



JD 9030 Series

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" 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	16-20558	1" X 2" Hex Bolt Gr 8 NC
2	16-35C612	3/8" -16 X 3/4" Flanged Bolt
1	17-12117	Mount, JD 9030 / Suregrip Joystick
1	18-11426	Mount, Rear Valve- STX / Danfoss
2	31-11492-12-12	Male JIC x Female JIC Swivel Nut Elbow 45° (6502-12-12)
1	31-12331-6-6	-6 Male JIC to -6 ORFS Swivel (FS-7504-6-6)
1	31-12332-6-4	Female JIC Swivel x Male Pipe (6505-6-4)
1	31-14177-4-6	Swivel Nut Elbow 90° - Male Pipe x Female JIC Swivel (6501-4-6)
1	31-34033	Straight JIC x O-Ring (6400-6-5)
1	31-34099	Swivel Nut Elbow 90° JIC (6500-6-6)
2	31-34102	Swivel Nut Elbow 90° JIC (6500-12-12)
1	31-34169	Male Elbow 90° JIC x Pipe (2501-6-4)
2	31-34237	Straight JIC x Metric (7400-12-22)
1	31-fs-2404-06-04	OFS Male Pipe Connector (FS-2404-06-04) or (FF2404-6-4)
2	35-11684-0600	-12FJIC x -12 FJIC - 60" - 4,000 psi
1	35-11694-0600	-6 FJIC x -6 FJIC - 60"
2	35-3970-20	Velcro Cordura 2" Diameter (SL-2.0)
1	44-11424	Valve Mount Cover
1	44-11435	Plate, Retaining Ring
1	44-12123	Mount, JD 9030 / Joystick Backing Plate
2	49-11801-22	Metric Bonded Seal (22mm)
1	56-11653	Joystick Valve
1	56-11658	Shuttle Valve - JD and STX
1	56-12424	Joystick Wire Harness
1	56-12426	Joystick
9	57-20740	1/4" Flat Washer
4	57-20741	5/16" Flat Washer
10	59-34951	Zip / Cable 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 with a 1/4" washer 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 the backing plate, 4 - 1/4" washers, and 4 - 1/4" nuts.
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) (A).
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.

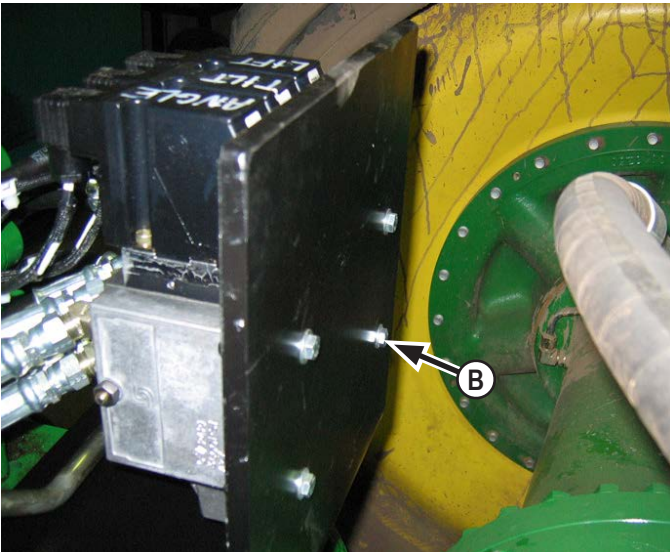
Valve Bracket Installation



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

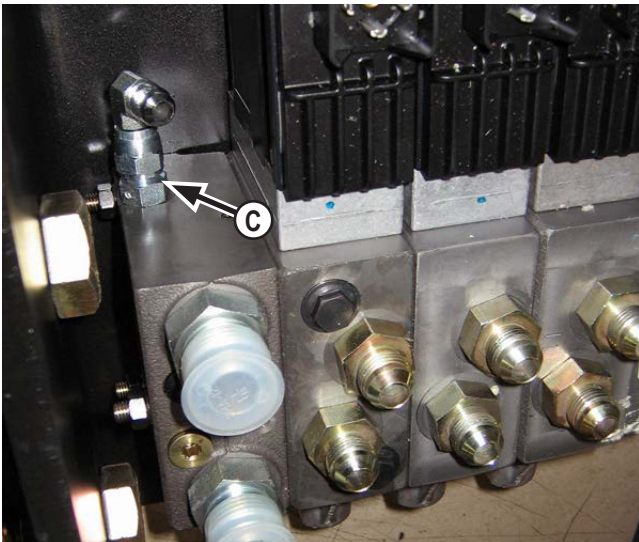
6. Attach the rear valve mount (PN: 18-11426) (1) to the rear of the tractor along the left tractor side frame with 2 - 1" x 2" bolt and 2 - 1" nuts. You can use one of the holes already in the tractor and drill 1 more or drill 2 holes where you would like the bracket to be located. Just position the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

Valve Installation

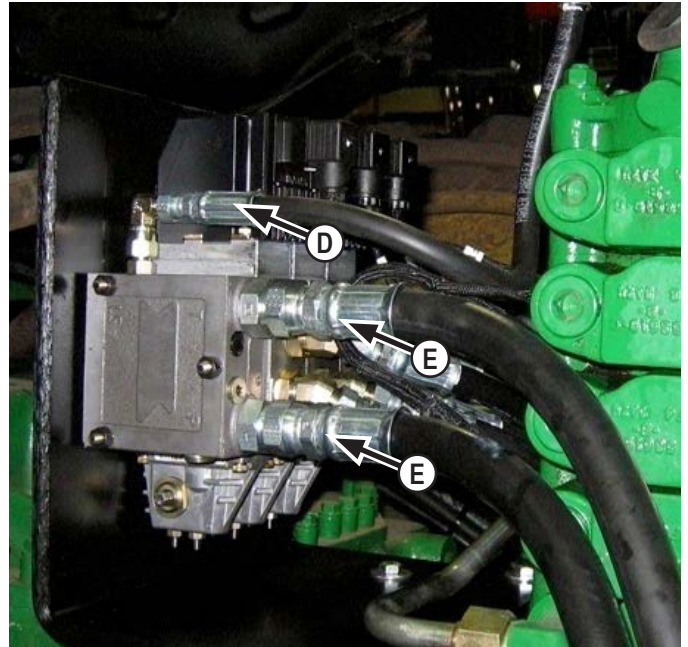


7. Attach the control valve (1) to the valve mount with 4 - 5/16" x 1" bolts and 4 - 5/16" flat washers (**B**).

Plumbing

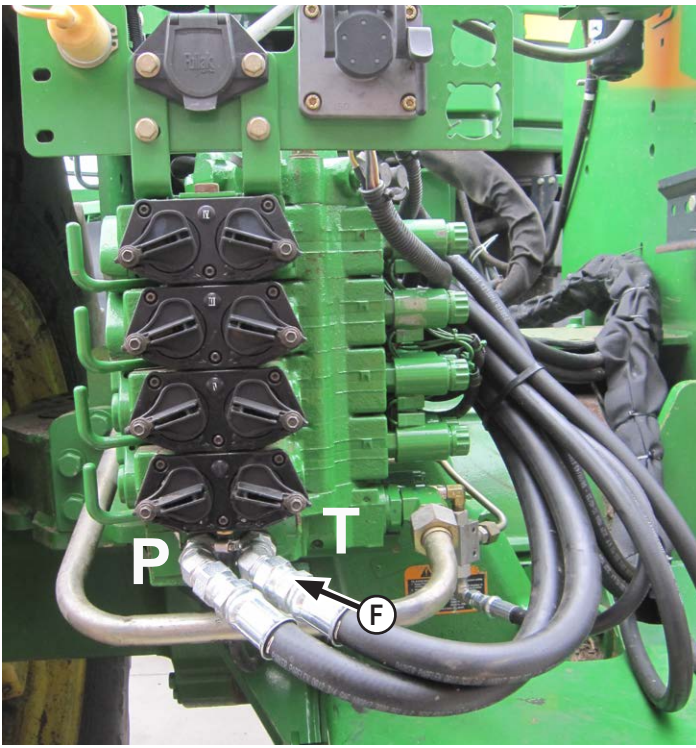


8. If fittings are not installed in the LS port on the control valve, install a straight -6-5 fitting (PN: 31-34033) and a 90° -6-6 fitting (PN: 31-34099) in the LS port (**C**).



9. Attach a 60" hose to the 90° fitting previously installed (**D**).

10. Attach the 60" hoses to the two fittings on the control valve that are closest to the left side of the tractor frame (**E**).



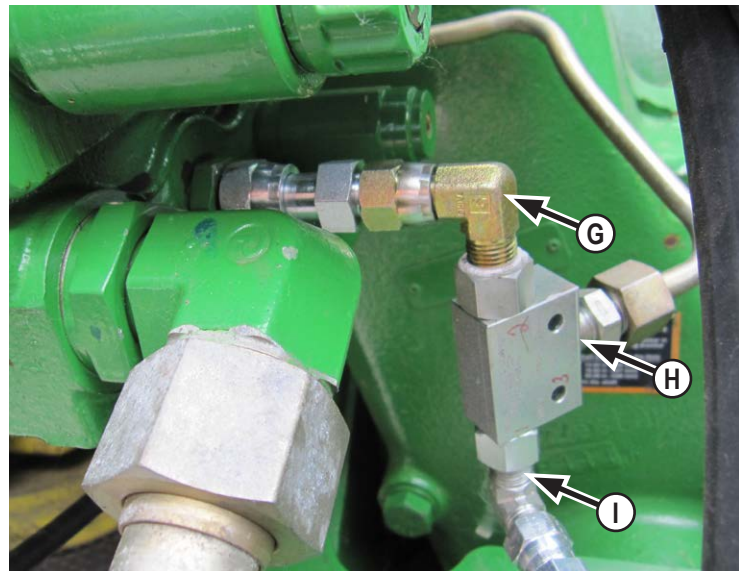
NOTE: Oil will flow. Be ready with an oil pan.

11. 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 either a 45° or 90° fitting (**F**).

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

13. Attach the 60" hose from the **top** fitting on the control valve to the fitting at the **T** port.

NOTE: Your tractor may look slightly different. Installation steps should be compatible.

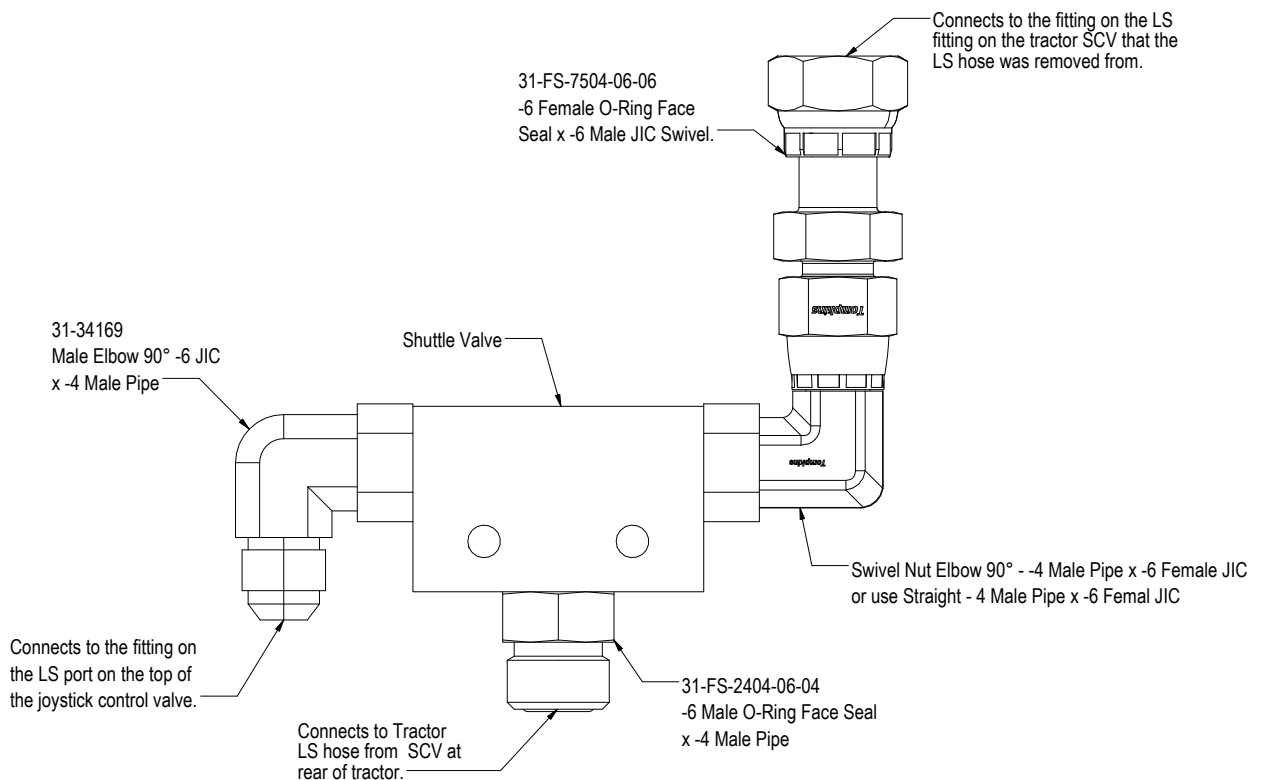


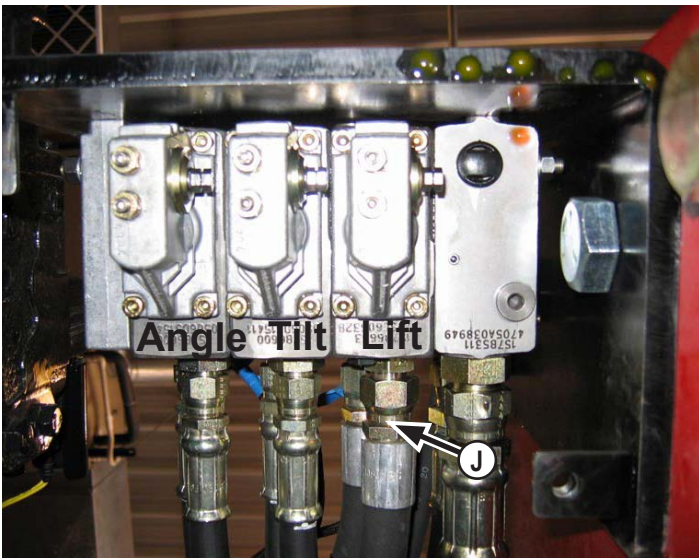
NOTE: Steps # 14-16 were originally for a JD 9000 series tractor. Picture may be different than your tractor but you still need disconnect the LS hose or line and install the shuttle valve. See diagram below.

14. Disconnect the LS hose or line at the rear of the tractor on the SCV. Install a swivel fitting along with a 90° swivel or straight fitting in its place. Attach the shuttle valve to the fitting (**G**).

15. Attach the LS hose or steel line and a straight O-Ring Face Seal Fitting (PN: 31-FS-2404-06-04) to the center port on the shuttle valve between the 2 bolt holes (**H**).

16. Install a 90° JIC x Pipe fitting (PN: 31-34169) (4) to the last port on the shuttle valve. Attach the end of the 60" hose from Step #9 to the male 90° fitting on the shuttle valve (**I**).





NOTE: Valve shown from the bottom and may look slightly different. Start with the Lift hoses next to the hoses that were connected to the Tractor R and P ports.

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 (**J**). 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.

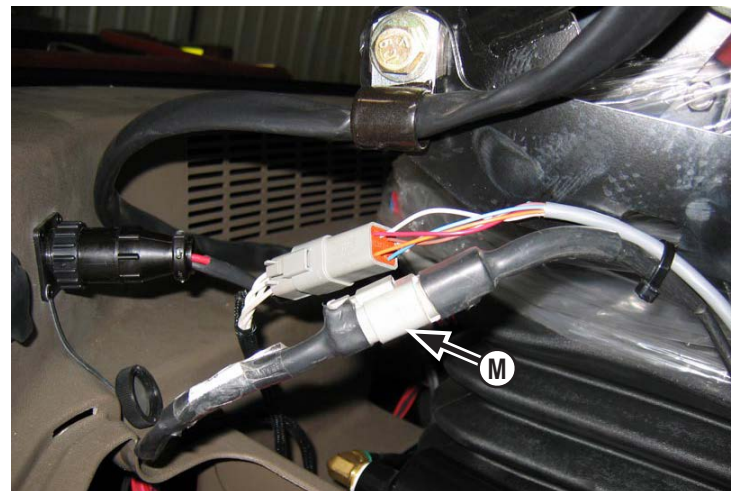
19. Guide the dozer Angle and Tilt hoses to the rear of the tractor. Attach the dozer Angle and Tilt hoses to the corresponding fittings on the control valve.

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

Cable Installation



21. Set control box in fuse compartment (**K**).



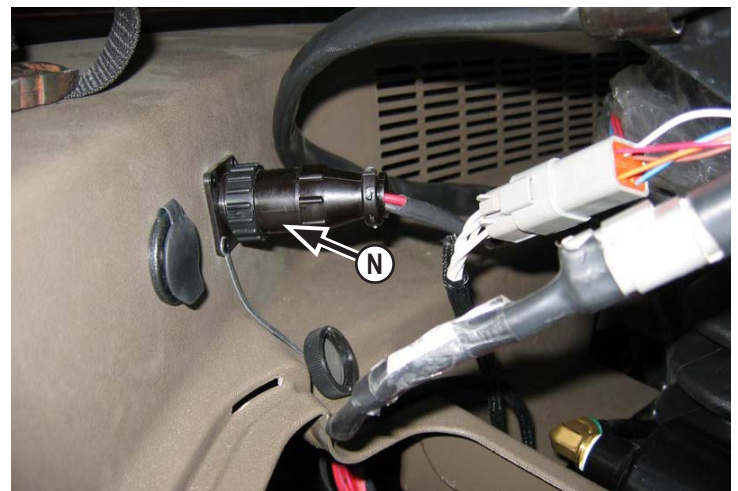
25. Connect the cable from the joystick to the wire harness (**M**).



22. Connect the dozer angle extension cord to the wire harness (**L**). 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.

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



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 (**N**).

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.

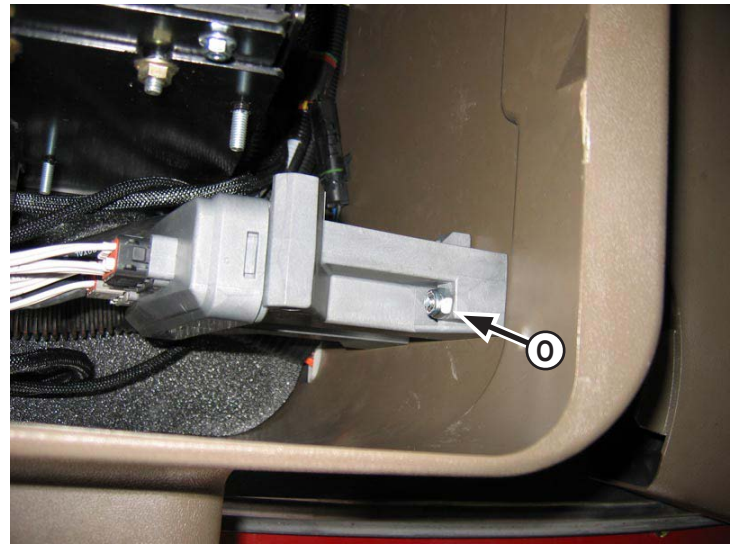
29. Connect the **Lift**, **Tilt**, and **Angle** Dins to the corresponding connections on the back of the control valve.

35. Use screws to fasten the Dins to the control 30 (A).

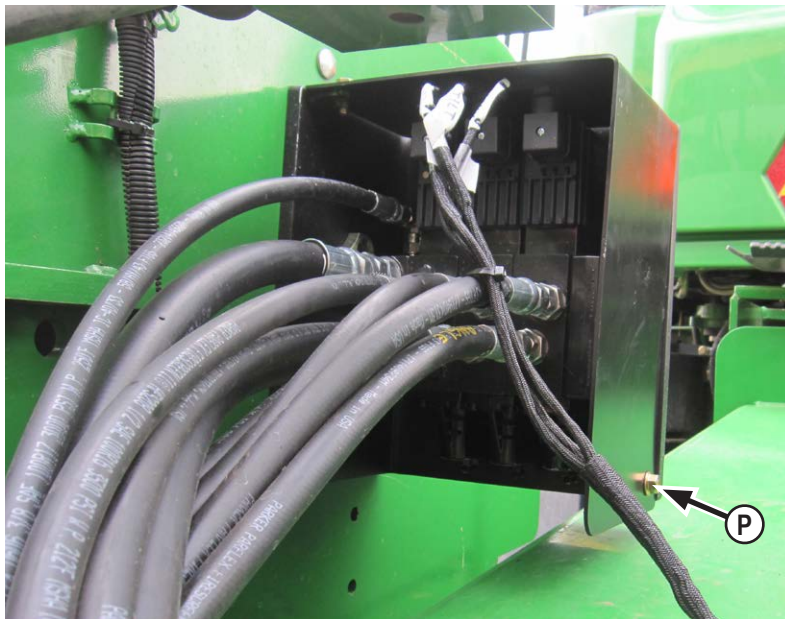
NOTE: The electric dozer functions can be overridden by attaching the supplied handles to the control valve and operating them.

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, 1/4" washer, and a 1/4" nut (O).



Valve Cover Installation



33. Place the valve cover over the valve and hoses. Verify that the hoses are not being pinched.

34. Attach the valve cover to the valve bracket with 2 - 3/8" flange bolts (P).

Joystick Operation

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

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

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

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

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

40. 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.

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

42. To cancel the float function, actuate the joystick.

NOTE: If directions are not correct, go to Step #17 and #18 on Page 7 and verify that the hoses are installed correctly.

Joystick Schematic

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CONNECTOR C6B, CONNECTS TO HARNESS CONNECTOR C6A

JOYSTICK "X" AND "Y" AXIS AND
5VDC PWR AND GND

FROM JOYSTICK

<	1	-	RED	(5 VDC PWR)
<	2	-	BLACK	(5 VDC GND)
<	3	-	WHITE	("X" AXIS)
<	4	-	BLUE	("Y" AXIS)

JOYSTICK AUXILIARY FUNCTIONS
12 VDC

FROM JOYSTICK

<	5	-	ORANGE	(TRIGGER)
<	6	-	BLUE	(TOP LEFT PB - ANGLE INC)
<	7	-	BROWN	(BOTTOM RIGHT - FLOAT)
<	8	-	WHITE	(BOTTOM LEFT - ANGLE DEC)
<	9	-	RED	(12 VDC PWR)
<	10	-		NOT USED
<	11	-		NOT USED
<	12	-		NOT USED



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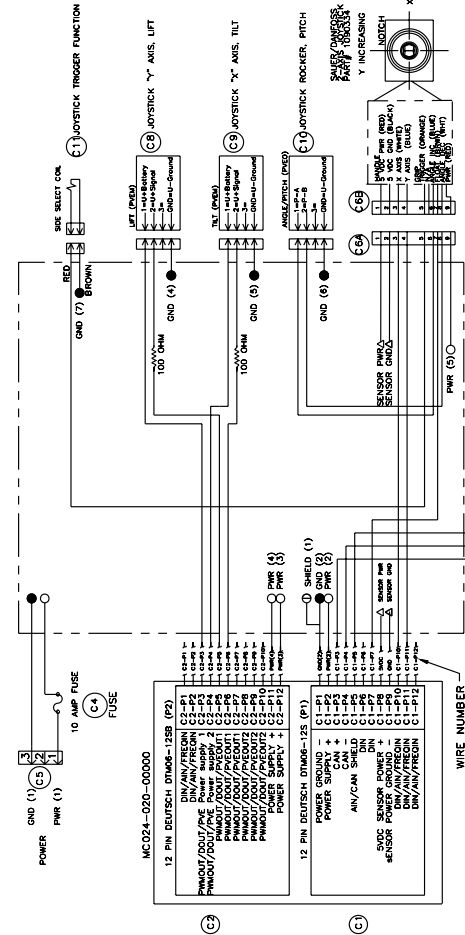
TITLE: SA-2839-SCH-JOYSTICK2

Date: 6/14/2007 DWG. NO.:

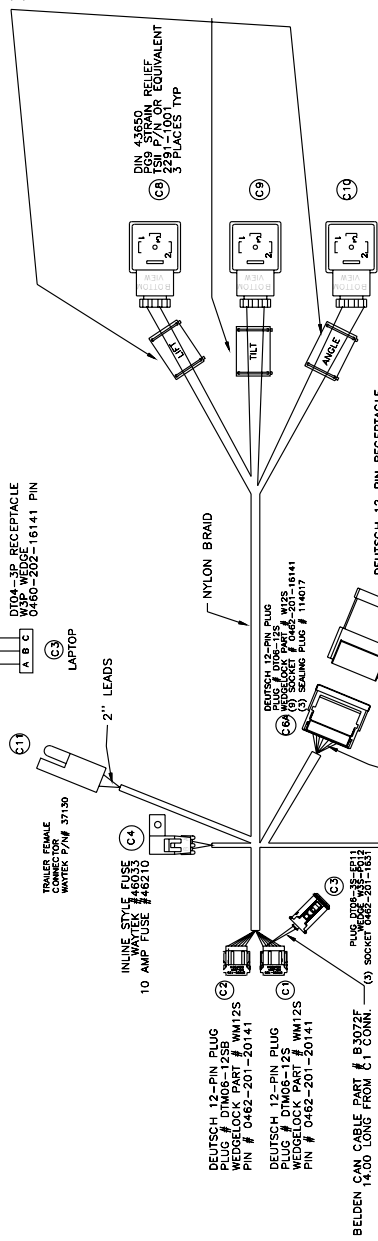
Joystick Schematic

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SUNSOURCE STD. PORT DESCRIPTIONS	
○	PWR
●	END
○	SHIELD
△	SENSOR PWR
▲	SENSOR GND
○	CAN+
○	CAN-
○	CAN D
○	CAN+ 1
○	CAN- 1



USE ZIP TIE STYLE TAG TO LABEL AS SHOWN WITH WHITE TEXT WITH BLACK BORDER WITH PANDUIT #PLT1M-M100 CABLE TIES (3) PLACES



NOTE: UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES WIRE TO BE 18AWG GXL WHITE WITH BLACK TEXT - "VIDEOJET #2" OR "DOMING" EQUIVALENT. "C" NUMBER TO BE ON ALL CONNECTORS USING POLY STICKER REFERENCE "BUILT PER SA-1000-SPEC" ON HARNESS LABEL.

PLEASE BAG AND SHIP WITH HARNESS

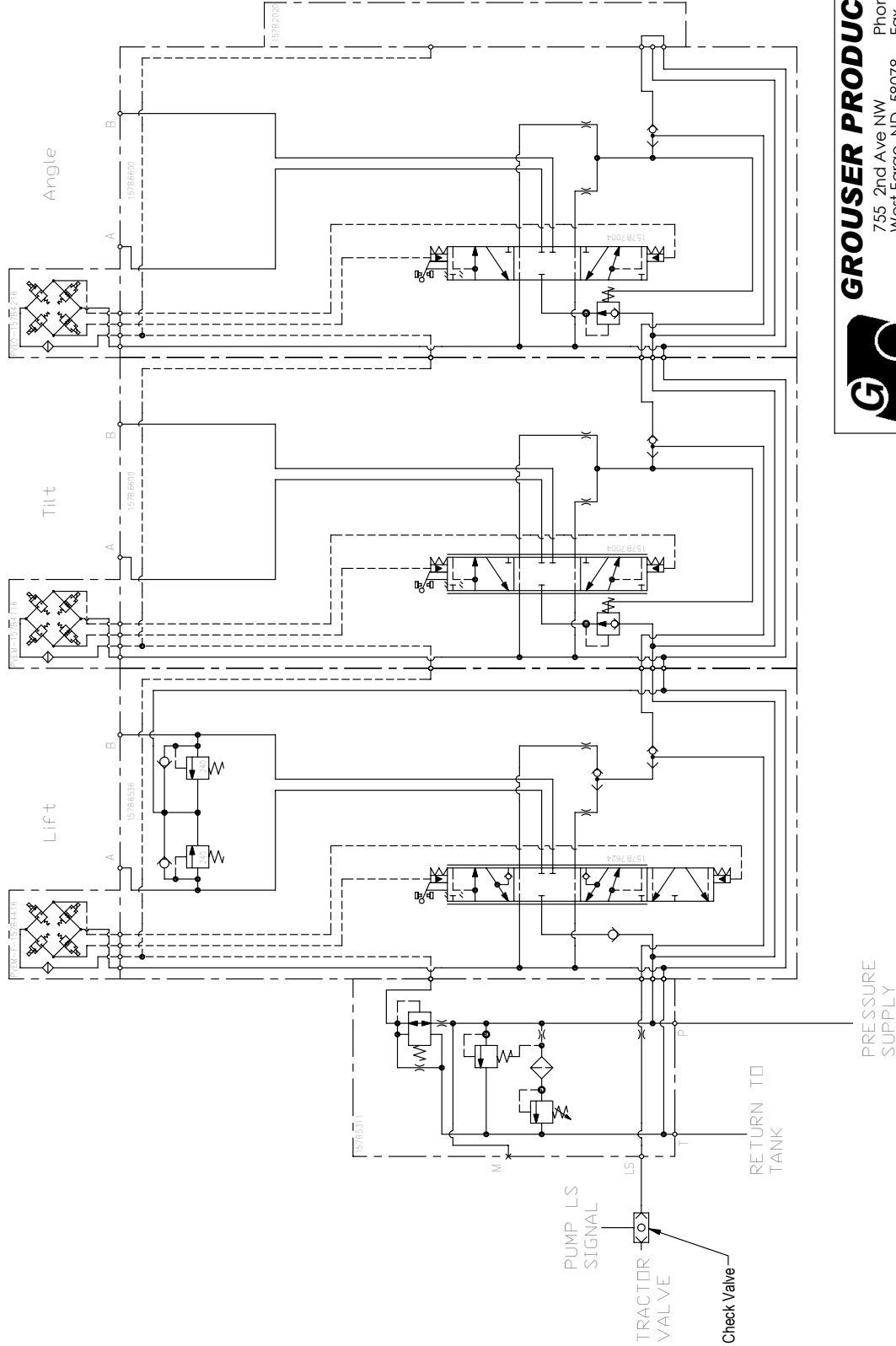
GROUSER PRODUCTS INC.
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 West Fargo, ND 58078
 WWW.GROUSER.COM
 Phone 701.282.7710
 Fax 701.282.8131

TITLE: SA-2839-MA2

Date: 6/14/2007 DWG. NO.:

Hydraulic Schematic

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 West Fargo, ND, 58078
 Phone 701.282.7710
 Fax 701.282.8131
 WWW.GROUSER.COM

TITLE: Valve Hydraulic Schematic

Date: 5-1-2007

DWG. NO.: STX

Improvements

Grouser Products Inc. is continually striving to improve its products. We reserve the right to change prices, specification, or equipment at any time without notice. We also reserve the right to make improvements or changes when it becomes practical and possible to do so without incurring any obligation to make changes or additions to the equipment sold previously.

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 **two (2) years for Agriculture Series Blades and one (1) year for Heavy Duty Series from date of original retail delivery.**

The obligation of the consumer under this warranty:

1. To read the operators manual and to operate, lubricate, maintain and store equipment in accordance with the instructions listed in the operators manual.
2. To inspect equipment and if any part needs repair or replacement when continued use would cause damage or wear to other parts or safety.
3. 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.

The obligation of the dealer under this warranty:

1. Complete warranty registration form and submit within 30 days of sale.
2. Contact Grouser Products for authorization prior to performing any warranty repairs or part replacement.
3. Complete warranty request form and submit with photos and supporting documentation.

The obligation of Grouser Products under this warranty:

1. Repair or replace, any equipment or parts, in the judgment of Grouser Products to be defective in material or workmanship.
2. Grouser Products will cover the cost of parts and ground shipping at dealer invoice only.
3. 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.

This warranty does not cover:

1. Depreciation or damage caused by normal wear, accident, improper assembly, improper adjustments.
2. Improper maintenance including lack of proper lubrication, or improper use. Including loose bolts, nuts, or fitting due to over tightening or vibration after 20 hours of operation.
3. Repairs or alterations without authorization from a Grouser Products representative.
4. 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.

NO EMPLOYEE OR REPRESENTATIVE OF GROUSER PRODUCTS IS AUTHORIZED TO CHANGE THE WARRANTY IN ANY WAY OR GRANT ANY OTHER WARRANTY.

Contact Us

As always, if you have any questions about your system or other products made by Grouser, feel free to contact us.



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