



## INSTALLATION INSTRUCTIONS

## BILLET COMPETITION DISTRIBUTOR

SERIES NOS. 81 AND 84

COMP<sup>®</sup> S/S DISTRIBUTOR

32 SERIES

NOTICE: THE COMP<sup>®</sup> S/S MAGNETIC BREAKERLESS DISTRIBUTOR SERIES AND BILLET COMPETITION DISTRIBUTOR SERIES NOS. 81 AND 84 ARE LEGAL IN CALIFORNIA ONLY FOR RACING VEHICLES WHICH MAY NEVER BE USED UPON A HIGHWAY. IF THERE ARE ANY QUESTIONS, PLEASE CONTACT THE FACTORY.

## PARTS INCLUDED WITH THIS KIT:

**Series Nos. 32 and 84 (Single Pickup)**

- 1 Distributor
- 1 Distributor Wire Harness Part No. 29788

**Series No. 81 (Dual Pickup)**

- 1 Distributor
- 2 Distributor Wire Harnesses Part No. 29788

## GENERAL INFORMATION

**Mechanical Advance**

Distributor part numbers ending in "1" have 24° (crankshaft degrees) of mechanical advance. Distributors ending in "05" have 20° (crankshaft degrees) of mechanical advance. Both of these may be adjusted by using Mallory Advance Curve Kit 29014 to fine tune the curve to your particular engine's requirements.

Distributor part numbers ending in "04" have locked, 0°, mechanical advance.

**Electronic Ignition Controls**

These distributors require the use of a Mallory HYFIRE 6 or 7 Series Capacitive Discharge Ignition System or a similar type CD ignition. They cannot be used with just a coil.

**Ignition Coils**

Use ignition coils recommended by the ignition coil manufacturer for the particular electronic ignition control.

**Spark Plug Wires**

**YOU MUST USE suppression type (carbon core; spiral core; suppression core) spark plug wire.** We recommend spiral core ignition wire, such as Mallory PRO SIDEWINDER<sup>®</sup> Ignition Wire. Suppression type spark plug wires prevent false triggering and the possibility of premature ignition or accessory failures.

**DO NOT USE solid core (copper core; stainless steel core) spark plug wire with any electronic ignition system or accessory.** Solid core spark plug wire causes radio frequency interference (ignition noise; static). Radio frequency interference causes false triggering (pre-ignition; spark-scatter) and premature ignition or accessory failures. Prevent false triggering and the possibility of premature ignition or accessory failures, use suppression type spark plug wire (carbon core; spiral core; suppression core). We recommend spiral core ignition wire, such as Mallory PRO SIDEWINDER<sup>®</sup> Ignition Wire.

**Spark Plug Gaps**

Experiment with and closely monitor various gaps to achieve maximum performance. Exceptionally large spark plug gaps lead to problems of crossfire inside the distributor cap, burnt rotors, spark plug wire failure and reduced spark plug life. If you are trying to find the ideal spark plug gap, start at 0.035" and increase 0.005" at a time until elapse

times fall off (or MPH-falls off), the car starts misfiring or the incidence of failure to the distributor cap, rotor, spark plug wires or spark plugs is frequent during the race.

**Electric Welding**

Unplug the distributor wire harness before welding on the vehicle.

**Distributor Drive Gear**

Bronze distributor gears absorb the increased wear caused by specialized camshafts and are easily replaced before costly damage to the camshaft gear occurs. Bronze distributor gears must be checked frequently and replaced often and are metallurgically compatible with any camshaft.

## OLD DISTRIBUTOR REMOVAL

**Step 1**

Locate the #1 cylinder's spark plug wire on the original distributor cap. Mark the distributor cap and the distributor housing, in line with this spark plug wire position on the distributor cap.

**Step 2**

Turn the engine crankshaft in the direction of rotation until the timing mark lines up with the top dead center (TDC) mark on the timing tab.

**NOTE: Removing the spark plugs may make it easier to turn the crankshaft.**

**Step 3**

Remove the distributor cap from the distributor. Do not remove the spark plug wires or coil wire at this time. The rotor blade should point to the mark made on the distributor housing (from Step 2). If it is not, turn the engine crankshaft in the direction of rotation one full turn (repeating Step 3) until the timing mark lines up (again) with the TDC-mark on the timing tab.

**NOTE: Once you are finished with step 4, do not turn the crankshaft until the new distributor is installed.**

**Step 4**

Note the direction the rotor is pointing. If you are replacing a vacuum advance distributor, disconnect the vacuum hose and plug the source. Remove the distributor hold down clamp and remove the distributor from the engine.

## MAGNETIC BREAKERLESS DISTRIBUTOR INSTALLATION

### Step 1

Remove the distributor cap.

### Step 2

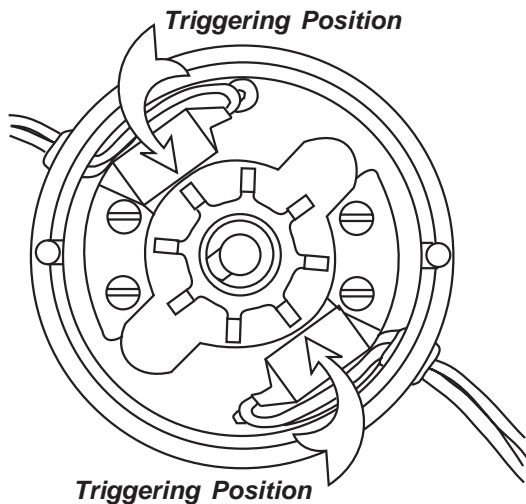
Place the distributor in the engine with the rotor pointing in the same general direction as the original distributor.

**NOTE:** *The distributor must be fully seated into the engine. It may be necessary to turn the oil pump drive, or turn the engine crankshaft in the direction of rotation two full turns until the timing mark lines up (again) with the TDC-mark on the timing tab, to allow the distributor to seat fully.*

### Step 3

Rotate the distributor housing in the opposite direction of rotor rotation until the nearest tooth of the reluctor is pointing directly at the center of the metal pole on the magnetic pickup. This will generally put timing close enough for starting purposes. Put the distributor hold down clamp in place and tighten slightly, leaving it loose enough to turn the distributor. Make a mark on the distributor housing where the rotor points. Example (Dual Pickup), see Figure 1:

FIGURE 1



**NOTE:** Recommended reluctor to pickup air gap is .010" – .020".

### Step 4

Install the distributor cap. Remove the #1 cylinder's spark plug wire on the original distributor cap and install it onto the distributor cap post above the mark on the distributor housing where the rotor had pointed. Continue installing each remaining spark plug wire, one at a time, from the original distributor cap to the distributor cap in the same sequence. **NOTE:** It may be necessary to purchase and install distributor boots and terminals for the spark plug wires to correctly fit the distributor cap.

## WIRING PROCEDURE

### SERIES NOS. 84 AND 32 (SINGLE PICKUP)

There is a female connector with two wires coming from the distributor:

- Connect the distributor wire harness to the female connector and route the harness two wires to the electronic ignition control.
- ORANGE-WIRE-(MAG+): Connect to the magnetic input (MAG+)-terminal or wire on the electronic ignition control.
- PURPLE-WIRE-(MAG-): Connect to the magnetic input (MAG-) terminal or wire on the electronic ignition control.

### SERIES NOS. 81 (DUAL PICKUP)

There are two separate female connectors with two wires coming from the distributor:

- Connect the distributor wire harness to one female connector and route the harness two wires to the electronic ignition control.
- ORANGE WIRE (MAG+): Connect to the magnetic input (MAG+) terminal or wire on the electronic ignition control.
- PURPLE WIRE (MAG-): Connect to the magnetic input (MAG-) terminal or wire on the electronic ignition control.
- Connect the other distributor wire harness to the other female connector and route the harness two wires to the other electronic ignition control.
- ORANGE WIRE (MAG+): Connect to the magnetic input (MAG+) terminal or wire on the electronic ignition control.
- PURPLE WIRE (MAG-): Connect to the magnetic input (MAG-) terminal or wire on the electronic ignition control.

**NOTE:** *Refer to the electronic ignition control instructions for remaining power connections.*

**Tachometer operation:** Connect tachometer wire or wires as recommended by the actual tachometer manufacturer or electronic ignition control manufacturer.

## STARTING THE ENGINE

**CAUTION:** *Be sure all tools, wires, and miscellaneous objects are clear of moving engine parts and extremem heat before starting the engine.*

### Step 1

Recheck all wires and connections to make sure they are correct. Check and clean or replace spark plugs. If replacing spark plugs, use types recommended by the engine manufacturer.

### Step 2

Connect a timing light. Find an area with the best view of the timing marks.

### Step 3

Start the engine. If it fails to start, rotate the distributor in small increments (either clockwise or counterclockwise) until the engine starts.

### Step 4

Set timing as recommended by the engine manufacturer, then tighten distributor hold-down clamp. Make sure timing is still correct. If timing has moved, repeat this procedure.



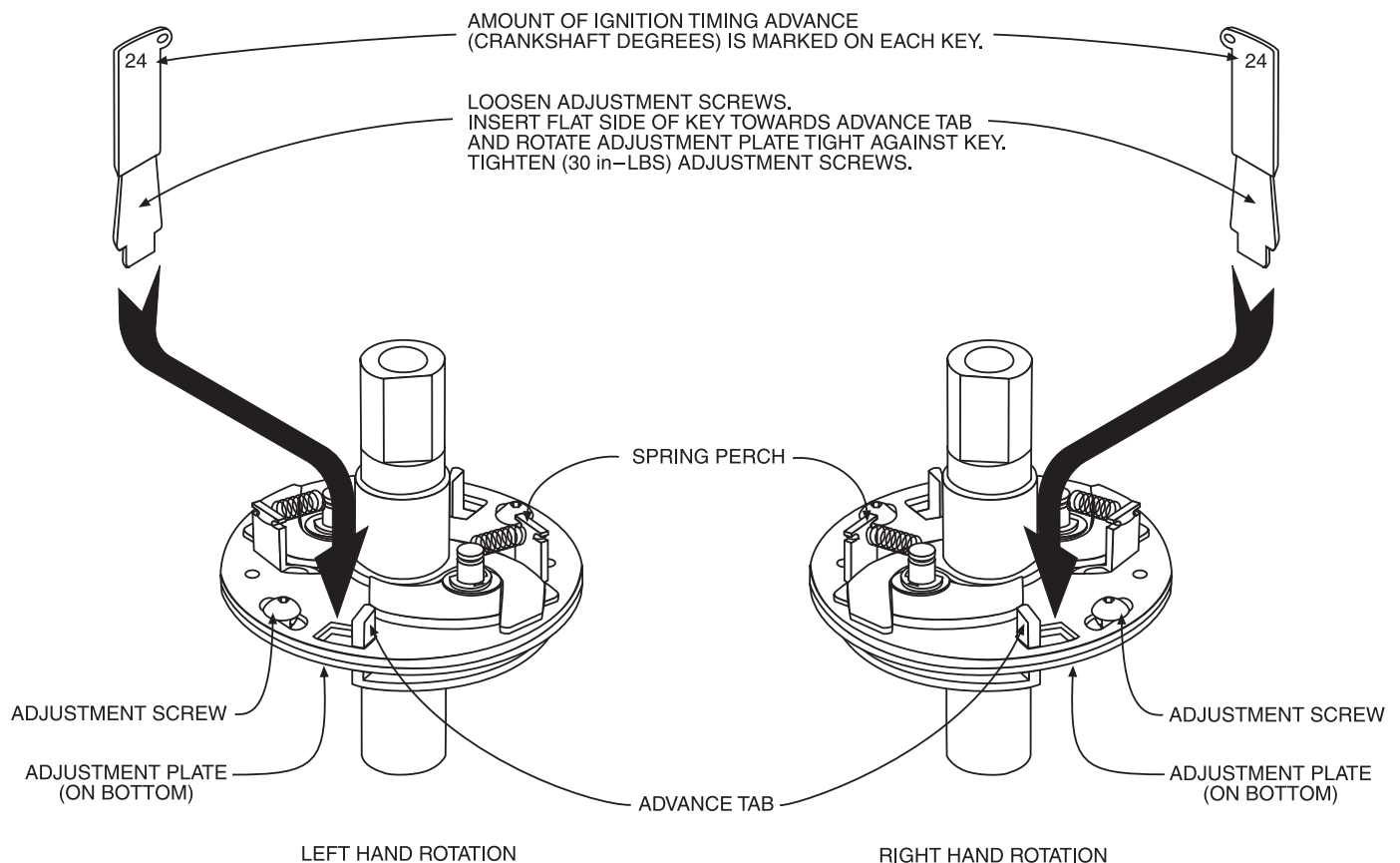
## INSTALLATION INSTRUCTIONS

# YH ADVANCE ASSEMBLY ADJUSTMENT PROCEDURE

*Distributor part numbers that end with the letter "H" have this type of advance. Mallory Advance Curve Change Kit Part No. 29014 is required to change the amount and rate of advance.*

*The kit includes degree keys that range from 14° to 28°. Five sets of springs are also included, with instructions to plot advance curves.*

*After tightening the adjustment screws, recheck the adjustment on both tabs to ensure they are equally adjusted.*



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