

# One piece harness installation instructions (standard wiring) with 2 plugs

(it requires light kit 800084 or 800086)

## Installation instructions

### **Warning:**

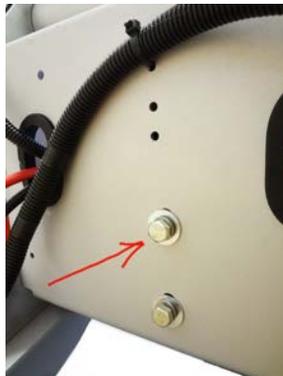
- Top of battery needs to be protected. If positive side of battery is accidentally grounded person could be burnt or wiring system can be damaged, or battery gasses could explode causing injuries.
- Disconnect cable from negative battery terminal before starting installation.
- Always wear eye protection and protective clothing when working around hydraulic systems.
- Remove jewelry and objects that might conduct electricity while working on power units.
- Fluid under pressure can pierce the skin and enter the bloodstream causing death or serious injury.
- Hydraulic hoses and electrical cables (harnesses) must be tied and routed safely to avoid any damage and pinching (away from hot places, sharp objects etc.).
- When drilling mounting holes or using self-tapping screws in the engine compartment, be sure to check the mounting location for any wires, hoses other obstructions that could be damaged during installation.

**Note: Apply dielectric grease to all connections to prevent corrosion.**

1. Install the power unit that the motor is facing toward driver's side of truck. Secure the power unit to the back of pump plate using 3/8" bolt and lockwasher (26)(27) ( apply removable grade Loctite to 3/8" bolts to fasten power unit to the pump plate).



Install Pump Plate using 5/16" carriage bolts.

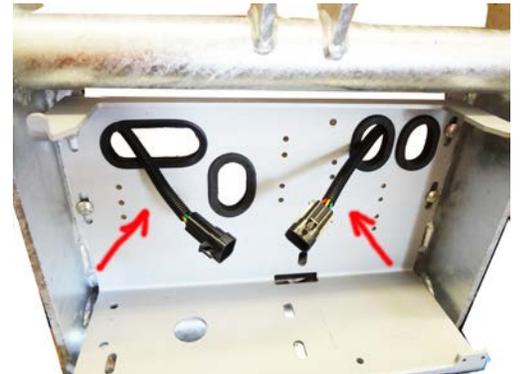


If M3493 is installed On Hi Boy Lift frame, install spacer plate and secure it with 1/4" bolt.

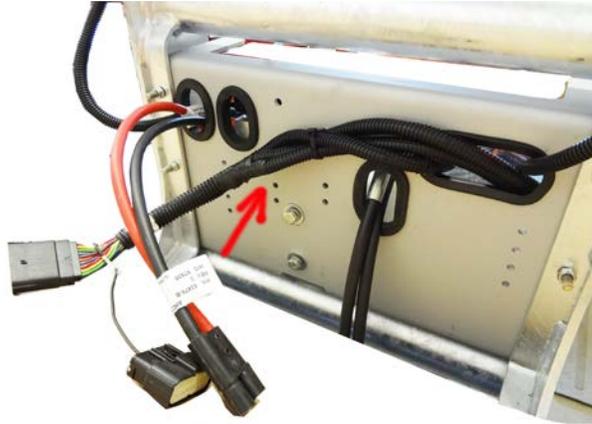
2. Install a red terminal protector (14) on a cable and plug assembly (7). Attach red lead of the cable and plug assembly to positive motor stud and black lead to the pump base using 5/16" bolt (19)(20). Liberally coat connections with dielectric grease then slide cover over the eye on the end of the cable.



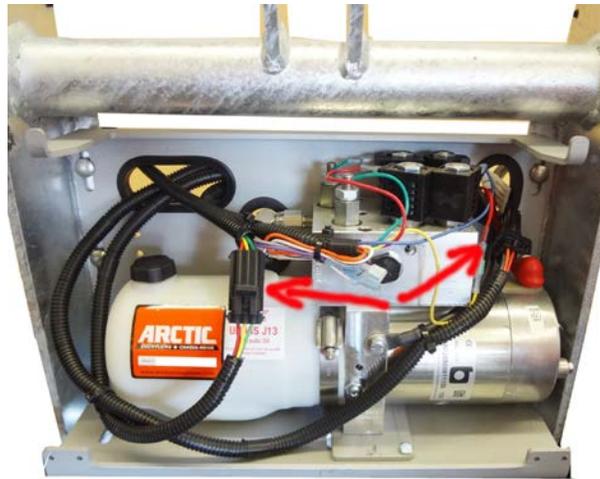
3. Install lights on a lift frame (21)(22)(23) and route a light harness inside of power unit housing. (using cable ties secure light harnesses to the lift frame)



4. Install the lift frame harness (5), inserting through the curb side opening in the pump plate and security it to the pump plate at the back. Bring the harness toward driver side.



4. Plug the light harnesses to the lift frame harness (5) and secure them under the pump cover. Attach the power unit leads from the lift frame harness (5) to the coils. (Drawing 3,4,5)



5. Mount solenoid (10) and relays (1) to metal surface close to the driver (as show on the picture) bending bracket if necessary. **NOTE: Solenoid must be well grounded** in order to function properly. (Drawing 1)

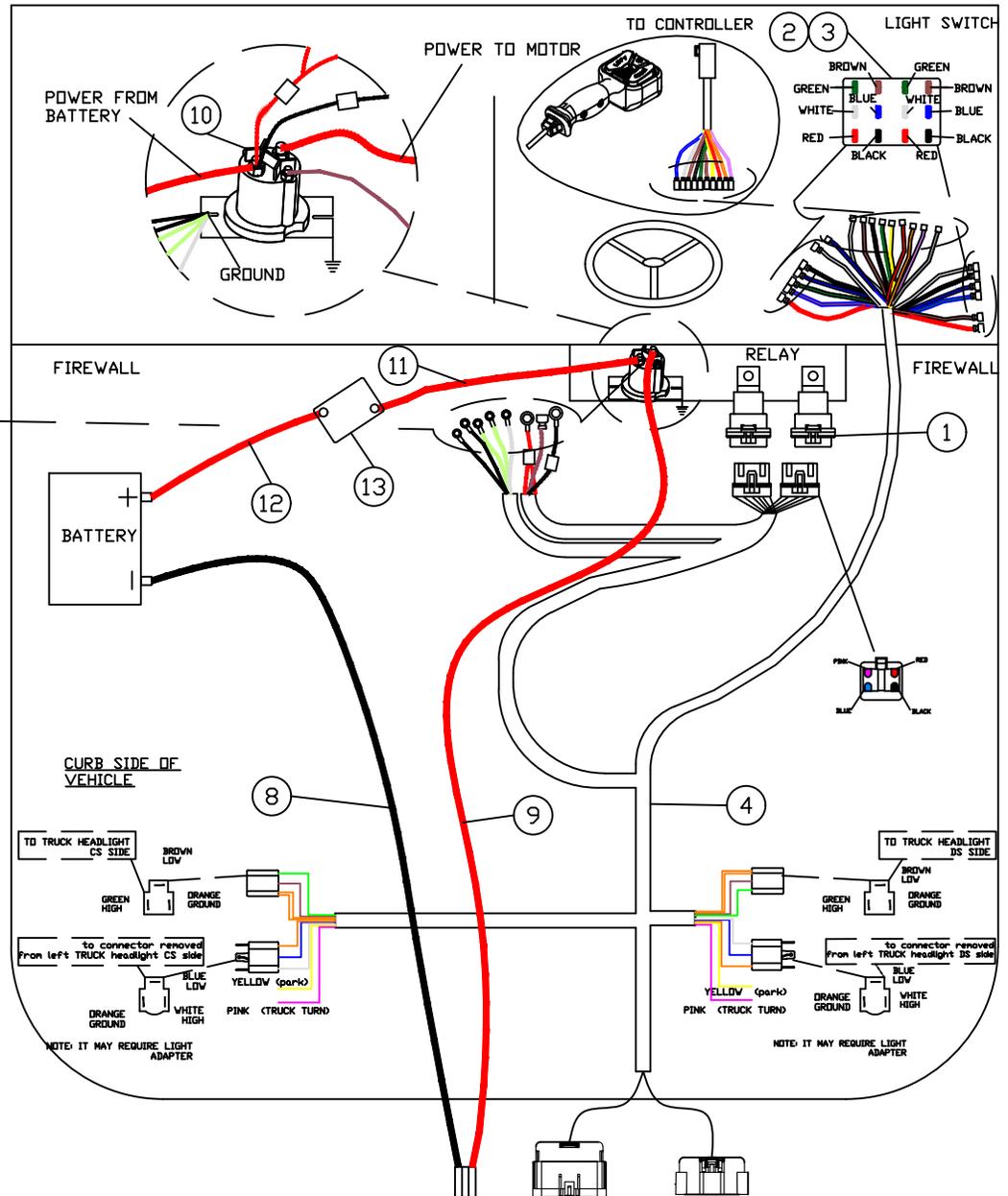
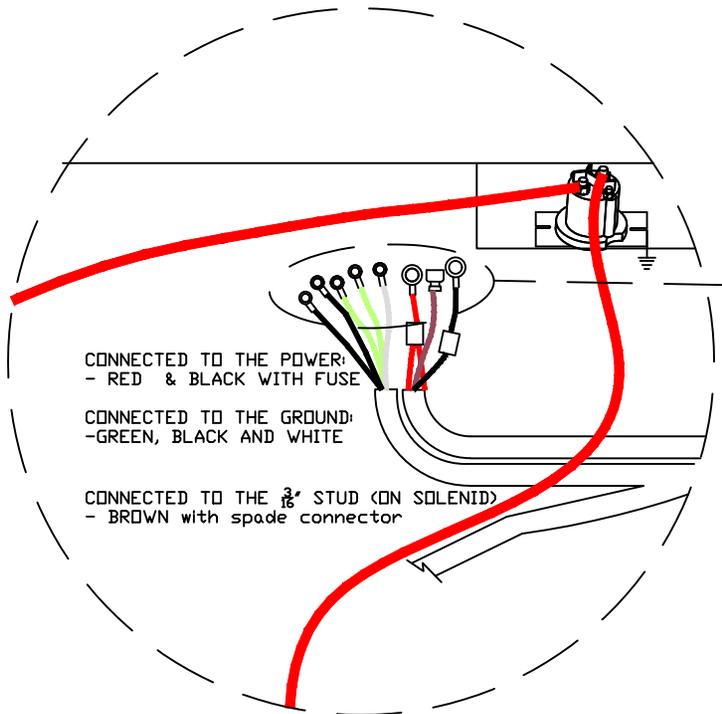


6. Slide Dummy Plug (15) over power cable (9) and ground cable (8) and route through grille of truck leaving sufficient length to attach to the cable and plug assembly (7). Secure the red power cable (9) to the large terminal on the solenoid and the black ground cable (8) to the negative terminal on the battery. (Drawing 1)



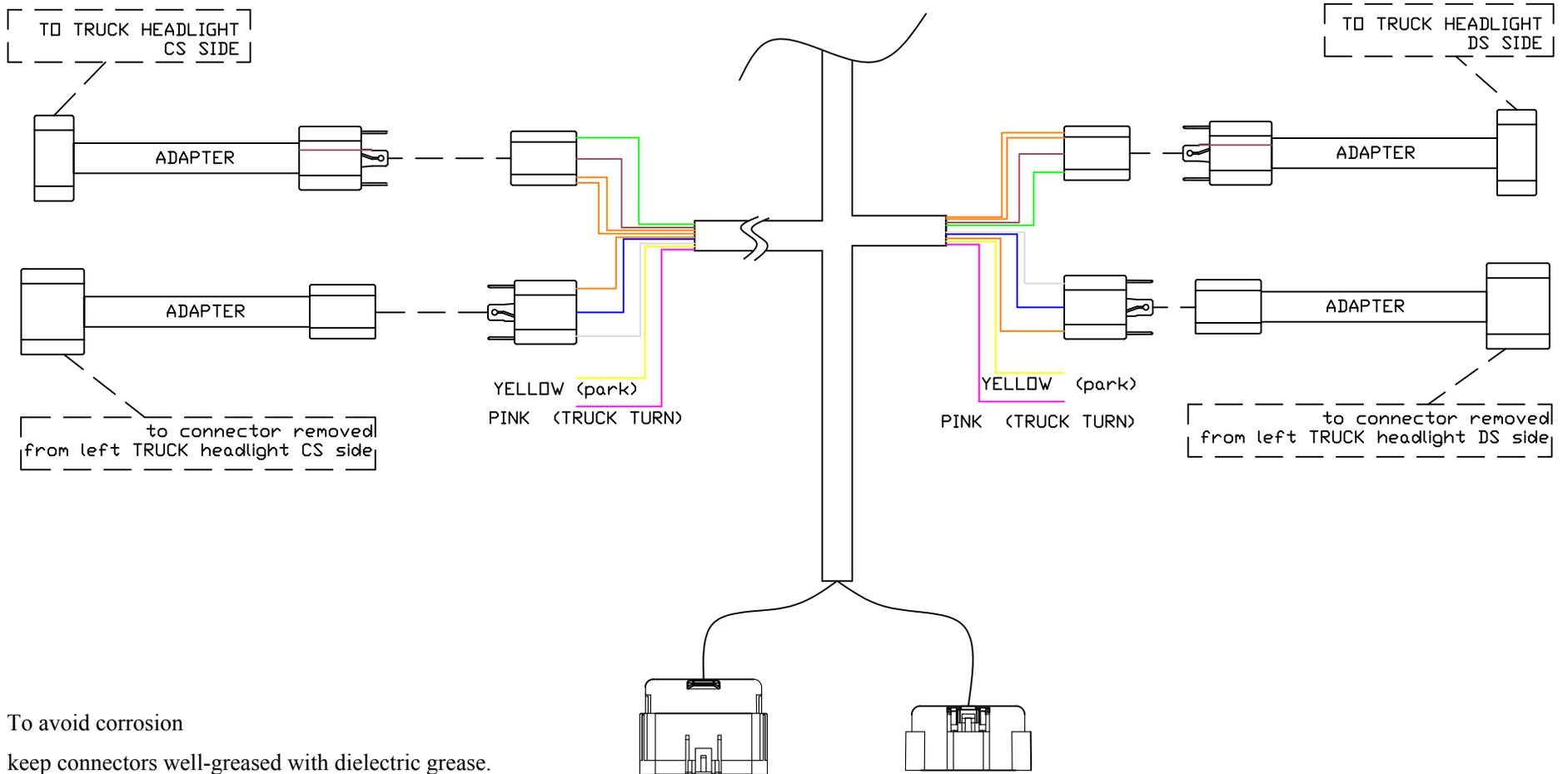
6. Install power cable 22" (12) from the positive side of battery to one of the terminal of 135 AMP circuit breaker (13). Install 56" power cable (11) on the second terminal end on the circuit breaker terminal and to the large terminal on the solenoid (10). When installing the circuit breaker locate a flat surface suitable for mounting. Choose surface that is clear of moving parts and extreme heat. The firewall or fender are possible mounting locations. Use 1/4" bolts and locknuts. If an acceptable flat surface is not available, cable tie the circuit breaker securely to a harness or an existing bracket. Note: Make sure that chosen location is in a spot that will allow the power cables to reach their destination (Drawing 1).
7. For the underhood harness (4) locate a pass through hole in the firewall near the driver's side of the truck. Route the harness through the hole in firewall and attach to the intermediate in cab harness and to the 12 pole light switch (2) (secure the light bracket to the dash). Intermediate harness in cab harness must be secured under the dash and it should be attached to control station.
8. Connect wires on the solenoid (10) as shown on Drawing 1.
9. Neatly secure all excess cables and wires using tie straps. Silicone hole in firewall.  
Note: Be sure all cables are properly protected from any sharp edges or hot or moving parts!!
18. For hydraulic install refer to Hydraulic Installation section.

One piece harness installation (parts can be found in kit part # 53617-M and pump kit)			
	Part#	Description	Quantity
1	800041	Relay	2
2	184069-12	12 Pole Light Switch Kit	1
3	52018-M	Light Switch Bracket Kit	1
4	53630-B	One Piece Harness	1
5	53629-B	Lift Frame Harness	1
6	M3493	M3493 Power Unit	1
7	53476-B	18" Cable Plug Assembly	1
8	53477-B	90" Ground Cable (Black)	1
9	53478-B	90" Power Cable (Red)	1
10	FP17757	Solenoid	1
11	51335-56-M	Battery Cable, 56"	1
12	51335-22-M	Gauge Battery Cable, 22"	1
13	53608-N	Circuit Breaker	1
14	52427-N	Red Terminal Protector	1
15	53560-A	Dummy Plug (Power & Ground)	1
16	HH-00293-006	1/4"-20x1 HHCS	1
17	HH-00294-001	1/4"-20 Hex Nut	1
18	HH-00457-006	1/4" Lockwasher	1
19	HH-00293-026	5/16"-18x3/4 HHCS	1
20	HH-00457-007	5/16" Lockwasher	1
21	800084	Sealed Beam AXV light Kit	1
22	800085	Single Bulb Head light Kit	1
23	800086	Dual bulb head light kit	1
24	FPN0455-1PC	Controller comes with adapter 53474-B	1
25	FPN0478-1PC	Touchpad comes with adapter 53474-B	1
26	52388-1PC	Large Joystick comes with adapter 53474-B	1
27	52405-1PC	Large Joystick & window bracket, comes with adapter 53474-B	1
28	52382-1PC	Handheld Controller comes with adapter 53474-B	1
29	53326-1PC	V Blade Handheld Controller comes with adapter 53473-B	1
30	53495-1PC	Wing blade Handheld Controller comes with adapter 53487-B	1

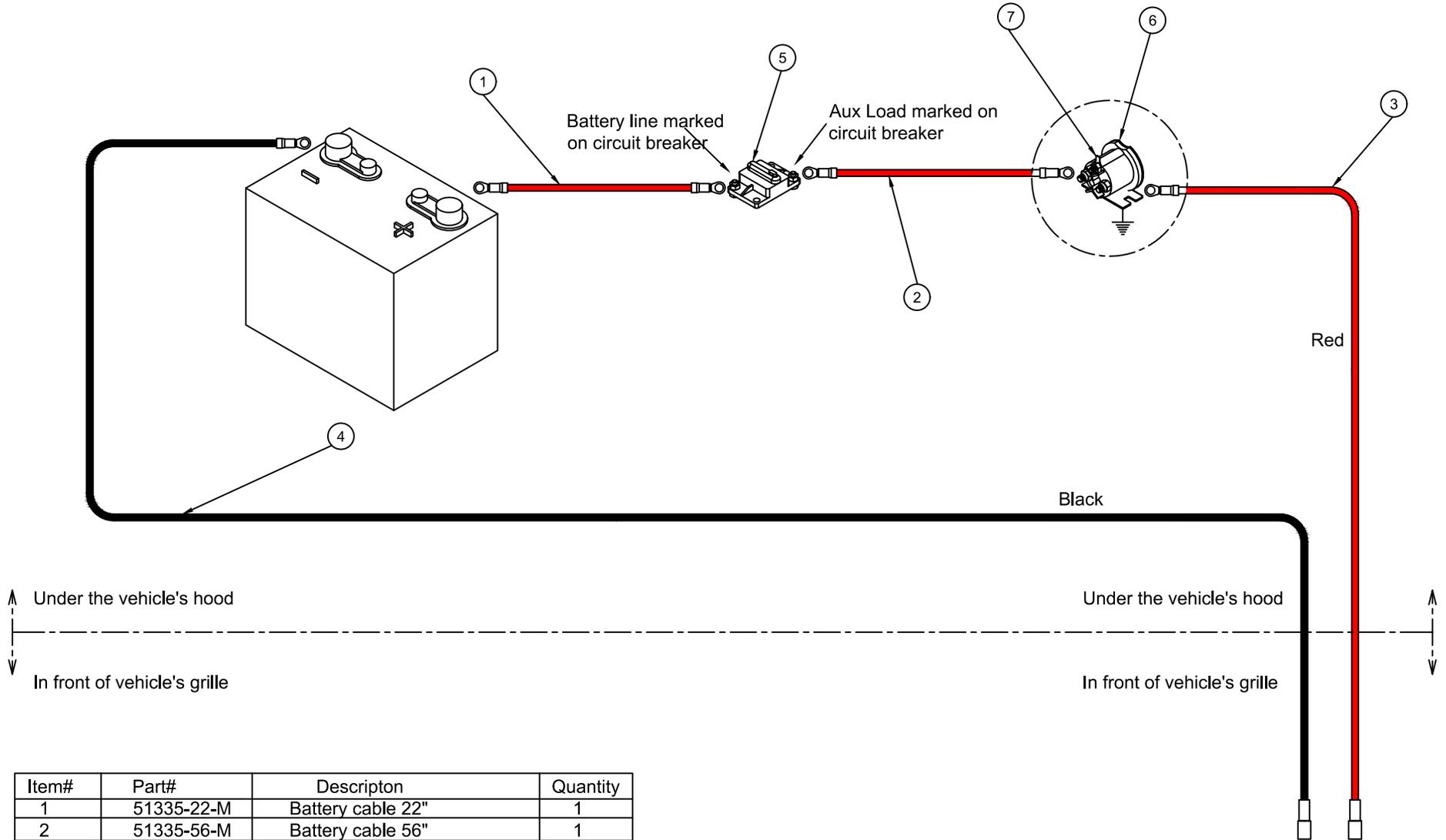


To avoid corrosion  
keep connectors well-greased with dielectric grease.

IF THE VEHICLE REQUIRES LIGHT ADAPTERS



To avoid corrosion  
keep connectors well-greased with dielectric grease.



Item#	Part#	Description	Quantity
1	51335-22-M	Battery cable 22"	1
2	51335-56-M	Battery cable 56"	1
3	53478-B	90" Power cable	1
4	53477-B	90" Ground cable	1
5	53608-N	135 amps circuit breaker	1
6	FP17757	Solenoid	1
7	FP3414	#10 Blade terminal (Solenoid)	1

**Lights Installation (refer to Drawing 1 & 2)**

1. Snow Plow Lamps should be mounted in the desired location on the snowplow frame ensuring that the snow plow lamp beams are not obstructed by any portion of the plow or vehicle.

2. WIRING INSTALLATION - Refer to diagram

NOTE: Prior to lamp/harness assembly, please apply provided lithium grease to snowplow lamp plugs on under hood harnesses, ensuring all connections are thoroughly covered. Neglecting to grease plugs will drastically reduce operating life of plow lamps/harnesses and will void manufacturer's warranty.

a) Plug a headlamp harness adapter leads from conversion kit (if required) into sealed beam connectors the wiring harnesses (53630-B).

b) Plug above assemblies into vehicle lamps.

c) Plug power harness adapter leads from conversion kit (if required) into matching 3 prong plug on a wiring harnesses (53630-B).

d) Plug above assemblies into OEM harnesses removed from vehicle lamps.

e) Referring to wiring diagram, complete wiring connections of turn signal and parking lights to vehicle's electrical lighting system using Quick-Splice connectors included in bagged parts.

f) Drill a hole in the firewall at the most convenient location (driver side). Apply a silicone in the drilled hole to protect wire insulation.

g) Pull wire harnesses through firewall from the engine compartment into the cab.

h) Referring to wiring diagram, connect 6 female tab connectors (x2) to twelve pole switch as shown below.

i) Select suitable location on dash to mount the toggle switch and drill 15/32" diameter hole through the dashboard or secure the light bracket to the dash and install the toggle switch through hole in the light bracket.

j) Apply switch identification label to dash or the light bracket by removing protective backing from label and pressing label over switch hole. Make sure switch is positioned with respect to label so that snowplow lamps are "ON" when toggle switch is in the upper position.

k) Remove knurled nut from the toggle switch; insert the switch through the drilled hole or through light bracket hole and re-install the knurled nut. Tighten nut securely.

3. Check for proper operation. Turn on headlight switch and check that with toggle switch in lower position, only the vehicle headlamps are on. With toggle switch in upper position, only the snowplow headlamps should be on. Dimmer switch should select high and low beams on both headlamps. Turn signal lamps should be on in same sequence and at same time as vehicle turn signal lamps. Parking lamps should be on at same time as vehicle parking lamps. If any lamp does not operate correctly, re-check wiring against wiring diagram and make necessary corrections in wiring hookup. Adjust the plow lamp beams to project the same distance ahead of the vehicle as compared to the original headlights.

4. Installer of these snow plow lamps must certify that installation conforms to applicable Federal Motor Vehicle Safety Standards.

NOTE: Daytime Running Lights will work on both plow and truck lights.

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Inside the power unit cover

To the vehicle's grille

Installation to be done inside the power unit cover

CS

DS

To power unit coils

Plugs together when not in use A  
(Apply grease)



CS Plow Headlight

DS Plow Headlight

Straight Blade		V Blade		Wing Blade	
Valve	Wire	Valve	Wire	Valve	Wire
A	Green	A1	Gray	A	White/Black
B	Yellow	A2	Green	B	Blue
C	Blue	B	Orange	C	Green
D	Red	C	Blue	D	Yellow
		D1	Purple	E	Red
		D2	Red	F	Orange
		E	Yellow	G	Gray
				H	Purple

Unused wires should be tied together

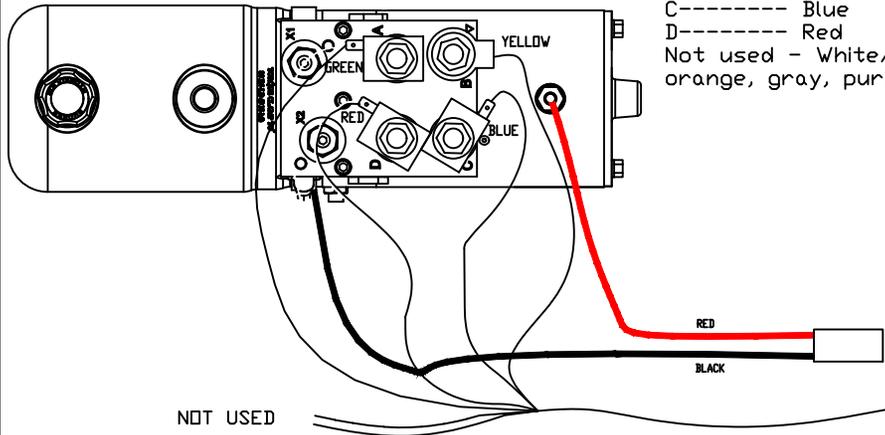
Inside the power unit cover

To the vehicle's grille

LEGEND

DS - Driver Side  
CS - Curb Side

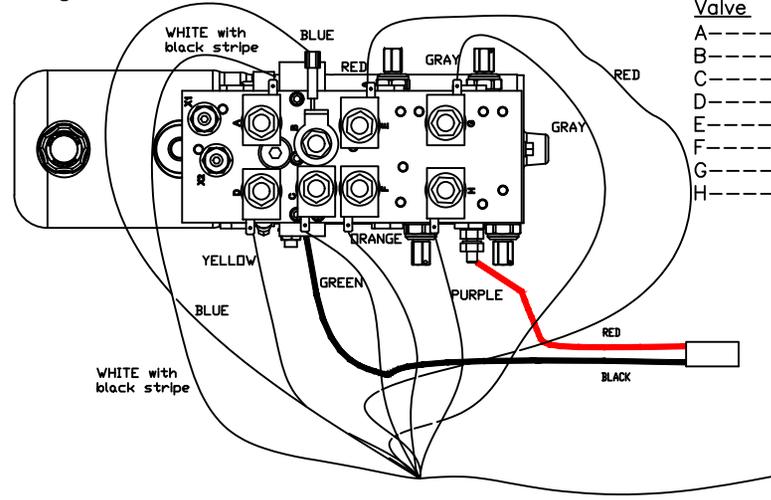
## Straight Blade



Lift frame harness

Valve	Wire
A-----	Green
B-----	Yellow
C-----	Blue
D-----	Red
Not used - White/black orange, gray, purple	

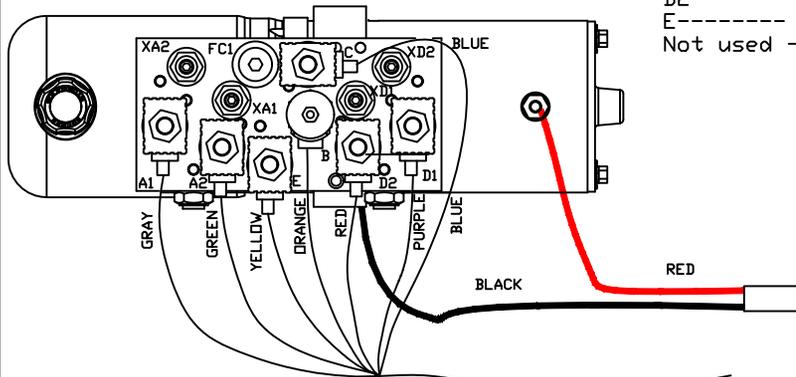
## Wing Blade



Lift frame harness

Valve	Wire
A-----	White/black
B-----	Blue
C-----	Green
D-----	Yellow
E-----	Red
F-----	Orange
G-----	Gray
H-----	Purple

## V Blade



Lift frame harness

Valve	Wire
A1-----	Gray
A2-----	Green
B-----	Orange
C-----	Blue
D1-----	Purple
D2-----	Red
E-----	Yellow
Not used - White/black	

### Note:

- To avoid corrosion, keep connectors well greased with dielectric grease
- Apply grease on the coils and on the connectors that plugs into the coils

