Automated Steering Hydraulic Installation Kit

P/N: ED-AC854

Fits Ag-Chem RoGator Model

854

(1997-2002 Models)

Overview

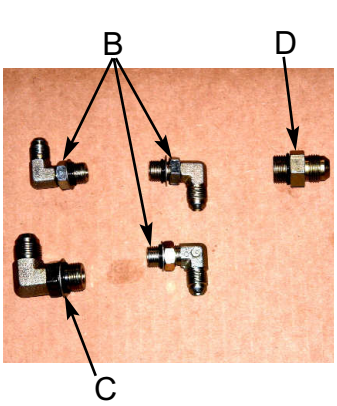
A series of equipment specific hydraulic installation kits has been developed to work in conjunction with your automated steering system. This kit contains the necessary components and detailed instructions to install automated steering hydraulics on the Ag-Chem RoGator 854 models listed above. (The last two digits of the serial number indicate the model year.) Please read this manual thoroughly before beginning the installation.

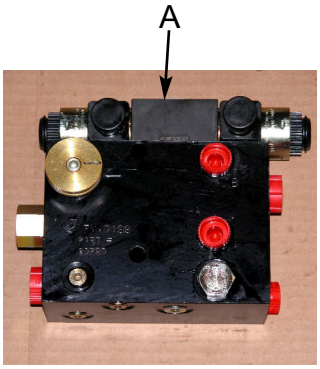
Machine Preparation

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

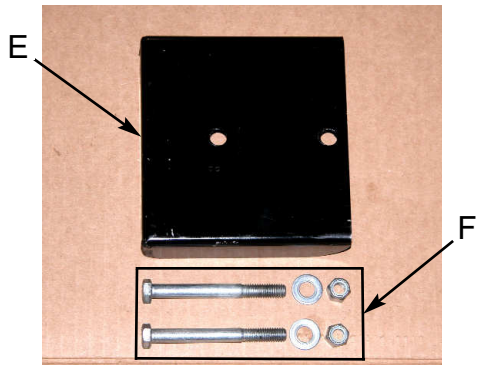
Kit Contents

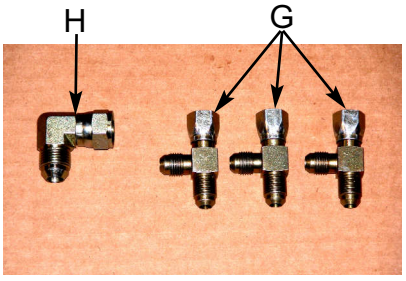
Unpack the installation kit and identify the required parts as shown.





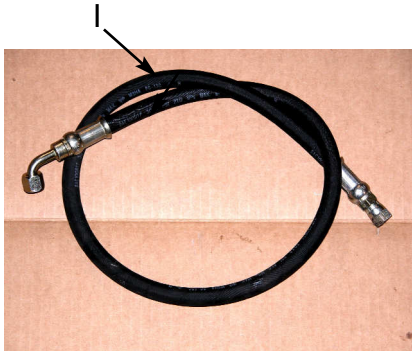
REF	P/N	QTY	DESCRIPTION
A	760-0005	1	Assy, Hyd. Valve Block - OC
	Bag #1 of 3 includes B, C, & D		
B	760-2058	3	Adapter, Hyd. 90 Elbow - #6maleJIC x #6maleORB
C	760-2080	1	Adapter, Hyd. 90 Elbow - #8maleJIC x #8maleORB
D	760-2079	1	Adapter, Hyd. - #8maleJIC x #8maleORB
E	640-0010	1	Bracket, Hydraulic Block Mnt - AC854
	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 x 1/16" + HK ZP
	676-1035	2	Nut, NyLock - 3/8NC ZP
	Bag #3 of 3 includes G & H		
G	760-2054	3	Adapter, Hyd. Run Tee - #6 JIC
H	760-2078	1	Adapter, Hyd. 90 Elbow - #8maleJIC x #8femJICswivel

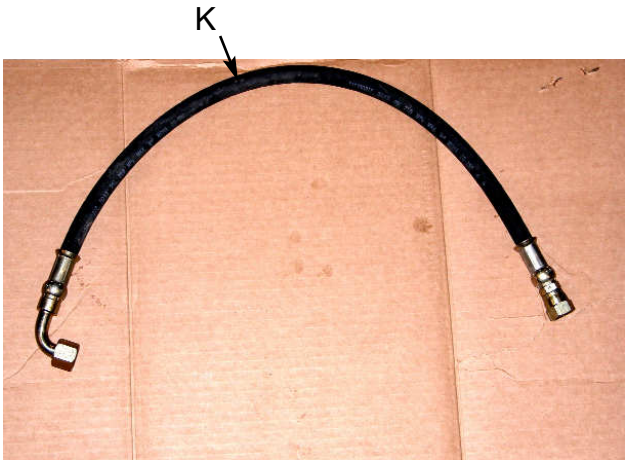


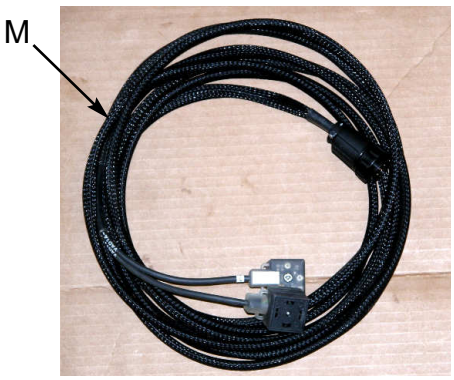


Kit Contents (cont.)

REF	P/N	QTY	DESCRIPTION
I	760-1062	1	Hose, Hyd. - 3/8" x 40", #6femJICswiv x #6femJICswiv90EL
J	760-1063	2	Hose, Hyd. - 1/4" x 39", #6femJICswiv x #6femJICswiv90EL
K	760-1064	1	Hose, Hyd. - 3/8" x 35", #8femJICswiv x #8femJICswiv90EL
L	760-1065	1	Hose, Hyd. - 3/8" x 32", #8maleJIC x #8femJICswiv
M	051-0143	1	Cable, Valve Interface - 15 ft.
	677-2001	20	Tie Strap, 11" Heavy Duty, Not Shown
	710-0053	1	Steering Wheel Switch Kit, 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 steering hydraulic control block is clean and dust free. Remove the plastic plugs. Install elbow adapters **(B)** in the **T, A, & B** ports. Install elbow adapter **(C)** in the **EF** port. Install straight fitting **(D)** in the **P** port. (Figure 3.1)

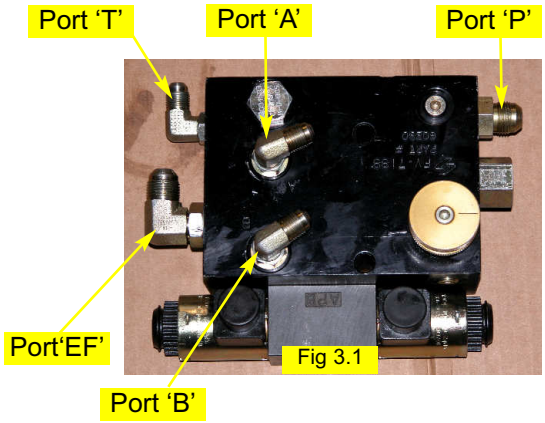


Fig 3.1

2. Install Mounting Bracket:

Locate the three bolts that fasten the sheet metal to the frame in front of the cab on the lower left side. (Figure 3.2)

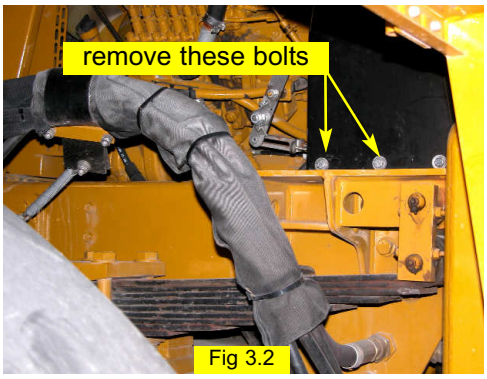


Fig 3.2

Remove the two bolts, as indicated, and install the hydraulic block mounting bracket **(E)**. Secure the mounting bracket to the sheet metal and frame as shown. (Figure 3.3)

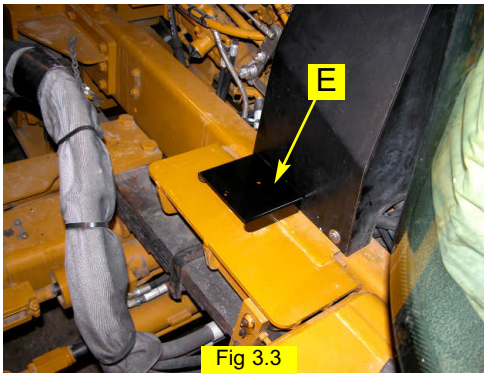


Fig 3.3

3. Install Hydraulic Control Block:

Install the hydraulic control block, as prepared in step **1**, to the mounting bracket as shown using the mounting hardware in group **(F)**. Tighten mounting bolts securely. (Figure 3.4)

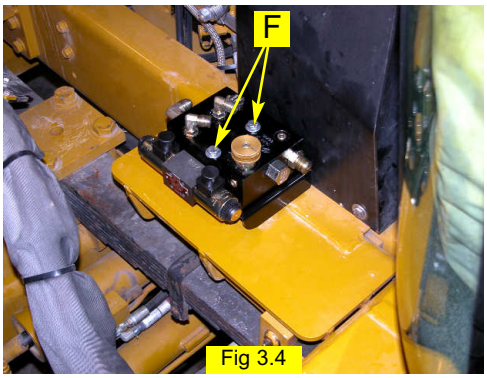


Fig 3.4

4. Pressure, Tank, & Excess Flow Fittings/Locations:

Note: *On models prior to 2002 the steering orbital is rotated 90 degrees to the right causing all ports to be rotated 90 degrees from the locations indicated by the diagrams.*

Locate the steering orbital under the cab. The tank return for the automated steering system will be relieved to the **T** (tank) port on the steering orbital. Locate the port stamped **T** on the top, right side of the steering orbital as shown. (Figure 4.1) Remove the hose, install the provided run-tee **(G)**, and reattach the hose to the end of the run-tee. (Figure 4.2)

Locate the excess flow port on the front of the steering orbital. (Figure 4.2) To better access this port the two steering output hoses will need to be removed from the left side of the orbital and set aside. (Figure 4.3) Pressure supply for the hydraulic control block will be received from the **EF**(excess flow) port on the steering orbital. Excess flow from the hydraulic control block will be relieved to the hose attached at the **EF** port of the steering orbital. Remove the hose from the **EF** port of the steering orbital and set it aside. (Figure 4.3)

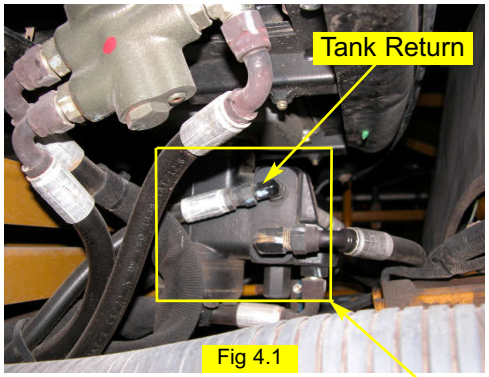


Fig 4.1

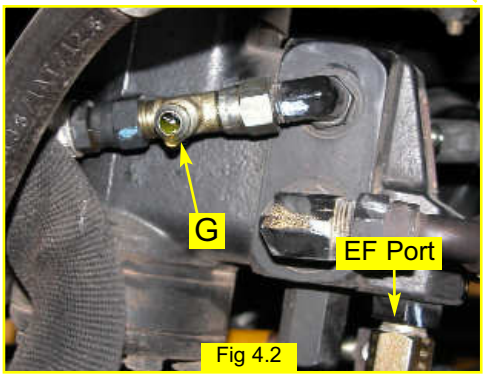
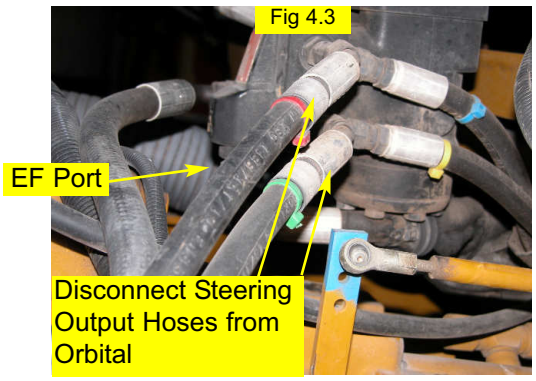


Fig 4.2

Fig 4.3


5. Install Pressure, Tank, & Excess Flow Hoses:

Route the provided tank hose **(I)** from the **T** port of the hydraulic control block, behind the sheet metal shielding and across to the run-tee installed on the **T** port of the steering orbital. Secure the hose to the branch of the run-tee and to the elbow in the **T** port of the hydraulic control block. (Figure 5.1)

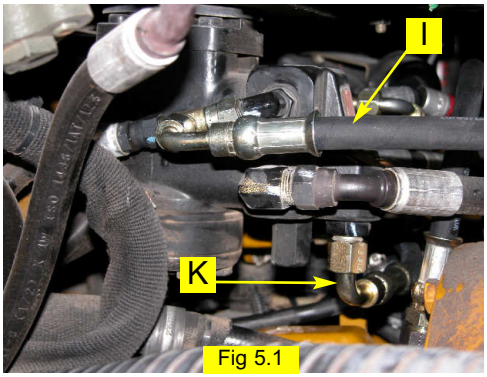


Fig 5.1

Route the provided excess flow hose **(L)** from the **EF** port of the hydraulic control block behind the sheet metal shield and back to the **EF** hose removed from the steering orbital. (Figure 5.2) Use the provided elbow adapter **(H)** to attach the excess flow hose to the machine **EF** hose. Route the provided pressure hose **(K)** from the **P** port of the hydraulic control block to the **EF** port of the steering orbital. (Figure 5.2 and 5.3) Tighten the pressure and excess flow fittings and hoses at the orbital and the hydraulic control block. (Figure 5.4)

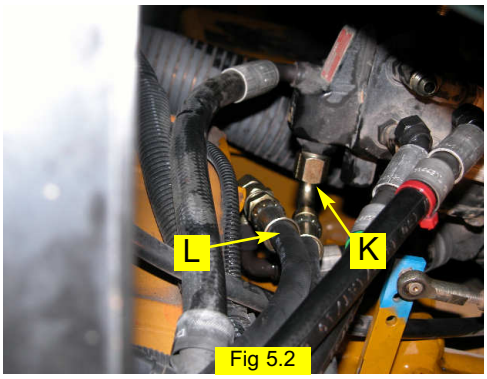


Fig 5.2

Carefully check the hose routings for clearance of moving parts and secure with the heavy tie straps provided. Securely tighten all hydraulic hose fittings and adapters on the pressure, tank, and excess flow lines.

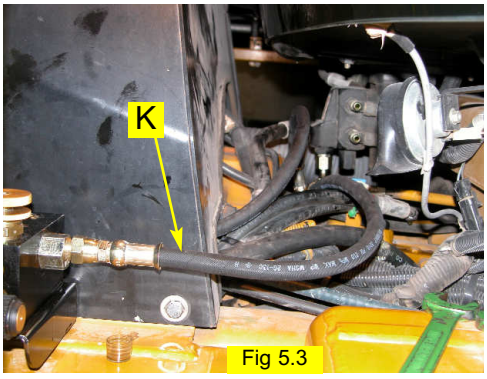


Fig 5.3

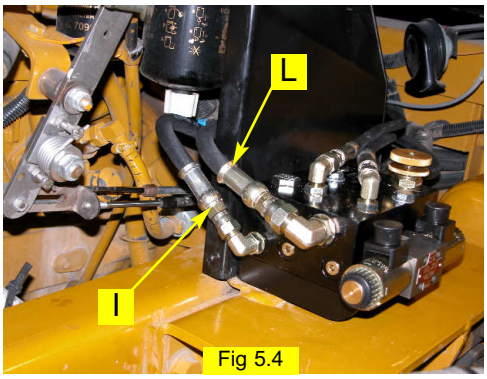


Fig 5.4

6. Install Steering Output Fittings:

Locate the steering output ports on the left side of the steering orbital. (Figure 6.1) Install the provided run-tees **(G)** onto both steering output ports of the steering orbital and reattach the steering hoses to the ends of the respective run-tees. (Figure 6.2 and 6.3)

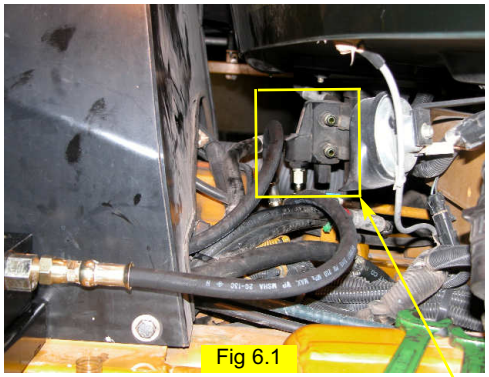


Fig 6.1

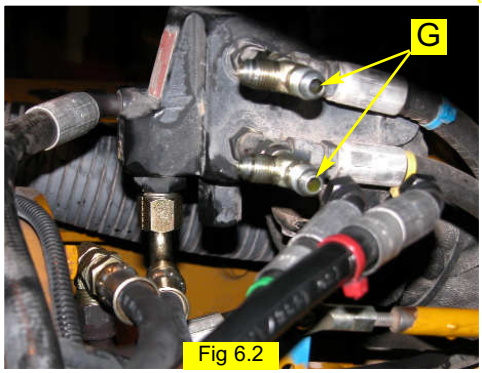


Fig 6.2

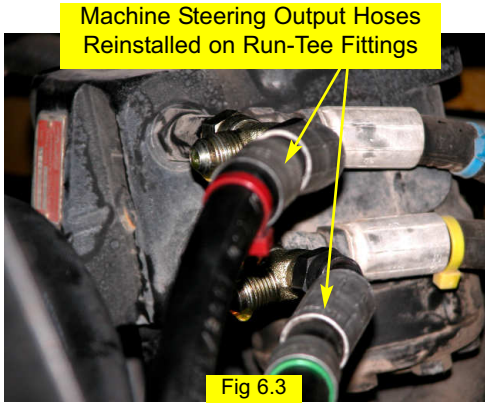


Fig 6.3

7. Install Steering Output Hoses:

Route the provided steering output hoses **(J)** from the **A** and **B** ports of the hydraulic control block to the branches of the run-tee fittings installed at the steering orbital. (Figure 7.1 and 7.2)

Carefully check the hose routings for clearance of moving parts and secure with the heavy tie straps provided. Securely tighten all hydraulic hose fittings and adapters on the steering output flow lines.

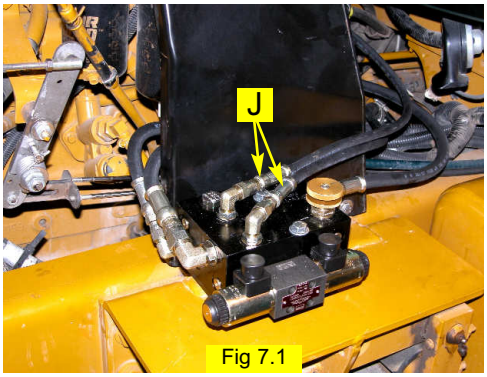


Fig 7.1

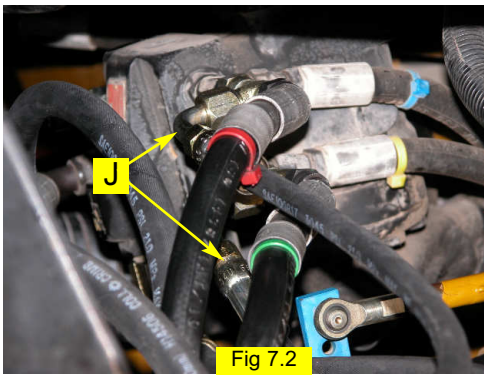


Fig 7.2

8. Install the Valve Control Cable:

Route the valve control cable **(M)** through the floor at the right rear corner of the cab. (Figure 7.4) Route the DIN connectors across underneath the cab, over to the hydraulic control block and attach as shown. (Figure 7.3) Reference pictures on following page for further detail of routed cable.

Remove enough slack out of the cable to prevent entanglement with moving machine parts. Use tie straps as needed. (Figure 8.1 and 8.2, next page)

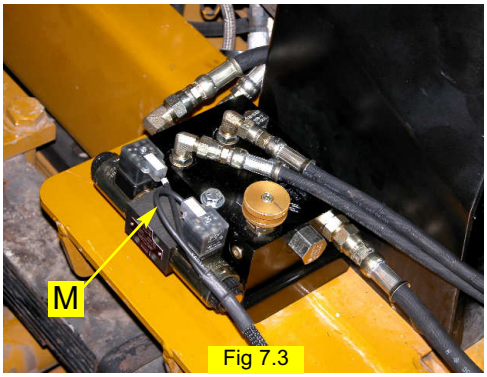


Fig 7.3

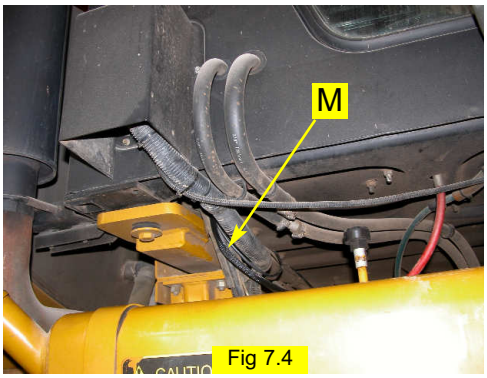


Fig 7.4

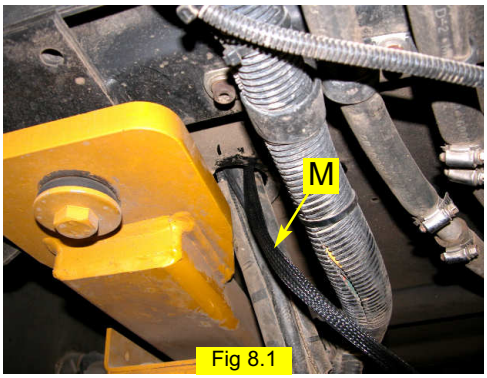


Fig 8.1

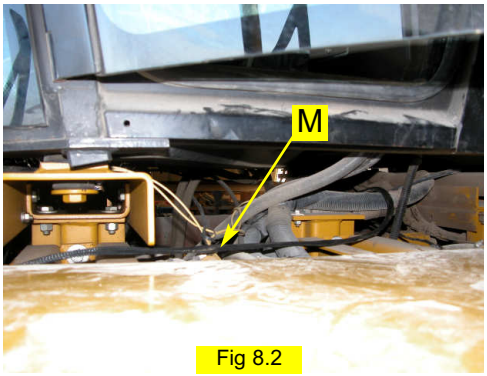


Fig 8.2

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 **3 turns** from completely closed. (Figure 8.3) 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. (Figure 8.3) Push either manual override to move the machine steering wheels all the way to one extreme. Count the number of seconds for the wheels to move all the way in the opposite direction while pressing the manual override of the other coil.

Adjust the hydraulic oil flow control knob to achieve an end to end steering cycle time of approximately **14** seconds.

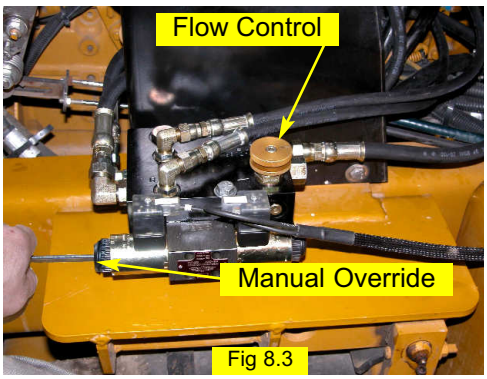


Fig 8.3

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.*

10. 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.