TPMS - Setup Guide

Pro V2.2
Truck

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Programming CANbus with SmarTool

Intro: Programming CANbus With SmarTool

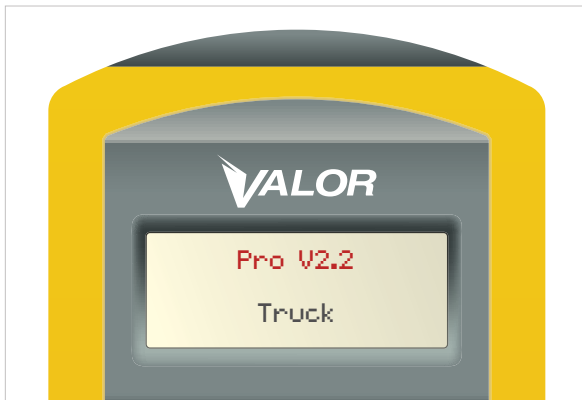1. These instructions apply only to Valor CANbus Transceivers (Figure 1) that require a Valor SmarTool for sensor programming.

2. The SmarTool must be updated to the latest software version (Pro 2.2 or higher). To check the software version on your SmarTool simply press the on/off button. The firmware version of the device will display on screen Figure 1A.

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Main Menu

1. Once the SmarTool is turned on, the Start menu should be the same as that shown in Figure 2.

2. This is the home screen and it lists 7 possible selections as you scroll down the menu using the up/down arrow keys.

- Sensor   1/7
- Vehicle ID   2/7
- ID Learning   3/7
- Check ID   4/7
- Baseline   5/7
- Download   6/7
- System Set   7/7

SmarTool Setup

Figure 3

Figure 4

These instructions are for first use only to setup the SmarTool:

1. In main menu scroll to "System Set" (Item 7/7)

2. Press ENTER

3. Set up units of measure, select "Set Unit" (C/PSI)

4. Press ENTER

5. Default settings are in BAR/Celsius (BC), to switch to PSI/Fahrenheit (PF) use the up/down arrow (Figure 3)

6. Press ENTER to select (unit will "beep" to confirm)

7. Press ESC to return to the Setting screen

8. To set up the number of axles, select "Set Axle" (Figure 4)

9. Press ENTER

10. Use up down arrow keys to select number of axles

11. Press ENTER once (note: Screen doesn't change)

12. Press ESC twice to return to Main Menu

*Note: If programming TempTrac, please refer to the *TempTrac Setup Guide*.

System Setup

Figure 5

The system setup requires the following steps:

1. Read CANbus ID
2. Read Sensor ID/Set positions
3. Format Valor CANbus memory
4. Program Valor CANbus transceiver
5. Confirm programming

Turn to next page to begin Step 1.
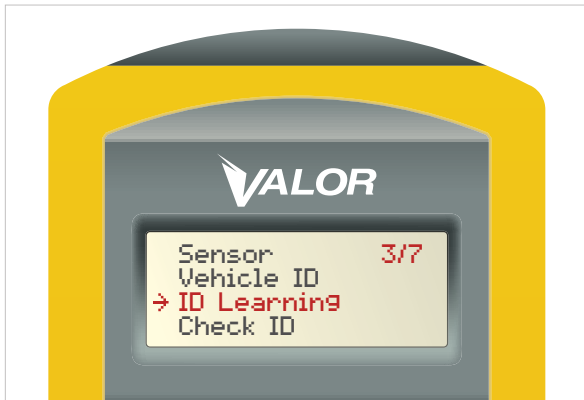
STEP 1

STEP 1 - Read CANbus ID

Figure 6

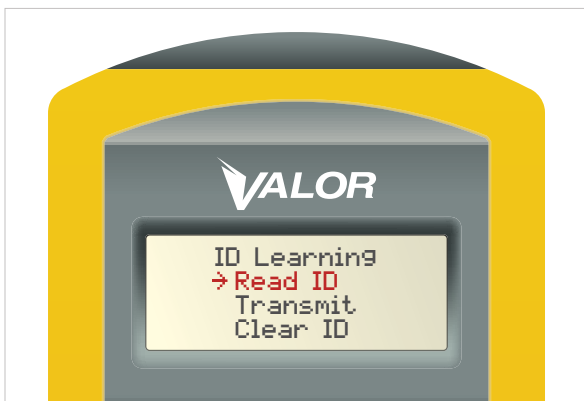1. In Main menu scroll to "ID Learning" (item 3/7). (Figure 6)

2. Press ENTER

STEP 1.1

Figure 7

1. In the "ID Learning" menu, select "Read ID." (Figure 7)

2. Press ENTER

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STEP 1

STEP 1.2
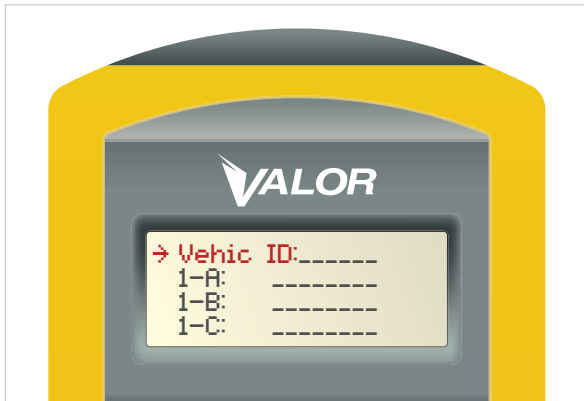

Figure 8

Figure 8A

Figure 8B

1. Position the SmarTool directly over the Valor CANbus transceiver.

2. With the cursor arrow ⇥ positioned next to "Vehicle ID:" (Figure 8) turn the power to the Valor CANbus transceiver OFF and back ON. (I.e. vehicle ignition or power interrupt button on Valor harness (Figure 8A).

3. DO NOT PRESS THE ENTER BUTTON on the SmarTool.

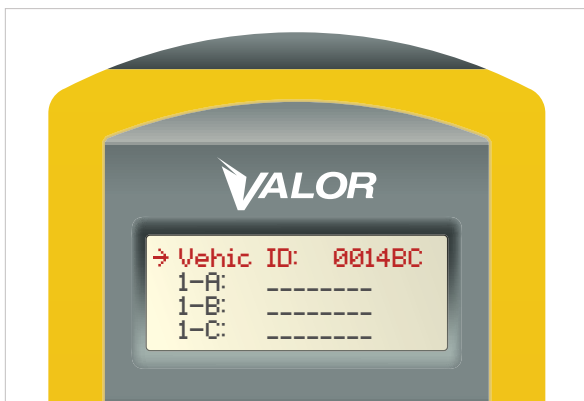4. The Vehicle ID number will populate automatically. (Figure 8B)

STEP 2 - Read Sensor ID/Set Positions

Figure 9

Figure 10

1. Using the up/down arrow buttons, select the tire position you want to program. Once the arrow → is in the selected position (Figure 9), go to the corresponding tire on the vehicle.

   Example: If programming 1–A to the left front tire, position the SmarTool approx 1 inch from the side of the tire you wish to scan (sensors are normally installed near the valve stem).

2. Press ENTER

3. A series of zeros will scroll across the SmarTool indicating a search for sensor. When it locates the sensor, the SmarTool will beep once. (Figure 10)
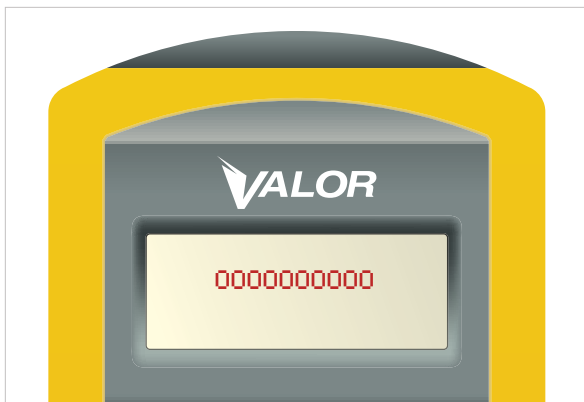
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STEP 2

STEP 2.1

Figure 11

1. Once it locates the sensor, the SmarTool will display the ID number in the tire position field selected by the operator.

2. If performing a complete tire installation, be sure to repeat this step for each tire before moving to the next step.

3. Once all Sensor ID numbers (tires) have been scanned/ loaded, press ESC on the SmarTool and return to the "ID Learning" menu. Return to the vehicle's cab.

4. ***Note:** When programming a Valor CANbus transceiver for an axle with only two wheel positions (tires) program the sensor ID numbers in positions – A for left side and B for the right side. (Figure 11)

   By positioning the sensors this way the graphical display on the Ametek gauge will appear with 2 wheel positions on the axle, not 4. For axles with 4 wheel position (tires), program the sensor ID numbers as normal: outside left A, inside left B, inside right C, outside right D.

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STEP 2

STEP 3 - Format Valor CANbus memory

Figure 12
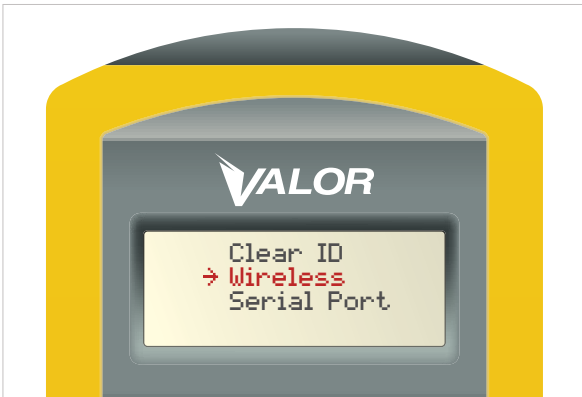

Figure 13

1. To ensure there is no existing data in the Valor CANbus transceiver, you must format/clear the device memory.
   *Note: this step is performed only upon first use.

2. Please ensure that the power to the Valor CANbus transceiver is turned OFF.

3. Use the up/down keys on the SmarTool to move the cursor arrow ⇥ to the "Clear ID" option in the "ID Learning" menu. (Figure 12)

4. Press ENTER

5. In the "Clear ID" sub menu, move the cursor arrow ⇥ to the wireless option. (Figure 13)

6. Turn the power to the Valor CANbus transceiver back ON, it will beep once. Upon hearing the beep, position the SmarTool directly over the Valor CANbus transceiver and press ENTER.
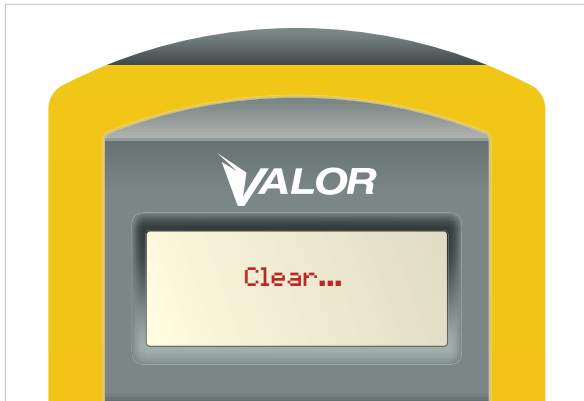
STEP 3

STEP 3.1

Figure 14

Figure 15

1. The SmarTool will display "Clear…" (Figure 14)

2. If there was any previously stored ID data on the Valor CANbus transceiver, the SmarTool will clear it and the screen with display "Succeed." (Figure 15)

3. If the SmarTool displays "Failed," proceed to next step.

4. **Note:** this message does **not** mean setup has failed, it simply means there was no previous stored data to clear.

5. The Valor CANbus is now ready for programing

STEP 4

STEP 4 - Program Valor CANbus Transceiver

Figure 16

Figure 17

Figure 18

1. The SmarTool will default back to the "Clear ID" screen. (Figure 16)

2. Still holding the SmarTool directly over the Valor CANbus transceiver, press ESC to return to the "ID Learning" menu (Figure 17).

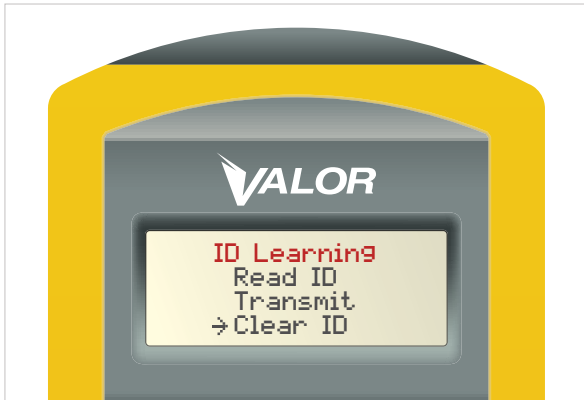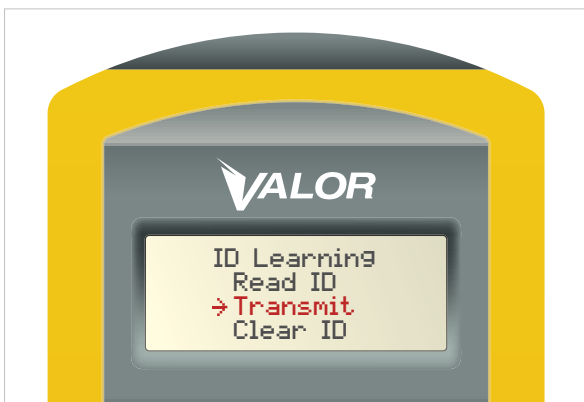3. Scroll up and select the "Transmit" option (Figure 18)

4. Press ENTER
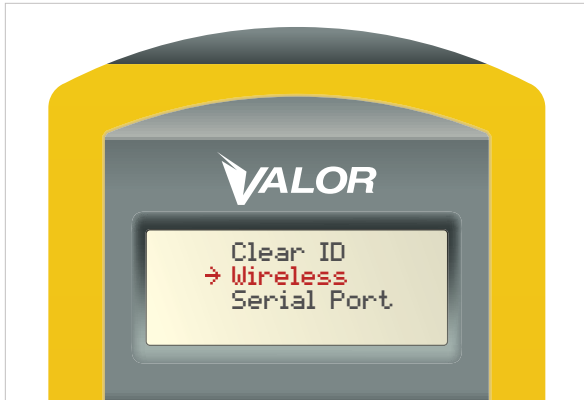
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STEP 4

STEP 4.1

Figure 19

1. The cursor arrow should be next to the "Wireless" option. (Figure 19)

2. Press ENTER

3. The SmarTool will begin transmitting the sensor ID information stored on the hand-held to the Valor CANbus transceiver. "Transmitting" will appear on screen.
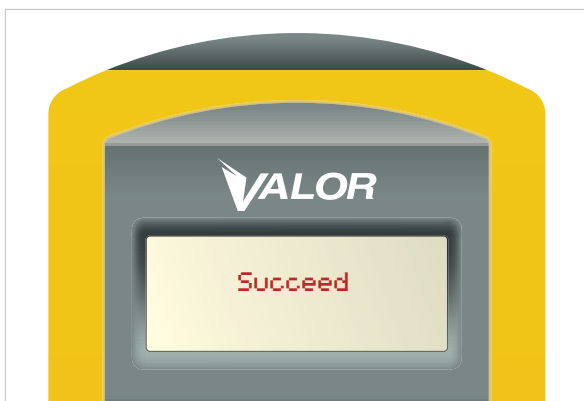
STEP 4.2

Figure 20

1. Once the SmarTool has completed transmitting the information to the Valor CANbus transceiver, the screen will display "Succeed." (Figure 20)

2. If the SmarTool displays "Failed," proceed to the programming confirmation outlined in Step 5.

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STEP 5 - Confirm Programming

Figure 21

Figure 22

Figure 23

1. To check if the new sensor ID information has been uploaded correctly, go to the Main menu on the SmarTool and select option "Check ID" "4/7." (Figure 21)

2. Position the SmarTool directly over the Valor CANbus and press ENTER.

3. The screen will display "Waiting Rec," (Figure 22) Restart the Valor CANbus (power OFF and back ON).

4. The SmarTool will display the sensor ID (tires) by position assigned during programming. (Figure 23)

   Example:
   1–A   01011A2D
   1–B   0101243R
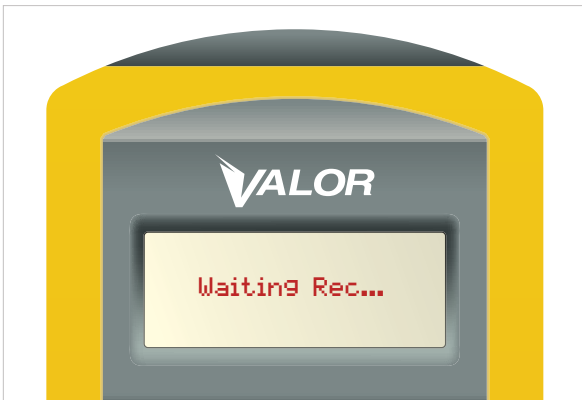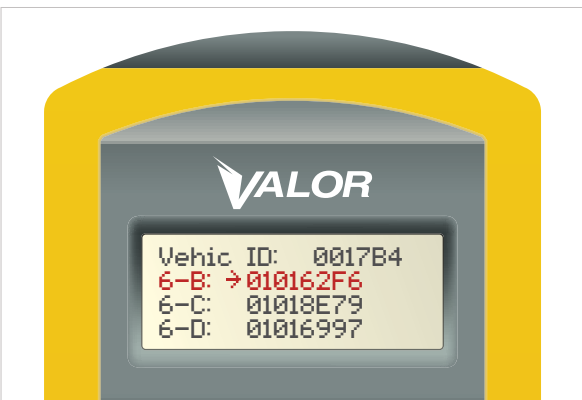   Showing all position with sensors.

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STEP 6

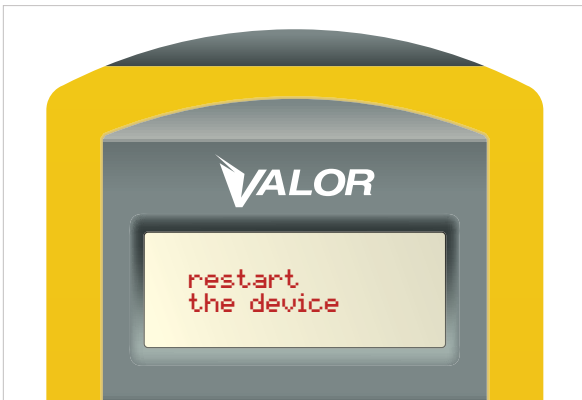# STEP 6 - Baseline Setup

Figure 24

Figure 25

Figure 26

The following steps are used to set the tire pressure baseline:

1. Please insure that power to the CANbus is OFF

2. In the Main Menu of the SmarTool scroll to "Baseline" (item 5/7)

3. Press ENTER

4. Select "Set"

5. Press ENTER

6. To setup new vehicle, select "Yes" (Figure 24)

7. Press ENTER

8. "Restart the device" appears on the screen indicating you should turn power to the CANbus ON (Figure 25)

9. Once the CANbus has been turned ON, bring the SmarTool within 12 inches of the CANbus. The baseline screen will appear indicating CANbus ID# (Vehic) and unit of measure PSI/BAR (Figure 26)
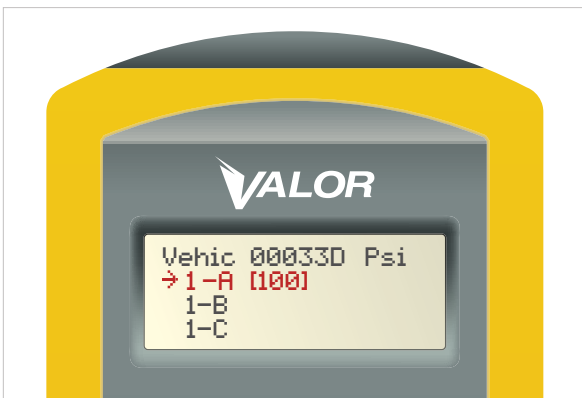
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STEP 6.1

Figure 27

Figure 28

1. Each tire position with a loaded sensor will be shown with an NC next to it. (Figure 27)

2. To adjust the baseline air pressure for 1-A (default is 100 PSI), press ENTER on SmarTool, the NC will change to [100] indicating current PSI setting. (Figure 28)

3. To adjust the PSI number, use the up/down arrow keys on the SmarTool.

4. Press ENTER

5. Repeat for all tire positions

6. Once the baselines for all tires have been set, press ESC to return to the Baseline menu.

7. In the Baseline menu, select "Transmit".

8. Press ENTER

9. Select "Wireless"

10. Press ENTER

11. Hold SmarTool within 12 inches of CANbus. The upload will take approximately 3 seconds. Note: During this process the screen will not change, **DO NOT** press Enter again.

12. If the upload was successful, "Succeed" will appear on the screen and the CANbus will beep twice.

13. If the display shows "Failed," repeat the steps from the beginning.