

How do I check my wideband O2 sensor to confirm functionality?

Periodically, you will want to check the O2 sensor to make sure it is performing properly. If you are running pump gas check the sensor after 3 oil changes, race gas should check it every oil change.

Steps to Check O2 Sensor:

1) Establish Test Session

- Remove the O2 sensor from the exhaust bung. Plug the exhaust where the O2 sensor came out of.
- Open the AFR Monitor in the Tuning Suite and connect to the bike side harness.
- Inspect the sensor element for residue and replace the sensor if it is really gummed up.
- Start monitoring the Active Tune in the AFR Monitor (bike must be running)

2) Verify Sensor Responsiveness

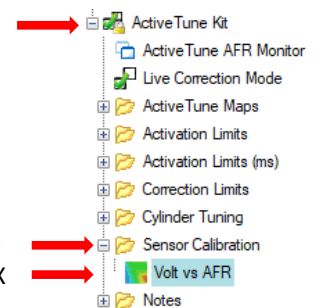
- **Open Atmosphere Test:** With the O2 sensor in open air you should see an AFR reading of 20 in the AFR Monitor.
- **Butane Test:** Take a common butane lighter and put the open end of the lighter on the open end of the O2 sensor, then spray the gas into the O2 sensor. You should see the AFR drop to 10 in the AFR Monitor.

3) Verify Sensor Calibration

- **Stoichiometry Test:** Use common industrial nitrogen (tire/ welding nitrogen) and spray it into the open end of the O2 sensor. You should see the AFR move to 14.7 in the AFR Monitor.
- If your O2 Sensor does not read 14.7 with nitrogen but it reads anywhere from 14.2-15.2 you can move to step 4.
- If it reads outside these numbers then you need to purchase a new O2 sensor and repeat calibration.

4) Update calibration in ECU tune

- Disconnect from AFR Monitor.
- Calculate correction value ($14.7 \div \text{Measured AFR} = \text{Correction Value}$)
- Go into the Tuning Suite software and access your current tune file.
- Navigate to Paid Features -> Active Tune Kit -> Sensor Calibration -> Volt vs AFR



- Select all the values in the table below. Click on the drop down bar as circled below.
- Enter formula (d*xxx) then click enter on your keyboard. Your total correction = XXX
- **Example:**

$$14.7 \div 14.4 = 1.020$$

Total correction of 1.020 is going to look like (d*1.020) as seen in the box below.

