

The SafetyDirect® By Bendix CVS Web Portal Processor Installation Verification Procedure

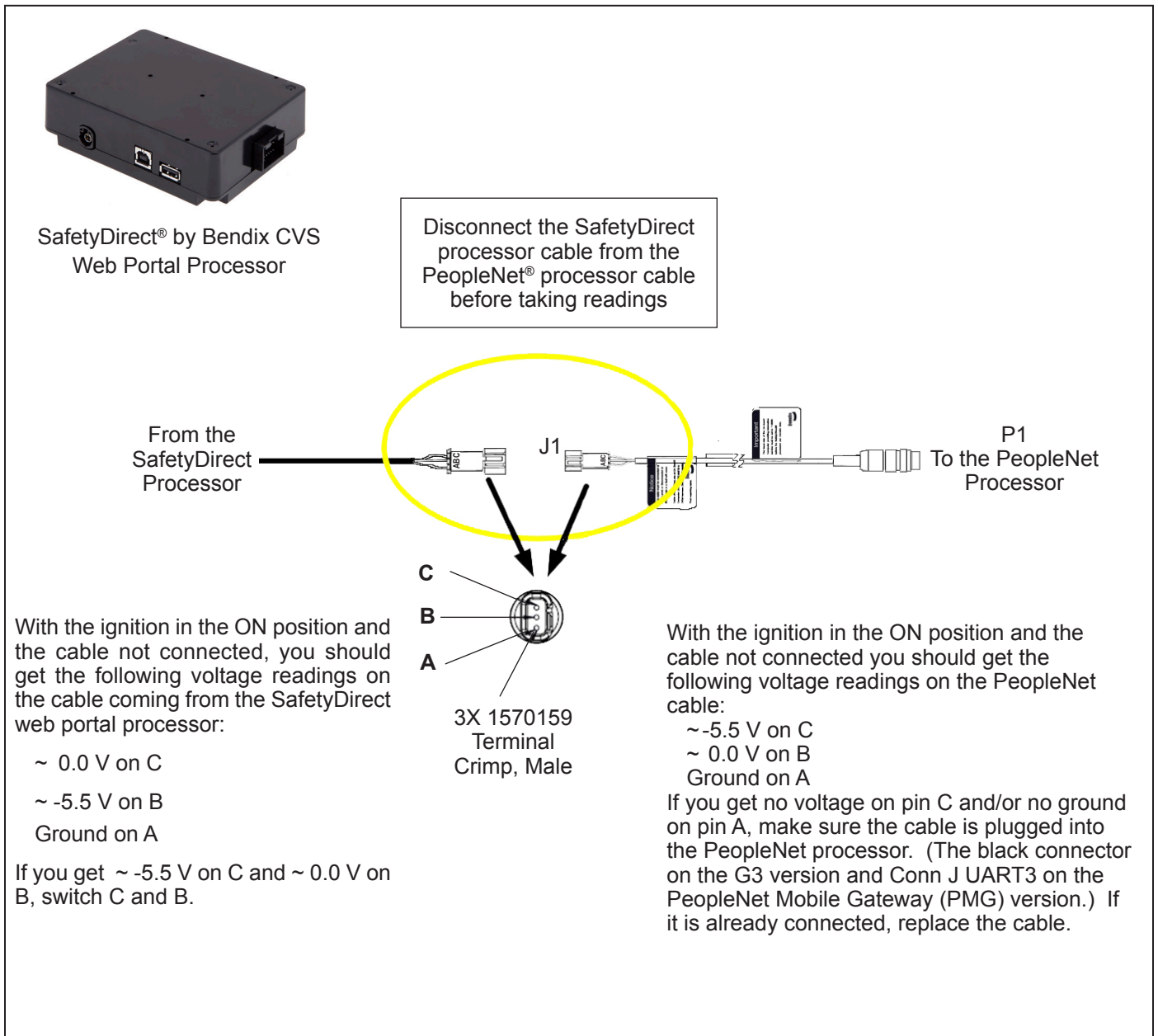


Figure 1 – SafetyDirect® Web Portal Processor 3-Pin Data Cable Verification to Telematics Connection

GENERAL

This document covers various aspects of installation verification of the SafetyDirect® web portal processor by Bendix CVS to ensure proper use of the cables, connection tests, baud rate settings, and event logging. In cases where the SafetyDirect system is unresponsive or does not record events, these diagnostics steps should be followed before contacting the Bendix Tech Team.



WARNING

Bendix safety technologies complement safe driving practices and are not intended to enable or encourage aggressive driving. No commercial vehicle safety technology replaces a skilled, alert driver exercising safe driving techniques and proactive, comprehensive driver training. Responsibility for the safe operation of the vehicle remains with the driver at all times.

GENERAL SAFETY GUIDELINES



**WARNING! PLEASE READ AND FOLLOW THESE INSTRUCTIONS
TO AVOID PERSONAL INJURY OR DEATH:**



When working on or around a vehicle, the following guidelines should be observed **AT ALL TIMES**:

- ▲ Park the vehicle on a level surface, apply the parking brakes and always block the wheels. Always wear personal protection equipment.
- ▲ Stop the engine and remove the ignition key when working under or around the vehicle. When working in the engine compartment, the engine should be shut off and the ignition key should be removed. Where circumstances require that the engine be in operation, **EXTREME CAUTION** should be used to prevent personal injury resulting from contact with moving, rotating, leaking, heated or electrically-charged components.
- ▲ Do not attempt to install, remove, disassemble or assemble a component until you have read, and thoroughly understand, the recommended procedures. Use only the proper tools and observe all precautions pertaining to use of those tools.
- ▲ If the work is being performed on the vehicle's air brake system, or any auxiliary pressurized air systems, make certain to drain the air pressure from all reservoirs before beginning ANY work on the vehicle. If the vehicle is equipped with a Bendix® AD-IS® air dryer system, a Bendix® DRM™ dryer reservoir module, or a Bendix® AD-9si® air dryer, be sure to drain the purge reservoir.
- ▲ Following the vehicle manufacturer's recommended procedures, deactivate the electrical system in a manner that safely removes all electrical power from the vehicle.
- ▲ Never exceed manufacturer's recommended pressures.
- ▲ You should consult the vehicle manufacturer's operating and service manuals, and any related literature, in conjunction with the Guidelines above.
- ▲ Never connect or disconnect a hose or line containing pressure; it may whip and/or cause hazardous airborne dust and dirt particles. Wear eye protection. Slowly open connections with care, and verify that no pressure is present. Never remove a component or plug unless you are certain all system pressure has been depleted.
- ▲ Use only genuine Bendix® brand replacement parts, components and kits. Replacement hardware, tubing, hose, fittings, wiring, etc. must be of equivalent size, type and strength as original equipment and be designed specifically for such applications and systems.
- ▲ Components with stripped threads or damaged parts should be replaced rather than repaired. Do not attempt repairs requiring machining or welding unless specifically stated and approved by the vehicle and component manufacturer.
- ▲ Prior to returning the vehicle to service, make certain all components and systems are restored to their proper operating condition.
- ▲ For vehicles with Automatic Traction Control (ATC), the ATC function must be disabled (ATC indicator lamp should be ON) prior to performing any vehicle maintenance where one or more wheels on a drive axle are lifted off the ground and moving.
- ▲ The power **MUST** be temporarily disconnected from the radar sensor whenever any tests **USING A DYNAMOMETER** are conducted on a vehicle equipped with a Bendix® Wingman® system.

REQUIREMENTS

To check the functionality of the SafetyDirect® by Bendix CVS web portal processor you will need a previously installed SafetyDirect Processor (SDP) (part of the Bendix® Wingman® Fusion™ system) or 3G Lane Departure Warning Processor (non-Wingman Fusion, camera only) and a telematics interface with an active service provider subscription. Your telematics provider must be notified that

SafetyDirect processor data is being uploaded, since the provider will need to verify and pass along the vehicle data in order for it to reach the SafetyDirect web portal. Failing to notify the provider about this interface, could result in no data reaching your SafetyDirect online account.

LOCATIONS OF SDP 3-PIN DATA CABLE BASED ON VEHICLE OEM

CONNECTING THE SAFETYDIRECT PROCESSOR TO TELEMATICS

In order for the SafetyDirect® Processor (SDP) to broadcast event data via a telematics service, the following cable connection must be verified. There may be slight variations in type, color, size, and length of cable depending on which telematics OEM is used (i.e. PeopleNet®, Omnitracs®, etc.), but the general pinout requirements for the cable remain the same.

Bendix supplies the interface cable that will match your telematics unit in the event the OEM did not provide one with the vehicle. For a list of all available interface cables, please check the *Bendix Quick Reference Catalog* (BW1114) under section “Camera System – Lane Departure”.

Using a voltmeter, verify the output voltage of the SDP source on Pins A, B, and C. Do the same for the OEM telematics connection (cable supplied by PeopleNet or Omnitracs). Pin A is always set as Ground. Pin B from the SDP side should read approximately 5.5V when not connected to the telematics connector. Pin C from the SDP should read 0V. On the telematics connect cable, Pin B must read 0V and Pin C must read 5.5V in the unconnected state with the vehicle ignition on. The pins are usually identified with lettering on the connector housing. See *Figure 1 for additional detail*. Verifying these pinouts and voltages between the SDP and telematics unit ensure proper data communication for uploading recorded events.

When connecting to an Omnitracs® telematics unit, please note that there are currently three types available depending on your OEM configuration. They are identified as MCP100, MCP110, and MCP200. Each type requires a specific interface cable for connecting to the SafetyDirect web portal processor. Note the interface port for each type is shown in Figure 2.

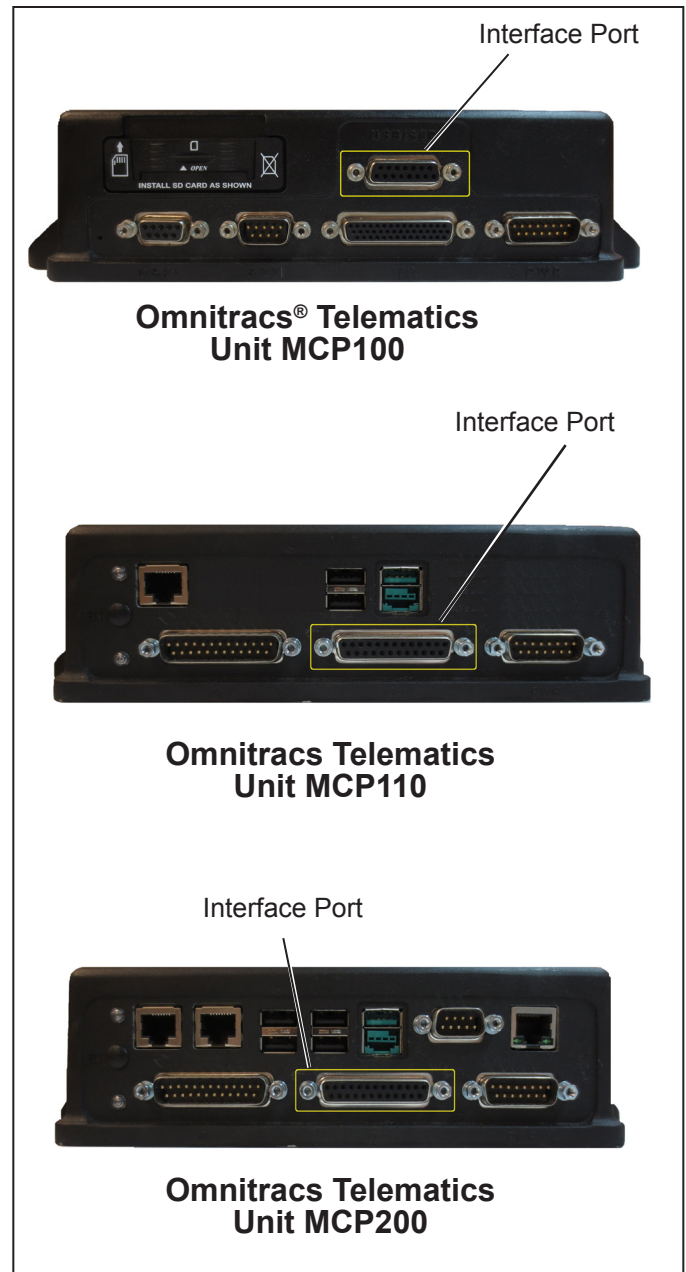


Figure 2 – Omnitracs Telematics Units

LOCATIONS OF THE SDP 3-PIN DATA CABLE AND PROCESSOR BASED ON VEHICLE OEM

Original Equipment Manufacturer (OEM)	Location of SDP 3-Pin Data Cable	Location of SafetyDirect Processor (SDP and 3G)
Freightliner®	Passenger side kick panel	Overhead within 24 inches of the camera
Kenworth®	Headliner or passenger side of the dash and panel	
Mack®	Center of the dash – High or Low	
Peterbilt®	Driver side kick panel	Overhead within 24 inches of the camera (SDP and AM 3G)
Volvo®	Center of the dash – High or Low	Center of the dash below the brake ECU (OEM 3G)

SafetyDirect® Processor by Bendix CVS to Telematics Baud Rate Verification – PeopleNet® Specific

The following instruction on baud rate verification and possible changes are specific to PeopleNet® telematics interface units. Please note, Omnitracs® OBC telematics interfaces do not require a baud rate update.

For the Bendix® Wingman® Fusion™ or AutoVue® Lane Departure Warning (LDW) Systems to be able to communicate with the PeopleNet units, the PeopleNet baud rate must be updated. This can only be updated **after** the PeopleNet G3 processor has been installed and configured for the truck.

The following procedure will show how to update the PeopleNet baud rate. If, after completing these instructions the pop-up described in Figure 21 is not seen, please check the cable pinouts and connections in Connecting the SafetyDirect Processor to Telematics section.

1. As shown in Figure 3, with the vehicle ignition in the Off position and the PeopleNet login screen displayed, log in with the following Diagnostic ID and Password:

Driver ID **!diagmode**

Password **9238**

2. *Press the Submit icon*—the green circle with the white arrow on lower left of the screen.
3. Now wait for the PeopleNet program to complete the login process and display the home screen. This should take no longer than one minute.
4. After the login process is complete, *select the System icon* on the upper right corner of the screen, this will be the only selectable icon. See Figure 4.
5. After the system menu is displayed, *select the OBC Diagnostic icon*. See Figure 5.



Figure 3 – PeopleNet Telematics Login Screen



Figure 4 – Selecting The System Icon



Figure 5 – OBC Diagnostic Icon

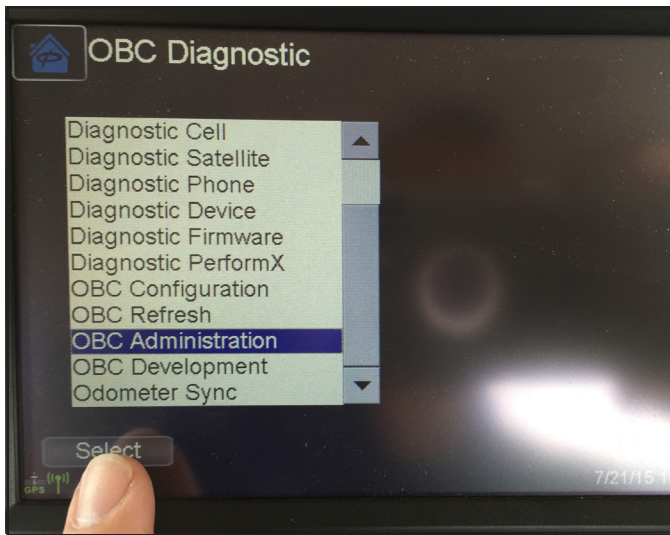


Figure 6 – OBC Administration

6. After the OBC Diagnostic drop-down menu is displayed, *highlight the OBC Administration line and press the Select icon on the lower left corner of the screen. See Figure 6.*
7. When a password entry field is displayed, *enter the password 9238 and press the Select icon. See Figure 7.*
8. From the displayed drop-down menu, *highlight Serial Port Configuration and press the Select icon on the lower left corner of the screen. See Figure 8.*
9. From the displayed drop-down menu, *highlight G3 Services and press the Select icon. See Figure 9.*
10. From the displayed drop-down menu, *highlight 115200 and press the Select icon. It is important to select 115200 since a lower baud rate will be insufficient for the data being generated by the SafetyDirect® web portal processor by Bendix CVS. See Figure 10.*

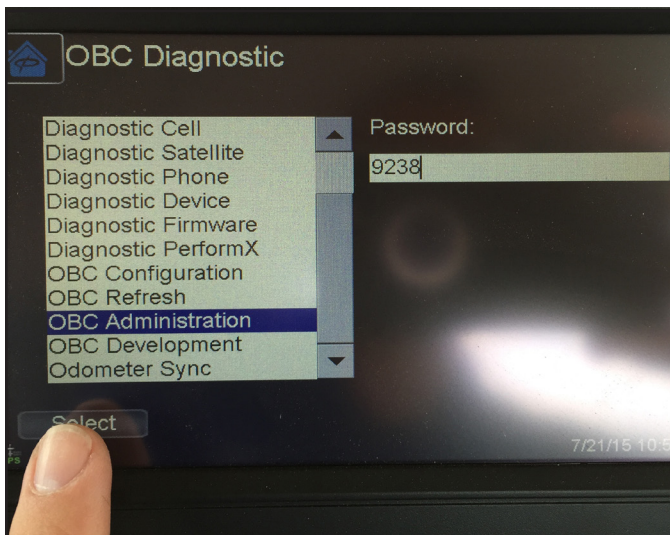


Figure 7 – Password Entry

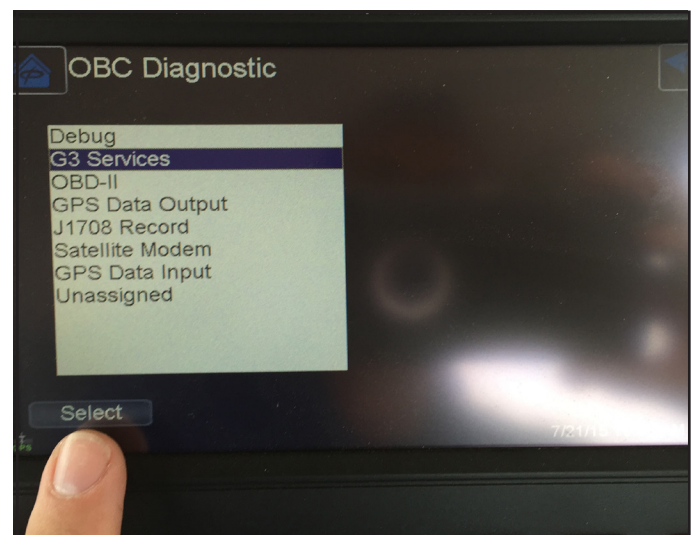


Figure 9 – G3 Services

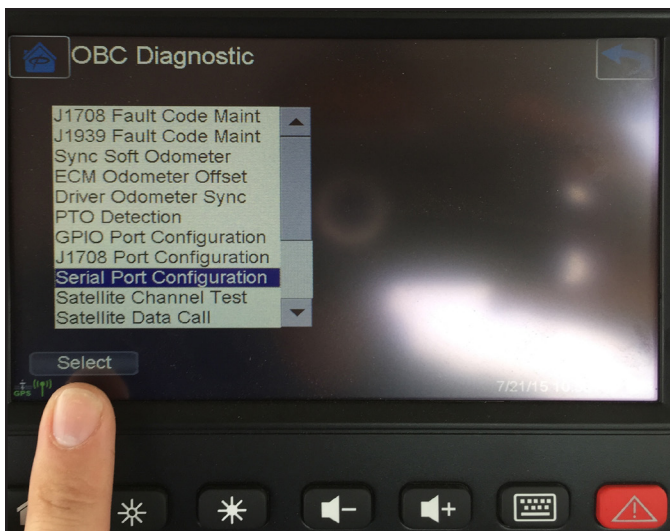


Figure 8 – General Port Configuration

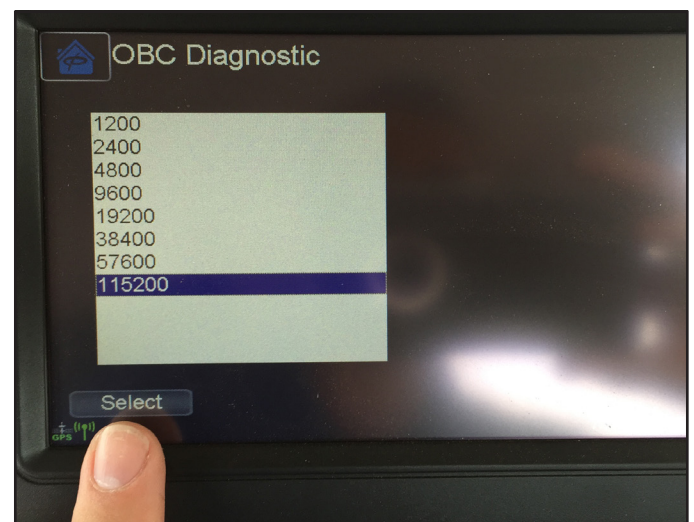


Figure 10 – Selecting 115200 Baud Rate

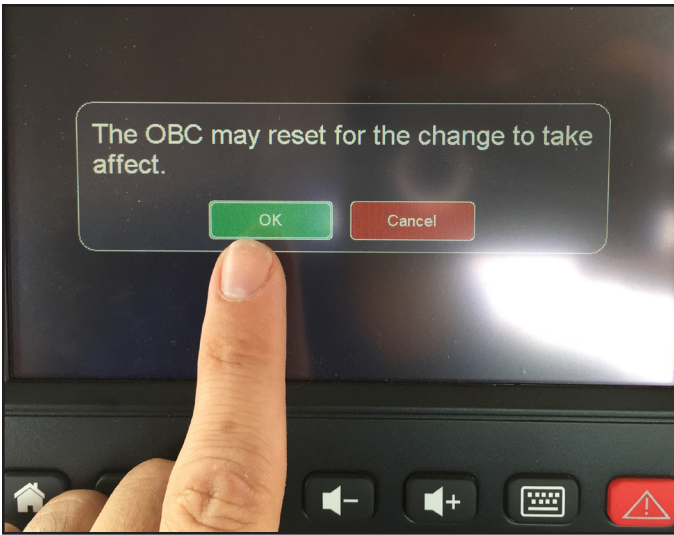


Figure 11 – Sign-on Screen

11. The following display will show a pop-up text box with “The OBC may reset for the change to take effect.” plus two selection icons. *Select the green OK icon and allow the system to reboot. See Figures 11 and 12.*
12. After rebooting, the system will return to the OBC Diagnostic menu. Navigate back to the home screen by pressing the blue Home icon located at the upper left of the display. *See Figure 13.*
13. From the Home screen, *press the System icon.* When the System screen appears, *press the Information icon.* *See Figures 14 and 15.*
14. From the Information screen, *press the Admin icon on the lower part of the screen.* When prompted, *enter the Admin password of 9238 and then select the green OK icon.* *See Figures 16 and 17.*

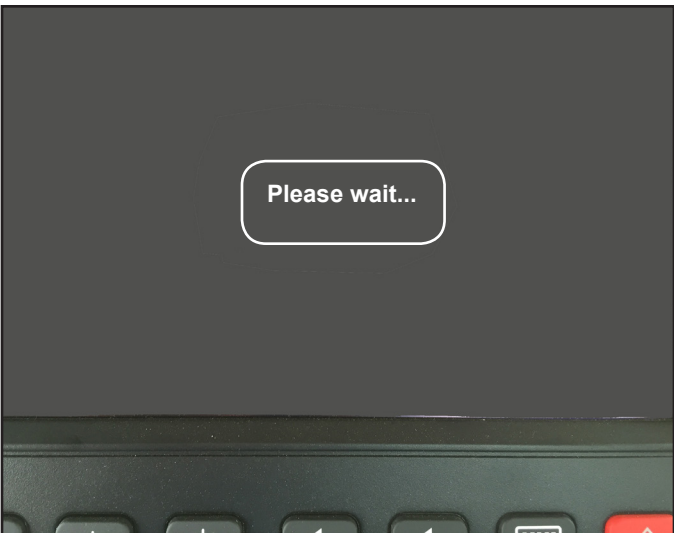


Figure 12 – Sign-on Screen



Figure 14 – Home Screen

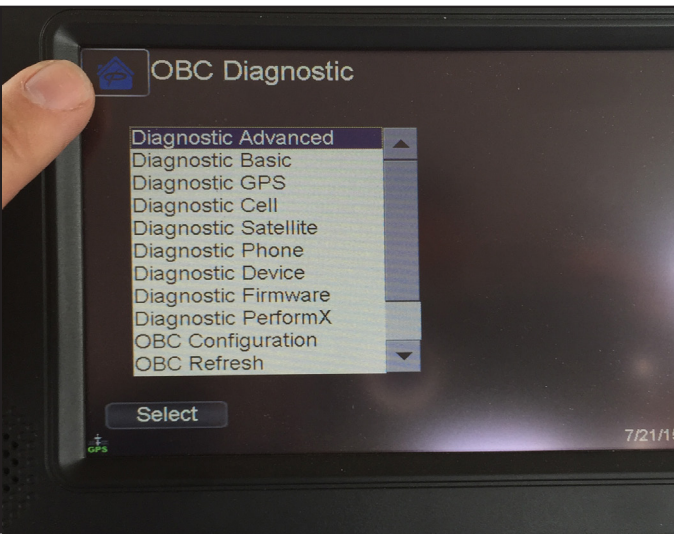


Figure 13 – Blue Home Icon



Figure 15 – System Screen



Figure 16 – Sign-on Screen

15. From the Information screen, *highlight Shutdown and then press the Select icon*. The PeopleNet® program will log out and return to the main login screen. See *Figures 18 and 19*.

16. Turn the ignition to the ON position (engine does not need to be running) and wait for the Lane Departure Warning (LDW) system start-up chirps – left side speaker and then right. This should occur within 30 seconds of the start-up. Once the LDW start-up is complete, the following pop-up message should be displayed. “*SafetyDirect release version X.X and the current software identification*” in the LDW (exact version numbers may vary). Note, if the pop-up message is not displayed, please check the applicable wiring described in the *Connecting the SafetyDirect Processor to Telematics* section of this document.

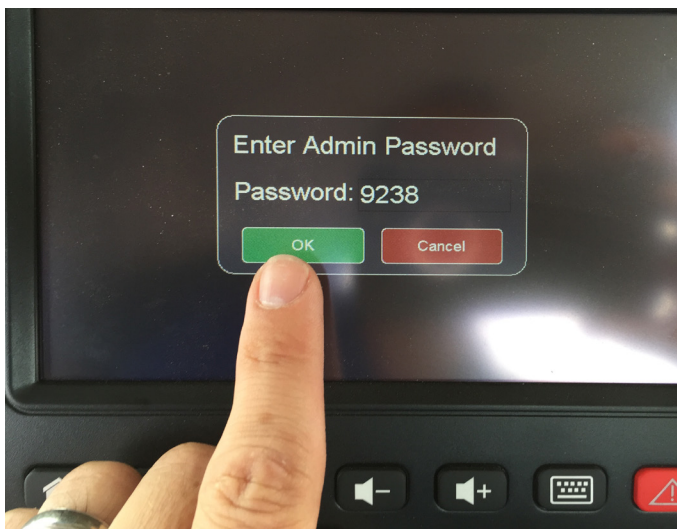


Figure 17 – Admin Password Screen



Figure 19 – Sign-on Screen



Figure 18 – Admin Password Screen

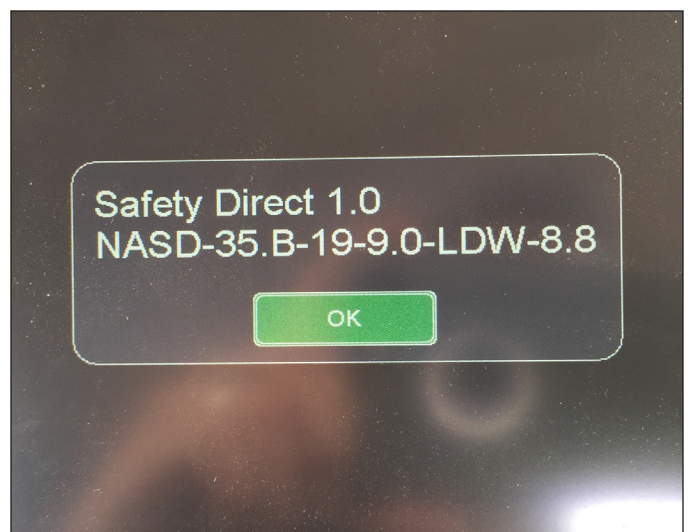


Figure 20 – SafetyDirect Software Version I.D.



Figure 21 – Lane Departure Warning Switch

17. After the pop-up message is displayed, *press and release* the Lane Departure Warning switch in the cab of the vehicle. Press the disable switch twice. After pressing the switch the second time, wait 10 seconds and then turn the vehicle ignition to the OFF position. This will trigger the SafetyDirect® by Bendix CVS web portal processor to start reporting event data via the PeopleNet® processor to the SafetyDirect website portal where it can be viewed for analysis.

Generating a Practice Event to Verify SafetyDirect® Processor by Bendix CVS Operation

With proper cable connections in place and updated baud rate settings a practice event should be generated to verify the complete operation of the SafetyDirect reporting system. To generate the event data, follow the steps below.

1. Power up the vehicle and verify the system lights stay on and the speaker start-up chirps are heard. Depress the LDW dashboard switch five times to generate events. Note that some vehicles may have their start-up chirps disabled, if so, wait 30 seconds after powering up before pressing the LDW switch.
2. Leave the truck powered up for 1 to 1.5 hours.
3. Log into the SafetyDirect portal using your account information at safetydirectportal.com.
4. Run the vehicle report and select “Show Vehicles with no Miles” at the top of the menu.
5. Verify the truck is reporting. Results may take longer to show in the report, depending on location coverage and the computers’ server load. Continue to refresh the report in 30 minute intervals until event data is shown.

Note that Omnitracs® telematics users may need to look for their Motor Carrier Permit (MCP) vehicle number as these vehicles often report as MCP-designated numbers for several days after the initial set-up.

Additional Support at bendix.com or 1-800-AIR-BRAKE (1-800-247-2725, Option 2)

For the latest information – and for free downloads of the Bendix® ACom® Diagnostics software – and its User Guide, visit the Bendix website at: bendix.com.

For direct telephone technical support, the Bendix Tech Team is available at 1-800-AIR-BRAKE (1-800-247-2725, option 2) Monday through Friday, 8:00 a.m. to 6:00 p.m. ET. Follow the instructions in the recorded message.

The Bendix Tech Team can also be reached by e-mail at: techteam@bendix.com.

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