



E-STREET 2 EFI IGNITION CONTROL KIT

Part #3674, 3675, 3676, 3679, 3680
INSTALLATION INSTRUCTIONS

PLEASE study these instructions carefully before beginning this installation. Most installations can be accomplished with common tools and procedures. However, you should be familiar with and comfortable working on your vehicle. If you do not feel comfortable performing this installation, it is recommended to have the installation completed by a qualified mechanic. If you have any questions, please call our **Technical Hotline at: 1-800-416-8628**, 7:00 am - 5:00 pm, Pacific Standard Time, Monday through Friday.

Proper installation is the responsibility of the installer. Improper installation will void all manufacture's standard warranties and may result in poor performance and engine or vehicle damage.

Inspect all components for damage that may have occurred in transit before beginning installation. If any parts are missing or damaged, contact Edelbrock Technical Support, not your parts distributor.

The Edelbrock Ignition Control Kit, when paired with E-Street 2 EFI system, has the ability to direct drive an ignition coil without the use of a CDI (Capacitive Discharge Ignition) box such as a MSD 6AL. The Ignition Control feature enables complete control of the ignition curve without the need to disassemble the distributor. This feature helps provides a smoother idle, improved acceleration, and the ability to tune for better fuel economy. Ignition Control is an optional feature (sold separately) and is NOT required for the E-Street 2 EFI to function properly. Although the Ignition Control does not require the use of a CDI box, the use of one is highly recommended on medium to hi performance applications.

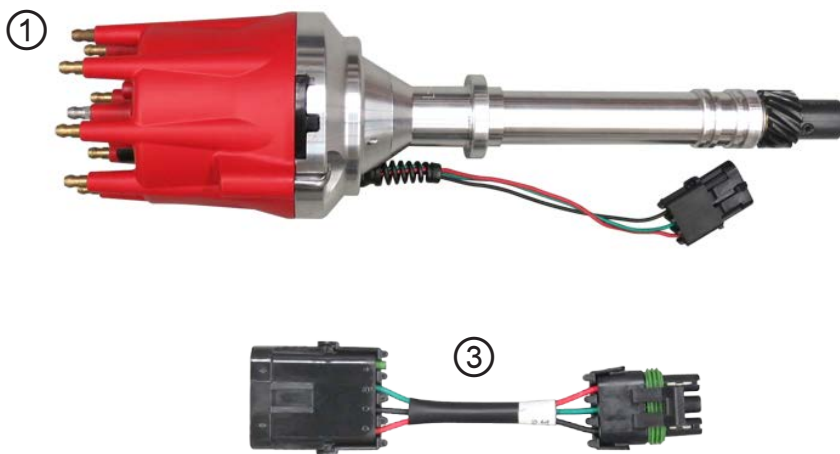
EDELBROCK E-STREET 2 EFI IGNITION CONTROL REQUIRES THE USE OF THE SUPPLIED EDELBROCK PRO-FLO EFI DISTRIBUTOR. THIS DISTRIBUTOR CONTAINS A SPECIAL PICKUP AND TRIGGER WHEEL PATTERN SPECIFIC FOR EDELBROCK EFI SYSTEMS. DO NOT TRY TO IMPLEMENT IGNITION CONTROL WITH OTHER MANUFACTURERS DISTRIBUTORS.

IGNITION CONTROL FEATURE IS ONLY COMPATIBLE WITH EDELBROCK E-STREET 2 EFI SYSTEMS. ORIGINAL E-STREET SYSTEMS, #3600, #3602 and #3606, ARE NOT COMPATIBLE WITH THE IGNITION CONTROL FEATURE.

KIT CONTENT

(Images for reference Only)

HARNESSES			
Item	P/N	QTY.	Description
1	Various	1	Edelbrock Pro-Flo Distributor
2	37-3499	1	Ignition Coil Harness
3	37-1623	1	Distributor Adaptor Harness



IMPORTANT NOTES:

INDUCTIVE COIL SELECTION

The E-Street 2 EFI ignition output is rated at 8 amps maximum continuous current. It is designed to fire a coil directly without an ignition amplifier. The coil's primary resistance should be no less than 0.7 ohms (a typical value for most popular MSD Blaster ignition coils). Avoid coils designed specifically for CDI ignition systems. The primary resistance of these coils is much too low and will cause an over-current condition resulting in poor performance and damage to the ECU and ignition components.

DISTRIBUTOR INSTALLATION:

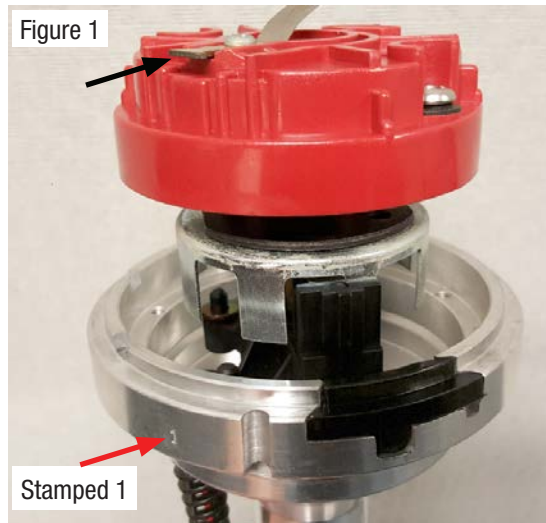
1. With the distributor removed, rotate the crankshaft in the direction of normal rotation, until cylinder #1 is coming up on the compression stroke. Stop turning when the crankshaft is at 12° BTDC. Make sure the engine is on the compression stroke, not overlap.

2. Apply a light coat of lube to the gasket and cam gear. Install the Edelbrock Pro-Flo distributor so that the rotor is pointed in the proximity of the #1 stamped on the outside of the distributor housing (See Figure 1).

NOTE: You may need to remove and reinsert the distributor a few times to get the alignment correct. Make sure that the distributor seats down completely and has full engagement with the oil pump drive. You may need to rotate the oil pump shaft to ensure it is engaged properly.

3. Tighten the hold down clamp leaving it just loose enough that you can rotate the distributor during the timing procedure. The final timing will be set using the E-Tuner Android app.

DISTRIBUTOR ROTOR LOCATION AT INSTALLATION POINTING TO #1 ON SIDE OF HOUSING WITH ENGINE AT 12° BTDC CYLINDER #1 ON COMPRESSION STROKE.



4. **DISTRIBUTOR CONNECTION** - Connect the 3 pin distributor connector to the provided distributor adapter harness. Plug the opposite end of the distributor adapter harness (4 pin connector) into the E-Street Main Harness connector labeled Tach Input (See diagrams on Page 4 or 5).

5. **COIL CONNECTION WITHOUT CDI BOX** - Connect the provided Ignition Coil Harness into the E-Street Main Harness connector labeled Coil. Connect the two eye terminals to the ignition coil (refer to the diagrams on Page 4).

6. **COIL CONNECTION W/ CDI BOX** - Cut off the two eye terminals on the provided Ignition Coil harness. Connect the WHITE lead to the WHITE negative trigger wire on the CDI box (refer to the diagrams on Page 5). Connect the modified Ignition Coil Harness to the E-Street Main Harness connector labeled Coil.

ENABLING THE IGNITION CONTROL FEATURE

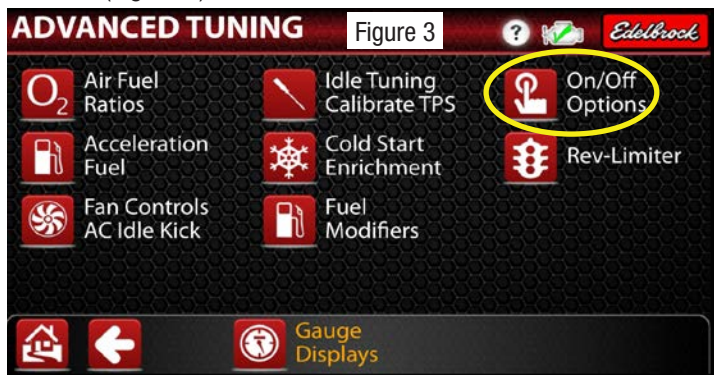
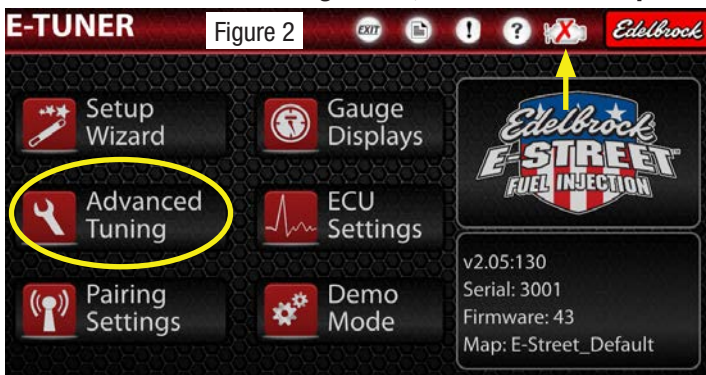
(This step will require an Android Tablet or Smartphone running the E-Street E-Tuner app.)



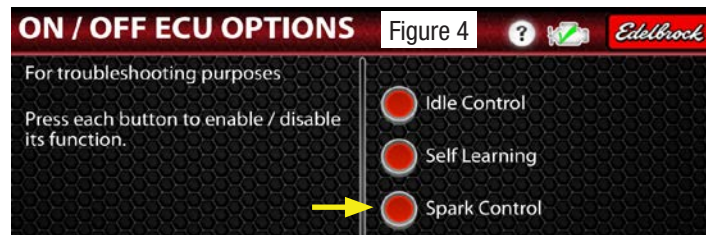
If you are installing the Ignition Control Kit in conjunction with the E-Street 2 EFI System for the first time, skip the **Enabling the Ignition Control Feature** and refer to the **Quick Reference Guide** included with the E-Street 2 EFI system. The Quick Reference Guide will guide you through the initial E-Tuner Wizard setup to enable the Ignition Control feature.

If you are adding on an Ignition Control Kit to a pre-installed E-Street 2 EFI system that has already been loaded with a base map, follow the **Enabling the Ignition Control Feature**. This can be done without running through the entire Setup Wizard. NOTE: A timing light is required to properly perform this procedure.

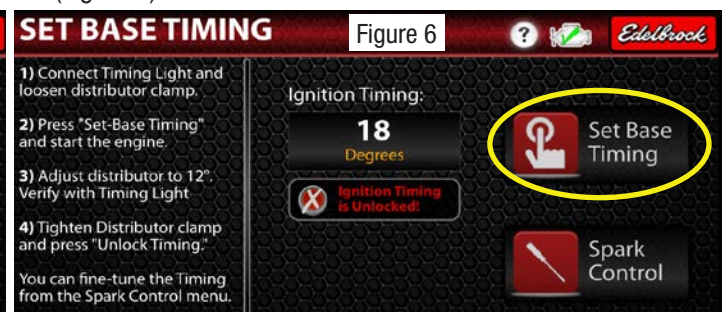
1. Power on the E-Street ECU by turning the ignition to the ON position. **Do NOT start the engine.**
2. Launch the E-Tuner app and click the engine icon w/ the Red X to connect to the ECU (Figure 2).
3. Wait for the Green check mark to appear on the engine icon and then select **Advanced Tuning** (Figure 2).
4. On the **Advance Tuning** screen, select the **On/Off Options** submenu (Figure 3).



5. Select the **Spark Control** option (Figure 4) on the **On/Off ECU Options** screen to enable the Ignition Control feature. Select **Finish** to continue.



6. Connect a timing light, remove the air cleaner (if installed) and loosen the distributor clamp.
7. Select **Base Timing** to proceed (Figure 5).
8. Select **Set Base Timing** to lock the ignition timing to 12° BTDC (Figure 6).

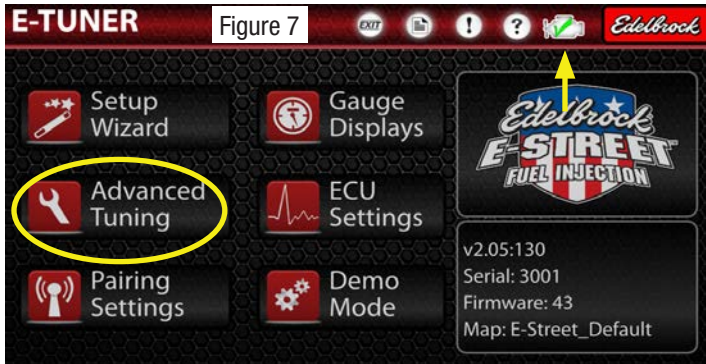


9. Start the engine and adjust the ignition timing to 12° BTDC with the timing light.
10. Tighten the distributor lockdown clamp and verify the ignition timing has not moved.
11. Click **Unlock Timing** . The E-Street software is now controlling the ignition timing.

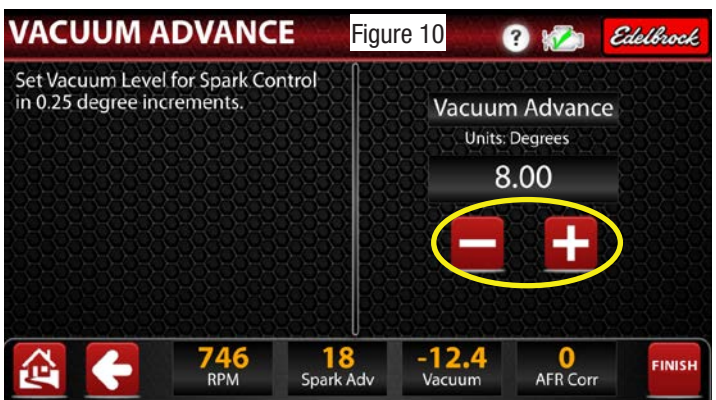
ADVANCED TUNING - IGNITION CONTROL FUNCTIONS

Once Ignition Control is enabled, you can now control the spark curve using the E-Tuner app. Follow the procedure below to get to the **Spark Control** screen.

1. Verify that the E-Tuner app is connected to the ECU (green check mark on the engine icon) and then select **Advanced Tuning** (Figure 7).
2. On the **Advanced Tuning** screen, select **Spark Control** (Figure 8) to adjust your spark curve settings.



3. The spark control functions can be related to the mechanical and vacuum advance functions of a standard distributor. The sample values displayed are good starting points and should provide performance similar to standard distributor curve (Figure 9).
4. Select **Next** to continue to the **Vacuum Advance** screen. Use the “-” and “+” icons to adjust the **Vacuum Advance** as needed (Figure 10).



Idle Spark – This may also be referred to as initial ignition timing. This is the amount of ignition advance that the ignition curve will start with as the engine RPM increases.

Idle Spark RPM – The ignition timing will start advancing at this RPM.

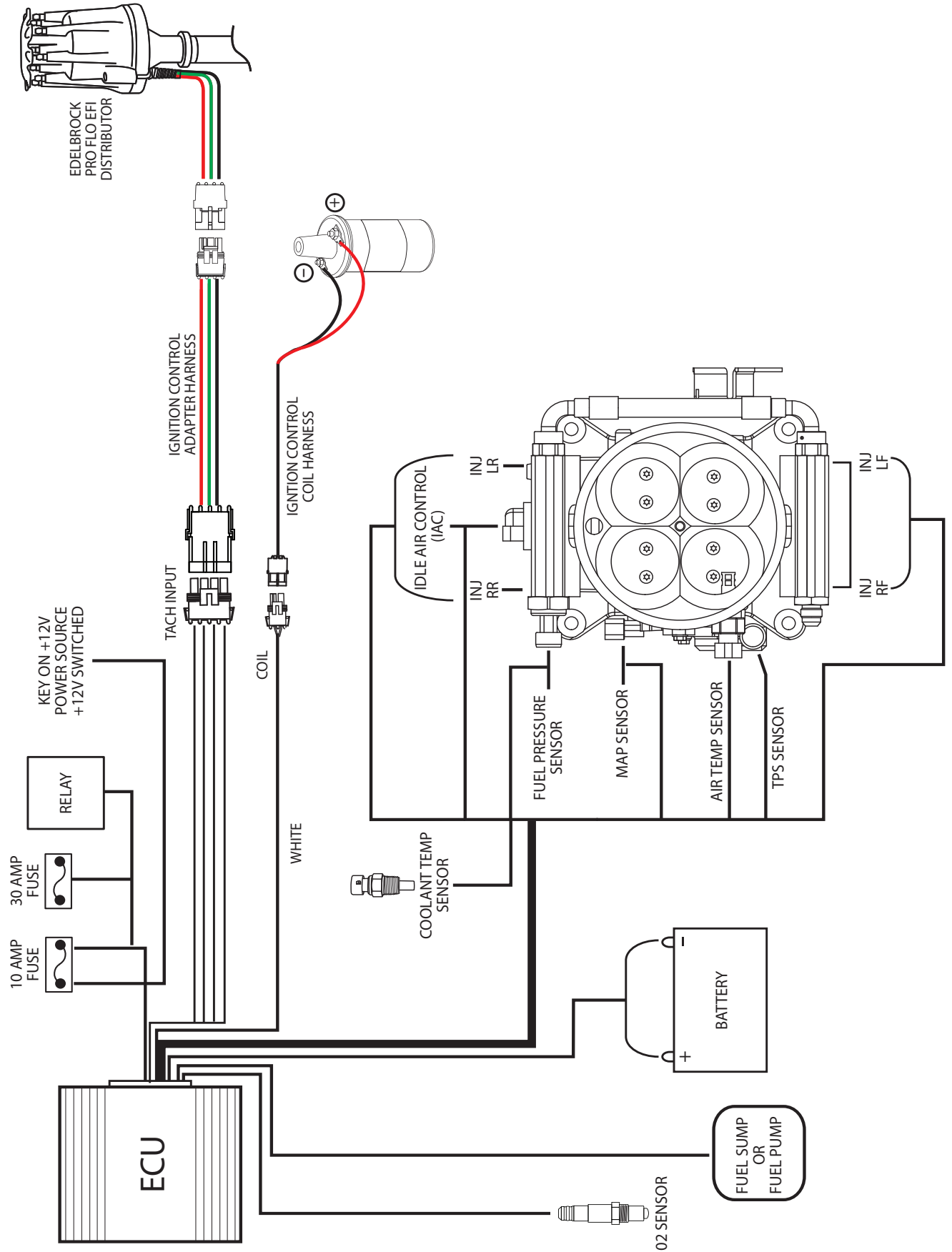
Total Spark – The total ignition advance that the ignition curve will calculate based off RPM.

Total Spark RPM – The RPM that the ignition curve will reach the Total Spark value.

Vacuum Advance – The amount of additional ignition advance added to the Total Advance based on manifold vacuum.

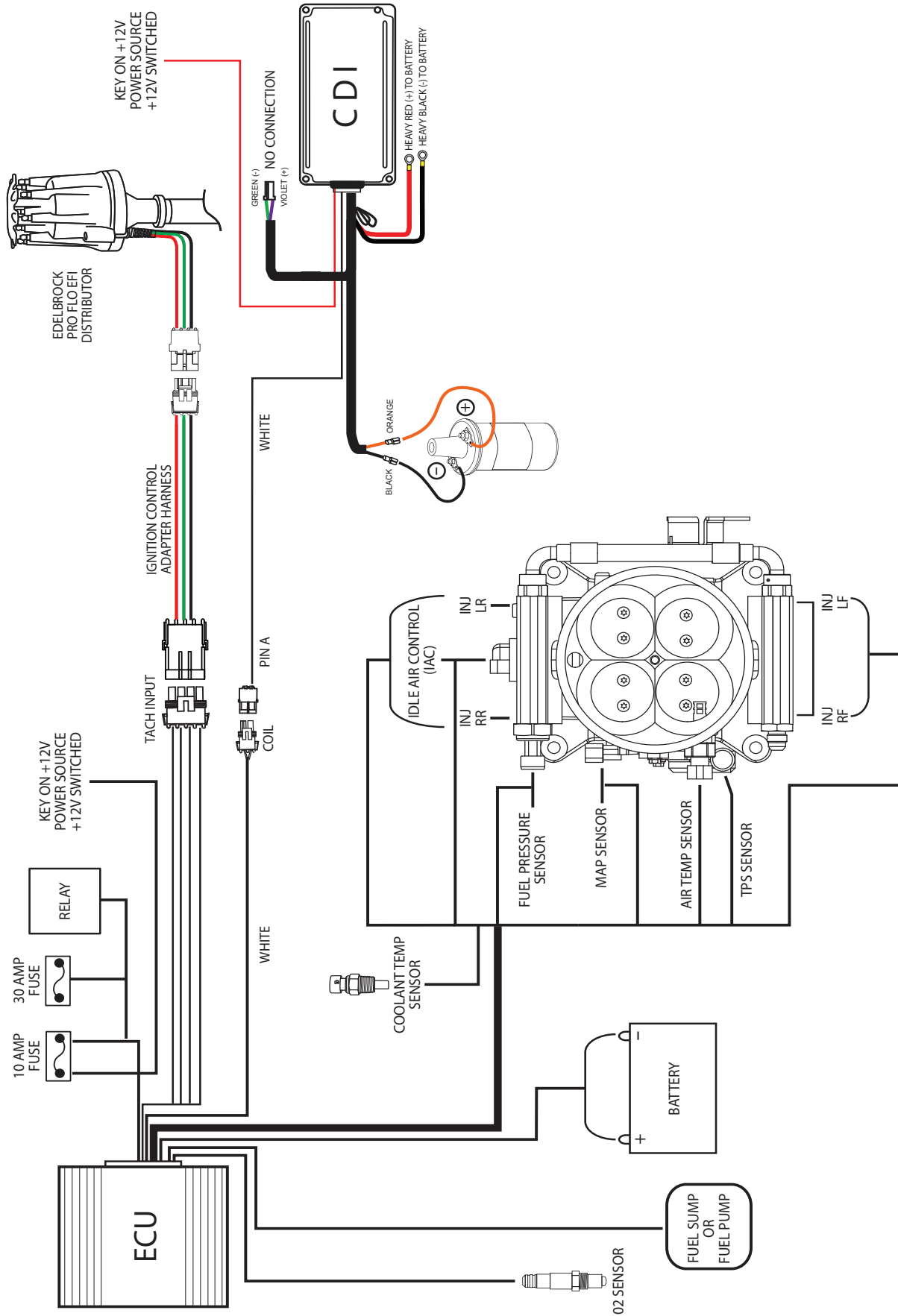
WIRING W/ PRO-FLO DISTRIBUTOR

(With Ignition Control)



WIRING W/ PRO-FLO DISTRIBUTOR & CDI BOX

(With Ignition Control)



OEM FIRING ORDERS

AMC 304-401
FIRING ORDER
 1-8-4-3-6-5-7-2

PONTIAC
 265, 301, 307, 326, 350
 389, 400, 421, 428, 455
FIRING ORDER
 1-8-4-3-6-5-7-2

CHRYSLER / DODGE
 361, 383, 400, 413, 426, 426
 HEMI, 440
FIRING ORDER
 1-8-4-3-6-5-7-2

CHRYSLER / DODGE
PLYMOUTH
 273, 318, 340, 360
FIRING ORDER
 1-8-4-3-6-5-7-2

CHEVROLET
BIG & SMALL BLOCK
FIRING ORDER
 1-8-4-3-6-5-7-2

CHEVROLET
LS SERIES
FIRING ORDER
 1-8-7-2-6-5-4-3

FORD
 260, 289, 302, 429, 460,
 514, ALL FE
FIRING ORDER
 1-5-4-2-6-3-7-8

FORD
 351W, 351C, 351M, 400,
 LATE 302
FIRING ORDER
 1-3-7-2-6-5-4-8