Installation Guide

Throttle Body Fuel Injection

555-16800

JEGS BANDIT SERIES

JEGS.com

1-800-345-4545

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Fuel Injection made easy from a name you trust, JEGS.

Congratulations on purchasing one of the most dynamic fuel injection systems on the market today. This is a universal, throttle body style electronic fuel injection system, intended for most V8 engines originally equipped with carburetors. Engines with Q-Jet style manifolds will require an adapter, such as part# 555-15440, to run the Bandit system.

The JEGS Bandit fuel injection system features easy-to-use software, which is pre-installed onto a supplied touch screen controller. The software will allow you to monitor real-time system performance. Your existing distributor and ignition box, if used, functions as before and controls timing.

The JEGS Bandit is self-tuning once the initial setup is performed using the hand-held controller. When the necessary initial inputs are made the handheld controls the system which creates a base fuel map to get the engine running. Once running, the self-tuning programming will fine-tune the map to produce optimum power and performance.

Through the use of a Wide Band O2 Sensor the system can continuously make adjustments to fuel delivery to provide the correct air/fuel ratio under all climates and altitude conditions. Several sensors are also integrated into the throttle body assembly including the Throttle Position Sensor (TPS), and the Manifold Absolute Pressure Sensor (MAP). The Wideband O2 Sensor is installed into the exhaust pipe. This system is designed with safety in mind and has a self-adjusting “limp home” mode. It also has a data-logging feature to track what is going on with the system while it is running, that can be reviewed later, to ensure optimal performance.

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 180º Fahrenheit (82º Celsius).

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 45º and 37º AN fittings. These fittings look similar, but will not work together. The 45º fittings are usually sourced from a hardware or auto parts store, while the 37º 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.

Fuel

The JEGS Bandit is intended for use with unleaded pump gas. The system is not compatible with Ethanol fuels. The use of E-85 is not recommended and will void your warranty.

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

The JEGS Bandit comes with 62 lb. injectors pre-installed. This unit is capable of handling 200-550 hp @ 58 psi.

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

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.

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 warm-up. It will automatically turn off once your engine reaches operating temperature.

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 3/16 in. and three 3/8 in. nipples. ***See Figures 1 and 2*** for their locations and uses.

Figure 1

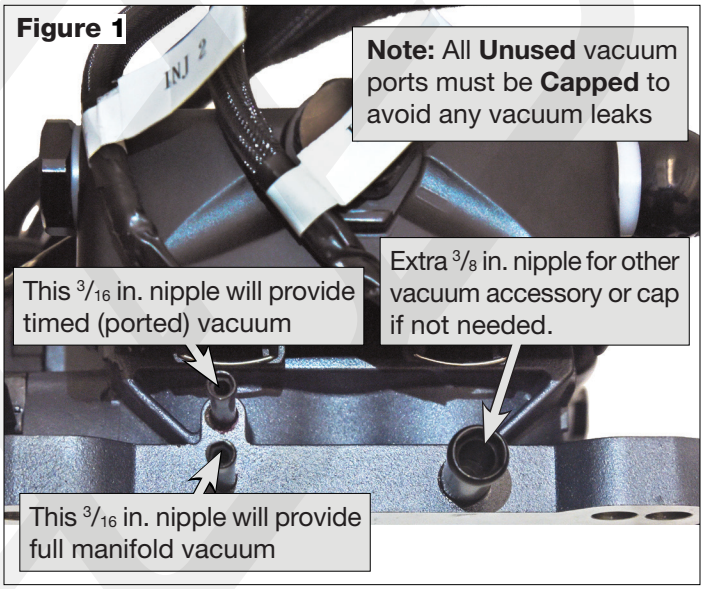
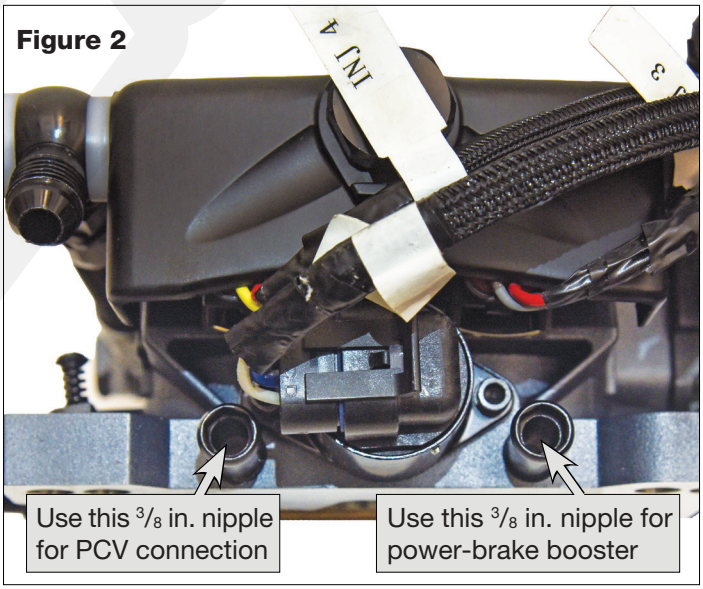


Figure 2



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.

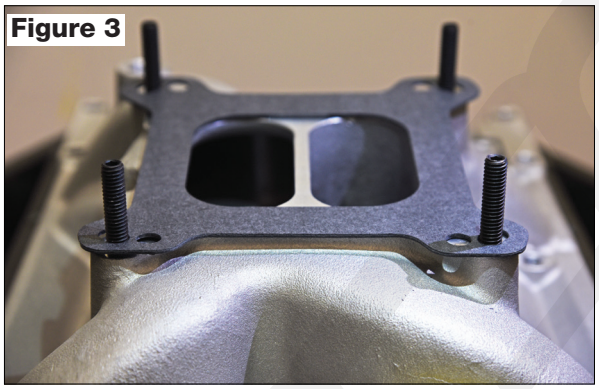


Figure 3

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 it 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.

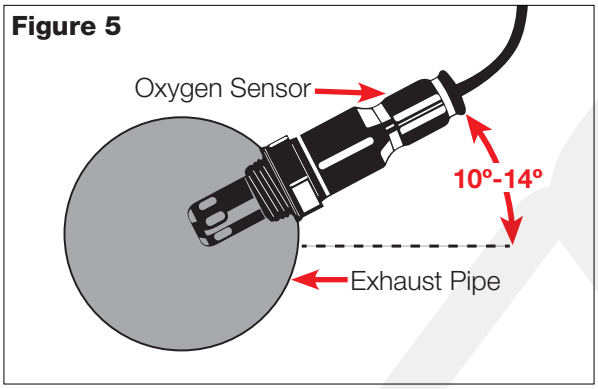
Warning: Do not start the engine without the sensor cable sub-harness connected to the throttle body and the fuel injection system is fully operational, or damage will occur to the sensor!

See images 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
- IAC
- O2
- TPS
- CTS
- Fan
- Tach
- Injectors
- Ground
- Battery Positive
- ECU
- Controller Connection
- Fuel Pump
- 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)

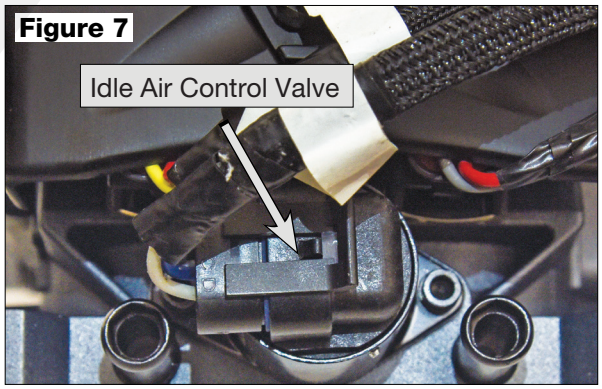
The MAP sensor is attached to the outside of the throttle body on the passenger side. Two sensors, Inlet Air Temperature (IAT) and Manifold Absolute Pressure (MAP), are combined for ease of installation. The Manifold Absolute Pressure measures the load of the engine and will range between 10-90 kPa while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

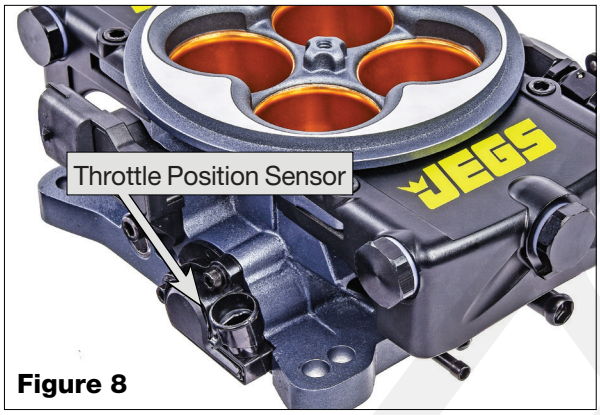


Figure 8

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 550 hp. 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.

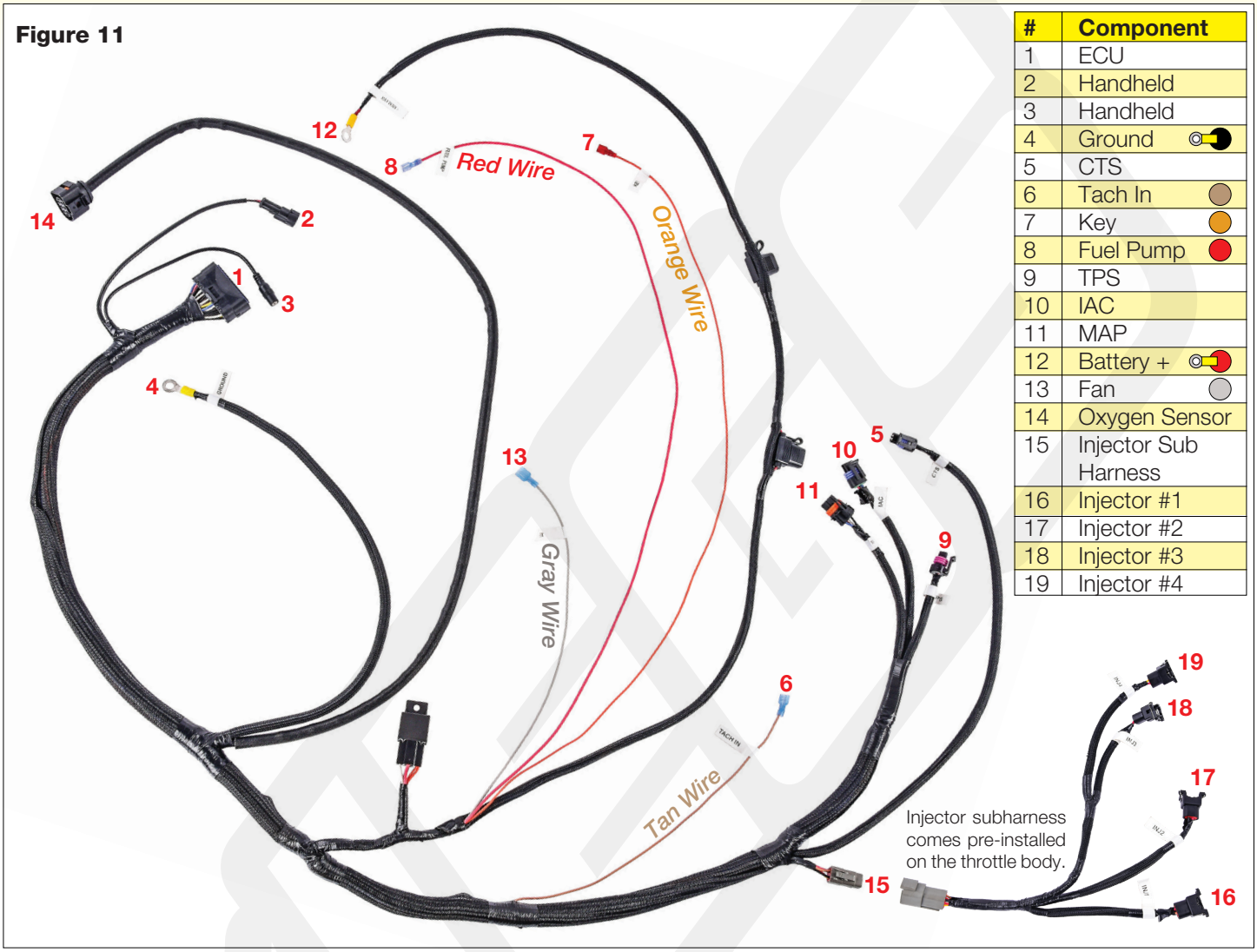
Note: Typically some of the wires listed in the chart may need to be extended. It is strongly suggested that any wire extensions are made with the same gauge and color wires as is used in the supplied harness. Make connections as a soldered joint rather than a crimped connection. Utilize a shrink-wrapped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



#	Component
1	ECU
2	Handheld
3	Handheld
4	Ground
5	CTS
6	Tach In
7	Key
8	Fuel Pump
9	TPS
10	IAC
11	MAP
12	Battery +
13	Fan
14	Oxygen Sensor
15	Injector Sub Harness
16	Injector #1
17	Injector #2
18	Injector #3
19	Injector #4

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 postive (+) 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.

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.
2. Input the engine criteria
   - Cylinders
   - Engine CID (Cubic Inch Displacement)
   - Cam Mild-Wild
   - Rev Limit RPM
   - Idle RPM Warm
   - Fan Control (Coolant Temp)

   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.
3. 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.

Figure 14

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."

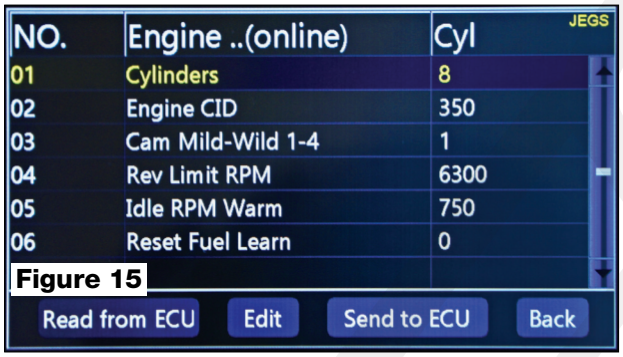


Figure 15

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

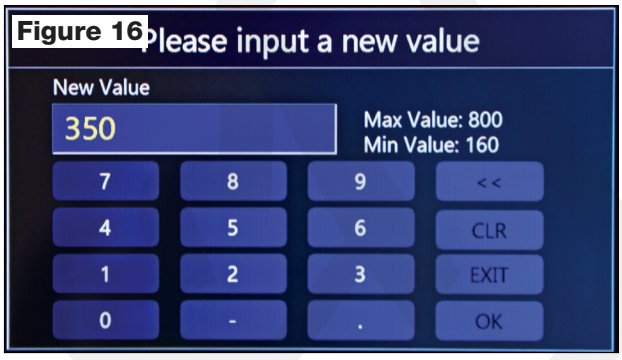


Figure 16

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.***

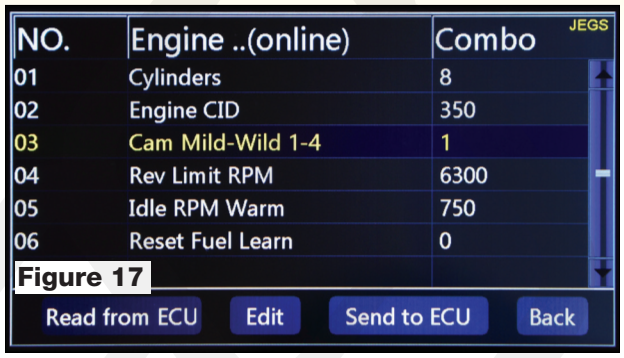


Figure 17

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

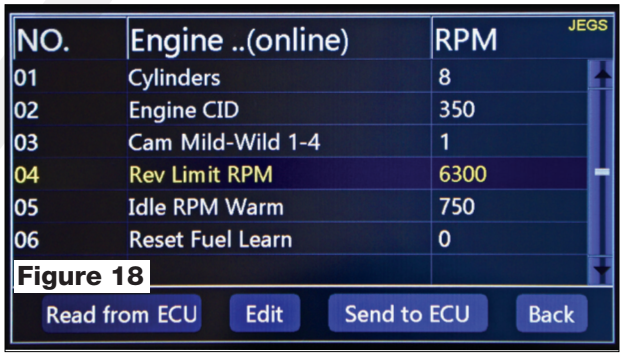


Figure 18

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

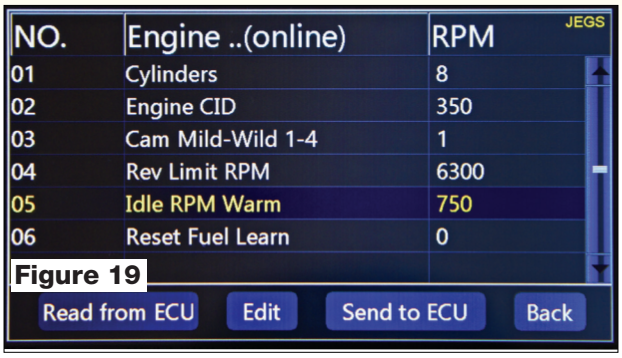


Figure 19

5. **Idle Speed Warm** - The idle speed at which you wish your engine to run at 150° F (65° C) and above. If you are using the JEGS Bandit to control your electric fans, your idle speed will increase by 30 rpm.
   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

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
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 - This is usually set approximately 5 degrees lower than the Fan ON temperature, but is up to user preference.
   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.

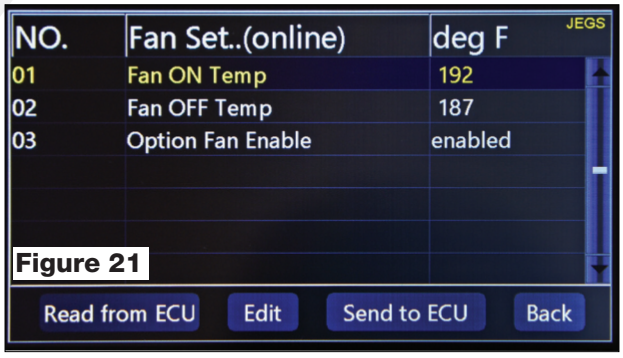


Figure 21

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. 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

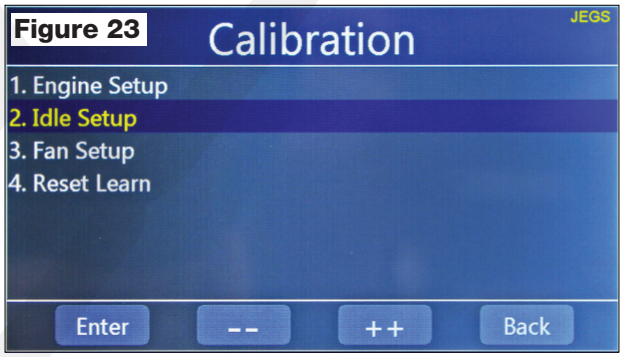
Steps for adjusting the IAC:

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

Figure 22

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

Figure 23



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

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IAC Setup

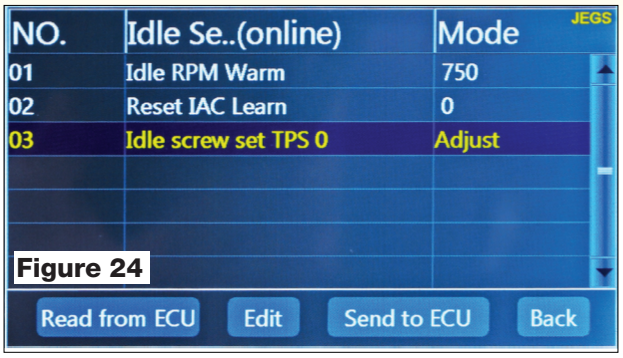


Figure 24

4. 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

5. Press the back button to return to the main menu, once on the Main Menu select ***#1 - Dashboard***. ***See Figure 25***

Figure 26

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

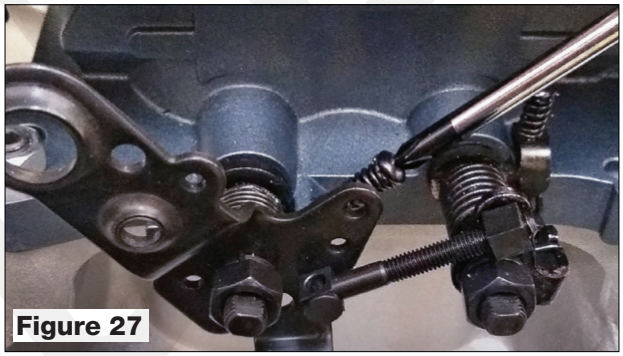


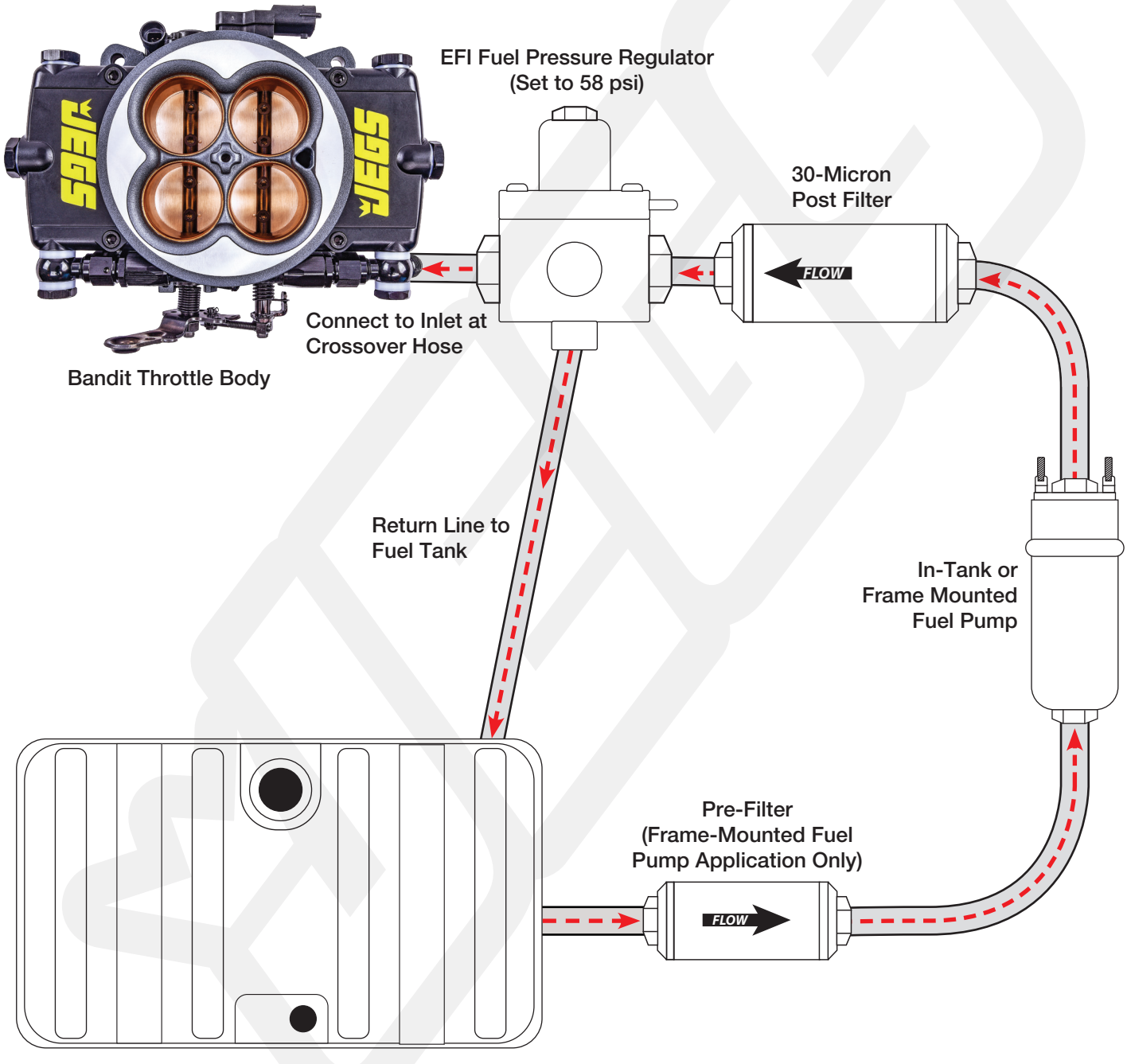
Figure 27

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

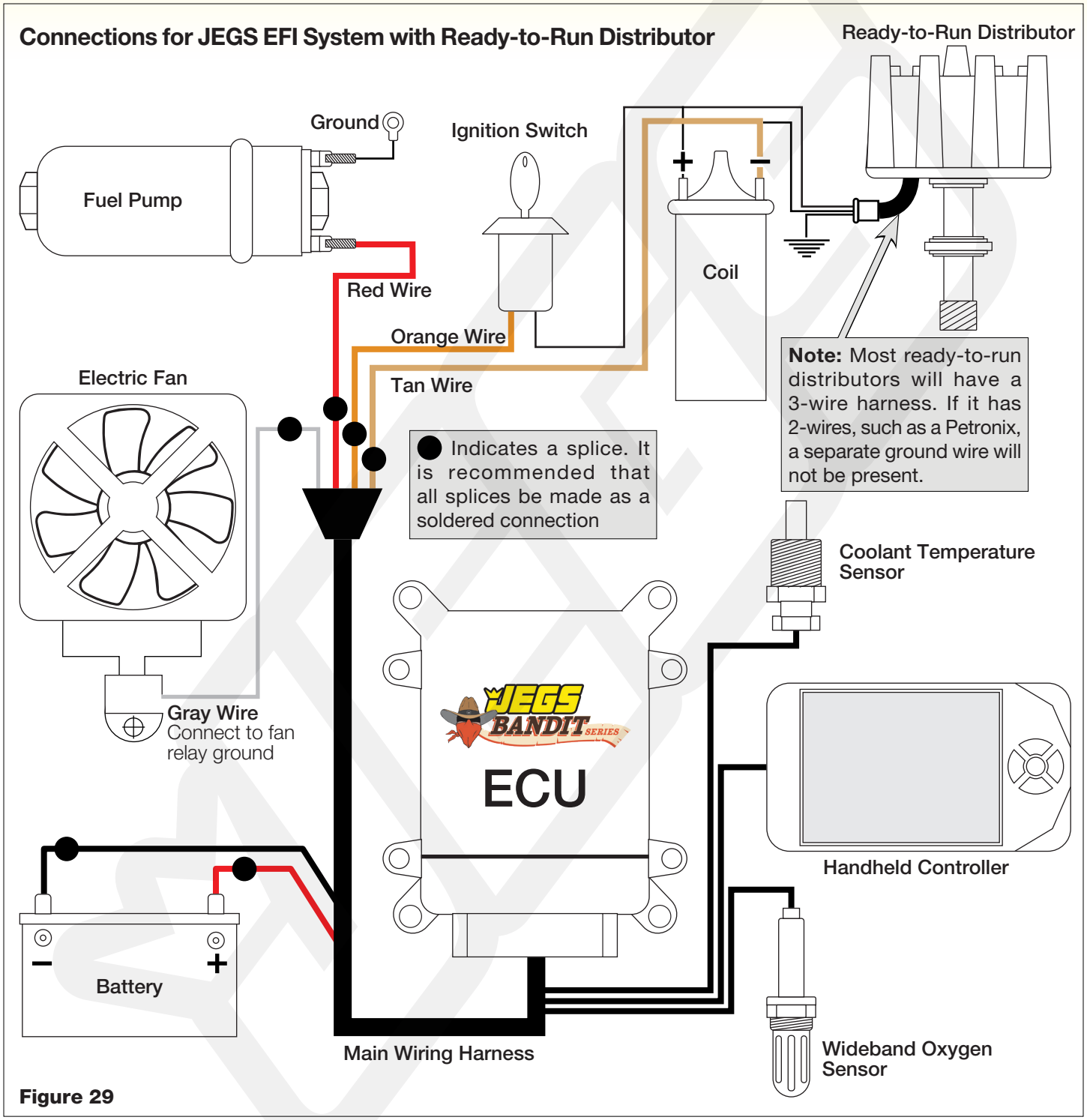


Figure 29

Diagrams

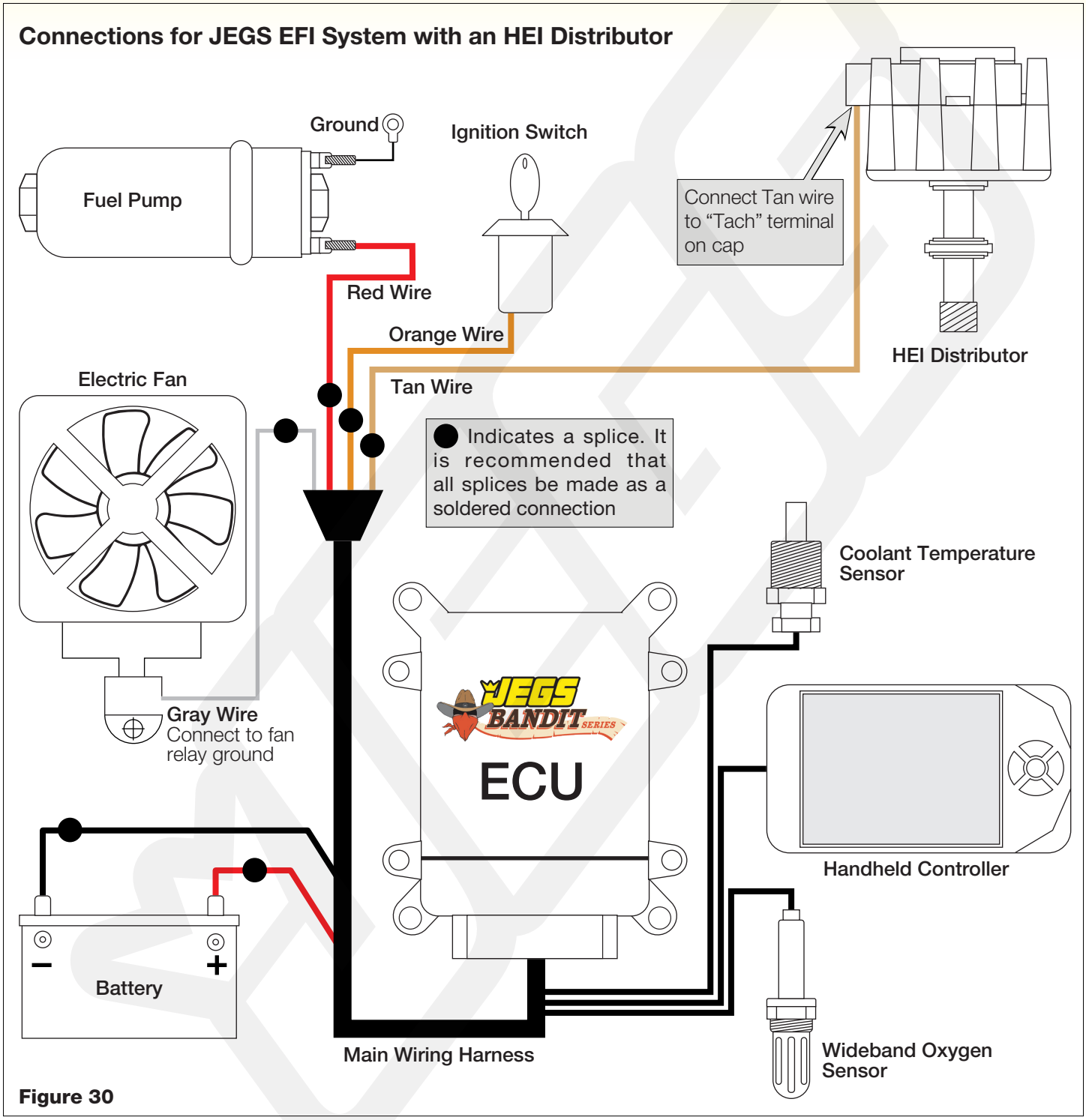


Figure 30

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

Diagrams

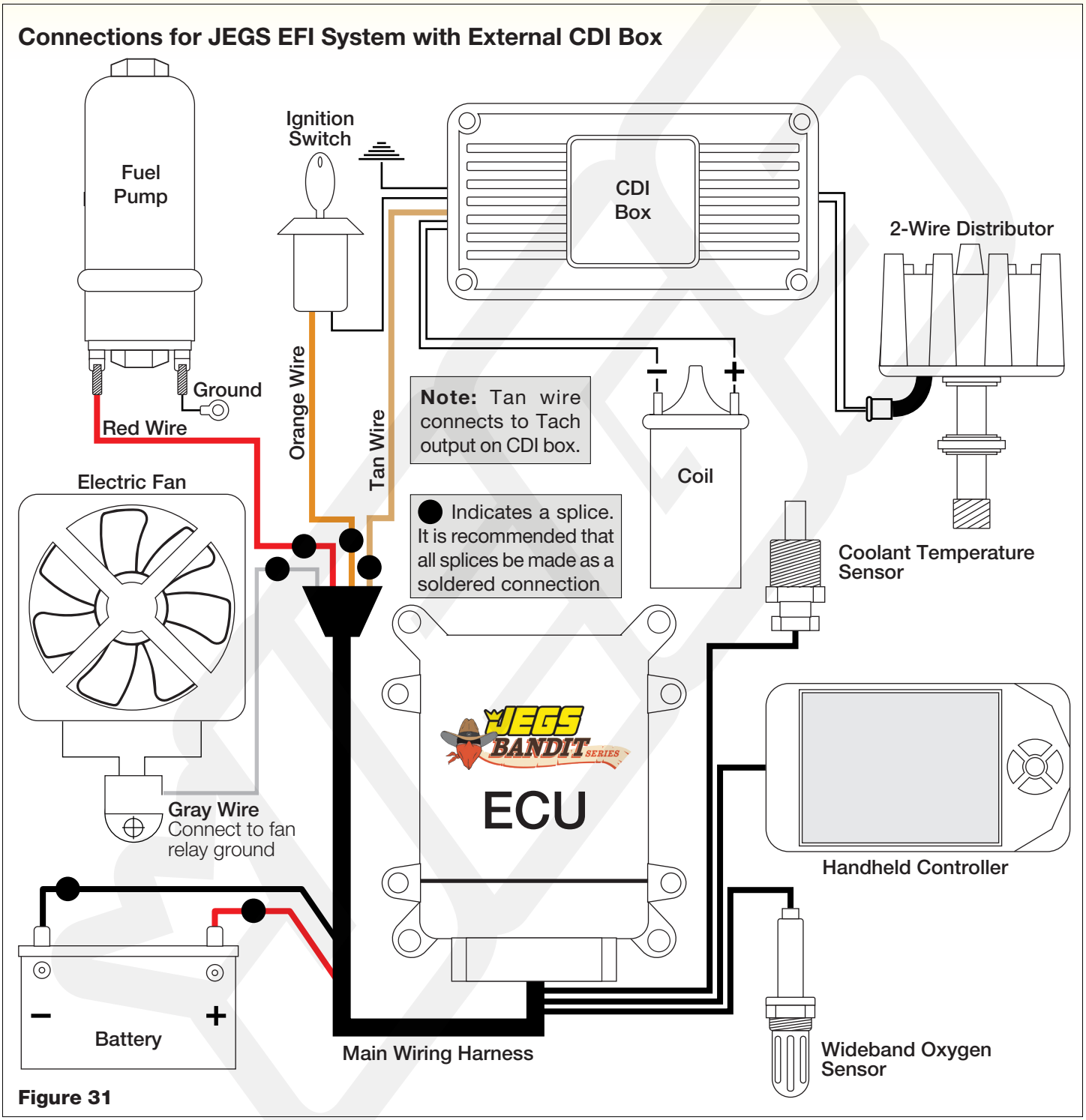


Figure 31

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

Fuel Delivery

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**.

Warranty

JEGS provides customers with the highest quality performance products. JEGS warranties 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.

Troubleshooting

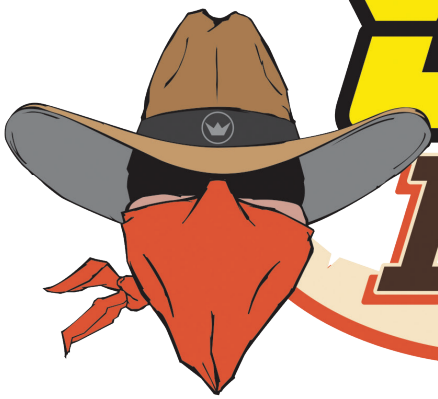
Fault Code List		
P Code	Number	Name
P0107	11	MAP Low
P0108	12	MAP High
P0129	13	Baro Low
P0106	14	Baro High
P0122	15	TPS Low
P0123	16	TPS High
P0112	21	IAT Low
P0113	22	IAT High
P0116	23	CTS Low
P0117	24	CTS High
P0131	27	Wideband Low
P0132	28	Wideband High
P0130	31	Wideband Open
P0562	32	Battery Low
P0563	33	Battery High
P0335	36	Crank Noise Fault
P0335	37	Crank Miss fault
P0335	38	Crank Open fault
P0335	39	Cam Unsync
P0335	40	Tooth in Gap
P0340	41	Cam Low
P0340	42	Cam High
P0351	43	Coil A
P0352	44	Coil B
P0201	45	Injector A
P0202	46	Injector B
P0203	47	Injector C
P0204	48	Injector D
P0353	49	Coil C
P0505	53	IAC Fault
P0032	55	Wideband Heater Open
P0031	56	Wideband Heater Short
P0230	63	Fuel Pump Relay Open
P0230	64	Fuel Pump Relay Short
P0480	74	Fan 1 Open
P0480	75	Fan 1 Short
P0481	76	Fan 2 Open
P0481	77	Fan 2 Short
P0170	78	Fuel Learn Fault
P0560	110	Main Relay Low
P0560	111	Main Relay High
P0325	117	Knock Fault
P0501	118	VSS Fault
P0560	122	Main Relay Open
P0205	129	Fuel E
P0206	130	Fuel F
P0207	131	Fuel G
P0208	132	Fuel H
P0130	133	Wideband Temp High
P0130	134	Wideband Temp Low
P0150	135	Wideband B
P0161	136	Wideband B Heater Open
P0161	137	Wideband B Heater Short
P0150	138	Wideband B Temp High
P0150	139	Wideband B Temp Low
P0753	140	Shift Sol A
P0758	141	Shift Sol B
P1864	142	TCC Sol
P1860	143	TCC PWM
P1835	144	Sol 3-2
P0748	145	Trans Line Pressure Sol

Troubleshooting Guide TB Injection	
Issue Observed	Things to Check
Handheld/EFI wont turn on	Check red wire for 12 volts
	Check Fuses
	Check engine ground for less than 0.5 ohms resistance
Handheld wont connect to ECU	Check red wire for 12 volts
	Check handheld cable connection
Engine cranks, fires, and dies	Check red wire for 10+ volts during cranking
	Check white wire for 10+ volts during cranking
	Check engine ground for less than 0.5 ohms resistance
	See if handheld will read RPM in Dashboard
	Adjust throttle adjustment screw
Engine fires, stumbles, and dies	Adjust afterstart enrichment
	Adjust throttle adjustment screw
Smells rich at idle	Check AFR of the engine in dashboard
	Check fuel pressure
	Check engine timing
	Check for exhaust leaks by oxygen sensor
Engine surges at idle	Check for vacuum leaks
	Check fault code in handheld
Engine wont idle	Check for vacuum leaks
	Adjust idle (IAC Adjustment)
Poor gas mileage	Adjust AFR to lean out
	Check fault codes
Hesitation when trying to accelerate	Adjust accel pump in Go EFI Tuning
	Check fuel pressure when free revving engine
	Check ignition timing

Items You Need

	Part No.	Description		Part No.	Description
1.	555-10654	Fuel Pump Harness & Relay	70.	555-100285	AN Hose Complete Pressure Test Kit (-03AN to -16AN)
2.	555-159120	Fuel Pressure Regulator (EFI Billet)	71.	555-80544	Nylon Vise Jaws (4 in. wide for AN Hose Ends)
3.	555-159076	Inline Fuel Pump (Bosch-Style)	72.	555-80547	Aluminum Vise Jaws (4 in. Wide for AN Hose Ends)
4.	555-15948	Inline Fuel Delivery Kit	73.	555-80548	Vise Jaw Protector (For AN Hose Ends)
5.	555-15949	Inline Fuel Delivery Kit	74.	555-82035	Cushion Clamps (-6AN Hose)
6.	555-15440	Spread Bore Adapter	75.	555-W5355	Screw Assortment
7.	555-15840	Carburetor Studs	76.	555-W50092	Cordless Drill (19.2-Volt with 13-Piece Bit Set, 3/8 in. Chuck)
8.	555-157110	Linkage Plate	77.	555-W50086	Electric Drill (3/8 in. Chuck with Keyless Chuck)
9.	555-157050	Throttle Bracket (Driver Side Rear Stud)	78.	555-150114	Step Drill Bit Set (3-Piece)
10.	555-157052	Throttle Bracket (Driver Side Rear Stud)	79.	555-81903	Extension Cord (With Retractable Reel)
11.	555-157210	Throttle Linkage Adapter (1977-1986 GM)	80.	555-W2270	Extension Cord (25 ft. 16 ga.)
12.	555-15150	Throttle Bracket & Return Spring (GM-Style Cable)	81.	555-W4034K	Funnel and Drain Pan Kit
13.	555-15151	Throttle Bracket & Return Spring (Ford-Style Cable)	82.	555-80006	Aluminum Low-Profile Floor Jack (2-Ton)
14.	555-15152	Throttle Bracket & Return Spring (Lokar-Style Cable)	83.	555-80037	Jack Stands (6-Ton)
15.	555-15153	Throttle Bracket & Return Spring (Morse-Style Cable)	84.	555-W41001	Wheel Chocks
16.	555-15154	Throttle Bracket & Return Spring (Mopar-Style Cable)	85.	555-1250	Safety Glasses
17.	555-157100	Throttle Return Spring Kit	86.	555-65010	Fender Cover
18.	555-40687	Vibration Isolation Mount Kit (1/4 in. -20 Threads)	87.	555-W2237	Work Light (120V)
19.	555-10859	Tan Wire (16-gauge)	88.	555-81927	Work Light (LED 60-Watt)
20.	555-10851	Red Wire (16-gauge)	89.	298-52811	Pod Light (LED)
21.	555-10856	Gray Wire (16-gauge)	90.	555-80427	Tool Set (123-Piece)
22.	555-10854	Orange Wire (16-gauge)	91.	555-81440	Work Bench
23.	555-10630	Heat Shrink	92.	555-80170	Work Bench Utility Mat (24 in. L x 16 in. W)
24.	555-8076	Heat Gun			
25.	555-80720	Butane Torch			
26.	555-80569	Circuit Tester			
27.	555-w2974	Digital Multi-Tester			
28.	555-28020	Dielectric Grease			
29.	555-80575	Wire Crimper			
30.	555-80160	Solder Gun			
31.	555-w3248	Solder			
32.	555-10600	Zip Ties (4 in. Length)			
33.	555-10605	Zip Tie (8 in. Length)			
34.	555-53221	Thermostat (180º, Pre-LT1 SBC)			
35.	555-28010	Hose & Fitting Assembly Kit			
36.	555-110027	30º Max Flow (Blk, -6 AN)			
37.	555-110011	45º Max Flow (Blk, -6 AN)			
38.	555-110037	60º Max Flow (Blk, -6 AN)			
39.	555-110021	90º Max Flow (Blk, -6 AN)			
40.	555-108031	120º Max Flow (Blk, -6 AN)			
41.	555-110031	150º Max Flow (Blk, -6 AN)			
42.	555-110046	180º Max Flow (Blk, -6 AN)			
43.	555-110091	Stgt Max Flow, Male (Blk, -6 AN)			
44.	555-110001	Stgt Max Flow, Female (Blk, -6 AN)			
45.	555-100910	Pro-Flow Hose 200 Series (3 ft, -6 AN)			
46.	555-100911	Pro-Flow Hose 200 Series (6 ft, -6 AN)			
47.	555-100912	Pro-Flow Hose 200 Series (10 ft, -6 AN)			
48.	555-100913	Pro-Flow Hose 200 Series (15 ft, -6 AN)			
49.	555-100914	Pro-Flow Hose 200 Series (20 ft, -6 AN)			
50.	555-110104	Straight Flare Fitting (Blk, 1/4 in. NPT to -6 AN Flare)			
51.	555-110106	Straight Flare Fitting (Blk, 3/8 in. NPT to -6 AN Flare)			
52.	555-110322	Swivel Coupler (Blk, -6 AN)			
53.	555-110640	Swivel Coupler (Blk, -6 AN, 45º)			
54.	555-110647	Swivel Coupler (Blk, -6 AN, 90º)			
55.	555-110670	Female Coupler (Blk, -6 AN Male to -6 AN, 90º)			
56.	555-110202	Flare Union (-6AN)			
57.	555-15164	Y-Fitting			
58.	555-110892	AN Female to Male Union (-6AN Female to -6AN Male			
59.	555-110882	AN Female to Male Union (-6AN Female to -6AN Male			
60.	555-80558	AN Wrench Set (-4AN to -12AN)			
61.	555-80559	AN Wrench Set (-4AN to -20AN)			
62.	555-80625	Adjustable Wrench (Billet Aluminum, -3AN to -12AN)			
63.	555-82035	Cushion Clamps (-6 AN Hose)			
64.	555-80589	Ratcheting Hose Cutter Rubber & Plastic hose			
65.	581-409B	KOUL tools EZ-ON Hose Press (1/4 in. to 1 in. Hose)			
66.	555-82055	Tite-Seal Pinch Clamp (-6AN)			
67.	555-28011	Thread Sealing Paste			
68.	555-75055	Thread Sealing Tape (1/2 in. x 43 ft.)			
69.	555-28010	Hose & Fitting Assembly Kit			

	Optional Parts Part No.	Optional Parts Description
1.	555-500078	Air Cleaner (14 in. x 4 in. Chrome)
2.	555-500080	Air Cleaner (14 in. x 4 in. Chrome w/Logo)
3.	555-500074	Air Cleaner (14 in. x 3 in. Chrome)
4.	555-500052	Air Cleaner (14 in. x 3 in. Blk)
5.	555-154055	Carburetor Heat Shield (4150-Style)
6.	555-15495	Carburetor Spacer (4150-Style, 1/2 in. Height)
7.	555-15496	Carburetor Spacer (4150-Style, 1 in. Height)
8.	555-15497	Carburetor Spacer (4150-Style, 2 in. Height)
9.	555-40002	Distributor (Ready-to-Run, SBC/BBC)
10.	444-40032	Distributor (Ready-to-Run, Ford 221-302)
11.	555-40002K	HEI Distributor (SBC/BBC)
12.	555-40620	Distributor Hold Down (SBC/BBC/90º v6)
13.	121-6425	Ignition (MSD 6AL)
14.	555-40100	Ignition Coil (High-Energy for Breaker Points/Non-CD, Chrome)
15.	555-40155	Ignition Coil (High Output, Red)
16.	555-40200	Spark Plug Wires (Universal, 8mm, Red)
17.	555-402000	Spark Plug Wires (Universal, 8mm, Blk)
18.	555-40230	Spark Plug Wires (SBF 302 w/HEI Cap, 8mm, Red Hot Pow'r)
19.	555-402030	Spark Plug Wires (SBF 302 w/HEI Cap, 8mm, Blk Hot Pow'r)
20.	555-40231	Spark Plug Wires (Ford 351-460 w/HEI Cap, 8mm, Red Hot Pow'r)
21.	555-402031	Spark Plug Wires (Ford 351-460 w/HEI Cap, 8mm, Blk Hot Pow'r)
22.	555-83250	Zinc Manifold Bolts
23.	555-513000	Intake Manifold (SBC, 1955-1986, Cast)
24.	555-513074	Intake Manifold (SBC Vortech, Cast)
25.	555-513002	Intake Manifold (SBC Vortech w/L31, Cast)
26.	555-513020	Intake Manifold (SBF 289/302, Except Boss, Cast)
27.	555-210003	Intake Manifold Gaskets (SBC Vortec w/L31, Port: Tapered x 2.1 in. H)
28.	555-210000	Intake Manifold Gaskets (SBC, Port: 1.34 in. x 2.21 in.)
29.	555-210001	Intake Manifold Gaskets (SBC, Port: 1.28 in. x 2.09 in.)
30.	555-210002	Intake Manifold Gaskets (SBC, Port: 1.23 in. x 1.99 in.)
31.	555-210004	Intake Manifold Gaskets (SBC, Port: 1.23 in. x 2 in.)
32.	555-210008	Intake Manifold Gaskets (SBC, Port: 1.25 in. x 2 in.)
33.	555-210100	Intake Manifold Gaskets (BBC, Port: 1.8 in. x 2.5 in., w/out Upper Bolts)
34.	555-210101	Intake Manifold Gaskets (BBC, Port: 1.8 in. x 2.5 in., with Upper Bolts)
35.	555-210102	Intake Manifold Gaskets (BBC, Port: 1.82 in. x 2.05 in., Open X-Over)
36.	555-210103	Intake Manifold Gaskets (BBC, Port: 1.82 in. x 2.05in., Blocked X-Over)
37.	555-210400	Intake Manifold Gaskets (Chrysler 318-360, Port: 1.12 in. x 2.25 in.)
38.	555-210200	Intake Manifold Gaskets (SBF 260-351W, Port: 1.20 in. x 2 in.)
39.	555-210201	Intake Manifold Gaskets (SBF 260-351W, Port: 1.28 in. x 2.10 in.)
40.	555-210205	Intake Manifold Gaskets (Ford 351C, Port: 1.65 in. x 2.25 in., 2BBL)
41.	555-210206	Intake Manifold Gaskets (Ford 351C, Port: 1.88 in. x 2.65 in., 4BBL)
42.	555-210700	Intake Manifold Gaskets (Oldsmobile 260-403)
43.	555-210600	Intake Manifold Gaskets (Pontiac 326-455, Port: 1.12 in. x 2.04 in.)



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