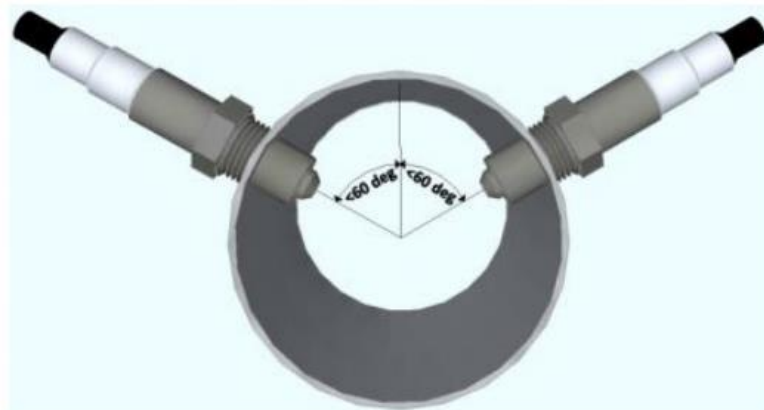
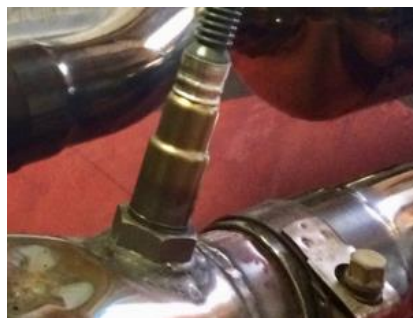


## AFR Sensor Controller Harness Instructions

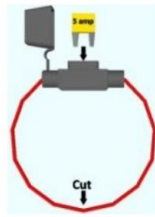
There are two AFR connections on the JBOX unit to accommodate Lambda/AFR readings. Both, one or no sensors can be connected to these inputs. Do not use third party sensors and controllers with the JBOX as you may damage the unit. Do not connect or disconnect the assemblies while controller is plugged into power, only do so when unit is unpowered. The Lambda Sensor gets very hot during normal operation, be careful when handling it. Do not install the Lambda Sensor in such a manner that the unit is powered before your engine is running. An engine start can move condensation in your exhaust system to the sensor, if the sensor is already heated this can cause thermal shock and cause the ceramic internals inside the sensor to crack and deform. While the Lambda Sensor is in an active exhaust stream, it must be controlled by the MD Controller. Carbon from an active exhaust can easily build up on an unpowered sensor and ruin it. Lambda sensor life when used with leaded fuels is between 100-500 hrs. The MD Controller harness is water resistant, not waterproof, so please try your best to locate the assembly away from sources of water and heat. The Lambda Sensor should be installed between the 10 o'clock and the 2 o'clock position, less than 60 degrees from vertical, this will allow gravity to remove water condensation from the sensor.



For all Oxygen sensor installations the sensor must be installed before the catalytic converter. For normally aspirated engines the sensor should be installed about 2ft from the engine exhaust port. For Turbocharged engines the sensor should be installed after the turbocharger. For Supercharged engines the sensor should be installed 3ft from the engine exhaust port.



To protect the assembly from damage we supply a fuse. Fuse - Insert 5 amp fuse into fuse holder, cut wire at midpoint, and secure lid. One end of the fuse holder connects to the red wire on the grey cable, the other end of the fuse holder connects to a switched 12[v] source.



Wire Color	Name	Connects to	Note
Red	Power	Switched 12[v]	Use fuse holder, 12[v] should be live only when engine is running
Black	Electronics Ground	Ground	Ground where interfacing device is grounded
White	Heater Ground	Ground	Ground to chassis or engine block
Green	Linear Output	Interfacing device; ECU/Gauge/datalogger/etc...	0[v] @ 0.68 [Lambda] Linear to 5[v] @ 1.36 [Lambda], equivalent to 10-20 [AFR] for gasoline fuel



Note: Controller assemblies ship with M12 connectors and one lose LSU 4.9 Bosch sensor. The Brown wire is for simulated narrow band output and is not used for dynamometer applications and the blue wire is an LED output for sensor temperature, also not used. Replacement Bosch sensors can be purchased from Mustang through the Holeshoot Software or by contacting us via email or telephone. Our sensors can be purchased locally assuming the proper connector is installed.

Note: We also offer various “post tailpipe” adaptors that can be used in a pinch or for events like open-houses where time is of the essence and accuracy is less of a concern versus expedience. Please contact us for pricing at (330) 963-5400 or via email at [sales@mustangdyne.com](mailto:sales@mustangdyne.com). Parts can also be purchased directly through your Hole Shot Software.

