



WESTERN PRODUCTS
P.O. BOX 245038
MILWAUKEE, WISCONSIN 53224-9538



A DIVISION OF DOUGLAS DYNAMICS, INC.

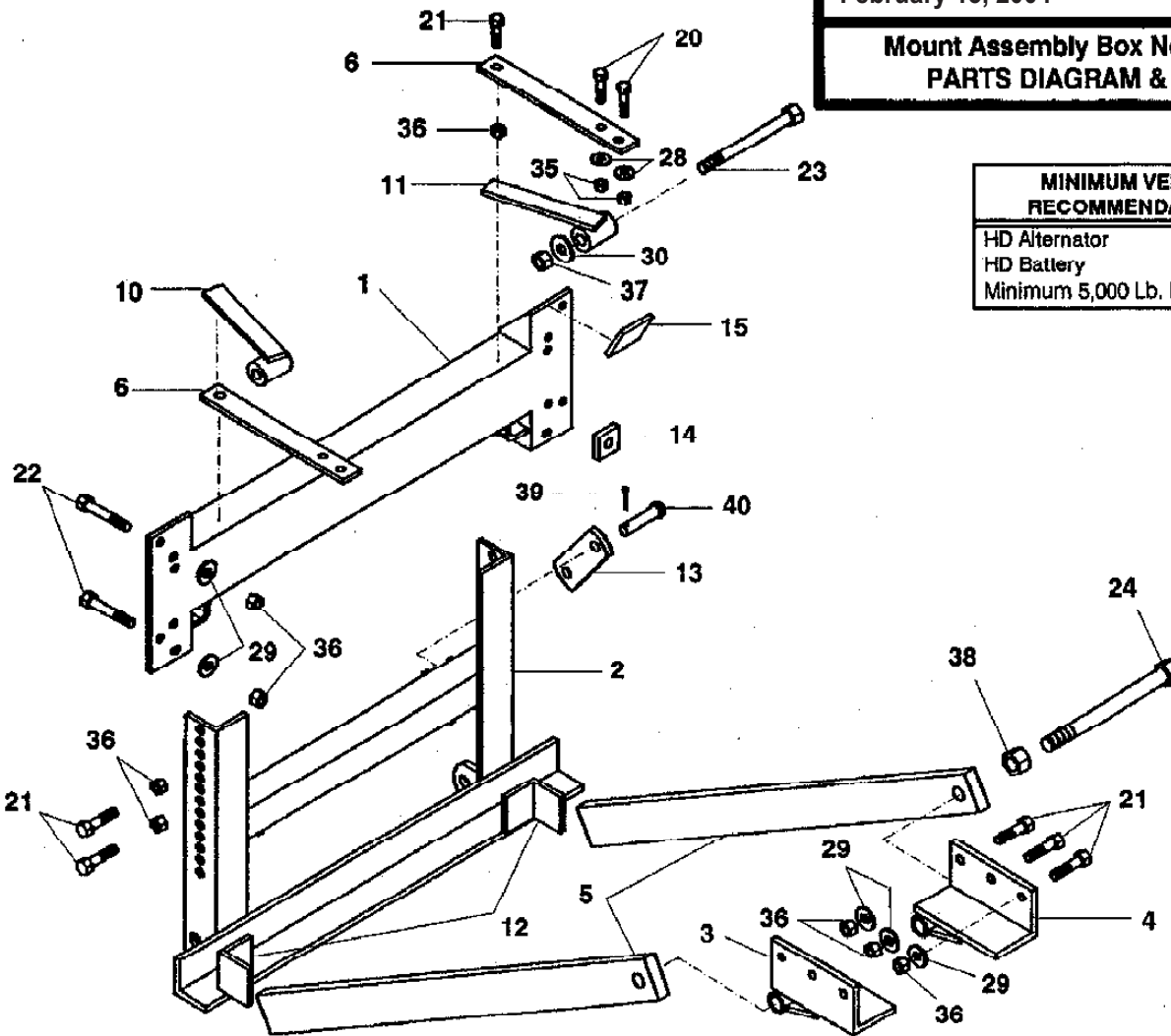
Vehicle Installation Instructions and
Parts List

Model 2955
Mount Assembly Box No. 62275
Universal Mount 14,000 to 27,000 GW
1980 & Later
Hydraulics Box No. 56400
Harness Kit No. 62510
February 15, 2004

Mount Assembly Box No. 62275
PARTS DIAGRAM & LIST

MINIMUM VEHICLE
RECOMMENDATIONS

HD Alternator
HD Battery
Minimum 5,000 Lb. Front GAWR



ITEM PART NO. QTY. DESCRIPTION

1	62135	1	MOUNT FRAME 2955
2	62140	1	SPREADER
3	59707	1	THRUST BRACKET DR
4	59708	1	THRUST BRACKET CU
5	59710	2	THRUST BAR
6	62131	2	BRACE
10	62269	1	SUPPORT STRAP DR
11	62270	1	SUPPORT STRAP CU
12	59731	2	ATTACHING ANGLE
13	64610	2	LINK H.W.
14	62271	2	SPACER
15	62266	2	TAB
20	90102	4	1/2-13X2 HX CS G5 ZP
21	90129	12	5/8-11X2 HX CS G5 ZP
22	90132	4	5/8-11X3 HX CS G5 ZYC
23	90189	2	3/4-10X6 HX CS G5 ZP
24	90476	2	1-8X7 HX CS G2 ZP
28	91105	4	1/2 PLAIN WASHER TY A STD ZYC

ITEM PART NO. QTY. DESCRIPTION

29	91106	10	5/8 PLAIN WASHER TY A STD ZP
30	91107	2	3/4 PLAIN WASHER TY A STD ZP
35	91335	4	1/2-13 PT HX LK NUT NYIS ZYC
36	91337	16	5/8-11 PT HX LK NUT NYIS ZYC
37	91338	2	3/4-10 PT HX LK NUT NYIS ZYC
38	91340	2	1-8 PT HX LK NUT NYIS ZP
39	91911	2	5/32X1-1/2 COTTER PIN ZYC
40	93074	2	RIVET 1" X 3-1/4" G5 ZP
NOT SHOWN			
	22381	1	BATTERY ADAPTERS, SIDE TERMINAL
	56080	1	DASH BRACKET
Above listed parts may be found in the following:			
	62272	1	BOLT BAG ASSY (62275)

Abbreviations

ASSY	Assembly	NYIS	Nylon Insert
CS	Capcrew	PT	Prevailing Torque
CU	Curb-Side	STD	Standard
DR	Driver-Side	TY	Type
G	Grade	ZP	Zinc Plate
HX	Hex	ZYC	Zinc Yellow Chromate
LK	Lock		

NOTE: Some cutting, drilling, and welding will be necessary to complete this installation.

**Mount Box No. 62275
INSTALLATION INSTRUCTIONS**

IMPORTANT: Read instructions before assembling. Bolts should be finger tight until instructed to tighten per torque chart. Use standard methods and practices when attaching snowplow including wearing safety glasses during cutting, drilling, and welding.

MOUNT FRAME:

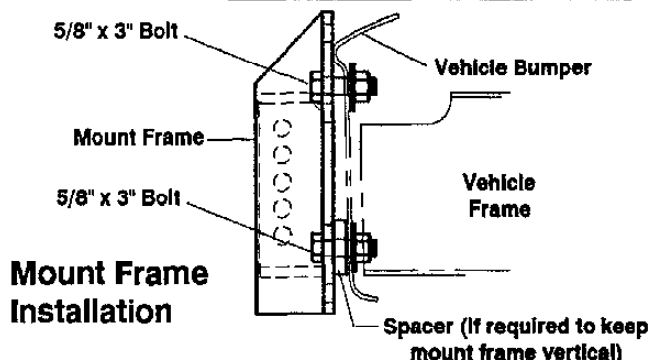
1. Remove existing bumper mounting bolts from the end of the vehicle frame. Support bumper if required in original position.
2. Position mount frame to front of bumper. On most vehicles, existing holes in the mount frame will align with bumper mounting holes.
3. Mount frame must be vertical to road surface. Use spacers when needed between bumper and mount frame.
4. On Ford low rider and some other low vehicles, cut off top of mount frame side angles and weld tabs in place to conform to vehicles bumper. (See top diagram on next page.)
5. Attach mount frame to bumper and bumper brackets or ends of vehicle frame rails with four 5/8" x 3" bolts, flat washers and locknuts to inside.

Recommended Fastener Torque Chart (Ft.-Lbs.)				
Size	SAE Grade 2		SAE Grade 5	
	SAE Grade 2	SAE Grade 5	SAE Grade 5	SAE Grade 8
1/4-20	6	9	13	
5/16-18	11	18	28	
3/8-16	19	31	46	
3/8-24	24	48	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	563	589	

Metric Grade 8.8 (Ft.-Lbs.)			
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.

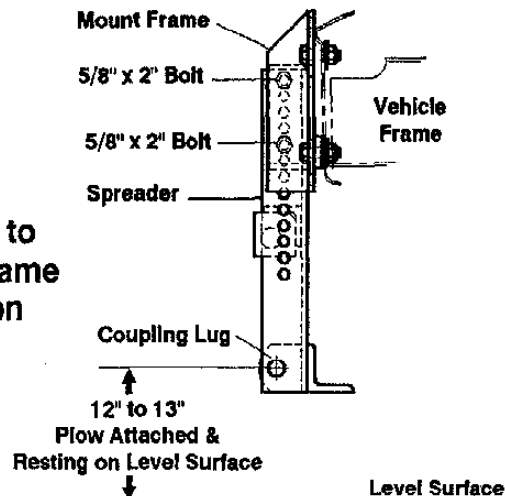
AS VIEWED FROM DRIVER SIDE



SPREADER:

1. Position the spreader into the mount frame to obtain a center of coupling lug hole height of 12" to 13" above the road surface.
2. Trim top of spreader side angles as required.
3. Attach spreader angles to mount frame with two 5/8" x 2" bolts and locknuts on each side.

Spreader to Mount Frame Installation

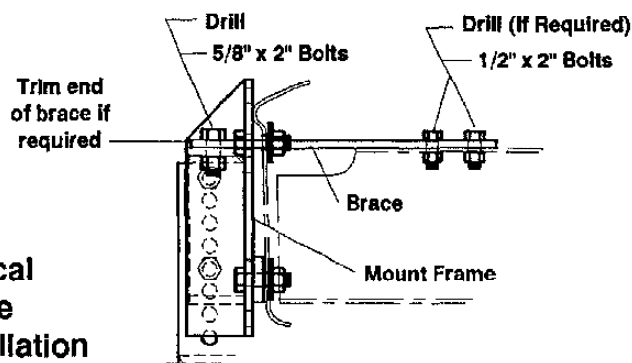


BRACE/SUPPORT STRAP:

Typical Brace Installation -

1. Attach a brace to top flange of each vehicle frame rail using existing holes if available with two 1/2" x 2" bolts, flatwasher to vehicle frame and locknuts to inside.
2. Use hole in end of each brace to drill a 5/8" hole through mount frame cross angle. Some installations may require drilling a new 5/8" hole in brace.
3. Secure each brace to cross angle with a 5/8" x 2" bolt and locknut to inside.
4. Trim brace if it protrudes beyond leg of angle.

Typical Brace Installation

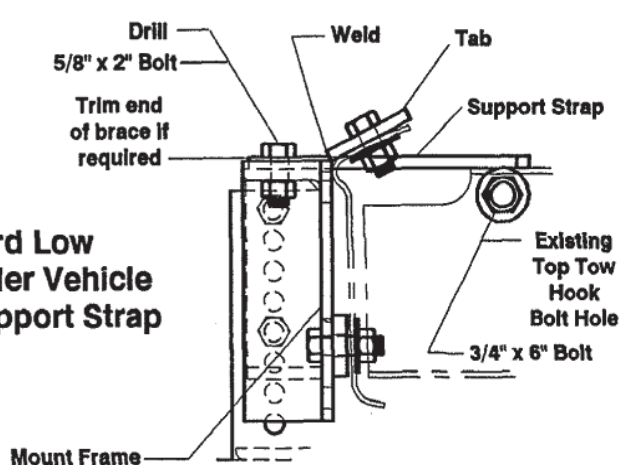


Ford Low Rider Vehicle Support Strap

Some Ford vehicles can use the furnished support straps in place of the brace shown previously.

1. Remove the top tow hook bolt from each side of vehicle.
2. Insert a 3/4" x 6" bolt into each tow hook hole.
3. Slide the tube end of each support strap over the bolt and retain with a flat washer and locknut.
4. Drill a 5/8" hole through the brace and cross angle.
5. Attach each support strap with a 5/8" x 2" bolt and locknut to inside.
6. Trim brace if it protrudes beyond leg of angle.

Ford Low Rider Vehicle Support Strap



THRUST BRACKET DR & CU:

Choose a location on bottom outside of each vehicle frame rail for mounting the thrust brackets. Location requirements include:

- No interference with frame brackets, brake, fuel, or cooling lines or other obstructions.
- 3" wide thrust bars must clear all suspension and steering components including axle, tie rods, springs, etc.
- Tube of thrust bracket may be towards the front or the rear of vehicle. Thrust arm length can vary from side to side.
- Thrust arm can attach to inside or outside of thrust bracket.

1. Drill three 5/8" holes into each vehicle frame rail using thrust brackets as a template. If notches or obstructions interfere with hole pattern, relocate holes in thrust bracket.
2. Secure with three 5/8" x 2" bolts, flat washer to inside of vehicle frame and locknuts on each side.

THRUST ARMS:

1. Temporarily mount hole end of thrust arms to thrust bracket tubes with 1" x 7" bolts. (See diagram above)
2. Mark and cut off excess length of each thrust arm.
3. Attach thrust arms to thrust brackets using 1" x 7" bolts and locknuts.
4. Position an attaching angle into the cross angle of the spreader at the inside end of each thrust arm. Clamp attaching angle, thrust arm, and spreader together.
5. Weld these pieces together with a MINIMUM 1/4" fillet welds.

LINK ARM:

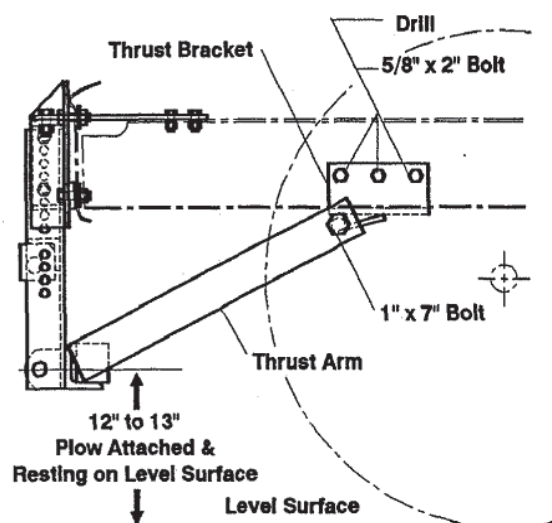
Fasten a link arm between each upper pair of spreader lugs with one 1" x 3-1/4" grade 5 rivet and cotter pin on each side.

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

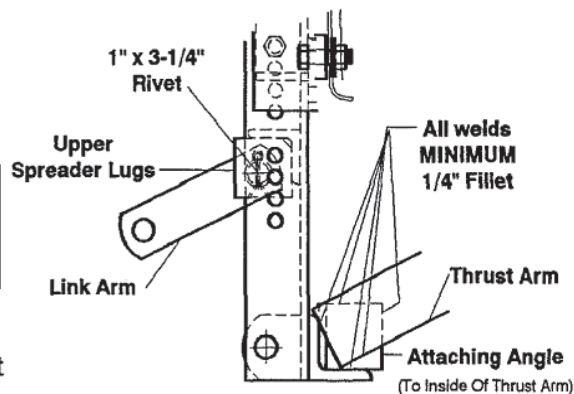
HARNESS KIT SELECTION:

For DUAL Type 2B Headlamps - Use Box No. 61540 Headlamp Kit 9-Pin and 62510 Harness Kit 2B/2D 9-Pin LG U-A. For other types of headlamps and Canadian DRLs, contact Customer Service for assistance.

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



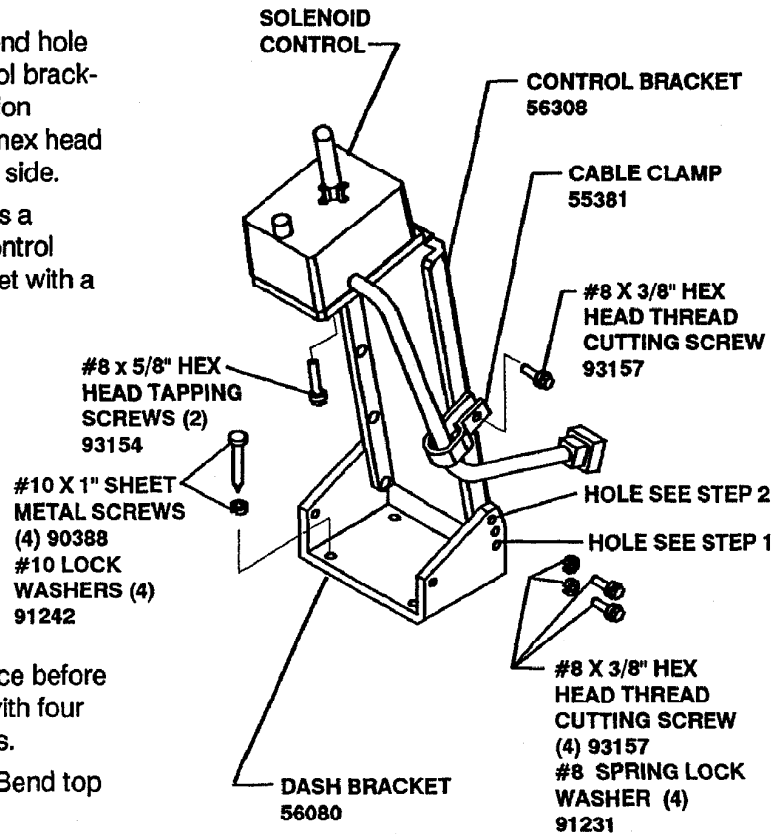
Thrust Bracket Installation



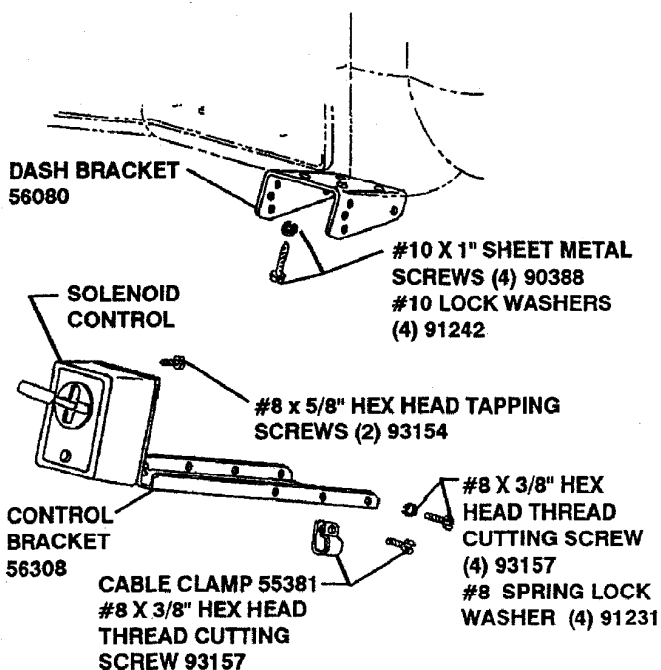
Thrust Arm and Link Arm Installation

Solenoid Control – Floor Mounted INSTALLATION INSTRUCTIONS

1. Align 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.



Solenoid Control – Dash Mounted INSTALLATION INSTRUCTIONS



1. Secure solenoid control to control bracket using two #8 x 5/8" hex head tapping screws, and control bracket to dash bracket using four #8 x 3/8" hex head thread cutting screws. Secure control cable to control bracket with cable clamp using one #8 x 3/8" hex head thread cutting screw.
2. Select a location on the dash for the assembly. The dash bracket should fit fairly flat against the surface of the dash. Verify that control will clear vehicle components in all positions. Check for clearance before drilling holes.
3. Mark this location.
4. Remove the dash bracket. Place dash bracket in selected location and mark four holes.
5. Drill four 1/8" holes in marked locations. Secure dash bracket using four #10 x 1" sheet metal screws and lock washers.
6. Place control into dash bracket and fasten in desired position reusing fasteners from paragraph 1 above. **NOTE:** Bend top flange of control bracket to desired position.



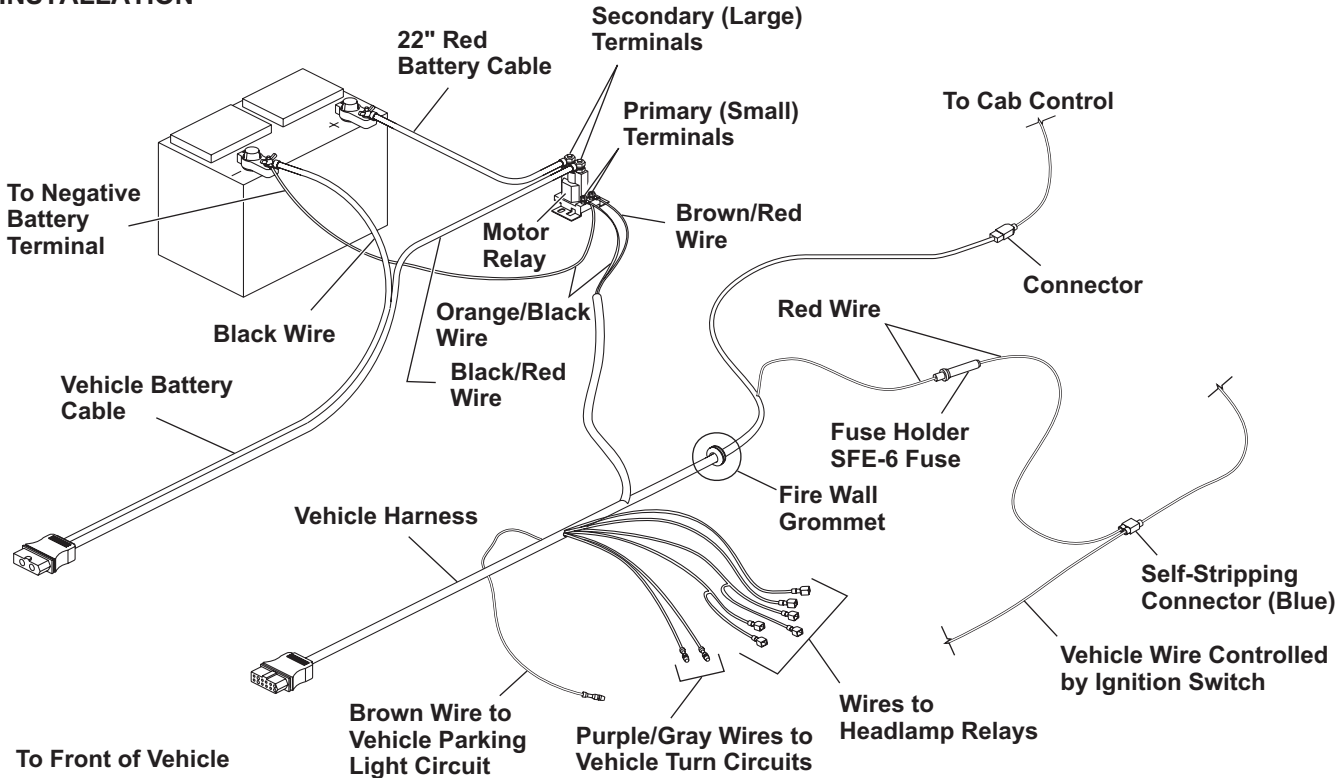
SAFETY NOTE: Whenever you see this symbol, it notes a **SAFETY WARNING**. To avoid serious injury to yourself or others, follow all warnings.

**Vehicle Underhood
INSTALLATION INSTRUCTIONS**

9-Pin Vehicle Harness And Motor Relay

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

**HARNESS, SOLENOID CONTROL
& MOTOR RELAY
INSTALLATION**



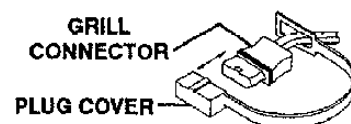
NOTE: To prevent corrosion on all underhood electrical connections, use dielectric grease to fill receptacles and lightly coat ring terminals and blades before assembly or lightly coat connections after assembly.

1. Identify wires for the parking lamp on the driver-side and the turn signals on both sides. Attach a black self-stripping bullet receptacle connector (found in harness kit) 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 locknuts.
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 the battery POSITIVE (+) terminal with the furnished battery adapter. (Adapters found in mount box.) Tighten battery adapter to 124-178 in-lb. Attach OEM battery cable to adapter with original bolt. Hold adapter while tightening original bolt to 124-178 in-lb.
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 9 pin vehicle harness (found in harness kit). Place plug covers over molds on harnesses.



Continued on next page.

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 connectors.
7. Route battery cable through the grill at the selected location and through or around the radiator bulkhead to motor relay taking care to avoid 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 (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 9 pin vehicle harness (similar position to battery cable mount). See Step #6 & 7 above for how to mount. Route 9 pin 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 9 pin 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 any convenient location away from hot or moving engine parts. Feed fuse holder through hole first and then feed the plastic connector and harness through to the cab.
12. Route brown/red and black/orange wire loom to motor relay. Attach each ring terminal to a separate small terminal on motor relay using a lock washer and #10-32 nut for each terminal.
13. Attach the hydraulic unit black battery cable and orange/black wire terminal to the negative terminal with the furnished battery cable adapter. (Adapters found in mount box.) Tighten battery adapter to 124-178 in-lb. Attach OEM battery cable to adapter with original bolt. Hold adapter while tightening original bolt to 124-178 in-lb.
14. Inside the cab, route 9 pin vehicle harness connector to solenoid control and couple the connectors together.
15. 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).

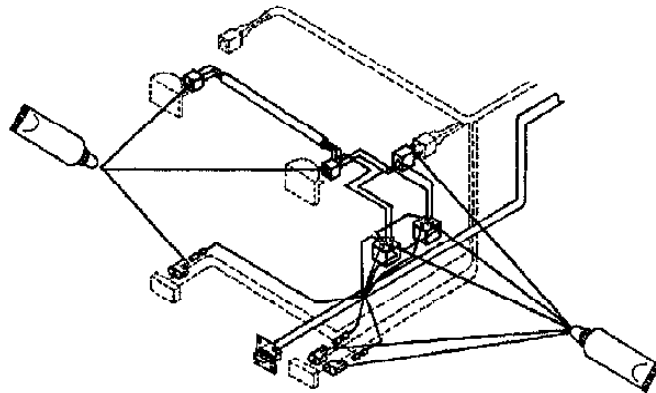
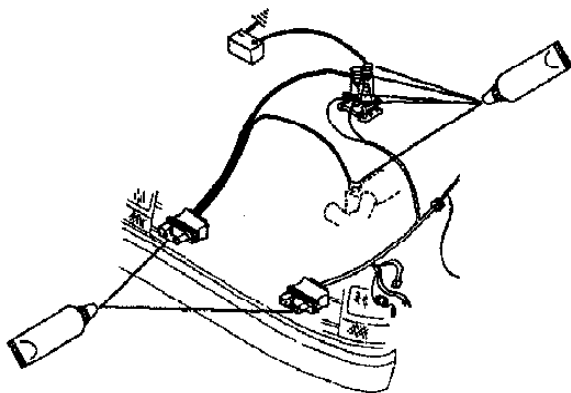
Fuse block terminal as source: Attach a terminal (not furnished) to the vehicle harness red wire and plug on to fuse box terminal. If DRL wire is used, crimp pink wire into the same terminal with the red wire.

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 pair of pliers and snap the locking tab in place. Repeat with DRL pink wire.

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.

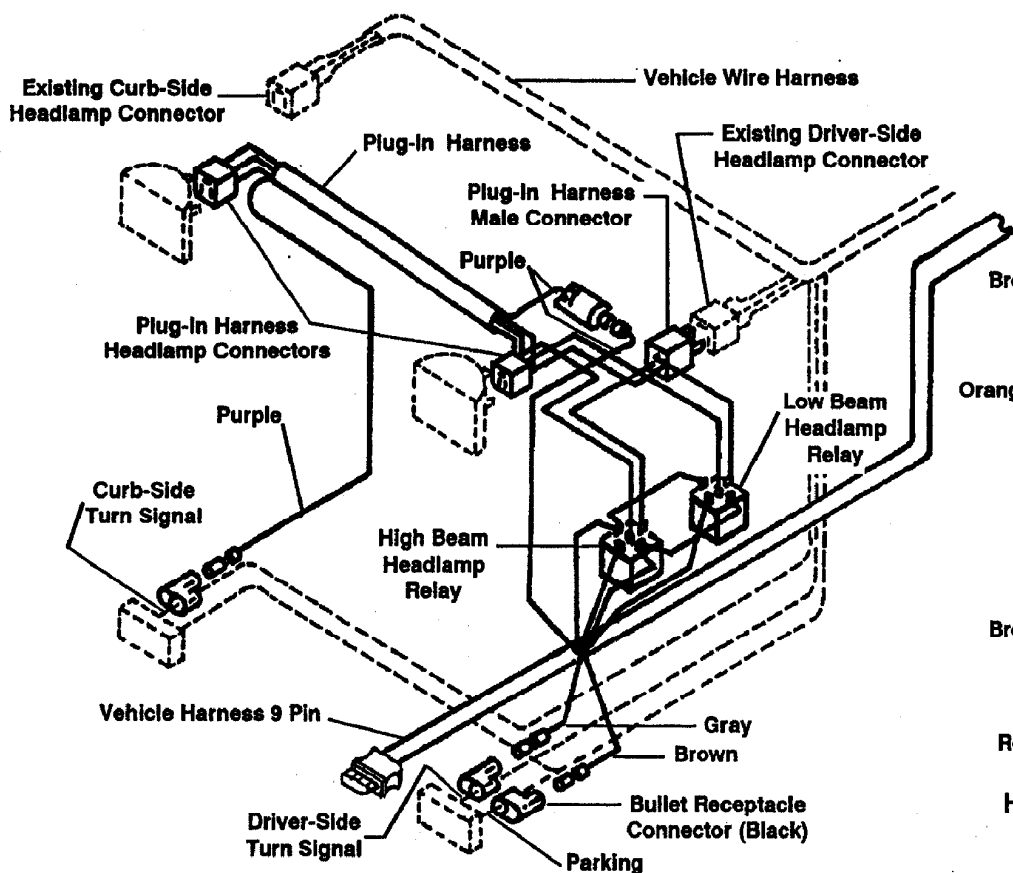


**DIELECTRIC GREASE -
P.N. 56099**

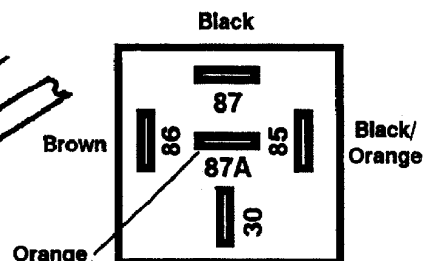


VEHICLE HEADLAMP WIRING DIAGRAM - Type -A

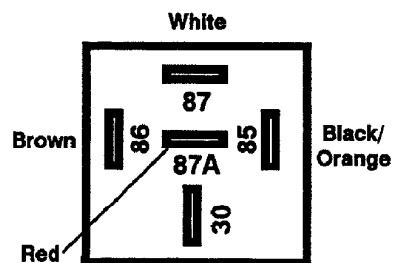
PLUG-IN HARNESS & HEADLAMP RELAY INSTALLATION



HEADLAMP RELAY WIRING DIAGRAM Type - A



Low Beam Headlamp Relay



High Beam Headlamp Relay

Plug-in Harness & Headlamp Relay

Reminder: Lubricate all receptacles and blades with dielectric grease before assembly.

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 #1 of previous section) as follows:
 - Brown wire to parking lamp wire on driver-side.
 - Gray wire to 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 mating 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 1 wire male connector on plug-in harness. Secure connector with a cable tie (found in harness kit). Attach plug-in harness headlamp connector to mating headlamp terminals.
4. On the curb-side, insert purple wire bullet from plug-in harness into vehicle turn signal black bullet connector installed in step # 1 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. Use cable ties (found in harness kit) to secure relays and prevent accidental grounding of connections.
7. Place grommet around 9 pin vehicle harness and insert into firewall hole (also insert a grommet in the hole in the radiator bulkhead if one was drilled). Use cable ties to secure harnesses and wires away from hot or moving engine parts.
8. Replace vehicle flasher with flasher furnished in harness kit.
9. Lubricate terminal cavities of both grill connectors with dielectric grease. Furnish dielectric grease tube to vehicle owner for future lubrication of grill connectors.

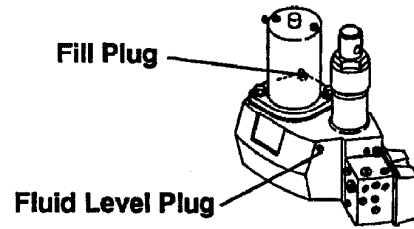
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OPERATIONAL TESTS AND ADJUSTMENTS

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 hole. Replace both plugs.



Use: automatic transmission fluid (ATF) Dexron IIe 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 ON or ACCESSORY position.
5. Turn the control ON/OFF switch ON.
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 procedure in paragraph 3 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 per paragraph 3 of this section.

Capacity: Solenoid ISARMATIC® Mark IIIa reservoir 1-3/4 quarts
Equipped with 16" Hydra-Turn® rams 2-3/4 quarts



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

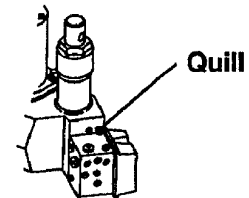
Blade Drop Speed Adjustment

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

Turn quill IN (clockwise) to slow drop speed.

Turn quill OUT (counterclockwise) to increase drop speed.

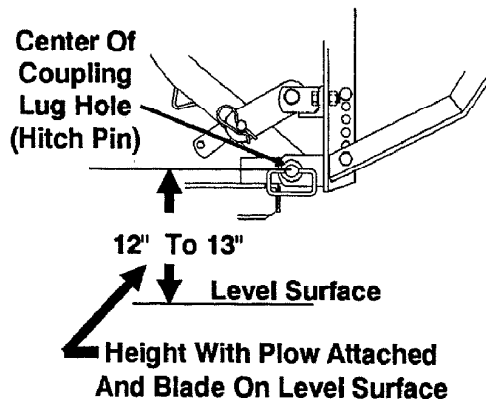
NOTE: Turning quill too far IN can slow raise time.



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).
2. Lift plow and move vehicle. Travel 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,
center of coupling lug holes (hitch pin shaft) to level surface should measure 12" to 13". To obtain height, adjust spreader position.



NOTE: Coupling height must be 12" 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 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.

Turn signals and parking lamps:

Parking lamps ON	Both vehicle and plow lamps should be on at the same time.
Right Turn Signal ON	Both vehicle and plow lamps should flash at the same time.
Left Turn Signal ON	Both vehicle and plow 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
9 or 12 pin plow plug CONNECTED	Plow headlamps should be on

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

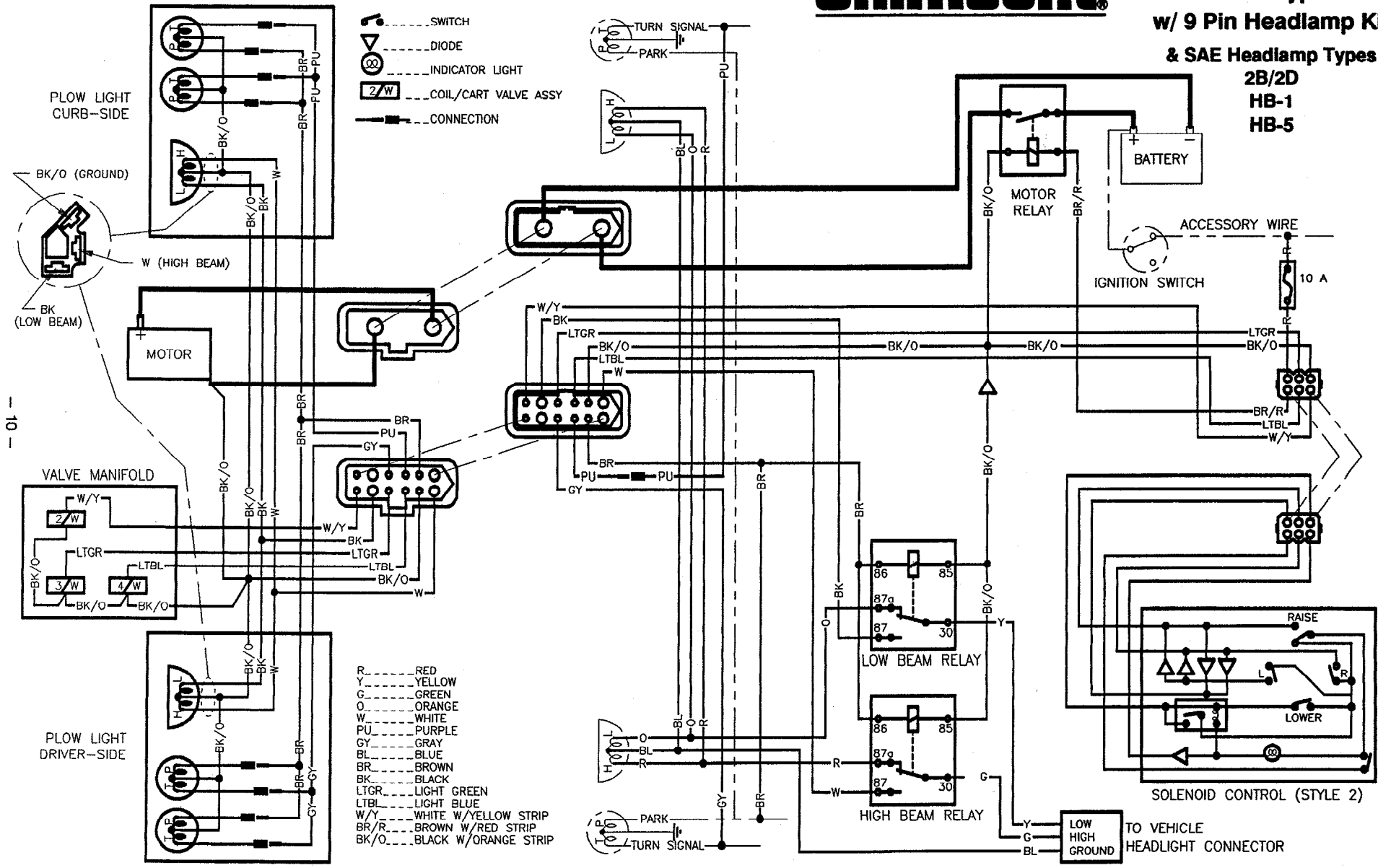
Solenoid Control

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.

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 5 to 10 hours of snowplow usage, retorque all mount assembly fasteners.

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

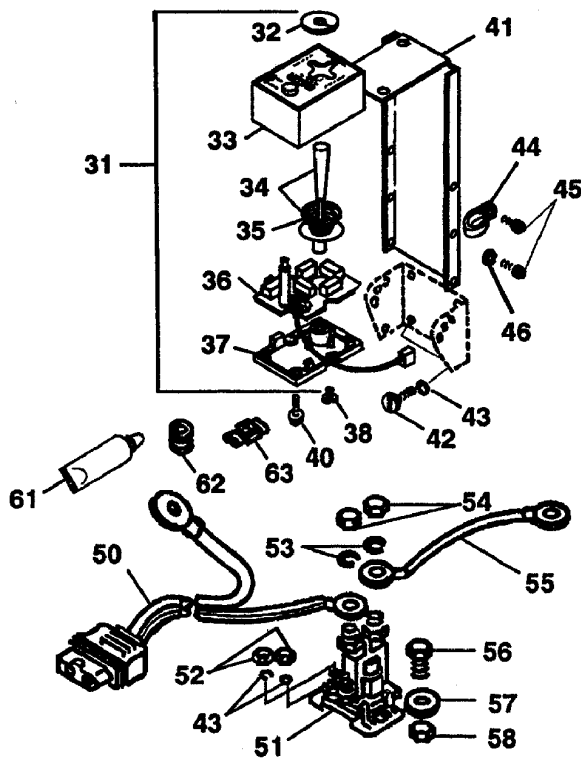


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Solenoid Control — The control indicator light should light whenever the control ON/OFF switch and the ignition (key) switch are both turned ON and the plow plugs are connected to the grill connector.

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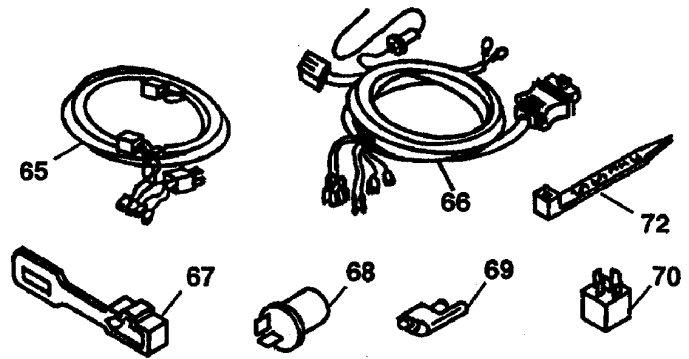
**Mount Assembly Box No. 62275
 Harness Kit Box No. 62510
 Hydraulics Box No. 56400
 PARTS DIAGRAM & LIST**



ITEM	PART NO.	QTY.	DESCRIPTION
Found in Hydraulics Box No. 56400			
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 BPO
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 BZP
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
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
Found in Harness Kit Box No. 62510			
65	62511	1	PLUG-IN HARNESS 2B/2D LG U-A (For Harness Kit No. 62510)
66	62512	1	VEHICLE HARNESS 9-PIN LG U
67	61548	2	PLUG COVER
68	60109	1	FLASHER HD
69	59224	3	BULLET RECEPTACLE CONNECTOR
70	61535	2	HEADLAMP RELAY SPDT
72	59223	8	CABLE TIE
Parts listed above may be found in the following assembly.			
61547	1	PARTS BAG	



Found in Mount Box No. 62275			
85	61536	4	CABLE TIE - LONG
90	56080	1	DASH BRACKET

Abbreviations			
ASSY	Assembly	SL	Slotted
BP	Black Phosphate	SP	Spring
BPO	Black Phosphate & Oil	SPDT	Single Pole Double Throw
BZP	Black Zinc Plate	STD	Standard
CS	Capscrew	SYS	System
G	Grade	TCTS	Thread Cutting Tapping
HD	Heavy Duty		Screw
HX	Hex	TFTS	Thread Forming Tapping
HXW	Hex Washer		Screw
LK	Lock	TY	Type
NYIS	Nylon Insert	U	UniMount® System
PC	Printed Circuit	W/	With
PN	Pan	ZP	Zinc Plate
PT	Prevailing Torque		

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

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