

TROUBLESHOOTING

Q.THE ENGINE WILL NOT START.

A. Check all connections to ensure that they are tight and in the proper locations. Check the engine timing to insure the distributor was installed correctly. Make sure the firing order is correct on the cap.

B. Make sure the distributor's Black wire is getting a good battery Negative signal with the key "ON" and while cranking. Jumping the Black wire to battery negative is a quick test to assure the black wire is getting a good solid signal. NOTE: Jumping to battery neg. is not wiring the engine, removing the jumper from battery neg. is the only way to turn off the engine during this test.

C. Be sure the distributor housing and coil positive is getting a good ground back to battery positive.

Q.THE ENGINE STARTS BUT STOPS AFTER RUNNING. BUT WILL RESTART AFTER SOME TIME(COOLS DOWN) HAS PASSED.

A. This type of problem can happen within minutes of startup or hours later. The most common reason is a weak signal to the distributor's Black wire. Reading the resistance value in this circuit is the best test it should be below 0.2 ohms. This would be done by disconnecting the ignition wire at the black wire and read back to the key switch. Then from the main power of the switch to battery negative. The easier test is to jump black wire to battery negative when the engine stops. If the engine start then the problem is in the ignition circuit. (See Note above about jumping to battery neg.)

B. Try another coil.

Q. HOW DO I CHECK A COIL'S PRIMARY RESISTANCE?

A. A digital VOM (volt/ohmmeter) will be needed. Almost all analog (needle style VOM) will not work. Remove all wires from the coil. Set the VOM to the lowest OHM scale. Attach leads from the VOM to the coil's (+)&(-) terminals. The meter should display the primary resistance value of the coil. If no reading is displayed try a different scale setting on VOM. ALL GOOD coils have primary resistance so, no reading normally means a defective coil.

Q. How can I receive additional help or alternative wiring diagrams?

A. Visit our knowledge base at www.pertronix.com Or call our Technicians 909-599-5955 Ext. 1 Mon.-Fri. 7AM-4:30PM PST.

LIMITED WARRANTY

PerTronix, LLC. Warranty is to the original Purchaser that its Ignition products shall be free from defects in material and workmanship (normal wear and tear excluded) for the following periods:

Ignitor, Ignitor II, Ignitor III – 30 months

Industrial Distributor – 90 days mechanical/30 months Ignitor

Flame-thrower coils – 90 days

Flame-Thrower HEI distributors – Limited 1 year

Flame-Thrower Billet and Cast distributors – 1 year Mechanical/30 months Ignitor module

Flame-Thrower Spark plug wire – Limited Lifetime

Ignition Boxes (second strike, Rev Limiter, & Digital HP) – Limited 1 year

All warranty periods start on the date of purchase

All returns must have a Return Material Authorization (RMA) number issued to them before being returned. To obtain an RMA number please contact PerTronix Technical Department at (909) 599-5955.

When returning, leave all wires at the length in which they have been installed. Include a copy of receipt, detailed account of the problems experienced and RMA number. All warranties are to be returned prepaid shipping and Pertronix will return the product prepaid.

If within the period of the foregoing warranty PerTronix finds after inspection, it was used in a normal/proper manner, consistent with PerTronix instruction, and the product or any component thereof is defective.

PerTronix will, at its option, repair such products or components or replace them with identical or similar parts.

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 LLC WHETHER ON WARRANTY, CONTRACT OR FOR NEGLIGENCE AND IN NO EVENT WILL PerTronix LLC BE LIABLE FOR MONEY DAMAGES WHETHER DIRECT OR CONSEQUENTIAL.

PERTRONIX

IGNITION PRODUCTS

Flame-Thrower Ignitor® equipped

INSTRUCTIONS for Part Number:

GENERAL INFORMATION

DI78609 DI79600 DI78600

- **IMPORTANT:** Read all instructions before starting installation
- For 12-Volt **POSITIVE** ground applications only. Maximum voltage 16V; Minimum voltage 8V.
- **WARNING: DO NOT USE WITH SOLID CORE SPARK PLUG WIRES; RFI SUPPRESSION SPARK PLUG WIRES MUST BE USED**
- **INCORRECT** wiring of Ignitor Black/White & Black wire **OR** leaving the key in the run position without the engine running for an extended period can damage the unit.
- **EIGHT** cylinder engines require a **MINIMUM** of 1.5 ohms of primary resistance. **FOUR** and **SIX** cylinder engines require a **MINIMUM** of 3.0 ohms of primary resistance in the ignition circuit.
- An external resistor is not required when the coil has the minimum primary resistance required for the application.
- Spark plug gap can be opened .005" overstock.

UNDERSTANDING TIMING

- Before continuing with the installation, here are a few definitions you should be aware of:
- Initial Timing: This is the base or idle timing of the engine before the centrifugal advance begins.
- Centrifugal Advance: The centrifugal or mechanical advance mechanism is made up of weights, springs, and advance stops. The amount and rate of advance of the distributor is determined by the centrifugal timing.
- Total Timing: This is the total of the initial timing plus the centrifugal advance added together at full mechanical advance. Example: 10° Initial + 24° centrifugal = 34° Total Timing. (When checking Total timing, disconnect the vacuum canister and plug the vacuum source.)
- Vacuum Advance: The vacuum advance will advance the timing up during partial throttle driving. The vacuum line should be routed to a ported vacuum outlet above the throttle plates.

DISTRIBUTOR INSTALLATION

- Set the 1st cylinder in the firing order to **TDC** compression stroke on the timing indicator.
- Remove the distributor cap and make sure the rotor is pointing at the distributor cap terminal that is 1st in the firing order. Mark the location of the rotor on the engine. Note: If the rotor is not pointing at the 1st cylinder in firing order the engine is not at **TDC** compression stroke.
- Label the location of the distributor wires on the coil. Remove them from the coil leaving all other wires on the coil connected. Note: If an external electronic

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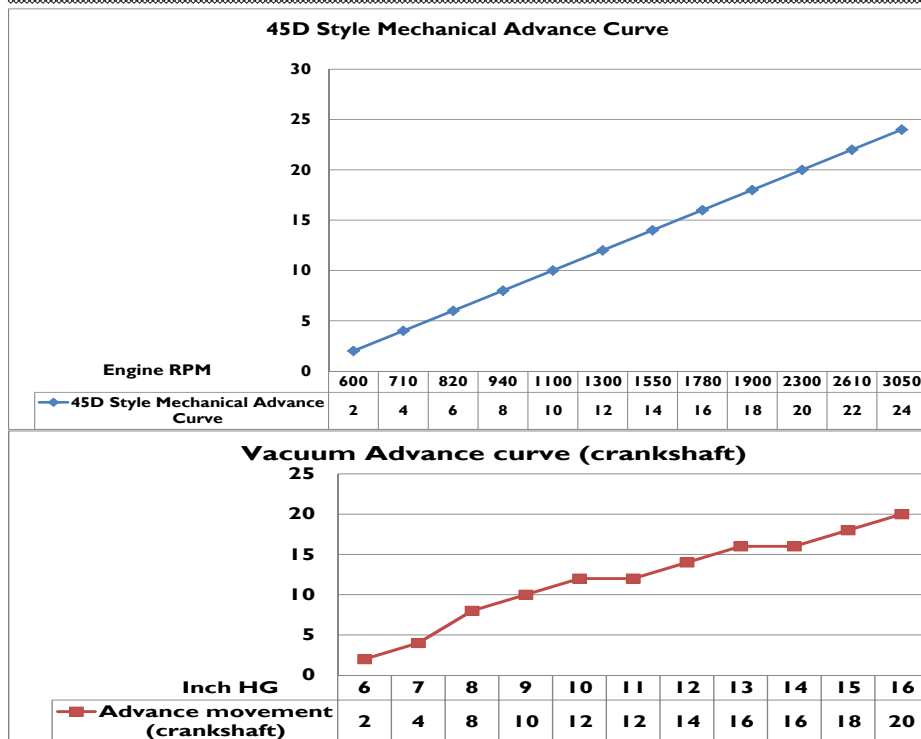
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box is being used, the distributor's wires will not go directly to the coil.

- Loosen the distributor clamp and remove the distributor. Note: Applications with a vacuum advance disconnect the vacuum line.
- Clean the original distributor hold-down clamp of grease and paint. The clamp is the main ground for the distributor so ensuring a good clean connection is important for a proper ground. Reinstall the clamp on the distributor or engine after cleaning.
- Remove the Flamethrower distributor cap and install the distributor gasket on applications that come with a gasket. Apply assembly lube on the gear and O-ring on distributors that have them installed.
- Install the distributor making sure the rotor lines up with the fixed mark on the engine. Make sure the distributor seats flat on the engine.
- Place the distributor cap onto the housing loosely. If the rotor is not lined up with a distributor cap terminal turn the distributor housing until the rotor is lined up with a cap terminal. This will be your #1 cylinder in your firing order. Slightly tighten the distributor hold-down clamp
- Install spark plug wires in the correct firing order.
- Note: The Flamethrower distributor is designed to be used with a ported vacuum source. Applications that use manifold vacuum, we recommend relocating to a ported source. Applications that didn't originally have a vacuum advance do not require hooking up the Flamethrower's vacuum advance.

Distributor Advance Curves



Replacement parts

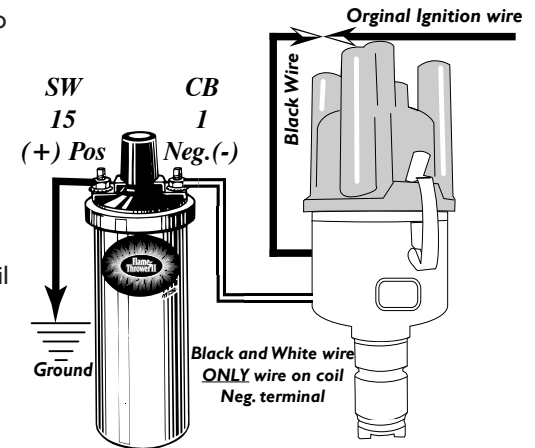
- Replacement 4 Cylinder Cap(Top exit) and Rotor P/N: [D604600](#)
- Replacement 4 Cylinder Cap(Side exit) and Rotor P/N: [D604609](#)
- Replacement 6 Cylinder Cap and Rotor P/N: [D606600](#)
- Replacement Module P/N: [D500708](#)
- Replacement Vacuum Advance P/N: [D909004](#)

WIRING

- Many vehicles came equipped with a ballast resistor or resistance wire. To achieve the optimum performance we recommend the removal of all external resistance, allowing the coil to receive full running voltage. When running a new wire from coil positive to engine ground use 14-16 gauge wire.
- With no external resistors, the coil must meet the **MINIMUM primary resistance REQUIRED** in the resistance chart. Using a coil with a **LOWER** primary resistance **REQUIRES** an external resistor to bring up the primary resistance to the minimum **OHM** requirements.
- The distributor wires can be Cut or Lengthen for wiring. Use 20 gauge wire for lengthening. Wire terminals are included for connections at the coil.
- Wire the Black & White wire to coil Negative. This will be the only wire on coil Negative.
- Wire the Black wire to the original Ignition switch wire. Note: The Ignitor Black wire and Original ignition wire are splicing into each other. They will **NOT** be connected to a coil terminal, so the ignition wire will no longer be on a coil terminal.
- Make a new wire to run from coil Positive to engine ground or battery positive terminal. You will make the wire using a 14 or 16 AWG wire. This will be the **ONLY** wire on coil Positive.

| Cylinders | Minimum | Maximum |
|-----------|----------|----------|
| 1-6 | 3.0 OHMs | 4.5 OHMs |
| 8 & 12 | 1.5 OHMs | 3.5 OHMs |

Note: When using an external resistor. Add the primary resistance value of coil and external resistor to know total primary resistance. Exp. 1.5(coil)+1.5(resistor)=3.0 OHMs



STARTING

- Recheck all the wires and connections to ensure they are correct.
- Recheck spark plug wires to ensure secure connections and correct firing order.
- Start the engine. If the engine fails to start, rotate the distributor in small increments clockwise or counter wise until the engine starts.
- Bring the engine to operating temperature. Set initial timing or total timing to the desired setting.