

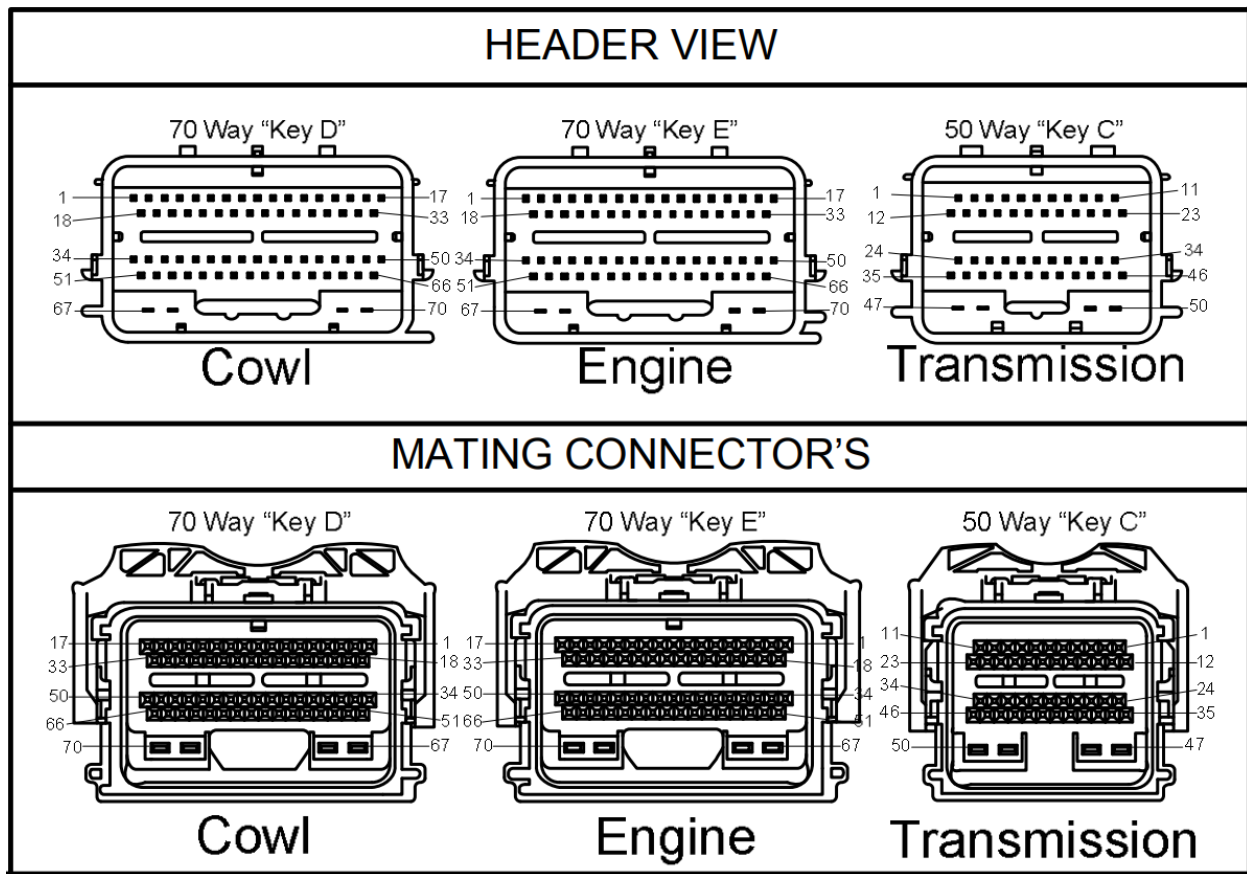
CORTEX EBC

2011-2014 F-150 5.0L Specific Instructions

Rev 2.0.0

WIRING

The 2011-2014 F-150 PCM is in the passenger side of the engine bay on the firewall. The PCM has three connectors. Power, RPM, vehicle speed, and throttle position signals can be accessed at these connectors. When the PCM is installed in the vehicle the Transmission connector will be on the right, the Engine connector will be in the middle, and the Cowl connector will be on the left.



The Cortex EBC wiring harness can be connected to the PCM connectors as outlined in the following table (C = Cowl Connector, E = Engine Connector, T = Transmission Connector). RPM and vehicle speed signals are required for boost by gear applications.

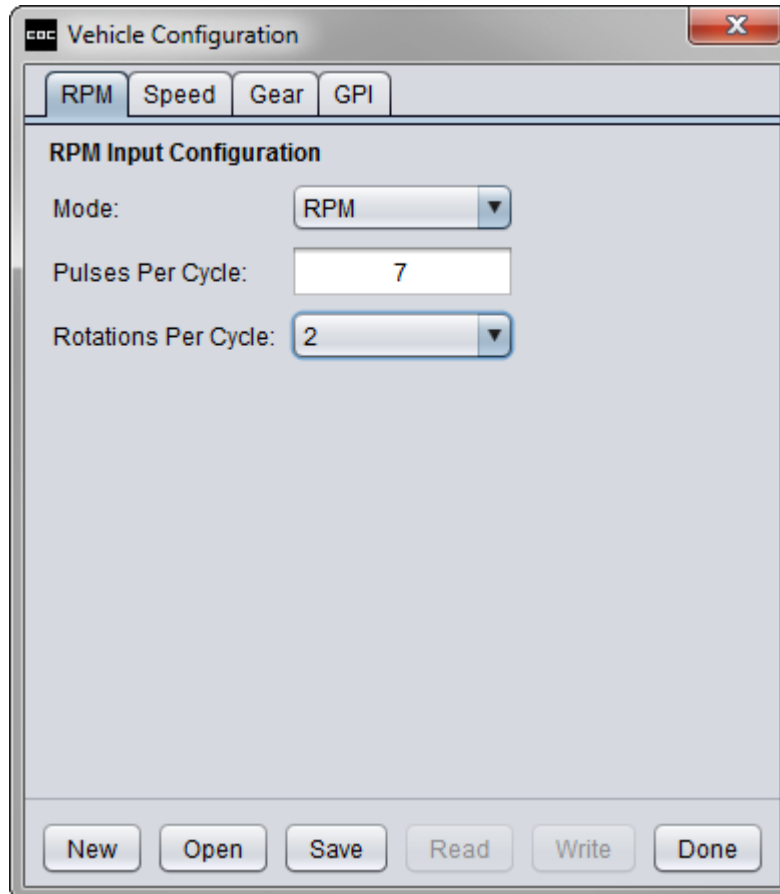
CORTEX EBC TO PCM CONNECTIONS

CORTEX SIGNAL	CORTEX WIRE COLOR	PCM SIGNAL	PCM PIN	PCM WIRE COLOR
+12V Power	Red	Switched PCM Power	C-67	Green / Blue
Ground	Black (x2)	Connect to Chassis Near EBC	N/A	N/A
Engine Speed	Pink	Intake Cam Position Sensor (CMP21)	E-42	Yellow / Blue
Vehicle Speed	Green	Output Shaft Speed	T-14	Brown / Green
General-Purpose	Orange	Throttle Position 1	E-39	Brown

VEHICLE CONFIGURATION SETTINGS

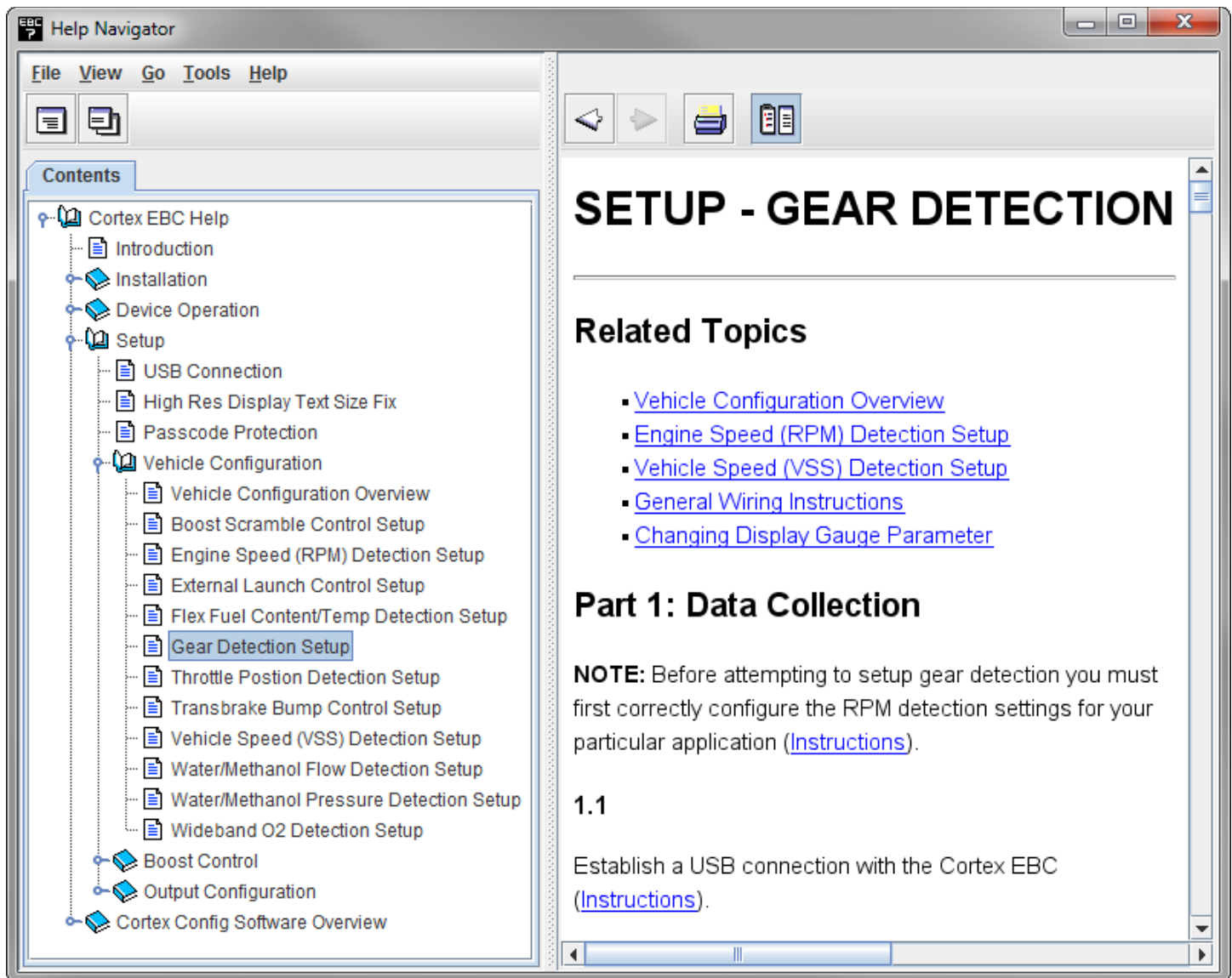
RPM DETECTION:

- Mode: RPM
- Pulses Per Cycle: 7
- 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 content for 'SETUP - GEAR DETECTION', including a 'Related Topics' list and 'Part 1: Data Collection'.

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

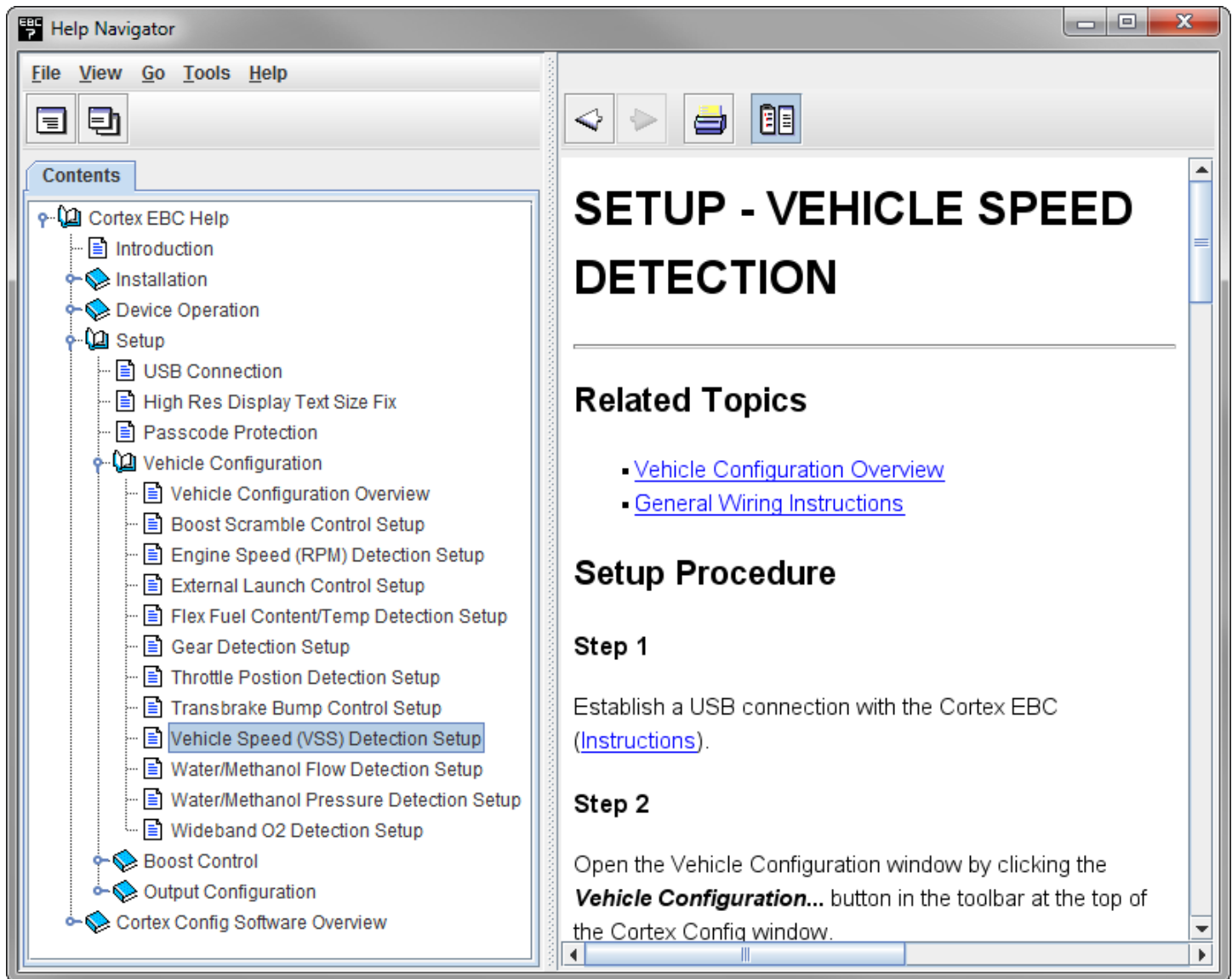
NOTE: Before attempting to setup gear detection you must first correctly configure the RPM detection settings for your particular application ([Instructions](#)).

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 help window titled "Help Navigator" with a menu bar (File, View, Go, Tools, Help) and a toolbar with navigation icons. The left pane shows a "Contents" tree with "Vehicle Speed (VSS) Detection Setup" selected. The main pane displays the article "SETUP - VEHICLE SPEED DETECTION" with a "Related Topics" section containing links to "Vehicle Configuration Overview" and "General Wiring Instructions". The "Setup Procedure" section includes "Step 1" (Establish a USB connection with the Cortex EBC) and "Step 2" (Open the Vehicle Configuration window).

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.

