Automated Steering Hydraulic Installation Kit

P/N: ED-CASE4WD

Fits Case 4WD Tractor Models:

4490	***4494***
4690	***4694***
4890	***4894***

Overview

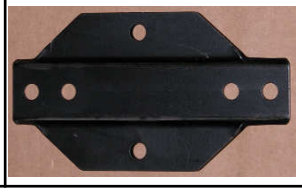
A series of equipment-specific hydraulic installation kits has been developed to work in conjunction with your automated steering system. This kit contains the necessary components and instructions to install the automated steering hydraulics on the Case 4WD tractor models listed above. Please read this manual thoroughly before beginning the installation.

Machine Preparation

Before attempting to install hydraulics, park the machine 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	PHOTOGRAPHS
A	760-0005	1	Assy, Automated Steering Block - OC	
	Bag #1 of 3 includes B & C			
B	760-2080	2	Adapter, Hyd. - 90 elbow #8 maleJIC x #8 maleORB	
C	760-2058	3	Adapter, Hyd. - 90 elbow #6maleJIC x #6maleORB	
D	640-0011	1	Automated Steering Block Mnt	

Kit Contents (continued)

REF	P/N	QTY	DESCRIPTION	PHOTOGRAPHS
	Bag #2 of 3 includes E & F			
E	675-2005	2	Bolt - 3/8NC x 3-3/4" 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	
F	675-2007	1	Bolt - 3/8NC x 3/4" Gr5, ZP	
	676-1035	1	Nut, NyLock - 3/8NC ZP	
	Bag #3 of 3 includes G			
G	760-2077	3	Adapter, Hyd. Run Tee - #8 JIC	
H	760-1218	2	Hoses, Hyd. - 3/8" x 98", #6fJIC x #8fJIC90	
H	760-1218	1	Hose, Hyd. - 3/8" x 98", #6fJIC x #8fJIC90	
I	760-1219	1	Hose, Hyd. - 1/2" x 102", #8fJIC x #8fJIC	

Kit Contents (continued)

REF	P/N	QTY	DESCRIPTION	PHOTOGRAPHS
J	760-1223	1	Hose, Hyd. - 1/2" x 94", #8fJIC x #8mJIC	
K	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

WARNINGS

ATTENTION:

READ this entire installation guide **before** beginning installation. Failure to comply with warnings in this guide can result in personal injury or damage to equipment, and will void all warranties.

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.

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.

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.

IMPORTANT:

FOR OPTIMAL PERFORMANCE. The tractor models listed on the first page must be operated in front wheel steering mode when using automated steering. Other manual steering modes may degrade performance.

INSTALLATION

1. Prepare Automated Steering Block:

a. Make sure the Automated Steering Block is clean and dust free.

b. Remove the plastic plugs and install the small elbow adapters (**C**) in the **T**, **A**, and **B** ports and the larger elbow adapter (**B**) in the **EF** and **P** ports. (Figure 1.)

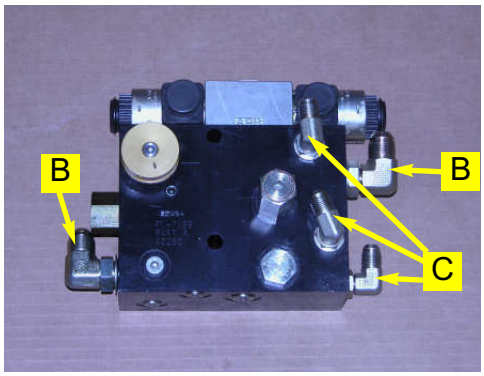


Figure 1. Prepared Automated Steering Block.

2. Mount Automated Steering Block:

a. Locate and install the mounting bracket (**D**) on the right, rear fender above the fuel tank. (Figure 2a. and 2b.)

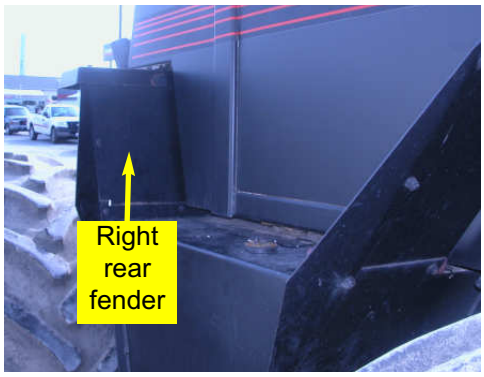


Figure 2a. Right, rear fender mounting location.

b. Install the bottom hole of the mounting bracket onto the middle fender bolt and use the bracket as a guide to drill the top hole.

c. Use the provided hardware (**E**) to attach the mounting bracket to the fender. (Figure 2b.)

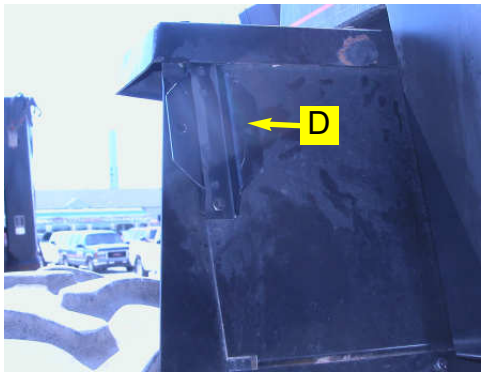


Figure 2b. Installed mounting bracket.

d. Install the Automated Steering Block, as prepared in step **1**, to the mounting bracket using the hardware in group (**F**). Be sure the Automated Steering Block is oriented with the **P** port pointing up. (Figure 2c.)

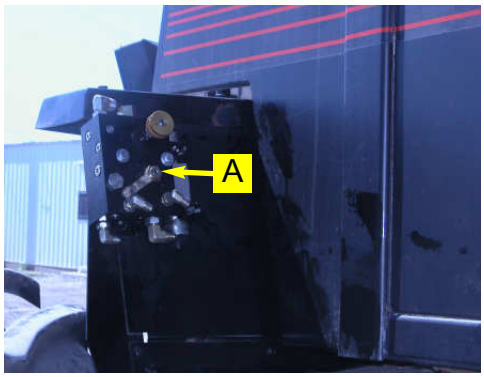


Figure 2c. Mounted Automated Steering Block.

3. Pressure, Tank, and Excess Flow Connection Locations:

a. The Automated Steering Block will receive pressure from the tank port on the steering orbital. The tank port is the left rear port on the orbital. (Figure 3a.)

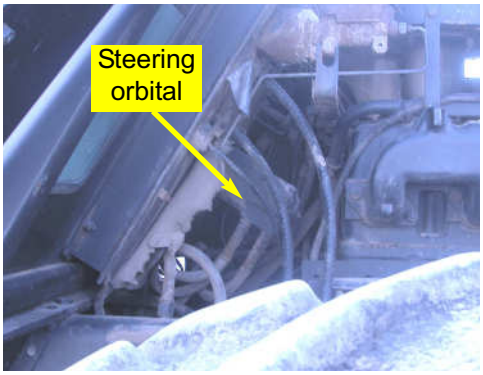


Figure 3a. Location of steering orbital.

b. Remove the left rear line from the steering orbital. Excess flow and tank flow from the Automated Steering Block will be connected to the line originally attached at the orbital. (Figure 3b.)

NOTE: Use plastic caps to prevent leakage from the open ports.

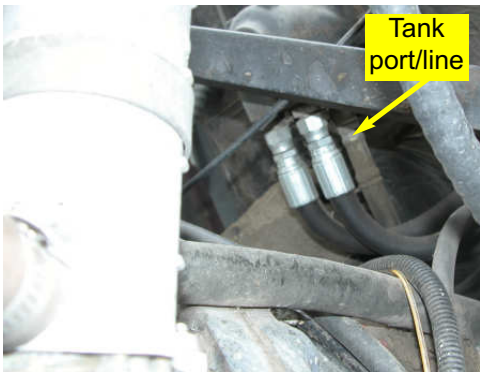


Figure 3b. Location of tank port/line.

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

a. Install the provided pressure hose (**I**) between the **P** port of the Automated Steering Block and the left, rear port on the steering orbital. (Figure 4a. and 4b.)

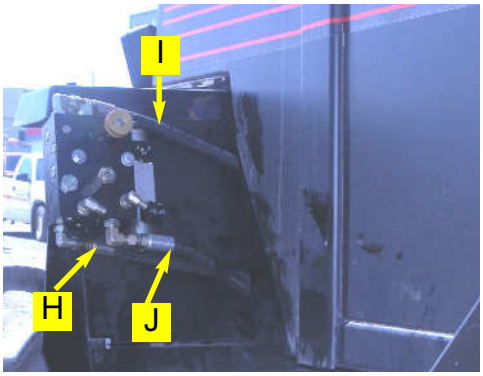


Figure 4a. Installed pressure hose.

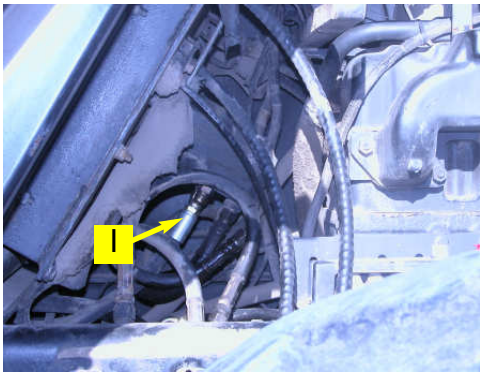


Figure 4b. Installed pressure hose.

4. Install Pressure, Tank, and Excess Flow Hoses (continued):

b. Connect the run tee (**G**) to the hose removed from the orbital. (Figure 4c.)

c. Connect the provided tank hose (**H**) and excess-flow hose (**J**) to the run tee (**G**)and to the **T** port and the **EF** port of the Automated Steering Block, respectively. (Figure 4c.)

d. Use the heavy tie-straps provided to secure the hoses to the machine and frame away from moving parts. Tighten all hydraulic connections securely to prevent leaks.

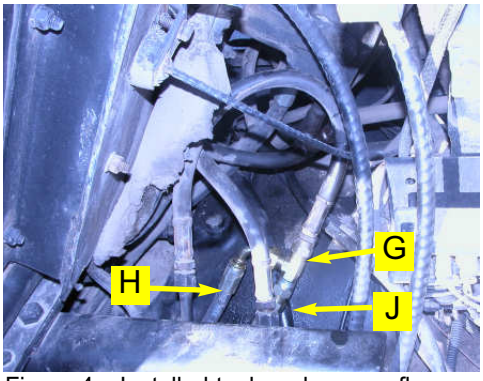


Figure 4c. Installed tank and excess-flow hoses.

5. Install Steering Output Fittings:

a. Locate the steering output lines, which are connected to the two right-side ports on the steering orbital. (Figure 5a.)

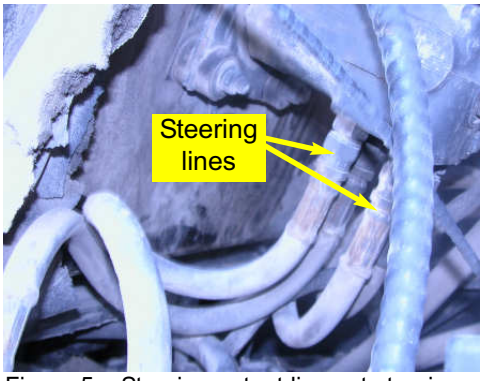


Figure 5a. Steering output lines at steering orbital.

b. Install the provided run tees (**G**) in the steering lines as shown. Use plastic caps to prevent excess leakage from the open run tee ports. (Figure 5b.)

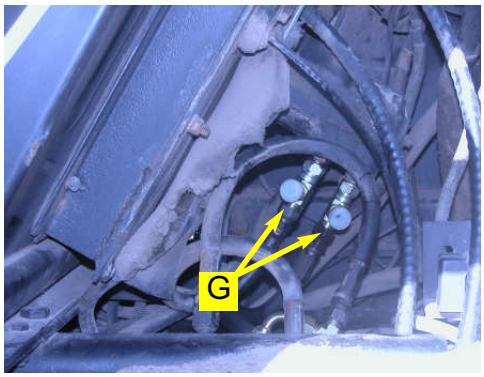


Figure 5b. Installed steering output run tees.

6. Install Steering Output Hoses:

a. Install the provided steering output hoses (**H**) between the run tees installed in step **5b** and the **A** and **B** ports of the Automated Steering Block. (Figure 6a. and 6b.)

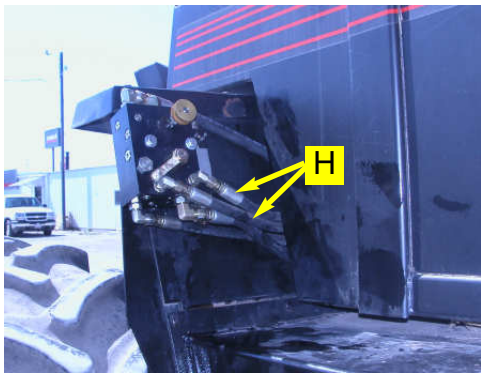


Figure 6a. Installed steering output hoses.

6. Install Steering Output Hoses (continued):

c. Attach the left and right steering hoses' (**H**) 90-degree elbows (**H**) to the run tees. (Figure 6b.)

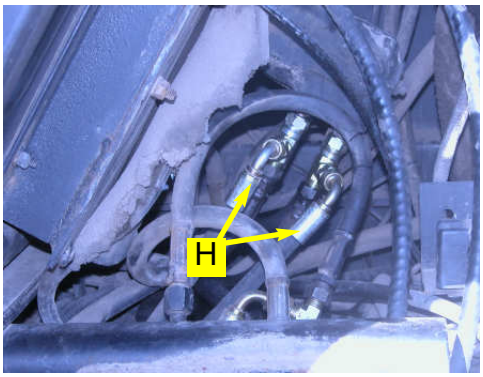


Figure 6b. Left and right steering hoses attached to run tees.

d. The steering hoses (**H**) should be routed from the Automated Steering Block between the cab and fender, then to the steering orbital. Use the heavy tie-straps that are provided to secure the hoses away from moving parts. (Figure 6c.)

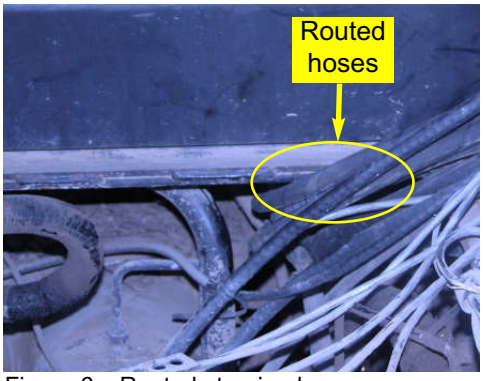


Figure 6c. Routed steering hoses.

7. Install the Valve Interface Cable:

a. Install the valve interface cable (**K**) to the Automated Steering Block by attaching the DIN connectors to the coil. (Figure 7a.)

Figure 7a. Installed valve control cable.

b. Route the valve control cable (**K**) into the cab through the access hole near the rear window. (Figure 7b.)

c. Secure the valve control cable using the provided tie straps as necessary.

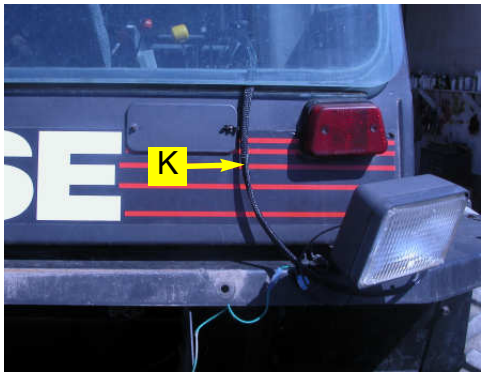


Figure 7b. Routed valve control cable.

8. Complete Automated Steering Electronic Installation and Setup:

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

9. Verify Operation and Set Steering Control Rate:

a. Cleanup the installation area around the machine and make certain that it is safe to operate.

b. Start the machine and check automated steering connections for any leaks.

c. Rotate the steering wheel from one extreme to the other, and back.

d. Adjust the Automated Steering flow control knob to a starting position of **1.5 turns** from completely closed. To adjust the knob:
• turn clockwise to reduce flow.
• turn counter-clockwise to increase flow.
(Figure 8)

e. Your automated steering system is equipped with a Steering Adjust (Valve Test) function. Use the Steering Adjust (Valve Test) function in your automated steering system to move the tractor steering all the way to one extreme.

f. Count the number of seconds for the steering to move all the way in the opposite direction while using the Steering Adjust (Valve Test) function.

g. Adjust the Automated Steering oil flow control to achieve an end to end steering cycle time of approximately **11** seconds. Use the knurled locking nut to secure the final flow control setting. (Figure 9.)

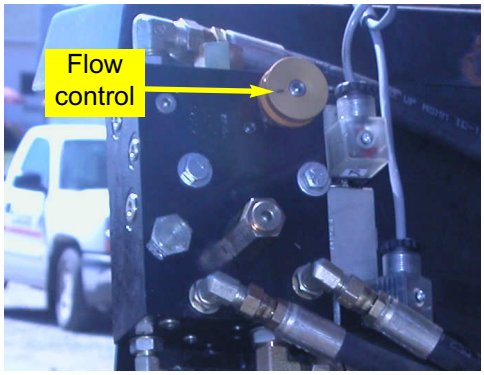


Figure 9. Automated Steering flow control.