



## TELORVEK IV Ford Sequential Fuel Injection System **(MG-70)**

### **WIRING INSTRUCTIONS**

Thank you for purchasing the absolute finest of wiring kits for the Ford Motor Co. fuel injection. We have taken considerable time to work out the circuitry so that you, the customer will understand at least some of what this is all about. We ask that you follow our instructions closely. We recommend an high pressure in tank fuel pump. Custom installations are available from Tanks Inc. (phone 320-558-6882) and Rock Valley (phone 800-344-1934).

Regarding emissions, the Canister Purge, Air Divert and Air Bypass solenoids located in bags 75 and 76 can be eliminated if your vehicle does not need to pass emissions testing. The EGR (located in bag 62) can be eliminated but will set codes that will retard the timing UNLESS the computer receives some kind of signal from that circuit. We can provide an accessory to supply that signal. Please call for details. Should you eliminate any additional sensor, your injection system will not work at its peak and will probably be in some variation of back up mode. There are many factors that will keep you from a trouble free start up that you must consider. Please call for more information should you have any questions.

**Non-Mass Air (Speed Density) to Mass Air conversions - If you are converting a non-mass air engine to mass air you must change to the following components: Mass Air ECM, Mass Air Flow Meter and Barometric Air Pressure (BAP) Sensor. If you are using an H.O. ECM be sure you have the orange 19lb injectors.**

#### **WARNING!**

**After the kit installation is complete and it is necessary to diagnose a starting or drive ability problem, follow the procedures recommended in the shop manual. All voltage tests must be preformed using a HIGH impedence, digital voltmeter. DO NOT use a test light on this system! DAMAGE WILL BE DONE to the engine computer if a test light is used on this system.**

**Important: 1991 & newer T-Bird & Cougar engines require changing the Engine Control computer to a 1989 - 1993 Mustang 5.0. Failure to make this change will cause the engine not to perform properly.**

**The Detail Zone fuel injection wire harnesses are “ALL” designed to follow the electronic circuitry of the vehicle your engine was removed from! Following this simple procedure allows our fuel injection harness customers to have their vehicles diagnosed by “ANY” FORD dealer or reputable repair facility familiar with diagnosing fuel injection electronic systems.**

**The Detail Zone does not re-engineer electronic circuitry that a vehicle manufacturer has spent millions of dollars on testing and designing. Our goal is to allow an “easy”, “neat”, “pain free” installation through quality installation instructions and a state of the art wiring kit.**

**If your vehicle experiences starting or run-ability problems, 99% of the time it is some sort of mechanical, NOT A WIRING PROBLEM. Fuel injection engines still run similar to carbureted engines, the difference being that the engine computer receives “inputs” from various sensors throughout the engine. The computer then uses this information to calibrate fuel delivery and engine timing.**

**Diagnosing a NO SPARK situation is the same on a computer controlled fuel injection engine as it is on a carbureted engine. Spark control, even though it may be done slightly different depending on engine year and make, is still essentially the same. A sensor sends a signal to the engine computer allowing spark to be provided to the plugs, similar to a carbureted engine.**

**Thank you for purchasing our products!**

**NOTE: FORD diagnostic procedures are very detailed, lengthy and impossible to cover in this set of instructions. Purchasing the FORD ENGINE/EMISSIONS DIAGNOSIS shop manual will help you learn about the engine you installed and guide you through the correct diagnostic procedures Ford recommends. This book is available through your local Ford dealer or Helm Inc. Helm is the distributor for the shop manuals for General Motors and Ford Motor Company. Helm can be contacted at 800-782-4356 or on their web site [www.helminc.com](http://www.helminc.com)**

## STARTING INSTALLATION

Since there are so many individual circuits to complete, we recommend that you connect them in the order that we prescribe. Disconnect the battery before starting and do not reconnect until instructed.

In order to allow for the proper spacing between the computer and the Telorvek panel, plug the connector into the computer (ECM) and mount the TELORVEK panel and computer in an accessible location anywhere you desire out of the weather. **For safety, disconnect the ECM connector until finished the installation. Under the dash, under the seat or in the trunk are good. There are a lot of wires so allow room to work. A poor installation will result in a poor running car. The number referred to from this point on will be the location on one of the terminal blocks located on the TELORVEK panel.**

After all wires are connected to the engine, wire tie them together or use 3/4 inch Zip loom to protect them. This can be done before any connections are made to the panel. Since all wires are marked, running the entire group to the panel at one time is fine. Some terminals on the panel may not be used!

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**Important!** We have supplied two sizes of terminals for your use on the panels itself. The Blue, used for the larger sizes of wires and red for the bulk of the smaller wires. Each individual bag instructions will be marked as to when to use the blue terminals. All others will use the red terminals. Time to start the installation. In order to install the injector connectors the upper air intake manifold will have to be removed. By doing this you will have access to the injectors. **A NEW gasket should be used when reassembling because a vacuum leak will cause a drivability problem.**

**Bag #60. INJECTORS:** The injector wiring is made up in two harnesses, one for the left bank of injectors and one for the right bank. Locate the injector connector with the Red and Tan wires and connect it to cylinder number (1) injector one. Now plug in the rest of the injector connectors (injectors 2, 3, 4) in that half of the harness. In the other half of the injector harness locate the injector connector with the Red and Lt Blue wires and connect it to injector number (5). Plug in the rest of the injector connectors (injectors 6, 7, 8) and run all the wires from both halves of the harness to the Telorvek Panel. Using the blue terminals connect the Red wires (INJ 1->14) and (INJ 5->14) to **#14**. Now connect the remaining eight wires as follows using the red terminals, Tan (INJ 1->19) to **#19**, White (INJ 2->20) to **#20**, Yellow (INJ 3->21) to **#21**, Brown (INJ 4->22) to **#22**, Lt Blue (INJ 5->15) to **#15**, Lt Green (INJ 6->16) to **#16**, Orange (INJ 7->17) to **#17** and Dk Blue (INJ 8->18) to **#18**.

**Bag #61 ENGINE GROUNDS:** The Black wire marked (FRT ENG GRD->25) is connected to a bolt in the front of the intake manifold and using the blue terminal run it to number **#25** on the panel. The Black wire marked (REAR ENG GRD->25) is run from a rear manifold bolt and using a blue terminal connect it to number **#25** on the panel.

**Install the upper air intake manifold. You will be installing the wiring on the sensors that are located on the Air Intake Manifold which provides mounting flanges for the Air Throttle Body Assembly, Fuel Supply and EGR.**

### **Bag #62. EXHAUST GAS RECIRCULATION VALVE POSITION SENSOR & EGR**

**SOLENOID:** Plug in the connector to the EGRVP. Using red terminals run the Orange wire (EVP-> 41) to **#41**, Brown wire (EVP B-> 39) to **#39** and the Black (EVP-> 46) to **#46**. Plug the connector into the EGR solenoid and using a blue terminal run the Red wire (EGR->32 to **#32** and use a red terminal on the Dk Green (EGR->33) to **#33**.

**Bag #63. THROTTLE POSITION SENSOR:** Plug into the sensor located on the right side of the throttle body and using red terminals run the Black (TPS-> 45) to **#45**, Orange (TPS-> 41) to **#41** and Dk Green (TPS-> 42) to **#42**.

**Bag #64. IDLE SPEED CONTROL:** The ISC is located on the right side of the throttle body and after plugging in the connector, run the White (ISC-> 28) to **#28** and the Red (ISC-> 27) to **#27** using red terminals to connect them to the panel.

**Bag #65. COOLANT TEMPERATURE SENSOR:** After attaching the plug to the sensor located in the front of the engine, run the two wires to the panel and connect them using the red terminals, yellow wire (CTS-> 38) to **#38** and the Black wire (CTS-> 44) to **#44**.

**Bag #66. MASS AIR FLOW SENSOR:** Attach the connector to the M.A.F sensor. Using a blue terminals run the Red wire (MAF-> 32) to **#32**. Now using the red terminals run the Black (MAF-> 23) to **#23**, Tan (MAF-> 35) to **#35** and the Dk Blue (MAF-> 34) to **#34**

**Bag #67. BAROMETRIC/MANIFOLD PRESSURE SENSOR (BAP/MAP):** Mass Air Flow engines used the BAP sensor and did not have vacuum connected to it. **Non** Mass Air Flow engines used the MAP sensor and had vacuum running to it. Be sure to use the correct sensor if you have changed from Non-Mass Air Flow to Mass Air Flow or vice versa. The sensors look nearly identical. (HINT: The BAP sensor had a ferrule that would prevent you from attaching a vacuum hose to it). Locate the sensor on the firewall of the engine compartment. Attach the connector and using the red terminals run the Orange wire (MAP/BAP-> 40) to **#40**, Lt Green (MAP/BAP-> 43) to **#43** and the Black (MAP/BAP-> 46) to **#46**. The print on the wires for this sensor might be labeled MAP instead of BAP.

**Bag #68. OXYGEN SENSOR (2):** This area of the vehicle is hot so keep the wires away from the exhaust. Two sensors are required per engine. **Install each sensor as close to the block as possible.** Plug in both connectors into the O2 sensors following the wording printed on the wires (Left to the left O2, Right to right O2) and run the wires to the Telorvek panel. Using the blue terminals connect the Gray wires (LEFT O2-> 1) and (RIGHT O2->1) that runs from both sensors to **#1**. Now using the red terminals the other two wires on the left O2 are installed as follows, Dk Blue (LEFT O2-> 9) to **#9** and the Black (LEFT O2-> 23) to **#23**. The other two right O2 sensor wires, Dk Green (RIGHT O2-> 10) to **#10** and the Black (RIGHT O2-> 24) to **#24**.

**Bag #69. TFI IGNITION MODULE CONNECTION (Distributor):** The TFI module requires some of the wires to be shielded from any electrical interference, that is why four of the wires (Dk Blue, Black, Yellow, Solid Strand) in the connector are wrapped.

Carefully uncoil the harness and plug it into the distributor then run all the wires to the Telorvek panel. Remove the tape and shielding material back only as far as it is necessary for the length of the wire to be cut and allowing enough wire to make the connections on the panel. In the shielded harness there is a solid strand wire with no insulation, install a blue terminal on it and connect it to **#24**. After the connection is made wrap the exposed wire from the shielded harness to **#24** with electrical tape. Using red terminals the other three wires in the shielded harness are connected as follows, Dk Blue (TFI->5) to **#5**, Black (TFI->7) to **#7** and the Yellow (TFI->6) to **#6**.

The remaining three wires in the TFI connector not wrapped in the shielded harness are connected as follows, (using blue terminals) Red (TFI->2) to **#2**, (using red terminals) Purple (TFI->3) connects to **#3**, and the Dk Green (TFI->8) to **#8**.

The Purple wire (STARTER SOL-> 3) coiled separate runs from the **(S)** post of the starter solenoid and using blue terminals connected to **#3** on the Telorvek Panel.

**SHORTING PLUG:** This connector is exposed from the shielded harness near the distributor. It must be disconnected in order to set the engine timing. Reconnect it after your timing is set. This procedure may cause a trouble code to set and the check engine light to come on. To clear the trouble code disconnect the battery for 5 minutes.

**NOTE: If the TFI module is not mounted on the side of your distributor and your distributor has a round connector running out of it, you must change your distributor to the type with the TFI module mounted to it.**

**Bag #70. IGNITION COIL:** After attaching the connector to the coil run the wires back to the Telorvek panel. Connect the Red wire (IGN COIL-> 2) using a blue terminal to **#2** and the Dk Green wire (IGN COIL->8) using a red terminal to **#8**. The other Dk Green wire in this bag is for the TACH connection if desired. Plug the wire into the short Dk Green wire running from the ignition coil connector and run it to the tach.

**Bag #71. SPEED SENSOR:** Install the connector onto the speed sensor located in the speedometer assembly on the transmission and run the wires back to the Telorvek panel. Using the red terminals connect the Orange wire (SPEED SENSOR->48) to **#48** and the Dk Green wire (SPEED SENSOR->47) to **#47**.

Electronic speedometers can be connected to terminal **#47** to pick up the VSS signal. This is a standard Ford 8000 pulse per mile signal.

**Bag #72.V.I.P. SELF TEST:** Mount both connectors inside the vehicle under the dash and run the wires to the Telorvek Panel. There are three Tan wires, read the printing on the wires themselves and connect them to the proper terminal on the Telorvek Panel. Using the red terminals connect the Tan (VIP 1->11) to **#11**, Tan (VIP 1->13) to **#13**, Tan (VIP 2->12) to **#12**, Black (VIP 1->45) to **#45**.

Connect the Tan wire (13->SERVICE ENG) to **#13** on the Telorvek Panel and run it to a dash indicator light and connect it to one of the wires running from the light. The other wire running from the light is connected to a ignition source. This light is not required as the yellow light on top of the Telorvek Panel has the same function.

**Bag #73.FUEL PUMP RELAY & INERTIA SWITCH:** Mount the fuel pump relay connector close to the Telorvek panel. Using the blue terminals run the Tan (F/P RELAY->11) to **#11**, Pink (F/P RELAY->36) to **#36** and the Orange (F/P RELAY->29) to **#29**. The Red Wire (F-P RELAY IGN) has a black connector to install onto **one of two** wires depending on whether you use an inertia switch or not - SEE BELOW. For fuel pump relay use Ford part number F8PZ-14N135-AA or Motorcraft DY-864.

**The short Red wire with the black connector (FP RELAY->31) is a bypass wire used only if an inertia switch "IS NOT BEING USED". This wire plugs into the red wire running from the fuel pump relay (F-P RELAY IGN) and connects to #31. If the inertia switch IS USED, this short red wire is discarded. Follow the inertia switch wiring paragraph below to complete the fuel pump wiring.**

**INERTIA SWITCH:** The inertia switch is designed to disconnect the ignition voltage from the fuel pump relay in the event of a accident. This kills the engine and the pumping of fuel to prevent fire. After mounting the inertia switch, plug the connector with the two red wires into the switch and run the wires to the Telorvek panel. Connect the Red wire (INERTIA->31) to **#31**. Plug the other red wire (INERTIA->FP REL) into the mating connector running from the fuel pump relay, red wire marked (F-P RELAY IGN). The fuel pump must be grounded

**NOTE: The fuel pump WILL NOT operate without the inertia switch connected or the short bypass wire connected to #31.**

The coiled up Pink wire marked (36->FUEL PUMP) runs from **#36** on the panel to the fuel pump. The fuel pump must be grounded as well.

**Bag #74. AIR CHARGE TEMPERATURE SENSOR:** Install the connector onto the air charge temperature sensor. Run the wires to the Telorvek Panel and using the red terminals connect the Lt Green Wire (AIR TEMP->37) to **#37** and the Black wire (AIR TEMP->44) to **#44**.

**Bag #75. CANISTER PURGE SOLENOID:** Plug the connector into the Canister Purge Solenoid. Using a blue terminal connect the Red wire (CAN PURGE->27) to **#27** and the Gray wire (CAN PURGE->49) to **#49** using a red terminal. **NOTE: The short factory harness (part #if needed E6V2-9D857-A) must be connected to the solenoid. Our harness is designed to connect to the other end of the short factory harness.**

#### **Bag #76. AIR DIVERT & AIR BYPASS SOLENOIDS:**

**Air Divert Solenoid:** Plug the connector into the air divert solenoid and run the wires to the Telorvek Panel. Using a blue terminal connect the Red wire (DIVERT SOL->26) to **#26** and the Lt Green wire (DIVERT SOL->4) to **#4** using a red terminal.

**Air Bypass Solenoid:** Plug the Connector into the air bypass solenoid and run the wires to the Telorvek Panel. Connect the Red wire (BYPASS SOL->26) to **#26** using a blue terminal and the White wire (BYPASS SOL->30) to **#30** using a red terminal.

### **FINISHING UP**

Connect the large pre-wired **orange** wire to the ignition circuit of your ignition switch. This is an ignition feed that is controlled by the ignition switch. This is not an accessory feed and must remain hot even when the engine is cranking.

Connect the large pre-wired **red** battery feed wire to a battery feed. This is a battery feed that must remain hot even with the key off. Make sure this is a good connection. If you have a Master Disconnect switch, install this wire on the battery side of the switch so it will remain hot with the Disconnect off.

The **black** ground wire from the TELORVEK Panel runs direct to the battery. Run the battery ground directly to the engine not the frame first. This includes rear mounted batteries.

**NOTE: The short orange and pink wires with the gray connector running out of the computer connector is for the wide open throttle air conditioning compressor clutch disengagement connection. This is not used in an aftermarket application.**

## **STARTING THE ENGINE**

You have now made all of the connections necessary to TRY to start your car. If you try now, you will be disappointed since you did not hook up the battery. You can do so now.

### **Priming the Fuel System**

The fuel system can be primed by grounding the fuel pump lead in the V.I.P Self Test Connector. This lead is a Tan wire (VIP 1->11) located in the large V.I.P Test connector on the short end of the connector. With the key off, run a jumper wire from the connector to ground. Turn the key on and carefully bleed off any air pressure at the schrader valve until fuel runs out. CARE SHOULD BE TAKEN TO AVOID ANY SPILLAGE OR INJURY WHILE FOLLOWING THIS PROCEDURE. After making sure all the air is out of the lines, turn the key off and remove the jumper wire.

### **Initial Timing Procedure**

- (1) Transmission in Park.
- (2) Connect an inductive timing light.
- (3) Disconnect the shorting connector located in line on the Yellow wire running from the distributor to #6 on the Telorvek panel. The connector is located eight inches from the distributor connector.
- (4) With the engine running check/adjust timing.
- (5) Shut the engine off, reconnect the shorting connector and check for timing advance to verify distributor is advancing beyond the initial setting.

### **We're trying...**

Ron Francis Wiring has made every effort to assure a quality product and can assure you that this system works well in your application. Most of the 'problem' calls we have had to date are basic trouble shooting questions which have nothing to do with the TELORVEK system we sold you. Once you have confirmed our simple electrical tests are OK, set the timing and any trouble you experience will be a defective part or seat of the pants repair.

We are committed to offering the most user friendly wiring systems available and support this with many years experience in the wiring and fuel injection fields. Please be certain that all connections are correct and tests run before calling. Your unit can be tested at any Ford Motor Company Dealership with no difficulty.

## USING THE CHECK ENGINE LIGHT

The check engine light performs just the same as it would in any newer car, when the key is turned on (engine not running) the light will stay on till the engine starts.

When the check engine light comes on during engine operation, it is an indication of a fault in the system. It will be necessary to have the computer perform a self test diagnostic procedure. The self test is divided into three specialized tests:

**KEY ON ENGINE OFF SELF TEST:** For this test the fault must be present at the time of testing. For intermittent , refer to continuous memory codes.

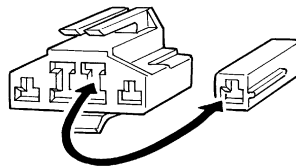
**ENGINE RUNNING SELF TEST:** The sensors are checked under operating conditions and at normal operating temperatures.

**CONTINUOUS MEMORY CODES:** These codes are issued as a result of information stored while the vehicle was in normal operation.

**READING THE CHECK ENGINE LIGHT:** A service code is reported by a flash of the check engine light. All service codes are two digit numbers, such as 2-3. The light will display two flashes, then, after a two second pause, the light will flash three times. All self test codes (if any) will be displayed and then a delay of six seconds, a single half second separator flash and another six second delay and then the continuous memory codes will be flashed.

If the light remains on after the engine is running then follow the procedures below to have the check engine light flash trouble codes.

Locate the V.I.P self test connectors and connect a jumper wire between the black wire (VIP 1->45) located in the large VIP connector and the tan wire (VIP 2->12) located in the single connector as shown in the drawing below.





## Trouble Codes

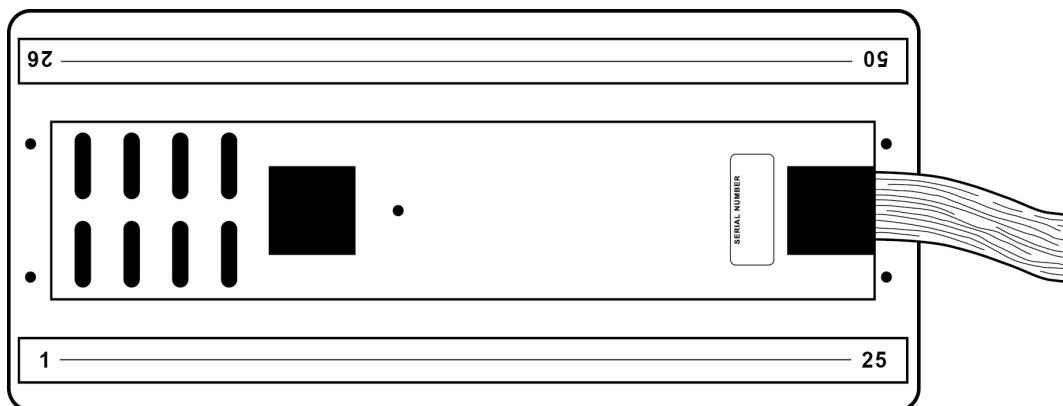
11	System PASS	53	TP circuit above maximum voltage
12	High RPM	54	ACT indicated -40°F/circuit open
13	Low RPM	56	MAF circuit above max voltage
14	PIP circuit failure	61	ECT indicated 254°F/circuit grounded
15	ECG memory failure	63	TP circuit below minimum voltage
16	RPM low for EGO test	64	ACT indicated 254°F/circuit grounded
18	SPOUT /IDM circuit failure	66	MAF circuit below minimum voltage
19	ECG internal voltage failure	67	Neutral drive switch circuit open
21	ECT out of test range	74	Brake on/off circuit open during self test
22	MAP /BP out of test range	75	Brake on/off circuit closed/ ECG input open
23	TP out of test range		
24	ACT of test range	77	Brief WOT not sensed during self test
26	MAF out of test range	79	A/C on defrost on during self test
29	Vehicle speed sensor problem	81	Air management 2 circuit failure
31	EVP voltage below minimum	82	Air management 1 circuit failure
32	EVP voltage below closed limit	84	EGR Vacuum Regulator circuit failure
33	EGR valve opening not detected	85	Canister purge circuit failure
34	EVP voltage above closed limit	87	Fuel pump primary circuit failure
35	EVP voltage above maximum	91	HEGO (L) sensor lean or defective
41	HEGO (R) sensor lean or defective	92	HEGO (L) sensor rich
42	HEGO (R) sensor rich	94	Thermacter air system inoperative (L)
44	Thermacter air system defective (R)	95	Fuel pump secondary circuit failure
45	Thermacter air upstream during self test	96	Fuel pump secondary circuit failure
46	Thermacter air not bypassed during self test	98	Hard fault present FMEM mode
51	ECT indicated -40°F/open circuit		

No codes = unable to indicate self test  
Code not listed = Not applicable to this engine

### Numbered terminal block cover strip reference.

The drawing below is for your reference on the correct positioning of the Telorvek fuel injection panel terminal block cover strips.

When connecting wires to the panel be sure the numbered terminals match the drawing below.



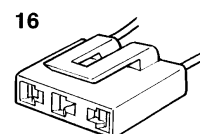
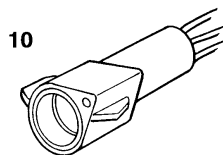
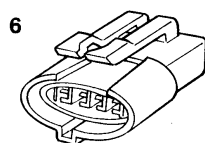
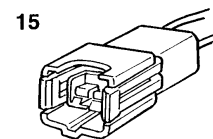
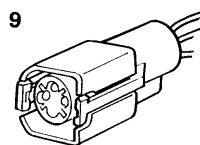
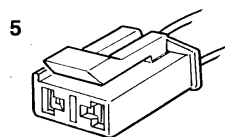
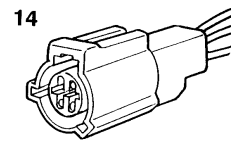
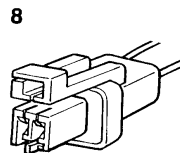
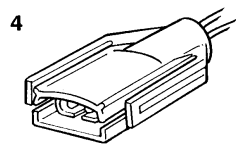
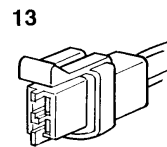
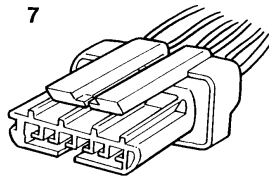
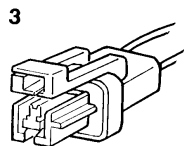
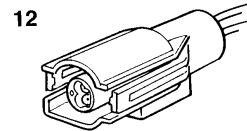
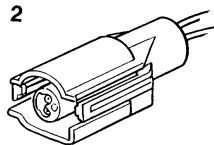
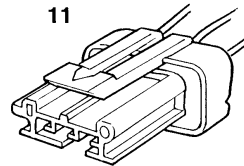
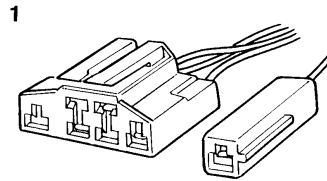
## Breakout Box Circuit Diagnosis

The Telorvek panel can be used as a BREAKOUT BOX for testing circuits running to and from the EEC Processor. Listed below is the Ford circuit number, circuit description, E.E.C processor pin number, Telorvek panel number the circuit runs to, Ford wire color and the color of wire we used. Following the diagnostic procedures that can be found in the ENGINE / EMISSIONS DIAGNOSIS SHOP MANUAL that can be purchased at your local Ford dealer all trouble codes can be diagnosed.

Circuit	Description	EEC pin#	Panel #	Ford Color	TDZ Color
687	Ign, Lf/Rt HEGO		1	Gray/Yellow	Gray
16	Ign, TFI Module/+ Coil		2	Red/Lt Green	Red
771	Crank Signal	30	3	Purple/Yellow	Purple
99	Divert Sol.	32	4	Lt Green/Black	Lt Green
349	Ignition Pick-up	56	5	Dk Blue	Dk Blue
324	Spark output	36	6	Yellow/Lt Green	Yellow
259	TFI Ign Ground	16	7	Black/Orange	Black
11	Ign Coil Neg	4	8	Dk Green/Yellow	Dk Green
90	HEGO Left	43	9	Dk Blue/Lt Green	Dk Blue
94	HEGO Right	29	10	Dk Green/Pink	Dk Green
97	V.I.P/Fuel Pump	22	11	Tan/Lt Green	Tan
201	Self Test Input	48	12	Tan/Red	Tan
657	VIP/Engine Lt	17	13	Tan	Tan
361	Ign, LF/RT Injectors		14	Red	Red
559	Injector #5	14	15	Tan/Lt Blue	Lt Blue
560	Injector #6	15	16	Lt Green	Lt Green
561	Injector #7	42	17	Tan/Orange	Orange
562	Injector #8	52	18	Lt Blue	Dk Blue
555	Injector #1	58	19	Tan	Tan
556	Injector #2	59	20	White	White
557	Injector #3	12	21	Brown/Yellow	Yellow
558	Injector #4	13	22	Brown/Lt Blue	Brown
60	Power Ground MAF/O2	40/60	23	Black/Lt Green	Black
57/89	Ground O2/TFI Shield	20/49	24	Black	Black & Solid
	Motor Grounds		25		Black
361	Ign, Bypass,Divert Sol.		26	Red	Red
361	Ign, Canister,ISC		27	Red	Red
264	ISC	21	28	White/LT Blue	White
38	Battery,F.P.R	1	29	Black/Orange	Orange
100	Air Bypass	38	30	White/Red	White
361	Ign EEC,F.P.R	57	31	Red	Red
361	Ign EEC,MAF,EGR	37	32	Red	Red
360	EGR	33	33	Dk Green	Dk Green
967	Mass Air Flow	50	34	Dk Blue/Orange	Dk Blue
968	Mass Air Return	9	35	Tan/Lt Blue	Tan
787	Fuel Pump Monitor	19	36	Pink/Black	Pink
357	Air Charge Sensor	25	37	Lt Green/Pink	Lt Green
354	Coolant Temp Sensor	7	38	Lt Green/Yellow	Lt Green
352	EGR Position Sensor	27	39	Brown/Lt Green	Lt Green
351	Voltage BAP,TPS,EVP	26	40/41	Orange/White	Orange
355	TPS	47	42	Dk Green/Lt Green	Dk Green
358	BAP	45	43	Lt Green/Black	Lt Green
359	Signal Return ACS,CTS, TPS,VIP,BAP,EVP	46	44/45/46	Black/White	Black
150	Vehicle Speed Sensor (+)	3	47	Dk Green/White	Dk Green
563	Vehicle Speed Sensor (-)	6	48	Orange/Yellow	Orange
101	Canister Purge	31	49	Gray/Yellow	Gray

# Ford EFI Connections

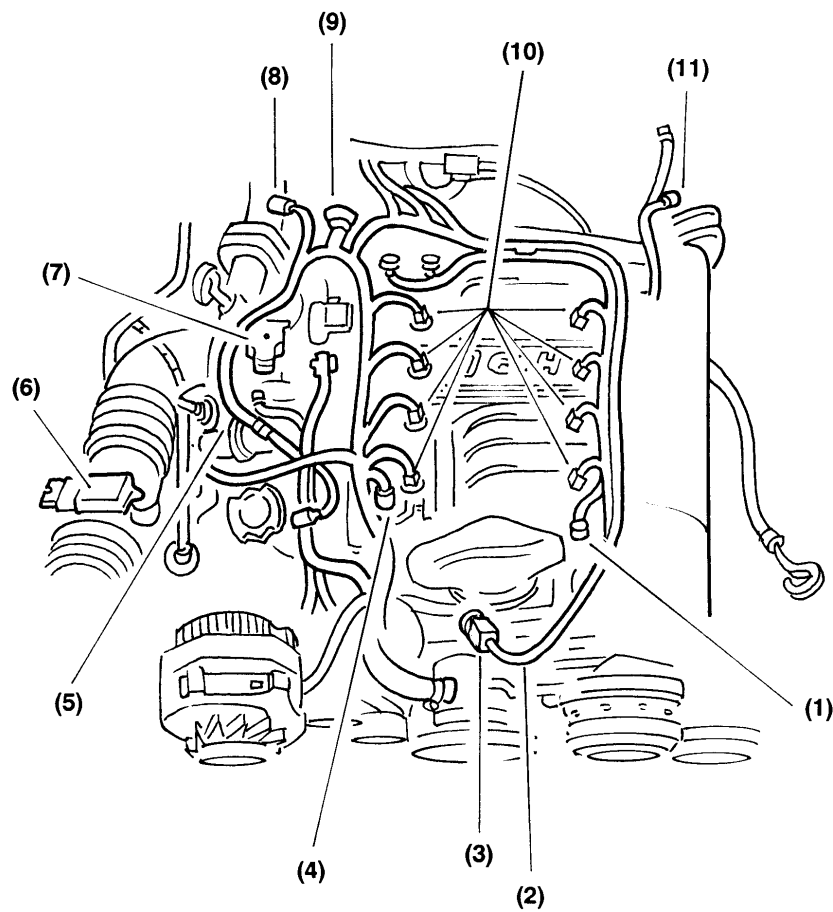
- |   |                                       |
|---|---------------------------------------|
| 1) <b>V.I.P Self Test</b>   | 9) <b>EGR Valve Position Sensor</b>   |
| 2) <b>Air Charge Temperature Sensor<br/>Canister Purge Solenoid</b> | 10) <b>Throttle Position Sensor</b>   |
| 3) <b>Air Divert Solenoid</b>                                       | 11) <b>Barometric Pressure Sensor</b> |
| 4) <b>Speed Sensor</b>  | 12) <b>Coolant Temperature Sensor</b> |
| 5) <b>EGR Solenoid</b>  | 13) <b>Idle Speed Control</b>         |
| 6) <b>Mass Air Flow</b>   | 14) <b>Oxygen Sensor</b>              |
| 7) <b>TFI Ignition Module</b>                                       | 15) <b>Injectors</b>                  |
| 8) <b>Air By-Pass Solenoid</b>                                      | 16) <b>Ignition Coil</b>              |



## Sensor / Harness Connections

The following diagram shows some of the sensor locations on Ford 5.0 engines. The sensors not shown were mounted remote (off the engine) on the stock vehicle application. Your installation may require these items not to be mounted in the same location as on a factory installation. The numbers before the sensor names correspond to the numbers shown in the drawing.

- |                                  |                              |
|----------------------------------|------------------------------|
| 1) Air Charge Temperature Sensor | 7) Throttle Position Sensor  |
| 2) Shorting Plug                 | 8) Right O2 Sensor           |
| 3) TFI Ignition Module           | 9) EGR Valve Position Sensor |
| 4) Coolant Temperature Sensor    | 10) Injectors                |
| 5) Idle Speed Control            | 11) Left O2 Sensor           |
| 6) Mass Air Flow Sensor          |                              |



COMPATIBLE FORD 5.0 AND ASSOCIATED PARTS		
ECM FOR MANUAL TRANSMISSION (A9L)	FORD	F3ZF-12A650-DB
	STANDARD MOTOR PRODUCTS	EM073
	A1-CARDONE	78-4352
ECM FOR AUTO TRANSMISSION (A9P)	FORD	F3ZF-12A650-FB
	STANDARD MOTOR PRODUCTS	EM680
	A1-CARDONE	78-5611
MASS AIR FLOW METER	FORD	E9ZF-12B579-AA
	STANDARD MOTOR PRODUCTS	MF0872
	A1-CARDONE	74-9502
IDLE AIR BYPASS VALVE	FORD	F0AE-9F715-BA
	STANDARD MOTOR PRODUCTS	AC21
AIR CHARGE TEMP SENSOR	FORD	F2DZ-12A697-A
	STANDARD MOTOR PRODUCTS	AX3
BAROMETRIC AIR PRESSURE SENSOR	FORD MOTORCRAFT	DY530
	STANDARD MOTOR PRODUCTS	AS13
ENGINE COOLANT TEMP SENSOR	FORD	F2AF-12A648-AA
	STANDARD MOTOR PRODUCTS	TX6
OXYGEN SENSOR WITH 8 INCH LEAD	FORD	E9SF-9F472-AA
	STANDARD MOTOR PRODUCTS	SG23
	BOSCH	13942
OXYGEN SENSOR WITH 16 INCH LEAD	FORD	E7TF-9F472-CA
	STANDARD MOTOR PRODUCTS	SG40
	BOSCH	13953
THROTTLE POSITION SENSOR	FORD	E8ZF-9F989-AA
	STANDARD MOTOR PRODUCTS	TH72
VEHICLE SPEED SENSOR	FORD	E9TZ-9E731-A
	STANDARD MOTOR PRODUCTS	SC37
INERTIA SWITCH	FORD	XF3Z-9341-AA
	AIRTEX	1S3906
FUEL INJECTOR (STOCK 19 LB/HR) ORANGE	FORD	F1ZZ-9F593-C
	STANDARD MOTOR PRODUCTS	FJ68
FUEL PRESSURE REGULATOR	FORD	F4CZ-9C968-A
	STANDARD MOTOR PRODUCTS	PR15

COMPATIBLE FORD 5.0 AND ASSOCIATED PARTS		
DISTRIBUTOR 5.0 WITH ROLLER CAM	FORD RACING	M-12127-C302
	A1-CARDONE	302892
DISTRIBUTOR 5.0 WITH STANDARD CAM	A1-CARDONE	302880
DISTRIBUTOR 5.8 WITH STANDARD CAM	A1-CARDONE	302884
DISTRIBUTOR 7.5 WITH STANDARD CAM	A1-CARDONE	302886

## Telorvek Panel Fuse Designation & Size

The harness has a total of eight fuses. Shown below is a diagram of what each fuse protects.

### Top, Front View Of Fuse Blocks

Fuse Row #1	
Fuse Designation	Fuse Size
Ignition O2 (LF & RT)	10 AMP
Ignition Coil, TFI Ign Module	20 AMP
Ignition Injectors (LF & RT)	15 AMP
Ignition IAC, Canister Purge Sol.	10 AMP

Fuse Row #2	
Fuse Designation	Fuse Size
Air By-Pass, Air Divert Solenoids	10 AMP
Ignition Fuel Pump Relay, ECM	10 AMP
Ignition MAF, EGR, ECM	10 AMP
Battery Fuel Pump Relay, ECM	15 AMP



## Copyright Infringement

**Ron Francis Wiring has taken the extra effort to produce a quality, easy to understand instructions. We will aggressively prosecute any other harness supplier who attempts to copy this material!!**