

REV LIMITER SETTING PROCEDURE

NOTE: The Module has an adjustable rev limit, that is set with the dial potentiometer. This will require a small phillips screwdriver. The potentiometer has a total range of approximately 3/4 of a turn.

1. Remove distributor cap and rotor.
2. In order to set the rev limiter, the module must have 12V power, but the car must not be running. This can be done with the module in the car, by turning the key "ON" (engine off). Or it can be done with the module out of the car, by providing 9V or 12V to the terminal labeled "B", and attaching a ground to the mounting hole on the side of the module. See Figure 2.

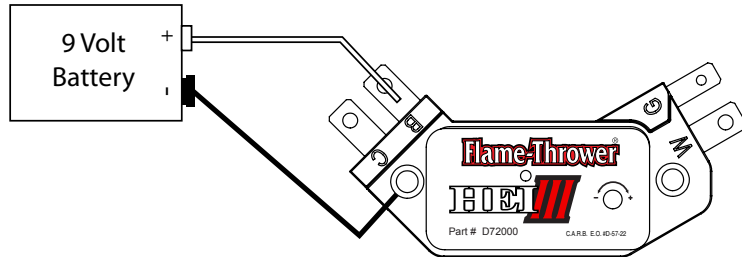


Figure 2

3. Once power is supplied to the module, you have to get it into programming mode. To do that, you have to turn the potentiometer completely clockwise, then turn it completely counterclockwise. Once you do this, the existing rev limit is cleared, and the module is in the rev limit programming mode. The LED will flash a pattern of 1 long flash, followed by a short flash, then "off" for two seconds. It will repeat the pattern continuously. This means the rev limiter is disabled. The rev limit range is 4000-9000 RPM. To set the limit higher turn the potentiometer clockwise. The LED will blink the RPM it is set at, followed by a 2 second pause, with the following pattern.

LED Blink Pattern	Rev Limit
1 long followed by 1 short	No Rev Limit
X long followed by Y short	X thousand, Y hundred
X long followed by a 2 second pulse	X thousand
Example: 5 Long (X) pulses followed by 2 short (Y) pulses will be 5200 RPM rev limit.	

4. Once you have selected the rev limit you want, and have verified that it blinks the right number of times, you must remove the power, or turn the ignition switch "off" and finish with the installation.

NOTE: Leaving the Rev-Limit dial in the full counterclockwise position disables the Rev-Limiter.

REV-LIMITER SPECIFICATIONS

Settings	RPM'S
Minimum	4000
Maximum	9000
Factory Setting	5500

LIMITED WARRANTY

PerTronix, LLC. warrants to the original Purchaser of its Flame-Thrower HEI-III distributor that the product shall be free from defects in material and workmanship (normal wear and tear excluded) for a period of 12 months from the date of purchase.

If within the period of the foregoing warranty PerTronix finds, after inspection, that the product or any component thereof is defective, PerTronix will, at its option, repair such products or component or replace them with identical or similar parts PROVIDED that within such period Purchaser:

1. Promptly notifies PerTronix, in writing, of such defects.
2. Delivers the defective product or component to PerTronix (Attn: Warranty) with proof of purchase date; and
3. Has installed and used the product in a normal and proper manner, consistent with PerTronix printed instructions

THE FOREGOING LIMITED WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THE FURNISHING OF A REPAIR OR REPLACEMENT COMPONENT OR COMPONENTS SHALL CONSTITUTE THE SOLE REMEDY OF PURCHASER AND THE SOLE LIABILITY OF PerTronix WHETHER ON WARRANTY, CONTRACT OR FOR NEGLIGENCE, AND IN NO EVENT WILL PerTronix BE LIABLE FOR MONEY DAMAGES WHETHER DIRECT OR CONSEQUENTIAL.



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HEI-III DISTRIBUTOR
INSTALLATION INSTRUCTIONS



GENERAL INFORMATION

1. See our website (www.pertronix.com) for latest product information. **IMPORTANT: Read all instructions before starting installation.**
2. **WARNING!!! DO NOT USE WITH SOLID CORE IGNITION WIRES.**
3. The HEI-III used in our Flame-Thrower HEI distributor is not compatible as a trigger for other electronic boxes.
4. The HEI-III Rev-Limiter is preset at 5500 RPM's. The Rev-Limiter can be user set to a minimum 4000 and a maximum 9000 RPM's.
5. All external resistors must be removed to achieve optimum performance from the HEI-III ignition system.
6. The HEI-III is compatible with coils that have a minimum of 0.32 ohms of primary resistance.

DISTRIBUTOR REMOVAL

1. Before the original distributor is removed, several settings should be noted;
 - Base timing should be checked, and noted.
 - Position of vacuum advance canister should be noted.
 - Position of rotor should be noted.
 - **Note:** If converting from a point style ignition, all primary Ignition resistance should be removed. New HEI style spark plug wires will be necessary.
2. To check base timing, bring the engine up to normal operating temperature.
 - Disconnect and plug the vacuum hose attached to the vacuum advance canister.
 - Connect timing light.
 - Start engine and check the base timing.
3. Disconnect the negative battery cable.
4. Disconnect the vehicle wiring harness, and distributor wiring harness from the distributor cap.
5. Remove the distributor cap, leaving the spark plug wires attached. Set the cap and wires out of the way.
6. Note the position of the distributor rotor. The vehicle should not be moved, and the engine should not be turned over until the installation is complete. **NOTE: To ensure the Flame-Thrower™ distributor is installed correctly, note the direction in which the vacuum advance canister points. Remove the distributor cap, and note the position of the rotor. Once the Flamethrower distributor is installed the rotor position should be duplicated.**

7. If converting from point type distributor, label the wires attached to the coil terminals and disconnect them. Remove the coil, and coil bracket from the engine.
8. Remove the vacuum hose attached to the vacuum canister.
9. Remove the distributor hold down bolt and hold down.
10. Remove the distributor by lifting up on the distributor housing while slightly turning the rotor.
11. Check the distributor gear for signs of excess wear, or potential problems.

DISTRIBUTOR INSTALLATION

1. Disconnect the *Flame-Thrower™* wire harness from the distributor cap. Remove the cap from the distributor housing.
2. Install the distributor gasket over the gear, and up to the distributor collar (gasket not required on Oldsmobile application). A small amount of gasket adhesive will help to hold the gasket in place as the distributor is installed.
3. Lubricate the *Flame-Thrower™* distributor gear with a liberal amount of engine oil.
4. Turn the distributor shaft until the rotor is in the same position that was noted with the old distributor.
5. Place the distributor into the engine. As the distributor drops down, the rotor will turn as it engages with the camshaft gear. Adjust for this rotation by turning the rotor a few degrees prior to the gear engagement. Several attempts may be necessary to achieve the proper rotor position. The distributor collar should sit completely flat on the intake manifold.
6. Turn the distributor housing until the vacuum advance canister points in the same direction as the original.
7. Install the distributor hold down and tighten the hold down bolt slightly. Once the ignition timing is adjusted the hold down bolt should be tightened completely.
8. Install the new *Flame-Thrower™* distributor cap.
9. Starting with the number one spark plug wire, move the spark plug wires from the original distributor cap to the *Flame-Thrower™* cap one by one.
10. If converting from a point type ignition, new HEI style spark plug wires should be used (Check with your dealer for the *Flame-Thrower™* spark plug wires).
11. Connect the *Flame-Thrower™* wire harness and vehicle wiring into the distributor cap.
12. If converting from a point type ignition, remove any resistance wire, or ballast resistor that may have been previously used.
 - If a resistance wire is present: replace the wire with a 12-gauge copper stranded wire. Most resistance wires begin at the engine compartment side of the fuse block.

- If a ballast resistor is present: remove the wires attached to both sides of the resistor. Connect all of the wires removed together at a single point. Isolate the connection from any grounds.
 - Plug the Ignition switch wire into the position marked **BAT** on the distributor cap.
13. If a tachometer is used: Connect the tachometer wire into the position marked **TACH** on the distributor cap.
 14. Re-connect the battery.
 15. Plug the vacuum hose that attaches to the vacuum advance canister.
 16. Check to insure that all spark plug wires are secure and in the correct place.
 17. Start the engine, and check the base timing.
 18. Check the vehicle manufacture specifications for the correct timing. Rotate the distributor housing to achieve the indicated timing specifications.
 19. Once the timing is properly adjusted, turn the ignition switch off and tighten the distributor hold down.
 20. Re-attach the vacuum hose to the vacuum advance canister.

PERFORMANCE ADJUSTMENTS

The Flame-Thrower HEI distributor come with a fully adjustable vacuum advance and extra mechanical advance springs for your custom curving needs. The vacuum and mechanical advance springs are both preset at our factory to meet the California Air Resource Board's requirements for use on highway. Any adjustments of the distributor's advance mechanism is illegal except for racing vehicles, which may never be driven upon a highway.

MECHANICAL ADVANCE

To adjust the mechanical advance curve, select the appropriate springs from the chart below. The Flame-Thrower distributor is factory equipped with the silver springs. Remove the cap and rotor. Remove the existing springs and install the desired springs. Re-install the rotor, Note: If the Flame-Thrower distributor is used in a high RPM application, replace the metallic rotor retaining screws with the provided Teflon screws and washers. Do not over tighten the Teflon screws. Reinstall the rotor and cap.

Spring	RPM						
	500	1000	2000	3000	4000	5000	6000
Copper	4°	12°	19°	24°	24°	24°	24°
Silver	0°	8°	12°	16°	19°	21°	24°
Natural	0°	6°	10°	14°	17°	20°	21°

Crankshaft Degrees

VACUUM ADVANCE

1. Adjustments to the vacuum advance are made through the port on the front of the vacuum advance.
2. The vacuum advance is preset to 16°. Each additional turn in the clockwise direction will add 2° of vacuum advance.
3. Each additional turn in the counter clockwise direction will subtract 2° of vacuum advance.
4. Turning the adjustment in the counter clockwise direction until it stops will lock out the vacuum advance entirely.
5. Re-connect the vacuum hose to the advance canister, and bring the engine up to normal operating temperature.
6. Test the vacuum advance setting by load testing the engine. If pinging is detected than turn the vacuum advance setting counter clockwise until the pinging stops.

TROUBLESHOOTING

1. Make sure the distributor is getting 12 volts, and that it is grounded properly through the hold down bracket to the engine block.
2. Double check that both HEI module screws are securely fastened to the distributor. **NOTE:** For proper operation the HEI-III module must be grounded properly to the housing.
3. Verify that the HEI module is getting power by trying to set the rev limit (See Rev-Limiter Setting Procedure). If the LED's are blinking, the module is getting power.
4. You can try swapping out the Race HEI Coil and HEI-III module for a standard HEI coil and standard HEI module. If the problem persists with the standard module, the problem is likely not related to the module, but to something else in the system.