RON FRANCIS Wiring

TELORVEK EFI

MG-05 / MG-05A

WIRING INSTRUCTIONS

Thank you for purchasing the absolute finest of wiring kits for the Ford Motor Co. 4.6 3 valve and 5.4 S/C modular engines. This harness works on the 2005 through 2009 Ford Mustang GT and GT500 fuel injected engines. 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.

These engines originally used a “returnless” fuel system. The ECM maintained a fuel pump that was equipped to operate at variable speeds. A fuel pump driver module and a fuel rail pressure transducer worked with the ECM to control this special factory fuel pump that was designed to run at variable voltages and thus variable speeds. That is how fuel pressure was controlled in these factory vehicles. If you plan to use an aftermarket fuel pump, you will need to install a fuel pressure regulator between the pump and the fuel rail and run a return line from that fuel pressure regulator back to the fuel tank. You will still need to use the fuel rail pressure transducer and the fuel pump driver module. Proper adjustments will need to be made in your ECM program to facilitate the use of an aftermarket fuel pump. Please call if you have questions.

These engines require 32-33 PSI at idle and 41-42 PSI at WOT. We recommend that the fuel pump be mounted in the fuel tank. Custom installations are available from Tanks Inc. (320-558-6882) and Rock Valley (800-344-1934).

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**

*****Note*****

The ECM for this engine must be reprogrammed to have the PATS anti-theft removed, along with other necessary changes. This was explained to you at the time of order. If you have not had the ECM reprogrammed or have any questions please call us at 610-485-1981.

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 impedance, 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.

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.

There will be many connections to the TELORVEK panel so plan the location of the panel in an area with room to work. We suggest mounting the panel in an assessable location, in the trunk, under the seat or under the dash are good. 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 panel and computer. **For safety, disconnect the ECM connector until finished the installation.** 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!

Important! We have supplied three sizes of terminals for your use on the panels itself. The Yellow is for 10-12 gauge wire, Blue for 14-16 gauge wire and red for 18 gauge wire. Each individual bag instructions will be marked as to which terminal to use.

☞ NOTE ☜

You will be moving around to different terminals on the TELORVEK panel to make connections. For this reason extra care is needed when making all connections to the panel.

Bag #59 ENGINE COOLANT TEMP SENSOR (5.4 S/C ONLY): Attach the connector to the ECT sensor located on front of the engine. Using a red terminals run the Lt Green (ECT->71) to **#71** and Gray (ECT->38) to **#38.**

Bag #60 MASS AIR FLOW SENSOR (includes IAT): Attach the connector to the M.A.F sensor located in the air intake tube between the intake manifold and air cleaner. Using a blue terminal run the Red wire (MAF 6->23) to **#23**. Now using the red terminals run the Black (MAF 5->24) to **#24**, Tan (MAF 4->2) to **#2**, Lt Blue (MAF 3->1) to **#1,** Dk Green (MAF 1->3) to **#3** and Gray (MAF 2->32) to **#32.**

Bag #61 INTAKE AIR TEMP #2 (5.4 S/C ONLY): Attach the connector to the IAT sensor located on top of the engine. Using a red terminals run the Lt Green (IAT 2->100) to **#100** and Gray (IAT 2->38) to **#38.**

Bag #62 THROTTLE POSITION SENSOR (TPS): Plug into the sensor located in the front of the engine on the throttle body and run the wires back to the panel. Using the red terminals run the Yellow (TPS 1->4) to **#4**, Red (TPS 2->5) to **#5**, Lt Green (TPS 3->6) to **#6** and White (TPS 4->7) to **#7**.

Bag #63 ELECTRONIC THROTTLE CONTROL MOTOR: Plug the connector into the ETC Motor located in the front of the engine on the throttle body and run the wires to the Telorvek Panel and using the red terminals connect the Orange wire (ETC MOTOR 1->59) to **#59** and the Dk Blue wire (ETC MOTOR 2->60) to **#60**.

Bag #64 INTAKE MANIFOLD RUNNER CONTROL (IMRC) (4.6 ENGINE ONLY): The IMRC is located at the rear of the engine, just below the intake manifold. Plug in the connector and run the wires back to the Telorvek panel. Using the red terminals run the Red wire (IMRC 1->23) to **#23**, Black wire (IMRC 2->24) to **#24**, Dk Blue wire (IMRC 3->8) to **#8** and Lt Green wire (IMRC 4->9) to **#9.**

Bag #65 KNOCK SENSORS (2) (4.6 ENGINE ONLY): The knock sensors are located under the intake, screwed into the block. There is a short piece of harness that connects the two knock sensors together. Our harness plugs into that short harness, located at the back of the intake. Plug the connector into the short harness and run the wires back to the panel. Using the red terminals, connect the Red (RT KNOCK ->13) to **#13,** Yellow wire (RT KNOCK->12) to **#12**, the White wire (LF KNOCK->11) to **#11** and the Dk Green (LF KNOCK -> 10) to **10**.

Bag #66 CYLINDER HEAD TEMPERATURE SENSOR: This sensor is located in rear of the passenger side cylinder head under the intake. It is reachable without removing the intake. Plug in the connector and run the wires back to the panel. Using the red terminals, connect the Grey wire (CHT 3->34) to **#34** and the Yellow wire (CHT 2-120) to **#120**.

Bag #67 CANISTER PURGE AND CANISTER VENT SENSORS: This wiring is not included if it has been eliminated from the ECM programming. Plug in the connector into each sensor and run the wires back to the panel. Using the red terminals, connect the Red wire (CAN VENT->102) to **#102**, the Purple wire (CAN VENT->93) to **#93**, the light green wire (CAN PURGE->92) to **#92** and the Red wire (CAN PURGE->102) to **#102**.

Bag #68 OXYGEN SENSOR (4): Ford now uses four heated O2 sensors. This area of the vehicle is hot so keep the wires away from the exhaust. Four sensors are required per engine. **Install the left and right front O2 sensors in each exhaust manifold or in the header collector as close to the block as possible. The left and right rear O2 sensors mount behind the catalytic converters in each exhaust pipe.** These sensors monitor the status of the converters and WILL set a trouble code if a faulty converter is detected or a converter is not used at all (**UNLESS YOU HAVE HAD YOUR COMPUTER REPROGRAMMED**). NOTE: The O2 sensors do not send a signal to the ECM until they reach 600 degrees. Mounting them in header collectors may take longer for them to heat up causing the ECM to stay in OPEN LOOP longer than normal. If you must install an adapter, use part # OS-30.

LEFT FRONT O2: The four gang connector with the Red, Dk Blue, Yellow and Gray wires running from it plugs into the left front oxygen sensor.

RIGHT FRONT O2: The four gang connector with the Red, Lt Blue, White and Gray wires running from it plugs into the right front oxygen sensor.

LEFT REAR O2: The four gang connector with the Red, Lt Green, White and Gray wires running from it plugs into the left rear oxygen sensor.

RIGHT REAR O2: The four gang connector with the Red, Purple, Tan and Gray wires running from it plugs into the right rear oxygen sensor.

Run all the wires back to the panel and using the blue terminals connect the Red wires (LEFT FRT O2->22) to **#22**, (RIGHT FRT O2->21) to **#21**, Red wires (RIGHT RR O2->101) & (LEFT RR O2->101) to **#101**. The Gray wires (LEFT FRT O2->34) to **#34**, (LEFT RR O2->38) to **#38**, (RIGHT FRT O2->35) to **#35** & (RIGHT RR O2->38) to #**38**. Now using the red terminals connect the Dk Blue (LEFT FRT O2->16) to **#16**, Yellow (LEFT FRT O2->15) to **#15**, Lt Blue (RIGHT FRT O2->18) to **#18**, White (RIGHT FRT O2->17) to **#17**, Purple (RIGHT RR O2->105) to **#105**, Tan (RIGHT RR O2->106) to **#106**, Lt Green (LEFT RR O2->103) to **#103** and the white (LEFT RR O2->104) to **#104**.

Bag #70 IGNITION COIL: This 4.6 engine has eight coil packs, one for each spark plug. The coil packs are located above each cylinder. Locate the right coil connector with the Red and Lt Green wires and connect it to cylinder number (1) coil one (front passenger side). Now plug in the rest of the coil connectors (coils 2, 3, 4) in that half of the harness. In the left coil harness locate the coil connector with the Red and Yellow wires and connect it to coil number (5) (front driver side). Plug in the rest of the coil connectors (coils 6, 7, 8) and run all the wires from both haves of the harness to the Telorvek Panel.

Using the blue terminals connect the Red wires (IGN COIL 1->49) and (IGN COIL 5->49) to **#49**. Now connect the remaining eight wires as follows using the red terminals, Lt Green (IGN COIL 1->41) to **#41**, Pink (IGN COIL 2->42) to **#42**, White (IGN COIL 3->43) to **#43**, Dk Green (IGN COIL 4->44) to **#44**, Yellow (IGN COIL 5->45) to **#45**, Orange (IGN COIL 6->46) to **#46**, Lt Blue (IGN COIL 7->47) to **#47** and Dk Blue (IGN COIL 8->48) to **#48**.

WARNING !!!

The distributorless ignition system (DIS) on this engine is a high energy system operating in a dangerous voltage range which could prove to be fatal if exposed terminals or live parts are contacted. Use extreme caution when working on the vehicle with the ignition on or the engine running.

TACH: With these coil on plug motors Ford has the ECM providing the tach signal to the dash cluster. This tach signal is delivered multiplexed with other data that only the original dash instruments can read. For this reason, if you are using a tachometer, you will need to acquire a tach module or driver. Most gauge manufacturers have such units as this is a common problem that every 1999 and newer Mustang owner encounters when attempting to install an aftermarket tach. Please see illustration 1 at end of these instructions, consult your gauge manufacturer or give us a call to solve this issue or help wire up a tach module/driver 610-485-1981.

Bag #71 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 right injector connector with the Red and Lt Green wires and connect it to cylinder number (1) (passenger front) injector one. Now plug in the rest of the injector connectors (injectors 2, 3, 4) in that half of the harness. In the left injector harness locate the injector connector with the Red and Yellow wires and connect it to injector number (5) (driver side front). Plug in the rest of the injector connectors (injectors 6, 7, 8) and run all the wires from both haves of the harness to the Telorvek Panel. Using the blue terminals connect the Red wires (INJ 1->69) and (INJ 5->69) to **#69**. Now connect the remaining eight wires as follows using the red terminals, Lt Green (INJ 1->61) to **#61**, Pink (INJ 2->62) to **#62**, White (INJ 3->63) to **#63**, Dk Green (INJ 4->64) to **#64**, Yellow (INJ 5->65) to **#65**, Orange (INJ 6->66) to **#66**, Lt Blue (INJ 7->67) to **#67** and Dk Blue (INJ 8->68) to **#68**.

Bag #72 VARIABLE VALVE TIMING SOLENOIDS (4.6 ENGINE ONLY): The VVT Solenoids are located on each valve cover at the front. There is one for each bank of cylinders. VVT SOL 1 is the passenger side, VVT SOL 2 is the driver side. Plug in the connectors and run the wires back to the panel. Using the red terminals, connect the Purple wire (VVT 1->70) to **#70**, Red wire (VVT 1->21) to **#21**, Dk Green wire (VVT 2->71 to **#71** and the Red wire (VVT 2->22) to **#22**.

Bag #73 ACCELERATOR PEDAL POSITION SENSOR: As this is a drive by wire engine, you will need to use the original style gas pedal with the corresponding sensor that measures commanded throttle. Once you have located and mounted your accelerator pedal assembly, connect the plug to the sensor run the wires to the panel. Connect them using the red terminals, Grey wire (APP SENSOR 1->52) to **#52**, Brown wire (APP SENSOR 2->53) to **#53,** Grey wire (APP SENSOR 3->54) to **#54**, White wire (APP SENSOR 5->55) to **#55**, the Red wire (APP SENSOR 6->56) to **#56**, the Tan wire (APP SENSOR 7->57) to **#57** and the Yellow wire (APP SENSOR 8->58) to **#58**.

Bag #74 CAMSHAFT POSITION SENSORS: This engine uses two cam position sensors, one for each bank of cylinders. CAM POS SEN 1 is the passenger side, CAM POS SEN 2 is the driver side. These circuits require the wires to be shielded from any electrical interference. Carefully uncoil the harnesses and plug it into the correct cam position sensors located on the front of the engine. Run 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 harnesses there are solid strand wires with no insulation. At the panel, run these two solid strands together and install both together in a blue terminal and connect it to **#26**. After the connection is made wrap the exposed wire from the shielded harness to **#26** with electrical tape. Connect the remaining wires as follows: Dk Blue (CAM POS SEN 1->39) to **#39**, the Grey (CAM POS SEN 1->33) to **#33**, the Orange wire (CAM POS SEN 2->40) to **#40** and the Gray (CAM POS SEN 2->33) to **#33.**

Bag #75 CRANK POSITION SENSOR (CPS): requires the wires to be shielded from any electrical interference. Carefully uncoil the harness and plug it into the CPS located on the right front of the engine down by the balancer. Run 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 **#26**. After the connection is made wrap the exposed wire from the shielded harness to **#26** with electrical tape. Connect the remaining two wires as follows: Black wire (CPS->73) to **#73** and the Gray wire (CPS->74) to **#74**.

5R55S Electronic Controlled Overdrive Transmission Wiring
(Bags #76 and #77) (4.6 ENGINE ONLY)

Bag #76 5R55S TRANSMISSION CONNECTIONS: The 5R55S transmission is a electronically controlled automatic transmission. Plug the connector into the transmission and run the wires to the Telorvek panel. Using the red terminals, connect the Gray (TRANS 12->37) to **#37**, Orange wire (TRANS 2->80) to **#80**, Lt Blue (TRANS 1->79) to **#79**, Red (TRANS 3->50) to **#50**, Purple (TRANS 14->85) to **#85** and the White (TRANS 4->81) to **#81,** the Lt Green (TRANS 5->82) to **#82**, Pink (TRANS 6->83) to **#83**, the Yellow (TRANS 11->84) to **#84**, the Dk Blue (TRANS 15->86) to **#86** and the Brown wire (TRANS 16->87) to **#87.**

Bag #77 DIGITAL TRANSMISSION RANGE SELECTOR : This switch is located on the left hand side of the transmission. The DTR controls neutral safety, back-up and lever position functions. We have included wires in the MLPS connector to allow you to get full use out of the switch. Connect the circuits in the switch as follows:

NEUTRAL / SAFETY: The heavier gauge Lt Blue (DTR 12 -> IGN SW) and the Purple (DTR 10 -> START SOL) wires are for the neutral safety circuit. Locate the wire that runs from the ignition switch to the starter solenoid. Cut the wire and connect the Lt Blue wire (DTR 12 -> IGN SW) to the wire running from the ignition switch and the Purple wire (DTR 10 -> START SOL) to the wire running from the starter solenoid. **NOTE:** If you are wiring this circuit to a Ron Francis Wire Works Wiring Kit, these wires will be a color for color match.

BACK-UP LIGHTS: Connect the Orange wire (BACK UP LT FEED) to a 12 volt ignition source. This wire should have 12 volts only with the key in the run position. Run the other Dk Green wire (BACK UP LTS) to the rear of the vehicle and connect it to both back-up lights. The lights must be grounded.

LEVER POSITION CIRCUIT: Run these wires to the Telorvek panel. Using the red terminals, connect the Gray wire (DTR 2 -> 37) to **#37**, Lt Blue wire (DTR 3 -> 76) to **#76,** Yellow wire (DTR 4 -> 78) to **#78,** Black wire (DTR 5 -> 77) to **#77** and the White wire (DTR 6 -> 75) to **#75**.

Bag #78 TRANSMISSION CONTROL SWITCH (TCS) Auto Trans Only: The ECM has the capability to lock-out fourth gear of the transmission with a push of a button. Pushing the momentary contact switch button will lock-out fourth gear in the transmission for city driving. Pushing the button again will turn the TCIL off and release the lock-out allowing the transmission to shift into fourth gear for highway driving. The factory Mustang had a light indicating lockout of fourth gear, however, the circuit was fed through a high speed data line to the original gauge cluster and is not available for aftermarket applications.

Mount a momentary contact switch in dash or near the shifter lever. Using the red terminals, connect the Red wire (50->TCS) to **#50** and the White wire (72->TCS) to **#72** and run both wires to the TCS switch. You may connect the wires to either terminal on the switch.

Bag #79 OUTPUT SHAFT SPEED SENSOR (MANUAL TRANSMISSION): The output shaft speed sensor is located on the left of the transmission case, rearward on the tailshaft.. This sensor combined with other sensors inputs determine proper shift points and torque converter lock-up.

After plugging in the connector run the wires back to the panel. Connect the Dk Blue wire (OSS SENSOR->88) to **#88** and the Gray wire (OSS SENSOR->36) to **#36**.

Electronic speedometers can be connected to terminal **#88** to pick up the VSS signal. This is a standard Ford 8000 pulse per mile signal.

Bag #79A AUTOMATIC TRANSMISSION SPEED SENSORS: On automatics, there are three speed sensor lining the left side of the transmission case. The TURBINE SHAFT SPEED SENSOR (dark green and grey wires) is most forward on the transmission, the INTERMEDIATE SPEED SHAFT (orange and grey wires) is in the middle and the OUTPUT SHAFT SPEED SENSOR (dark blue and grey wires) is most rearward on the transmission. Connect the three sensors into their appropriate positions and run the wires back to the panel.

Connect the Dk Blue wire (OSS SENSOR->88) to **#88** , the Gray wire (OSS SENSOR->36) to **#36**, the Dk Green wire (TSS SENSOR->89) to **#89** and the Orange wire (ISS SENSOR->90) to **#90**.

Electronic speedometers can be connected to terminal **#88** to pick up the VSS signal. This is a standard Ford 8000 pulse per mile signal.

Bag #82 FUEL PUMP & INERTIA SWITCH: We have included the wiring necessary for the Ford inertia switch. The inertia switch cuts off the electric fuel pump in the advent of an accident. Mount the inertia switch in the rear of the vehicle in a dry area. Using the blue terminals, plug in the connector to the inertia switch and run the Tan wires (INERTIA SW->98) to **#98** and (INERTIA SW->99) to **#99** on the Telorvek panel

NOTE 1: The inertia switch has a red button on top of it that must be set (pushed down) in order for the fuel pump to operate. If the pump fails to operate check the inertia switch making sure the red button is in the down position.

NOTE 2: There are two relay sockets in the cover of the panel. The one closest to the fuses is for the fuel pump relay. Relays are not supplied with our wiring kit. The proper can be ordered locally under Airtex part #1R1061, Standard Motor Products part #RY116 or GM part #14100455.

Bag #83 DATA LINK CONNECTOR (DLC): Mount the connector inside the vehicle under the dash. Now run the wires to the Telorvek Panel and using the red terminals connect the Pink (DLC 11->117) to **#117**, Yellow (DLC 16->20) to **#20**, White (DLC 6->116) to **#116**, Lt Green (DLC 14->119) to **#119,** Orange (DLC 3->115) to **#115**, Purple (DLC 13->118) to **#118** and the Black wires (DLC 4->28) & (DLC 5->28) to **#28**.

A check engine light is not available for this system as Ford handled the signaling for this circuit through the high speed data line from the ECM to the stock gauge cluster.

Bag #84 ELECTRIC FAN WIRING: Connect the Lt Blue wire (112->COOLING FAN) to terminal **#112** and the Black wire (27->FAN GRND) to terminal #**27** on the panel and run them to the electric radiator cooling fan. Connect the Lt Blue wire to the positive wire running from the fan motor and the other wire to the fan motor ground.

NOTE 1: IF YOU ARE USING THE LATE MODEL FORD FAN ASSEMBLY THAT CAME ORIGINAL ON THE DONOR VEHICLE, DO NOT WIRE UP THE FAN PRESCRIBED ABOVE. INSTEAD, USING THE DONOR VEHICLE MODULE, RUN LARGE GAUGE WIRES FROM THE MODULE TO THE BATTERY POWER AND GROUND. THEN, FOR THE SMALL GAUGE WIRE, RUN TO TERMINAL 51 OF THE TELORVEK PANEL. DO NOT INSTALL A RELAY IN THE ELECTRIC FAN RELAY PORT ON THE PANEL.

NOTE 2: There are two relay sockets in the cover of the panel. The one furthest from the fuses is for the fan relay. Relays are not supplied with our wiring kit. The proper can be ordered locally under Airtex part #1R1061, Standard Motor Products part #RY116 or GM part #14100455.

Bag #88 FUEL PUMP DRIVER MODULE: Mount the fuel pump driver module to your liking and plug in the connector. Run the wires back to the panel. Using the red terminals, connect the Lt Blue wire (FP DRIVE 6->94) to **#94** and the Tan wire (FP DRIVE 1->95) to **#95**. Using the blue terminals, connect the Black wire (FP DRIVE 3->27) to **#27**, Tan wire (FP DRIVE 4->96) to #96, the Tan wire (FP Drive 5->98) to **#98** and the Black wire (FP Drive 2-> 97) to **#97**.

Next plug the 8 gang round connector into the fuel tank connector and run the wires back to the panel. There may be a short black wire with a ground ring that needs to go to ground. Using blue connectors, connect the Tan wire (FP MOTOR->96) to **#96** and the Black wire (FP MOTOR->97) to **#97.** Using Red terminals, connect the red wire (TANK PRESS 3->111) to **#111**, the Gray wire (TANK PRESS 2->54) to **#54** and the white wire (TANK PRESS 1->110) to **#110**. The Lt Green wire (FUEL SEND->GAUGE) is included to run to your fuel gauge. Do remember that the gauge needs to match the sending unit as far as ohm range for it to read properly**.**

If you are using an aftermarket fuel pump disregard the 8 gang round connector and simply wire the Tan FP MOTOR wire to the positive side of the fuel pump and the Black FP MOTOR wire to the negative side of the fuel pump. Disregard the Tank Press wires.

Bag #88A DUAL FUEL PUMP DRIVER MODULE & PUMPS (5.4 S/C ONLY): This engine version uses two fuel pump driver modules. Mount the fuel pump driver modules to your liking and plug in the connectors to both. Run the wires back to the panel. Using the red terminals, connect the Lt Blue wire (FP DRIVE 6->94) to **#94** and the Tan wire (FP DRIVE 1->95) to **#95**. Using the blue terminals, connect the Black wire (FP DRIVE 3->27) to **#27**, Tan wire (FP DRIVE 4->96) to #96 and the Black wire (FP Drive 2-> 97) to **#97**.
Using the red terminals, connect the Lt Blue wire (FP DRIVE2 6->94) to **#94** and the Tan wire (FP DRIVE2 1->19) to **#19**. Using the blue terminals, connect the Black wire (FP DRIVE2 3->29) to **#29**, Tan wire (FP DRIVE2 4->117) to #117 and the Black wire (FP Drive2 2-> 115) to **#115**.
Using a yellow terminal, crimp both Tan wires (FP Drive 5->98) and (FP Drive2 5->98) together and connect to #98.

We do not have access to the factory connector for the fuel pumps. We have supplied a TK-4 weatherpak connector to connect the four fuel pump wires to the factory harness at the fuel pumps. There may be a short black wire with a ground ring that needs to go to ground. Using blue connectors, connect the Tan wire (FP MOTOR 1->96) to **#96**, the Black wire (FP MOTOR 1->97) to **#97**, Tan wire (FP MOTOR 2->117) to **#117** and the Black wire (FP MOTOR 2->115) to **#115.**

Using Red terminals, connect the red wire (TANK PRESS 3->111) to **#111**, the Gray wire (TANK PRESS 2->54) to **#54** and the white wire (TANK PRESS 1->110) to **#110**. Using a red terminal, connect the Lt Green wire (FUEL SEND->100) to **#100.**

If you are using an aftermarket fuel pump disregard the 8 gang round connector and simply wire the Tan FP MOTOR wire to the positive side of the fuel pump and the Black FP MOTOR wire to the negative side of the fuel pump. Disregard the Tank Press wires.

Bag #89 FUEL RAIL PRESSURE TRANSDUCER: Locate the sensor on the front top driver's side of the motor on the fuel rail. Plug in the connector and run the wires back to the panel. Using the red terminals, connect the Pink wire (FUEL PRESS 1->107) to **#107**, the White wire (FUEL PRESS 2->108) to **#108,** the Grey wire (FUEL PRESS 4->35) to **#35** and the Yellow wire (FUEL PRESS 3->109) to **#109**.

Bag #90C ALTERNATOR: The alternator on these engines is computer controlled. We have supplied the control wires and connector in this kit but you will also have to connect a large charge wire to the alternator for proper charging. Plug in the connector at the alternator and run the two long wires to the panel. Using the red terminals, connect the Yellow wire (ALT 1->113) to **#113** and the Lt Blue wire (ALT 2->114) to **#114**. The short red wire has a ring on it and gets attached to the stud on the alternator, along with the large charge wire**.**

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.

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.

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. 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.

Fuse Designation & Size

The harness has a total of eight fuses. Shown below is a diagram of what each fuse protects. The illustration is the front view of the Telorvek panel.

Fuse Block #1	
Fuse Designation	Fuse Size Block #1
Spare	15 AMP
Mass Air Flow Sensor, Frt O2	15 AMP
Left & Right Coils & Transmission	20 AMP
Left & Right Injectors	20 AMP

Fuse Block #2	
Fuse Designation	Fuse Size Block #2
Rear O2 Sensors	15 AMP
ECM, DLC	20 AMP
Fuel Pump Relay	30 AMP
Fan Relay	30 AMP

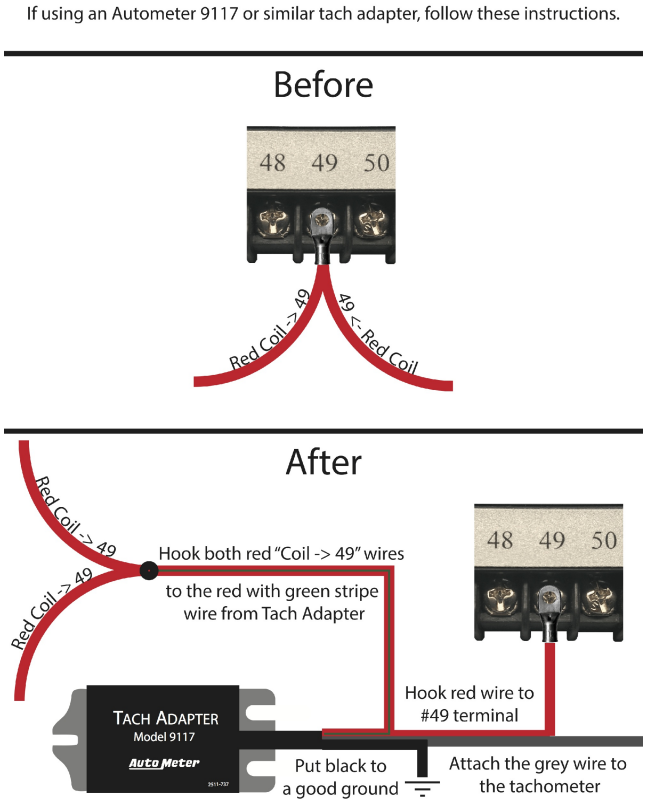
FUEL PUMP and ELECTRIC FAN RELAYS

The relay housings mounted in the cover of the Telorvek panel is for the FUEL PUMP and ELECTRIC FAN. The relay can be ordered under Airtex part #1R1061, Standard Motor Products part #RY116 or GM part #14100455

FUEL PUMP RELAY

ELECTRIC FAN RELAY

ILLUSTRATION 1: TACH ADAPTER WIRING



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.