

DIS4

INSTALLATION MANUAL
DIS4-2.3 L FORD

DISTRIBUTORLESS
IGNITION SYSTEM

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INTRODUCTION

Congratulations! You have just purchased the highest performance ignition system available for the Ford 2.3 L engine.

READ THESE INSTRUCTIONS COMPLETELY BEFORE BEGINNING INSTALLATION!

If you are in doubt about any of the procedures, have a qualified automotive technician install the system for you!

Refer to the separate diagram sheet during installation

VERIFY THE CONTENTS OF THE SYSTEM.

It should contain the following:

DIS4-2.3 L Ford Electronic Distributor
4 Tower Ignition Coil Pack
8 mm Spark Plug Wire Set
Wire Harness
Clear Plastic Coil Mount Template

GENERAL COMMENTS

These instruction sheets are precise and accurate. They are designed to take you through the installation, step by step, in a logical sequence. If you follow them, the system will work the first time, every time. If you do not follow them, Cypress Engineering cannot guarantee the results.

Due to the high energy output of this system, only silicone high voltage leads, such as the ones supplied with the system, can be used.

High quality spark plugs, in new or good condition must be used. Recommended spark plug gap is 0.045".

Never crank the engine with any high voltage wires disconnected from the Coil Pack terminals or spark plugs. This puts a very high stress on the coil and it is dangerous!

DO NOT try to time this system with a dial back timing light! Each spark plug wire conducts current once per engine revolution instead of once every other revolution as in a conventional system. This causes a dial back timing light to give a false reading! Use only a standard timing light with a clamp on inductive type pick up.

REMOVE STOCK COMPONENTS

1. Remove high voltage wire from ignition coil.
2. Remove all of the high voltage wires from the spark plugs.
3. Remove the distributor cap and set it and the high voltage wires out of the way.
4. Remove the wire from the ignition coil primary negative (-) terminal that connects to the distributor.

CAUTION: MAKE SURE THE IGNITION SWITCH IS OFF!! The wire from the ignition switch to the ignition coil primary terminal is NOT fused in many applications. If this wire is allowed to touch vehicle or engine ground, with the ignition switch on, it can cause a direct short on the battery possibly causing permanent damage to the vehicle wiring and a fire. Cypress Engineering assumes no liability for damage caused from this occurrence or due to any faults in the existing vehicle wiring.

5. Remove the ignition switch wire from the ignition coil primary positive (+) terminal. Make sure this wire does not come into contact with vehicle or engine ground.
6. Remove the ignition coil and mounting strap from the fan housing and set them aside.
7. Remove the stock distributor and set it aside.
8. Install the Compu-Tronix DIS4-2.3 L Ford Electronic Distributor. Tighten the clamp just enough so that the distributor can still be turned by hand.

INSTALL COIL PACK

Using the plastic template provided, mount the coil pack. Choose a location as close to the original coil mounting as possible. DO NOT mount the coil on the exhaust side of the engine.

SETTING PRELIMINARY TIMING

Refer to Figure 1.

Insert the plug (15) on the wire harness (18) into the socket (16) on top of the Compu-Tronix distributor. The plug will only go into the socket one way. **DO NOT** connect the plug (23), on the other end of the wire harness, to the coil pack at this time.

With the ignition switch off, the gear shift in neutral and the emergency brake set, rotate the engine until the timing mark is about 12° BTDC. It does not matter whether Cylinder #1 or Cylinder #4 is on the compression stroke.

1. Connect the ignition switch wire (the one that was removed from the positive coil terminal) to the red wire (22), in the wire harness. (This wire has an insulated male spade terminal on it.)
2. Turn the ignition switch **ON**.
3. The LED static timing light (19), in the top of the Compu-Tronix Distributor, may be on or off. If it is off, slowly rotate the distributor counterclockwise until the LED just turns on. This is the point at which #1 cylinder will fire. If the LED is initially on, rotate the distributor clockwise until the LED turns off. The distributor may need to be rotated up to 120° for the LED to turn off. Then slowly rotate the distributor counterclockwise until the LED just turns back on. This is the point at which #1 cylinder will fire. **TURN THE IGNITION SWITCH OFF**. The timing is now set with about 10° initial advance. This will allow for the engine to be started so the timing can be set. **NOTE:** There are two correct settings for the distributor that are 180° apart. You may choose either position to get the connector in the top of the distributor located in the most desirable location. If you decide to rotate the distributor 180°, repeat the steps for preliminary timing above.

INSTALL SPARK PLUG WIRES

Refer to Figure 1.

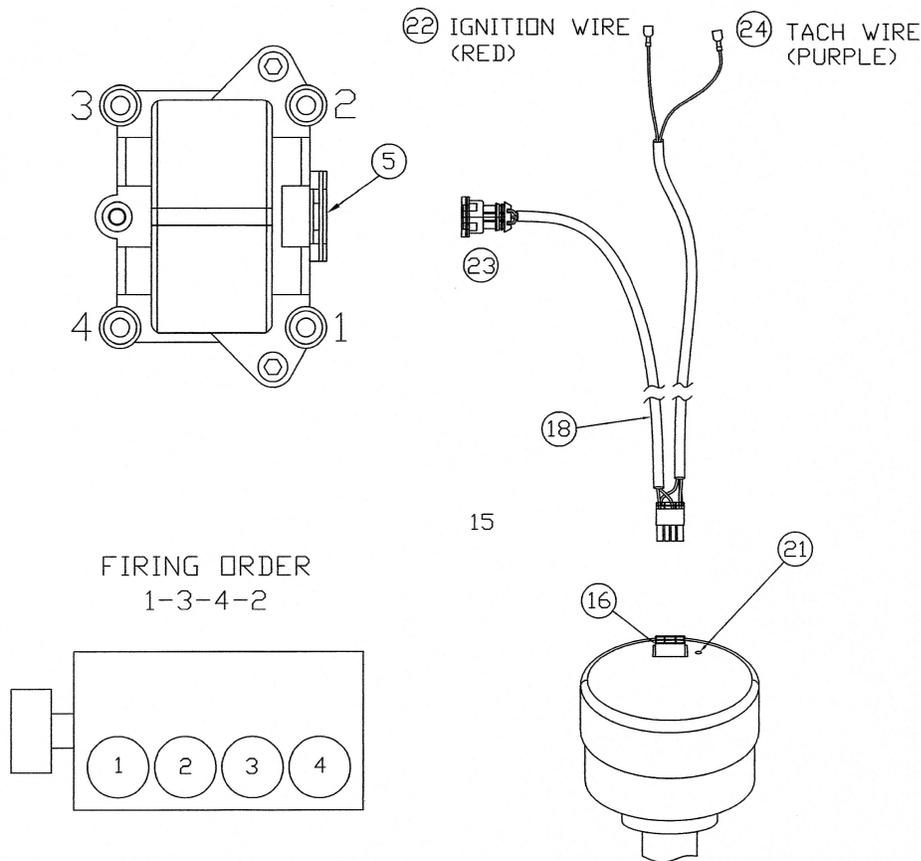
There are two long spark plug wires and two shorter ones in the spark plug wire set supplied. The two long wires go to cylinders #1 and #4. The two shorter wires go to cylinders #2 and #3. The cylinder designations for the Ford 2.3 L engine are shown in Figure 1.

The cylinder designations, for the connections of the spark plug wires to the Coil Pack are molded into the coil pack case at the bottom of the high voltage towers. Install the spark plug wires to the spark plugs and coil pack. The best procedure is to install one wire completely from the spark plug to the coil pack. Then go on to the next wire. Make sure all wires are fully seated on the spark plugs and coil pack terminals.

FINAL ELECTRICAL CONNECTIONS

MAKE SURE THE IGNITION SWITCH IS OFF!

1. Connect the wire harness plug (23 – Figure 1) to the Coil Pack Connector (5 – Figure 1). The connectors will only go one way and have a spring clip to hold them together. Push the spring wire, on connector (23), down to insert into or remove the connector (23) from the Coil Pack Connector (5). Make sure the connectors are fully mated and that the spring clip locks it in place when released.
2. Connect the ignition switch wire to the red wire (22 – Figure 1), in the wire harness. Connect the wire from the tachometer (if applicable) to the purple wire (24) coming from the wire harness. If you are not using a tachometer, tape off the connector on the purple wire. The ignition switch and tachometer wires should be terminated with fully insulated 1/4" female spade connectors.
3. Make sure none of the wiring or connectors are lying against any surface that gets hot enough to cause damage.



WIRE HARNESS CONNECTIONS

FIGURE 1

SETTING IGNITION TIMING

NOTE: A variable or “dial back” timing light can not be used unless the delay is set to ZERO and it is used as a conventional timing light!

Start the engine. The engine is timed in the conventional manner using a conventional timing light with an inductive pick up clamp. The inductive pick up should be clamped around the #1 spark plug wire. If the timing light is weak, reverse the orientation of the inductive pick up on the spark plug wire. Ignition timing should be set at maximum advance. Typical timing is 33° to 35° BTDC at maximum advance. The engine should be running at 3,000 to 3,200 to check maximum advance.

TROUBLESHOOTING

DO NOT ATTEMPT TO SEE IF THE SYSTEM IS FIRING BY DISCONNECTING A SPARK PLUG WIRE AND HOLDING IT NEXT TO GROUND. THE HIGH VOLTAGE CREATED BY THIS PROCEDURE STRESSES THE INSULATION AT THE COIL AND IS VERY DANGEROUS!

Engine cranks but does not start – No spark present

Determine if the red LED light flashes on and off when the engine is cranked. If it does, the ignition switch wire connection is good and the system is triggering correctly.

If the red LED stays off, the system is not getting 12 volts from the ignition switch wire.

Verify that there is 12 volts present at the ignition switch wire when the ignition switch is turned on.

Verify that the connectors are fully inserted and seated.

Engine starts but backfires/misfires

The spark plug wires may be connected incorrectly. Recheck that the spark plug wires are connected as shown in Figure 1.

Make sure all rubber boots on the spark plug wires are fully seated at both the coil pack and spark plug ends.

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