

SECTION VI WIRING

WIRING HARNESS TOOLS:

Good quality wire strippers
Good quality terminal crimping tool
Straight edge razor knife and extra blades
Self powered test light

SUPPLIES:

Coil Resistor Mopar No. 5206436 or equivalent such as NAPA ICR-13, available from auto parts store.

Proper terminals - butt connectors, ring terminals, female disconnects, splice connectors

Electrical tape Wire ties Wire clamps

GENERAL

The Ford Harness is a two section, integrated assembly that meets the electrical wiring requirements for normal operation. Modifications can be made to suit any engine-transmission instrument configurations.

The two sections are the instrument harness and the main harness. These two sections meet and interconnect at the upper left corner on the rear of the firewall. We recommend that you use the Ford connectors that came with your Ford chassis or purchase new connectors from a dealer to interconnect the two harness sections. See Figures 1 and 2.

NOTE: Most older Fords have only one set of male/female plugs. The female plug is attached to the steering column. To facilitate connections between the main harness

and the instrument harness, another set of connectors should be purchased from a Ford dealer. See Figure 2.

An alternate method is to splice the wires together with butt connectors or use a terminal block.

The harness should be secured to the frame using plastic tie straps or cable clamps and should be checked for clearance between mating body parts. The harness should be kept clear of sharp edges, protruding screws, etc.

The wiring instructions given here apply to a standardized wiring-chassis-engine configuration. They apply to the use of Ford pin connectors, standard engines and automatic transmissions, with standard accessories. Refer to the Alternate Wire Hook-up for exexceptions.

INSTRUMENT HARNESS

The instrument harness connects to the instrument and indicator lights on one end and the fuse block and the female half of a Ford 11-pin connector on the other end.

Install the gauges in the instrument panel before installing the instrument panel in the body. Lay the instrument harness along the top edge of the panel above the gauges. There will be little space between the instruments and the wiper arm. Connect all the leads to the instruments and indicator lights.

NOTE: Keep the wiring tight and clean since there is little space between instruments. Check the diagrams, instructions and color codes carefully.

After the instrument panel is installed into the body, turn the body upside down and continue wiring.

INSTRUMENT HARNESS CONNECTIONS

See Figure 4 for detailed connections. An over-all wiring diagram is provided in this section.

- Heater. Connect blue (No. 62) to post No. 2 on heater switch and post on heater. Connect red/violet (No. 61) lead to post No. 1 on heater switch and fuse No. 7. Connect black ground wire (No. 9) from frame to heater. See Figure 4,5, and 6.
- Windshield Washer. Connect red/gray (No. 63) lead to post No. 1 on washer switch and fuse No. 5. Run a wire (not supplied) from post No. 2 on washer switch to washer pump. Ground pump to frame.
- Windshield Wiper. Connect white (No. 60) lead to post No. 3 on wiper switch and high speed post on wiper motor. Connect blue/black (No. 59) lead to post No. 2 on wiper switch and low speed post on wiper motor. Connect red/orange lead (No. 58) to post No. 1 on wiper switch and fuse No. 5.
- NOTE: Due to many variations in windshield wiper motors, we recommend that you connect the high and low speed

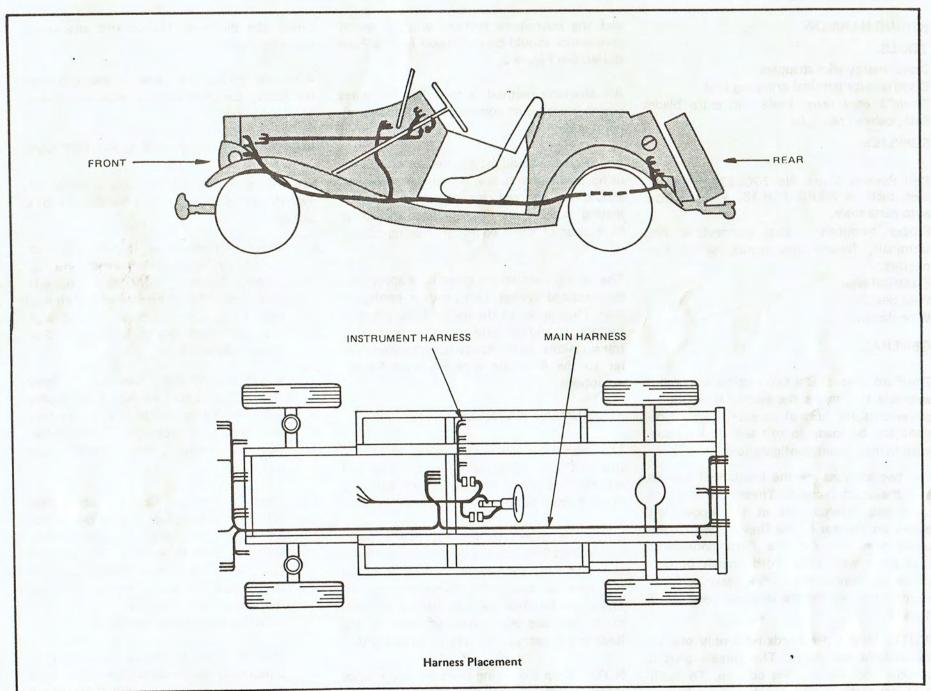


Figure 1

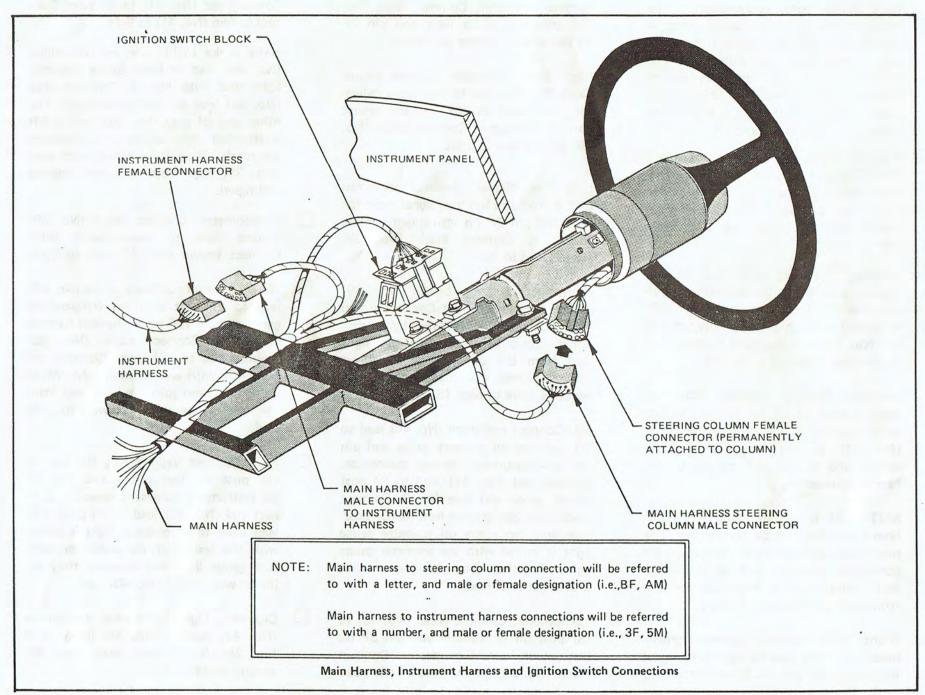


Figure 2

leads to the motor as suggested. If the motor gives you high speed when it	harness connector. Connect black (No. 39) ground lead to light and pin 7F	Connect red (No. 41) to (I) post. Connect brown (No. 41) to light.
should give you low speed, reverse the two leads. Also, the wiper will not return to park (all the way down) position when you turn them off. Time your shut-off so the wipers are down when you turn them off.	on instrument harness connector. High Beam Indicator. Connect white/ black (No. 51) lead to high beam indica- tor light and pin 5F on instrument harness connector. Connect black (No. 39) ground lead to light.	Hand Brake Light. Connect red/yellow (No. 46) lead to hand brake indicator light and fuse No. 9. Connect gray (No. 45) lead to hand brake light. The other end of gray (No. 45) lead is left unattached until all other connections
Parking Light. Connect brown/black (No. 57) lead to post No. 2 on head-light switch and pin No. 6F on instru-	Left Turn Signal. Connect green/red (No. 52) lead to left turn signal indicator	are made. Then it is joined with gray (No. 36) lead from the main harness and taped.
ment harness connector. Also connect brown (No. 40) to post No. 2 on head-light switch.	light and pin 2F on instrument harness connector. Connect black (No. 39) ground lead to light.	Speedometer. Connect black (No. 39) ground lead to speedometer light. Connect brown (No. 40) lead to light.
Headlight. Connect red/white (No. 56) lead to post No. 1 on headlight switch and fuse No. 2. Connect orange (No. 55) to post No. 3 on headlight switch and pin No. 9F on instrument harness connector. See Figures 4 through 8.	Ammeter. Connect black (No. 39) ground lead to (G) post. Connect brown (No. 40) lead to ammeter light lead. While doing this also join the light lead from the oil gauge with brown (No. 40) lead. For main harness con-	Water. Connect red/black/white (No. 43) lead to (S) post on water temperature gauge and pin 10F on instrument harness connector. Connect black (No. 39) ground lead to (G) post. Connect red (No. 40) with water gauge light. While
Foglight. Connect red/blue (No. 54) lead to post No. 1 on foglight switch and fuse No. 6. Connect yellow/black	nections, refer to page 18. Oil. Connect red/green (No. 44) lead to (S) post on oil pressure gauge and pin	doing this, also join the light lead from the fuel gauge with brown (No. 40) lead.
(No. 53) to post No. 2 on foglight switch and to pin 11F on instrument harness connector.	4F on instrument harness connector. Connect red (No. 41) lead to (I) post on oil gauge and fuse No. 9. Connect	Fuel. Connect yellow (No. 49) lead to (S) post on fuel gauge and pin 3F on instrument harness connector. Con-
NOTE: At this stage, your five dash- board switches will be hooked up. The next steps will complete the instrument	black (No. 39) ground lead to (G) post. The lead from the oil pressure gauge light is joined with the ammeter gauge	nect red (No. 41) lead to (I) post. The lead from the fuel gauge light is joined with the lead from the water tempera-
connector hook-up and all the gauge and indicator light hook-ups for the Ammeter. See Figures 6,8 and 9.	light. Together they are joined with brown (No. 40) lead.	ture gauge light and together they are joined with brown (No. 40) lead. Cigarette Lighter. Connect red/brown
Right Turn Signal. Connect green/ black (No. 50) lead to right turn signal indicator light and pin 1F on instrument	Tachometer. Connect green (No. 48) to (S) post on tachometer and pin 8F on instrument harness connector. Connect black (No. 39) ground lead to (G) post.	(No. 47) lead to cigarette lighter and fuse No. 8. Connect black (No. 39) ground lead to lighter.

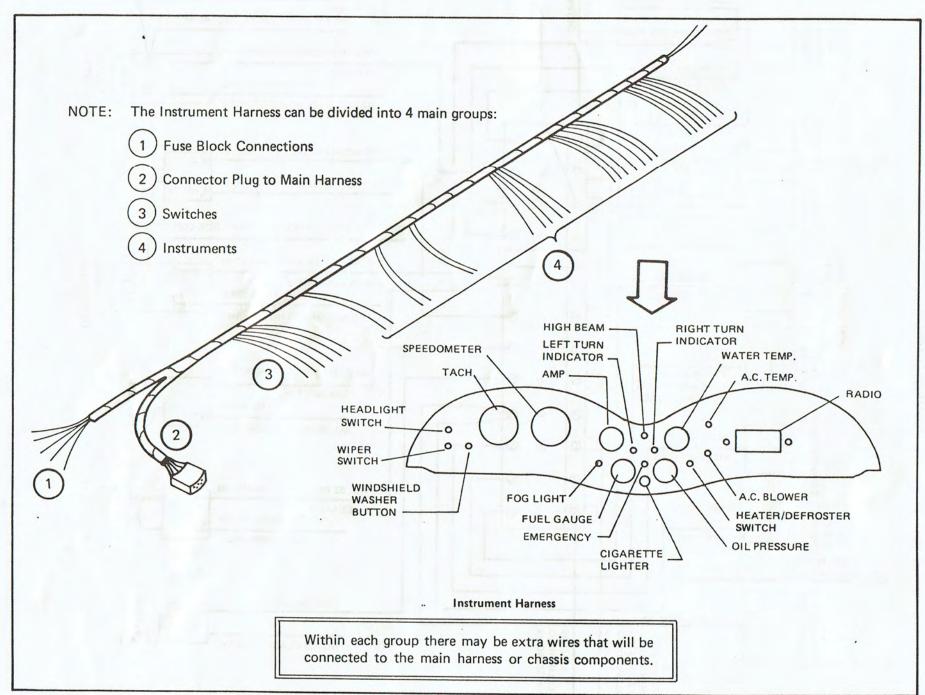
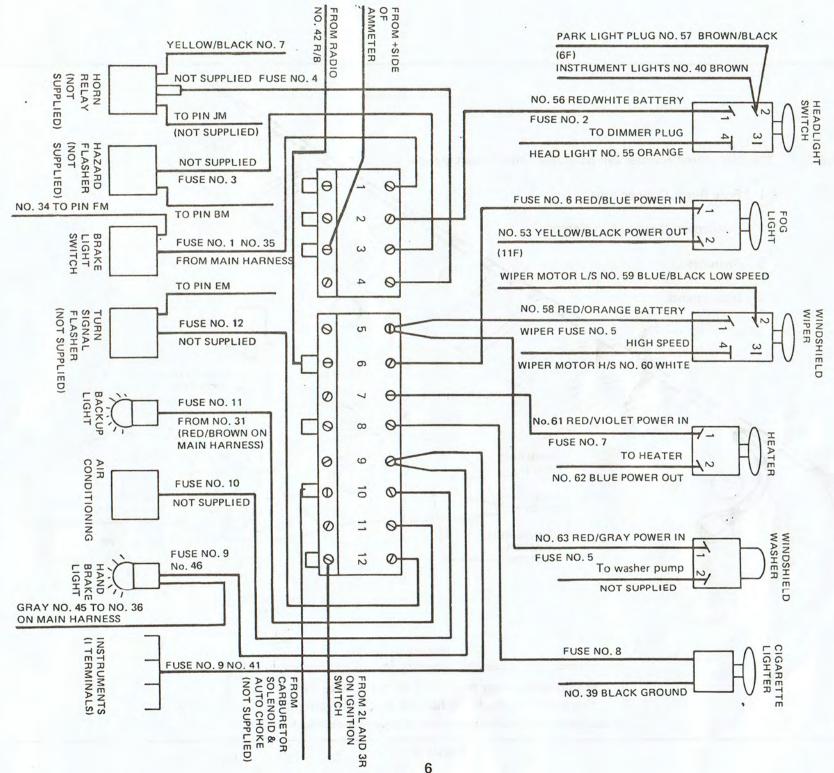


Figure 3



MF1

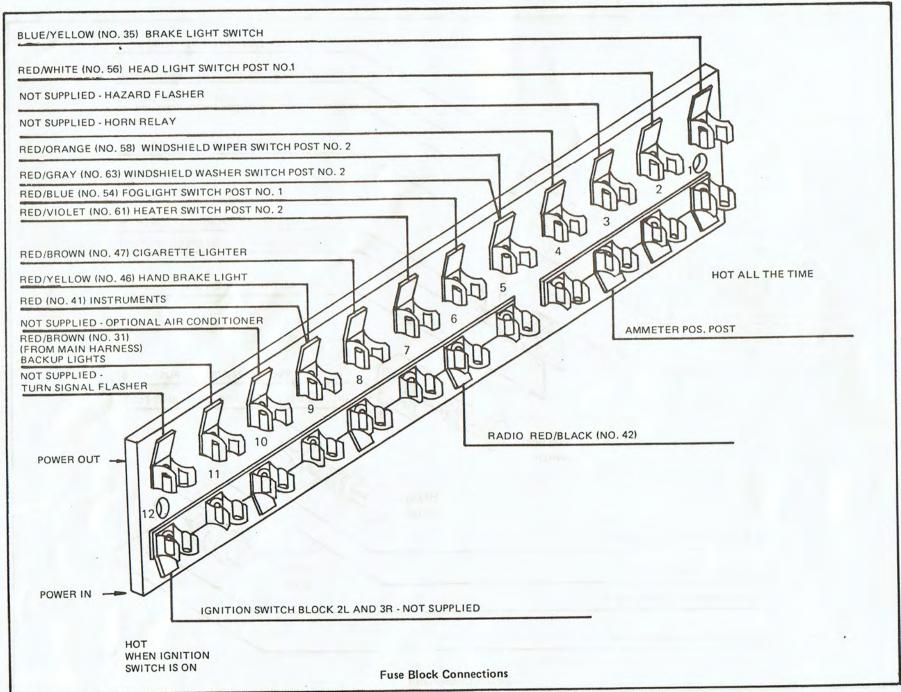


Figure 5

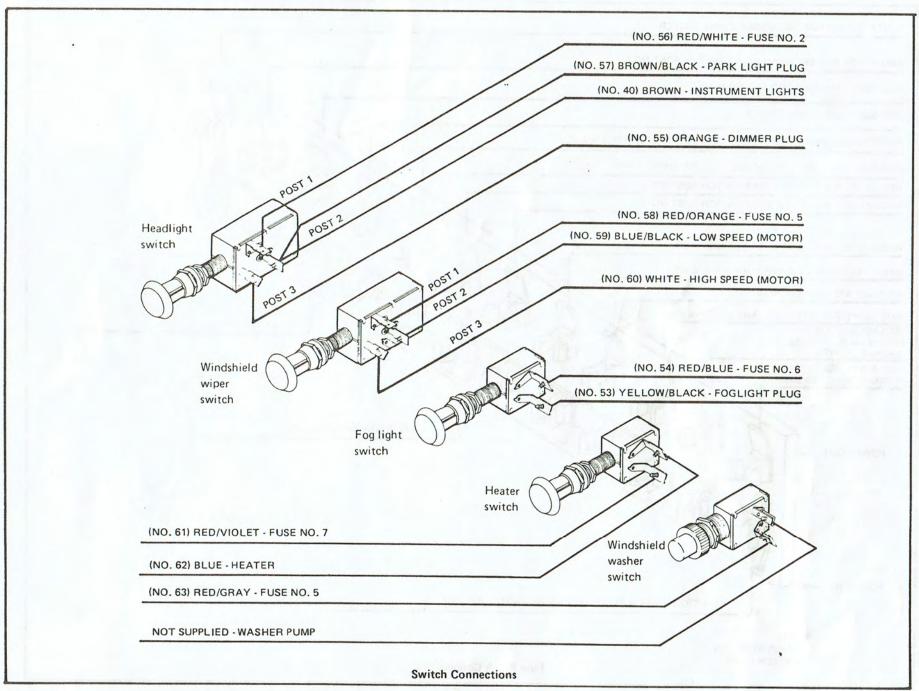


Figure 6

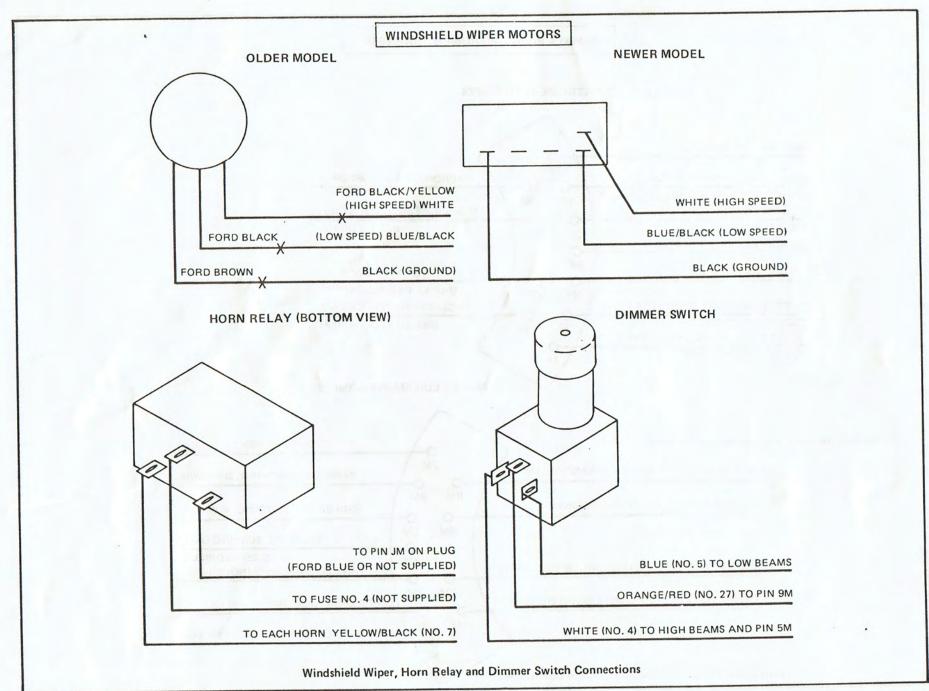
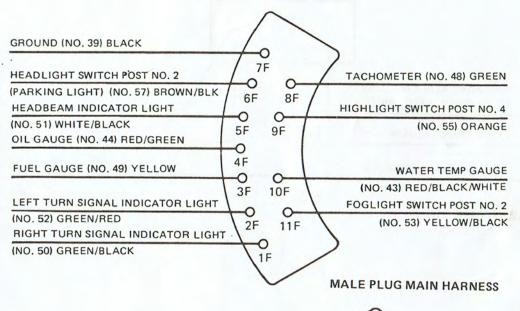


Figure 7

FEMALE PLUG INSTRUMENT HARNESS

FEMALE PLUG INSTRUMENT HARNESS



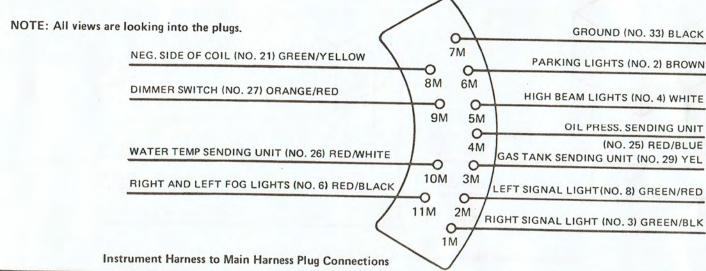


Figure 8

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HARNESS

Gauges and Indicator Lights

 Radio. The radio has an in-line fuse. Connect red/black (No. 42) lead to power side of fuse block 1-4 and the lead on the radio containing the in-line fuse. Connect black (No. 39) ground lead to radio. NOTE- This completes connecting the instrument harness. 	NOTE: For an overall wiring diagram of Main Harness, see Main Harness Installation. Right and Left Front Turn Signals. Connect the black (ground) (No. 1) lead to each light. Connect the brown (No. 2) lead to the parking light. The green/black lead (No. 3) connects to the right signal light and the green/red
MAIN HARNESS	(No. 8) lead connects to the left turn signal.
The Main Harness connects to two Ford pin connectors and the ignition switch block on one end and branches off into three main branches which are the front branch, engine branch and rear branch. Each main branch divides into other branches which are detailed below. The starting point for all the branches will be the steering column. This is where the Ford pin connectors join and the ignition switch block is on the steering column. Since the main harness branches from one end of the car to the other, it is more efficient to run the branches to their locations and make all the connections that apply to the branch. Then come back to the steering column area and make the pin connections and block connections.	 NOTE: Connect short leads to all lights prior to installation to facilitate hook-ups. Rights and Left Headlights. Connect the black (No. 1) ground lead to each headlight. Connect blue (No. 5) lead to low beam and white (No. 4) to high beam on each light. Right and Left Foglights. Connect red (No. 6) lead to each foglight. Right and Left Horns. Connect black (No. 1) ground lead to each horn. Connect yellow/black (No. 7) lead to the positive connection on each horn. (The two leads are interchangeable.)
FRONT BRANCH Route the harness down from the left side of the firewall. Bring the wires forward on	Ground. The black (No. 1) lead attaches to each component and then is bolted
top of the frame and across the front through the channel under the radiator. The branches for the lights, horn, etc. should end up behind the front corners of the frame. Make the ground connections before the body is on	NOTE: Make sure all dust, paint, rust, etc. is cleaned away where the ground connection is made.

Horn relay. The horn relay, as well as the flashers, are mounted on the fuse block board behind the dashboard. Connect the yellow/black (No. 7) lead to the relay. Run a lead (not supplied) from the relay to where the main harness pin plug connector will be (later connect to pin JM). From the other side of the relay run a lead (not supplied) to terminal No. 4 on fuse block 1-4. Refer again to Figure 7 for typical horn relay hook-up.

NOTE: This completes the connections to be made in the front of the car.

ENGINE BRANCH

The engine harness branch has two main divisions. One runs along the left side of the valve cover to the distributor and alternator. The other runs across the top edge of the firewall to the ignition module, coil, resistor, regulator and starter relay. The ignition module, coil, resistor and regulator are located on the shelf on each side of the battery box. The starter relay is on the firewall.

Lay the harness in position along the firewall to determine the location for the components. The connectors at the alternator, distributor, coil and ignition module are Ford connectors and not included with the Harness Kit. Use the plugs on the original Ford harness and attach them to the engine harness where appropriate by soldering and taping each lead. Specific connections are detailed below. (In the event the Ford plugs are lost or damaged, all the connections are

the frame.

_	n in terms of direct splices to the com- ents.)	connections on a single plug. Follow the same hook-up procedures.		to the other terminal on the resistor.
	Alternator. Connect the orange/black (No. 14) lead to the F (field) connection on the alternator. The red/black (No. 37) lead attaches to the B (battery) terminal on the alternator. See Figure 10.	Sending Units. Connect red/blue (No. 25) lead to the oil pressure sending unit on the engine. Connect the red/white (No. 26) lead to the water temperature sending unit on the engine.		Coil. Connect yellow/brown (No. 18) lead to the positive terminal (indicated with a (+)) of the coil. Connect the green/blue (No. 20) lead and the green/yellow (No. 21) lead to the negative terminal (indicated with a minus sign
	Distributor. The distributor has a plug connector that can be joined to the engine harness by either replacing the Ford wire with the harness kit wires or splicing the wires together. The color match up are as follows: Connect the orange/brown (No. 15) lead to the Ford	Starter Relay. Connect red/yellow (No. 11) lead to S (starter) terminal on the relay. Connect the blue/black (No. 12) lead to S terminal. Connect the red (No. 38) lead to battery side of the relay. Connect the yellow/blue (No. 10)	REA	[-]). NOTE: This completes the component connections of the engine branch of the main harness. AR BRANCH
0	yellow lead; connect the purple (No. 23) lead to the Ford purple/blue; connect the black (No. 24) to the Ford black.	lead to battery side. The ground lead is black (No. 9) and attaches to the relay mounting nut. Now would be a good time to connect this ground lead to the	The back	rear branch of the main harness has eral divisions that branch several ways. I main branch goes down the firewall and k along the inside of the frame. Make asmisison, fuel, and ground connections
	Ignition Module. The ignition module has two plug connections. Use the plugs by either replacing the Ford wires with	regulator, heater and bolt it to the frame.	befo	ore the body is on the frame. Each branch its connections are detailed below.
	the kit wires or splice the wires together. The connections are as follows: connect the red/yellow (No. 11) lead to the Ford red; connect the white/black (No. 22) lead to the Ford white.	Regulator. The regulator should be grounded with black (No. 9) lead from the starter relay. If this connection has not been made, do so now. The regulator terminals are marked, A, F, and I. Connect them as follows: the yellow/		Right Taillight. Connect brown (No. 2) lead to the taillight. Connect green (No. 30) lead to the signal light. The black (No. 33) lead is ground.
	This completes one plug. The other is as follows: connect the black (No. 24) lead to the Ford black; connect the	blue (No. 10) lead to A; the orange/ black (No. 14) lead to F; the green/ brown (No. 16) to I. (Other terminals on the regulator are not used.)		NOTE: Connect short leads to taillights prior to installation to facilitate hook up.
	purple (No. 23) lead to the Ford black/ blue or purple; connect the orange/ brown (No. 15) to the Ford orange; connect the green/blue (No. 30) to the Ford green. This completes both plugs.	Resistor. Connect brown/black (No. 19) lead to one terminal on the resistor. Connect the yellow/red (No. 17) lead		Back-up and Tag Lights. Connect red (No. 32) lead to the back-up lights and brown (No. 2) lead to the tag lights The black (No. 33) lead is ground.

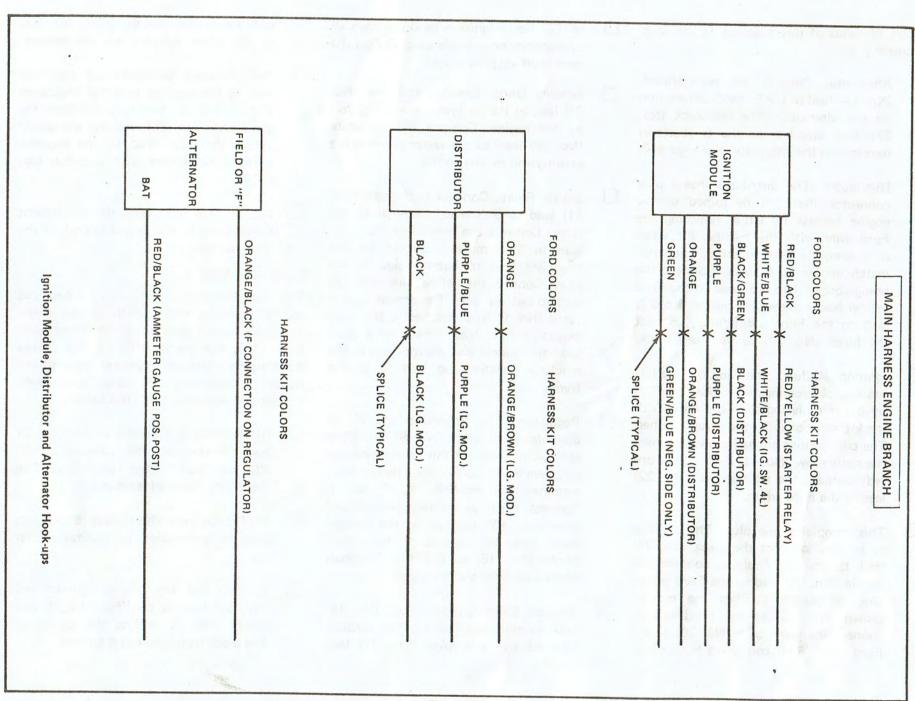


Figure 10

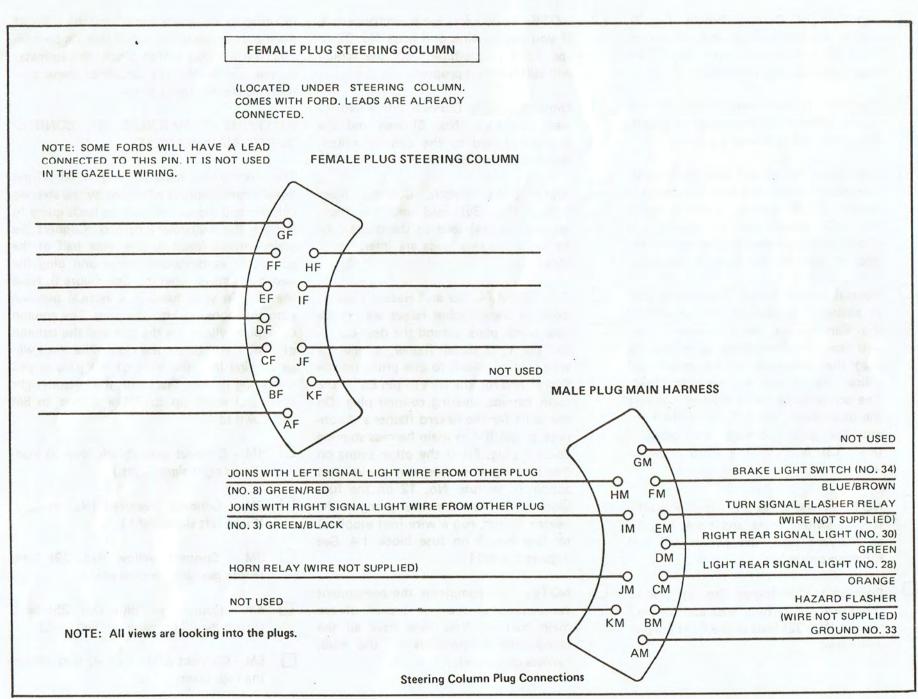
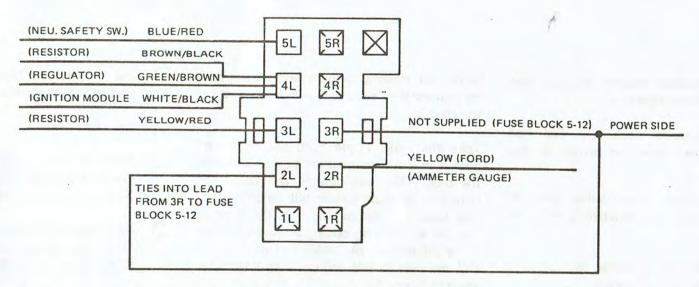


Figure 11

Left Taillight. Connect brown (No. 2) lead to the left taillight and the orange (No. 28) lead to the signal light. The black (No. 33) lead is ground.	NOTE: These wires are interchangeable. If you switch wires and hook No. 32 to the Ford purple/blue lead, the switch will still function properly.	In order to complete the wiring the leads of the main harness go to one of two pin connec- tors, the ignition switch block, the ammeter or the fuse block. The details of these con-
Gas Tank. Connect yellow (No. 29) lead to the gas tank's fuel level sending unit. The black (No. 33) lead is ground.	Dimmer Switch. Connect white (No. 4) lead, the blue (No. 5) lead and the orange/red lead to the dimmer switch. Refer again to Figure 7.	INSTRUMENT HARNESS PIN CONNECTOR TO MAIN HARNESS
Handbrake Switch and Gear Shift Light. Connect gray (No. 36) lead to handbrake switch (Ford green). Connect black (No. 33) ground lead to ground lead (Ford black) on switch. Connect brown (No. 2) lead to light bulb in gear shift.	Brake Light Switch. Connect blue/ yellow (No. 35) lead and the blue/ brown (No. 34) lead to the brake light switch. (The two leads are interchange- able.)	The instrument harness plug is an 11-pin female connector. It is located by the steering column and should have all its leads going to it from the instrument harness. Connect the main harness leads to the male half of the connector as described below and plug the
Neutral Safety Switch. The neutral safety switch is located on the left side of the transmission. We recommend that you leave the Ford wires going into the plug that connects to the switch and splice the harness kit wires to them. The connections are as follows: connect the blue/black (No. 12) lead to the Ford red/blue lead; connect the blue/red (No. 13) lead to the Ford blue/red lead.	Turn Signal Flasher and Hazard Flasher. Both of these flasher relays are on the fuse block plate behind the dash-board. On the turn signal flasher, connect a wire (not supplied) to one prong on the flasher and run the wire to pin EM in the main harness steering column plug. Do the same for the hazard flasher and connect to pin BM in main harness steering column plug. From the other prong on the turn signal flasher, run a wire (not	two connectors together. See Figure 8. Hold the plug in your hand in a vertical position with you looking into the plug. The column of 4 pins will be on the left and the column of 7 pins will be on the right. The leads will be coming into the back of the plug as you are facing it now. Start with the bottom right (1M) and work up to 7M and over to 8M and down to 11M. 1M - Connect green/black (No. 3) lead. (From right signal light.)
NOTE: These wires are interchangeable. If you switch wires and hook No. 12 to blue/red lead, the switch will still function properly.	supplied) to fuse No. 12 on the fuse block 5-12. From the other prong on the hazard flasher, run a wire (not supplied) to fuse No. 3 on fuse block 1-4. See Figures 5 and 11.	 □ 2M - Connect green/red (No. 8) lead. (From left signal light.) □ 3M - Connect yellow (No. 29) lead.
Connect the red/brown (No. 31) lead to the Ford purple/blue lead and connect the red (No. 32) lead to the Ford purple/ white lead.	NOTE: This completes the component connections of the rear branch of the main harness. You now have all the component connections of the main harness connected.	(From gas tank sending unit.) 4M - Connect red/blue (No. 25) lead. (From the oil pressure sending unit.) 5M - Connect white (No. 4) lead. (From the high beam lights.)

	6M - Connect brown (No. 2) lead. (From parking lights.) 7M - Connect black (No. 33) lead. Ground lead from rear branch of main	is on the steering column and comes with its connections already made when you get the chassis. Take the male 11-pin Ford connector and		FM - Connect blue/brown (No. 34) lead. (From the brake light switch.) GM - Not used.
	harness.) 8M - Connect green/yellow (No. 21) lead. (From the negative side of the coil.)	old it in a vertical position as you look into the plug. The 7-pin column will be on the ght and the 4-pin column will be on the left. The leads will be coming into the back of the pin as you are looking at it. Begin with		HM - Connect green/red (No. 8) lead. (This lead joins with left signal light lead from the other plug.) IM - Connect green/black (No. 3) lead.
	9M - Connect orange/red (No. 27) lead. (From the dimmer switch.)	the right bottom pin (AM) and work up to GM and over to HM and down to KM. Refer again to Figure 11.		(This lead joins with the right signal light lead from the other plug.)
	10M - Connect red/white (No. 26) lead. (From the water temperature sending unit.)	AM - Connect black (No. 33) lead. (From rear harness branch.)		JM - This lead is not supplied. It is the lead that comes from the horn relay. Connect the lead from the horn relay to pin JM.
	11M - Connect red/black (No. 6) lead. (From the right and left fog lights.)	BM - This lead is not supplied. It is the lead that comes from the hazard flasher. Connect the lead from the hazard		KM - Not used.
	NOTE: This completes the leads going into the 11 pin, male, Ford plug and it now can be connected to the 11 pin, female, Ford plug on the instrument	flasher to pin BM. CM - Connect orange (No. 28) lead. (From the left rear signal light.)		NOTE: This completes the leads going into the 11-pin male, Ford plug by the steering column and this plug can now be plugged into the connector on the steering column.
STE	harness. EERING COLUMN PIN CONNECTOR TO	DM - Connect green (No. 30) lead. (From the right rear signal light.)		NOTE: If using a stock Ford gas tank with a stock Ford sending unit, you
MAIN HARNESS STEERING COLUMN CONNECTOR The next pin connector is an 11-pin Ford		EM - This lead is not supplied. It is the lead that comes from the turn signal flasher. Connect the lead from the flasher to Pin EM.		will need to install a five-watt 50 ohm resistor between the S and the I terminals of the custom gauge.
	nector. The female half of the connector			

17



IGNITION SWITCH BLOCK

The ignition switch block is mounted on the top of the steering column. The connections are called out from the view of you sitting in the driver's seat looking down on the block. The connections on the left are designated 1L (closest to you) to 5 L. The connections on the right are designated 1R clostest to you) to 5R. See Figure 12. We recommend that you splice the harness kit wires to the Ford wires. Not all of the wires or connections are used.

- ☐ 1L Not used.
- 2L Use the For lead and splice it with the Ford lead coming out 3R.
- 3L Connect yellow/red (No. 17) lead (from the resistor) to the Ford brown/ purple lead in the switch.
- 4L Connect green/brown (No. 16) lead (from the regulator), the brown/

Figure 12. Ignition Switch Block Connections

black (No. 19) lead (from the resistor) and the white/black (No. 22) lead (from the ignition module) to the Ford lead in 4L.

- 5L Connect blue/red (No. 13) lead (from the neutral safety switch) to the Ford lead in 4L.
- ☐ 1R Not used.
- 2R Run a lead (not supplied) from 2R to the positive post on the ammeter. (If the Ford wire is too short, splice a lead you supply.
- 3R This lead is not supplied. Connect a lead you supply to 3R and 2L and run the lead to the power side of fuse block 5-12.
- 4R Not used.
- ☐ 5R Not used.

The connector to the right of 5R is not used.

AMMETER

Connect red/black (No. 37) lead (from the alternator) to the positive post on the ammeter. Also run a lead (not supplied) from the positive post on the ammeter to power side of fuse block 1-4. Connect red (No. 38) from battery side of starter relay to the negative post on the ammeter. Refer to Figure 9.

FUSE PANEL

Connect blue/yellow (No. 35) lead (From the brake light switch) to terminal No. 1 on fuse block 1-5. Refer to Figure 5.

This completes all of the connections for the Harness Kit.

APPENDIX A

ALTERNATE WIRE HARNESS HOOK-UP INSTRUCTIONS

For connection of instrument harness with main harness

1974 and Earlier Fords. These earlier Fords do not have electronic ignition systems. If you have a chassis that fits into this group, refer to the supplement.

SUPPLEMENTARY WIRING INSTRUC-TIONS FOR '74 AND EARLIER FORDS

- ☐ 1L Not used.
- 2L Not used.
- 3L Run a lead (not supplied) from 3L to the positive post on the ammeter. (If the Ford wire is too short, splice a lead you supply.
- 4L Connect green/brown (No. 16) lead (from the regulator), brown/black (No. 19) lead (from the resistor) and the white/black (No. 22) lead (from the ignition module) to the Ford lead in 4L. The yellow/red (No. 17) lead (from the resistor) is not used.
- R Not used.
- R Not used.
- ☐ 3R This lead is not supplied. Connect a lead you supply to 3R and run the

lead to the power side of fuse block 5-12.

- 4R Connect blue/red (No. 13) lead (from the neutral safety switch) to the Ford lead in 4R.
- Starter Relay. Connect red/yellow (No. 11) lead to the I terminal on the relay. Connect the blue/black (No. 12) lead to S terminal. Connect the red (No. 38) lead to battery side of the relay. Connect the yellow/blue (No. 10) lead to battery side.
- Ignition Module Wires. Splice together red/yellow (No. 11) and white/black (No. 22). Also splice orange/brown (No. 15) and green/blue (No. 20). The purple (No. 23) and the black (No. 24) are not used.

Transmissions. The earlier instructions refer to an automatic transmission. If you are using a standard transmission, when you make your connections to the neutral safety switch, take the two Harness Kit leads colored blue/black and blue/red and connect them together using solder and tape. Cap or tape the brown lead coming out of the transmission. Connect the red and red/brown leads from the Harness Kit to the remaining leads on the transmission.

Other Engines. Six and eight cylinder ignition systems require additional wires between the distributor and ignition module. These should be routed along the harness and taped in place. Engines other than four cylinder Fords may have different starter, alternator, etc., locations so lead lengths may have to be changed.

