


Hydraulic Jack Installation

(Only with QLIV attachment)

53216-M-HJ for Straight & V Plow

53216-M-HJ-W for WING Plow

53216-M-W-VHJ for V Plow with WING Power Unit

 **Warning**

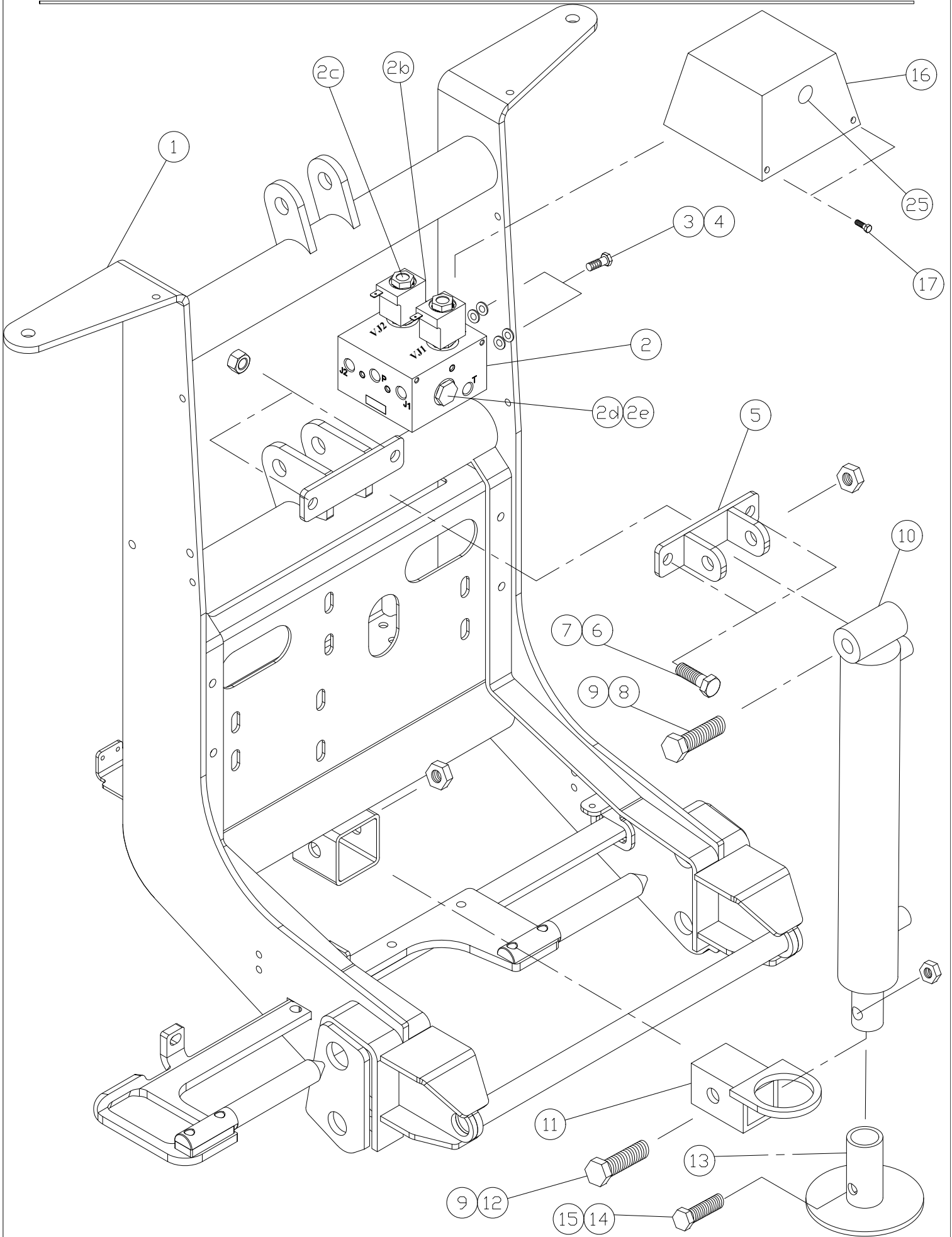
- Top of battery needs to be protected. If positive side of battery is accidentally grounded person could be burnt or wiring system can be damaged, or battery gasses could explode causing injuries.
- Disconnect cable from negative battery terminal before starting installation.
- Always wear eye protection 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.).



Switch Setup on V Plow



Switch Setup on WING Plow



53216-M-HJ Hydraulic Jack Kit for V and Straight Blades 53216-M-HJ-W for WING Blades			
	Item	Description	Quantity
1	53517-HANDLE	QLIV Lift Frame with Handle	1
2	53576-N	Hydraulic Jack Manifold Assembly (c/w coils and valves)	1
2a	53576-01-N	Manifold Only	
2b	FP18835-D	Coil 10VDC	
2c	FP0679-D	3W/2P Cartridge	
2d	FP7217	PO Check Valve	
2e	FP7218	Piston for PO Check Valve	
2f*	FP7527	Relief Valve Kit	
3	HH-00293-028	5/16 – 18 x 1.25 HHCS	2
4	HH-00341-003	5/16 Flat washer	4
5	53567-A	Jack Cylinder Bracket	1
6	HH-00972-089	½ - 20 x 1 ¼ HHCS	2
7	HH-00540-004	½ - 20 Nylon Insert Locknut	2
8	HH-00972-139	5/8 – 18 x 4 ½ HHCS	1
9	HH-00540-002	5/8 – 18 Nylon Insert Locknut	2
10	53566-M	2” Bore Diameter x 12” Stroke Hydraulic Jack Cylinder c/w 53535-02-N fitting	1
11	53568-A	Bottom Jack Cylinder Bracket	1
12	HH-00972-136	5/8 - 18 x 3 ½ HHCS	1
13	53526-A	Jack Foot Assembly	1
14	HH-00293-094	½ - 13 x 2 ½ HHCS	1
15	HH-00340-003	½ -13 Nylon Insert Lock nut	1
16	FPN0339	Manifold Valve Cover	1
17	FPN0546	#10 – 24 x 3/8 Self Tapping Screw	4
18*	53573-HJ	Up/Down Switch kit for Hydraulic Jack	1
	53573-M	Harness for Hydraulic Jack (No Switch)	
	53573-02-N	Toggle Switch	
	53573-03-A	Harness for Truck Side – UP valve	
19*	53877-M	Box with fasteners to mount switch – only required for WING blades 53216-M-HJ-W kit	1
	53877-A	Box Only	1
	HH-00141-029	#10 – 32 x ¾ Machine Screw	2
	HH-00540-100	#10 – 32 Nylon Insert Locknut	2
20*	51002-M	¼” – 18” Hose Assembly (ST-90)	2
21*	52612-B-GA	Dual Chain Lift Channel	1
22*	50999-B	29” Blade Guides	2

53216-M-HJ Hydraulic Jack Kit for V and Straight Blades 53216-M-HJ-W for WING Blades			
	Item	Description	Quantity
23*	51904-M	¼" – 29" Hose Assembly	2
24*	HH-00790-002	90 Degree Swivel Elbow (1/4 NPT Male to ¼ NPT Swivel)	7
25	FP1414	Strain Relief Fitting	1
26*	53373-M-BB	Bolt Bag for Dual Lift Channel	1

Items marked with * are not shown on drawing



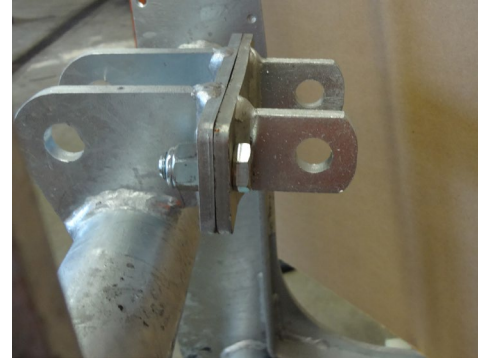
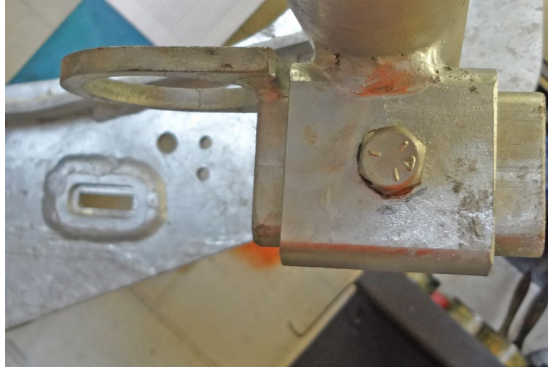
53573-M



53573-02-N

53573-HJ (UP/DOWN SWITCH KIT FOR HYD JACK (C/W 53573-02-N & 53573-M))

Installation of Hydraulic Jack



- Install Bottom Jack Bracket (11) using 5/8" x 1 1/2" bolt and nut (12) & (9).
- Install Top Bracket (5) using two 1/2" x 1 1/4" bolts and nut (6) & (7).

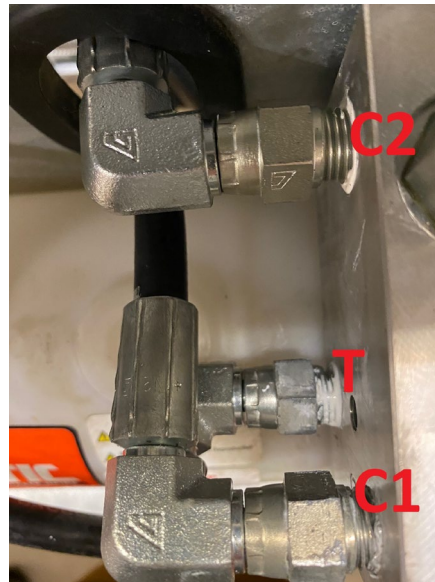
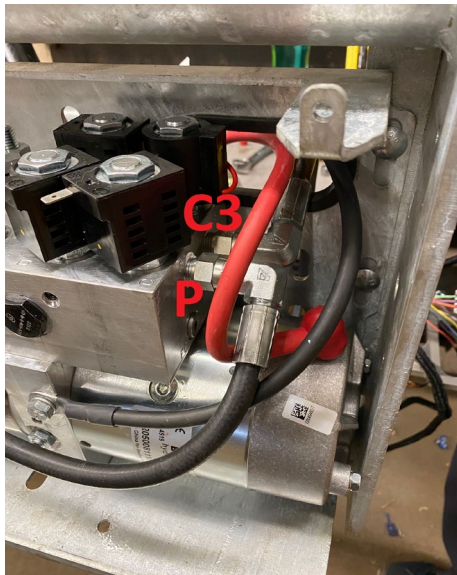


- Secure a cylinder (10) using 5/8" x 4.5" bolt and lock nut (8)(9).
- Install a cylinder foot (13) using 1/2" x 2 1/4" bolt and nut (14)(15) through the bottom hole (the top hole is used for higher trucks).
- Install a manifold (2) on the side of lift frame (1) using two flat washers (4) under each bolt (3) (washer are located between manifold and lift frame). Install 5/16" bolt and flat washer (3)(4).

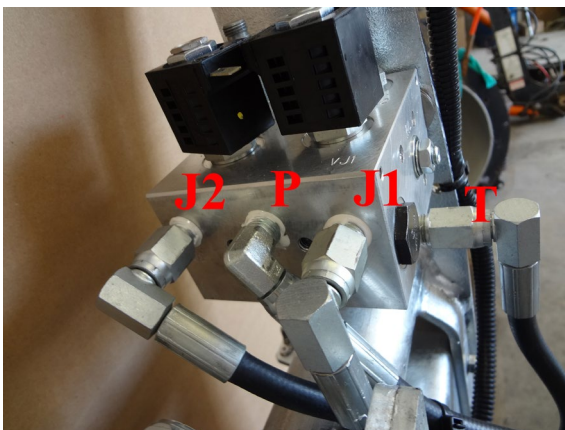
Straight Blade Installation M3493 power unit



Manifold Installation- front view.



Straight Blade power unit – P & T hose installation

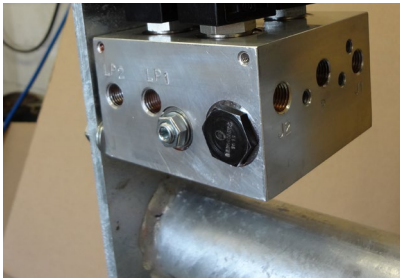


Manifold hose installation (T-29” hose, P- 18” hose)

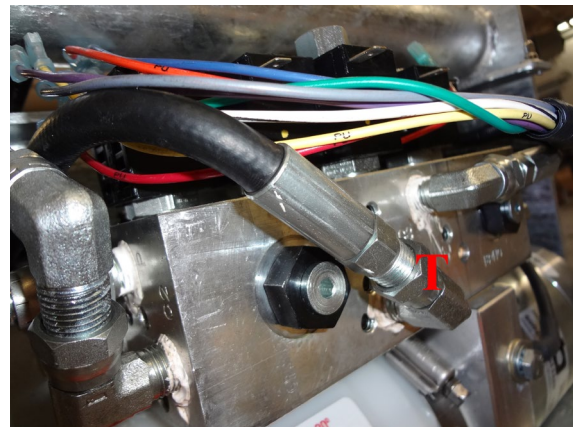
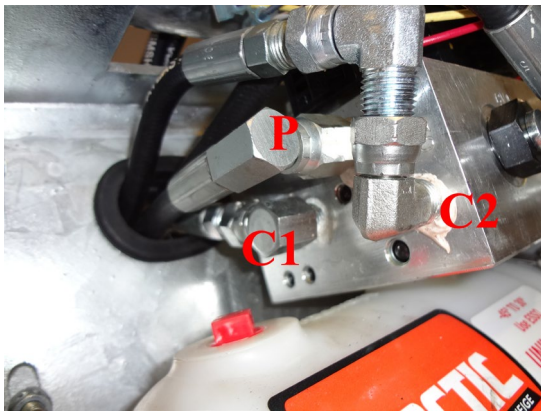


Jack hose installation (18” Hoses)

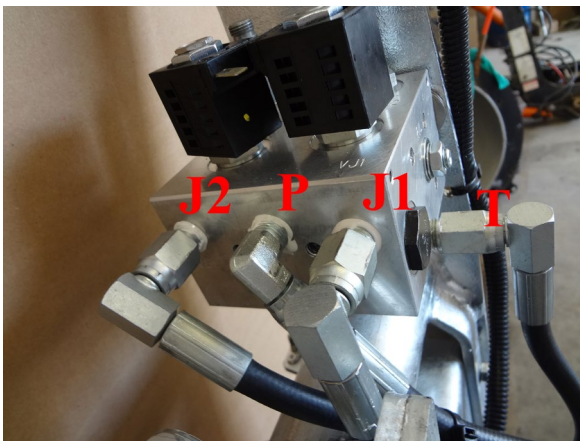
V plow installation M3500V power unit



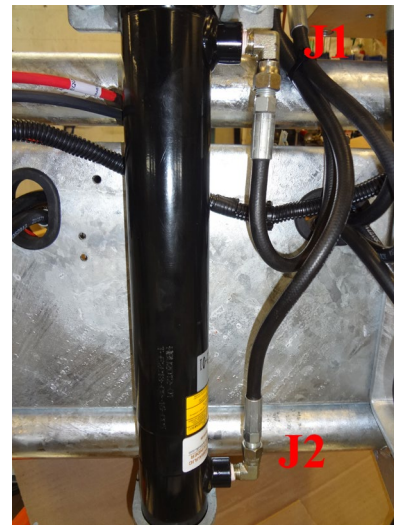
Manifold installation – front view.



V plow power unit (P and T hoses installation)

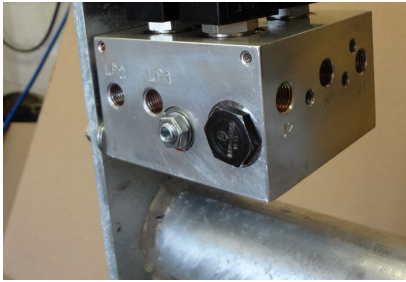


Manifold hose installation (T-29" hose, P-18" hose)

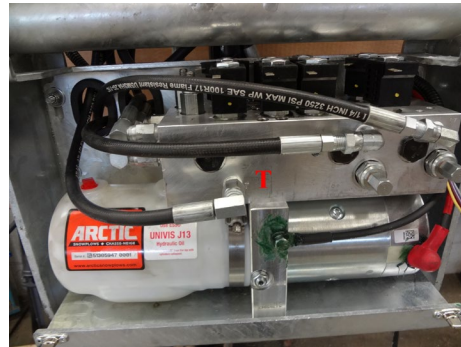


Jack hose installation (18" Hoses)

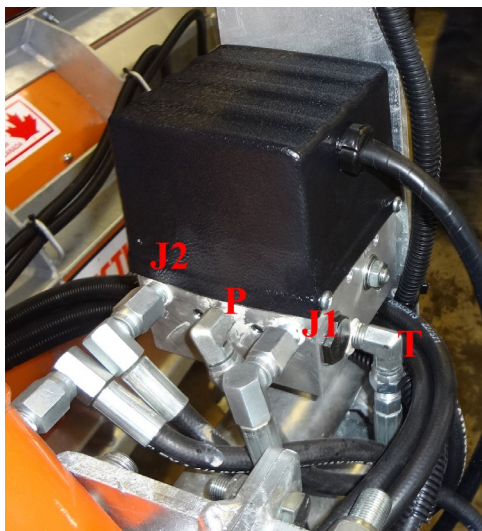
Wing plow installation



Manifold installation – front view.



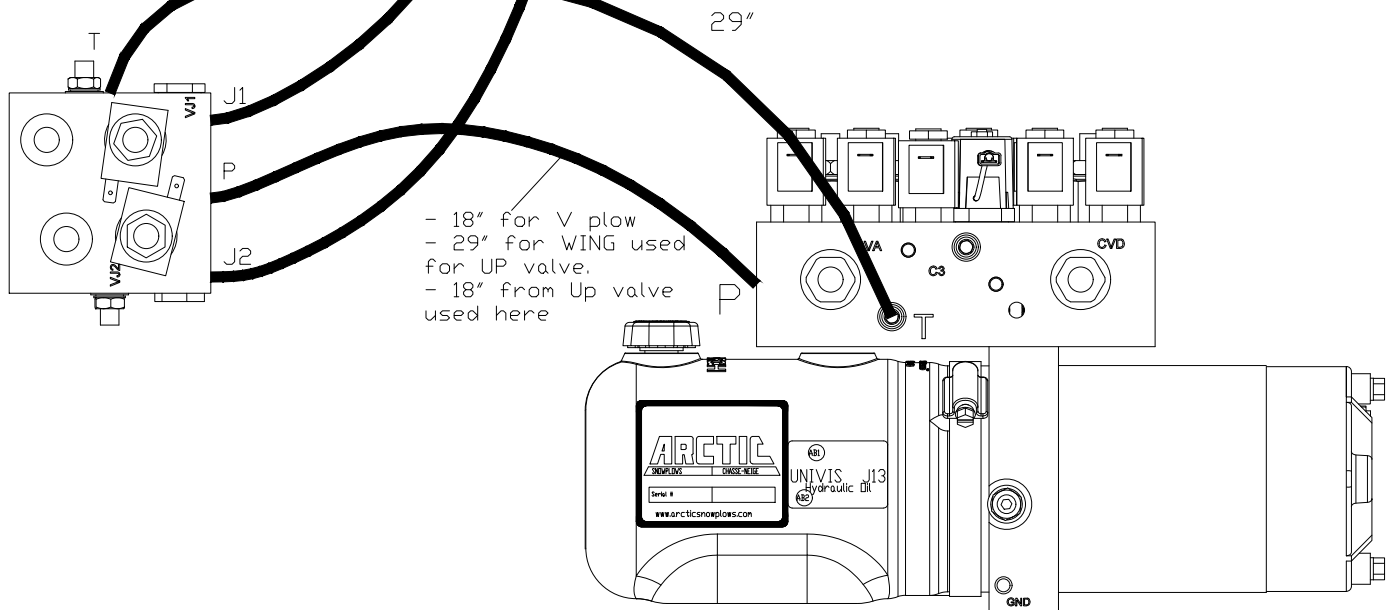
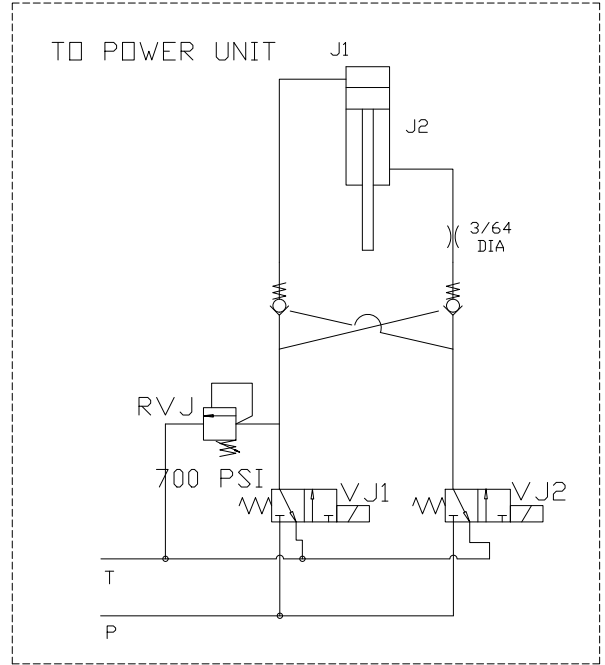
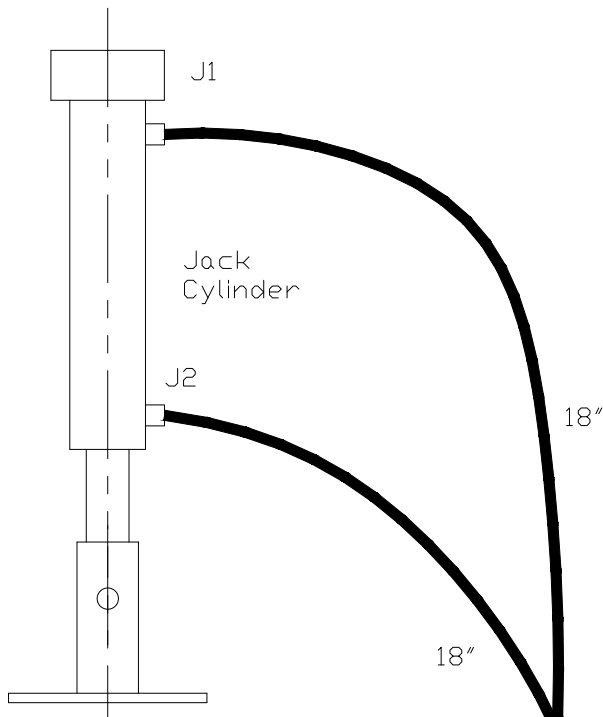
Wing plow power unit (P and T hoses installation)

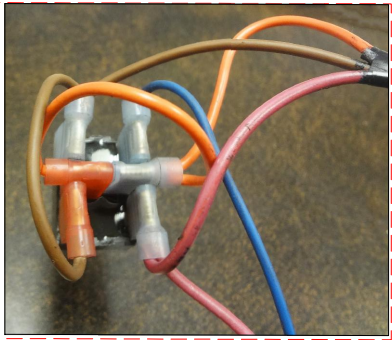
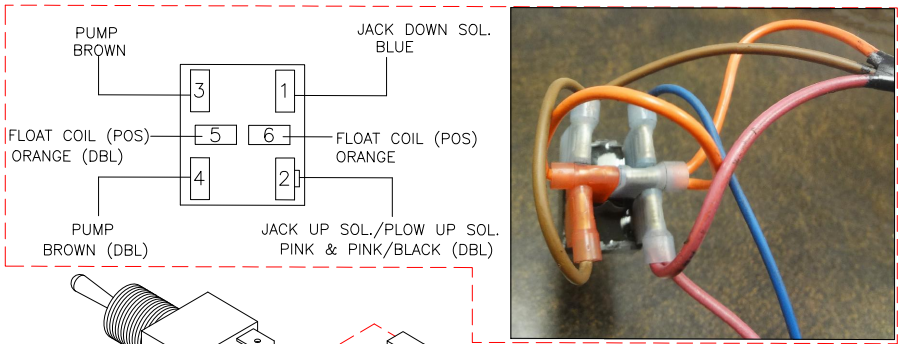


Manifold hose installation (T-29" hose, P-18" hose)

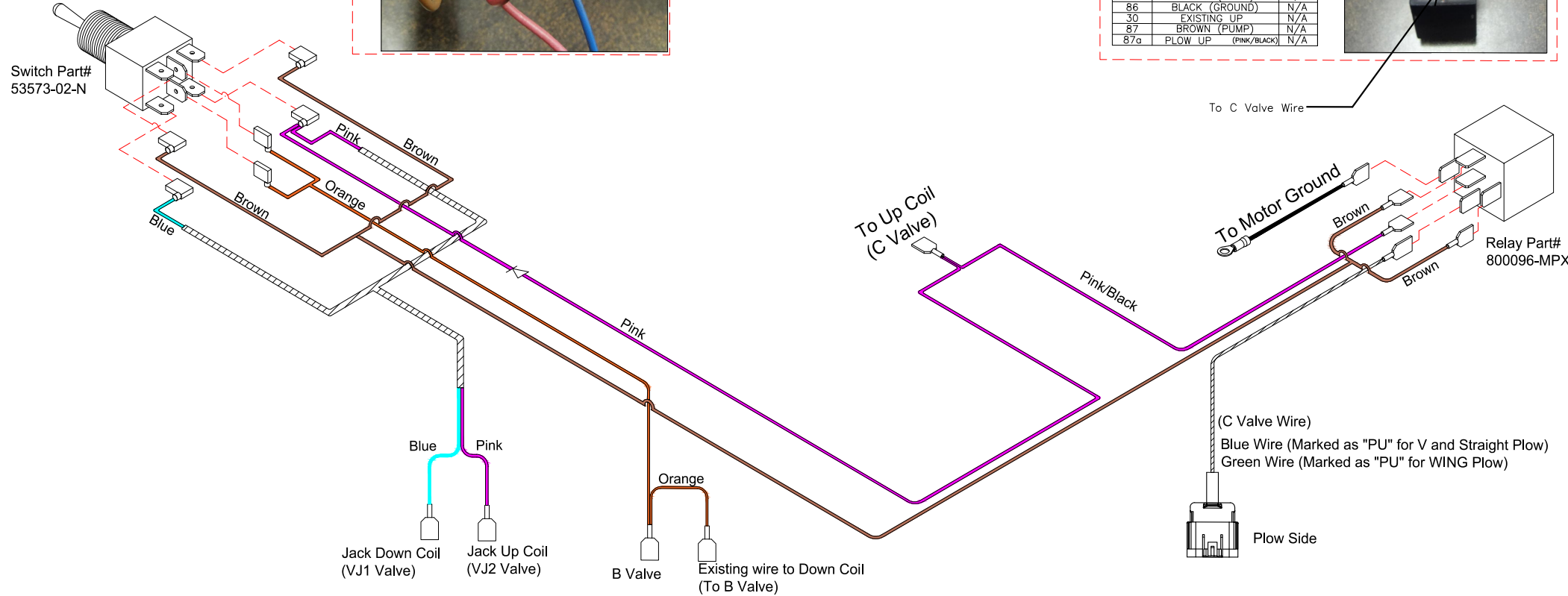
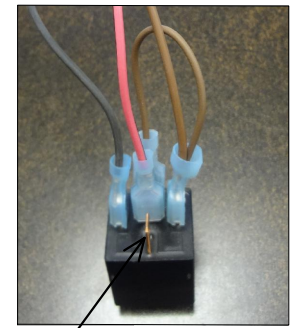
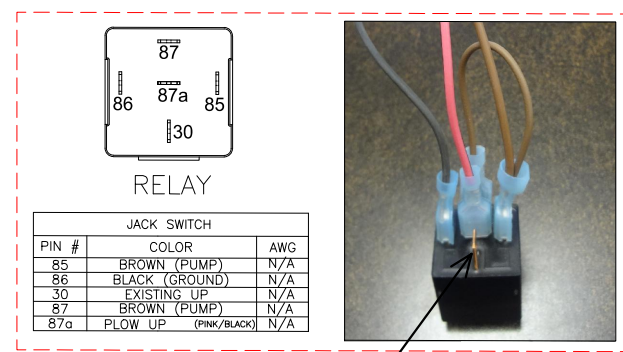


Jack hose installation (18" hoses)





Controller must be in down (float) position to operate Jack

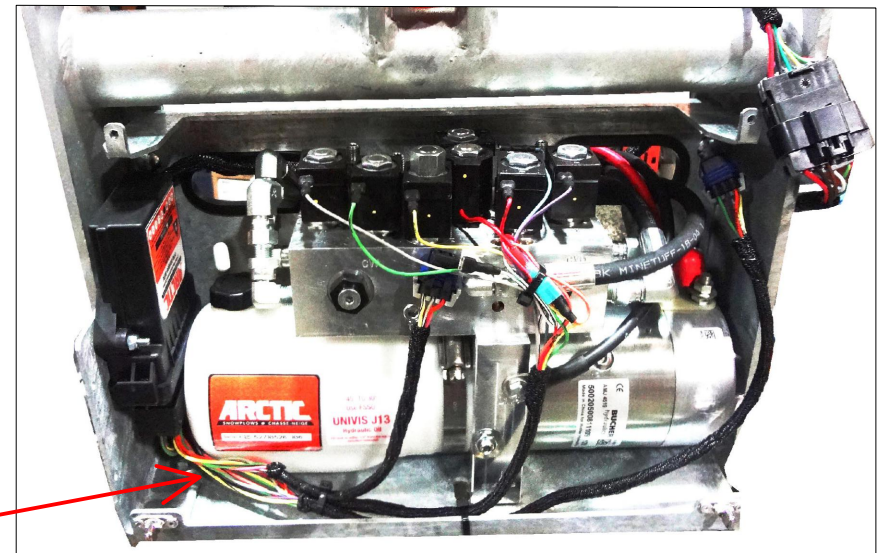
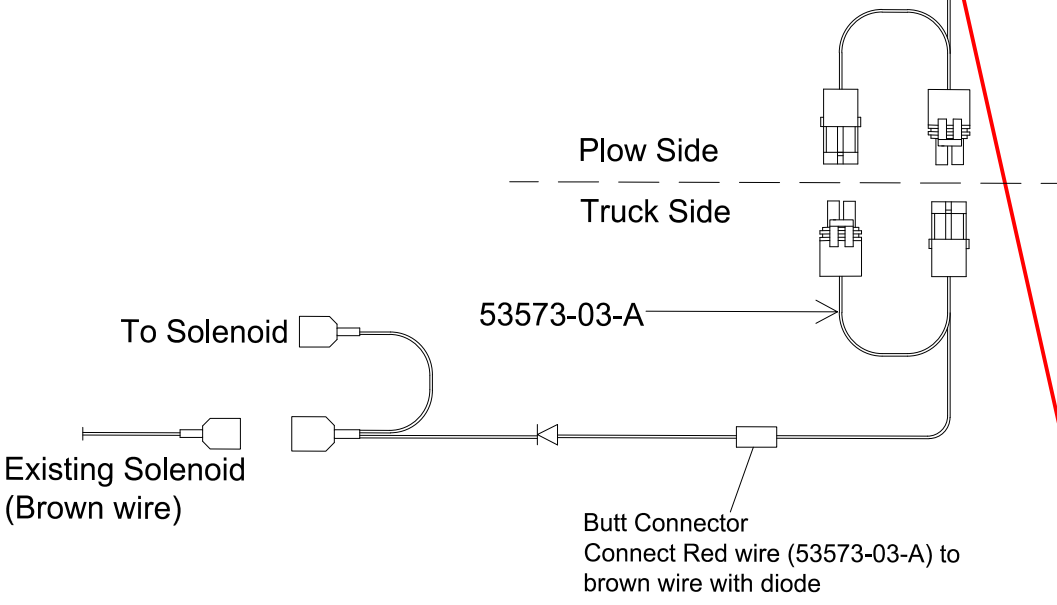
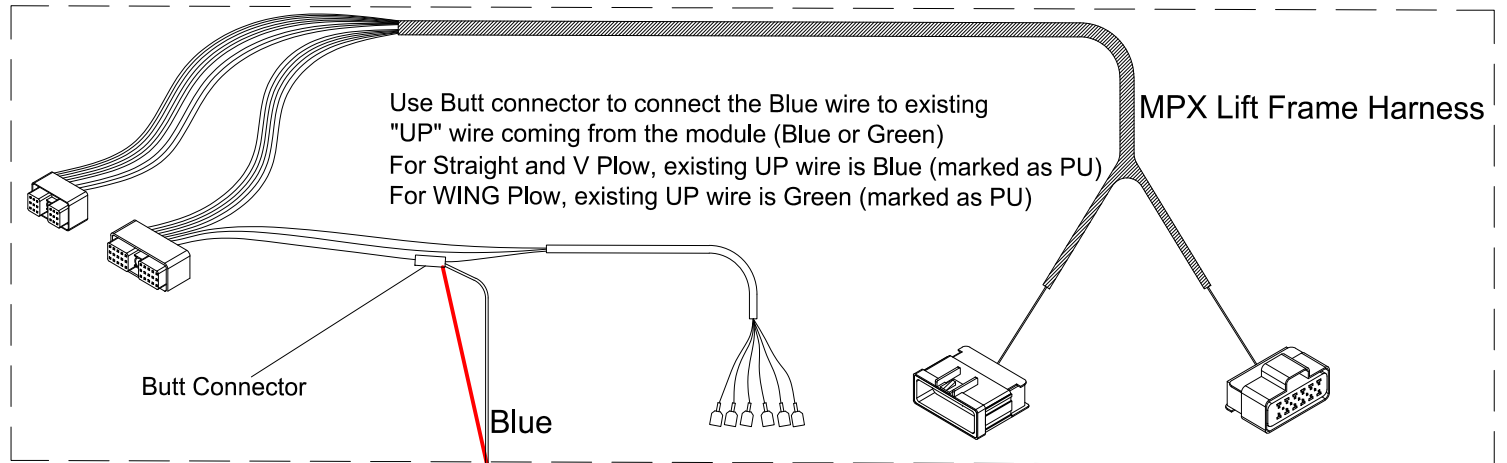


If Snowplow is fully assembled, follow the steps on following pages to install these harnesses →



MPX Install

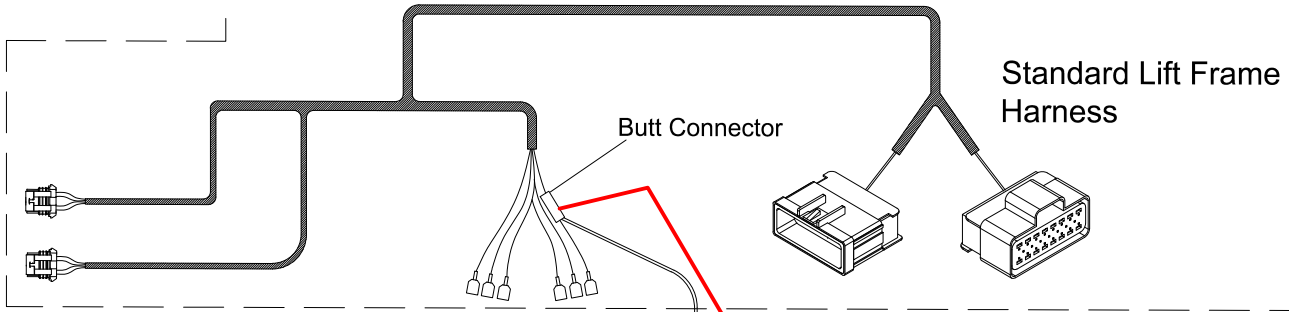
Controller must be in down (float) position to operate Jack



Non-MPX Install Option 1 of 2

Use Butt connector to connect the Blue wire to existing "UP" wire coming from the module (Blue or Green)
For Straight and V Plow, existing UP wire is Blue (marked as PU)
For WING Plow, existing UP wire is Green (marked as PU)

Controller must be in down (float) position to operate Jack



Blue

Plow Side

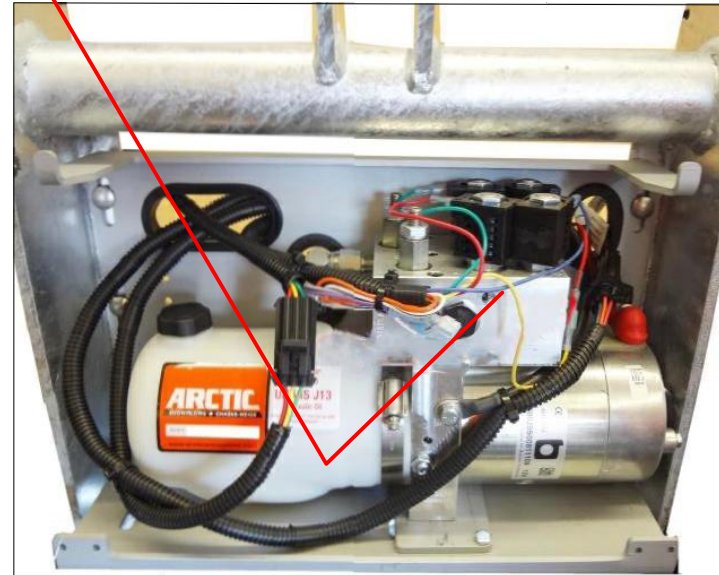
Truck Side

To Solenoid

53573-03-A

Butt Connector
Connect Red wire (53573-03-A) to brown wire with diode

Existing Solenoid
(Brown wire)



Non-MPX Install 53573-03-A Harness

Option 2 of 2



Picture 1 - Cut

To Existing UP wire on harness
Blue wire (marked as PU for Straight & V)
Green (marked as PU for WING)

Cut

To Existing Brown wire on
Controller harness

To Solenoid



Picture 2 - Wire after Cutting



Installation Instructions for 53573-03-A harness:

1. Remove brown wire (controller harness) from solenoid (check Picture 1)



Picture 1

2. Use brown jumper harness with diode from harness and install on a solenoid (see Picture 2)



Picture 2

3. Unplug brown wire from solenoid shown in picture 1 and plug brown jumper wire with diode to solenoid shown in Picture 2. Connect the remaining two wires to each other completing the circuit as shown in Picture 3.



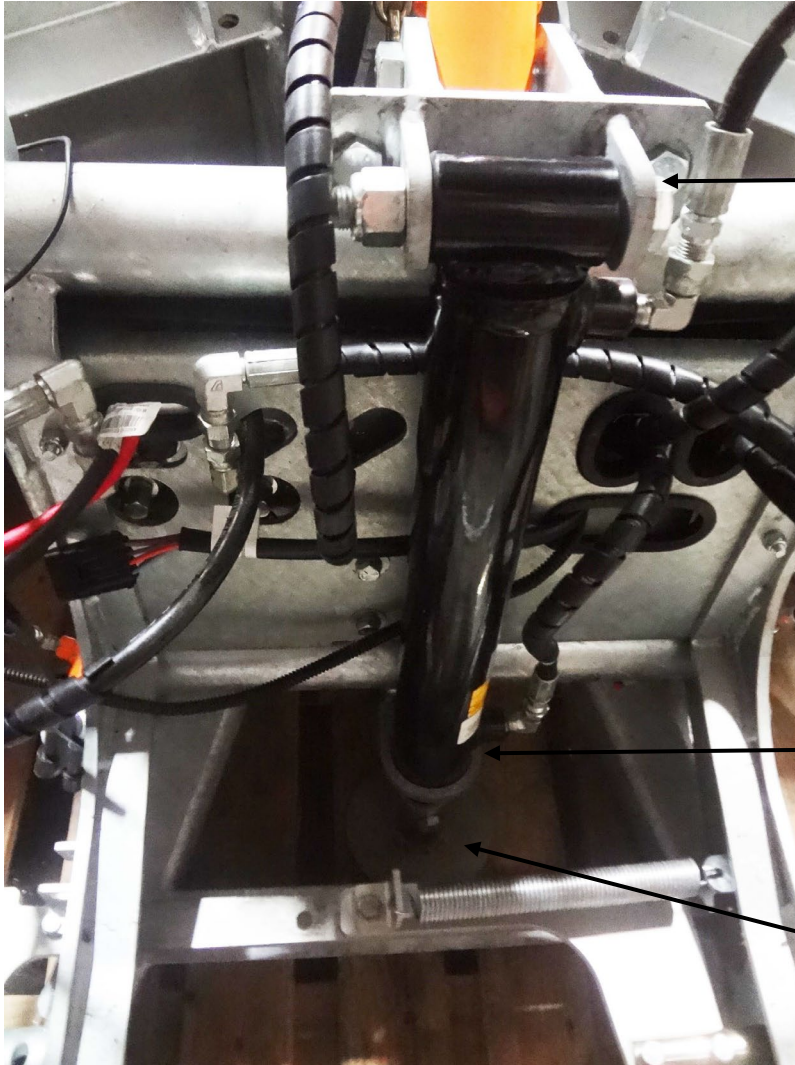
Picture 3

Troubleshooting for Hydraulic Jack

Problem	Possible Cause / Solution
Jack is not going UP and/or down because motor is not running, and valve are clicking.	Check relay is wired properly, check for any loose wires or corrosion (brown wire), defective relay (if relay is not clicking)
	Check switch is wired properly (brown wire), check for any loose wires, defective switch (if there is no power to brown wire when switch is pressed up or down)
	Check Brown wire on solenoid for 12V, if not detected, back track and check all the butt connections for Brown wire to C valve wire
Jack is not going UP, motor is running	Check Orange wire on switch (controller must be in float position), check pink wire on switch, defective switch
	Check VJ2 coil on manifold (should get magnetized when UP is pressed)
	Check VJ2 valve on manifold
Jack is not going DOWN	Check Orange wire on switch (controller must be in float position), check blue wire on switch, defective switch
	Check VJ1 coil on manifold (should get magnetized when DOWN is pressed)
	Check VJ1 valve on manifold
Jack is not going UP and/or DOWN because motor is not running, and valves are not clicking	Check all wire connection on switch, check orange wire on switch (controller must be in float position), defective switch

Lift frame Part# 53517-HJ

Lift frame Part# with QLIV Handle 53517-HJ-HANDLE



Top Bracket Part#

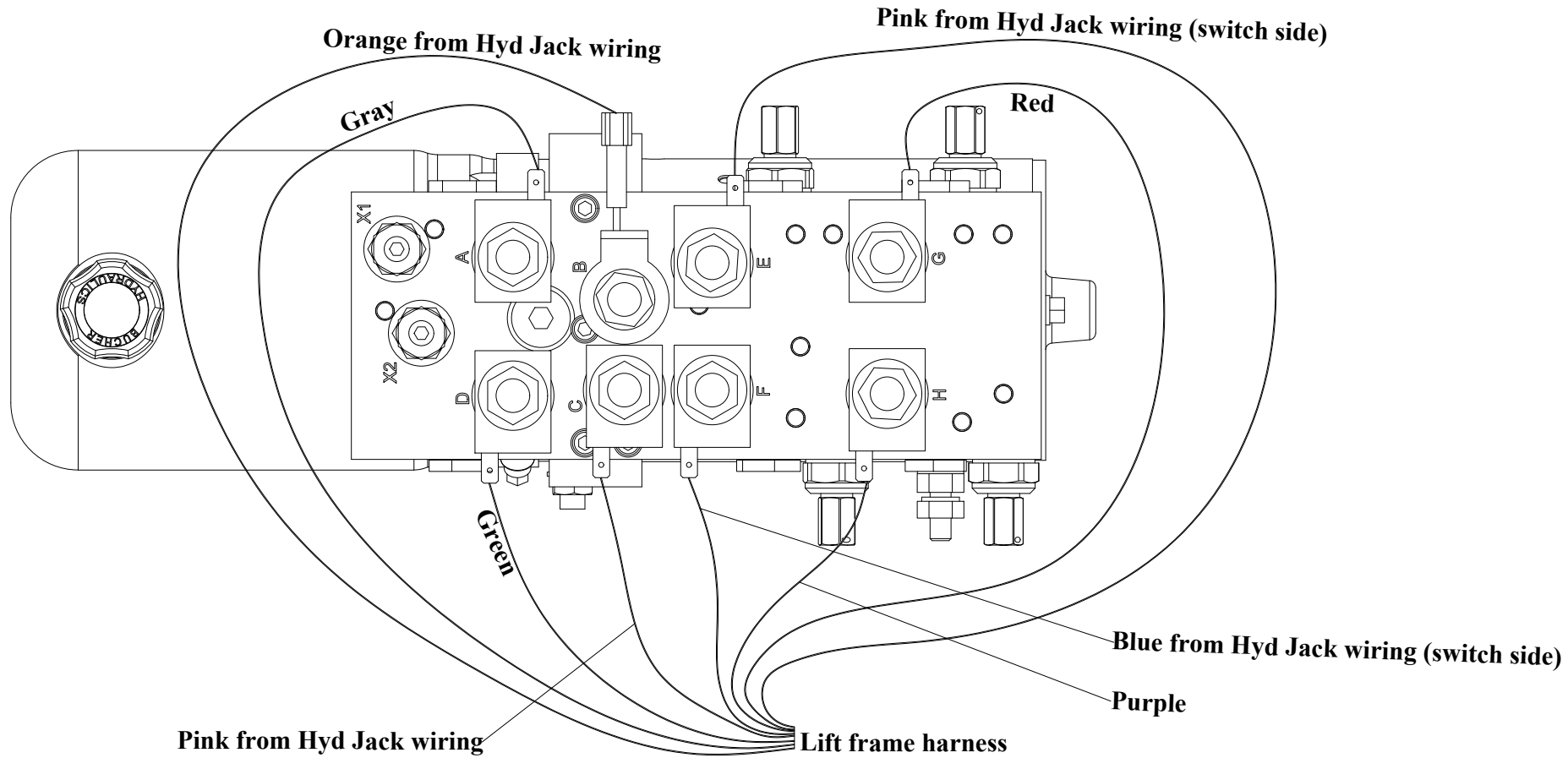
53567-N

Bottom Bracket part#

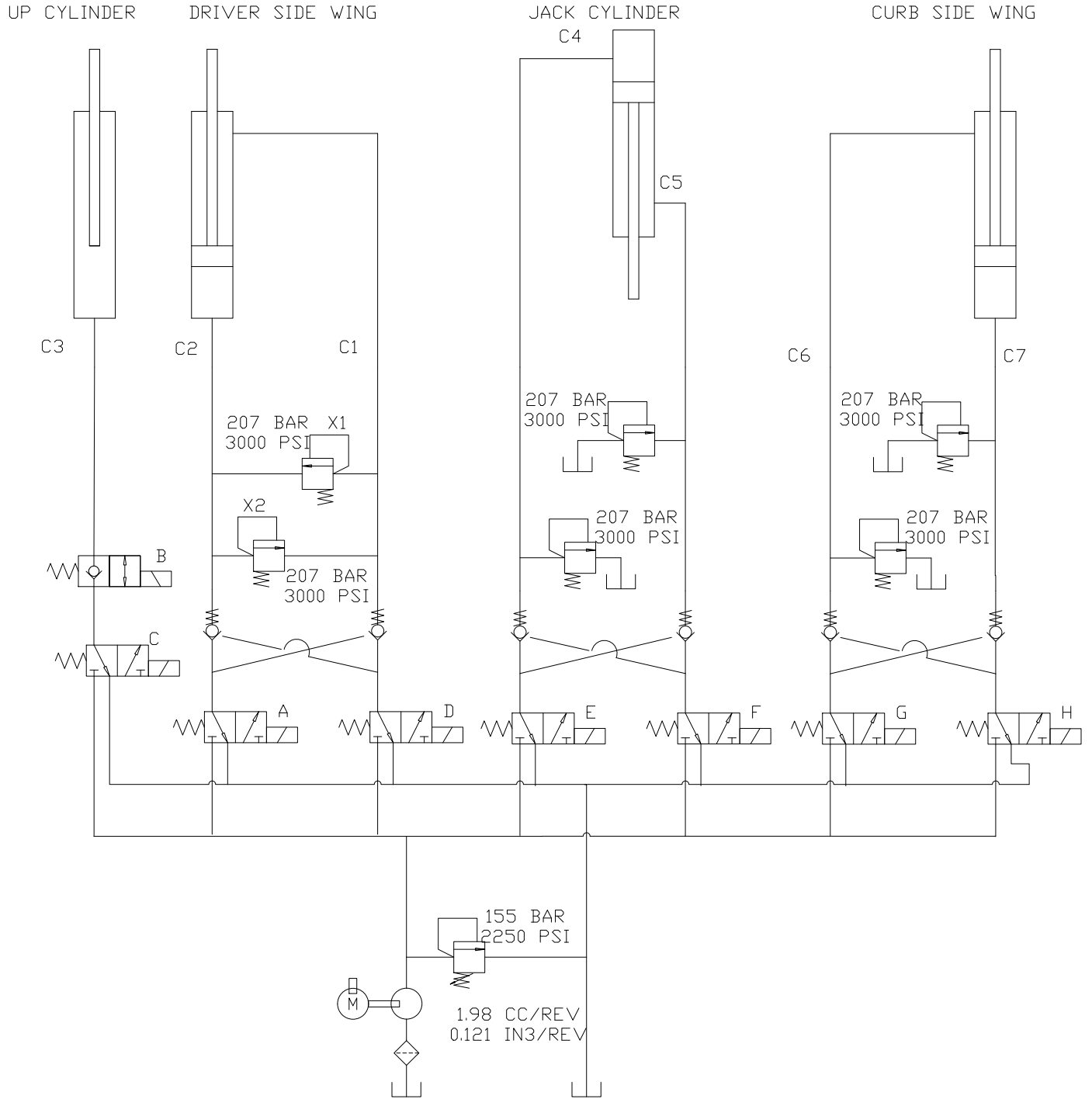
53568-A

Cylinder Foot Assembly Part#

53526-A



<u>Valve</u>	<u>Wire</u>
A-----	Gray
B-----	Orange from Hyd Jack Wiring
C-----	Pink from Hyd Jack Wiring
D-----	Green
E-----	Pink from Hyd Jack Wiring, switch side
F-----	Blue from Hyd Jack Wiring, switch side
G-----	Red
H-----	Purple



SCHEMATIC

