



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



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

Vehicle Installation Instructions and
 Parts List

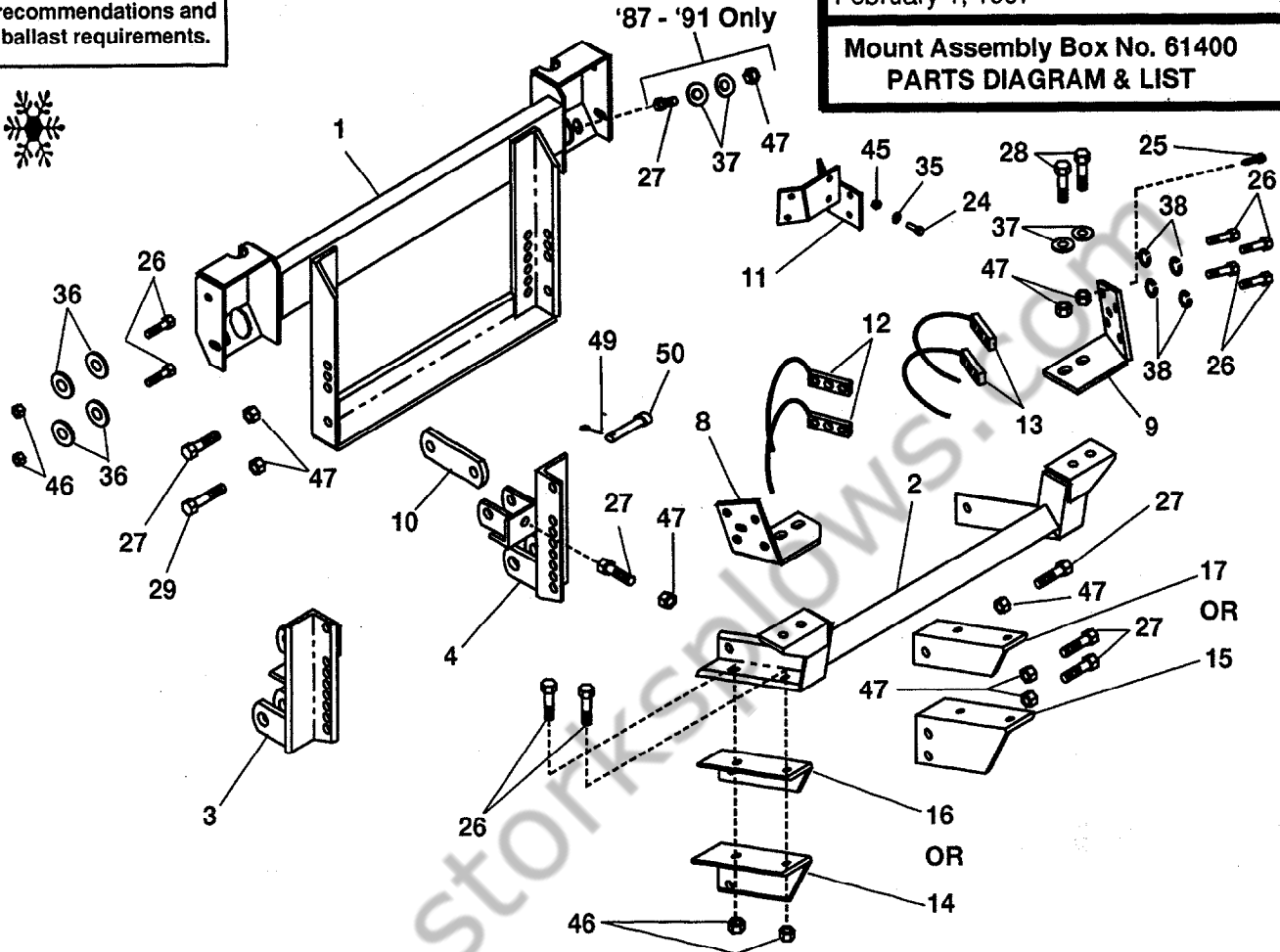
Model 1345
 Mount Assembly Box No. 61400
 Ford Bronco, F-150 4x4,
 F-250/F-350 4x4 & 2WD,
 Super Duty
 1980 - 1991
 Hydraulics Box No. 56365
 Harness Kit No. 61545 or 61570
 February 1, 1997

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



NOTE: This symbol designates a change
 made in the instructions since the last
 revision date of March 1, 1992.

Mount Assembly Box No. 61400
PARTS DIAGRAM & LIST



ITEM	PART NO.	QTY.	DESCRIPTION
1	61401	1	MOUNT FRAME 1345
2	61394	1	THRUST FRAME
3	61390	1	SPREADER DR
4	61391	1	SPREADER CU
8	61726	1	MOUNT BAR DR
9	61727	1	MOUNT BAR CU
10	61412	2	LINK ARM
11	60495	1	EVAPORATOR BRACKET
12	61652	2	NUT BAR DR
13	61653	2	NUT BAR CU
14	61410	1	GUSSET, LONG DR
15	61411	1	GUSSET, LONG CU
16	61724	1	GUSSET, SHORT DR
17	61725	1	GUSSET, SHORT CU
24	90020	4	5/16-18X1 HX CS G2 ZP
25	93169	2	3/8-16X1 HXW TRTS TY SW ZP
26	90100	16	1/2-13X1-1/2 HX CS G5 ZYC
27	90128	10	5/8-11X1-3/4 HX CS G5 ZP
28	90129	4	5/8-11X2 HX CS G5 ZP
29	90130	2	5/8-11X2-1/4 HX CS G5 ZP
35	91102	4	5/16 PLAIN WASHER TY A STD ZP

ITEM	PART NO.	QTY.	DESCRIPTION
36	91105	8	1/2 PLAIN WASHER TY A STD ZYC
37	91139	8	5/8 PLAIN WASHER TY A SAE ZP
38	91205	8	1/2 SP LK WASHER ZYC
45	91332	4	5/16-18 PT HX LK NUT NYIS ZYC
46	91335	8	1/2-13 PT HX LK NUT NYIS ZYC
47	91337	16	5/8-11 PT HX LK NUT NYIS ZYC
49	91911	2	5/32X1-1/2 COTTER PIN ZYC
50	93062	2	RIVET 3/4" X 3-1/4" G5 ZYC

NOT SHOWN

61536	4	CABLE TIE - LONG
56080	1	DASH BRACKET
56081	1	DASH BRACKET

Parts listed above may be found in the following:
 61413 1 BOLT BAG ASSY (61400)

Abbreviations			
CS	Cap Screw	SAE	Society of Automotive Engineers
CU	Curb-Side		
DR	Driver-Side	SP	Spring
G	Grade	STD	Standard
HX	Hex	TRTS	Thread Rolling
HXW	Hex Washer		Tapping Screw
LK	Lock	TY	Type
NYIS	Nylon Insert	ZP	Zinc Plate
PT	Prevailing Torque	ZYC	Zinc Yellow Chromate

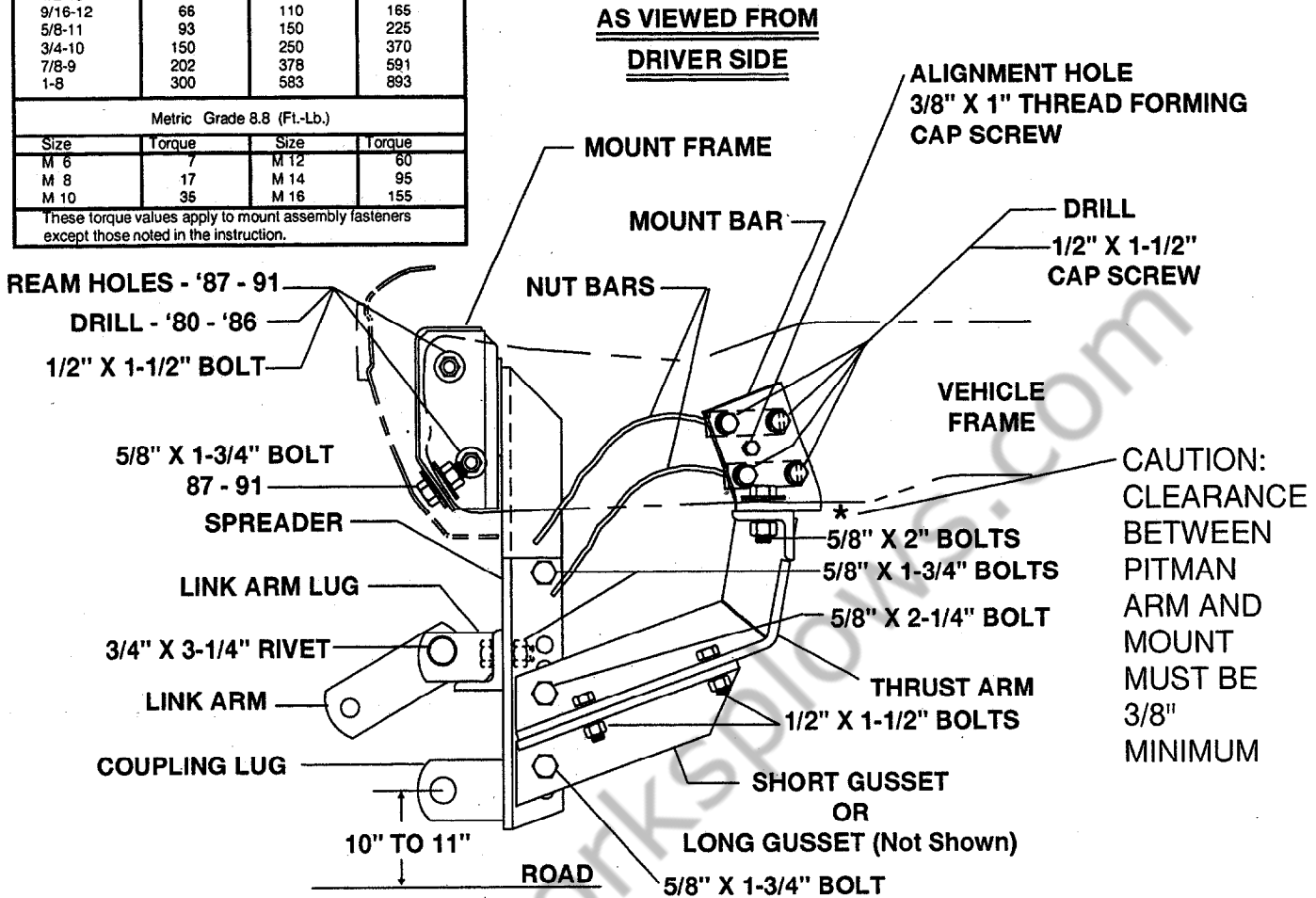
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**Mount Box No. 61400
INSTALLATION INSTRUCTIONS**

Recommended Fastener Torque Chart (Ft.-Lb.)			
Size	SAE	SAE	SAE
	Grade 2	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.



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: '87 through '91 Vehicles

1. Remove the bumper from the vehicle, leaving the brackets attached to the bumper.
2. Place mount frame onto vehicle frame horns. On each side of vehicle, insert a 5/8" x 1-3/4" bolt with flat washer through front bottom slot in mount frame into front flange of vehicle frame. Install a flat washer against vehicle frame and a locknut.

MOUNT FRAME: '80 through '86 Vehicles

1. Remove the bumper from the vehicle.
2. Place mount frame onto vehicle frame horns. With mount frame tight to top and end of vehicle frame horns, clamp in place. Use mount frame as a template to drill two 9/16" holes into each side of vehicle frame. Fasten each side with two 1/2" x 1-1/2" bolts, flat washers, and locknuts. Insert bolts from center of vehicle towards outside with a flat washer against vehicle frame.

MOUNT BARS & THRUST FRAME: All Vehicles

1. Following the diagram, with mount bar tight to bottom of frame rail, locate alignment hole in mount bar to existing small hole in frame rail and secure with 3/8" x 1" thread forming screw. Tighten screw only tight enough (10 ft. lb.) to hold mount bars in place.
2. If the vehicle has an evaporator canister that interferes with the mount, remove the canister and install furnished bracket to original canister mounting holes using existing fasteners. Secure canister to the rear side of bracket using furnished 5/16" x 1" bolts, flat washers and locknuts.

CAUTION: Maintain adequate clearance horizontally and vertically between hoses, steering linkage at maximum right turn, alternator drives, oil cooler lines, and do not collapse evaporate hose.

- Use each mount bar as a template to drill four 9/16" holes through each side of vehicle frame. Install two nut bars to inside of each vehicle frame rail aligning to drilled holes. Fasten each mount bar to nut bars with four 1/2" x 1-1/2" bolts and lock washers. Tighten bolts to corresponding torque chart values.
- Attach each mount bar to thrust frame with two 5/8" x 2" bolts, flat washers and locknuts. Install flat washers against slots. (If the vehicle has a deep underslung stabilizer cross member assembly that will interfere, it must be removed for snowplow installation. Retain all parts and replace on vehicle if the snowplow is removed.)

SPREADER:

- Position a spreader frame, link arm lugs towards center of vehicle, between each mount frame angle and thrust frame angle.
During installation, allow for drop in vehicle height when weight of plow is added. The distance between the center of the coupling lug hole and the level surface should be 9-1/2" to 10-1/2" with plow attached and resting on the level surface. (See Coupling Lug Height Check near the end of these instructions.)
- On each side, insert a 5/8" x 2-1/4" bolt through thrust frame, spreader, and lower hole of mount frame angle; a 5/8" x 1-3/4" bolt through highest hole possible in spreader and mount frame angle; and a 5/8" x 1-3/4" bolt through hole between link arm lugs and front of mount frame angle. Loosely attach each bolt with a locknut.

GUSSET:

- Installation of a gusset is determined by the number of holes in spreader which are below the thrust frame angle. If a gusset will fit, attach the widest gusset that will fit to the underside of each thrust frame angle using two 1/2" x 1-1/2" bolts and locknuts. Attach gusset to spreader with one or two 5/8" x 1-3/4" bolt(s) and locknut(s) on each side of vehicle.

TIGHTEN ALL BOLTS TO CORRESPONDING TORQUE CHART VALUES.

LINK ARMS:

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

BUMPER: '87 through '91 Vehicles

- To replace bumper, loosen bracket bolts on bumper and slide to outer end of bumper 1/4", retighten bolts. Check bumper bracket holes in vehicle frame for clearance of two 1/2" bolt on each side of vehicle. Ream or drill if required. Replace bumper to vehicle frame at original location and fasten each side with two 1/2" x 1-1/2" bolts, flat washers, and locknuts. Install flat washers to vehicle frame and bumper bracket. Tighten bumper fasteners.
- Air deflector may require notching for clearance of link arm lugs on light duty vehicles.

BUMPER: '80 through '86 Vehicles

- Replace bumper to original position using existing fasteners. Tighten bumper fasteners.
- Air deflector may require notching for clearance of link arm lugs on light duty vehicles.

CAUTION: 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 on vehicles through 1986 - Use Box No. 61540 Headlamp Kit 9-Pin and 61545 Harness Kit 2B/2D 9-Pin -A.

For DUAL replaceable bulb type HB-1 headlamps on 1987 through 1991 vehicles - Use Box No. 61540 Headlamp Kit 9-Pin and 61570 Harness Kit HB-1 (9004) 9-Pin -A.

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

Plow may be removed from vehicle for installation of electrical components.

Dash Bracket Installation Instructions Found On Next Page.

Solenoid Control
INSTALLATION INSTRUCTIONS

1988 THROUGH 1991 VEHICLES

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

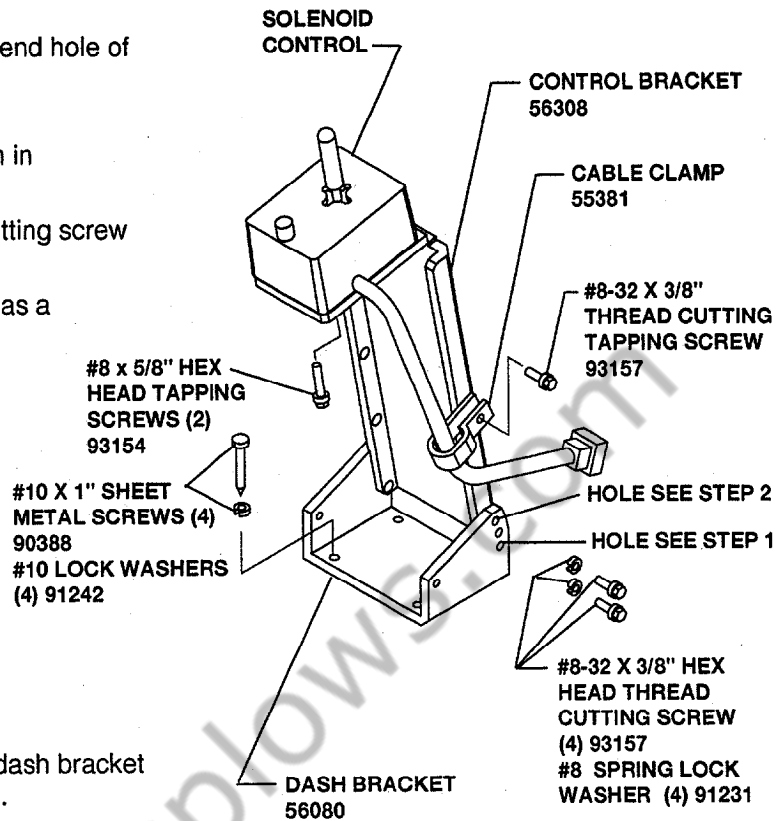
NOTE: Top flange of control bracket may be reversed in dash bracket from position shown in diagram.

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

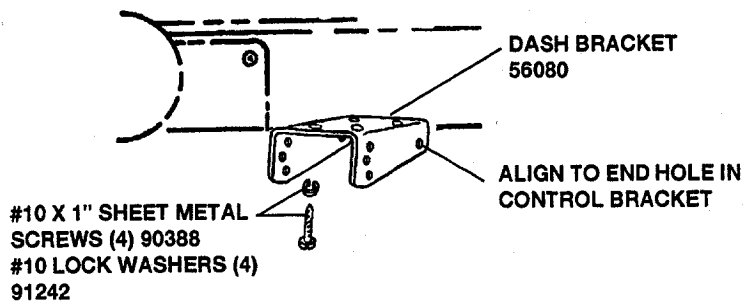
2. Use top holes in dash bracket (see diagram) as a template to drill a 9/64" hole in each side of control bracket. Secure dash bracket to control bracket with a second screw and lock washer in each side.
3. Secure solenoid control to control bracket with two #8 x 5/8" hex head tapping screws.
4. Move 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" tapping screws and lock washers.

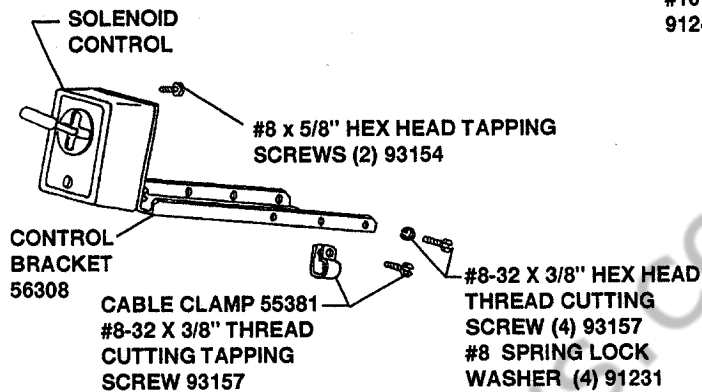
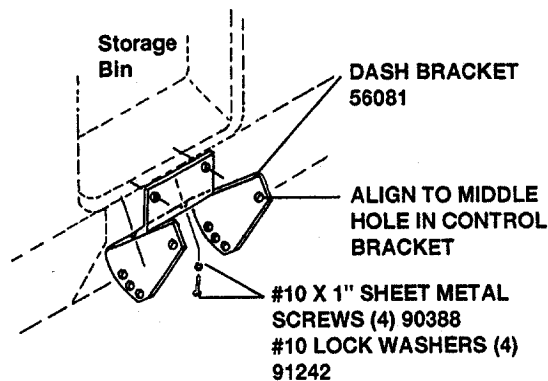
7. Reassemble control bracket to dash bracket. Bend top flange of control bracket to desired position.
8. Secure harness to control bracket with cable clamp and one #8 x 3/8" hex head thread cutting screw.



1987 VEHICLES



1980 THROUGH 1986 VEHICLES



1987 VEHICLES

1. Align END hole of control bracket to hole shown in dash bracket (see top left diagram).
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. Align MIDDLE hole in control bracket to any one of the three holes in the dash bracket. Start a second screw with lock washer into the control bracket.
3. Secure solenoid control to control bracket with two #8 x 5/8" hex head tapping screws.
4. Locate control and bracket assembly as shown to the right of the steering column removable lower dash panel next to the dash reinforcement or wherever it is most convenient. The bracket should fit fairly flat against the bottom surface of the dash. Verify that solenoid control assembly does not interfere with the operation of vehicle controls in all positions.

1980 THROUGH 1986 VEHICLES

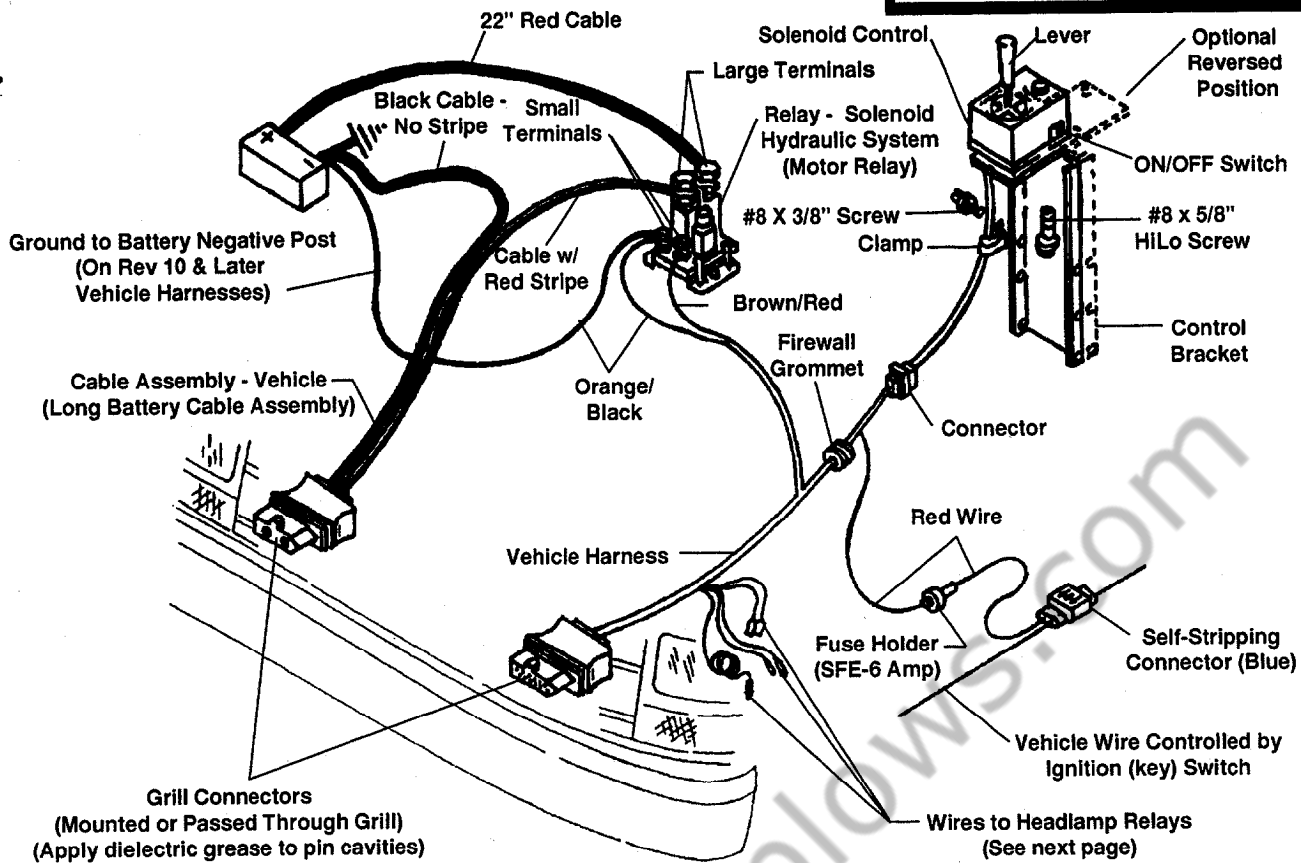
1. Align MIDDLE hole of control bracket to hole shown in dash bracket (see top right diagram).
NOTE: Top flange of control bracket may be reversed in dash bracket from position shown in diagram. Attach with one # 8 x 3/8" hex head thread cutting screw and lock washer on each side.
2. Align END hole in control bracket to any one of the three holes in the dash bracket. Start a second screw with lock washer into the control bracket.
3. Secure solenoid control to control bracket with two #8 x 5/8" hex head tapping screws.
4. Locate control and bracket assembly as shown below the storage bin or wherever it is most convenient. Position the brackets so that the top and bottom edges contact the dash (bend may be opened to permit closer fit). Verify that solenoid control assembly does not interfere with the operation of vehicle controls in all positions.

1980 THROUGH 1986 , and 1987 VEHICLES

5. Mark this location.
6. Remove the bracket from the solenoid control. Place the bracket in the selected location under the dash and mark all 4 holes.
7. Check for adequate drill clearance before drilling holes. Drill 1/8" diameter holes into the dash to align to the holes in the bracket. Secure using No. 10 sheet metal screws and lock washers.
8. Reassemble control bracket to dash bracket in desired position. Bend top flange of control bracket to desired position.

HARNESS, SOLENOID CONTROL & MOTOR RELAY INSTALLATION DIAGRAM

Vehicle Underhood INSTALLATION INSTRUCTIONS



WARNING: The symbol at left identifies a safety warning that indicates a potentially hazardous situation that, if not avoided, could result in death or serious personal injury.

VEHICLE HARNESS AND MOTOR RELAY

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

CAUTION: To prevent corrosion on all under-hood 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 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.
2. Remove **NEGATIVE** battery cable from battery.



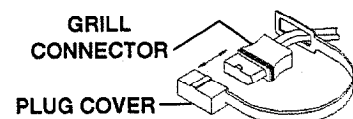
WARNING: Electrical shock hazard. Disconnect battery before beginning electrical installation.

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 avoiding 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 existing terminal fastener.
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 on 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 the motor relay 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 the battery cable without a stripe directly to the NEGATIVE battery terminal (carefully separate the two cables as needed to reach the battery ground). 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 sharp edges, and hot or moving engine parts.

IMPORTANT: On all vehicles with DRLs, insert fuse holder on pink wire of DRL Adapter Kit (PN 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. Disassembling 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 the CabCommand control is being installed. (See instructions furnished with the 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 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.

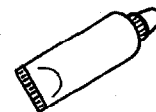
15. Reconnect vehicle ground cable to the NEGATIVE battery terminal. Attach the hydraulic unit black battery cable and orange/black wire terminal to the negative clamp bolt.

16. Locate an accessory wire capable of carrying 7 amps in addition to existing circuit loads 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). If used, DRL pink wire requires 0.4 amps.

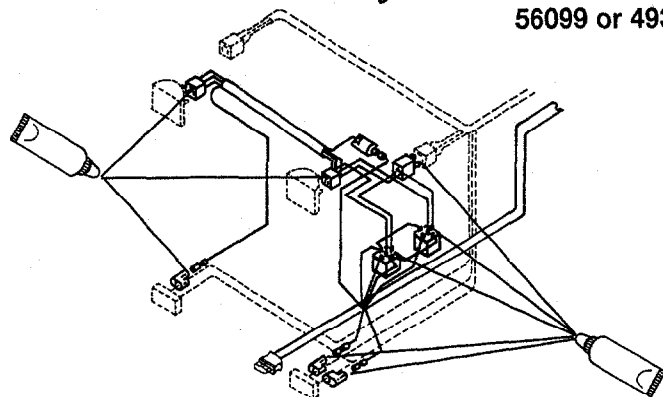
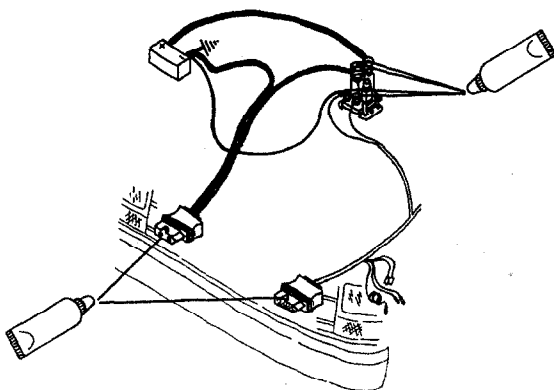
Open the blue, self-stripping connector and place the end of the red wire against the inner groove stop (end of wire must not extend from the closed connector), and the accessory wire in the outer groove. Close connector over the wires using a pliers and snap the locking tab in place. Repeat with DRL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

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

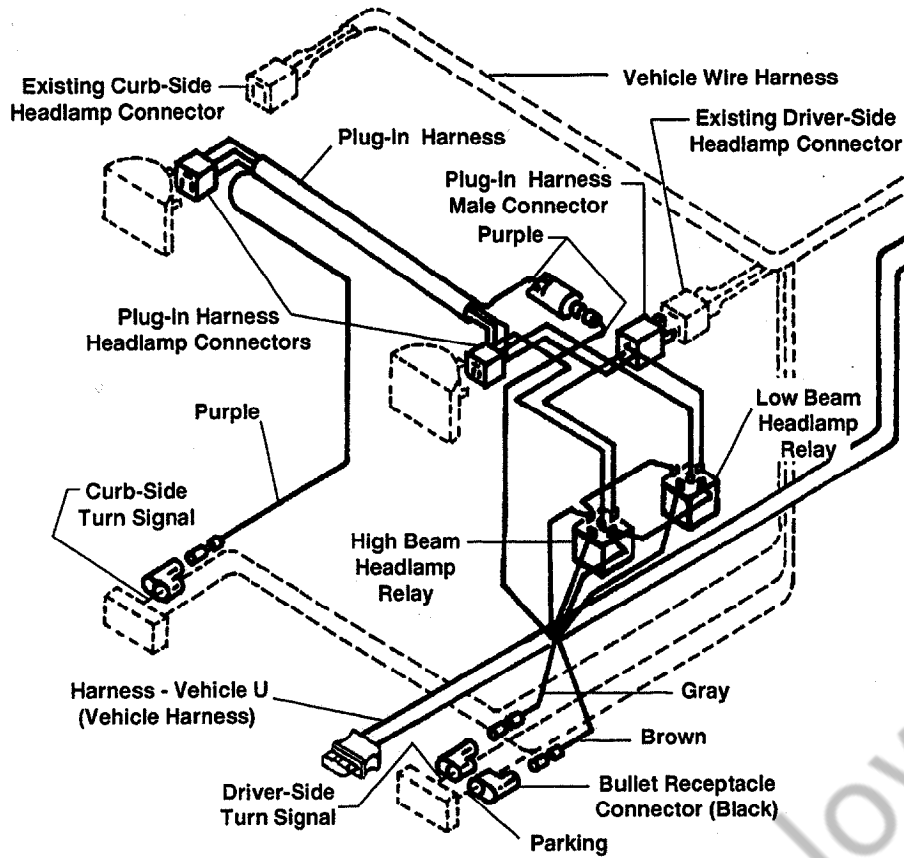
REMINDER: To prevent corrosion on all under-hood electrical connections, use dielectric grease to fill receptacles, including grill connectors, and lightly coat ring terminals and blades before assembling or lightly coat connections after assembling.



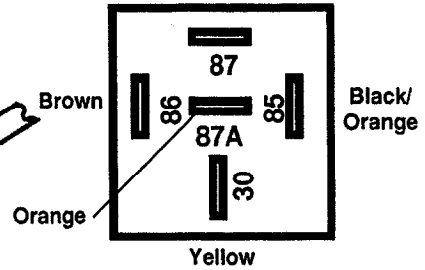
DIELECTRIC GREASE - Part Number 56099 or 49326



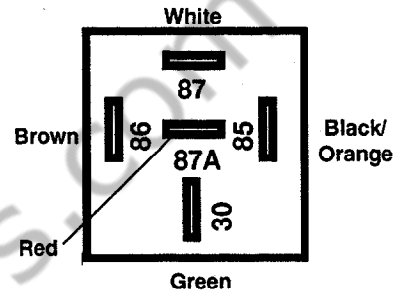
VEHICLE HEADLAMP WIRING DIAGRAM—Type-A



**HEADLAMP RELAY
WIRING DIAGRAM
Black**



Low Beam Headlamp Relay



High Beam Headlamp Relay

VEHICLE 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 vehicle harness into black bullet connectors (installed in step one of previous section) with brown wire to parking lamp wire on driver side, and gray wire to left turn signal wire on driver side.
2. At the vehicle driver-side headlamp, remove the connector from the headlamp and couple matching 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.
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 vehicle and plug-in harness wires with receptacles to the two headlamp relays (found in harness kit) as shown in the above diagram. (If vehicle has DRLs, replace brown wires with pink wire from DRL kit. Brown wires from vehicle harness are not used in DRL installations.)
7. Place grommet around 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. Replace vehicle turn signal flasher with flasher furnished in harness kit.
9. Lubricate terminal cavities of both grill connectors with dielectric grease. Give dielectric grease tube to vehicle owner for future lubrication of grill connectors.

Continued on next page.

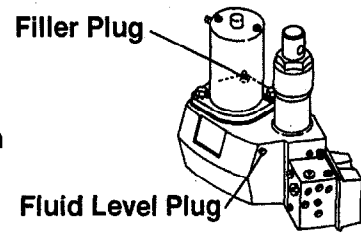
OPERATIONAL TESTS AND ADJUSTMENTS

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 hole. Replace both plugs.
- Use: automatic transmission fluid (ATF) Dexron III to -10° F (-23° C), or WESTERN® High Performance Fluid to -25° F (-32° C), or 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. This may cause pump cavitation.**
 7. Refill unit with fluid following the procedure in Step 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 according to Step 3 of this section.



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



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

Blade Drop Speed Adjustment

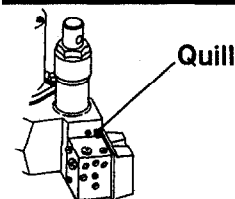
The quill on the top rear of the valve manifold (see diagram) adjusts blade drop speed.

Turn quill IN (clockwise) to decrease drop speed.

Turn quill OUT (counterclockwise) to increase drop speed.

NOTE: Turning quill too far in can slow raise time

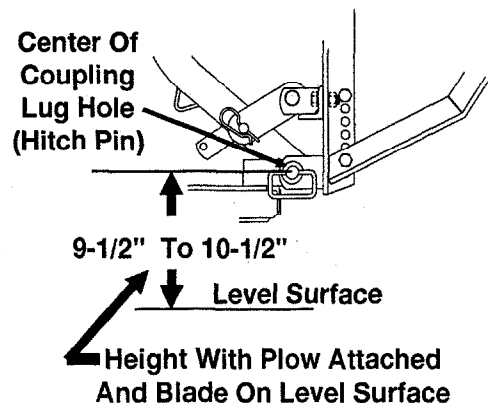
Blade Drop Speed Adjustment



Coupling Lug Height Check

1. Mount plow to vehicle (see label on back of blade or Owner's Manual for mounting instructions). Add recommended ballast as found in selection list.
2. Lift plow and move vehicle a minimum of 10 feet. Lower blade.
3. After step 2, with blade on level surface, slack in lift chain, and rear ballast located behind rear wheels, the center of coupling lug holes (hitch pin shaft) to level surface should measure 9-1/2" to 10-1/2". To obtain height, adjust spreader position.

Coupling Lug Height Check



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

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 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-pin plow plug from the grill connector should switch between vehicle and plow headlamps as follows:

9-pin plow plug DISCONNECTED Vehicle headlamps should be on, plow headlamps off.
9-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 or CabCommand Control

9-pin vehicle harness revision 10 and later or

9-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 in the ON position. 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:

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-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 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.

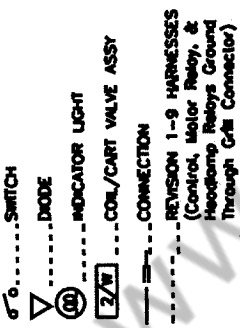
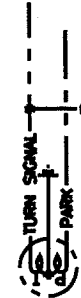
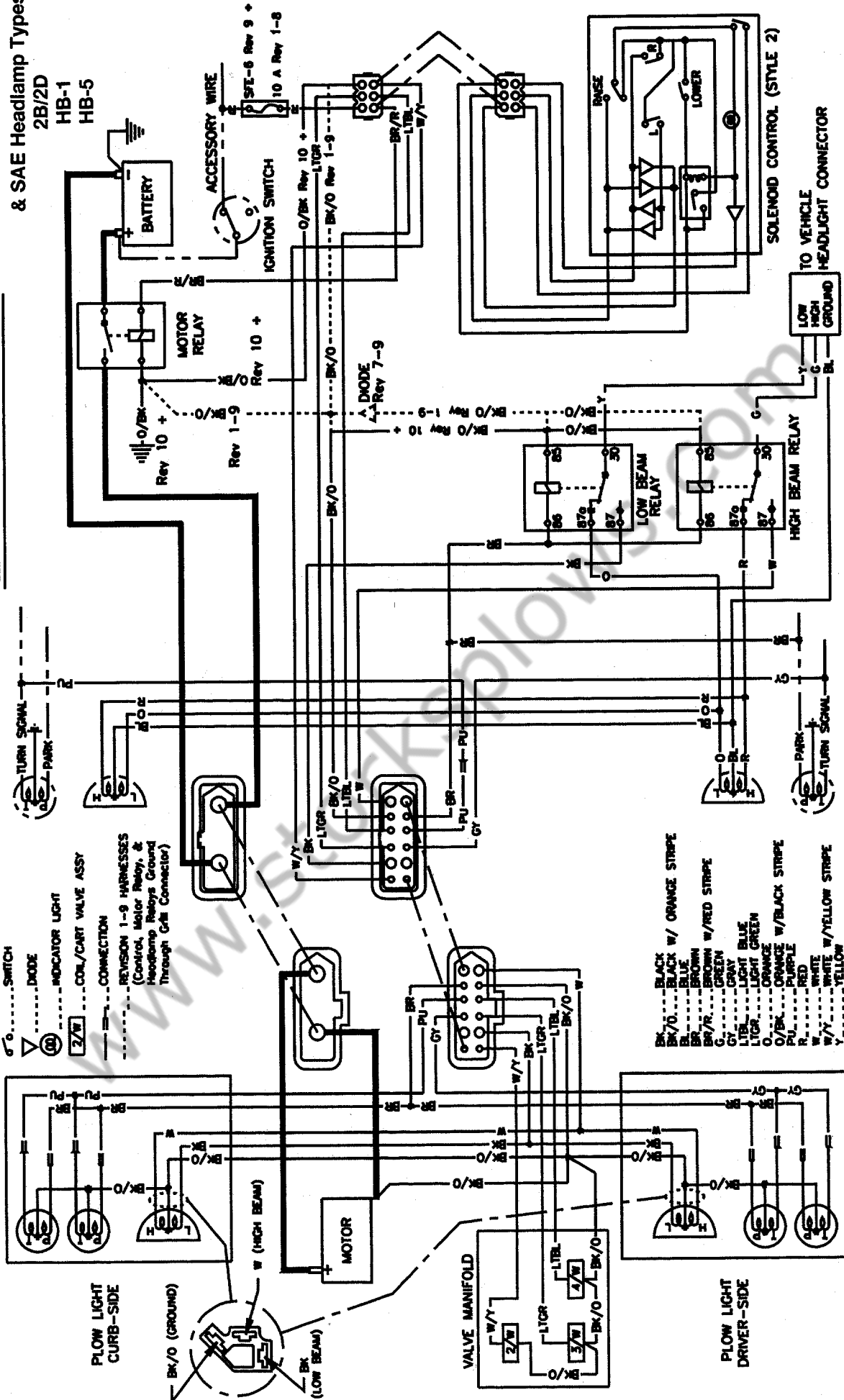
NOTE: After 5 to 10 hours of snowplow usage, retorque all mount assembly fasteners.



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



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.

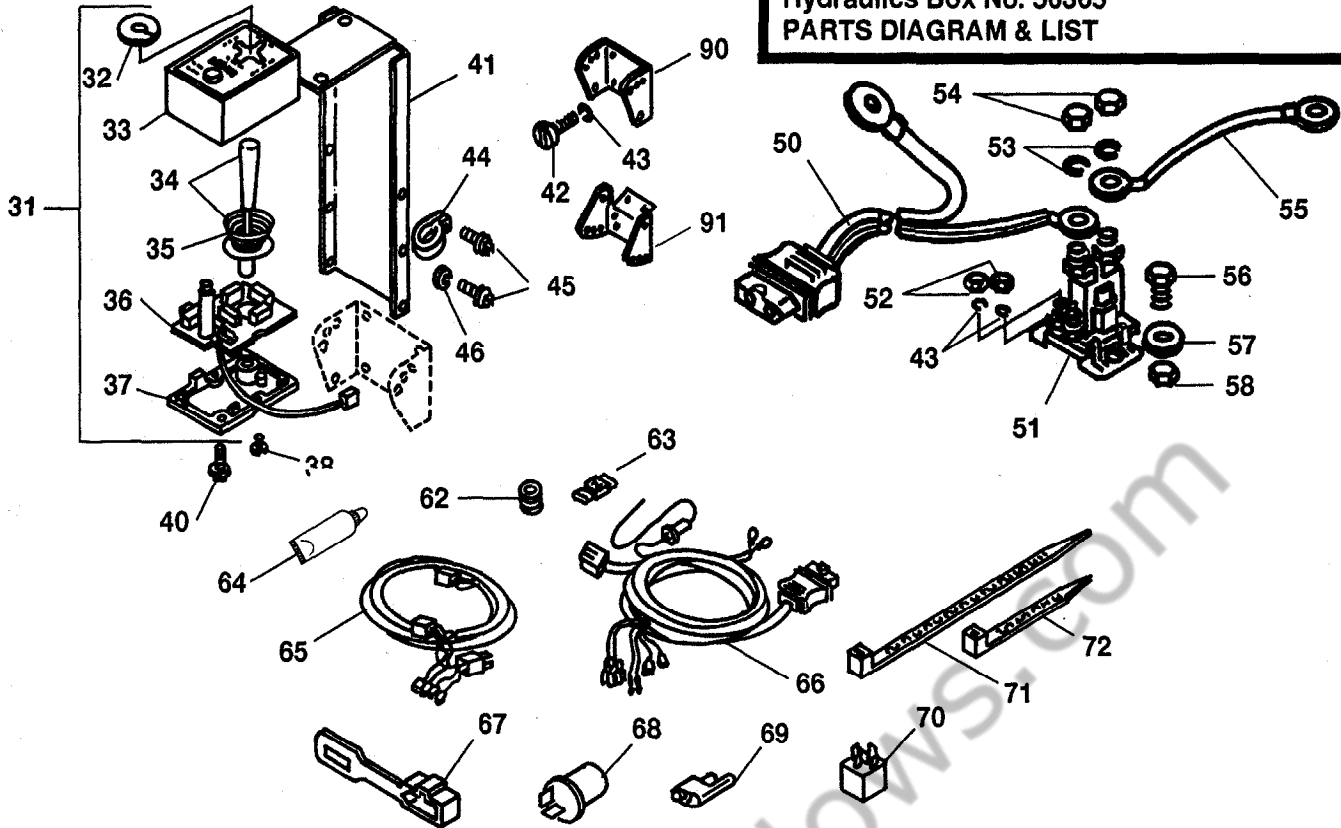


- BK/D... BLACK W/ ORANGE STRIPE
- BL... BLUE
- BR... BROWN
- BR/R... BROWN W/ RED STRIPE
- G... GREEN
- GY... GRAY
- L... LIGHT BLUE
- L/L... LIGHT GREEN
- O... ORANGE
- O/BK... ORANGE W/ BLACK STRIPE
- PU... PURPLE
- R... RED
- W... WHITE
- W/Y... WHITE W/ YELLOW STRIPE
- Y... YELLOW

9-Pin 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.

9-Pin Vehicle harnesses - P.N. 61437, rev. 7, 8, or 9 - The indicator light on the solenoid control will only light when both plow plugs and grill connectors are connected and the ignition (key) switch and control on/off switch are both turned on.

Mount Assembly Box No. 61400
 Harness Kit Box No. 61545 or 61570
 Hydraulics Box No. 56365
PARTS DIAGRAM & LIST



ITEM	PART NO.	QTY.	DESCRIPTION
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
62	66130	2	RUBBER GROMMET
63	59114	1	SELF STRIP WIRE CONNECTOR
64	56099	1	DIELECTRIC GREASE TUBE
	49326	1	WESTERN DIELECTRIC GREASE TUBE (2 ounce)

ITEM	PART NO.	QTY.	DESCRIPTION
65	61546	1	PLUG-IN HARNESS 2B/2D U -A (For Harness Kit No. 61545)
	61571	1	PLUG-IN HARNESS HB-1(9004) U -A (For Harness Kit 61570)
66	61437	1	VEHICLE HARNESS 9-PIN
67	61548	2	PLUG COVER
68	60109	1	FLASHER HD
69	59224	3	BULLET RECEPTACLE CONNECTOR
70	61535	2	RELAY SPDT
71	61536	4	CABLE TIE - LONG
72	59223	8	CABLE TIE
90	56080	1	DASH BRACKET
91	56081	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	Cap Screw	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 parts are included in the assembly under which they are listed.
 Quantities shown are included with the assembly.

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