



JD 9000

Joystick Installation Instructions

Purchase Date

Serial Number

Model Number

Tractor Model

Dealer

Index

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Bolt Torque Specifications

Bolt Dia. (inch)	Thread per inch	Grade 5	Grade 8
		Torque (ft-lbs.)	Torque (ft-lbs.)
1/4	20	8	12
1/4	28	10	14
5/16	18	17	25
5/16	24	19	29
3/8	16	30	45
3/8	24	35	50
7/16	14	50	70
7/16	20	55	80
1/2	13	75	110
1/2	20	90	120
9/16	12	110	150
9/16	18	120	170
5/8	11	150	220
5/8	18	180	240
3/4	10	260	380
3/4	16	300	420
7/8	9	430	600
7/8	14	470	660
1	8	640	900
1	12	710	990

Bolt Dia. (mm)	Pitch	Grade 8.8	Grade 10.9
		Torque (ft-lbs.)	Torque (ft-lbs.)
4	0.70	2	
5	0.80	4	
5	1.00	7	11
7	1.00	12	
8	1.25	17	26
8	1.00	18	
10	1.50	35	51
10	1.20	37	
10	1.00	39	
12	1.75	59	88
12	1.50	62	
12	1.25	65	
14	2.00	94	139
14	1.50	101	
16	2.00	146	210
18	2.50	210	
20	2.50	292	
22	2.50	398	
44	3.00	503	

Inventory

QTY.	PN	Description
4	16-11436	10-24 x 1.00" Socket Head Cap Screw
4	16-20005	1/4" X 1-1/4" Hex Bolt Gr 5 NC
1	16-20006	1/4" X 1-1/2" Hex Bolt Gr 5 NC
4	16-20034	5/16" X 1 " Hex Bolt Gr 5 NC
2	16-35C612	3/8" X 3/8" Flange Bolt
2	16-20558	1" X 2" Hex Bolt Gr 8 NC
1	17-12117	Mount, JD 9000 & 9030
1	18-11426	Mount, Rear Valve- STX / Danfoss
2	31-11492-12-12	Male JIC x Female JIC Swivel Nut Elbow 45°
1	31-12331-6-6	-6 JIC x -6 ORFS Swivel
1	31-12332-6-4	-6 Female JIC Swivel x -4 Male Pipe
2	31-15KB1212	Sraight JIC x O-Ring (6400-12-12)
1	31-34033	Straight JIC x O-Ring (6400-6-5)
6	31-34041	Straight JIC x O-Ring (6400-8-10)
1	31-34099	Swivel Nut Elbow 90° JIC (6500-6-6)
1	31-34169	Male Elbow 90° JIC x Pipe (2501-6-4)
2	31-34237	Straight JIC X Metric (7400-12-22)
2	31-FS-2404-06-04	OFS Male Pipe Connector
2	35-11684-0600	-12 FJIC x -12 FJIC - 60"
1	35-11694-0600	-6 FJIC x -6 FJIC - 60"
2	35-3970-20-24	Velcro Cordura 2" Diameter (24 Inches)
1	44-11424	Valve Mount Cover- STX / Danfoss
1	44-11435	Plate, Retaining Ring / SureGrip
1	49-11801-22	Metric Bonded Seal (22mm)
1	56-11653	Sunsource/Danfoss 3 Spool Valve/Joystick
1	56-11658	Shuttle Valve - JD and STX
9	57-20740	1/4" Flat Washer
4	57-20741	5/16" Flat Washer
10	59-34951	Zip Tie 50# 15.5"
1	69-11663	4100 Joystick Extension Cord 30'
5	70-20580	1/4" Hex Nut Gr 5 NC
2	70-20599	1" Hex Nut Gr 8 NC

Bracket & Joystick Installation

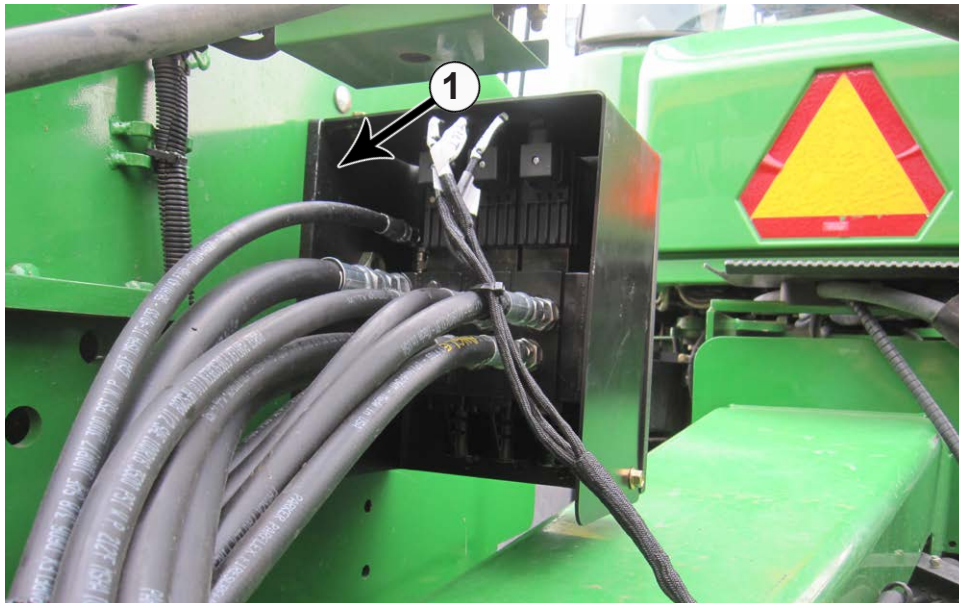
NOTE: Your machine may vary slightly from the machine in this manual, but the same installation procedure will be compatible.



NOTE: The following pictures show the joystick assembly already in place. The joystick will be installed in a later step.

1. Remove top section of the armrest to get at the armrest frame. Position the joystick mount (PN: 17-12117) on the armrest in a location that the operator prefers. Use the holes on the joystick mount to mark 4 holes. Drill 4 - 1/4" holes.
2. After the 4 holes are drilled, insert 4 - 1/4" x 1-1/4" bolts (PN: 16-20005) with a 1/4" washer (PN: 57-20740) on each bolt through the holes of the joystick mount and armrest.
3. On the inside of the armrest, attach the joystick mount to the armrest with 4 - 1/4" washers, and 4 - 1/4" nuts (PN: 70-20580).
4. Hold the mounting ring (PN: 44-11435) inside the side mount, and attach the joystick to the top of the side mount and the mounting ring with 4 - 1" socket head cap screws (PN: 16-11436) (1).
5. Adjust the joystick and mounts to position the joystick to the operator's preference. Once the joystick is in the correct position, tighten all of the fasteners.

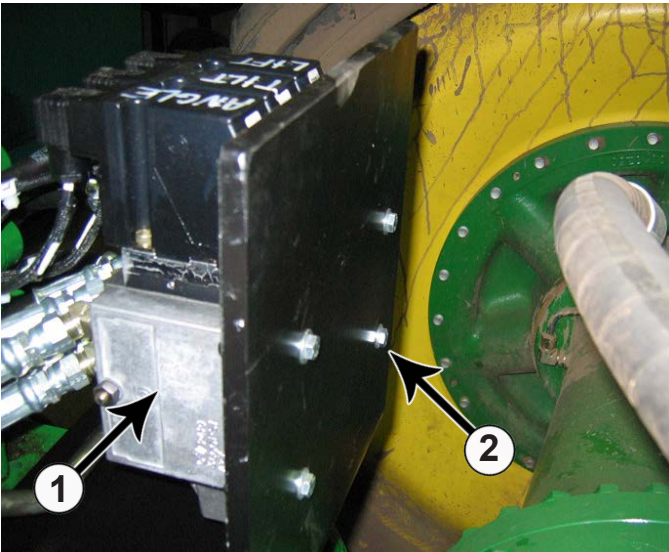
Valve Bracket Installation



NOTE: The following pictures show the joystick valve already in place. The valve will be installed in a later step.

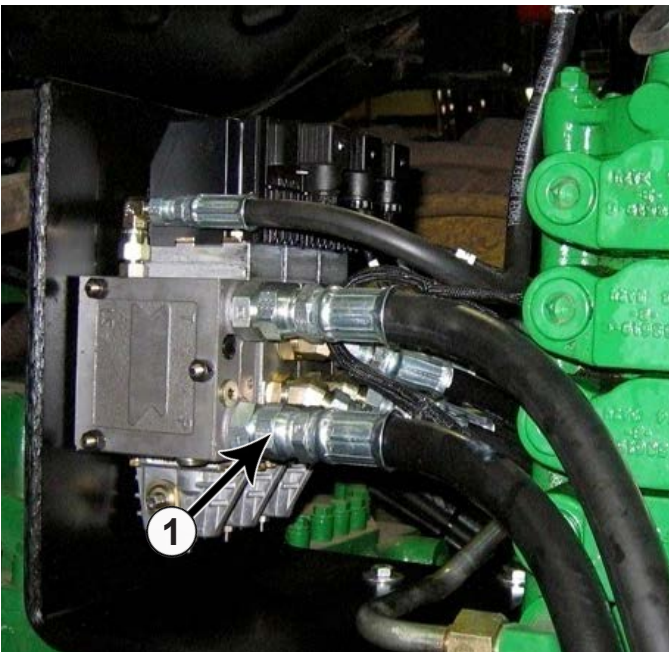
6. Attach the rear valve mount (PN: 18-11426) (1) to the rear of the tractor along the left tractor side frame with 2 - 1" x 2" bolts (PN: 16-20558), and 2 - 1" nuts (PN: 70-20599). You can use one of the holes already in the tractor and drill 1 more or drill 2 holes where you would like the bracket to be located. Just position the bracket like this picture and make sure it isn't interfering with anything.

Valve Installation

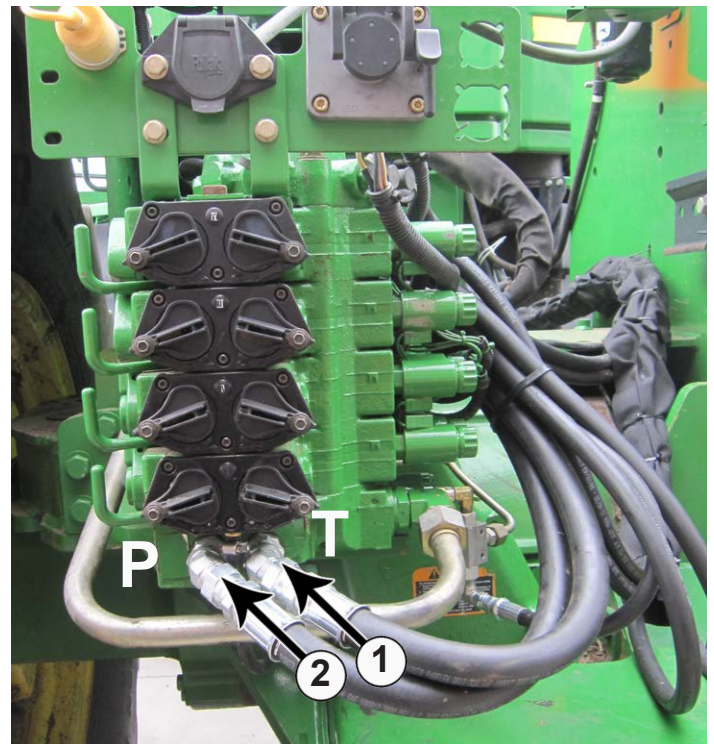


7. Attach the control valve (1) to the valve mount with 4 - 5/16" x 1" bolts (PN: 16-20034) and 4 - 5/16" flat washers (PN: 57-20741) (2).

Plumbing



8. Attach the 60" hoses (PN: 35-11684-0600) to the two fittings on the control valve that are closest to the left side of the tractor frame (1).

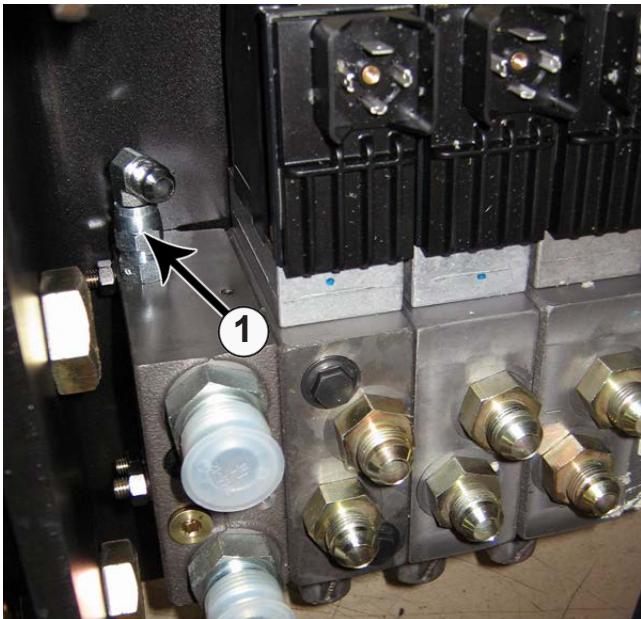


NOTE: Oil will flow. Be ready with an oil pan.

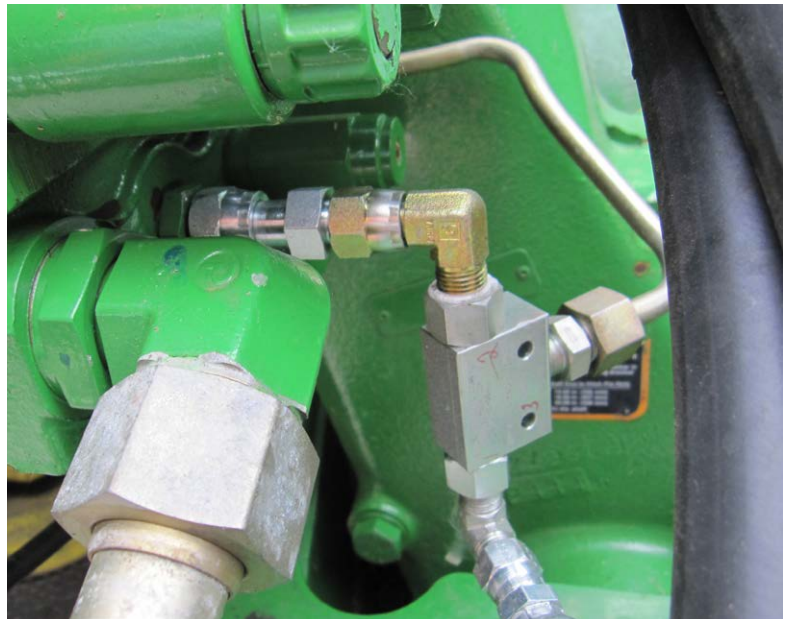
9. Remove the plug or quick connect from the P and T ports at the rear of the tractor and replace each with a straight fitting (PN: 31-34237) and a 45° fitting (PN: 31-11492-12-12) (1).

10. Attach the 60" hose from the **bottom** fitting on the control valve to the 45° fitting at the P port.

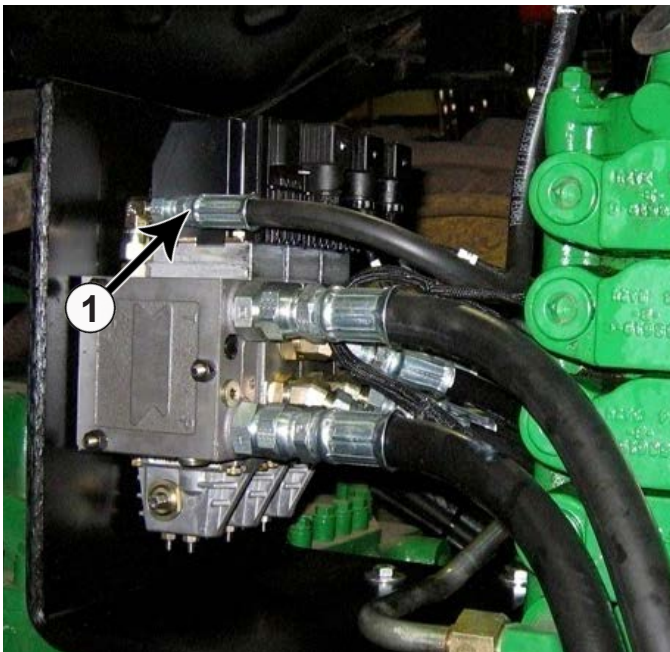
11. Attach the 60" hose from the **top** fitting on the control valve to the 45° fitting at the T port. (2).



12. If fittings are not installed in the LS port on the control valve, install a straight -6-5 fitting (PN: 31-34033) and a 90° -6-6 fitting (PN: 31-34099) in the LS port (1).



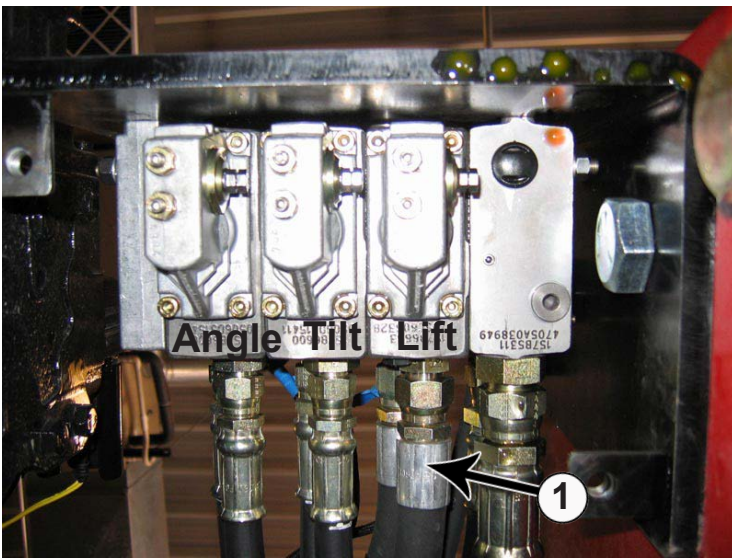
14. At the rear of the tractor in front of the large steel line there is a small steel line. Remove the steel line and install a swivel fitting (PN: 31-12331-6-6) along with a 90° swivel fitting in its place. Attach the shuttle valve to the 90° fitting.



13. Attach a 60" hose (PN: 35-11694-0600) to the 90° fitting in the LS port.

15. Attach the steel line and a straight O-Ring Face Seal Fitting (PN: 31-FS-24040-06-04).attach to the shuttle valve.

16. Install a 90° JIC x Pipe fitting (PN: 31-34169) (4) to the last port on the shuttle valve. Attach the straight end of the 60" hose (PN: 35-11694-0600) from Step #13 to the male 90° fitting on the shuttle valve (5).



NOTE: Valve shown from the bottom.

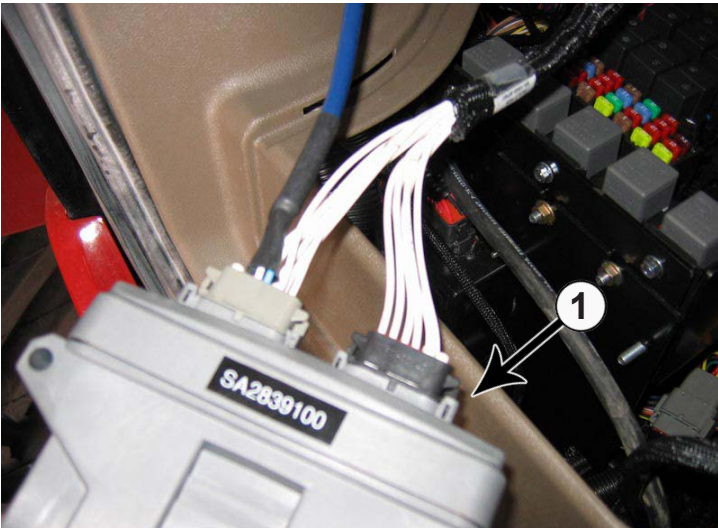
17. Guide the dozer **lift** hoses to the rear of the tractor. Wrap a hose protector around the hoses. If necessary, use zip ties to keep the hose protector in place.

18. Attach the dozer **Lift** hoses to the corresponding fittings on the control valve (1). The cylinder **base** end hose goes to the top fitting on the control valve. The cylinder **rod** end hose goes to the **bottom** fitting on the control valve.

19. Guide the dozer **Angle** and **Tilt** hoses to the rear of the tractor. Attach the dozer **Angle** and **Tilt** hoses to the corresponding fittings on the control valve (1).

20. Use zip-ties to hold the hoses into place.

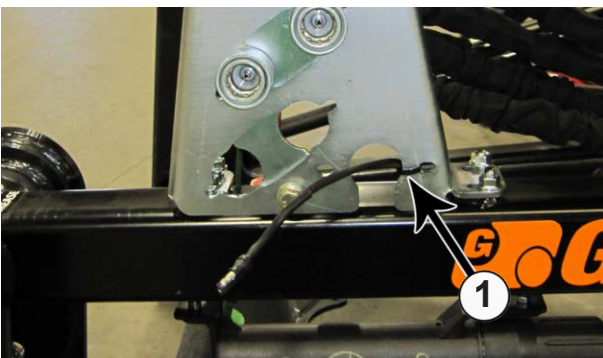
Cable Installation



21. Set control box in fuse compartment (1).



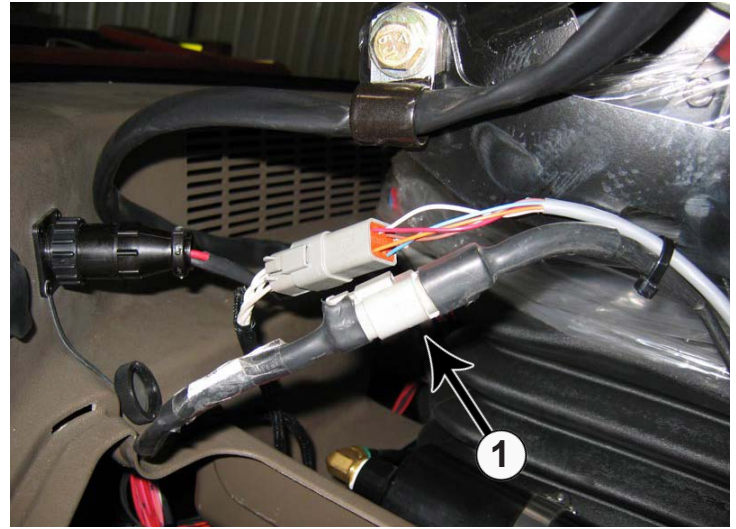
22. Connect the dozer angle extension cord (PN: 69-11663) to the wire harness (1). Run the cord through the hole in the floor of the fuse compartment.



23. Guide the extension cord from the wire harness to the front of the tractor. Run the wire along the left side of the lift frame (1).

24. Connect to the extension cord on the angle system valve.

NOTE: The bracket on the top arm may be different depending on year of system.



25. Connect the cable from the joystick to the wire harness (1).



26. Plug the power cord from the wire harness into the port located behind and to the right of the operator's seat in the tractor cab (1).

27. Guide the 3 cables and Dins from the wire harness out to the rear of the tractor.

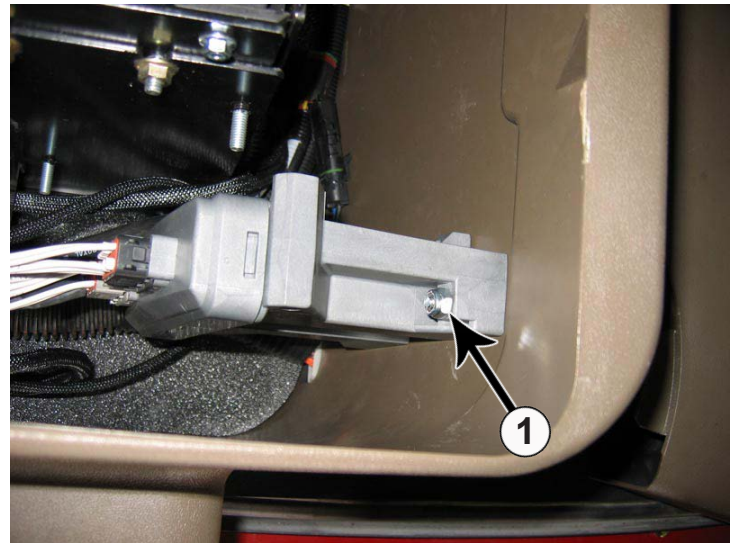
28. Put the supplied rubber seal on each Din connector.

29. Connect the **Lift**, **Tilt**, and **Angle** Dins to the corresponding connections on the back of the control valve.

30. Use screws to fasten the Dins to the control valve.

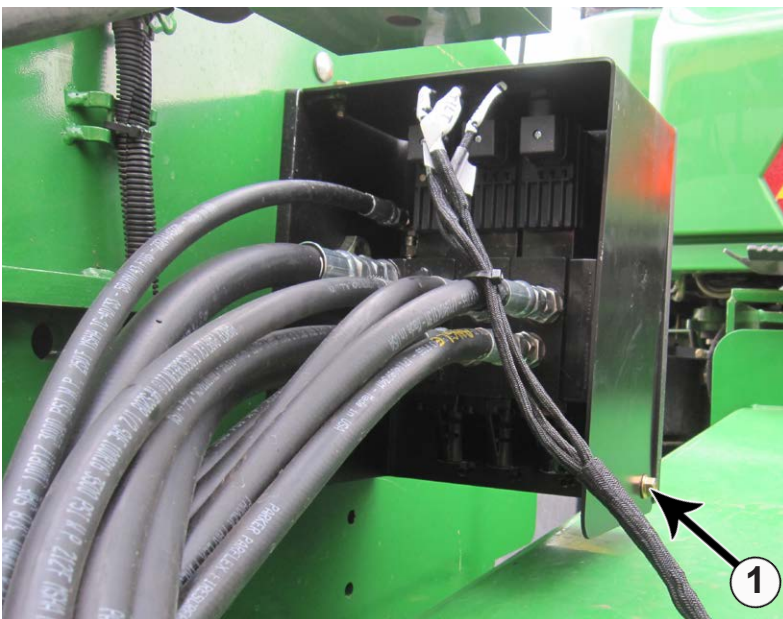
NOTE: The electric dozer functions can be overridden by attaching the supplied handle to the control valve and operating them.

31. Use zip-ties to hold cables in place.



32. Drill a hole for a 1/4" bolt in the fuse compartment. Attach the wire harness to the compartment with a 1/4" bolt (PN: 16-20006), 1/4" washer (PN: 57-20740), and a 1/4" nut (PN: 70-20580) (1).

Valve Cover Installation



33. Place the valve cover over the valve and hoses as shown in the picture. Verify that the hoses are not being pinched.

34. Attach the valve cover to the valve bracket with 2 - 3/8" flange bolts (PN: 16-35C612). (1).

35. Joystick installation is complete!

Joystick Operation

36. To **raise** the blade **up**, **pull back** on joystick.

37. To **lower** the blade **down**, **push forward** on joystick.

38. To **tilt** the blade **left**, tilt the joystick to the **left**.

39. To **tilt** the blade **right**, tilt the joystick to the **right**.

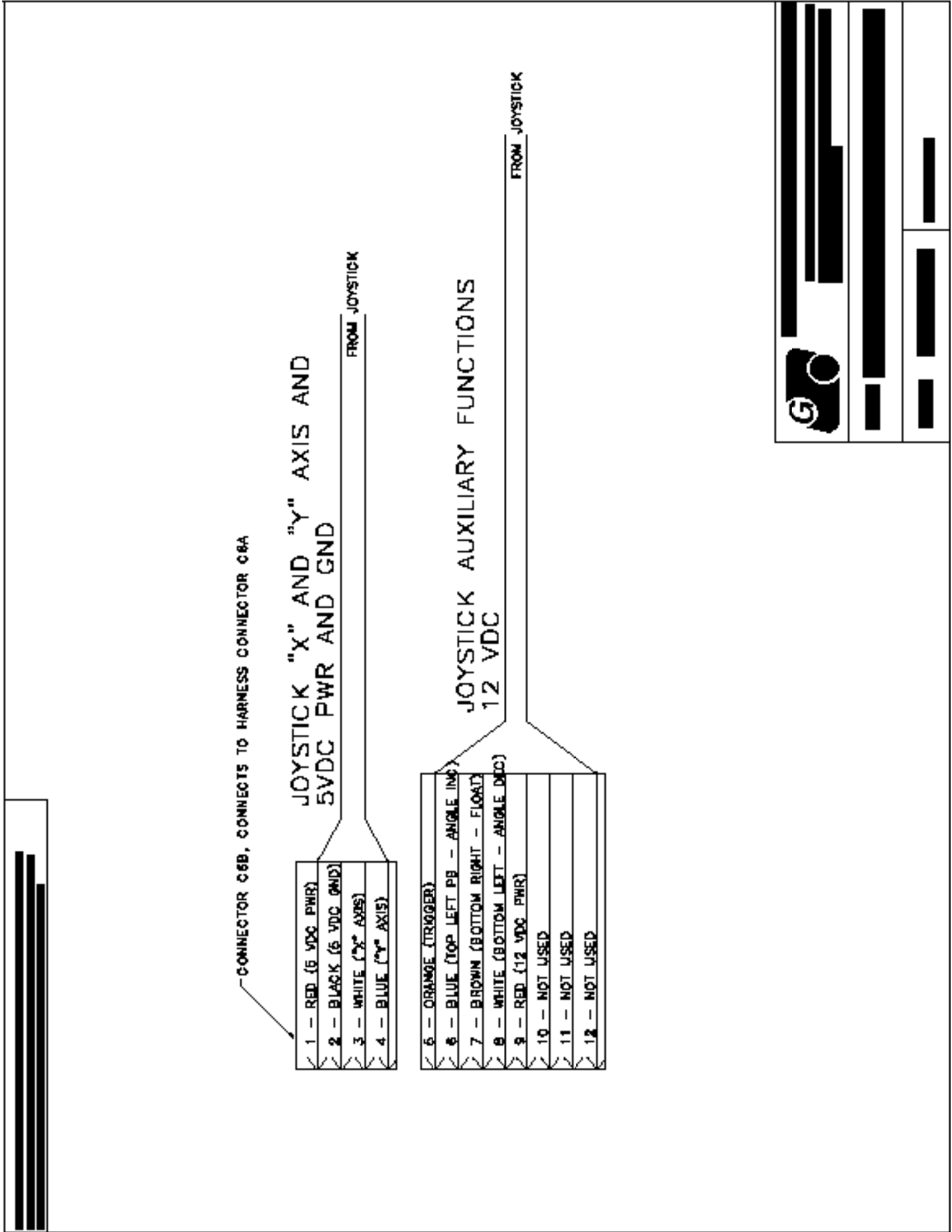
40. To extend and retract the **left** side of the blade, operate the rocker button on the top of the joystick.

41. To extend and retract the **right** side of the blade, hold down the trigger switch on the joystick handle and operate the rocker button on the top of the joystick.

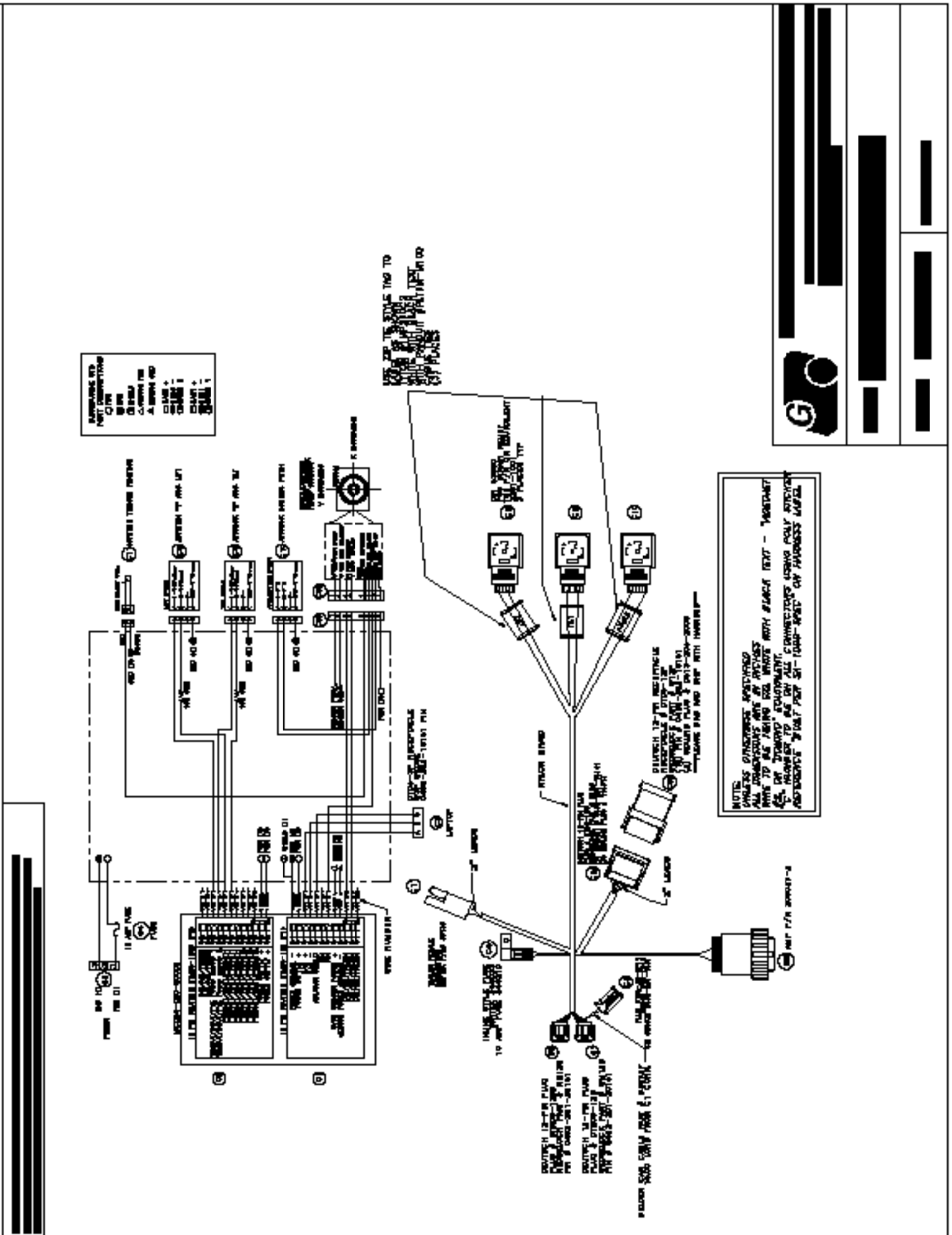
42. To operate the float function, push the bottom switch on the left side on the top of the joystick.

NOTE: If directions are not correct, go to Step #18 and #19 on Page 7 and switch the hoses for each of the functions that are not correct.

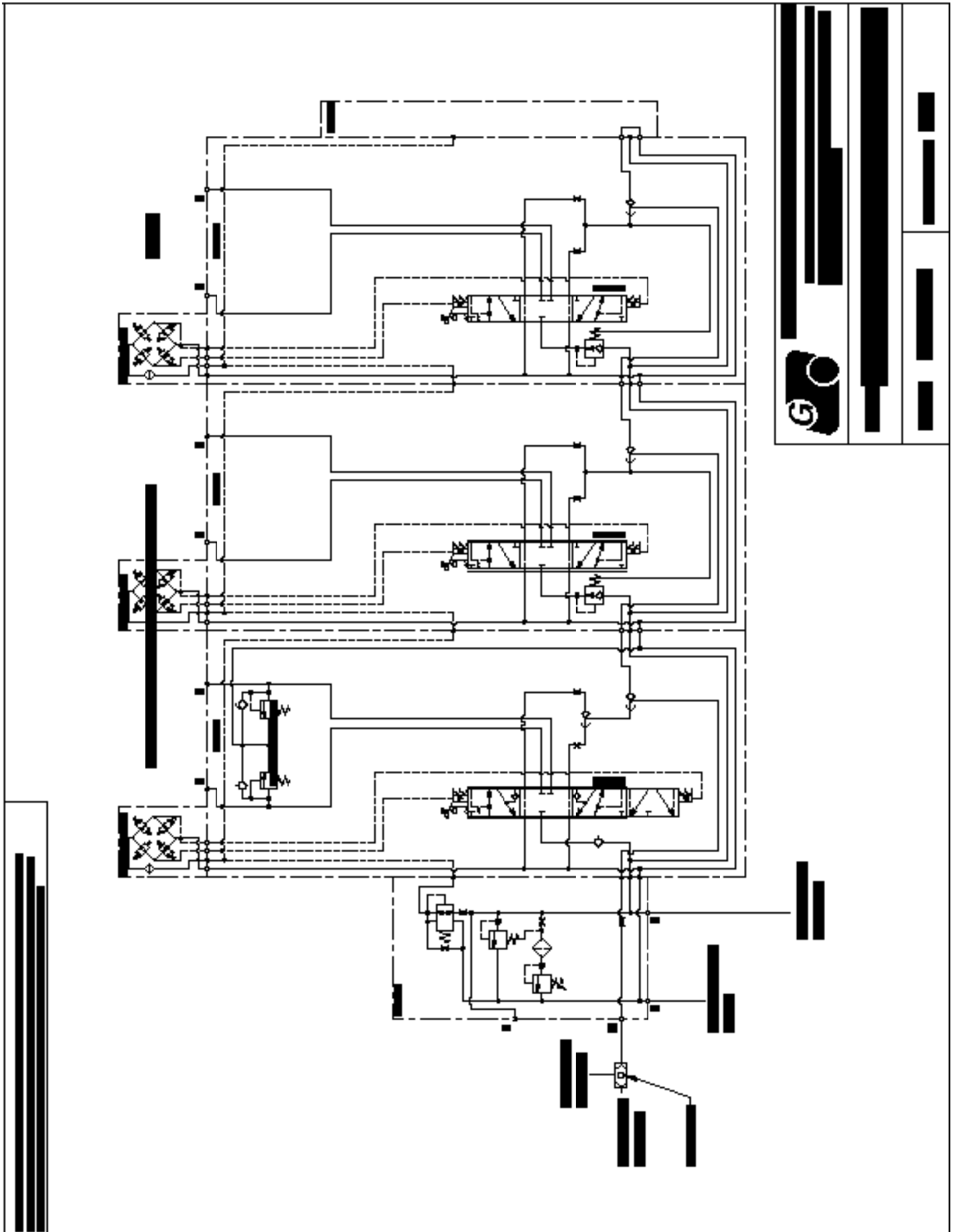
Jovstick Schematic



Jovstick Schematic



Hydraulic Schematic



Notes

Notes

Warranty

Grouser Products warrants to the original purchaser of each item that the product be free from defects in material and workmanship under normal use and service for a period of one year. If such equipment is found to be defective within one year, it is the obligation of Grouser Products under this warranty to repair or replace (exclusive of the cost of labor and transportation), any equipment or parts, in the judgment of Grouser Products to be defective in material or workmanship.

All equipment or parts claimed to be defective in material or workmanship must be made available for inspection at the place of business of a dealer authorized to handle the equipment covered by this warranty, or, upon request by Grouser Products, shipped to the Grouser Products factory in West Fargo, North Dakota. Grouser Products shall have no obligation to bear the cost of labor or transportation in connection with replacement or repair of any such defective parts. Grouser Products will pay \$35 / hr. on the modification or repair of defective parts in the setup procedure.

This warranty covers only defects in material and workmanship. It does not cover depreciation or damage caused by normal wear, accident, improper assembly, improper adjustments, improper maintenance including lack of proper lubrication, or improper use. Therefore, Grouser Products liability under this warranty shall not be effective or actionable unless the equipment is assembled, maintained and operated in accordance with the operating instructions accompanying the equipment. Grouser Products shall have no liability if the equipment has been altered or reworked without the written authorization of Grouser Products.

Grouser Products' parts, which are furnished under this warranty and properly installed, shall be warranted to the same extent as the original parts under this warranty if, and only if, such parts are found to be defective within the original warranty period covering the original equipment.

Contact Information

1-800-747-6182 or 1-701-282-7710

755 2nd Ave NW • West Fargo, ND 58078

Fax: 1-701-282-8131

E-mail: grouser@grouser.com

Website: www.grouser.com