Automated Steering Hydraulic Installation Kit

P/N: ED-H284

Fits Hagie Sprayer Models:

284

Overview

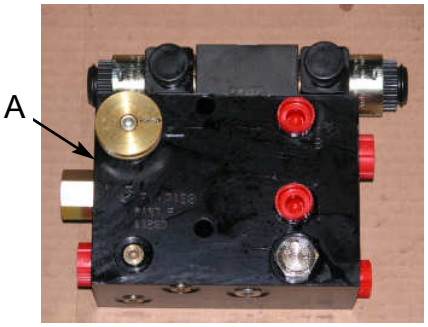
A series of equipment specific hydraulic installation kits have been developed to work in conjunction with your automated steering system. This kit contains the necessary components and instructions to install automated steering hydraulics on the Hagie 284 sprayer. Please read this manual thoroughly before beginning the installation.

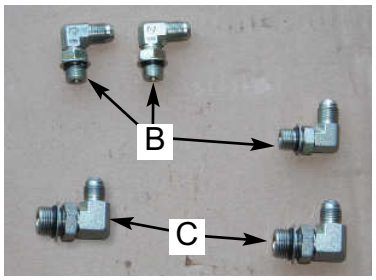
Sprayer Preparation

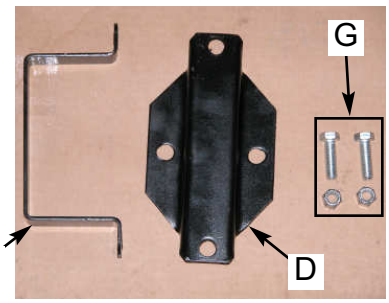
Before attempting to install hydraulics, park the sprayer on a clean level floor with adequate clearance to work all around.

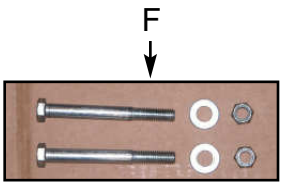
Kit Contents

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





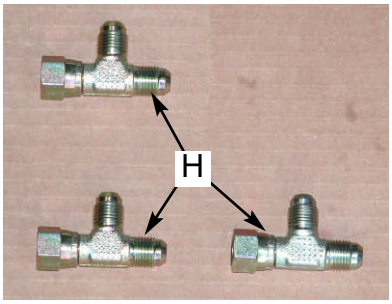




REF	P/N	QTY	DESCRIPTION
A	760-0005	1	Assy, Hyd. Valve Block - OC
	Bag #1 of 3 includes B & C		
B	760-2058	3	Adapter, Hyd. 90 Elbow - #6maleJIC x #6maleORB
C	760-2061	2	Adapter, Hyd. 90 Elbow - #6maleJIC x #8maleORB
D	640-0011	1	PLB 60178 - Hyd. Block Mnt
E	640-0026	1	Hyd. Block Mount - Hammer Strap
	Bag #2 of 3 includes F & G		
F	675-2005	2	Bolt - 3/8NC x 3-1/4" Gr5, ZP
	678-1054	2	Washer, Narrow Flat - 3/4"OD x 13/32ID x 1/16"thk, ZP
	676-1035	2	Nut, NyLock - 3/8NC ZP
G	675-2007	2	Bolt, 3/8NC x 3/4” Gr5 ZP
	676-1035	2	Nut, NyLock - 3/8NC ZP

Kit Contents (cont.)

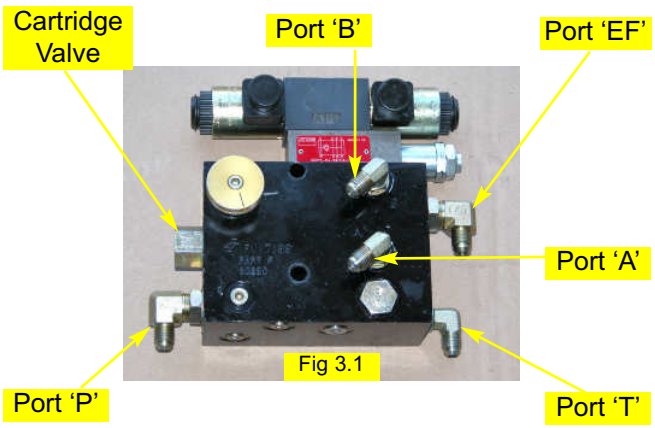
REF	P/N	QTY	DESCRIPTION
	Bag #3 of 3 includes H		
H	760-2054	3	Adapter, Hyd. Run Tee - #6 JIC
I	760-1089	2	Hose, Hyd. - 1/4” x 130”, #6femJICswivel both ends
J	760-1092	1	Hose, Hyd. - 3/8” x 10”, #6maleJIC x #6femJISCswivel
K	760-1062	1	Hose, Hyd. - 3/8" x 40", #6femJICswiv x #6femJICswiv90EL
L	760-1002	1	Hose, Hyd. - 3/8" x 36", #6femJICswiv Both Ends
M	051-0143	1	Cable, Interface - 15 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.

IMPORTANT: **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.

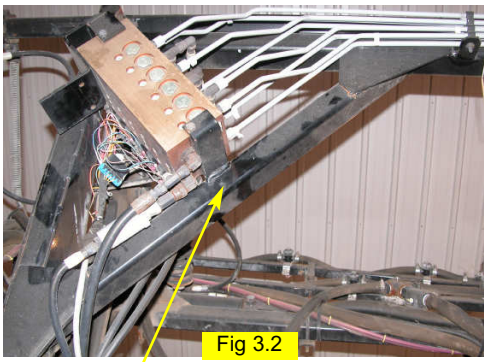
INSTALLATION

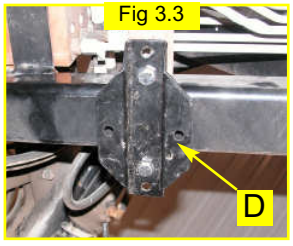


1. Prepare Hydraulic Control Block:

Make sure the hydraulic control block is clean and dust free. Install elbows **(B)** into the **T**, **A**, and **B** ports of the hydraulic control block. Install elbow-fitting **(C)** into the **P** and **EF** ports of the hydraulic control block. (Figure 3.1)

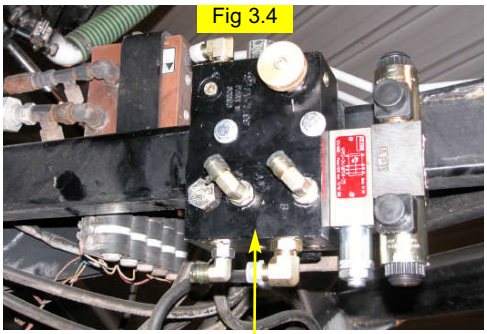
Note: *To install the elbow fitting* ***(C)*** *into the* ***P*** *port of the hydraulic block, the cartridge valve must be removed from the end of the block. Remove the cartridge, install the elbow, and reinstall the cartridge.*





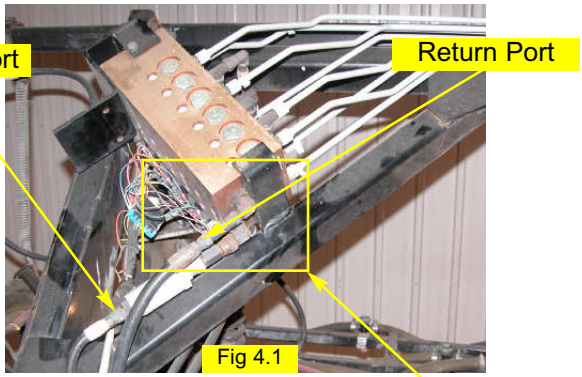
2. Mount Hydraulic Control Block:

Install the hydraulic mounting bracket **(D)** to the left angle brace on the boom near the hydraulic boom function block using the hammer strap **(E)** and hardware group **(G)**. (Figure 3.2 and 3.3) Using the provided mounting hardware in group **(F)** attach the prepared hydraulic control block to the mounting bracket in the orientation shown. (Figure 3.4)

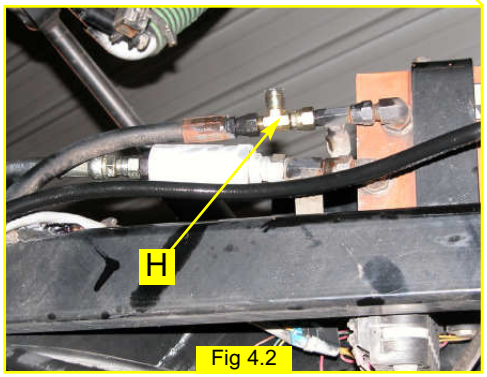


3. Install Pressure, Tank, and Excess Flow Fittings and Note Connection Locations:

The hydraulic control block will receive pressure from the supply line connected to the boom hydraulic block. Excess flow from the hydraulic control block will be connected at the boom hydraulic block. Hydraulic oil will be returned to tank from the hydraulic control block to the return line connected at the boom hydraulic block. These three ports are labeled **P**, **EF**, and **T** respectively on the hydraulic control block. (Figure 4.1)

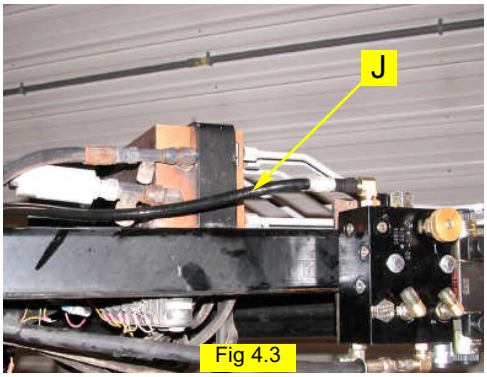


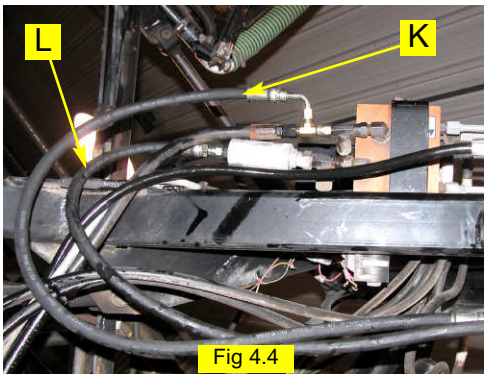
Remove the tank line from the boom hydraulic block and install the provided run-tee **(H)**. (Figure 4.2) Reattach the tank line to the end of the run-tee. Use plastic caps to prevent excess leakage.



4. Install Pressure, Tank, and Excess Flow Hoses:

Disconnect the pressure supply line from the boom hydraulic block. Connect the provided pressure hose **(J)** between the **P** port of the hydraulic control block and the pressure supply line. (Figure 4.3) Install the provided excess flow hose **(L)** between the **EF** port of the hydraulic control block and pressure port of the boom hydraulic block. Connect the tank hose **(K)** between the **T** port of the hydraulic control block and the branch of the run-tee **(H)** installed at the boom hydraulic block in step **3**. (Figure 4.4)





5. Install Steering Output Fittings:

Locate the steering cylinders in front of the cab. Install the provided run-tee fittings **(H)** to the rod and blind end of the left steering cylinder as shown. Use plastic caps to prevent excess leakage from the open runtees. (Figure 5.1 and 5.2)

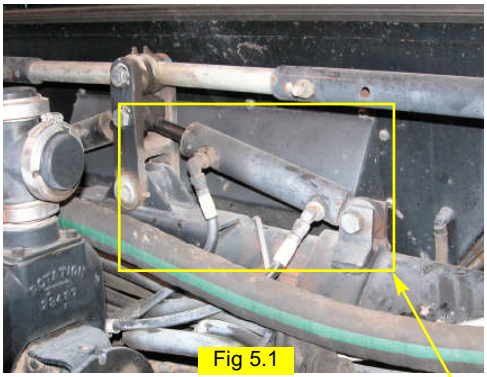


Fig 5.1

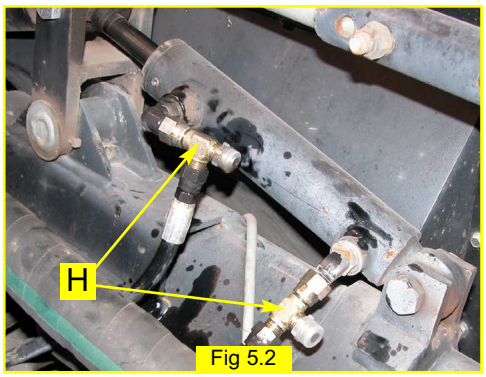


Fig 5.2

6. Install Steering Output Hoses:

Install the provided steering output hoses **(I)** between the run-tees at the steering cylinder and the **A** and **B** ports of the hydraulic control block. (Figure 6.1and 6.2) Hoses should be routed with other machine plumbing to allow for boom movement and suspension articulation. (Figure 6.3 and 6.4)

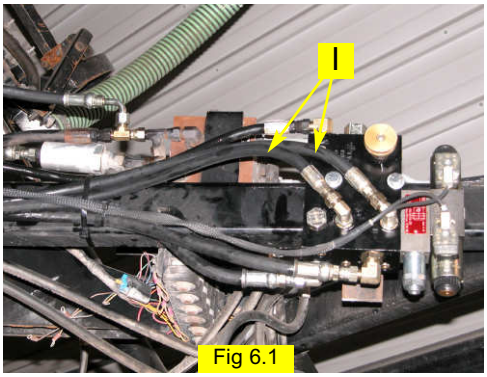


Fig 6.1

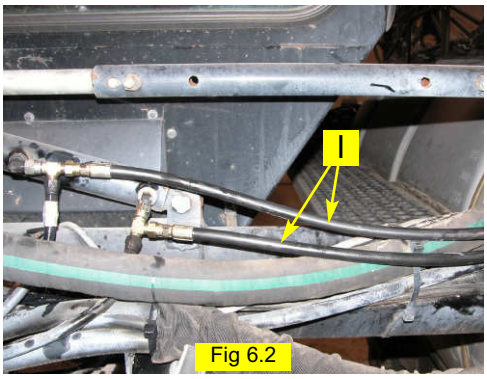


Fig 6.2

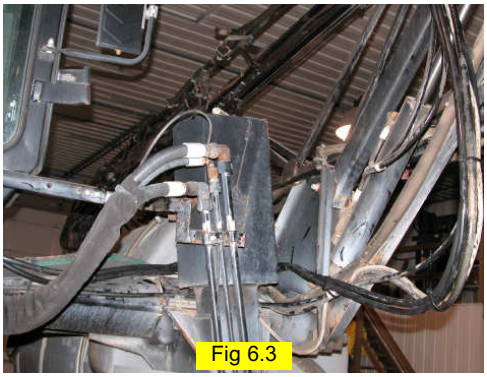


Fig 6.3

Hose Routing

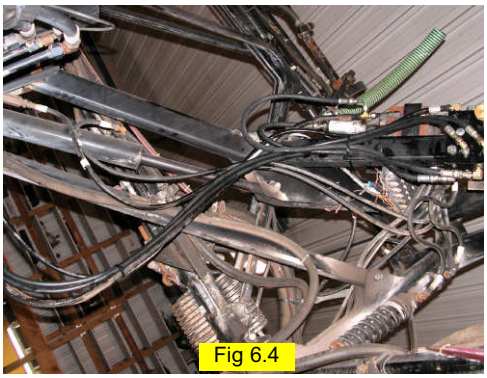


Fig 6.4

7. Install the Valve Control Cable:

Install the hydraulic valve control cable **(M)** at the hydraulic control block by attaching the DIN connectors to the coil. (Figure 7.1) Route the cable with other machine plumbing down and into the cab through the door seal. (Figure 7.2) Secure the cable leaving enough slack to allow for machine movements. Use provided tie straps as necessary.

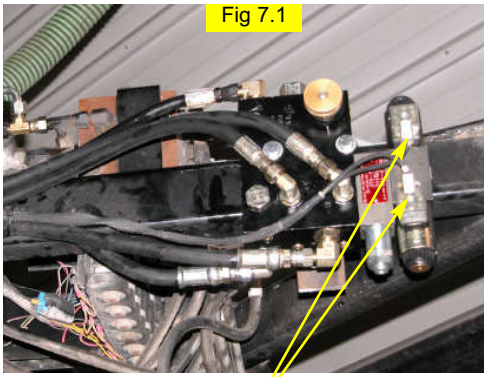


Fig 7.1

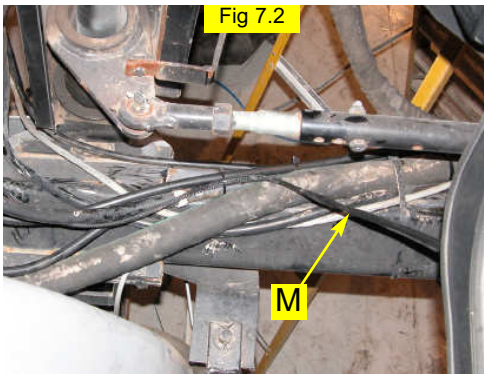


Fig 7.2

8. Verify Operation and Set Steering Control Rate:

Cleanup the installation area around the sprayer and make certain that it is safe to operate. Start the sprayer 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 **3 turns** from completely closed. To adjust the knob, turn clockwise to reduce flow, counter-clockwise to increase flow. The knurled locking nut should be tightened against the cartridge face to maintain desired setting.

The coils on the control block have manual push button overrides. Push either manual override to move the sprayer steering all the way to one extreme. Count the number of seconds for the sprayer steering to move all the way in the opposite direction while pressing the manual override of the other coil. (Figure 7.3)

Adjust the hydraulic oil flow control knob to achieve an end to end steering cycle time of approximately **12** seconds.

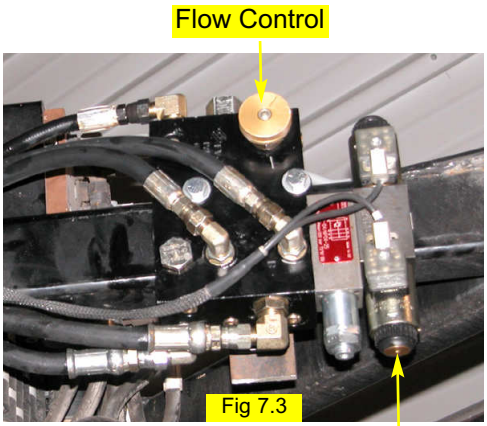


Fig 7.3

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.*

9. Complete Electronic Installation and Setup:

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

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.