FJO RACING PRODUCTS®

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PRODUCT CATALOG

rev S

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Company History

FJO Enterprises Inc. was founded in 1992 by our president, Fred Oberbuchner, and is located in Winnipeg, Manitoba, Canada.

As a Professional Engineer with over 15 years experience in designing electronic systems for aerospace and military applications, Fred originally focused the company on developing products for use in defence markets around the world.

High-tech electronics were always at the core of our designs. As the company grew, along with our personal interests in the automotive scene, our focus began to turn to the performance industry. Our continued growth proves that there is an opportunity to deliver outstanding quality products performing a useful function for a fair price.

We believe that products designed for the automotive industry must be able to withstand the harsh conditions that exist in this environment while still being affordable. This means not only must a product be functional; it must also be able to withstand heat, cold, water, dirt and vibration.

From this, the FJO Racing Products brand was born. Our reputation is based on products that keep on working even under the harshest conditions.

"There are only two types of products in this business: FJO and not exactly!"

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Wideband Air/Fuel Ratio Analysis System

Why do I need a Wideband AFR Analysis System?

Whether you're building a high performance street car or an all out race car, proper tuning is critical for maximum reliable power and torque. In the "old days" EGT (Exhaust Gas Temp) gauges, narrow band O2 sensors, and spark plug reading were the only means to get information about what AFR (Air Fuel Ratio) the engine was actually running. Each of these primitive techniques suffers from fundamental problems. Engines could not be tuned to their potential, resulting in less horsepower and lazy throttle response or melted engines.

EGT gauges react far too slowly to be useful as a safe tuning device. Typically pistons or valves will be damaged before the EGT gauge reacted to the elevated heat levels. In addition, many other factors can affect exhaust gas temperature so it is not an accurate measure of AFR .

All narrow band O2 sensors (single, 3 or 4 wire) suffer from the same inescapable "flaw". They are accurate only under light load conditions. This is great for emissions and fuel economy but potentially disastrous for performance. Under full throttle conditions, just when richer mixtures are needed to keep an engine from detonating, narrow band sensors can be wildly wrong in their readings. The output of these sensors makes it virtually impossible to measure the difference between 12 AFR and 13 AFR, which in a high performance engine could be the difference between power and meltdown.

Spark plug reading is a tedious, highly inaccurate and risky method for measuring AFR. To properly "read the plugs" a fresh set of spark plugs must be installed each time before a single run or dyno pull, and the engine must be immediately shut off at the precise point you want to measure. Then the plugs must be inspected for varying shades of "beige" or "light beige". Unfortunately fuel additives and gasoline brands can greatly affect the residue left on spark plugs regardless of AFR. Going lean during this test provides no safety margin at all. Also, this process must be repeated every time the weather changes or you purchase new fuel.

Enter the 21st century...

Thankfully today no one needs to rely on any of these primitive and inaccurate methods. With the development of wideband oxygen sensors and modern electronics it is now possible to accurately measure AFRs over a wide range from very lean (20:1) to very rich (10:1) in just a fraction of a second - consistently and reliably.

Why should I buy the FJO Wideband AFR Analysis System?

Rugged and Dependable - FJO initially designed and manufactured electronics for military and aerospace applications. We design and build all of our automotive electronics to withstand the same type of harsh conditions. We use only high-grade components and we test each and every product we sell in our own facilities before it is shipped to the end user. To ensure rugged dependability we use aluminum housings and protect the electronics from moisture and vibration by filling the case with a special epoxy compound. Since engine compartments are also filled with RFI (radio frequency interference), we use a custom shielded sensor cable to ensure a clean error-free signal between the sensor and the control unit. This cable is available in 4, 8 and 12 foot lengths.

Expandability - with our software up to 8 channels can be datalogged or displayed simultaneously.

Versatility - many OEM or aftermarket ECUs and data recorders lack the ability to enter a custom AFR calibration curve. To eliminate this problem, the FJO Wideband AFR Analysis System has the capability to enter a custom AFR voltage output curve easily and quickly by the end user.

Leanest Channel Mode - many OEM or aftermarket ECUs lack the ability to monitor more than 1 AFR channel and for dual exhaust applications, this means one side goes un-monitored. The FJO Wideband AFR Analysis System has a unique feature that monitors up to 8 AFR channels (1 per cylinder on a V8 engine for example) and sends the output from the leanest channel to the ECU.

Gauge Display - we design and manufacture our own high quality AFR gauge. With the Leanest Channel mode, you have the option of monitoring up to 8 AFR channels with a single gauge.

Kits

KWB4000 – Mini Wideband AFR Controller Kit (Single channel – for ECU integration)

Includes mini wideband AFR controller (single channel), wiring harness, and oxygen sensor bung and plug. This is an "AFR only" controller designed for ECU or datalogger integration. Dual analog outputs provide "FJO legacy" and 0.5-4.5 volt linear output curves.

Order SO20003 or SO20004 sensors, sensor cables and other options separately.

The SO20004 sensor has an 18-inch cable and can be used without an extension. The SO20003 sensor has a 6-inch cable and may require the use of an IWS300x extension.

KWB4001 – Mini Wideband AFR Controller Kit (Single channel – with RPM input and software)

Includes mini wideband AFR controller (single channel, with RPM input), wiring harness, oxygen sensor bung and plug, a PC serial cable, and software CD. Dual analog outputs provide "FJO legacy" and user configurable output curves.

Order SO20003 or SO20004 sensors, sensor cables and other options separately.

The SO20004 sensor has an 18-inch cable and can be used without an extension. The SO20003 sensor has a 6-inch cable and may require the use of an IWS300x extension.

Components and Accessories

SO20003 – Wideband Oxygen Sensor [NTK]
This sensor is for use with the KWB30xx kits, KWB400x kits and the 341B2 Engine Management System.
NOT compatible with earlier controllers using the SO20001 sensor.

SO20004 – Wideband Oxygen Sensor [Bosch]
This sensor is only recommended for applications which do not use leaded race fuel. This sensor is for use with the KWB30xx kits, KWB400x kits and the 341B2 Engine Management System.
NOT compatible with earlier controllers using the SO20001 sensor.

SO20001 – Wideband O2 Sensor (first gen)
This sensor is for use with the CWC0001 or CWC0002 controllers only.

HSB0001 – Oxygen Sensor Bung
A mild steel bung to install an O2 sensor into exhaust [requires welding]. A threaded plug is included for when the sensor is not installed.

HWB3003 – Clamp-on Inductive RPM Pickup
Used to pick up a tach signal from a spark plug wire. An adapter is included for use with KWB3001, KWB3002, and KWB3044 kits.

DWB0001 – Wideband AFR Red LED Display
Rectangular 3-digit red LED display ("14.7")
For use with the KWB3001, KWB3002, and KWB3044 kits only.

DWB0002 – Wideband AFR Green LED Display

Rectangular 3-digit green LED display ("14.7")
For use with the KWB3001, KWB3002, and KWB3044 kits only.

DWB0003 – Wideband AFR $2^1/_{16}$" Gauge Display

Round 3-digit LED display with a 40 led dot bar graph sweep. Ultrabright LEDs for daytime visibility.
For use with the KWB3001, KWB3002, and KWB3044 kits only.

The dot bar graph range is 11-15 AFR displayed as

11-12 AFR	10 yellow LEDs
12-13 AFR	10 green LEDs
13-14 AFR	10 yellow LEDs
14-15 AFR	10 red LEDs

DWB4001 – Wideband AFR $2^1/_{16}$" Gauge Display

Round 3-digit LED display with a 40 led dot bar graph sweep. Ultrabright LEDs for daytime visibility.
Foe use with the KWB400x kits and 341B2 Engine Management System.

The dot bar graph range is 11-15 AFR displayed as

11-12 AFR	10 yellow LEDs
12-13 AFR	10 green LEDs
13-14 AFR	10 yellow LEDs
14-15 AFR	10 red LEDs

IWC0002 – Wideband AFR Controller Installation Kit

Includes assembled controller connector, and 6 feet of colour-coded 18AWG wires in "pig tail" form (power and ground only). Pins and wire seals for 2 additional contacts included.

Compatible with the KWB3001, KWB3002, and KWB3044 kits only.

IWS3004 – Wideband AFR Sensor Extension Cable (4 foot)

A 4 foot long, high temperature, shielded cable to connect the WBAFR controller to an O2 sensor. Compatible with KWB3001, KWB3002, KWB3044 kits, and 341B2 Engine Management System.

IWS3008 – Wideband AFR Sensor Extension Cable (8 foot)

An 8 foot long, high temperature, shielded cable to connect the WBAFR controller to an O2 sensor. Compatible with KWB3001, KWB3002, KWB3044 kits, and 341B2 Engine Management System.

IWS3012 – Wideband AFR Sensor Extension Cable (12 foot)

A 12 foot long, high temperature, shielded cable to connect the WBAFR controller to an O2 sensor. Compatible with KWB3001, KWB3002, KWB3044 kits, and 341B2 Engine Management System.

IWC0004 – Wideband AFR Sensor Integration Kit

A 6 foot long cable harness which directly connects the WBAFR controller to supported products such as the FJO water injection system and NX Maximizer-II. Compatible with the KWB3001, KWB3002, and KWB3044 kits only.

Water Injection System

Components and Accessories

CWI0010 – Water Injection Controller

Full 3D mapping controller with RPM, SPEED, TPS, Water Pressure, and Wideband AFR inputs
(controller & cables only, includes software)

CWP0002 – Water Injection Pump

High output, high pressure water injection pump. 12 Volts, 8 Amps.

IWI0001 – Water Injection Installation Kit

Includes high pressure line (black), fittings for CWI0010 / CSV0003 / CWP0002 installation, and pump relay.

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CWN0400 – Water Injection Solenoid Nozzle (300 HP – approx 400 cc/min)

High speed solenoid valve with precision ultra-fine atomizing nozzle for water injection, 3/8 NPT with 1/4" hose fitting, 316 stainless steel.

CWN0600 – Water Injection Solenoid Nozzle (400 HP – approx 600 cc/min)

High speed solenoid valve with precision ultra-fine atomizing nozzle for water injection, 3/8 NPT with 1/4" hose fitting, 316 stainless steel.

CWN0700 – Water Injection Solenoid Nozzle (500 HP – approx 700 cc/min)

High speed solenoid valve with precision ultra-fine atomizing nozzle for water injection, 3/8 NPT with 1/4" hose fitting, 316 stainless steel.

CWN0900 – Water Injection Solenoid Nozzle (600 HP – approx 900 cc/min)

High speed solenoid valve with precision ultra-fine atomizing nozzle for water injection, 3/8 NPT with 1/4" hose fitting, 316 stainless steel.

CWN1000 – Water Injection Solenoid Nozzle (800 HP – approx 1000 cc/min)

High speed solenoid valve with precision ultra-fine atomizing nozzle for water injection, 3/8 NPT with 1/4" hose fitting, 316 stainless steel.

FWF0450 – Water Injection Filter

High pressure, stainless steel body, sintered stainless steel filter element, 316 stainless steel, compression fittings for 1/4" tube.
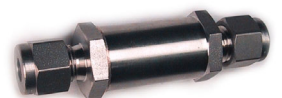
FRF0050 – Water Injection Filter Replacement
Replacement sintered stainless steel filter kit for FWF0450 filter.

FUT0403 – Water Injection T-fitting (for dual solenoid nozzles)
High pressure, 316 stainless steel, three compression fittings for 1/4" tube.

FBT0403 – Water Injection T-fitting (for pressure transducer)
High pressure, 316 stainless steel, two compression fittings for 1/4" tube, one 1/8NPT-Female for sensor.

FWA0001 – Aluminum Weld-on Bung (for solenoid nozzle installation)
Aluminum weld-on fitting for solenoid nozzle.

FWS0001 – Stainless Steel Weld-on Bung (for solenoid nozzle installation)
Stainless steel weld-on fitting for solenoid nozzle.

SHP0200 – High Pressure Sensor (200 psig)
200 PSI-gauge, Laser-welded STAINLESS STEEL package, -40°C to +125°C calibrated, 1/8NPT-27 MALE pressure port, 7/8" HEX, 2.85" overall length.

Digital/Analog Gauges

Standalone Digital/Analog Gauges (using analog sensors)

GNP1500 – Nitrous Pressure Gauge (1500 psig)

Combined LED digital and LED bar gauge, 2 $^1/_{16}$" round format. Ultrabright LEDs for daytime visibility. Gauge can be configured for dot or bar mode display and features a max/min recall function.

Includes gauge, bracket and wiring. Order SHP1500 sensor separately.

GOP0100 – Oil Pressure Gauge (100 psig)

Combined LED digital and LED bar gauge, 2 $^1/_{16}$" round format. Ultrabright LEDs for daytime visibility. Gauge can be configured for dot or bar mode display and features a max/min recall function.

Includes gauge, bracket and wiring. Order SHP0100 sensor separately.

GFP0100 – Fuel Pressure Gauge (100 psig)

Combined LED digital and LED bar gauge, 2 $^1/_{16}$" round format. Ultrabright LEDs for daytime visibility. Gauge can be configured for dot or bar mode display and features a max/min recall function.

Includes gauge, bracket and wiring. Order SHP0100 sensor separately.

GFP0200 – Fuel Pressure Gauge (200 psig)

Combined LED digital and LED bar gauge, 2 $^1/_{16}$" round format. Ultrabright LEDs for daytime visibility. Gauge can be configured for dot or bar mode display and features a max/min recall function.

Includes gauge, bracket and wiring. Order SHP0200 sensor separately.

GBP0050 – Boost Pressure Gauge (50 psi)

Combined LED digital and LED bar gauge, 2 $^1/_{16}$" round format. Ultrabright LEDs for daytime visibility. Gauge can be configured for dot or bar mode display and features automatic peak boost display and max/min recall function. When the gauge senses a transition from boost to vacuum, it will display the peak boost for 3 seconds.

Includes gauge, bracket and wiring. Order SHP0050 sensor separately.

GBP0035 – Boost Pressure Gauge (35 psi)

Combined LED digital and LED bar gauge, 2 $^1/_{16}$" round format. Ultrabright LEDs for daytime visibility. Gauge can be configured for dot or bar mode display and features automatic peak boost display and max/min recall function. When the gauge senses a transition from boost to vacuum, it will display the peak boost for 3 seconds.

Includes gauge, bracket and wiring. Order SHP0050 sensor separately.

GBP0015 – Boost Pressure Gauge (15 psi)

Combined LED digital and LED bar gauge, 2 $^1/_{16}$" round format. Ultrabright LEDs for daytime visibility. Gauge can be configured for dot or bar mode display and features automatic peak boost display and max/min recall function. When the gauge senses a transition from boost to vacuum, it will display the peak boost for 3 seconds.

Includes gauge, bracket and wiring. Order SHP0015 sensor separately.

GTF0010 – Temperature Gauge (-40° to +302° Fahrenheit)

Combined LED digital and LED bar gauge, 2 $^1/_{16}$" round format. Ultrabright LEDs for daytime visibility. Gauge can be configured for dot or bar mode display and features a max/min recall function. Depending on the sensor chosen, this gauge can be used for fluid temperatures such as coolant or oil (using SFT0001 or SFT0002 sensor), or it may be used to measure air temperatures with a slower response time (using the SAT0010 sensor).

Includes gauge, bracket and wiring. Order SFT0001, SFT0002, or SAT0010 sensor separately. The sensor connector on this gauge is NOT compatible with the SAT0020 sensor.

GTF0020 – Fast Response Air Temperature Gauge (-40° to +302° Fahrenheit)

Combined LED digital and LED bar gauge, 2 $^1/_{16}$" round format. Ultrabright LEDs for daytime visibility. Gauge can be configured for dot or bar mode display and features a max/min recall function. This gauge can be used for fast-changing air temperature measurements where the sensor will not come in contact with fluids (open sensor element for faster response times).

Includes gauge, bracket and wiring. Order SAT0020 sensor separately. The sensor connector on this gauge is NOT compatible with the SFT0001, SFT0002, or SAT0010 sensors.

GTC0010 – Temperature Gauge (-40° to +150° Celsius)

Combined LED digital and LED bar gauge, 2 $^1/_{16}$" round format. Ultrabright LEDs for daytime visibility. Gauge can be configured for dot or bar mode display and features a max/min recall function. Depending on the sensor chosen, this gauge can be used for fluid temperatures such as coolant or oil (using SFT0001 or SFT0002 sensor), or it may be used to measure air temperatures with a slower response time (using the SAT0010 sensor).

Includes gauge, bracket and wiring. Order SFT0001, SFT0002, or SAT0010 sensor separately. The sensor connector on this gauge is NOT compatible with the SAT0020 sensor.

GTC0020 – Fast Response Air Temperature Gauge (-40° to +150° Celsius)

Combined LED digital and LED bar gauge, 2 $^1/_{16}$" round format. Ultrabright LEDs for daytime visibility. Gauge can be configured for dot or bar mode display and features a max/min recall function. This gauge can be used for fast-changing air temperature measurements where the sensor will not come in contact with fluids (open sensor element for faster response times).

Includes gauge, bracket and wiring. Order SAT0020 sensor separately. The sensor connector on this gauge is NOT compatible with the SFT0001, SFT0002, or SAT0010 sensors.

GTF0030 – Exhaust Gas Temperature (EGT) Gauge (Fahrenheit)

Combined LED digital and LED bar gauge, 2 $^1/_{16}$" round format. Ultrabright LEDs for daytime visibility. Gauge can be configured for dot or bar mode display and features a max/min recall function. This gauge uses the high quality SRT0001 platinum EGT sensor.

Includes gauge, bracket and wiring. Order SRT0001 sensor separately. This gauge is NOT compatible with thermocouple style sensors.

GTC0030 – Exhaust Gas Temperature (EGT) Gauge (Celsius)

Combined LED digital and LED bar gauge, 2 $^1/_{16}$" round format. Ultrabright LEDs for daytime visibility. Gauge can be configured for dot or bar mode display and features a max/min recall function. This gauge uses the high quality SRT0001 platinum EGT sensor.

Includes gauge, bracket and wiring. Order SRT0001 sensor separately. This gauge is NOT compatible with thermocouple-style EGT probes.

Sensors

SHP0015 – Stainless Steel Pressure Sensor (15 psig)

15 psig, laser-welded stainless steel package, calibrated over an operating temperature range of -40°C to +125°C, 1/8NPT-27 MALE pressure port, 7/8" HEX, 2.85" overall length.

SHP0050 – Stainless Steel Pressure Sensor (50 psig)

50 psig, laser-welded stainless steel package, calibrated over an operating temperature range of -40°C to +125°C, 1/8NPT-27 MALE pressure port, 7/8" HEX, 2.85" overall length.

SHP0100 – Stainless Steel Pressure Sensor (100 psig)

100 psig, laser-welded stainless steel package, calibrated over an operating temperature range of -40°C to +125°C, 1/8NPT-27 MALE pressure port, 7/8" HEX, 2.85" overall length.

SHP0200 – Stainless Steel Pressure Sensor (200 psig)

200 psig, laser-welded stainless steel package, calibrated over an operating temperature range of -40°C to +125°C, 1/8NPT-27 MALE pressure port, 7/8" HEX, 2.85" overall length.

SHP1500 – Stainless Steel Pressure Sensor (1500 psig)

1500 psig, laser-welded stainless steel package, calibrated over an operating temperature range of -40°C to +125°C, 1/8NPT-27 MALE pressure port, 7/8" HEX, 2.85" overall length.

SFT0001 – Brass Temperature Sensor (standard thread)

3/8-18 NPT MALE thread, -40°C to +135°C (-40°F to +275°F) operating temperature range, brass body, 3/4" HEX, 2.25" overall length.

SFT0002 – Brass Temperature Sensor (metric thread)

M12x1.5mm MALE thread, -40°C to +135°C (-40°F to +275°F) operating temperature range, brass body, 19mm HEX, 57mm overall length.

SAT0010 – Poly Temperature Sensor (standard thread)

3/8-18 NPT MALE thread, standard response (encapsulated element), -40°C to +135°C (-40°F to +275°F) operating temperature range, Polyetherimide & glass fiber body, 3/4" HEX, 2.25" overall length.

SAT0020 – Fast Response Air Temperature Sensor (standard thread)

3/8-18 NPT MALE thread, fast response (open element), -40°C to +135°C (-40°F to +275°F) operating temperature range, polyester & glass fiber with brass body, 3/4" HEX, 2.25" overall length.

SRT0001 – Platinum RTD Exhaust Gas Temperature Sensor

Platinum exhaust gas temperature (EGT) RTD probe with 10 foot stainless steel braided lead. Includes a stainless steel 1/8" NPT BT compression fitting and stainless steel weld-on bung.

Serial Interface Digital Gauges (for use with FJO controllers)

Coming soon!

Engine Management

Example Configurations

The following are a few examples of customized 341B configurations.
Please contact factory or your dealer to customize a configuration for your application.

Example: Basic 4, 6, or 8 Cylinder System

Using existing 3-wire Coil-On-Plug coils, saturated (high impedance) injectors, and existing temperature & MAP sensors.

Minimum recommended parts:

1x	C3B0002	341B Engine Management Unit
1x	H3B0001	341B USB Serial Cable
1x	SCA0001	Crank Angle Speed Sensor
1x	ICA0001	SCA0001 sensor harness
1x	CCT0001	6 inch Crank Target
1x	H3B6000	Wiring Harness Kit

Example: High Performance 4 Cylinder System

Using FJO CIM ignition, peak-and-hold (low impedance) injectors, with no existing sensors.

Minimum recommended parts:

1x	C3B0002	341B Engine Management Unit
1x	CIM0040	Ignition module (2 coil)
1x	IIM0040	CIM0040 wiring harness
1x	KID0004	Low Impedance Injector Driver
1x	H3B0001	341B USB Serial Cable
1x	SFT0001	Fluid Temperature Sensor
1x	IFT0001	SFT0001 sensor harness
1x	SAP0010	Air Pressure Sensor (1bar)
1x	IAP0010	SAP0010 sensor harness
1x	SCA0001	Crank Angle Speed Sensor
1x	ICA0001	SCA0001 sensor harness
1x	CCT0001	6 inch Crank Target
1x	H3B6000	Wiring Harness Kit

Example: High Performance 6 Cylinder System

Using FJO CIM ignition, peak-and-hold (low impedance) injectors, with no existing sensors.
Minimum recommended parts:

1x	C3B0002	341B Engine Management Unit
1x	CIM0060	Ignition module (2 coil)
1x	IIM0060	CIM0040 wiring harness
1x	KID0008	Low Impedance Injector Driver
1x	H3B0001	341B USB Serial Cable
1x	SFT0001	Fluid Temperature Sensor
1x	IFT0001	SFT0001 sensor harness
1x	SAP0010	Air Pressure Sensor (1bar)
1x	IAP0010	SAP0010 sensor harness
1x	SCA0001	Crank Angle Speed Sensor
1x	ICA0001	SCA0001 sensor harness
1x	CCT0001	6 inch Crank Target
1x	H3B6000	Wiring Harness Kit

Example: High Performance 8 Cylinder System

Using FJO CIM ignition, peak-and-hold (low impedance) injectors, with no existing sensors.
Minimum recommended parts:

1x	C3B0002	341B Engine Management Unit
2x	CIM0040	Ignition module (2 coil)
2x	IIM0040	CIM0040 wiring harness
1x	KID0008	Low Impedance Injector Driver
1x	H3B0001	341B USB Serial Cable
1x	SFT0001	Fluid Temperature Sensor
1x	IFT0001	SFT0001 sensor harness
1x	SAP0010	Air Pressure Sensor (1bar)
1x	IAP0010	SAP0010 sensor harness
1x	SCA0001	Crank Angle Speed Sensor
1x	ICA0001	SCA0001 sensor harness
1x	CCT0001	6 inch Crank Target
1x	H3B6000	Wiring Harness Kit

Components

C3B0002 – 341B-2 Engine Management System

with integrated wideband AFR controller

CIM0040 – High-Output Ignition Module for 341B2
2 Dual-Tower Coils. 1 required for 4 cylinder, 2 required for 8 cylinder
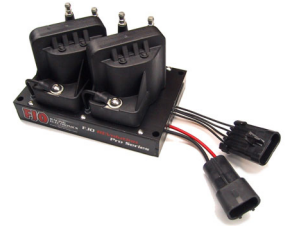
IIM0040 – Installation Harness Kit for CIM0040 High-Output Ignition Module
Includes control cable, power cable, and sealed inline fuse.

CIM0060 – High-Output Ignition Module for 341B2
3 Dual-Tower Coils. 1 required for 6 cylinder

IIM0060 – Installation Harness Kit for CIM0060 – High-Output Ignition Module
Includes control cable, power cable, and sealed inline fuse.

KID0004 – PEAK&HOLD (low impedance) Injector Driver kit (4 channel)
Drives 4 PEAK&HOLD injectors, includes cables

KID0008 – PEAK&HOLD (low impedance) Injector Driver kit (8 channel)
Drives 8 PEAK&HOLD injectors, includes cables

CCD0040 – Ignition Coil Driver Module for 341B2 (4-Channel)

Drives up to four 2-wire COP coils.

ICD0040 – Installation Harness Kit for CCD0040 Ignition Coil Driver Module

Includes control cable, and output cable.

CWD0082 – WATER INJECTION Solenoid Driver

Drives one CWNxxxx Water Injection Solenoid Nozzle from 341B, includes power cable.

CWD0041 – FUEL INJECTOR Solenoid Driver (4A/1A)

Drives one fuel injector (4A peak, 1A hold) from 341B, includes power cable.

Sensors

SRT0001 – Platinum RTD Exhaust Gas Temperature Sensor

Platinum exhaust gas temperature (EGT) RTD probe with 10 foot stainless steel braided lead. Includes a stainless steel 1/8" NPT BT compression fitting and stainless steel weld-on bung.

IRT0001 – RTD EGT Installation Kit

Includes assembled sensor connector and 6 foot pigtail harness. For SRT0001 sensors only.

STC0100 – K-type Thermocouple Exhaust Gas Temperature Sensor

EGT Thermocouple with 10 foot stainless steel braided lead. Probe has an exposed junction for fast response. An EGT adapter (part# CEC0020) is required for 341B2 integration. Includes a stainless steel 1/8" NPT BT compression fitting and stainless steel weld-on bung.

SFT0001 – Brass Temperature Sensor (standard thread)

3/8-18 NPT MALE thread, -40°C to +135°C (-40°F to +275°F) operating temperature range, brass body, 3/4" HEX, 2.25" overall length.

SFT0002 – Brass Temperature Sensor (metric thread)

M12x1.5mm MALE thread, -40°C to +135°C (-40°F to +275°F) operating temperature range, brass body, 19mm HEX, 57mm overall length.

SAT0010 – Poly Temperature Sensor (standard thread)

3/8-18 NPT MALE thread, standard response (encapsulated element), -40°C to +135°C (-40°F to +275°F) operating temperature range, Polyetherimide & glass fiber body, 3/4" HEX, 2.25" overall length.

IFT0001 – Temperature Sensor Installation Kit

Includes assembled sensor connector, and 6 foot pigtail harness. For SFT0001, SFT0002, and SAT0010 sensors only.

SAT0020 – Fast Response Air Temperature Sensor (standard thread)
3/8-18 NPT MALE thread, fast response (open element), -40°C to +135°C (-40°F to +275°F) operating temperature range, polyester & glass fiber with brass body, 3/4" HEX, 2.25" overall length.

IAT0020 – Fast Response Air Temperature Sensor Installation Kit
Includes assembled sensor connector, and 6 foot pigtail harness. For SAT0020 sensor only.

SAP0010 – 1 bar Air Pressure Sensor (MAP)

IAP0010 – 1 bar Air Pressure Sensor Installation Kit
Includes assembled sensor connector, and 6 foot pigtail harness.

SAP0020 – 2 bar Air Pressure Sensor (MAP)

SAP0030 – 3 bar Air Pressure Sensor (MAP)

IAP0020 – 2 & 3 bar Air Pressure Sensor Installation Kit
Includes assembled sensor connector, and 6 foot pigtail harness.

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SAP0540 – 4 bar Air Pressure Sensor (MAP)

4bar absolute, black box epoxy filled package, -40°C to +125°C calibrated, 4" hose & barb, 5 volt

SAP0550 – 5 bar Air Pressure Sensor (MAP)

5bar absolute, black box epoxy filled package, -40°C to +125°C calibrated, 4" hose & barb, 5 volt

SAP0560 – 6 bar Air Pressure Sensor (MAP)

6bar absolute, black box epoxy filled package, -40°C to +125°C calibrated, 4" hose & barb, 5 volt

SAP0570 – 7 bar Air Pressure Sensor (MAP)

7bar absolute, black box epoxy filled package, -40°C to +125°C calibrated, 4" hose & barb, 5 volt

IAP0500 – 4-7 bar Air Pressure Sensor Installation Kit

Includes assembled sensor connector, and 6 foot pigtail harness.

KAP0035 – 3.5 bar Air Pressure Sensor (MAP) KIT (stainless)

3.5 bar absolute, Laser-welded STAINLESS STEEL package, -40°C to +125°C calibrated, 1/8NPT-27 MALE pressure port, 7/8" HEX, 2.85" overall length. Includes assembled sensor connector with 6 foot cable and hose barb adapter.

KAP0050 – 5 bar Air Pressure Sensor (MAP) KIT (stainless)

5 bar absolute, Laser-welded STAINLESS STEEL package, -40°C to +125°C calibrated, 1/8NPT-27 MALE pressure port, 7/8" HEX, 2.85" overall length. Includes assembled sensor connector with 6 foot cable and hose barb adapter.

SHP0015 – Stainless Steel Pressure Sensor (15 psig)

15 psig, laser-welded stainless steel package, calibrated over an operating temperature range of -40°C to +125°C, 1/8NPT-27 MALE pressure port, 7/8" HEX, 2.85" overall length.

SHP0050 – Stainless Steel Pressure Sensor (50 psig)

50 psig, laser-welded stainless steel package, calibrated over an operating temperature range of -40°C to +125°C, 1/8NPT-27 MALE pressure port, 7/8" HEX, 2.85" overall length.

SHP0100 – Stainless Steel Pressure Sensor (100 psig)

100 psig, laser-welded stainless steel package, calibrated over an operating temperature range of -40°C to +125°C, 1/8NPT-27 MALE pressure port, 7/8" HEX, 2.85" overall length.

SHP0200 – Stainless Steel Pressure Sensor (200 psig)

200 psig, laser-welded stainless steel package, calibrated over an operating temperature range of -40°C to +125°C, 1/8NPT-27 MALE pressure port, 7/8" HEX, 2.85" overall length.

SHP1500 – Stainless Steel Pressure Sensor (1500 psig)

1500 psig, laser-welded stainless steel package, calibrated over an operating temperature range of -40°C to +125°C, 1/8NPT-27 MALE pressure port, 7/8" HEX, 2.85" overall length.

IHP0001 – High Pressure Sensor Installation Kit

Includes assembled sensor connector, and 6 foot pigtail harness.

SCA0001 – Crank Angle/Wheel Speed Sensor

ICA0001 – Crank Angle/Wheel Speed Sensor Harness

Includes assembled sensor connector, and 6 foot pigtail harness.

SKN0001 – Knock Sensor

IKN0001 – Knock Sensor Installation Kit

Includes assembled sensor connector, and 6 foot pigtail harness.

SO20003 – Wideband Oxygen Sensor [NTK]

This sensor is only compatible with the current generation KWB3001, KWB3002, KWB3044, KWB4001 kits or the 341B2 Engine Management System. It is NOT compatible with controllers using the SO20001 sensor.

SO20004 – Wideband Oxygen Sensor [Bosch]

This sensor is only recommended for applications which do not use leaded race fuel. This sensor is only compatible with the current generation KWB3001, KWB3002, KWB3044, KWB4001 kits or the 341B2 Engine Management System. It is NOT compatible with controllers using the SO20001 sensor.

IWS3004 – Wideband AFR Sensor Extension Cable (4 foot)

A 4 foot long, high temperature, shielded cable to connect the WBAFR controller to an O2 sensor. Compatible with KWB3001, KWB3002, KWB3044 kits, and 341B2 Engine Management System.

IWS3008 – Wideband AFR Sensor Extension Cable (8 foot)

An 8 foot long, high temperature, shielded cable to connect the WBAFR controller to an O2 sensor. Compatible with KWB3001, KWB3002, KWB3044 kits, and 341B2 Engine Management System.

IWS3012 – Wideband AFR Sensor Extension Cable (12 foot)

A 12 foot long, high temperature, shielded cable to connect the WBAFR controller to an O2 sensor. Compatible with KWB3001, KWB3002, KWB3044 kits, and 341B2 Engine Management System.

HSB0001 – Oxygen Sensor Bung

A mild steel bung which requires welding to install an O2 sensor into an exhaust. A threaded plug is included for when the sensor is not installed.

CCT0001 – Crank Target, 6 inch

6 inch target wheel. Requires machining to install.

CCT0004 – Crank Target, 4 inch

4 inch target wheel. Requires machining to install.

CCT0005 – Crank Target, 5 inch

5 inch target wheel. Requires machining to install.

CIM0001 – Idle Control Motor and Manifold

IIM0001 – Idle Control Motor/Manifold Installation Kit

Includes assembled controller connector, and 6 foot pigtail harness.

CSV0001 – Solenoid Valve (3 port)

Use for single port waste gate

ISV0001 – Solenoid Valve Installation Kit (3 port)

Includes three brass 3/16" ID hose adapters, assembled valve connector, and 6-foot pigtail harness.

CSV0002 – Solenoid Valve (4 port)

Use for dual port waste gate
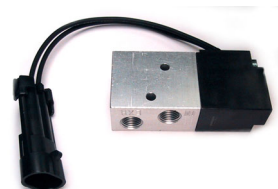
ISV0002 – Solenoid Valve Installation Kit (4 port)

Includes four brass 3/16" ID hose adapters, assembled valve connector, and 6-foot pigtail harness.

CTA0001 – Tachometer Adapter

Accessories

CEC0020 – Dual Channel EGT Adapter Kit

Dual K-Type thermocouple input, 0-5 volt output. Kit includes power input and signal output cables. EGT probes may be ordered separately.

Harnesses

H3B6000 – 341B2 Wiring Harness Kit (generic)
Fully populated 341B2 mating connectors with 6 feet of wire.

H3B0001 – 341B2 USB Serial Cable
4 pin metripack connector to USB.

Nitrous Controllers

Kits

KWS0022 – Progressive Nitrous Mini-Controller

The PROGRESSIVE NITROUS MINI-CONTROLLER combines the functions of a TPS switch, a 2-STAGE RPM WINDOW SWITCH and our HIGH CURRENT SOLENOID DRIVER all into one very compact module. It can progressively drive two channels, each with a 40-amp load capacity (continuous duty). The device also supports low-voltage OEM, V10 or 3 cylinder TACH signals without the need for additional adapters. It works with most OEM throttle position sensors including most drive-by-wire vehicles. This device also includes FJO's "real curve" ramp, which allows you to create a progressive curve instead of just a ramp. That ramp can be either time based or RPM based. All this and only the size of a spark plug box.

Peak and Hold (Low Impedance) Injector Driver

Finally! You have the ability to reprogram your ECU, allowing you to adjust your vehicle's air/fuel and timing curve without having to rewire the car, buy a new ECU, or lose the factory functionality provided by the stock ECU. Great! Now what happens if you need bigger high-impedance (saturation-style) injectors? Suddenly the proposition gets expensive. High flow, high-impedance injectors are far more costly than low-impedance injectors - if you can even find the right ones. And for the additional cost, what do you get? Slower response at high-RPM (resulting in a loss of fueling accuracy) and less stability at low-RPM (resulting in idling problems). When you use a PEAK&HOLD driver, low impedance injectors initially get driven with more current (called the "peak current"), which results in a stronger magnetic field to open them. More force means faster opening response. The reverse holds true when they close. Because they have a lower current holding them open (called the "hold current"), it takes less time for the magnetic field to collapse and allow the injector to close. In simple terms, a peak-and-hold driven low-impedance injector just works better. Sure, you can add a ballast resistor and use the low-impedance injectors, but in many cases this will perform WORSE than the original high impedance injector - and performance is what it's all about.

The FJO LOW IMPEDANCE INJECTOR DRIVER is NOT a ballast resistor. It actually converts the high-impedance (saturated-type) driver signal to a low-impedance (peak and hold) driver signal. This means that you get the full performance from your low-impedance injectors without needing to replace your existing ECU. The FJO LOW IMPEDANCE INJECTOR DRIVER is simple to install and is built for the demands of the racing environment.

Kits

KID0004 – Injector Driver (4 channel)

Drives 4 PEAK&HOLD injectors with 4 amp peak and 1 amp hold currents. Kit includes cables. Designed for upgrading a factory ECU which can only drive high impedance injectors. Splicing into factory harness is required.

KID0008 – Injector Driver (8 channel)

Drives 8 PEAK&HOLD injectors with 4 amp peak and 1 amp hold currents. Kit includes cables. Designed for upgrading a factory ECU which can only drive high impedance injectors. Splicing into factory harness is required.
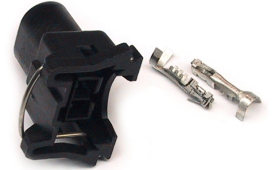
Wiring Accessories

Connectors

WCK0010 – FUEL INJECTOR Sealed Connector Kit

Includes connector, pins, and seal for 18awg wire (extra pin included), fits most injectors with rectangular "Bosch-style" connector.

WCK1010 – WEATHERPACK Sealed Connector Kit (1 pin set)

Includes 1-pin Male & Female connectors, pins, and seals for 18awg wire (extra pin included), 15 amps max

WCK1020 – WEATHERPACK Sealed Connector Kit (2 pin set)

Includes 2-pin Male & Female connectors, pins, and seals for 18awg wire (extra pin included), 15 amps max

WCK1030 – WEATHERPACK Sealed Connector Kit (3 pin set)

Includes 3-pin Male & Female connectors, pins, and seals for 18awg wire (extra pin included), 15 amps max

WCK1040 – WEATHERPACK Sealed Connector Kit (4 pin set)

Includes 4-pin Male & Female connectors, pins, and seals for 18awg wire (extra pin included), 15 amps max

WCK1060 – WEATHERPACK Sealed Connector Kit (6 pin set)

Includes 6-pin Male & Female connectors, pins, and seals for 18awg wire (extra pin included), 15 amps max

WCK2020 – METRIPACK 150 Sealed Connector Kit (2 pin set)

Includes 2-pin Male & Female connectors, pins, seals, and pin locks for 18awg wire (extra pin included), 15 amps max

WCK2030 – METRIPACK 150 Sealed Connector Kit (3 pin set)

Includes 3-pin Male & Female connectors, pins, seals, and pin locks for 18awg wire (extra pin included), 15 amps max

WCK2040 – METRIPACK 150 Sealed Connector Kit (4 pin set)

Includes 4-pin Male & Female connectors, pins, seals, and pin locks for 18awg wire (extra pin included), 15 amps max

WCK2060 – METRIPACK 150 Sealed Connector Kit (6 pin set)

Includes 6-pin Male & Female connectors, pins, seals, and pin locks for 18awg wire (extra pin included), 15 amps max

WCK2080 – METRIPACK 150 Sealed Connector Kit (8 pin set)

Includes 8-pin Male & Female connectors, pins, seals, and pin locks for 18awg wire (extra pin included), 15 amps max

WCK2100 – METRIPACK 150 Sealed Connector Kit (10 pin set)

Includes 10-pin Male & Female connectors, pins, seals, and pin locks for 18awg wire (extra pin included), 15 amps max

WCK3020 – METRIPACK 630 Sealed Connector Kit (2 pin set, high current)

Includes 2-pin Male & Female connectors, pins, seals, and pin locks for 12awg wire (extra pin included), 35 amps max

Wire

WAW8250 – SAE AUTOMOTIVE GRADE WIRE (18awg, BLACK)

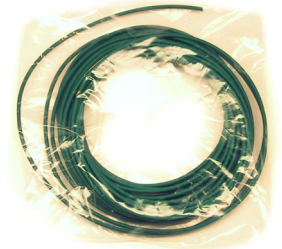High Temperature Cross-linked Polyethylene, SAE spec J1128, 25 feet

WAW8251 – SAE AUTOMOTIVE GRADE WIRE (18awg, BLUE)

High Temperature Cross-linked Polyethylene, SAE spec J1128, 25 feet

WAW8252 – SAE AUTOMOTIVE GRADE WIRE (18awg, GREEN)

High Temperature Cross-linked Polyethylene, SAE spec J1128, 25 feet

WAW8253 – SAE AUTOMOTIVE GRADE WIRE (18awg, RED)

High Temperature Cross-linked Polyethylene, SAE spec J1128, 25 feet

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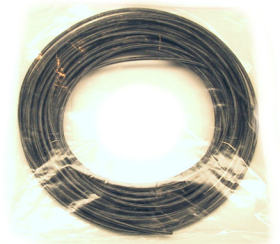
WAW8254 – SAE AUTOMOTIVE GRADE WIRE (18awg, WHITE)
High Temperature Cross-linked Polyethylene, SAE spec J1128, 25 feet

WAW8255 – SAE AUTOMOTIVE GRADE WIRE (18awg, YELLOW)
High Temperature Cross-linked Polyethylene, SAE spec J1128, 25 feet

WAW2250 – SAE AUTOMOTIVE GRADE WIRE (12awg, BLACK)
High Temperature Cross-linked Polyethylene, SAE spec J1128, 25 feet
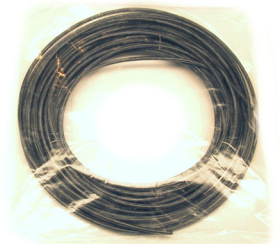

WAW2251 – SAE AUTOMOTIVE GRADE WIRE (12awg, BLUE)
High Temperature Cross-linked Polyethylene, SAE spec J1128, 25 feet

WAW2253 – SAE AUTOMOTIVE GRADE WIRE (12awg, RED)
High Temperature Cross-linked Polyethylene, SAE spec J1128, 25 feet

WAW0250 – SAE AUTOMOTIVE GRADE WIRE (10awg, BLACK)
High Temperature Cross-linked Polyethylene, SAE spec J1128, 25 feet
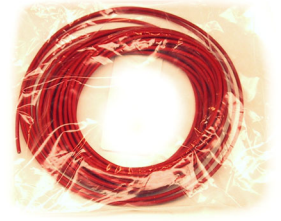
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WAW0253 – SAE AUTOMOTIVE GRADE WIRE (10awg, RED)
High Temperature Cross-linked Polyethylene, SAE spec J1128, 25 feet

Software and Firmware Updates

In many cases, free software and/or firmware updates are available at www.fjoracing.com

Disclaimer

FJO Racing Products shall not be held responsible for any damages, howsoever caused, to any persons or equipment during the installation or operation of its products. FJO products are meant for off-road use only, and make no claims as to the unit's ability to meet local safety or emissions laws.

Warranty

FJO Enterprises Inc. (FJO) warrants the material and workmanship of the equipment, components and parts manufactured by FJO against defects under normal use and service. This warranty shall extend for 180 days from the date of manufacture provided that the customer first returns the defective part or component through an authorized distributor, shipping costs prepaid. Prior to returning a product for warranty inspection, the customer must contact FJO's service department with the product serial number to receive a WARRANTY CLAIM NUMBER. Units returned without this number will be refused.

FJO may at its option, repair or replace without cost for parts and labour, the defective product. This warranty does not cover finishes, normal wear and tear, nor does it cover damage resulting from accident, misuse, dirt, tampering, unreasonable use, service attempted or performed by unauthorized service agencies, failure to provide reasonable maintenance, or FJO products that have been modified or used for commercial reasons.

FJO specifically does not warrant equipment, parts or components purchased by FJO or the customer from any third party manufacturers or suppliers. Rather, for any defect in respect of equipment, parts and components purchased from third party manufacturers and suppliers, the customer shall have recourse only to the terms of the warranty of that particular manufacturer or supplier. Any recommendations made by the third party manufacturer or suppliers concerning the use or application of their products are those of the manufacturer or supplier, and FJO extends no warranty with respect to the results obtained for their use. FJO does not warranty those products in any way beyond the term of the warranty extended by the manufacturer or supplier.

The warranty provided above, FJO's obligations and liabilities hereafter, and the rights and remedies of the customer are exclusive and in substitution for, and the customer waives all other warranties, guarantees, obligations, liabilities, rights and remedies, expressed or implied, arising by law or otherwise, including (without limitation) the implied warranties of merchantability or fitness of purpose, and any obligations or liability of FJO arising from tort, or loss of use, revenue or profit, or for incidental or consequential damage.