



WESTERN PRODUCTS
 7777 NORTH 73RD STREET
 P.O. BOX 23045
 MILWAUKEE, WISCONSIN 53223

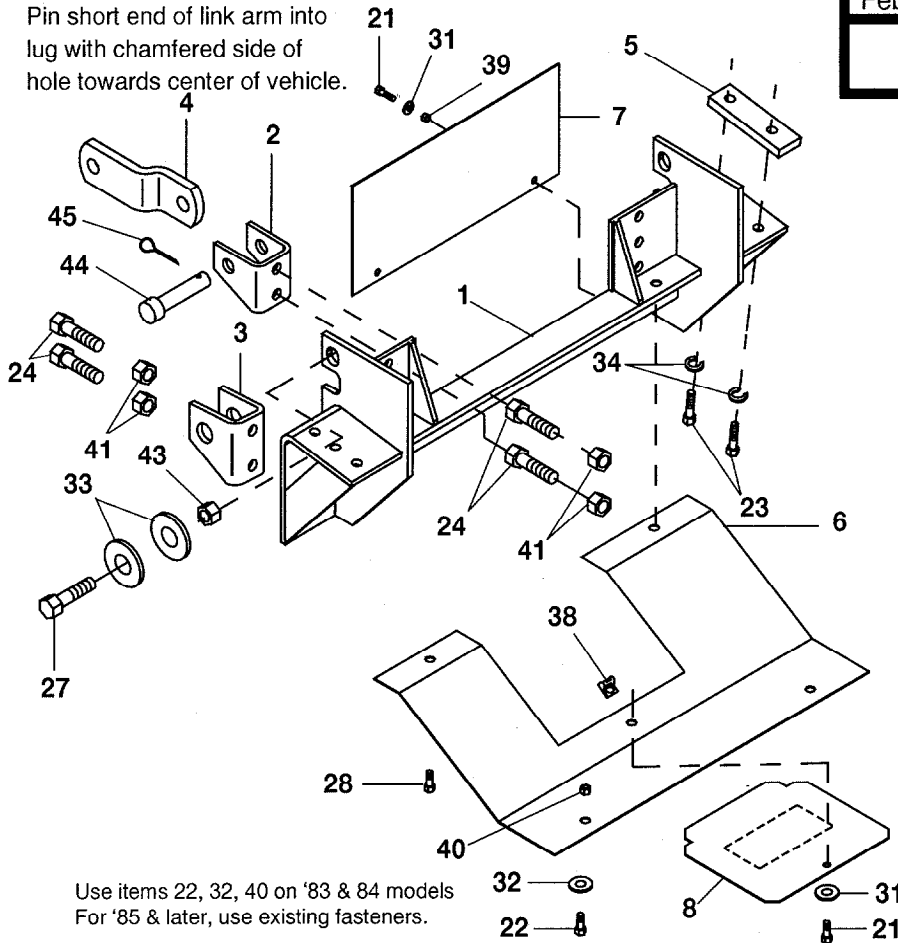


A DIVISION OF DOUGLAS DYNAMICS, L.L.C.



NOTE: This symbol designates a change made in the instructions since the last revision date of February 6, 1995.

Pin short end of link arm into lug with chamfered side of hole towards center of vehicle.



Use items 22, 32, 40 on '83 & 84 models
 For '85 & later, use existing fasteners.

ITEM	PART NO.	QTY.	DESCRIPTION
1	62202	1	MOUNT FRAME 1505
2	61916	2	LINK ARM LUG
3	61917	2	COUPLING LUG
4	62246	2	LINK ARM
5	61486	2	NUT BAR 7/16-14
6	62201	1	SPLASH GUARD
7	62248	1	SHIELD
8	62252	1	COVER ASSY
21	90020	3	5/16-18X1 HX CS G2 ZP
22	90040	2	3/8-16X1-1/4 HX CS G5 ZYC
23	90067	4	7/16-14X1-1/2 HX CS G5 ZYC
24	90100	8	1/2-13X1-1/2 HX CS G5 ZYC
27	90154	2	3/4-10X2 HX CS G5 ZP
28	93169	2	3/8-16X1 HXW TRTS TY SW ZP
31	91102	3	5/16 PLAIN WASHER TY A STD ZP
32	91103	2	3/8 PLAIN WASHER TY A STD ZP
33	91107	4	3/4 PLAIN WASHER TY A STD ZP
34	91204	4	7/16 SP LK WASHER ZP
38	91571	1	5/16-18 CAGE NUT
39	91332	2	5/16-18 PT HX LK NUT NYIS ZYC
40	91333	2	3/8-16 PT HX LK NUT NYIS ZYC

ITEM	PART NO.	QTY.	DESCRIPTION
41	91335	8	1/2-13 PT HX LK NUT NYIS ZYC
43	91338	2	3/4-10 PT HX LK NUT NYIS ZYC
44	93062	2	RIVET 3/4" X 3-1/4" G5 ZYC
45	91911	2	5/32X1-1/2 COTTER PIN ZYC
NOT SHOWN			
	55930	1	BATTERY CABLE ADAPTOR - Set of 2
	61536	4	CABLE TIE - LONG
	62262	1	DASH BRACKET W/FLASHER ASSY
	56080	1	DASH BRACKET
	60109	1	FLASHER HD
Parts listed above may be found in the following assembly.			
	62249	1	PARTS BAG ASSY (62200)

Abbreviations			
ASSY	Assembly	SP	SPRING
CS	Cap Screw	STD	Standard
G	Grade	TRTS	Thread Rolling
HD	Heavy Duty		Tapping Screw
HX	Hex	TY	Type
HXW	Hex Washer	W/	With
LK	Lock	ZP	Zinc Plate
NYIS	Nylon Insert	ZYC	Zinc Yellow Chromate
PT	Prevailing Torque		

Vehicle Installation Instructions and
 Parts List

Model 1505
 Mount Assembly Box No. 62200
 Chevrolet/GMC "S" Series 4 x 4
 83' & Later
 Hydraulics Box No. 56355 or 56365
 Harness Kit without DRLs, No. 61545,
 61575, or 61515
 Harness Kit with DRLs, No. 61555, 62535,
 or 61585
 February 17, 1997

Mount Assembly Box No. 62200
PARTS DIAGRAM & LIST

Refer to the current
 selection list for
 minimum vehicle
 recommendations and
 ballast requirements.

**Mount Box No. 62200
INSTALLATION INSTRUCTIONS**

IMPORTANT: Read instructions before assembling. Bolts should be finger tight until instructed to tighten according to the torque chart shown at right. Use standard methods and practices when attaching snowplow including wearing safety glasses while drilling.

MOUNT FRAME

1. Remove splash shield, air deflector, tow hooks and tapped bars (inside frame). Retain and reinstall whenever mount is removed from vehicle.
2. Place mount frame between vehicle frame rails aligning vertical slots in mount frame to horizontal slots in vehicle frame. '83-'84 truck bumper brackets may need to be repositioned. On each side, insert a 3/4" x 2" bolt and flat washer. Retain with a flat washer and locknut inside vehicle frame.

Recommended Fastener Torque Chart (Ft.-Lb.)				
Size	SAE Grade 2		SAE Grade 5	
	Grade 2	Grade 5	Grade 5	Grade 8
1/4-20	6	9	13	
5/16-18	11	18	28	
3/8-16	19	31	46	
3/8-24	24	46	68	
7/16-14	30	50	75	
1/2-13	45	75	115	
9/16-12	66	110	165	
5/8-11	93	150	225	
3/4-10	150	250	370	
7/8-9	202	378	591	
1-8	300	583	893	

Metric Grade 8.8 (Ft.-Lb.)			
Size	Torque	Size	Torque
M 6	7	M 12	60
M 8	17	M 14	95
M 10	35	M 16	155

These torque values apply to mount assembly fasteners except those noted in the instruction.

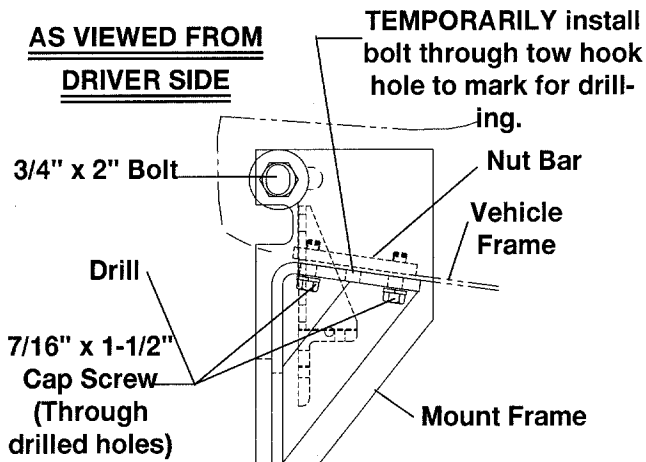
3. '94 AND LATER: Align one nut bar inside each vehicle frame horn over tow hook holes.

On each side, temporarily thread one 7/16" x 1-1/2" bolt through the center hole in mount frame and tighten into the nut bars.

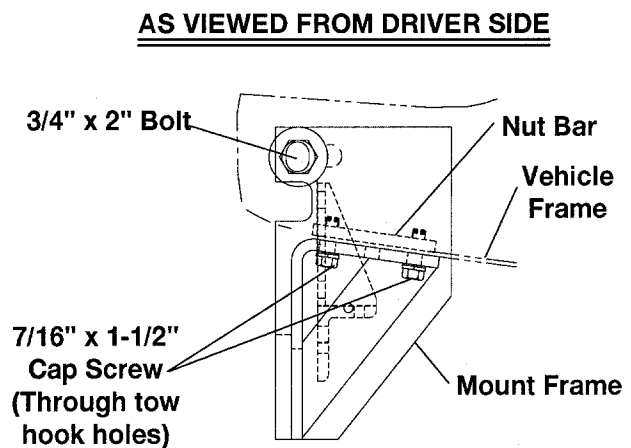
Use mount frame as a template to mark front and rear holes to vehicle frame. Remove mount frame and nut bars, drill two 1/2" holes on each side through bottom of vehicle frame. Reattach mount frame with two 7/16" x 1-1/2" cap screws and lock washers into nut bars on each side.

'83 THROUGH '93: Align one nut bar inside each vehicle frame horn over tow hook holes. On each side, thread two 7/16" x 1-1/2" bolts with lock washers through 1/2" holes in mount frame and into the nut bars.

1994 & Later Vehicles



1983 Through 1993 Vehicles



4. (All Vehicles) Starting with the 7/16" x 1-1/2" bolts:

TIGHTEN ALL FASTENERS ACCORDING TO THE TORQUE CHART.

COUPLING LUGS

1. Position the coupling lugs (1" holes) against the outer set of holes in the front of the mount frame. (Turning lugs upside down changes height by 1".)

During installation, allow for drop in vehicle height when the plow is installed. The final distance between the coupling lug hole center to level surface should be 9-1/2" to 10-1/2" with plow attached and resting on a level surface. (See Coupling Lug Height Check on page 17.)

2. Secure each coupling lug with two 1/2" x 1-1/2" bolts and locknuts.

LINK ARM LUGS

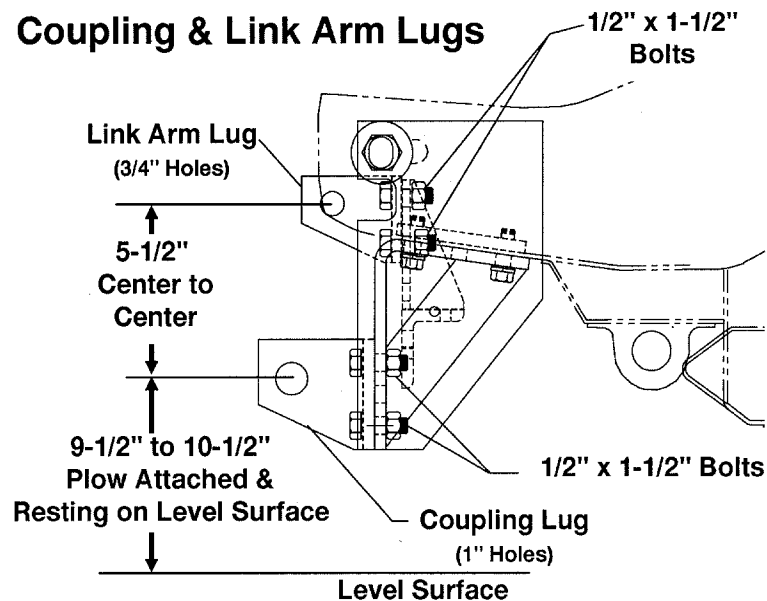
1. Install link arm lugs (3/4" holes) with angled side in the same position as the angled side of the coupling lugs. Position the link arm lugs to the **top** inner holes on the front plates of the mount frame.

NOTE: Center of coupling lug holes to center of link arm lug holes should be 5-1/2".

2. Secure each link arm lug with two 1/2" x 1-1/2" bolts and locknuts.

TIGHTEN ALL FASTENERS ACCORDING TO THE TORQUE CHART AT THE TOP OF PAGE 2.

Coupling & Link Arm Lugs



SHIELD

Attach the shield to the front of the mount frame main angle with two 5/16" x 1" bolts, flat washers to shield, and locknuts.

SPLASH GUARD

Attach front of splash guard to bottom of main angle on mount frame with two 3/8" x 1" self-tapping screws. Attach rear of guard as follows:

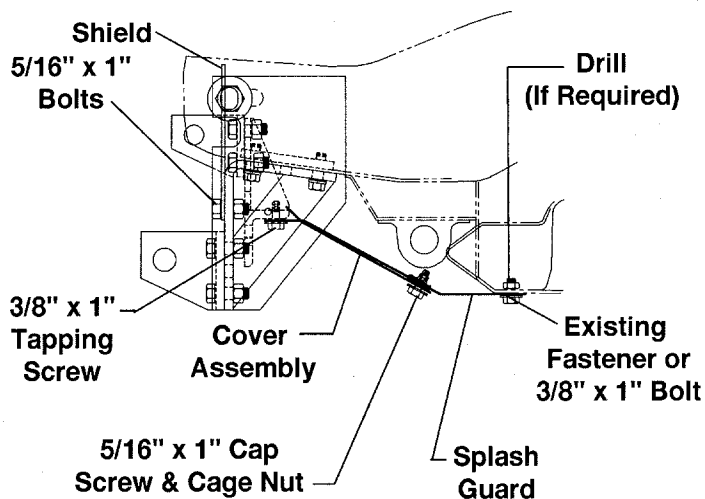
'85 & Later: Secure to vehicle frame with existing splash guard fasteners. Tighten fasteners according to the torque chart on page two.

'83 & '84: Using the outer rear holes in splash guard as a guide, drill two 13/32" holes in vehicle frame and fasten with two 3/8" X 1" bolts, flat washers and locknuts. Tighten fasteners according to the torque chart on page two.

COVER ASSEMBLY

Push cage nut over hole in splash guard with threaded part of cage nut up. Place retaining lip of cover on top of main angle with instruction label facing down. Fasten cover to splash guard with a 5/16" x 1" cap screw and flat washer into cage nut.

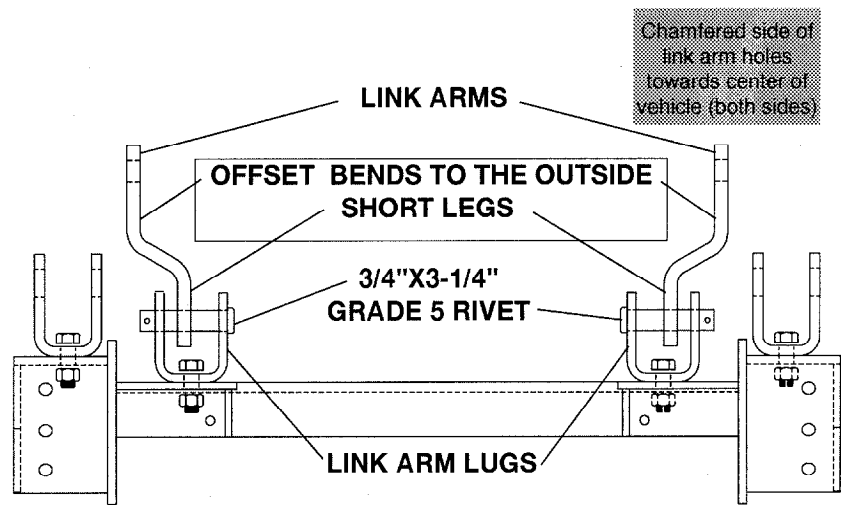
Shield, Splash Guard & Cover Assembly



Continued on next page.

LINK ARMS

Attach short leg of each link arm, chamfered side of link arm holes towards center of vehicle, with offset as shown in diagram between each pair of link arm lugs with a 3/4" x 3-1/4" grade 5 rivet and cotter pin. See diagram for proper orientation of link arms.



HARNESS KIT SELECTION

Use flasher provided in harness kit or found in mount box dash bracket carton to replace vehicle turn signal flasher on all vehicles.

Vehicles produced starting in December, 1994 have been equipped with Daytime Running Lights (DRL's). Vehicles with DRL's have a white wire with a blue trace for the ground wire of the driver-side headlamp (dual lights) or high beam headlamp (quad lights). These vehicles require the use of (61550) 12-Pin Headlamp Kits.

Vehicles with DRL's

Use Box No. 61550 Headlamp Kit (12-Pin).

For DUAL Type 2E headlamps, use 62535 Harness Kit 2E 12-Pin U -B. See installation instructions on pages 8 and 9. Wiring diagram is on page 19.

For QUAD Type HB-3 & HB-4 headlamps, use 61585 Harness Kit HB-3 & HB-4 12-Pin -B. See installation instructions on pages 10 and 11. Wiring diagram is on page 20.

For DUAL Type 2B headlamps, use 61555 Harness Kit 2B/2D 12-Pin -B. See installation instructions on pages 12 and 13. Wiring diagram is on page 19.

Vehicles without DRL's

Use Box No. 61540 Headlamp Kit (9-Pin).

For DUAL Type 2E headlamps, use 61575 Harness Kit 2E 9-Pin -C. See installation instructions on page 14. Wiring diagram is on page 21.

For QUAD Type HB-3 & HB-4 headlamps, use 61515 Harness Kit HB-3 & HB-4 9-Pin -A. See installation instructions on page 15. Wiring diagram is on page 22.

For DUAL Type 2B headlamps, use 61545 Harness Kit 2B/2D 9-Pin -A. See installation instructions on page 16. Wiring diagram is on page 23.



CAUTION: During electrical installation, THE LONG BATTERY GROUND CABLE (no stripe) MUST BE GROUNDED TO THE NEGATIVE BATTERY TERMINAL.

NOTE: After 5 to 10 hours of using the snowplow, retorque all mount assembly fasteners.

**Solenoid Control — Floor Mounted
INSTALLATION INSTRUCTIONS**

1. Align the lower dash bracket hole shown in diagram to end hole of control bracket.

NOTE: Top flange of control bracket may be reversed in dash bracket from position shown in diagram.

Attach with one #8 x 3/8" hex head thread cutting screw and lock washer on each side.

2. Use top holes in dash bracket (see diagram) as a template to drill a 9/64" hole in each side of control bracket.

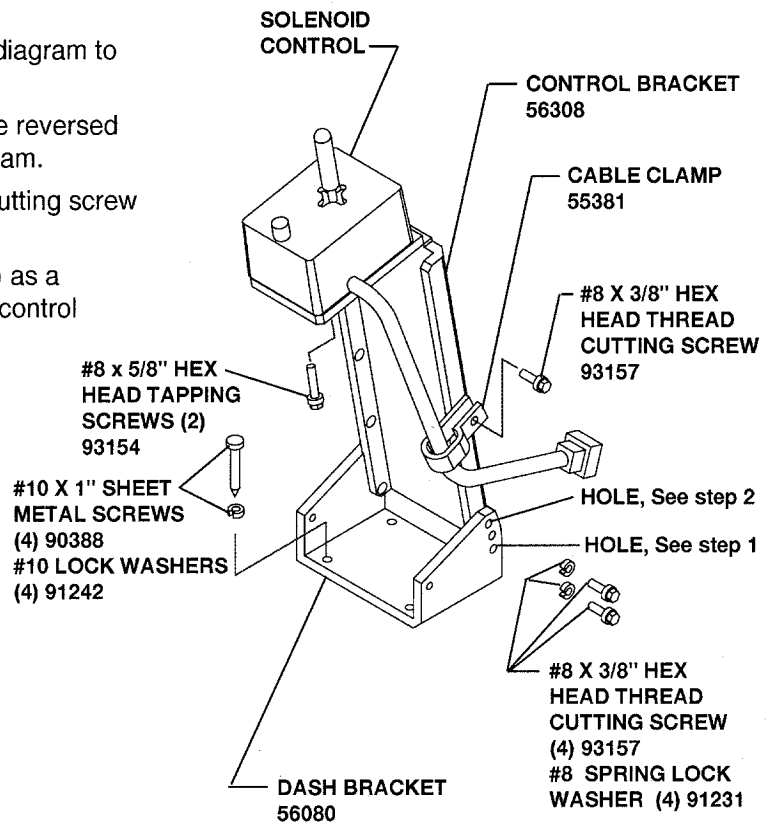
Secure dash bracket to control bracket with a second screw and lock washer in each side.

3. Secure solenoid control to control bracket with two #8 x 5/8" hex head tapping screws.

4. Move seat forward. Locate control and bracket assembly on floor tunnel so that it does not interfere with the operation of vehicle controls. Mark this location.

5. Remove control bracket from dash bracket.

6. Place dash bracket in marked location. Use dash bracket as a template to drill four 1/8" holes in tunnel.



CAUTION: Check for clearance before drilling holes.

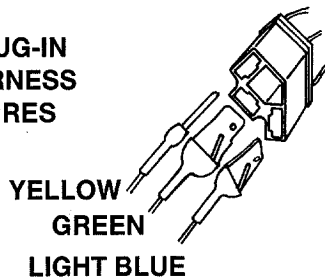
Secure dash bracket to tunnel with four #10 x 1" sheet metal screws and lock washers.

7. Reassemble control bracket to dash bracket. Bend top flange of control bracket to desired position.
8. Secure harness to control bracket with cable clamp and one #8 x 3/8" hex head thread cutting screw.

**2E HEADLAMP WIRE INSTALLATION DIAGRAMS
(See paragraphs 2 & 3, page 8 or 14)**

**DRIVER-SIDE VEHICLE
HEADLAMP CONNECTOR**

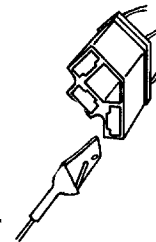
**PLUG-IN
HARNESS
WIRES**



Secure wires with electrical tape after insertion.

**CURB-SIDE VEHICLE
HEADLAMP CONNECTOR**

**PLUG-IN
HARNESS -
DARK
BLUE WIRE**



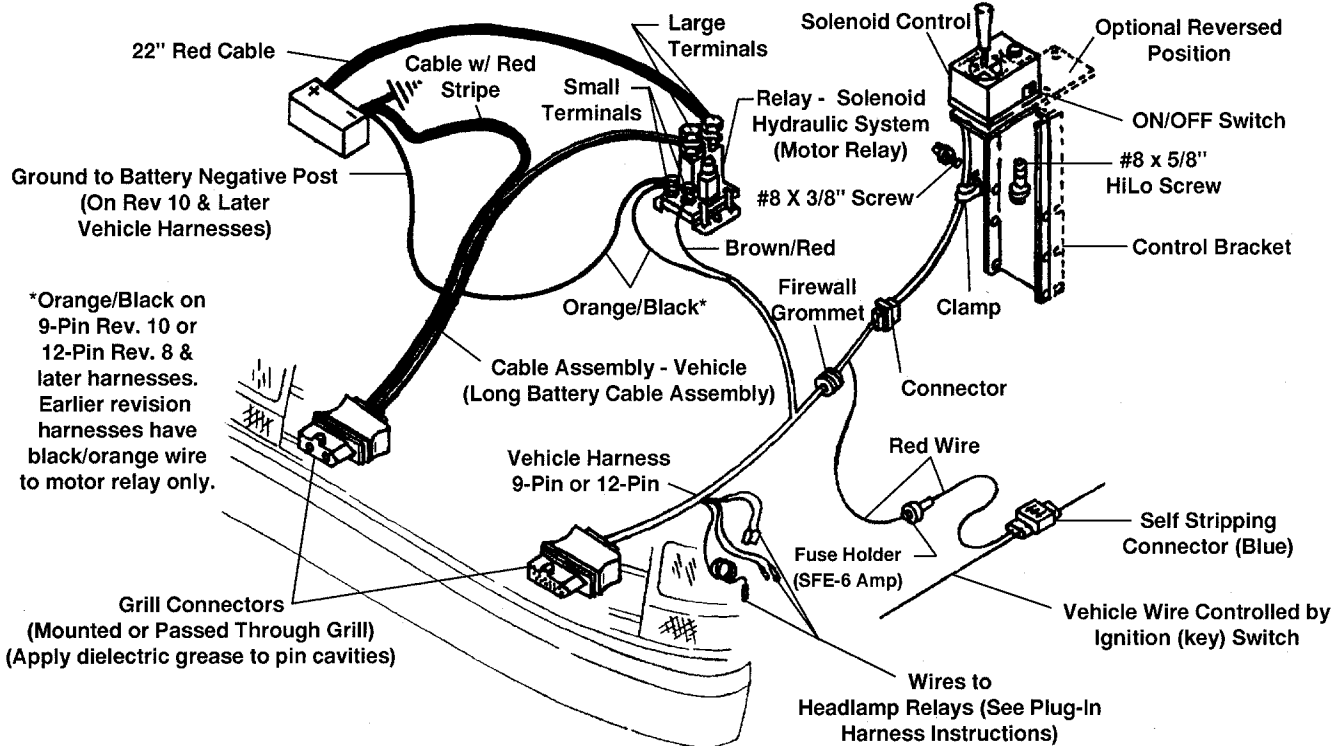


SAFETY NOTE: Whenever you see this symbol, it notes a **SAFETY WARNING**. To avoid serious injury to yourself or others, follow all warnings.

**Vehicle Underhood
INSTALLATION INSTRUCTIONS**

9-Pin Vehicle Harness And Motor Relay

HARNESS, SOLENOID CONTROL & MOTOR RELAY INSTALLATION DIAGRAM



Except as noted, parts to be installed are found in the hydraulics box.

CAUTION: To prevent corrosion on all underhood electrical connections, use dielectric grease to fill receptacles and lightly coat ring terminals and blades before assembling, or lightly coat the connections after assembling.

1. Identify wires for the parking lamp on the driver-side and the turn signals on both sides of the vehicle. Attach a black self-stripping bullet receptacle connector (found in harness kit) to each of these three wires.

OPTION: Identify wires for parking lamps and both turn signals in the main harness behind the driver-side headlamp. Attach a black self-stripping bullet receptacle connector to each of these three wires.

2. Remove **NEGATIVE** battery cable from battery.



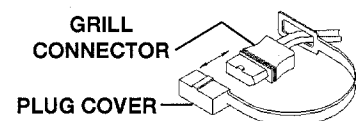
WARNING: Electrical shock hazard. Disconnect battery before beginning electrical installation.

3. Find a location for the motor relay where it will be protected from road splash and will be within 18" of the vehicle primary battery.

NOTE: Motor relay terminals must be up or horizontal.

Using the motor relay mounting plate as a template, drill two 9/32" holes, and mount motor relay to holes using 1/4" x 3/4" bolts, flat washers, and lock nuts.

4. Route 22" red battery cable between a large motor relay terminal and the **POSITIVE** battery terminal taking care to avoid sharp edges, and hot or moving parts. Attach cable to motor relay terminal with a lock washer and 5/16"-24 jam nut. Attach cable to battery **POSITIVE** terminal with battery cable adapter (found in mount box).
5. Stretch rectangular openings of plug cover straps (found in harness kit) over grill connector ends of long battery cable assembly (found in hydraulics box) and vehicle harness (found in harness kit). Place plug covers over molds on harnesses.



6. Find a location in the vehicle grill on the battery side for mounting the battery cable grill connector. The best location is at least 10-1/2" from the center of the grill and at a convenient height for connecting the plow plugs. Allow grill connector of each harness to hang out in front of grill. Allow enough cable so it is easy to mate and remove connector. Secure with long cable ties (found in mount box).
7. Route battery cable through the grill at the selected location and through or around the radiator bulkhead to motor relay taking care to avoiding sharp edges, and hot or moving parts.
8. Attach cable with red stripe to the unused large terminal on the motor relay, and secure it with a lock washer and 5/16"-24 jam nut.



9. Route cable without stripe **directly to the NEGATIVE battery terminal** (carefully separate the two cables as needed to reach the battery). **DO NOT** attach cable to battery at this time.
10. Find a location in grill on driver-side for mounting the vehicle harness (similar position to battery cable mount). See Steps 6 & 7 above for how to mount. Route vehicle harness through grill and around, or through radiator bulkhead (drill 5/8" hole if needed) into engine compartment.
11. Route the wires that break out of the vehicle harness to the area behind the driver-side headlamp. Route rest of harness to the firewall. Drill a 5/8" hole through the firewall in a convenient location away from hot or moving engine parts.

IMPORTANT: All vehicles with DRL's — insert fuse holder on pink wire of DRL Adapter Kit (P.N. 61584) through firewall first. Route end of pink wire with receptacles to area of driver-side headlamp.

Feed vehicle harness fuse holder through hole and then feed the plastic connector and harness through to the cab. Disassembly of the fuse holder may make it easier to pass through 5/8" hole.



12. Route brown/red and orange/black (early revision harnesses have brown/red and black/orange wires) wire loom to motor relay. Early revision harnesses must be modified if CabCommand control is being installed. (See instructions furnished with CabCommand control.)

Attach the brown/red and orange/black (early revisions black/orange) wires small ring terminals to separate small terminals on motor relay using a lock washer and #10-32 nut for each connection.

13. Route the orange/black wire with 3/8" ring terminal to the battery negative post (early revision harnesses do not have this wire). **DO NOT** attach wire to battery at this time.
14. Inside the cab, route vehicle harness connector to solenoid or CabCommand control and couple the connectors together.



15. Attach the hydraulic unit black battery cable and orange/black wire terminal to the negative terminal with the furnished battery cable adapter. Reconnect vehicle ground cable to NEGATIVE battery terminal cable adapter.
16. Locate an accessory wire or unused fuse box terminal capable of carrying 7 amps and controlled by the ignition (key) switch. Route the vehicle harness SFE-6* fuse holder red wire to this location and trim off any excess length of wire (keep fuse holder in system).

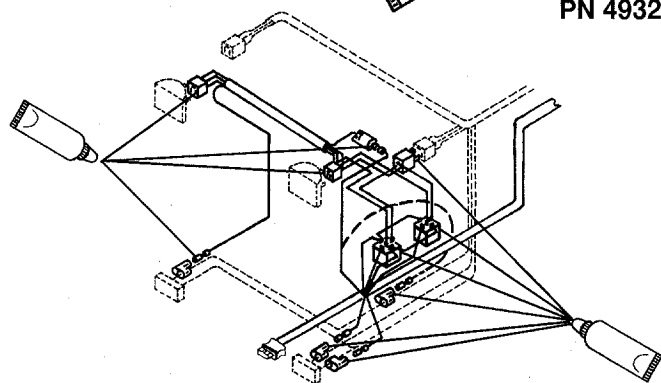
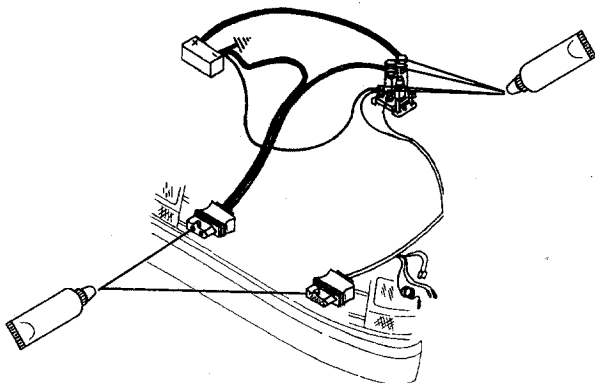
Fuse block terminal as source: attach a terminal (not furnished) to the vehicle harness red wire and plug on to fuse box terminal. If DRL wire is used, crimp pink wire into the same terminal with the red wire.

Accessory wire as source: Open blue self stripping connector and place the end of the red wire against the inner groove stop (end of wire must not extend from the connector), and the accessory wire in the outer groove. Close connector over the wires using a pliers and snap the locking tab in place. Repeat with DRL pink wire.

***Early style harnesses have a 10 amp fuse which must be replaced with SFE-6 fuse for CabCommand Control.**

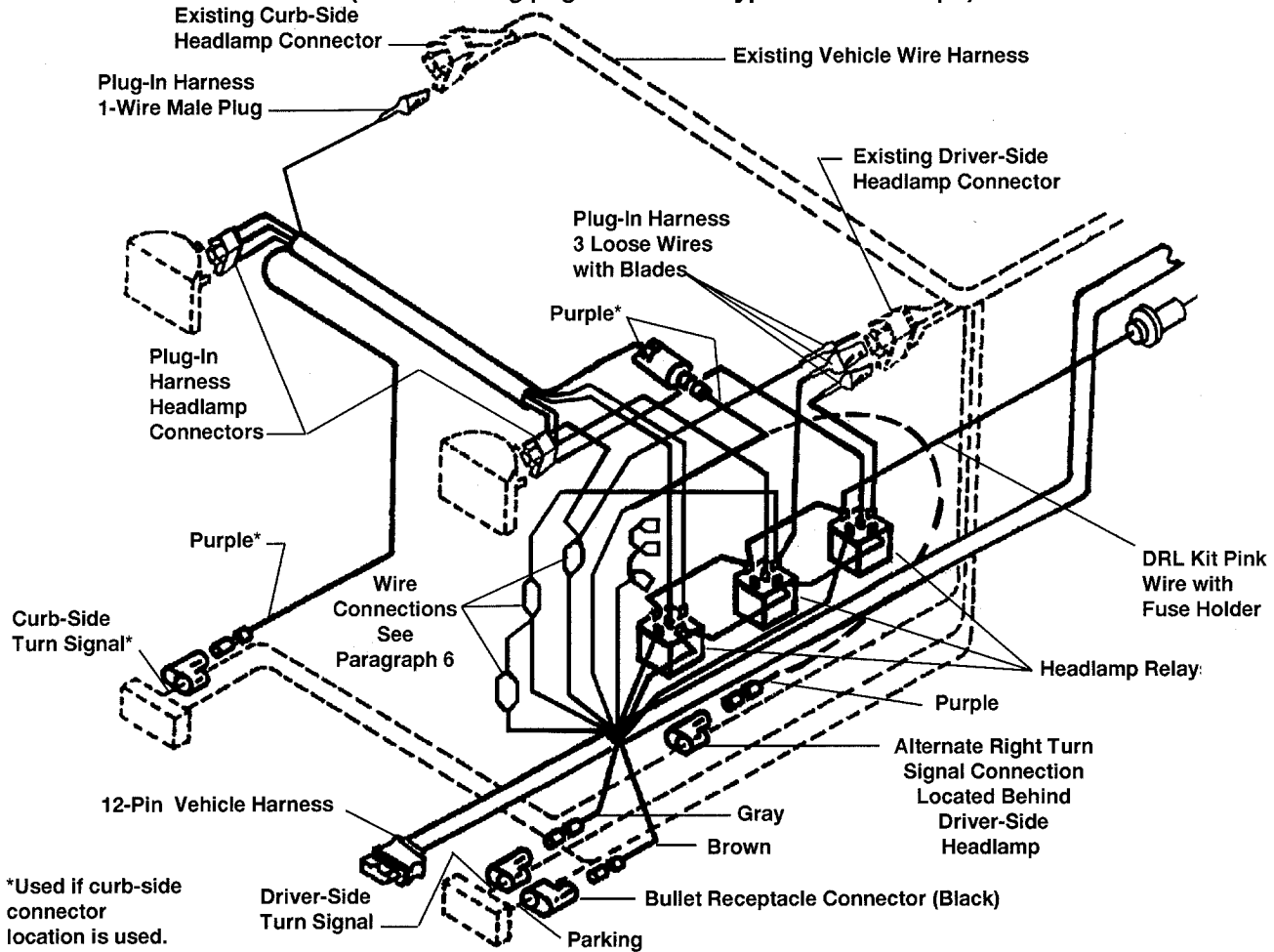
REMINDER: To prevent corrosion on all underhood electrical connections, use dielectric grease to fill receptacles, including grill connectors, and lightly coat ring terminals and blades before assembly or lightly coat connections after assembly.

DIELECTRIC GREASE - PN 56099 or PN 49326



Page 8 & 9 instructions are for installing Plug-in Harness on Chevrolet/GMC vehicles WITH SAE 2E (dual) headlamps & WITH Daytime Running Lights (DRL's). Headlamp Kit No. 61550 & Harness Kit No 62535

(See following pages for other types of headlamps)



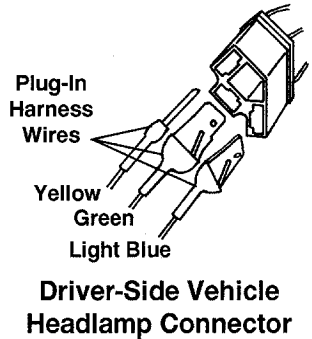
*Used if curb-side connector location is used.

2E DUAL HEADLAMP – PLUG-IN HARNESS & HEADLAMP RELAY

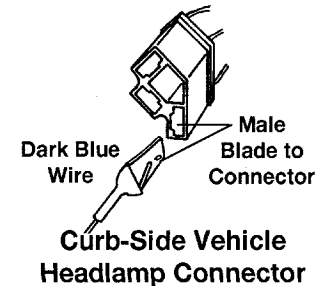
REMINDER: Lubricate all receptacles and blades with dielectric grease before assembling.

1. In the engine compartment behind the driver-side headlamp, insert wire bullets from 12-pin vehicle harness into black bullet connectors (installed in step one of previous section) as follows:
 - Brown wire to parking lamp wire on driver-side.
 - Gray wire to left turn signal wire on driver-side.
 - If alternate bullet connector location is used — vehicle harness purple wire to right turn signal wire on driver-side.

2. At the vehicle driver-side headlamp, remove the connector from the headlamp and couple connector with plug-in harness 3 loose wires with blade terminals as shown in diagram (plug-in harness found in harness kit). Attach plug-in harness headlamp connector to headlamp terminals.
3. Route other end of plug-in harness along radiator bulkhead or over radiator shroud to curb-side headlamp. Remove headlamp connector and couple connector with plug-in harness dark blue wire with blade terminal as shown in diagram. Secure connector with a cable tie (found in harness kit). Attach plug-in harness headlamp connector to headlamp terminals.



Driver-Side Vehicle Headlamp Connector



Curb-Side Vehicle Headlamp Connector

SAE 2E (dual) Headlamps & Daytime Running Lights (DRL's). (Continued)

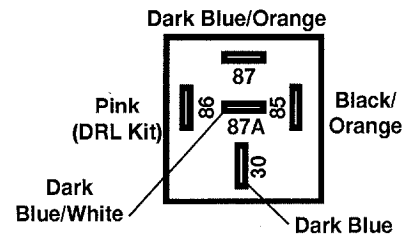
HEADLAMP RELAY WIRING DIAGRAM SAE 2E Headlamps w/ DRL's

If alternate right turn signal connector location is used, skip steps 4 & 5. Purple wire in plug-in harness is not used.

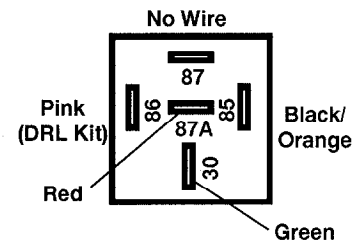
4. On the curb-side, insert purple wire bullet from plug-in harness into vehicle turn signal black bullet connector installed in step one of the previous section.
5. At the driver-side headlamp, insert the purple wire bullet from the vehicle harness into the purple wire receptacle on the plug-in harness.
6. Behind the driver-side headlamp, connect the following blades and receptacles together:
 - black/white wire blade to black/white wire receptacle,
 - yellow and orange wire blade to black wire receptacle,
 - green wire blade to white wire receptacle.
7. At driver-side headlamp, connect 12-pin vehicle and plug-in harness wires with receptacles to the three headlamp relays (found in harness kit) as shown in the diagrams on this page.

NOTE: The pink wire installed in paragraphs 11 and 15 (previous section) is used on terminal 86 of each headlamp relay. The three brown wires of the vehicle harness are not used in DRL installations.

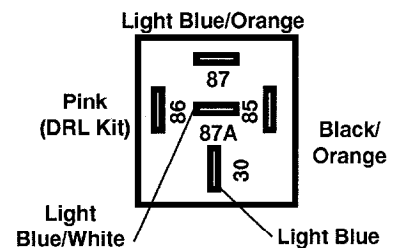
8. Place grommet around 12-pin vehicle harness and insert into firewall hole (also put a grommet in the hole in the radiator bulkhead if hole was drilled). Use cable ties (found in harness kit) to secure harnesses, relays and wires away from sharp edges, and hot or moving engine parts and to prevent accidental grounding of connections.
9. Change vehicle flasher with flasher found in control bracket carton in mount box.
10. Lubricate terminal cavities of both grill connectors with dielectric grease. Give the dielectric grease tube to vehicle owner for future lubrication of grill connectors.



Curb-Side Headlamp Relay



Vehicle High Beam Headlamp Relay

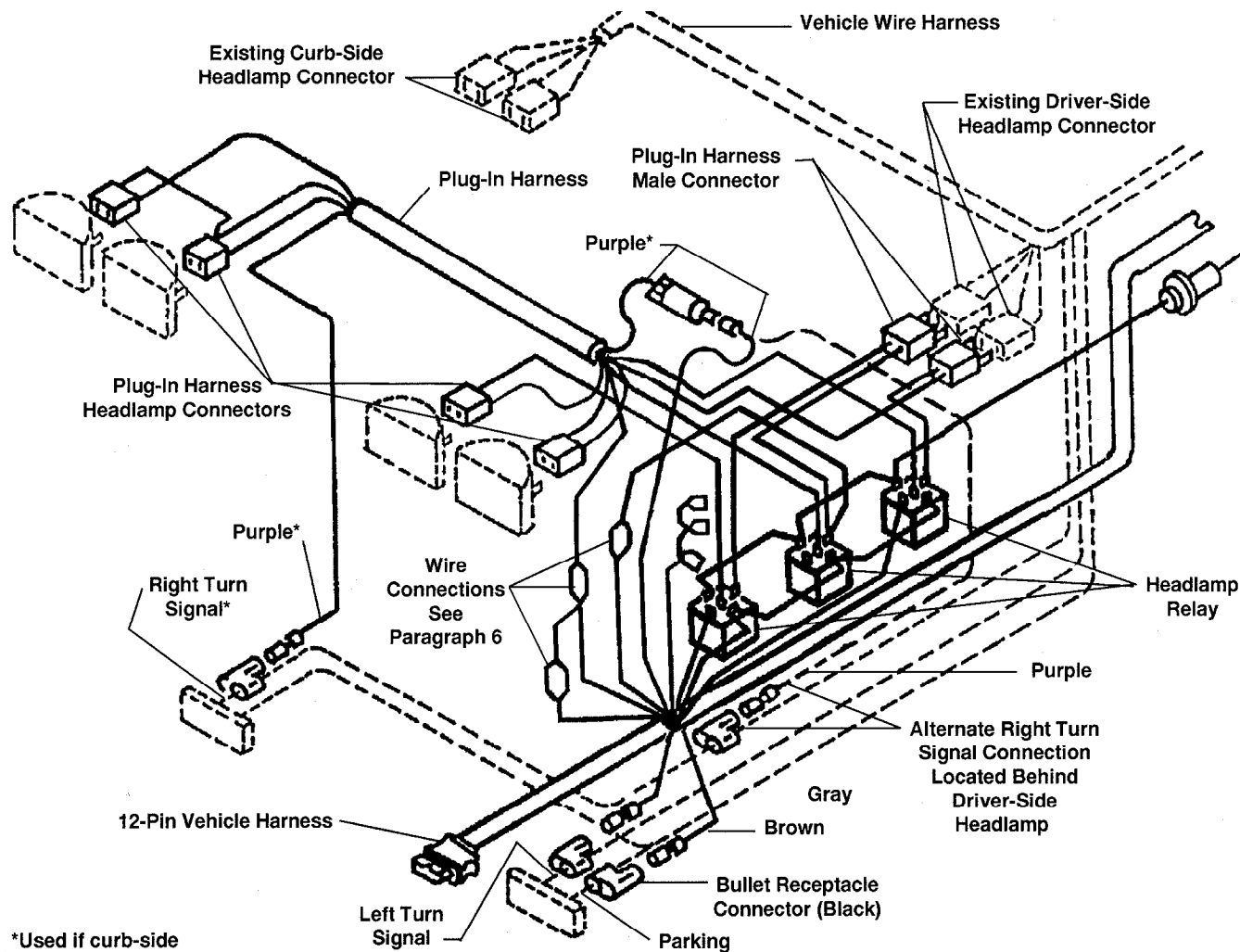


Driver-Side Headlamp Relay

Installation instructions continued on page 17.

Page 10 & 11 instructions are for installing Plug-in Harness on Chevrolet/GMC vehicles WITH SAE HB-3 & HB-4 (quad) headlamps & WITH Daytime Running Lights (DRL's). Headlamp Kit No. 61550 & Harness Kit No 61585

(See pages 8 through 16 for other types of headlamps)



*Used if curb-side connector location is used.

HB-3 & HB-4 QUAD HEADLAMP – PLUG-IN HARNESS & HEADLAMP RELAYS

REMINDER: Lubricate all receptacles and blades with dielectric grease before assembling.

1. In the engine compartment behind the driver-side headlamp, insert wire bullets from 12-pin vehicle harness into black bullet connectors (installed in step one of previous section) as follows:
 - Brown wire to parking lamp wire on driver-side.
 - Gray wire to left turn signal wire on driver-side.
 - If alternate bullet connector location is used — vehicle harness purple wire to right turn signal wire on driver-side.
2. At the vehicle driver-side headlamp, remove the connectors from the headlamps and couple matching connectors with two plug-in harness 2-wire male plugs (plug-in harness found in harness kit). Attach two plug-in harness headlamp connectors to headlamp terminals.
3. Route other end of plug-in harness along radiator bulkhead or over radiator shroud to curb-side headlamps. Remove two headlamp connectors and secure connectors with a cable tie (found in harness kit). Attach two plug-in harness headlamp connectors to headlamp terminals.

SAE HB-3 & HB-4 (quad) headlamps & Daytime Running Lights (DRL's). (Continued)

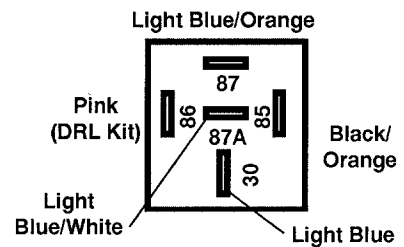
**HEADLAMP RELAY
WIRING DIAGRAM
SAE HB-3 & HB-4
Headlamps w/ DRL's**

If alternate right turn signal connector location is used, skip steps 4 & 5. Purple wire in plug-in harness is not used.

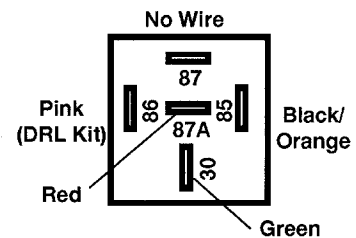
4. On the curb-side, insert purple wire bullet from plug-in harness into vehicle turn signal black bullet connector installed in step one of the previous section.
5. At the driver-side headlamp, insert the purple wire bullet from the vehicle harness into the purple wire receptacle on the plug-in harness.
6. Behind the driver-side headlamp, connect the following blades and receptacles together:
 - black/white wire blade to black/white wire receptacle,
 - yellow and orange wire blade to black wire receptacle,
 - green wire blade to white wire receptacle.
7. At the driver-side headlamp, connect 12-pin vehicle and plug-in harness wires with receptacles to the three headlamp relays (found in harness kit) as shown in the diagram on this page.

NOTE: The pink wire installed in paragraphs 11 and 15 (previous section) is used on terminal 86 of each headlamp relay. The three brown wires of the vehicle harness are not used in DRL installations.

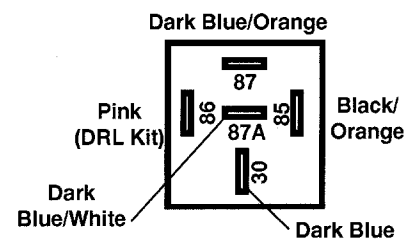
8. Place grommet around 12-pin vehicle harness and insert into firewall hole (also put a grommet in the hole in the radiator bulkhead if hole was drilled). Use cable ties (found in harness kit) to secure harnesses, relays and wires away from sharp edges, and hot or moving engine parts and to prevent accidental grounding of connections.
9. Change vehicle flasher with flasher found in control bracket carton in mount box.
10. Lubricate terminal cavities of both grill connectors with dielectric grease. Give the dielectric grease tube to vehicle owner for future lubrication of grill connectors.



High Beam Headlamp Relay



Vehicle High Beam Headlamp Relay

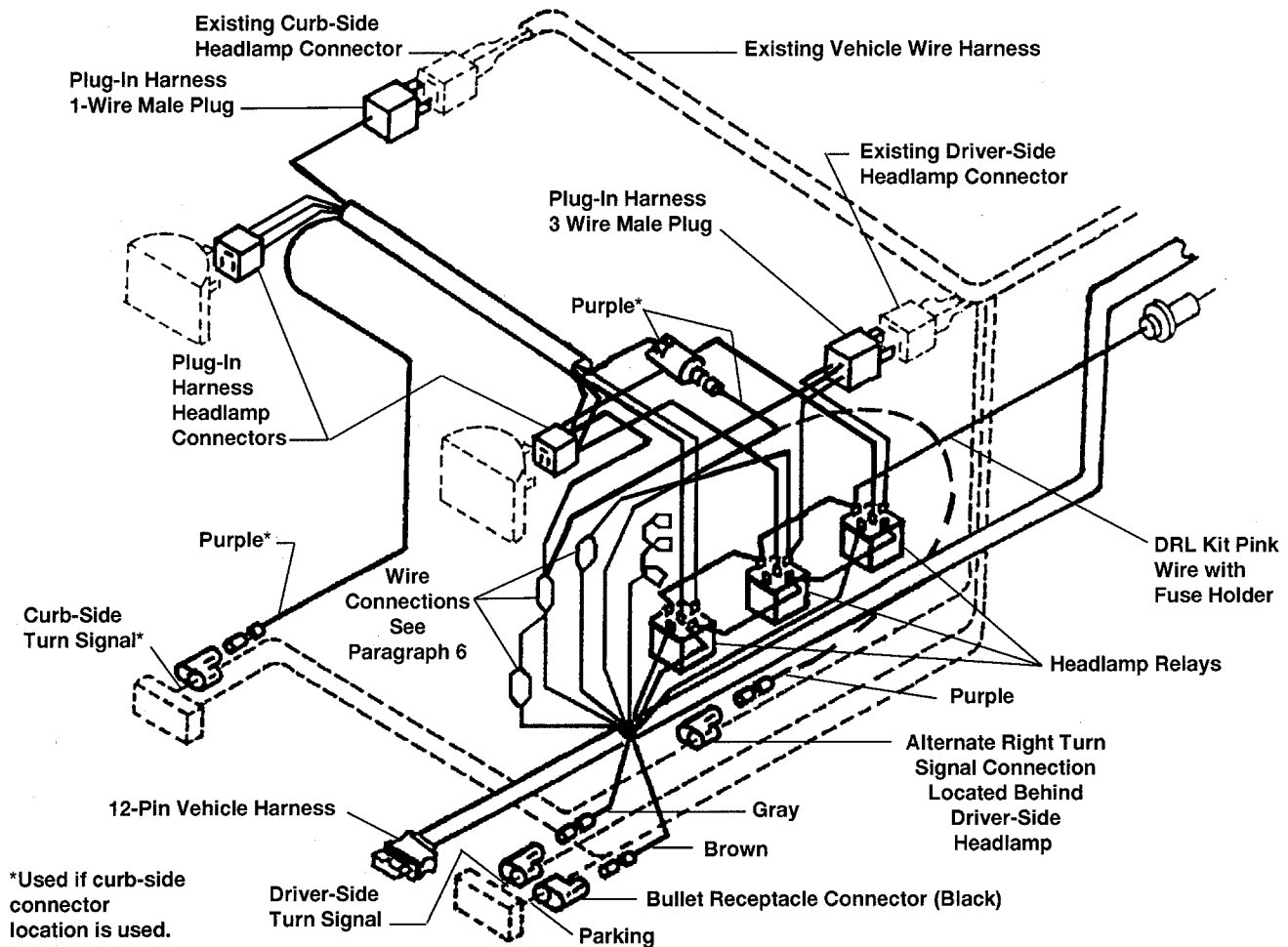


Low Beam Headlamp Relay

Installation instructions continued on page 17.

Page 12 & 13 instructions are for installing Plug-in Harness on Chevrolet/GMC vehicles WITH SAE 2B (dual) headlamps & WITH Daytime Running Lights (DRL's). Headlamp Kit No. 61550 & Harness Kit No 61555

(See pages 8 through 16 for other types of headlamps)



2B DUAL HEADLAMP – PLUG-IN HARNESS & HEADLAMP RELAY

REMANDER: Lubricate all receptacles and blades with dielectric grease before assembling.

1. In the engine compartment behind the driver-side headlamp, insert wire bullets from 12-pin vehicle harness into black bullet connectors (installed in step one of previous section) as follows:
 - Brown wire to parking lamp wire on driver-side.
 - Gray wire to left turn signal wire on driver-side.
 - If alternate bullet connector location is used — vehicle harness purple wire to right turn signal wire on driver-side.
2. At the vehicle driver-side headlamp, remove the connector from the headlamp and couple connector with plug-in harness 3-wire male plug (plug-in harness found in harness kit). Attach plug-in harness headlamp connector to headlamp terminals.
3. Route other end of plug-in harness along radiator bulkhead or over radiator shroud to curb-side headlamp. Remove headlamp connector and couple connector with plug-in harness 1-wire male plug. Secure connector with a cable tie (found in harness kit). Attach plug-in harness headlamp connector to headlamp terminals.

SAE 2B (dual) Headlamps & Daytime Running Lights (DRL's). (Continued)

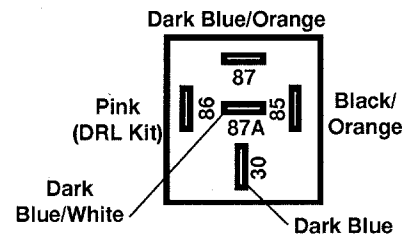
If alternate right turn signal connector location is used, skip steps 4 & 5. Purple wire in plug-in harness is not used.

4. On the curb-side, insert purple wire bullet from plug-in harness into vehicle turn signal black bullet connector installed in step one of the previous section.
5. At the driver-side headlamp, insert the purple wire bullet from the vehicle harness into the purple wire receptacle on the plug-in harness.
6. Behind the driver-side headlamp, connect the following blades and receptacles together:
 - black/white wire blade to black/white wire receptacle,
 - yellow and orange wire blade to black wire receptacle,
 - green wire blade to white wire receptacle.
7. At driver-side headlamp, connect 12-pin vehicle and plug-in harness wires with receptacles to the three headlamp relays (found in harness kit) as shown in the diagrams on this page.

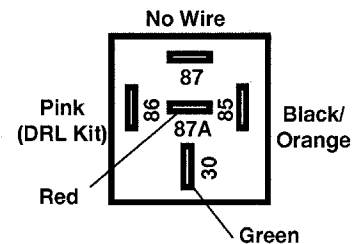
NOTE: The pink wire installed in paragraphs 11 and 15 (previous section) is used on terminal 86 of each headlamp relay. The three brown wires of the vehicle harness are not used in DRL installations.

8. Place grommet around 12-pin vehicle harness and insert into firewall hole (also put a grommet in the hole in the radiator bulkhead if hole was drilled). Use cable ties (found in harness kit) to secure harnesses, relays and wires away from sharp edges, and hot or moving engine parts and to prevent accidental grounding of connections.
9. Change vehicle flasher with flasher found in control bracket carton in mount box.
10. Lubricate terminal cavities of both grill connectors with dielectric grease. Give the dielectric grease tube to vehicle owner for future lubrication of grill connectors.

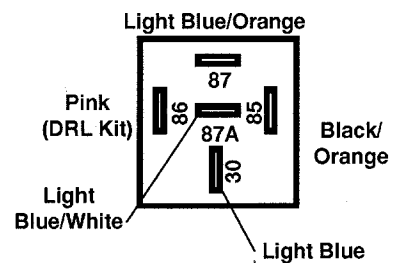
HEADLAMP RELAY WIRING DIAGRAM SAE 2B Headlamps w/ DRL's



Curb-Side Headlamp Relay



Vehicle High Beam Headlamp Relay

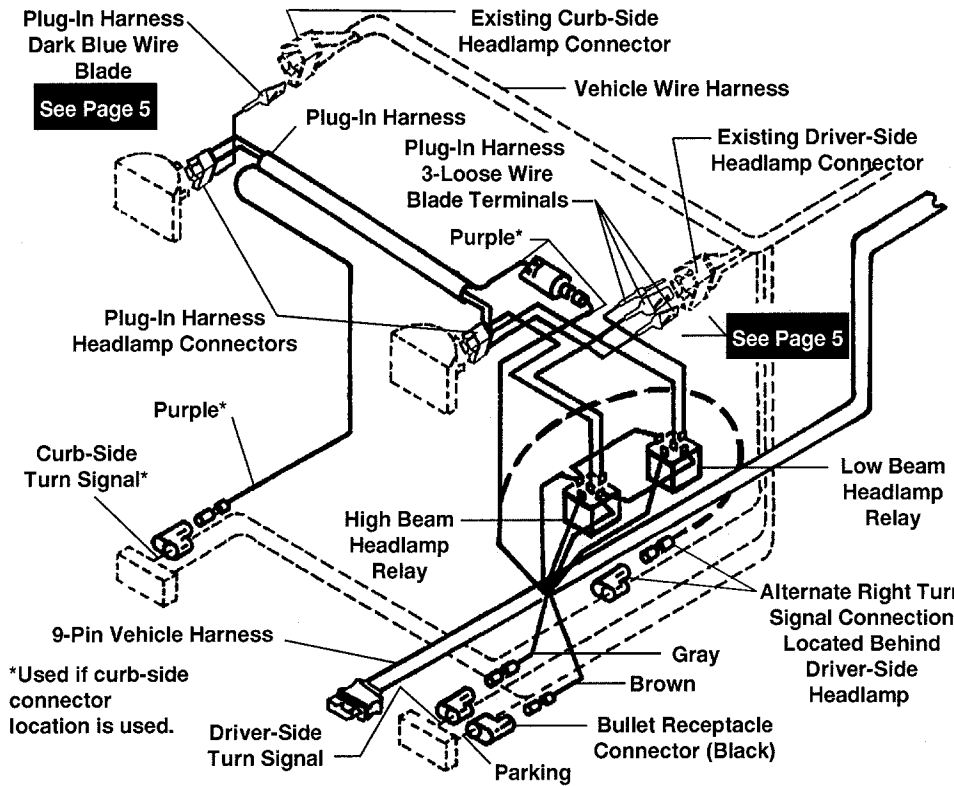


Driver-Side Headlamp Relay

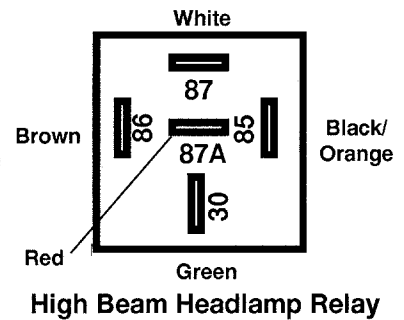
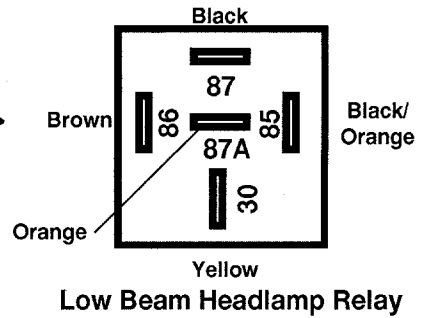
Installation instructions continued on page 17.

Page 14 instructions are for installing Plug-in Harness on Chevrolet/GMC vehicles WITH SAE 2E (dual) headlamps & WITHOUT Daytime Running Lights (DRL's). Headlamp Kit No. 61540 & Harness Kit No 61575

(See pages 8 through 16 for other types of headlamps)



HEADLAMP RELAY WIRING DIAGRAM Type - C



2E DUAL HEADLAMP – PLUG-IN HARNESS & HEADLAMP RELAYS

REMINDER: Lubricate all receptacles and blades with dielectric grease before assembling.

1. In the engine compartment behind the driver-side headlamp, insert wire bullets from 9-pin vehicle harness into black bullet connectors (installed in step one of previous section) as follows:

Brown wire to parking lamp wire on driver-side.
Gray wire to left turn signal wire on driver-side.

If alternate bullet connector location is used — vehicle harness purple wire to right turn signal wire on driver-side.

2. At the vehicle driver-side headlamp, remove the connector from the headlamp and couple connector with plug-in harness 3 loose wires with blade terminals as shown on bottom of page 5 of these instructions (plug-in harness found in harness kit). Attach plug-in harness headlamp connector to headlamp terminals.
3. Route other end of plug-in harness along radiator bulkhead or over radiator shroud to curb-side headlamp. Remove headlamp connector and couple with dark blue wire blade as shown on bottom of page 5. Secure connector with a cable tie (found in harness kit). Attach plug-in harness headlamp connector to headlamp terminals.

If alternate right turn signal connector location is used, skip steps 4 & 5. Purple wire in plug-in harness is not used.

4. On the curb-side, insert purple wire bullet from plug-in harness into vehicle turn signal black bullet connector installed in step one of the previous section.
5. At the driver-side headlamp, insert the purple wire bullet from the vehicle harness into the purple wire receptacle on the plug-in harness.
6. At driver-side headlamp, connect 9-pin vehicle and plug-in harness wires with receptacles to the two headlamp relays (found in harness kit) as shown in the above diagram.
7. Place grommet around 9-pin vehicle harness and insert into firewall hole (also put a grommet in the hole in the radiator bulkhead if one was drilled). Use cable ties (found in harness kit) to secure harnesses, relays and wires away from sharp edges, and hot or moving engine parts and to prevent accidental grounding of connections.

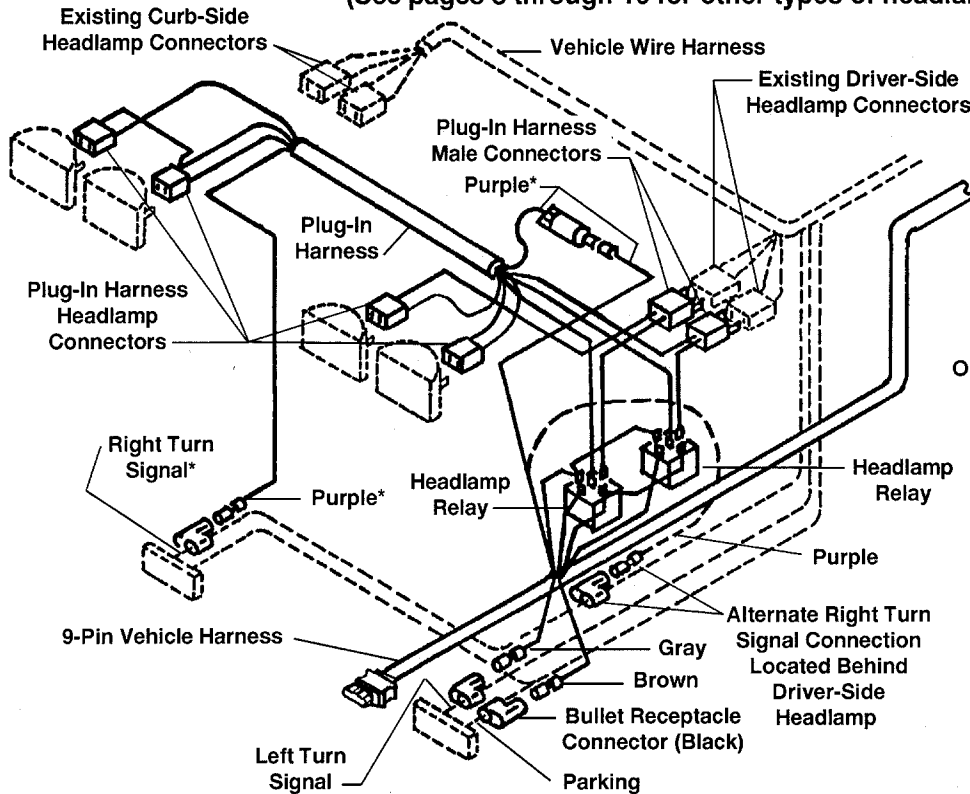
8. Change vehicle flasher with flasher found in control bracket carton in mount box.

9. Lubricate terminal cavities of both grill connectors with dielectric grease. Give the dielectric grease tube to vehicle owner for future lubrication of grill connectors.

Installation instructions continued on page 17.

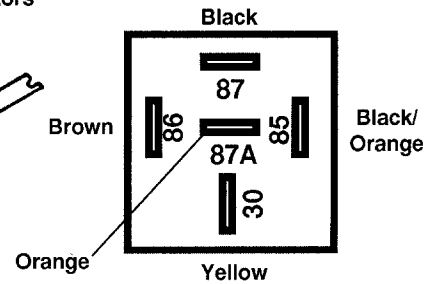
Page 15 instructions are for installing Plug-in Harness on Chevrolet/GMC vehicles WITH SAE HB-3 & HB-4 (quad) headlamps & WITHOUT Daytime Running Lights (DRL's). Headlamp Kit No. 61540 & Harness Kit No 61515

(See pages 8 through 16 for other types of headlamps)

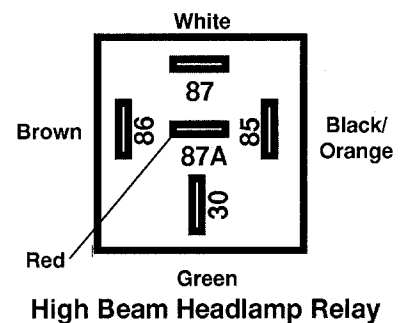


HEADLAMP RELAY WIRING DIAGRAM

Type - A



Low Beam Headlamp Relay



High Beam Headlamp Relay

HB-3 & HB-4 QUAD HEADLAMP – PLUG-IN HARNESS & HEADLAMP RELAYS

REMINDER: Lubricate all receptacles and blades with dielectric grease before assembling.

1. In the engine compartment behind the driver-side headlamp, insert wire bullets from 9-pin vehicle harness into black bullet connectors (installed in step one of previous section) as follows:

Brown wire to parking lamp wire on driver-side.

Gray wire to left turn signal wire on driver-side.

If alternate bullet connector location is used — vehicle harness purple wire to right turn signal wire on driver-side.

2. At the vehicle driver-side headlamp, remove the connectors from the headlamps and couple matching connectors with two plug-in harness 2-wire male plugs (plug-in harness found in harness kit). Attach two plug-in harness headlamp connectors to headlamp terminals.
3. Route other end of plug-in harness along radiator bulkhead or over radiator shroud to curb-side headlamps. Remove headlamp connectors and secure connectors with a cable tie (found in harness kit). Attach two plug-in harness headlamp connectors to headlamp terminals.

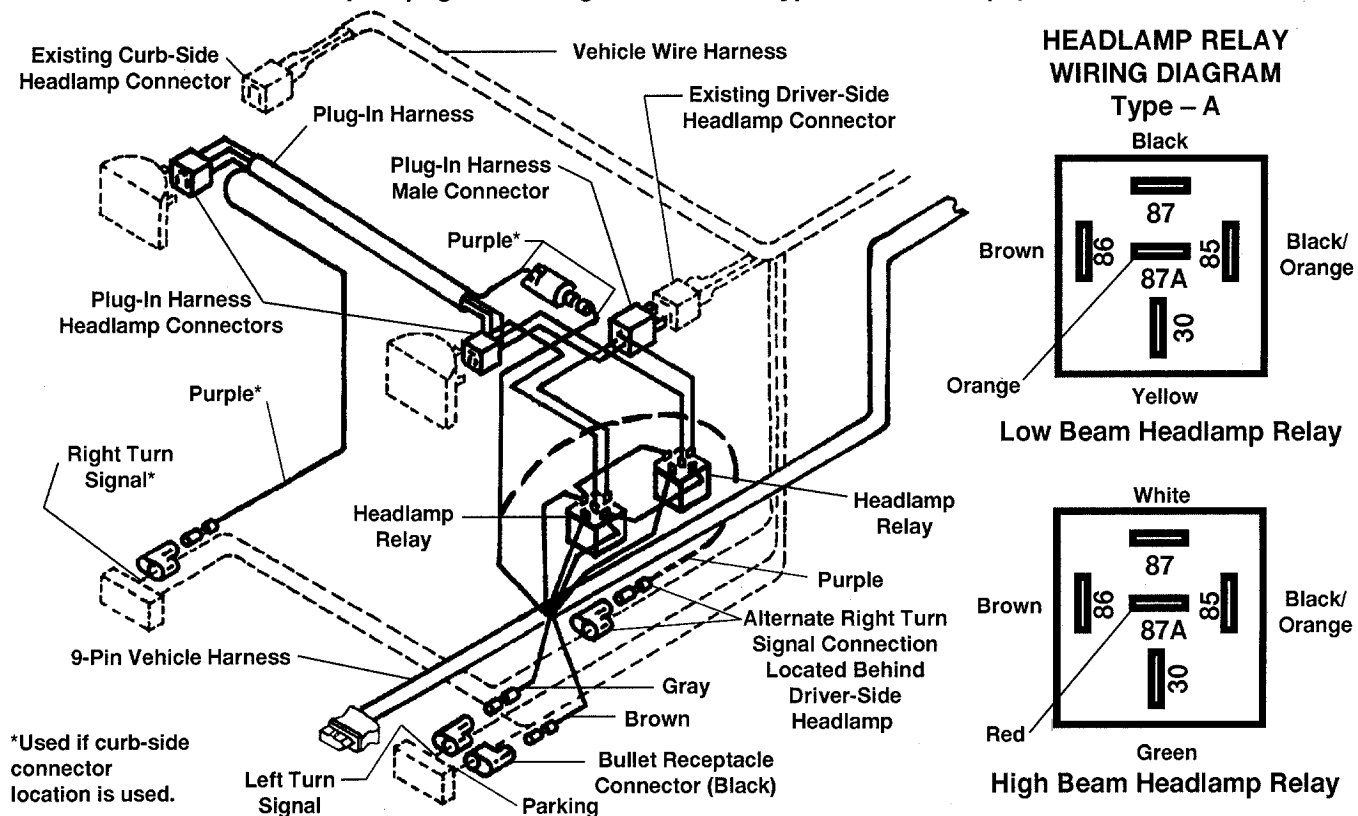
If alternate right turn signal connector location is used, skip steps 4 & 5. Purple wire in plug-in harness is not used.

4. On the curb-side, insert purple wire bullet from plug-in harness into vehicle turn signal black bullet connector installed in step one of the previous section.
5. At the driver-side headlamp, insert the purple wire bullet from the vehicle harness into the purple wire receptacle on the plug-in harness.
6. At the driver-side headlamp, connect 9-pin vehicle and plug-in harness wires with receptacles to the two headlamp relays (found in harness kit) as shown in the above diagram.
7. Place grommet around 9-pin vehicle harness and insert into firewall hole (also put a grommet in the hole in the radiator bulkhead if one was drilled). Use cable ties (found in harness kit) to secure harnesses, relays and wires away from sharp edges, and hot or moving engine parts and to prevent accidental grounding of connections.
8. Change vehicle flasher with flasher found in control bracket carton in mount box.
9. Lubricate terminal cavities of both grill connectors with dielectric grease. Give the dielectric grease tube to vehicle owner for future lubrication of grill connectors.

Installation instructions continued on page 17.

Page 16 instructions are for installing Plug-in Harness on Chevrolet/GMC vehicles WITH SAE 2B (dual) headlamps & WITHOUT Daytime Running Lights (DRL's). Headlamp Kit No. 61540 & Harness Kit No 61545

(See pages 8 through 15 for other types of headlamps)



2B DUAL HEADLAMP – PLUG-IN HARNESS & HEADLAMP RELAYS

REMINDER: Lubricate all receptacles and blades with dielectric grease before assembling.

1. In the engine compartment behind the driver-side headlamp, insert wire bullets from 9-pin vehicle harness into black bullet connectors (installed in step one of previous section) as follows:

Brown wire to parking lamp wire on driver-side.

Gray wire to left turn signal wire on driver-side.

If alternate bullet connector location is used — vehicle harness purple wire to right turn signal wire on driver-side.

2. At the vehicle driver-side headlamp, remove the connector from the headlamp and couple connector with plug-in harness 3-wire male plug (plug-in harness found in harness kit). Attach plug-in harness headlamp connector to headlamp terminals.
3. Route other end of plug-in harness along radiator bulkhead or over radiator shroud to curb-side headlamp. Remove headlamp connector and secure connector with a cable tie (found in harness kit). Attach plug-in harness headlamp connector to headlamp terminals.

If alternate right turn signal connector location is used, skip steps 4 & 5. Purple wire in plug-in harness is not used.

4. On the curb-side, insert purple wire bullet from plug-in harness into vehicle turn signal black bullet connector installed in step one of the previous section.
5. At the driver-side headlamp, insert the purple wire bullet from the vehicle harness into the purple wire receptacle on the plug-in harness.
6. At driver-side headlamp, connect 9-pin vehicle and plug-in harness wires with receptacles to the two headlamp relays (found in harness kit) as shown in the above diagram.
7. Place grommet around 9-pin vehicle harness and insert into firewall hole (also put a grommet in the hole in the radiator bulkhead if one was drilled). Use cable ties (found in harness kit) to secure harnesses, relays and wires away from sharp edges, and hot or moving engine parts and to prevent accidental grounding of connections.
8. Change vehicle flasher with flasher found in control bracket carton in mount box.
9. Lubricate terminal cavities of both grill connectors with dielectric grease. Give the dielectric grease tube to vehicle owner for future lubrication of grill connectors.

Installation instructions continued on page 17.

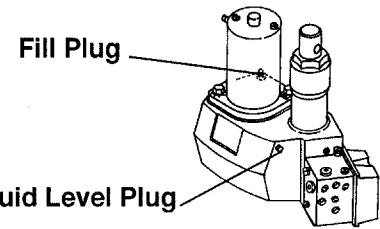
OPERATIONAL TESTS AND ADJUSTMENTS

OPERATIONAL TESTS AND ADJUSTMENTS

Mount plow assembly to vehicle. (See label on back of blade or owner's manual for mounting instructions.)

Filling Hydraulic Unit

1. Push lift channel all the way down.
 2. Remove fill plug and fluid level plug.
 3. Fill unit through fill plug hole until fluid runs out of fluid level plug hole. Replace both plugs.
- Use: automatic transmission fluid (ATF) Dexron III to -10°F (-23°C), WESTERN[®] High Performance Fluid to -25°F (-32°C), Texaco 1537 Aircraft Hydraulic Oil for temperatures below -25°F (-32°C).
4. Turn ignition (key) switch to the ON or ACCESSORY position.
 5. Turn the control ON/OFF switch to the ON position.
 6. Move control lever to angle left and angle right several times to remove air from Hydra-Turn[®] rams. **DO NOT raise blade as this may cause pump cavitation.**
 7. Refill unit with fluid following the procedure in step three of this section.
 8. Move the control lever as indicated on label to control the plow. Raise and lower plow several times to remove air. Recheck fluid level according to step three of this section.



Capacity: Solenoid ISARMATIC[®] Mark IIIa reservoir 1-3/4 quarts
Equipped with 10" Hydra-Turn rams 2-3/8 quarts
Equipped with 6" Hydra-Turn rams 1-7/8 quarts



WARNING: To prevent accidental movement of plow, always turn the solenoid control to the OFF position when not using the mounted plow.

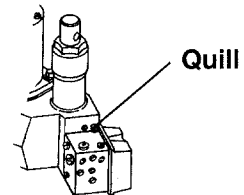
Blade Drop Speed Adjustment

The quill on the top rear of the valve manifold (see diagram) adjusts blade drop speed.

Turn quill IN (clockwise) to decrease drop speed.

Turn quill OUT (counterclockwise) to increase drop speed.

NOTE: Turning quill too far in can slow raise time



COUPLING LUG HEIGHT CHECK

COUPLING LUG HEIGHT CHECK

1. Mount plow to vehicle (see label on back of blade or owner's manual for mounting instructions). **See selection list for recommended ballast requirements.**

2. Lift blade and move vehicle a minimum of 10 feet. Lower blade.

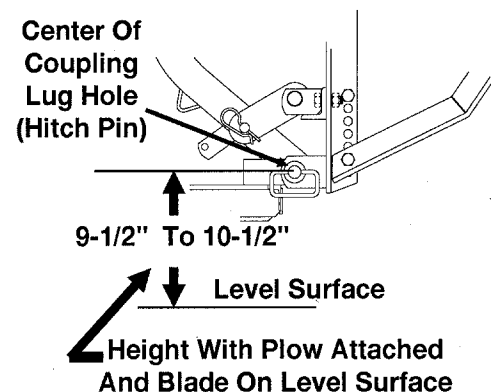
3. After step 2, with: blade on level surface, slack in lift chain, rear ballast located behind rear wheels,

the center of the coupling lug holes (hitch pin shaft) to level surface should measure 9-1/2" to 10-1/2". To obtain height, there are two options:

1. Both coupling lugs and link arm lugs may be turned over to change height 1".
2. Adjust torsion bar suspension. Alternate driver- and curb-side torsion bar adjustments for uniform height change. After each series of adjustments, repeat steps 2 and 3.

NOTE: Coupling height must be 9-1/2" minimum to allow stand to be pinned to lift frame.

4. Adjust chain slack with plow mounted to vehicle, and lift channel pushed all the way down. To adjust, remove chain from hook. Straighten chain and pull tight. Rehook it to the lift channel. After it is hooked, it will have the correct amount of slack for blade "float". **DO NOT** remove chain from lift channel when removing plow from vehicle.



FINAL HYDRAULIC INSPECTION

1. Make sure all fasteners and hydraulic and electrical connections are tight.
2. Check ram packing nuts for oil leakage. If any leakage is observed, tighten the packing nut 1/4 turn after you feel the nut contact the packing. Do not overtighten — overtightening affects cylinder operation and shortens the life of the packing. A short period of normal operation will allow chevron packings to become saturated, and leakage will normally stop.

VEHICLE LIGHTING CHECK

1. Check the operation of vehicle and plow lights with plow mounted to vehicle and both plow plugs connected.

Turn signals and parking lamps

Parking lamps ON	Both vehicle and plow parking lamps should be on at the same time.
Right turn signal ON	Both vehicle and plow right turn signal lamps should flash at the same time.
Left turn signal ON	Both vehicle and plow left turn signal lamps should flash at the same time.

Headlamps

Move vehicle headlamp switch to the ON position. Connecting and disconnecting the 9 or 12-pin plow plug from the grill connector should switch between vehicle and plow headlamps as follows:

9 or 12-pin plow plug DISCONNECTED	Vehicle headlamps should be on, plow headlamps off.
9 or 12-pin plow plug CONNECTED	Plow headlamps should be on, vehicle headlamps off.

Dimmer switch should dim whichever headlamps are operating. The high beam indicator on the dash should light when either set of headlamps is on high beam.



Solenoid Control or CabCommand Control

9-pin vehicle harness revision 10 and later or
 12-pin vehicle harness revision 8 and later or
 9 or 12-pin vehicle harnesses – earlier revisions modified for CabCommand Control:

The control indicator light should light whenever the control ON/OFF switch and the ignition (key) switches are both turned ON. The plow plugs do not need to be connected to the grill connectors.

Solenoid Control used with earlier revision harnesses

9-pin revision 7, 8, or 9 vehicle harnesses or
 12-pin revision 5, 6, or 7 vehicle harnesses:

The control indicator light should light whenever the control ON/OFF switch and the ignition (key) switches are both turned ON and the plow plugs are connected to the grill connectors.

9 or 12-pin vehicle harnesses – all earlier revisions:

The indicator light will also light when the control and ignition (key) switches are on the plow plugs are disconnected. If the parking lights are turned on (with plug plugs disconnected), the indicator light will go out.

2. Connect plow plug to grill connector. Raise plow and aim plow headlamps according to SAE J599 Lighting Inspection Code (See Service Bulletin SP 608) and any applicable federal, state, or local regulations.
3. Check aim of vehicle headlamps with plow removed.
4. When plow is removed from the vehicle, install plug covers on grill connectors and insert the plow plugs into the boot on the hydraulic unit.

NOTE: After using the snowplow for 5-10 hours, retorque all mount assembly fasteners.

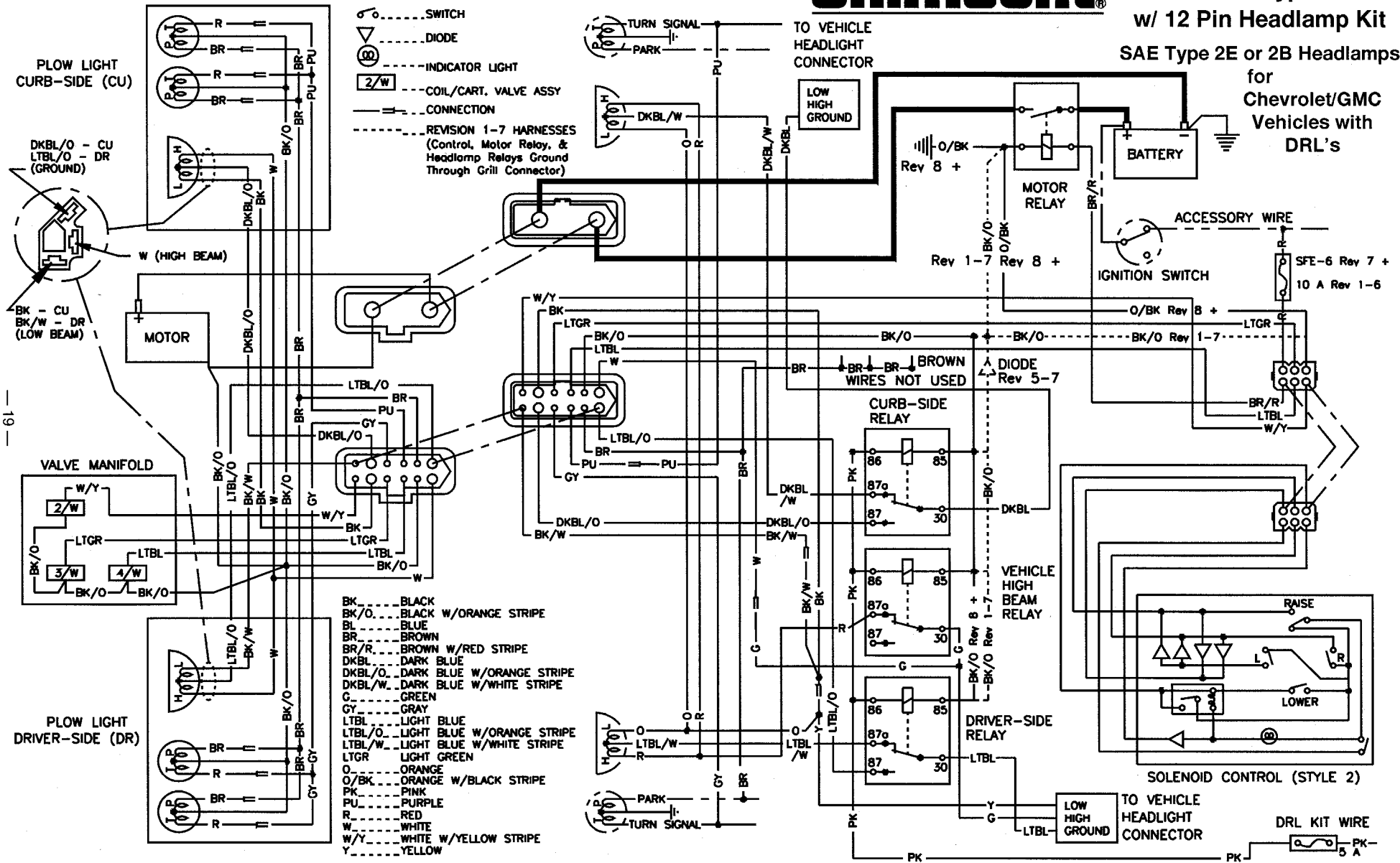
Headlamp Kit 12-Pin P.N. 61550, Harness Kit 2E U-B

P.N. 62535 Installation Instructions page 8 & 9

Solenoid Control — 12-Pin Vehicle Harness Revision 8 & later - The control indicator light will light whenever the control ON/OFF switch and the ignition (key) switch are both turned ON. The plow plugs and grill connectors do not need to be connected for the control light to be on.



Wiring Diagram Harness Type - B w/ 12 Pin Headlamp Kit SAE Type 2E or 2B Headlamps for Chevrolet/GMC Vehicles with DRL's

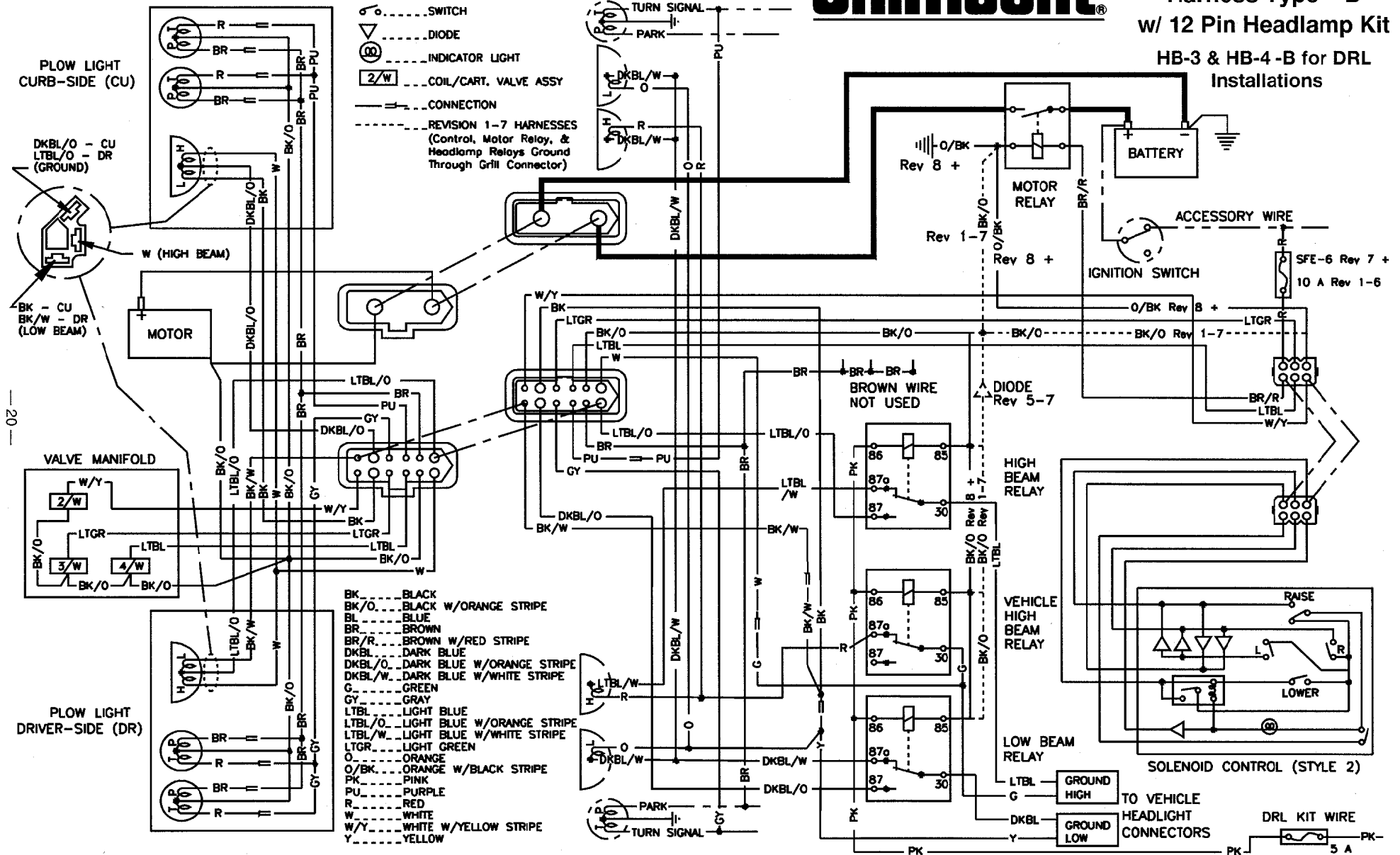


Headlamp Kit 12-Pin P.N. 61550, Harness Kit HB-3 & HB-4 U-B P.N. 61585 Installation Instructions page 10 & 11

Solenoid Control — 12-Pin Vehicle Harness Revision 8 & later - The control indicator light will light whenever the control ON/OFF switch and the ignition (key) switch are both turned ON. The plow plugs and grill connectors do not need to be connected for the control light to be on.



Wiring Diagram Harness Type - B w/ 12 Pin Headlamp Kit HB-3 & HB-4-B for DRL Installations

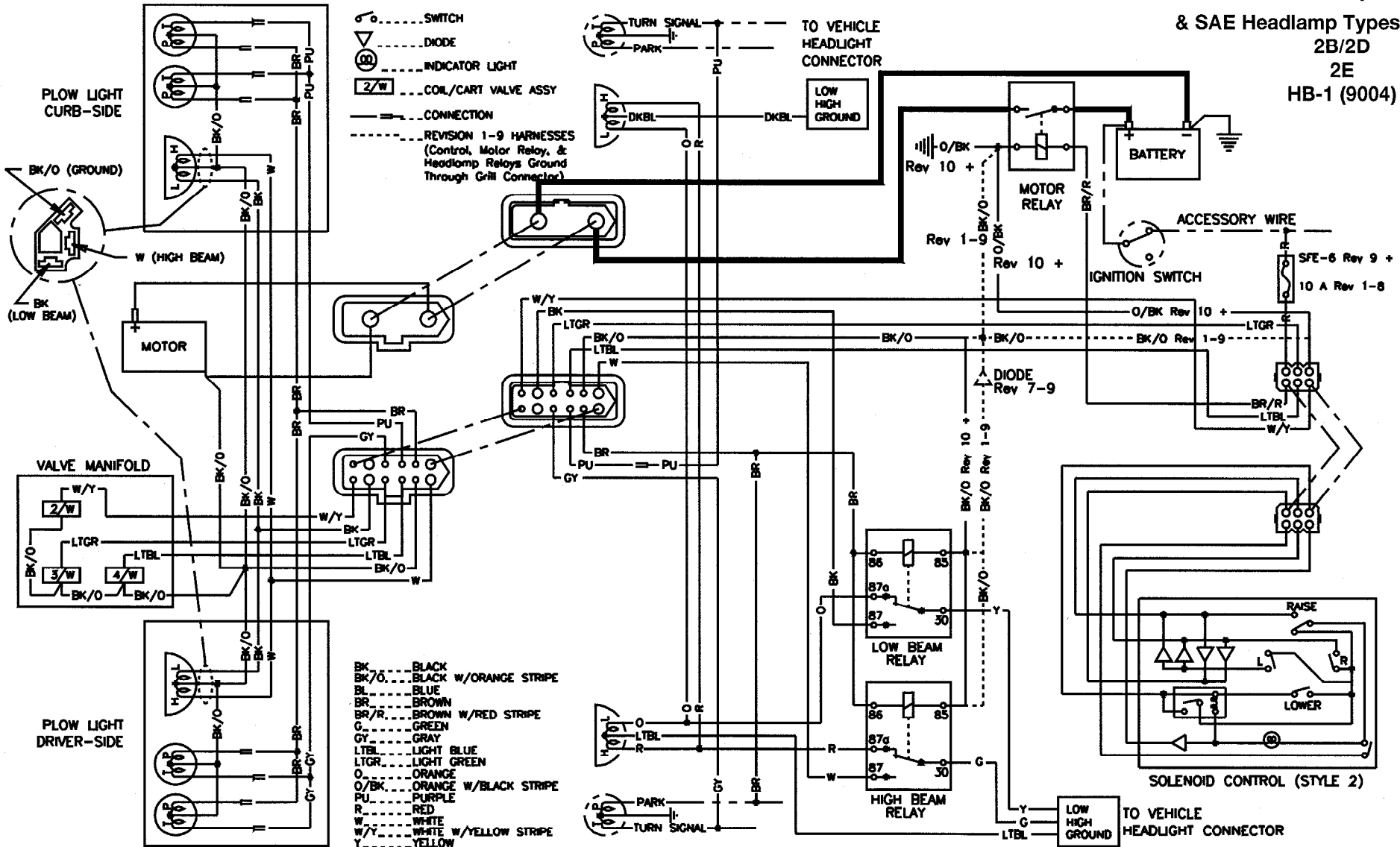


Headlamp Kit 9 -Pin P.N. 61540, Harness Kit 2E U -C P.N. 61575 Installation Instructions page 14

Solenoid Control — 9-Pin Vehicle Harness Revision 10 & later - The control indicator light will light whenever the control ON/OFF switch and the ignition (key) switch are both turned ON. The plow plugs and grill connectors do not need to be connected for the control light to be on.



Wiring Diagram
Harness Type – C
w/ 9 Pin Headlamp Kit
& SAE Headlamp Types
 2B/2D
 2E
 HB-1 (9004)



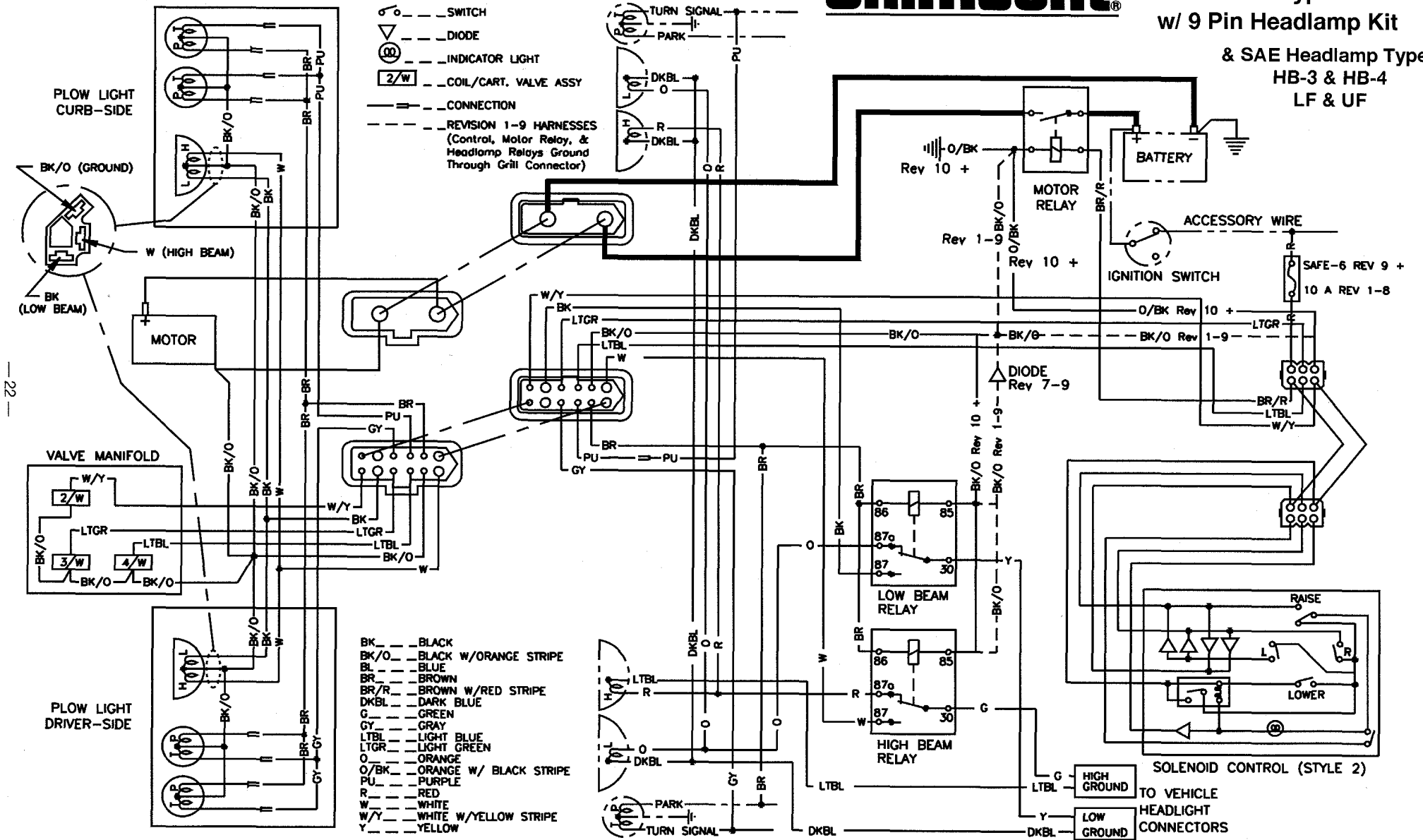
Headlamp Kit 9-Pin P.N. 61540, Harness Kit HB-3 & HB-4 U -A P.N. 61515 Installation Instructions page 15

Solenoid Control — 9-Pin Vehicle Harness Revision 10 & later - The control indicator light will light whenever the control ON/OFF switch and the ignition (key) switch are both turned ON. The plow plugs and grill connectors do not need to be connected for the control light to be on.

UniMount SYSTEM

**Wiring Diagram
Harness Type - A
w/ 9 Pin Headlamp Kit**

**& SAE Headlamp Types
HB-3 & HB-4
LF & UF**



Vehicle harnesses - 9 pin, P.N. 61437 rev. 7, 8, or 9 - The indicator light on the solenoid control will only light when the plow is attached to the vehicle and the ignition switch and control on/off switch are both turned on.

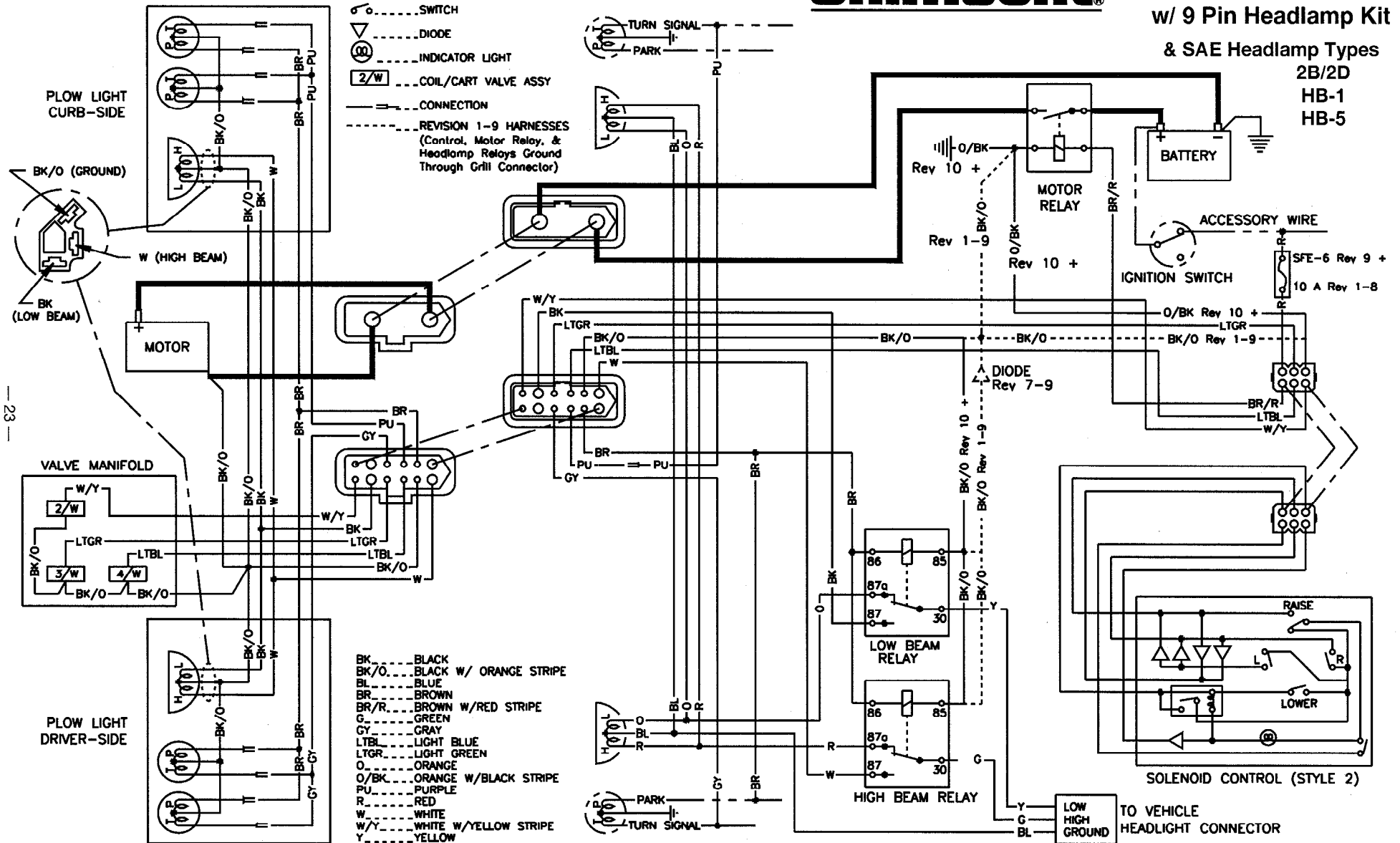
Vehicle harnesses with revision numbers prior to listed revisions at right - The indicator light will also be on when the control and ignition (key) switches are ON and the plow plugs are disconnected. If the parking lights are turned on (with plow plugs disconnected), the indicator light will go out.

Headlamp Kit 9-Pin P.N. 61540, Harness Kit 2B/2D U -A P.N. 61545 Installation Instructions page 16

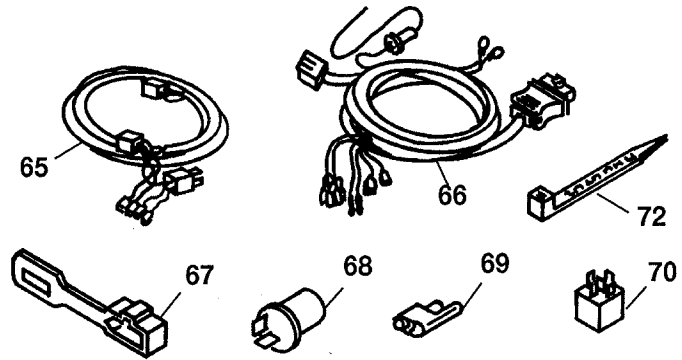
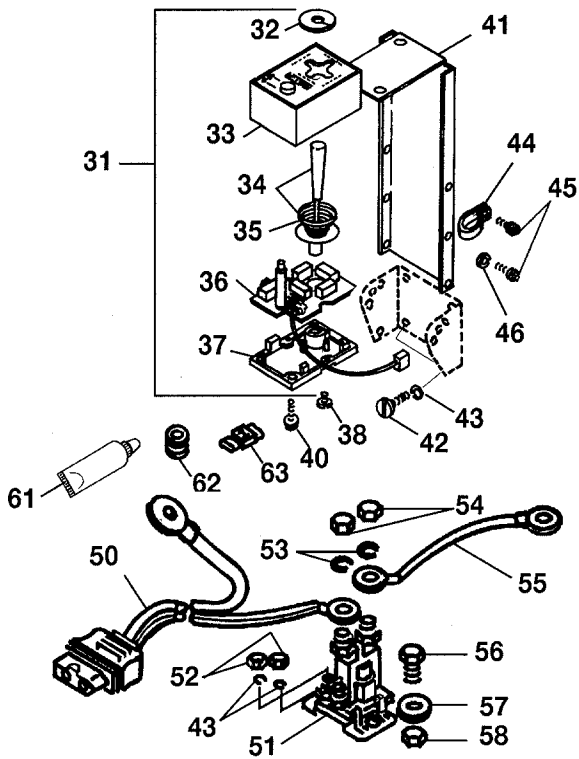
Solenoid Control — 9-Pin Vehicle Harness Revision 10 & later - The control indicator light will light whenever the control ON/OFF switch and the ignition (key) switch are both turned ON. The plow plugs and grill connectors do not need to be connected for the control light to be on.



Wiring Diagram Harness Type – A w/ 9 Pin Headlamp Kit & SAE Headlamp Types 2B/2D HB-1 HB-5



Mount Assembly Box No. 62200
Harness Kit without DRLs, No. 61545, 61515, or 61575
Harness Kit with DRLs, No. 61555, 62535, or 61585
Hydraulics Box No. 56355 or 56365
PARTS DIAGRAM & LIST



ITEM	PART NO.	QTY.	DESCRIPTION
Found in Hydraulics Box No. 56355 or 56365			
31	56369	1	SOLENOID CONTROL (Style 2)
32	56283	1	SHIELD
33	49286	1	BODY W/LABEL & LENS (Style 2)
34	49287	1	LEVER, SPRING & ACTUATOR KIT (Style 2)
35	55923	1	SPRING - CONICAL
36	49283	1	PC BOARD ASSY MOLEX (Style 2)
37	56199	1	BASE
38	93153	2	#6-19X3/8 SL HXW TFTS HILO
40	93154	2	#8-18X5/8 SL HXW TFTS HILO
41	56308	1	CONTROL BRACKET
42	90388	4	#10X1 SL PN TFTS TY AB BZP
43	91242	4	#10 SP LK WASHER BPO
44	55381	1	CABLE CLAMP
45	93157	5	#8-32X3/8 SL HXW TCTS TY T BP
46	91231	4	#8 SP LK WASHER BP
50	61169	1	CABLE ASSEMBLY - VEHICLE
51	56134K	1	RELAY-SOLENOID HYDRAULIC SYS
43	91242	2	#10 SP LK WASHER BPO
52	91402	2	#10-32 HX NUT ZP
53	91202	2	5/16 SP LK WASHER ZP
54	92842	2	5/16-24 HX JAM NUT
55	22511	1	BATTERY CABLE 22" RED
56	90002	2	1/4-20X3/4 HX CS G2 ZP
57	91101	2	1/4 PLAIN WASHER TY A STD ZP
58	91331	2	1/4-20 PT HX LK NUT NYIS ZP
61	56099	1	DIELECTRIC GREASE TUBE (0.25 ounce)

49326	1	WESTERN DIELECTRIC GREASE TUBE (2 ounce)	
62	66130	2	RUBBER GROMMET
63	59114	1	SELF STRIP WIRE CONNECTOR
Parts listed above may be found in one of these assemblies.			
56368	1	CARTON ASSY LOOSE PARTS U	
56367	1	BOLT BAG ASSY LARGE U	
56358	1	BOLT BAG SMALL U	

ITEM	PART NO.	QTY.	DESCRIPTION
65	61546	1	PLUG-IN HARNESS 2B/2D U -A (For Harness Kit No. 61545)
	61556	1	PLUG-IN HARNESS 2B/2D U -B (For Harness Kit No. 61555)
	61576	1	PLUG-IN HARNESS 2E U -C (For Harness Kit No. 61575)
	62536	1	PLUG-IN HARNESS 2E U -B (For Harness Kit No. 62535)
	61716	1	PLUG-IN HARNESS HB-3&HB-4 U -A (For Harness Kit No. 61515)
	61586	1	PLUG-IN HARNESS HB-3&HB-4 U -B (For Harness Kit No. 61585)
66	61437	1	VEHICLE HARNESS 9-PIN (W/O DRL's)
	61557	1	VEHICLE HARNESS 12 PIN (W/ DRL's)
67	61548	2	PLUG COVER
68	60109	1	FLASHER HD
69	59224	3	BULLET RECEPTACLE CONNECTOR
70	61535	*	RELAY SPDT *W/O DRL's - Qty 2, W/ DRL's - Qty 3
72	59223	8	CABLE TIE

Parts listed above may be found in one of the following assembly.

61547	1	PARTS BAG
61559	1	PARTS BAG (HARNESS KIT U NF)
61572	1	PARTS BAG (HARNESS KIT U)
61577	1	PARTS BAG (HARNESS KIT U NF)

Found in Mount Box No. 62200			
85	61536	4	CABLE TIE - LONG
90	56080	1	DASH BRACKET

Indented part numbers are included in the assembly under which they are listed. Quantities shown are included with the assembly.

Abbreviations			
ASSY	Assembly	HXW	Hex Washer
BP	Black Phosphate	LK	Lock
BPO	Black Phosphate & Oil	NF	No Flasher
BZP	Black Zinc Plate	NYIS	Nylon Insert
CS	Cap Screw	PC	Printed Circuit
DRL's	Daytime Running Lights	PN	Pan
G	Grade	PT	Prevailing Torque
HD	Heavy Duty	SL	Slotted
HX	Hex	SP	Spring
		SPDT	Single Pole Double Throw
		STD	Standard
		SYS	System
		TCTS	Thread Cutting Tapping Screw
		TFTS	Thread Forming Tapping Screw
		TY	Type
		U	UniMount® System
		W/	With
		W/O	Without
		ZP	Zinc Plate

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