TRANSPEC

ENGINEERED TO LAST

EBS WORKSHOP MANUAL
for DIAG+ and FLEET+

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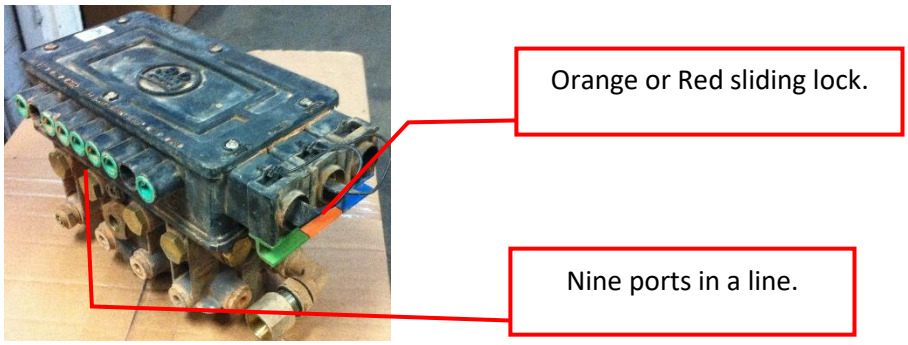
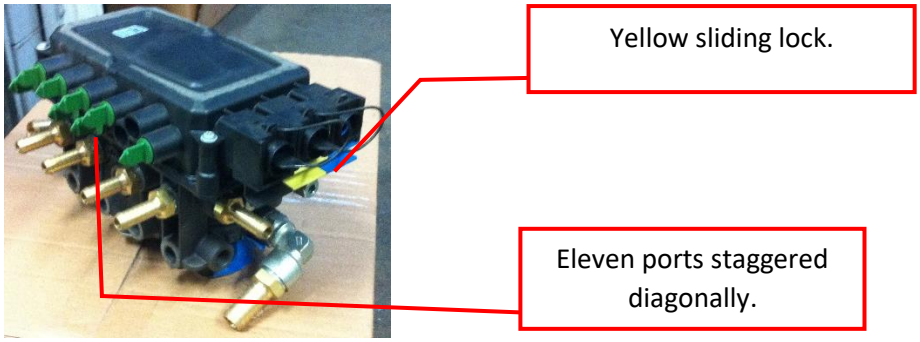
1. Valve Identification

There are two models of EBS Valve; BPW Ecotronic and Generation 3 Multivolt. Valves may be identified as follows:

BPW Ecotronic



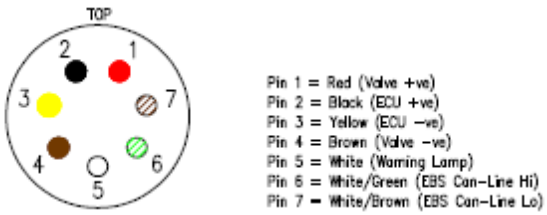
Gen 3 Multivolt



2. Connecting to the EBS Valve

2.1 Power

The EBS valve must be powered before diagnostic communication can be made. It may be powered directly from a truck or from any DC power supply using an ISO 7638 7 pin plug.



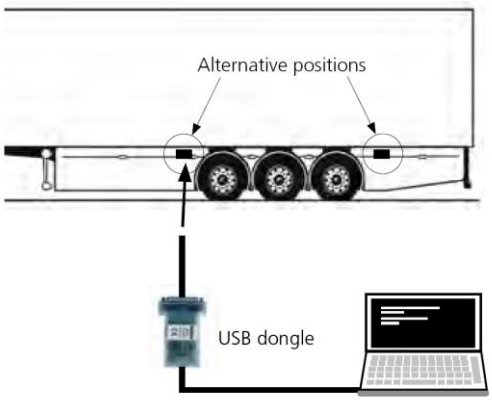
Plug wiring, view from front of plug

Multivolt valves may be powered by a 12V or 24V source. BPW Ecotronic valves require 24V. If the trailer does not have a voltage invertor, a 24V power source is required.

2.2 Side of Trailer

- Locate the side of vehicle diagnostic plug and connect the 6.5m interface cable.
- If an Info Centre or Trailer Monitor is fitted to the trailer, it will have to be unplugged from the diagnostic plug first.
- Connect the Diag+ or Fleet+ dongle between the interface cable and a USB port on the computer.
- Initially, the LED in the dongle will be illuminated orange. When connection with a powered EBS valve is made, it will turn red.

Diagnostic Plug

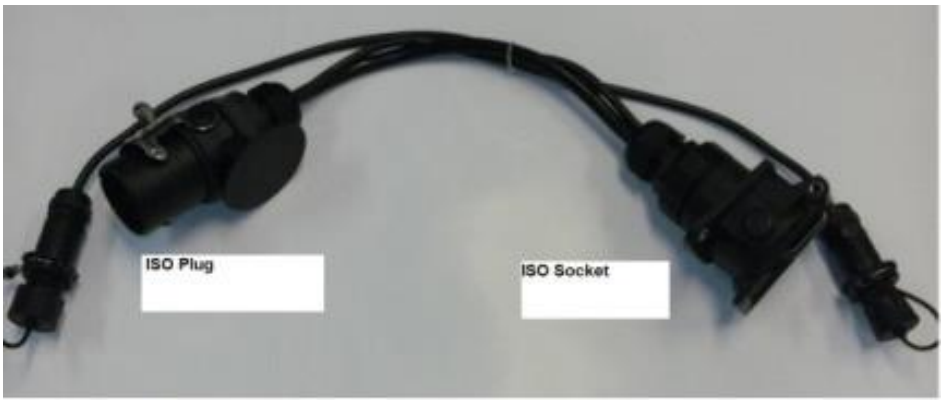


Connection to Computer

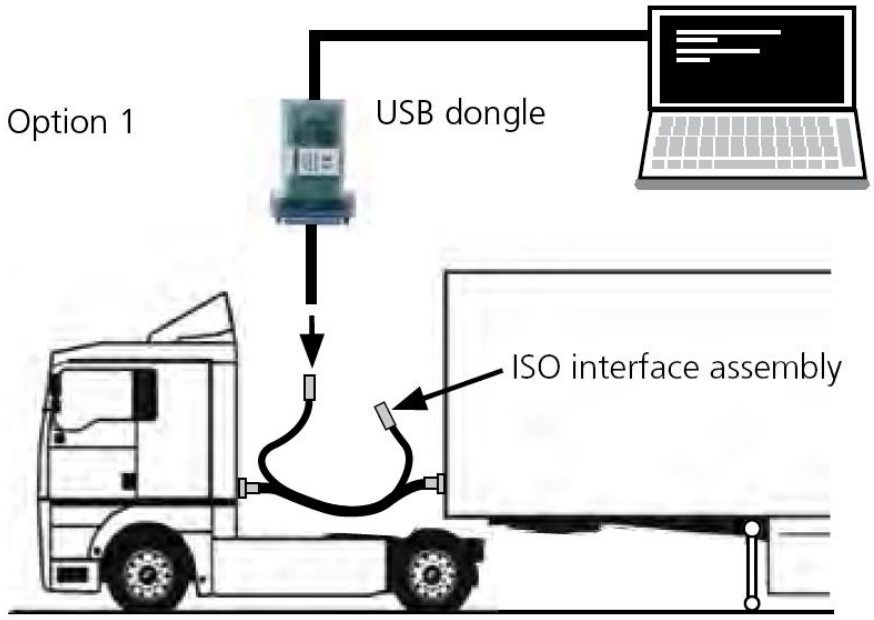
2.3 Front of Trailer

Note; This connection will work with Semi trailers and dog trailers only. B-Double lead and Road-train lead trailers will not communicate with Diag+ via front connection.

- Fit the double-ended ISO 7638 interface cable to the front of the trailer.



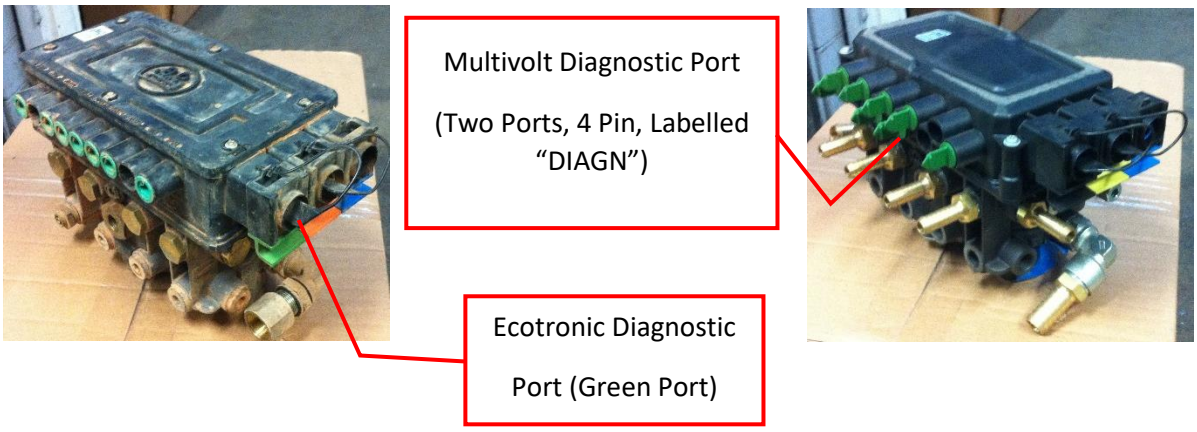
- Connect the 6.5m interface cable to the diagnostic plug FACING AWAY from the trailer. Refer to Option 1 figure on page 5.
- Connect the Diag+ dongle between the interface cable and a USB port on the computer.
- Initially, the LED in the dongle will be illuminated orange. When connection with a powered EBS valve is made, it will turn red.



Connection using ISO 7638 Interface

2.4 Direct to Valve

Diagnostics kits have a cable that can be used to bypass the trailer diagnostic cable and plug directly into the valve. A different cable is required for Ecotronic and G3 Multivolt valves and the cable is not available as a separate part.

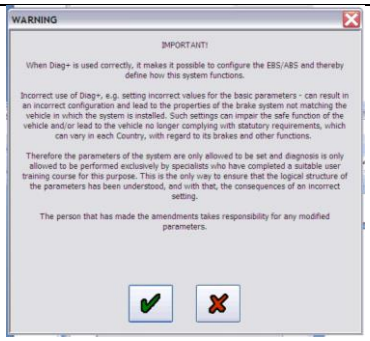
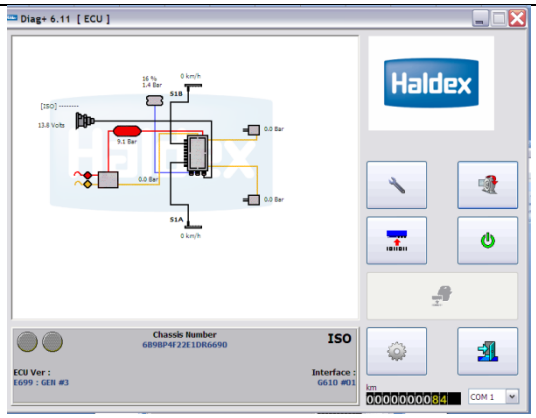


3. Diag+

Diag+ software can be used to:

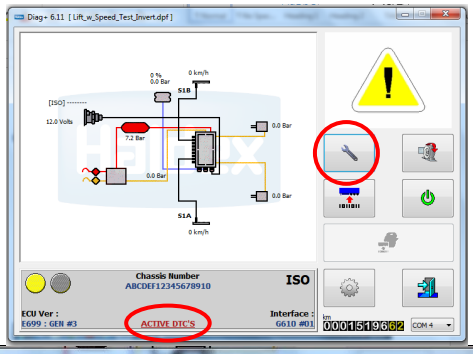
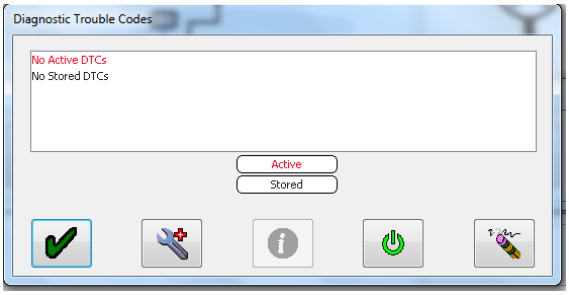
- Read Diagnostic Trouble Codes (DTCs).
- Save DTC reports.
- Erase DTCs.
- Read live trailer schematic data including wheel speed sensor checks.
- Read configuration files from the valve.
- Write configuration files to the valve.

3.1 Diag+ Communication with valve

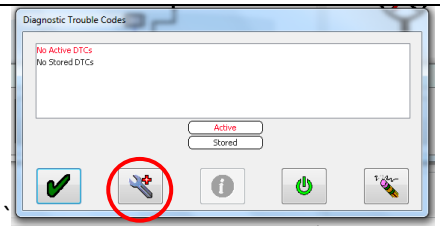
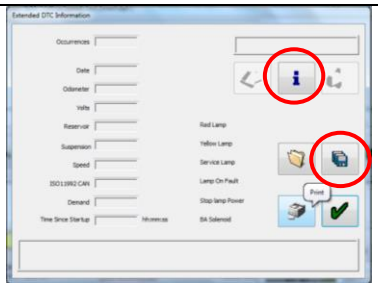
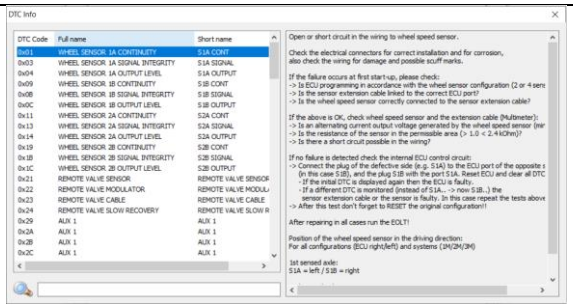
Open Diag+ program. A warning message will appear. Click the green tick button to close the message.	
If communication with the ECU is made, the home screen will show a schematic of the EBS system.	
If communication with the ECU is not made, search for a com port by clicking the binocular icon button. When connection is successful, the schematic will appear as above and the binoculars will be replaced by an odometer. If communication with the valve is not successful, refer to the troubleshooting section of this manual.	

3.2 DTCs

3.2.1 Reading DTCs

Open the Service Menu. *If active DTCs are present, "Active DTCS" will flash at the bottom of the screen where indicated.*	
Click the DTC Button	
DTCs can be read from this screen. Active DTCs appear in red and stored DTCs in black.	

3.2.2 Saving DTC Reports

Open the Extended DTC screen	
Information associated with each DTC can be viewed in this screen. Use the green arrows to scroll between faults. Click the Save Button to save a DTC report The report can be viewed by clicking the print button. Extra DTC information can be found by clicking the i button	
DTCs can be searched by typing in the bottom bar. General troubleshooting advice for each DTC can be found on the right side of the window. You do not need to be connected to a valve or dongle to access this screen	

3.2.3 Erasing DTCs

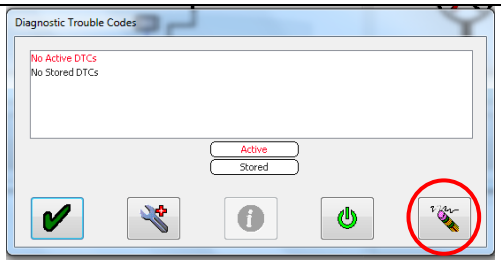
Exit the Extended DTC screen by clicking the Green Tick.

Click the Erase DTC button.

Only stored DTCs can be erased. If a fault remains active after corrective repairs, transfer it to a stored DTC as follows: Exit this screen, power the valve off and on then return to the DTC screen and click Erase.

For wheel speed sensor signal strength or signal integrity faults, it may be necessary to tow the trailer (with EBS powered) before the DTC can be erased.

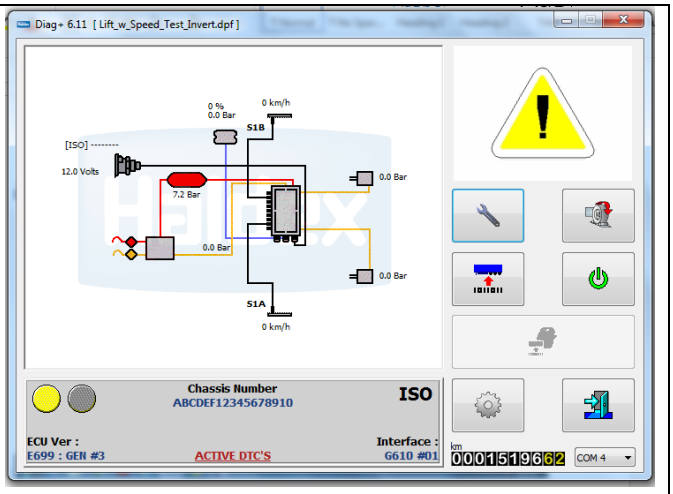
It is good workshop practice to save a second report showing no DTCs before returning the trailer to service.



3.3 Other Diagnostic Tools

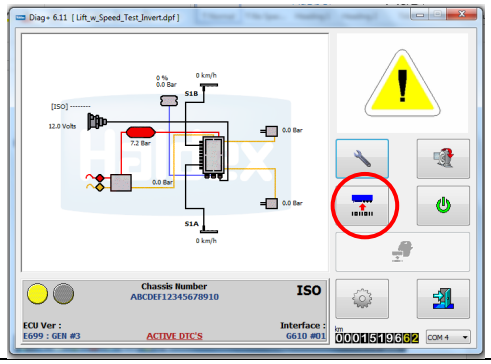
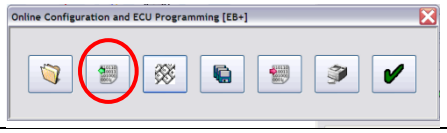
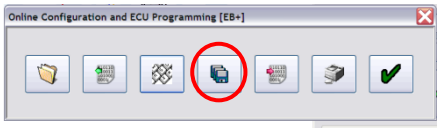
The home screen schematic can be used to view system parameters:

- System voltage
- Air tank pressure
- Air bag pressure
- Blue line pressure (appears as a yellow line)
- **Wheel speed for each sensed hub**
- Output pressure to brake boosters

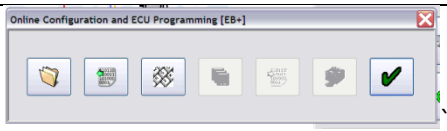
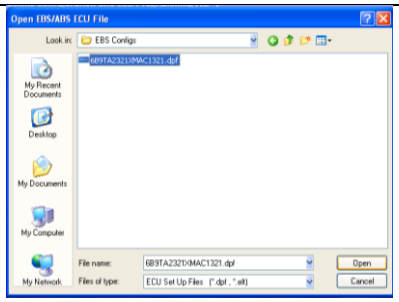


3.4 Reading and Saving a Configuration File

The configuration file is unique to each trailer. Occasionally, BPW Transpec may need to see the configuration loaded on a specific valve so changes can be made in response to EBS performance.

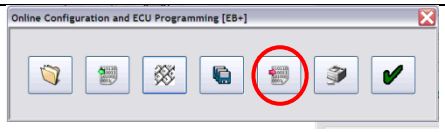
Open the Configuration Menu.	
Click the “Read Configuration” button.	
Click “Save To File” and save in an appropriate location.	

3.5 Writing a Configuration File to a Valve

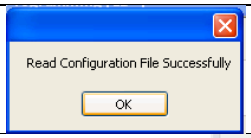
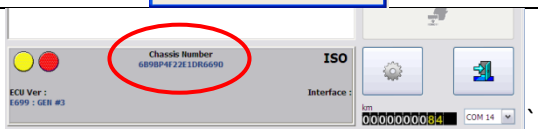
Click the Configuration Menu button. This will open the Program ECU menu.	
Click the Folder button. This will open the file system. Where the config file is saved will depend on how your files are managed. The config may be saved on a USB memory stick or transferred to a specific folder on the computer. Highlight the correct config file for the trailer and click open. The file name will be the same as the trailer VIN. A message that the configuration has been read successfully will appear. Click OK.	 Read Configuration File Successfully

<table>
<tr>
<td>Send the config file to the valve by clicking the Program ECU button on the main menu.

If this button is not active, there is a communication fault. Check the trouble shooting section for possible causes.

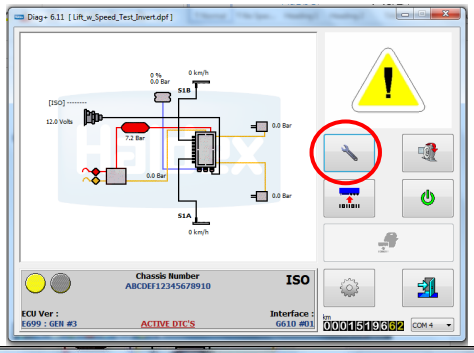
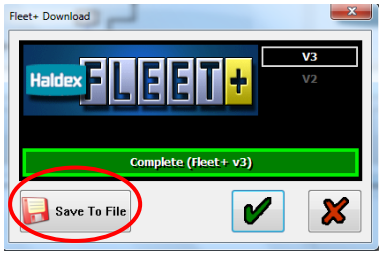
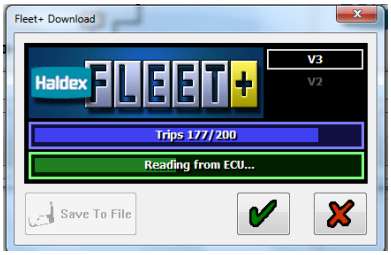
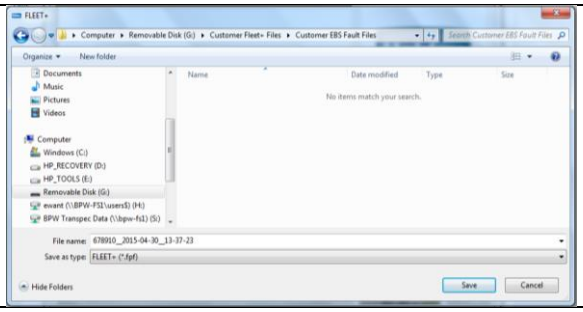
A message will appear asking if you want to send the data to the ECU. Click Yes.</td>
<td> 

Inactive ‘Send to Valve’ Button

Confirm: Send data to ECU</td>
</tr>
<tr>
<td>A message will appear saying the config was read successfully. Click OK.</td>
<td> 
</td>
</tr>
<tr>
<td>Exit the ‘Program ECU’ menu by clicking the green tick button.
Check that the correct VIN is showing where indicated and that there are no new DTCs.</td>
<td> 
</td>
</tr>
</table>

4. Fleet+ and Trailer Analyser Downloads

Fleet+ (Multivolt Valves) and Trailer Analyser (Ecotronic Valves) are data download programs. Downloads contain information about the operation history of the trailer. They require specific software AND dongles in order to get downloads, however, Diag+ V6.13 ANZ* can be used to get downloads from any version valve using a Fleet+ dongle.

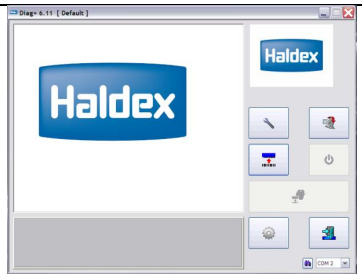
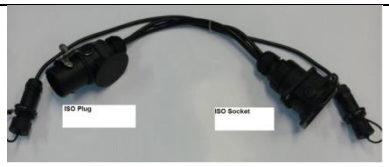
Must use Diag+ V6.13 ANZ* and Fleet+ dongle, part number 815023011. Open the Service Menu.	
Click the Fleet+ button	
Click “Save To File”	
This screen will appear while data is downloading. This may take a few minutes, particularly for higher mileage trailers.	
When the download is complete, a save menu will appear. Save the file to an appropriate location. The software will automatically create a file name with the last six characters of the VIN, the date and time.	

*Fleet+ 6.13 ANZ or later ANZ software version.

5. Trouble Shooting

<table>
<tr><td><u>No Communication with Valve</u>

The system schematic does not appear in the main screen.

• Check that the valve is powered. Power off and on, the valve should be heard to click twice. If it does not, check your power source and trailer harness wiring.</td><td>  </td></tr>
<tr><td>• Make sure the binocular icon has been clicked.</td><td> </td></tr>
<tr><td>• Make sure the dongle is plugged into an active USB port. When the dongle is plugged into the USB port only, the LED should be illuminated yellow/orange. If it does not illuminate, driver software may not be installed on the computer.
• When the dongle is joined up to the trailer diagnostic plug via the 6.5m cable, the LED should change to red.</td><td>
 </td></tr>
<tr><td>• If using the side of trailer plug and the trailer has an Info Centre/Trailer Monitor (IC/TM), make sure it is wired correctly. The one metre cable must go to the IC/TM and the 2.5m or 6.5m cable must go to the diagnostic port on the valve.</td><td> </td></tr>
<tr><td>• If using the ISO7638 interface cable, make sure the trailer is not a lead trailer with an EBS socket or plug for connection to a tag trailer.
• Ensure you are using the diagnostic plug which faces away from the trailer.</td><td>  </td></tr>
<tr><td><u>Cannot Write Config to the Valve</u>

• If using Diag+ Version 6.13ANZ*, it is possible to write to the valve using a Fleet+ dongle.
• For other versions of Diag+, the Diag+ dongle is required. It is not possible to write to the valve using a Fleet+ dongle.
• Diag+ dongle has the part number 815023001 on the label.
• Refer to the table in section 6 for full description of Software and Dongle compatibility.</td><td> </td></tr>
</table>

*Fleet+ 6.13 ANZ or later ANZ software version.

6. Software and Dongle Compatibility

EBS Software and Dongle Compatibility

Software	Version	Dongle	Read From Valve	Write to Valve	Modify Config	G3 Fleet+ Download	Ecotronic Trailer Analyser Download
Diag+	**6.11**	Diag+	Yes	Yes	Yes	No	No
		Fleet+	Yes	No	No	Yes	No
	6.13ANZ*	Diag+	Yes	Yes	No	No	No
		Fleet+	Yes	Yes	No	Yes	Yes
Fleet+	**3.24.0**	Diag+				No	No
		Fleet+				Yes	No

Part Numbers		
	Dongle Only	**Dongle Interface Kit**
Diag+	815023001	0950800909
Fleet+	815023011	0950800910

*Fleet+ 6.13 ANZ or later ANZ software version.

Revision Table	
Initial Issue:	16/07/2015
Revision B:	20/03/2020