

# BX Third Function Valve Kit

## #380-289A & #380-339A Installation Instructions



For Kubota 80 Series BX Tractors

Manual No. 380-304M

### Before You Start



When you see this symbol, the subsequent instructions and warnings are serious - follow without exception. Your life and the lives of others depend on it!

#### California Proposition 65



**WARNING:** Cancer and reproductive harm.  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

**IMPORTANT:** Before you begin, thoroughly read these instructions and check to be sure all parts are accounted for. Please retain these installation instructions for future reference and parts ordering information.

### General Information

Your BX Third Function Valve Kit is exclusively designed for your Kubota 80 series BX tractors. Please read these installation instructions thoroughly before assembling this kit to your Kubota tractor and loader. Especially read information relating to safety concerns.

These assembly instructions apply to the Third Function Valve Kit Accessories listed below:

- **380-339A: 3FVK FF BX2680** . . . . . **page 2**
- **380-289A: 3FVK PC BX2680** . . . . . **page 5**

### Further Assistance

Your Land Pride dealer wants you to be satisfied with your new BX Third Function Valve Kit. If for any reason you do not understand any part of this manual or are not satisfied with the service received, the following actions are suggested:

1. Discuss any problems you have with your Third Function Valve Kit with your dealership service personnel so they can address the problem.
2. If you are still not satisfied, seek out the owner or general manager of the dealership, explain the question/problem, and request assistance.
3. For further assistance write to:

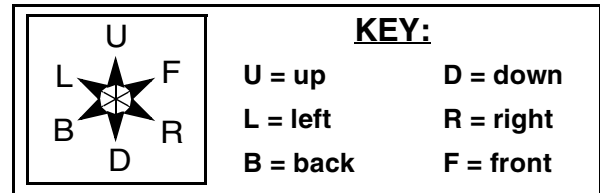
**Land Pride Service Department**  
**1525 East North Street**  
  
P.O. Box 5060  
Salina, Ks. 67402-5060  
  
E-mail address  
[lp servicedept@landpride.com](mailto:lp servicedept@landpride.com)

### Assembly Instructions

A detailed listing of parts for this kit is provided on page 10 for kits. Use the list that is for your specific Third Function Valve Kit as a checklist to inventory parts received. Please contact your local Land Pride dealer for any missing hardware.

#### Direction Reference

All directional references are made from the operator seat while facing the direction the machine will operate.



Directional Arrows Used in Illustrations

### Initial Preparations

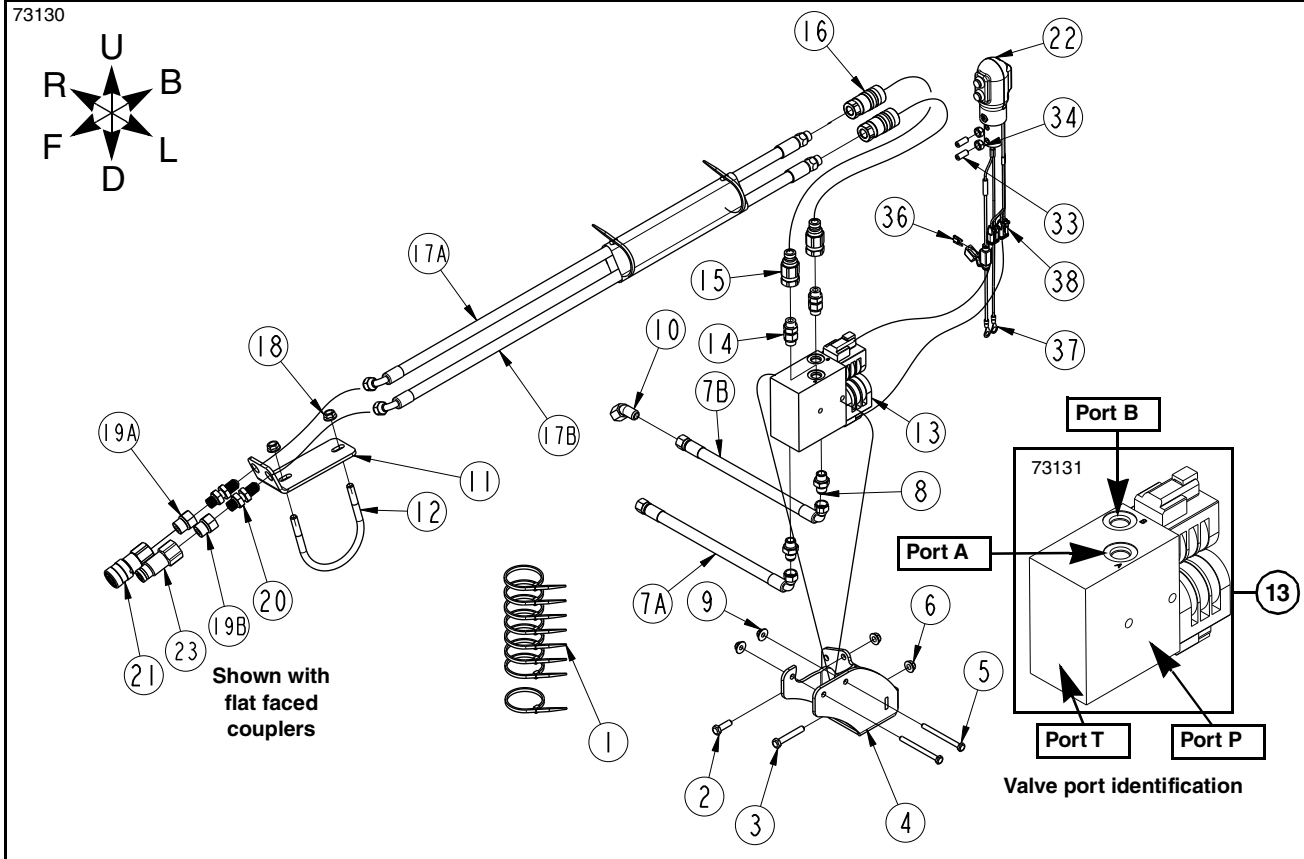


#### WARNING

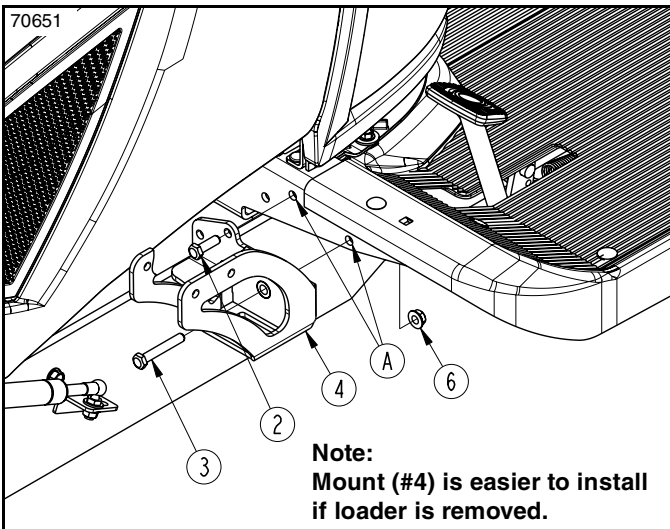
*To avoid serious injury or death: Hydraulic fluid under high pressure can penetrate the skin and/or eyes causing a serious injury. Wear protective gloves and safety glasses or goggles when working with hydraulic systems.*

The steps listed below must be followed before installing this kit:

1. If attached, dismantle loader from tractor. If loader is not attached, skip to step 4.
2. Turn tractor off, then relieve all hydraulic pressure from hydraulic lines by operating the loader control lever in all directions. Proceed with locking the control lever.
3. Disconnect loader hydraulic lines.
4. Restart tractor and slowly back away from loader.
5. Park tractor on a flat, level surface. Put tractor in park or set park brake, turn off engine, and remove switch key to prevent unauthorized starting.
6. As a safety precaution, disconnect the negative battery cable from the battery terminal. Move cable away from the terminal to avoid accidental contact.



**BX Third Function Valve kit**  
Figure 1



**Valve Mount Assembly (Shown Without Loader Arms)**  
Figure 2

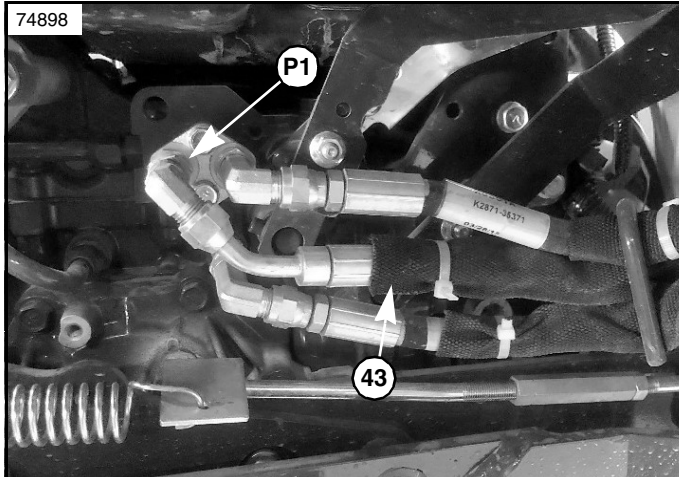
## Valve Mount Assembly

Refer to Figure 1 & Figure 2:

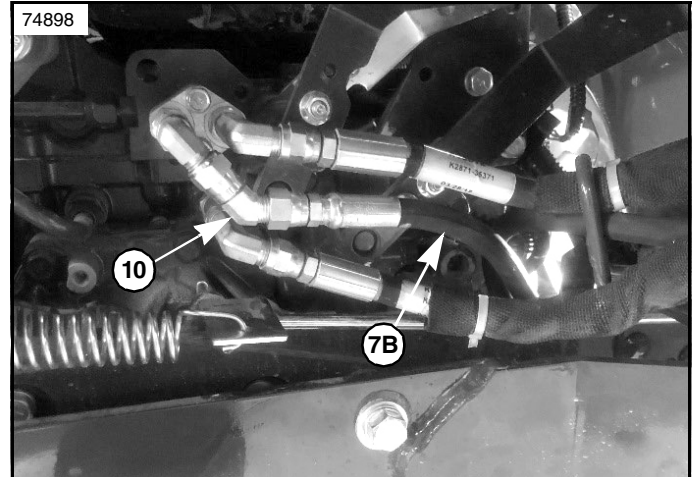
1. Attach valve mount (#4) to existing holes "A" in the tractor platform with one 5/16" x 1" bolt (#2), one 5/16" x 2" bolt (#3), and two hex whiz nuts (#6). Tighten hex whiz nuts to 17 ft-lbs.

Refer to Figure 1:

2. Attach valve (#13) to mount (#4) with two 1/4" x 3" hex head bolts (#5) and hex locknuts (#9). Tighten lock nuts to 8 ft-lbs of torque.
3. Attach hydraulic hose (#7A) to "T" port in valve (#13), using adapter (#8).
4. Attach hydraulic hose (#7B) to "P" port in valve (#13), using adapter (#8).
5. Install adapters (#14) to "A" and "B" ports in valve (#13).
6. Attach male couplers (#15) to adapters (#14) in valve (#13).
7. Route hydraulic hoses (#7A & #7B) to the right side of mounting bracket (#4) and beneath the tractor platform.



Remove Hose (#43)  
Figure 3



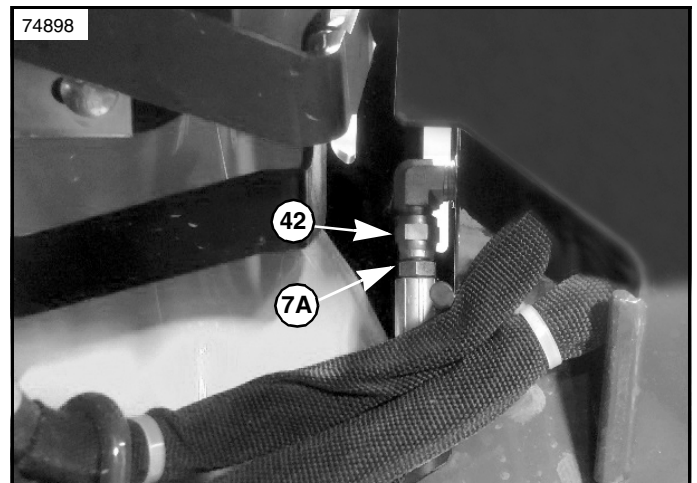
Install Hose (7B)  
Figure 4

## Connect to Power Beyond Port

Refer to Figure 3, Figure 4, & Figure 5:

**IMPORTANT:** Land Pride recommends that your dealer connect hydraulic hoses (#7A & #7B) to your tractor's power beyond port (P1) and loader valve fitting (T1). Improper hook-up could cause damage to your tractor.

**IMPORTANT:** DO NOT connect hydraulic hoses (#7A & #7B) to the loader valve fitting (T1) and power beyond port (P1) if the outer block feeds equipment mounted on the back of the tractor such as a backhoe. The instructions below do not apply in this situation. Have your nearest dealer hook-up these hoses. Improper hook-up can damage your



Install Hose (7A)  
Figure 5

1. Place chocks in front and back of tractor's left rear wheel.
2. Loosen lug nuts on right rear wheel. Do not remove lug nuts at this time.
3. Jack right rear wheel off the ground and place a jack stand under the right rear wheel axle.
4. Lower right rear axle onto the jack stand. The wheel should still be slightly off the ground. Make sure jack stand is secure and will not slip out from under the tractor axle.
5. Remove lug nuts and right rear wheel.

**Refer to Figure 3:**

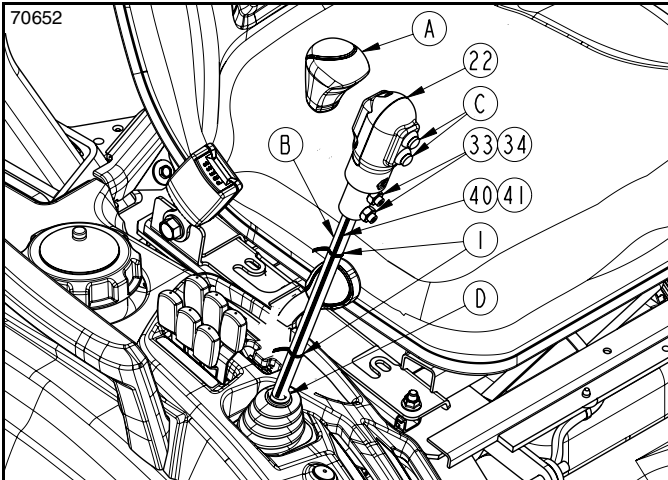
6. Locate and remove the hydraulic line (#43) that connects power beyond port on the loader valve to power beyond port (P1). The outlet block is directly behind the right rear tractor tire.

**Refer to Figure 1 on page 2 & Figure 4:**

7. Connect elbow fitting (#10) to the fitting on the power beyond port (P1) where the hydraulic line was removed in step 6.
8. Connect free end of hydraulic hose (#7B) to elbow fitting (#10).

**Refer to Figure 1 on page 2 & Figure 5:**

9. Connect free end of the hydraulic hose (#7A) to the fitting (#42) on the loader valve where the hydraulic line was removed in step 6.
10. Secure hoses (#7A & #7B) to the underside of the tractor with cable ties (#1).
11. Replace right rear wheel and screw lug nuts on until snug.
12. Jack axle up and remove jack stand.
13. Lower tractor down and tighten lug nuts in a crisscross pattern. Refer to tractor Operator's Manual for proper torque value.
14. Remove chocks.
15. Check tractor hydraulic fluid level. If low, add recommended hydraulic fluid. Refer to your tractor Operator's Manual for recommended hydraulic fluid and procedure for checking hydraulic fluid level.



**Control Stick Assembly**  
Figure 6

## Control Lever Assembly

Refer to Figure 6:

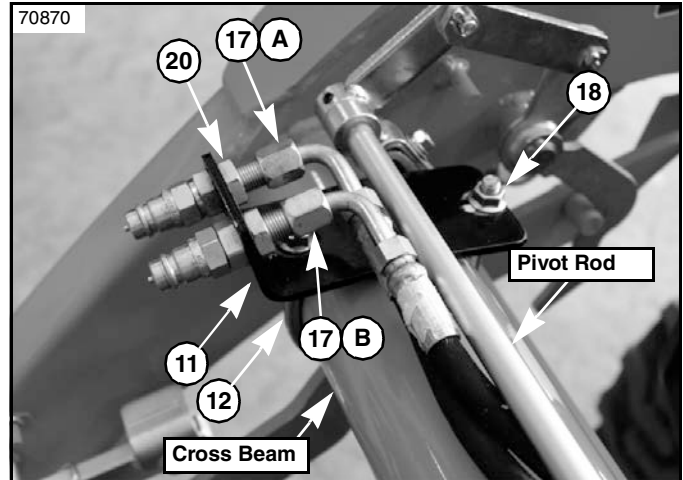
1. Remove existing knob "A" from control lever "B".
2. Install new control handle (#22) over end of control lever "B" with push buttons "C" facing the operator.
3. Tighten set screws (#33) against control lever "B". Tighten jam nuts (#34) to secure set screws.
4. Route wire harnesses (#37 & #38) down control lever "B" and through hole in rubber shield "D".

Refer to Figure 1 on page 2:

5. Route wire harness (#38) under the tractor platform and along newly installed hydraulic lines (#7) to the third function valve (#13).
6. Attach connectors on end of wire harness (#38) to solenoids on valve (#13).
7. Route wire harness (#37) with eyelets under the tractor platform to the tractor battery.
8. Connect red wire in harness (#37) to the battery's positive (+) post.
9. Connect the black wire in harness (#37) to the battery's negative (-) post.
10. Reattach disconnected negative battery wire to the battery's negative (-) post.

Refer to Figure 1 on page 2 & Figure 6:

11. Secure wire harnesses (#37 & #38) with cable ties (#1).

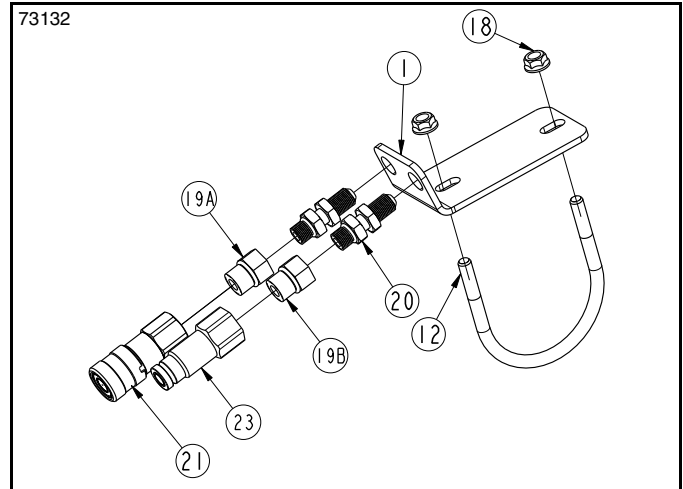


**Hose Route Along Loader Arm**  
(Shown with Pioneer Couplers)  
Figure 7

## Cross Beam Mount Assembly

Refer to Figure 1 on page 2 & Figure 7:

1. On the loader's right-hand side, attach bulkhead mount (#1) to the loader's crossbeam with u-bolt (#12) and whiz nuts (#18). Tighten whiz nuts to 20 ft-lbs.

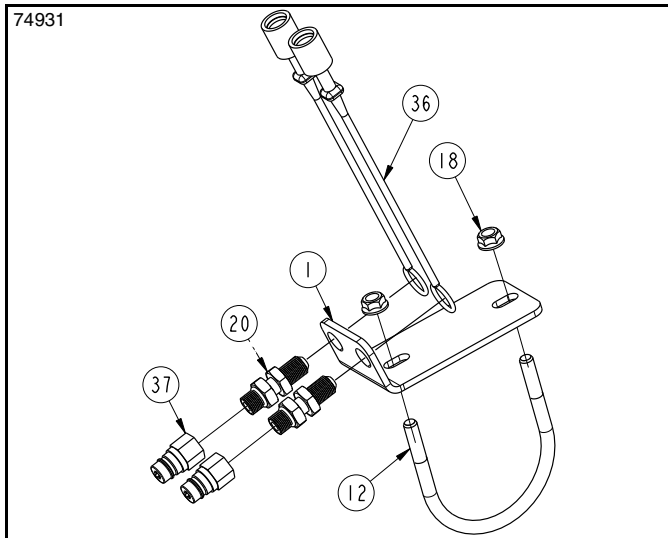


**Bulkhead Mount with Flat Faced Couplers**  
Figure 8

## Bulkhead Assembly with Flat Face Couplers

Refer to Figure 7 & Figure 8:

1. Attach bulkhead fittings (#19A & 19B) to bulkhead mount (#1). Tighten bulkhead locknuts to bulkhead mount (#1).
2. Attach female coupler (#21) to fitting (#19A). Tighten and secure fittings.
3. Attach male coupler (#23) to fitting (#19B). Tighten and secure fittings.
4. Attach hose (#17A) to adapter (#19A) and tighten.
5. Attach hose (#17B) to adapter (#19B) and tighten.

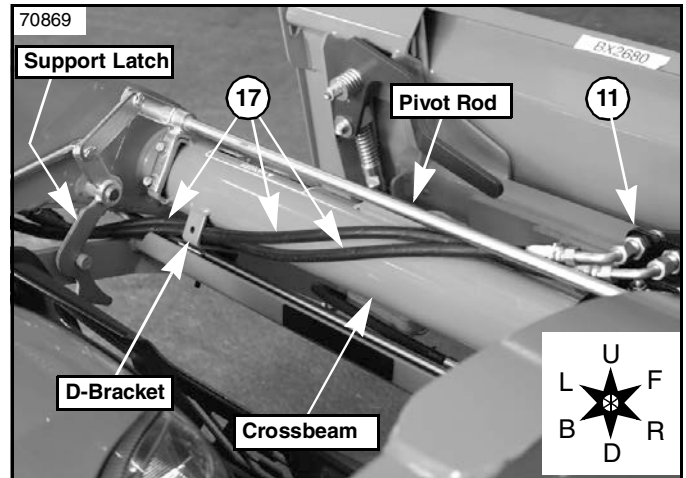


**Bulkhead Mount with Pioneer Couplers**  
Figure 9

## Bulkhead Assembly with Pioneer Couplers

Refer to Figure 7 & Figure 9:

1. Attach bulkhead fittings (#20) to bulkhead mount (#1). Tighten bulkhead locknuts to bulkhead mount.
2. Slide red dust caps (#35) on bulkhead fittings.
3. Attach pioneer male couplers (#37) to the bulkhead fittings (#20). Tighten and secure couplers to fittings.
4. Attach hoses (17A & 17B) to fittings (#20) and tighten.

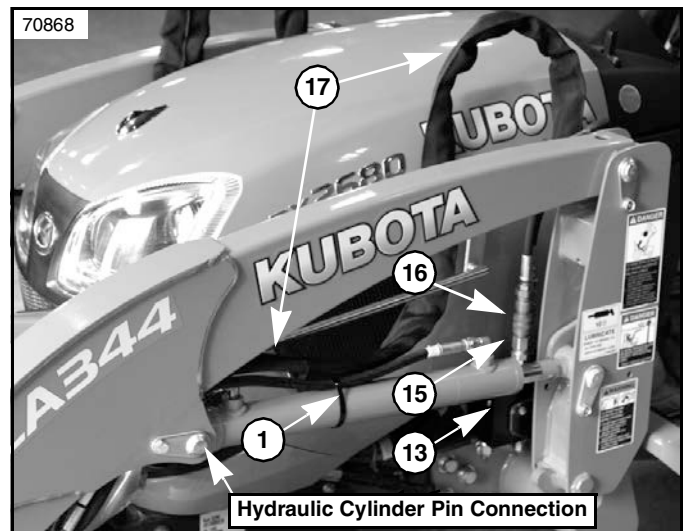


**Cross Beam & Hose Holder Assembly**  
Figure 10

## Hydraulic Hose Routing

Refer to Figure 1 on page 2 & Figure 10:

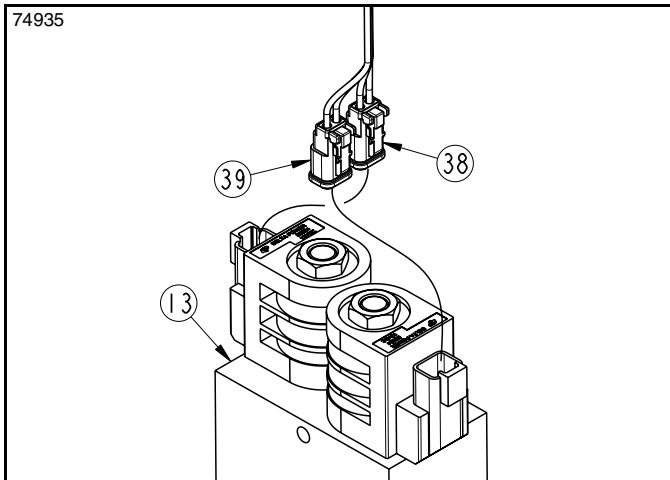
1. Route hydraulic hoses (#17) under pivot rod, through D-bracket, and in front of support latch to the left-hand loader arm.



**Hose Route Along Loader Arm**  
Figure 11

Refer to Figure 1 on page 2 & Figure 11:

2. Thread hydraulic hoses (#17) under the loader arm and above the hydraulic cylinder pin connection.
3. Exit hydraulic hoses (#17) out from under the loader arm above the hydraulic cylinder pin connection.
4. Continue routing hydraulic hoses (#17) between the tractor and loader arm to third function valve (#13) as shown.)
5. Attach female couplers (#16) to hoses (#17).
6. Attach hose (#17A) to coupler in valve port (A) and (#17B) to coupler in valve port (B).
7. Secure hydraulic hoses (#17) as needed with cable ties (#1).



Switch Wire Connections  
Figure 12

## Relieve Hydraulic System Pressure

Be sure to lower the attachment to the ground and to relieve all hydraulic pressure to the attachment before leaving the tractor seat. Relieve hydraulic pressure to the attachment as follows:

1. Turn tractor switch key to off.
2. Press and hold both red buttons down on the control handle until all movement at the attachment stops.

## Check Operating and Fluid Level

The Third Function Valve is now ready to be used with a multitude of attachments. Be sure to familiarize yourself with a complete understanding of how to operate the Third Function Valve Kit.

### DANGER

*To avoid serious injury or death:*

*Do not allow bystanders to be near the attachment, loader arms, or tractor during operation. They can become entangled, pinched, or crushed by the equipment. Disconnect and lockout power source before making adjustments or servicing tractor and attachment.*

1. Hook attachment to the tractor front loader and couple hydraulic hoses to the bulkhead couplers at the front of the loader.
2. Raise attachment off the ground and operate the third function hydraulics using the push-buttons on the newly installed control handle.
  - The top red button switch will actuate the attachment in one direction.
  - The bottom red button switch will actuate the attachment in the opposite direction.

#### Refer to Figure 12:

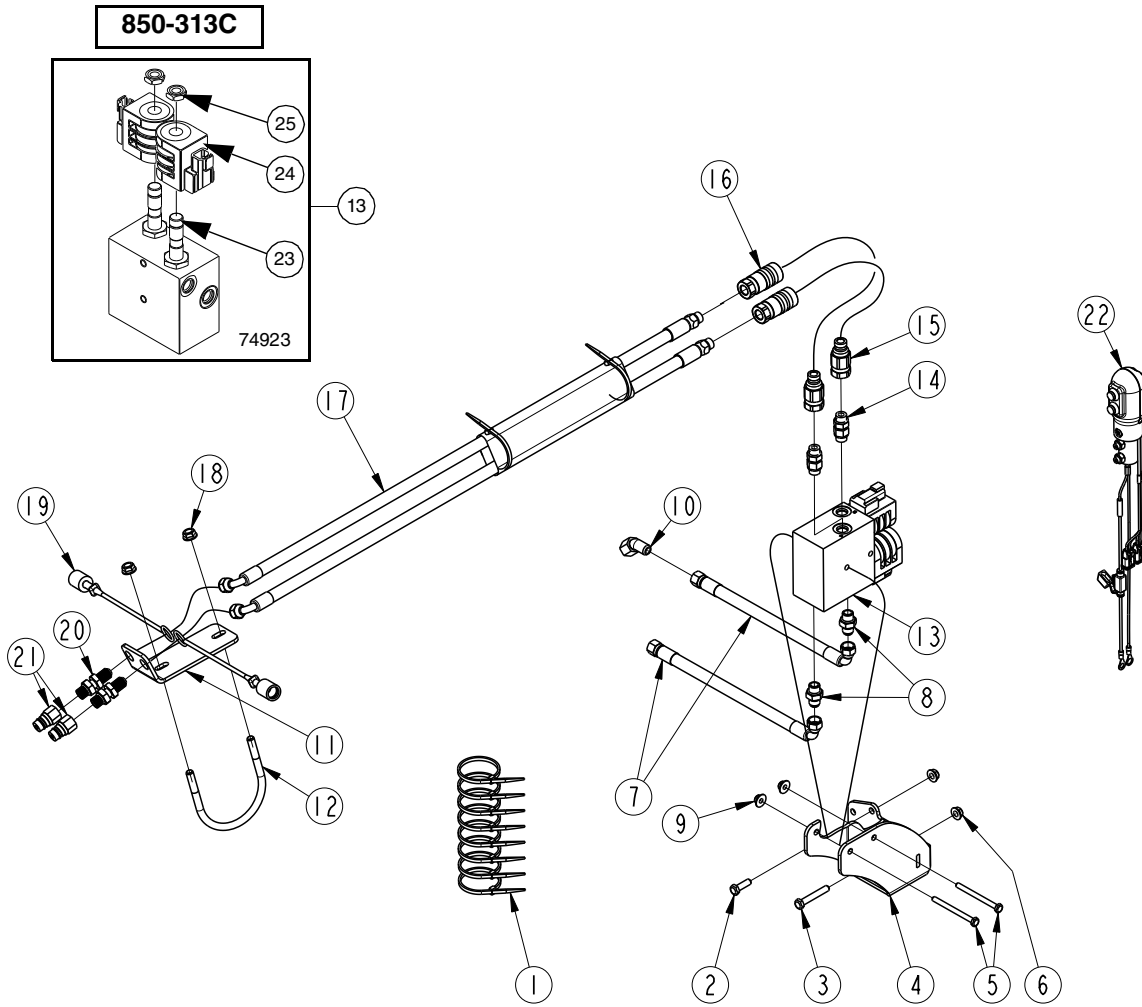
3. Switch wire connections (#38 & #39) at solenoid valve (#13) if the attachment's hydraulic cylinder(s) operate in the opposite direction intended.

**IMPORTANT:** Refer to your tractor Operator's Manual for recommended hydraulic fluid and procedure for checking hydraulic fluid level.

4. Once hoses and cylinder(s) are full of hydraulic fluid, check tractor hydraulic fluid level.
5. If low, add recommended hydraulic fluid.

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Hydraulic Hose Identification Chart

<p><b>851-193C - (#17)</b></p>	<p>85.00</p>
<p><b>851-949C - (#7)</b></p>	<p>58.00</p>

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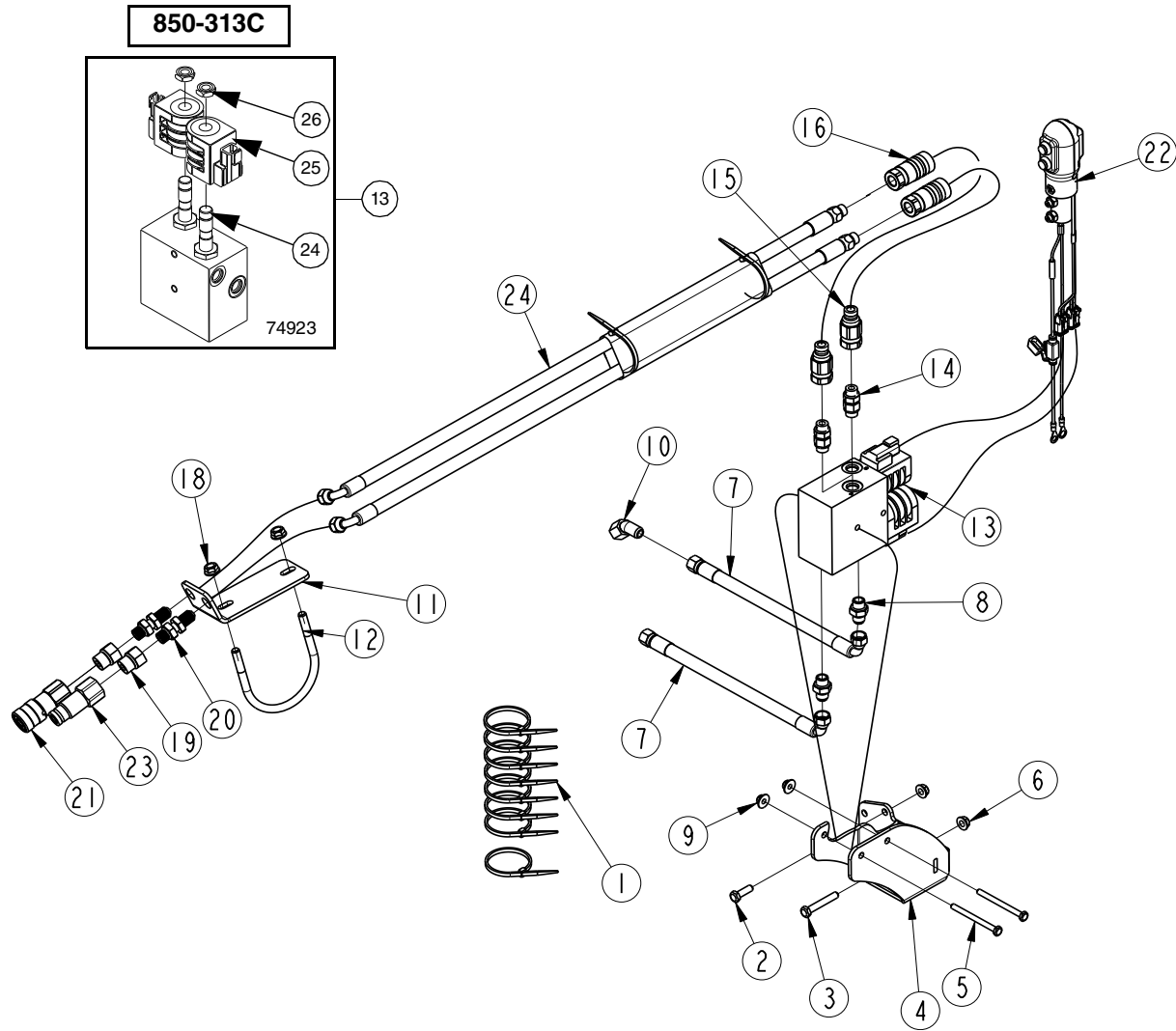
Third Function Valve Kit for Cab Tractor  
Figure 13



**Kit No. 380-289A VALVE KIT, BX THIRD FUNCTION  
(Equipped with pioneer couplers)**

Item	Part No.	Description	Qty
1	800-112C	CABLE TIE .19X7.25 1.75D 50LB . . . . .	8
2	802-159C	HHCS 5/16-18X1 GR5 . . . . .	2
3	802-115C	HHCS 5/16-18X2 GR5 . . . . .	1
4	380-303H	MNT BKT, BX80 3RD VALVE . . . . .	1
5	802-274C	HHCS 1/4-20X3 GR5 . . . . .	2
6	803-043C	NUT HEX WHIZ 5/16-18 PLT . . . . .	2
7	851-959C	HH1/4R2 58 9/16FJIC 9/16FJIC90 . . . . .	2
8	811-170C	AD 9/16MORB 9/16MJIC . . . . .	2
9	803-088C	NUT HEX LOCK 1/4-20 FLG . . . . .	2
10	811-397C	EL 45 9/16MJIC 9/16FJIC . . . . .	1
11	380-223D	PLATE, BX BLKHD MOUNT. . . . .	1
12	806-256C	U-BOLT 3/8-16X3 1/2X4 1/8 RND . . . . .	1
13	850-313C	VALVE, THIRD FUNCTION (DELTA) . . . . .	1
14	811-636C	AD 9/16MORB STRAIGHT UNION . . . . .	2
15	861-288C	CP 9/16FORB QD 1/4 BODY MALE . . . . .	2
16	861-287C	CP 9/16FORB QD 1/4 BODY FEMALE . . . . .	2
17	381-170L	ASY, BX80 3RD VLV LOADER HOSE . . . . .	1
18	803-198C	NUT HEX WHIZ 3/8-16 PLT . . . . .	2
19	851-976C	DUST CAP, 1/4" QD AG . . . . .	2
20	851-276C	AD 9/16MJIC9/16MORB BLKHD W/LN . . . . .	2
21	841-467C	CP 9/16 FORB QD 1/4 BODY MALE . . . . .	2
22	380-302S	ASY, PUSH BUTTON CNTRL HNDL (See page 7 for parts breakdown) . . . . .	
23	85002296	4-WAY, 2-POS SOLENOID VALVE . . . . .	2
24	39680034	12VDC SOLENOID COIL, DT04-2P . . . . .	2
25	36202020	COIL NUT . . . . .	2

73134



Hydraulic Hose Identification Chart

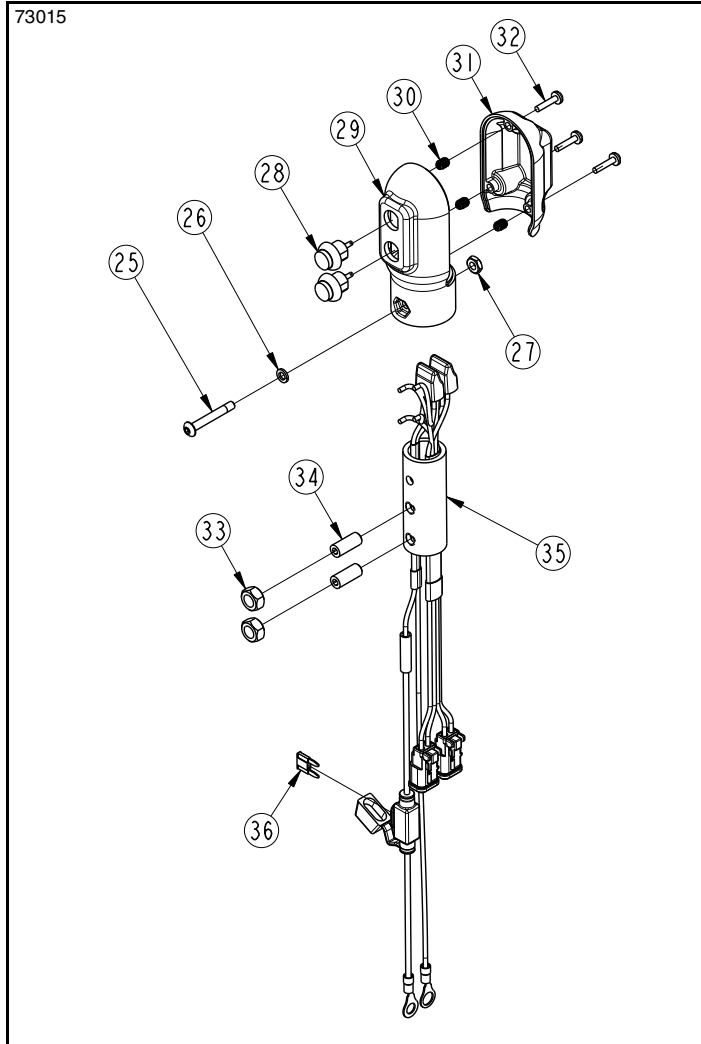
<p><b>851-193C - (#17)</b></p>	<p>85.00</p>
<p><b>851-949C - (#7)</b></p>	<p>58.00</p>

73136

Third Function Valve Kit for Cab Tractor  
Figure 14

**Kit No. 380-339A VALVE KIT, BX THIRD FUNCTION  
(Equipped with flat faced couplers)**

Item	Part No.	Description	Qty
1	800-112C	CABLE TIE .19X7.25 1.75D 50LB. ....	8
2	802-159C	HHCS 5/16-18X1 GR5. ....	1
3	802-115C	HHCS 5/16-18X2 GR5. ....	1
4	380-303H	MNT BKT, BX80 3RD VALVE. ....	1
5	802-274C	HHCS 1/4-20X3 GR5 ....	2
6	803-043C	NUT HEX WHIZ 5/16-18 PLT. ....	2
7	851-959C	HH1/4R2 58 9/16FJIC 9/16FJIC90 ....	2
8	811-170C	AD 9/16MORB 9/16MJIC. ....	2
9	803-088C	NUT HEX LOCK 1/4-20 FLG. ....	2
10	811-397C	EL 45 9/16MJIC 9/16FJIC ....	1
11	380-223D	PLATE, BX BLKHD MOUNT ....	1
12	806-256C	U-BOLT 3/8-16X3 1/2X4 1/8 RND ....	1
13	850-313C	VALVE, THIRD FUNCTION (DELTA) ....	1
14	811-636C	AD 9/16MORB STRAIGHT UNION ....	2
15	861-288C	CP 9/16FORB QD 1/4 BODY MALE ....	2
16	861-287C	CP 9/16FORB QD 1/4 BODY FEMALE ....	2
17	381-170L	ASY, BX80 3RD VLV LOADER HOSE ....	1
18	803-198C	NUT HEX WHIZ 3/8-16 PLT ....	2
19	841-103C	AD 3/4MORB 9/16FORB. ....	2
20	851-276C	AD 9/16MJIC9/16MORB BLKHD W/LN ....	2
21	861-543C	CP 3/4FORB QD FML FLATFACE. ....	1
22	380-302S	ASY, PUSH BUTTON CNTRL HNDL ....	1
23	841-099C	CP 3/4FORB QD FLATFACE. ....	1
24	85002296	4-WAY, 2-POS SOLENOID VALVE ....	2
25	39680034	12VDC SOLENOID COIL, DT04-2P ....	2
26	36202020	COIL NUT ....	2



Control Handle  
Figure 15

**Part No. 380-302S Push Button Control Handle**

Item	Part No.	Description	Qty
25	801-250C	HSBHCS #10-32X1 3/8	1
26	804-054C	WASHER LOCK #10	1
27	803-269C	NUT HEX 10-32 PLT	1
28	833-739C	SWITCH, P9 PB NO SPST MOM RED	2
29	837-054C	BASE, PUSH BUTTON CNTRL HNDL	1
30	99362A300	6-32 BRASS TAPPING INSERT	3
31	837-053C	COVER, PUSH BUTTON CNTRL HNDL	1
32	801-091C	CRPHMS 6-32X5/8 SS	3
33	803-008C	NUT HEX 5/16-18 PLT	2
34	801-204C	SCREW SET SCKT HD 5/16-18X3/4	2
35	380-225D	MOUNT TUBE, CONTROL STICK	1
36	833-495C	FUSE, 10 AMP MINI BLADE	1





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