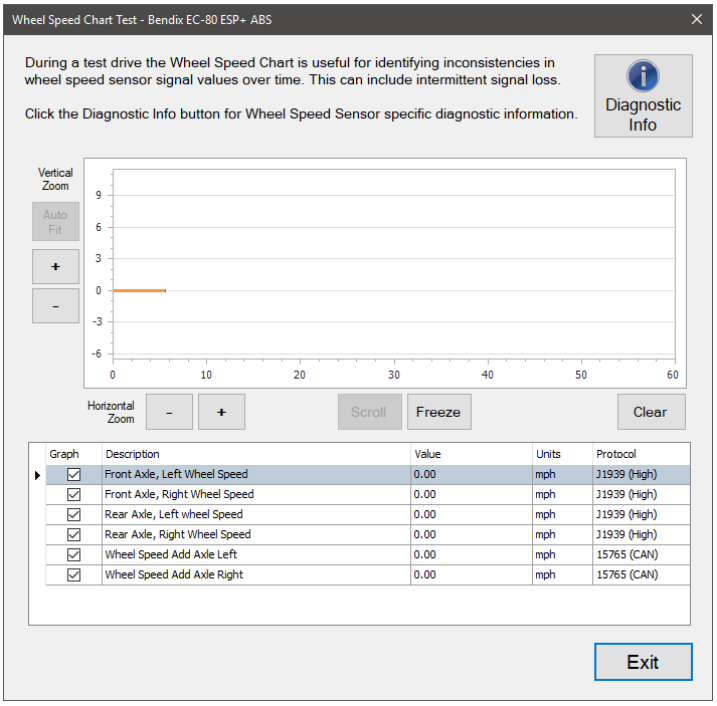
Wheel Speed Chart Test or Wheel Speed Window Test

The Wheel Speed Window test is available for any tractor and trailer braking system that report wheel speed data.

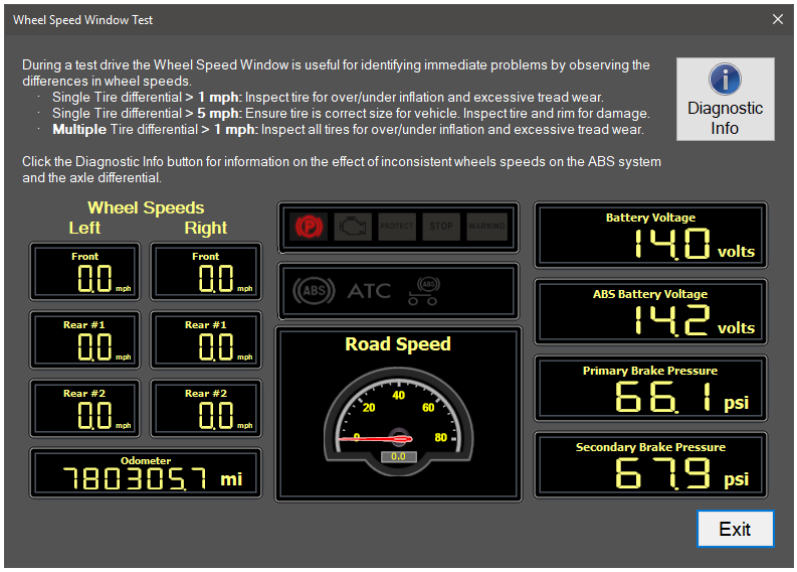
This test can be used to verify and test wheel speed sensors and confirm fault codes before and after a repair or replacement.

1. Select Wheel Speed Chart Test or the Wheel Speed Window Test and press Enter or press *Start* Button.

2. The test dialog will be displayed.



Wheel Speed Chart Test



Wheel Speed Window Test

3. Lift the suspect axle(s) to allow free spinning wheel(s). While looking at the test screen, spin the wheel(s) to check for changes in the graph or digital readout to match the wheel being spun.
4. Click *Diagnostic Info* to view additional diagnostic information related to wheel speed readings.
5. Press *Exit* button when ready to exit this test and return to the test selection dialog.

Wiggle Test / Performance Issue Monitor

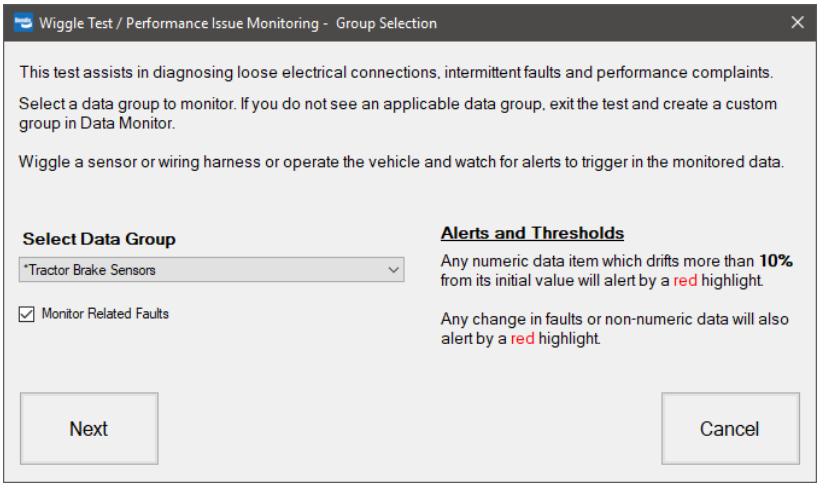
The Wiggle Test / Performance Issue Monitor is supported on:

✓ EC-60 and EC-80 braking systems

This test assists in diagnosing loose electrical connections, intermittent faults and performance complaints. The test monitors for changes in fault status or selected data (beyond a threshold) while wiggling connectors or wiring or while running the vehicle.

1. Select Wiggle Test / Performance Issue Monitor and press Enter or press *Start* Button.
2. The Group Selection dialog will be displayed. Select a data group to monitor.

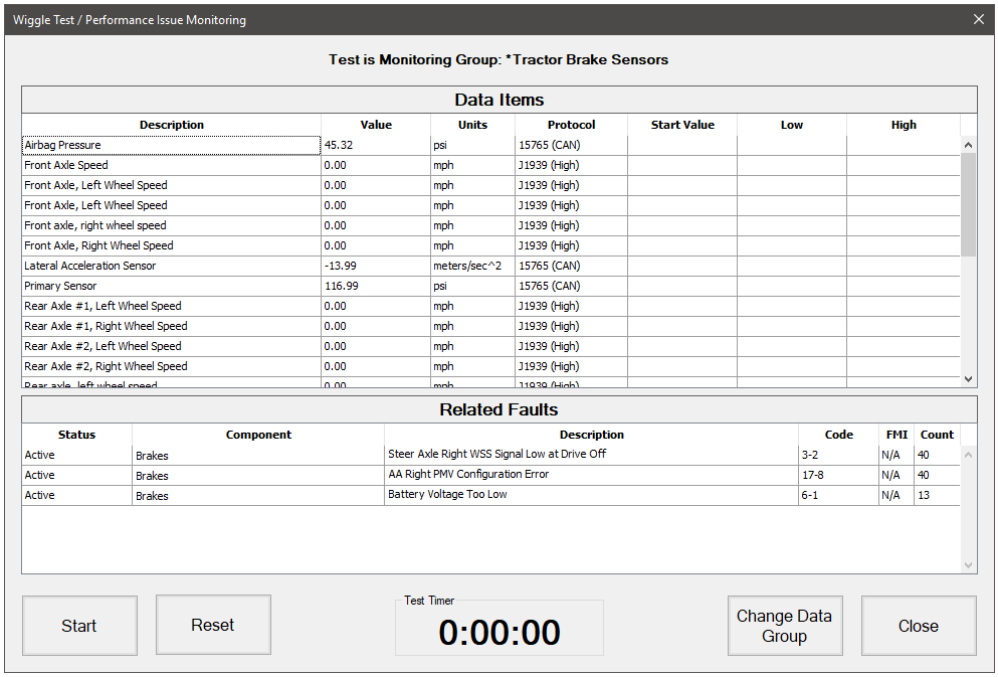
NOTE: If you do not see an applicable data group, exit the test and create a custom group in the Data Monitor "Data Groups" tab.



Wiggle Test / Performance Issue Monitoring – Group Selection

3. Select *Next* to begin the test on the selected Data Group.
4. The Wiggle Test / Performance Issue Monitoring test displays with the selected Data Group name displayed at the top of the window. The window will display all Data items that are available on the current vehicle from the selected Data Group. If the "Monitor

Related Faults" was checked on the Group Selection window, then in the bottom of the window will be all currently reported related faults.



Wiggle Test / Performance Issue Monitoring

5. Select the *Start* button to begin monitoring the data and faults for changes.
6. Wiggle a sensor or wiring harness or operate the vehicle and watch for alerts to trigger in the monitored data.

   Any numeric data item which drifts more than **10%** from its initial value will alert by a red highlight.

   Any change in faults or non-numeric data will also alert by a red highlight.

7. Select *Reset* to reset all alerts and initial values for monitoring.
8. Select *Change Data Group* to perform the test using a different set of data.
9. Select *Close* when done.

Yaw Rate and Lateral Accel. Test and Calibration

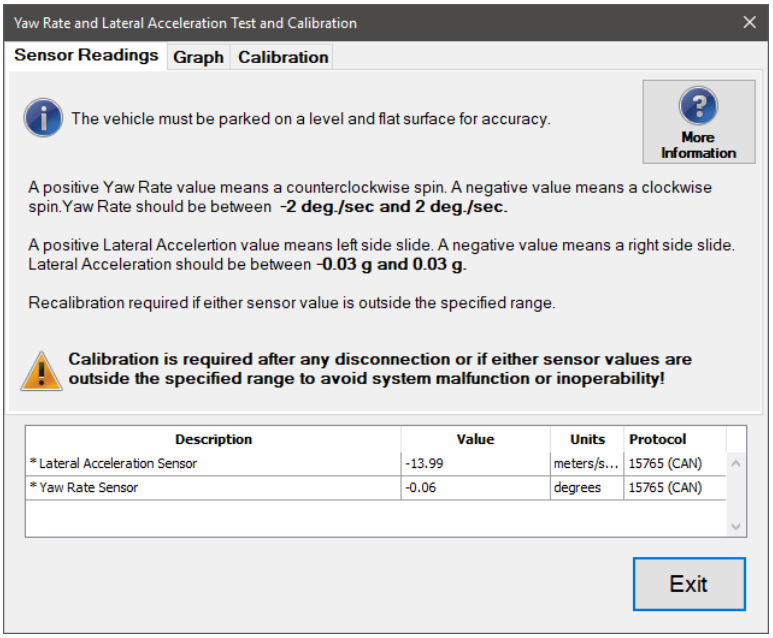
The Yaw Rate and Lateral Accel. Test and Calibration is available on:

- ✓ EC-60 Advanced braking systems
- ✓ EC-80 ESP braking systems

This test checks the calibration of the Yaw Rate/ Lateral Acceleration sensor when the vehicle is stationary. It also provides the ability to recalibrate the sensor if its values are found to be out of bounds.

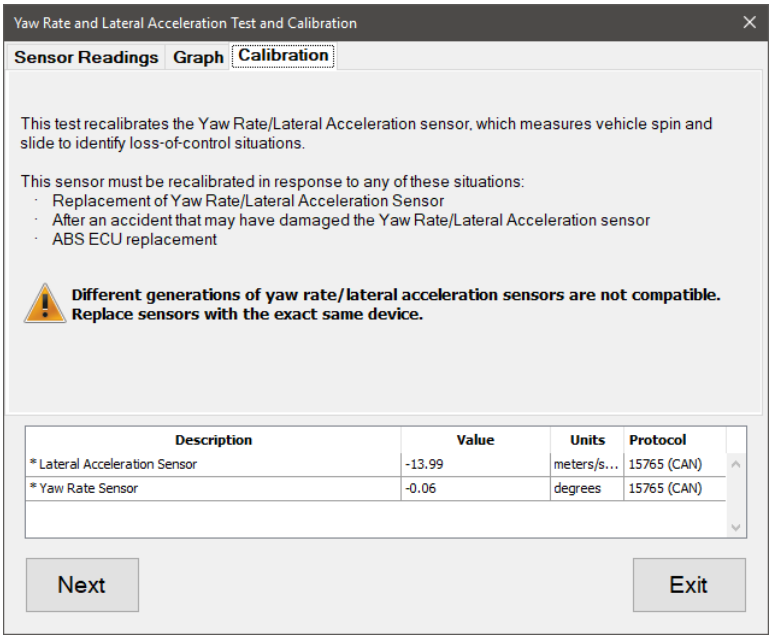
1. Select the Yaw Rate and Lateral Accel. Test and Calibration and press Enter or the *Start* button.

2. The test dialog will be displayed.



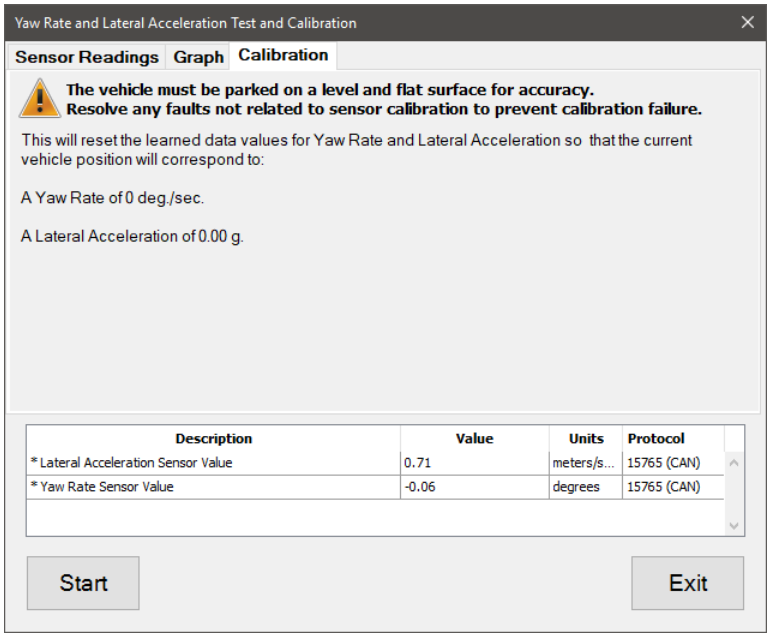
Yaw Rate and Lateral Acceleration Test and Calibration

3. From the Sensor Readings tab observe the monitored data values and compare them to the defined acceptable ranges. Select the *Graph* tab to view a graph of the monitored data values.
4. Select the Calibration tab to perform recalibration of the Yaw Rate/Lateral Acceleration sensor. Important test information is displayed for review. Select the *Next* button to continue.



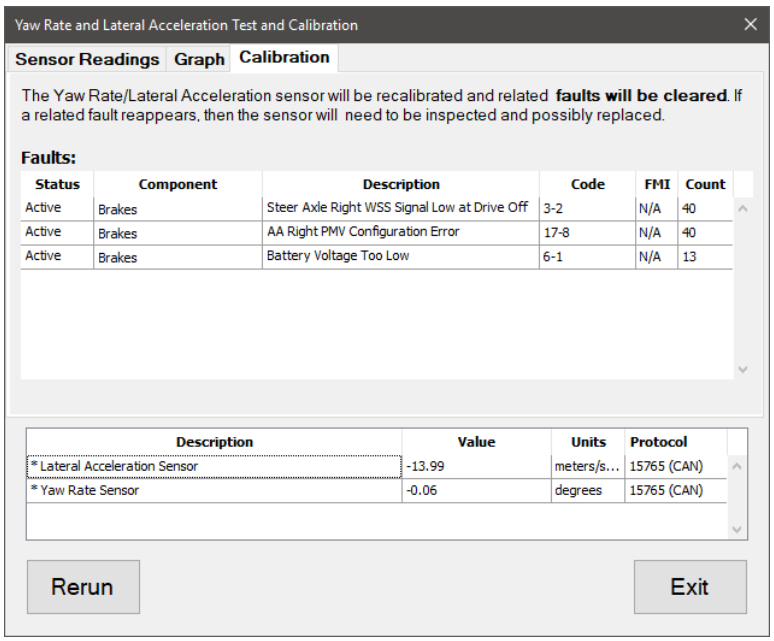
Yaw Rate and Lateral Acceleration Calibration Instructions

5. Click the *Start* button to begin the recalibration.



Yaw Rate and Lateral Acceleration Calibration Preconditions

6. When recalibration begins the test information will be replaced with a faults display for related braking system faults. When calibration is completed a success message will be displayed. Click *OK* to dismiss this message.



Yaw Rate and Lateral Acceleration Calibration Faults Display

7. If desired the recalibration can be performed again by clicking the *Rerun* button to return to calibration instructions.
8. When done, press the *Exit* button to return to the test selection dialog.

Air Treatment Systems Tests

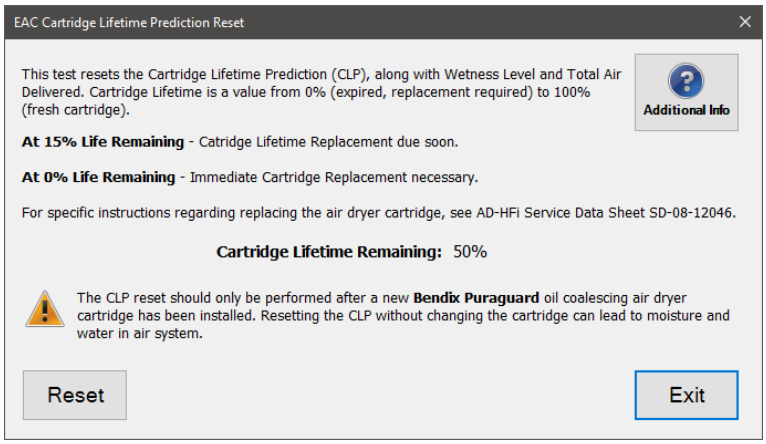
Cartridge Lifetime Prediction Reset Test

The Cartridge Lifetime Prediction Reset test is available on:

- ✓ EAC (EC-80 Integrated)
- ✓ EAC (Standalone)

This test provides the ability to reset the Cartridge Lifetime Remaining value to 100% after a new air dryer cartridge has been installed.

1. Select Cartridge Lifetime Prediction Reset Test and press Enter or the *Start* Button.
2. The test dialog will be displayed.

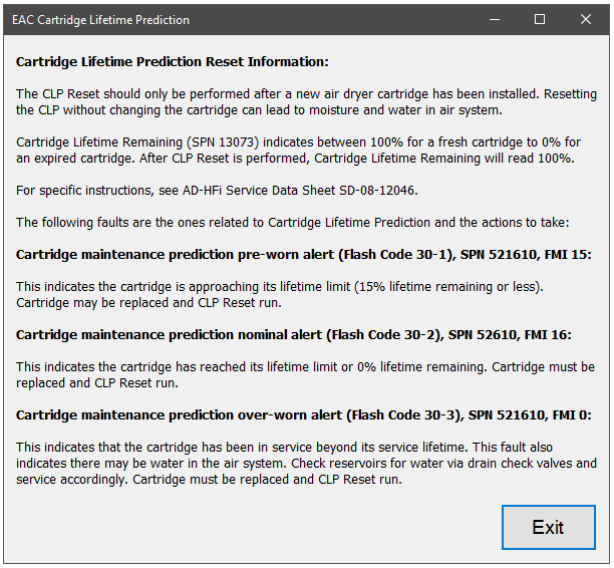


Cartridge Lifetime Prediction Reset Test

NOTE: Reset should only be performed after a new air dryer cartridge has been installed.

3. Click the *Reset* button to reset the Cartridge Lifetime Remaining value to 100%. The Wetness Level and Total Air Delivered values will also be reset.

4. Selecting *Additional Info* will display important test and repair information, including explanations for related faults. Click *Exit* to close this screen.



Cartridge Lifetime Prediction Reset Test Additional Info

5. When done, press the *Exit* button to return to the test selection dialog.

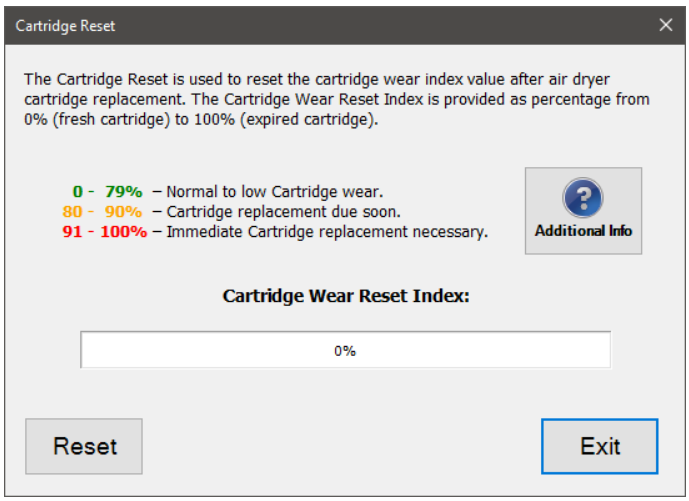
Cartridge Reset Test

The Cartridge Reset Test is available on:

- ✓ eAPU2
- ✓ iAPU

The Cartridge Reset Test provides the ability to reset the cartridge wear index measurement value to 0% after a new air dryer cartridge has been installed.

1. Select Cartridge Reset Test and press Enter or the *Start* Button.
2. The test dialog will be displayed.



Cartridge Reset Test

3. Select *Reset* to begin the test. A warning message that the existing cartridge must be replaced before running this test is displayed. When ready to perform the test, select the

OK button. The test will complete, resetting the cartridge wear index measurement value.

4. When done, press the *Exit* button to return to the test selection dialog.

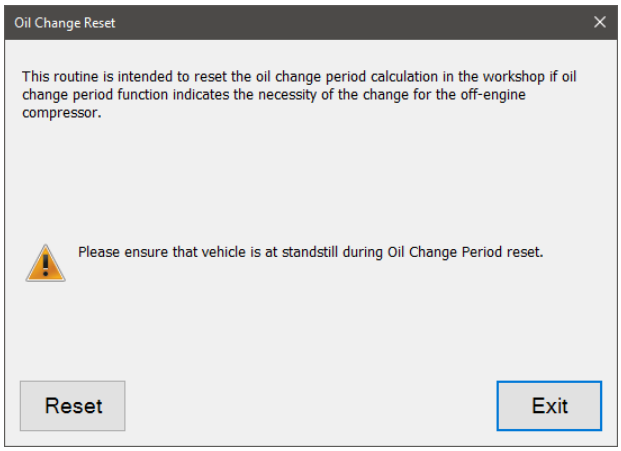
Oil Change Reset Test

The Oil Change Reset Test is available on:

- ✓ eAPU2
- ✓ iAPU

The Oil Change Reset Test will reset the oil change period calculation after an oil change has been performed..

1. Select Oil Change Reset Test and press Enter or the *Start* Button.
2. The test dialog will be displayed.



Oil Change Reset Test

3. Ensure the vehicle is stationary, then select *Reset* to begin the test. The oil change period value will be reset.
4. When done, press the *Exit* button to return to the test selection dialog.

Driver Assistance Systems (DAS) Tests

AutoVue 3G Configuration

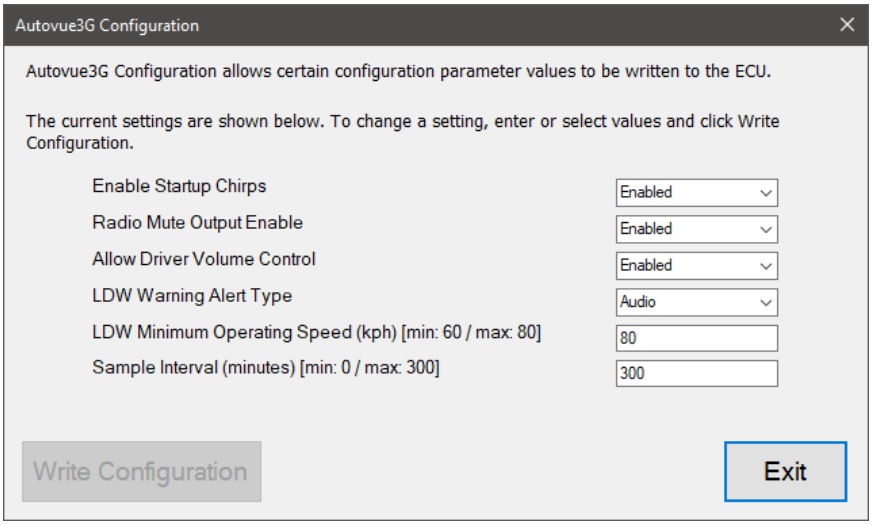
The AutoVue 3G Configuration Test is available on:

- ✓ AutoVue® 3G LDW System

This test allows the editing of configuration parameters.

1. Select AutoVue 3G Configuration and press Enter or the *Start* button.

2. The test dialog will be displayed.



AutoVue 3G Configuration

3. Select a new value in one or more rows of the grid. Click *Write Values* button to have the new values sent to the vehicle. Once the programming is complete the **Current Value** column values will be updated and the *Restore Original* button will become enabled.
4. When done, press the Exit button to return to the test selection dialog.

Blindspotter Configuration

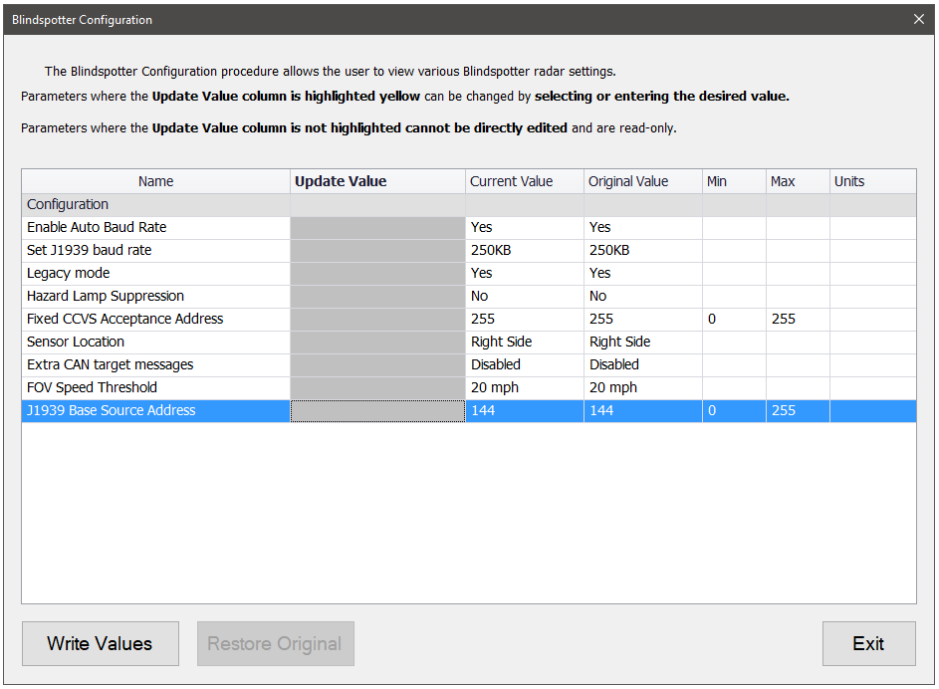
The Blindspotter Configuration is available on:

- ✓ Blindspotter® Radar

This test allows viewing the parameter values for the Blindspotter radar.

1. Select Blindspotter Configuration and press Enter or the *Start* button.

2. The test dialog will be displayed showing the current parameter values of the Blindspotter radar.



Blindspotter Configuration

3. When done, press the *Exit* button to return to the test selection dialog.

Camera Snapshot Test

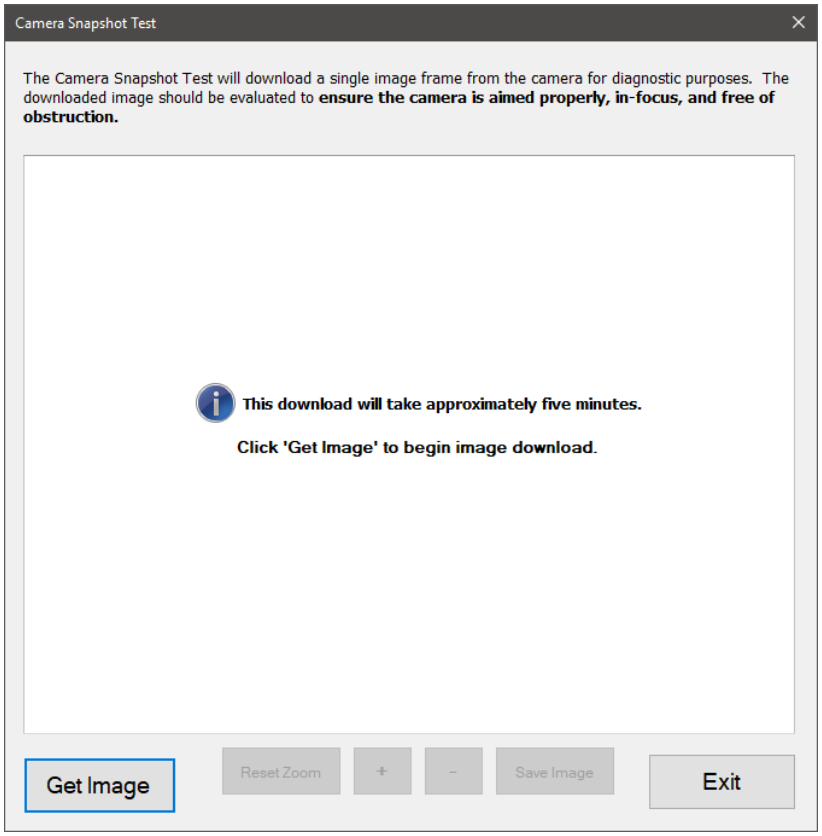
The Camera Snapshot Test is available on:

- ✓ AutoVue® FLC20™ Camera

This test commands the camera to take a snapshot and downloads the image for viewing to ensure proper camera alignment, focus, and visibility.

1. Select Camera Snapshot Test and press Enter or the *Start* button.

2. The test dialog will be displayed.



Camera Snapshot Test

3. Select the *Get Image* button to take a snapshot with the camera and download it to the viewer window. Review the downloaded image to ensure proper camera placement and function. Click the + and – buttons to change image zoom. Click *Reset Zoom* to return the image to its default full screen view. Click *Save Image* to save the picture to your hard drive.

NOTE: Downloading the image can take approximately 5 minutes.

4. When done, press the *Exit* button to return to the test selection dialog.

Clear Stored Events and Videos

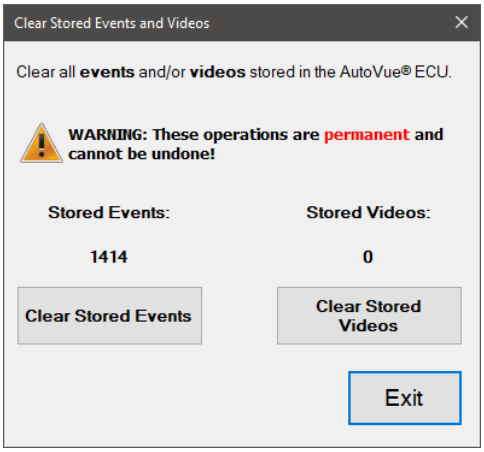
The Clear Stored Events and Videos test is available on:

- ✓ AutoVue® 3G LDW System
- ✓ SafetyDirect® Web Portal Processor (3G and 5G)

This test allows the clearing of any events or videos stored in the AutoVue® ECU. Clearing events or videos is permanent and cannot be undone.

1. Select the Clear Stored Events and Videos test and press Enter or the *Start* button.

2. The test dialog will be displayed.



Clear Stored Events and Videos

3. Select the *Clear Stored Events* button to clear the log of stored events.

   Select the *Clear Stored Videos* button to clear all videos stored in memory. After the selected clear event completes the related counter will be reset to 0.

NOTE: Clearing stored events or videos is a permanent process that cannot be undone.

4. When done, press the Exit button to return to the test selection dialog.

DIU Configuration

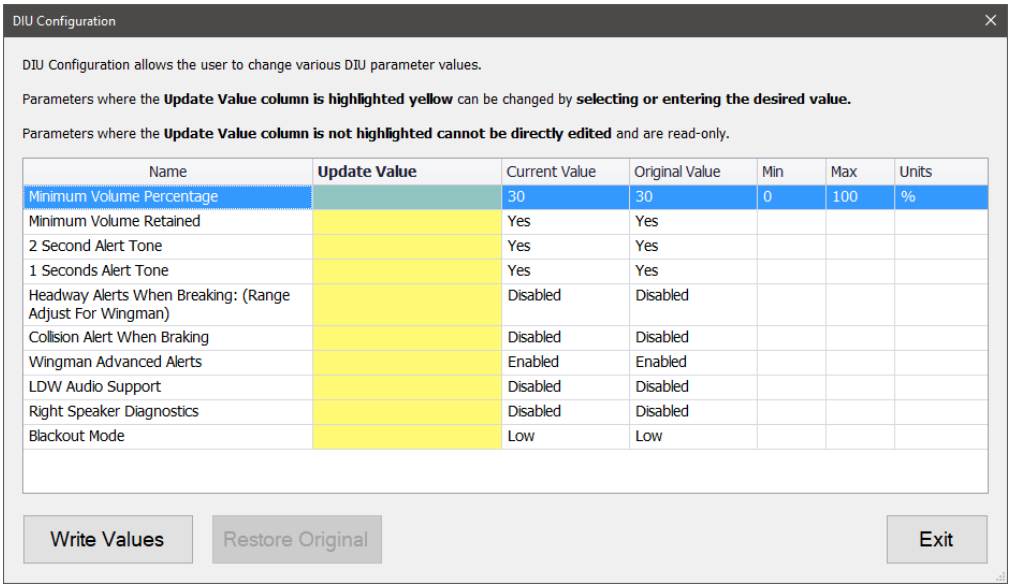
The DIU Configuration is available on:

- ✓ Driver Interface Unit

This test allows the editing of configuration parameters.

1. Select DIU Configuration and press Enter or the *Start* button.

2. The test dialog will be displayed.



DIU Configuration

3. Select a new value in one or more rows of the grid. Click *Write Values* button to have the new values sent to the vehicle. Once the programming is complete the **Current Value** column values will be updated and the *Restore Original* button will become enabled.
4. When done, press the *Exit* button to return to the test selection dialog.

Indicator Component Tests

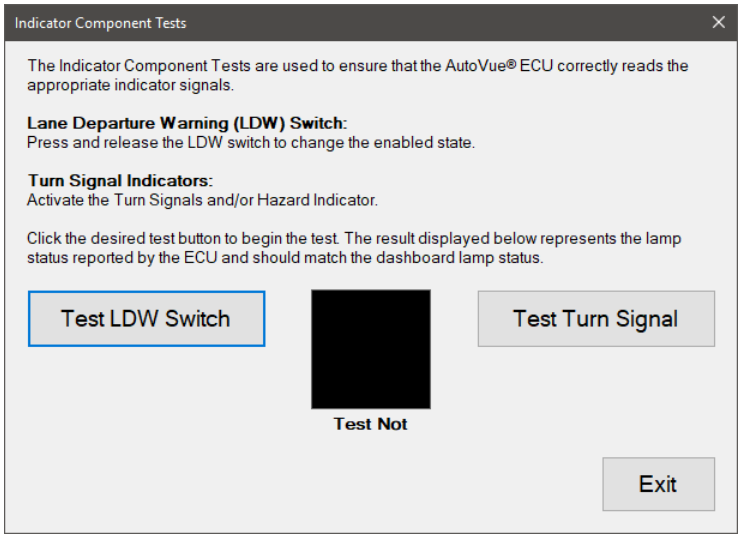
The Indicator Component Tests are available on:

- ✓ AutoVue® 3G LDW System
- ✓ SafetyDirect® Web Portal Processor (5G)

This test is used to ensure the ECU is correctly reading input from the following indicator components: Lane Departure Warning (LDW) switch, and the Turn Indicators.

1. Select the Indicator Component Test and press Enter or the *Start* button.

2. The test dialog will be displayed.



Indicator Component Tests

3. This test verifies the ECUs ability to correctly read indicator signals. Select *Test LDW Switch* to begin reading the status of the lane departure warning switch. Toggle the physical LDW switch in the vehicle cab and observe the test to see if the change in status is reported. Click *Stop Test* to stop monitoring the LDW status.
4. Select *Test Turn Signal* and observe the test while using the turn signals to see if the change in status is reported. The Hazard light switch can also be toggled. Click *Stop Test* to stop monitoring the turn signals.
5. When done, press the *Exit* button to return to the test selection dialog.

Lamp Component Test

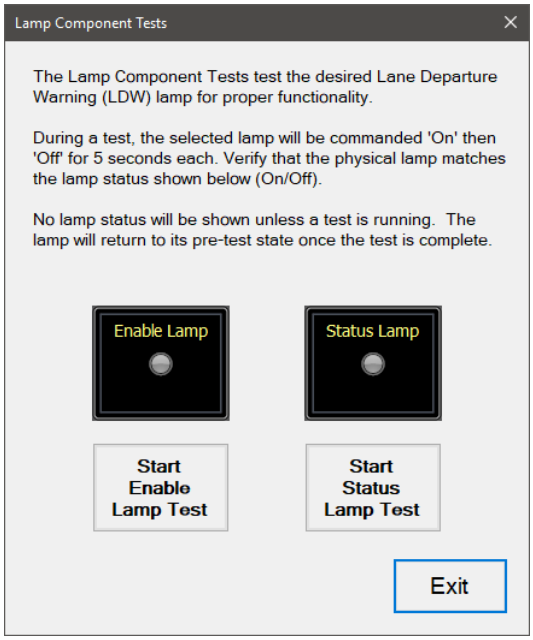
The Lamp Component Tests are available on:

- ✓ AutoVue® 3G LDW System
- ✓ SafetyDirect® Web Portal Processor (5G)

The Lamp Component Test tests proper functionality of the Lane Departure Warning Enable/Disable lamp and the Status Lamp.

1. Select the Lamp Component Test and press Enter or the *Start* button.

2. The test dialog will be displayed.



Lamp Component Tests

3. Select the desired lamp test button. The selected lamp will be commanded *On* for 5 seconds and then *Off* for 5 seconds. Observe the lamps to see if their status changes to match the commanded status displayed on the test screen.
4. When done, press the *Exit* button to return to the test selection dialog.

LDW Configuration

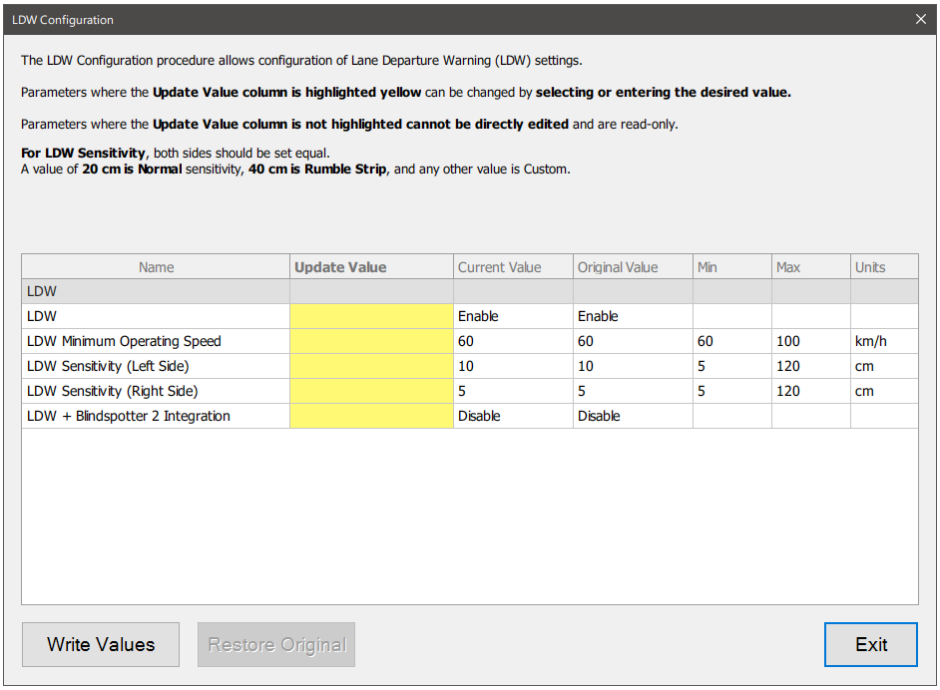
The Lane Departure Warning (LDW) Configuration test is available on:

- ✓ AutoVue® FLC20™ Camera

This test allows editing of configuration parameters.

1. Select LDW Configuration and press Enter or the *Start* button.

2. The test dialog will be displayed.



LDW Configuration

3. Select a new value in one or more rows of the grid. Click *Write Values* button to have the new values sent to the vehicle. Once the programming is complete the **Current Value** column values will be updated and the *Restore Original* button will become enabled.
4. When done, press the *Exit* button to return to the test selection dialog.

Output Component Tests

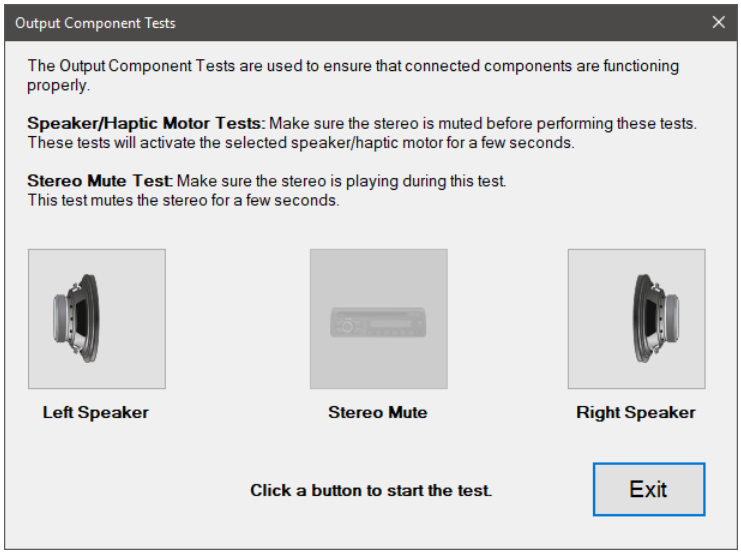
The Output Component Tests are available on:

- ✓ AutoVue® 3G LDW System
- ✓ SafetyDirect® Web Portal Processor (3G and 5G)

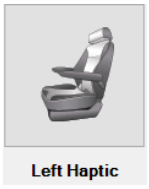
This test checks for proper functionality of connected alert systems, including: Speaker Feedback, Haptic Feedback, and Stereo Mute.

1. Select the Output Component Test and press Enter or the *Start* button.

2. The test dialog will be displayed.



Output Component Tests



Haptic Image

3. Ensure the stereo is muted, then click the desired left or right test button. The selected speaker or haptic motor will be activated until the selected button is clicked again to stop the test.
4. To perform the Stereo Mute test ensure the stereo is turned on before clicking the button to begin the test. Select the button again to stop the test.
5. When done, press the *Exit* button to return to the test selection dialog.

Pressure Trimming and Coil Polarity Test

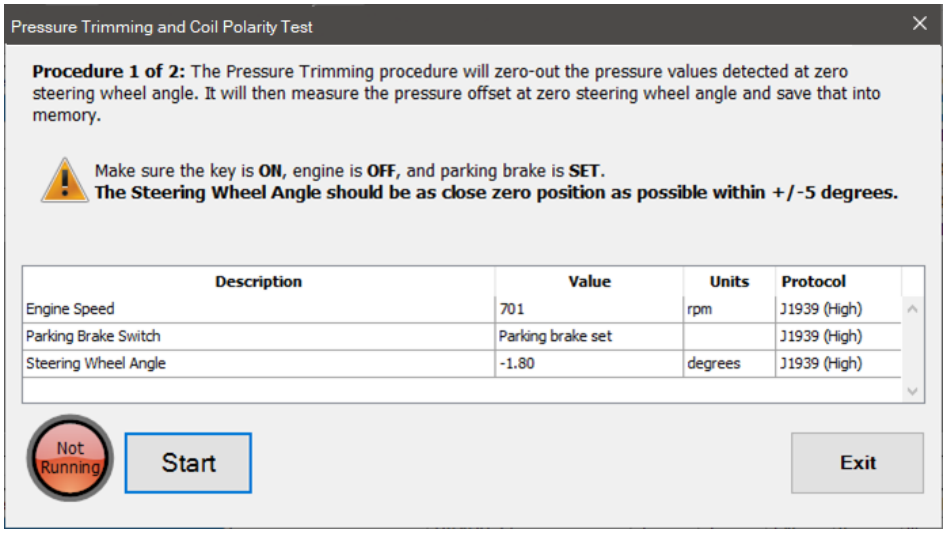
The Pressure Trimming and Coil Polarity Test is available on:

- ✓ Steering Assist components

This test will reset the pressure values to zero and should only be performed when the steering wheel angle is zero.

1. Select Pressure Trimming Test and press Enter or the *Start* button.

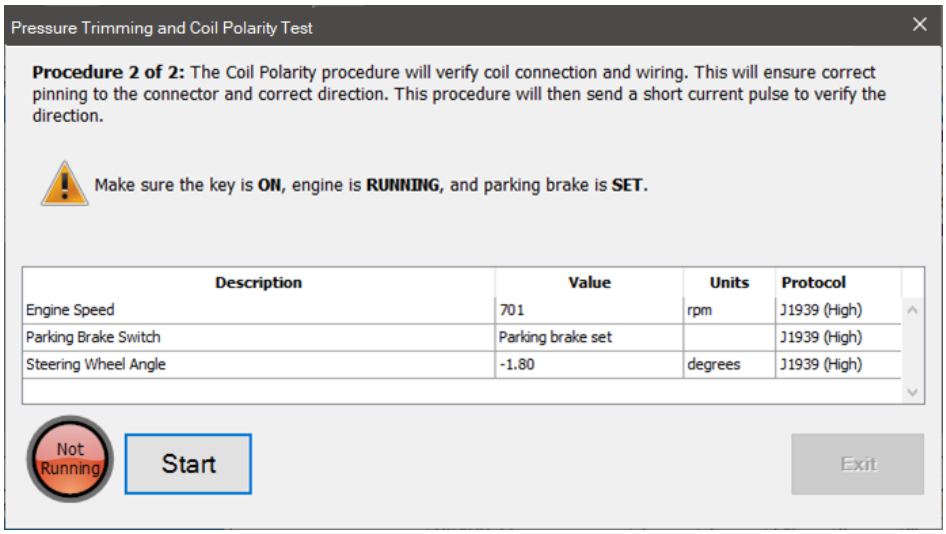
2. The test dialog will be displayed.



Pressure Trimming Test

3. Once the Steering Wheel Angle is as close to zero as possible, click *Start* to begin the test. The pressure values will be reset to zero and the offset will be written to memory.

4. The test will move to the second procedure. Click *Start* to perform the test. The coil connection and status will be verified. The test results will be displayed upon completion.



Coil Polarity Procedure

5. When done, press the *Exit* button to return to the test selection dialog.

Radar Service Alignment

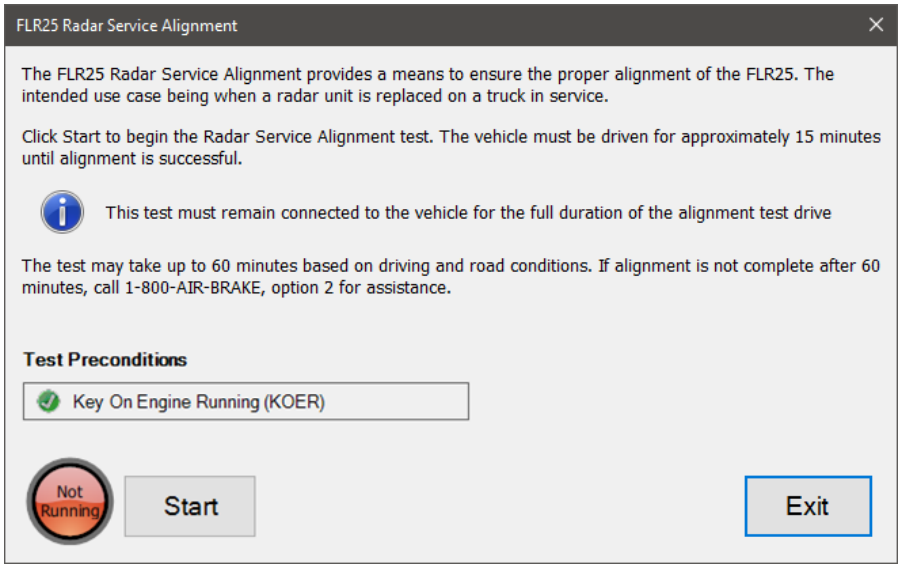
The Radar Service Alignment test is available on:

- ✓ Wingman® FLR25™ Radar

This test allows the user to align the FLR25 radar to the vehicle. After beginning the test, the vehicle must be driven for at least 15 minutes for the radar to align. Rough road conditions or erratic driving can cause the alignment process to take longer.

NOTE: This test must remain connected to the vehicle for the full duration of the test.

1. Select Radar Service Alignment and press Enter or the *Start* button.
2. The test dialog will be displayed.



FLR25 Radar Service Alignment

3. Click the *Start* button to begin the test. A misalignment fault will be set as active. A timer will begin, showing the test duration. Begin driving the vehicle for approximately 15 minutes. When Alignment is complete the timer will be replaced with “Alignment is successful” and the misalignment fault will become inactive.

   If alignment has not completed after 60 minutes of driving, the test will end with alignment unsuccessful. Call the displayed support number for assistance.

4. When done, press the *Exit* button to return to the test selection dialog.

Safety Direct Event Configuration

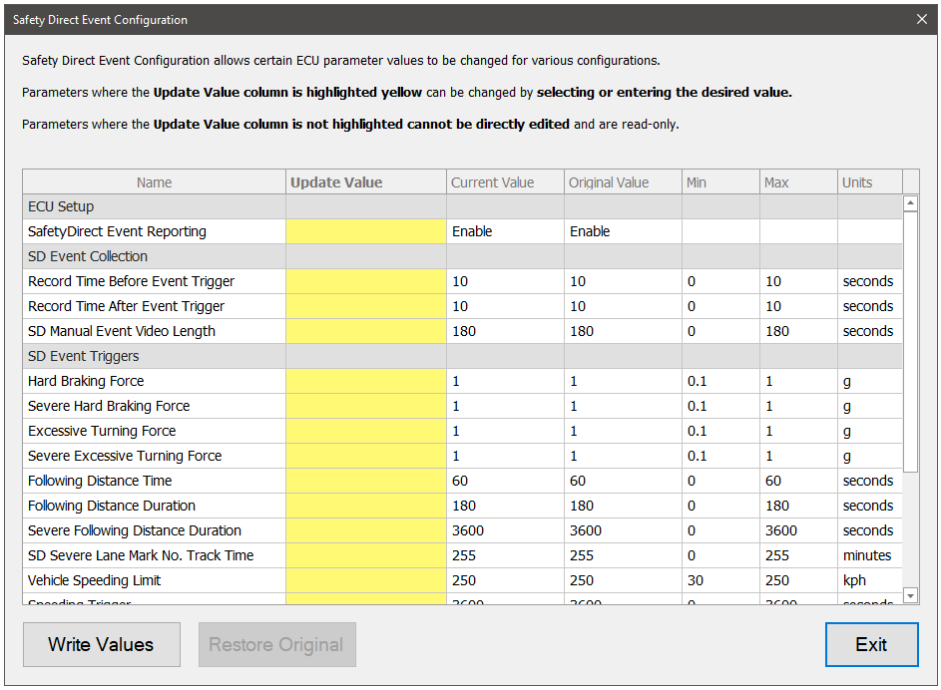
The Safety Direct Event Configuration test is available on:

- ✓ SafetyDirect® Web Portal Processor (3G and 5G)

This test allows the user to configure triggers and parameters for safety events.

1. Select Safety Direct Event Configuration and press Enter or the *Start* button.

2. The test dialog will be displayed.



Safety Direct Event Configuration

3. Select a new value in one or more rows of the grid. Click *Write Values* button to have the new values sent to the vehicle. Once the programming is complete the **Current Value** column values will be updated and the *Restore Original* button will become enabled.
4. When done, press the *Exit* button to return to the test selection dialog.

Safety Direct Event Selection Configuration

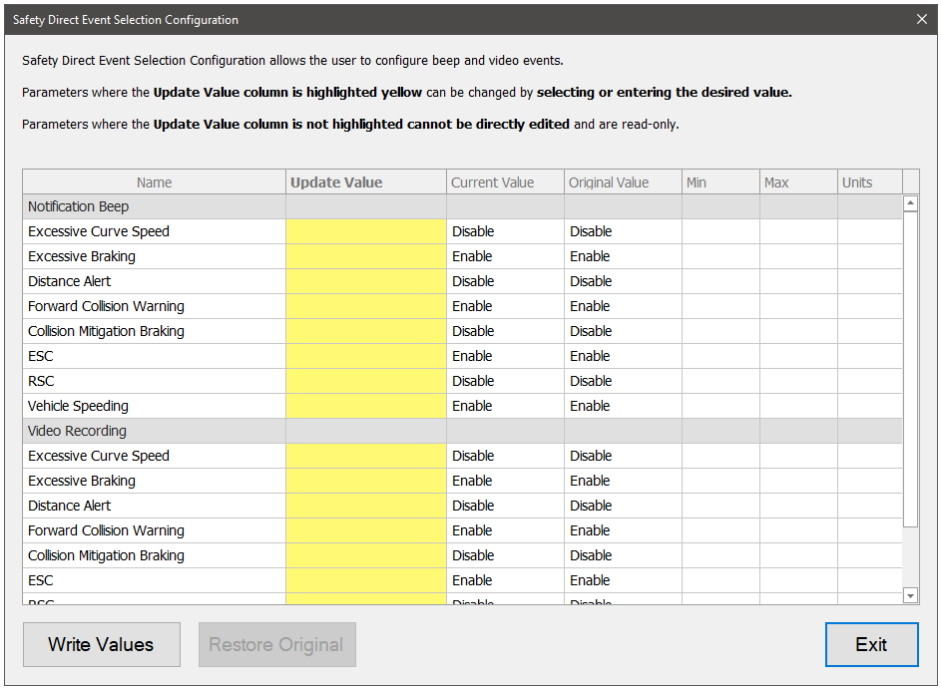
The Safety Direct Event Selection Configuration test is available on:

- ✓ AutoVue® 3G LDW System
- ✓ SafetyDirect® Web Portal Processor (3G and 5G)

This test allows the user to configure beep and video events.

1. Select Safety Direct Event Selection Configuration and press Enter or the *Start* button.

2. The test dialog will be displayed.



Safety Direct Event Selection Configuration

3. Select a new value in one or more rows of the grid. Click *Write Values* button to have the new values sent to the vehicle. Once the programming is complete the **Current Value** column values will be updated and the *Restore Original* button will become enabled.
4. When done, press the *Exit* button to return to the test selection dialog.

SDP3 Configuration

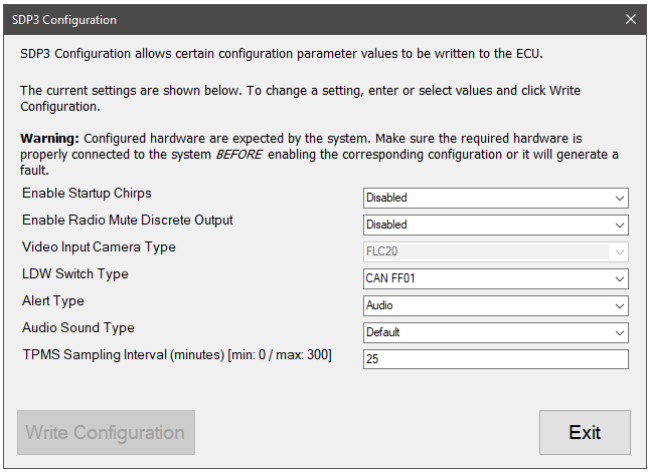
The SDP3 Configuration Test is available on:

- ✓ SafetyDirect® Web Portal Processor (3G)

This test allows the editing of configuration parameters.

1. Select SDP3 Configuration and press Enter or the *Start* button.

2. The test dialog will be displayed.



SDP3 Configuration

3. Select a new value in one or more dropdown boxes. Click *Write Configuration* to have the new values sent to the vehicle. Once the programming is complete the values in the dropdown boxes will be updated.
4. When done, press the *Exit* button to return to the test selection dialog.

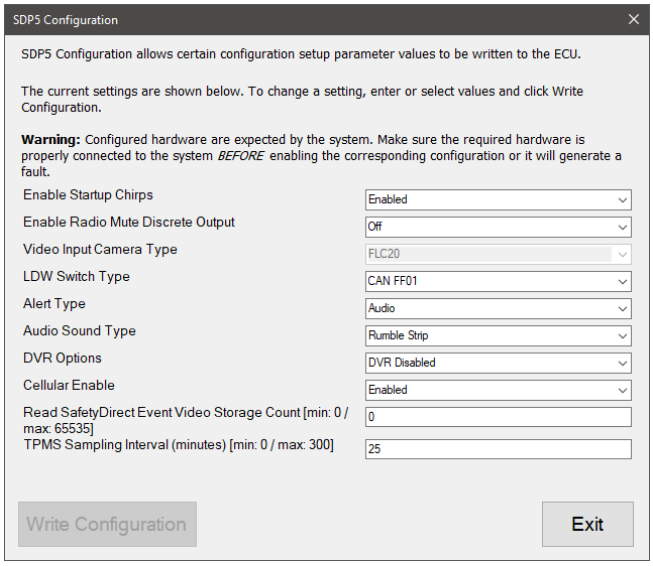
SPD5 Configuration

The SDP5 Configuration Test is available on:

- ✓ SafetyDirect® Web Portal Processor (5G)

This test allows the editing of configuration parameters.

1. Select SDP5 Configuration and press Enter or the *Start* button.
2. The test dialog will be displayed.



SDP5 Configuration

3. Select a new value in one or more dropdown boxes. Click *Write Configuration* to have the new values sent to the vehicle. Once the programming is complete the values in the dropdown boxes will be updated.
4. When done, press the *Exit* button to return to the test selection dialog.

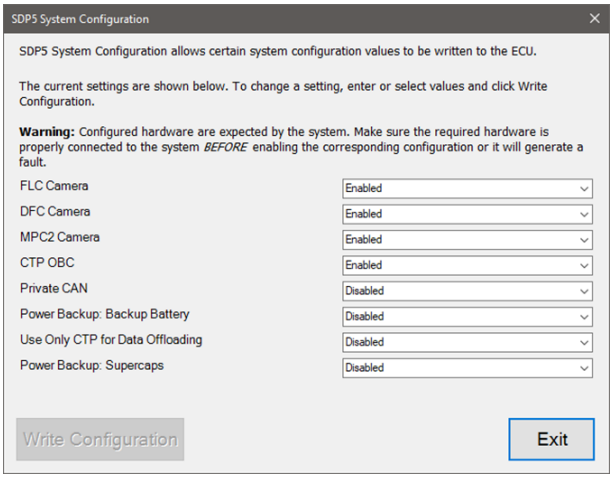
SPD5 System Configuration

The SDP5 System Configuration Test is available on:

- ✓ SafetyDirect® Web Portal Processor (5G)

This test allows the editing of system configuration parameters.

1. Select SDP5 System Configuration and press Enter or the *Start* button.
2. The test dialog will be displayed.



SDP5 System Configuration

3. Select a new value in one or more dropdown boxes. Click *Write Configuration* to have the new values sent to the vehicle. Once the programming is complete the values in the dropdown boxes will be updated.
4. When done, press the *Exit* button to return to the test selection dialog.

Speaker Volume Configuration

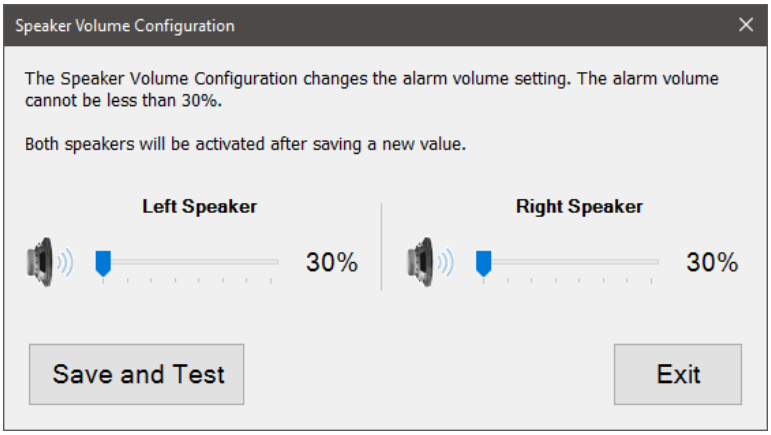
The Speaker Volume Configuration test is available on:

- ✓ AutoVue® 3G LDW System
- ✓ SafetyDirect® Web Portal Processor (3G and 5G)

This test allows calibration of the lane departure warning volume for both Left and Right speakers.

1. Select the Speaker Volume Configuration Test and press Enter or the *Start* button.

2. The test dialog will be displayed.



Speaker Volume Configuration

3. The current speaker volumes will be displayed. Select the desired volume for either speaker. Click *Save and Test* to have the new values sent to the vehicle. Once programming is completed each speaker will be activated to preview the new volume.
4. When done, press the *Exit* button to return to the test selection dialog.

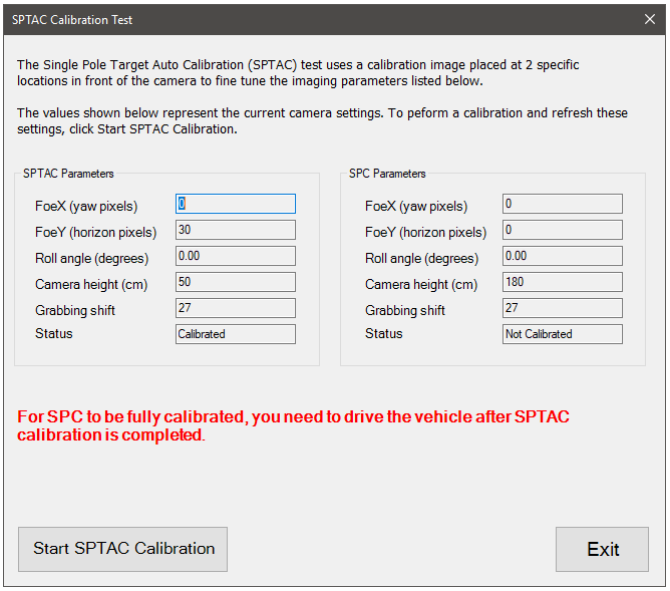
SPTAC Calibration

The SPTAC Calibration test is available on:

- ✓ AutoVue® FLC20™ Camera

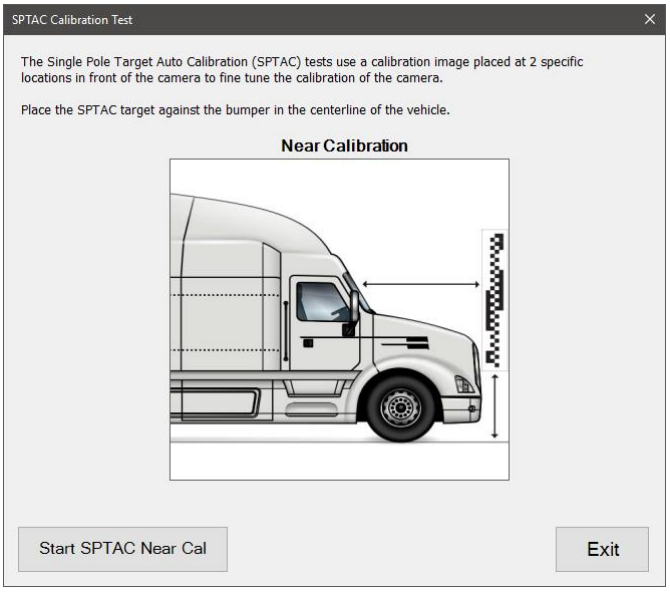
This test allows calibration of the vehicle mounted camera by imaging a target placed at 2 specific locations.

1. Select the SPTAC Calibration Test and press Enter or the *Start* button.
2. The test dialog will be displayed.



SPTAC Calibration Test Current Settings

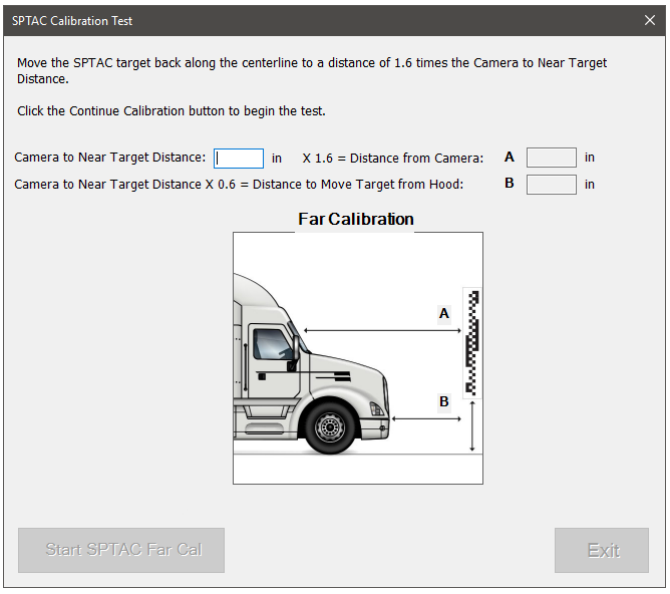
3. The current calibration information is displayed. Select *Start SPTAC Calibration* to begin the recalibration procedure.



SPTAC Near Calibration

4. The SPTAC target must be setup before beginning the calibration. Click *Start SPTAC Near Cal* to begin the recalibration process.
5. Once near calibration has completed the Far Calibration instructions will be displayed. A calculator is provided to locate the far position for the SPTAC target. Press Tab or click outside the calculator box to enable the *Start SPTAC Far Cal* button.

   Click *Start SPTAC Far Cal* to begin the recalibration process. A successful calibration message will be displayed when the process is complete. The screen will change to display the current calibration settings.



SPTAC Far Calibration

6. When done, press the *Exit* button to return to the test selection dialog.

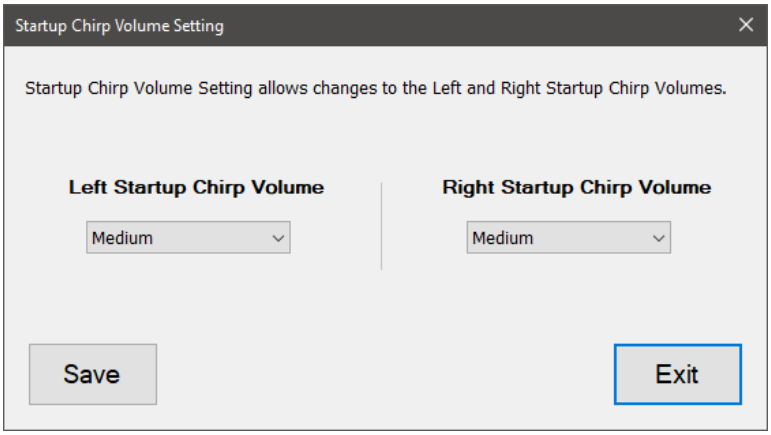
Startup Chirp Volume Setting

The Startup Chirp Volume Setting test is available on:

- ✓ SafetyDirect® Web Portal Processor 3G version 21.19 and above
- ✓ SafetyDirect® Web Portal Processor 5G

This test sets the left and right chirp volumes.

1. Select Startup Chirp Volume Setting and press Enter or the *Start* button.
2. The test dialog will be displayed.



Startup Chirp Volume Setting

3. Select the desired volume level for each speaker. Click *Save* to update the volume settings.
4. When done, press the *Exit* button to return to the test selection dialog.

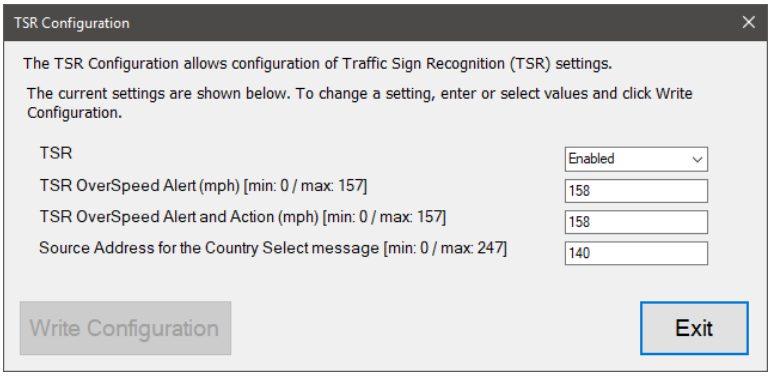
TSR Configuration

The Traffic Sign Recognition (TSR) Configuration test is available on:

- ✓ AutoVue® FLC20™ Camera

This test allows editing of configuration parameters.

1. Select TSR Configuration and press Enter or the *Start* button.
2. The test dialog will be displayed.



TSR Configuration

3. Select a new value in one or more rows of the grid. Click *Write Configuration* button to have the new values sent to the vehicle.
4. When done, press the *Exit* button to return to the test selection dialog.

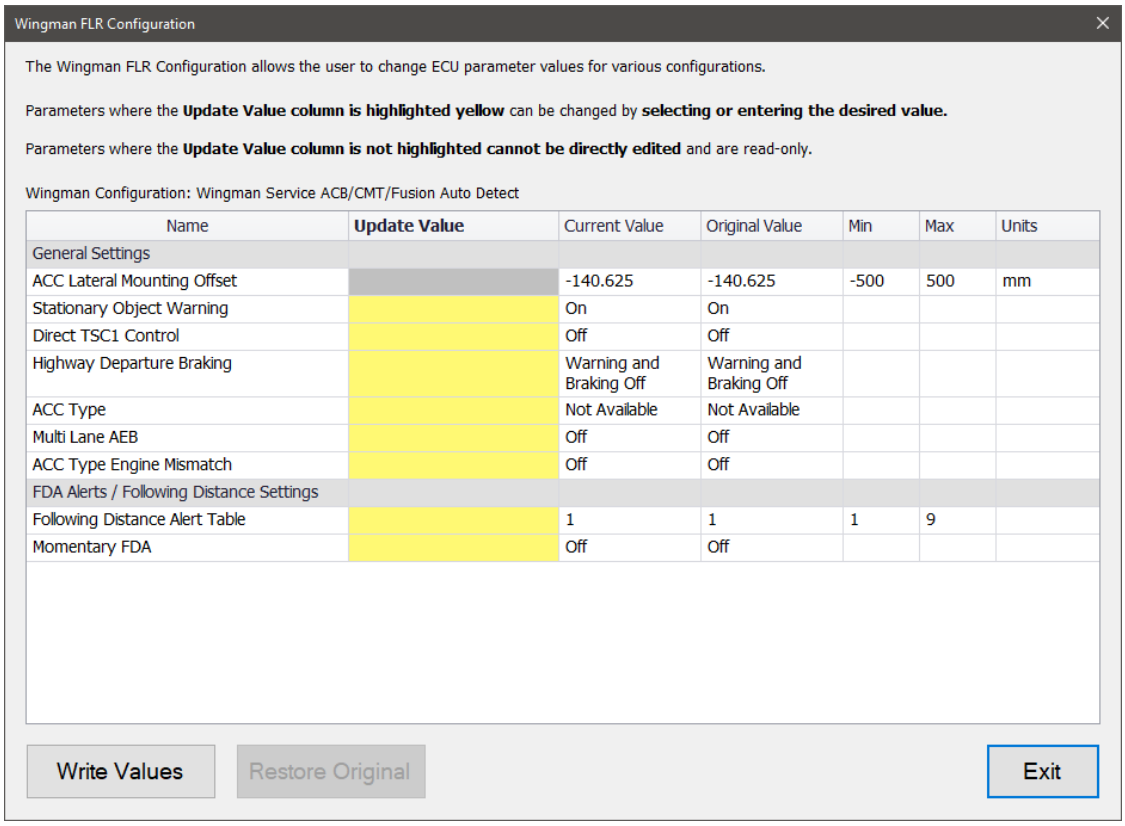
Wingman FLR Configuration

The Wingman FLR Configuration test is available on:

- ✓ Wingman® FLR20™/FLR21™ Radar
- ✓ Wingman® FLR25™ Radar
- ✓ Vorad VS500 Radar

This test allows editing of configuration parameters.

1. Select Wingman FLR Configuration and press Enter or the *Start* button.
2. The test dialog will be displayed.



Wingman FLR Configuration

3. Select a new value in one or more rows of the grid. Click *Write Values* button to have the new values sent to the vehicle. Once the programming is complete the **Current Value** column values will be updated and the *Restore Original* button will become enabled.
4. When done, press the *Exit* button to return to the test selection dialog.

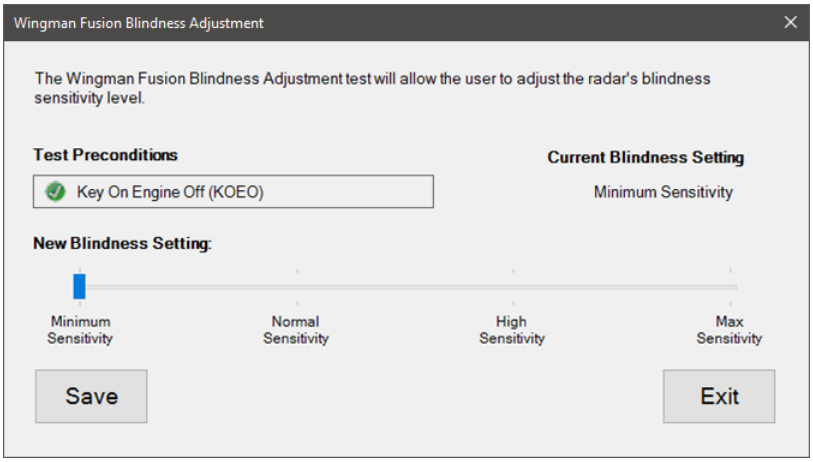
Wingman Fusion Blindness Adjustment

The Wingman Fusion Blindness Adjustment test is available on:

- ✓ Wingman® FLR21™ Radar

This test allows adjustment of the radar's blindness sensitivity level.

1. Select Wingman Fusion Blindness Adjustment and press Enter of the *Start* button.
2. The test dialog will be displayed.



Wingman Fusion Blindness Adjustment

3. The current blindness sensitivity level is displayed. Move the slider to the desired level and click the *Save* button to write the new value to the radar.
4. When done, press the *Exit* button to return to the test selection dialog.

Tire Pressure Monitoring System (TPMS) Tests

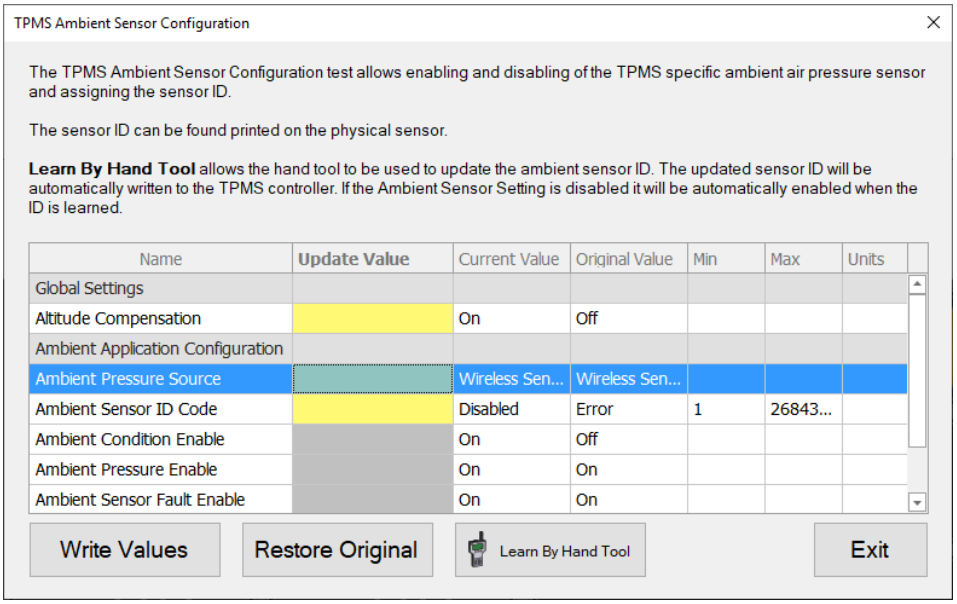
TPMS Ambient Sensor Configuration

The TPMS Ambient Sensor Configuration test is available on:

- ✓ All SmarTire™ TPMS solutions

This test allows enabling of the TPMS Ambient Sensor and setting the sensor ID.

1. Select TPMS Ambient Sensor Configuration and press Enter or the *Start* button.
2. The test dialog will be displayed



TPMS Ambient Sensor Configuration

3. The ambient sensor enabled status and sensor ID can be edited manually if source is set to Wireless Sensor. Select *Write Values* to write all updated information to the ECU.

   The ambient sensor can also be updated by selecting *Learn By Hand Tool* to update with the SmarTire™ hand tool. The new sensor Id will be automatically written when it is read by the hand tool and the sensor will be enabled.

   The *Restore Original* button will become enabled after any change has been written to the ECU.
4. When done, press the *Exit* button to return to the test selection dialog.

TPMS Backup and Restore

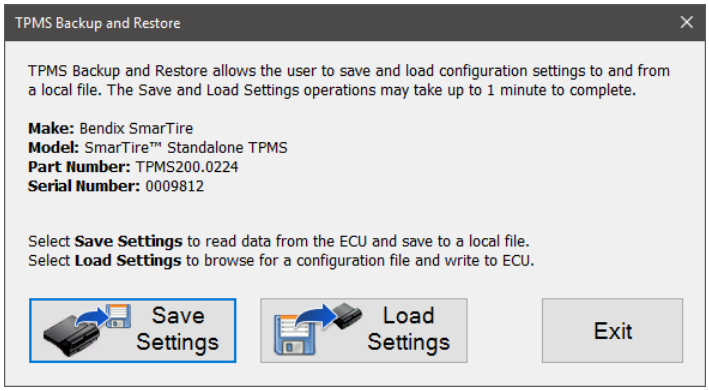
The TPMS Backup and Restore is available on:

- ✓ All SmarTire™ TPMS solutions

This test allows configuration settings to be saved to a local file and/or loaded onto a TPMS ECU.

1. Select the TPMS Backup and Restore and press Enter or the *Start* button.

2. The test dialog will be displayed.



TPMS Backup and Restore

3. Select *Save Settings* to create a configuration file based on the currently connected ECU. A save file dialog will appear. Save the configuration file to the desired location.

   Select *Load Settings* to update the currently connected ECU with the configuration information from a previously saved file. An open file dialog will appear. Navigate to the desired file and click *OK* to begin writing the configuration information to the ECU.

NOTE: For compatibility rules see TPMS Backup and Restore Compatibility.

4. When done, press the *Exit* button to return to the test selection dialog.

TPMS Configuration

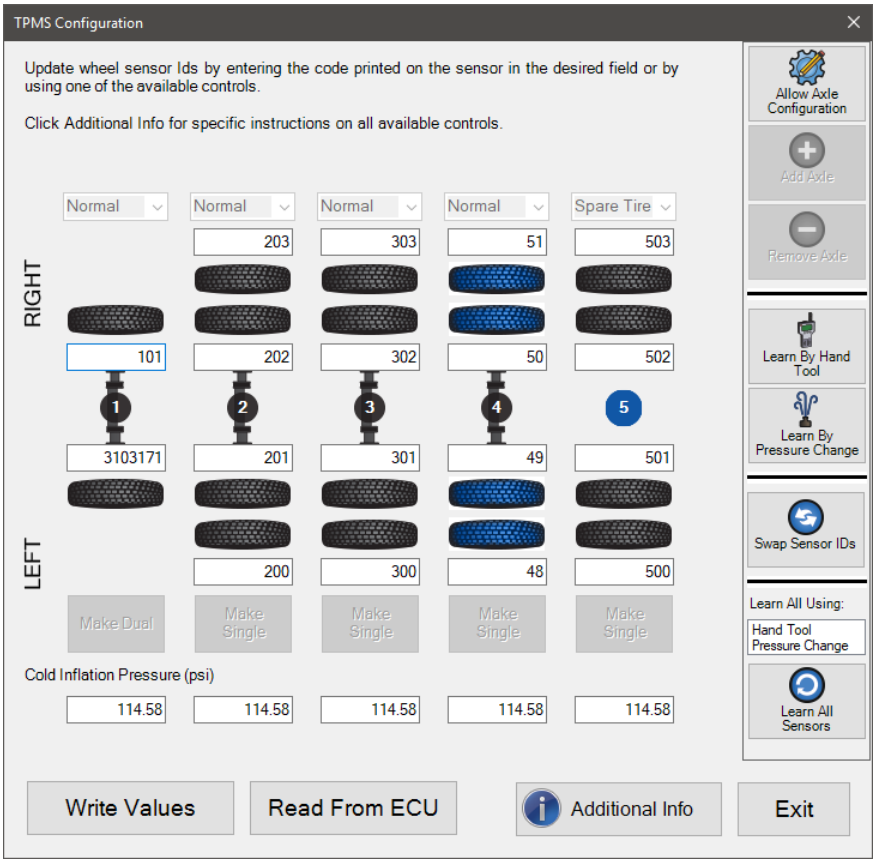
The TPMS Configuration test is available on:

- ✓ All SmarTire™ TPMS solutions

This test allows full configuration of TPMS sensors, including defining the number of axles and the number of tires per axle. It also provides multiple options for relearning tire sensor information.

1. Select TPMS Configuration and press Enter or the *Start* button.

2. The test dialog will be displayed.



TPMS Configuration

3. Tire sensor Id numbers and Cold Inflation Pressure values can be updated by typing in the new value. Select *Write Values* to write all updated information to the ECU.

   Tire Sensor Id can also be relearned by clicking on a tire and using one of the available command buttons.

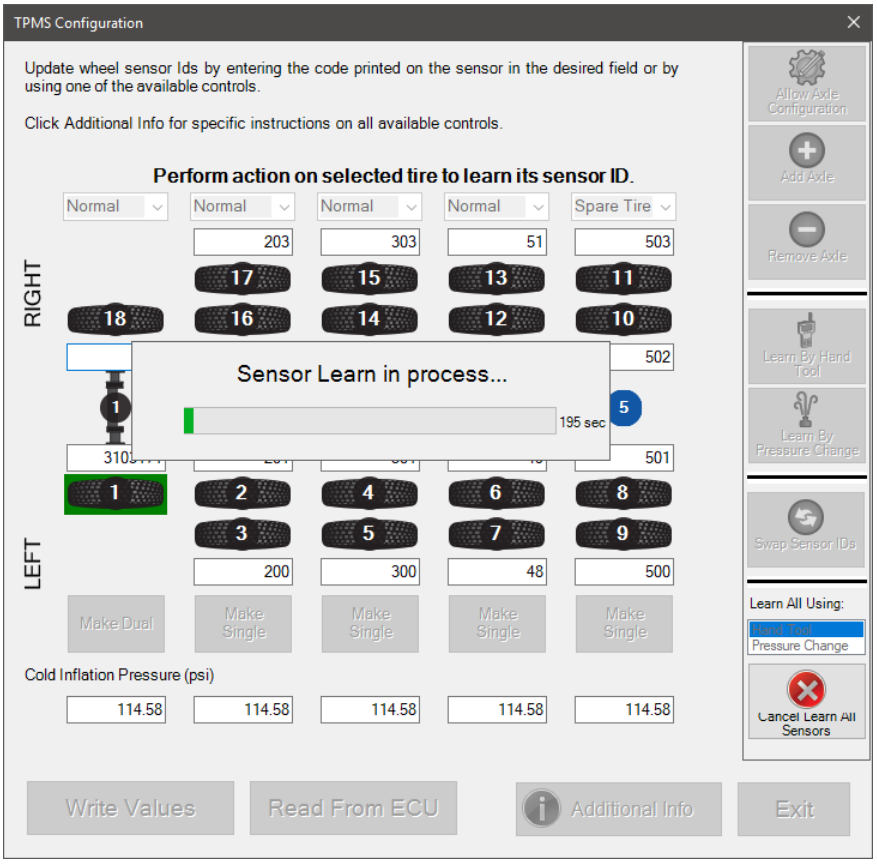
   a. Click *Learn By Hand Tool* to update the selected tire with the SmarTire™ hand tool. The new sensor Id will be automatically written when it is read by the hand tool.

   b. Click *Learn By Pressure Change* to set the selected tire in a listening mode that will automatically update the Id when a change in tire pressure is detected.

4. Click *Swap Sensor Ids* to move the existing sensor Ids between any 2 selected tires.

5. To relearn all tire sensors select an available method and click *Learn All Sensors*. All tire sensors will be numbered, the first tire in order will be selected, and a timer displays. When the tire sensor Id has been updated using the selected method the next sensor in order will be selected. This will continue until all tire sensors have been updated.

a. Prior to relearning the sensors, a warning message will be displayed; click *Yes* to continue the relearning process.

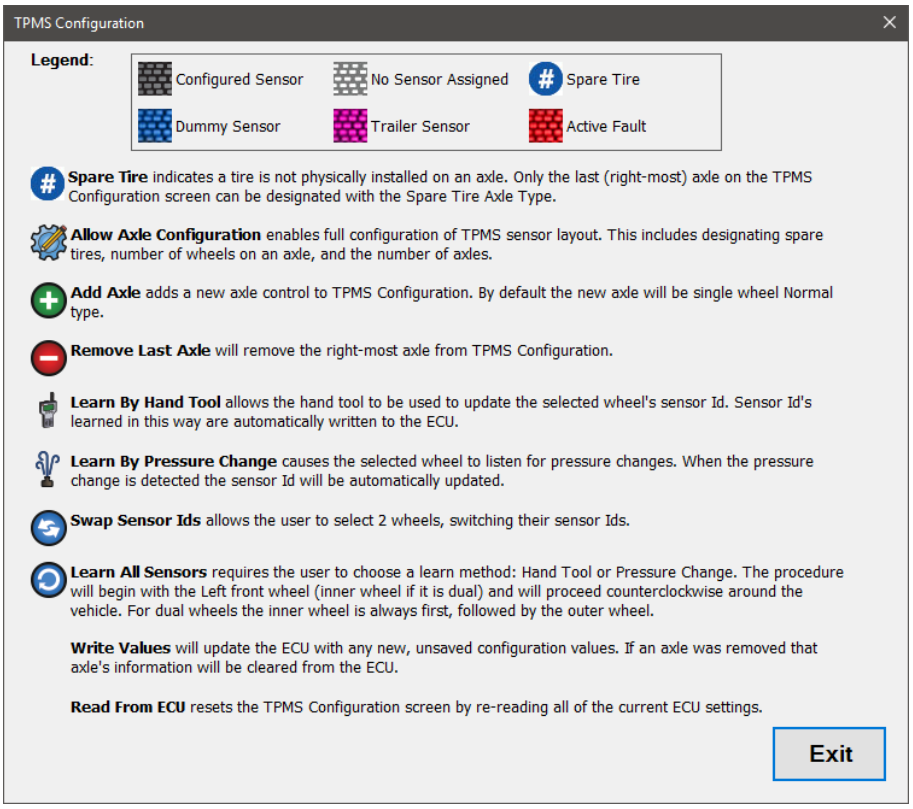


TPMS Configuration Relearn All Sensors

6. To change the number of tire sensors or axles managed by the TPMS click Allow Axle Configuration. A warning message will be displayed; click *Yes* to allow axle configuration. The Add Axle and Remove Axle buttons will become enabled. Removing an existing axle will cause all of its current configuration information to be forgotten.

   Clicking *Add Axle* will add a new axle control. Click *Make Dual* to set the axle to 2 tires per side. Selecting *Make Single* will change the axle to 1 tire per side. The new axle's sensor information must be assigned before clicking *Write Values* to update the TPMS system.
7. Clicking *Read From ECU* will cause any unsaved changes to be lost as the current configuration to be reread from the ECU.

8. Selecting *Additional Info* will provide a legend of tire image meanings and instructions for each control available on the TPMS Configuration screen. Click *Exit* to close this screen.



TPMS Configuration Additional Info

9. When done, press the *Exit* button to return to the test selection dialog.

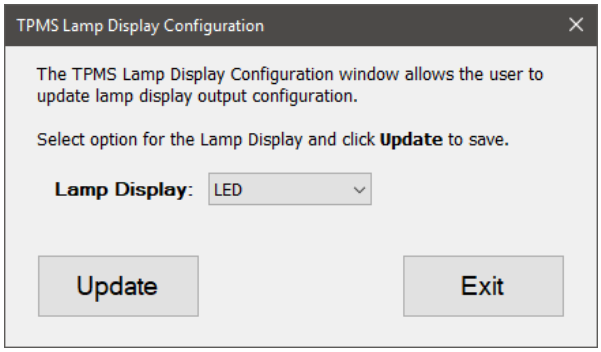
TPMS Lamp Display Configuration

The TPMS Lamp Display Configuration test is available on:

- ✓ SmarTire™ Standard and NextGen TPMS solutions

This test allows selection of the TPMS lamp display.

1. Select TPMS Configuration and press Enter or the *Start* button.
2. The test dialog will be displayed.



TPMS Lamp Display Configuration

3. Select the desired Lamp Display option and click *Update* to save the new selection.
4. When done, press the *Exit* button to return to the test selection dialog.

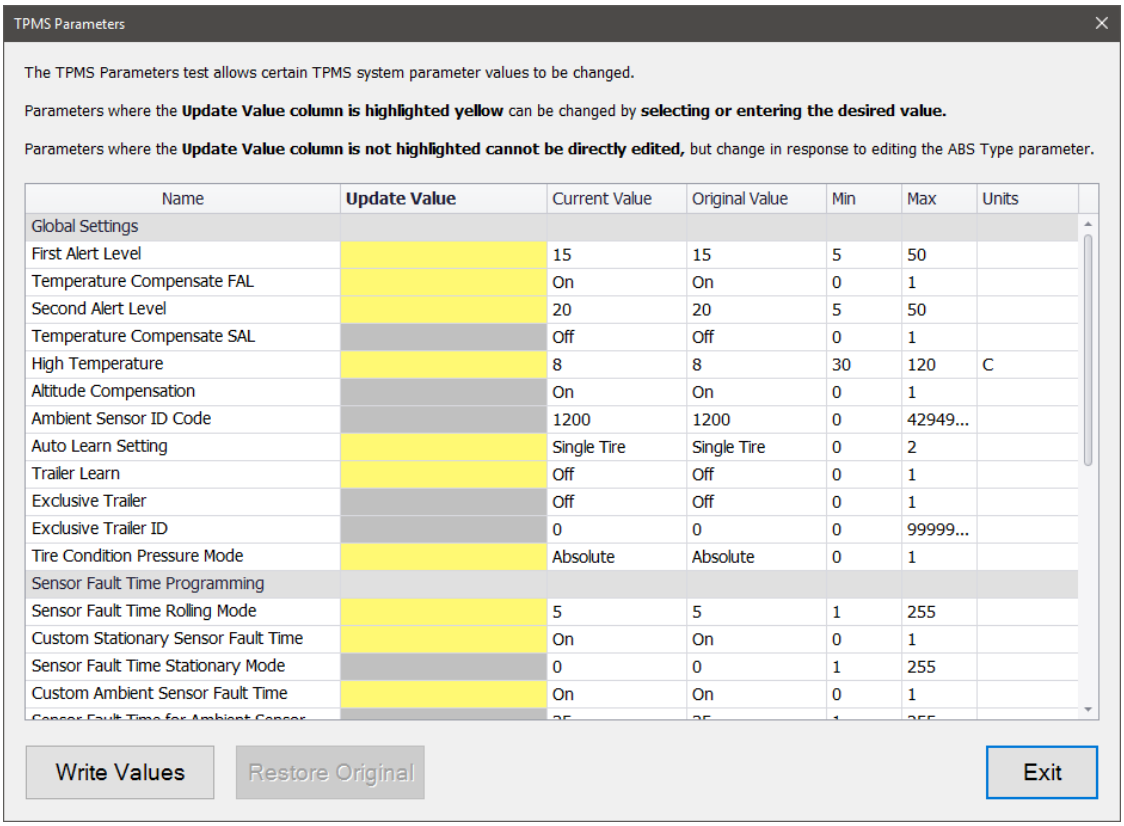
TPMS Parameters

The TPMS Parameters test is available on:

✓ All SmarTire™ TPMS solutions

This test allows editing of configuration parameters.

1. Select TPMS Parameters and press Enter or the *Start* button.
2. The test dialog will be displayed.



TPMS Parameters

3. Select a new value in one or more rows of the grid. Click *Write Values* button to have the new values sent to the vehicle. Once the programming is complete the **Current Value** column values will be updated and the *Restore Original* button will become enabled.
4. When done, press the *Exit* button to return to the test selection dialog.

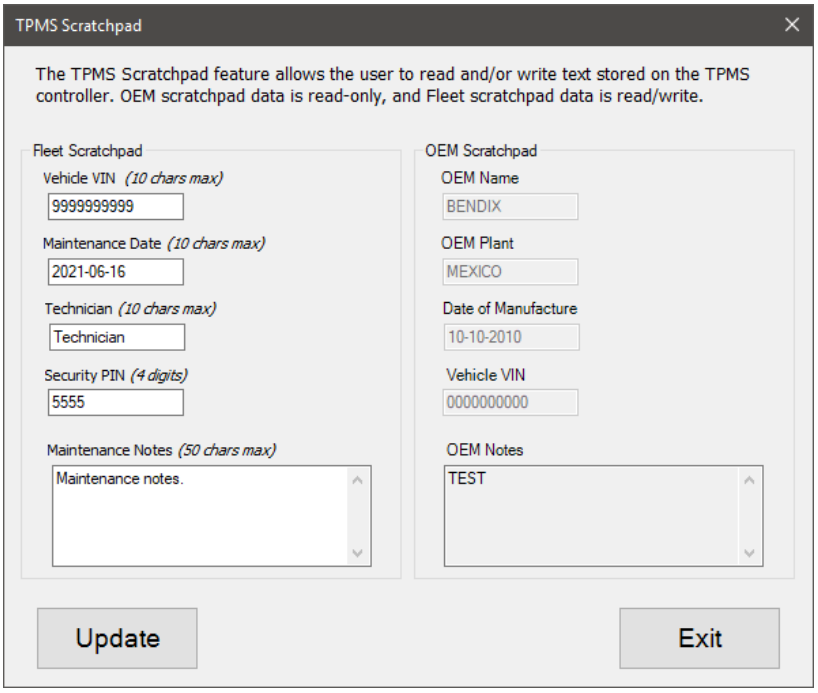
TPMS Scratchpad

The TPMS Scratchpad is available on:

✓ SmarTire™ NextGen TPMS solutions

This test allows users to read and/or write text stored on the TPMS controller. The OEM scratchpad displays read-only identification data for the ECU. The Fleet scratchpad allows technicians to view or update maintenance information.

1. Select the TPMS Scratchpad and press Enter or the *Start* button.
2. The test dialog will be displayed.



TPMS Scratchpad

3. Data read from the TPMS controller is displayed. Fleet scratchpad entries may be updated; any unsaved changed will be highlighted. Click *Update* to write changes to the ECU.
4. When done, press the *Exit* button to return to the test selection dialog.

TPMS Signal Strength Test

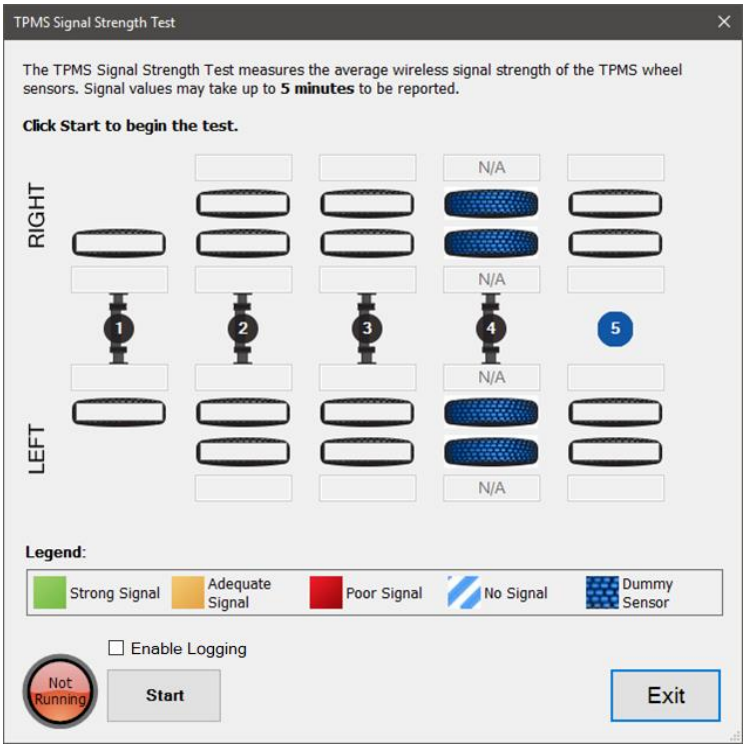
The TPMS Signal Strength Test is available on:

- ✓ All SmarTire™ TPMS solutions (except for Standard TPMS models 200.0213, 200.0216, and 200.0219)

This test allows testing and logging of signal strength between the TPMS control unit and each connected tire sensor.

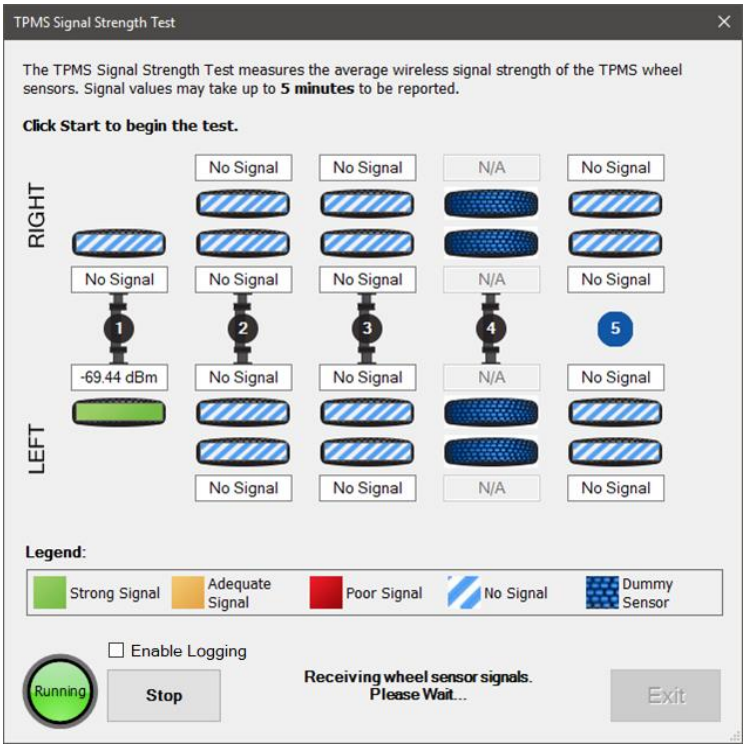
1. Select the TPMS Signal Strength Test and press Enter or the *Start* button.

2. The test dialog will be displayed.



TPMS Signal Strength Test

3. To save the signal strength information received during the test, check *Enable Logging*. Click the *Start* button to begin the signal strength test. Signal strength values will be displayed as they are measured. The test will continue until the *Stop* button is clicked.



TPMS Signal Strength Test

4. When done, press the *Exit* button to return to the test selection dialog.

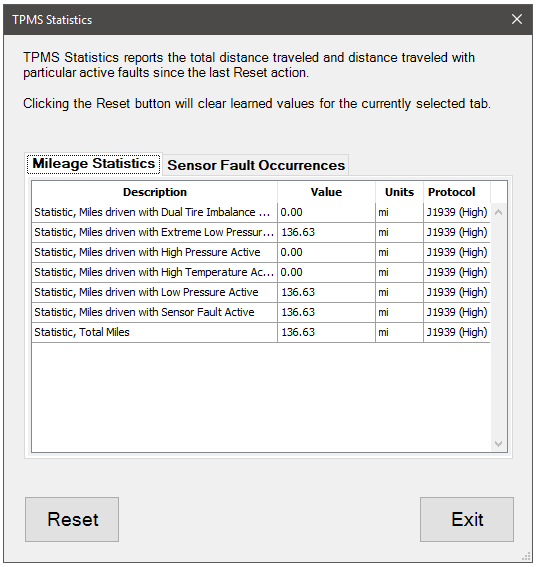
TPMS Statistics

The TPMS Statistics Test is available on:

✓ SmarTire™ NextGen TPMS solutions

This test displays information about mileage accumulation statistics and sensor fault occurrences and allows them to be reset. Resetting these statistics is permanent and cannot be undone.

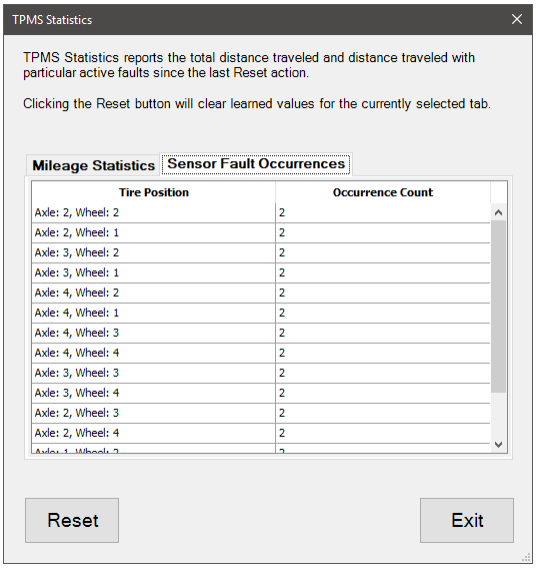
1. Select TPMS Statistics and press Enter or the *Start* button.
2. The test dialog will be displayed.



TPMS Mileage Statistics

The *Mileage Statistics* tab displays accumulated distance the vehicle has traveled with different statuses enabled. *Sensor Fault Occurrences* displays the fault occurrence count for all affected axles and tire sensors.

3. Clicking the *Reset* button will display a confirmation message. Click *Yes* to reset the currently selected tab.



TPMS Sensor Fault Occurrences

NOTE: Resetting statistical data is a permanent operation that cannot be undone.

4. When done, press the *Exit* button to return to the test selection dialog.

Trailer Brakes Tests

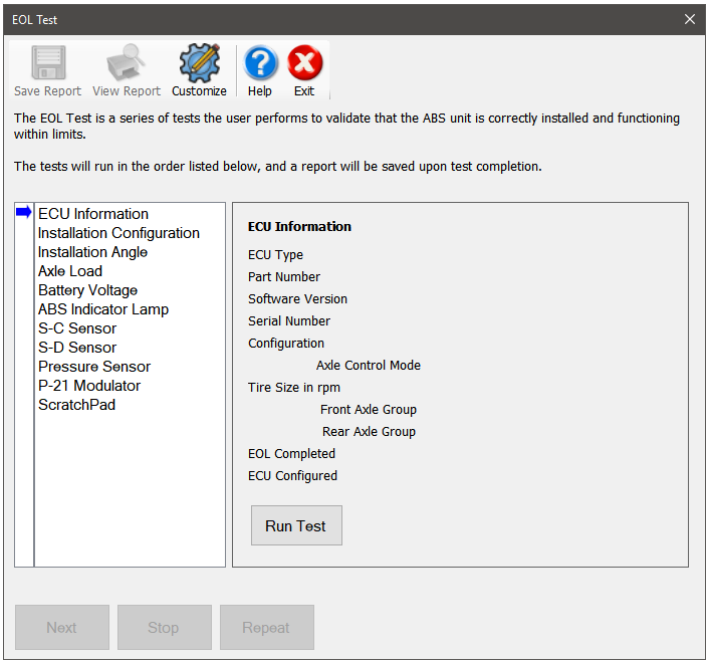
EOL Test

The EOL (End of Line) Test is available on:

- ✓ TABS-6™ Advanced Single-Channel Trailer ABS
- ✓ TABS-6™ Multi-Channel Trailer ABS
- ✓ TABS-8™ Trailer ABS

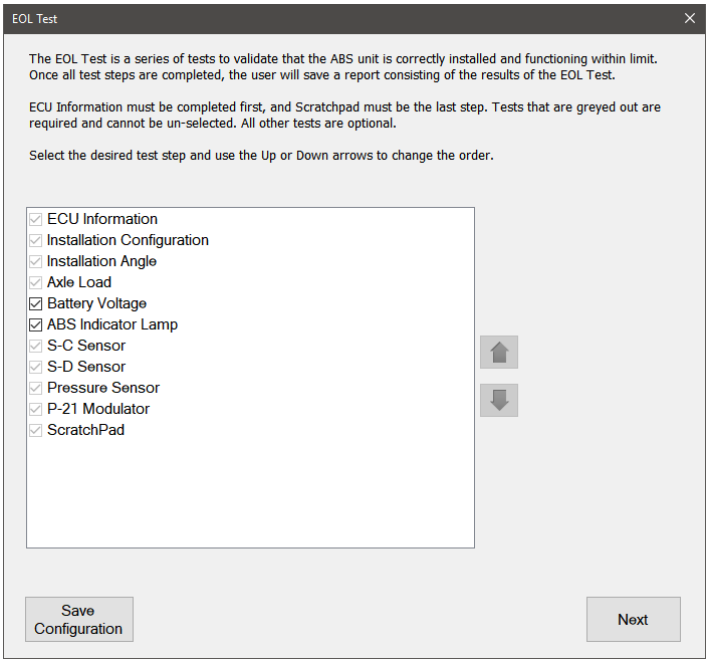
The EOL Test is a test that is launched from the main toolbar. This test is a series of test steps performed during End of Line (EOL) procedures. These test steps validate that the trailer ABS unit is correctly installed and is functioning within limits. You may perform the EOL Test in its entirety or run each applicable test individually through the Bi-Directional test screen. Users may customize which tests are run and the order in which they are performed, excluding ECU Information which must always be run first, and Scratchpad which must always be run last.

1. Select EOL Test on the main form toolbar.
2. The main test screen will be displayed. Two informational pop-ups will appear that the user must confirm before beginning the test.



EOL Test Run Test Screen

3. Select *Customize* to select the tests to be run and the order to perform them in. Select *Save Configuration* to save the order of tests to a customization file that is held locally. Select *Next* to return to the main test screen.



EOL Test Customization Screen

4. Press *Run Test* to begin the selected test and follow any provided instructions. Repeat until all tests have been performed. The *Repeat* button will be enabled after each test is completed, giving the option to repeat that test. The “TABS EOL Test Not Completed (SID 254 FMI 14)” fault will be cleared from the ECU after successful test completion.
5. Clicking the *Save Report* button will open a save file dialog. Save the EOL Report to the desired location.

   Click the *View Report* button to view the EOL Report, which contains ABS data items and test information.
6. Clicking the *Help* button will open the User Guide.
7. When done, press *Exit* to return to the main form.

ABS Indicator Lamp Test

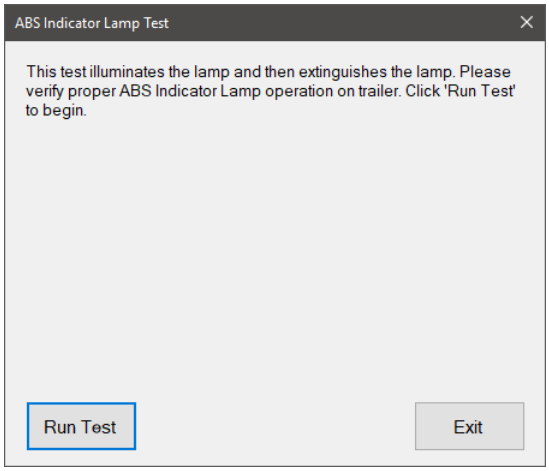
The ABS Indicator Lamp Test is available on:

- ✓ TABS-6™ Advanced Single-Channel Trailer ABS
- ✓ TABS-6™ Multi-Channel Trailer ABS
- ✓ TABS-8™ Trailer ABS

The ABS Indicator Lamp Test provides the ability to test the trailer ABS indicator dashboard lamp. This test is available as part of the EOL Test and from Bi-Directional test selection.

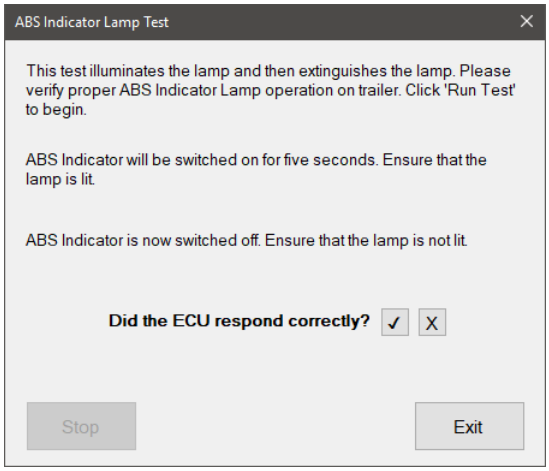
1. Select the ABS Indicator Lamp Test and press Enter or the *Start* button.

2. The test dialog will be displayed.



ABS Lamp Indicator Test

3. Select *Run Test* to begin. The dialog will update with a status bar and text that indicates when the ABS Lamp is on and off, correlating with the lighted status of the physical ABS Lamp.
4. Once the ABS Lamp turns on and off, a prompt appears asking if the ECU responded correctly.



ABS Lamp Indicator Test Confirmation

5. Select the checkmark button to indicate that the ECU responded correctly. A successful status message will appear and the *Repeat* button becomes enabled. Select the *Repeat* button to perform the test again.
6. When done, select the *Exit* button to return to the test selection dialog.

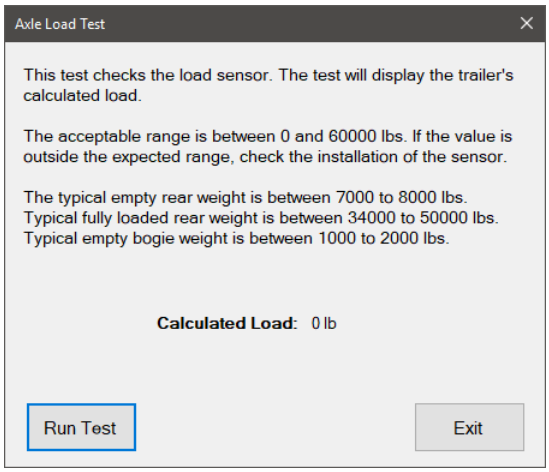
Axle Load Test

The Axle Load Test is available on:

- ✓ TABS-6™ Advanced Single-Channel Trailer ABS
- ✓ TABS-6™ Multi-Channel Trailer ABS
- ✓ TABS-8™ Trailer ABS

The Axle Load Test provides the reading of the axle load sensor with an expected range of 0 to 60,000 lbs. This test is available both inside of the EOL Test dialog and in the Bi-Directional menu.

1. Select the Axle Load Test and press Enter or the *Start* button.
2. The test dialog will be displayed.



Axle Load Test

3. Select *Run Test* to begin. The Calculated Load will update with the current Axle Load. A successful status message will appear and the *Repeat* button becomes enabled. Select the *Repeat* button to perform the test again.
4. When done, select the *Exit* button to return to the test selection dialog.

Battery Voltage Test

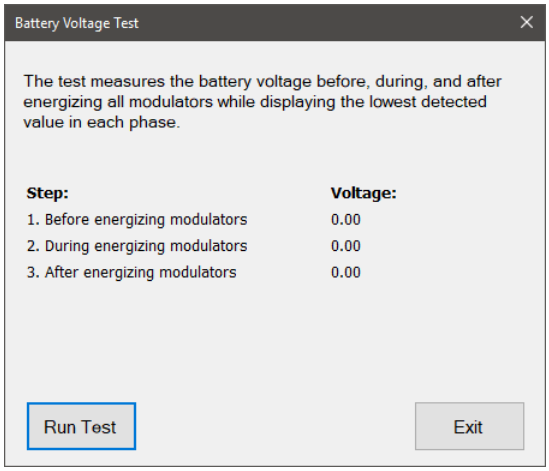
The Battery Voltage Test is available on:

- ✓ TABS-6™ Advanced Single-Channel Trailer ABS
- ✓ TABS-6™ Multi-Channel Trailer ABS
- ✓ TABS-8™ Trailer ABS

The Battery Voltage Test checks the battery voltage with and without the modulators energized, and then displays the voltage reading. This test is available both inside of the EOL Test dialog and in the Bi-Directional menu.

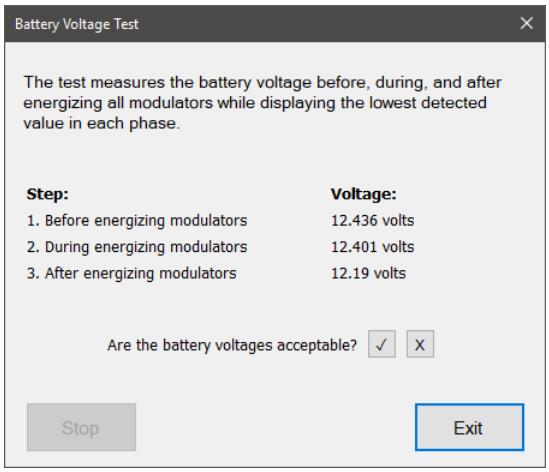
1. Select the Battery Voltage Test and press Enter or the *Start* button.

2. The test dialog will be displayed.



Battery Voltage Test

3. Select *Run Test* to begin. A progress bar appears as the voltages update for each step over time. Select the *Stop* button to end the test at any point. Once all voltages are updated, a prompt appears asking if the battery voltages are acceptable.



Battery Voltage Test Confirmation

4. Select the checkmark button to indicate the voltages are acceptable. A successful status message will appear and the *Repeat* button becomes enabled. Select the *Repeat* button to perform the test again.
5. When done, select the *Exit* button to return to the test selection dialog.

Chuff Test

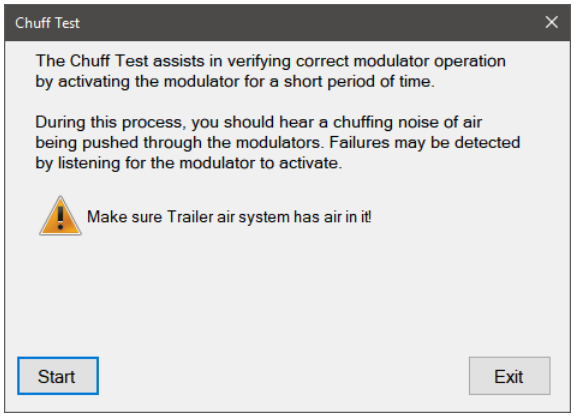
The Chuff Test is available on:

- ✓ TABS-6™ Multi-Channel Trailer ABS
- ✓ TABS-8™ Trailer ABS

The Chuff Test assists in verifying correct brake modulator operation by activating the modulator for a short period of time. Ensure the vehicle is at normal operating air pressure while running the test.

1. Select the Chuff Test and press Enter or the *Start* button.

2. The test dialog will be displayed.



Chuff Test

3. Select the *Start* button to begin the test. The test will run for approximately 8 seconds. During the test you should hear a clicking or chuffing sound indicating successful actuation. When the test is complete, a prompt appears asking if the ECU responded correctly.
4. Select the checkmark button to indicate the ECU responded correctly. A successful status message will appear.
5. When done, select the *Exit* button to return to the test selection dialog.

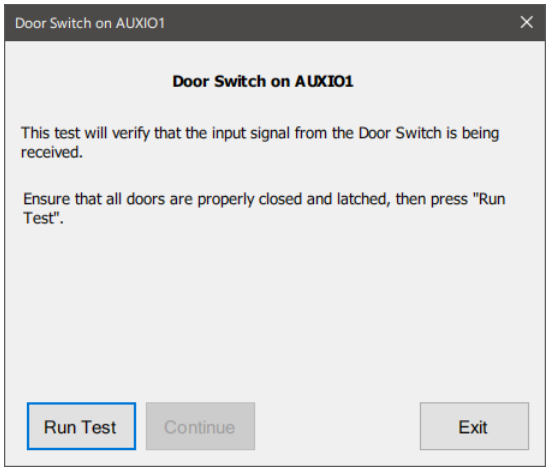
Door Switch Status Test

The Door Switch Status Test is available on:

- ✓ TABS-6™ Advanced Single-Channel Trailer ABS
- ✓ TABS-6™ Multi-Channel Trailer ABS
- ✓ TABS-8™ Trailer ABS

The Door Switch Status Test verifies the input signal from the Door Switch is being received. This test is available both inside of the EOL Test dialog and in the Bi-Directional menu.

1. Select the Door Switch Status Test and press Enter or the *Start* button.
2. The test dialog will be displayed.



Door Switch Test

3. Verify the doors are closed and latched, then select *Run Test* to begin. Follow the test instructions, opening the doors when requested and clicking *Continue*.
4. The ECU verifies the doors are open and the test passes. A successful status message will appear and the *Repeat* button becomes enabled. Select the *Repeat* button to perform the test again.
5. When done, select the *Exit* button to return to the test selection dialog.

ECU Configuration

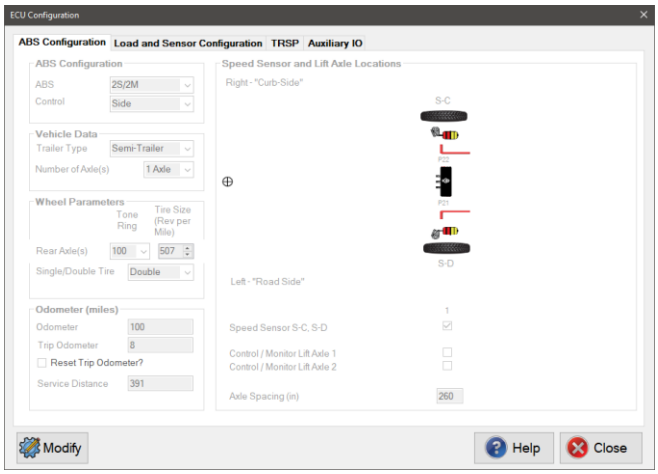
ECU Configuration is available on:

✓ TABS-6™ Multi-Channel Trailer ABS

ECU Configuration allows technicians to set parameters and configurations of the ECU.

1. Select ECU Configuration and press Enter or the *Start* button.
2. The test dialog will be displayed, showing the current ECU settings.

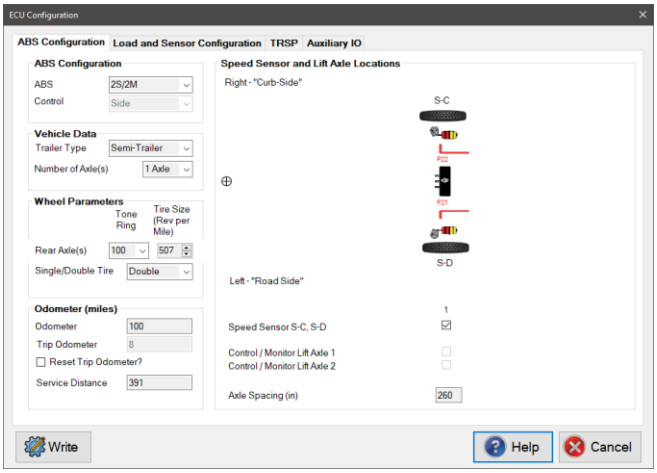
   Clicking the *Help* button will open this User Guide document.



ECU Configuration

3. Clicking the *Modify* button allows ECU configurations and parameters to be changed.
4. The ABS Configuration tab allows changing the ECU type, number of axles supported, tire parameters, and odometer information.

The configuration diagram will update to reflect the current settings. Related parameters like sensor location, lift location, and axle spacing may be defined.



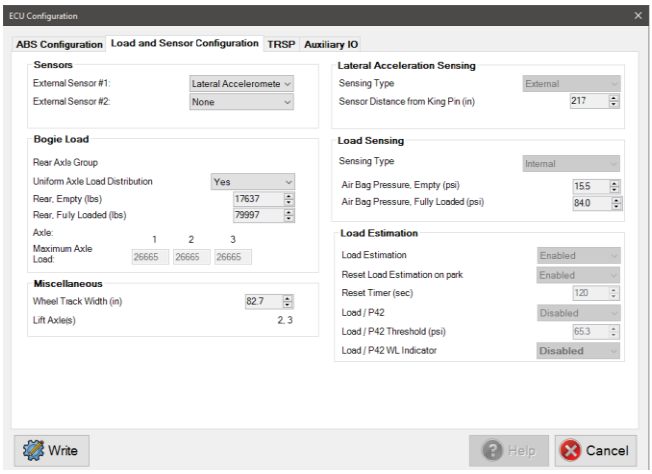
Modify ABS Configuration

5. The Load and Sensor Configuration tab allows users to change sensor settings, load of the Bogie, and width of the wheel track.

   Lateral Acceleration Sensing type is set to “External” only when External Sensor #1 is set to “Lateral Accelerometer.” This allows the “Sensor distance from King Pin” value to be defined.

   Load Sensing type is based on either the External Sensor #1 or #2 value. If either External Sensor is set to “Load,” the sensing type will be set to “External” and the “Load Input, Empty” and “Load Input, Fully Loaded” values may be defined.

   If either External Sensor is set to any other value, the sensing type will be set to “Internal.” This allows the “Air Bag Pressure, Empty” and “Air Bag Pressure, Fully Loaded” values to be defined.

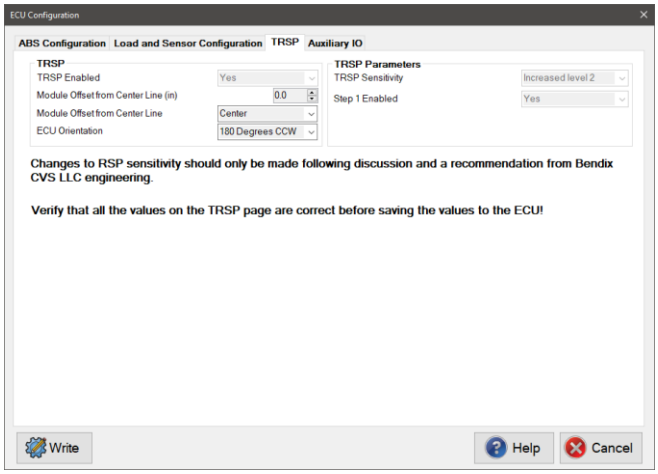


Modify Load and Sensor Configuration

6. The TRSP tab allows users to view the trailer rollover stability and stability sensitivity. The ECU’s location and orientation on the trailer can be defined.

All TRSP values and parameters must be verified as correct before being saved to the ECU. Incorrect values can compromise trailer rollover stability effectiveness.

NOTE: Changes to trailer rollover stability should only be made following the recommendation of Bendix CVS LLC engineering.



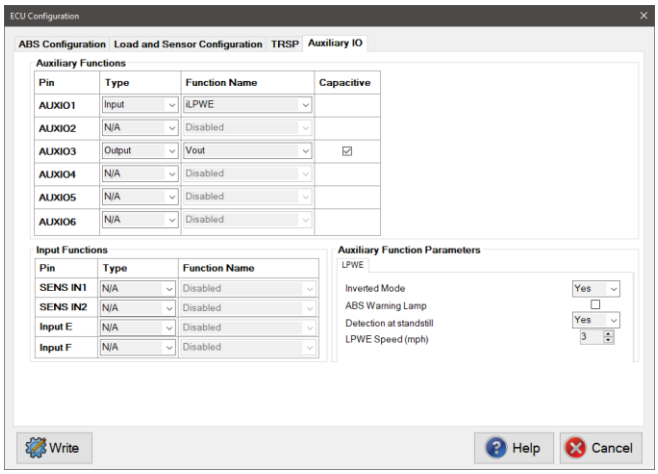
Modify Trailer Rollover Stability (TRSP)

7. The Auxiliary IO tab allows users to define the type and function of the available Aux IO pins. Select the desired type of “Input” or “Output,” then select the desired Function Name. A checkbox will appear in the Capacitive column for all Output functions.

NOTE: AUXIO1 and AUXIO2 will have the same type (Input or Output) if either is updated.

The Input functions section allows “Input” functions to be assigned to specific pins.

A tab of related parameters will be added to the Auxiliary function parameters section for every function that supports them. These parameters must be set to ensure proper function of the ECU.



Modify Auxiliary IO

8. When all configuration and parameter changes have been made and verified, click the *Write* button to write them to the ECU. A progress bar will be displayed. You may hear a clicking or chuffing sound from the ECU as the updates are written. When configuration is complete, a success status popup is displayed.
9. When done, select the *Exit* button to return to the main form.

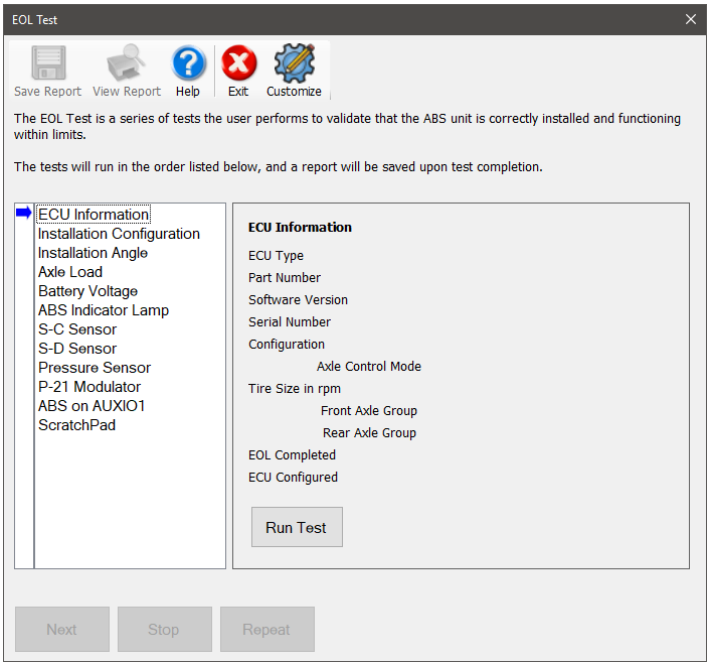
ECU Information Test

The ECU Information Test is available on:

- ✓ TABS-6™ Advanced Single-Channel Trailer ABS
- ✓ TABS-6™ Multi-Channel Trailer ABS
- ✓ TABS-8™ Trailer ABS

The ECU Information Test provides information regarding the TABS ECU such as ECU type, part number, software version, serial number, configuration, tire size, EOL Completion status, and if the ECU is configured. This test is only available inside of the EOL Test dialog and does not appear in the Bi-Directional test selection.

1. Select EOL Test on the main form toolbar.
2. Select the tests to be ran and the order to perform them in, then select Next.
3. The ECU Information screen will appear.



ECU Information Test Inside EOL Test Screen

4. Select *Run Test*. ECU Information will be gathered and displayed on screen. A successful status message will appear and the *Repeat* button becomes enabled. Select the *Repeat* button to perform the test again.
5. When done, select the *Exit* button to return to the main form.

General Output Functions Test

The General Output Test is available on:

- ✓ TABS-6™ Advanced Single-Channel Trailer ABS
- ✓ TABS-6™ Multi-Channel Trailer ABS

- ✓ TABS-8™ Trailer ABS

The General Output Test allows for confirmation that the output functions assigned to an Input/Output (I/O) pin is functioning properly. There are multiple I/O functions that are held under this General Output Test.

TABS-6™ Advanced Single-Channel Trailer ABS, AUXIO1, AUXIO2, AUXIO4, and AUXIO6 pins allow output functions to be tested.

TABS-6™ Multi-Channel Trailer ABS, AUXIO 1, AUXIO 2, AUXIO 3, AUXIO 4, AUXIO 5, AUXIO 6 pins allow output functions to be tested. SE and SF do not allow output functions.

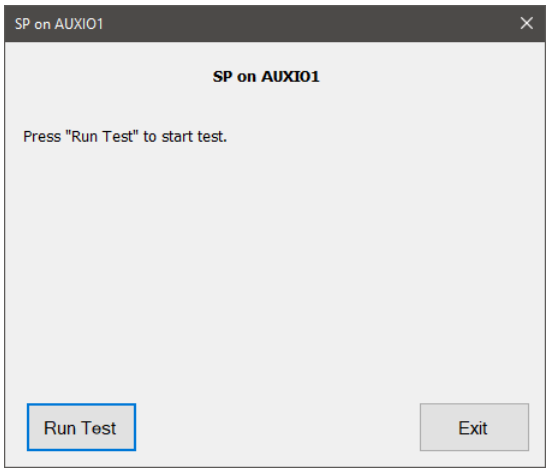
For TABS-8™ Trailer ABS, AUXIO1 is the only I/O pin that allows output functions to be tested. SE and SF do not allow output functions.

Supported I/O functions:

- ✓ SP – Speed Pulse
- ✓ ISS – Integrated Speed Switch
- ✓ SAL – Steering Axle Lock
- ✓ ABS – Anti-Lock Braking System
- ✓ RSP – Roll Stability Program
- ✓ RSP Step 1 – Roll Stability Program Step 1 (TABS6 MC only)
- ✓ ADL – Auxiliary Design language (TABS6 SC and TABS8 only)
- ✓ Vout – Voltage Out (TABS6 SC and TABS8 only)
- ✓ DL – Dome Lamp
- ✓ oTIS – Output Tire Inflation System (TABS6 SC and TABS8 only)
- ✓ oLPWE – Output Low Pressure Warning Emergency (TABS6 SC and TABS8 only)
- ✓ oLPWS – Output Low Pressure Warning Service (TABS6 SC and TABS8 only)
- ✓ oRD – Output Rear Dump (TABS6 SC and TABS8 only)

This test is available both inside of the EOL Test dialog and in the Bi-Directional menu.

1. Select the General Output Test.
2. The test dialog will be displayed. The pin under test will be displayed in the title.



General Output Test – SP on AUXIO1 For Example

3. Select the *Run Test* button. The test will turn the output on. Verify that it's on and select the checkmark button.
4. The test will turn the output off. Verify that it's off and select the checkmark button.

5. The test passes and a successful status message will appear and the *Repeat* button becomes enabled. Select the *Repeat* button to perform the test again.
6. When done, select the *Exit* button to return to the test selection dialog.

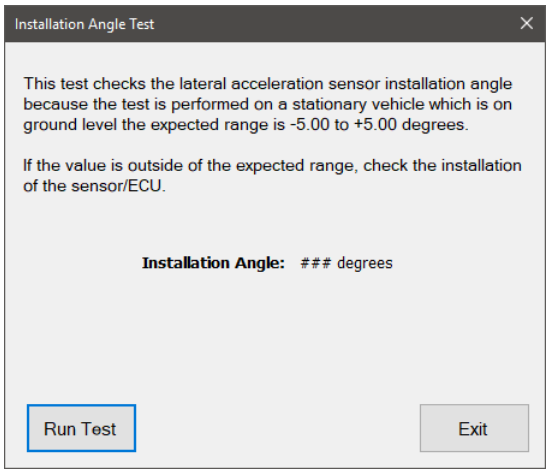
Installation Angle Test

The Installation Angle Test is available on:

- ✓ TABS-6™ Advanced Single-Channel Trailer ABS
- ✓ TABS-6™ Multi-Channel Trailer ABS
- ✓ TABS-8™ Trailer ABS

The Installation Angle Test reads the installation angle from the Lateral Acceleration Sensor. The vehicle must be stationary on level ground before performing this test. The expected installation angle range is +/- 5 degrees. This test is only available inside of the EOL Test dialog and cannot be selected in the Bi-Directional menu.

1. Select Installation Angle Test and press Enter or the *Start* button.
2. The Installation Angle screen will appear.



Installation Angle Test

3. Select *Run Test*. The installation angle will be read and displayed on screen. A successful status message will appear, and the Repeat button becomes enabled. Select the *Repeat* button to perform the test again.
4. When done, select the *Exit* button to return to the test selection dialog.

Installation Configuration Test

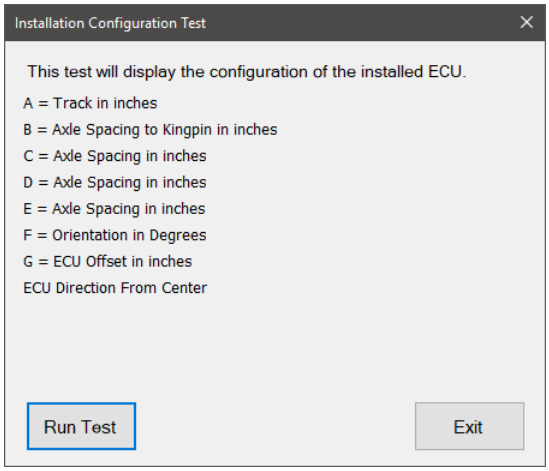
The Installation Configuration Test is available on:

- ✓ TABS-6™ Advanced Single-Channel Trailer ABS
- ✓ TABS-6™ Multi-Channel Trailer ABS
- ✓ TABS-8™ Trailer ABS

The Installation Configuration Test verifies that the TABS unit is properly installed on the trailer. This test is available both inside of the EOL Test dialog and in the Bi-Directional menu.

1. Select Installation Configuration Test and press Enter or the *Start* button.

2. The Installation Configuration screen will appear.



Installation Configuration Test

3. Select *Run Test*. The installation configuration information will be gathered and displayed on screen, with a diagram of the ECU. A confirmation label asking if the ECU responded properly appears. Select the checkmark button to indicate the ECU responded correctly. The test passes and a successful status message will appear and the *Repeat* button becomes enabled. Select the *Repeat* button to perform the test again.
4. When done, select the *Exit* button to return to the test selection dialog.

Lift Axle Control Test

The Lift Axle Control Test is available on:

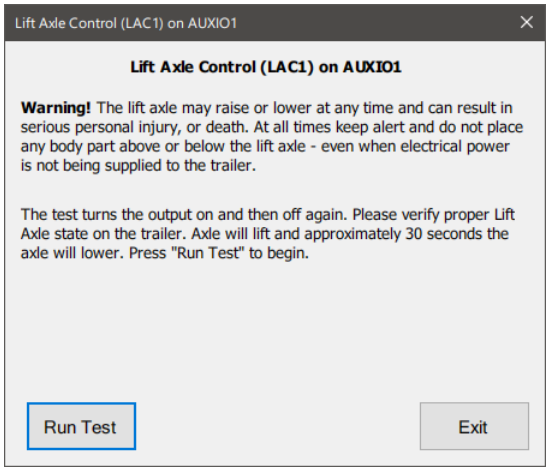
- ✓ TABS-6™ Advanced Single-Channel Trailer ABS
- ✓ TABS-6™ Multi-Channel Trailer ABS
- ✓ TABS-8™ Trailer ABS

NOTE: Supports LAC1 and LAC2

The Lift Axle Control Test ensures the lift axle can be lifted and lowered on command. This test is available both inside of the EOL Test dialog and in the Bi-Directional menu.

1. Select Lift Axle Control Test.

2. The Lift Axle Control screen will appear.



Lift Axle Control Test

3. Select *Run Test*. The lift axle will raise itself, then lower itself 30 seconds later. A confirmation prompt appears on screen asking the user if the ECU responded properly. Select the checkmark button to confirm it responded properly.
4. The test passes and a successful status message will appear and the *Repeat* button becomes enabled. Select the *Repeat* button to perform the test again.
5. When done, select the *Exit* button to return to the test selection dialog.

Lift Axle Sensing Test

The Lift Axle Sensing Test is available on:

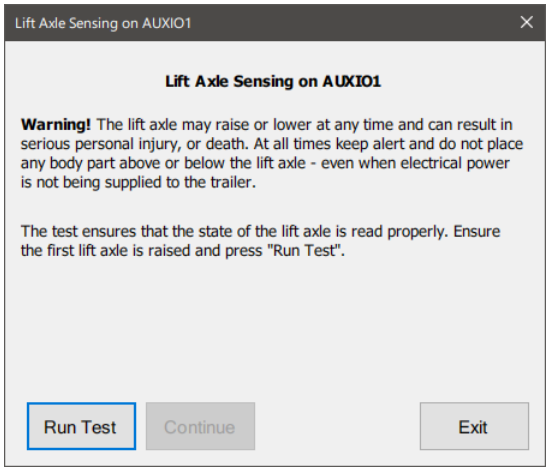
- ✓ TABS-6™ Advanced Single-Channel Trailer ABS
- ✓ TABS-6™ Multi-Channel Trailer ABS
- ✓ TABS-8™ Trailer ABS

NOTE: Supports LAS1 and LAS2

The Lift Axle Sensing Test ensures that the ECU is properly reading the current state of the lift axle. This test is available both inside of the EOL Test dialog and in the Bi-Directional menu.

1. Select Lift Axle Sensing Test and press Enter or the *Start* button.

2. The Lift Axle Sensing screen will appear.



Lift Axle Sensing Test

3. Lift the axle and select *Run Test*. Next, lower the axle and select *Run Test*. The ECU confirms it read both messages properly. The test passes and a successful status message will appear and the *Repeat* button becomes enabled. Select the *Repeat* button to perform the test again.
4. When done, select the *Exit* button to return to the test selection dialog.

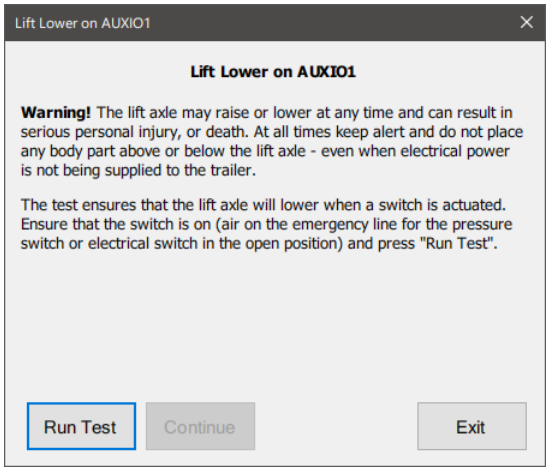
Lift Lower Test

The Lift Lower Test is available on:

- ✓ TABS-6™ Advanced Single-Channel Trailer ABS
- ✓ TABS-6™ Multi-Channel Trailer ABS
- ✓ TABS-8™ Trailer ABS

The Lift Lower Test verifies that all wiring and switches are properly installed to the trailer supply line by checking the air supply into the supply line. This test is available both inside of the EOL Test dialog and in the Bi-Directional menu.

1. Select Lift Lower Test.
2. The Lift Lower screen will appear.



Lift Lower Test

3. Ensure there is air supplied to the supply line and select *Run Test*. Follow the instructions on screen. Ensure there is no air supplied to the supply line and select *Continue*.
4. The ECU confirms the air supply was properly supplied. The test passes and a successful status message will appear and the *Repeat* button becomes enabled. Select the *Repeat* button to perform the test again.
5. When done, select the *Exit* button to return to the test selection dialog.

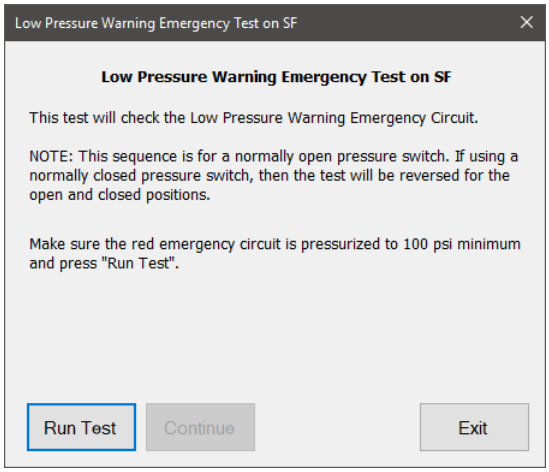
Low Pressure Warning Emergency Test

The Low Pressure Warning Emergency Test is available on:

- ✓ TABS-6™ Advanced Single-Channel Trailer ABS
- ✓ TABS-6™ Multi-Channel Trailer ABS
- ✓ TABS-8™ Trailer ABS

The Low Pressure Warning Emergency Test checks the Low Pressure Warning Emergency Circuit. This test is available both inside of the EOL Test dialog and in the Bi-Directional menu.

1. Select Low Pressure Warning Emergency Test and press Enter or the *Start* button.
2. The Low Pressure Warning Emergency screen will appear.



Low Pressure Warning Emergency Test

3. Ensure the red emergency circuit is pressurized to 100 PSI and select *Run Test*.
4. Follow the instructions on screen by releasing the air to return to 0 PSI and selecting *Continue*. The ECU confirms the emergency circuit was properly pressurized and depressurized. The test passes and a successful status message will appear and the *Repeat* button becomes enabled. Select the *Repeat* button to perform the test again.
5. When done, select the *Exit* button to return to the test selection dialog

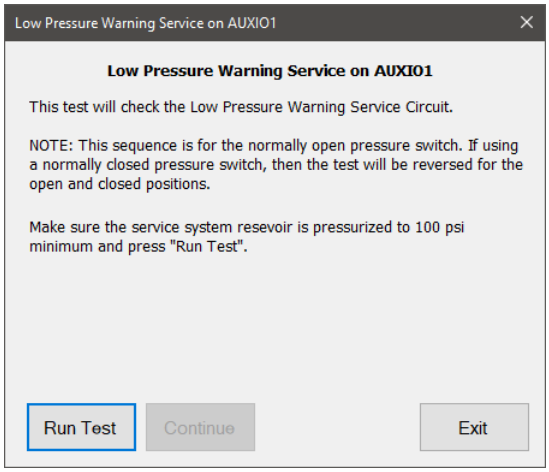
Low Pressure Warning Service Test

The Low Pressure Warning Service Test is available on:

- ✓ TABS-6™ Advanced Single-Channel Trailer ABS
- ✓ TABS-8™ Trailer ABS

The Low Pressure Warning Service Test checks the Low Pressure Warning Service Circuit. This test is available both inside of the EOL Test dialog and in the Bi-Directional menu.

1. Select Low Pressure Warning Service Test and press Enter or the *Start* button.
2. The Low Pressure Warning Service screen will appear.



Low Pressure Warning Service Test

3. Ensure the red emergency circuit is pressurized to 100 PSI and select *Run Test*.
4. Follow on screen instructions: pressurize the circuit to 50 PSI or lower and select *Continue*.
5. The ECU confirms the emergency circuit was properly pressurized. The test passes and a successful status message will appear and the *Repeat* button becomes enabled. Select the *Repeat* button to perform the test again.
6. When done, select the *Exit* button to return to the test selection dialog.

P-21 Delivery Test

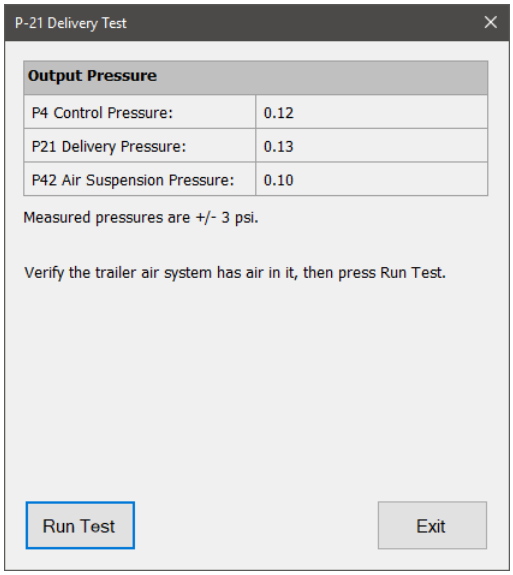
The P-21 Delivery Test is available on:

- ✓ TABS-6™ Multi-Channel Trailer ABS
- ✓ TABS-8™ Trailer ABS

The P-21 Delivery Test checks the P21, P4, and P42 delivery pressures when brakes are applied and released.

1. Select P-21 Delivery Test and press Enter or the *Start* button.

2. The P-21 Delivery screen will appear.



P-21 Delivery Test

3. Ensure the trailer air system has air in it and select *Run Test*.
4. Follow the on-screen instructions, applying the brake when required to verify the P21 and P4 pressures. After each pressure is checked, select the *Next* button to continue the test. When all pressures have been checked, the test passes, and a successful status message will appear.
5. When done, select the *Exit* button to return to the test selection dialog.

P-21 Modulator Test

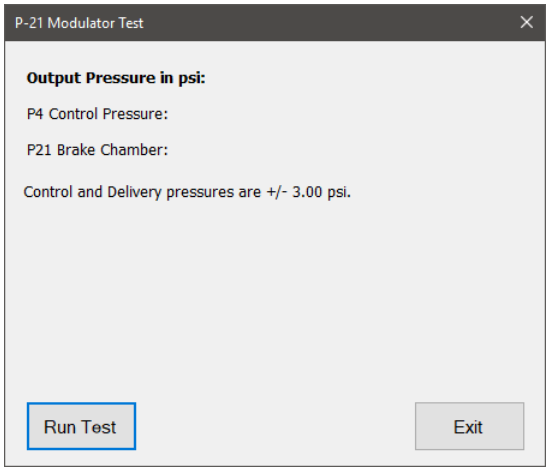
The P-21 Modulator Test is available on:

- ✓ TABS-6™ Advanced Single-Channel Trailer ABS
- ✓ TABS-6™ Multi-Channel (MC) Trailer ABS
- ✓ TABS-8™ Trailer ABS

The P-21 Modulator Test checks the P21 and P4 pressures when brakes are applied and released. This test is available both inside of the EOL Test dialog and in the Bi-Directional menu.

1. Select P-21 Modulator Test and press Enter or the *Start* button.

2. The P-21 Modulator screen will appear.



P-21 Modulator Test

3. Ensure the trailer air system has air in it and select *Run Test*.
4. Follow the on screen instructions, applying the brake when required to verify the P21 and P4 pressures. The test passes and a successful status message will appear and the *Repeat* button becomes enabled. Select the *Repeat* button to perform the test again.
5. When done, select the *Exit* button to return to the test selection dialog.

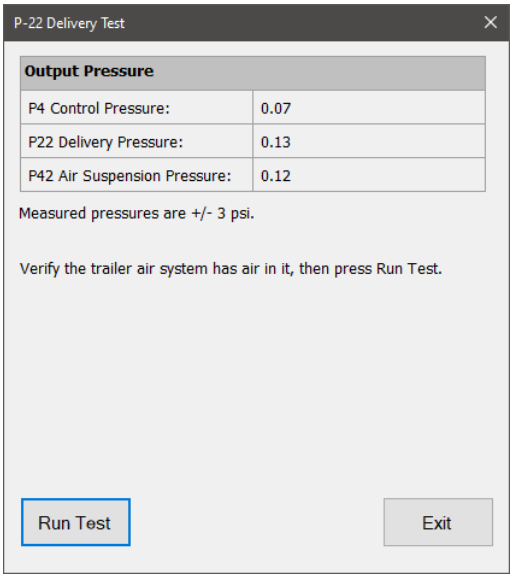
P-22 Delivery Test

The P-22 Delivery Test is available on:

- ✓ TABS-6™ Multi-Channel Trailer ABS

The P-22 Delivery Test checks the P22, P4, and P42 delivery pressures when brakes are applied and released.

1. Select P-22 Delivery Test and press Enter or the *Start* button.
2. The P-22 Delivery screen will appear.



P-21 Delivery Test

3. Ensure the trailer air system has air in it and select *Run Test*.
4. Follow the on-screen instructions, applying the brake when required to verify the P22 and P4 pressures. After each pressure is checked, select the *Next* button to continue the test. When all pressures have been checked, the test passes, and a successful status message will appear.
5. When done, select the *Exit* button to return to the test selection dialog.

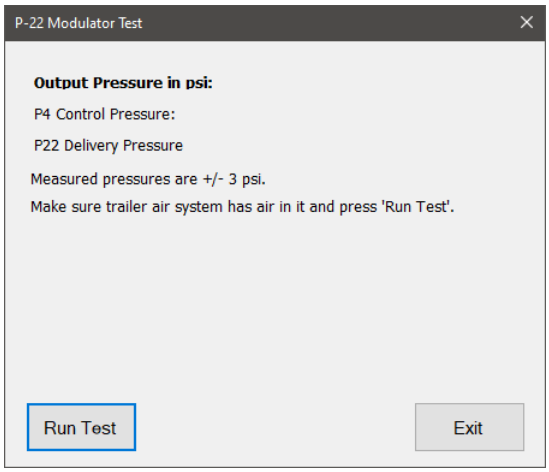
P-22 Modulator Test

The P-22 Modulator Test is available on:

- ✓ TABS-6™ Multi-Channel Trailer ABS

The P-22 Modulator Test checks the P22 and P4 pressures when brakes are applied and released. This test is available both inside of the EOL Test dialog and in the Bi-Directional menu.

1. Select P-22 Modulator Test and press Enter or the *Start* button.
2. The P-22 Modulator screen will appear.



P-22 Modulator Test

3. Ensure the trailer air system has air in it and select *Run Test*.
4. Follow the on screen instructions, applying the brake when required to verify the P22 and P4 pressures. The test passes and a successful status message will appear and the *Repeat* button becomes enabled. Select the *Repeat* button to perform the test again.
5. When done, select the *Exit* button to return to the test selection dialog.

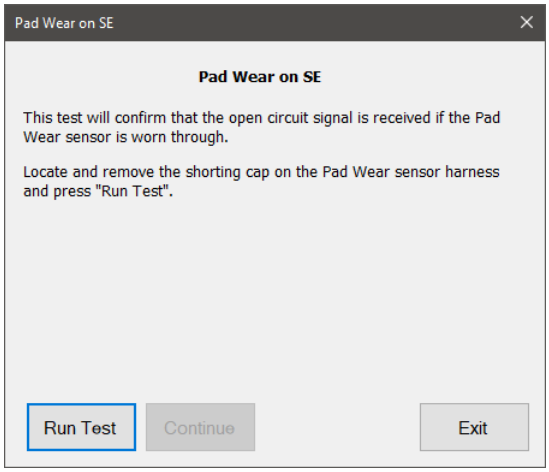
Pad Wear Test

The Pad Wear Test is available on:

- ✓ TABS-6™ Advanced Single-Channel Trailer ABS
- ✓ TABS-6™ Multi-Channel Trailer ABS
- ✓ TABS-8™ Trailer ABS

The Pad Wear Test confirms an open circuit signal is received if the Pad Wear sensor is worn through. This test is available both inside of the EOL Test dialog and in the Bi-Directional menu.

1. Select Pad Wear Test and press Enter or the *Start* button.
2. The Pad Wear screen will appear.



Pad Wear Test

3. Ensure the shorting cap on the Pad Wear sensor is removed and select *Run Test*. When prompted, re-install the shorting cap and select *Continue*.
4. The ECU confirms the signal was received properly. The test passes and a successful status message will appear and the *Repeat* button becomes enabled. Select the *Repeat* button to perform the test again.
5. When done, select the *Exit* button to return to the test selection dialog.

Pressure Sensor Test

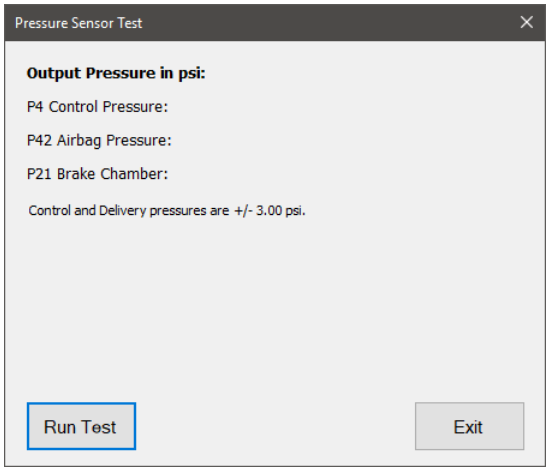
The Pressure Sensor Test is available on:

- ✓ TABS-6™ Advanced Single-Channel Trailer ABS
- ✓ TABS-6™ Multi-Channel Trailer ABS
- ✓ TABS-8™ Trailer ABS

The Pressure Sensor Test checks the P21, P42, and P4 pressures when brakes are applied and unapplied. This test is available both inside of the EOL Test dialog and in the Bi-Directional menu.

1. Select Pressure Sensor Test and press Enter or the *Start* button.

2. The Pressure Sensor screen will appear.



Pressure Sensor Test

3. Ensure the trailer air system has air in it and select *Run Test*.
4. Follow test instructions to apply the service brakes, confirm the P4 pressure rises to at least 10 PSI, and select *Continue*. Next, release the service brakes and select Continue.
5. The ECU confirms the P21, P42, and P4 pressures return to approximately 0 PSI. The test passes and a successful status message will appear and the *Repeat* button becomes enabled. Select the *Repeat* button to perform the test again.
6. When done, select the *Exit* button to return to the test selection dialog.

S-C Sensor/S-D Sensor Tests

The S-C and S-D Tests are available on:

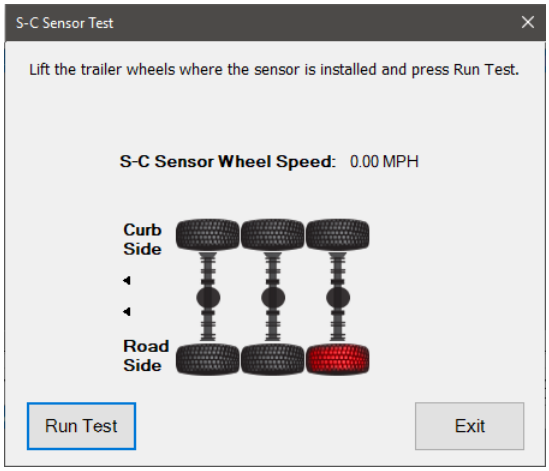
- ✓ TABS-6™ Advanced Single-Channel Trailer ABS
- ✓ TABS-6™ Multi-Channel Trailer ABS
- ✓ TABS-8™ Trailer ABS

The S-C and S-D Tests verifies that the wheel sensor is properly mounted and is functioning as it should. These tests are available both inside of the EOL Test dialog and in the Bi-Directional menu.

NOTE: This test will perform an ECU Reset when loaded to ensure proper operation.

1. Select S-C or S-D Sensor Test and press Enter or the *Start* button.

2. The Sensor Test screen will appear.



S-C/S-D Sensor Test

3. Select *Run Test*. Spin the wheel indicated by the red highlighted wheel on the on-screen graphic. The ECU will apply the brakes to stop the wheel. A successful status message will appear and the *Repeat* button becomes enabled. Select the *Repeat* button to perform the test again.
4. When done, select the *Exit* button to return to the test selection dialog.

S-E Sensor/S-F Sensor Tests

The S-E and S-F Tests are available on:

- ✓ TABS-6™ Multi-Channel Trailer ABS

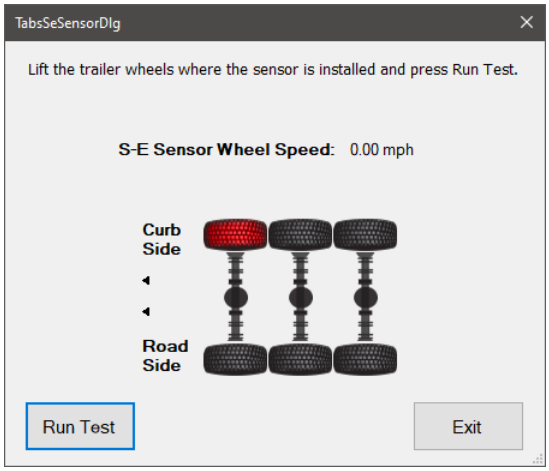
NOTE: Supports 4 sensor configuration only

The S-E and S-F Tests verifies that the wheel sensor is properly mounted and is functioning as it should. These tests are available both inside of the EOL Test dialog and in the Bi-Directional menu.

NOTE: This test will perform an ECU Reset when loaded to ensure proper operation.

1. Select S-E or S-F Sensor Test and press Enter or the *Start* button.

2. The Sensor Test screen will appear.



S-C/S-D Sensor Test

3. Select *Run Test*. Spin the wheel indicated by the red highlighted wheel on the on-screen graphic. The ECU will apply the brakes to stop the wheel. A successful status message will appear and the *Repeat* button becomes enabled. Select the *Repeat* button to perform the test again.
4. When done, select the *Exit* button to return to the test selection dialog.

Scratchpad Test

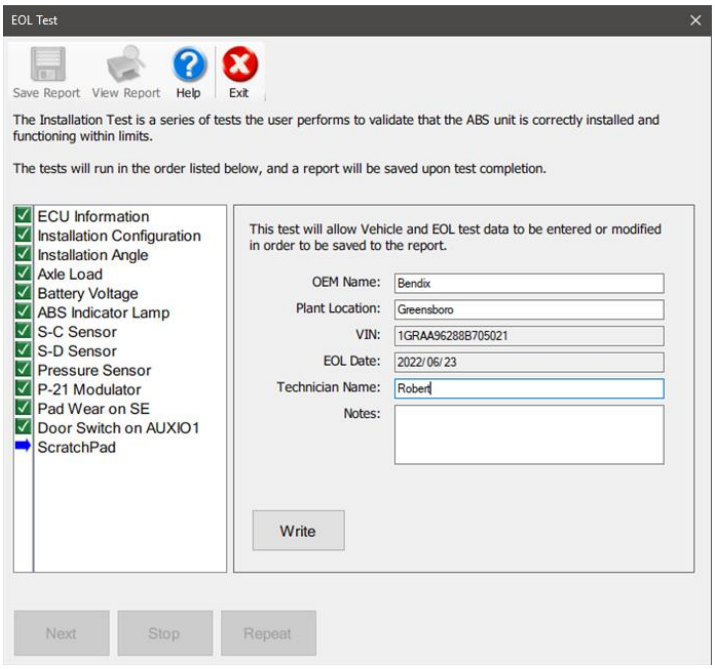
The Scratchpad Test is available on:

- ✓ TABS-6™ Advanced Single-Channel Trailer ABS
- ✓ TABS-6™ Multi-Channel Trailer ABS
- ✓ TABS-8™ Trailer ABS

The Scratchpad Test allows the user to enter information that will be saved to the ECU. This test is only available inside of the EOL Test dialog and cannot be selected in the Bi-Directional menu.

1. Select EOL Test on the main form toolbar.
2. Select the tests to be ran and the order to perform them in, then press *Next*.

3. Pass all tests to reach the Scratchpad, which is always the final test.



Scratchpad Test Inside EOL Test Screen

4. Data read from the ECU is displayed. Information may be updated or added. Select Write to write changes to the ECU.
5. The Scratchpad information is written to the ECU. There will be a green label on the bottom of the screen that states “Scratchpad Passed”. The *Repeat* button will enable, as well as the *Save Report* and *View Report* buttons on the top of the EOL Test form.

Tire Inflation System Test

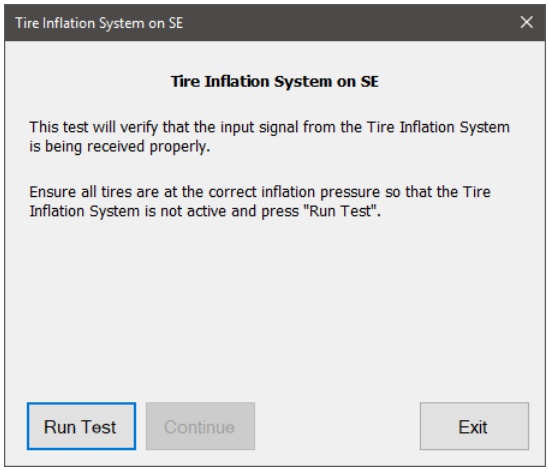
The Tire Inflation System Test is available on:

- ✓ TABS-6™ Advanced Single-Channel Trailer ABS
- ✓ TABS-6™ Multi-Channel Trailer ABS
- ✓ TABS-8™ Trailer ABS

The Tire Inflation System Test verifies that the input signal from the Tire Inflation System is being received. This test is available both inside of the EOL Test dialog and in the Bi-Directional menu.

1. Select Tire Inflation System Test and press Enter or the *Start* button.

2. The Tire Inflation System screen will appear.



Tire Inflation System Test

3. Ensure all tires are at the correct inflation pressure and select *Run Test*. Follow instructions to release the air from the Tire Inflation System circuit and select *Continue*.
4. The ECU confirms the Tire Inflation System circuit is functioning properly. The test passes and a successful status message will appear and the *Repeat* button becomes enabled. Select the *Repeat* button to perform the test again.
5. When done, select the *Exit* button to return to the test selection dialog.

Wear Sensing Test

The Wear Sensing Test is available on:

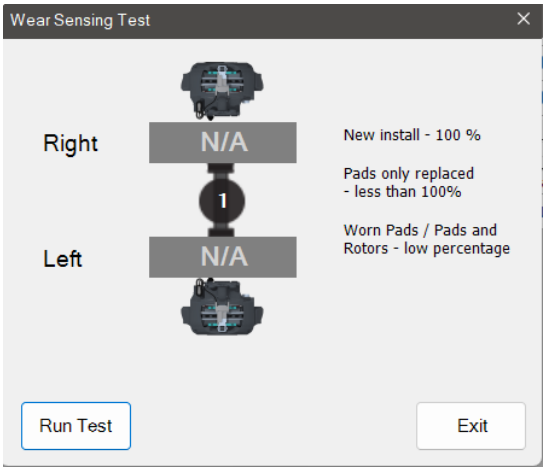
- ✓ TABS-6™ Multi-Channel Trailer ABS with minimum software version of TCWG.730.88

NOTE: This test is only available for single axle trailers with QWS on SENS IN 1 and 2.

The Wear Sensing Test checks the remaining pad wear life and reports the value as a percentage. This test is available both inside of the EOL Test dialog and in the Bi-Directional menu.

1. Select Wear Sensing Test and press Enter or the *Start* button.

2. The Wear Sensing Test screen will appear.



Wear Sensing Test

3. Select *Run Test* to read the remaining pad wear life values, which are displayed as percentages. A confirmation message will be displayed, asking if the values are correct. Clicking the checkmark will show a successful status message, and the *Repeat* button becomes enabled. Select the *Repeat* button to perform the test again.
4. When done, select the *Exit* button to return to the test selection dialog.

Other Main Toolbar Options

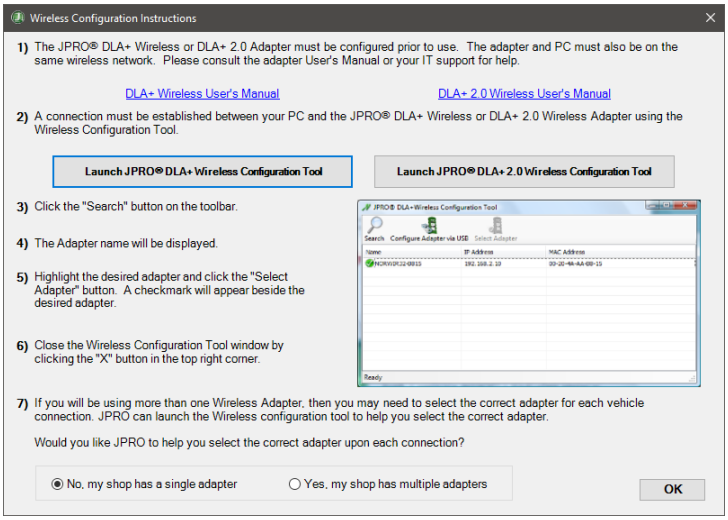
Exit

Select the F4 key or the *Exit* button to end your session and quit the application.

Help

DLA+ Wireless Configuration Instructions

Select the *DLA+ Wireless Configuration Instructions* button for help with configuring a Noregon DLA+ 3.0 Wireless, DLA+ 2.0 Wireless, or DLA+ Wireless adapter.



Wireless Configuration Instructions

DLA+ Adapter Connectivity Test

Select the *DLA+ Adapter Connectivity Test* button to launch the Noregon DLA+ Adapter Family Connectivity Test application.

Update DLA Drivers

The *Update DLA Drivers* button will open an internet browser to the Noregon Adapter Drivers web page. From this site you can download the latest adapter driver versions.

View User's Guide

Select the *View User's Guide* button to view this document. This option requires Adobe Acrobat Reader.

About Bendix® ACom® PRO™

Select the *About Bendix® ACom® PRO™* button to view information about the application version, component versions, and web links. Click System Info for detailed information about your PC configuration that may be needed for technical support personnel.

What's New

Select the *What's New* button to view the What's New document which contains an overview of all features available in the Bendix® ACom® PRO™ Diagnostics application. This option requires Adobe Acrobat Reader.

Support – Submit Issue

Selecting the *Submit Issue* button will open an internet browser to the Noregon Bendix® ACom® PRO™ Diagnostics Support web page. From this site you can either check on the status of an open issue or request support by opening a new issue.

Support – Enable Remote Login

This option is to be used at the direction of Noregon support to help resolve open issues.

Contact Sales

Selecting the *Contact Sales* button will open an internet browser with contact information for purchasing additional adapters, cables or renewing your subscription. A current subscription is required to be eligible for future updates to the Bendix® ACom® PRO™ Diagnostics product.

Appendix A – Definitions, Acronyms, and Abbreviations

For a complete listing of common definitions, acronyms and abbreviations, please see the Industry Terms document available via Data Monitor or the NextStep window.