



**American
Autowire**

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DESIGN ASSISTANCE
PROVIDED BY:

LATEMODELRESTORATION.COM

1987-89 Ford Mustang
Classic Update Series
510547

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510547 92970659 Rev 5.0 05/13/2025

START HERE !

PLEASE READ THIS BEFORE STARTING INSTALLATION !

This wiring kit is designed for ease of installation. Please read the guidelines below, BEFORE STARTING your installation, to guarantee a successful job. Use an appropriate crimping tool, which folds the wings of the open barrel terminals down into the wire, as shown on this page. If you use our crimping tools and correctly crimp the included terminals, soldering is not necessary. If you are unsure about a particular crimp, soldering is recommended. Our factory crimped terminations are installed by GM approved five ton presses, and soldering these terminations is not necessary.



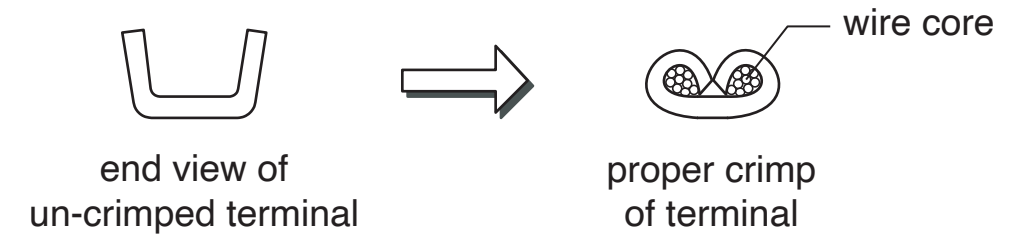
AAW offers a great terminal crimping video entitled "Proper Crimping Video". It can be viewed by visiting YouTube.

Type the following address into your web browser, to go directly to the video:
www.youtube.com/watch?v=JAgEDoVI-co

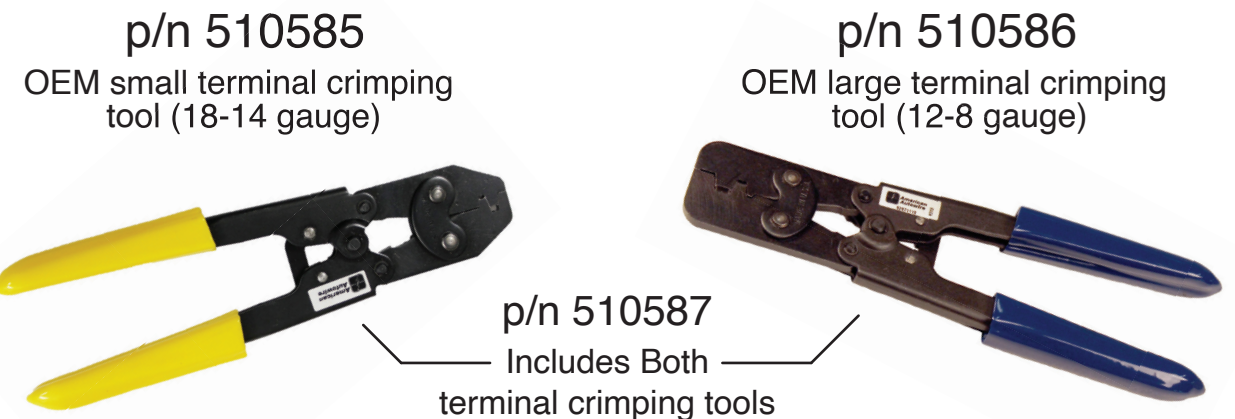
Youtube Channel:
www.youtube.com/user/WiringHarness



The terminals that we supply in our kits, utilize what is known as an F crimp. The F crimp, in a cross section, will look like the illustration below, when done correctly.



We carry the following crimping hand tools, to help with your terminal crimping. These hand tools are available, for purchase or rental.



We carry many accessories for your 1987-89 Ford Mustang.



STEP 1: DISCONNECT YOUR BATTERY:

Disconnect the battery, before installing the wiring kit, to prevent any accidental shorting caused by loose bare wire ends.

1987-89 Ford Mustang

Classic Update Series

510547 92970659 Rev 5.0 05/13/2025

If you have any questions concerning this or any of our products, please feel free to call us at 1-856-933-0801.

STEP 2: START INSTALLING KIT:

This kit is broken down into individual sections, that are identified by a letter printed on the enclosed sheets, visible through each bag. The order of installation and the pages with their installation instructions, are shown below:

Table of Contents:

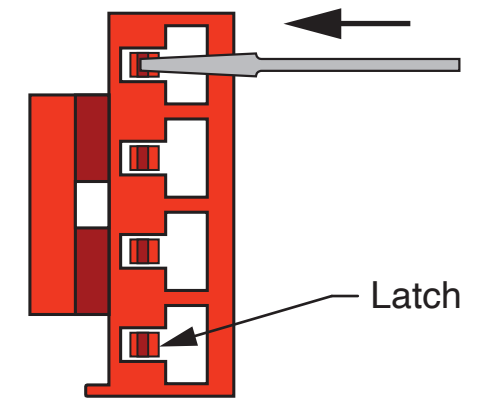
Bags: Pages: Sections:

G	4 - 14	Dash Harness - This is the main harness in the kit and contains: <ul style="list-style-type: none">- Starter solenoid connections.- Wiper motor connections- Brake light switch connection.- Neutral safety switch connection.- Door jamb switches.- Wiper module and switch connections- Defrost module and switch connections.- Headlight and fog light connections.
H	15, 16	Gauge Cluster Harness - This Harness contains: <ul style="list-style-type: none">- Gauge connections for aftermarket gauges.
M	17, 18	Rear Body Harness - This Harness contains: <ul style="list-style-type: none">- Tail light, turn signal, reverse light, and running light connections.- Hatch connections; third brake light, license plate lights, and rear defroster connections.- Fuel pump connections.
L	19 - 22	Front Light Harness - This Harness contains: <ul style="list-style-type: none">- Headlight, turn signal, running light connections.- Fog lamp wiring.- Windshield washer connection.- Electric fan relay trigger.- Brake fluid level wiring.
J	23 - 25	Engine Harness - This Harness contains: <ul style="list-style-type: none">- Temperature, oil pressure, tachometer wiring.- Ignition system / ECU power.- A/C compressor connections.- Alternator connections.

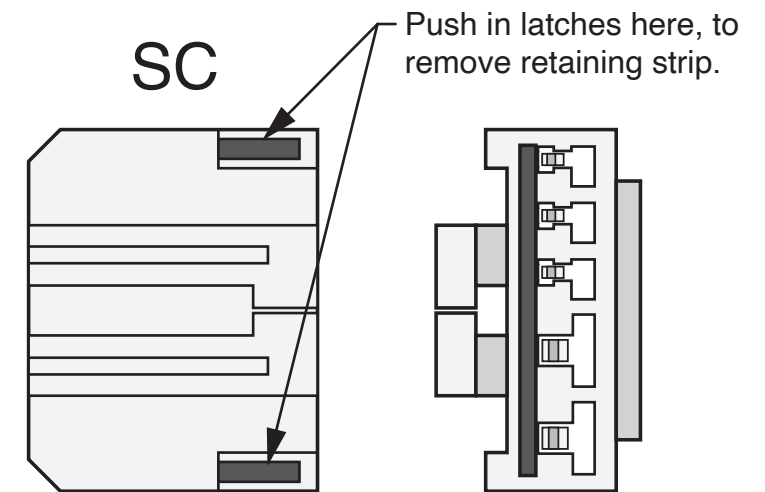


Connector terminal removal instructions:

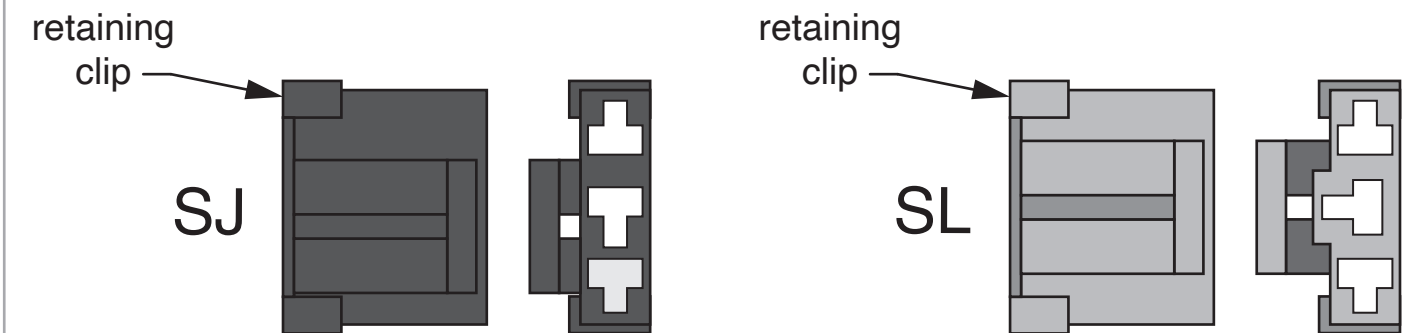
You will need to remove the terminals, from the connectors that are to be salvaged from your original harnesses. Looking into the openings in the mating end of the connector, you will need to push the small latches inside, towards the outside of the connector body, while gently pulling the wire and terminal, from the other end. Be careful not to break the latches.



The white Defrost Module connector to the right, needs to have the black retaining strip removed, prior to pushing the latches, to release the terminals. This retaining strip will be replaced, after the new terminals are installed. If the strip should break, during removal, the connector will still work without it.



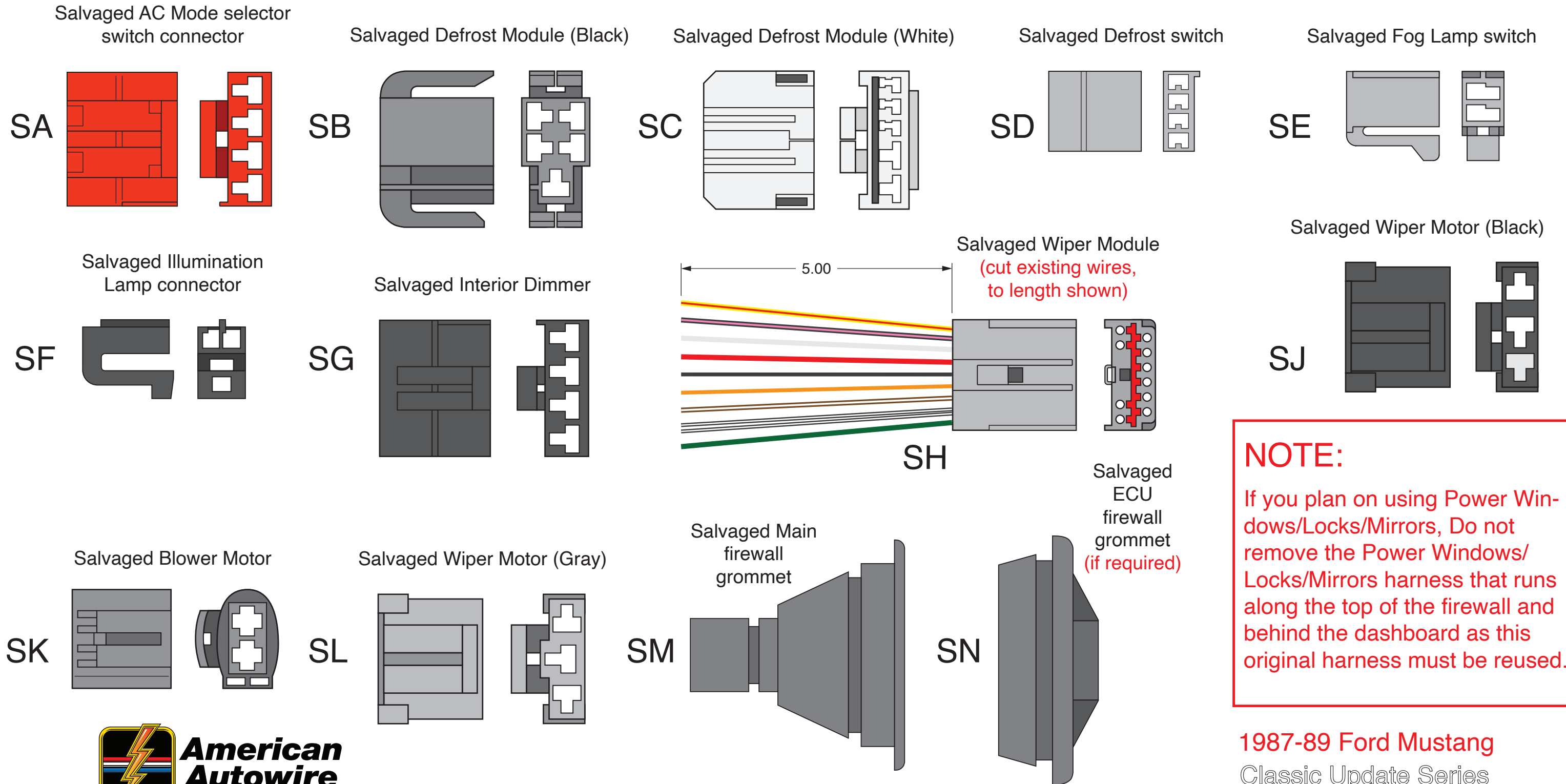
The two Wiper Motor connectors, have a retaining clip on the wire side, that must be removed, prior to pushing the latches to release the terminals. These retaining clips will be replaced, after the new terminals are installed. If the clips should break, during removal, the connectors will still work without them.



The terminals are not shown in these views, for clarity.

Dash/Main Harness installation instructions:

Shown below, are the connectors and grommets you will need to salvage/remove from your original Dash harness, that will be re-used (along with the supplied parts, on the following page) to complete your Dash/Main harness connections. They are itemized and referred to on this page, just as they are on the following pages of this Dash/Main instruction set (also see page 17, for parts salvaged from your original Rear Body harness). Terminal removal instructions, are on page 3. The original “donor” harnesses, for these salvaged parts, are in years 1987-93.



NOTE:

If you plan on using Power Windows/Locks/Mirrors, Do not remove the Power Windows/Locks/Mirrors harness that runs along the top of the firewall and behind the dashboard as this original harness must be reused.

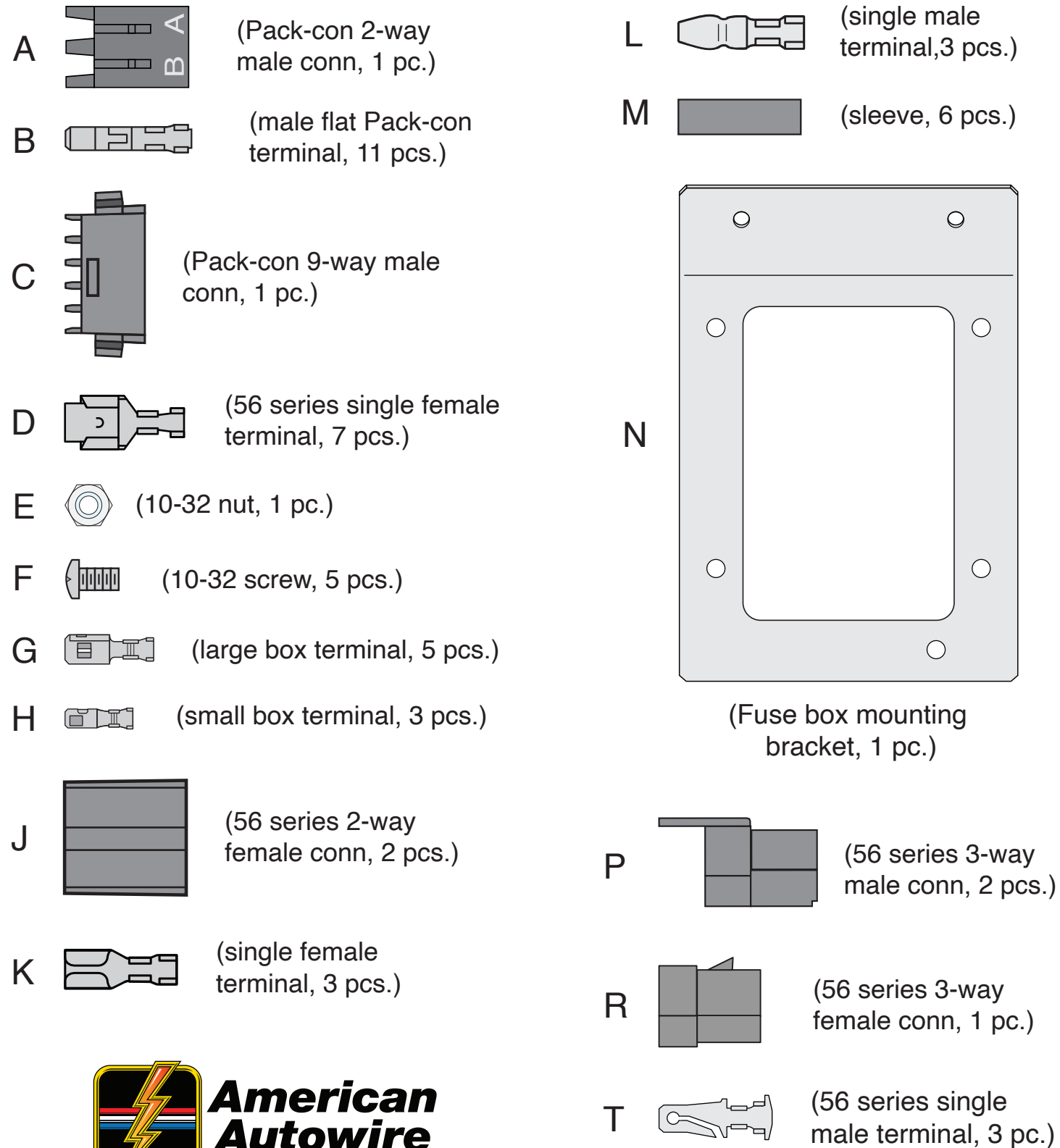
1987-89 Ford Mustang

Classic Update Series

510547 92970659 Rev 5.0 05/13/2025

Dash/Main Harness installation instructions:

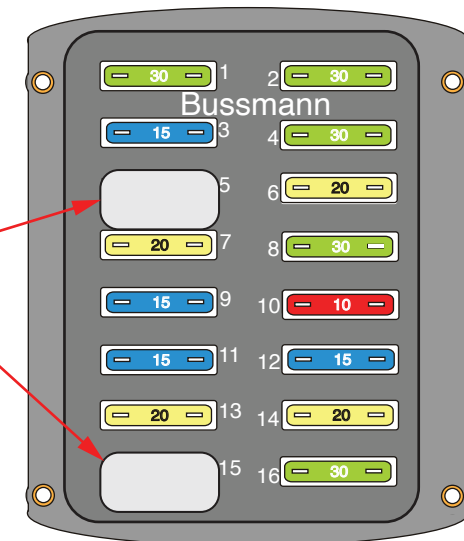
Shown below, are the supplied misc. terminals, plastic connector bodies, hardware, and bracket, that will be used (along with the salvaged parts that were removed from your original Dash harness, from the previous page) to complete your Dash/Main harness connections. They are itemized and referred to on this page, just as they are on the following pages of this Dash/Main instruction set.



PLEASE READ THIS HELPFUL INSTALLATION TIP, BEFORE GOING ANY FURTHER!

Prior to installing the Dash/Main harness in your dashboard, plug all of the fuses and circuit breakers (see detailed picture below), Horn Relay, Hazard Flasher and Turn Flasher (see detailed picture below), into this harness.

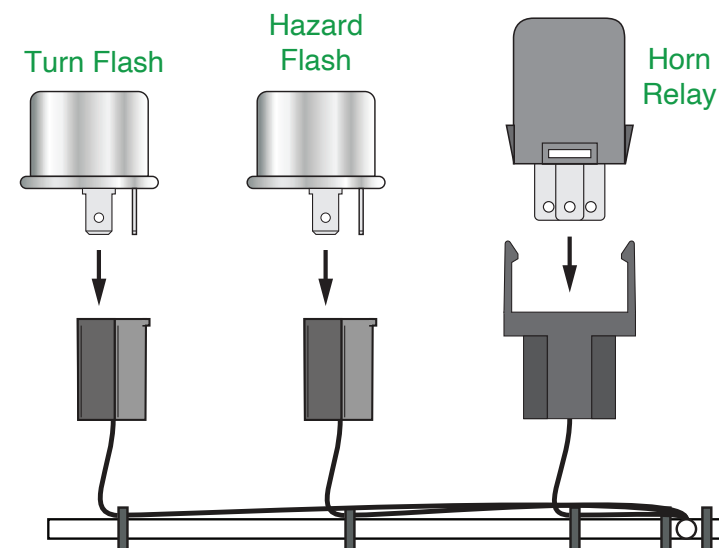
Trim leads of both circuit breakers, where shown, prior to installing in fuse box.



Fuse, circuit breaker installation orientation.

Rear Defrost 30A - BAT	1	Fuel Pump 30A - BAT	2
Dome Light 15A - BAT	3	Brake Light 30A - BAT	4
Pwr Locks CB - BAT	5	Clock/Cigar 20A - BAT	6
Hazard 20A - BAT	7	Headlights 30A - BAT	8
Turn Signal 15A - IGN	9	Fuel Relay 10A - IGN	10
Back Up Lts 15A - IGN	11	Gauges 15A - IGN	12
Wiper 20A - ACC	13	Radio 20A - ACC	14
Pwr Window CB - ACC	15	Heat / AC 30A - ACC	16

Fuse label shown on inside of fuse box cover; may be placed anywhere.



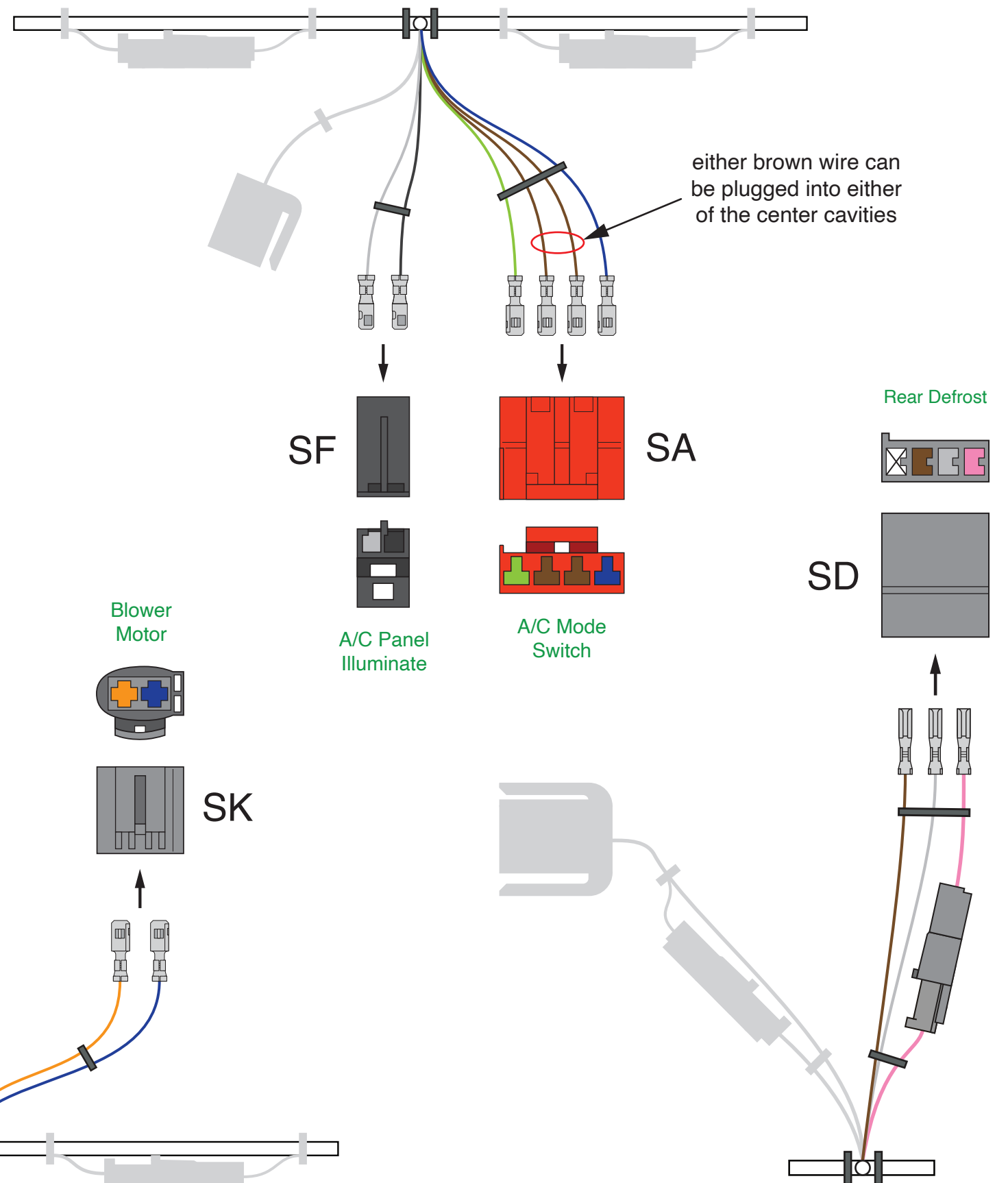
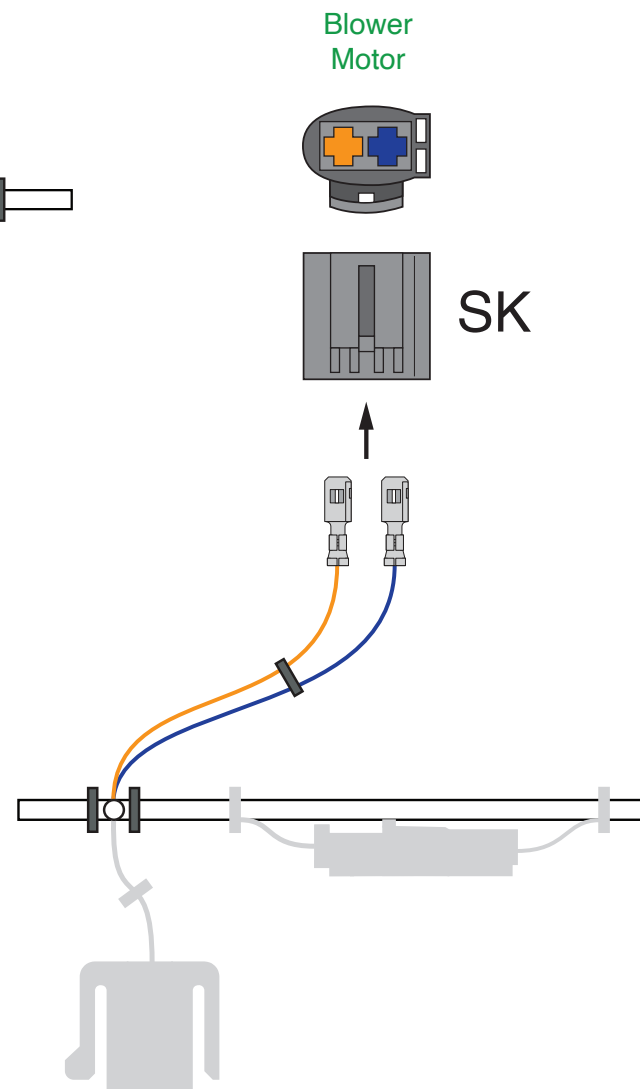
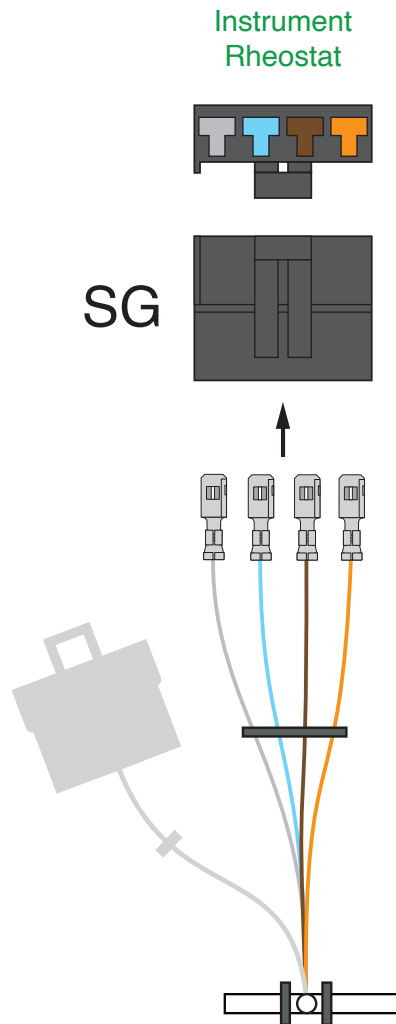
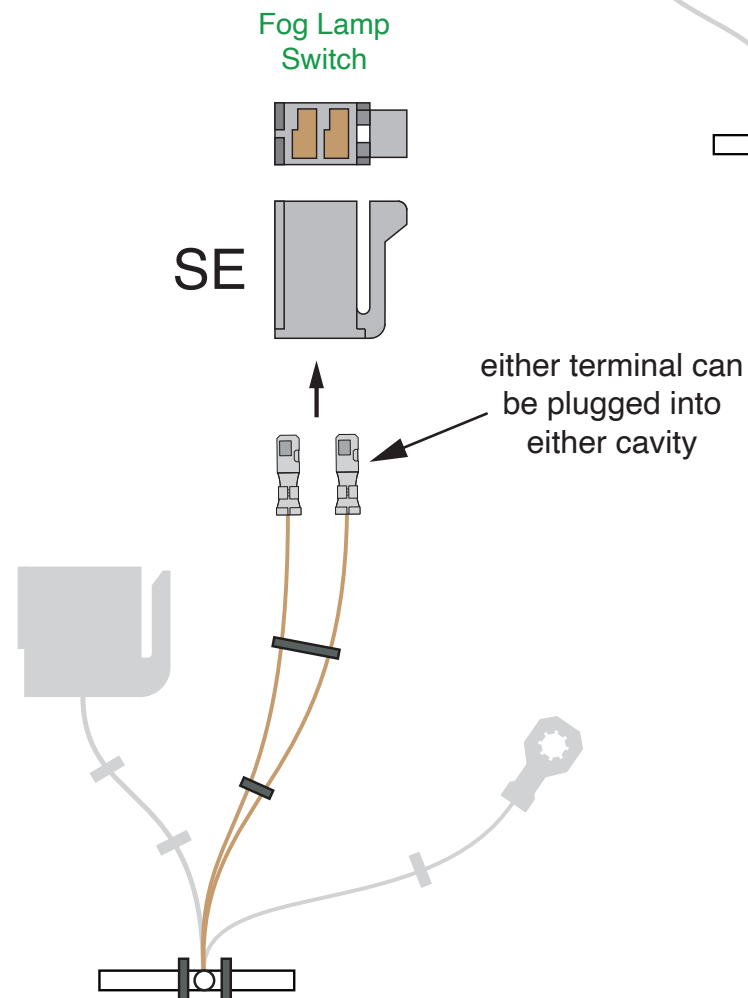
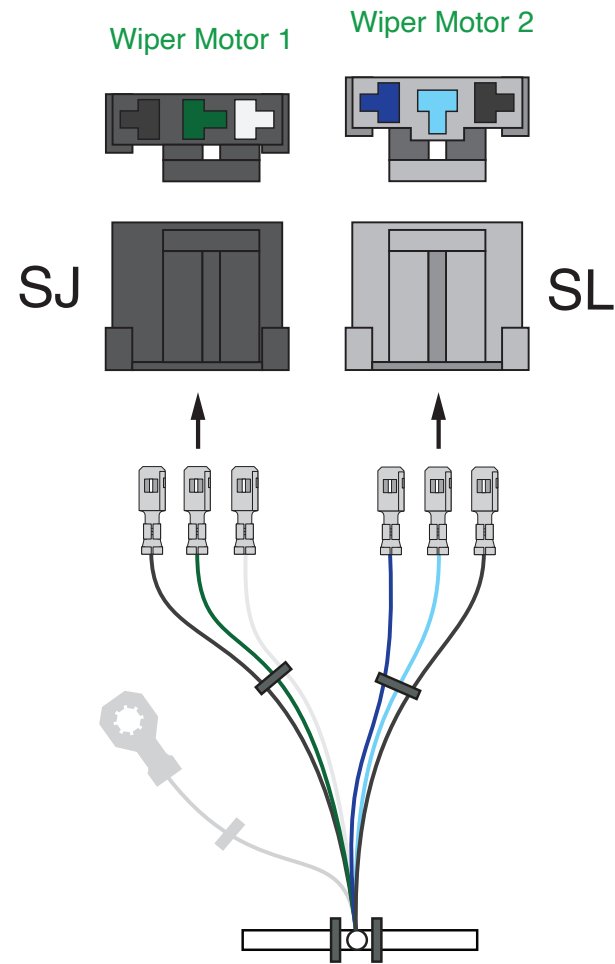
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Dash/Main Harness installation instructions:

It is recommended that the connector terminations and harness installations, on the following pages, are performed in the order they are presented.

The connectors on this page, should have their wires installed, on a bench or work area, prior to installing the harness, in the dashboard.

The indexing shown for each connector is from the face-view, not the wire-entry perspective.



Dash/Main Harness installation instructions:

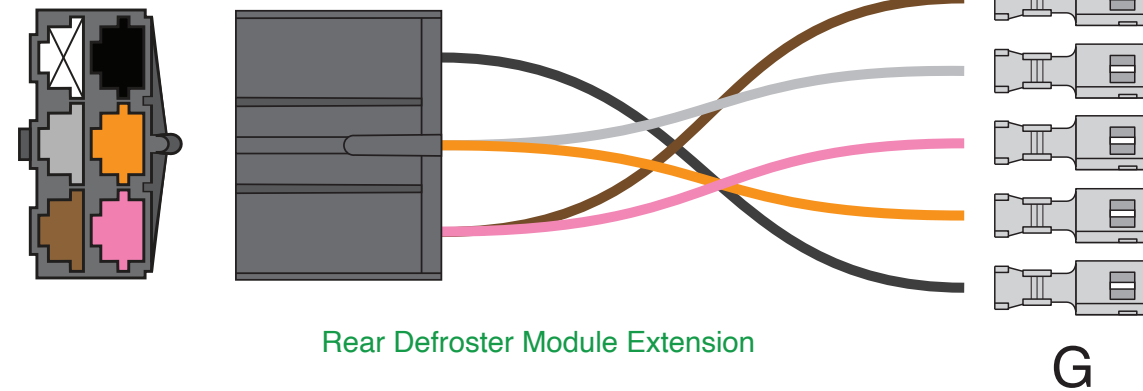
The terminals and connectors on this page, should be installed on a bench or work area, prior to installing the harness in the dashboard.

The indexing shown for each connector is from the face-view, not the wire-entry perspective.

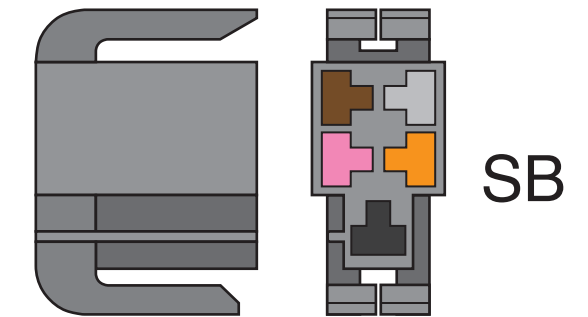
Defrost Module Adapters

'87-'89

(Plug this end of this pigtail into the rear defrost connector on the Dash Harness, page 8)

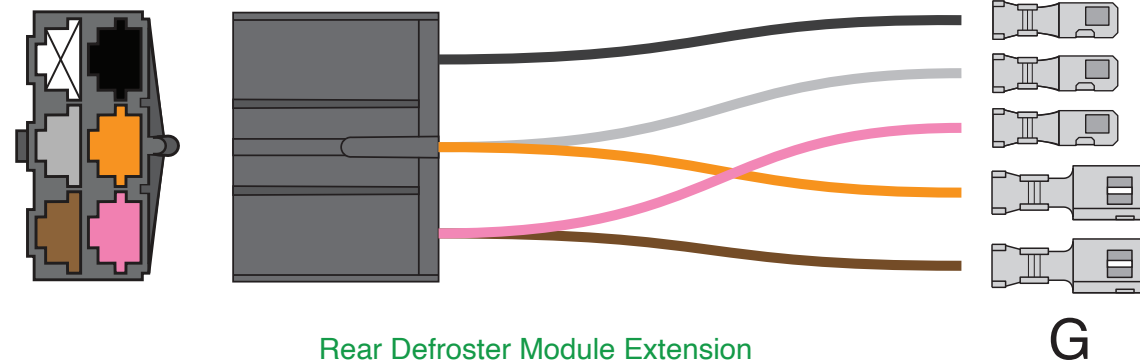


Salvaged Defrost Module (Black)
(After completing this pigtail, plug this end into the original wiper module.)

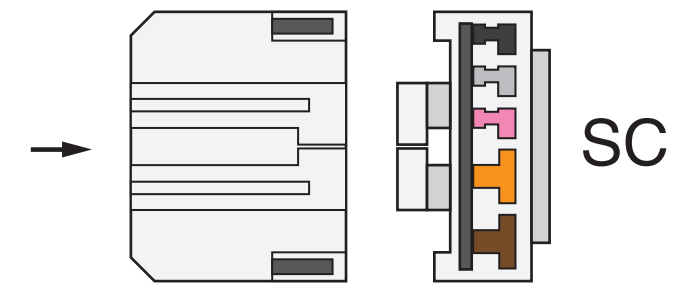


'90-'93

(Plug this end of this pigtail into the rear defrost connector on the Dash Harness, page 8)

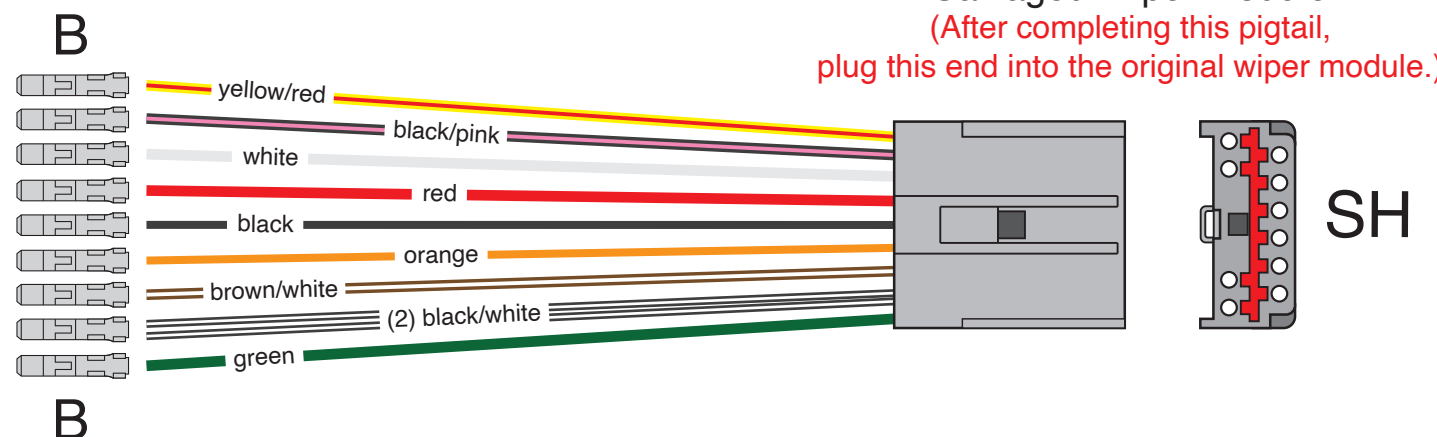
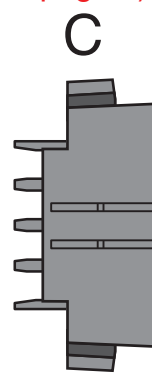
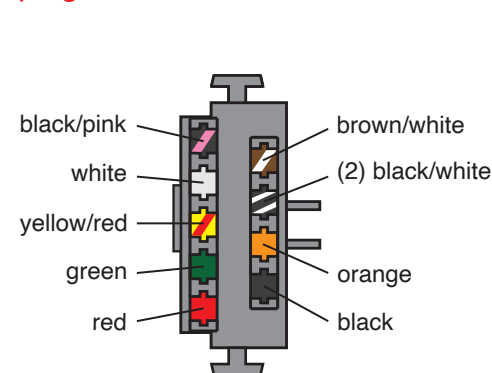


Salvaged Defrost Module (White)
(After completing this pigtail, plug this end into the original wiper module.)



Wiper Module Adapter

(After completing this pigtail, plug this end into the Dash Harness, page 8)



Salvaged Wiper Module
(After completing this pigtail, plug this end into the original wiper module.)



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1987-89 Ford Mustang

Classic Update Series

510547 92970659 Rev 5.0 05/13/2025

Dash/Main Harness installation instructions:

Engine ECU / Ignition, Alternator and
A/C Compressor Feed
(see pages 24 and 25)

Rear of Dashboard

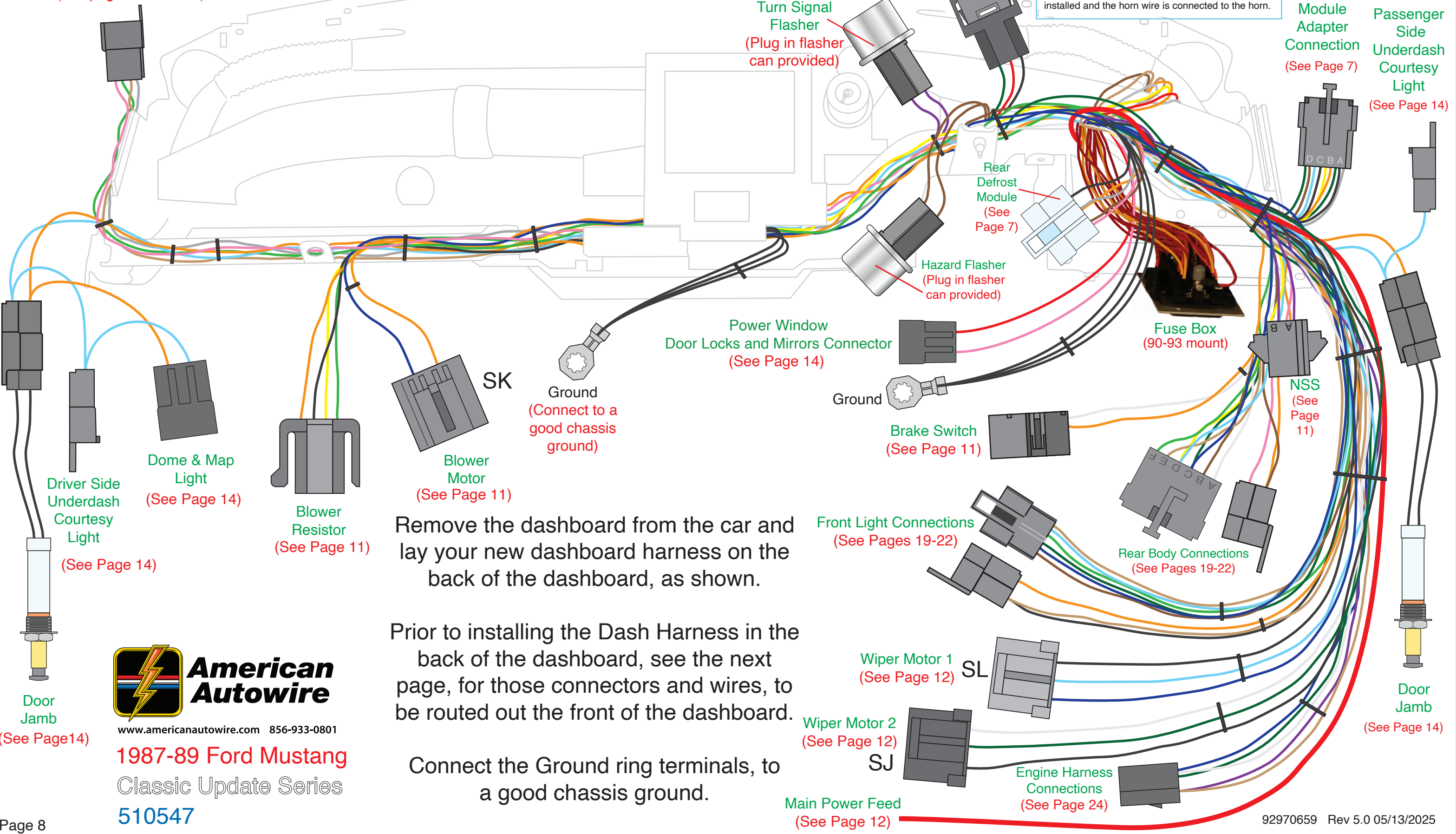
Horn Relay
(Plug in horn relay
provided)

Horn Relay Warning:

This new horn relay is found in the loose piece kit, along with the fuses and flashers. To prevent premature relay failure, do not plug this relay in until the turn signal switch connector is connected, the steering wheel and horn buttons are installed and the horn wire is connected to the horn.

Wiper
Module
Adapter
Connection
(See Page 7)

Passenger
Side
Underdash
Courtesy
Light
(See Page 14)



Remove the dashboard from the car and lay your new dashboard harness on the back of the dashboard, as shown.

Prior to installing the Dash Harness in the back of the dashboard, see the next page, for those connectors and wires, to be routed out the front of the dashboard.

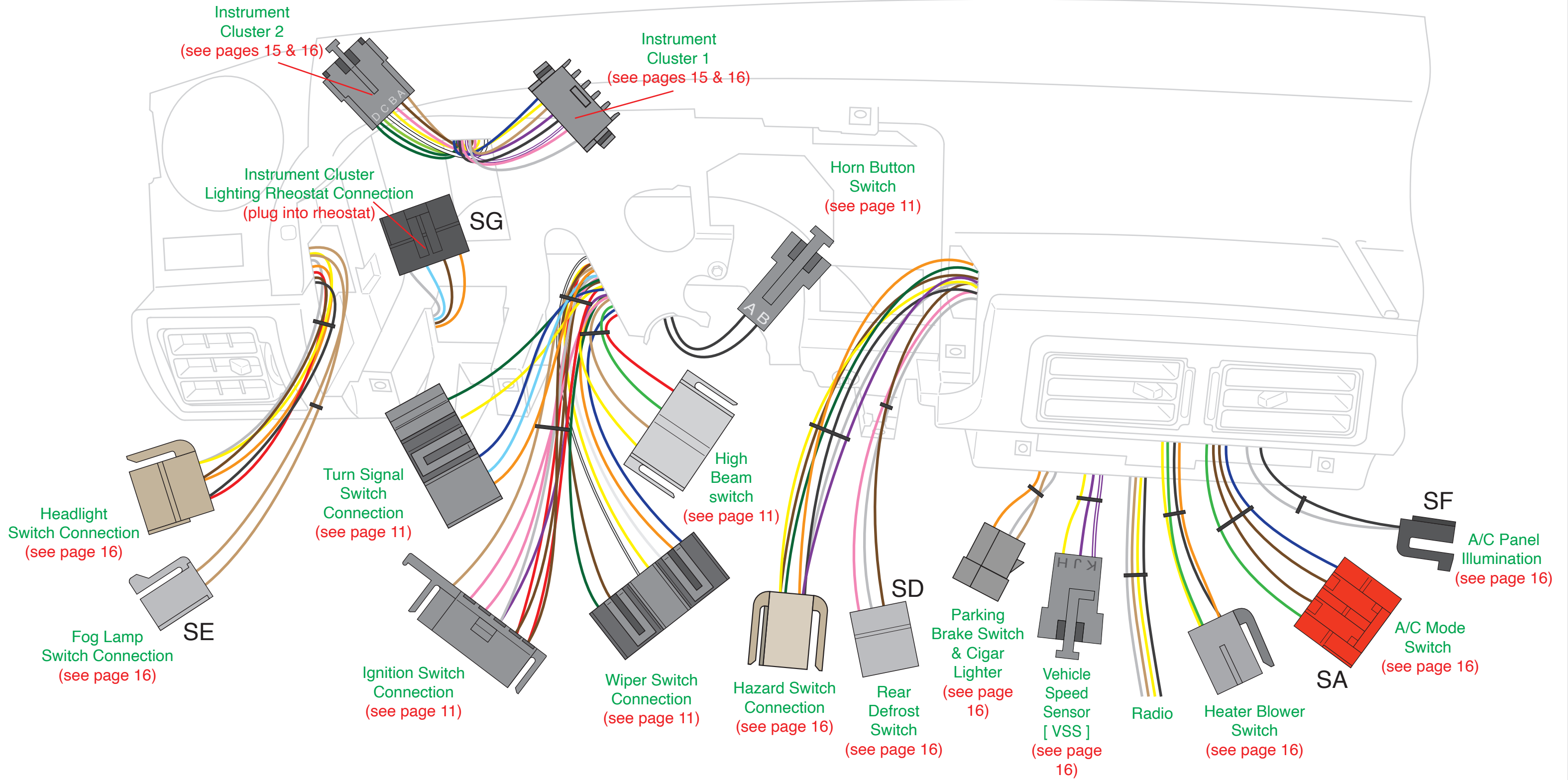
Connect the Ground ring terminals, to a good chassis ground.



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1987-89 Ford Mustang
Classic Update Series
510547

Dash/Main Harness installation instructions:

Front of Dashboard (instrument panel removed)

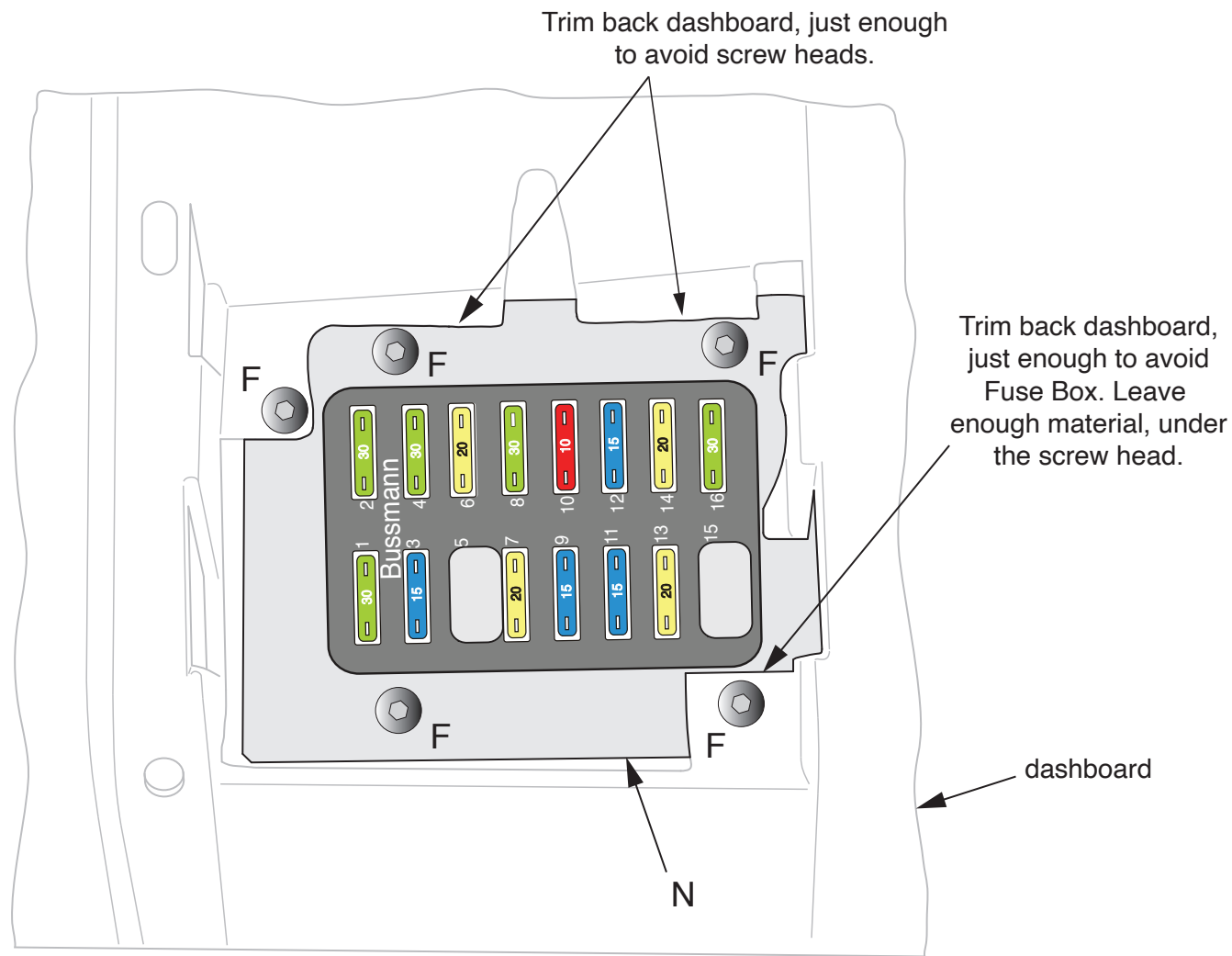


While installing the Dash Harness in the back of the dashboard, route these connectors and wires out the front of the dashboard, as shown.

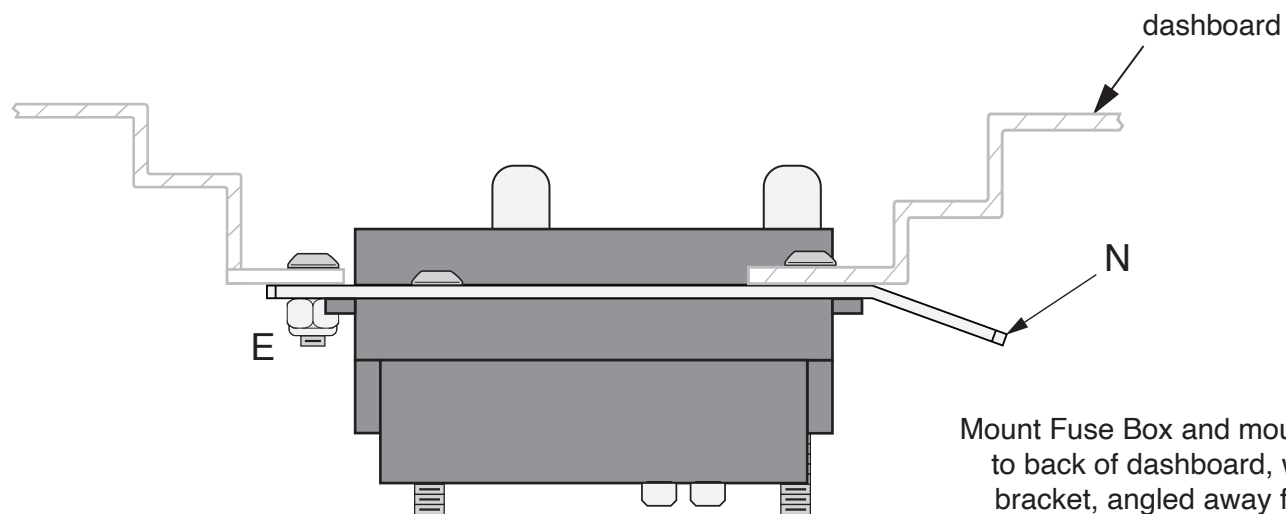


Dash/Main Harness installation instructions:

1987-89 Fuse Box installation:



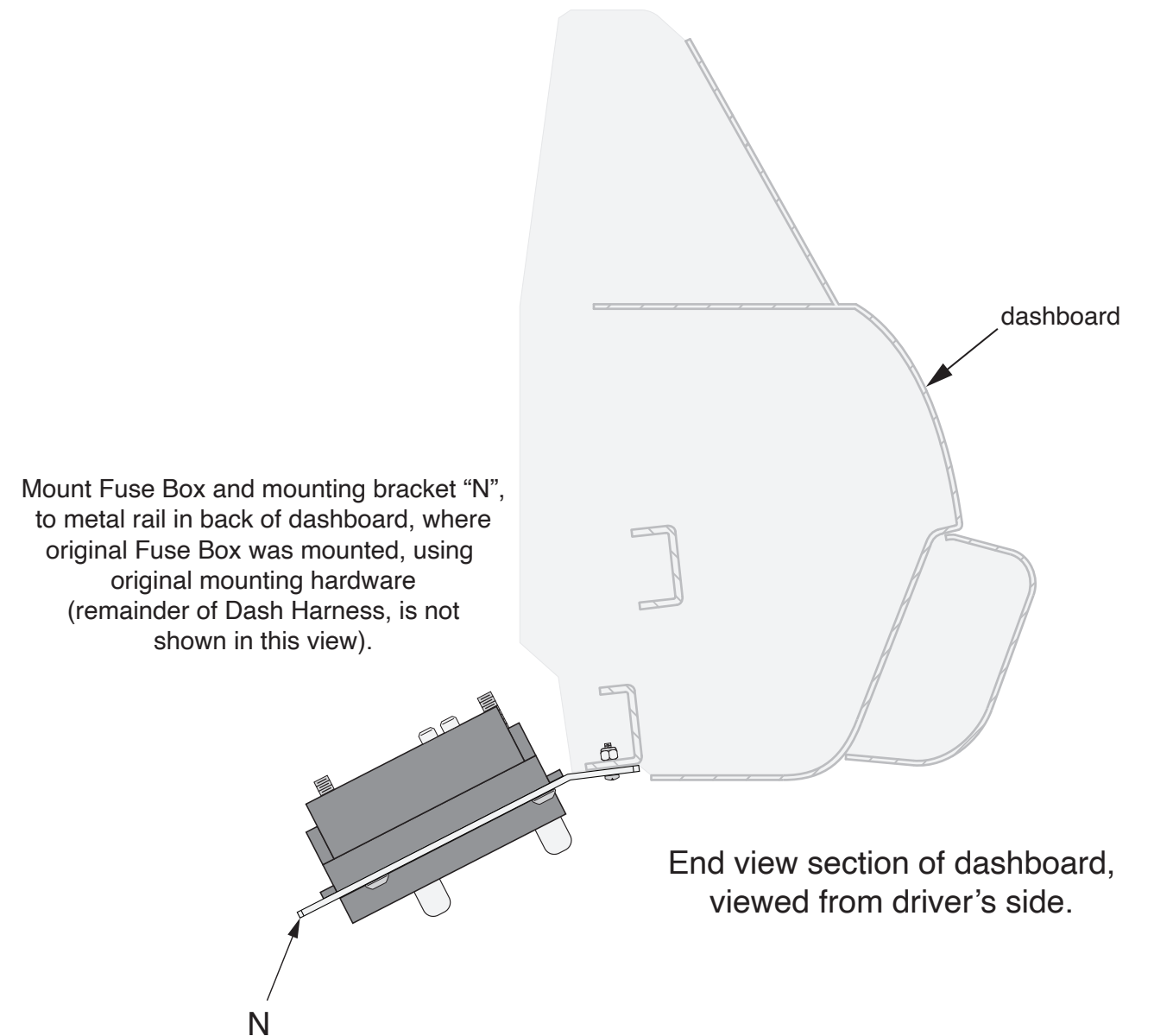
Front of dashboard, with Fuse Box access panel removed.



Looking up, at bottom edge of dashboard, with Fuse Box access panel removed.

Mount Fuse Box and mounting bracket "N", to back of dashboard, with bent end of bracket, angled away from dashboard (remainder of Dash Harness, is not shown in this view).

1990-93 Fuse Box installation:



End view section of dashboard, viewed from driver's side.



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1987-89 Ford Mustang

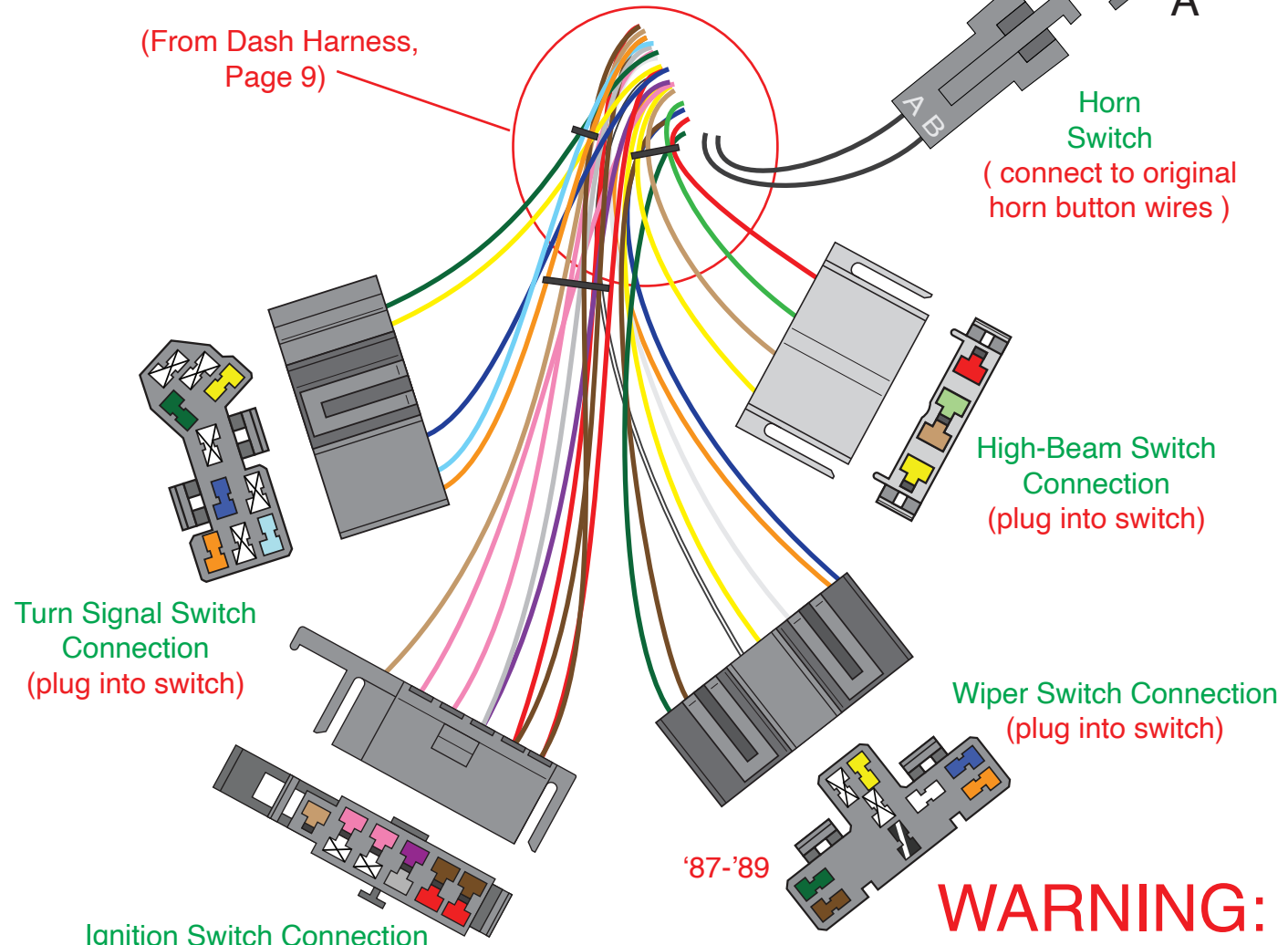
Classic Update Series

510547 92970659 Rev 5.0 05/13/2025

Dash/Main Harness installation instructions:

Plug these connectors into their mating connectors, found at the steering column. See the note at the Wiper Switch connector, for '90-'93 models. Cut the original terminals, from the original Horn wires and terminate the wires as shown.

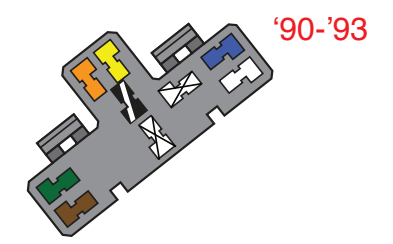
(From Dash Harness, Page 9)



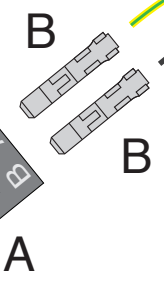
'87-'89

WARNING:

The Wiper Switch connector, comes wired for '87-'89 models, as shown above. For '90-'93 models, remove the orange, white and black/white wires and re-insert them, as shown below.

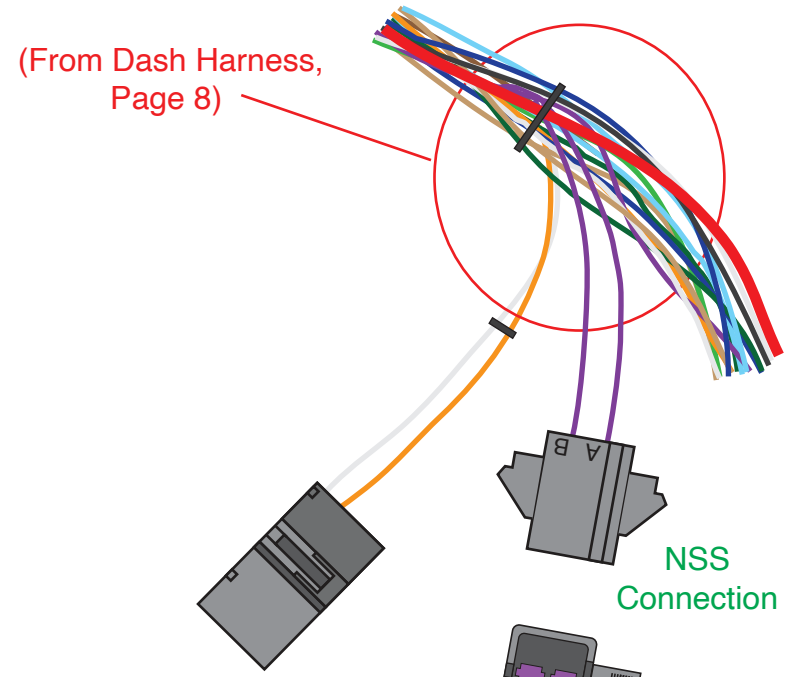


Original horn button wires.



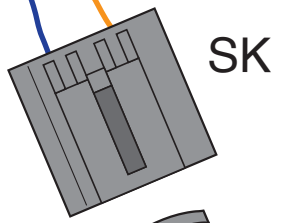
Plug these connectors into their respective switches, found under the dashboard, above the pedals.

(From Dash Harness, Page 8)



Plug these connectors into their mating connectors, found on the blower plenum, under the dash.

(From Dash Harness, Page 9)



Heater Blower Motor Connection (plug into switch)

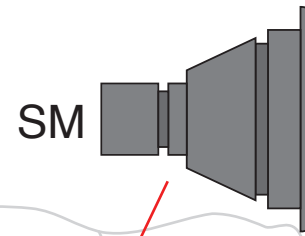
Heater Blower Resistor Connection (plug into switch)

Original wires from Neutral Safety Switch



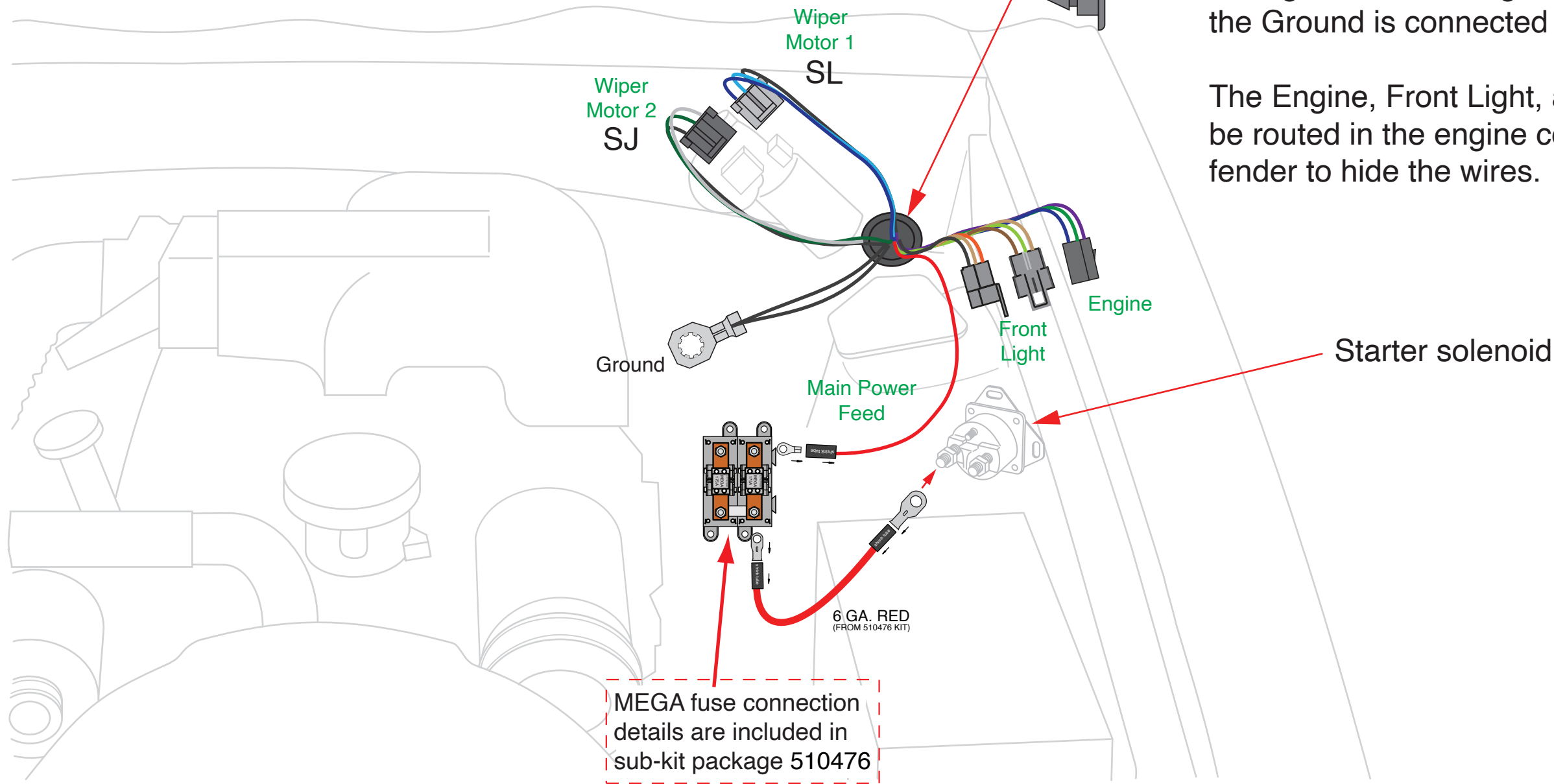
Dash/Main Harness installation instructions:

Plug the wiper connectors into the wiper motor.



Route the Engine, Front Light, Wiper, Ground and the red Main Power Feed wires, through the driver side of the firewall, using the large circular grommet (SM) salvaged from the original dash harness. Make sure the Ground is connected to a good chassis ground.

The Engine, Front Light, and red Main Power Feed can be routed in the engine compartment or in the inner fender to hide the wires.



Mount the MEGA Fuses (510476) included with this kit in a location close to the starter solenoid. Route red main power feed to the MEGA Fuse. Cut to length and install ring terminal per the instructions included with the 510476 kit. Use a section of the 6ga wire to connect the MEGA Fuse to the battery side of the starter solenoid, using the ring terminals supplied with the 510476 kit.



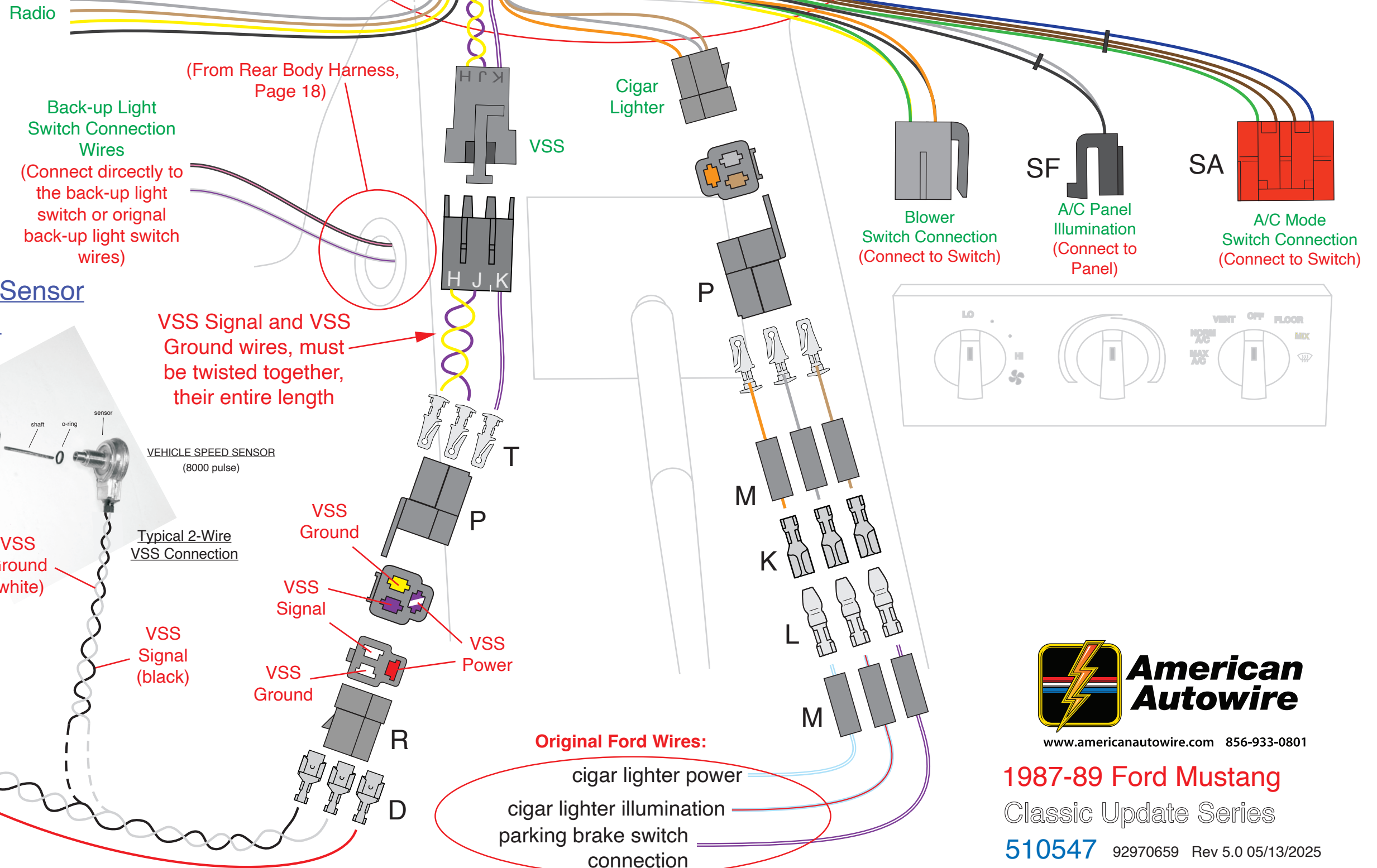
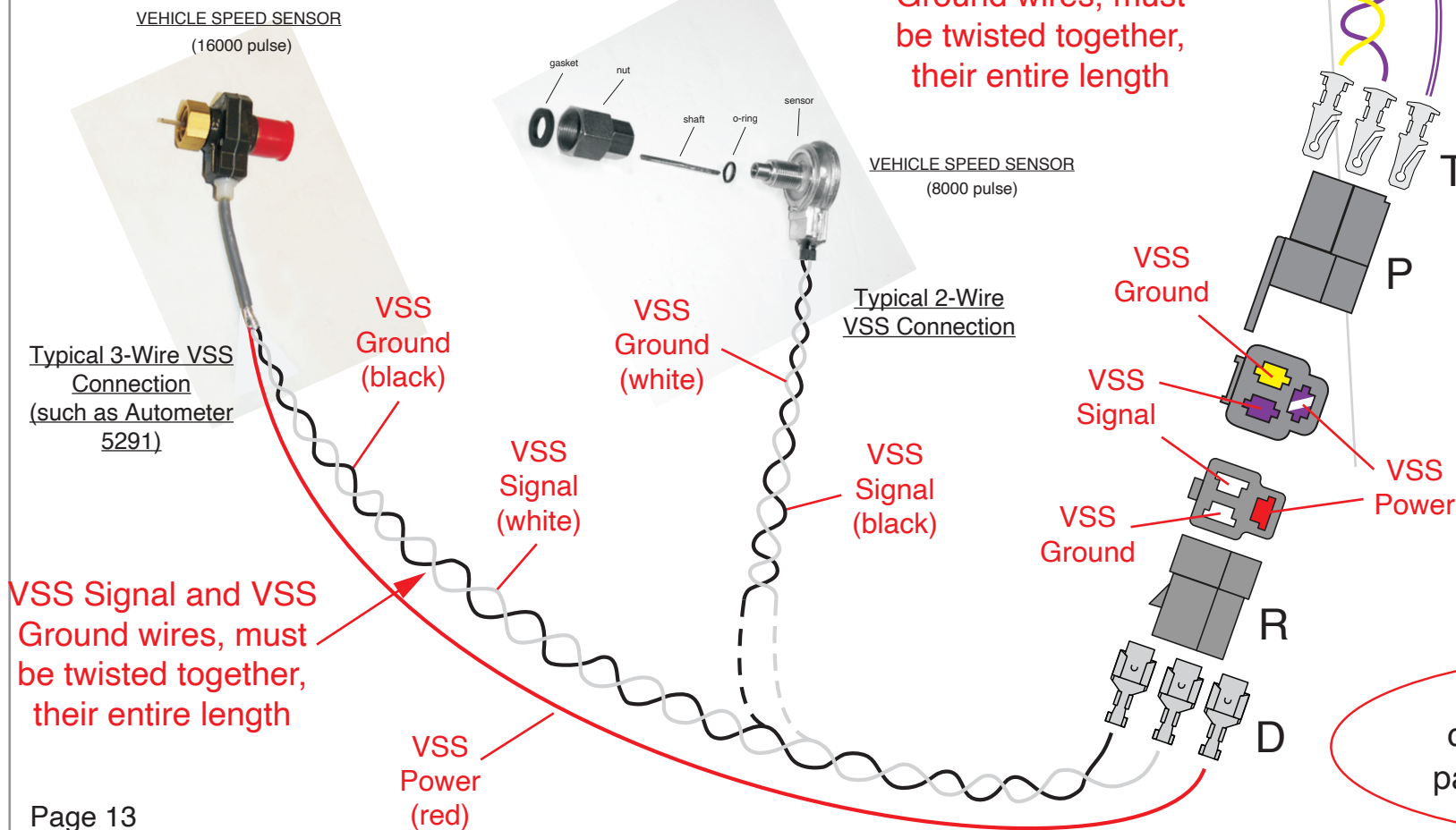
Dash/Main Harness installation instructions:

Radio Connections:

Use radio manufacturer's instructions to connect your radio. The functions of the wire's provided are:

- Gray - Dash Lights, controlled by headlight switch.
- Yellow - 12v battery constant feed for clock or radio memory.
- Tan - 12v keyed accessory feed for main radio power
- Black - Radio Ground

Aftermarket Vehicle Speed Sensor (VSS) connections:



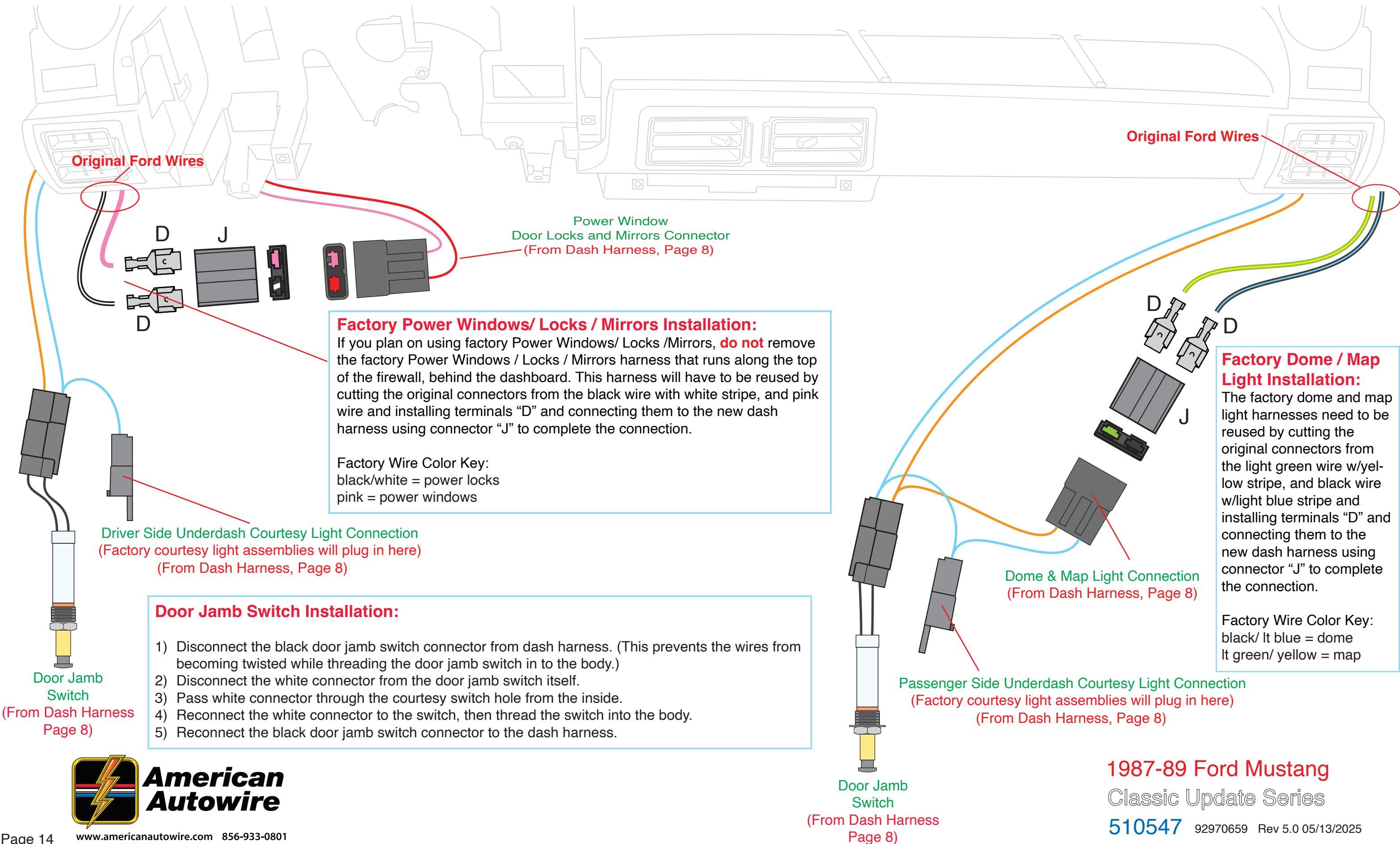
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1987-89 Ford Mustang

Classic Update Series

510547 92970659 Rev 5.0 05/13/2025

Dash/Main Harness installation instructions:



Original Ford Wires

Original Ford Wires

Power Window
Door Locks and Mirrors Connector
(From Dash Harness, Page 8)

Factory Power Windows/ Locks / Mirrors Installation:
If you plan on using factory Power Windows/ Locks / Mirrors, **do not** remove the factory Power Windows / Locks / Mirrors harness that runs along the top of the firewall, behind the dashboard. This harness will have to be reused by cutting the original connectors from the black wire with white stripe, and pink wire and installing terminals "D" and connecting them to the new dash harness using connector "J" to complete the connection.

Factory Wire Color Key:
black/white = power locks
pink = power windows

Factory Dome / Map Light Installation:
The factory dome and map light harnesses need to be reused by cutting the original connectors from the light green wire w/yellow stripe, and black wire w/light blue stripe and installing terminals "D" and connecting them to the new dash harness using connector "J" to complete the connection.

Factory Wire Color Key:
black/ lt blue = dome
lt green/ yellow = map

Driver Side Underdash Courtesy Light Connection
(Factory courtesy light assemblies will plug in here)
(From Dash Harness, Page 8)

Dome & Map Light Connection
(From Dash Harness, Page 8)

Door Jamb Switch Installation:

- 1) Disconnect the black door jamb switch connector from dash harness. (This prevents the wires from becoming twisted while threading the door jamb switch in to the body.)
- 2) Disconnect the white connector from the door jamb switch itself.
- 3) Pass white connector through the courtesy switch hole from the inside.
- 4) Reconnect the white connector to the switch, then thread the switch into the body.
- 5) Reconnect the black door jamb switch connector to the dash harness.

Passenger Side Underdash Courtesy Light Connection
(Factory courtesy light assemblies will plug in here)
(From Dash Harness, Page 8)

Door Jamb Switch
(From Dash Harness Page 8)

Door Jamb Switch
(From Dash Harness Page 8)

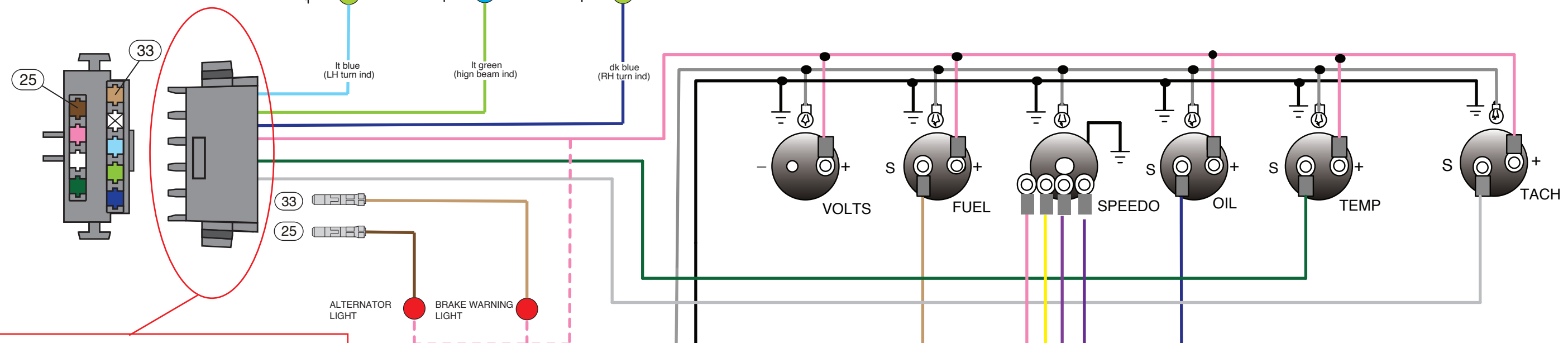
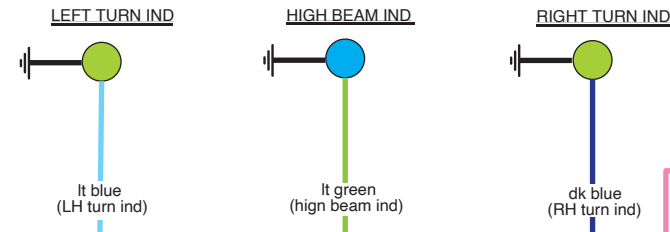


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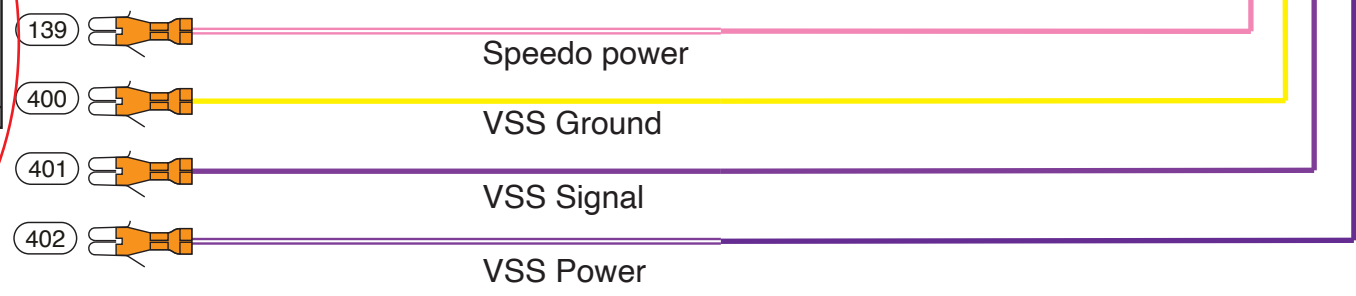
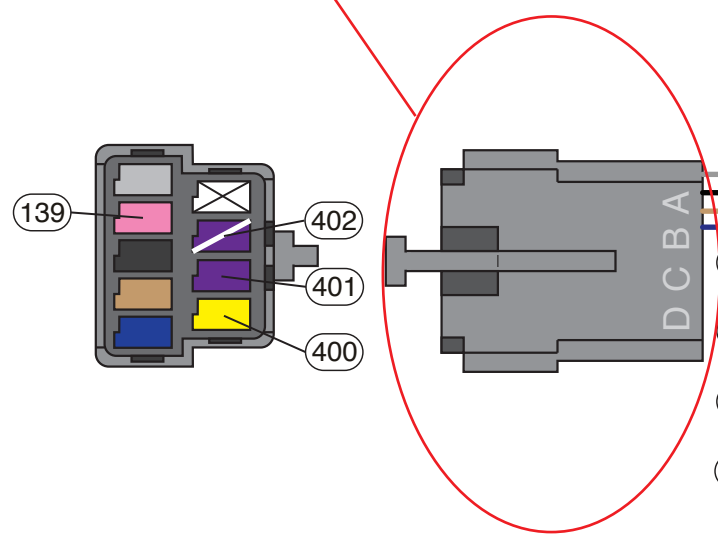
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Classic Update Series

Gauge Cluster Harness (aftermarket gauges) installation instructions:

TURN SIGNAL AND HI-BEAM LAMP CONNECTIONS



These pigtails connect to Instrument Cluster Connections 1 and 2 From Dash Harness (See pages 9 and 16)

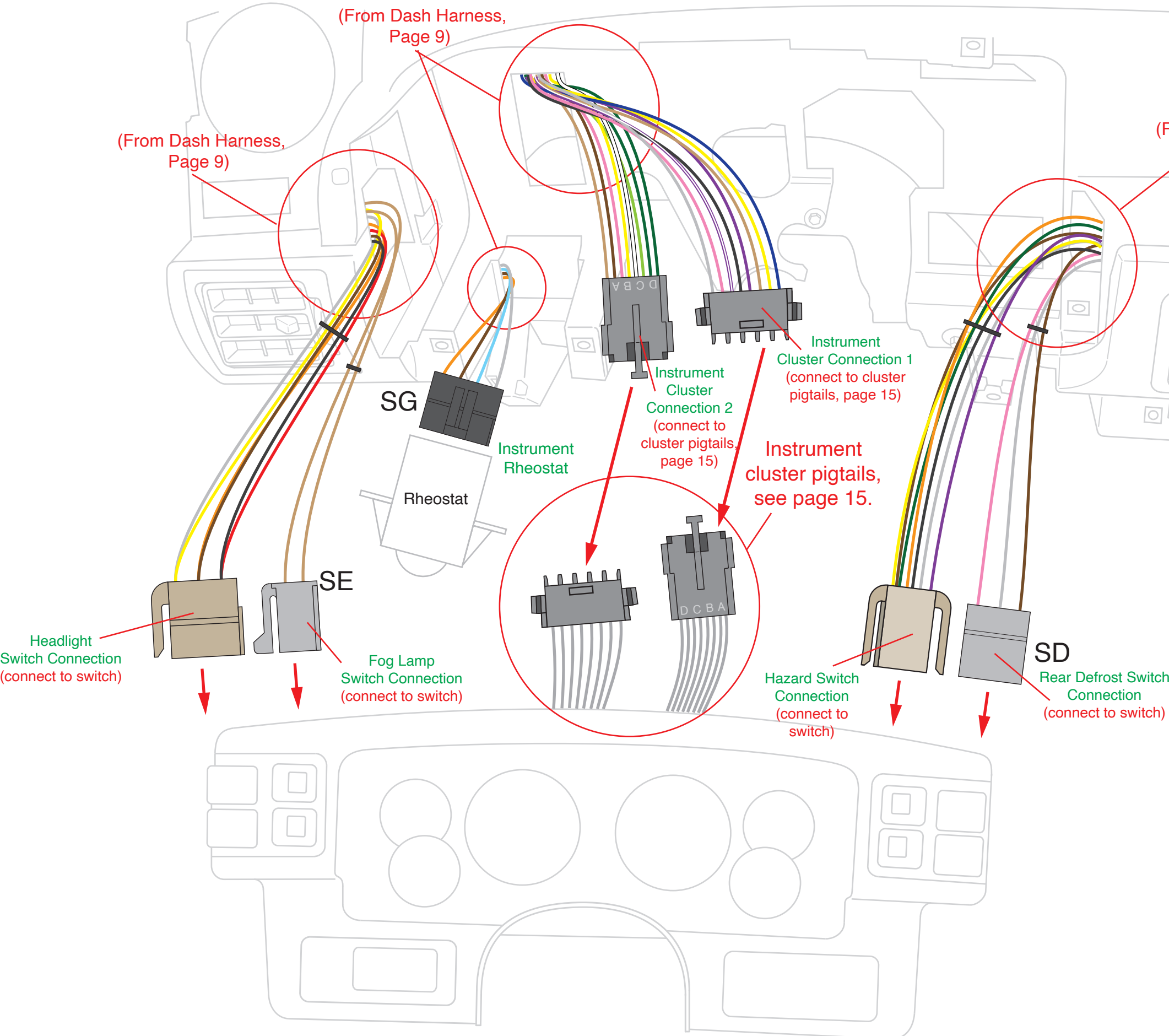


Below are some general instructions for hooking up an electric speedometer. This connector and these instructions will ONLY be used in the event that you are utilizing an aftermarket electric speedometer. If your car does NOT have an electric speedometer, this connection will NOT be used and should not be plugged onto your dash harness. It is best to consult the speedometer manufacturer's instructions if you have any questions.

- Yellow VSS Ground Connect to VSS neg. "--" on speedometer.
- Purple VSS Signal Connect to VSS input on speedometer.
- Purple/White VSS Power Connect to 12V power on speedometer.
- Black/White Speedo Ground Connect to ground on speedometer.
- Pink/White Speedo Power Connect to 12v power on speedometer. **NOTE:** This wire will double onto the same stud as the purple/white VSS power wire from above.



Gauge Cluster Harness (aftermarket gauges) installation instructions:



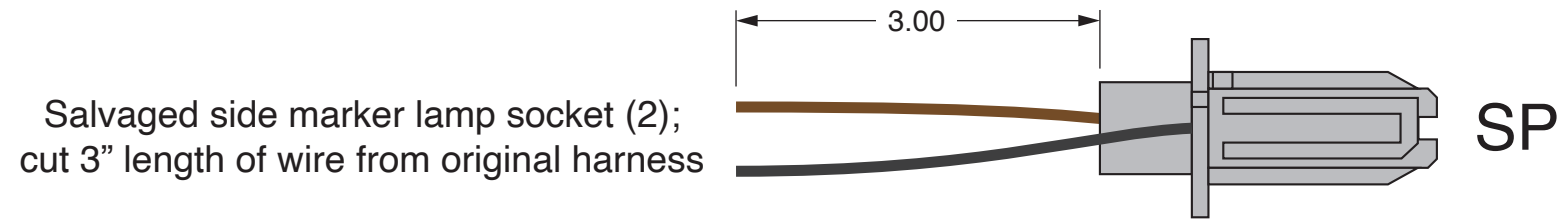
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1987-89 Ford Mustang
Classic Update Series


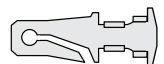
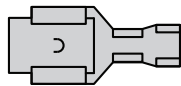

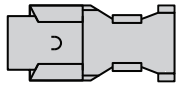





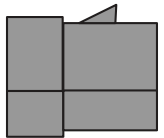

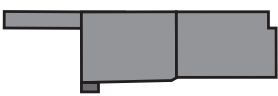
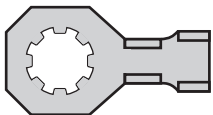
510547 92970659 Rev 5.0 05/13/2025

Rear Body Harness installation instructions:

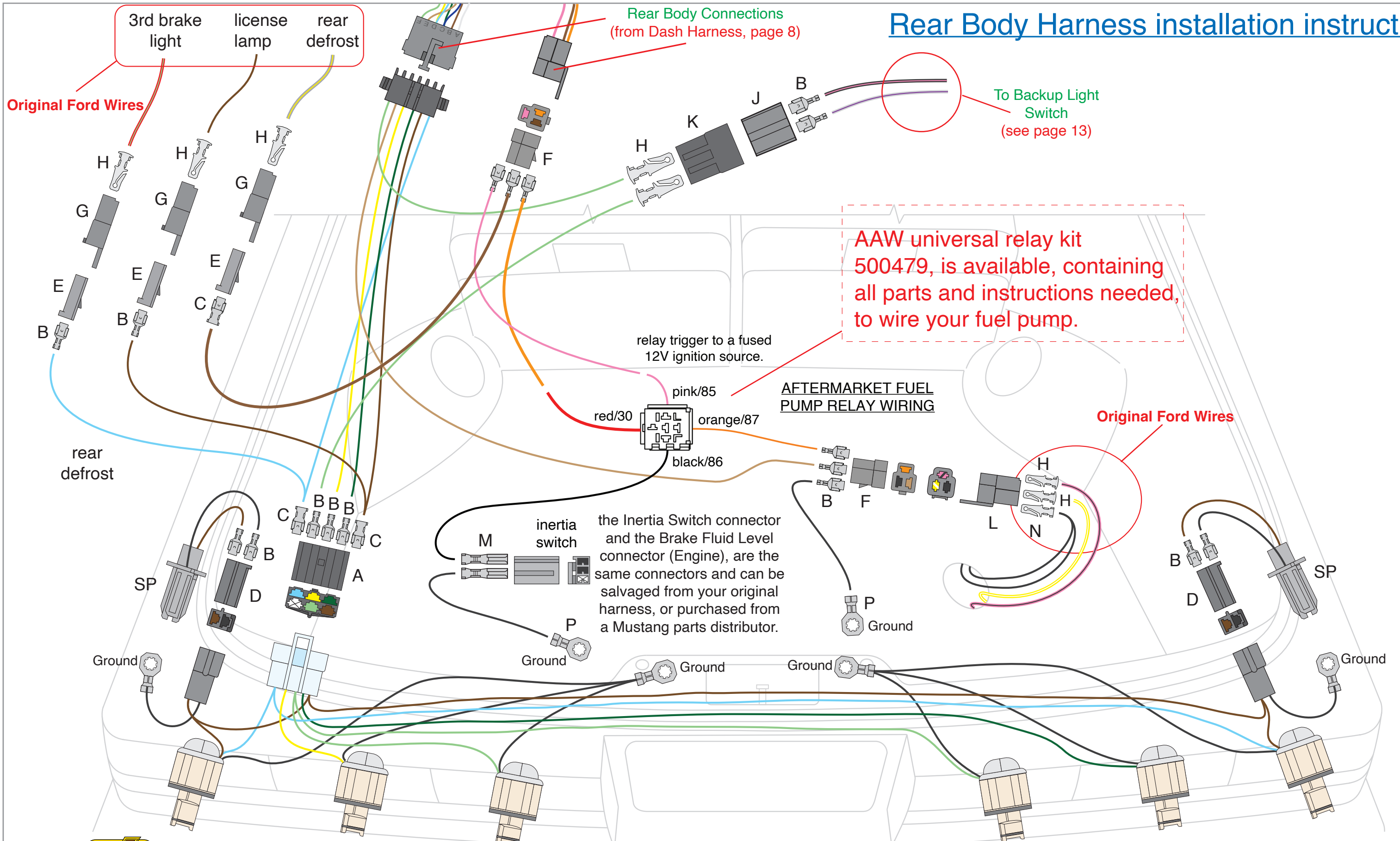
Shown below, is the side marker lamp socket you will need to salvage/remove from both sides of your original Rear Body harness, that will be re-used (along with the supplied parts below) to complete your Rear Body harness connections. It is itemized and referred to on this page, just as it is on the following pages of this Rear Body instruction set.



Shown below, are the supplied misc. terminals and plastic connector bodies, that will be used to complete your Rear Body harness connections. They are itemized and referred to on this page, just as they are on the following pages of this Rear Body instruction set.

- | | | | | | |
|---|---|---|---|---|--|
| A |  | (56 series 6-way female conn, 1 pc.) | H |  | (56 series single male terminal, for smaller gauge wire, 7 pcs.) |
| B |  | (56 series single female terminal, 14 pcs.) | J |  | (56 series 2-way female conn, 1 pc.) |
| C |  | (56 series double female terminal, 3 pcs.) | K |  | (56 series 2-way male conn, 1 pc.) |
| D |  | (56 series 2-way female conn, 2 pcs.) | L |  | (56 series 3-way male conn, 1 pc.) |
| E |  | (56 series 1-way female conn, 3 pcs.) | M |  | (small single female terminal, 3 pcs.) |
| F |  | (56 series 3-way female conn, 2 pcs.) | N |  | (56 series single male terminal, for larger gauge wire, 1 pc.) |
| G |  | (56 series 1-way male conn, 3 pcs.) | P |  | (ring terminal, 2 pcs.) |

Rear Body Harness installation instructions



Original Ford Wires

Rear Body Connections
(from Dash Harness, page 8)

To Backup Light Switch
(see page 13)

AAW universal relay kit 500479, is available, containing all parts and instructions needed, to wire your fuel pump.

relay trigger to a fused 12V ignition source.

AFTERMARKET FUEL PUMP RELAY WIRING

Original Ford Wires

the Inertia Switch connector and the Brake Fluid Level connector (Engine), are the same connectors and can be salvaged from your original harness, or purchased from a Mustang parts distributor.

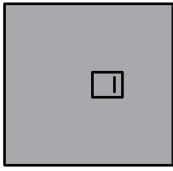

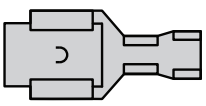

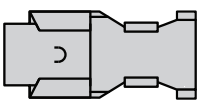

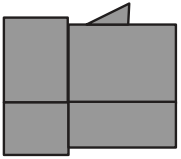


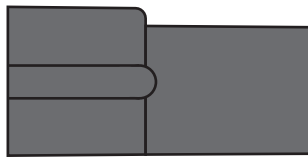
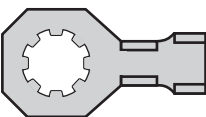
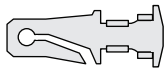



American Autowire

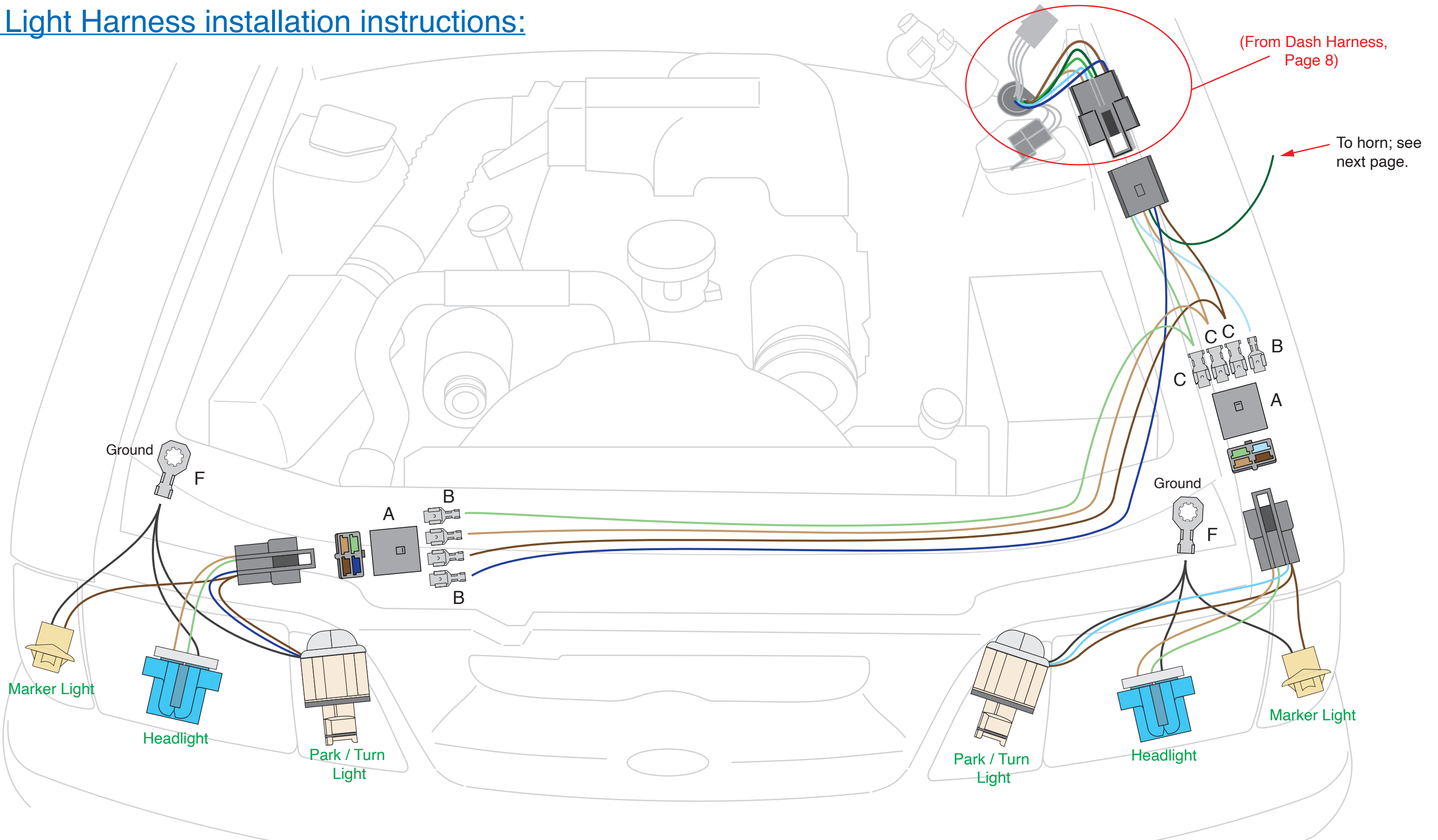
The stop/tail, turn, and back-up sockets in the rear body harness all use 3157 bulbs (not included). These can be sourced from your local parts supplier.

Front Light Harness installation instructions:

Shown below, are the supplied misc. terminals and plastic connector bodies, that will be used to complete your Front Light harness connections. They are itemized and referred to on this page, just as they are on the following pages of this Front Light instruction set.

- | | | | | | |
|---|---|--|---|---|--|
| A |  | (56 series 4-way female conn, 2 pcs.) | H |  | (sleeve, 4 pcs.) |
| B |  | (56 series single female terminal, 9 pcs.) | J |  | (single female terminal, 2 pcs.) |
| C |  | (56 series double female terminal, 5 pcs.) | K |  | (washer pump conn, 1 pc.) |
| D |  | (56 series 3-way female conn, 1 pc.) | L |  | (56 series 2-way female connector, 2 pcs.) |
| E |  | (56 series 1-way female conn, 2 pcs.) | M |  | (56 series 2-way male connector, 2 pcs.) |
| F |  | (ring terminal, 5 pcs.) | N |  | (56 series single male terminal, 4 pcs.) |
| G |  | (single male terminal, 2 pcs.) | | | |

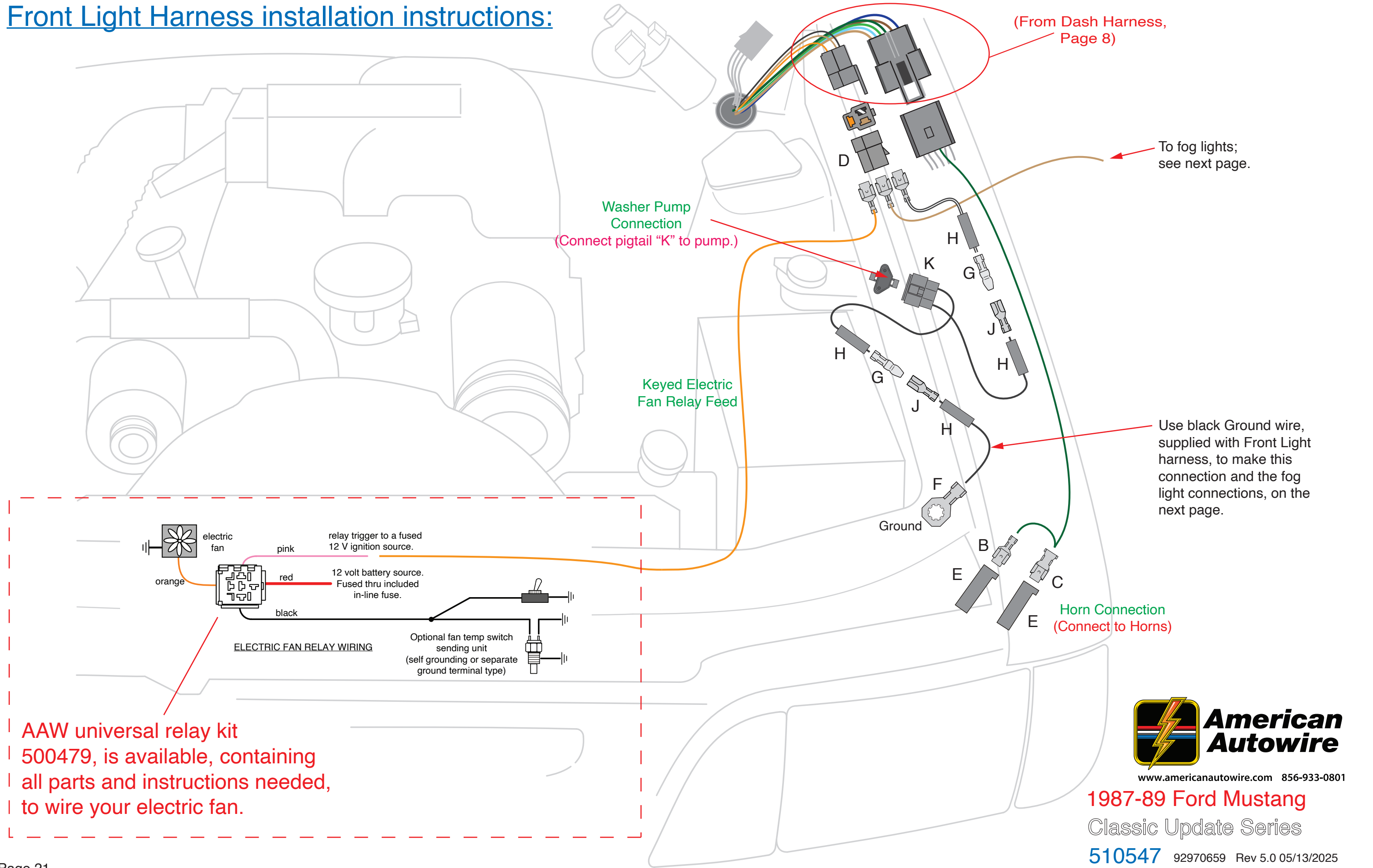
Front Light Harness installation instructions:



The parking lamp/turn signal sockets in the front light harness use 3157 bulbs (not included). These can be sourced from your local parts supplier.



Front Light Harness installation instructions:



AAW universal relay kit 500479, is available, containing all parts and instructions needed, to wire your electric fan.

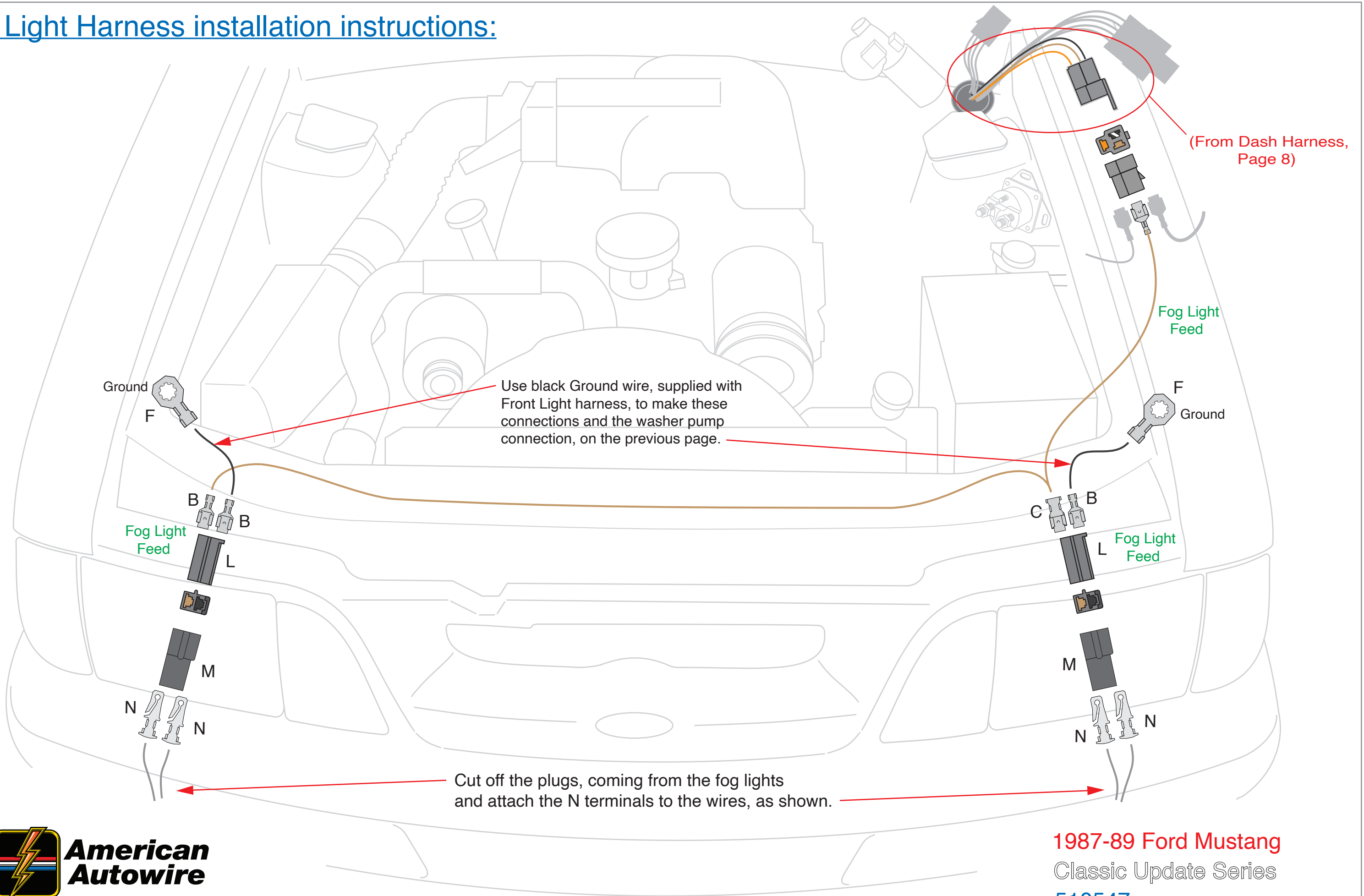


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1987-89 Ford Mustang Classic Update Series

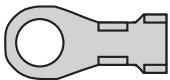
510547 92970659 Rev 5.0 05/13/2025


Front Light Harness installation instructions:



Engine Harness installation instructions:

Shown below, are the supplied misc. terminals, sleeves and plastic connector bodies, that will be used to complete your Engine harness connections. They are itemized and referred to on this page, just as they are on the following pages of this Engine instruction set.


A  (small ring terminal for larger gauge wire, 1 pc.)

B  (small rubber sleeve, 3 pcs.)


C  (56 series single female terminal, 4 pcs.)


D  (56 series single female connector, 2 pcs.)


E  (56 series single male terminal, 2 pcs.)

G  (small ring terminal for smaller gauge wire, 4 pcs.)

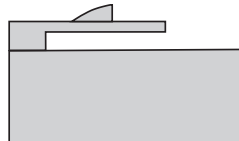
H  (large rubber sleeve, 2 pcs.)

J  (single male terminal, 1 pc.)

K  (single female terminal, 1 pc.)


L  (10-32 nut, 1 pc.)

M  (56 series 2-way male connector, 1 pc.)

N  (56 series 2-way female connector, 1 pc.)

R  (A/C pressure switch connector, 1 pc.)

T  (large ring terminal, copper, 1 pc.)

U  (small ring terminal for larger gauge wire, copper, 1 pc.)

V  (small single female terminal, 3 pcs.)

W  (ring terminal, 1 pc.)



Engine Harness installation instructions:

Engine ECU / Ignition, Alternator and
A/C Compressor Feed
(From Dash Harness, Page 8)

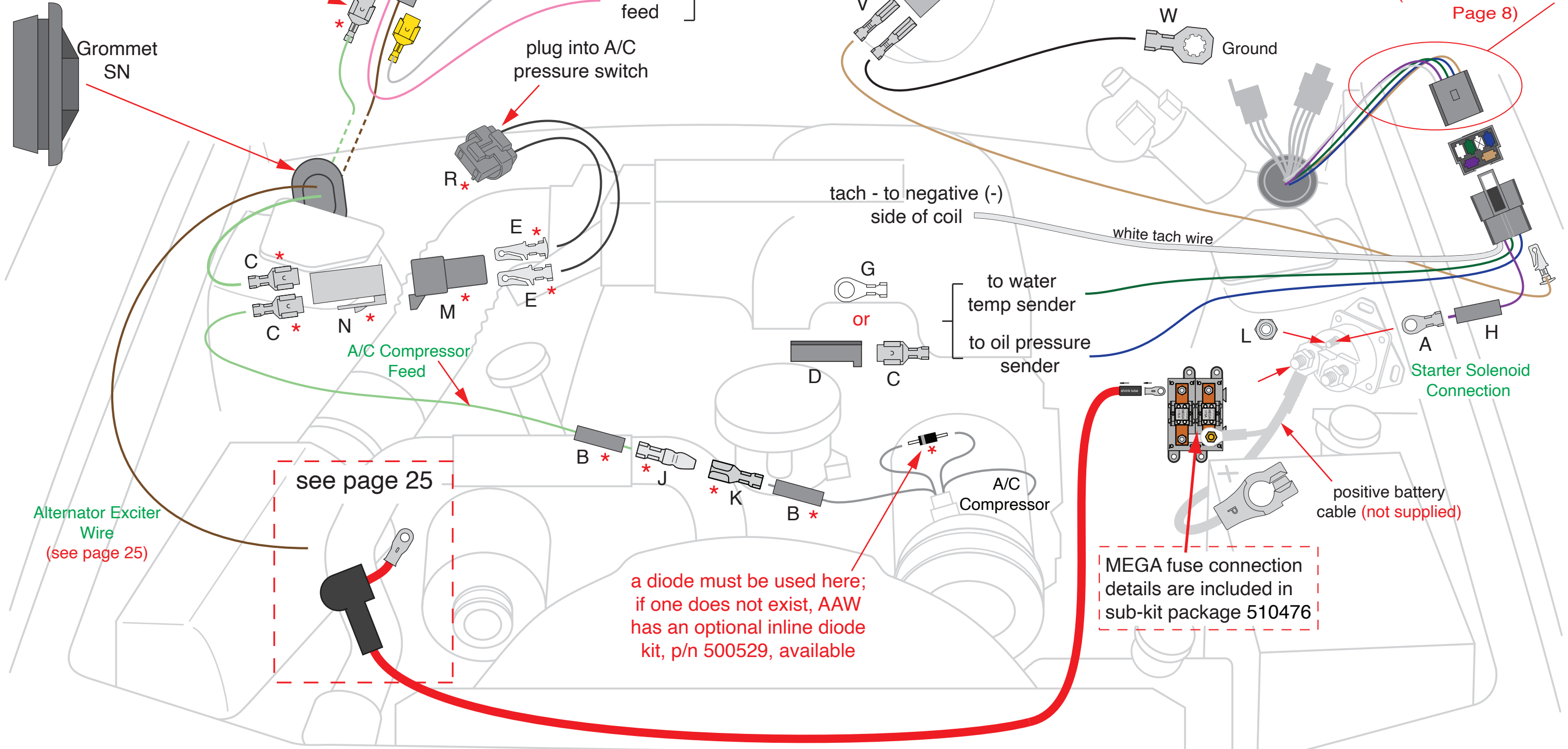
plug in the green
wire terminal, if
you are using A/C

ECU
ignition
feed } see
page 25

plug into A/C
pressure switch

the Brake Fluid Level connector
and the Inertia Switch connector
(Rear Body), are the same connectors
and can be salvaged from your
original harness, or purchased from
a Mustang parts distributor.

(From Dash Harness,
Page 8)



Alternator Exciter
Wire
(see page 25)

see page 25

a diode must be used here;
if one does not exist, AAW
has an optional inline diode
kit, p/n 500529, available

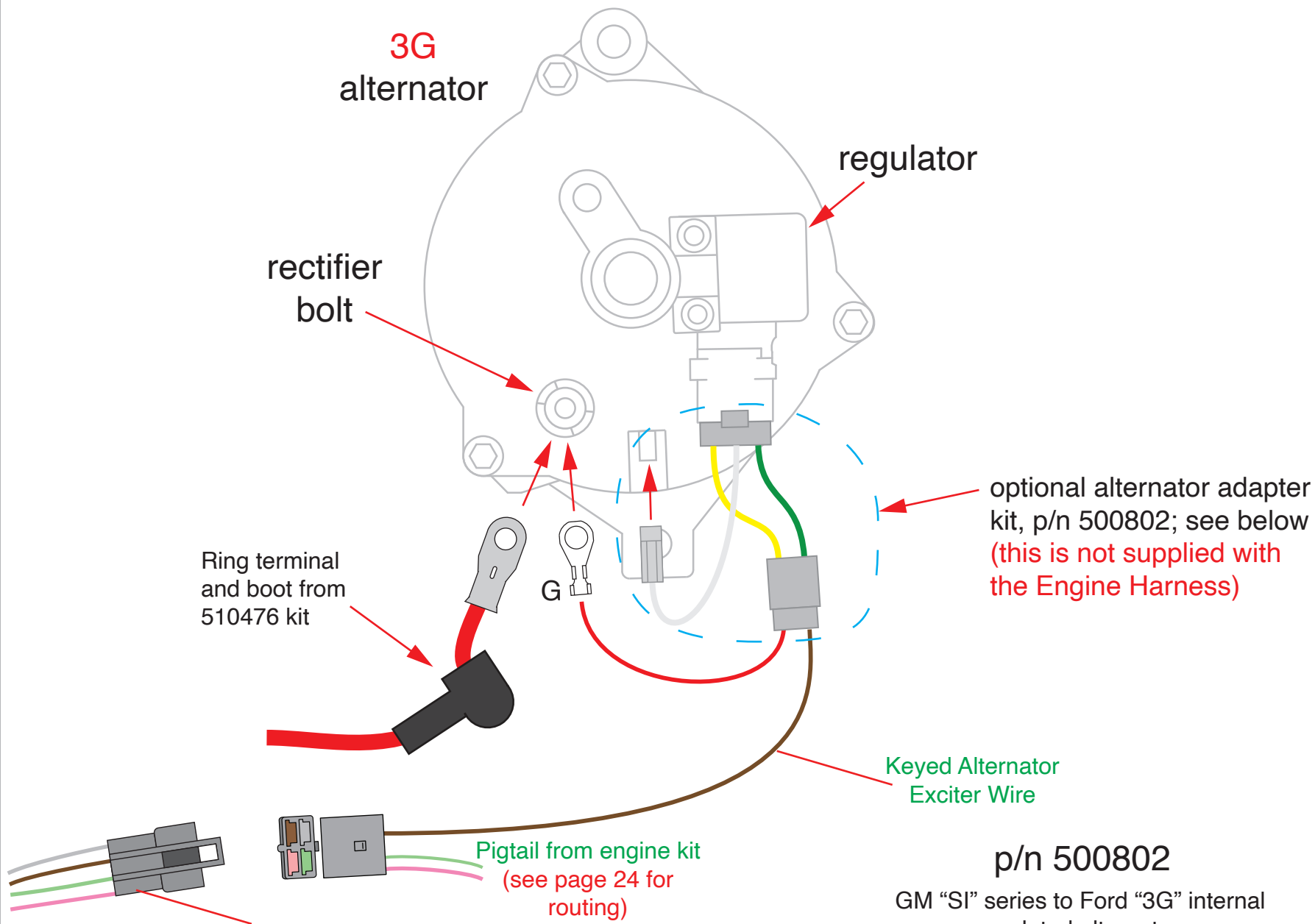
MEGA fuse connection
details are included in
sub-kit package 510476

* - if you are not planning on using Air Conditioning,
these items are not required.

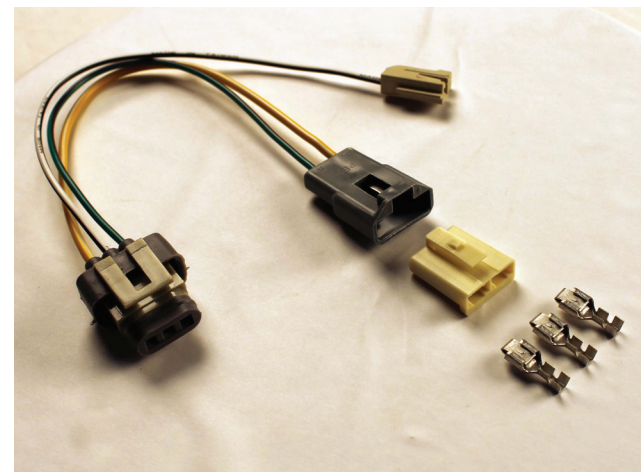


Engine Harness installation instructions:

Alternator connections:



p/n 500802
GM "SI" series to Ford "3G" internal regulated alternator



Engine ECU / Ignition, Alternator and A/C Compressor Feed (From Dash Harness, Page 8)

NOTE:
AAW recommends the use of Ford 3G or other alternators, over the use of Ford 2G alternators, due to known failures in 2G alternator wiring.



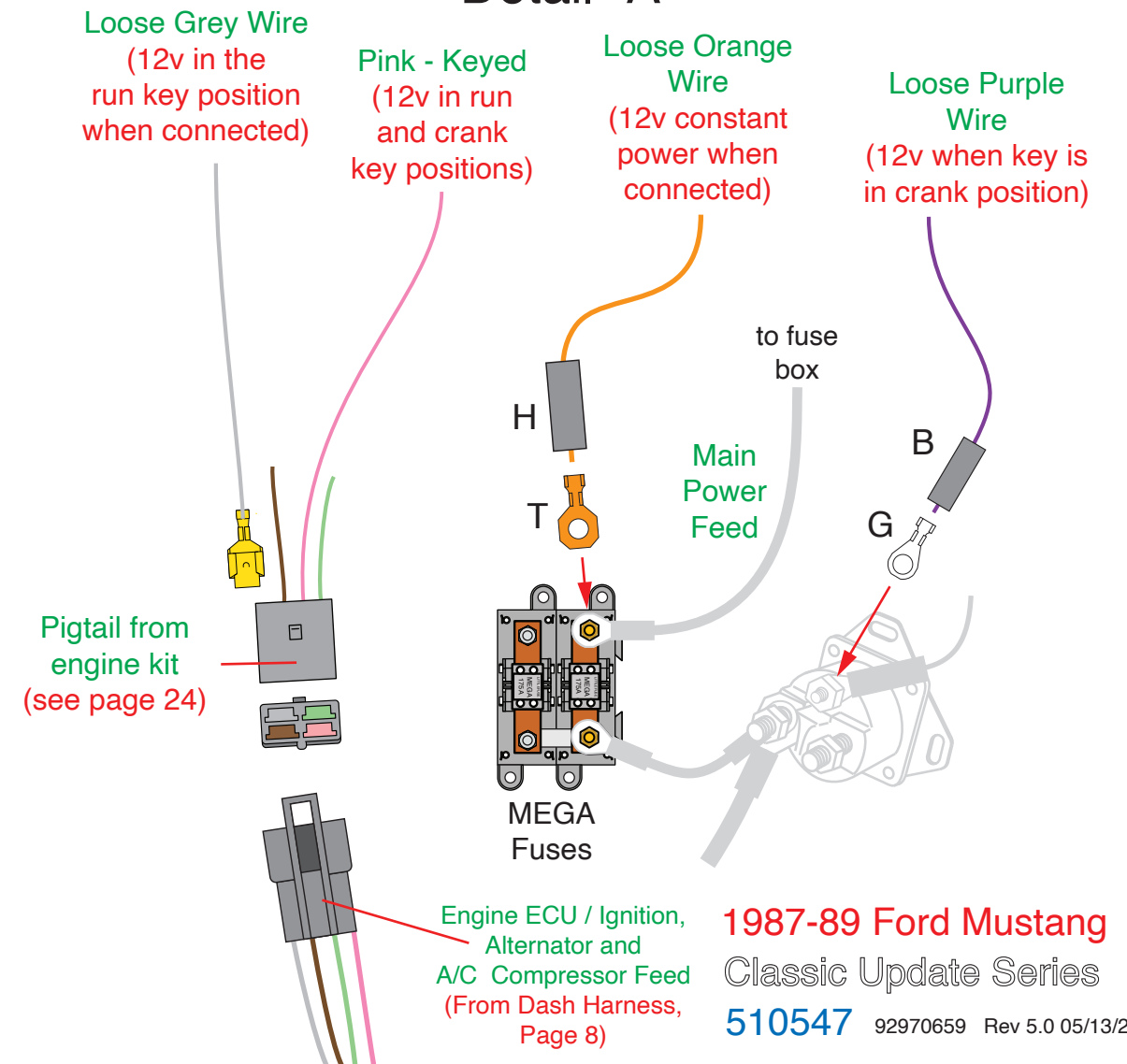
ECU / Ignition System power connections:

The following wires are supplied for powering aftermarket ignition systems and fuel injection ECU's. (See Detail "A" Below)

- Pink - 12v in run & crank key positions - This wire is already installed in the Engine Kit 510560.
- Grey - 12v in the run key position - This wire is supplied loose and needs to be plugged into the location shown on page 24, if required.
- Purple - 12v in crank key position - This wire is supplied loose and can be connected to the S terminals of the starter solenoid and connected to your ECU, if required.
- Orange - 12v constant battery power - This wire is supplied loose and needs to be connected to the Main Power Feed side of the MEGA Fuse, if required.

Please refer to your ignition system or fuel injection manufacturer's instructions, for correctly connecting to the system that you are using.

Detail "A"



1987-89 Ford Mustang Classic Update Series
510547 92970659 Rev 5.0 05/13/2025

STEP 3: RECONNECT YOUR BATTERY:

When you have completed the installation and are ready to reconnect the battery, make sure that the following electrical system grounds are in place:

- A. Battery is grounded to the ENGINE BLOCK.
- B. Battery is grounded to the frame.
- C. Engine block is grounded to the frame.
- D. Body is grounded to the frame.

STEP 4: CHECK ALL ELECTRICAL FUNCTIONS:

Any non-functioning items should be checked for proper installation. Any problems with your wiring and electrical circuit functions, should be addressed to American Autowire Systems, Inc. as soon as possible, to avoid any warranty problems.

If you have any questions concerning this or any of our products, please feel free to call us at 1-856-933-0801.

