

CRYSTEEL'S

MATERIAL

CONTROL

GATE

INSTALLATION – OPERATION INSTRUCTIONS



P.O. Box 178 Hwy 60 East
Lake Crystal, MN 56055
(507) 726-2728 (800) 533-0494

1902 Route 57 South
Fulton, NY 13069
(315) 598-0719 (800) 883-9191

OWNERS
MANUAL

DATE PURCHASED _____
BODY SERIAL NUMBER _____
HOIST SERIAL NUMBER _____
CYLINDER SERIAL NUMBER _____
DEALER _____
ADDRESS _____
PHONE _____

FOREWORD

Crysteel’s Material Control Gate allows much more controlled dumping of materials than a standard tailgate. Each gate can be controlled separately, and can be operated from the cab of the truck or by using a hand held control pendant which can be connected at the tailgate.

This manual contains information necessary for the proper installation and operation of Crysteel’s Material Control Gate. Study it carefully before attempting to mount or use this product. With proper installation and maintenance, the Material Control Gate will give years of trouble-free service.

KEEP THIS MANUAL IN A SAFE PLACE FOR FUTURE REFERENCE

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FOR OPTIMUM SAFETY AND LONG SERVICE

1. OBSERVE ALL CAUTIONS STATED IN THIS MANUAL.
- 2 Do not race engine when unloading.
3. Keep clear of the tailgate when dumping.
4. NEVER put hands into openings on tailgate, accidental closure may occur if pendant and cab controls are not set properly.

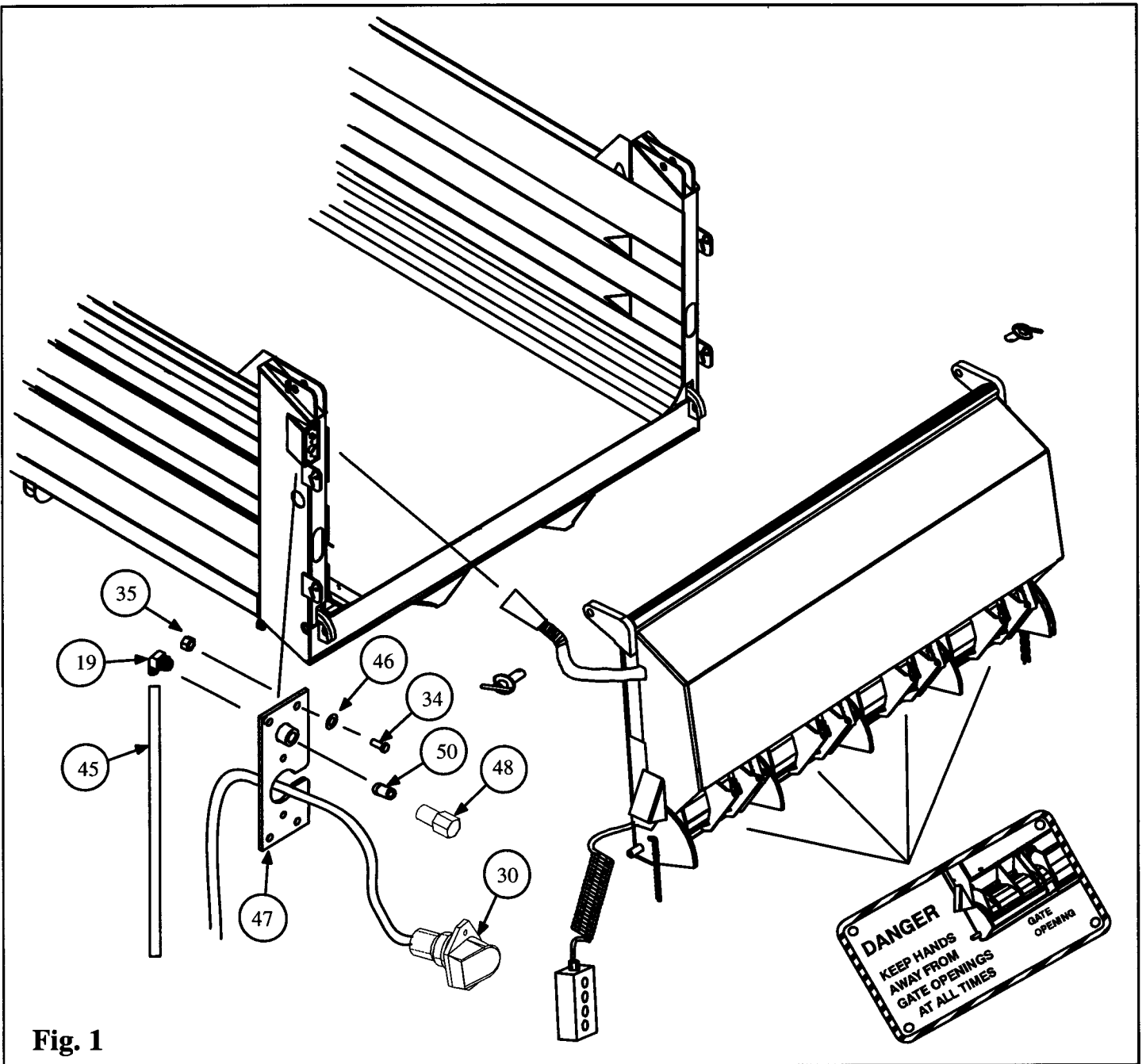


Fig. 1

INSTALL MATERIAL CONTROL GATE WIRING

The wiring and air line for the Material Control Gate must be installed into the driver's side rear pillar for proper operation.

Install 1/4" pipe nipple in pipe coupling on access cover plate. Install air quick coupler body on this nipple. On other side of access cover, install 90° air line fitting and attach one end of 144" air line here. Attach 126" long wiring harness to access cover with 1/4 x 1 1/4 cap screws, flat washers and hex lock nuts.

Insert air line and wiring harness through cutout in pillar and fasten access cover plate to the pillar using 5/16 x 3/4 self-tapping screws.

After the body and tailgate have been painted, mount one caution decal on each Material Control Gate door. Secure them in place with #10 drive screws.

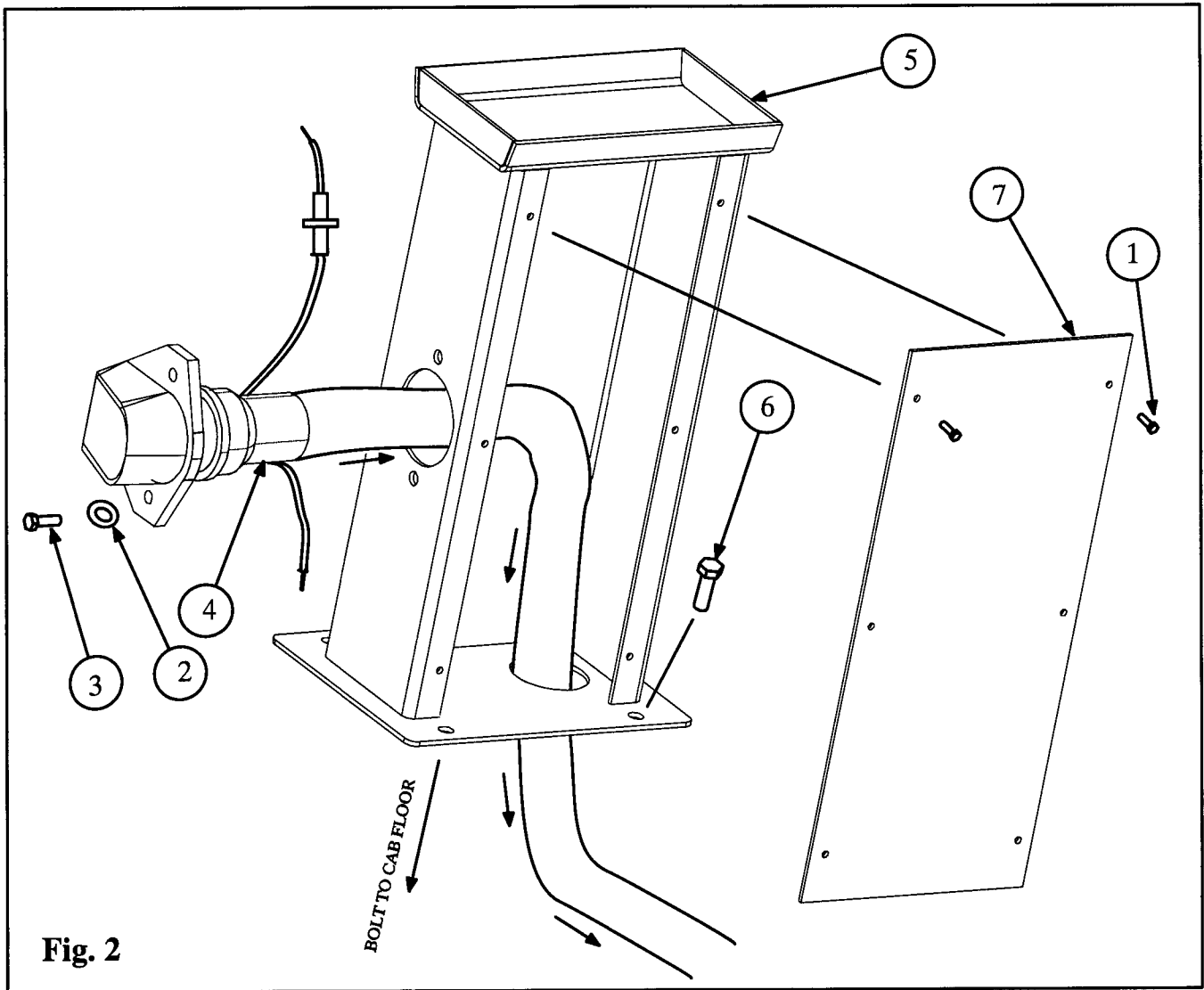
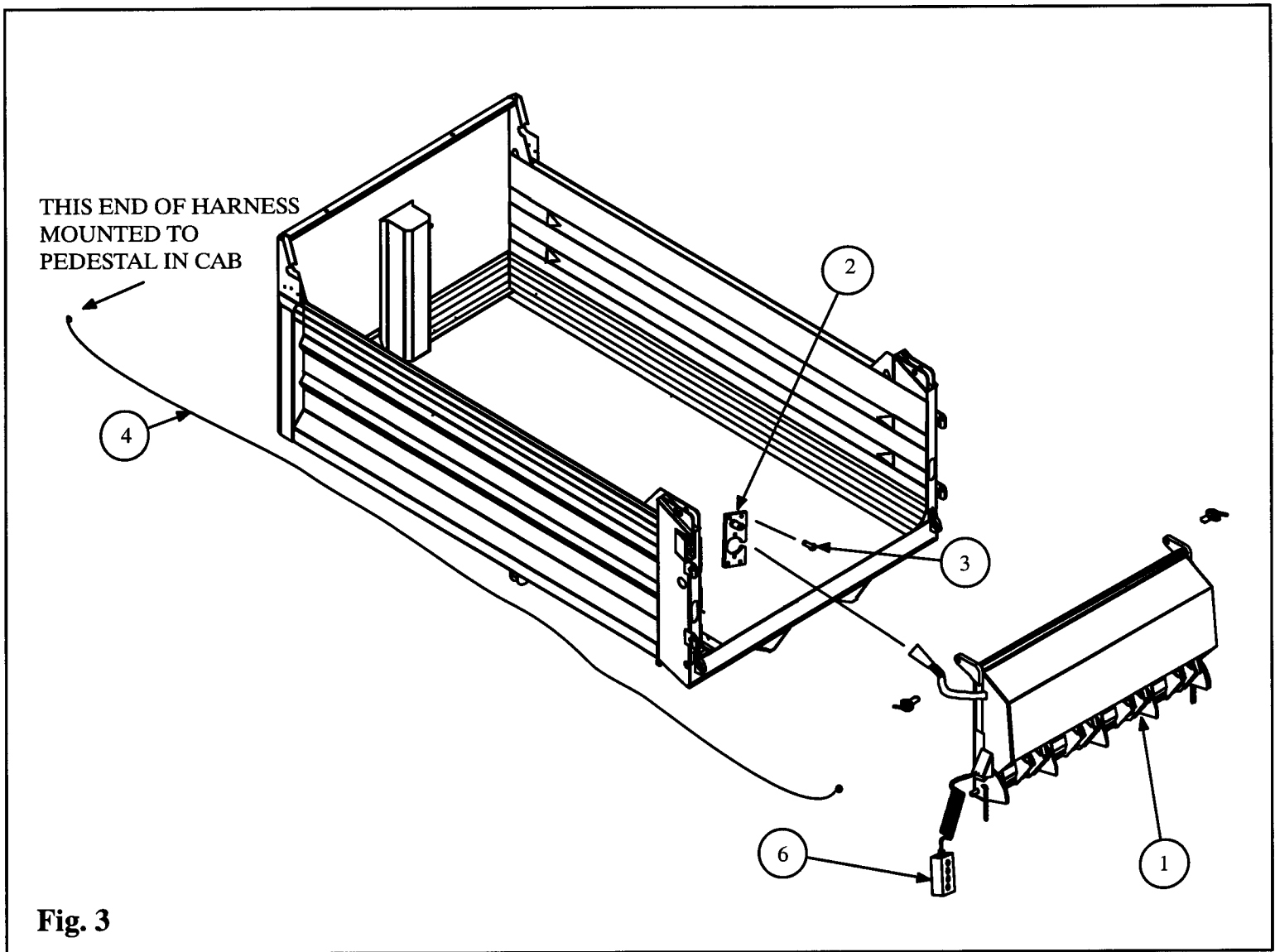


Fig. 2

INSTALL CONTROL BOX PEDESTAL AND WIRING HARNESS IN TRUCK

The control box pedestal must be bolted to the floor of the truck cab, within reach of the driver. A hole must be cut in the truck floor, under the pedestal, large enough for the wiring harness to run through. To run the harness, the end which will attach to the tailgate must be started in the cab, at the outside of the pedestal, run through to the inside, through the hole in the bottom of the pedestal, out under the cab and then to the rear of the truck. Connect to the wiring harness in the left rear pillar of the body. Use tie – straps to secure wiring harness to the body and truck frame to prevent them from being damaged. There are two wires attached to the large connector which is bolted to the pedestal. Connect the fuse holder to the 8” long wire with the terminal. Connect the other end of the fuse holder wire to a hot (+12V DC) wire on the cold side of the ignition switch, and connect the other wire to ground. Install the fuse in the fuse holder.

ITEM	DESCRIPTION	PART NO.	QTY.
1.	Screw Self Tapping #10 x 3/8	400108	6
2.	Washer Flat 1/4	400180	2
3.	Screw Cap 1/4 x 1 1/4 NC G2	400158	2
4.	Wiring Harness – Cab to Rear	404704	1
5.	Assy Control Box Pedestal	138044	1
6.	Screw Self Tapping 5/16 x 3/4	400112	4
7.	Panel Side Pedestal Control Box	257463	1



CONNECT AIRLINE

Connect the air line in the left rear pillar of the body to the truck's air supply. Use a pressure protection valve (not included), at the truck air tank end of the air line.

ITEM	DESCRIPTION	PART NO.	QTY.
1.	Assy Tailgate 48" Material Control Gate(Optional)	138057	1
2.	Assy Access Cover W / Pipe Fitting	138219	1
3.	Screw Self-Tapping 5/16 x 3/4	400112	4
4.	Wiring Harness – Cab to Rear	404704	1
5.	Assy Control Box Pedestal	138044	1
6.	Assy Control Box Material Control Gate	128214	1

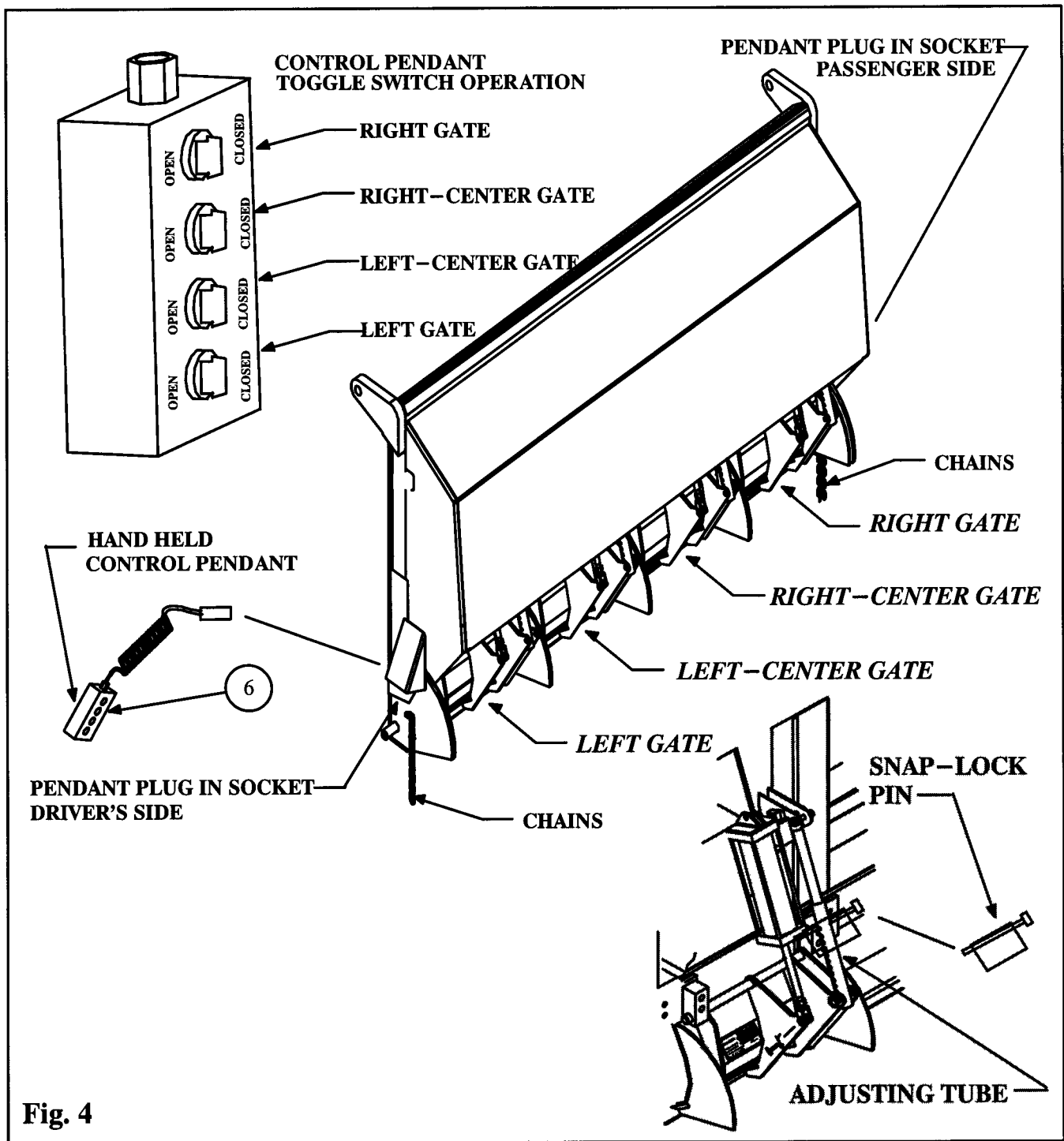


Fig. 4

MATERIAL CONTROL GATE OPERATION

The Material Control Gate allows material to be dumped in a more controlled fashion than a standard tailgate. The gate openings can be controlled from the cab of the vehicle or by using a single, hand held 'control pendant,' which may be plugged in and operated by a person near the rear of the dump body. There is one plug in socket on each side of the Material Control Gate. (See Fig. 4).

The amount of material released is determined by the size of the opening the operator has allowed each of the four gates to have. Each gate is opened and closed by a separate air cylinder. The size of the opening is determined by changing the location of the snap-lock pin in the adjusting tube. The gates can be operated when the body is raised in the dump position or when it is lowered. *As soon as the control pendant is plugged in, the pendant settings will override the cab control settings, so be aware of how you want your gates set each time you transfer controls.*

**Be very observant of the following cautions and operating instructions to insure safe operation.

***** **USE CAUTION!** *****

- ** Before traveling with a load, *always* put the snap–lock pin (see illustration) in the top most holes of the adjusting tube on all gates. Having the pin in this position will prevent the gates from opening, even if the control is accidentally activated.
- ** Never change the snap–lock pins with the body elevated!
- ** Keep hands and face away from the gate openings at all times! *Do not reach under the gate doors.*
- ** Do not stand or walk behind the vehicle when it is dumping or in the raised position. When using the hand held control pendant, always walk to the side of the vehicle.
- ** Plugging in and unplugging the control pendant should always be done only when the body is in the lowered position. Again, for your safety, stand to the side when plugging in or unplugging the control pendant! Please observe the warnings and/or cautions posted at the rear of the vehicle.

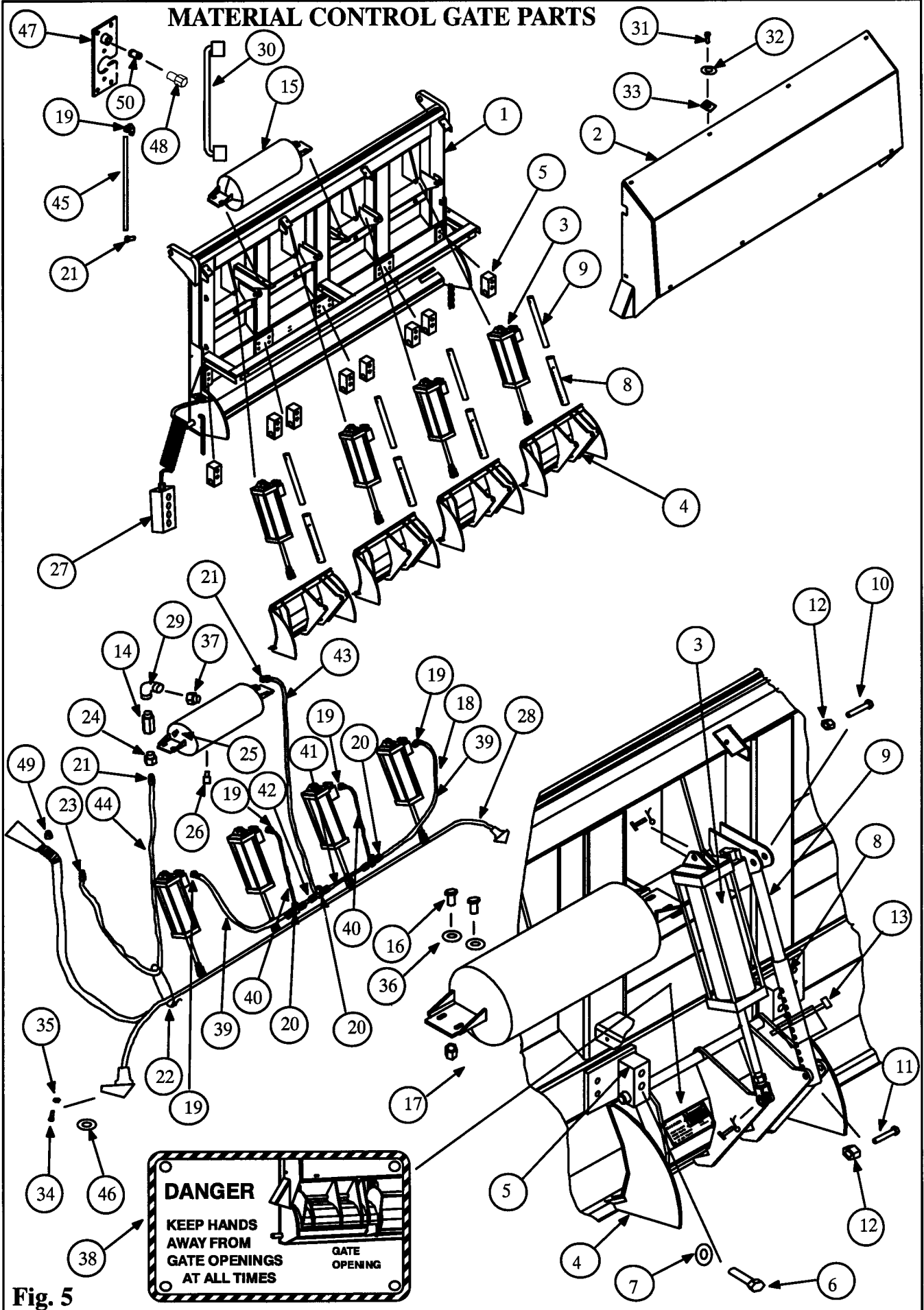
THE CONTROL PENDANT OVERRIDES THE CAB CONTROL SETTINGS!

- ** If any gates are closed, but the switches for those gates are in the “open position” when the pendant is plugged in, those gates will IMMEDIATELY OPEN!
- ** If any gates are open, but the switches for those gates are in the “closed position” when the pendant is plugged in, those gates will IMMEDIATELY CLOSE!
- ** The operator must **BE VERY AWARE OF EACH SWITCH POSITION AND WHICH GATE EACH SWITCH CONTROLS**, every time the control pendant is plugged in and unplugged!
- ** Be also, very aware, that **as soon as the control pendant is unplugged, the gates will respond to the settings of the controls in the cab.** The operator will want to check both the settings on the pendant and in the cab to be sure they are set the same, so an accidental spill or closure will not occur!

OPERATING THE GATES WITH THE REAR MOUNTED CONTROL PENDANT
PLEASE OBSERVE CAUTIONS LISTED ABOVE

- ** The control pendant is plugged in at the rear of the body, in the lower side socket, at the left (driver’s) side or the right (passenger’s) side of the Material Control Gate. There is a spring loaded door on the tailgate mounted receptacle. Lift this door up and insert the plug. The plug prongs are arranged so that it can only be plugged in one way. The spring loaded door will retain the plug, preventing accidental disconnection. **WHEN PLUGGED IN, THE CONTROL PENDANT DEACTIVATES THE CAB CONTROL.** Once the control pendant is connected, **STRETCH OUT THE CORD AND STAND AWAY FROM THE BACK OF THE TRUCK!**
- ** There are four toggle switches on the pendant, each switch controlling one gate.
- ** To operate each gate, flip its corresponding switch to the open position to open the gate, then flip the same switch to the closed position to close the same gate.
- ** The labeling on the buttons corresponds to the gate positions as viewed from the back of the vehicle: LEFT -- LEFT CENTER -- RIGHT CENTER -- RIGHT.
- ** **DISCONNECT THE REAR CONTROL PENDANT, ONLY WHEN THE DUMP BODY IS IN THE LOWERED POSITION!** The spring loaded door, retaining the plug, must be lifted up to allow removal of the plug. **ONCE THE CONTROL PENDANT IS DISCONNECTED, THE GATES WILL, ONCE AGAIN, BE CONTROLLED BY THE CAB CONTROL SETTINGS.**

MATERIAL CONTROL GATE PARTS



DANGER
 KEEP HANDS
 AWAY FROM
 GATE OPENINGS
 AT ALL TIMES

GATE
 OPENING

Fig. 5

ITEM	DESCRIPTION MCG PARTS	PART NO.	QTY.
1.	Assy Tailgate, Material Control Gate	129652	1
2.	Assy Cover Material Control Gate	129653	1
3.	Assy Cylinder, Air	131341	4
4.	Assy Gate, Material Control Gate	129528	4
5.	Bearing Block	239963	8
6.	Screw Cap 5/8 x 3 NC G8	400126	16
7.	Washer Lock 5/8	400160	16
8.	Tube MCG Gate Adjust	239973	4
9.	Tube MCG Gate Stop	239974	4
10.	Screw Cap 1/2 x 2 NC G8	403428	4
11.	Screw Cap 1/2 x 3 1/4 NC G8	403423	4
12.	Nut Hex Lock 1/2 – 13	403417	8
13.	Snap–Lock Pin 3/8 x 3”	403502	4
14.	Valve Air Check	403482	1
15.	Tank Air 1000 CI	403483	1
16.	Screw Cap 3/8 x 1 NC G5	403420	4
17.	Nut Hex Lock 3/8 – 16	403416	4
18.	Assy Air Line MCG	129834	1
19.	Elbow Male 3/8 x 1/4 NPT	401331	5
20.	Tee Ends Tube 3/8	403244	3
21.	Connector Male 3/8 x 3/8 Pipe	403384	3
22.	Cable Tie 8 1/4” Nylon	401027	18
23.	Connector Male 3/8 x 1/4 Pipe	401332	1
24.	Bushing Hex 1/2M x 3/8 F	400440	1
25.	Plug Pipe 3/8” Hex Socket	400422	1
26.	Valve Drain, Air Tank w/3’ Cable	403491	1
27.	Assy Control Box Control Gate MCG	128214	1
28.	Assy Wiring Harness MCG M917	403484	1
29.	Street Elbow 1/2 NPT	401504	1
30.	Wiring Harness/ Truck to MCG	403248	1
31.	Screw Cap 5/16 x 1 NC GR8	403543	10
32.	Washer Flat 5/16	400892	10
33.	Cage Nut 5/16–18	403528	10
34.	Screw Cap 1/4 x 3/4 NC G2	400158	4
35.	Nut Hex 1/4–20 Lock	402376	4
36.	Washer Flat 3/8	400164	4
37.	Bushing Hex 3/4 M x 1/2 F	401091	1
38.	Decal Material Control Gate	403514	1
39.	Tube Air Line 31”	245542	2
40.	Tube Air Line 9”	245543	2
41.	Tube Air Line 17”	245540	1
42.	Tube Air Line 8”	245541	1
43.	Tube Air Line 21”	245539	1
44.	Tube Air Line 66”	245538	1
45.	Tube Air Line 144”	245544	1
46.	Washer Flat 1/4”	400180	4

47.	Assy Access Cover W/Pipe Fitting	127373	1
48.	Coupler Quick Air Body 1/4 FPT	403620	1
49.	Coupler Quick Air Tip 1/4 FPT	403621	1
50.	Pipe Nipple	401944	1

MATERIAL CONTROL GATE WIRING SCHEMATIC

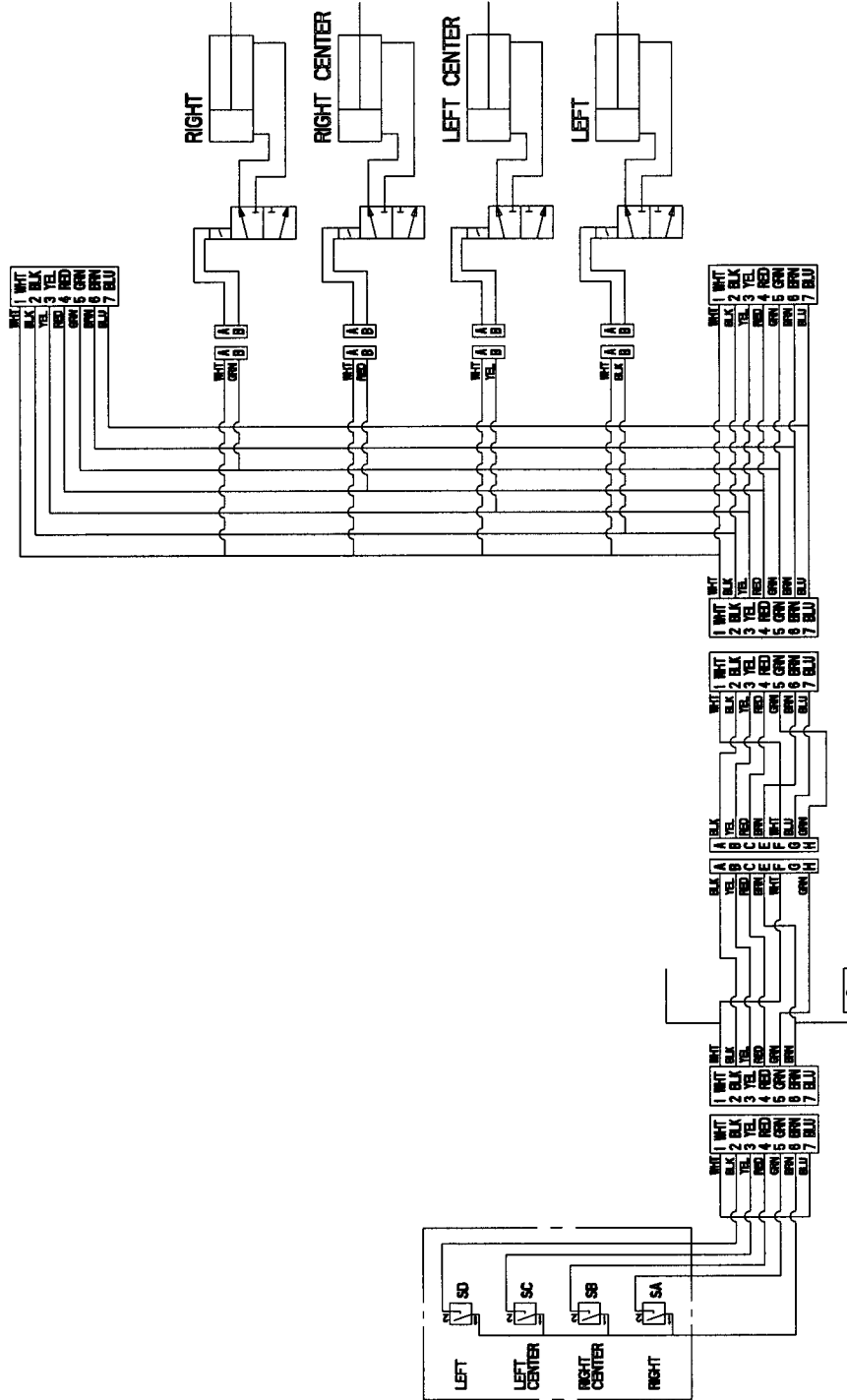


Fig. 6

**** NOTES ****

SPECIALLY DESIGNED – WITH QUALITY IN MIND

WARRANTY

- Crysteel Manufacturing, Inc. warrants its products for a period of one year from date of purchase.
- The warranty provides that our products must perform satisfactorily or we will repair, replace or refund the purchase price at the option of the purchaser. Hydraulic pumps, valves, hoses and other purchased parts are covered by the warranties of their respective manufacturers.
- Any parts returned to Crysteel Manufacturing, Inc. shall be shipped prepaid, and will be returned F.O.B. Lake Crystal, Minnesota.
- We will not assume responsibility for shipping, labor, travel, loss of use or downtime expenses.
- The warranty is void if the product has been obviously abused, or subjected to other than normal usage.
- We reserve the right to make improvements without notice or obligation regarding models previously sold.

! CAUTION !

- **BODY MUST BE BRACED BEFORE
SERVICING HOIST OR WORKING IN
AREA WITH BODY IN RAISED POSITION**
- **TRUCK MUST BE LEVEL FOR DUMPING**
- **DO NOT OVERLOAD**

CRYSTEEL MFG, INC.

CRYSTEEL MANUFACTURING, INC.

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