SECTION BOOKLET

A Flex Fuel

1 guide · compiled Oct 29, 2026 · https://help.impactwiringsolutions.com/section/advanced-features/flex-fuel
Each guide keeps its own page numbers and version stamp. The newest versions are always online.

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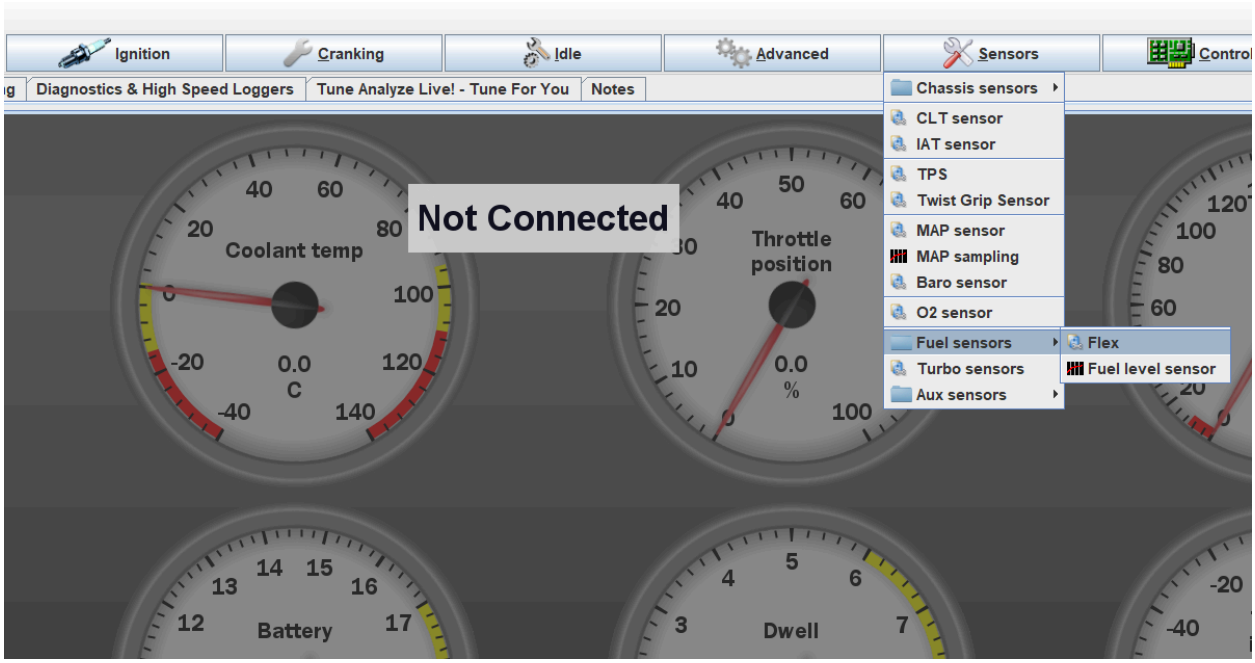
Enabling Flex Fuel On Impact ECU

Open TunerStudio:
Launch the TunerStudio software and establish a connection to your ECU. Ensure that the ECU is properly powered and communicating with TunerStudio.

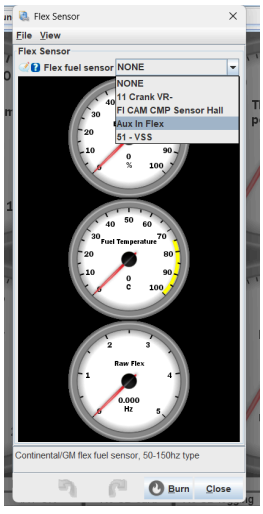
1. **Navigate to Flex Sensor Settings**:



   - In the TunerStudio menu, click on **"Sensors"**.
   - From the dropdown, navigate to **"Fuel Sensors"**.
   - Locate the **"Flex Sensor"** option in the list.

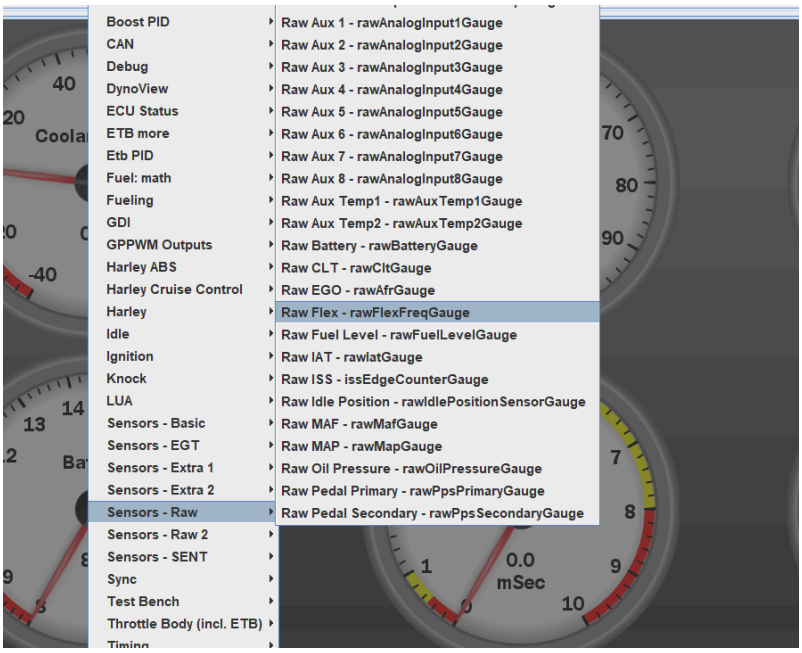
2. **Assign the Correct Input**:

   - Set the **"Flex Sensor"** field to **“AUX In Flex”**



Test the Flex Sensor:

- To verify that the flex sensor is functioning correctly, right-click any gauge on the dashboard in TunerStudio.
- Choose **"Raw Flex"** from the **"Sensors Raw"** menu.
- Observe the frequency being displayed:
  - With standard gasoline, the reading should be approximately **50 Hz**.
  - With E70 (70% ethanol), the reading should increase to around **120 Hz**.



3. **Define Stoichiometric Ratios For Both Pump Gas And Ethanol**:



- In TunerStudio, click on the **"Fuel"** button in the top menu and select **"Injection Configuration"**.
- Under the **"Fuel Characteristics"** section:
  - Set the **"Stoichiometric Ratio"** field to the stoichiometric ratio for when the flex sensor reads **0% ethanol** (standard petroleum-based fuel, typically **14.7:1**).
  - Set the **"E100 Stoichiometric Ratio"** field to the stoichiometric ratio for pure ethanol (typically **9.0:1**).
- These values will allow the ECU to correctly interpolate fuel mixtures between gasoline and ethanol based on the flex sensor reading

Flex Fuel Cranking Table

1. Next navigate to **“Cranking Menu —> Cranking Settings”**
2. Enable **“Use Flex Fuel Cranking Fuel Table”**
3. Now under **“Cranking Menu”** you will notice a new sub-menu item will appear, named **“Cranking Fuel Multiplier (Flex Fuel)”**