American Autowire

We Make Wiring Easy!

1982-1986 S-10

Gauge Cluster Kit Installation Instructions (500959)

92968107 (500959) instruction sheet rev. 1.0 12/5/2008

Important facts about this kit.

1. The dash panel used in this picture is used by permission of Covan's Classic.
2. This kit requires some modification to your original under dash wiring harness. It is not intended to be a complete plug and play interface. We strive to make the integration of this product as easy as possible. However, in many cases there are no mating connectors due to obsolescence of original factory connectors. This requires substitution of components that will require modifications on the part of the installer.
3. As mentioned throughout the documentation included here, it is important to read the instructions that come with the gauges. This is important to identify the type of gauge used and any special requirements the manufacturer may have for installation.
4. This harness is designed to be used for Autometer Series I and Series II short sweep gauges. The harness is not compatible with Autometer full sweep gauges as they include their own sender harness assemblies. This harness assembly addresses connection of the water temperature, oil pressure, fuel, voltmeter, speedometer, and tachometer gauges, as well as indicator lights for turn signals, high beam lights, and emergency brake (if originally equipped).
5. Vehicle grounding and specifically instrument panel grounding are extremely important to the operation of you gauges. Check your grounds as this is the most common problem concerning proper operation of your gauges.

STEP 1:

Install the blade terminals to the back of each of the 4 small gauges. Secure the terminal with a lock washer and nut. There are specific left, center, and right hand terminals. Install as shown in the photo.

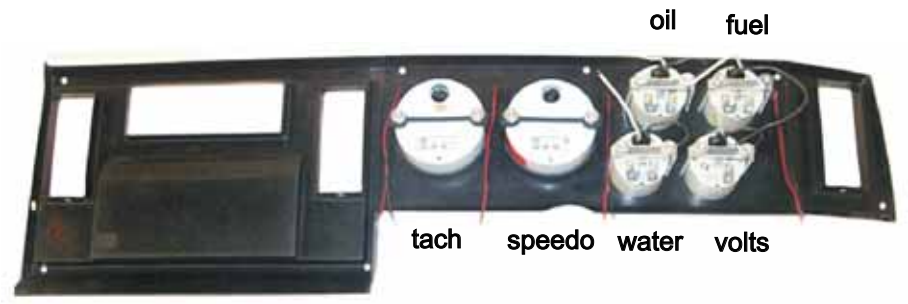
NOTE: Voltmeters use the 'GND' and 'I' terminals only.

STEP 2:

Plug the appropriate lamp socket pigtails into the 4 smaller gauges. This picture shows the lamp socket on a Series I gauge. Series II gauges have an integral blade terminal for the lamp power and ground connection.

STEP 3:

Insert gauges into housing in locations shown.
Install retention brackets on all gauges



STEP 4:

Drill 4 mounting holes for LED's, using a 5/32" drill bit, at the desired locations. Insert LED's in the hole from the front of the panel.

NOTE: The LED housings are a taper fit into the hole. Press the LED housing all the way in to tighten against the instrument panel.

STEP 5:

Connect the black ground wires from the lamp pigtails to the center ground studs of the smaller gauges as shown.

NOTE 1: This picture shows connection of individual light sockets as would appear on Series I gauges. The speedometer and tachometer have separate twist-in light sockets.

NOTE 2: This picture shows connection of lighting as would appear on Series II gauges. A separate blade terminal for power and ground exists for the internal lighting. The speedometer and tachometer have a specific lamp terminal within the 8 cavity plug.

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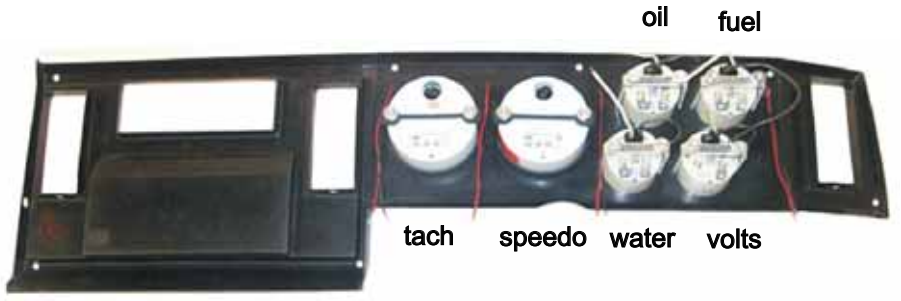
STEP 6:

Install the mounting brackets on all the 6 gauges.
The completed assembly is now ready for the connection of the wiring harness.
Note that this assembly shows Series I gauges.



STEP 7:

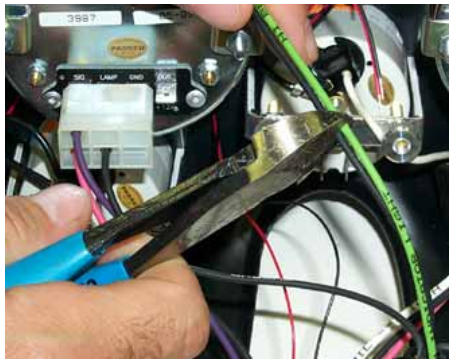
Plug in gauge connections using the supplied connectors. Plug in the connectors in the order shown below. A typical plug-in is shown in this picture.

1. FUEL pink / black / tan
2. TACH pink / black / white
3. TEMP pink / black / dark green
4. OIL pink / black / dark blue
5. VOLT pink / black
6. SPEEDO pink / black / purple

STEP 8:

Plug each lamp power wire (white) into the mating connectors on each gray wire (DASH LIGHTS) on the new harness.

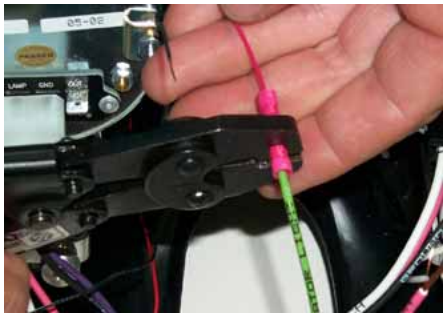
NOTE:
The supplied wiring harness comes with plug-in female terminals for the power and ground terminals of the Series II type 2 1/16 inch and 2 5/8 inch gauges. This is a direct plug into the terminals on the gauge. If you are using Series I gauges, you will have to remove these terminals and connectors and install the male and female disconnect terminals supplied in the kit to connect the individual light sockets. This picture shows this connection type. Please refer to the instruction sheet in the 500928 Gauge Side Wiring sub-kit for a more detailed explanation of the differences in the gauges.



STEP 9:

Select an LED lamp from the panel, and attach the appropriate signal lead wire from the harness, as noted below. Each signal wire will attach to the red LED lead wire from the panel. Trim the wires from the harness to the desired length before crimping.

LED color	function	power wire color
blue	high beam	light green
green	left hand turn	light blue
green	right hand turn	dark blue
red	brake	pink



STEP 10:

Install butt connectors, as shown, matching the wire functions noted above with the proper LED. Trim wires from the harness to the desired length before crimping.

Match the black wire from each LED panel lamp with a black ground wire from the harness for all LED lamps except the red brake warning LED.

If you are using the red brake warning LED lamp, remove the factory lamp socket and attach the black lead wire from this LED lamp to the factory brown wire. As noted above, the red will connect to the factory pink wire.

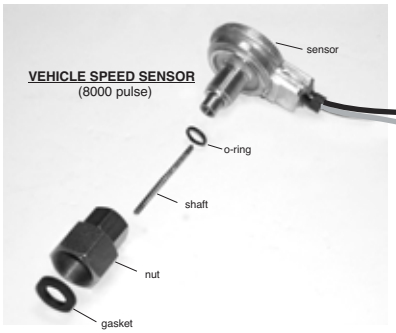
LED color	function	signal ground wire color
red	brake	tan

STEP 11:

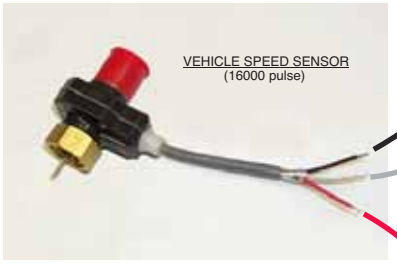
The speedometer connection has a separate long yellow wire with a ring terminal on the end. This wire is twisted around the purple vehicle speed sensor lead that is plugged into the speedometer connector. The purpose of this wire is to cancel out any signal interference to the speedometer and must be grounded to a good chassis ground after the instrument cluster is finally installed.

STEP 12:

This kit uses an electronic programmable speedometer which requires a vehicle speed sensor that replaces the original speedometer cable at the transmission. Below are the connections for the various vehicle speed sensors that may be supplied in your kit.



Typical 2 wire VSS connection



Typical 3 wire Autometer 5291 VSS connection

Note:
This VSS requires a lead wire from the red wire to a 12 volt ignition source. This wire is not included in the kit.

STEP 13:
Connect your existing instrument cluster wires to the new wiring kit using the supplied connectors and terminals and pin location chart. Be sure to maintain color continuity with the gauge side wiring when plugging the wires into our connectors.
Using the enclosed PIN LOCATION chart, apply the appropriate terminal to your existing wires and plug into the supplied connector. There are empty cavities. Note: Empty cavities can be used for remaining wires from the original cluster connectors which are not used in this application. This will protect the wires.

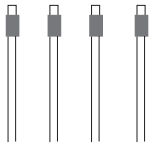
Route the long purple & yellow wires to the transmission Vehicle Speed Sensor (VSS). Be sure to twist the wires as shown! This is necessary to prevent signal interference.

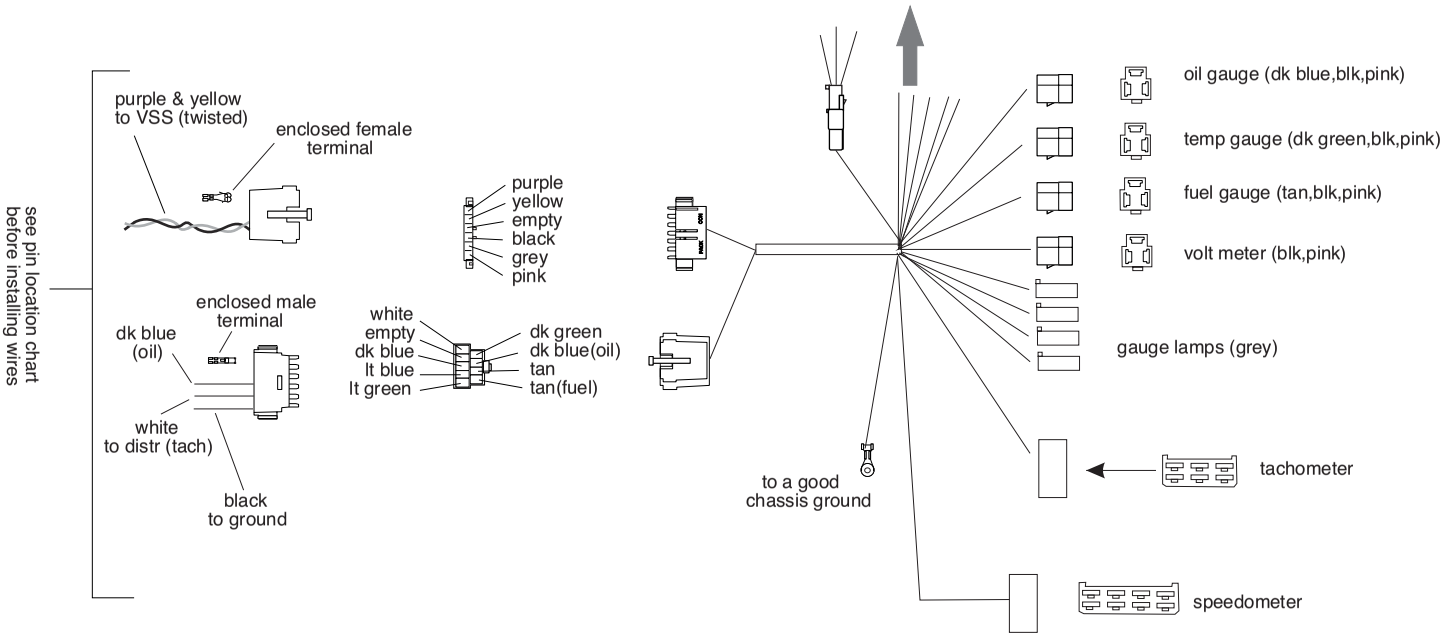
LONG BARE LEADS
lt green: connect to hi beam LED red lead
black: connect to hi beam LED black lead

lt blue: connect to LH turn LED red lead
black: connect to LH turn LED black lead

dk blue: connect to RH turn LED red lead
black: connect to RH turn LED black lead

tan: connect to the brake LED black lead
pink: connect to the brake LED red lead





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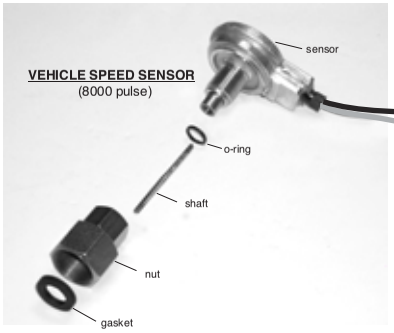
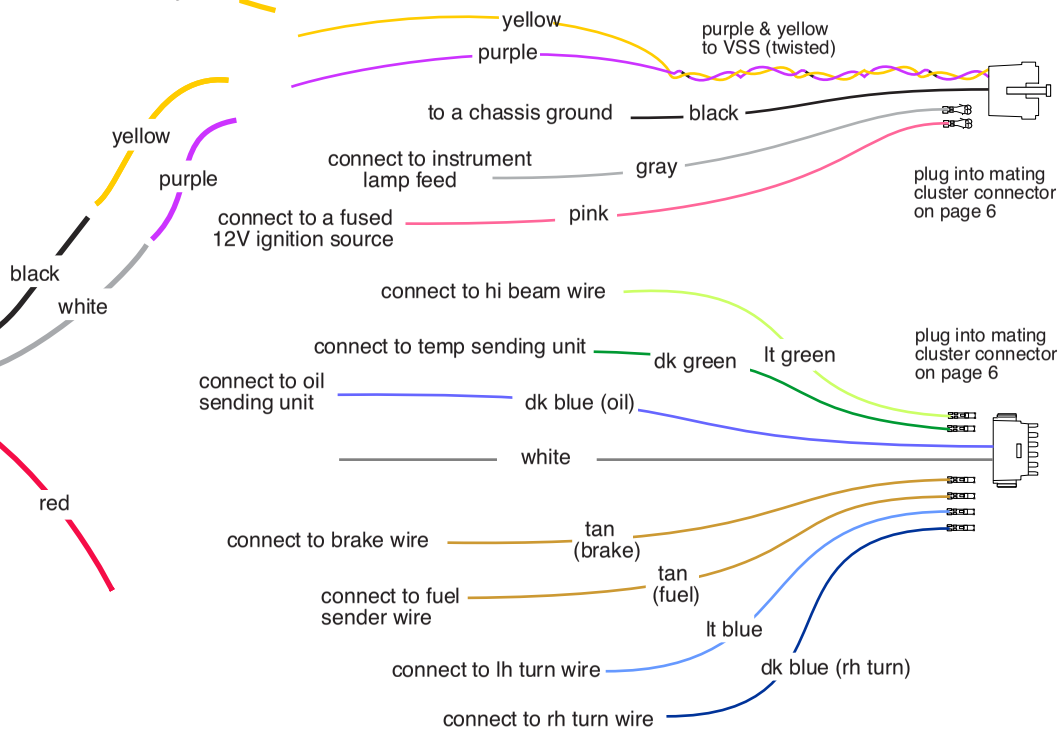


Typical 2 wire VSS connection

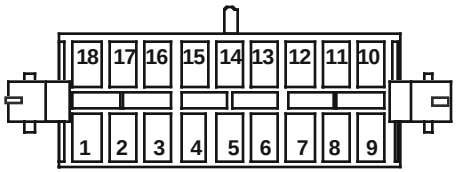
Typical 3 wire Autometer 5291 VSS connection

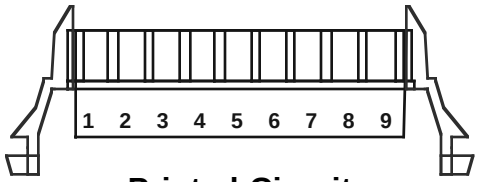
Note:
This VSS requires a lead wire from the red wire to a 12 volt ignition source. This wire is not included in the kit.

DASH SIDE CONNECTIONS
Use the included PIN LOCATION CHART on the following page to identify the wires which will be used for this connection process. Be sure to maintain color continuity (and wire function) with the mating connectors from the previous page.
Using the information below, connect the necessary wires to the connectors shown.
If you are using the wires from your existing instrument cluster connector, remove the existing terminals and terminate using the new terminals supplied in the kit.
Plug these wires into the new cluster connector maintaining color continuity with the mating connectors from the previous page.
Extra wires are provided in the kit if it is necessary to complete the cluster connections.
Route the long purple & yellow wires to the transmission Vehicle Speed Sensor (VSS). Be sure to twist the wires as shown! This is necessary to prevent signal interference.

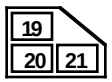


Printed Circuit Cluster Connector Pin Locations 1982-88





Printed Circuit Cluster Connector



Optional Tachometer Connector

1982-86 S-10 DASH PRINTED CIRCUIT CONNECTOR PIN LOCATIONS

Circuit NO.	Function	Wire Color	1982-88 factory gauges with tach Pin Loc	1982-88 factory gauges without tach Pin Loc	1982-88 warning lights Pin Loc	Notes
8	Instrument Lights	gray	6, 18	17	17	
11	High Beam Indicator	light green	14	14	14	
14	Left Turn Indicator	light blue	16	15	15	
15	Right Turn Indicator	dark blue	17	16	16	
25	Alternator light	brown	- -	- -	3	2
30	Fuel tank sender	pink	13	2	2	
31	Oil pressure sender	tan	5	5	5	
33	Brake Warning	tan / white stripe	12	12	12	
35	Coolant temperature sender	dark green	11	11	11	
39	12 Volt fused power	pink / black stripe	3, 9, 20	4, 8	4, 8	
121	Tachometer	white	21	- -	- -	1
150	Ground	black	2, 19	1, 6	1, 6	
237	Seat belt warning light	yellow	15	13	13	5
78	Electric choke	light blue	8	7	7	not used
256		dark blue / white stripe	- -	- -	10	not used

Notes:

1. Factory gauge trucks were equipped with a gauge package consisting of fuel, temperature, voltmeter and oil pressure gauges. Tachometers were optional and connected by a separate 3 wire connector. The tachometer signal lead ran through the firewall to a tach filter in the engine bay.
2. Factory gauge cars were not equipped with an alternator charge light.
3. Headlight switch grounds directly through the switch connector.
4. Wiper switch is steering column mounted.
5. A seat belt warning light is mounted directly in the dash unit. Can be used with a customer supplied bulb.

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