

Automated Steering Hydraulic Installation Kit

P/N: ED-GR72

Fits Gleaner Combine Models:

R62 (sn66001-only)

R65

R72 (sn76001-only)

R75



Overview

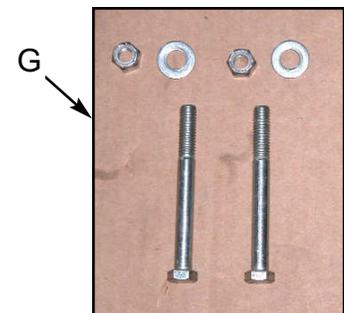
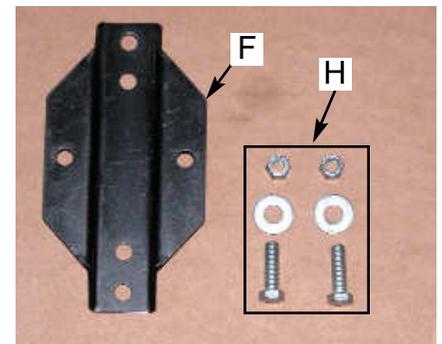
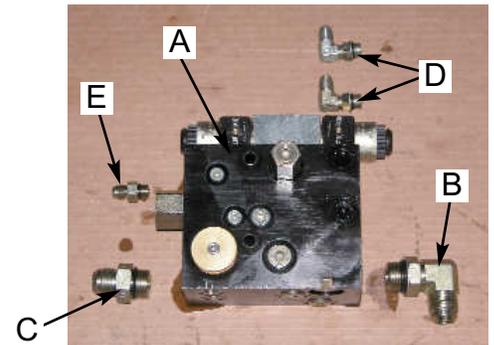
A series of equipment specific hydraulic installation kits have been developed to work in conjunction with your automated steering system. This kit contains the necessary components and instructions to install automated steering hydraulics on the Gleaner combine models listed above. Please read this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

Combine Preparation

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

Kit Contents

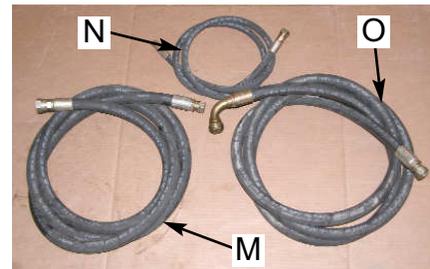
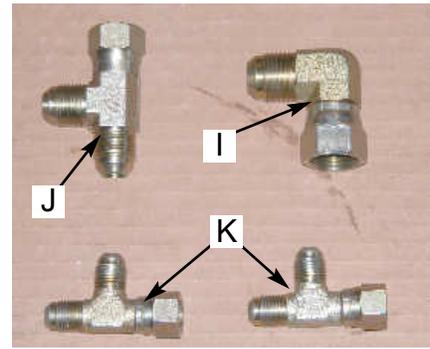
Unpack the installation kit and identify the required parts as shown.



REF	P/N	QTY	DESCRIPTION
A	760-0007	1	Assy, Hyd. Valve Block - OC (Low Range)
Bag #1 of 3 includes B, C, D, & E			
B	760-2019	1	Adapter, Hyd. 90 El - #12mJIC x #12mORB
C	760-2018	1	Adapter, Hyd. - #12maleJIC x #12maleORB
D	760-2058	2	Adapter, Hyd. 90 Elbow - #6maleJIC x #6maleORB
E	760-2056	1	Adapter, Hyd. - #6maleJIC x #6maleORB
F	640-0011	1	Hyd. Block Mnt
Bag #2 of 3 includes G & H			
G	675-2006	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
H	675-2003	2	Bolt, 3/8NC x 1 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

Kit Contents (cont.)

REF	P/N	QTY	DESCRIPTION
Bag #3 of 3 includes I, J, & K			
I	760-2007	1	Adapter, Hyd. 90 Elbow - #10maleJIC x #10femJICswiv
J	760-2077	1	Adapter, Hyd. Run Tee - #8 JIC
K	760-2054	2	Adapter, Hyd. Run Tee - #6 JIC
L	760-1186	2	Hose, Hyd. - 3/8x84", #6femJICswiv x #6femJICswiv 90EL
M	760-1187	1	Hose, Hyd. - 3/4x157", #12femJICswiv x #10femJICswiv
N	760-1188	1	Hose, Hyd. - 3/8x76", #8femJICswiv x #6femJICswiv
O	760-1189	1	Hose, Hyd. - 3/4x170", #12femJICswiv 90EL x #10femJICswiv
P	051-0143	1	Cable, Interface - 15 ft.
	677-2001	20	Tie Strap, 11" Heavy Duty
	710-0053	1	Kit, Steering Wheel Switch, Not Shown



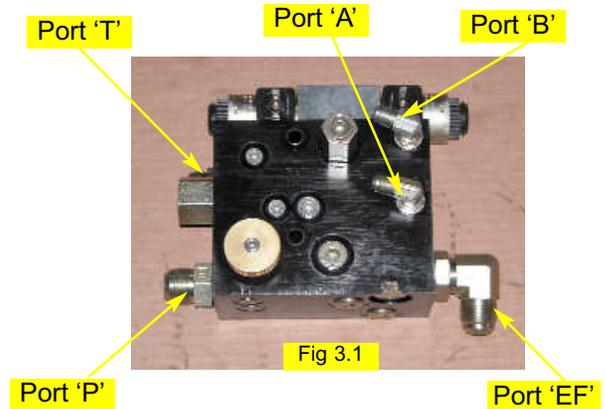
WARNING: **HIGH-PRESSURE FLUID HAZARD.** Hydraulic oil may be hot and under high pressure. To prevent serious injury or death: Relieve system pressure and allow to cool before repairing or disconnecting. Wear proper hand and eye protection when searching for leaks, using wood or cardboard instead of 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

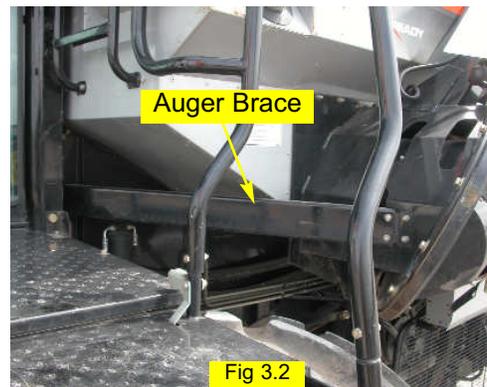
1. Prepare Hydraulic Control Block:

Make sure the hydraulic control block is clean and dust free. Remove the plastic plugs and install the smaller elbow adapters (**D**) in the **A** and **B** ports and the larger elbow (**B**) in the **EF** port. Install the smaller straight adapter (**E**) in the **T** port and the larger straight adapter (**C**) in the **P** port of the hydraulic control block. (Figure 3.1)

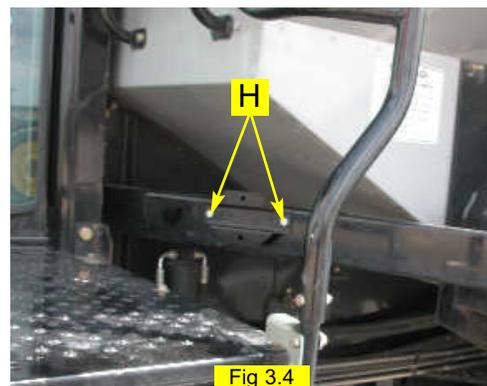
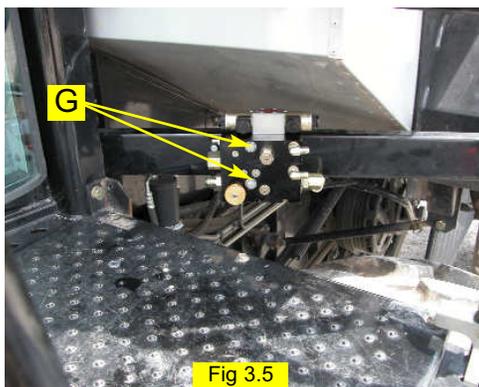
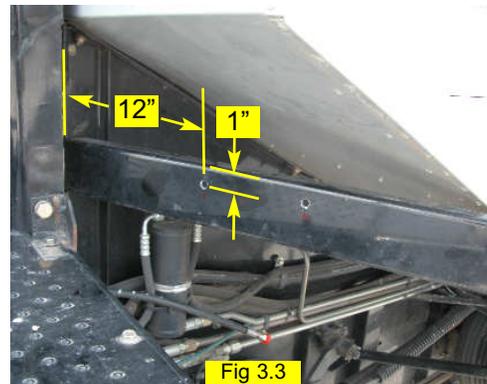


2. Mount Hydraulic Control Block:

The mounting bracket (**F**) will be installed on the auger brace behind the cab entry platform. (Figure 3.2) Place the mounting bracket (**F**) on the auger brace with the first hole **1"** down and **12"** over from the vertical cab brace. Mark the two outer holes in the bracket. Drill out the two holes using a **7/16"** drill bit. (Figure 3.3) Secure the bracket using the hardware in group (**H**). (Figure 3.4)



Use the provided mounting hardware in group (**G**) to attach the prepared hydraulic control block to the mounting bracket in the orientation shown.(Figure 3.5)



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

The hydraulic control block will be connected in series with the pressure line to the combine hydraulic valve stack. Remove the hydraulic line that connects the valve stack to the priority divider. (Figure 4.1) Install elbow fitting **(I)** on the priority divider. (Figure 4.2) Pressure will be supplied to the hydraulic control block from the priority divider. Excess flow from the hydraulic control block will be returned to the combine hydraulic valve stack.

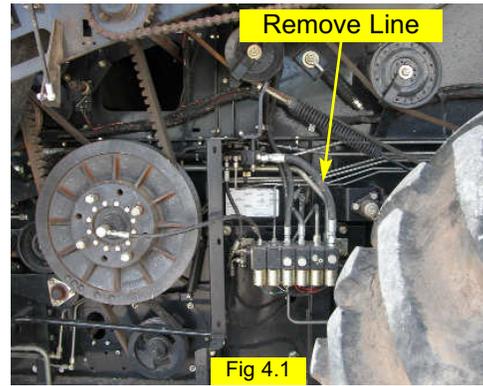


Fig 4.1

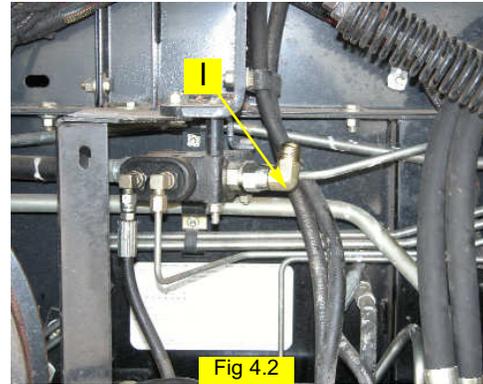


Fig 4.2

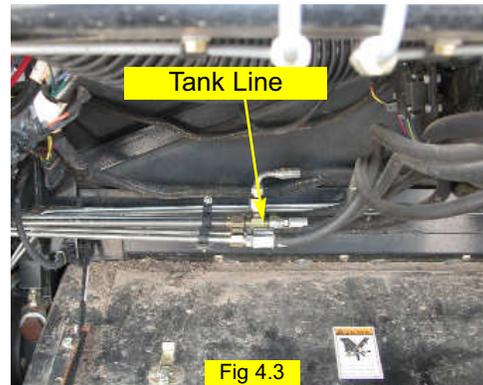


Fig 4.3

Tank flow from the hydraulic control block will be returned to the tank line under the cab. Install the provided run-tee **(J)** in the return line as shown. (Figure 4.3 and 4.4)

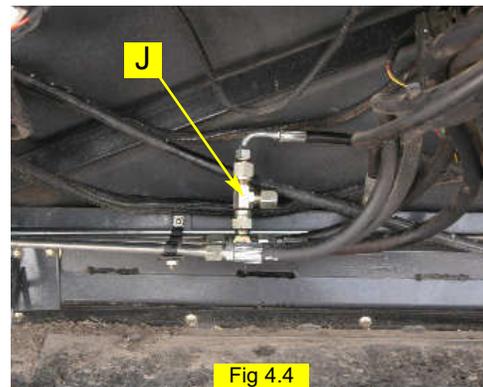
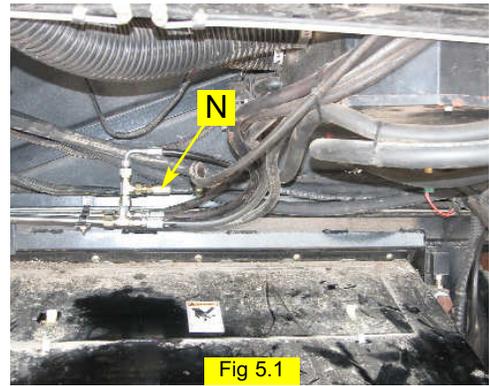


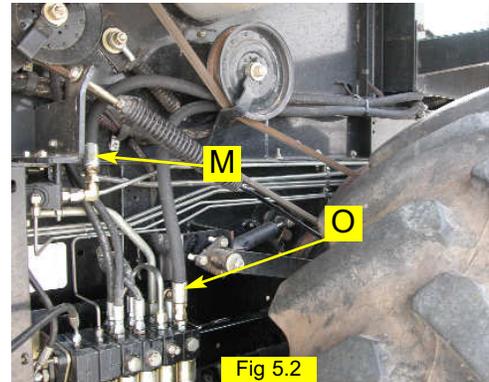
Fig 4.4

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

Install the provided tank hose (**N**) between the **T** port of the hydraulic control block and the branch of the run-tee (**J**) installed in **step 3**. (Figure 5.1 and 5.3)

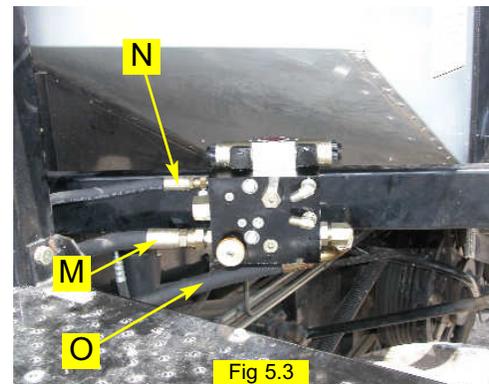


Connect the pressure hose (**M**) to the **P** port of the hydraulic control block and to the priority divider. (**I**) (Figure 5.2 and 5.3)



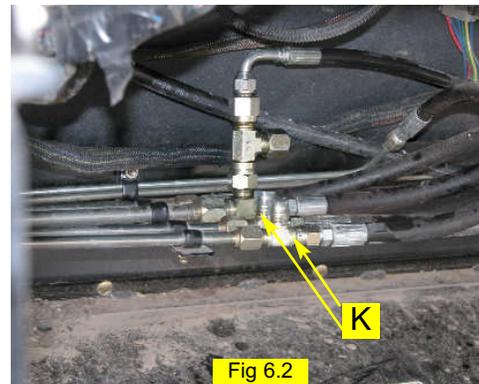
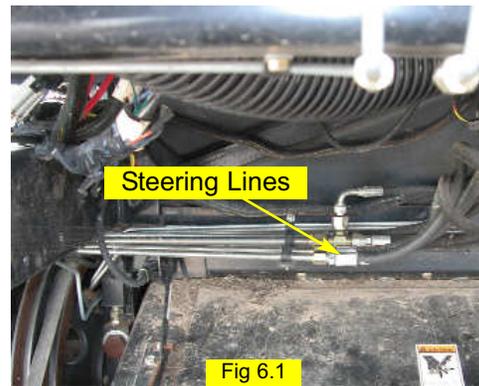
Install the excess-flow hose (**O**) between the **EF** port of the hydraulic control block and the hydraulic valve stack. (Figure 5.2 and 5.3)

Route the pressure and excess-flow hoses (**M** and **O**) with the air conditioning lines under the cab. Route the tank line along the back of the feeder house with other plumbing. Use heavy tie-straps to secure the hoses to the machine frame and away from moving parts. Tighten all hydraulic connections securely to prevent leaks.



5. Install Steering Output Fittings:

Locate the steering lines under the cab where the rubber hoses are connected to the steel lines. (Figure 6.1) Install the provided run-tees (**K**) in the steering lines as shown. (Figure 6.2) Use plastic caps to prevent excess leakage from the open run-tee ports.



6. Install Steering Output Hoses:

Install the provided steering output hoses (**L**) between the run-tees installed in step 5 and the **A** and **B** ports of the hydraulic control block. (Figure 7.1 and 7.2)

Attach hose ends equipped with 90-degree elbows to the run-tees and attach the straight hose ends to the hydraulic block. (Figure 7.1 and 7.2)

Route hoses with existing lines as shown. Use the heavy tie-straps provided to secure the hoses away from moving parts. (Figure 7.3)

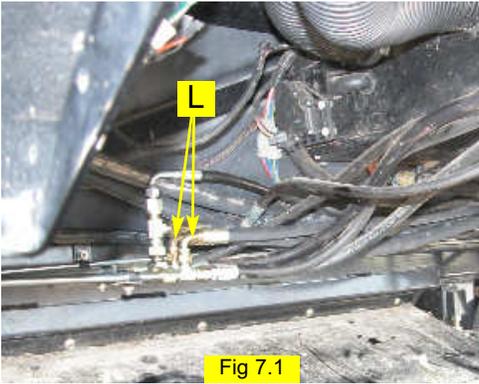


Fig 7.1

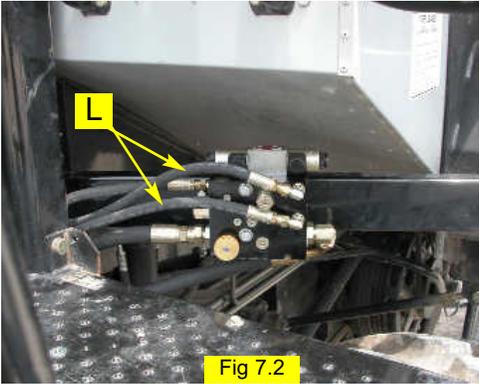


Fig 7.2

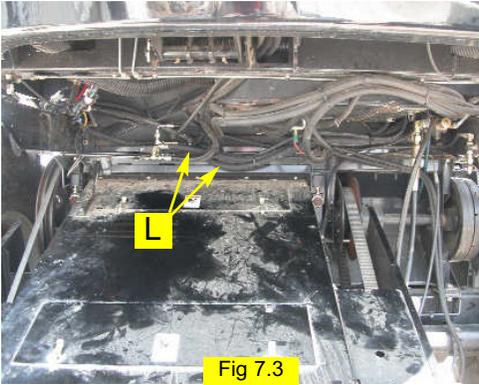
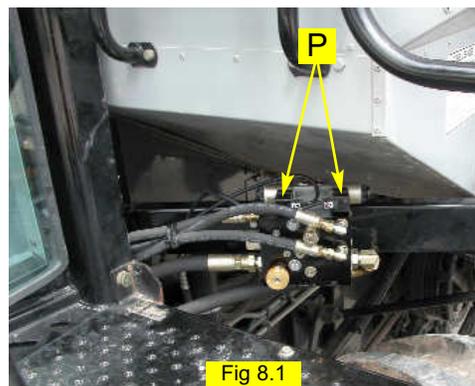


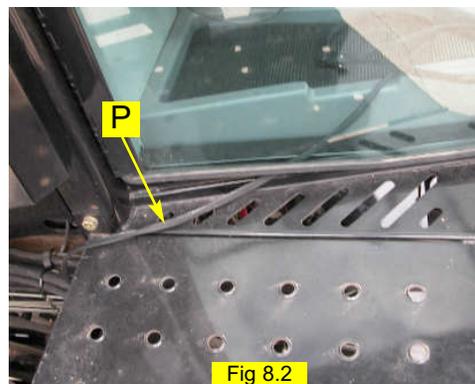
Fig 7.3

7. Install the Valve Control Cable:

Install the hydraulic valve control cable (**P**) at the hydraulic block by attaching the DIN connectors to the coils. (Figure 8.1)



Route the cable under the cab and through the right side door. (Figure 8.2) Secure the cable using the provided tie straps as necessary.



8. Verify Operation and Set Steering Control Rate:

Cleanup the installation area around the combine and make certain that it is safe to operate. Start the combine and check hydraulic connections for any leaks. Rotate the steering wheel from one extreme to the other, and back.

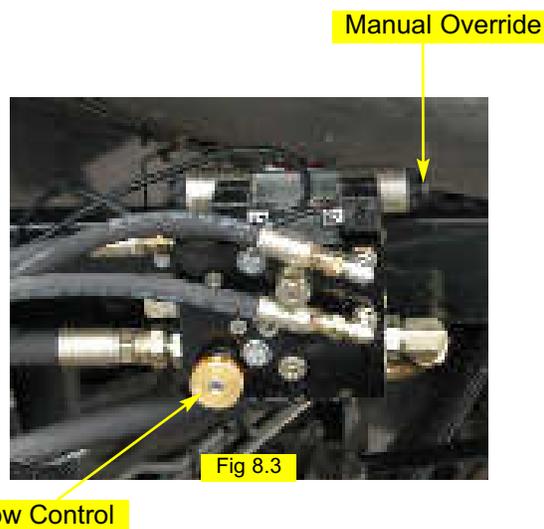
Adjust the hydraulic oil flow control knob to a starting position of **1 1/4 turns** from completely closed. To adjust the knob, turn clockwise to reduce flow, counter-clockwise to increase flow.

The coils on the control block have manual push button overrides. Push either manual override to move the 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. (Figure 8.3)

Adjust the hydraulic oil flow control to achieve an end to end steering cycle time of approximately **15 seconds**. Use the knurled locking nut to secure the final flow control setting.

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.



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.



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.