



American Autowire

We Make Wiring Easy!



1968 Nova



1969-74 Nova



1977-79 Nova

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.

1968-1979 Nova Gauge Cluster Kit Installation Instructions (510025)



STEP 1:

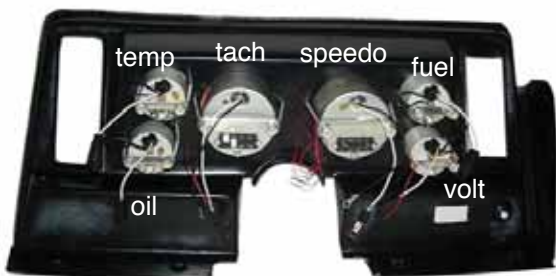
Install the blade terminals to the back of each of the 4 small gauges. Secure the terminal with a lock washer and nut. There are specific left, center, and right hand terminals. Install as shown in the photo.

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



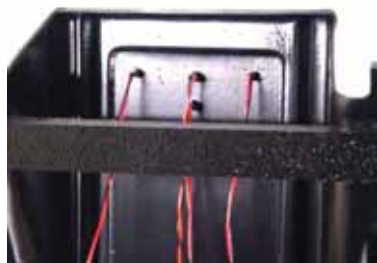
STEP 2:

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.



1968 Nova headlight and wiper switch grounding.

STEP 5:

The headlight and wiper switches must be grounded. The grounding kit supplied with the kit supplies several grounding wires and terminals to accomplish proper grounding. The grounding for the 1968 wiper switch differs from the 1969-74. The connection for the 1968 Nova is shown here. Connect as shown by routing the long remaining end to a good chassis ground with the supplied ring terminal.



1969-74 Nova headlight and wiper switch grounding.

This photo shows the 1969-74 configuration. Connect as shown by routing the long remaining end to a good chassis ground with the supplied ring terminal.



STEP 6:

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

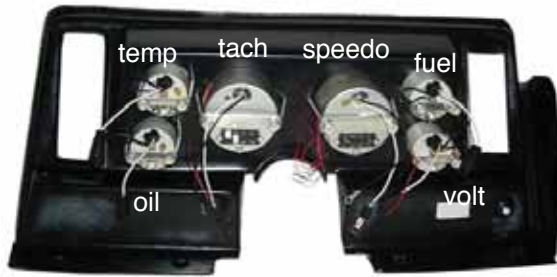
NOTE 1: This picture shows connection of individual light sockets as would appear on Series I gauges. The speedometer and tachometer have separate twist-in light sockets.



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.

STEP 7:

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 8:

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 9:

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

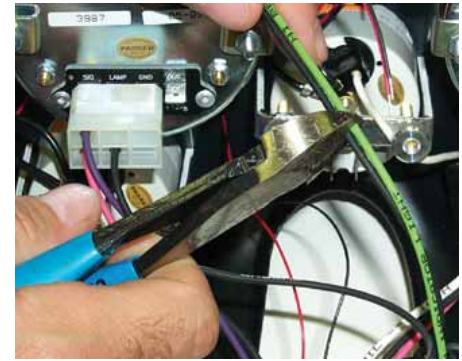
NOTE:

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 10:

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



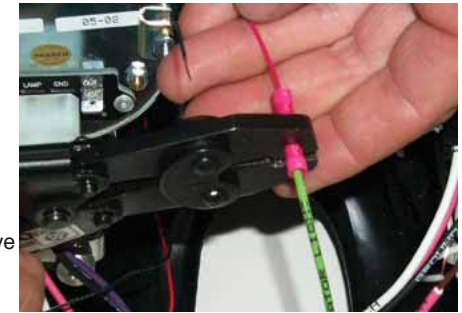
STEP 11:

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.

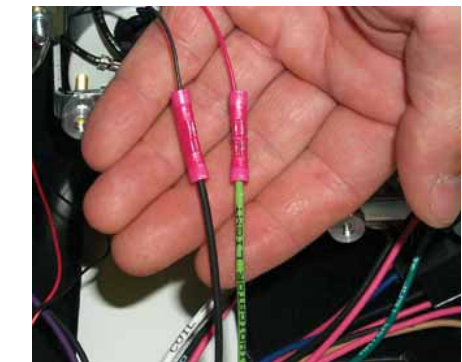
Match the black wire from each LED panel lamp with a black ground wire from the harness for all LED lamps except the red brake warning LED.

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



This is a completed LED splice.



STEP 13:

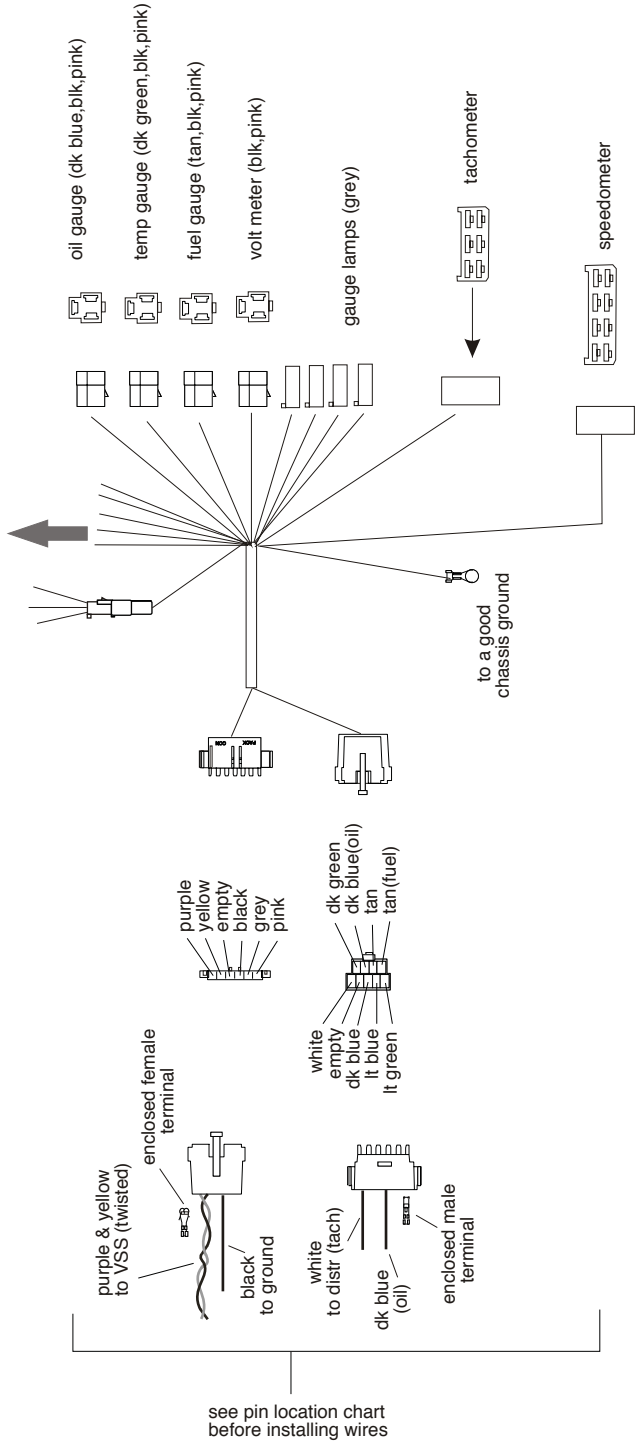
Connect your existing instrument cluster wires to the new wiring kit using the supplied connectors and terminals and pin location chart. Be sure to maintain color continuity with the gauge side wiring when plugging the wires into our connectors.

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.

© COPYRIGHT 2004 American Autowire / Factory-Fit
 Used with express permission of American Autowire / Factory-Fit
 92968466 (510025) instruction sheet rev. 1.0 12/28/2012

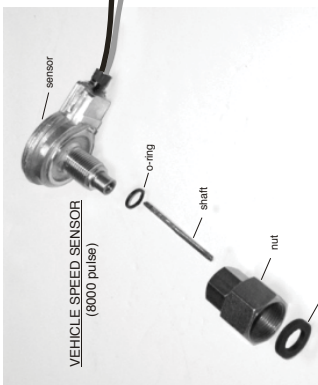
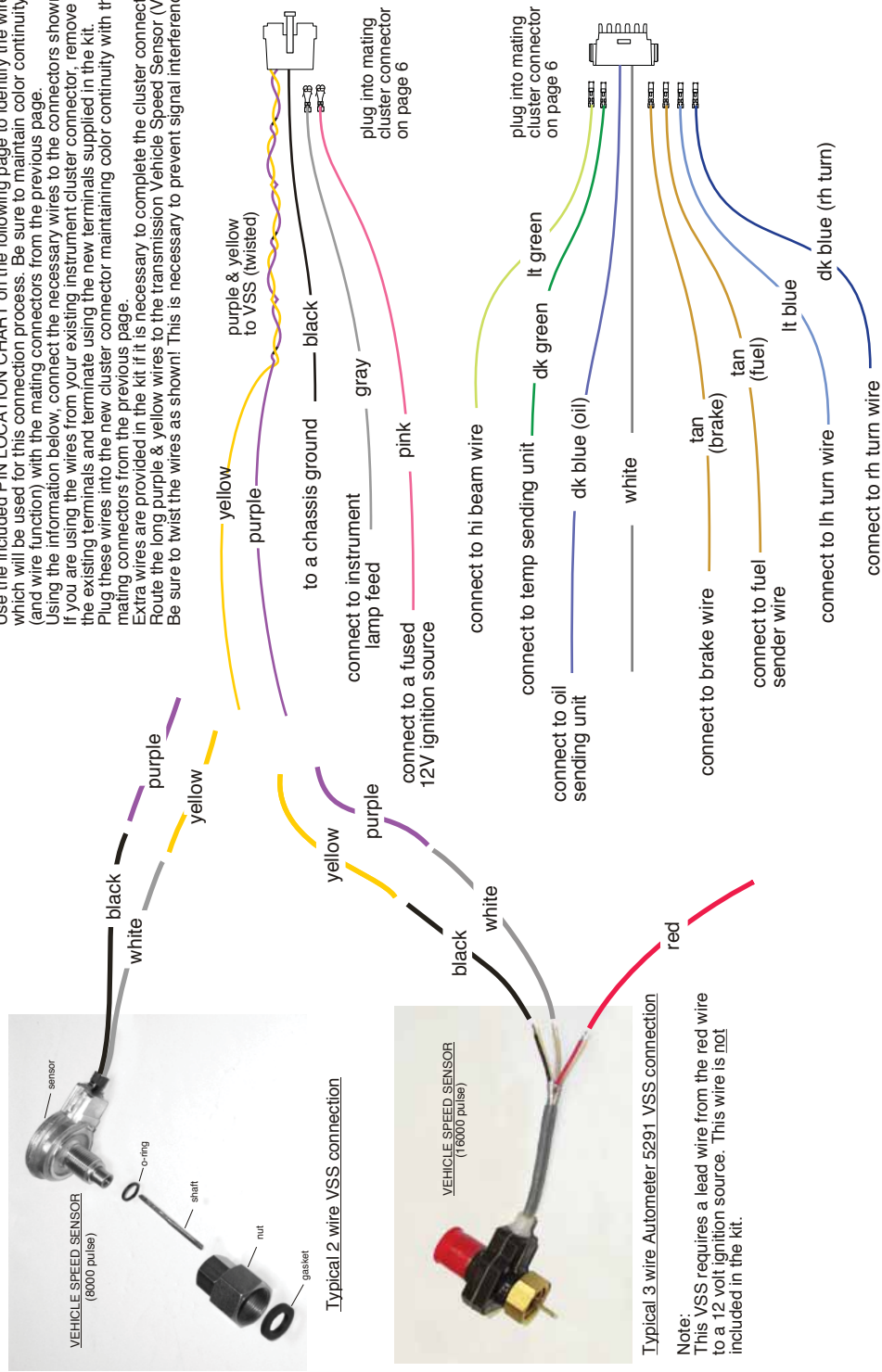
LONG BARE LEADS
 lt green: connect to hi beam LED red lead
 black: connect to hi beam LED black lead
 lt blue: connect to LH turn LED red lead
 black: connect to LH turn LED black lead
 dk blue: connect to RH turn LED red lead
 black: connect to RH turn LED black lead
 tan: connect to the brake LED black lead
 pink: connect to the brake LED red lead



4

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.



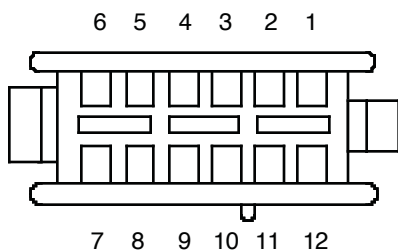
Typical 2 wire VSS connection



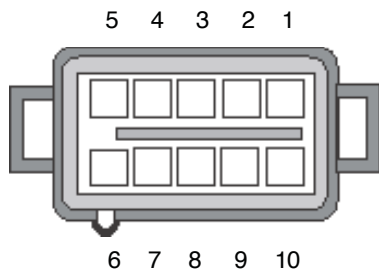
Typical 3 wire Autometer 5291 VSS connection

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.

Printed Circuit
Cluster Connector
Pin Locations
1968-1976



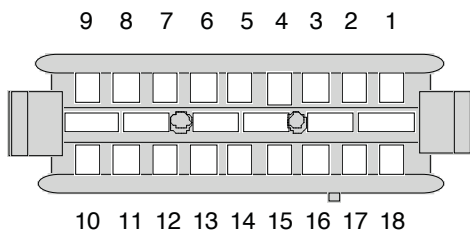
Console Gauge
Cluster Connector
Pin Locations
1968-1976



1968-76 NOVA DASH PRINTED CIRCUIT CONNECTOR PIN LOCATIONS

Circuit No.	Function	Wire Color	1968- factory gauges Pin Loc	1972 warning lights Pin Loc	1973- factory gauges Pin Loc	1976 warning lights Pin Loc	1968-72 console gauge Pin Loc	1973-75 console gauge Pin Loc	1976 console gauge Pin Loc
30	Fuel tank sender	tan	see note 1	1	see note 1	1	5	5	5
39	12 Volt fused power	pink	2	2	2	2	7	7	7
25	Alternator light	brown	see note 2	3	see note 2	3	see note 2	see note 2	see note 2
33	Brake Warning	tan	4	4	4	4			
14	Left Turn Indicator	light blue	5	5	5	5			
31	Oil pressure sender	dark blue	see note 1	6	see note 1	6	see note 1	see note 1	see note 1
15	Right Turn Indicator	dark blue	8	8	8	8			
11	High Beam Indicator	light green	9	9	9	9			
8	Instrument Lights	gray	10	10	10	10	6	6	6
35	Coolant temperature sender	dark green	see note 1	11	see note 1	11	4	4	4
105	Ammeter gauge	black	see note 1		see note 1		9	9	see note 1
106	Ammeter gauge	black/white	see note 1		see note 1		8	8	see note 1
121	Tachometer	brown	1		1				
952	Low Fuel Indicator	yellow	11				3	see note 7	see note 7
150	Ground	black					2	2	2
Notes:									
1	1968-1975 factory console gauge cars were equipped with the console gauge package consisting of fuel, temperature, ammeter electrical gauges and a mechanical oil pressure gauge.								
	1976 factory console gauge cars replaced the ammeter with a voltmeter								
2	Factory gauge cars were not equipped with an alternator charge light.								
3	1968-1971 cars require the grounding wires for the headlight and wiper switches.								
4	1972-1976 cars ground both the headlight and wiper switches directly through the switch connector.								
5	1973-1976 cars have a wiper switch light.								
6	1972-1976 cars have a seat belt warning light mounted directly into the dash unit.								
7	1973-76 factory console gauge cars did not use a low fuel indicator light.								

**Printed Circuit
Cluster Connector
Pin Locations
1977-1979**



1977-79 NOVA DASH PRINTED CIRCUIT CONNECTOR PIN LOCATIONS

Circuit NO.	Function	Wire Color	1977-	1979
			factory gauges Pin Loc	warning lights Pin Loc
8	Instrument Lights	gray	8, 18	2
11	High Beam Indicator	light green	3	9
14	Left Turn Indicator	light blue	15	8
15	Right Turn Indicator	dark blue	2	18
25	Alternator light	brown	see note 2	3
30	Fuel tank sender	tan	11	14
31	Oil pressure sender	dark blue	16	4
33	Brake Warning	tan / white stripe	4	11
35	Coolant temperature sender	dark green	17	16
39	12 Volt fused power	pink	5, 12	12
121	Tachometer	brown	6	
150	Ground	black	1, 7	1, 6, 10, 13
237	Warning Buzzer lead	pink / white stripe	14	5

Notes:

- 1 1977-1979 factory gauges cars were equipped with a gauge package consisting of tachometer, fuel, temperature, voltmeter and oil pressure gauges.
- 2 Factory gauge cars were not equipped with an alternator charge light.
- 3 1977-1979 cars ground both the headlight and wiper switches directly through the switch connector.
- 4 1977-1979 cars have a wiper switch light.
- 5 1977-1979 cars have a seat belt warning light mounted directly into the dash unit.