

# Automated Steering Hydraulic Installation Kit

P/N: ED-N2200

Fits Nitro Sprayer Models:

**2200T**  
**2200T-SS**  
**2200T-ET**  
**2200HT**  
**2275HT**



## Overview

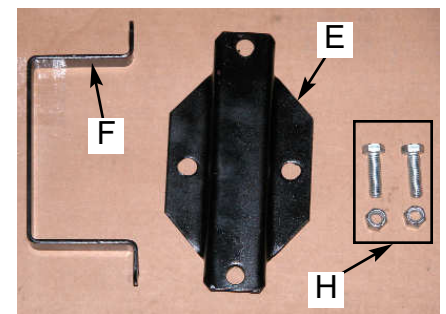
A series of equipment specific hydraulic installation kits have been developed to work in conjunction with your automated steering system. This kit contains the necessary components and instructions to install automated steering hydraulics on the Nitro sprayer models listed above. Please read this manual thoroughly before beginning the installation.

## Sprayer Preparation

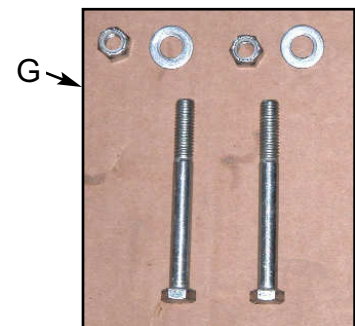
Before attempting to install hydraulics, park the sprayer on a clean level floor with adequate clearance to work all around.

## Kit Contents

Unpack the installation kit and identify the required parts as shown.

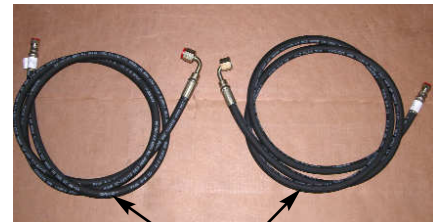
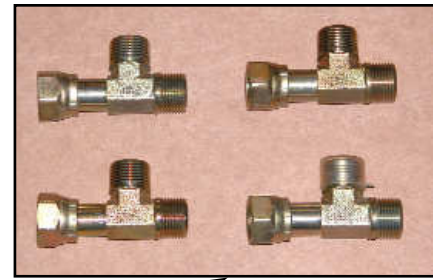


REF	P/N	QTY	DESCRIPTION
A	760-0003	1	Assy, Hyd. Valve Block - LS
<b>Bag #1 of 3 includes B, C, &amp; D</b>			
B	760-2058	2	Adapter, Hyd. 90 Elbow - #6maleJIC x #6maleORB
C	760-2045	1	Adapter, Hyd. Plug - #6maleORB
D	760-2056	2	Adapter, Hyd. - #6maleJIC x #6maleORB
E	640-0039	1	Hyd. Block Mount
F	640-0040	1	Hyd. Block Mnt. - Hammer Strap
<b>Bag #2 of 3 includes G &amp; H</b>			
G	675-2005	2	Bolt - 3/8NC x 3-1/4" Gr5, ZP
	678-1054	2	Washer, Narrow Flat - 3/4"OD x 13/32"ID x 1/16"thk ZP
	676-1035	2	Nut, NyLock - 3/8NC ZP
H	675-2007	2	Bolt, 3/8NC x 3/4" Gr5 ZP
	676-1035	2	Nut, NyLock - 3/8NC ZP



## Kit Contents (cont.)

REF	P/N	QTY	DESCRIPTION
<b>Bag #3 of 3 includes I</b>			
I	760-2069	4	Adapter, Hyd. Run Tee - #8 ORFF
J	760-1177	3	Hose, Hyd. - 3/8x105", #6fJIC x #8fORFF90
K	760-1178	1	Hose, Hyd. - 3/8x18", #6fJIC90 x #8fORFF
L	051-0144	1	Cable, Interface - 10 ft.
	677-2001	20	Tie Strap, 11" Heavy Duty, Not Shown
	710-0053	1	Kit, Steering Wheel Switch, Not Shown



**WARNING:**

**HIGH-PRESSURE FLUID HAZARD.** Hydraulic oil may be hot and under high pressure. To prevent serious injury or death: Relieve system pressure and allow to cool before repairing or disconnecting. Wear proper hand and eye protection when searching for leaks, using wood or cardboard instead of hands. Keep all hydraulic components in good repair.



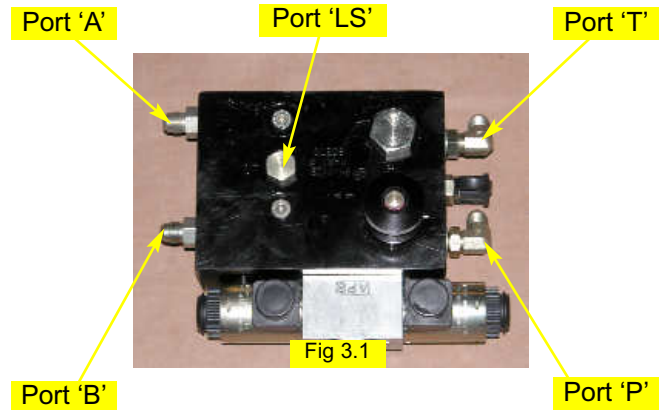
**PREVENT HYDRAULIC SYSTEM CONTAMINATION.** It is essential to thoroughly clean hydraulic system fittings and hose connections prior to disconnecting or removing. Use a spray cleaner such as 'Brake Clean' to prevent hydraulic system contamination. Note that o-rings used on ORB and ORFF type fittings may be damaged by solvent cleaners such as 'Brake Clean'. If a fitting is to be cleaned internally, the o-ring should first be removed and cleaned with a fiberless cloth.

# INSTALLATION

## 1. Prepare Hydraulic Control Block:

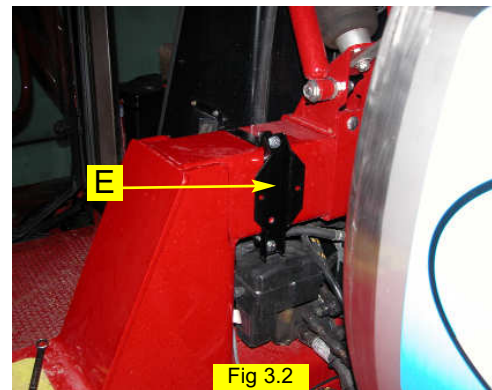
Make sure the hydraulic control block is clean and dust free. Remove the plastic plugs and install the elbow adapter fittings (**B**) into the **P** and **T** ports. Install the straight adapter fittings (**D**) into the **A** and **B** ports, and install the ORB plug (**C**) into the **LS** port of the hydraulic control block. (Figure 3.1)

*Note:* To install the elbow fittings into the **P** and **T** ports, the pressure test port fitting must first be removed. Once the elbows are installed, reinstall the pressure test port fitting.



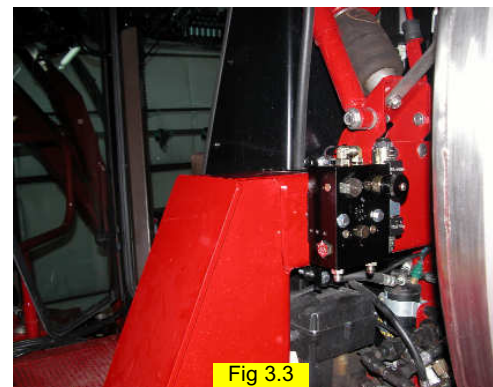
## 2. Install Mounting Bracket:

Locate the frame cross-member behind the cab on the left side of the machine. Install the hydraulic mounting bracket (**E**) to the frame using the hammer-strap (**F**) and the hardware group (**G**) as shown. (Figure 3.2)



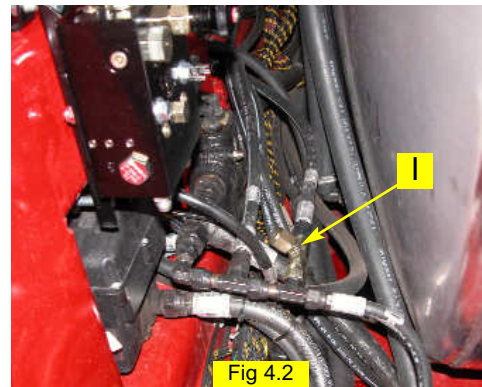
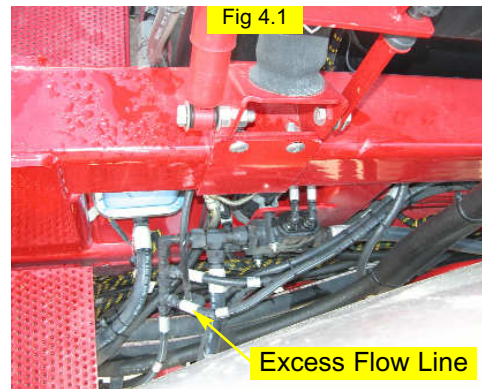
## 3. Install Hydraulic Control Block:

Install the hydraulic control block (**A**), as prepared in step 1, to the mounting bracket as shown using the mounting hardware in group (**H**). (Figure 3.3) Be sure the hydraulic block is oriented with the **A** and **B** ports pointed down, and tighten the mounting bolts securely.

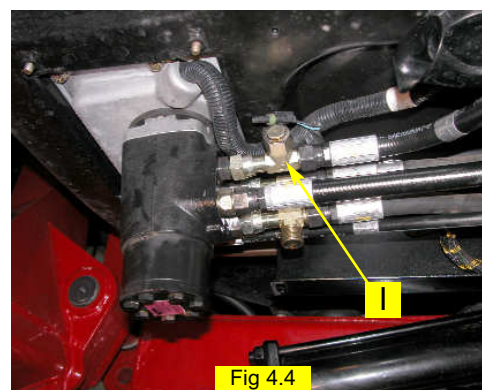
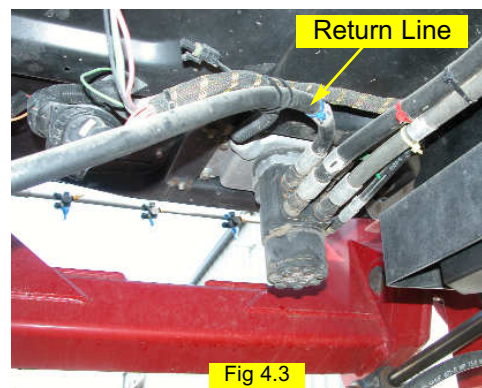


#### 4. Install Pressure and Tank Fittings:

Locate the excess flow line coming from the priority valve behind the cab, near the hydraulic control block mounting location. (Figure 4.1) Install the run-tee (I) into the location shown to provide pressure to hydraulic control block. (Figure 4.2)



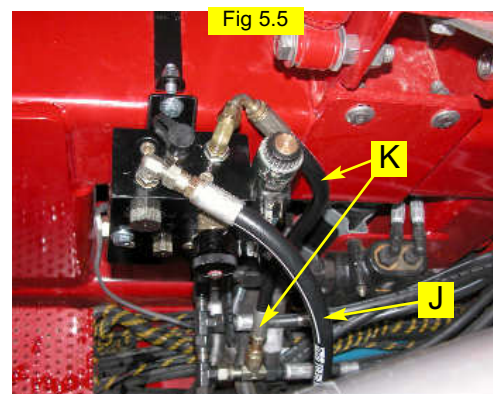
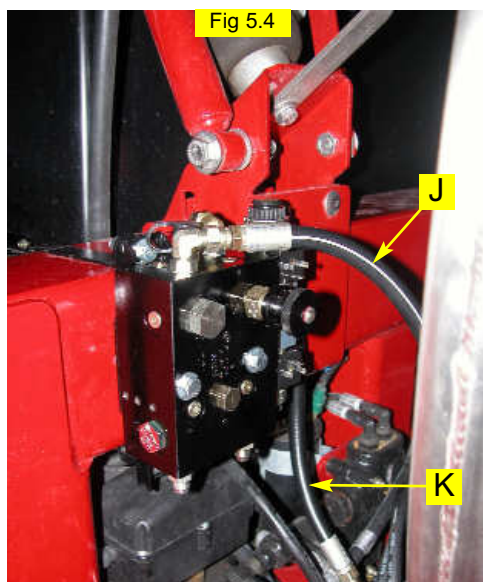
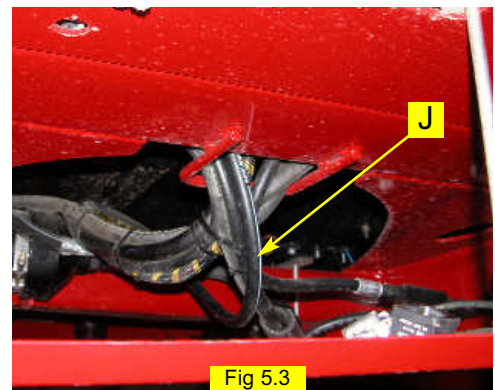
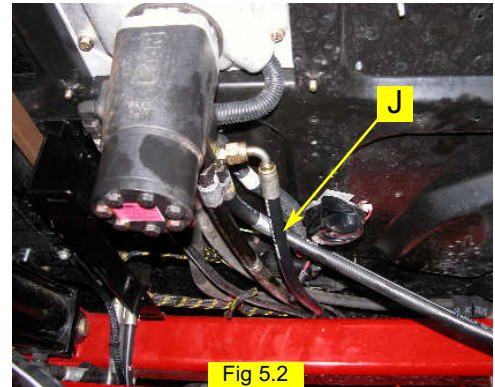
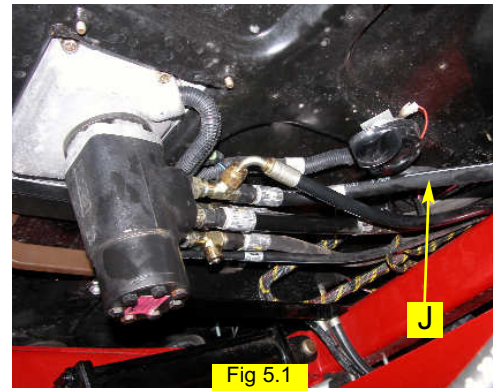
Locate the steering orbital under the sprayer cab (Figure 4.3) and install the run-tee (I) into the return line at the steering orbital as shown. (Figure 4.4) This will provide a tank return for the hydraulic control block. Use plastic caps to prevent excess leakage from the run-tees during installation.



## 5. Install Pressure and Tank Hoses:

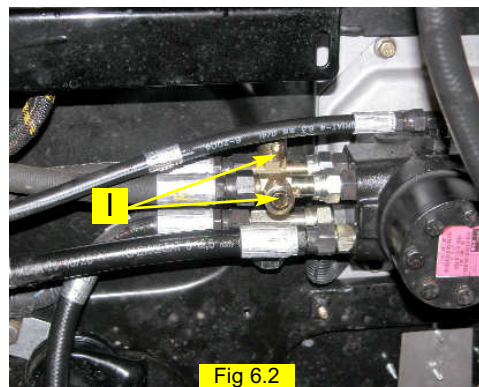
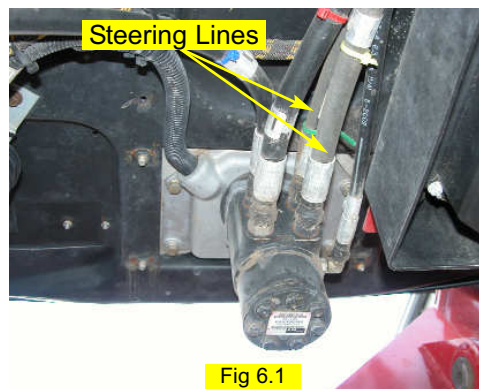
Install the pressure (**K**) and tank (**J**) hoses between the runtees installed in step 4 and the **P** (pressure) and **T** (tank) ports of the hydraulic control block respectively. (Figure 5.1 and 5.2)

The tank hose should be routed along with other hydraulic plumbing and up to the hydraulic control block. Make sure all hoses are routed properly and free from entanglement. Use heavy tie straps (included) as needed. (Figures 5.2 - 5.4)



## 6. Install Steering Output Fittings:

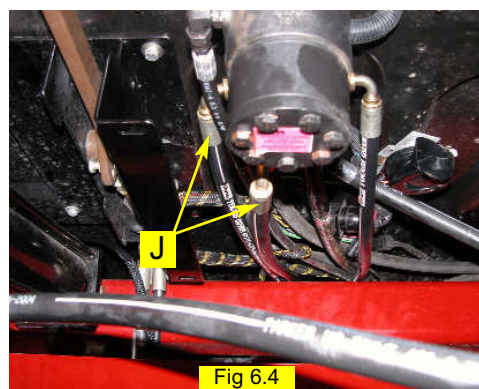
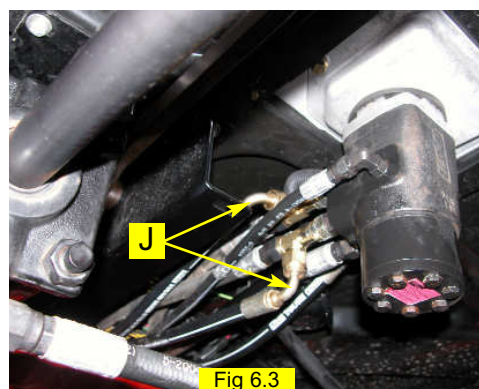
Locate the steering lines on the right side of the steering orbital under the cab. (Figure 6.1) Install run-tee fittings (**I**) in the steering lines at the orbital. (Figure 6.2) Use plastic caps to prevent excess leakage from the run-tees during installation.



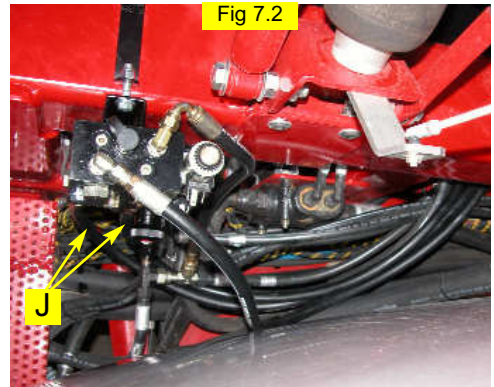
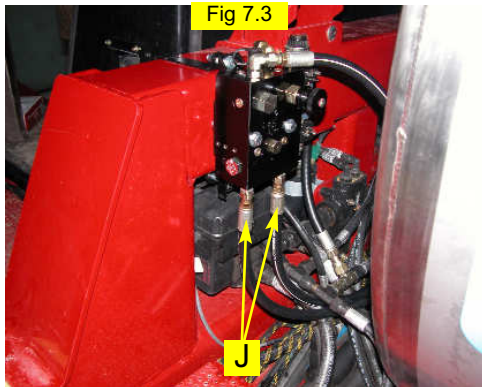
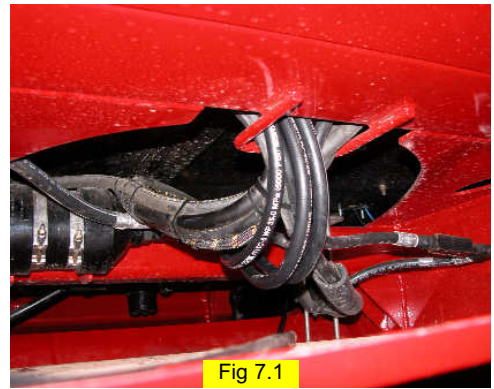
## 7. Install Steering Output Hoses:

Install the steering hoses (**J**) to the branches of the run-tees installed in step 6 and to the **A** and **B** ports of the hydraulic control block. (Figure 6.3 and 7.3)

The hoses should be routed under the cab and up to the hydraulic control block with other plumbing. (Figures 6.4 - 7.3) Use heavy tie straps (included) to secure hoses as needed.

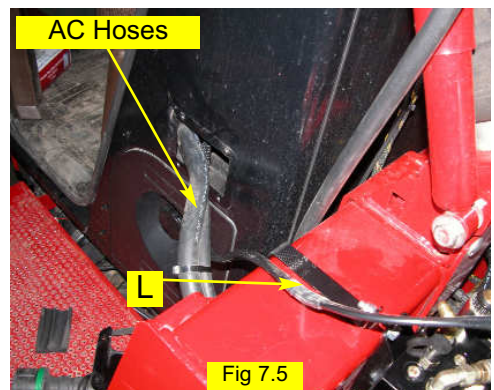
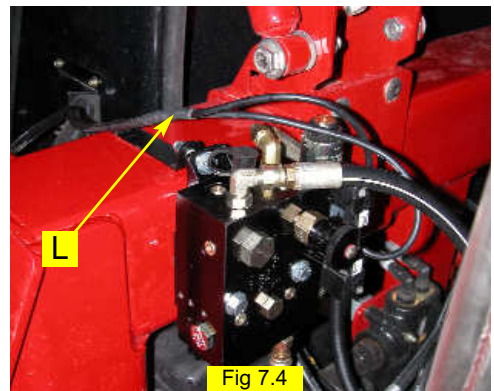


## 7. Install Steering Output Hoses: (Cont.)



## 8. Install the Valve Control Cable:

Attach the hydraulic valve cable (L) to the hydraulic control block (Figure 7.4) and route it into sprayer cab through the grommet with the air conditioner hoses as shown. (Figures 7.5 - 8.2)



## 8. Install the Valve Control Cable: (Cont.)

Be sure the cable is routed securely and free from entanglement. Use tie straps (included) as needed.



## 9. Verify Operation and Set Steering Control Rate:

Cleanup the installation area around the machine and make certain that it is safe to operate. Start the machine and check hydraulic connections for any leaks. Rotate the steering wheel from one extreme to the other, and back.

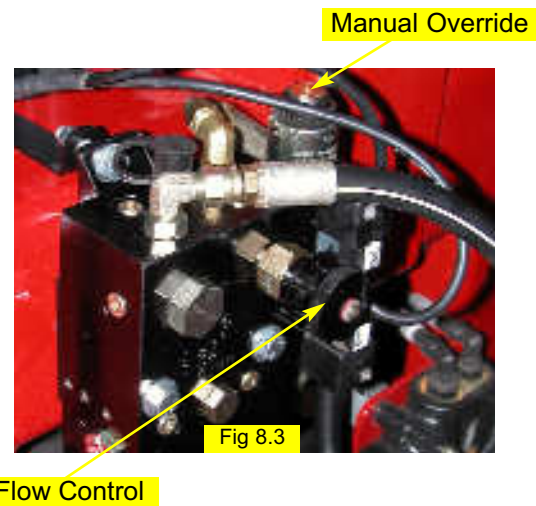
Adjust the hydraulic oil flow control knob to a starting position of **2 turns** from completely closed. To adjust the knob, lift and turn clockwise to reduce flow, counter-clockwise to increase flow.

The coils on the control block have manual push button overrides. Push either manual override to move the sprayer wheels all the way to one extreme. Count the number of seconds for the sprayer wheels to move all the way in the opposite direction while pressing the manual override of the other coil. (Figure 8.3)

Adjust the hydraulic oil flow control to achieve an end to end steering cycle time of approximately **18 seconds**.

## 10. Complete Electronic Installation and Setup:

Refer to the owner's manual supplied with the your automated steering system to complete the electronic installation and setup.



**Note:** To activate the manual overrides, a tool such as a small screw driver or allen wrench must be inserted into the end of the coil to depress the override button.



**WARNING:**

**PINCH POINT HAZARD.** To prevent serious injury or death, avoid unsafe practices while manually operating hydraulic steering circuit. Keep others away and stay clear of mechanical steering linkages.