

Automated Steering Hydraulic Installation Kit

P/N: ED-AC85496

**Fits Ag-Chem RoGator Sprayer:
854
(Models thru 1996)**

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 automated steering hydraulics on the Ag-Chem RoGator 854 models listed above. (The last two digits of the serial number indicate the model year.) 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 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, Hyd. Valve Block - OC	
Bag #1 of 3 includes B, C & D				
B	760-2080	1	Adapter, Hyd. - 90 elbow #8 maleJIC x #8 maleORB	
C	760-2058	3	Adapter, Hyd. - 90 elbow #6maleJIC x #6maleORB	
D	760-2079	1	Adapter, Hyd. - #8 maleJIC x #8 maleORB	
E	640-0010	1	Hyd. Block Mnt - AC854	

Kit Contents (continued)

REF	P/N	QTY	DESCRIPTION	PHOTOGRAPHS
Bag #2 of 3 includes F				
F	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 ZP	
	676-1035	2	Nut, NyLock - 3/8NC ZP	
Bag #3 of 3 includes G				
G	760-2077	3	Adapter, Hyd. Run Tee - #8 JIC	
H	760-1220	2	Hose, Hyd. - 3/8" x 60", #6fJIC x #8fJIC	
I	760-1221	1	Hose, Hyd. - 1/2" x 44", #8fJIC x #8fJIC	
J	760-1118	1	Hose, Hyd. - 3/8" x 48", #8fJIC90 x #6fJIC	
K	760-1222	1	Hose, Hyd. - 1/2" x 13", #8fJIC x #8mJIC	
L	051-0143	1	Cable, Valve Interface - 15 ft.	

Kit Contents (continued)

REF P/N	QTY	DESCRIPTION	PHOTOGRAPHS
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.

INSTALLATION

1. Prepare Automated Steering Block:

- a. Make sure the Automated Steering Block is clean and dust free.
- b. Install the large elbow adapter (**B**) in the EF port and the small elbow adapters (**C**) in the A, B, and T ports of the Automated Steering Block. (Figure 1.)
- c. Install the straight adapter fitting (**D**) into the P port of the Automated Steering Block. (Figure 1.)

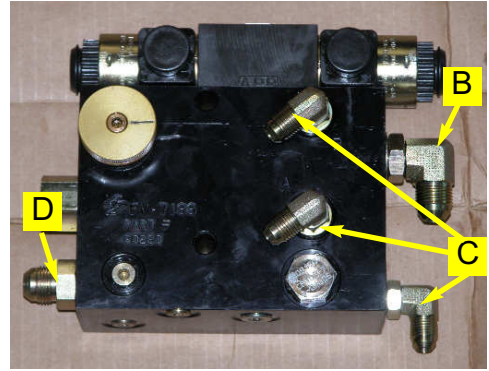


Figure 1. Prepared Automated Steering Block.

2. Mount Automated Steering Block:

- a. Locate the three bolts that fasten the sheet metal to the frame in front of the cab on the lower left side. (Figure 2a.)
- b. Remove the two bolts furthest from the cab.
- c. Install the mounting bracket (**E**) using the existing bolts. (Figure 2b.)
- d. Use the provided hardware group (**F**) to attach the Automated Steering Block (**A**) to the mounting bracket (**E**) in the orientation shown. (Figure 2c.)

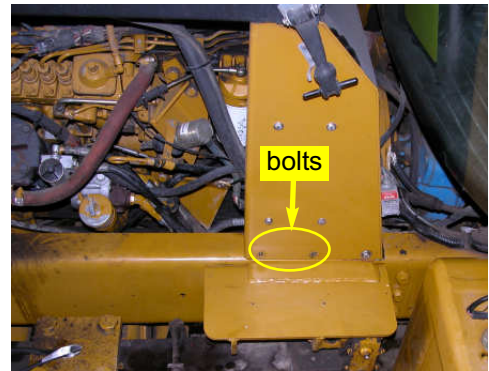


Figure 2a. Bolts removed.



Figure 2b. Installed mounting bracket.

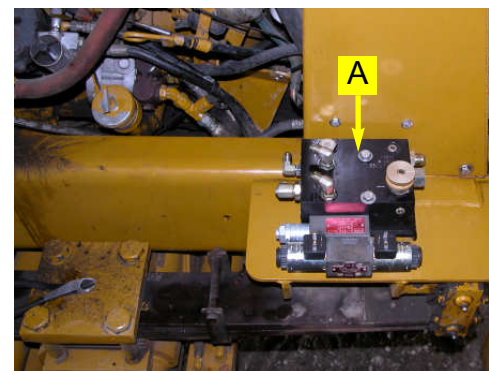


Figure 2c. Installed Automated Steering Block.

3. Pressure, Tank, and Excess Flow fittings/locations:

- a. Locate the steering orbital under the cab. The tank return for the automated steering system will be relieved to the T port on the steering orbital. (Figure 3a.)
- b. Locate the T port on the top, left side of the steering orbital as shown. (Figure 3a.)
- c. Remove the hose and install the provided run tee (G). (Figure 3b.)
- d. Reattach the existing hose to the end of the run tee.
- e. The Automated Steering Block will be connected in series with the main hydraulic pump located on the side of the engine by the oil fill. The priority divider is mounted to the back of the main pump. Excess flow from the priority divider will provide pressure for the Automated Steering Block. Remove the excess flow hose from the priority divider.

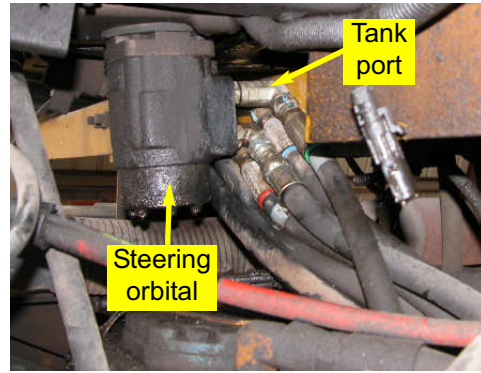


Figure 3a. Steering orbital and tank port.



Figure 3b. Run tee installed.

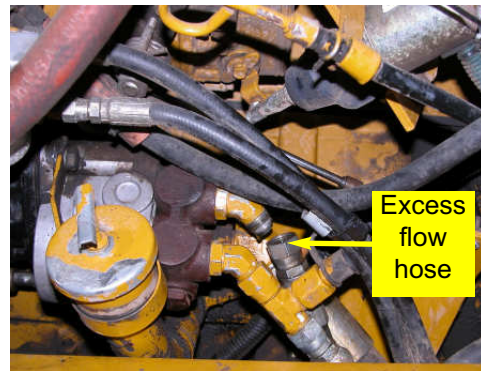


Figure 3c. Hydraulic pump and excess flow hose.

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

- a. Route the provided tank hose (**J**) from the **T** port of the Automated Steering Block, behind the sheet metal shielding and across to the run tee installed on the **T** port of the steering orbital. (Figure 4a. and 4c.)
- b. Secure the tank hose to the branch of the run tee and to the elbow in the **T** port of the Automated Steering Block. (Figure 4a. and 4c.)
- c. Route the pressure hose (**I**) from the **P** port of the Automated Steering Block behind the hood frame and to the excess flow port on the priority divider. (Figure 4b.)
- d. Connect the excess flow hose (**K**) from the **EF** port of the Automated Steering Block to the hose removed from the priority divider. (Figure 4c.)

NOTE: Be sure all hoses are routed and secured for problem free operation.

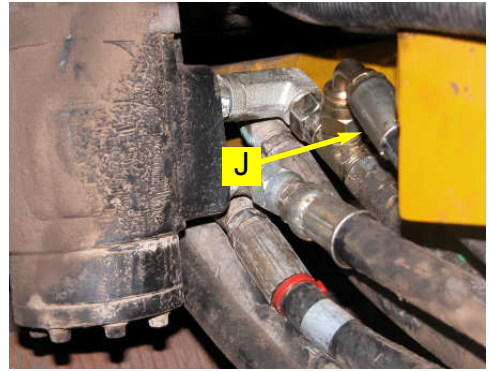


Figure 4a. Connected tank hose at run tee.

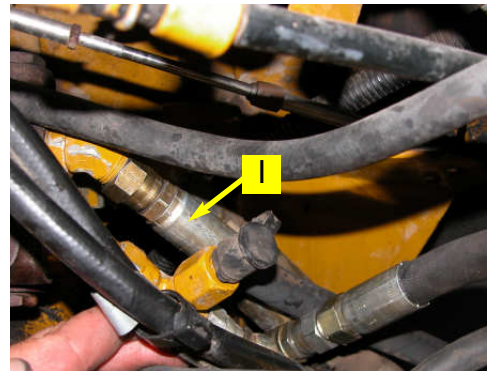


Figure 4b. Connected pressure hose at priority divider.

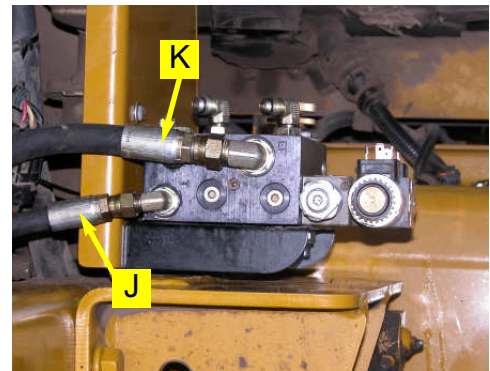


Figure 4c. Excess flow and tank hoses connected to Automated Steering Block.

5. Install Steering Output Fittings:

- a. Locate the steering lines at the front of the sprayer under the frame where the plumbing is branched. The first two lines from the rear are the steering lines. (Figure 5a.)
- b. Remove the two steering lines.

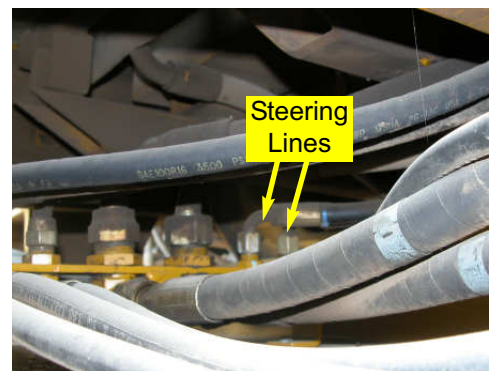


Figure 5a. Steering lines.

5. Install Steering Output Fittings (continued):

- c. Install the run tees (**G**) fitting into the steering lines. Use plastic caps to prevent excess leakage from the run tees during installation. (Figure 5b. and 5c.)



Figure 5b. Installed run tees.

- d. Reattach the steering lines to the ends of the run tees. (Figure 5c.)

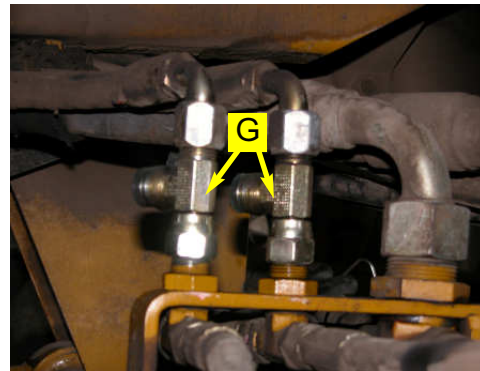


Figure 5c. Installed run tees.

6. Install Steering Output Hoses:

- a. Route the provided steering output hoses (**H**) from the **A** and **B** ports of the Automated Steering Block under the radiator with existing plumbing to the steering run tees at the front of the sprayer. (Figure 6a. and 6b.)

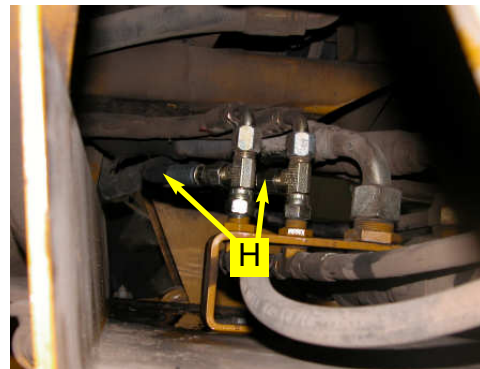


Figure 6a. Steering output hoses connected to run tees.

- b. Attach the steering output hoses (**H**) to the **A** and **B** ports on the Automated Steering Block and to the run tees. (Figure 6a. and 6b.)

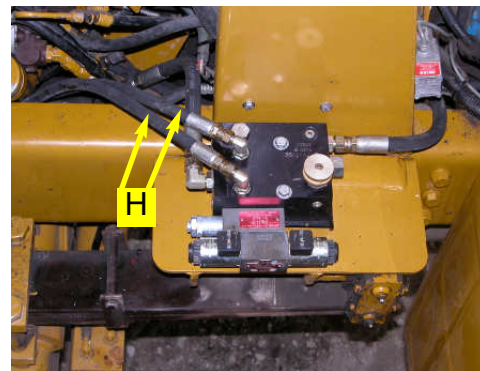


Figure 6b. Steering output hoses connected to Automated Steering Block.

7. Install the Valve Interface Cable:

- a. Route the valve interface cable (L) into the cab through the floor at the right, rear corner of the cab. (Figure 7a.)

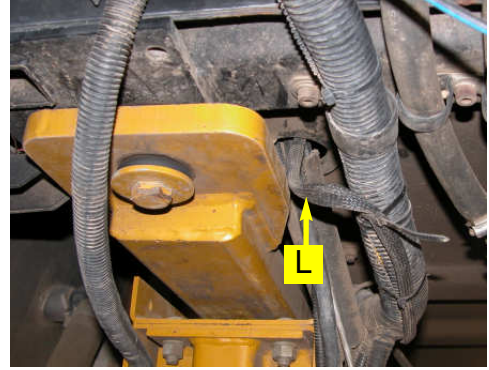


Figure 7a. Routed valve interface cable.

- b. Connect the DIN connectors to the valve coils of the Automated Steering Block. (Figure 7b.)

NOTE: Take enough slack out of the valve cable to prevent entanglement and secure with tie straps.

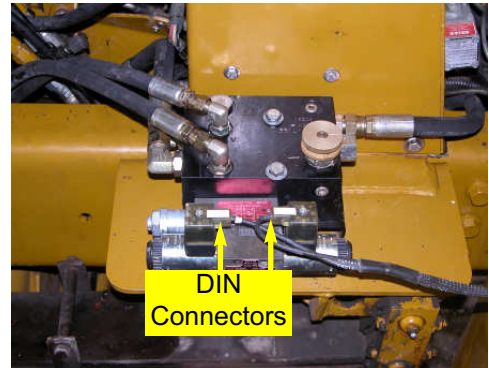


Figure 7b. Attached DIN connectors.

8. Verify Operation and Set Steering Control Rate:

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



WARNING:

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

- d. Adjust the Automated Steering oil flow control knob to a starting position of **2 turns** from completely closed. To adjust the knob:
 - Turn clockwise to reduce flow
 - Turn counter-clockwise to increase flow. (Figure 8.)
- e. The coils on the Automated Steering Block have manual push button overrides. Push either manual override to move the machine steering wheels all the way to one extreme. (Figure 8.)



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.

- f. Count the number of seconds for the steering wheels to move all the way in the opposite direction while pressing the manual override of the opposite coil. (Figure 8.)
- g. Adjust the Automated Steering oil flow control knob to achieve an end-to-end steering cycle time of approximately **14** seconds. (Figure 8.)
- h. Tighten the knurled, locking nut against the cartridge face to maintain the desired setting. (Figure 8.)

9. 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.

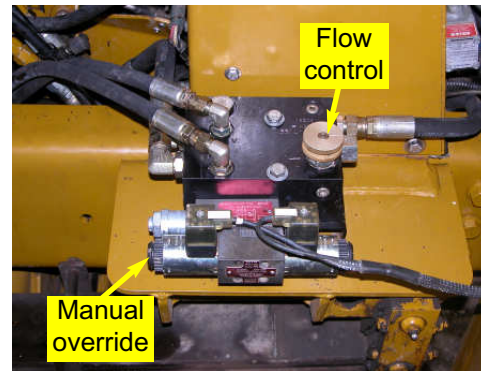


Figure 8. Automated Steering flow control knob and manual override.

