

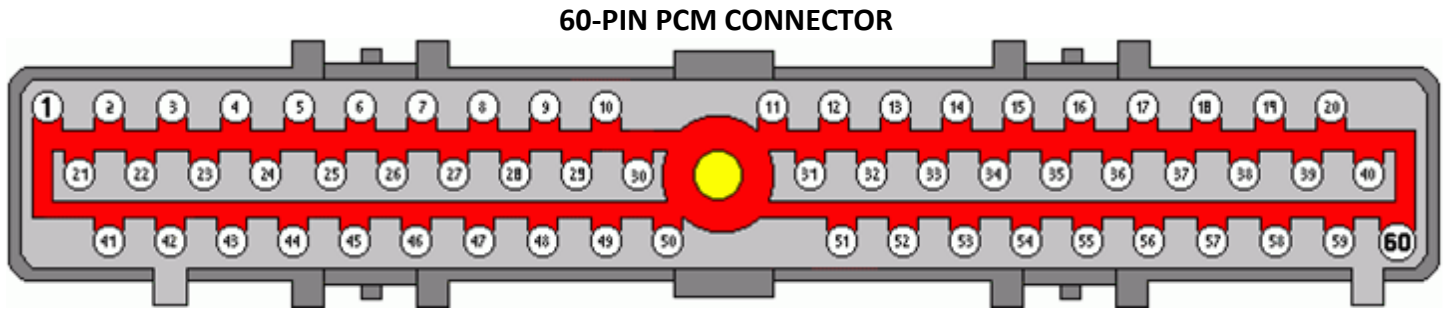
CORTEX EBC

1986-1987 Mustang GT 5.0L Specific Instructions

Rev 3.0.0

WIRING

The 1986-1987 Mustang PCM is inside the vehicle, behind the kick panel in the passenger side foot well near the door. The PCM has a single large 60-pin connector. Power, ground, RPM, and throttle position signals can be accessed at the PCM connector. On 1986-1987 Mustangs vehicle speed must be accessed at a different location.



The Cortex EBC wiring harness can be connected to the 60-pin PCM connector as outlined in the following table. RPM and vehicle speed are required for boost by gear applications.

CORTEX EBC TO PCM CONNECTIONS

CORTEX SIGNAL	CORTEX WIRE COLOR	PCM SIGNAL	PCM PIN	PCM WIRE COLOR
+12V Power	Red	Switched PCM Power	37	Red
Ground	Black (x2)	Connect to Chassis Near EBC	N/A	N/A
Engine Speed	Pink	Cam Position Signal (PIP)	56	Dark Blue
General-Purpose	Orange	Throttle Position	47	Dark Green / Light Green

The 1986-1987 Mustangs were equipped with an electronic VR speed sensor for the cruise control system. However, the sensor is not connected to the PCM and the signal is instead accessed from a wiring harness connector behind the kick panel in the driver side foot well near the door. There are several connectors behind the kick panel. The required connector will be black and has 8 pins. On one edge of the connector there will be an orange / yellow wire and a dark green / white wire that will be connected to the Speed Sensor Adapter V2 module. The Speed Sensor Adapter V2 can be connected to the same power and ground source as the Cortex EBC if desired.

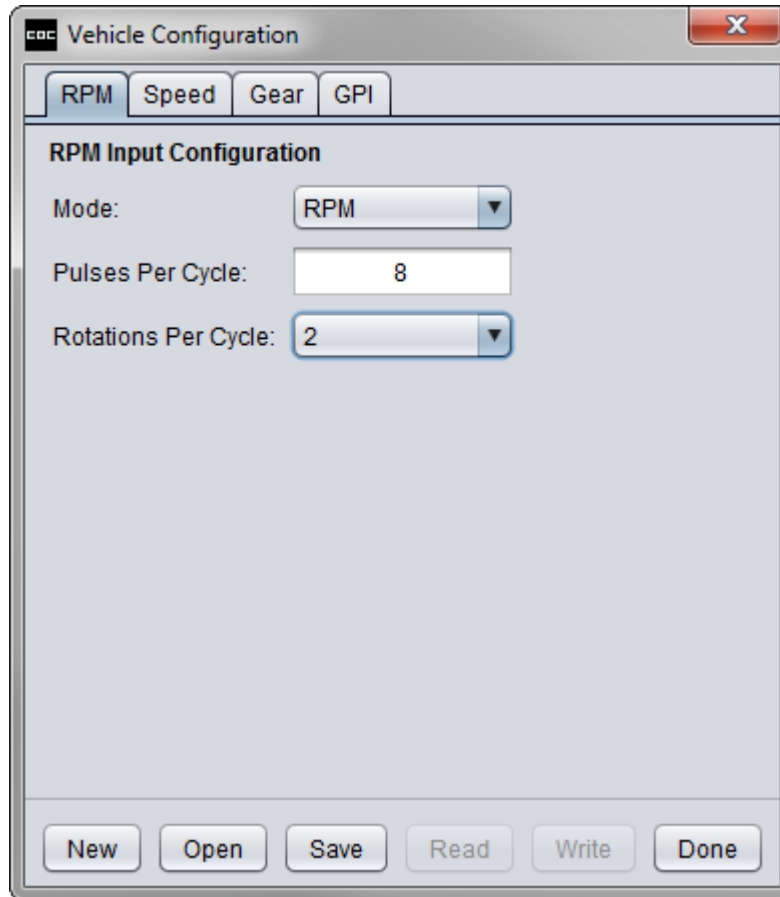
SPEED SENSOR ADAPTER V2 CONNECTIONS

SPEED SENSOR ADAPTER V2 SIGNAL	SPEED SENSOR ADAPTER V2 WIRE COLOR	CRUISE CONTROL SIGNAL	CRUISE CONTROL WIRE COLOR
Sensor IN+	Green	Vehicle Speed Signal +	Dark Green / White
Sensor IN-	Blue	Vehicle Speed Signal -	Orange / Yellow
-	-	CORTEX SIGNAL	CORTEX WIRE COLOR
Output	White	Vehicle Speed	Green

VEHICLE CONFIGURATION SETTINGS

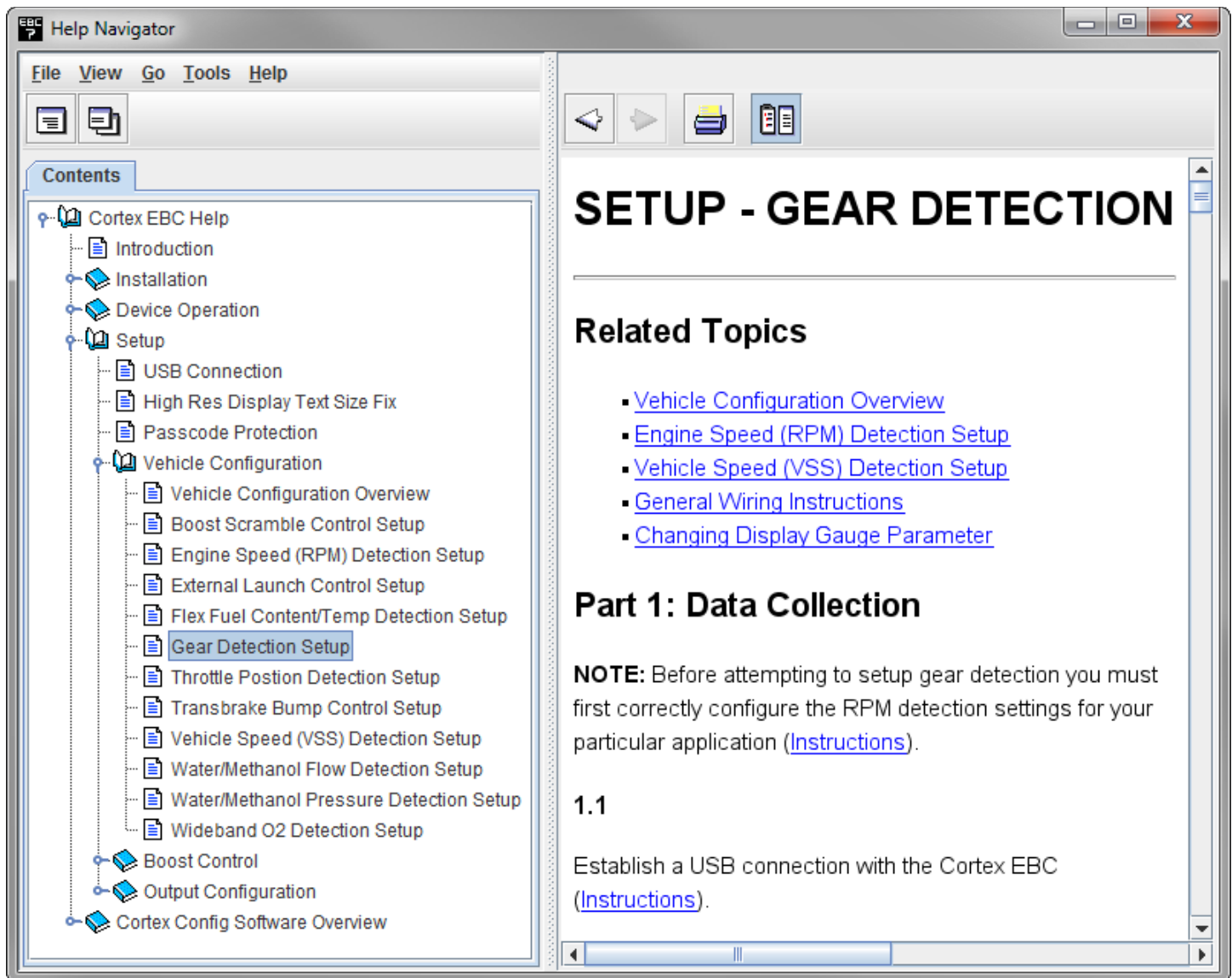
RPM DETECTION:

- Pulses Per Cycle: 8
- Rotations Per Cycle: 2



GEAR DETECTION:

- Follow the steps in the **Setup – Gear Detection** section of the Help utility to determine the correct EVS ratio settings for gear detection.



The screenshot shows the Cortex EBC Help Navigator window. The left pane displays a tree view of the help contents, with 'Gear Detection Setup' selected under the 'Vehicle Configuration' folder. The right pane displays the 'SETUP - GEAR DETECTION' page, which includes a 'Related Topics' section with links to 'Vehicle Configuration Overview', 'Engine Speed (RPM) Detection Setup', 'Vehicle Speed (VSS) Detection Setup', 'General Wiring Instructions', and 'Changing Display Gauge Parameter'. Below this is 'Part 1: Data Collection', which contains a 'NOTE' about configuring RPM detection settings and a sub-section '1.1' titled 'Establish a USB connection with the Cortex EBC' with a link to '(Instructions)'.

SETUP - GEAR DETECTION

Related Topics

- [Vehicle Configuration Overview](#)
- [Engine Speed \(RPM\) Detection Setup](#)
- [Vehicle Speed \(VSS\) Detection Setup](#)
- [General Wiring Instructions](#)
- [Changing Display Gauge Parameter](#)

Part 1: Data Collection

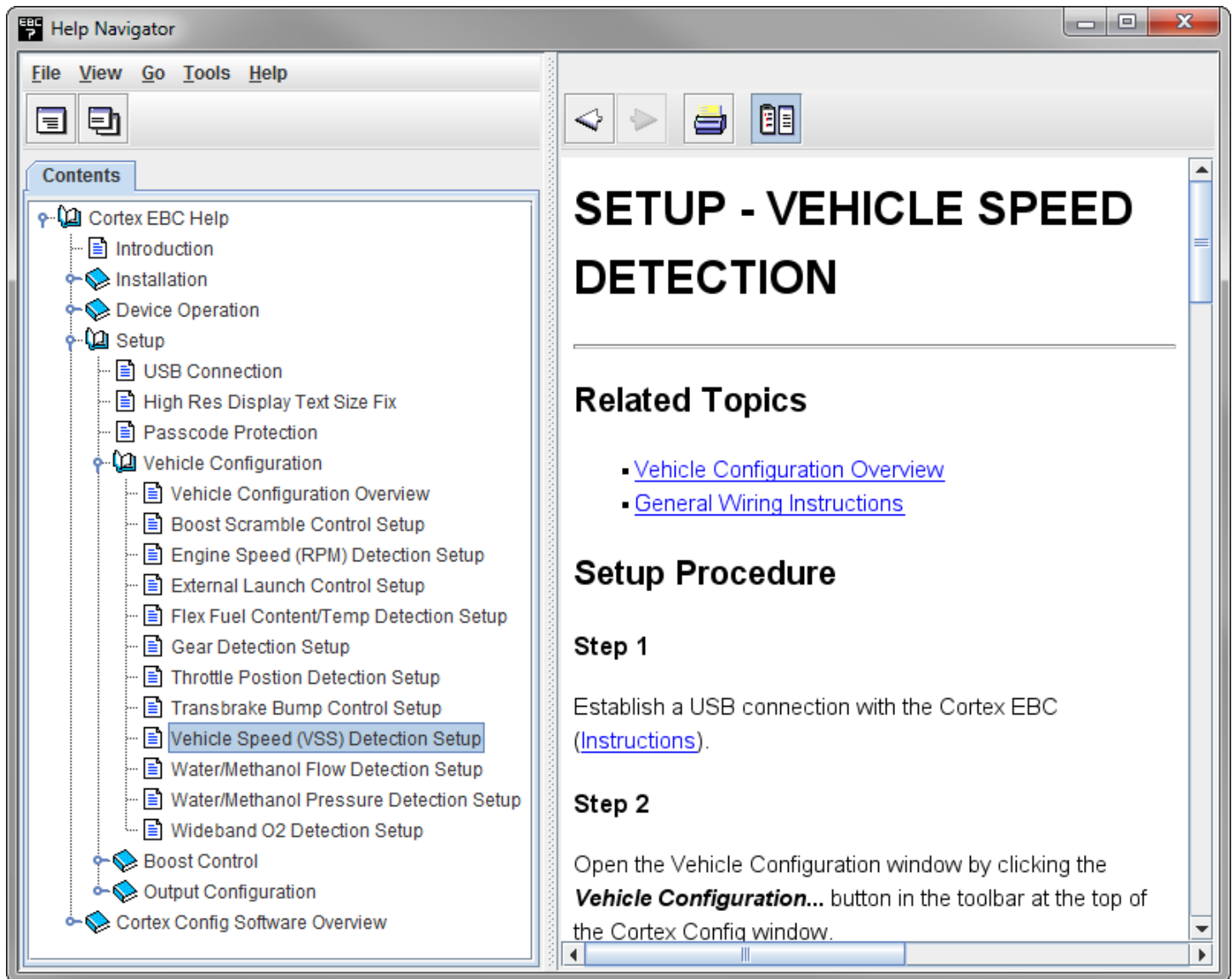
NOTE: Before attempting to setup gear detection you must first correctly configure the RPM detection settings for your particular application ([Instructions](#)).

1.1

Establish a USB connection with the Cortex EBC ([Instructions](#)).

SPEED DETECTION:

- Follow the steps in the **Setup – Vehicle Speed Detection** section of the Help utility to determine the correct Pulses Per Mile setting.
- **NOTE:** Gear detection setup should be performed before calibrating the Pulses Per Mile setting.



The screenshot shows a software window titled "Help Navigator" with a menu bar (File, View, Go, Tools, Help) and a toolbar with navigation icons. The left pane displays a "Contents" tree with "Vehicle Speed (VSS) Detection Setup" selected. The right pane shows the article content:

SETUP - VEHICLE SPEED DETECTION

Related Topics

- [Vehicle Configuration Overview](#)
- [General Wiring Instructions](#)

Setup Procedure

Step 1

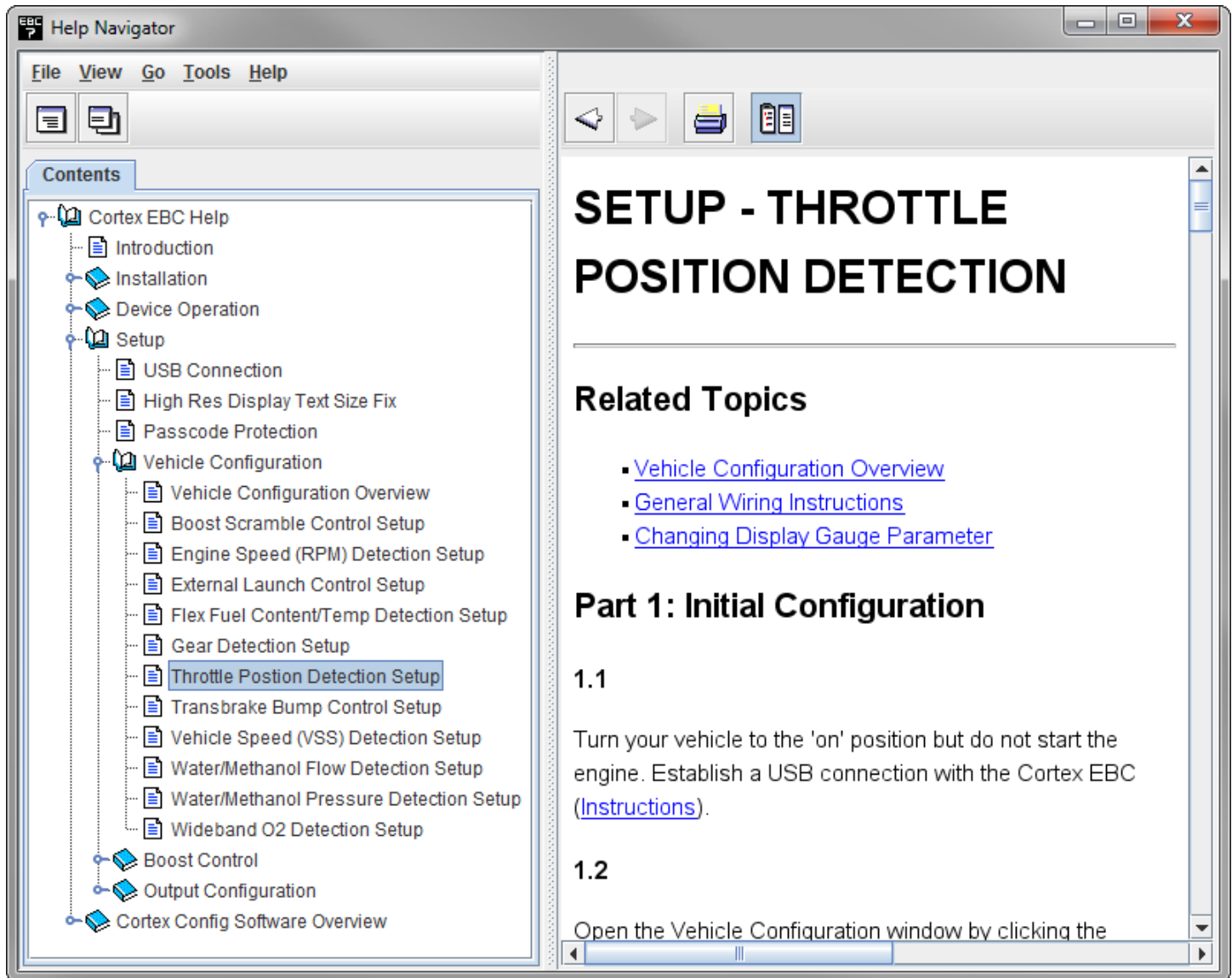
Establish a USB connection with the Cortex EBC ([Instructions](#)).

Step 2

Open the Vehicle Configuration window by clicking the **Vehicle Configuration...** button in the toolbar at the top of the Cortex Config window.

THROTTLE POSITION DETECTION:

- Follow the steps in the **Setup – Throttle Position Detection** section of the Help utility to determine the correct Closed TPS Voltage and Open TPS Voltage settings.



The screenshot shows the EBC Help Navigator application window. The title bar reads 'EBC 7 Help Navigator'. The menu bar includes 'File', 'View', 'Go', 'Tools', and 'Help'. Below the menu bar is a toolbar with icons for home, back, forward, print, and search. The left pane, titled 'Contents', shows a tree view of the help topics. The 'Setup' folder is expanded, and 'Throttle Position Detection Setup' is selected and highlighted. The right pane displays the main content area with the following text:

SETUP - THROTTLE POSITION DETECTION

Related Topics

- [Vehicle Configuration Overview](#)
- [General Wiring Instructions](#)
- [Changing Display Gauge Parameter](#)

Part 1: Initial Configuration

1.1

Turn your vehicle to the 'on' position but do not start the engine. Establish a USB connection with the Cortex EBC ([Instructions](#)).

1.2

Open the Vehicle Configuration window by clicking the