Draper Platform Adapter Bundle

RC0098

Installation Instructions

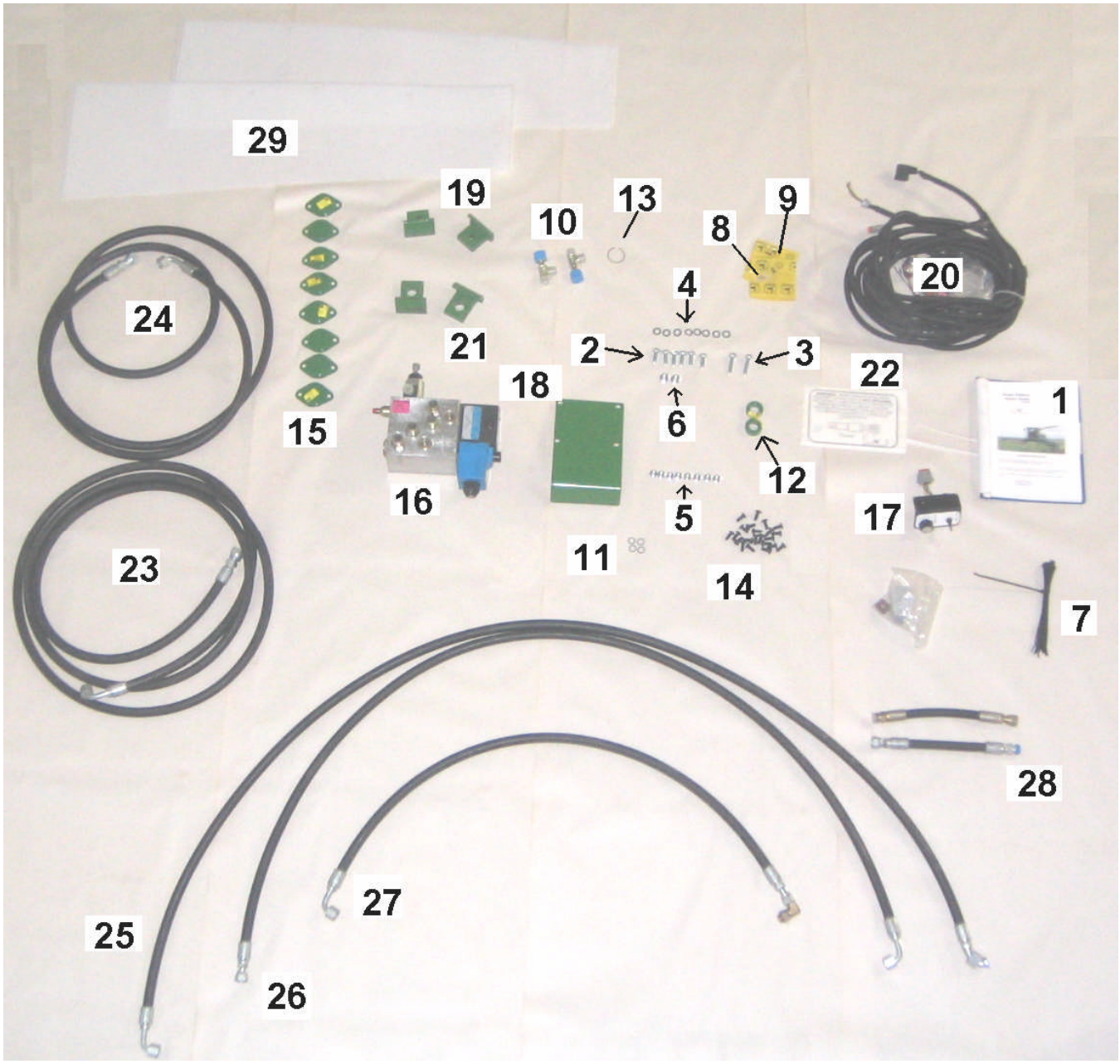
John Deere 7000-Series Self Propelled Forage Harvester (North America)
John Deere 925D, 930D Draper Platform (North America)

(With supplemental information for performance improvements of draper platform in this application and recommendations to adapt to 6010- and 6050-series SPFH)

(For use in conjunction with John Deere Bundle BZ13724, Cutting Platform Adapter bundle)

RCI Engineering LLC
RC0098 (16MAR2005)
www.RCIengineering.com

Contents of Bundle RC0098



Parts Listing

Key	RCI Part Number	Qty	Part Name
1	RC0098	1	Installation Instruction
2	RC0144	6	M10X25 bolt
3	RC0145	2	M10 X 40 bolt
4	RC0146	8	M10 Washers
5	RC0147	8	M8 Flange nut
6	RC0148	2	M10 Flange Nuts
7	RC0149	15	Zip Ties
8	RC0150	2	Washers for RC0151
9	RC0151	2	Screws for POT bracket
10	RC0152	2	T-fittings, - 8 ORFS, 2male, 1 female
11	RC0119	4	O-rings for T-fitting
12	RC0153	2	Bushings for adapting frame
13	RC0154	1	Snap ring for multi-coupler
14	RC0155	22	Screw for auger tooth covers
15	RC0156	8	Cover for auger tooth
16	RC0101	1	Hydraulic Valve Assembly
17	RC0099	1	Armrest bracket assembly
18	RC0100	1	Bracket to mount valve
19	RC0102	2	New style adapting frame stops
20	RC0103	1	Main wiring harness
21	RC0104	2	Adapting Frame Stops - Prod
22	RC0111	1	Decal for electrical cabinet
23	RC0113	1	Hose
24	RC0114	1	Hose
25	RC0115	1	Hose
26	RC0116	1	Hose
27	RC0117	1	Hose
28	RC0118	2	Hose
29	RC0120	2	Deflector

Note: For service parts, see your local John Deere dealer. Your local John Deere dealer can order the parts from RCI at www.RCIengineering.com.

Parts Breakdown for assemblies above:

16	1	Armrest bracket assembly	RC0099	RCI
	1	Potentiometer	RC0105	RCI
	1	Potentiometer Dial	RC0122	RCI
	1	Toggle Switch	RC0121	RCI

IMPORTANT: Before opening hydraulic components, thoroughly clean surrounding area. Absolute cleanliness is a must!

NOTE: After installation has been completed, inspect entire system for leaks and check oil level. Set relief pressure of new valve to be slightly higher than that of header lift. See end of instructions for more information.

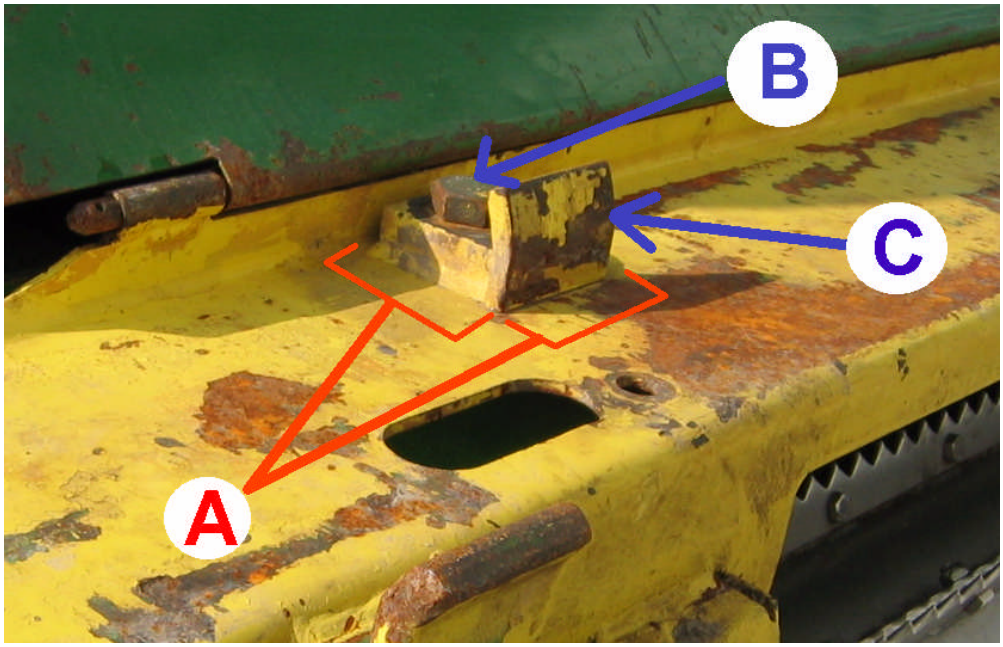
- **NOTE: Additional RC0100 Stops are included in this kit to be installed where the production stops on the adapting frame are removed, when using the machine for other headers. DO NOT MISPLACE these stops as they are absolutely necessary for installation of other headers.**

<u>WARNING:</u> The power to this system must be disconnected when a header requiring auxiliary hydraulics is NOT installed to prevent damage to hydraulic components. To accomplish this, disconnect the 4-pin Deutsch Connector inside the electrical cabinet. (See step 41 for more information)

SPFH Adapting Frame Modification

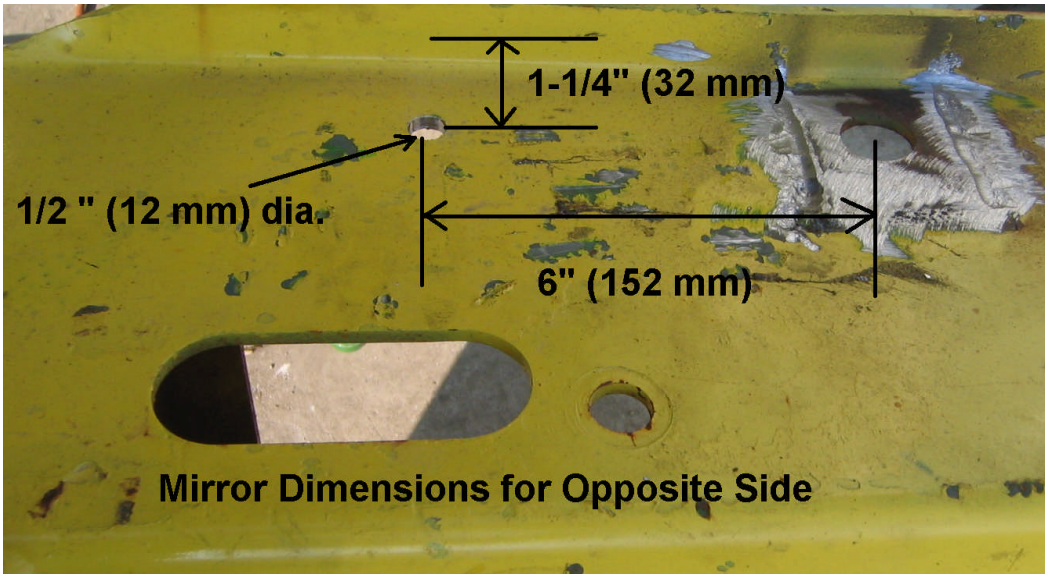
1/ Remove feedroll stops from adapting frame of SPFH

- **Remove welds (A) and bolts (B).**
- **Remove Stops (C) on both sides of adapting frame**



2/ Drill new holes for RC0102 Stops.

- **½ inch (12 mm) diameter hole**
- **6 inches (152 mm) away from existing mounting holes, away from the feedroll housing, 1-1/4 inches (32 mm) away from rear fold of frame**



3/ Install new stops and reinstall adapting frame mounting bolts

- **Install RC0102 Stop using RC0145 Bolt (M10 x 40), RC0146 Washer and RC0148 Flange Nut (M10 Flange)**

- **Reinstall adapting frame mounting bolts and washers using H137204 Bushing as a spacer as shown**

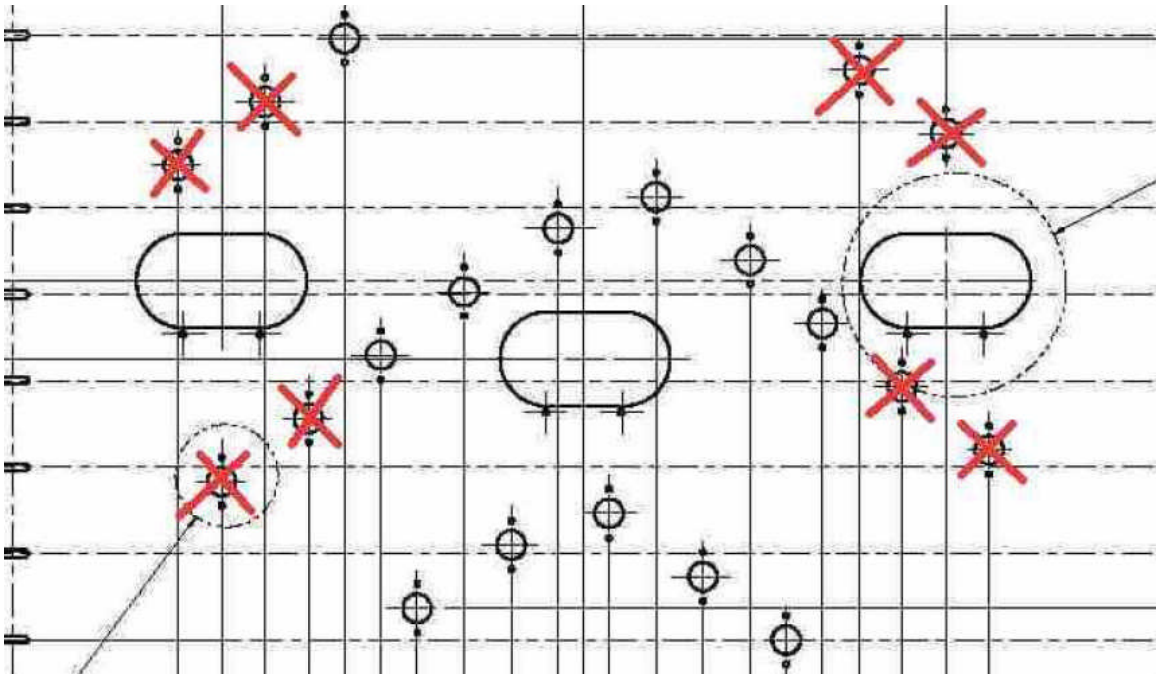
- **NOTE: Additonal RC0100 Stops are included in this kit to be installed where the production stops were removed when using the machine for other headers. DO NOT MISPLACE these stops as they are absolutely necessary for installation of other headers.**

- **NOTE: Be sure to tighten all hardware before installing header on machine**

Draper Platform Modification

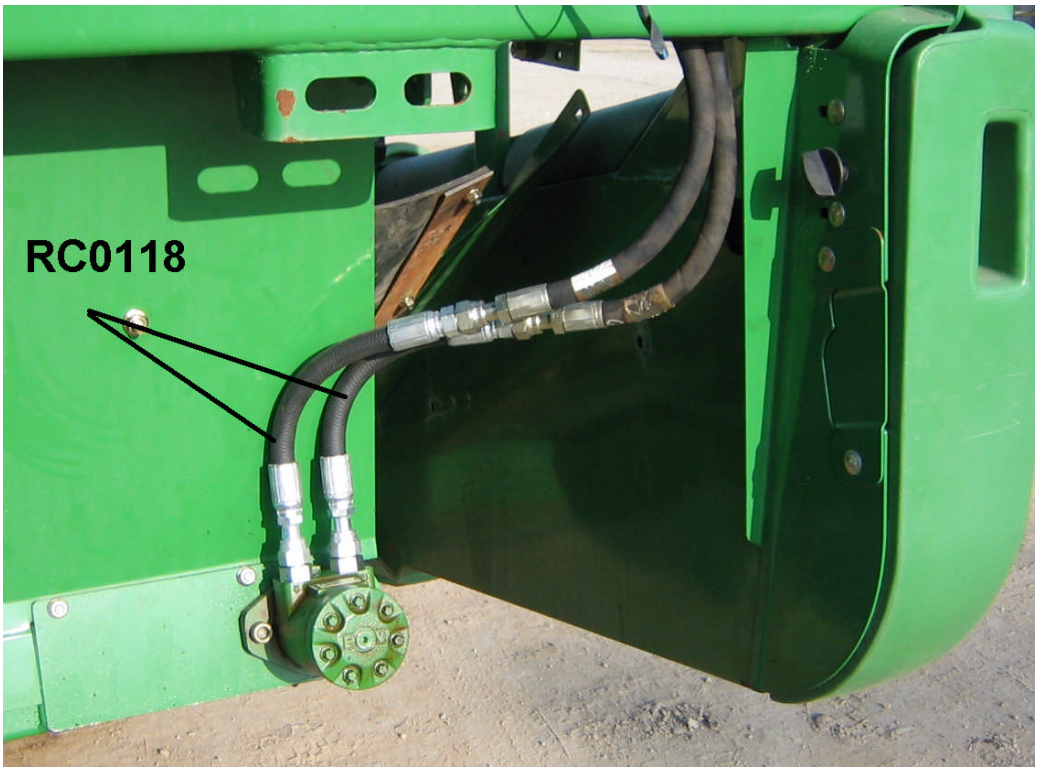
4/ Remove fingers from draper platform feeding tube as indicated

- **Install (1) Cover RC0156 and (2) Bolt RC0155 over each hole where a finger was removed**

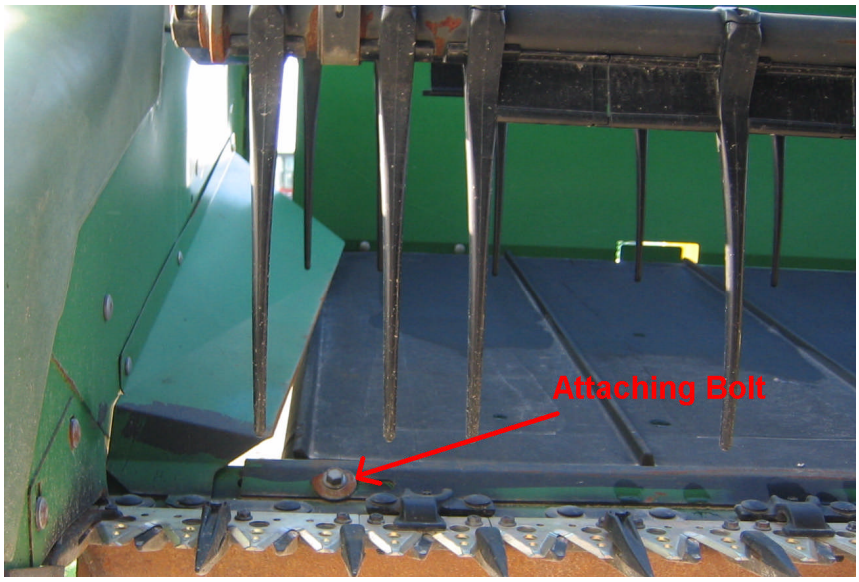


5/ Disconnect hydraulic hoses on RH draper belt drive.

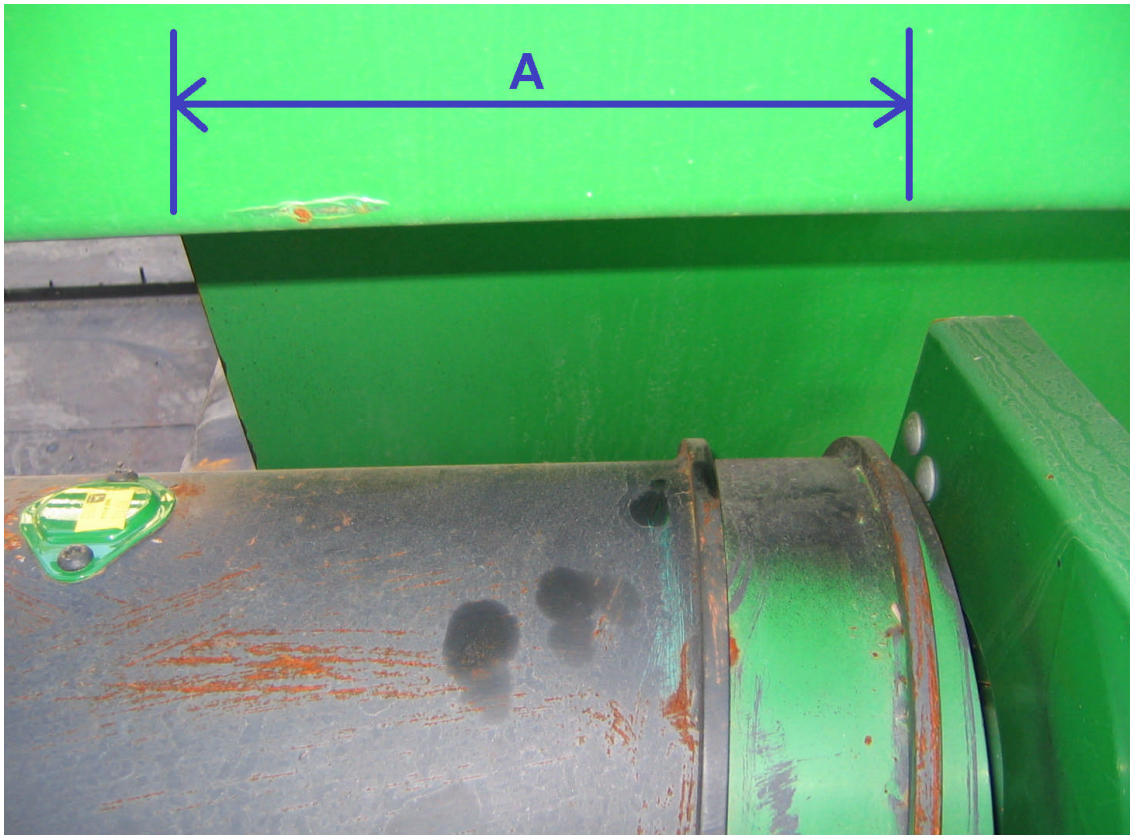
6/ Install (2) Hose RC0118 as shown.



7/ Remove the (3) attaching bolts for the draper transfer belt frame at the front plate of the frame, beginning with the RH side of the machine.

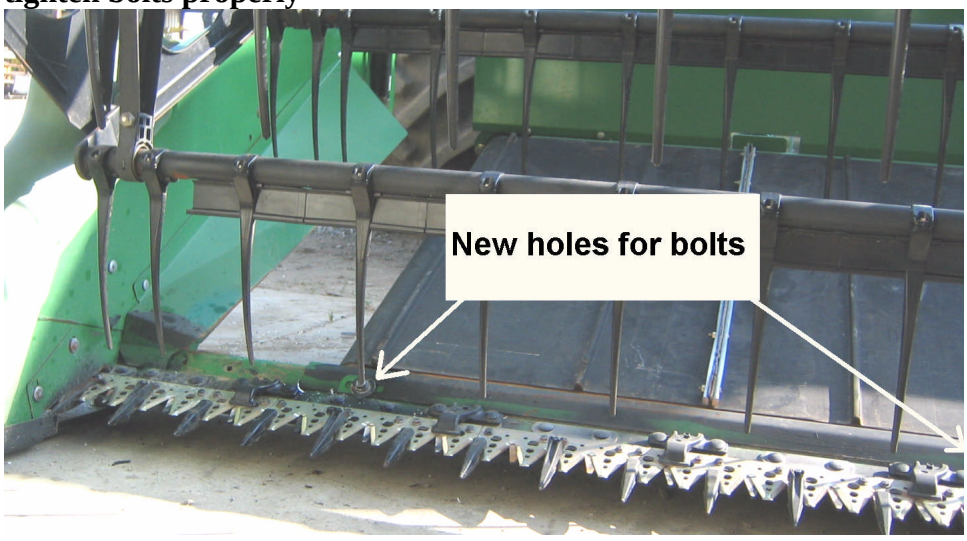


8/ Slide the draper transfer belt frames towards the center until they overlap the center opening by 9” (230 mm) as shown (same for each side). This will give a distance between the ends of the belt of 44” (1120 mm).



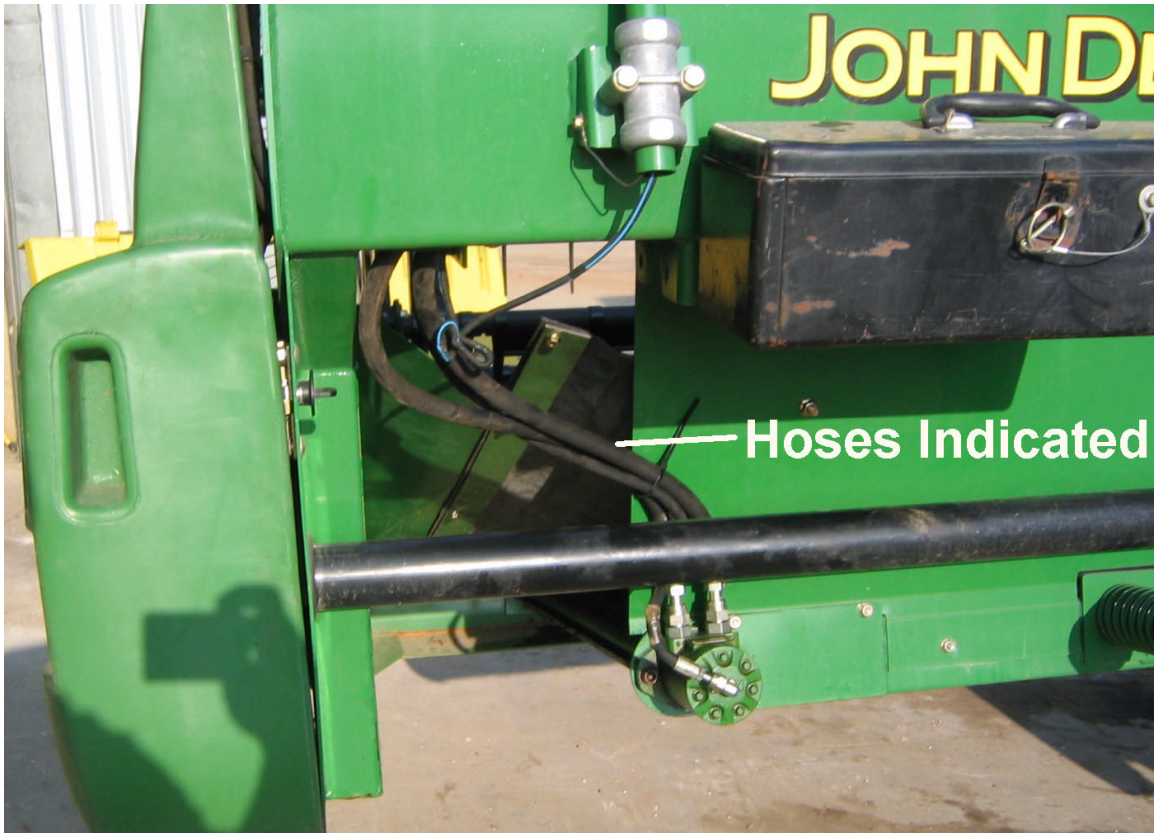
A = 9” (230 mm)

9/ Drill 11/32” (8.75 mm) diameter hole in center of slots for reinstallation of (3) self-tapping bolts removed in step 7. Bolts are self-tapping. Be sure to tighten bolts properly



10/ Repeat steps 7-9 for LH side draper transfer belt.

Note: Hydraulic hoses for LH belt drive motor can remain attached. It is important to pull approximately 2” (50 mm) of hose from the frame to accommodate the shift as shown.



Deflector Modification

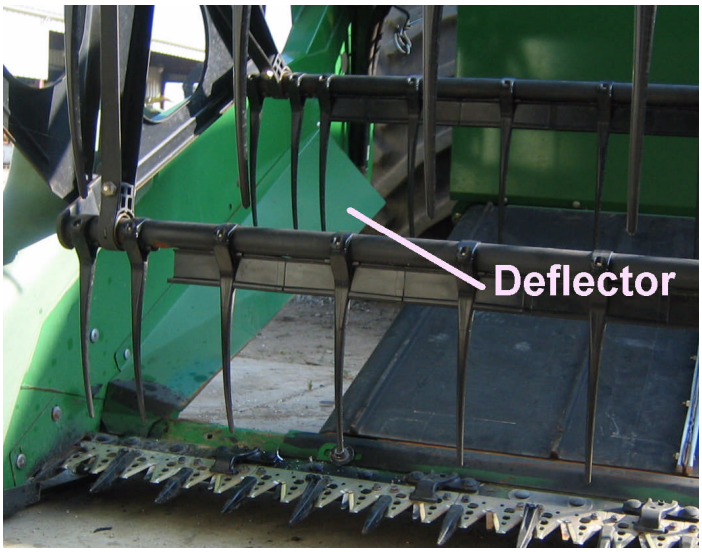
Note: The next several steps deal with modification of the crop deflectors to cover the open areas at the end of the draper belts. For a better understanding of what is to be modified, see the picture below of the final result.

11/ Place the RC0120 Deflector over the top of the production deflector. Align the hole on the cutterbar frame with the hole in the deflector. Align the rest of the RC0120 Deflector with the production deflector as shown in the picture above. Mark the remaining three holes.

Note: It may be beneficial to remove the excess material from the production deflector beneath the RC0120 Deflector. This is recommended if you can accept using this new style deflector if/when the draper is used in a combine application. If removing this material, leave approximately 1.5" (35 mm) for proper mounting of the RC0120 Deflector.

Note: Each end of the draper may be off by 1" depending on size of header used. Position the deflector on the production sheet to accommodate the spacing.

12/ Remove crop deflectors on each end of draper belts. There are three bolts on the end frame and one bolt on the cutterbar.



13/ Installation of RC0120 UHMW plastic deflector onto existing crop deflectors.

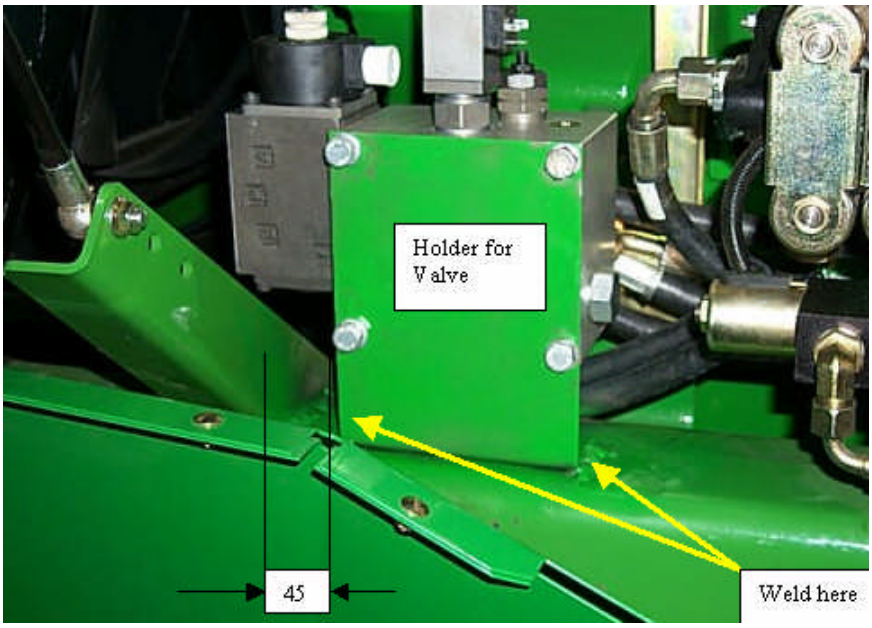
- **Drill three 3/8" (10 mm) diameter holes in deflector to accept installation of RC0120 Deflector .**

- **Fasten RC0120 Deflector to the production deflector with RC0155 Allen Head Screw and RC0147 Flange Nut (M8).**

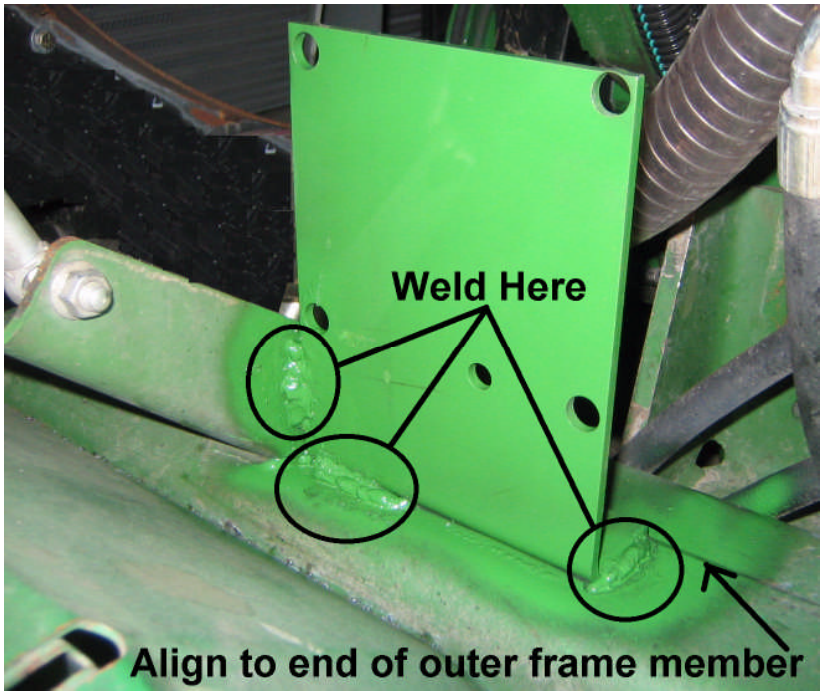
14/ Reinstall deflector on draper platform. Use RC0144 Bolt (M10X25) and RC0146 Washer to fasten RC0120 Deflector to existing hole in cutterbar as shown below.

Hydraulic Component Installation

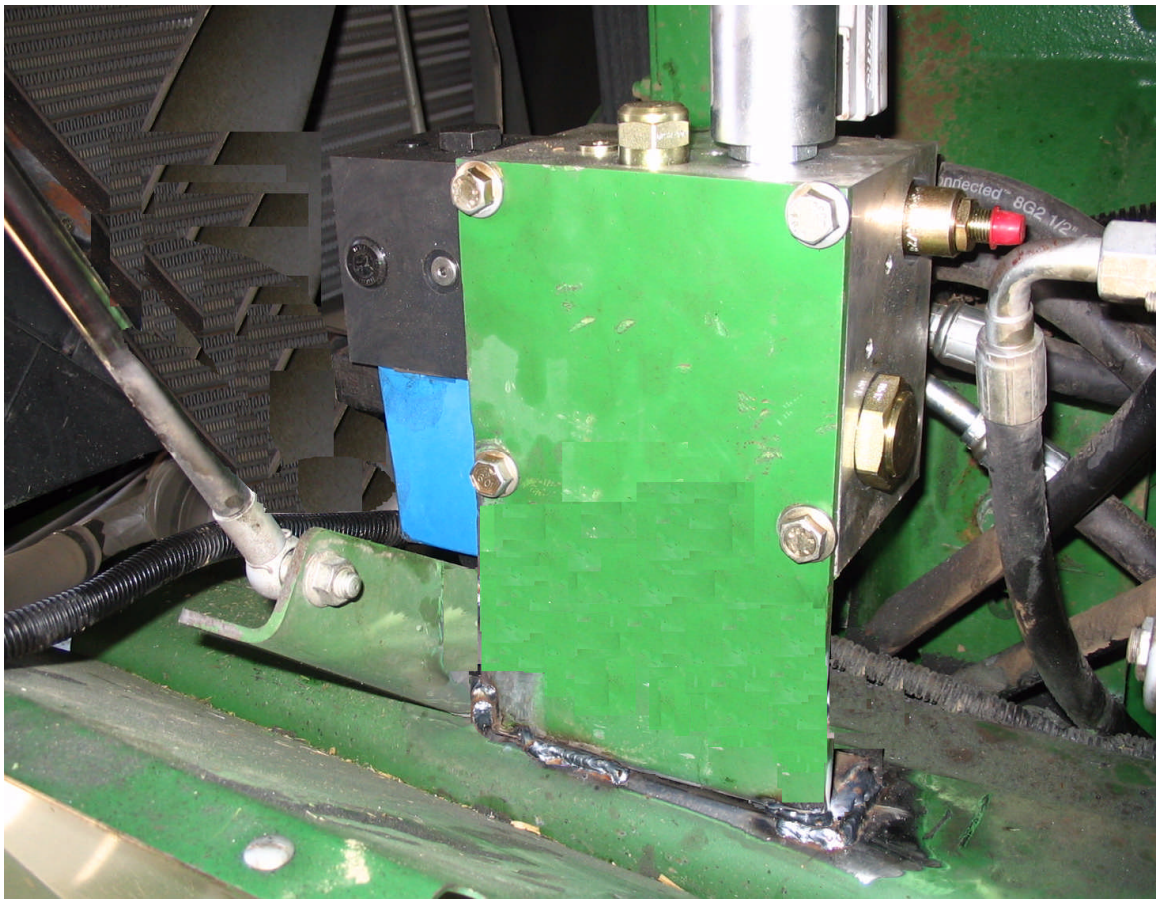
18/ Install RC0100 Hydraulic Control Valve Mounting Bracket to RH frame rail behind the main control valve stack, 1-3/4" (45 mm) from the gas shock support as shown. Weld in areas noted. Disconnect ground before welding.



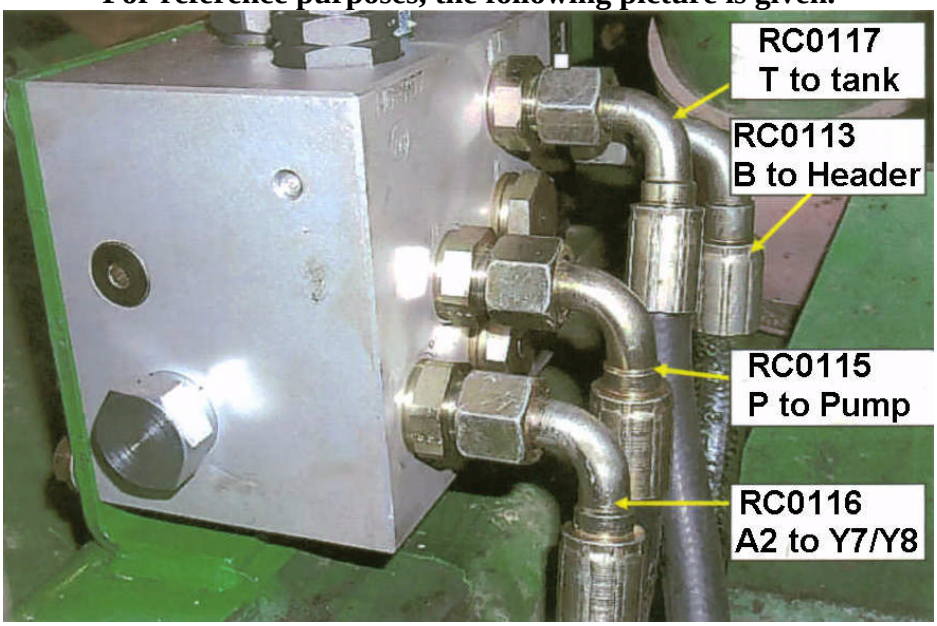
NOTE: In the event that auxiliary hydraulics for wagon dump or SCV II are installed, there may not be enough room to install the plate as shown. In such conditions, install as shown below.



19/ Install RC0101 Hydraulic Control Valve on Valve plate using RC0144 Bolts (M10X25) and RC0146 Washers.



For reference purposes, the following picture is given.

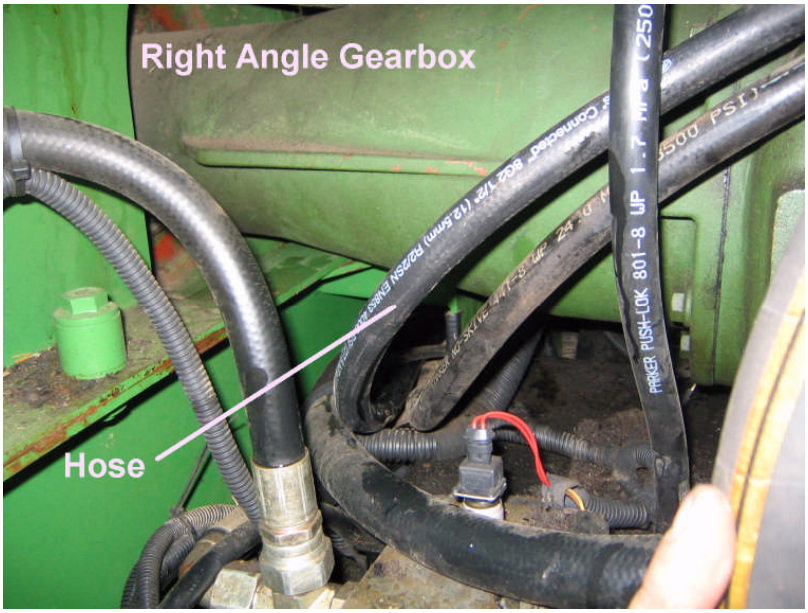


20/ Route Hose RC0115 from Control valve to the first section of the 4-stack pump. Connect the -8 ORFS end to the new control valve at port "P" as shown in the picture above.

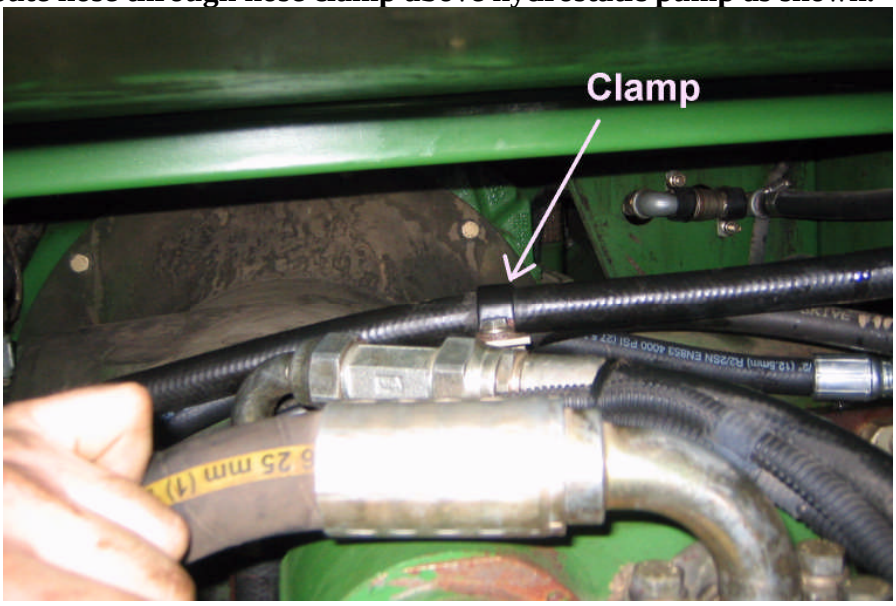
- **Remove existing hose from first section of four-stack pump to the Y7/Y8 Header Lift Valve.**

- **Route the hose along the other hydraulic hoses from the main control valve through the frame rail towards the front of the machine.**

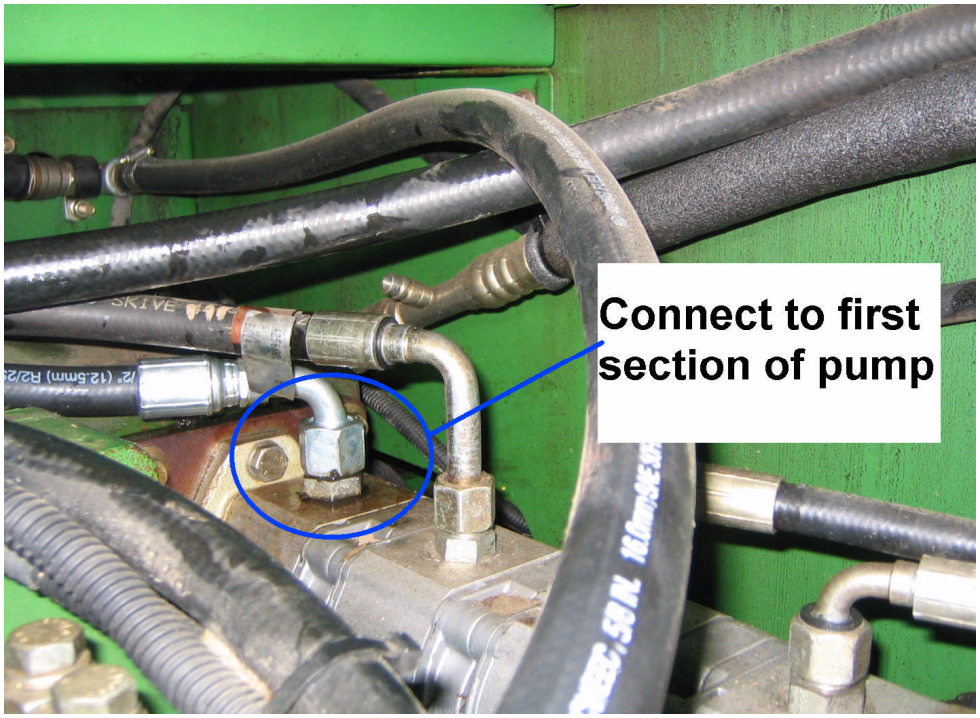
- **Route hose over the top of the hydrostatic pumps as shown below.**



- **Route hose through hose clamp above hydrostatic pump as shown.**



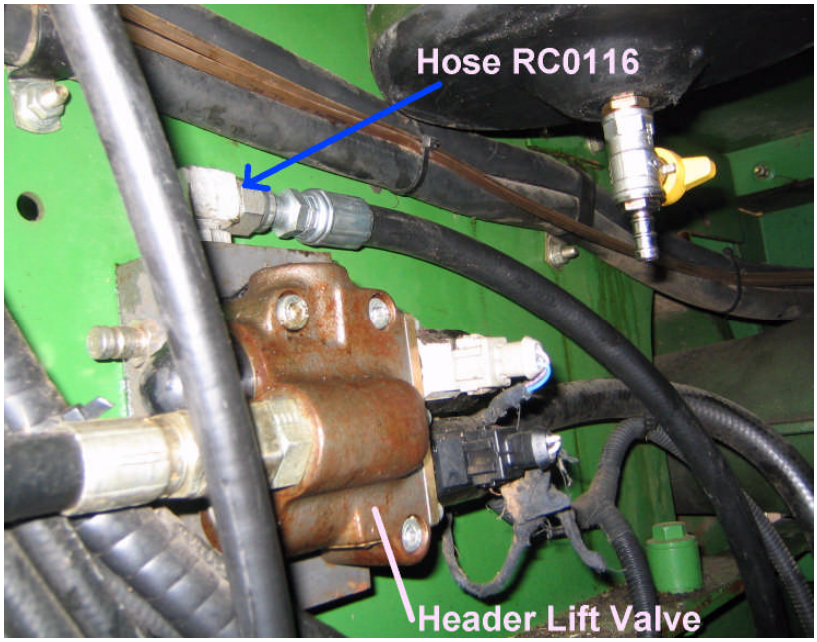
- **Attach -10 end of hose to the first section of four-stack pump as shown.**



21/ Route Hose RC0116 from back of control valve to the Y7/Y8 Header Lift Valve.

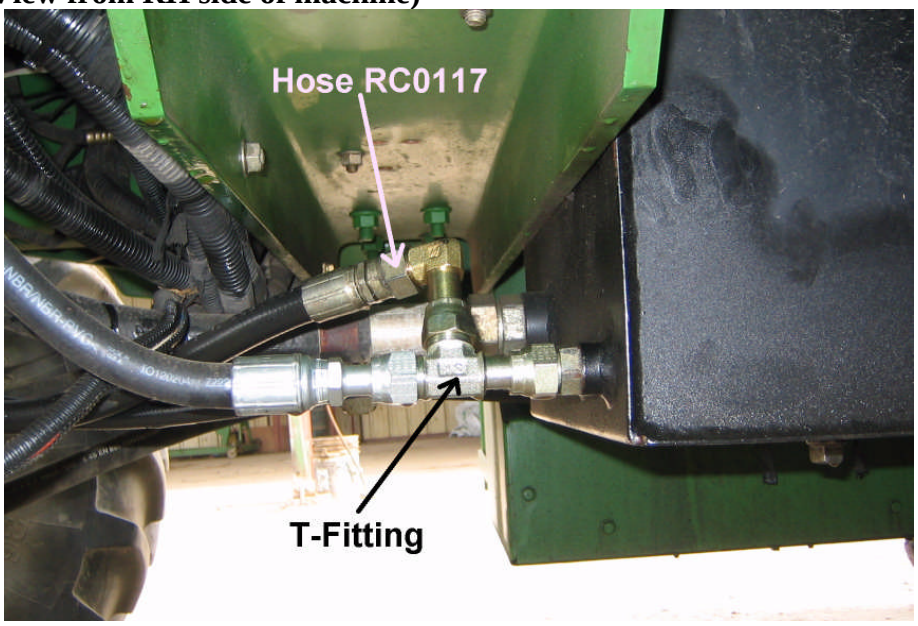
- **90 Degree fitting will attach to back of control valve at Port "A2"**

- **Route hose through frame rail along other hydraulic hoses to Y7/Y8 Header lift valve on RH frame rail where hose was removed in step 20.**



22/ Route Hose RC0117 from back of control valve at Port "T" to the rear side of hydraulic tank. Install (1) T-Fitting 38H1031 with appropriate o-rings as shown below.

(View from RH side of machine)

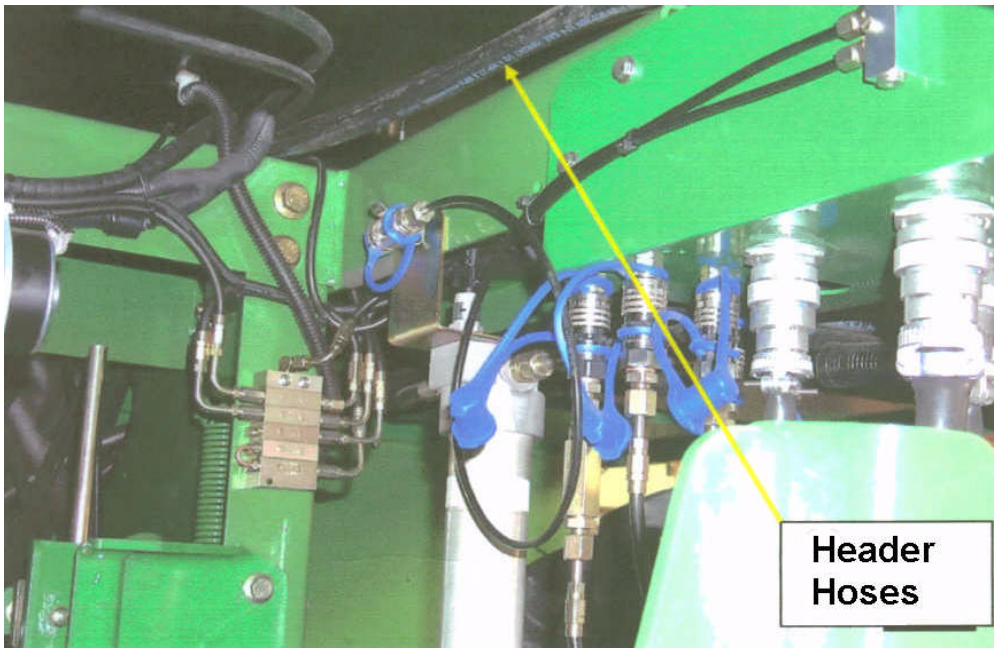


23/ Route Hose RC0113 from Port "A" of new control valve to the multi-coupler that was installed with BZ13724 Kit.

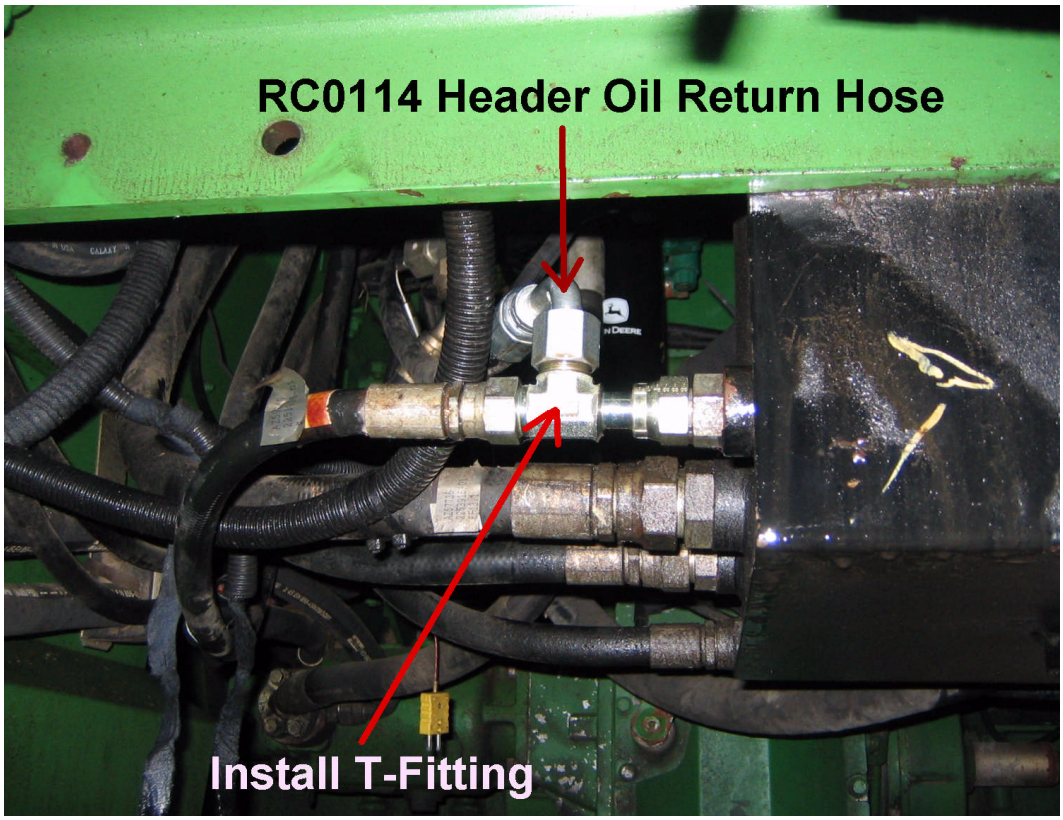
- **Route this hose through frame rail with other hoses, across to the area on the LH side of the transition, and then on the cab platform out to the front as shown on next page.**

24/ Route Hose RC0114 (Header Oil Return) from multi-coupler, along Hose RC0113, back under the cab, but direct it to the LH side of the oil tank for return to tank.

- **Install Hose RC0114 on lower Multicoupler connection remaining. Install other end (-8 ORFS 90 Deg) at Oil Tank Return Port as shown in following picture using (1) T-Fitting 38H1031 with appropriate o-rings.**



Picture of Header Hose Routing Under Cab



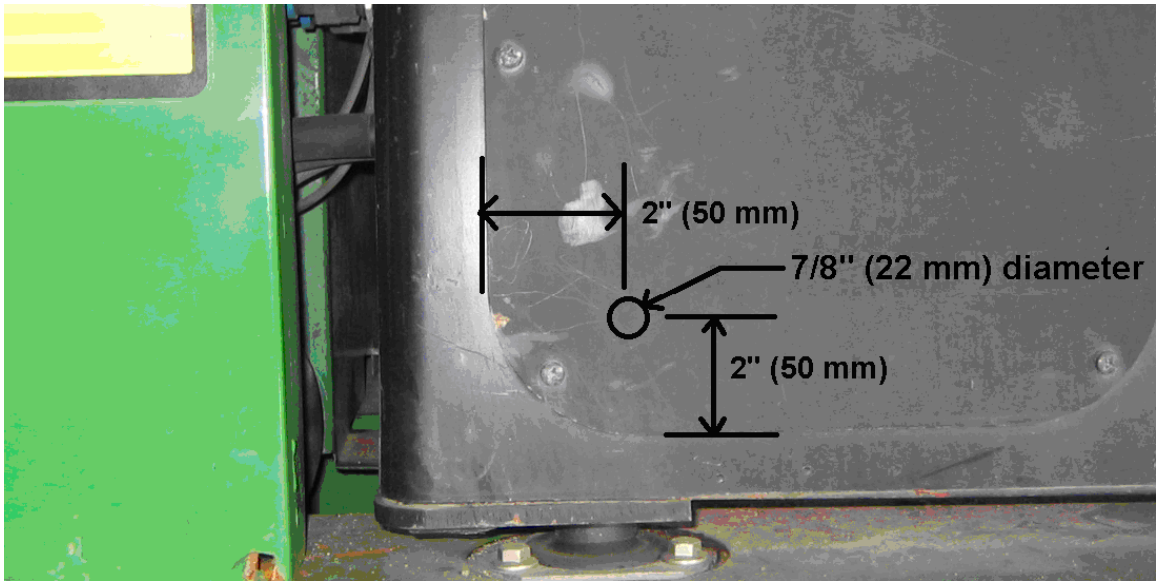
View from rear of Hydraulic Tank

Multicoupler Hose Connections

Wiring Harness Installation

25/ Begin harness installation with RC0103 Wiring Harness on the RH Cab Platform.

26/ Remove access panel from cab and drill 7/8” diameter hole as shown below.

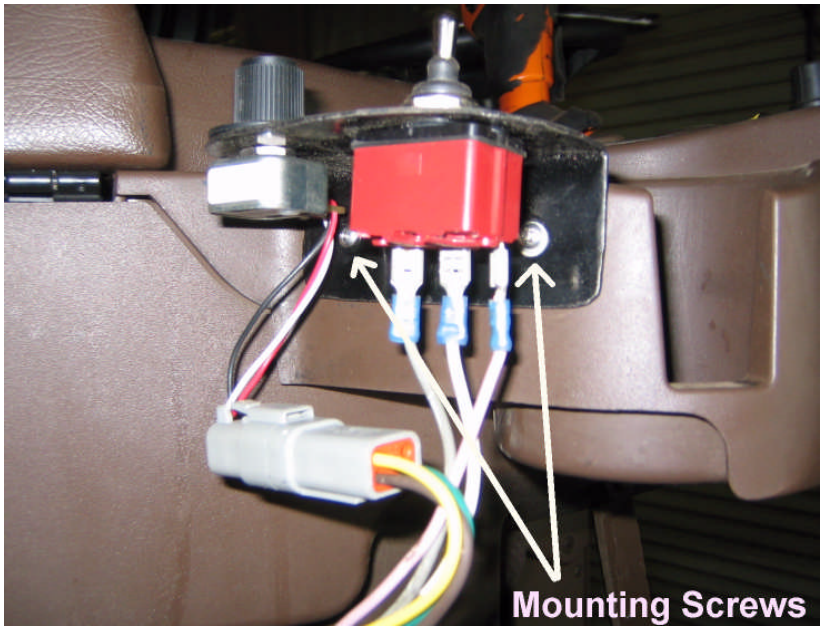


27/ Install harness end (with 8-pin Deutsch Connector in plastic bag attached) through this new hole. Route the wires through the back panel of inside of cab to approach the armrest.

View to RH side of operator seat

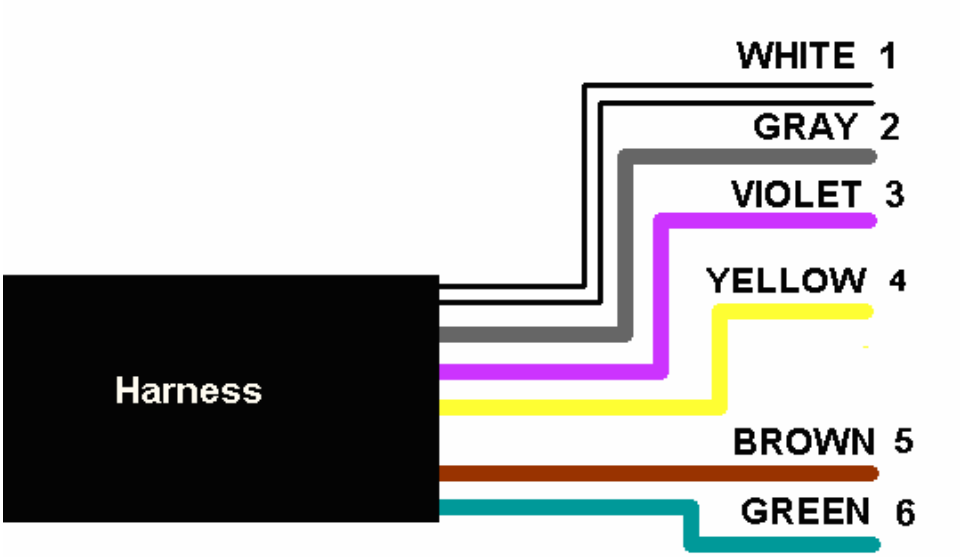
28/ Mount Switch Bracket RC0099 to armrest using (2) RC0151 Screws and (2) RC0150 Washers. Only mount bracket in position noted to avoid contact with internal components of the armrest.

View of Mounted Switch Bracket RC0099



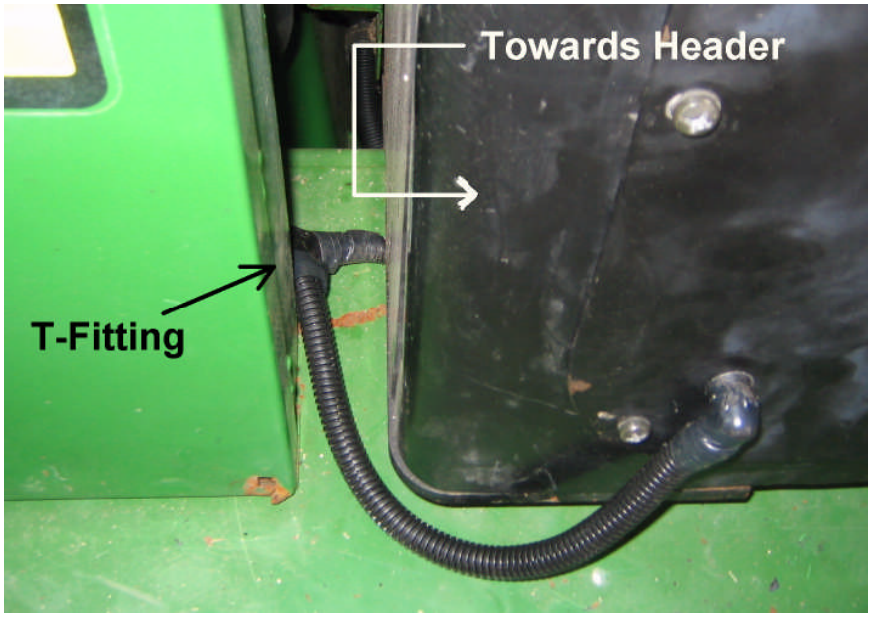
View of Switch Bracket from RH side of cab

29/ Install wires of wire harness end into 6-pin Deutsch Connector to match the wires in the connector from the armrest bracket (per the schematic below). Complete the connection to the Switch Bracket.

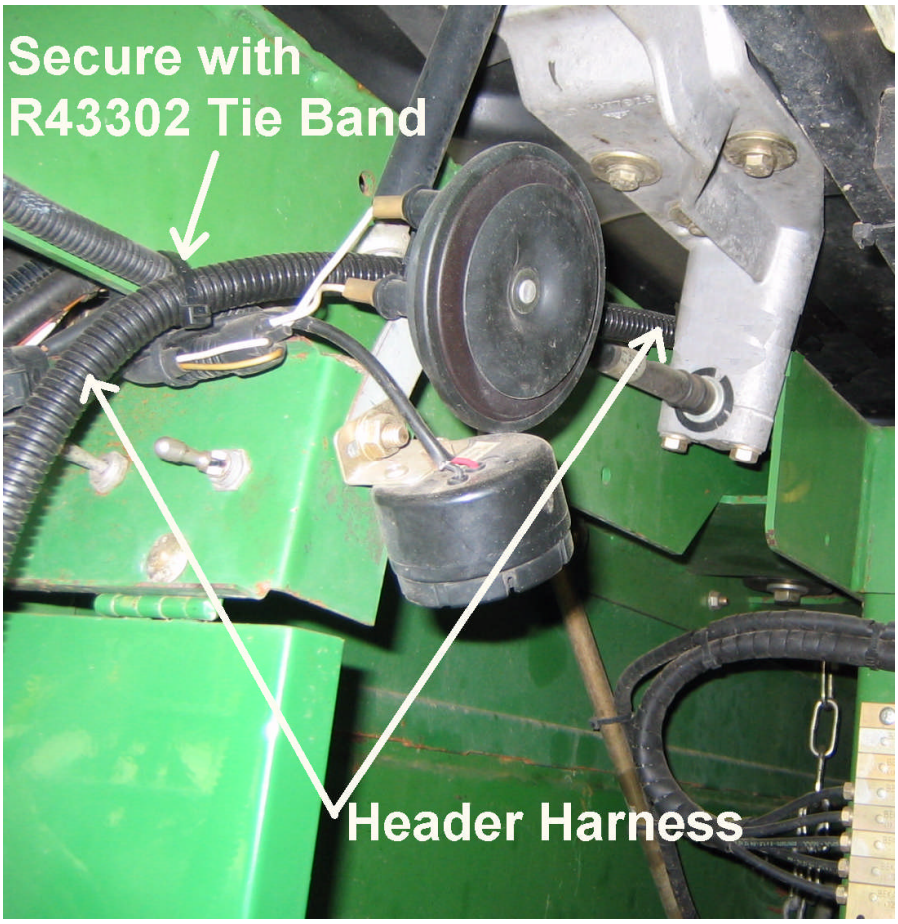


30/ Route longest segment of wiring harness left outside of the cab to the multi-coupler at the front of the machine.

- **Start under the cab and route along the RH cab platform rail to the area near the CH rotation alarm.**
- **Route harness down to hydraulic hoses and follow across to the multicoupler.**



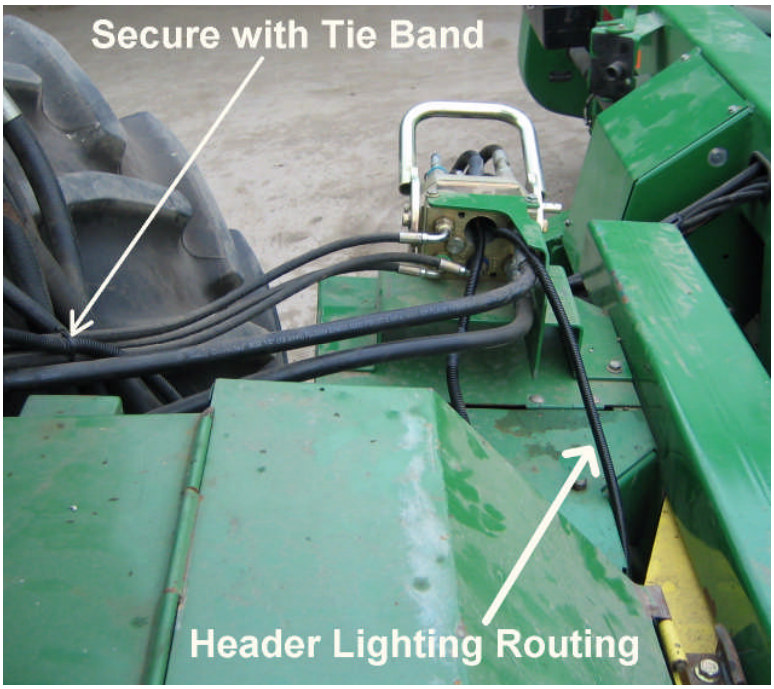
View from RH Cab Platform



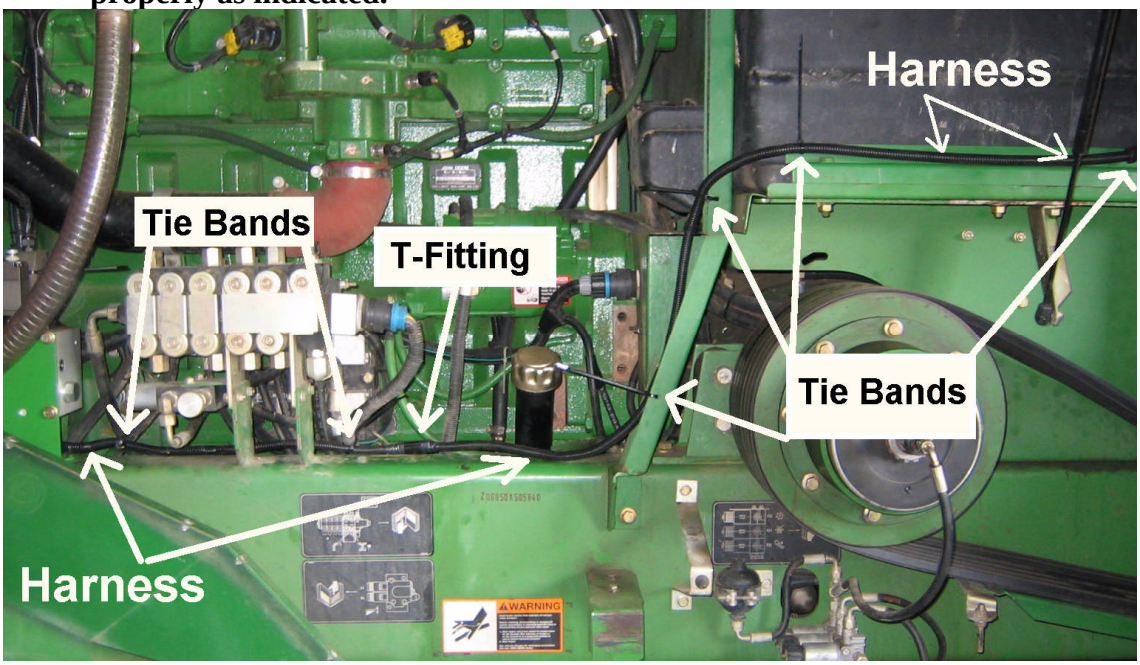
View from Front of Cab along RH Cab Platform Rail

31/ Install connector in Multi-coupler with RC0154 Snap Ring.

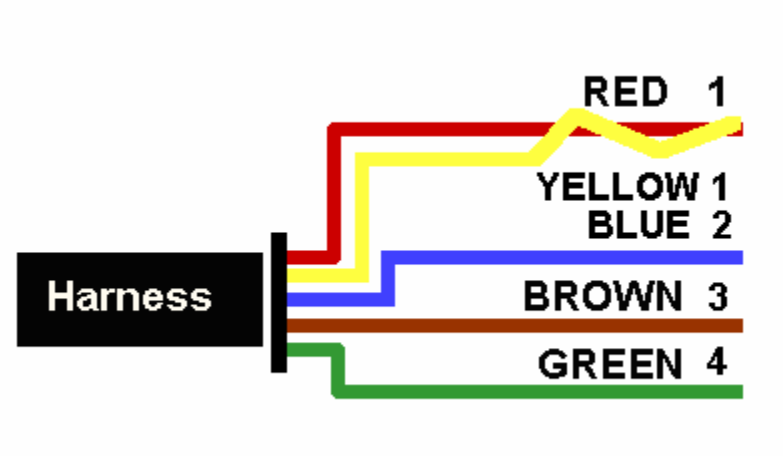
32/ Route extension on end of harness to header lighting connection along side of IVLOC.



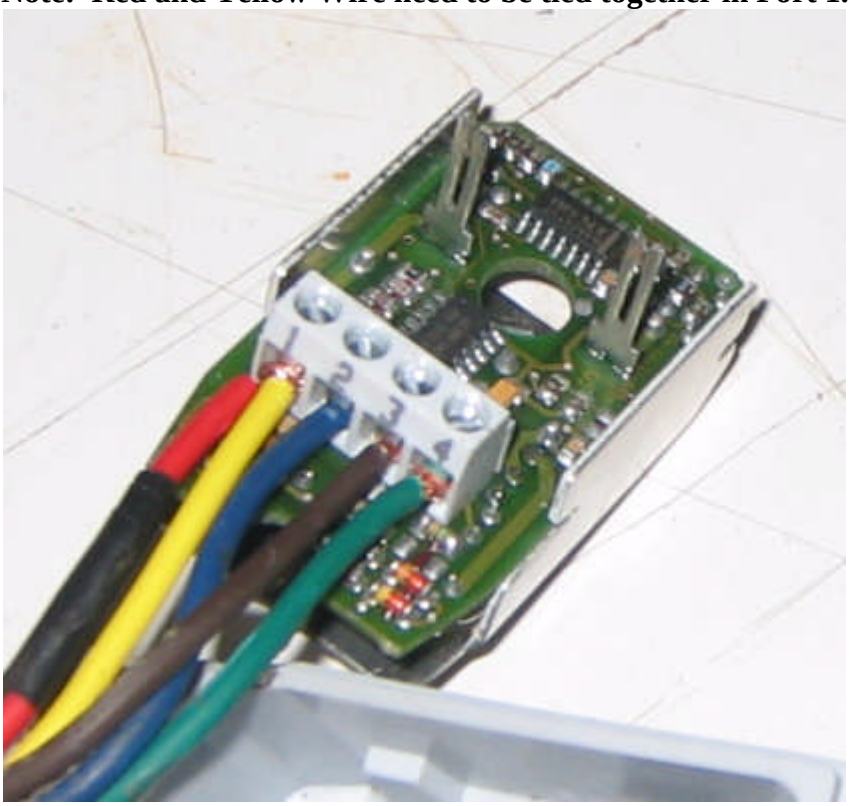
33/ From the RH side of the fuel tank, route the wire harness leading to the control valve through the compartments towards the control valve as shown. Secure properly as indicated.



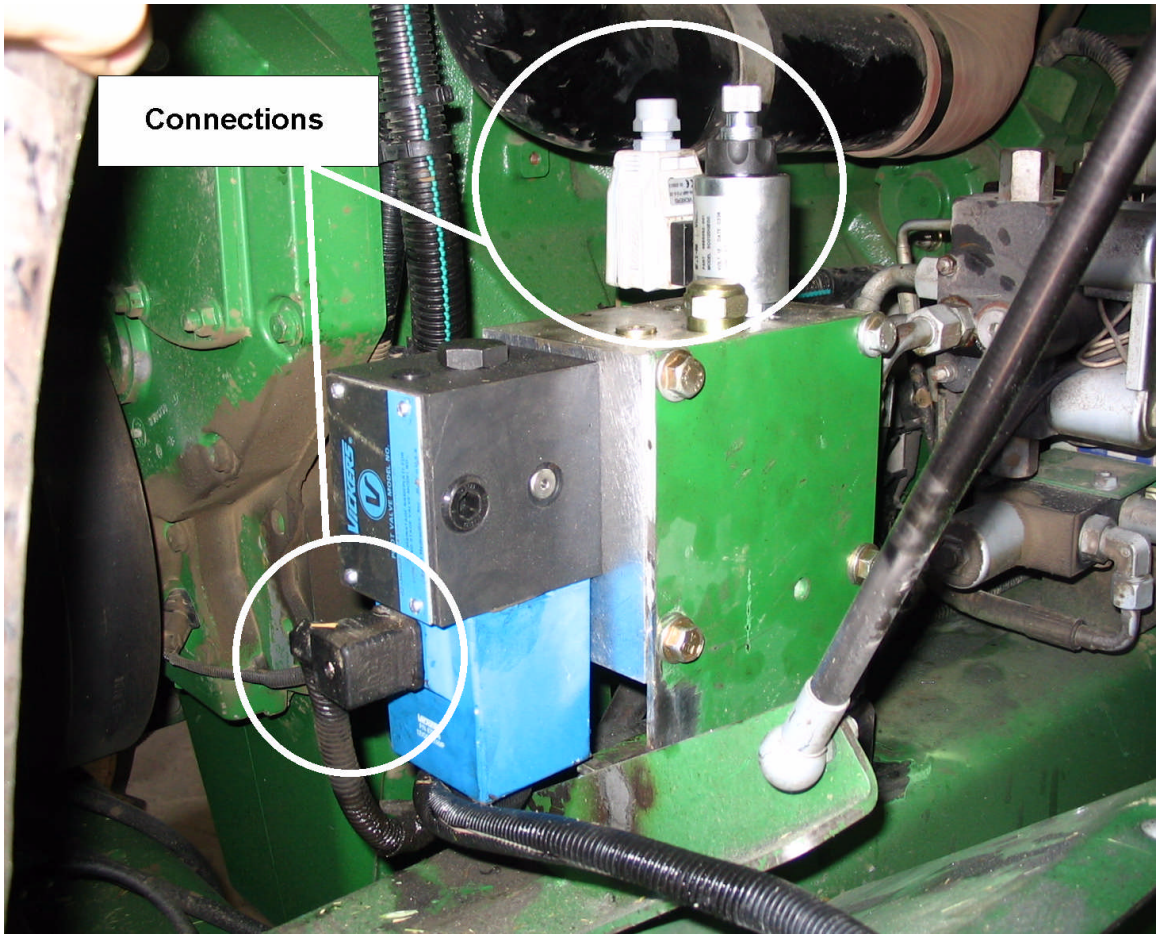
34/ Install wires to the microcontroller (for the reel speed oil flow control valve) internal pin board per the schematic below.



Note: Red and Yellow Wire need to be tied together in Port 1.

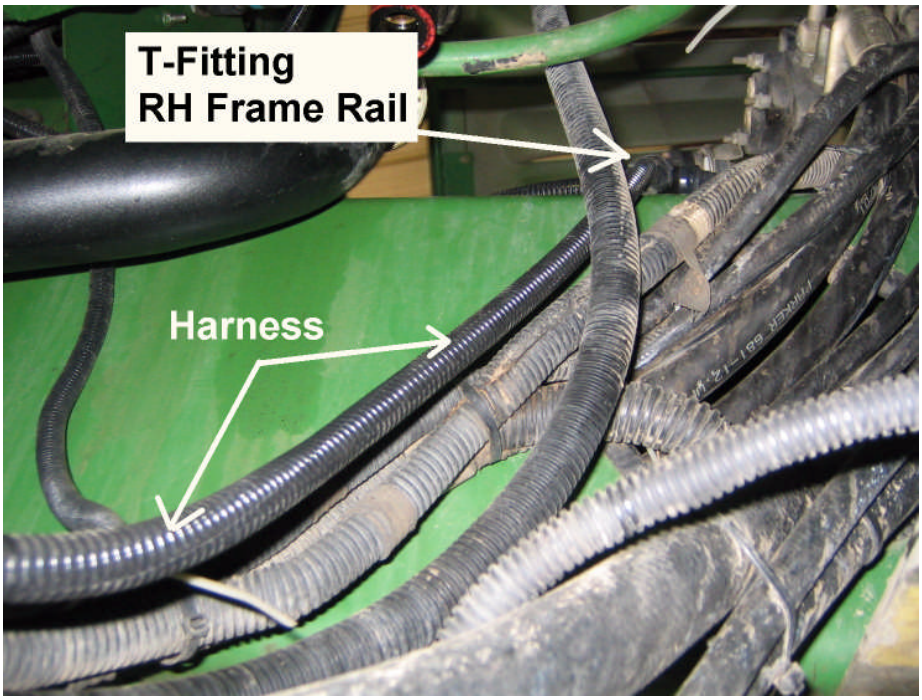


35/ Attach connectors as shown.

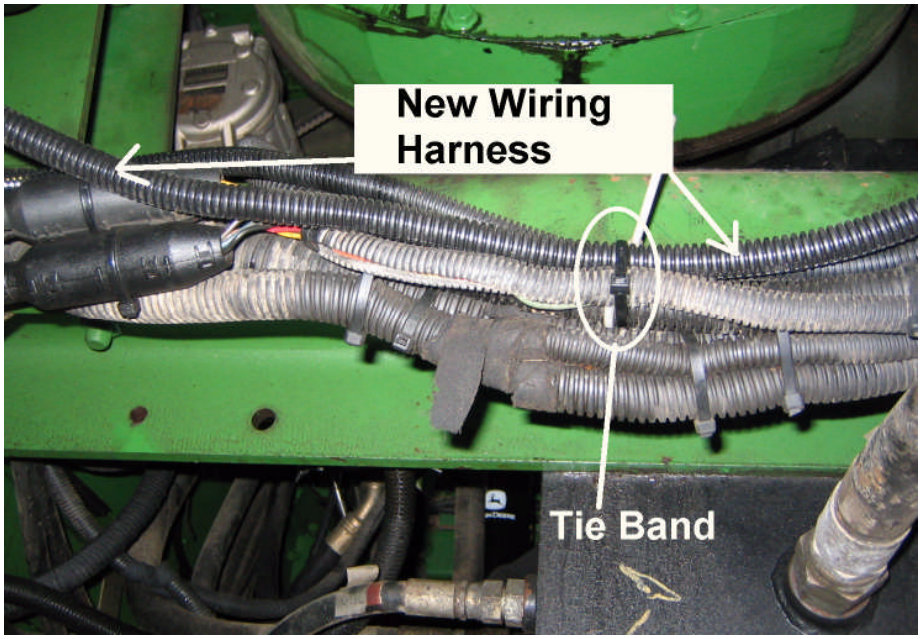


36/ Route final segment of wiring harness across machine to the electrical cabinet.

- **Follow other wiring harnesses across the frame support gusset.**
- **Use tie bands to fasten harness as needed.**

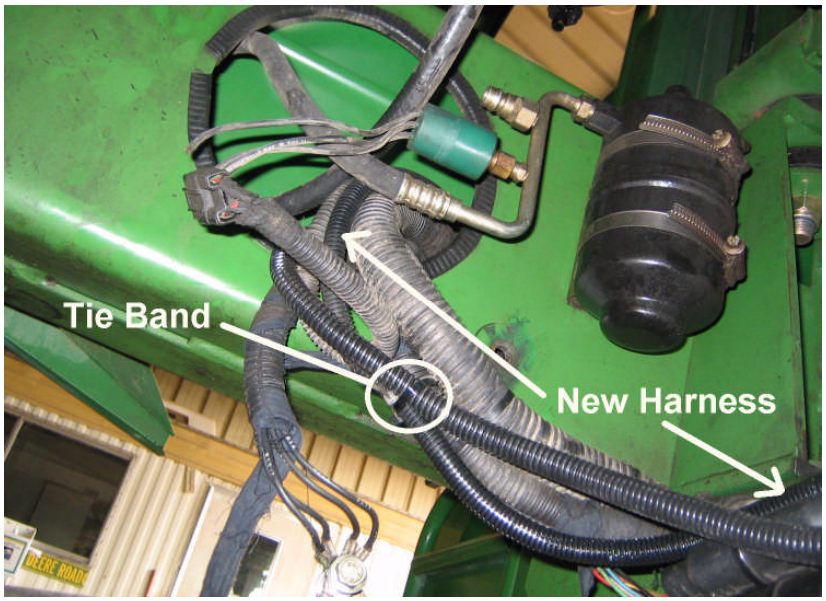


View of RH Frame Rail from directly under the engine, behind the hydraulic tank



View of Frame Gusset from Rear

37/ Route Harness through LH frame rail along other wiring harnesses into the back of the electrical cabinet. Secure with tie bands as indicated.

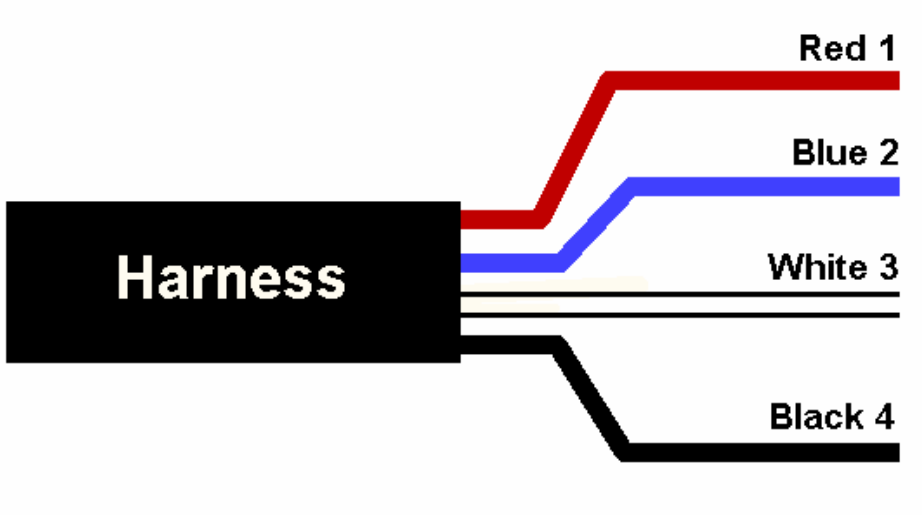


View of LH Frame Rail from RH side, directly below engine.

38/ Drill 7/8" (22 mm) diameter hole in floor of electrical cabinet as shown, to install the plastic elbow fitting in the harness. (LH Side, near corner of lower circuit board)

- **Route wire harness through tool storage area to this new hole with the elbow fitting. Fasten the fitting in place.**

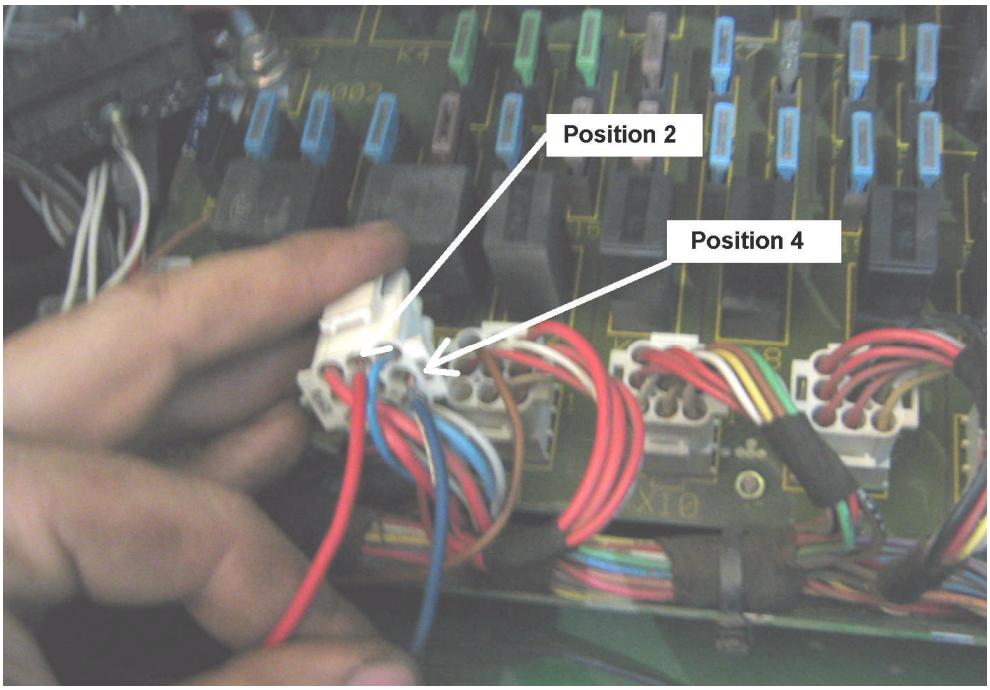
39/ Install 4 wires in Deutsch Connector once inside of cabinet. This connector is in a plastic bag on the end of the wiring harness.



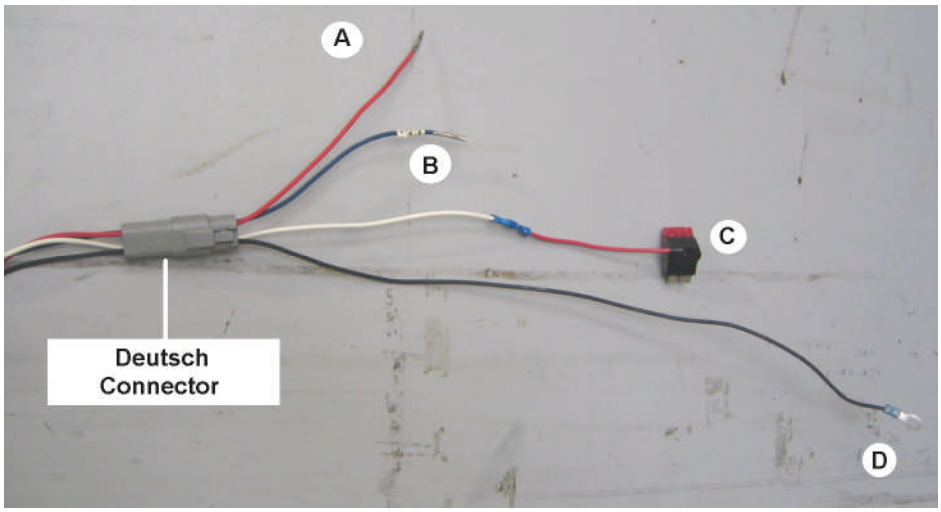
40/ Connect wires to the connectors on the lower circuit board.

- **Connect Blue Wire to Connector 3X8, position 4. This is the second connector from the left end of the bottom board. It is labeled on the green board.**

- **Connect Red Wire to Connector 3X8, position 2.**



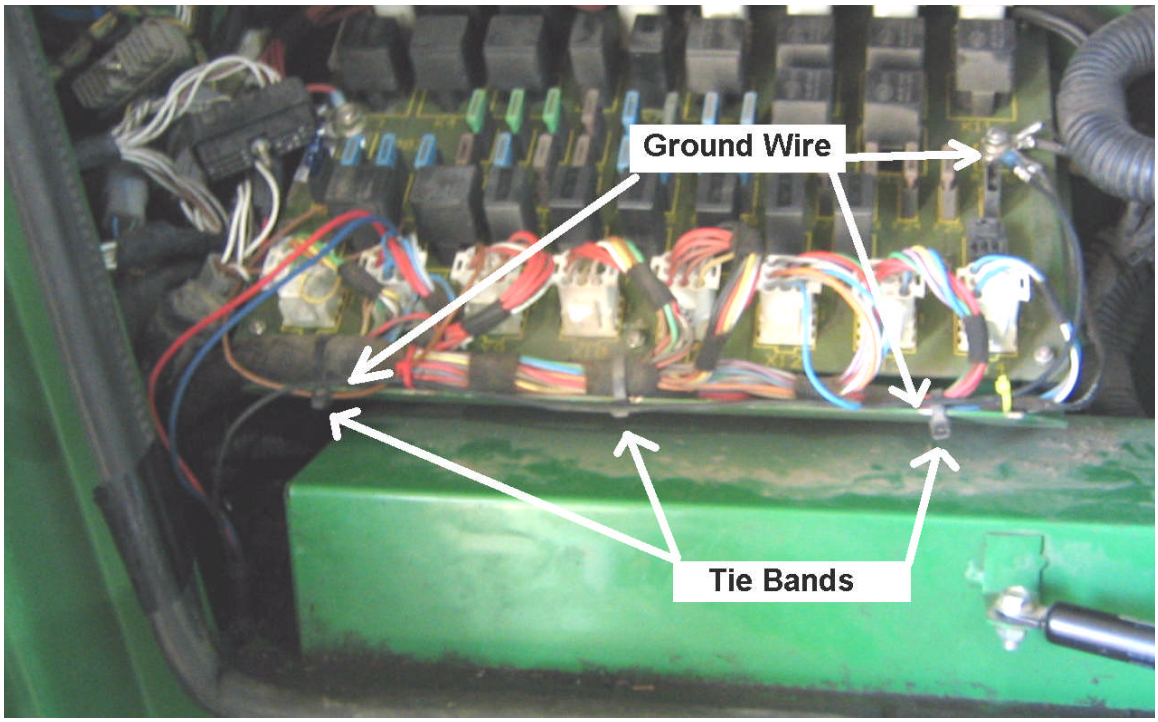
41/ Install Fuse Assembly in position 3F13.



A – Red wire, 3x8-2 B – Blue Wire, 3x8-4 C – Fuse assembly, 3F13
D – Ground wire (shown below)

<u>WARNING:</u> This Deutsch Connector must be disconnected when a header requiring auxiliary hydraulics is NOT installed to prevent damage to hydraulic components.

42/ Install Ground Wire on Ground Terminal. Secure Wire to harness as indicated.



43/ To aid in remembering to disconnect the Deutsch Connector in the electrical cabinet when a header requiring auxiliary hydraulics is not used, install RC0111 Decal on Cabinet Door as shown.

Decal Placement

Performance Improvement Recommendations:

1/ Install H99303 Plate (from John Deere) in slip clutch for drive for feeding tube on draper platform. This will make a total of two plates to increase the spring force on the clutch to prevent slipping during the rapid engagement of the draper.

2/ Run header in slow speed whenever possible. Adjust draper belt speed to satisfy crop flow requirements.

3/ In short crop conditions, adjust the reel position to sit over the sickle and lower to about 2" (50 mm) above the crop deflectors to keep material moving across the rubber flap deflectors.

4/ When first starting the machine after installation, set the relief pressure of the new valve to be slightly higher than that of header lift. To do this, install pressure gauge on test port of Y7/Y8 header lift valve and raise header. Increase new relief valve set pressure until it exceeds header lift. Do not exceed 2950 psi. The relief valve has a red cap on it, and is on the side of the valve assembly.

5/ If the header begins to dig in the dirt and does not sit level on the machine, adjust the leaf springs that support the header until it does sit level and lifts out of the dirt. Tighten the adjustable linkage at the top center of the frame.

6/ If the header digs into the dirt or pushes mud across the platform, order and install Full Width Poly-skid Kit from John Deere. Part number for 925D Kit is AH210201.

7/ If crop builds at the end of the reel, you can order fingers for the end of the reel from your local John Deere dealer. See picture below.

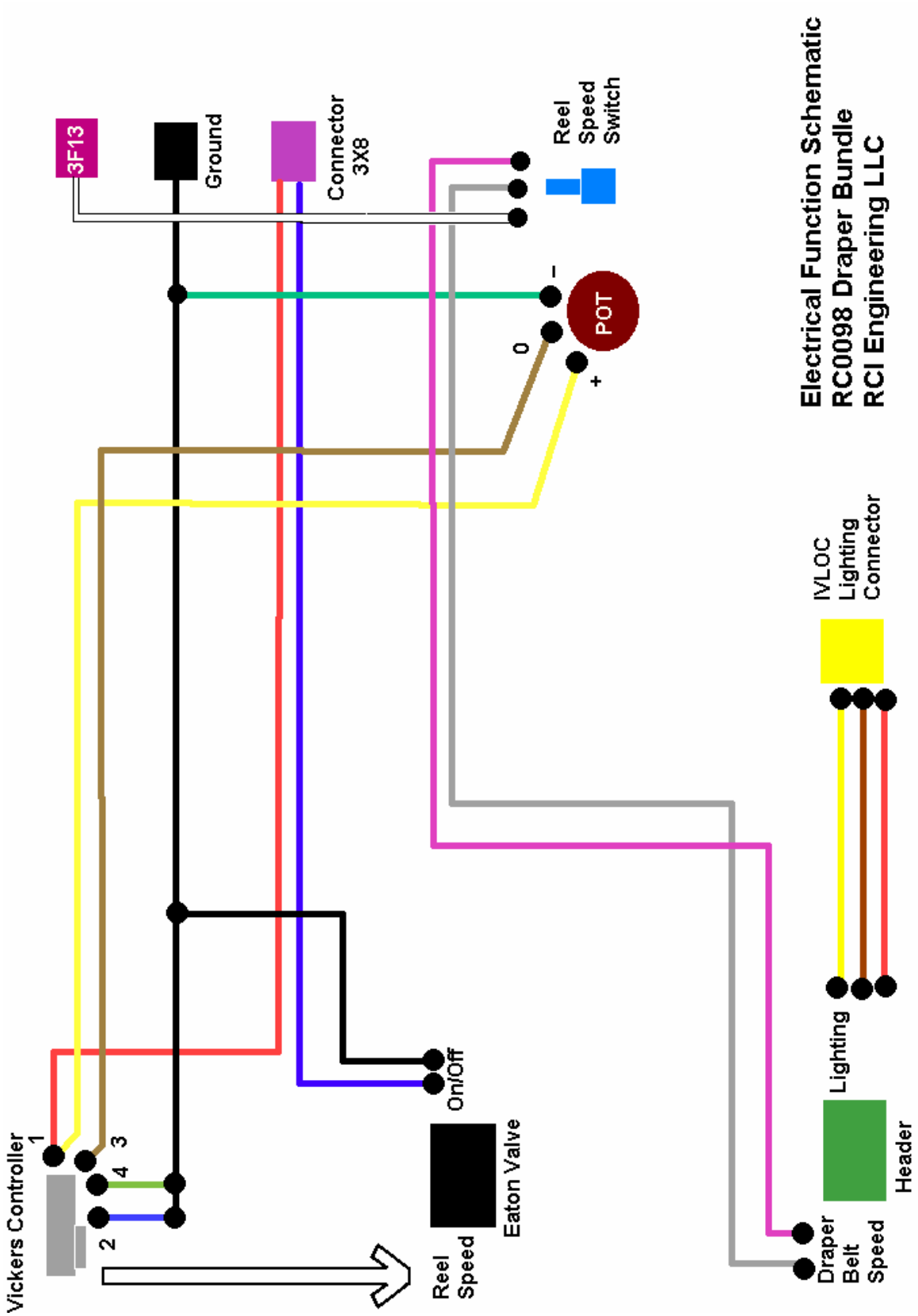
10- and 50- Series SPFH Installation Recommendations

1/ Electrical

- **Order RE11344 connector from John Deere. Combine the blue, white and red wires that would normally go to the electrical cabinet to the positive terminal of the connector. Install black / ground wire to ground terminal of the connector. Install connector at the back of the cab in the water injection pump outlet shown below. Then the reel will run when in harvesting position. Remember to disconnect this coupler when a header requiring auxiliary hydraulics is not used.**

2/ Hydraulic

- **Draw oil from the 35 cc/rev pump. Route a hose direct from this pump to the new valve that was installed with this kit. Route the return hose back to the valve stack in the cabinet. This would be the hose that would route to the Y7/Y8 header lift valve on the 7000 series. Set the relief pressure of the new valve by capping the reel hose to build pressure. Use a t-fitting to install a pressure port for the test.**


Electrical Function Schematic
RC0098 Draper Bundle
RCI Engineering LLC
3F13
Ground
Connector
3X8
Reel
Speed
Switch
POT
–
0
+
IVLOC
Lighting
Connector
Lighting
Header
Draper
Belt
Speed
On/Off
Eaton Valve
Reel
Speed
Vickers Controller
1
2
3
4