



"Where Performance Comes Down to the Wire!"

Taylor Cable Products, Inc.

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Vertex Magneto Instructions

GENERAL INFORMATION - READ CAREFULLY BEFORE INSTALLING MAGNETO

1. Rotation of original distributor and magneto should be the same. This may be checked by observing the distributor rotor while cranking the engine with the starter and comparing observed rotation with the arrow on the magneto cap.
2. Wire position numbers on the Vertex cap indicate sequence of firing of the magneto. 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 proper engine firing order.
3. RPM and degrees of advance are stated in terms of magneto speed and magneto degrees. Both of the figures must be doubled in order to determine crankshaft speed and degrees of advance.
4. The "P" terminal on the Vertex is for the ground wire to cut off ignition. **NEVER ATTACH A LIVE WIRE TO THIS TERMINAL** as serious internal damage to the magneto will result.
5. When installing or replacing an OAC Vertex distributor cap make certain the high-tension lead is properly inserted in the hole provided for it. If this lead becomes damaged it may be necessary to replace the entire internal coil assembly.
6. Do not drive or force gear or dog on Vertex spindle into engine receiver as internal damage to the magneto can occur.
7. Do not operate magneto unless all ignition cables are properly attached to the spark plugs.
8. Do not bundle or tape ignition wires together. This builds up parallel inductance and can cause cross-firing. Keep the ignition cable separated by non-metallic separators.
9. Lubricate center rotor electrode with one drop of light grease and graphite mixture periodically.
10. The proper contact breaker clearance for the Vertex magneto is 0.015". This setting should be checked periodically.
11. The recommended spark plug gap setting is 0.018"-0.045" for the Vertex magneto. Spark plugs should be cleaned and regapped periodically for optimum performance. The Vertex magneto will not affect spark plug type or heat range.
12. Vertex magnetos are often supplied with original-equipment type distributor 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 in the engine. Installation of a reverse drive gear will be necessary if a reverse drive camshaft is used.
13. Vertex warranties will be void if paint seals are broken or if nameplate is removed or defaced.



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Vertex OAC / OXC Magneto Installation Instructions

1. Rotate engine crankshaft until timing mark appears at the top dead center (TDC) for number one cylinder on the compression stroke. Remove the distributor cap and check to see that the rotor is pointing toward the number one electrode.
2. Determine the proper engine firing order either by reading the owner's manual or the stamping on the engine block, or by observing the sequence of ignition wire connections in the distributor cap.
3. Remove the distributor and coil.
4. Check and compare the mounting dimensions and drive gear of the distributor with the Vertex magneto. They should conform.
5. Mark the position of the number one electrode of the magneto cap on the magneto housing.
6. Install the Vertex magneto on the engine in a similar manner as the battery distributor with the rotor lined up with the number one electrode mark on the magneto housing (see step five). In cases where the oil pump is driven by the magneto shaft make certain the magneto shaft engages the oil pump. (Note: It may be necessary to turn the oil pump shaft with a pair of long-nosed pliers or a screw-driver in order to effect proper alignment. **DO NOT FORCE THE MAGNETO ONTO THE OIL PUMP SHAFT.**)
7. Installation of OAC magnetos where the ignition wires emanate from the side of the Vertex distributor cap may require indexing the number one cylinder wire to a different electrode position to get the ignition wires in the desired location. In this case install the magneto and rotate the housing until the ignition cable outlets point in the desired direction. Next, rotate the magneto housing slightly until the rotor lines up directly on an electrode. The number one spark plug wire must now be connected to the electrode terminal that the rotor is pointing towards.
8. Secure the magneto with the distributor hold-down clamp. Grasp the magneto rotor and pull it up and down. You should detect approximately 1/32" of endplay in the magneto when properly installed. If no endplay is apparent it will be necessary to remove the magneto and install shim washers. This is often the case if the heads and/or the intake manifold have been milled, causing a lower deck height. Part no. 3112 shim set is available from Taylor-Vertex for Chevrolet V-8's.
9. Remove spark plugs and regapped them to 0.018"-0.045", or install new spark plugs gapped to this specification.

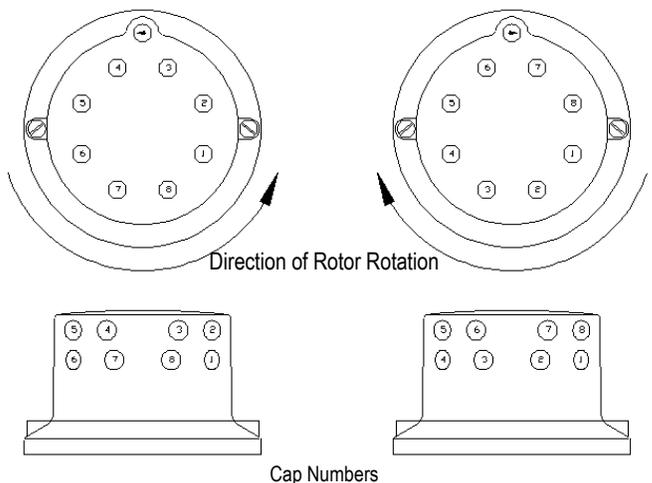


Vertex OAC Magneto Wiring Instructions

1. If the engine is equipped with carbon-center ignition wire, remove and install solid core ignition wire for optimum performance.
2. Connect the ignition wires to the magneto cap in the following sequence, making sure each wire is fully inserted in its proper location before tightening restraining screw:
 - a. Number one magneto terminal (or whichever terminal the rotor is pointing toward) to the number one cylinder.
 - b. Number two magneto terminal (or the next terminal in sequence) to the second cylinder in the engine firing order.
 - c. Continue in this manner until all ignition wires are connected.
5. If a Vertex start relay is not used, insulate the bare end of the hot wire that originally went to the battery coil with electrical tape.
6. Plug all vacuum lines that originally were connected to the distributor.
7. Before starting the engine, determine the proper initial advance setting by the following method:
 - a. Determine proper total advance for the engine. For most engines, this will be 34-40 degrees BTDC at the crankshaft.
 - b. Determine the crankshaft degrees of advance built into the magneto by doubling the figure on the red build tag.
 - c. Subtract (b) from (a). This will give you the proper initial advance setting.

| | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|
| Mag Firing Order (numbers on cap) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Write engine firing order here | | | | | | | | |

3. When installing 8mm ignition wires observe the following steps to prepare the wire.
 - a. Pull the insulation 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 and reduce the diameter. Cut off the end of the ignition wire so the conductor is visible.
 - b. Spray the end of the wire to be inserted into the cap with silicon lubricant.
 - c. Insert the ignition wire into the distributor cap while slowly rotating the wire until it is fully seated. Fasten the retaining screw.
4. Connect the grounding switch or Vertex start relay to the magneto "P" terminal. If a grounding switch is used, connect one pole of the switch to ground and the other pole to the magneto "P" terminal. If a Vertex start relay is used follow the directions included with the relay.



Vertex OXC Magneto Wiring Instructions

1. Install Vertex magneto distributor head.
Connect the ignition wires in accordance to magneto rotation and engine firing order.
2. Install the Vertex external coil as close as possible to the magneto.
3. Wire the magneto, external coil and kill switch as shown in the wiring diagram.
4. Connect the grounding switch or Vertex start relay to the magneto "P" terminal. If a grounding switch is used, connect one pole of the switch to ground and the other pole to the magneto "P" terminal. If a Vertex start relay is used follow the directions included with the relay.
5. If a Vertex start relay is not used, insulate the bare end of the hot wire that originally went to the battery coil with electrical tape.
6. Plug all vacuum lines that originally were connected to the distributor.
7. Before starting the engine, determine the proper initial advance setting by the following method:
 - a. Determine proper total advance for the engine. For most engines, this will be 34-40 degrees BTDC at the crankshaft.
 - b. Determine the crankshaft degrees of advance built into the magneto by doubling the figure on the red build tag.
 - c. Subtract (b) from (a). This will give you the proper initial advance setting.
8. Start the engine and set the initial advance with a timing light by loosening the distributor hold-down clamp and rotating the entire Vertex magneto slightly clockwise or counter-clockwise as the case may be. **DO NOT CHANGE THE POSITION OF THE BREAKER CAM OR MAKE ANY INTERNAL ALTERATIONS.**
9. Final vehicle testing should be used to determine if further adjustments to initial advance are required.

