



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

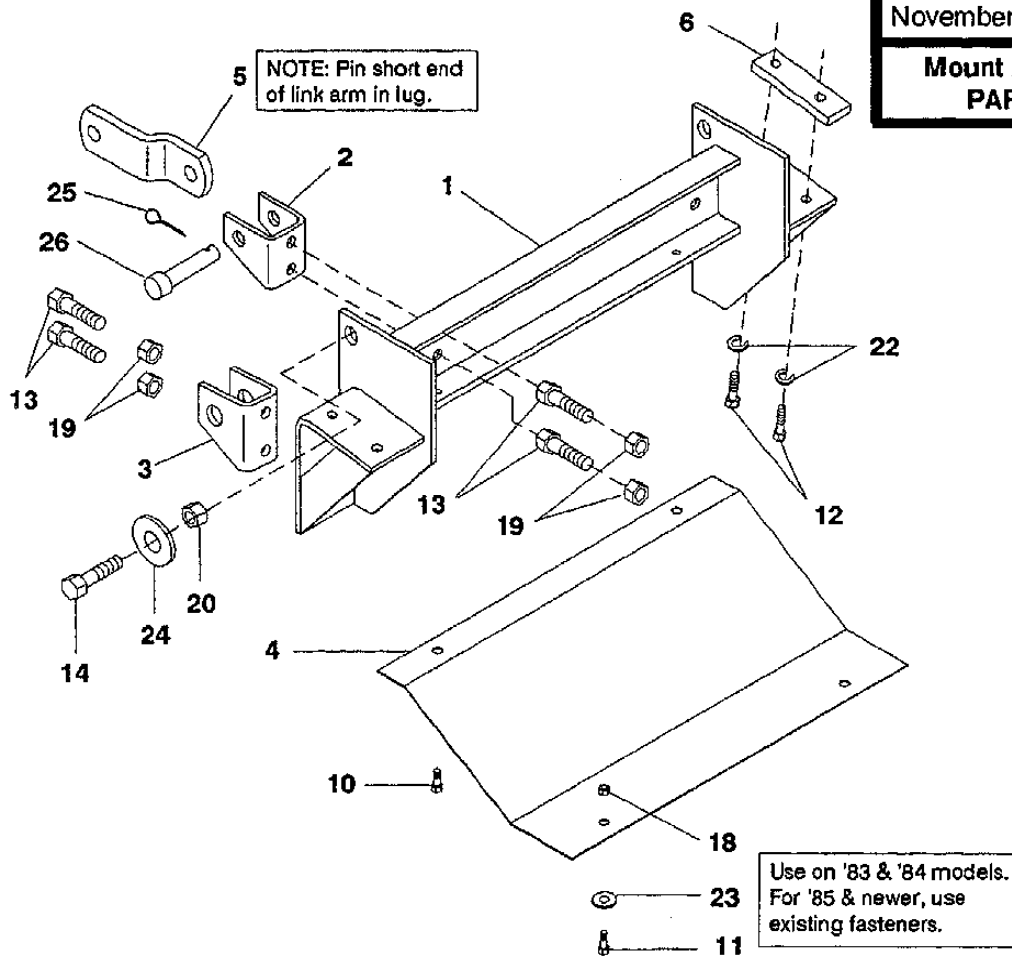
UniMount

DD A DIVISION OF DOUGLAS DYNAMICS, INC.

**Vehicle Installation Instructions and
Parts List**

Model 1535
Mount Assembly Box No. 61920
Chevrolet /GMC "S" Series 4 x 4
'83 & Later
Hydraulics Box No. 56355 or 56365
Harness Kit No. 61545
November 30, 1992

**Mount Assembly Box No. 61920
PARTS DIAGRAM & LIST**



**MINIMUM VEHICLE
RECOMMENDATIONS**

HD Alternator
HD Battery
"F60" Suspension

REAR BALLAST -
Sport/Utility Blades 200 lbs.,
Standard Blades 300 lbs.
when plow is attached.
**SECURE WEIGHT
BEHIND REAR WHEELS.**

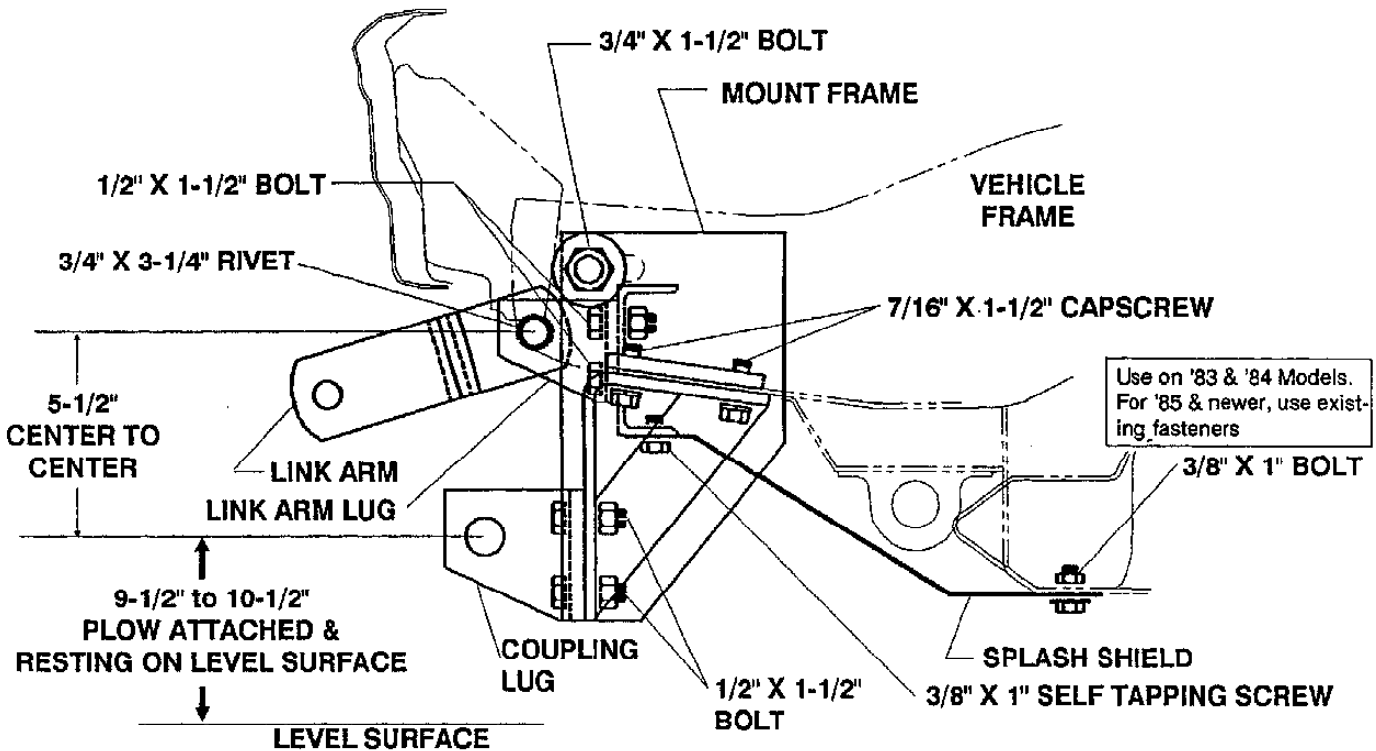
ITEM	PART NO.	QTY	DESCRIPTION
1	61910	1	MOUNT FRAME 1535
2	61916	2	LINK ARM LUG
3	61917	2	COUPLING LUG
4	61922	1	SPLASH GUARD
5	61921	2	LINK ARM
6	61486	2	NUT BAR
10	93169	2	3/8-16X1 HXW TRTS TY SW ZP
11	90039	2	3/8-16X1 HX CS G5 ZP
12	90067	4	7/16-14X1-1/2 HX CS G5 ZP
13	90100	8	1/2-13X1-1/2 HX CS G5 ZP
14	90152	2	3/4-10X1-1/2 HX CS G5 ZP
18	91333	2	3/8-16 PT HX LK NUT NYIS ZP
19	91335	8	1/2-13 PT HX LK NUT NYIS ZP
20	91338	2	3/4-10 PT HX LK NUT NYIS ZP
22	91204	4	7/16 SP LK WASHER ZP
23	91103	2	3/8 PLAIN WASHER TY A STD ZP
24	91107	2	3/4 PLAIN WASHER TY A STD ZP
25	91911	2	5/32X1-1/2 COTTER PIN ZP
26	93062	2	RIVET 3/4" X 3-1/4" G5 ZP

ITEM	PART NO.	QTY	DESCRIPTION
NOT SHOWN			
	55930	1	BATTERY CABLE ADAPTOR
	61536	8	CABLE TIE - LONG
	61539	1	PANEL MONT PLATE SET - SHORT
	56081	1	DASH BRACKET
Parts listed above may be found in the following assembly.			
	61918	1	PARTS BAG (61920)

Abbreviations

CS	Capscrew
G	Grade
HX	Hex
HXW	Hex Washer
LK	Lock
NYIS	Nylon Insert
PT	Prevailing Torque
SP	Spring
STD	Standard
TRTS	Thread Rolling Tapping Screw
TY	Type
ZP	Zinc Plate

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



Use on '83 & '84 Models.
For '85 & newer, use exist-
ing fasteners

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

MOUNT FRAME

1. Remove splash shield, air deflector, tow hooks and tapped bars (inside frame). Retain parts and fasteners, and reinstall whenever mount is removed from vehicle.
2. Place mount frame between vehicle frame rails aligning vertical slots in mount frame side bars to horizontal slots in vehicle frame ('83-'84: Bumper brackets may need to be repositioned.) On each side, insert a 3/4" x 1-1/2" bolt. Retain with a flat washer and locknut inside vehicle frame.
3. Inside each vehicle frame horn, align a nut bar over tow hook holes. Thread two 7/16" x 1-1/2" capscrews with lock washers through holes in mount frame into each nut bar.
4. Starting with the 7/16" x 1-1/2" bolts:

TIGHTEN ALL FASTENERS TO CORRESPONDING TORQUE CHART VALUES.

COUPLING LUGS

1. Position the coupling lugs (1" diameter 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 weight of plow is added. Final coupling lug hole center to level surface distance should be 9-1/2" to 10-1/2" with plow attached and resting on the level surface. (See Coupling Lug Height Check near end of these instructions.)
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" diameter holes) so angled side is in the same position as the angled side of the coupling lugs. Position the link arm lugs to the inner holes on the front of the cross channel on the mount frame. **NOTE:** Centers 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 TO CORRESPONDING TORQUE CHART VALUES.

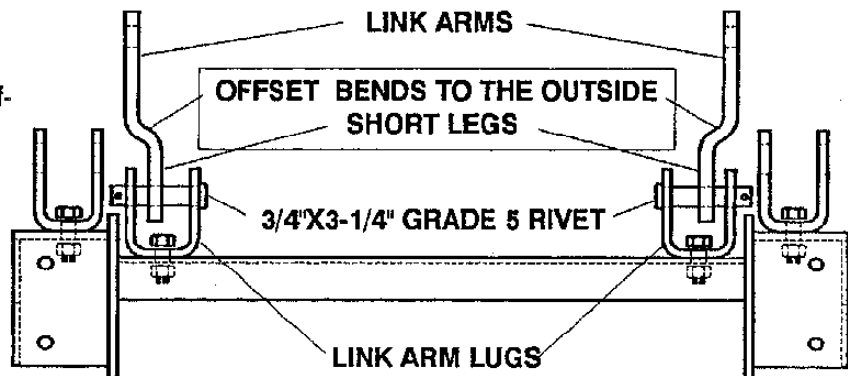
Recommended Fastener Torque Chart (Ft.-Lbs.)				
Size	SAE Grade 2		SAE Grade 5	
	SAE	Metric	SAE	Metric
1/4-20	6	9	13	
5/16-18	11	16	28	
3/8-16	19	31	46	
3/8-24	24	46	68	
7/16-14	30	50	75	
1/2-13	45	75	115	
9/16-12	68	110	165	
5/8-11	83	150	225	
3/4-10	150	250	370	
7/8-9	202	378	591	
1-8	300	583	889	
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 18	155	
These torque values apply to mount assembly fasteners except those noted in the instruction.				

SPLASH GUARD

1. Attach front of splash guard to bottom of center channel on mount frame with two 3/8" x 1" self tapping screws.
2. Attach rear of guard as follows:
'85 & Later: Secure to vehicle frame with existing splash shield fasteners. Tighten fasteners per torque chart.
'83 & '84: Using the 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 per torque chart.

LINK ARMS

Attach short leg of each link arm 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.



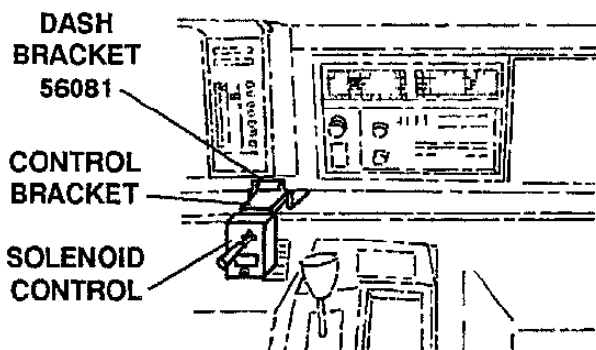
HARNESS KIT SELECTION

For DUAL Type 2B/2D headlamps, use Box No. 61540 Headlamp Kit 9-Pin and 61545 Harness Kit 2B/2D 9-Pin -A.

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

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

Solenoid Control INSTALLATION INSTRUCTIONS



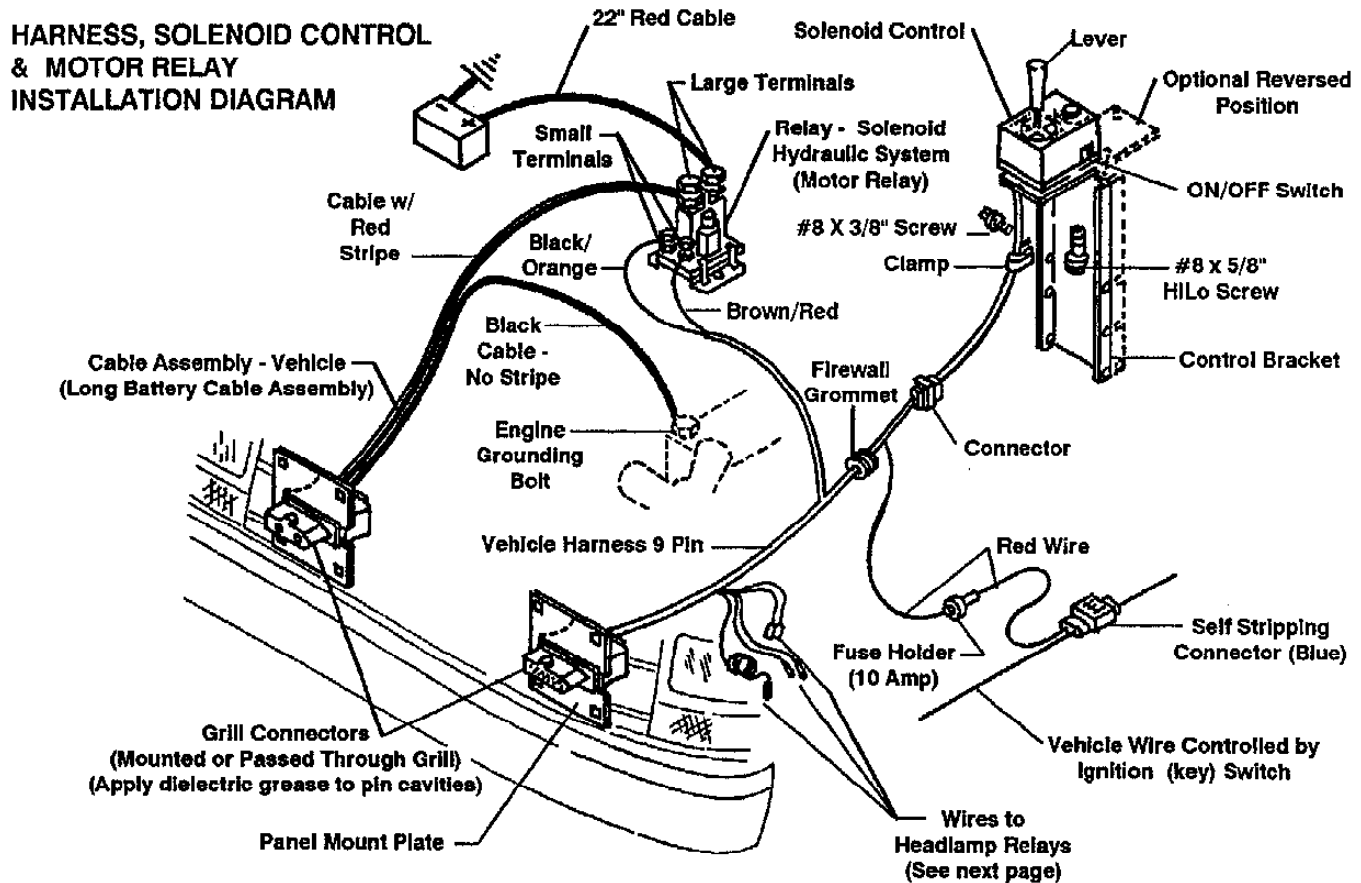
Parts to be installed are furnished in hydraulics box except as noted in ().

1. Secure solenoid control to control bracket using two No. 8 x 5/8" hex head screws, and control bracket to dash bracket (Mount Box) using four No. 8 x 3/8" hex head thread cutting screws.
2. Locate assembly to dash opening below and to the left of the radio. The dash bracket should fit fairly flat against dash/shelf surface. Verify that assembly will clear vehicle components in all positions. Mark this location.
3. Remove the dash bracket. Place dash bracket in selected location and mark four holes.
4. Check for adequate drill clearance. Drill 1/8" holes in marked locations. Secure dash bracket using four No. 10 x 1" sheet metal screws and lock washers.
5. Place control bracket into dash bracket and fasten in desired position. Bend top flange of control bracket to desired position.
6. Secure harness to bracket with cable clamp and a #8 x 3/8" thread cutting tapping screw.

9-pin Vehicle Harness And Motor Relay

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

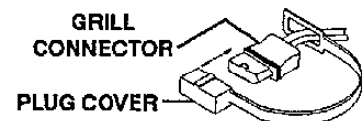
NOTE: To prevent corrosion on all underhood electrical connections, use dielectric grease to fill receptacles and lightly coat ring terminals and blades before assembly or lightly coat connections after assembly.



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 POS battery terminal taking care to avoid sharp edges and moving parts. Attach cable to motor relay terminal with a lock washer and 5/16"-24 jam nut. Attach cable to battery POS terminal with existing terminal fastener. NOTE: Side terminal batteries - use battery cable adaptor (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 9 pin 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.

Grill openings less than 3/4" high:

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.

Grill openings more than 3/4" high:

Use panel mount plates (found in mount box) to mount grill connectors to grill. For openings 3/4" to 1-1/4" mount the plates in front of the grill. For openings larger than 1-1/4", mount plates behind the grill (this will conceal the connector when not in use), making sure connectors can be easily mated.

If using mount plates, slide grooves of grill connectors into the large rectangular openings of the panel mount plates. Route the plug cover strap through the opening of the panel mount plates.

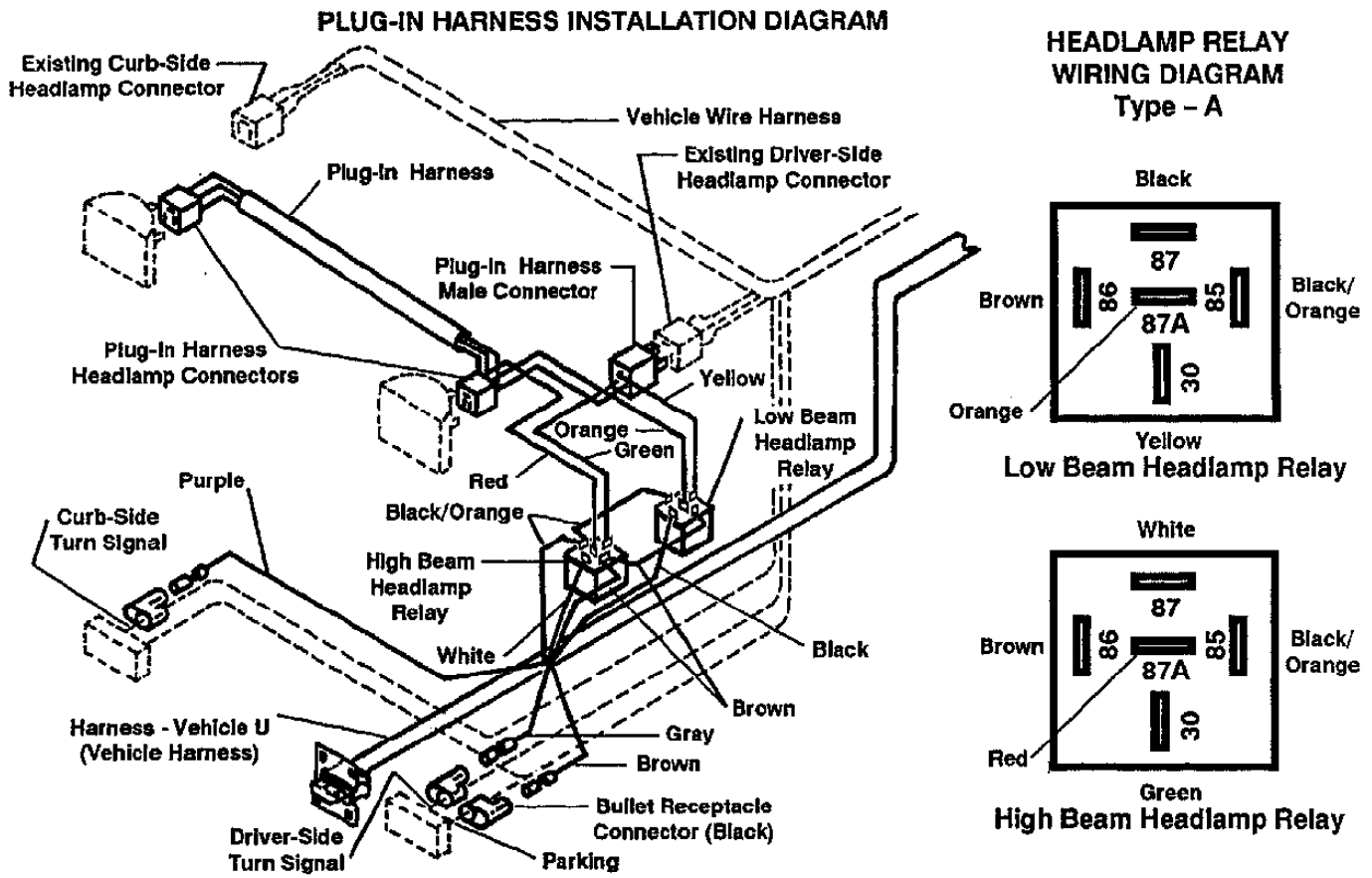
7. Route battery cable through the grill at the selected location and through or around the radiator bulkhead to motor relay taking care to avoid sharp edges and moving parts.

If using mounting plate, make sure the center key is up and secure the mount plate to the grill using four long cable ties (found in harness kit). Hide cable latch behind grill.

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. Attach cable without stripe to a ground bolt on engine or directly to the negative battery terminal (separate the two cables as needed to reach ground bolt or battery).
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. Reconnect vehicle ground cable to battery negative terminal.
14. Inside the cab, route 9 pin vehicle harness connector to solenoid control and couple the connectors together.
15. Locate an accessory wire that is controlled by the ignition switch (power is turned off when ignition switch is in OFF position). Route the 10 amp fuse holder red wire to this location and trim excess length (leave 10 amp fuse holder in system). Open blue self-stripping connector and place the end of the red wire against the inner groove stop (end of wire must not protrude from connector when it is closed) and the accessory wire in the outer groove. Close connector over the wires with pliers and snap locking tab into place.
OPTION: Locate an unused fuse box terminal operated by the ignition switch and attach a terminal (not furnished) to the red wire and plug into fuse box terminal.

Installation instructions continued on next page.

PLUG-IN HARNESS & HEADLAMP RELAY INSTALLATION



Plug-in Harness & Headlamp Relay

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 with plug-in harness 3-wire male plug (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.
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 receptacle 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 put 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. Unless noted in Harness Kit Selection paragraph on page 3 of these Instructions, replace vehicle turn signal flasher with the flasher furnished in the 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.

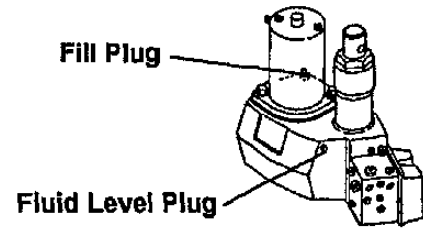
OPERATIONAL TESTS AND ADJUSTMENTS

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 with automatic transmission fluid (ATF) through fill plug hole until fluid runs out of fluid level hole. Replace both plugs. NOTE: For low temperature operation you can use Mobil One or Texaco 1537 Aircraft Hydraulic Oil.



Alternate method: (Systems without fluid level plug.) Remove plow from vehicle. With stand lock pin in place, refill unit through fill plug opening. Unit is full when fluid reaches fill hole threads. Replace fill plug.

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 10" Hydra-Turn® rams	2-3/8 quarts
Equipped with 6" Hydra-Turn® rams	1-7/8 quarts

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

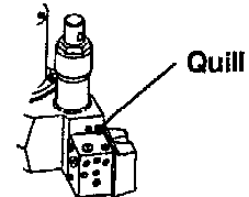
Blade Drop Speed Adjustment

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.



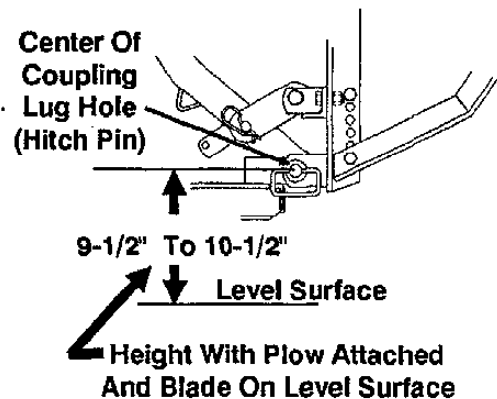
COUPLING LUG HEIGHT CHECK

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 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 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

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

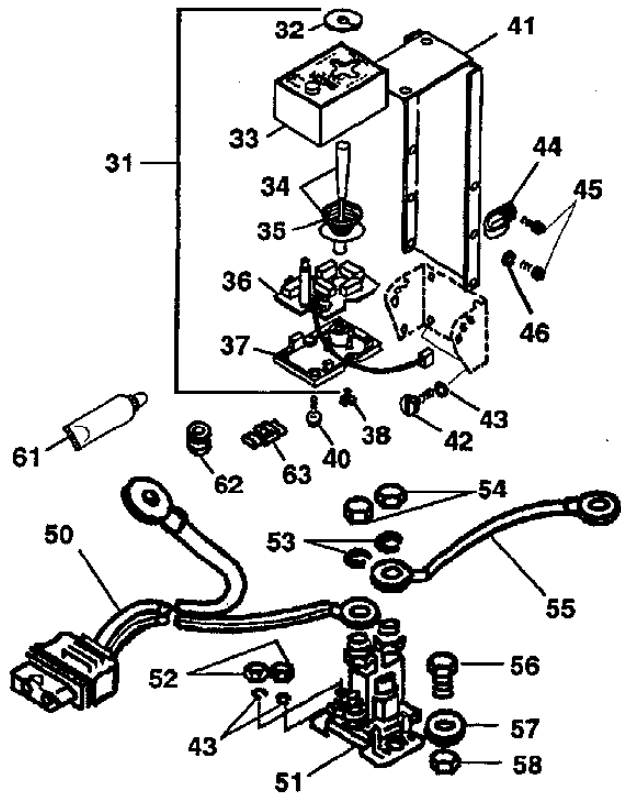
The control indicator light should light whenever the control ON/OFF switch and the ignition (key) switches are both turned ON and the plow plugs are connected to the grill connectors.

The indicator light will also light 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.

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.

Mount Assembly Box No. 61920
 Harness Kit Box No. 61545
 Hydraulics Box No. 56355 or 56365
PARTS DIAGRAM & LIST



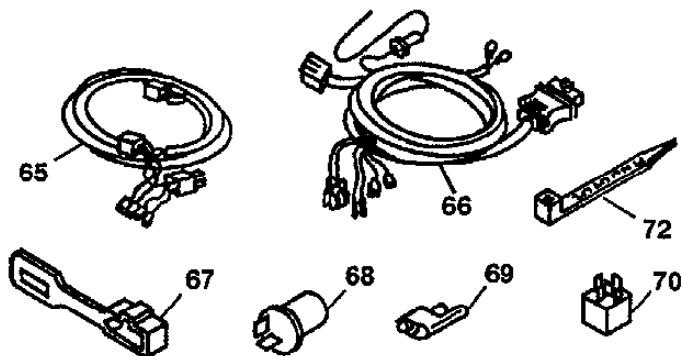
ITEM PART NO. QTY. DESCRIPTION

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
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



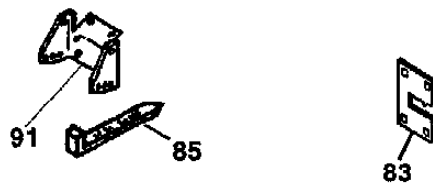
ITEM PART NO. QTY. DESCRIPTION

Found in Harness Kit Box No. 61545

65	61546	1	PLUG-IN HARNESS 2B/2D U -A (For Harness Kit No. 61545)
66	61437	1	VEHICLE HARNESS 9-PIN U
67	61548	2	PLUG COVER U
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
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ITEM PART NO. QTY. DESCRIPTION

Found in Mount Box No. 61920

83	61539	1	PANEL MOUNT PLATE SET - SHORT
85	61536	8	CABLE TIE - LONG
91	56081	1	DASH BRACKET

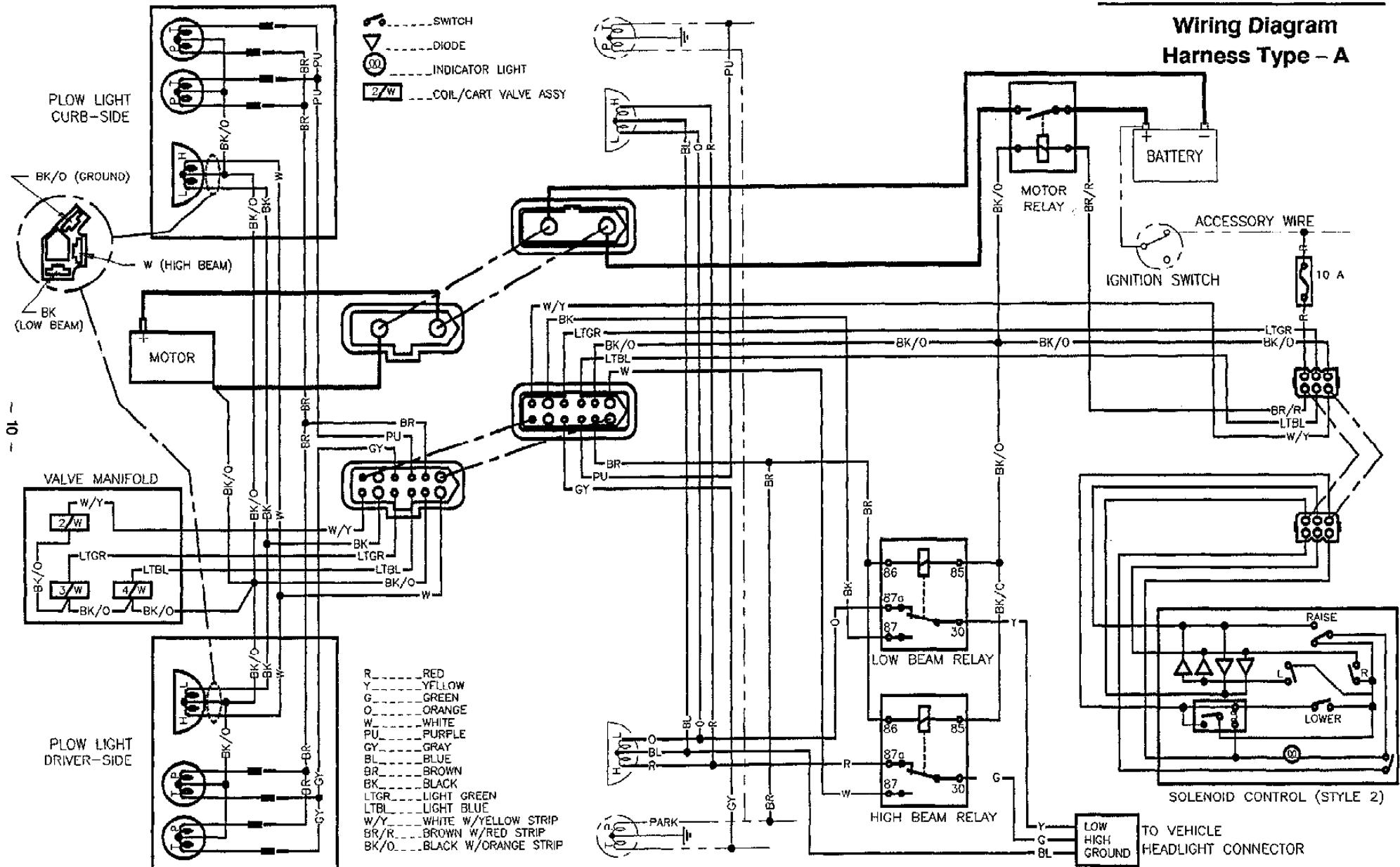
Parts listed above may be found in the following assembly.

61918	1	Parts Bag Assembly
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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.

Wiring Diagram Harness Type - A



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.

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.

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WESTERN® ISARMATIC® Hydra-Turn® UniMount® Roll-Action™ PRO-GUARD™

Western reserves the right under its Product Improvement Policy to change construction details and furnish equipment when so altered without reference to illustrations or specifications used herein.