

Installation Guide

Throttle Body Fuel Injection

555-16800

Revision C- 02/09/2026



JEGS.com

1-800-345-4545

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Rev Limiter Verification

If using an ignition system with **Rev Limiter Verification** it must be removed, this could activate the injectors causing a flooding situation.

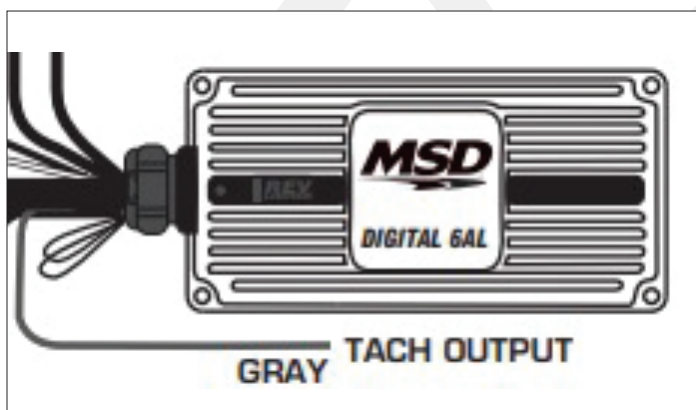
NOTE

Most ignition systems that have this feature will sweep the tach gauge when you key-on.

If using another ignition brand verify with the manufacturer the ignition does not have this feature.

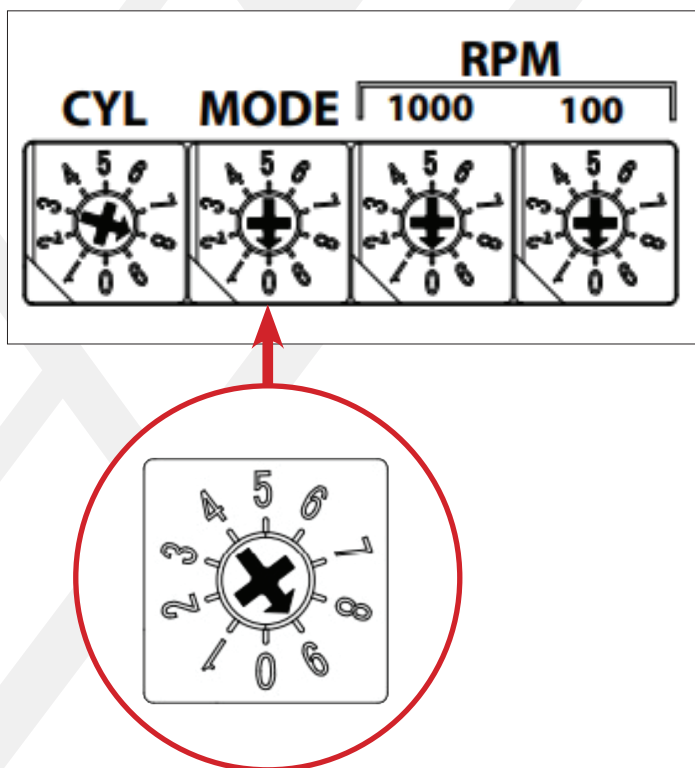
MSD DIGITAL 6AL

To turn off with an **MSD Digital 6AL**, ground the gray tach output wire, turn the ignition on (without starting), hold to ground for 5-7 seconds until the LED lights up, then release before 10 seconds. To confirm, cycle the ignition; the tach should not sweep.



PERTRONIX

To turn off with a **Pertronix** turn the MODE switch to position "9". Set the 1000 switch and the 100 switch to 0. Now turn the ignition switch to the on position and watch the LED lights on the front of the unit to confirm the setting was stored. Turn the ignition switch off and return the MODE switch to the "0" position.



Parts List



1	4-Injector Throttle Body	5	ECU
	Pre-Installed Inlet/Outlet Port Plugs	6	Coolant Temperature Sensor
	Pre-Installed Injectors	7	NPT Reducer (1/2 in. NPT to 3/8 in. NPT)
	Pre-Installed Idle Air Control (IAC)	8	O2 Sensor (Wideband)
	Pre-Installed Manifold Absolute Pressure (MAP)	9	O2 Bung Kit (Clamp-On)
	Pre-Installed Throttle Position Sensor (TPS)	10	Cable to Connect Handheld Controller to USB Port
2	Main Harness	11	(2) Base Gaskets (4150-Style)
3	Handheld Controller	12	Air Filter Gasket
4	Cable for Handheld Controller	13	Stand for Handheld Controller

Read Before Installation

Please be sure to verify that all of the kit components have been received. Reference the parts list on the previous page. If any components are missing or damaged, please contact Customer Service at: 1.800.345.4545

Installation of this kit can be done with basic hand tools. However, it is highly recommended that you have a professional mechanic with a solid understanding of fuel system modifications perform the installation.

Verify that you have the required fuel system prior to installation. This is crucial to ensure the proper fuel supply required for fuel injection. Below are several options depending on your project needs.

Fuel Supply Kits

- 555-15948 - Inline, Frame-mounted Pump
- 555-15949 - Inline, Frame-mounted Pump

Fuel Pump

- 555-159076 - 85gph Inline Pump

Fuel Pressure Regulator

- 555-159120 - 30-100psi

Fuel Pump Wiring Harness & Relay Kit

- 555-10564 - Single Pump with 30-Amp Relay

Warnings

Proper installation is the responsibility of the installer. Improper installation will void all manufacturer's standard warranties and may result in poor performance and/or engine or vehicle damage. The JEGS Bandit will not accept stock emission control systems.

This system is not legal for use on pollution-controlled motor vehicles.

Fuel Requirements

Because the JEGS Bandit fuel injection system uses a wideband oxygen sensor (O2), unleaded fuel must be used at all times. Using leaded fuel will damage the O2 sensor and void your warranty.

If leaded fuel is present in your fuel tank, the tank must be drained and filled with unleaded fuel.

It is also recommended to have a full fuel tank before operating the vehicle, once installation is complete.

Automatic Transmission

Automatic transmission adjustments must be completed and verified before driving. The transmission kickdown and shift points must be properly adjusted and verified before and after installation of this fuel injection system.

Cooling System

The minimum requirement for the thermostat is 180° Fahrenheit (82° Celsius).

Warnings

Ignition

Verify that the ignition timing and spark advance curve have been set properly. High Electromagnetic Interference (EMI) suppression spark plug wires are a necessity. Electromagnetic interference can cause issues with the engine management system by sending erroneous signals. DO NOT use solid core spark plug wires. Resistor-type spark plugs are necessary.

Safety

Caution must be observed when installing any product involving fuel system parts. Work in a well-ventilated area with an approved fire extinguisher readily available. Eye protection and other safety apparel should be worn to protect against debris and gasoline. The finished installation must be thoroughly checked for any fuel system leaks. All safety precautions must be observed when working with fuel. Disconnect the battery ground wire (-) before starting the installation.

INSTALLATION

Connect the wiring harness to all sensors and the injector sub harness prior to routing it into the cockpit. This ensures that there is enough slack for engine movement and that all connections are secure. Failure to do so may result in the inability to correctly wire your JEGS Bandit fuel injection system.

Special Instructions

Fittings

Make sure that you remove ALL low-pressure hoses, fittings, and clamps on factory fuel lines and replace them with EFI rated hardware and hoses.

The use of proper flared connections and clamps is a necessity. Be careful not to mix 45° and 37° AN fittings. These fittings look similar, but will not work together. The 45° fittings are usually sourced from a hardware or auto parts store, while the 37° fittings are available from JEGS and most speed shops.

Controller Settings

“Cranking Fuel” and “Hard Throttle Enrichment” (accelerator pump) are tuned by the user. Selecting the correct camshaft, “Cam Mild-Wild 1-4”, and “Engine CID” (Cubic Inch Displacement) during setup allows the controller to learn the criteria for your engine. Cruise and WOT (Wide Open Throttle) mixture (trims) are continuously learned and adjusted by the ECU.

- When disconnecting the battery: Always turn the ignition off and allow at least 30 seconds for the ECU to save the latest data before disconnecting the battery.

Target Air/Fuel Ratio

The JEGS Bandit is intended for use with unleaded pump gas. The system is compatible with Ethanol fuels. The use of E-85 requires more fuel and varies on blend. This is up to the user to determine max supported horsepower. **See Charts 1-3 on Pg.20**

Special Instructions

This system needs an external fuel pressure regulator set at 58 psi.

The JEGS Bandit comes with 62 lb. injectors pre-installed.

Note: Your fuel tank must have a vent to prevent pressure build up inside the tank.

Fuel Deliver Requirements

Note: Before starting any installation, disconnect the ground connection (-) on the battery. Be very careful when disconnecting any fuel lines and let the fuel drain into a receptacle or a dry cloth. Do not allow raw fuel to collect on the engine as this is a fire hazard. Please use extreme caution when working on the fuel system.

The JEGS Bandit is an unregulated system that comes with a fuel crossover hose installed. An external regulator must be used to ensure that the throttle body receives the proper 58 psi. When plumbing the JEGS Bandit run a fuel line from the tank through your fuel delivery system and then to the (-6AN) crossover hose. **See Figure 22.**

If you are using a regulated fuel delivery system, then an external regulator is not necessary. If the fuel delivery system does not have a regulator, an external regulator must be installed after the filter.

The JEGS Bandit is not compatible with a low pressure carbureted style pump. It requires a high pressure fuel injection pump that is either inside the gas tank or mounted between the fuel tank and fuel pressure regulator. It is also important to make sure that the system uses a **30 micron filter**.

Ignition

The JEGS Bandit is designed to be used with street or performance-based ignition systems. A few examples of these systems include:

- HEI Ignition
- Multi-Spark CD Ignition
- MSD Digital 6AL
- MSD Street Fire

This system will not operate with a race oriented ignition. A few examples of these systems include:

- MSD Digital 7AL
- MSD Digital 7AL-2
- MSD Digital 7AL-3
- MSD Digital 8-Plus

Please refer to the ignition system's instructions, as some features may need to be altered for proper operation. The JEGS Bandit does not control timing, but depends on the ignition/timing curve to be correct for optimal throttle response.

Engine Protection Feature

The JEGS Bandit is programmed with a limp home mode. This feature does not shut down your system; instead the ECU is designed to compensate if a sensor fails. This means that if for any reason a sensor fails, that sensor will receive either a default value or a simulated value. This is to ensure that the engine remains running in a safe and controlled manner so that you can get your vehicle to a safe location for repair.

Due to the compensation features of the ECU, the way to check if something is going wrong with your system is by the fault codes option on the main menu of your handheld controller. The fault code comes up under OBD-II, diagnostic standard. To the right of the code it will state the problematic sensor. See fault code list on page 22.

Another useful feature in your handheld controller is the rev offset. This will protect your engine from long term abuse by lowering your built-in rev limiter to prevent over-revving and possible damage during cold engine temperatures. It will automatically turn off once your engine reaches operating temperature.

Before You Start

If possible record the following values before removing any of the original parts from your vehicle.

- Engine vacuum at running temperature
- Thermostat opening temperature
- Warm idle RPM
- **For automatic transmission:** Make note of how much the RPMs drop when shifting into reverse.

Vacuum Port Layout

Determine the engine's need for vacuum ports including port and manifold vacuum. These ports cover accessories such as power brakes, vacuum advance, transmission modulation, PCV, and more.

There are two $\frac{3}{16}$ in. and three $\frac{3}{8}$ in. nipples. See **Figures 1 and 2** for their locations and uses.

Figure 1

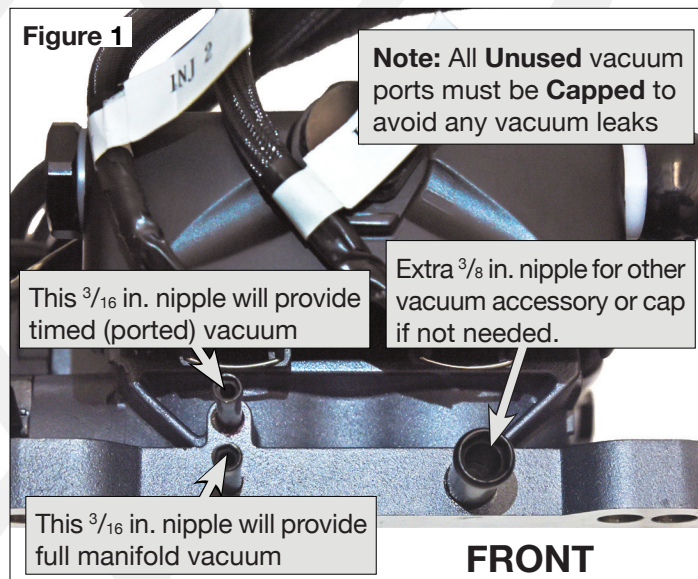
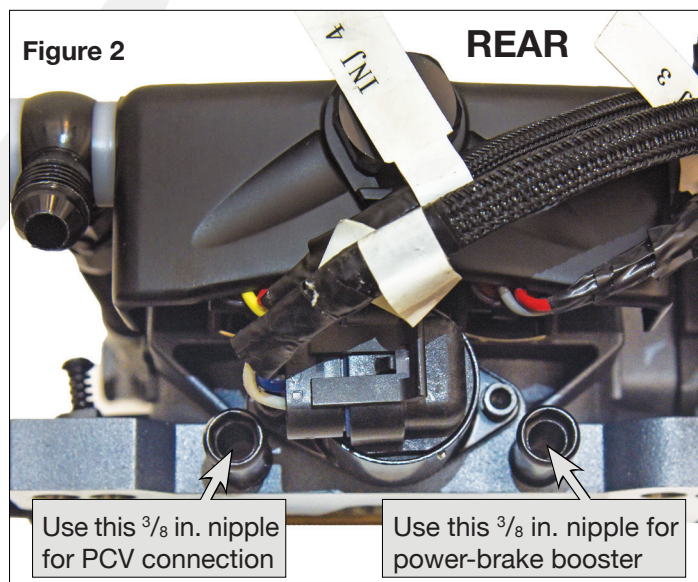


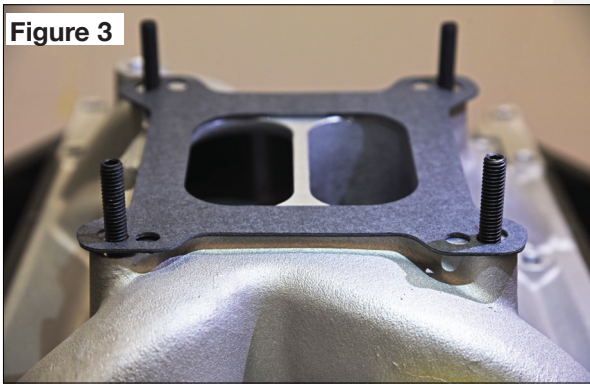
Figure 2



Throttle Body

1. Remove the existing carburetor and gasket.
2. Install the supplied base gaskets on the intake manifold. Using the existing studs, install the throttle body. The throttle body linkage must be on the driver's side of the engine.
3. Install throttle cable bracket and cable.
4. Secure the throttle body to the studs with the original nuts and washers.
5. Rotate throttle and check for interference.
6. Torque the manifold nuts to 10 lb. ft. in several steps using a crisscross pattern.

Figure 3



Coolant Temp Sensor

1. Remove existing sensor, if one is already in use.
2. Install new sensor with thread sealer, use the supplied 1/2 in. NPT to 3/8 in. NPT adapter if needed.

Figure 4



Wide-Band O2 Sensor

The O2 sensor is the key component of any fuel injection system. Only one sensor is required. This unit continuously monitors the exhaust gas mixture and sends the information to the ECU where adjustments are constantly made to maintain the air/fuel targets.

1. The supplied O2 sensor bung can be installed in either exhaust bank.
2. The O2 sensor connects to the cable in the main wiring harness.
3. Ideally the sensor should be in the exhaust collector or within 8 inches of collector. It must always be at least 18 inches from the exhaust tip to prevent reversion and false lean readings.
4. The sensor should be at 10° to 14° above horizontal to allow condensation to run off. If this is not done, the sensor is susceptible to damage.

See Figure 5.

5. Never position the sensor on the outside of a bend in the exhaust tubing.
6. Drill a 7/8 in. diameter hole in the desired location.
7. The supplied bung kit can either be welded in place or clamped in place. The clamp-on style works well and will not leak. If welded, make sure the bung is welded completely all the way around and does not leak. Thread a M18-1.5 bolt into the bung to prevent distortion when welding.
8. Install the sensor into the bung. Tighten securely.
9. Connect the O2 sensor to the sub-harness that connects to the throttle body.
10. Note: The O2 sensor will not work on "Zoomie" style headers.

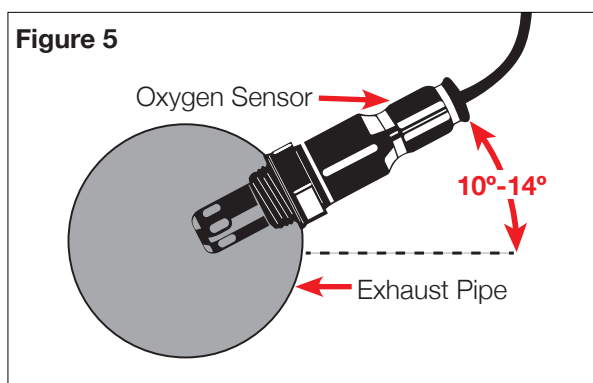
Warning: Do not start the engine without the sensor cable sub-harness connected to the throttle body and the fuel injection system is fully operational, or damage will occur to the sensor!

See image on to the next page →

Wide-Band O2 Sensor

Warning: A properly sealed exhaust system is critical for the JEGS Bandit system to function properly. Any air leaks in the exhaust system upstream of the O2 sensor will skew O2 sensor output to the ECU resulting in improper calibration that may result in damage to your engine. Improper installation of the O2 sensor and any damage that may result is not covered by any JEGS Warranty.

Figure 5



Wiring Harness

The harness connections include the following:

- | | |
|--------|-------------------------|
| • MAP | • Injectors |
| • IAC | • Ground |
| • O2 | • Battery Positive |
| • TPS | • ECU |
| • CTS | • Controller Connection |
| • Fan | • Fuel Pump |
| • Tach | • Key Hot |

ECU (Engine Control Unit)

When installing the harness, the external ECU can be mounted anywhere in the engine bay or under the dashboard. Position away from areas of excessive heat to prevent damage. When mounting, use a vibration isolation mounting kit (such as 555-40687).

Wiring Harness

MAP (Manifold Absolute Pressure)

The MAP sensor is attached to the outside of the throttle body on the passenger side. Two sensors, Inlet Air Temperature (IAT) and Manifold Absolute Pressure (MAP), are combined for ease of installation. The Manifold Absolute Pressure measures the load of the engine and will range between 10-90 kPa while the engine is running. When the engine is off it will read at 99-100 kPa.

See figure 6 below.

Figure 6



IAC (Idle Air Control)

The Idle Air Control valve gets installed directly into the throttle body. It is used to control the idle speed of the engine. **See Figure 7.**

Figure 7



Wiring Harness

TPS (Throttle Position Sensor)

The Throttle Position Sensor's purpose is to record how far the throttle blades are opened. The ECU maintains the calibration of the sensor, but if the TPS does not read 0 at idle then the sensor needs recalibrated. **See Figure 8.**

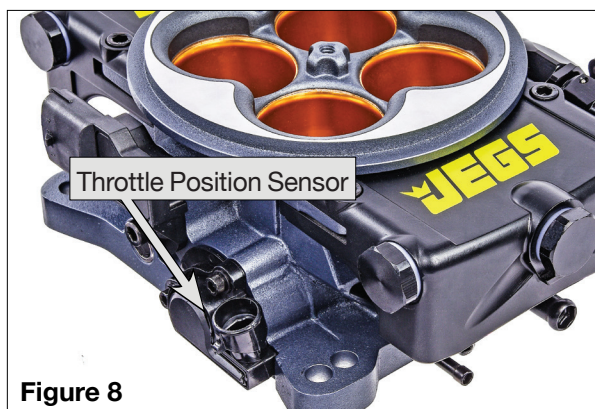


Figure 8

CTS (Coolant Temperature Sensor)

The Coolant Temperature Sensor, fitted to the intake manifold, plugs into the Bandit's wiring harness. This unit measures the temperature of the engine coolant. The information is sent to the ECU to adjust the fuel trim accordingly. Use thread sealer on the sensor when mounting it to the water port. A supplied NPT adapter is included, if needed. **See Figures 9.**



Figure 9

Injectors

The throttle body has four 62 lb. injectors already installed. This arrangement will allow the system to supply enough fuel flow for up to 650 hp. on gasoline. The throttle body has the injectors and harness pre-installed and ready to go.

Wiring the Fuel Injection System

See the wiring chart, **Figure 11**, which lists each wire in the main harness that is used in the system and where it connects.

Note: Typically some of the wires listed in the chart may need to be extended. It is strongly suggested that any wire extensions are made with the same gauge and color wires as is used in the supplied harness. Make connections as a soldered joint rather than a crimped connection. Utilize a shrink-wrapped sleeve covering. **See Image 10.**

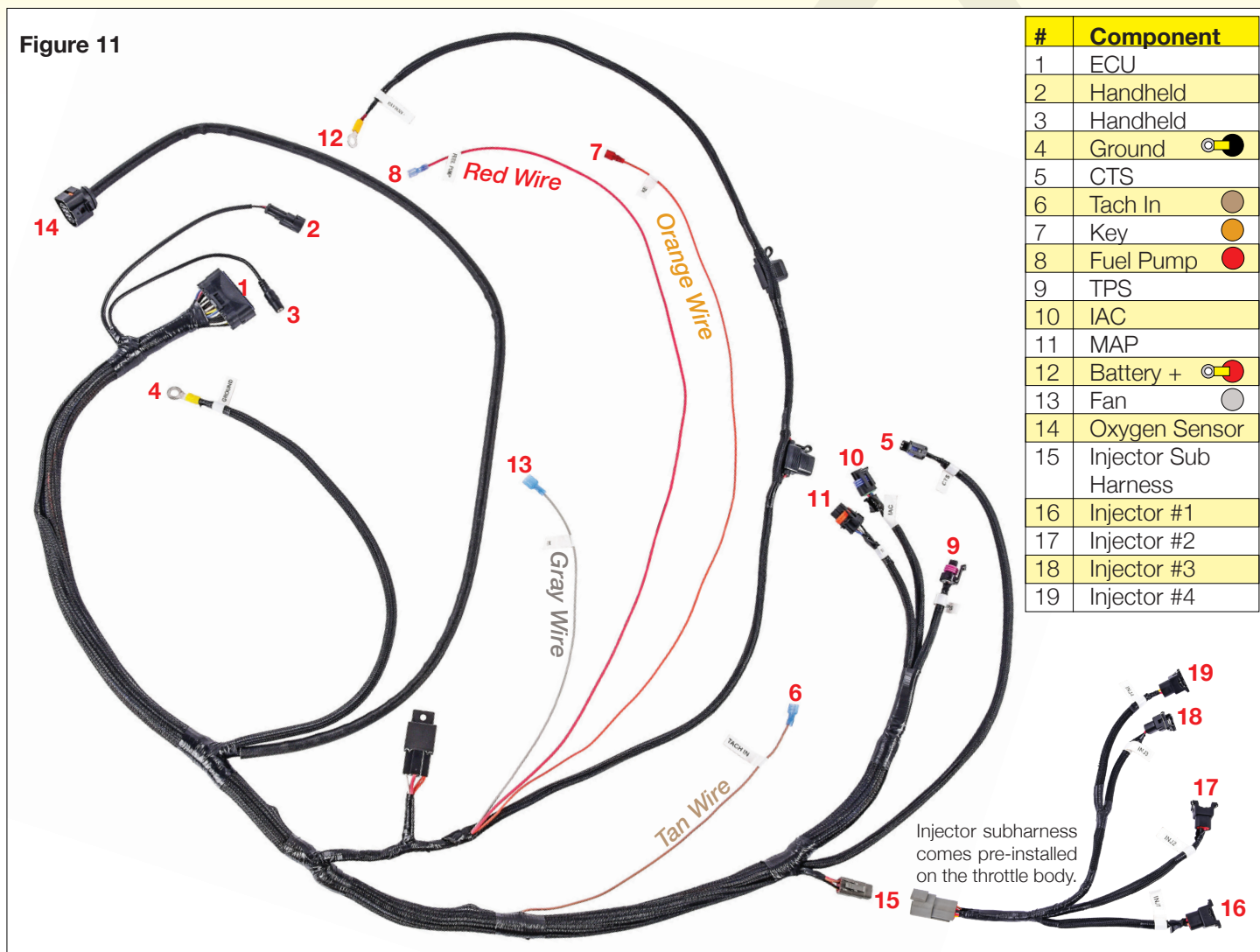
All modifications made to the wiring can only be made on wires listed in the wire chart, **Figure 12**, such as extensions and cuts. Any modification of the ECU main harness, other than these listed wires, will void the JEGS Fuel Injection Warranty.



Figure 10

Wiring Harness

Figure 11



Wire Color	Components that Connect to Wiring Harness	Figure 12
Red	Fuel Pump Circuit #8 - This wire provides 12v power to the fuel pump. Connect to the positive (+) terminal on the pump. No relay required. The fuel pump circuit is rated at 15 Amps max.	
Orange	Main Power (Key) #7 - Connect this wire to the ignition switch or other switched 12v power source that is hot when the key is in the "ON" and "Crank" (Start) position, and not when powered OFF.	
Tan	Tachometer Input Wire #6 - This triggers the ignition system. It connects to the negative (-) terminal on the coil. It connects to the "Tach" terminal on the distributor caps, or connects to a tach output on a CDI box.	
Gray	Fan Circuit #13 - This wire goes to the ground (-) terminal of the fan relay.	
Red	Battery Positive #12 - This eyelet connects to the positive battery terminal.	
Black	Ground #4 - This eyelet connects to the negative battery terminal.	

Handheld Controller

There are two ways to navigate the Bandit handheld controller; you can use the touchscreen with your finger, or the keypad: up, down, left, and right. The keypad consists of the black buttons on the right hand side of your controller. It can be used to view the displays on the controller by moving the buttons up, down, or side-to-side. To complete the selection (Enter), press “OK” in the center of the keypad.

See Figure 13.



ECU Changes Procedure

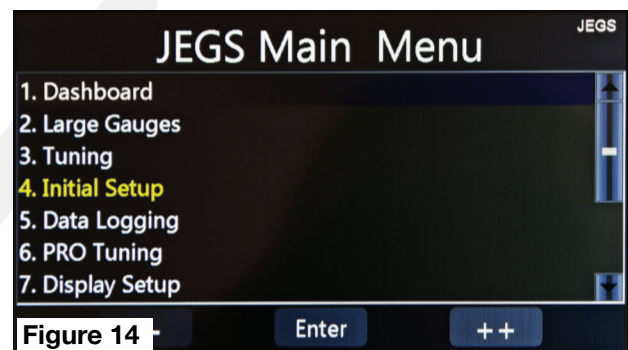
1. When making changes to the ECU through the controller, make sure that the ignition key is in the “ON” position.
2. Once the changes are made, turn the key off, and wait 30 seconds until the values disappear under the “Dashboard” feature. Doing this will ensure that your changes received a hard save.
3. Once the hard save is completed, if desired, the vehicle battery can be disconnected without interference with the calibrations.

Initial Programming

This simple procedure is performed using the handheld controller. A laptop is not required.

See Figure 14.

1. Plug the controller into the wiring harness.
Note: When changing values on the handheld controller, you must depress the keypad button, press “OK”, to send your info to the ECU. You will then see the “Sent ECU Succeed” message. This is a confirmation that the transfer was successful. Changing the number alone will not change the value in the ECU. Also, all tunes have a factory default which may work for you. Change only as needed.
2. The controller can be removed or left connected. When connected, there is a “Dashboard” and Large Gauges” screen that will show engine parameters in real time. Included in your kit is a windshield or dash mounted bracket to hold the controller while driving.



Handheld Controller

Value Selection Step-by-Step

The following steps will guide you through entering the correct criteria for the initial programming. These settings will vary by engine. Please verify your information is correct to ensure proper fueling. For the best performance, you may have to try multiple settings with criteria such as "Cam Mild-Wild 1-4," and "Rev Limit RPM."

NO.	Engine ..(online)	Cyl
01	Cylinders	8
02	Engine CID	350
03	Cam Mild-Wild 1-4	1
04	Rev Limit RPM	6300
05	Idle RPM Warm	750
06	Reset Fuel Learn	0

Figure 15

Read from ECU Edit Send to ECU Back

1. **Cylinder** - Factory preset is 8 and shouldn't need to be changed for most installations
See Figure 15.

Figure 16 Please input a new value

New Value

350

Max Value: 800
Min Value: 160

7 8 9 <<
4 5 6 CLR
1 2 3 EXIT
0 - . OK

2. **Engine CID** - Factory preset is 350 CID. To change value you can use the touchscreen buttons. (Edit > CLR value from screen > Enter correct CID > Press OK > Depress keypad button to Enter). *See Figure 16.*

NO.	Engine ..(online)	Combo
01	Cylinders	8
02	Engine CID	350
03	Cam Mild-Wild 1-4	1
04	Rev Limit RPM	6300
05	Idle RPM Warm	750
06	Reset Fuel Learn	0

Figure 17

Read from ECU Edit Send to ECU Back

3. **Cam Mild-Wild** - Camshaft selection is based on the engine's vacuum load. Choose the selection that corresponds with the amount of manifold vacuum your engine produces at idle (in neutral). *See Figure 17.*

The following specification are estimates. Depending on your cam's vacuum load you may need to switch between the available options to get the engine to run better for you application.

- Cam 1 - 15 in. Hg or above
- Cam 2 - 10 in. Hg to 15 in. Hg
- Cam 3 - 8 in. Hg to 10 in. Hg
- Cam 4 - 6 in. Hg to 8 in. Hg

NO.	Engine ..(online)	RPM
01	Cylinders	8
02	Engine CID	350
03	Cam Mild-Wild 1-4	1
04	Rev Limit RPM	6300
05	Idle RPM Warm	750
06	Reset Fuel Learn	0

Figure 18

Read from ECU Edit Send to ECU Back

4. **Rev Limit RPM** - This is a fuel cut. Please set at least 200 RPM above the maximum RPM of your engine, and any ignition system rev limiter. This is not a soft touch rev limiter, but a built-in safety feature. *See Figure 18.*

Handheld Controller

NO.	Engine ..(online)	RPM	JEGS
01	Cylinders	8	
02	Engine CID	350	
03	Cam Mild-Wild 1-4	1	
04	Rev Limit RPM	6300	
05	Idle RPM Warm	750	
06	Reset Fuel Learn	0	

Figure 19

Read from ECU Edit Send to ECU Back

5. **Idle Speed Warm** - The idle speed at which you wish your engine to run at 150° F (65° C) and above.

Note: The idle will be higher when the engine is cold and will taper down to the set speed at 150° F (66° C). *See Figure 19.*

Fan 1 Setup

Calibration		JEGS
1. Engine Setup		
2. Idle Setup		
3. Fan Setup		
4. Reset Learn		

Enter -- ++ Back

Figure 20

On the Calibration screen, *See Figure 20*, follow these steps:

If using an electric fan, go to option #3 and select “Enable” or depress the joystick button to send info to the ECU. If not using an electric fan, select “Disable” and continue the Enter/Send steps above.

Note: This step is important to eliminate a fault code from appearing when not using an electric fan, and also preventing the idle from increasing when the fan “On” temperature is achieved and no fan is used.

If the fan is enabled, *See Figure 21*, follow these steps:

1. Fan 1 ON Temp - Enter the desired temperature that is 10° degrees higher than the thermostat.
2. Enter/depress to send to ECU.
3. Idle speed will increase when the fan is activated.

Note: Idle speed increase is not user programmable in basic calibration, but can be adjusted in the pro-tuning screen.

4. Fan 1 OFF Temp - Set to thermostat open temp.
- Note:** Setting must be lower than fan ON temperatures for fans to shut off.

DO NOT start your engine until you have turned the ignition to the OFF position for at least 30 seconds for the ECU to store the data. At this point you have made all of the selections needed to start your engine. This is a one-time setup and the changes are permanently stored in the ECU even if you disconnect the battery. These edits can be changed anytime in the future, but no battery power is needed for the ECU to keep these selections in it’s memory.

NO.	Fan Set..(online)	deg F	JEGS
01	Fan ON Temp	192	
02	Fan OFF Temp	187	
03	Option Fan Enable	enabled	

Figure 21

Read from ECU Edit Send to ECU Back

On-Engine Adjustment

When you set the idle speed, you may notice some new sounds, compared to when running the carburetor. Suction and whistling noises from air bypassing the IAC valve (Idle Air Control), is normal. The IAC valve maintains idle speed when the A/C compressor or electric fans engage.

IAC Setup

The idle screw on the throttle body will need to be adjusted. This screw has to be set so that the IAC value is nearly closed when the engine is at operating temperature and idling. 3-10 IAC steps are recommended for an engine at operating temperature, out of gear, and idling.

Note: If your RPMs drop by more than 200 RPMs when engaging reverse you may need to set the idle in reverse.

When the engine is at idle, the IAC will learn the necessary position to maintain the RPM at the Target Idle Speed. When loads are placed on the engine or when the throttle is open, the ECU will adjust the IAC steps, this is normal. It's best to adjust this screw from a more open position to start with. This will allow the engine to start at a high idle, which will make adjusting the IAC easier.

Note: Once the IAC setup is complete no further adjustments are necessary.

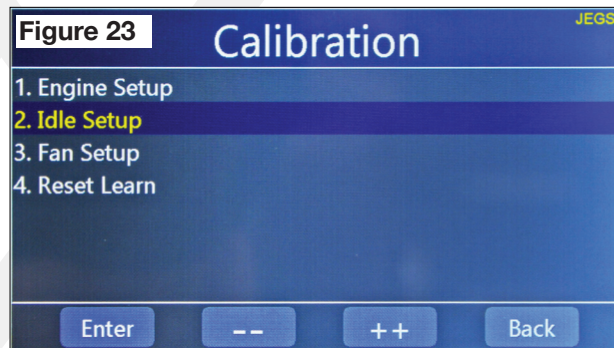
IAC Setup

Steps for adjusting the IAC:

1. Start the engine and get it to operating temperature.



2. Select **#4 - Initial Setup** in the handheld controller
See Figure 22



3. Select **#2 - Idle Setup** in the handheld controller
See Figure 23

IAC Setup

NO.	Idle Se..(online)	Mode
01	Idle RPM Warm	750
02	Reset IAC Learn	0
03	Idle screw set TPS 0	Adjust

Figure 24

Read from ECU Edit Send to ECU Back

Figure 24

- Using the keypad scroll down to **#3 - Idle screw set TPS 0**. This setting will need to be changed from “Normal” to “Adjust”. Once the setting has been changed, press the “OK” button to send the information to the ECU.

See Figure 24

Figure 25 JEGS Main Menu

1. Dashboard
 2. Large Gauges
 3. Tuning
 4. Initial Setup
 5. Data Logging
 6. PRO Tuning
 7. Display Setup

Navigation buttons: --, Enter, ++

Figure 25

5. Press the back button to return to the main menu, once on the Main Menu select **#1 - Dashboard**.

See Figure 25

Name	Value	Unit
TPS	0.0	%
Fuel PW	40.57	ms
Inject Duty%	0.0	%dc
Target RPM	950	RPM
IAC Steps	235	step
IAC Learn	2	step
IAC PID	0	step

Figure 26

- Using the keypad scroll down until you see **IAC Steps**. This setting should ideally read between 3-10 steps. **See Figure 26**

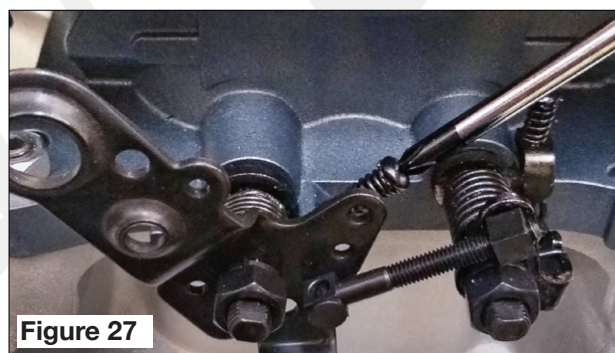


Figure 27

7. If the number is above 10, then you will need to turn the adjuster screw In or Clockwise. It will take a moment for the IAC to compensate, so make small adjustments and wait for the idle to stabilize between adjustments. **See Figure 27**
8. Once you're finished adjusting the IAC turn the Key off so the changes can be saved to the ECU. Wait at least 30 seconds before turning the key back on.

Diagrams

Plumbing Schematic for Return-Style System

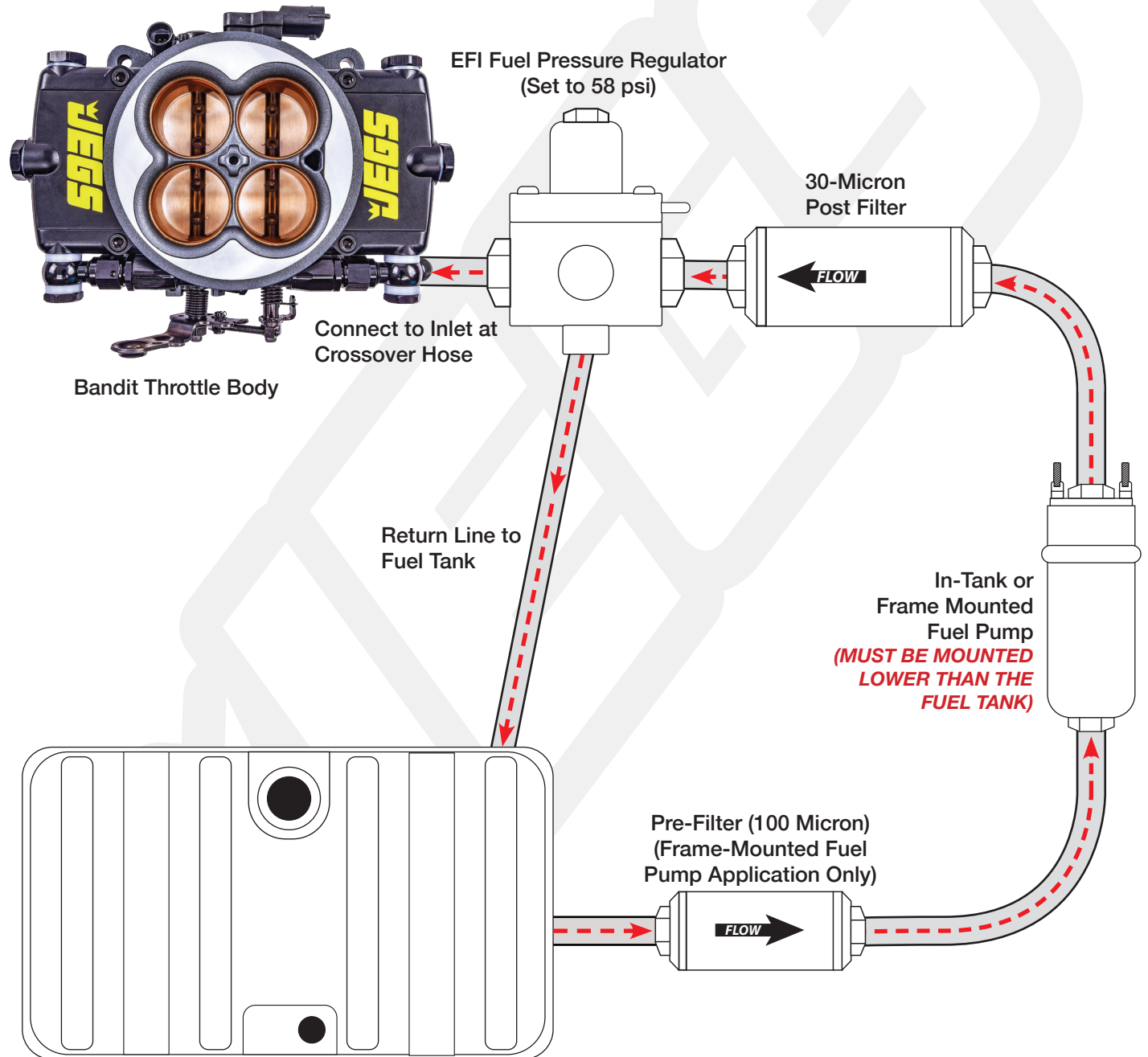


Figure 28

Diagrams

Connections for JEGS EFI System with Ready-to-Run Distributor

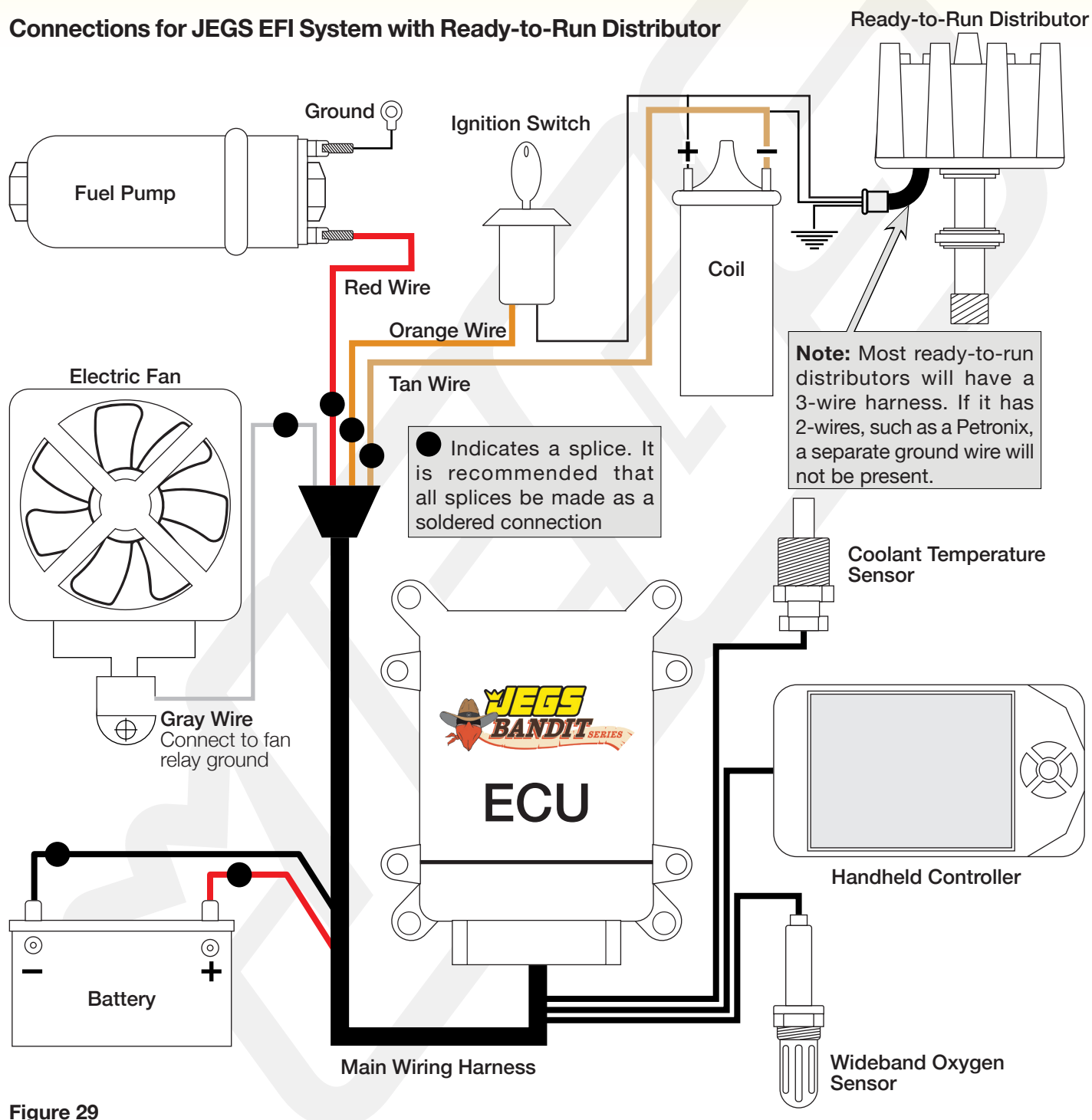


Figure 29

Diagrams

Connections for JEGS EFI System with an HEI Distributor

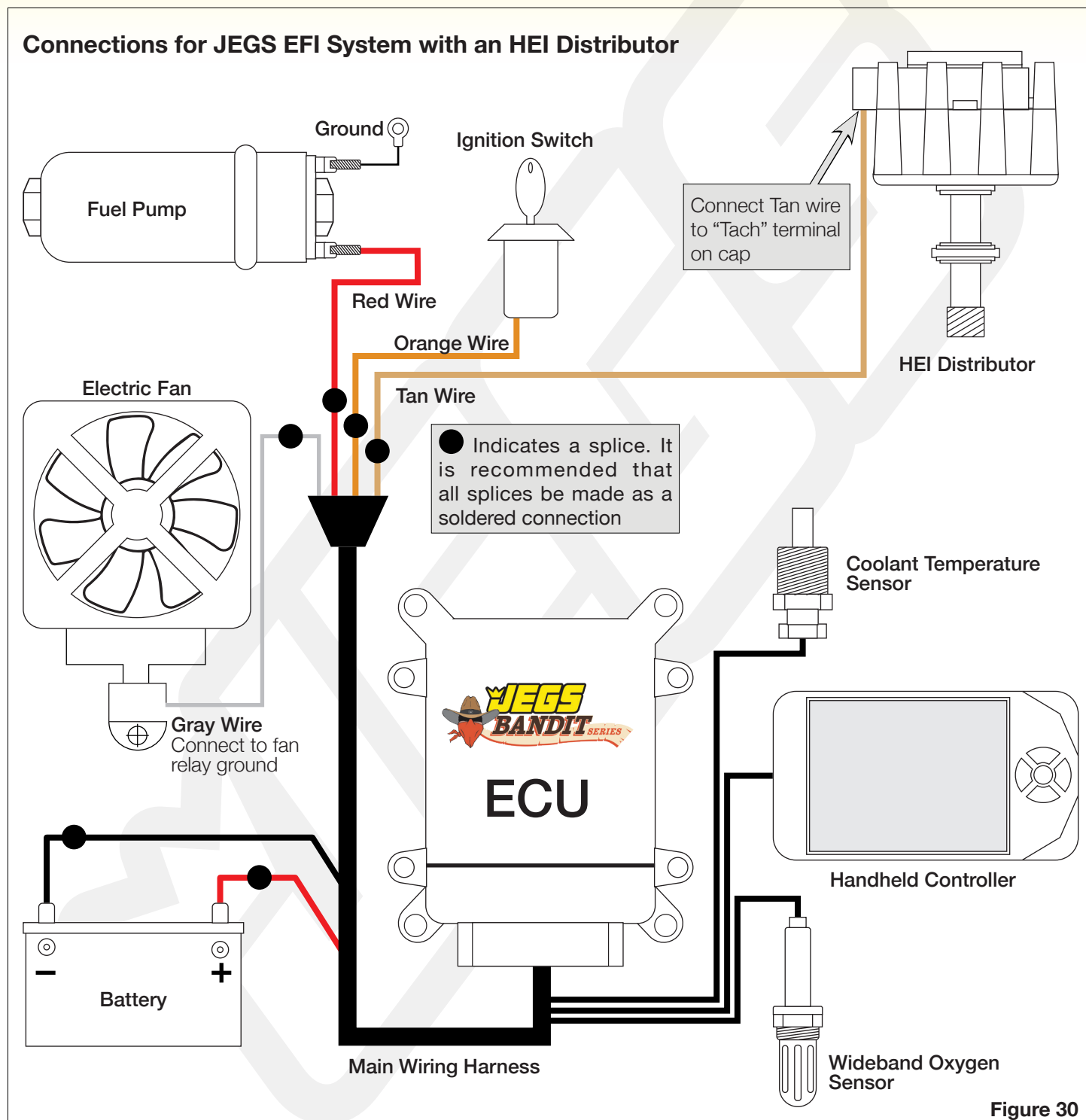


Figure 30

Use this schematic for HEI distributors without an external CDI box, such as an MSD 6AL, or similar aftermarket ignition box.

Diagrams

Connections for JEGS EFI System with External CDI Box

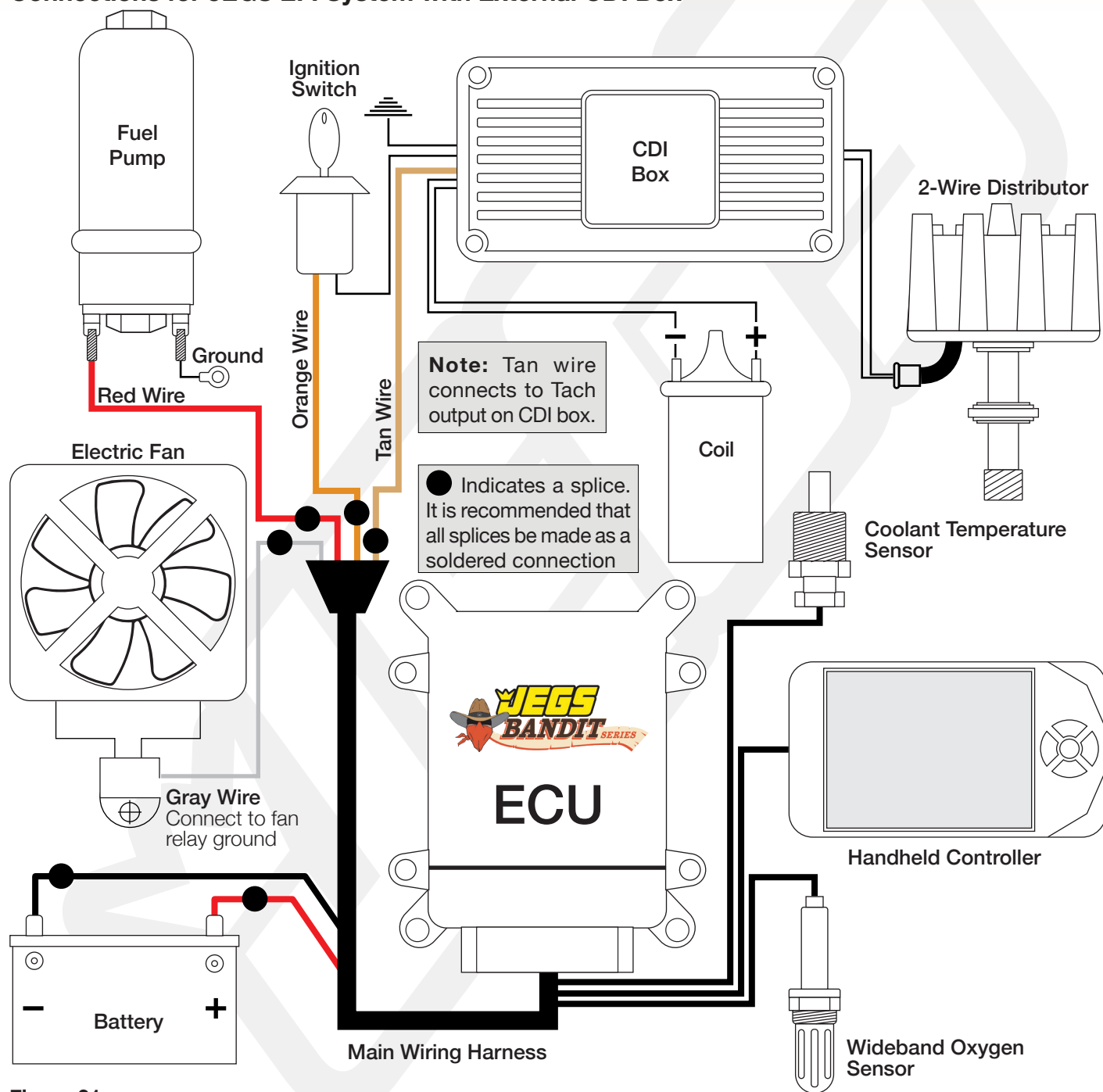


Figure 31

Use this schematic for conventional 2-wire distributors with an external CDI box, such as an MSD 6AL, or similar CDI box.

Fault Codes

FAULT CODE	FAULT #	NAME
P0107	11	MAP Low
P0108	12	MAP High
P0129	13	Baro Low
P0106	14	Baro High
P0122	15	TPS Low
P0123	16	TPS High
P0112	21	IAT Low
P0113	22	IAT High
P0116	23	CTS Low
P0117	24	CTS High
P0131	27	Wideband Low
P0132	28	Wideband High
P0130	31	Wideband Open

FAULT CODE	FAULT #	NAME
P0562	32	Battery Low
P0563	33	Battery High
P0335	36	Crank Noise Fault
P0201	45	Injector A
P0202	46	Injector B
P0203	47	Injector C
P0204	48	Injector D
P0505	53	IAC Fault
P0032	55	Wideband Heater Open
P0031	56	Wideband Heater Short
P0230	63	Fuel Pump Relay Open
P0480	74	Fan 1 Open
P0480	75	Fan 1 Short

Charts

LEGEND

kPa: Engine Load (MAP)

AFR: Air Fuel Ratio

Chart 1 (Gasoline)

		AFR		
kPa	95	12.80	12.75	12.65
	75	13.70	13.85	13.00
	45	14.00	14.40	13.40
		1100	3000	6000
		RPM		

Chart 2 (E85)

		AFR		
kPa	95	8.51	8.48	8.41
	75	9.11	9.21	8.65
	45	9.31	9.58	8.91
		1100	3000	6000
		RPM		

Chart 3 (Volumetric Efficiency)

		VE							
kPa	100	82.3	85.3	100.0	89.9	95.0	92.9	92.9	97.5
	80	55.9	62.5	86.3	81.3	91.9	91.4	90.9	91.4
	60	41.6	44.2	66.5	74.6	90.4	90.9	90.9	91.4
	40	36.6	30.5	52.3	66.5	83.8	81.9	89.4	90.4
	20	40.1	30.0	43.2	62.5	75.7	71.1	82.8	85.8
		500	900	1800	2700	3600	5000	6000	7000
		RPM							

Handheld Basic Tuning Menu

Main Menu			
#3 Tuning	#1 AFR Targets		Air/Fuel Ratio Target by RPM and kPa (Load). This screen represents a table like 'Chart 1.'
	#2 Accel Pump	1. Accel Pump 20F	Normal tip-in fuel at 20 degrees F. For tip-in hesitation try adding fuel, For a slow/sluggish tip-in response try removing fuel.
		2. Accel Pump 65F	Normal tip-in fuel at 65 degrees F. For tip-in hesitation try adding fuel, For a slow/sluggish tip-in response try removing fuel.
		3. Accel Pump 170H	Normal tip-in fuel at 170 degrees F. For tip-in hesitation try adding fuel, For a slow/sluggish tip-in response try removing fuel.
		4. Fast Accel 20F	WOT tip-in fuel at 20 degrees F. For tip-in hesitation try adding fuel. For a slow/sluggish tip-in response try removing fuel.
		5. Fast Accel 65F	WOT tip-in fuel at 65 degrees F. For tip-in hesitation try adding fuel. For a slow/sluggish tip-in response try removing fuel.
		6. Fast Accel 170H	WOT tip-in fuel at 170 degrees F. For tip-in hesitation try adding fuel. For a slow/sluggish tip-in response try removing fuel.
	#3 Crank & Warm-Up	1. Prime Fuel Mult	This replaces pumping the accelerator before cranking with a carburetor. A larger number is more fuel. Max: 100
		2. Crank Fuel 20F	Crank Fuel % at 20 degrees F. If the vehicle needs extra fuel during crank add it here. Add/Subtract in increments of 10.
		3. Crank Fuel 65F	Crank Fuel % at 65 degrees F. If the vehicle needs extra fuel during crank add it here. Add/Subtract in increments of 10.
		4. Crank Fuel 170F	Crank Fuel % at 170 degrees F. If the vehicle needs extra fuel during crank add it here. Add/Subtract in increments of 10.
		5. Crank IAC	This is the Idle Air Control valve position while cranking. Max: 100
		6. Afterstart 20F	Afterstart Fuel % at 20 degrees F. If the vehicle starts then dies add or remove fuel here. Add/Subtract in increments of 10.
		7. Afterstart 65F	Afterstart Fuel % at 65 degrees F. If the vehicle starts then dies add or remove fuel here. Add/Subtract in increments of 10.

Handheld Basic Tuning Menu

Main Menu			
#3 Tuning	#3 Crank & Warm-Up	8. Afterstart 170F	Afterstart Fuel % at 170 degrees F. If the vehicle starts then dies add or remove fuel here. Add/Subtract in increments of 10.
		9. Warm-up 20F	Warm-up Fuel % at 20 degrees F. Add/Subtract in increments of 10.
		10. Warm-up 65F	Warm-up Fuel % at 65 degrees F. Add/Subtract in increments of 10.
	#4 Idle Control	1. Warm Idle Speed	This is the target idle speed at operating temperature.
		2. IAC Rate Up	This controls how fast the IAC can open. If the vehicle RPM dips on gear engagement or when stopping value can be increased.
		3. IAC Rate Down	This controls how fast the IAC can close. If the vehicle coast down to fast decrease this value, to slow increase this value.
		4. Decel Open IAC	Replaces the function of a mechanical dashpot on a carburetor. If the RPMs hangs when pushing the clutch in you can lower this value.
		5. Reset IAC Learn	Change to '1' and send to ECU to clear idle learned values.
		6. Reset TPS Learn	Change to '1' and send to ECU to clear throttle learned values.
		7. Idle Crew Set TPS	Change this to 'Adjust' to set idle screw. See how to set engine idle.
	#5 Fuel Cut Control	1. Rev Limit RPM	RPM where the fuel will be turned off. Recommended to use an ignition system that cuts spark. Set above the spark cut RPM.
		2. DFCO Enable Temp	Above this temperature (degrees F), Deceleration Fuel Cutoff can be used.
		3. Decel Cut MAP	Below this MAP (kPa), Deceleration Fuel Cutoff can be used. If the vehicle pops/burples on decel raise this value.
		4. Decel Return MAP	Above this MAP (kPa), Deceleration Fuel Cutoff will be exited, and fuel injection returned. Set this 2 kPa higher than the Decel Cut.
		5. DFCO Return Fuel	When fuel injection returns, extra fuel pulse width (ms) added. If hesitation on throttle return increase number to add more fuel.

Handheld Basic Tuning Menu

Main Menu			
#4 Initial Setup	#1 Engine Setup	1. Cylinders	
		2. Engine CID	
		3. Cam (Mild-Wild [1-4])	Very important this setting is correct. This determines a base load (volumetric efficiency) value % for the fuel table. Fuel trims are adjustments to this value. 1. Engine idle vacuum is 15 inHg. or above. 2. Engine idle vacuum is 10 inHg. to 15 inHg. 3. Engine idle vacuum is 8 inHg. to 10 inHg. 4. Engine idle vacuum is 6 inHg. to 8 inHg.
		4. Rev Limit RPM	
		5. Idle RPM Warm	
		6. Reset Fuel Learn	
	#2 Fuel Setup		
	#3 Idle Setup		
	#4 Fan Setup	1. Fan 1 ON Temp	Turns fan on at temperature (degrees F). Set 10 degrees higher than thermostat opening temperature.
		2. Fan 1 OFF Temp	Turns fan off at temperature (degrees F). Set to thermostat opening temperature.
		3. Option Fan 1 Enable	For a mechanical fan set to 'Disable'. If controlling the fan with this system set to 'Enable'
	#5 Reset Learn	1. Fault Clear	Change to '1' and click 'Send to ECU' to clear all fault codes.
		2. Reset All Learn	Change to '1' and click 'Send to ECU' to clear all learned values.
		3. Reset Fuel Learn	Change to '1' and click 'Send to ECU' to clear fuel learned values.
		4. Reset IAC Learn	Change to '1' and click 'Send to ECU' to clear idle learned values.
		5. Reset TPS Learn	Change to '1' and click 'Send to ECU' to clear throttle learned values. See Data Logging section. See Pro Tuning section.

Handheld Basic Tuning Menu

Main Menu		
#5 Data Logging		
#6 Pro Tuning		
#7 Display Setup	1. Version of Software	
	2. Units of Display	
	3. Sound	
	4. Sleep Mode	
	5. PRO Calibration	If 'Pro Tuning' is not displayed in main menu change value to 'Show'. See "Handheld PRO Tuning Menu Pg.25-26.
	6. ECU Programmer	If 'ECU Programmer' is not displayed in the main menu change this value to 'Show'.
#8 Fault Code		See "Fault Code" list on Pg. 20
#9 Read Cal From ECU		To save a tune, turn the key to the On position, not running. Select this menu. Highlight one of the backup files you wish to save to and then either press OK on the screen, and it will save all your current settings and parameters.
#10 Write Cal to ECU		Select this option to load a saved file to the ECU.
#11 ECU Programmer		
#12 Handheld Software mode Selection		Select for PC or Laptop connection.

Handheld PRO Tuning Menu

See Main Menu > Display Setup > Pro Calibration

PRO Tuning

#1 Basic Setting

#2 AFR Targets

#3 Accel Pump

#4 Fuel Control

#5 Rev Limit Decel Cut

#6 Cranking Fuel

#7 AFR Closed Loop

1. Fuel Trim Max

Maximum fuel trim % correction. After the you feel the vehicle runs great and the learning process should be complete, set this value to half of what it is.

2. Fuel Trim Min

Minimum fuel trim % correction. After the you feel the vehicle runs great and the learning process should be complete, set this value to half of what it is.

3. Fuel Trim RPM Max

Maximum RPM to allow fuel trim. Can be used to limit learning at WOT.

4. Fuel Trim RPM Min

Minimum RPM to allow fuel trim. On a camshaft with a large overlap, setting this above idle RPM and adjusting fuel with the CAM table manually is an option. See CAM FUEL CONTROL Below.

5. AFR Loop Speed

6. Idle Trim Rate Positive

7. Idle Trim Rate Negative

8. Idle Trim Jump Positive

9. Idle Trim Jump Negative

10. Trim Up Limit Low MAP

11. Trim Dn Limit Low MAP

12. Loop MAP Low

13. Fuel Learn Rate

14. Idle Fuel Learn Rate

15. Fuel Learn Max

Maximum learning % correction the ECU will save. Should not need changed

16. Fuel Learn Min

Minimum learning % correction the ECU will save. Should not need changed

17. Fuel Learn Max RPM

Maximum RPM to allow fuel learning. Can be used to limit learning at WOT.

18. Fuel Learn Min RPM

Minimum RPM to allow fuel learning. On large overlap camshaft, setting this above idle RPM and adjusting fuel with the CAM table manually is an option. See CAM FUEL CONTROL Below.

19. Fuel Learn OFF 1

Setting this value to '1' will turn off learning. After the you feel the vehicle runs great and the learning process should be complete, set this value to '1'. The system will continue to use fuel trims, it just wont save any learned values. This is a safeguard so if the O2 sensor goes bad or the exhaust develops a leak that spark plugs won't get fouled.

Handheld PRO Tuning Menu

See Main Menu > Display Setup > Pro Calibration

PRO Tuning

#7 AFR Closed Loop

- | | |
|-------------------------|--|
| 20. Fuel Loop OFF 1 | Setting this value to '1' will turn off fuel trims. Should not need changed. |
| 21. Reset Fuel Learn | |
| 22. Display AFR Filter | |
| 23. Dis AFR Filter Idle | |
| 24. Preheat WB02 Stall | |

#8 Idle Control

- | | |
|--------------------|--|
| 1. Warm Idle Speed | |
| 2. Reset IAC Learn | |
| 3. IAC Learn MAX | |
| 4. IAC Learn MIN | |
| 5. IAC Rate UP | |
| 6. IAC Rate Down | |
| 7. Fan RPM Adder | RPM added to idle when cooling fan is commanded on. If running dual fans the initial AMP draw may cause a drop in RPM so this may need raised. |
| 8. Fan IAC Steps | |
| 9. Decel Open IAC | |

#9 Fan Settings

#10 Learn Data

#11 Accel Pump 3D Table

#12 Accel Decay 3D Table

#13 CAM1 Fuel Control

#14 CAM2 Fuel Control

#15 CAM3 Fuel Control

- | | |
|--|--|
| 01 VE 500rpm 20kPa -
40 VE 7000rpm 100kPa | See Chart 3 Pg.20 for how this table is laid out. This is the theoretical VE of the engine. If the vehicle is idling in this area, making this value larger will add fuel, and reducing this value will remove fuel. |
|--|--|

#16 CAM4 Fuel Control

Warranty

JEGS provides customers with the highest quality performance products. JEGS warrants the Bandit -Series Fuel Injection System to be free from defects in both workmanship and materials for a period of one year from date of purchase, provided that the product is properly installed and subjected to normal use and service, is not used for racing or competition purposes and that the product is not modified or altered in any way unless specified by our instructions.

Customers requiring warranty assistance should contact JEGS and we will determine the method of satisfying the warranty. Should JEGS determine that the product needs to be returned, it should be accompanied by proof of purchase and a clear description of the exact problem. The product must be returned freight pre-paid. If a thorough inspection of the product by JEGS indicates defects in workmanship or material, our sole obligation shall be to repair or replace the product. This warranty covers only the product itself and not the cost of installation or removal.

JEGS SHALL NOT BE LIABLE FOR ANY AND ALL CONSEQUENTIAL DAMAGES OCCASIONED BY THE BREACH OF ANY WRITTEN OR IMPLIED WARRANTY PERTAINING TO THIS SALE, IN EXCESS OF THE PURCHASE PRICE OF THE PRODUCT SOLD.

If you have any questions regarding this product or installation, please contact our Technical Department at 1-800-345-4545.





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1-800-345-4545