# IGNITION SYSTEM - TFI-IV

1987 Lincoln Mark VII

1983-88 ELECTRICAL
Ford Motor Co. - Distributors & Ignition Systems
Motorcraft TFI-IV IGNITION

Ford; Crown Victoria, Escort, EXP, LN7, LTD, Mustang, Taurus, Tempo, Thunderbird
Lincoln; Continental, Mark VII, Town Car
Mercury; Capri, Cougar, Grand Marquis, Marquis, Sable, Topaz

## MODEL COVERAGE

MODEL COVERAGE TABLE

| MODEL | YEAR | VIN No. | ENGINE - LITERS |
|---|---|---|---|
| Capri | 1983 | W,R,J | 2.3(2),2.3(3),2.3(3) |
| Capri | 1984 | A,W,3,F,M | 2.3(1), 2.3(2), 3.8, 5.0 |
| Capri | 1985/6 | A,T,W,3,F,M | 2.3(1),2.3(2),2.3(2),3.8,5.0,5.0 |
| Mustang | 1983 | W | 2.3(2) |
| Mustang | 1984 | W,3,F,M | 2.3(2), 3.8, 5.0,5.0 |
| Mustang | 1985/6 | A,T,W,3,F,M | 2.3(1),2.3(2),2.3(2),3.8,5.0,5.0 |
| Mustang | 1987 | A,F,M | 2.3(1),5.0,5.0 |
| Mustang | 1988 | A,E,F | 2.3(1),5.0,5.0 |
| Tempo/ Topaz ******* | 1984 | R,J | 2.3(3),2.3(3) |
| | 1985-8 | S,X | 2.3(3),2.3(3) |
| (4) Taurus (4) Sable ******* | 1986/7 | D,U | 2.5(3),3.0 |
| | 1988 | U,4 | 3.0,3.8 |
| Cougar | 1983 | W,R,J | 2.3(2),2.3(3),2.3(3) |
| Cougar | 1984 | W,3,F,M | 2.3(2), 3.8, 5.0,5.0 |
| Cougar | 1985/6 | T,W,3,F,M | 2.3(2),2.3(2),3.8,5.0,5.0 |
| Cougar | 1987 | T,W,4,F,M | 2.3(2),2.3(2),3.8,5.0,5.0 |
| Cougar | 1988 | T,W,4,F | 2.3(2),2.3(2),3.8,5.0 |
| Thunderbird | 1983 | W | 2.3(2), |
| Thunderbird | 1984 | W,3,F,M | 2.3(2), 3.8, 5.0,5.0 |
| Thunderbird | 1985/6 | T,W,3,F,M | 2.3(2),2.3(2),3.8,5.0,5.0 |
| Thunderbird | 1987 | T,W,4,F,M | 2.3(2),2.3(2),3.8,5.0,5.0 |
| Thunderbird | 1988 | T,W,4,F | 2.3(2),2.3(2),3.8,5.0 |

| | | | |
|---|---|---|---|
| (4) Marquis | 1984 | 3,F,M | 3.8, 5.0,5.0 |
| (4) Marquis | 1985/6 | A,3,F,M | 2.3(1),3.8,5.0,5.0 |
| (4) Escort<br>(4) Lynx<br>******* | 1983 | 5 | 1.6 |
| ******* | 1984/5 | 5,8 | 1.6, 1.6(2) |
| ******* | 1986 | J | 1.9 |
| ******* | 1987/8 | 9,J | 1.9,1.9 |
| EXP | 1983 | 5 | 1.6 |
| EXP | 1984/5 | 5,8 | 1.6, 1.6(2) |
| EXP | 1986/7 | J | 1.9 |
| LN7 | 1983 | 5 | 1.6 |
| LN7 | 1984/5 | 5,8 | 1.6, 1.6(2) |
| (4) LTD | 1984 | 3,F,M | 3.8,5.0,5.0 |
| (4) LTD | 1985/6 | A,3,F,M | 2.3(1),3.8,5.0,5.0 |
| (4) Crown Victoria | 1984-7 | F,M | 5.0,5.0 |
| (4) Grand Marquis<br>Town Car | 1988 | F | 5.0 |
| Mark VII | 1984-7 | F,M | 5.0,5.0 |
| Mark VII | 1988 | E,F | 5.0,5.0 |
| Continental | 1984-7 | F,M | 5.0,5.0 |
| Continental | 1988 | 4 | 3.8 |

(1) - OHC
(2) - Turbo
(3) - HSC
(4) - Wagon Included.

## DESCRIPTION

All EEC-IV controlled engines use the TFI-IV ignition system. The TFI-IV distributor is a gear driven, die cast unit. On models with 3.8L engines, a "closed bowl" distributor is used. The TFI ignition module is mounted on the cowl behind the engine (Continental, Sable & Taurus) or the radiator crossmember (Cougar/Thunderbird). On all others, the TFI ignition module is integrally mounted in the distributor. A Hall Effect stator assembly replaces the coil stator. This distributor does not use conventional centrifugal/vacuum advance mechanisms. See Fig. 1.

The TFI ignition module is contained in molded thermoplastic and is mounted on base of distributor. See Fig. 2. The TFI ignition module used on manual transaxle equipped vehicles features a push start mode. This feature allows vehicle to be push started if necessary. An "E" core ignition coil is used.

**OPERATION**

The TFI-IV distributor uses a Hall Effect switch mechanism to switch primary voltage and to trigger the discharge of high secondary voltage. Crankshaft position and engine load signal is supplied to the EEC-IV Electronic Control Assembly (ECA) to compute spark advance. Distribution of high secondary voltage is accomplished through a conventional cap, rotor, and spark plug wires.

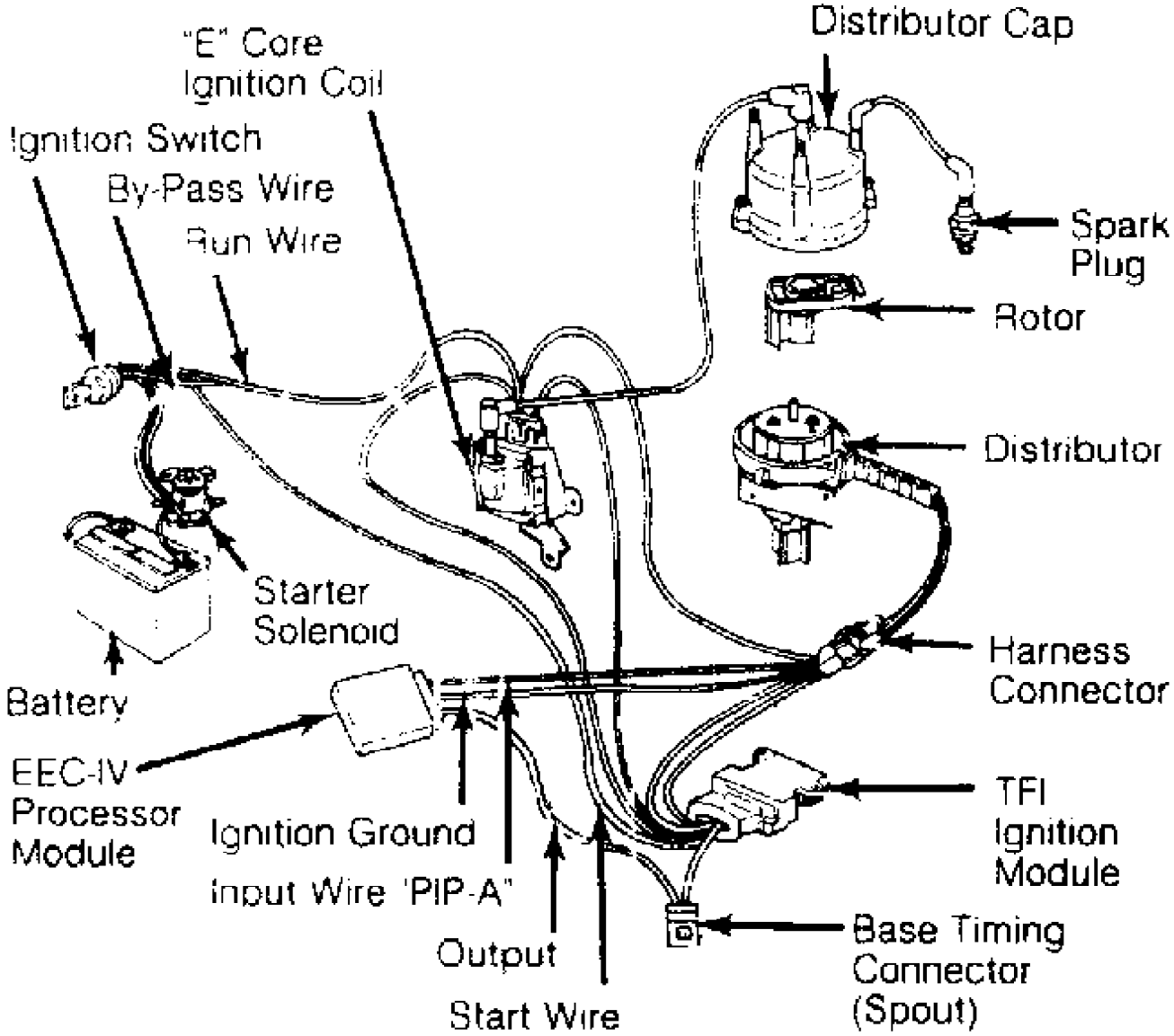



Fig. 1: TFI-IV "Closed Bowl" Ignition System (3.8L Engines)
Courtesy of Ford Motor Co.

NOTE: See Wiring Diagram for Wire Color ID

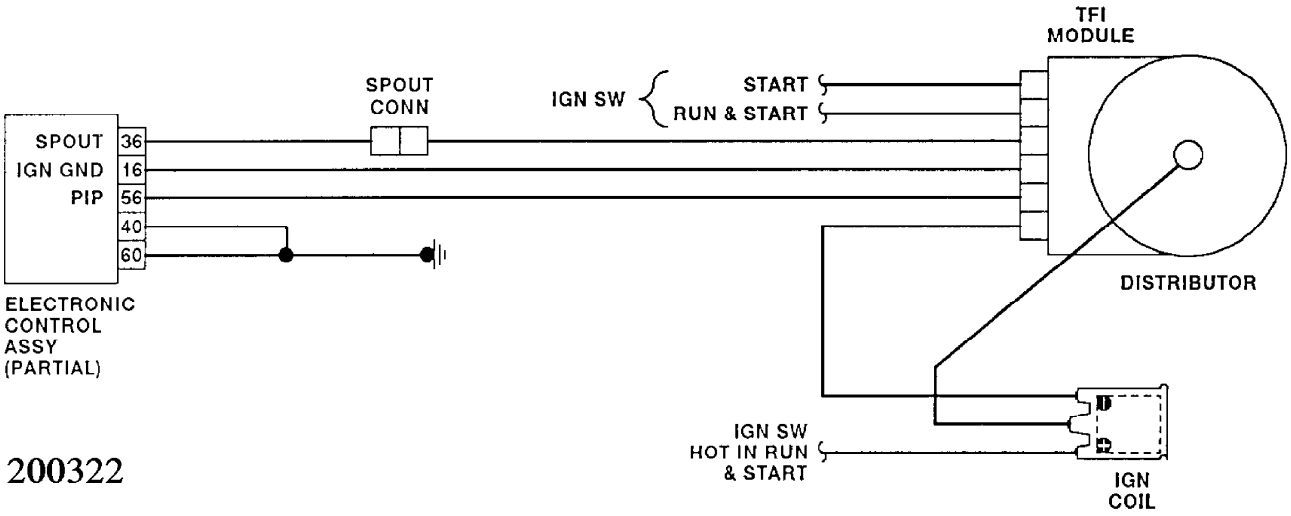



Fig. 2: TFI-IV Ignition System Wiring Diagram
Courtesy of Ford Motor Co.

## TROUBLE SHOOTING

NOTE: See the TROUBLE SHOOTING - BASIC PROCEDURES article in the GENERAL TROUBLE SHOOTING section.

## TESTING

### PRELIMINARY STEPS

1) Visually inspect engine compartment to ensure that all vacuum hoses and spark plug wires are properly routed and securely connected. Examine all wiring harnesses and connectors for insulation damage, burnt or overheated wires, and loose or broken terminals.

2) Ensure that battery is fully charged and that all accessories are off. Check that TFI ignition module is securely fastened to distributor base. Obtain Spark Tester (D81P-6666-A). A spark plug with a broken side electrode is NOT recommended as it may lead to incorrect results.

3) When inspecting wiring harness, both a visual inspection and a continuity check should be performed. When checking continuity perform a "WIGGLE" test to assist in finding intermittent faults.

### IGNITION COIL SECONDARY VOLTAGE CHECK

1) Connect Spark Tester (D81P-6666-A) between ignition coil wire and engine ground. Crank engine while checking for spark at tester. If spark occurs, inspect distributor cap and rotor for damage or carbon tracking. Make sure rotor tip is coated with Silicone Dielectric Compound (D7AZ-19A331-A).

NOTE: Do not use dielectric compound on multi-point rotor.

2) If no spark occurs, measure resistance of ignition coil wire. If reading is greater than 7000 ohms per foot, replace ignition coil wire. Inspect ignition coil for damage or carbon tracking. Crank engine while checking distributor rotation. If these items are okay, go to IGNITION COIL PRIMARY CIRCUIT SWITCHING test.

### IGNITION COIL PRIMARY CIRCUIT SWITCHING

Except 3.8L

1) Disconnect wiring harness connector from ignition module. Inspect connector for dirt, corrosion, or damage. Repair if necessary. If okay, reconnect harness. Connect a non-powered, 12-volt test light between coil "TACH" terminal and known good engine ground. See Fig. 3.

2) Crank engine while observing test light. If test light comes on or flashes, remove test light. Proceed to IGNITION COIL PRIMARY RESISTANCE test.

3) If test light does not light or if it is very dim, remove test light. Proceed to PRIMARY CONTINUITY TEST.

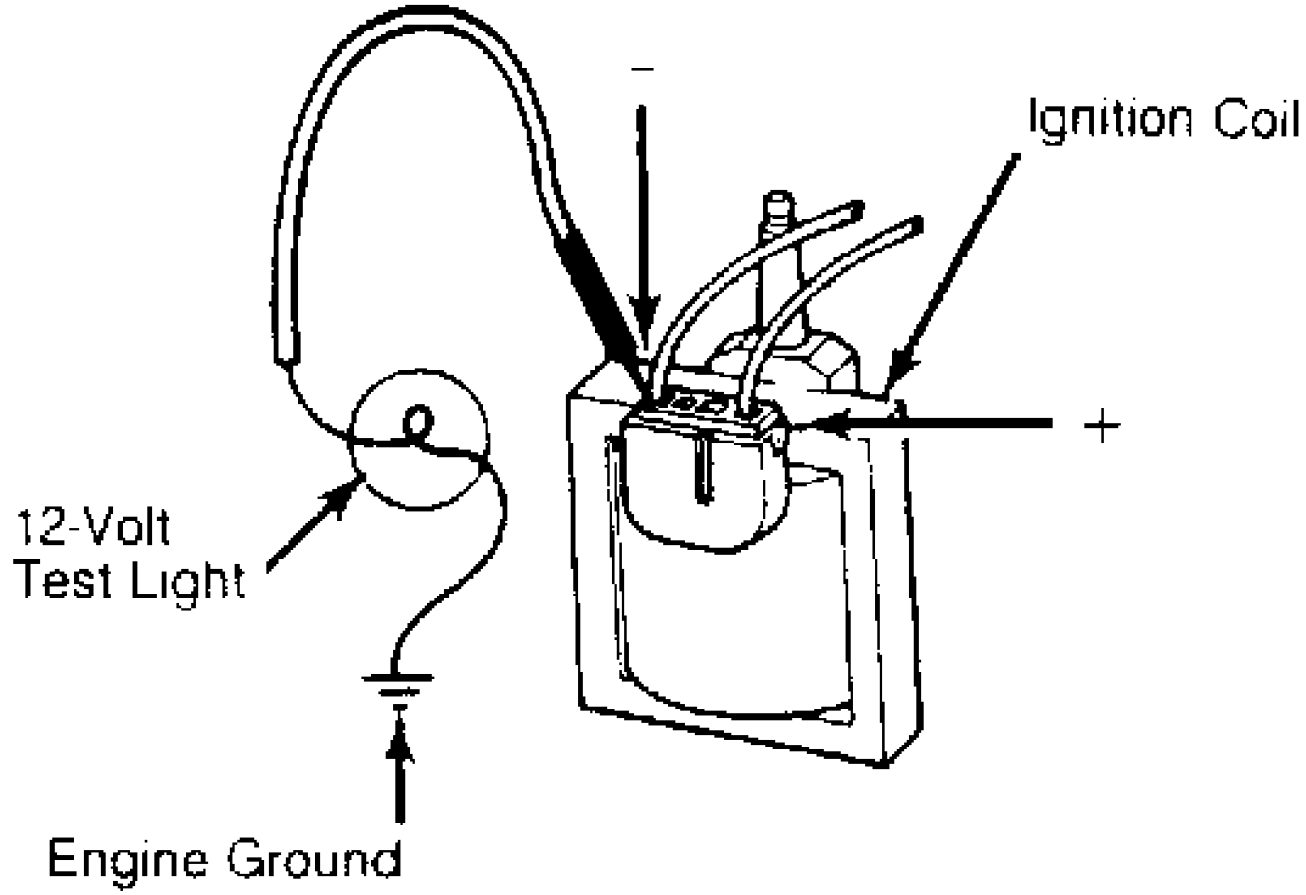



Fig. 3: Ignition Coil Primary Circuit Switching Test
Courtesy of Ford Motor Co.

## IGNITION COIL PRIMARY RESISTANCE

1) Place ignition switch in "OFF" position. Disconnect ignition coil connector. Inspect connector for dirt, corrosion, or damage. Repair if necessary. Measure resistance across ignition coil positive and negative terminals. See Fig. 4.

2) If reading is between 0.3-1.0 ohms, ignition coil primary circuit is okay. Go to IGNITION COIL SECONDARY RESISTANCE test. If resistance is less than 0.3 ohms or greater than one ohm, replace ignition coil.

## IGNITION COIL SECONDARY RESISTANCE

1) Place ignition switch in "OFF" position. Disconnect ignition coil connector and secondary wire from coil tower. Measure resistance between negative coil terminal and coil tower. See Fig. 4.

2) If reading is between 6500-11,500 ohms, ignition coil is okay. Go to WIRING HARNESS test. If reading is less than 6500 ohms or greater than 11,500 ohms, replace ignition coil.

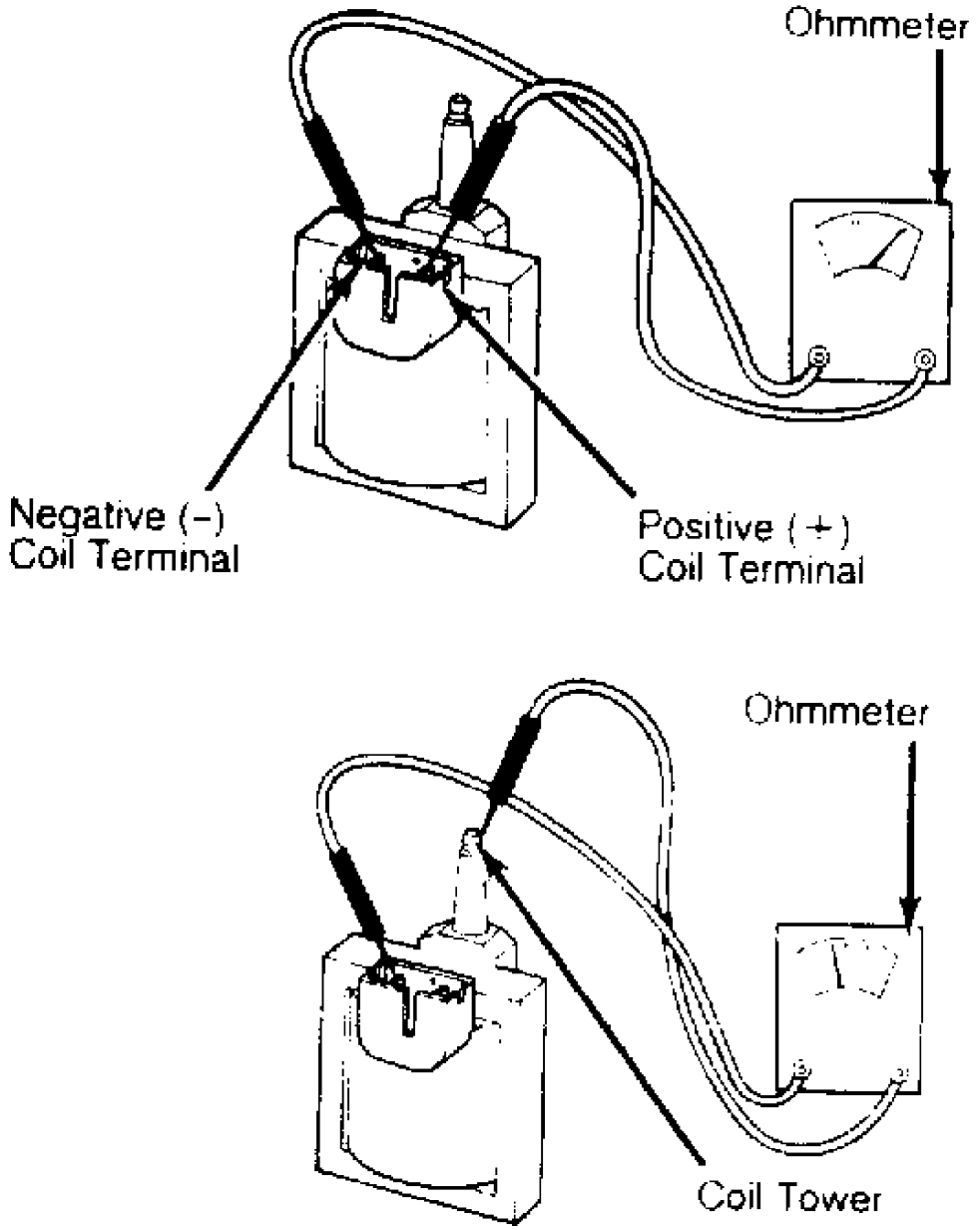



Fig. 4: Ignition Coil Primary & Secondary Resistance Tests
Courtesy of Ford Motor Co.

## WIRING HARNESS

1) Disconnect wiring harness connector from ignition module. Inspect connector for dirt, corrosion, or damage. Repair if necessary. Disconnect wire at "S" terminal of starter solenoid.

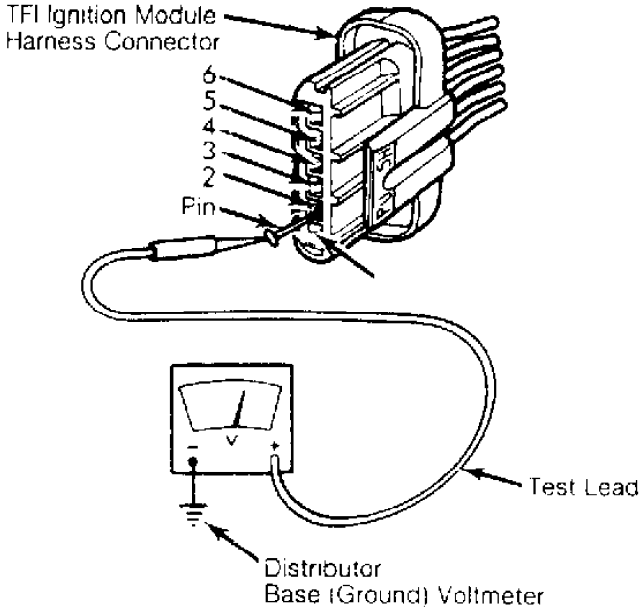
2) Attach negative voltmeter lead to distributor base. Measure voltage at battery. With negative lead of voltmeter still connected to distributor base, check voltages at TFI ignition module wiring harness terminals. See WIRING HARNESS CHECK table. See Fig. 5.

3) If all readings are at least 90% of battery voltage, wiring harness is okay. Turn ignition off. Remove voltmeter. Connect "S" terminal to starter solenoid. Proceed to appropriate STATOR test.

4) If any reading is less than 90% of battery voltage, inspect wiring harness and connectors. Also check for a worn or damaged ignition switch. Repair or replace as necessary. Turn ignition off. Remove voltmeter. Connect "S" terminal to starter solenoid.

WIRING HARNESS CHECK TABLE

| Connector Terminal No. | Wire (Circuit) | Ignition Switch Test Position |
|---|---|---|
| 2 | Coil - Terminal | "RUN" |
| 3 | Run | "RUN" or "START" |
| 4 | Start | "START" |




TERMINAL/WIRE COLOR
No. 6: Dark Blue (PIP)
No. 5: Yellow/Light Green (SPOUT)
No. 4: Red/Light Blue (Crank Signal)
No. 3: Red/Light Green (TFI Power)
No. 2: White/Light Blue (Tach Signal)
No. 1: Black/Orange (Ignition Ground)

Fig. 5: Wiring Harness Test
Courtesy of Ford Motor Co.

## STATOR

3.8L (FWD Only)

1) Separate harness connector from distributor. Inspect for dirt, corrosion or damage. Measure resistance between terminals No. 1 and 5 on distributor side of connector. Resistance should be less than 5 ohms.

2) If resistance is less than 5 ohms, proceed to step 3). If resistance is more than 5 ohms, replace stator.

3) Measure resistance between stator connector terminal No. 2 and distributor base. Resistance should be less than 5 ohms.

4) If resistance is less than 5 ohms, check terminals No. 1 ("PIP-A") and No. 6 ("IGN GND") signal wires for continuity to EEC module. If continuity is not present, repair open circuit in wires. If resistance is more than 5 ohms, replace stator.

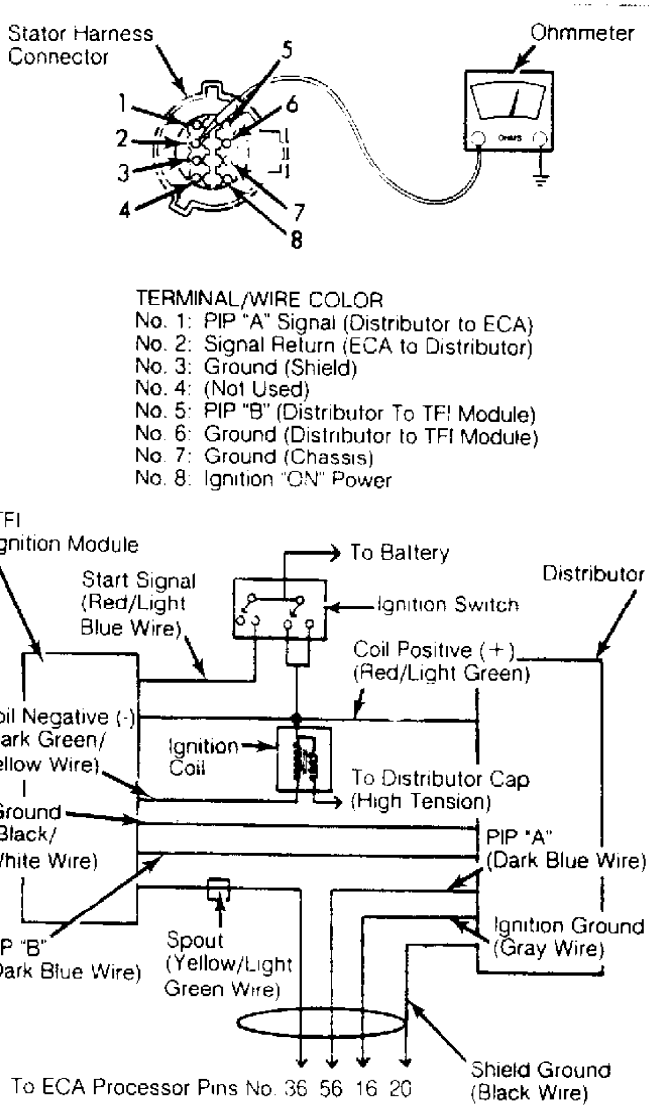



Fig. 6: Stator Connector & Wiring (3.8L Engines)
Courtesy of Ford Motor Co.

5) Measure resistance between terminal No. 6 and base of distributor. If resistance is less than one ohm, service wiring

between connector and TFI module and between connector and distributor ground circuit.

6) If resistance is more than one ohm, inspect stator retaining screws in distributor bowl. If retaining screws are tight and not corroded, replace stator. If screws are loose or corroded, repair as needed. Repeat step 5).

7) With ignition off, disconnect TFI harness connector from TFI module. Reconnect harness connector to distributor. Using voltmeter, attach negative lead to distributor base. Attach positive lead to TFI harness connector terminal No. 5 ("PIP-B" to Module).

8) Crank engine while noting voltage reading. If voltage is between 3-6 volts, stator is okay, replace TFI module. If voltage is not between 3-6 volts, replace stator.

Except 3.8L FWD

1) Turn ignition switch to "OFF" position. Remove and ground coil wire. Attach digital voltmeter negative lead to distributor base. Disconnect spout in-line connector near distributor. See Fig. 7. Attach positive lead to ignition module side of connector.

2) Place ignition switch in the "ON" position. Using ignition key, bump the starter 10 times, measuring voltage while engine is stationary. Allow digital voltmeter reading to stabilize before taking measurement. Record all values.

3) If lowest reading is less than 0.5 volts, replace stator assembly. If highest reading is less than 70% of battery voltage, but the lowest reading is greater than 0.5 volts, remove TFI ignition module from distributor.

4) Inspect stator and TFI terminals for misalignment or damage. If terminals are okay, replace stator assembly.

5) Measure resistance between TFI module terminals. See Fig. 7. Refer to TFI MODULE RESISTANCE VALUES table.

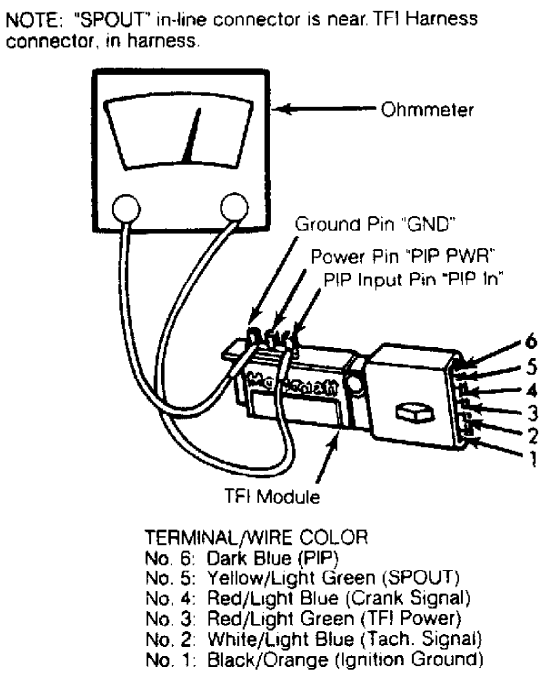



Fig. 7: TFI Ignition Module Terminal Locations (Except 3.8L) Courtesy of Ford Motor Co.

TFI MODULE RESISTANCE VALUES TABLE

| Measure Between Terminals | Ohms |
|---|---|
| "GND"-"PIP In" | Greater Than 500 |
| "PIP PWR"-"PIP In" | Less Than 2000 |
| "PIP PWR"-"TFI PWR" | Less Than 200 |
| "GND"-"IGN GND" | Less Than 2 |
| "PIP In"-"PIP" | Less Than 200 |

6) If TFI module resistance readings are correct, replace stator assembly. If any resistance readings are not within specification, replace TFI module.

7) If voltage reading in step 2) is greater than 70% of battery voltage, but TFI module resistance values are correct, replace stator assembly.

8) If reading in step 2) is not between 0.5 volts and 70% of battery voltage, measure resistance between TFI module terminals "PIP" and "SPOUT".

9) Resistance should be less than 7000 ohms. If resistance is not within specification, replace TFI module. If resistance is correct, proceed to TFI IGNITION MODULE test.

## TFI IGNITION MODULE

3.8L

1) Disconnect "Spout" in-line connector at TFI module. Connect Spark Tester (D81P-6666-A) between ignition coil wire and ground. Crank engine.

2) If spark is present at tester, perform STATOR test. If spark is not present, perform IGNITION COIL PRIMARY RESISTANCE test.

Except 3.8L

1) Disconnect "Spout" in-line connector at TFI module. Connect Spark Tester (D81P-6666-A) between ignition coil wire and engine ground. See Fig. 8. Crank engine. Check for spark at tester. If no spark occurs, perform IGNITION COIL PRIMARY RESISTANCE test.

2) If spark occurs, check Profile Ignition Pick-Up (PIP) and ignition ground wires for continuity. Repair as necessary. If these items are okay, go to appropriate ELECTRONIC ENGINE CONTROL IV article in COMPUTERIZED ENGINE CONTROLS section.

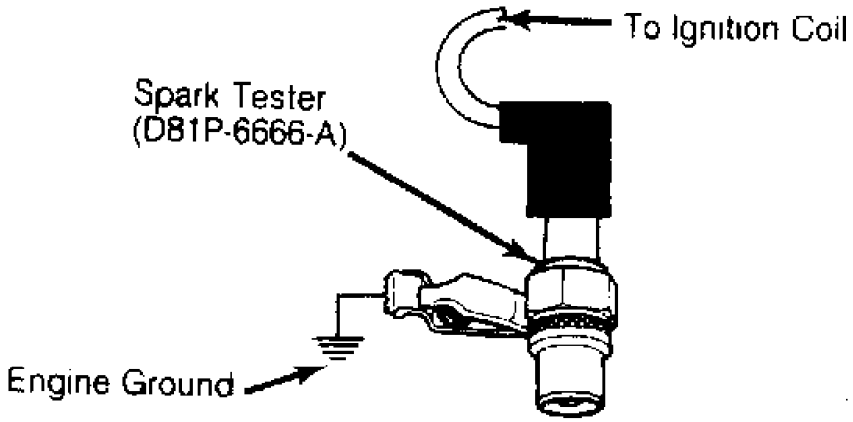



Fig. 8: TFI Ignition Module Test
Courtesy of Ford Motor Co.

## PRIMARY CIRCUIT CONTINUITY

1) Disconnect wiring harness connector from ignition module. Inspect connector for dirt, corrosion, or damage. Repair if necessary. Attach negative voltmeter lead to distributor base. Measure voltage at battery.

2) With negative voltmeter lead still attached to distributor base, insert positive lead into connector terminal No. 2. See Fig. 5. Place ignition switch in "RUN" position. Measure voltage at terminal No. 2.

3) If reading is 90% of battery voltage, turn ignition off. Proceed to WIRING HARNESS test. If reading is less than 90% of battery voltage, turn ignition off. Connect wiring harness. Proceed to IGNITION COIL PRIMARY VOLTAGE test.

### IGNITION COIL PRIMARY VOLTAGE

1) Attach negative voltmeter lead to distributor base. Measure voltage at battery. Place ignition switch in "RUN" position. Measure voltage at coil negative terminal.

2) If reading is 90% of battery voltage, turn ignition off. Inspect wiring harness between ignition module and coil negative terminal.

3) If reading is less than 90% of battery voltage, turn ignition off. Inspect wiring harness between ignition module and coil. If wiring is okay, go to IGNITION COIL SUPPLY VOLTAGE test.

### IGNITION COIL SUPPLY VOLTAGE

1) Attach negative voltmeter lead to distributor base. Measure voltage at battery. With negative voltmeter lead still attached to distributor base, insert positive lead into coil positive terminal.

2) Place ignition switch in "RUN" position. Measure voltage at coil positive terminal. If reading is 90% of battery voltage, turn ignition off. Inspect ignition coil connector and terminals for corrosion, or damage. Replace ignition coil.

3) If reading is less than 90% of battery voltage, turn ignition off. Inspect wiring harness between ignition coil and ignition switch for an open circuit. Also check for a worn or damaged ignition switch. When testing is complete, reconnect ignition module harness connector.

## REMOVAL & INSTALLATION

### DISTRIBUTOR ASSEMBLY

Removal & Installation (Escort)

Disconnect wiring harness at TFI module. Remove distributor cap and rotor. Remove distributor hold-down bolts. Remove distributor from engine. To install, reverse removal procedure. Ensure distributor coupling engages with camshaft drive. Adjust base ignition timing.

Removal & Installation (Tempo & Topaz)

1) Rotate engine until piston in cylinder No. 1 is at TDC of compression stroke. Mark relative position of No. 1 spark plug wire tower on distributor housing. Disconnect wiring harness at TFI ignition module. Remove distributor cap and rotor.

2) Remove distributor mounting bolt and clamp. Some units may be equipped with security-type hold-down bolts. If this is the case, use Distributor Hold-Down Bolt Wrench (T82L-12270-A) to remove bolt. Remove distributor from engine.

3) To install, reverse removal procedure. Ensure timing marks are aligned on crankshaft pulley. Ensure No. 1 spark plug wire tower

aligns with mark on distributor housing. Adjust base ignition timing.

Removal & Installation (Continental, Sable & Taurus)

1) Rotate engine until piston in cylinder No. 1 is at TDC of compression stroke. Mark relative position of No. 1 spark plug wire tower on distributor housing. Disconnect wiring harness at TFI ignition module. Remove distributor cap and rotor.

2) Remove distributor hold-down bolt and clamp. Remove distributor from engine. DO NOT remove intermediate shaft on 2.5L HSC/CFI engine. On 3.0L EFI engine, the intermediate shaft is removed with distributor assembly.

3) To install, reverse removal procedure. Ensure timing marks are aligned on crankshaft pulley. Ensure No. 1 spark plug wire tower aligns with mark on distributor housing. Adjust base ignition timing.

Removal & Installation (All Others)

1) Disconnect wiring harness at TFI ignition module. Remove distributor cap and rotor. Note position of shaft plate, armature, and rotor locating holes. Remove hold-down bolt and clamp. Remove distributor from engine.

2) To install, reverse removal procedure. Ensure that position of shaft plate, armature, and rotor locating holes are in the same position as during removal. Ensure TFI ignition module is properly oriented on engine.

## TFI IGNITION MODULE

Removal (3.8L)

1) Using a Phillips screwdriver, remove leaf screen attaching screws from top of cowl. Separate engine compartment/cowl seal from leaf screen and cowl dash extension panel near TFI ignition module.

2) Lift screen to allow access to TFI ignition module. Press up on harness connector latch from under TFI module shroud to disconnect harness connector from module. Remove 2 module retaining nuts and washers. Remove TFI ignition module and heat-sink as an assembly.

Installation

1) To install, insert module and heat-sink, with heat-sink facing down, into cowl dash extension to allow nuts to be installed. Install washers.

2) Install and tighten nuts to 44-70 INCH lbs. (5-8 N.m). Connect harness connector to module. Install leaf screen. Position seal on leaf screen and cowl dash extension.

Removal & Installation (Except 3.8L)

1) Remove distributor from engine. With distributor on workbench, remove 2 module mounting screws. Slide right side of module down toward distributor mounting flange, and then back up. Move left side of module down toward distributor mounting flange and then back up.

2) Alternate sliding right and left sides of module until module terminals are disengaged from connector in distributor. Any attempt to pull module from mounting surface prior to moving it toward distributor flange WILL BREAK module electrical connector pins.

3) To install, reverse removal procedure. Apply a 1/32" thick ribbon of Silicone Dielectric Compound (D7AZ-19A331-A) to TFI ignition module base plate. Adjust base ignition timing.

## STATOR

Removal (Escort)

1) Remove distributor. Using a small screwdriver, remove

drive coupling spring. Using compressed air, blow dirt and oil away from end of distributor. Mark orientation of drive coupling to shaft.

2) Align drive pin with slot in base. Support distributor and drive pin out with a 3/32" drift and small hammer. See Fig. 10. Remove drive coupling and set aside for reassembly.

3) Ensure shaft is free of nicks or burrs. If burrs are present, polish shaft with emery paper to remove minor burrs. Wipe shaft clean after polishing. Pull up on shaft plate to remove shaft from distributor.

4) Remove screws and TFI ignition module. See TFI IGNITION MODULE REMOVAL & INSTALLATION (ALL OTHERS). Wipe grease from base and module to keep surfaces free of dirt. Remove octane rod retaining screw and octane rod assembly.

5) Remove screws retaining stator connector in distributor bowl. Save screws for installation. Gently pull up on stator to remove from bowl. See Fig. 10.

6) Inspect base bushing, oil seal, spring retainer, "O" ring, and distributor housing for wear, cracks, or other damage. If necessary, replace spring retainer or "O" ring. If distributor housing, bushing, or oil seal are damaged, replace entire distributor assembly.

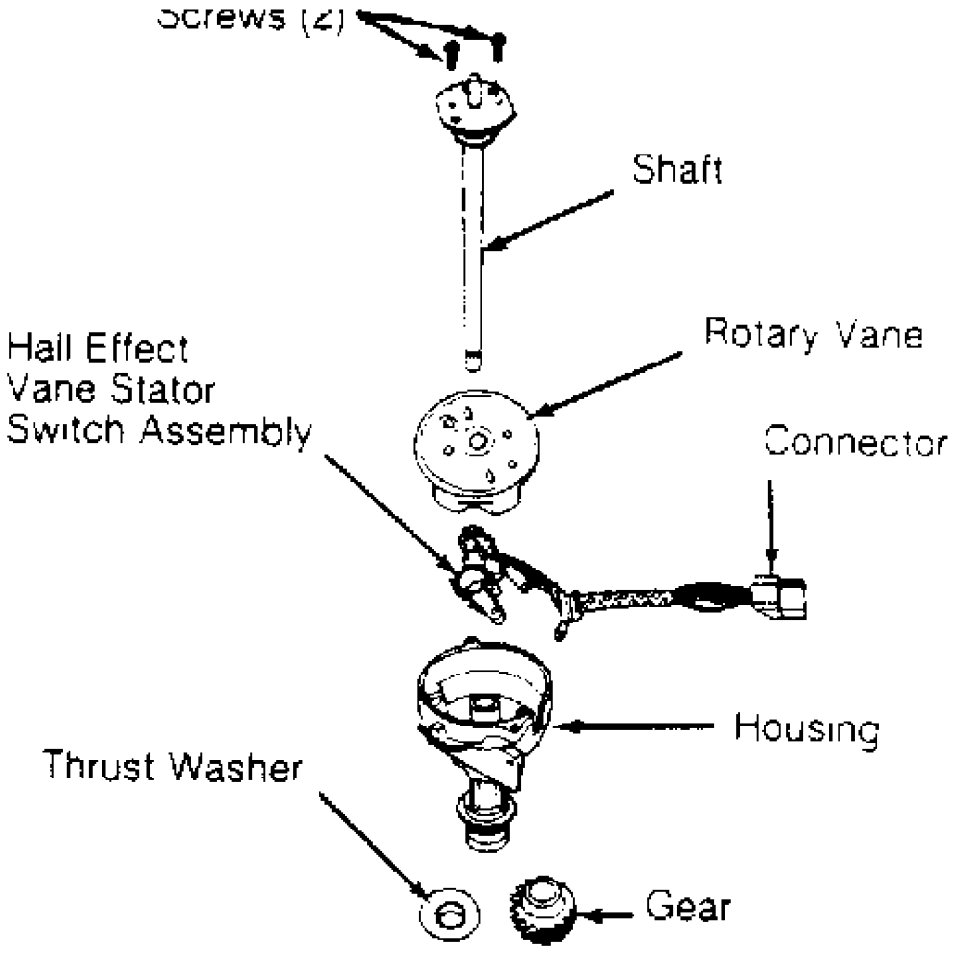



Fig. 9: Exploded View of TFI-IV Distributor (3.8L Engine) Courtesy of Ford Motor Co.

Installation

1) Place stator over bushing and press down on seat. Place

stator connector in position. Tab should fit in notch of base and fastening eyelets should align with screw holes. Position wires away from moving parts.

2) Install and tighten stator screws. With seal on octane rod, insert rod in holes. Install octane rod through distributor base hole. Place end of rod onto same post as original stator. Install and tighten octane rod screw.

3) Wipe back of TFI ignition module and distributor mounting plate clean. Apply Silicone Dielectric Compound (D7AZ-19A331-A) to back of module and spread evenly.

4) Turn distributor base upside-down so that stator connector is in full view. Insert TFI ignition module, making sure that module pins are inserted into stator connector.

5) Fully seat module into connector and against base. Install and tighten TFI module screws. Lubricate distributor shaft, just below armature, with light oil. DO NOT overlubricate.

6) Insert shaft assembly through base bushing. Place drive coupling over shaft and line up mark made during removal. Start pin into drive coupling and shaft.

7) Support distributor and drive pin into shaft until end of pin is flush with step in drive coupling. Check drive coupling for freedom of movement. Ensure that pin does not extend beyond step in coupling in either direction.

8) Remove distributor from support. Check distributor for freedom of rotation. Install drive coupling spring in groove of drive coupling. Install distributor. Check base timing.

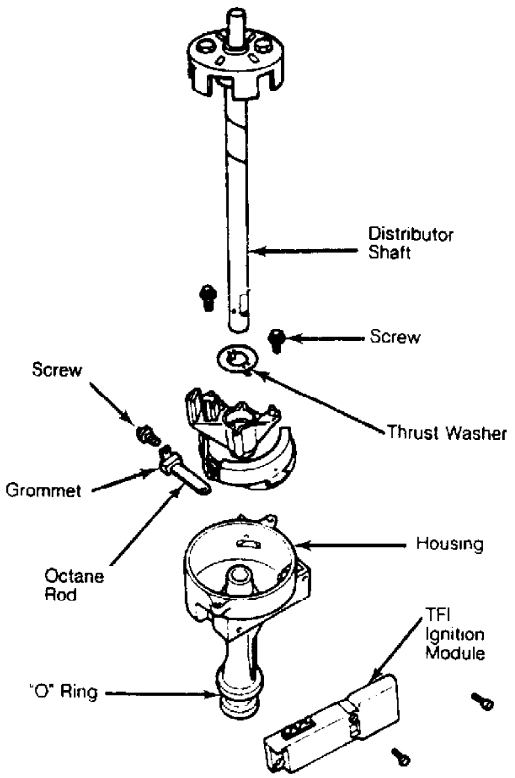



Fig. 10: Exploded View of Typical TFI-IV Distributor (Except 3.8L) Courtesy of Ford Motor Co.

Removal (Except Escort)

1) Remove distributor from engine. On all except Continental,

remove screws and TFI ignition module from distributor. See TFI IGNITION MODULE REMOVAL & INSTALLATION (ALL OTHERS). Wipe grease from base and module to keep surfaces free of dirt.

2) On all models, hold gear and loosen armature screws, DO NOT hold armature. Remove screws and armature. Using a felt tip pen, mark armature and gear for installation reference. Remove and discard roll pin in gear.

3) Place distributor in Axle Bearing Remover (T75L-1165-B). Press off gear using arbor press and Pinion Bearing Cone Remover (D79L-4621-A). Using emery cloth, remove burrs from distributor shaft. Remove shaft from distributor assembly.

4) Remove thrust washer from distributor and save for installation. See Figs. 10. Remove screw and octane rod assembly. Save octane rod and screw for installation. Remove stator assembly screws and stator. Save screws for installation.

5) Inspect base bushing, "O" ring, and distributor housing for wear, cracks, or other damage. If necessary, replace "O" ring. If distributor housing or bushings are worn, replace entire distributor assembly.

Installation

1) Place stator assembly over bushing and press down to seat. Place stator connector in position. Tab should fit in notch of base and fastening eyelets should align with screw holes. Position wires away from moving parts. Install and tighten stator screws.

2) Install octane rod through distributor base hole. Place end of rod onto same post as original stator. Install and tighten octane rod screw. Install thrust washer on top of bushing (if equipped). Lubricate distributor shaft, just below armature, with light oil. DO NOT overlubricate.

3) Install shaft through base bushing. Place a 1/2" deep well socket over shaft, invert assembly and place in arbor press. If distributor uses a screw-down rotor, invert assembly and place in arbor press. Place distributor drive gear on shaft. Align marks made during removal.

4) Place a 5/8" deep well socket over shaft and gear. Press gear until holes align with holes in shaft. If holes do not line up, press gear off and try once more. DO NOT try to align holes using a drift or roll pin.

5) Insert new roll pin through gear and shaft. If armature was removed, install armature. Tighten armature screws. Check distributor for freedom of rotation. If armature contacts stator, replace distributor.

6) Wipe back of TFI ignition module and distributor mounting plate clean. Apply Silicone Dielectric Compound (D7AZ-19A331-A) to back of module and spread evenly.

7) Turn distributor base upside-down so that stator connector is in full view. Insert TFI module. Ensure that module pins are inserted into stator connector.

8) Fully seat TFI ignition module into connector and against base. Install and tighten TFI module screws. See Fig. 10. Install distributor. Check base timing.

## TORQUE SPECIFICATIONS

TORQUE SPECIFICATIONS TABLE

| Application | Ft. Lbs. (N.m) |
|---|---|
| Distributor Hold-Down Bolts | |
| Except 1.9L Engine ..... | 17-25 (23-34) |

| | INCH Lbs. (N.m) |
|---|---|
| Armature Screws | 25-35 (3-4) |
| Distributor Hold-Down Bolts | |
| 1.9L Engine | 48-60 (5-7) |
| Octane Rod Screw | 25-35 (3-4) |
| Stator Assembly Screws | 25-35 (3-4) |
| TFI Ignition Module Screws | 25-35 (3-4) |