

Performance Distributors
HIGH PERFORMANCE & RACING IGNITION SYSTEMS
www.performancedistributors.com
901-396-5782

INFORMATION FOR FORD OWNERS TO AVOID DAMAGING YOUR DISTRIBUTOR AND CAM GEARS:

1) Customer should not run a high-volume oil pump, but if he insists on running one….

2) It is advised to run a brass distributor gear and check it occasionally for wear. Better to wear out a brass gear than a cam.

3) Drill a .030" hole in the lifer/oil galley plug behind the distributor. This will allow additional lubrication on the distributor and cam gears. This will not lower oil pressure enough to hurt motor.

4) Ford oil pump mounting brackets have elongated holes. Due to this, the distributor shaft and oil pump shaft should be aligned so that the distributor turns freely before tightening the mounting bracket bolts. Failure to do this will cause a binding situation, damaging the gear.

5) Stock Ford hex oil pump drive shafts are known to vary in length which could cause a bottoming or binding situation.

D.U.I. INSTRUCTIONS

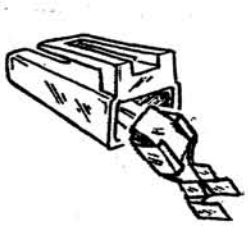
PLEASE READ ALL THE INSTRUCTION BEFORE STARTING INSTALLATION OF THIS D.U.I. (DAVIS UNIFIED IGNITION)

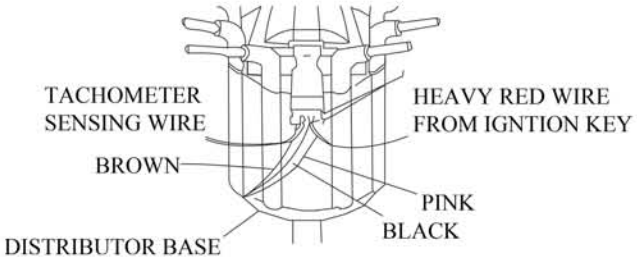
1) Familiarize yourself with your new distributor. Notice that on top of the coil cover the Connecting terminals are marked "TACH" on the left and "BATT" on the right (see illustration). The "BATT" terminal is for the 12 volt hook-up and the "TACH" terminal is for connecting a tachometer. CAUTION should be used to never accidentally reverse these connections as electronic damage could be extensive.



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2) For those of you who are Converting from a breaker point distributor to our electronic Racing H.E.I. Distributor, you must eliminate any ballast resistor or Original equipment resistance wire (on some model cars and trucks). This requires wiring straight from your ignition switch with 12 gage wire to the "BATT" terminal in the distributor cap. 18 gage wires are sufficient for the tachometer hook-up. If you do not use a tachometer as a permanent hook-up, this terminal is also to be used to connect diagnostic equipment for tuning purposes.
**NOTE: Cars already wired for HEI distributors will have a large pink (or red) wire coming from the distributor cap (this is the 12 volt wire) and if equipped with a tachometer, will have a smaller, usually neutral colored wire





3) Now disconnect the terminal (see illustration) plugged into the D.U.I. distributor cap (with 3 wires from the distributor base by carefully prying out and then down on the restraining ear. After removing not that the wide gap in the plastic insulator is to the right towards the BATT terminal. It can only be replaced in this position.

4) Now remove the cap by turning the 4 retainers about one quarter turn counter-clock-wise and lift off the cap. It contains the coil.

5) This is a good time to examine the centrifugal advance system by removing the 2 nylon rotor hold-down screws and flat washers and lifting of off the rotor. When re-installing these rotor screws use caution and do not over tighten.

6) Notice that one of the weights springs and posts they are attached to; along with the corresponding end of the "cam" are marked with red. These markings are initially placed to assist us in calibrating you r distributor by keeping the parts matched as we work with them. Also if you ever find it necessary to disassemble the weight assembly these red marking will enable you to reassemble these party and retain the original "curve".

7) Re-install the rotor placing the cut out notch on the proper side and carefully re-tightening the nylon screws.



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8) Removal of distributor:
A) Remove the distributor cap.
B) Remove the vacuum advance hose or line.
C) Remove the distributor hold-down clamp and bolt.
D) Note position of rotor. Suggest cranking until rotor faces firewall and mark where rotor points with chalk.
E) Pull distributor up and out of the engine noting the position of the rotor as the distributor gear clears the cam gear.

9) Re-installing the distributor:
A) Position the rotor to where it was when the distributor was just removed from the engine.
B) Slide the distributor down into the engine. Be sure rotor turns black to original position.
C) If the oil pump drive does not engage, check that rotor is pointing in correct direction.
1) If it is not pull the distributor out and repeat B.
2) If it is, bump the engine over until the distributor drive drops into the oil pump drive.
D) Re-install the hold-down clamp and bolt finger tight.
E) Put the distributor cap on.

10) Install the cap and transfer the plug wires (now is a good time to replace wires with a good quality set of 8MM metallic spiral core wires).

11) If you have converted your ignition from a breaker or a stock Ford electronic distributor to our electronic D.U.I. this would be a good time to open those spark plug gaps now that you have enough firepower available. We recommend setting your spark plugs at .050" to .055". Installation of the D.U.I. does not require you to change your heat range

12) We recommend setting your initial timing at 12 degrees (while idleing very slow, preferably under 600 RPM and with the vacuum advance disconnected with the vacuum advance hose plugged). After tightening the distributor hold-down bolt, re-check the timing mark to make sure it remained at 12 degrees. Re-connect the vacuum advance hose and idle engine speed where desired. We suggest that you connect the vacuum advance hose to direct manifold vacuum unless this causes your motor to idle too fast or too rough. Manifold vacuum will provide you with vacuum advance when your engine is idleing. This vacuum advance will keep your plugs cleaner. If your car does not run good at manifold vacuum, then connect to ported vacuum.



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13) We also suggest power timing your engine after above steps are finished. To do this, let the engine warm up to proper operating temperature. Now, road test and if under heavy load pinging is observed, retard by simply turning the distributor in a counter-clockwise direction (very slightly) and then test again under load. Repeat this until the ping is no longer objectionable. You might also want to run more than 12 degrees initial timing if you have no ping on your first road test. If this is the case, simply rotate (advance) the distributor in a clockwise direction until you detect pinging and then back up till it stops. Also make sure you do not advance so far the engine "kicks" back is hard to start.
* Your distributor calibration are stenciled under the base of your distributor (see illustration).

14) Due to the larger diameter of the D.U.I., you will need to run 13" or smaller air cleaner.

WARRANTY INFORMATION

These distributors are warranted to be free of defective parts and workmanship for a period of one year after the sale to the original consumer. Proof of the date of sale to the original consumer

DUI DISTRIBUTOR TROUBLESHOOTING

If you are experiencing a no spark problem with your new DUI Distributor, the following information will help you check and test the installation, connections and components of the unit so that you can get your engine running start Driving Under the Influence of more power!

1. First and foremost, check the 12 volt wire that you are using for power to the distributor. This wire should be a minimum of 12 gage and have no resistors in line. Make sure your 12 volt wire if fully to the "BAT" terminal, which is the terminal located on the front right of the cap. Also, make sure the three wire harness if fully connected to the three terminals behind the BAT and TACH connections. WARNING: If the hot wire is connected to the "TACH" terminal, damage to the module and or coil can occur.



2. If all of your connections check out good, then check your battery voltage as you are cranking the engine. Since the DUI is a high performance ignition system it requires more voltage than a standard ignition system. If your battery voltage drops below 10.5 volts, this is not enough power to get the distributor to fire. This condition can be due to a weak or old battery or you are using a hot wire that has a resistor line. Use a volt meter to test the hot wire while someone else cranks the engine over. If the voltage drops below 10.5, check your battery. To make sure it is not the hot wire, run a temporary jumper wire directly from the positive side of the battery to the distributor. If the distributor fires using the jumper wire, run a new hot wire your switched 12 volt source to the distributor.

3. A bad ground can keep the distributor from firing as well. The distributor ground itself to the engine when installed. Make sure your ground to the engine block is secure. If the intake and/or the hold down clamp has been painted, remove any paint from the surface where contact with the distributor is made. To ensure a good ground, a secondary ground wire can be attached to the distributor by connecting a wire anywhere on the housing and running to the chassis, body or negative side of the battery.

4. If you suspect an electronic part to be defective, the following steps will allow you to test the coil inside the cap and magnetic pick up coil. You will need a ¼ "nut driver and a multi-meter to check these components to test the resistance of the coil, loosen the 3 screws (2 screws on a 6 cyl. Models) holding the top coil cover. Remove cover to expose the coil and you will see a red and yellow wire. Using the multi meter on the ohms setting, touch the positive lead to the red wire terminal and the negative lead to the yellow wire terminal. The primary resistance value should 0.6k-1.5k ohms. To check the secondary resistance, remove the 4 screws that hold the coil in the cap. Pull the coil out of the cap and turn it upside down. Touch the negative meter lead to the ring terminal on the black wire (between the red and yellow) and touch the positive lead to the bottom of the coil where the rotor bushing makes contact. Your secondary reading should be 6.0k-10k ohms.

5. If the resistance checks on the coil are within spec, the next test would be to test the magnetic pick up coil. The pickup located underneath the top plate of the shaft and has a green and white wire coming from it that plugs into the module. Remove the green and white wires from the module and touch positive meter lead to the terminal on the green wire and the negative lead to the terminal on the white wire. The normal reading should be 800-860 ohms.

6. The remaining electronic part that would keep the distributor from firing is the Dyna-Module. The Dyna-Mod is located inside the distributor and has the green and white wires from the pickup attached no one end a terminal block on the other. Unfortunately there is no test that can be performed with an ohm meter on this part. You will need to remove it and take it to an auto parts store that has a module tester. Have them test the module 3-5 times as the module may no show to be bad until it develops some heat.

7. After you have conducted all of the testing procedures and you are still having a problem with the distributor,