

A-11574 Electronic Ignition System

INSTALLATION INSTRUCTIONS TRANSPARK II Ignition System for the Model "A" Ford

Application of this Transistor Ignition System to the Model "A" provides performance advantages and preserves the External Appearance of the existing system as follows:

- applicable to 6 Volt positive ground or 12 Volt negative ground battery connections increased reliability and life
- no maintenance
- increased spark energy
- uniformity of spark energy and ignition timing resulting in smoother more powerful engine performance
- immunity to oil, water, and engine heat

The Kit includes the following items:

- precision machined Trigger Wheel (Reluctor) [replaces the point cam]
- potted magnetic Trigger Coil assembly mounted on new upper-plate [replaces the contact points, upper and lower plates, and condenser]; a dummy condenser may be retained for external appearances
- new armored cable conduit from distributor to new ignition switch [identical to original cable]
- new ignition switch [simple ON-OFF switch replaces the costly deteriorating Pop-Out Switch and cable]
- sealed Transistor Module with color coded wires and terminals [mounts up under the dash]

The original ignition coil is used for 6 Volt applications. It is important to check your coil before use with the Transpark II system to make sure you have a nominal 1.5 ohm terminal-to-terminal resistance. If you are not sure, or if your coil is old, we strongly recommend replacing your existing coil with a NAPA# IC-12 coil for your 6 Volt application.

For 12 Volt applications the 1.5 ohm NAPA# IC-12 coil **with** the NAPA# ICR-13 (1.5 ohm) ballast resistor is recommended. These two parts used together create the 3.0 ohm resistance necessary for 12 Volts.
(See Field Notes #4 and #5)

IMPORTANT- The amount of current into the transistor module is controlled by using the proper coil or coil plus ballast resistor combination. ***Damage or ignition failure WILL result*** if attention is not paid to proper coil selection. Don't think that just any coil will be sufficient for a transistor ignition.

INSTALLATION INSTRUCTIONS

1. Disconnect the battery power supply from the electrical system
2. Remove the cam, upper point plate, condenser and lower point plate from the distributor--these pieces are not used. Retain the rotor and spring--these pieces are used.
3. Remove the four (4) screws holding the instrument panel to the dash and let the panel hang down. Disconnect the RED wire from the Pop-Out Switch and remove the switch assembly from the panel.
4. Remove the cover from the firewall junction box. Disconnect and remove the BLACK wire (driver's side stud) to the coil NEGATIVE terminal. Also, disconnect the RED wire (passenger side) POSITIVE coil terminal wire to the Pop-Out Switch. These wires are replaced with kit wires and other connections. The RED wire may be left in place,

if part of the harness, but the ends should be wrapped with insulating tape and tied back out of the way of any connections.

5. Unscrew the armored cable assembly (with attached Pop-Out Switch) from the distributor housing; pull it through the junction box, fire wall, and gas tank trough. Install the kit furnished switch assembly and connected wires as shown in the installation diagram.
6. Install the spring and new upper plate, with mounted trigger coil, into the distributor housing. The trigger wires are fed through the new armored cable-threaded opening. These wires are dressed inside the distributor housing and looped (as shown in the installation drawing) to prevent rubbing and wear. The plate arm is positioned in the usual position--pointing toward the fire wall.
7. Slide the new armored cable over the wires of Step 6 and screw the adapting nipple into the distributor housing. The open cable end, with wires, is passed through the junction box, the heavy rubber grommet and firewall. (IMPORTANT) Make sure the heavy rubber grommet is in place. The cable is clamped in place on the engine block so that the armored end is just short of entering the wire trough at the gas tank. Straighten the wire ends for assembly with the module matching color wires. The two RED wires, one from the module and one from the distributor, are laid parallel to each other and even at the ends. A wire nut is twisted clockwise until tight to connect the wires ends. The two BLACK-RED wires are connected the same way. A reversed connection of these wires results in a 60 degree advanced crankshaft timing error.
8. Mount the Transistor Ignition Module to the inside firewall as shown in the installation drawing. The remaining color-coded wires from and to the module are connected as shown in the installation drawing. The bullet ends should be fully seated into the molded connectors so that no exposed metal is visible. NOTE: The YELLOW-BLACK ground wire must be grounded to the firewall at an inside junction box screw using supplied screw, flat washer and star washer. All paint must be completely scraped off of the firewall at the screw head contact point. The star washer is placed on the bare metal then the ground wire lug and screw with flat washer is installed. An additional wire can be created and installed between the car body and engine to assure definite grounding. Pay attention to properly attach the Ground and Power Connectors.

For a POSITIVE BATTERY GROUND car (6 Volts), the Power Connectors are configured as follows:

YELLOW MODULE wire plugs into YELLOW-BLACK GROUND wire

BLACK MODULE wire plugs into YELLOW SWITCH wire

For a NEGATIVE BATTERY GROUND car (12 Volts), the Power connectors are configured as follows:

YELLOW MODULE wire plugs into YELLOW SWITCH wire

BLACK MODULE wire plugs into YELLOW-BLACK GROUND wire

NOTE: The POSITIVE and NEGATIVE ground battery systems DEMAND different connections.

MISCONNECTION WILL SHORT CIRCUIT AND CAN DESTROY THE MODULE, TRIGGER COIL, AND OTHER CAR WIRING. Check that proper wiring has been made for the appropriate battery ground system BEFORE powering the system.

9. Dress and tie the wires and harness so they cannot move about within the car. Cover the switch screw heads with insulating tape to prevent grounding to the gas tank. Remount the instrument panel to the dashboard.
10. Place the Trigger wheel -Trigger coil gap cylindrical gage on the distributor shaft. Loosen the coil plate hold down screw. Press the coil to contact the gage while rotating the gap gage and lock the coil in place with the hold-down screw. This adjusts the trigger coil magnetic gap clearance. Remove the gap gage and install the Trigger wheel onto the distributor shaft and rotate the wheel to assure there is no rubbing between the wheel and coil tips.

THIS COMPLETES THE KIT INSTALLATION.

IGNITION/WIRING TEST

Loosely tighten the Trigger wheel hold-down screw so the Trigger wheel rotates freely. Plug the high voltage coil wire into the ignition coil. Position the free end so that it is about 1/4" to 3/8" away from some engine ground point. Reconnect the battery to the electrical system. Turn the ignition switch "ON". Spin the Trigger wheel with your fingers. Sparks should "fire" between the coil wire end and ground. If they do, turn the switch "OFF" and proceed to IGNITION TIMING. If no sparks, recheck the wiring. If there are questions call NU-REX for trouble shooting assistance.

IGNITION TIMING

A timing light and crankshaft scale are recommended to accurately measure the ignition timing. The NU-REX PRECISION TIMING KIT (available from the major supply sources or nurex.com) contains a crank degree scale, timing procedures, and setting recommendations.

INITIAL SETTING

1. Push the steering column spark control to the FULL RETARD position (UP toward the windshield).
2. Hand-crank the engine to Top Dead Center #1 Piston, using the Trimming Gear Cover Pin OR looking through #1 cylinder open spark plug hole.
3. Tighten the Trigger wheel hold-down screw for a slight drag on the distributor shaft. Rotate the Trigger wheel by hand in a CLOCKWISE direction (removes timing drive slack) so that the Trigger wheel and Trigger Coil narrow pole pieces are centered opposite each other. The spark is triggered at this position. The ROTOR SLOT must be TOWARD the #1 cylinder button on the distributor. Tighten the Trigger wheel hold-down screw. Recheck that the pole pieces are centered opposite each other with the shaft drive slack removed.
4. Install the Rotor (see Field note #1), Distributor, Cap, and plug the high voltage Coil Wire into the cap. The car is now ready to start. It is timed so that #1 fires at Top Dead Center in FULL RETARD setting. This is the original FORD TIMING.
Test results on many 'A's indicate that a more desirable setting is approximately 5 degrees retard for slow idle and start ease. This setting gives approximately 30° plus maximum advance for high speed operation. A timing light and the NU-REX PRECISION TIMING KIT make measurement and adjustment to these settings with ease. It is suggested that a 'road test' be made. Final timing should be adjusted to fit your driving style.
NOTE: With the NU-REX automatic Advance System the timing should be set to approximately 5 degrees advance at idle.

THE INSTALLATION, TEST AND TIMING IS NOW COMPLETE.

If "kickback" occurs at engine start, check:

- Timing to assure a 0° or a TDC spark setting at RETARD.
- Possible "cross firing" within the Distributor Body; replace with a new or known good distributor Body for test.
- Reversed Red and Red-Black module to distributor connections

NOTE-FOR TECHNICAL ASSISTANCE, CALL OR FAX NU-REX AT 330-784-5334.

This Transistor Ignition Kit is warranted for five (5) years from date of purchase by the original owner. Modification/substitution of any component VOIDS this warranty.

FIELD NOTES:

- 1) Stack-up of manufacturing variation of reproduction distributor, cap, rotor, and housing components may cause the cap to not seat firmly on top of the distributor. File approximately 3/32" to 1/8" material from the plastic rotor tip just under the metal spring at the rotor top. The cap should then seat firmly on the distributor.
- 2) Normal driving and idle does not over heat the ignition coil or transistor control module.
- 3) It is suggested that a bent safety pin or a paper clip be used to clean out the thread in the distributor housing to make the new flex conduit screw in more easily. The thread size is 11/16 X 16.
- 4) Recommended coil for 6 Volt, use: NAPA #IC-12 coil
Recommended coil for 12 Volt, use: NAPA #IC-12 coil (use with NAPA #ICR-13 ballast resistor)
- 5) Ballast resistor installation For 12 Volt Applications Only- the Red woven wire from the module marked "coil" should be attached to the (plus +) terminal of the NAPA # IC-12 coil. The module black (woven) wire connects to one side of the NAPA# ICR-13 ballast resistor. The other side of the resistor connects to the (negative -) terminal of the coil. (A short wire will have to be made to make this connection).

TRANSPARK II MODEL "A" FORD IGNITION



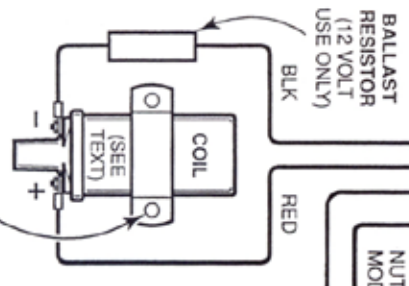
6 VOLT POWER CONNECTIONS

BATTERY CONFIGURATION	MODULE WIRE	POWER WIRE
6 VOLT ⊕ GND	YELLOW ↔ BLACK	YEL-BLK ↔ YELLOW

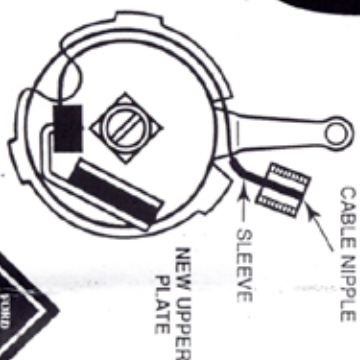
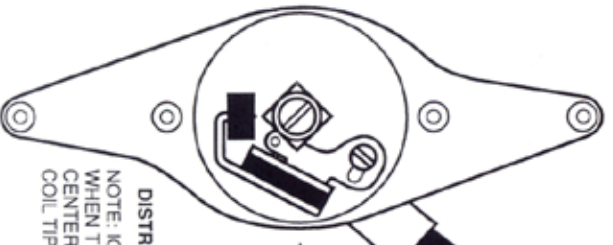
12 VOLT POWER CONNECTIONS

12 VOLT ⊖ GND	YELLOW ↔ BLACK	YELLOW ↔ YEL-BLK
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REPLACE COIL MOUNTING SCREW (DRIVER'S SIDE) WITH LONGER KIT SCREW, WASHER, NUT, AND FASTEN MODULE IN PLACE



REPLACE COIL MOUNTING SCREW (DRIVER'S SIDE) WITH LONGER KIT SCREW, WASHER, NUT, AND FASTEN MODULE IN PLACE



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SEE TABLES ABOVE FOR PROPER POWER CONNECTIONS

"GROUND" EYELET TERMINAL WITH STAR WASHER TO CLEAN INSIDE FIREWALL (ON UPPER PASSENGER SIDE) USING NEW SUPPLIED JUNCTION BOX MOUNTING SCREW

