



INSTALLATION INSTRUCTIONS

DUAL SYNC DISTRIBUTOR

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1. Verify which direction the rotor / distributor shaft turns when the engine is cranking (either clockwise, or counter-clockwise).
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.
3. Remove the distributor being replaced from the engine.
4. Before installing the Dual Sync distributor, attach the Dual Sync Distributor adapter wire harness (part# 77101) to the DFI Gen 7 main wire harness, ensuring that the ground leads are connected to an appropriate grounding point on the engine.
5. Turn the ignition to the **Key-On, Engine-Off** position, and launch the DFI CalMap Engine Management Software program.
6. Select the "Online to ECM" data source, and go to the Engine Configuration screen by pressing the **CTRL-S** key combination, or selecting the **System** menu item from the **Configuration** menu.
7. From the **Injection Type** drop-down list, select **Sequential** then press the **F10** key on your keyboard.
8. If you are running CalMap version 3.0 or higher, from the **Ignition Type** drop-down list, select **Dual Sync Distributor or Hall Effect equivalent**, then press **F10** and skip to step 15. If you are running CalMap version 2.0 or lower, complete steps 9 – 14.
9. Change the **Crank Trigger Edge** switch to the **Falling** position and press **F10**.
10. Change the **Cam Trigger Edge** switch to **Falling** and press **F10**.
11. Change the **Output Trigger Edge** switch to **Rising**, and press **F10**.
12. Change the **Crank Signal Input Type** to **Hall Effect** and press **F10**.
13. Change the **Cam Signal Input Type** to **Hall Effect** and press **F10**.
14. Change the **Output Signal Type** to **Sink, Points**, and press **F10**.
15. Verify that the **Fuel Injector Firing Order** is set to the desired firing order, and press **F10**.
16. If no error messages were observed, exit the CalMap program using the **File->Exit** menu command, by pressing the **CTRL-X** key combination, or by clicking on the Gen 7 DFI icon on the lower right portion of the screen. If any error messages were present, repeat steps 6-15.

DISTRIBUTOR PHASING

17. 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.
18. 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.
19. Continue to slowly rotate the distributor shaft / rotor until the red LED shuts off completely. 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.

20. Install the distributor in your engine and position the distributor housing so the mark inside the distributor housing made in step 19 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.
21. Verify that neither of the cam or crank LEDs are lit and tighten the distributor. If either LED is lit, repeat steps 17-20 until neither LED is lit.
22. 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 ECM.

ROTOR PHASING

23. Rotate the engine backward to 25-35 degrees BTDC. Make a small mark on the outside of the distributor housing where the rotor tip is pointing.
24. 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.
25. 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.
26. Install the distributor cap and spark plug wires. Double check that the spark plug wires match the firing order previously set in the ECM.
27. 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.
28. Your Dual Sync Distributor is now correctly mounted, phased, and ready to run Sequential Fuel Injection.

If you encounter problems, or if you need further technical assistance please call our DFI technical service line at (248) 380-2780.

REPLACEMENT PARTS

DESCRIPTION	DFI Dist. PART#	DFI Dist. Cap PART#	DFI Wire Retainer PART#	DFI Rotor PART#	DFI Steel Gear PART#	DFI Bronze Gear PART#
AMC (290-401) V8, small cap+	77601	74071	74078	74075		74080
Buick (215, 300, 340, 350ci) V8 small cap	77301	74071	74078	74075	74081	
Buick (400-430-455) V8 small cap+	77441	74071	74078	74075	74082	
Cadillac (368, 425, 472-500) V8 small cap	77548	74071	74078	74075	74083	74084
Chevy V8 small cap.	77100	74071	74078	74075	74083	74084
Chevy V8 large cap	77190	74072	74079	74076	74083	74084
Chevy V8 small cap tall deck	77100T	74071	74078	74075	74083	74084
Chevy V8 large cap tall deck.	77190T	74072	74079	74076	74083	74084
Corvette V8 w/tach drive small cap.	77110	74071	74078	74075	74083	74084
Chevy 4.3L V6 small cap.	77151	74073		74077	74083	74084
Chrysler B (383) V8 small cap.	77701	74071	74078	74075		
Chrysler Hemi (392) V8 small cap	77707	74071	74078	74075		
Chrysler "LA" (318-360) V8 small cap	77901	74071	74078	74075		
Chrysler R-B (440) V8 small cap	77801	74071	74078	74075		
Ford SB V8 small cap	77201	74071	74078	74075	74085	74086
Ford SB V8 large cap	77291	74072	74079	74076	74085	74086
Ford 351 Windsor V8 small cap.	77207*	74071	74078	74075	74087A*	74088A*
Ford 351 Windsor V8 large cap	77297*	74072	74079	74076	74087A*	74088A*
Ford BB (351C-429-460) V8 small cap	77204	74071	74078	74075	74089	74090
Ford BB (351C-429-460) V8 large cap	77294	74072	74079	74076	74089	74090
Honda 1.6L-1.8L small cap.	77313	74074	74078	74075		
Honda 1.6L-1.8L large cap	77393	74094	74079	74076		
Oldsmobile V8 small cap.	77401	74071	74078	74075	74091	
Oldsmobile V8 large cap	77491	74072	74079	74076	74091	
Pontiac V8 small cap.	77580	74071	74078	74075	74092	74093
Porsche 911 small cap (SHOC only)+	77911	74073		74077		
Ford Big Block FE small cap.	77200					
Ford Big Block FE large cap	77290					

Note: 77911*, 77151* and 77313* are equipped with a female tower cap. All other caps have a male tower cap. 77441, 77601, 77911 requires the use of an OE style gear which is not included.

***Denotes press-on gears +Uses stock gears**

LARGE CAP CONVERSION KIT

Includes cap, rotor, wire retainer and adapter.

V8 Applications77095



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