



# INSTALLATION INSTRUCTIONS

(with distributor out of engine)

## FIRESTORM DUAL SYNC

*Go to section 2 if you are doing the installation with the Dual Sync installed in the engine.*

**NOTE:** Make sure that your ignition coil is disconnected until you reach step 18. Make sure the engine is set at 0 TDC # 1 Cylinder. If you which to put in initial advance by setting the balancer to 5 to 10 Degrees BTDC, you must put the number in CRANK PICKUP OFFSET in Ignition Configuration.

### INSTALLATION PROCEDURE

#### Step 1

Remove the cap from your distributor, verify which direction the rotor/distributor shaft turns when the engine is cranking (either clockwise, or counter-clockwise).

#### Step 2

Rotate the engine to Top Dead Center of cylinder #1. If replacing another distributor, verify that the rotor is now pointing at the sparkplug wire for cylinder #1.

#### Step 3

If replacing another distributor, disconnect all wires and remove the distributor from the engine.

#### Step 4

Attach the Dual Sync Distributor adapter wire harness (part# 77101M) to the FireStorm Box main wire harness, ensuring that the ground leads are connected to an appropriate grounding point on the engine. Then plug both the CAM & CRANK connectors to the Dual Sync Distributor.

#### Step 5

Turn the ignition to the **Key-On, Engine-Off** position, and launch the SparkMap Software program.

#### Step 6

Select the "Online to FireStorm" data source, and go to the Ignition Configuration screen by pressing the **CTRL- I** key combination, or selecting the **Ignition** menu item from the **Configuration** menu.

#### Step 7

From the **Ignition Type** drop-down list, select **Dual Sync Distributor or Hall Effect equivalent**, then press **F10**.

### DISTRIBUTOR PHASING

#### Step 8

Position the Dual Sync Distributor so that you can see both the Red (Crank) and Blue (Cam) LEDs. Verify that the ignition is still in the **Key-On, Engine-Off** position.

#### Step 9

Rotate the distributor shaft /rotor in the same direction as when the engine is running (either clockwise or counterclockwise). Continue rotating **until the blue LED shuts off completely**. This indicates the falling edge of the cam trigger position.

#### Step 10-A

**If red light is still on**, continue to slowly rotate the distributor shaft/rotor **until the red LED shuts off, comes on again then shuts off (Stop)**. This indicates the falling edge of the crank trigger position #1. Stop at this point.

#### Step 10-B

**If red light was off** after blue light shut off, slowly rotate the distributor shaft/rotor **until the red LED shuts off (Stop)**. This indicates the falling edge of the crank trigger position. Stop at this point.

Taking care not to rotate the distributor housing or shaft, make a mark inside the distributor housing where the rotor tip is pointing. Your distributor is now set to Top Dead Center of cylinder #1

#### Step 11

Install the distributor in your engine and position the distributor housing so the mark inside the distributor housing made in step 10 lines up with the rotor tip. It may be necessary to use a screwdriver or socket wrench to rotate the oil pump drive shaft slightly to properly seat the distributor. Do not rotate the engine.

#### Step 12

Verify that the crank LED is not lit and tighten the distributor. If the red LED is lit, repeat steps 8-12.

#### Step 13

Turn the ignition key to the **Off** position. The key must remain in the **Off** position for at least **30 seconds** for the programming changes to be implemented by the Module.

### ROTOR PHASING

#### Step 14

Rotate the engine backward to 22 to 25 degrees BTDC. Make a small mark on the outside of the distributor housing where the rotor tip is pointing.

#### Step 15

Install the distributor cap, and locate the spark plug terminal that is closest to the mark on the outside of the distributor housing made in step 14. This is the terminal for cylinder #1. Mark the distributor cap to indicate the location of the #1 spark plug wire.

#### Step 16

Remove the distributor cap, loosen the two 5/64" Allen-head screws slightly and adjust the rotor so it is pointed at the center of the terminal for cylinder #1.

#### Step 17

Install the distributor cap and spark plug wires. Double check that the spark plug wires match the firing order previously set in the Module.

#### Step 18

Connect the coil.

**DO NOT ATTACH ANOTHER SWITCHED 12 VOLT SUPPLY TO THE BOX.**

#### Step 19

Start the engine. Using a timing light, verify that the timing reading on the harmonic balancer is the same as the timing reading in SparkMap. We recommend forcing the timing in SparkMap to 10–20 degrees while verifying readings. If the readings are different, loosen the distributor and rotate the distributor housing until the timing readings on the harmonic balancer are the same as the timing reading in SparkMap. Tighten the distributor.

#### Step 20

Your Dual Sync Distributor is now correctly mounted, phased, and ready to run.

## Section 2

### INSTALLATION INSTRUCTIONS *(with distributor installed in the engine)*

**NOTE:** Make sure that your ignition coil is disconnected until you reach step 18. Make sure the engine is set at 0 TDC # 1 Cylinder. If you which to put in initial advance by setting the balancer to 5 to 10 Degrees BTDC, you must put the number in CRANK PICKUP OFFSET in Ignition Configuration.

#### INSTALLATION PROCEDURE

##### Step 1

Verify which direction the rotor/distributor shaft turns when the engine is cranking (either clockwise, or counter-clockwise).

##### Step 2

Rotate the engine to Top Dead Center of cylinder #1. If replacing another distributor, verify that the rotor is now pointing at the sparkplug wire for cylinder #1.

##### Step 3

Remove the distributor being replaced from the engine.

##### Step 4

Install the Dual Sync distributor making sure that it seats properly and the rotor is pointing at #1 position; attach the Dual Sync Distributor adapter wire harness (part# 77101M) to the FireStorm Box main wire harness and to the Dual Sync distributor, ensuring that the ground leads are connected to an appropriate grounding point on the engine.

##### Step 5

Turn the ignition to the **Key-On, Engine-Off** position, and launch the SparkMap Software program.

##### Step 6

Select the "Online to FireStorm" data source, and go to the Ignition Configuration screen by pressing the **CTRL- I** key combination, or selecting the **Ignition** menu item from the **Configuration** menu.

##### Step 7

From the **Ignition Type** drop-down list, select **Dual Sync Distributor or Hall Effect equivalent**, then press **F10**.

#### DISTRIBUTOR PHASING

##### Step 8

Position yourself so that you can see both the Red (Crank) and Blue (Cam) LEDs in the Dual Sync Distributor. Verify that the ignition is still in the **Key-On, Engine-Off** position.

##### Step 9

Rotate the distributor housing opposite the rotor rotation (**Chevy: Rotate housing counter clockwise**) or opposite direction as when the engine is turning the rotor (either clockwise or counterclockwise). Continue rotating **until the blue LED shuts off completely**. This indicates the falling edge of the cam trigger position.

##### Step 10

If red light is still on, continue to slowly rotate the distributor shaft/rotor **until the red LED shuts off, comes on again then shuts off (Stop)**. This indicates the falling edge of the crank trigger position #1. Stop at this point.

##### Step 11

If red light was off after blue light shut off, slowly rotate the distributor shaft/rotor **until the red LED comes on and shuts off (Stop)**. This indicates the falling edge of the crank trigger position. Stop at this point. Your distributor is now set to Top Dead Center of cylinder #1.

##### Step 12

Taking care not to rotate the distributor housing, Verify that the crank LED (red) is not lit and tighten the distributor. If the red LED is lit, repeat steps 8-12.

##### Step 13

Turn the ignition key to the Off position. The key must remain in the **Off** position for at least **30 seconds** for the programming changes to be implemented by the Module.

#### ROTOR PHASING

##### Step 14

Rotate the engine backward to 22 to 25 degrees BTDC. Make a small mark on the outside of the distributor housing where the rotor tip is pointing.

##### Step 15

Install the distributor cap, and locate the spark plug terminal that is closest to the mark on the outside of the distributor housing made in step 23. This is the terminal for cylinder #1. Mark the distributor cap to indicate the location of the #1 spark plug wire.

##### Step 16

Remove the distributor cap, loosen the two 5/64" Allen-head screws slightly and adjust the rotor so it is pointed at the center of the terminal for cylinder #1. Tighten the two Allen-head screws to re-secure the rotor.

##### Step 17

Install the distributor cap and spark plug wires. Double check that the spark plug wires match the firing order previously set in the Module.

##### Step 18

Connect the coil.

**DO NOT ATTACH ANOTHER SWITCHED 12 VOLT SUPPLY TO THE BOX.**

##### Step 19

Start the engine. Using a timing light, verify that the timing reading on the harmonic balancer is the same as the timing reading in CalMap. We recommend forcing the timing in CalMap to 10–20 degrees while verifying readings. If the readings are different, loosen the distributor and rotate the distributor housing until the timing readings on the harmonic balancer are the same as the timing reading in CalMap. Tighten the distributor.

##### Step 20

Your Dual Sync Distributor is now correctly mounted, phased, and ready to run.

***If you encounter problems or if you need further technical assistance, please call our technical service line at (216) 688-8300.***



MALLORY IS A TRADEMARK OF PRESTOLITE PERFORMANCE  
10601 MEMPHIS AVE. #12, CLEVELAND, OH 44144  
216.688.8300 FAX 216.688.8306

FORM 1540M  
12/11