



# Installation Instructions

## Vertex® Electronic Distributor

(3-Wire Harness)

(Note: These instructions are for units manufactured prior to November 12, 2007)

This product is applicable to pre-1966 California and pre-1968 federally certified passenger cars. It is also applicable to non-emission controlled trucks and similar vehicles. It is not intended for use on any emission-controlled vehicles operated on highways or roadways, unless otherwise noted.

---

### Caution/Important Information:

Please read and understand all of the information provided in these instructions before attempting the installation. Ensure that your vehicle is equipped with an (ignition ballast resistor) or a (integral loom resistance wire) in the wire harness between the ignition switch and the coil (+) terminal. Check a service manual for your vehicle to locate the ignition ballast resistor or loom resistance wire. If your vehicle is not equipped with an ignition ballast resistor, install a Vertex® Ignition Ballast Resistor (PN 967000) in the wire between the +12VDC ignition switch and the coil (+) terminal. Failure to use an (ignition ballast resistor) or (loom resistance wire) will eventually destroy the internal electronics in the Vertex® Distributor and is not covered under the warranty.

---

### Parts included in this kit:

- (1) Vertex® Electronic Distributor
- (1) Vertex® Ballast Resistor (PN 967000)

### General Information:

**Rotation**-Rotation of the original distributor and your new Vertex® Distributor should be the same. This may be checked by observing the distributor rotor while cranking the engine with the starter and comparing the observed rotation with the arrow on the distributor cap.

**Distributor Firing Order**-Wire position numbers in the Vertex® cap indicate the sequence of firing of the distributor. These are not to be interpreted as the firing order of the engine. **Be sure to examine the Vertex cap closely when installing ignition wires in order to maintain the proper engine firing order.**

**Advance Curve**-Most Vertex® Distributors have 24 degrees (crankshaft) of mechanical advance (between 2200 and 2400 RPM).

**Spark Plug Gap**- For street applications, use your engine manufacturer's specification. The Vertex® Electronic Distributor is not designed for racing applications. We recommend the Vertex® Magneto for all racing applications.

**Spark Plug Wires**-The Vertex® Distributor is designed to be operated with suppression type spark plug wires to prevent false triggering and premature ignition failures. Taylor Spiro-Pro 8mm ignition wires are recommended.

**Electric Welding**- Always disconnect the distributor wiring harness before welding on the vehicle.

**Important Note**-The Vertex® Electronic Distributor is a self contained unit, and use of additional ignition timing controls, multi-spark discharge systems, or other ignition units is not recommended and will void the Vertex® warranty.

### Distributor Wire Harness Connections:

**Black wire**-Provides +12 volts DC to the trigger assembly inside of the Vertex® Electronic Distributor. The 12 volts DC provided to this terminal must be present in both the CRANK (start) and the RUN (on) positions of the ignition switch only.

**Red wire**-Provides current limited power to the coil assembly integral to the Vertex® Electronic Distributor. +12 volts DC is provided **through the ballast resistor or loom resistor wire** to this connection. The power provided to this connection must be present in the CRANK and RUN position of the ignition switch only.

**White wire**-Provides a signal for driving an electronic tachometer.

## **Old Distributor Removal:**

**Note: Ensure the vehicle ignition switch is in the off position and battery is disconnected before attempting the installation of the Vertex® Electronic Distributor.**

**Step 1-**Disconnect the coil trigger wire coming from the distributor to the negative (-) side of the ignition coil at the coil terminal. Disconnect the wire supplying current to the positive side (+) of the ignition coil. (Note: there may be two wires connected to this terminal, one from the ballast resistor and one from a terminal on the starter solenoid.) Identify this wire(s) for future reference as the **coil+** wire(s). Remove the old ignition coil as this is no longer needed. Use a shop service manual and locate the spark plug wire that is used to set the timing (usually spark plug wire #1) and mark this wire location on both the distributor cap and the distributor housing.

**Step 2-**Rotate the engine crank shaft in the direction of proper rotation until the timing mark on the harmonic balancer lines up with the indication on the timing tab for TOP DEAD CENTER (TDC). See a service manual for these locations.

**Step 3-**Remove the distributor cap (do not remove the spark plug wires and coil wire from the old distributor cap at this time) and observe the position of the rotor blade. The blade of the rotor should line up with the mark placed on the old distributor housing (step 1). If the blade is not lined up with the mark (180 degrees away) then repeat step 2 until the timing marks are aligned again.

**Note: Once you have completed step 3 do not rotate the crankshaft until the new distributor is correctly installed.**

**Step 4-**Note the direction that the rotor blade is pointing, remove the distributor hold down clamp and remove the distributor from the engine. Clean the distributor mounting surface ensuring there is no grease, dirt or paint to interfere with the installation of the new Vertex® Electronic distributor.

---

## **Vertex Electronic Distributor-Motor Installation:**

**Step 1-**Using a piece of tape, mark the position of the number one electrode of the Vertex® Electronic Distributor cap on the distributor housing. Remove the distributor cap from the Vertex Electronic Distributor.

**Step 2-**Install the Vertex® Distributor on the engine with the rotor lined up with the number one electrode mark on the distributor housing. If the distributor shaft drives the oil pump, ensure the distributor shaft fully engages the oil pump.

**Note: it may be necessary to turn the oil pump shaft to effect proper alignment. Do not force the distributor onto the oil pump shaft or damage to the distributor and/or oil pump may result.**

Installation of the Vertex® Electronic Distributor may require indexing number one cylinder to a different electrode, positioning the cap to get the ignition wires in a desired position. In this case, rotate the distributor housing until the ignition wires are pointed in the desired direction. Noting the position of the rotor, rotate the housing until the rotor is directly pointing to the nearest electrode. Connect the number one spark plug wire to the terminal that the rotor is pointing to.

**Step 3-**Secure the Vertex® Electronic Distributor with the distributor hold-down clamp.

**Step 4-**Record the terminal number identified as the number one spark plug wire.

**Vertex Electronic Distributor-Spark Plug Wires to Distributor Cap Installation:**

**Step1-** The Vertex distributor cap is drilled and design for use of an 8mm diameter ignition wire. Make sure you are using a suppression core or spiral wound wire. If you are using your existing spark plug wires, we suggest with a piece of tape, you number each wire with its corresponding cylinder number. Also, make sure when using your existing wires that they will be long enough after cutting off the distributor boot end to accommodate use in the Vertex® distributor cap. Note: When using 8mm ignition (spark plug) wires observe the following steps to prepare the wire.

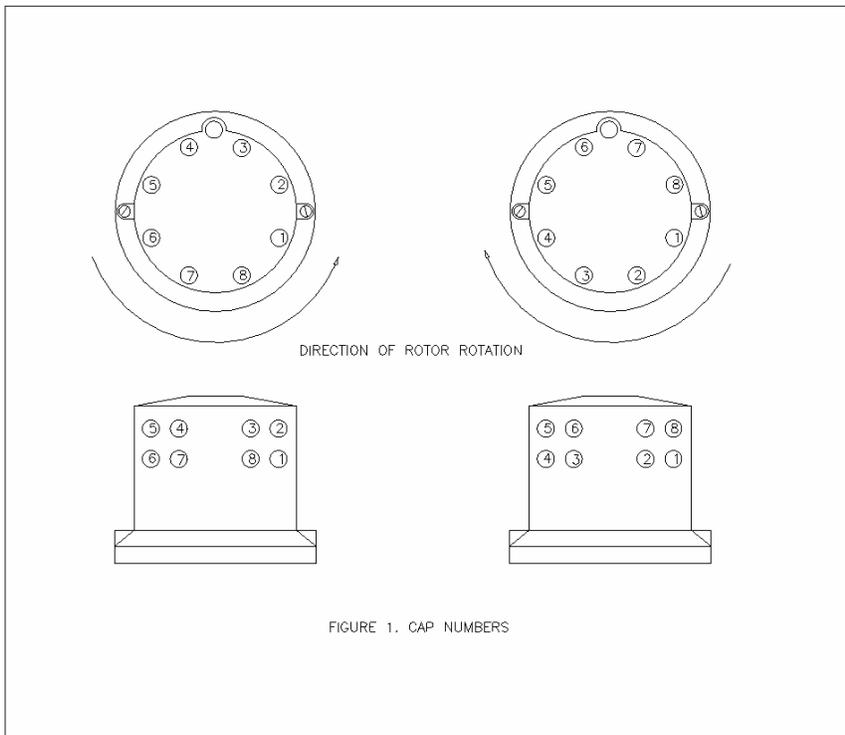
- a) Cut and trim flush the end of the ignition wire to be inserted so that the conductor is visible.
- b) Pull the insulation of the ignition wire, with a sliding motion, along the length of the wire toward the end to be inserted into the cap. This will tend to stretch out the insulation, reducing the diameter enough to allow easy insertion into the cap.
- c) Spray the end to be inserted with silicone lubricant and insert the lubricated end into the cap with a slow twisting motion.
- d) Fasten the wire in place by tightening down the wire retaining screw.

**Step2-**Connect the ignition (spark plug) wires to the distributor in the following sequence, ensuring each wire is fully inserted in its proper location before tightening restraining screw. Use Figure 1 and the table below to properly sequence the ignition wires to the cap.

- a) The number one cylinder wire is inserted into distributor cap terminal marked one (or the terminal recorded in the previous section).
- b) The next cylinder in the firing order is inserted into distributor cap terminal marked two (or the next terminal in order if you did not start from terminal number one).
- c) Continue in this manner until all ignition (spark plug) wires are inserted properly into their corresponding number firing sequence.

**.Step 3-**Plug all vacuum lines previously connected to the old distributor.

<b>Distributor Firing Order (numbers on cap)</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>
<b>Write Engine Firing Order Here</b>								



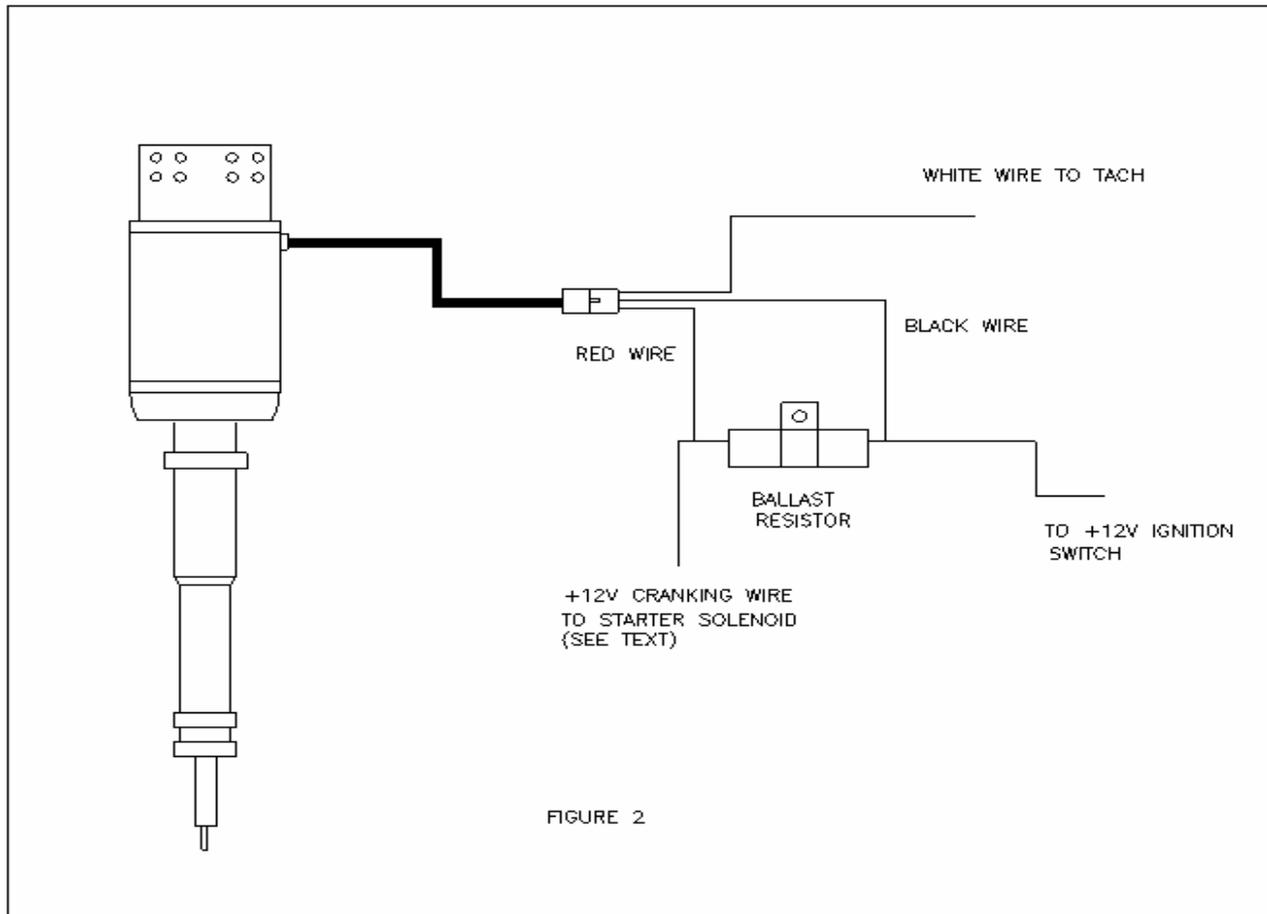
## **Wiring Procedure for use with Ballast Resistor: (Reference Figure 2)**

**Step 1-**Determine if the vehicle that the Vertex® Distributor is being installed in, has ballast resistor for the ignition system by consulting a service manual wiring diagram for the vehicle. **If the vehicle does not, and has an integral loom resistance wire for the ignition system then proceed to the Vertex Distributor power wiring procedure Figure 3.**

**Step 2-**If using the original vehicle ballast resistor then use the connection(s) identified in the previous distributor removal step identified as **coil+** and **connect to the red wire of the Vertex Electronic Distributor wire harness.** ***the original ballast resistor is to be replaced*** then disconnect the existing ballast resistor and remove it. Mount the Vertex ballast resistor in the same location and reconnect the previously removed wire to the Vertex ballast resistor terminal. Connect the wire previously identified as **coil+** from the ballast resistor to the red wire of the Vertex Electronic Distributor wire harness.

**Step 3-**Identify a fuse block connection that has +12 volts DC present in the CRANK(start) and RUN(on) position of the ignition switch (**but not in the accessory or off position**) and **connect this wire to the other (non-red) terminal side of the ballast resistor.** **Connect the black wire of the Vertex Electronic Distributor wire harness to this ballast terminal.**

**Step 4-**Connect the wire coming from the tachometer to the white wire of the Vertex Electronic Distributor. **If no tachometer is used, simply leave the pigtail wire disconnected and secure it in the wiring harness.**



**Note:** On installations using an aftermarket wiring harness and/or fuse block, the wire provided for the ignition switch is wired and connected to the side of the Vertex® ballast resistor terminal that contains the distributor's black wire. The red wire of the Vertex Distributor wire harness is then connected to the other terminal side of the ballast resistor. A second connection to the red wire of the ballast resistor from the starter relay coil connection may be needed to provide power to the distributor during cranking.

## **Wiring Procedure with Integral Loom Resistance Wire: Reference Figure 3**

### **Vertex Distributor Wire Harness Connections:**

**Black wire**-Provides +12volts DC to the trigger assembly inside of the Vertex® Electronic Distributor. The 12 volts DC provided to this terminal must be present in both the CRANK (start) and the RUN (on) positions of the ignition switch only.

**Red wire**-Provides current limited power to the coil assembly integral to the Vertex® Electronic Distributor. +12 volts DC is provided **through the ballast resistor** to this connection. The power provided to this connection must be present in the CRANK and RUN position of the ignition switch only.

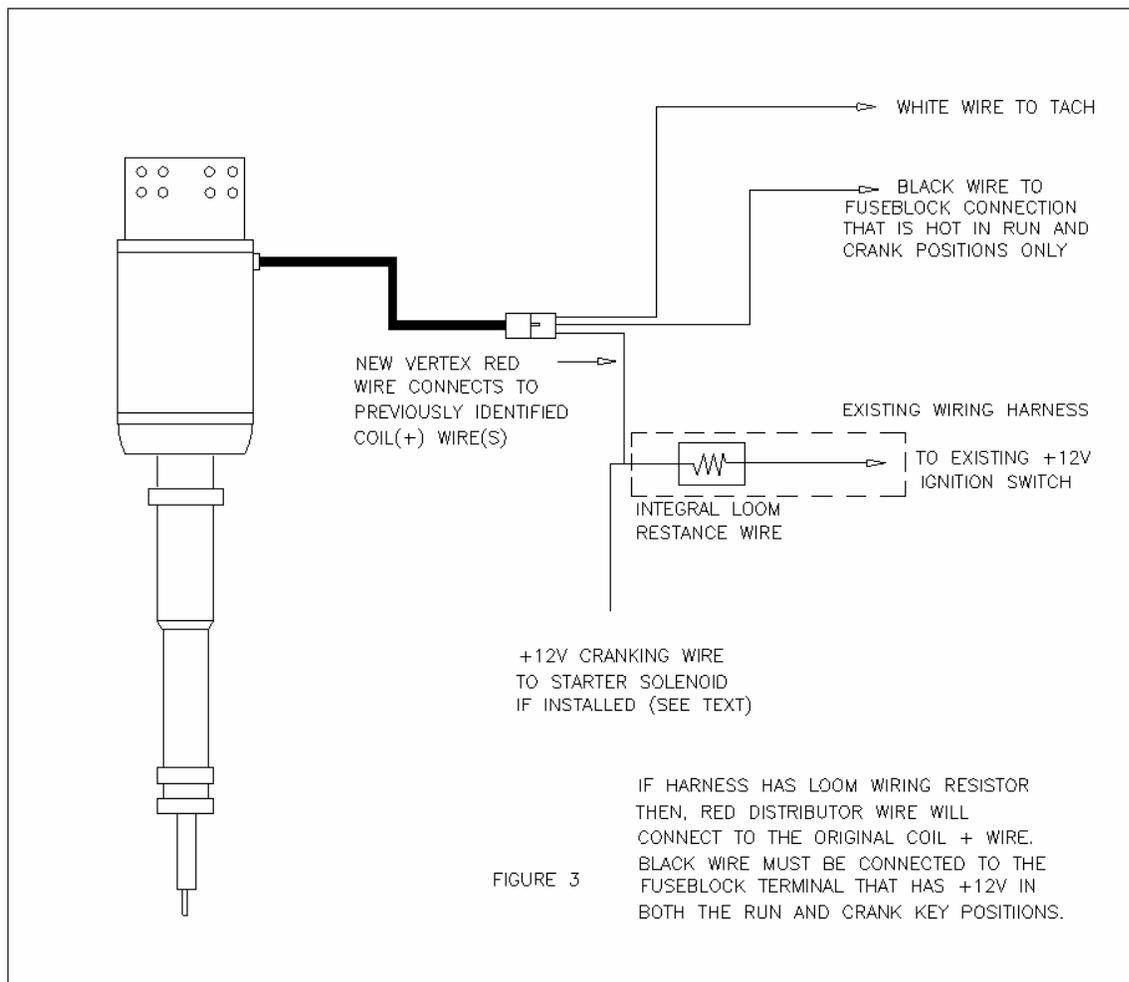
**White wire**-Provides a signal for driving an electronic tachometer.

### **Wiring Procedure: (Reference Figure 3)**

**Step 1**-Locate the wire(s) originally removed from the + side of the original coil identified as **coil+** and connect to the **red wire of the Vertex® Electronic Distributor wire harness.**

**Step 2**-Identify a fuse block connection that has +12 volts DC present in the CRANK(start) and RUN(on) position of the ignition switch (**but not in the accessory or off position**) and connect the **black wire of the Vertex Electronic Distributor wire harness to this terminal.**

**Step 3**-Connect the wire coming from the tachometer to the white wire of the **Vertex® Electronic Distributor wire harness.** **If no tachometer is used, simply leave the pigtail wire disconnected and secure it in the wiring harness.**



## **Testing of the wiring to the Vertex® Electronic Distributor:**

**Step 1-**Reconnect the vehicle battery and ensure the battery is fully charged.

**Step 2-**Using a test light for 12 volts, connect the ground lead of the test light to the negative or ground side of the battery. Test the black wire and the red wire to ensure that there is no voltage present in the off or accessory positions of the ignition key.

**Step 3-**Turn the ignition key to the RUN (on) position and ensure that +12 volts is present on the black wire. Probe the red wire connection and ensure that voltage is present (note: the light in the test light will not be full brightness on this connection).

## **Starting the Engine:**

**Caution: Ensure that all tools and miscellaneous objects are clear of moving parts and extreme heat before cranking engine.**

**Step 1-**Turn the ignition key to the CRANK position. Ensure that +12 volts is present on the black wire connection. Probe the red wire connection and ensure that voltage is present (note: the light in the test light will not be full brightness on this connection).

**Step 2-**Connect a timing light to the vehicle and start the engine. If vehicle fails to start loosen the distributor clamp and turn the distributor in small increments clockwise or counter clockwise until engine starts. Do not exceed more than 10 degrees in either direction when rotating the distributor in either direction.

**Step 3-**Set the timing as recommended by the engine manufacturer's specifications. Tighten the distributor clamp and recheck the timing to ensure no change.

**Step 4-**A final road test should be performed to determine if further adjustments to the initial timing are needed.

## **Troubling Shooting Tips:**

### **1) Motor turns over but will not start or run.**

Check the following in this order:

- a) Check number one cylinder in firing order to make certain it is getting spark.

If getting spark check these items:

- b) Ignition timing to make certain it is within the factory specifications.
- c) Engine's correct firing sequence is properly routed to the distributor cap firing sequence.
- d) Spark plug wires are properly inserted and connected in the distributor cap.
- e) Rotor is aligned with the number one cylinder marking on the distributor cap & housing.

### **2) No spark coming out of distributor to number one cylinder.**

Check the following in this order:

- a) Repeat b, c, d, and e from step 1 above.

If the above are properly installed check the following:

- a) Inspect all electrical wire connections to ensure properly routed and connected.
- b) Using a test light recheck both the black and red wires at the ballast resistor to ensure that there is no voltage present in the "off" or "accessory" positions of the ignition switch.
- c) With the ignition switch to the "on" position, use the test light and check to ensure that +12 volts is present on the black and red wire connections.
- d) With the ignition switch turned to the "start" (crank) position, use the test light and recheck to ensure that +12 volts is present on the black and red wire connections.

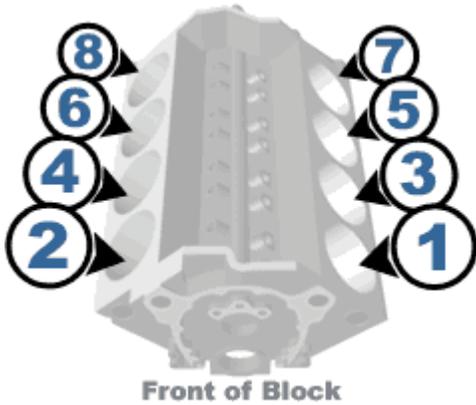
If the above are properly installed then proceed to Step 3

### **3) Test to perform on the distributor's "coil and module" to verify they are functioning properly.**

- a) Disconnect the Distributor's Red Coil Wire from the Ballast Resistor or (+) coil Integral Loom Resistance Wire. With an additional 18 gauge wire, connect one end to the Distributor's harness red wire(coil) and connect the other end to the positive (+) battery terminal post.
- b) Turn the ignition switch to the start position, if the distributor is functioning properly, the motor should fire start and run. **Caution:** Disconnect the wire from the battery after starting to avoid damage to the distributor's internal coil and electronic module from extended use in this test position.
- c) If this test fails, please contact our Vertex Tech Department for further assistance.

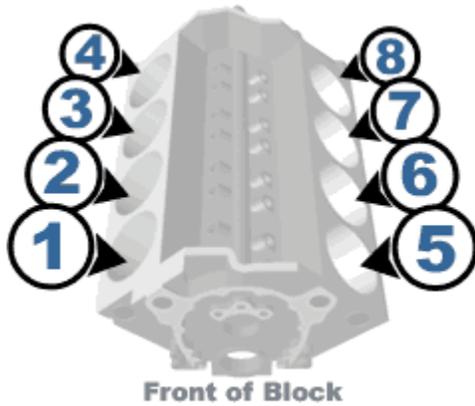
## V-8 Ignition Firing Order and Distributor Rotation

### CHEVROLET



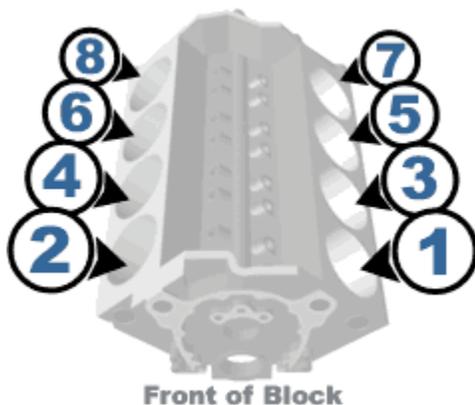
- Chevrolet Small Block 267/283/305/327/350/400  
Clockwise Rotation: 1-8-4-3-6-5-7-2
- Chevrolet Big Block 396 thru 454 (includes 348/409)  
Clockwise Rotation: 1-8-4-3-6-5-7-2
- Pontiac (most 1955-81 V-8 engines)  
Counter Clockwise Rotation: 1-8-4-3-6-5-7-2
- Oldsmobile 307/330/350/400/403/425/455  
Counter Clockwise Rotation: 1-8-4-3-6-5-7-2
- Buick 300/340/350/400/430/455  
Counter Clockwise Rotation: 1-8-4-3-6-5-7-2

### FORD



- Ford 260/289/302 (5.0L) Up to and including 1984  
Counter Clockwise Rotation: 1-5-4-2-6-3-7-8
- Ford 302 HO (5.0L), 351W (5.8L), 351C: 302 HO from 1984 on  
Counter Clockwise Rotation: 1-3-7-2-6-5-4-8
- Ford 332/352/390/427/428  
Counter Clockwise Rotation: 1-5-4-2-6-3-7-8
- Ford 429/460/514  
Counter Clockwise Rotation: 1-5-4-2-6-3-7-8
- Ford Flathead 1949-53 239/255  
Clockwise Rotation: 1-5-4-8-6-3-7-2

### CHRYSLER



- Small Chrysler 273/318/340/360 A Engines  
Clockwise Rotation: 1-8-4-3-6-5-7-2
- Big Chrysler 361/383/413/400/426/440 B/RB Engines  
Counter Clockwise Rotation: 1-8-4-3-6-5-7-2
- 392 Hemi  
Clockwise Rotation: 1-8-4-3-6-5-7-2
- 426 Hemi  
Counter Clockwise Rotation: 1-8-4-3-6-5-7-2

**Helpful Hints:**

- 1) When installing or replacing a Vertex® Distributor cap make certain the high-tension lead is properly inserted into the hole provided for it. If the lead becomes damaged or is improperly installed, the distributor may become damaged.
- 2) Do not drive or force gear of the Vertex spindle into engine or onto oil pump shaft as internal damaged to the distributor and engine may occur.
- 3) Do not operate distributor unless all ignition (spark plug) wires are properly attached to spark plugs. Operating the unit without all wires connected can lead to failure of the distributor coil.
- 4) Do not bundle or tape spark plug wires together as this builds up parallel inductance and can cause cross firing. Keep wires separated by non-metallic (suggest nylon) wire separators.
- 5) Vertex® Distributors are often supplied with original-equipment type drive gears. It may be necessary to replace this gear with either a steel or bronze gear if a steel billet camshaft has been installed. Installation of a reverse drive gear will be necessary if a reverse drive camshaft is used.
- 6) **DO NOT USE SOLID CORE IGNITION, COPPER CORE OR STAINLESS STEEL (SPARK PLUG) WIRES** with any Electronic Ignition System.

**WARRANTY INFORMATION**

At Taylor Cable we take every measure to manufacture our products to meet the highest quality specifications and standards available. However, from time to time it is possible that a product made may be or become defective in use. If such should occur, Taylor Cable will make every attempt within a reasonable request and under our warranty guidelines to make the warranty replacement process as smooth as possible.

**LIMITED WARRANTY:**

Taylor Cable Products, Inc. warrants solely to the original purchaser and not to any subsequent purchaser, and only as installed on the original vehicle, for which all Vertex Magneto products are to be free from defects in materials and workmanship for a period of ninety (90) days from the date of purchase when properly installed. Direct burns, misuse, misapplication under the intended product use, or improper installation by the customer are NOT covered under this warranty.

If failure should occur, return defective product, with proof of purchase, along with product warranty, to an authorized Taylor dealer for verification and replacement under this warranty.

This warranty is limited to the repair or replacement of the defective product at the sole discretion of Taylor Cable Products, Inc. to the extent permitted by law. You may also have other rights by law which varies from state to state.

Taylor Cable shall not be responsible for implied, expressed, incidental or consequential damages, such as labor cost for removal or installation, loss of vehicle use, inconvenience or commercial loss. Taylor Cable Products, Inc. is not responsible for injury, property damages, or other damages arising directly or indirectly from the actual or alleged defect in material and/or workmanship. Taylor Cable neither assumes nor authorizes anyone one to assume for it any other warranty.



**TAYLOR CABLE PRODUCTS, INC,  
301 HIGHGROVE ROAD, GRANDVIEW, MO 64030  
Phone 1-816-765-5011 Fax 1-816-765-2452**

[www.taylorvertex.com](http://www.taylorvertex.com)

[vertex@taylorvertex.com](mailto:vertex@taylorvertex.com)