

Automated Steering Hydraulic Installation Kit

P/N: ED-CSTX2

Fits CaseIH STX and New Holland TJ models:

275	280	
325	330	
375	380	
425	430	
440	450	480
500	530	

Overview





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

Machine Preparation

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

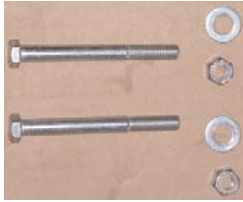








Kit Contents



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

REF	P/N	QTY	DESCRIPTION	PHOTOGRAPHS
A	760-0004	1	Hyd Valve Block - LS High Flow	
Bag #1 of 4 includes B & C				
B	760-2058	3	Adapter, Hyd. 90 Elbow - #6mJIC x #6mORB	
C	760-2074	2	Adapter, Hyd. 90 Elbow - #8mJIC x #6mORB	
D	640-0049	1	Hyd. Block Mnt	



Kit Contents (continued)

REF	P/N	QTY	DESCRIPTION	PHOTOGRAPHS
Bag #2 of 4 includes E & F				
E	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 XZP	
	676-1035	2	Nut, NyLock - 3/8NC ZP	
F	675-2004	2	Bolt - 3/8NC x 1-1/4" Gr5, ZP	
	678-1054	2	Washer, Narrow Flat - 3/8" ZP	
	676-1035	2	Nut, NyLock - 3/8NC ZP	
Bag #3 of 4 includes G, H, & I				
G	760-2069	2	Adapter, Hyd. Run Tee - #8 ORF	
H	760-2086	2	Adapter, Hyd Run Tee - M27fISO, M27mISO	
I	760-2022	2	Adapter, Hyd - #12mJIC, M27mISO	
Bag #4 of 4 includes J, K, L & M				
J	760-0002	1	Assy, Hyd. Load Shuttle - #6fORB	
K	760-2058	1	Adapter, Hyd. 90 Elbow - #6mJIC x #6mORB	
L	760-2040	1	Adapter, Hyd. 90 Elbow - #6mORB x #6fORF	
M	760-2048	1	Adapter, Hyd. - #6mORB x #6mORF	

P/N	QTY	DESCRIPTION	PHOTOGRAPHS
N 760-1250	2	Hose, Hyd-3/8" x 210", #6fJIC x #8fORF90	
O 760-1251	2	Hose, Hyd-1/2" x 70", #8fJIC x #12fJIC90	
P 760-1170	1	Hose, Hyd. - 1/4" x 65", #6fJIC x #6fJIC90	
Q 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.

INSTALLATION

1. Prepare Automated Steering Block:

- a. Make sure the automated steering block is clean and dust free.
- b. Install the small elbow adapter fittings (**B**) in the **LS**, **A** and **B** ports and the larger elbow adapter fittings (**C**) in the **P** and **T** ports. (Figure 1a.)

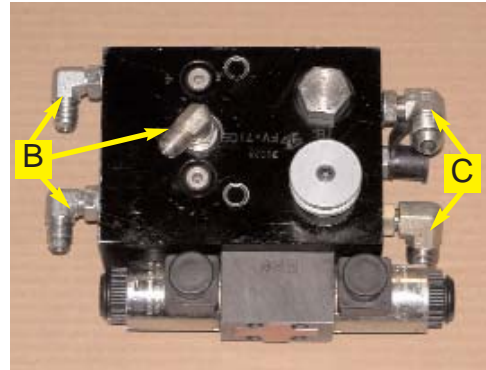


Figure 1a. Prepared Automated Steering Block.

NOTE:

To install the elbow fittings (**C**) in the **P** and **T** ports, the pressure test port fitting and valve coil must first be removed. To remove the coil, unscrew the plastic retaining nut on the end of the coil, remove the o-ring and slide the coil off of the shaft. Reinstall the coil and the pressure test port fitting. Do not over tighten the plastic retaining nut on the electric coil, hand tight is sufficient. (Figure 1b.)

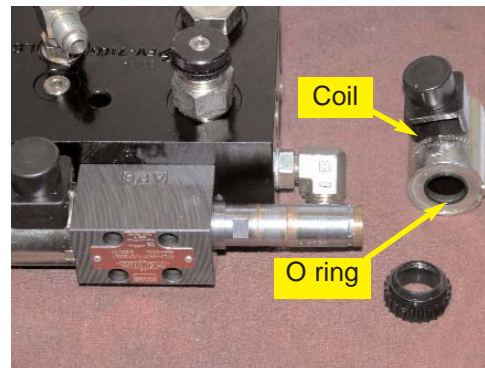


Figure 1b. Coil removed to install fitting.

2. Mount Automated Steering Block:

- a. Locate the two bolts that hold the light bar on the right rear fender. (Figure 2a.)
- b. Install the mounting bracket (**D**) to the two existing bolts. If your tractor is not equipped with a light bar use the hardware in group (**F**) to install the bracket (**D**). (Figure 2b.)

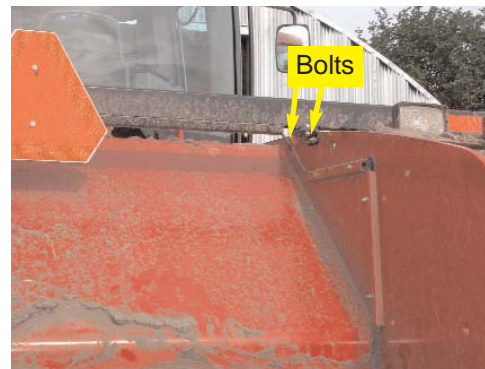


Figure 2a. Mounting location.

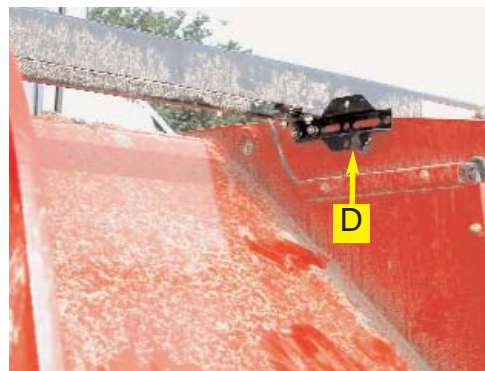


Figure 2b. Installed mounting bracket.

2. **Mount Automated Steering Block (continued):**

- c. Use the provided mounting hardware in group (E) to attach the automated steering block, as prepared in step 1, to the mounting bracket (D). (Figure 2c.)



Figure 2c. Mounted automated steering block.

3. **Install Pressure and Tank Fittings:**

- a. The automated steering block will receive pressure from the bottom left port on the valve stack. Some models have a quick coupler in this pressure port. (Figure 3a. and 3b.)
- b. The tank connection is the bottom right port on the valve stack. Some models have a quick coupler in this return port. (Figure 3a. and 3b.)

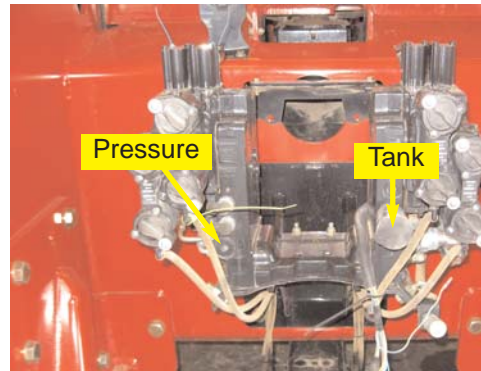


Figure 3a. Pressure and tank location.

- c. Remove the plug or pressure coupler from the bottom left port on the valve stack. Install the run tee (H) and reinstall the plug or coupler to the end of the run tee. Install adapter fitting (I) into the branch of the run tee (H). (Figure 3c.)
- d. Remove the plug or return coupler from the bottom right side of the valve stack. Install the run tee (H) and reinstall the plug or coupler to the end of the run tee. Install adapter fitting (I) into the branch of the run tee (H). (Figure 3c.)

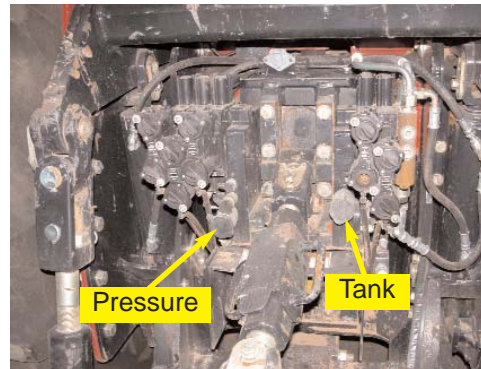


Figure 3b. Pressure and tank location with pressure coupler and return coupler.

NOTE: Leave the run tee fittings loose to allow for alignment when attaching hoses. Plastic caps placed on the open ends of the fittings will prevent excessive leakage prior to hose installation.

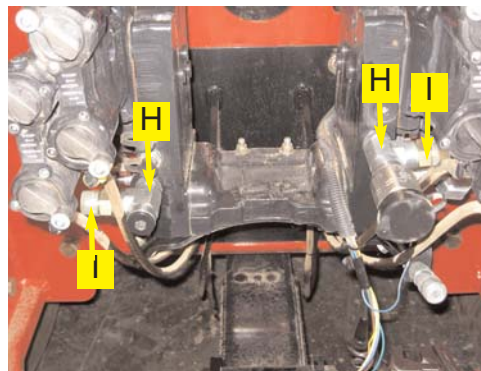


Figure 3c. Installed pressure and tank fittings.

4. Install Load Sense Shuttle:

- a. Pre-assemble the load sense shuttle (**J**) with adapter fittings **K**, **L** and **M** as shown. (Figure 4a.)

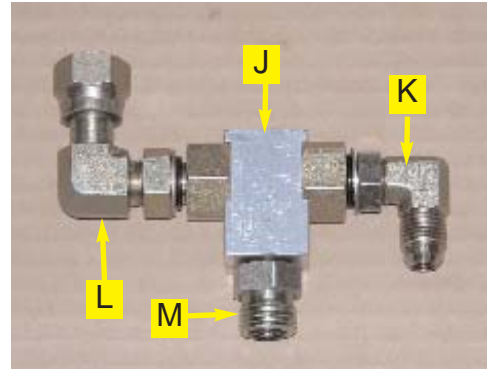


Figure 4a. Load sense shuttle.

- b. Locate the tractor load sense line on the back of the tractor. The load sense line is the lower left line on the valve stack. (Figure 4b.)

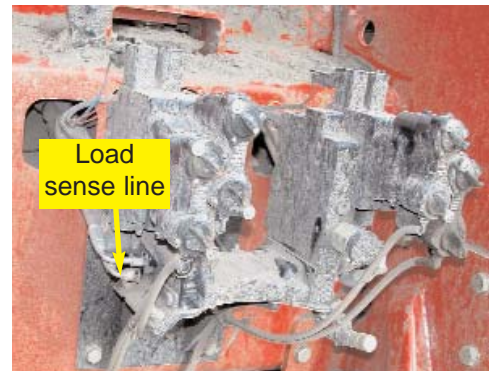


Figure 4b. Load sense line location.

- c. Disconnect the load sense line from the valve stack. Attach the center male fitting (**M**) of the load sense shuttle to the line removed from the valve stack. Install the female fitting (**L**) of the load sense shuttle to the valve stack port. Leave the load sense shuttle connections loose to allow for easier installation and secure after all connections are made. (Figure 4c.)

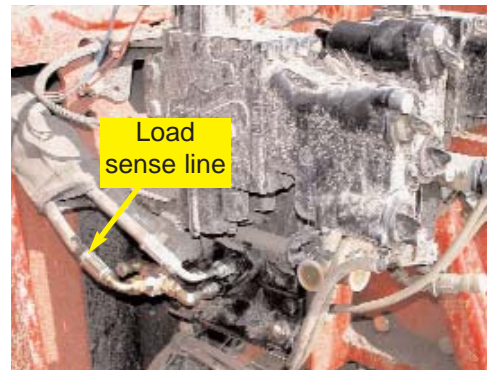


Figure 4c. Installed load sense shuttle.

5. Install Pressure, Tank and Load Sense Hoses:

- a. Connect the pressure hose (**O**) between the **P** port of the automated steering block and the run tee (**H**) installed on the left side of the hydraulic valve stack. (Figure 5a. and 5b.)
- b. Connect the tank hose (**O**) from the **T** port on the automated steering block to the run tee (**H**) on the right side of the hydraulic valve stack. (Figure 5a. and 5c.)

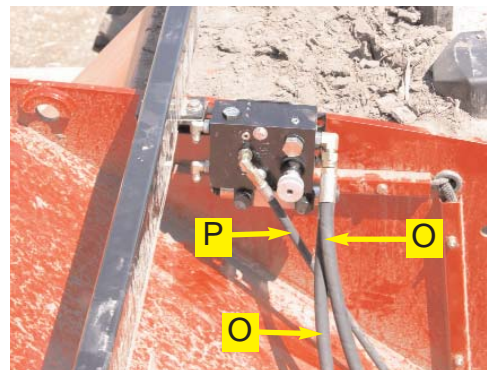


Figure 5a. Installed pressure, tank and load sense hoses.

5. **Install Pressure, Tank and Load Sense Hoses (continued):**

- c. Connect the load sense hose (**P**) from the **LS** port on the automated steering block to the open end of the load sense shuttle (**J**). (Figure 5a. and 5b.)

NOTE: All hoses should be routed with other tractor plumbing free from entanglement and secured with heavy tie straps (provided).

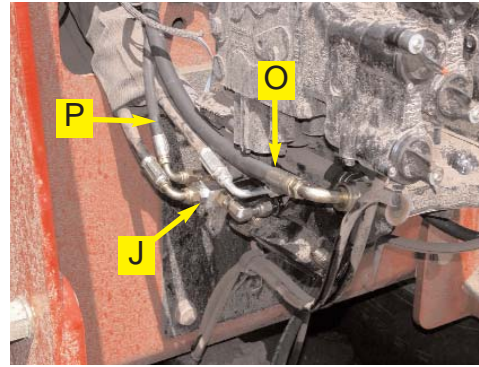


Figure 5b. Installed pressure and load sense hose.

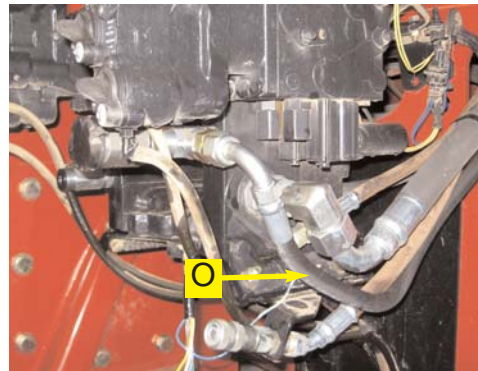


Figure 5c. Installed tank hose.

6. **Install Steering Output Fittings:**

- a. Locate the right side steering cylinder in the middle of the tractor. (Figure 6a.)

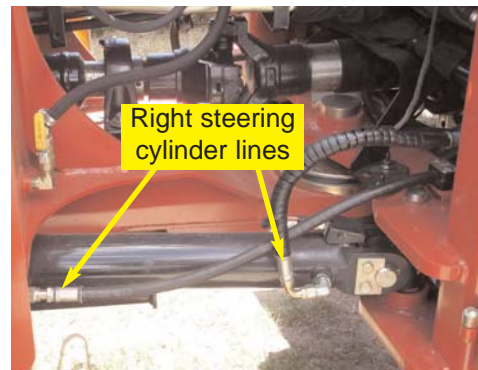


Figure 6a. Steering output location.

- b. Install the run tees (**G**) into the steering lines at each end of the steering cylinder as shown. (Figure 6b.)

NOTE: Leave the run tee fittings loose to allow for alignment when attaching hoses. Plastic caps placed on the open ends of the fittings will prevent excessive leakage prior to hose installation.

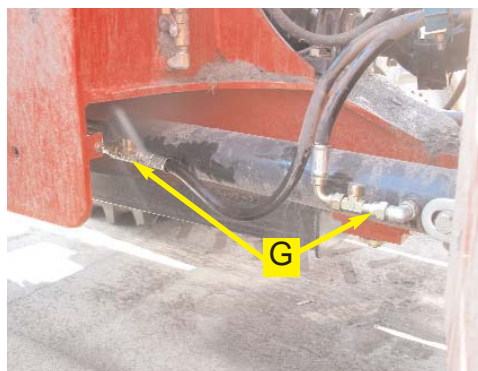


Figure 6b. Steering output fittings installed.

7. **Install Steering Output Hoses:**

a. Connect the steering output hoses (N) from the **A** and **B** ports on the automated steering block to the branches on the steering cylinder run tees. (Figure 7a. and 7b.)

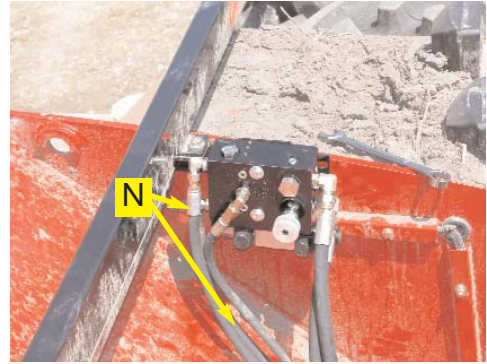


Figure 7a. Installed steering hoses at the automated steering block.

b. The steering hoses should be routed from the automated steering block down the back of the tractor, forward through the hole under the fuel tank, along the frame, in front of the pivot point, and back down to the steering cylinder. (Figure 7c., 7d., and 7e.)

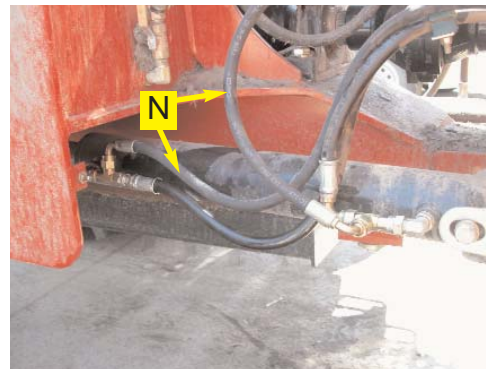


Figure 7b. Installed steering hoses at the steering cylinder.

NOTE:

All hoses should be routed with other tractor plumbing free from entanglement and secured with heavy tie straps (provided).



Figure 7c. Routed steering hoses.

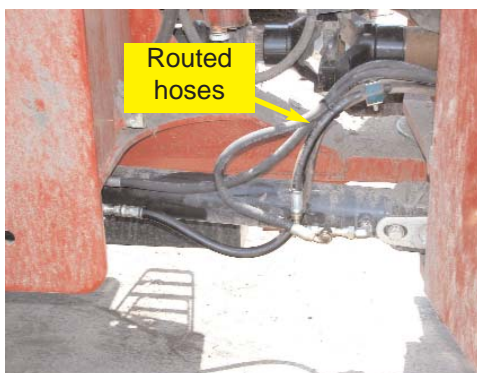


Figure 7e. Routed steering hoses.

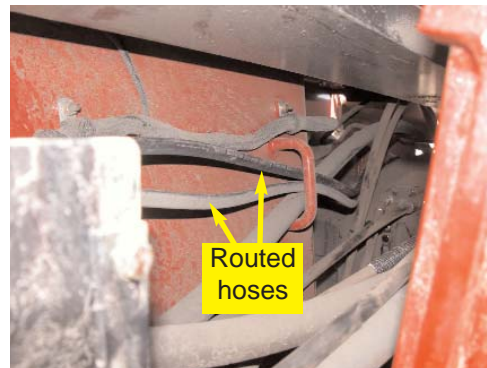


Figure 7d. Routed steering hoses.

8. Install the Valve Control Cable:

Route the valve control cable (Q) from the automated steering block, forward, under the cab and through the access hole in the right rear corner of the cab floor. (Figure 8a. and 8b.)

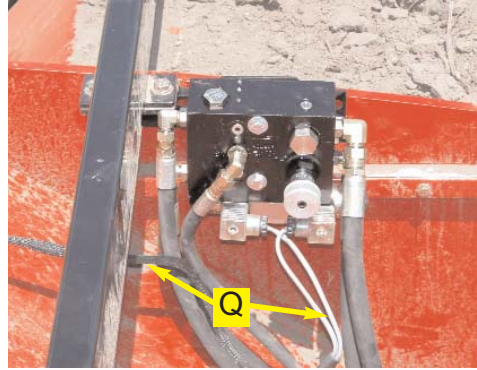


Figure 8a. Installed valve cable at the automated steering block.

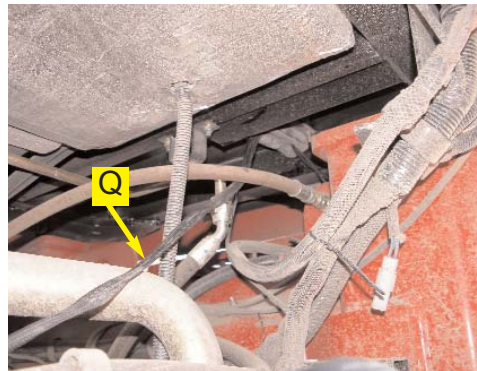


Figure 8b. Valve cable routed in access hole.

11. Verify Operation and Set Automated 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 the automated steering 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 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.
- e. The coils on the automated steering block have manual push button overrides. Push either manual override to move the steering wheels all the way to one extreme.
- f. Count the number of seconds for the steering wheels to move all the way in the opposite direction while pressing the manual override the other coil.

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.

- g. Adjust the automated steering oil flow control to achieve an end-to-end steering cycle time of approximately **18** seconds. Use the knurled locking nut to secure the final flow control setting.

12. Complete Automated Steering Electronic Installation and Setup:

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

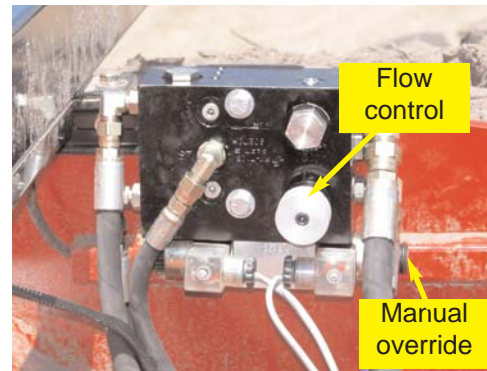


Figure 11. Manual override and flow control valve.

