

In-Line Mount and Cross-Cut Mount Flush Style Intermediate Discharge Gates

Installation Manual

PNEG-1732

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GSI GROUP



PNEG-1732

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Safety Guidelines

This manual contains information that is important for you, the owner/operator, to know and understand. This information relates to protecting **personal safety** and **preventing equipment problems**. It is the responsibility of the owner/operator to inform anyone operating or working in the area of this equipment of these safety guidelines. To help you recognize this information, we use the symbols that are defined below. Please read the manual and pay attention to these sections. Failure to read this manual and its safety instructions is a misuse of the equipment and may lead to serious injury or death.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.



DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.



WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION, used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.



NOTICE is used to address practices not related to personal injury.

Safety Instructions

Our foremost concern is your safety and the safety of others associated with this equipment. We want to keep you as a customer. This manual is to help you understand safe operating procedures and some problems which may be encountered by the operator and other personnel.

As owner and/or operator, it is your responsibility to know what requirements, hazards and precautions exist, and to inform all personnel associated with the equipment or in the area. Safety precautions may be required from the personnel. Avoid any alterations to the equipment. Such alterations may produce a very dangerous situation where **SERIOUS INJURY** or **DEATH** may occur.

This equipment shall be installed in accordance with the current installation codes and applicable regulations which should be carefully followed in all cases. Authorities having jurisdiction should be consulted before installations are made.

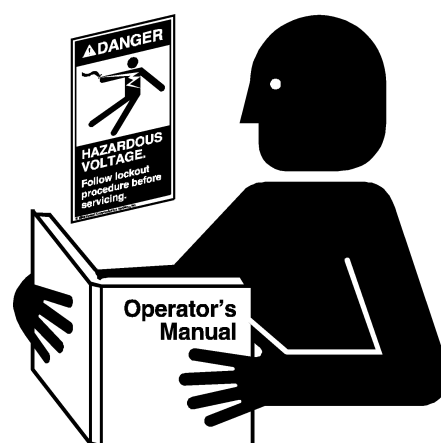
Follow Safety Instructions

Carefully read all safety messages in this manual and safety signs on your machine. Keep signs in good condition. Replace missing or damaged safety signs. Be sure new equipment components and repair parts include the current safety signs. Replacement safety signs are available from the manufacturer.

Learn how to operate the machine and how to use controls properly. Do not let anyone operate without instruction.

Keep your machinery in proper working condition. Unauthorized modifications to the machine may impair the function and/or safety and affect machine life.

If you do not understand any part of this manual or need assistance, contact your dealer.



Read and Understand Manual

1. Safety

Operate Motor Properly

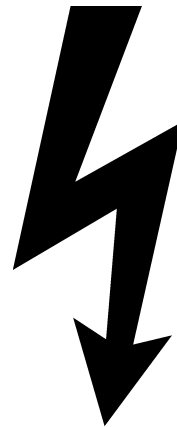
To avoid serious injury or death, stay away from unit and make sure everyone is clear of the equipment before starting or operating the unit.

All electrical connections should be made in accordance with the National Electric Code. Be sure equipment and bins are properly grounded.

Do not operate electric motor equipped units until motors are properly grounded.

Disconnect power on electrical driven units before resetting motor overloads.

Do not repetitively stop and start the drive in order to free a plugged condition. Jogging the drive in this manner can damage the equipment and/or drive components.

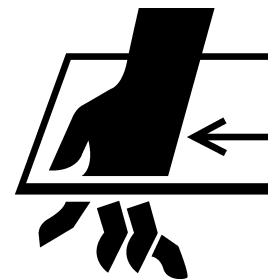


Electric Shock Hazard

Stay Clear of Moving Parts

Keep arms and hands away from slide gate opening. Slide gate can crush and dismember. Motor may start at any time.

Always stop and lock out power source before making adjustments, cleaning, or maintaining equipment.

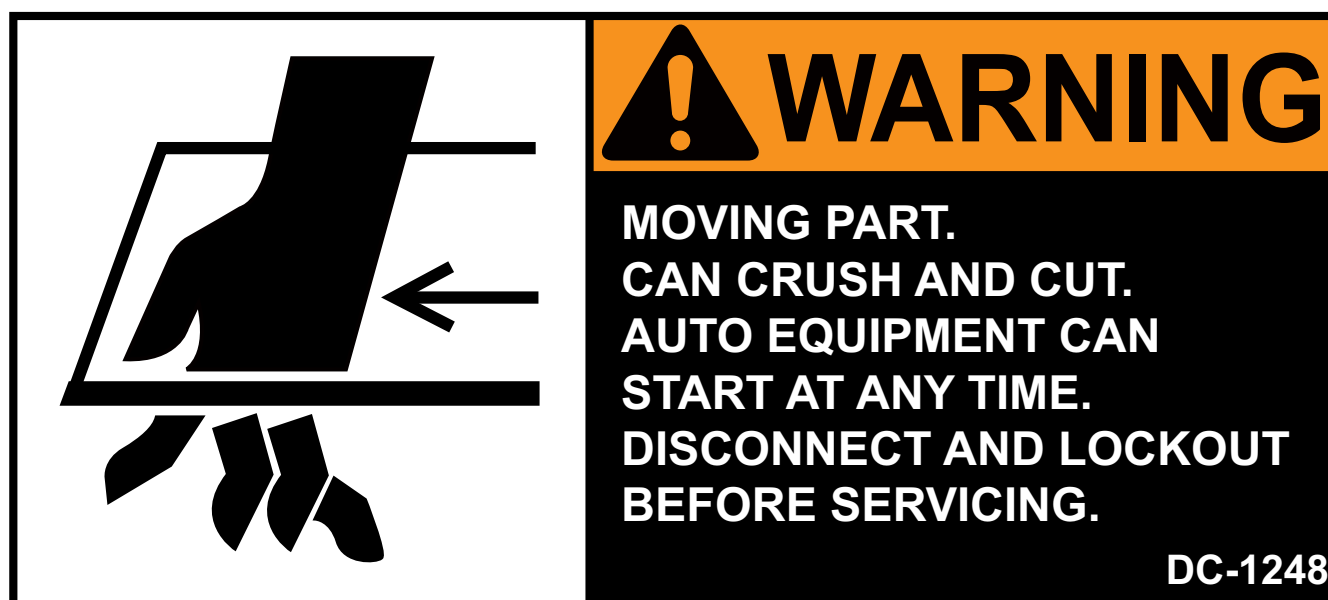


Slide Hazard

Please remember, safety decals provide important safety information for people working near equipment that is in operation. If a safety sign cannot be easily read for any reason or has been painted over, replace it immediately. Additional safety signs may be obtained from your dealer, distributor or ordered from the factory free of charge.

Contact:

The GSI Group
1004 E. Illinois St.
Assumption, IL. 62510
Phone: 1-217-226-4421



DC-1248
(Not to scale.)

Overall Flush Gate Dimensions

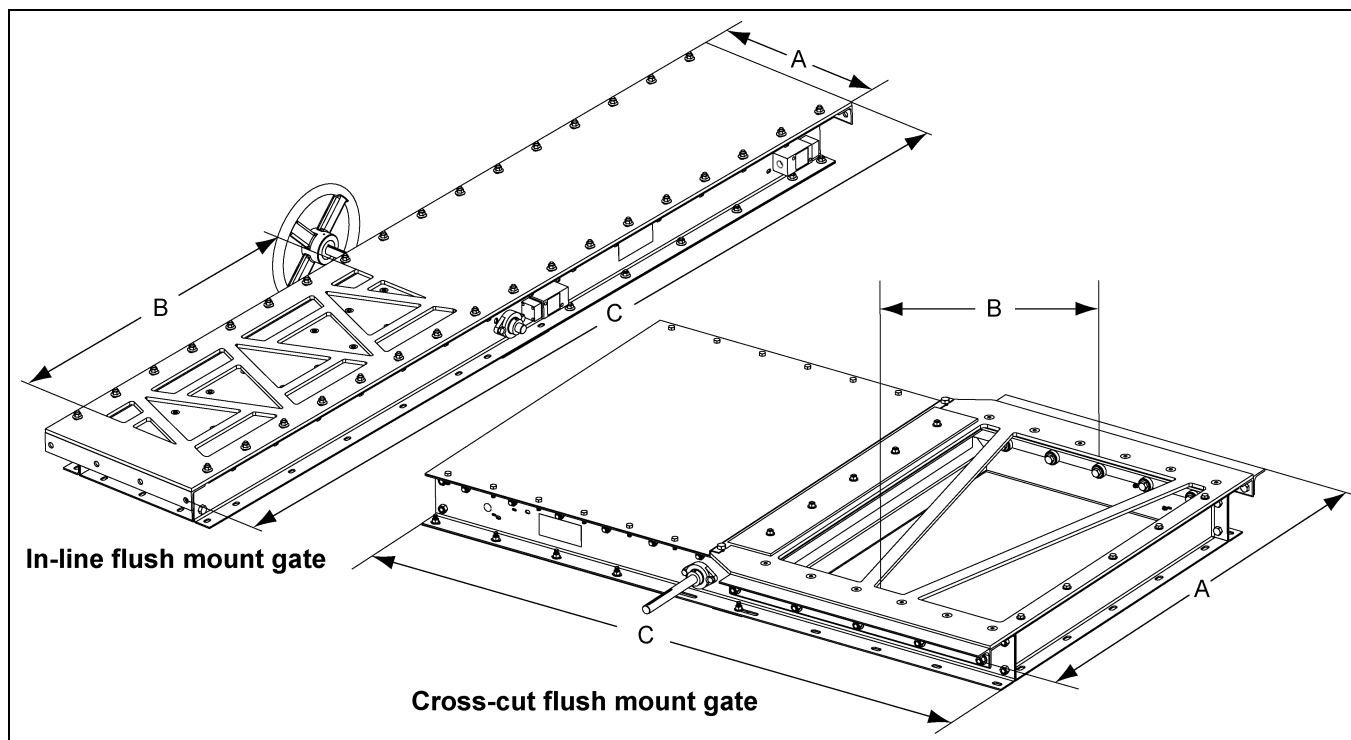


Figure 3A Overall Flush Gate Dimensions

Overall Flush Gate Dimensions

Gate Size (Conveyor Width)		A	B	C
09	In-Line	15"	36"	95"
	Cross-Cut	45.813"	35-3/4"	40-1/4"
12	In-Line	16"	36"	95"
	Cross-Cut	45.813"	35-3/4"	44-1/4"
14	In-Line	18"	36"	95"
	Cross-Cut	45.813"	35-3/4"	48-1/4"
16	In-Line	20"	36"	95"
	Cross-Cut	45.813"	35-3/4"	52-1/4"
20	In-Line	24"	36"	95"
	Cross-Cut	45.813"	35-3/4"	60-1/4"
21	In-Line	25"	36"	95"
	Cross-Cut	45.813"	35-3/4"	62-1/4"
26	In-Line	30"	36"	95"
	Cross-Cut	45.813"	35-3/4"	72-1/4"
32	In-Line	36"	36"	95"
	Cross-Cut	45.813"	35-3/4"	84-1/4"

Cut Trough Bottom for Gate Placement

1. Start by locating the center of the proposed discharge location. Dimension "A" shown in [Figure 3B](#).
2. If holes cannot be aligned, new holes must be drilled in the trough side bottom flanges.
3. Dimension "B" would be 95" for in-line gates or 45.813" for cross-cut gates.
4. Center this dimension "B" around the point found with the "A" dimension and cut the bottom as straight as possible on either side of the center.
5. Weld the extra angle iron flanges provided with the gate to each trough bottom cut, as shown in [Figure 3B](#), so that the gate can be bolted to each side. Stitch weld edges 2" long with 1-1/2" spacing.
6. Remove burrs on the inside edge of the trough bottom.
7. Apply paint to welds on outside of trough.

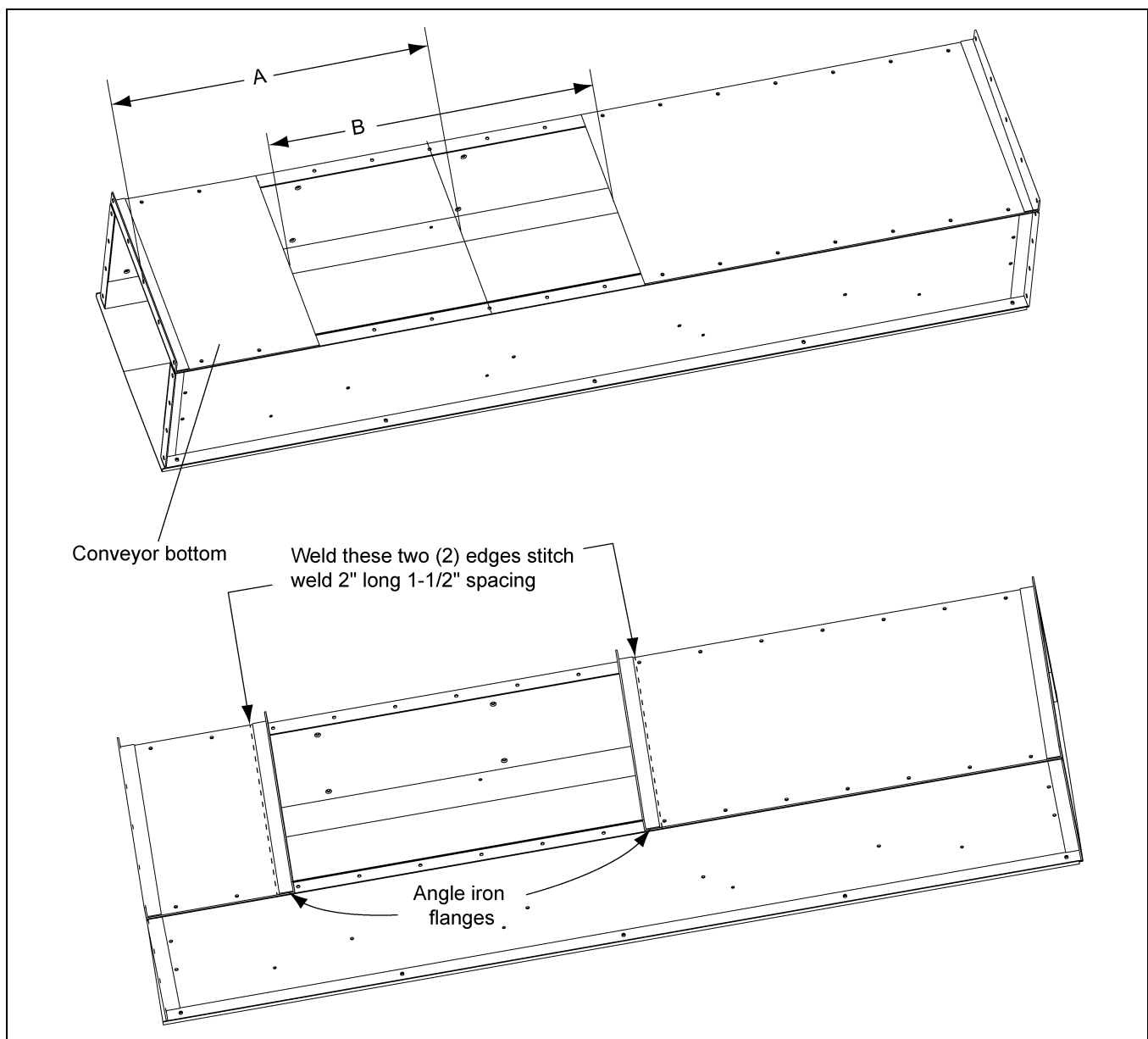


Figure 3B

3. Installation

Manual Gate Installation

Manually Operated Gate

1. Install the specified wheel to the shaft by aligning the key and key way, then tighten the set screw. This gate can be operated by a chain, cable or hand wheel. (See [Figure 3C.](#))
2. All flush mount style gates have a double gear rack for slide actuation.
3. The slide plate rides on 1-3/8" double shielded radial bearings, as well as being guided and sealed by UHMW strips for smooth operation.

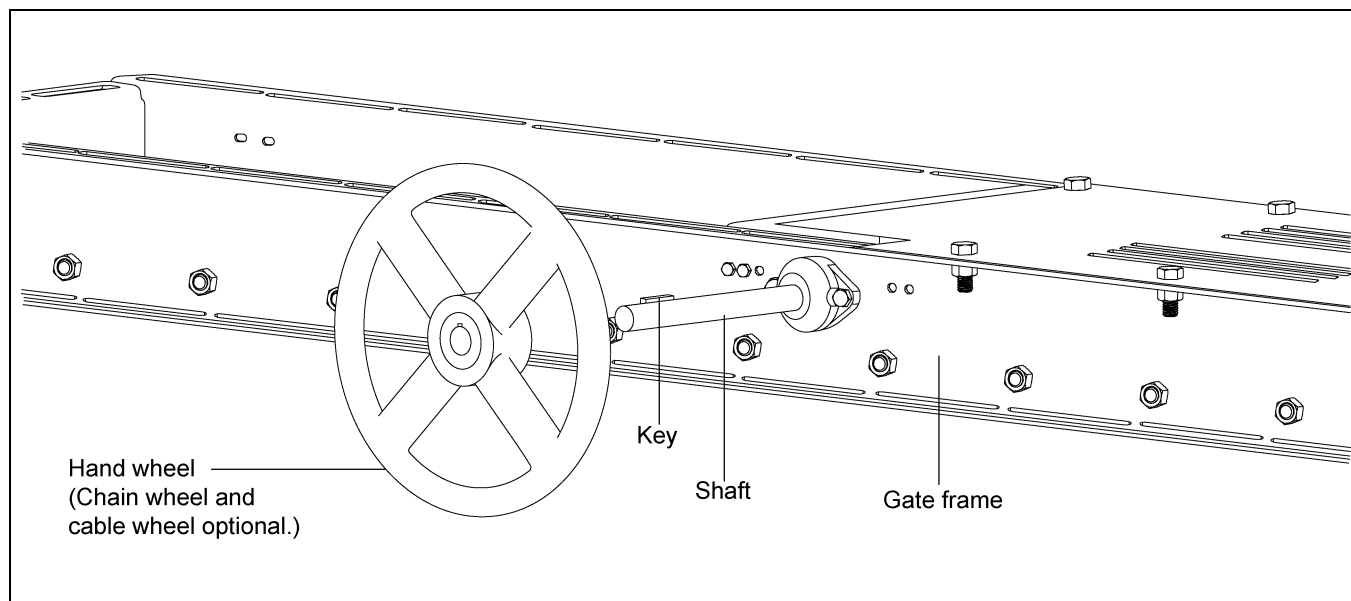


Figure 3C

Motor Driven Gate Installation

Install Motor Bracket

1. Install the motor bracket to the gate. Then attach the motor to the bracket as shown *in Figure 3D*, using the provided hardware.

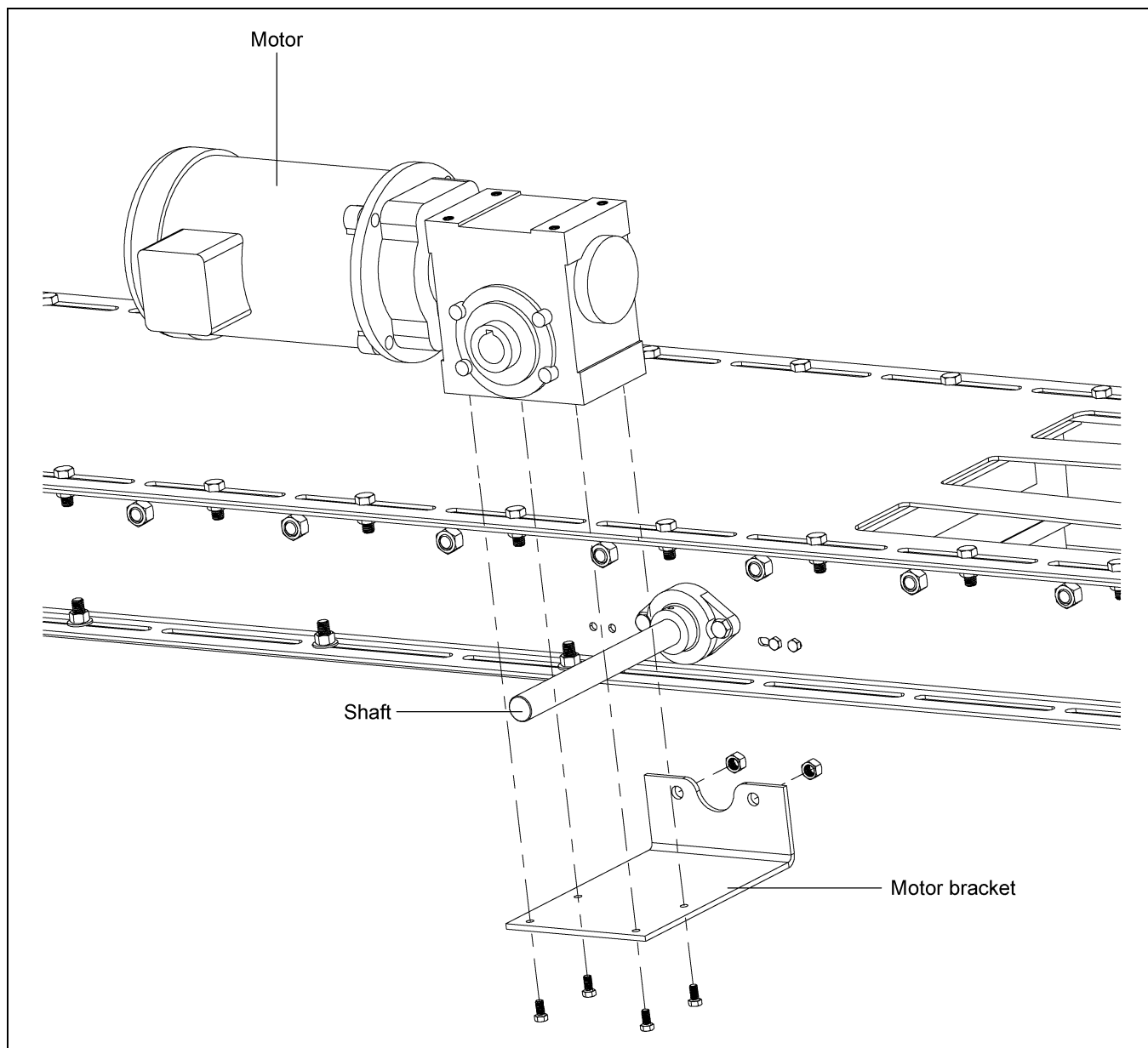


Figure 3D

3. Installation

Cross-Cut Discharge Gate Limit Switch Installation

1. Cross-cut switches are installed on opposite corners outside of gate frame. (See Figure 3E.)

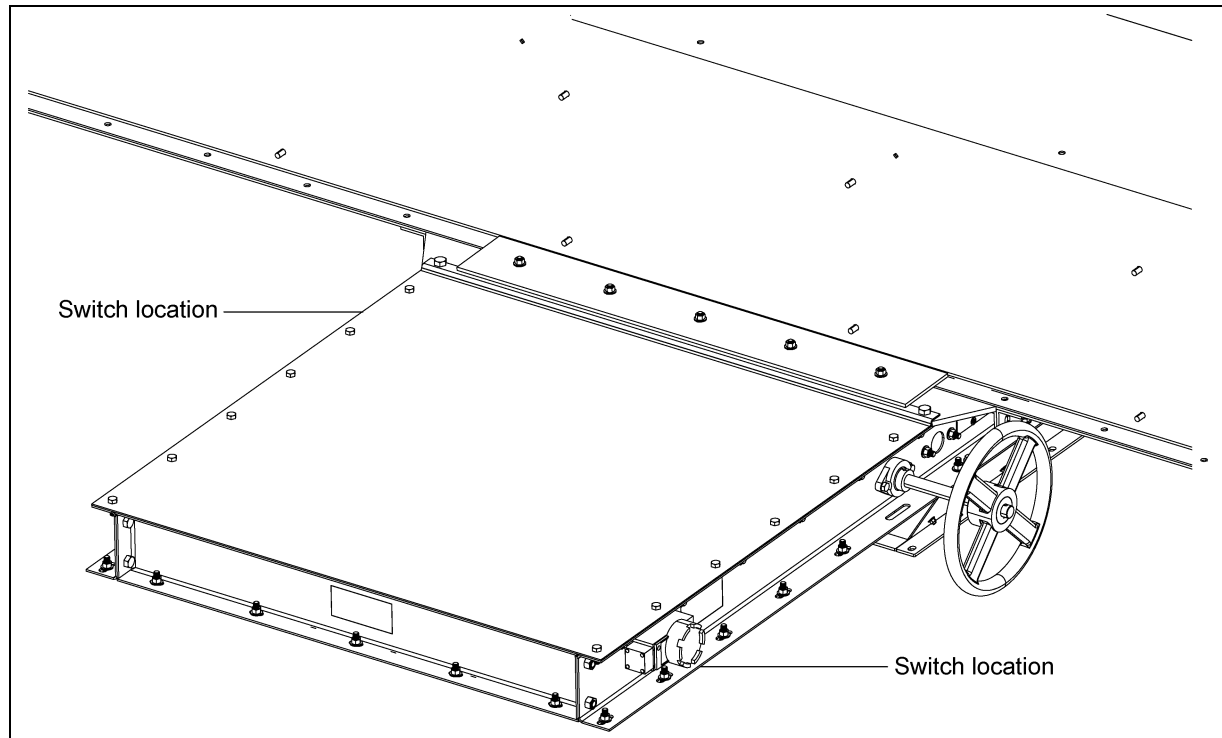


Figure 3E

2. Install limit switch to the outside of the gate frame. Knock out the hole where indicated to install switch through gate frame. (See Figure 3F.)

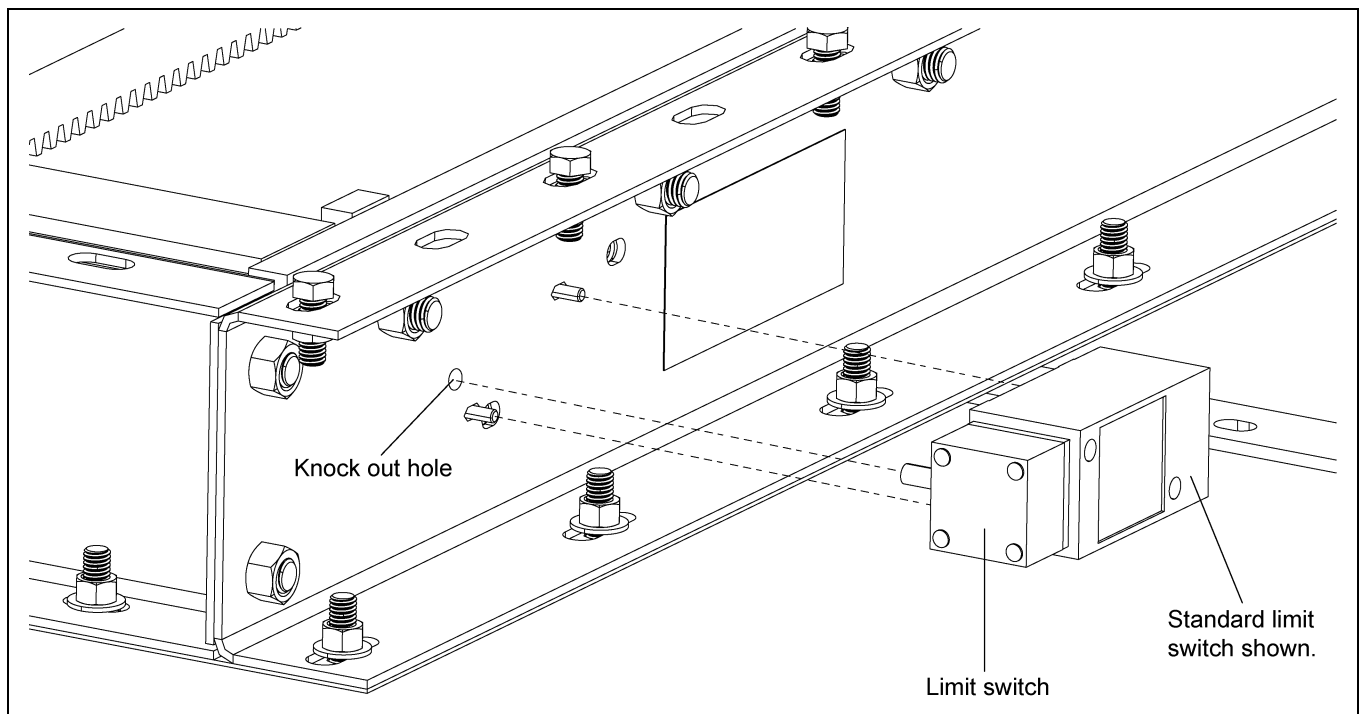


Figure 3F

3. Install switch levers vertically. When the switch target on gate pushes a switch 15° in either direction, the motor will stop. (See Figure 3G and Figure 3H.)

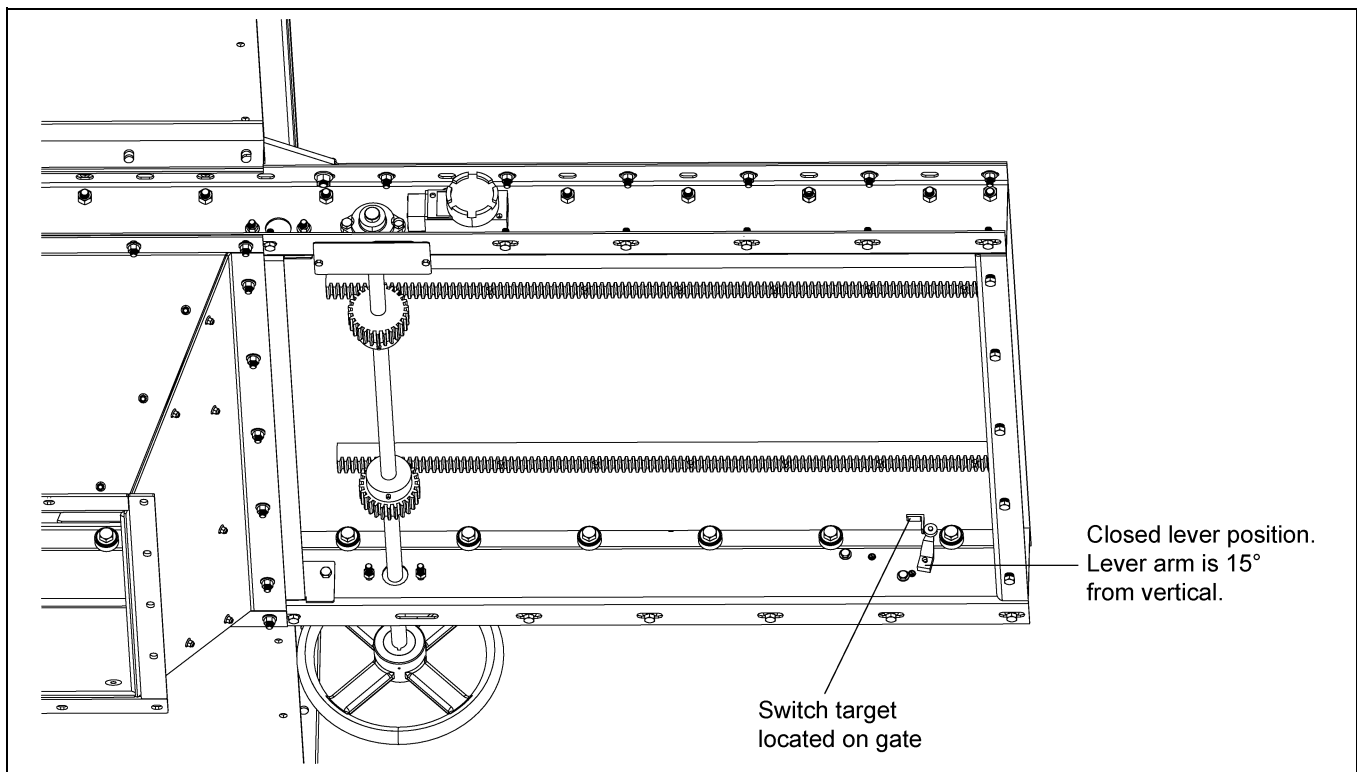


Figure 3G

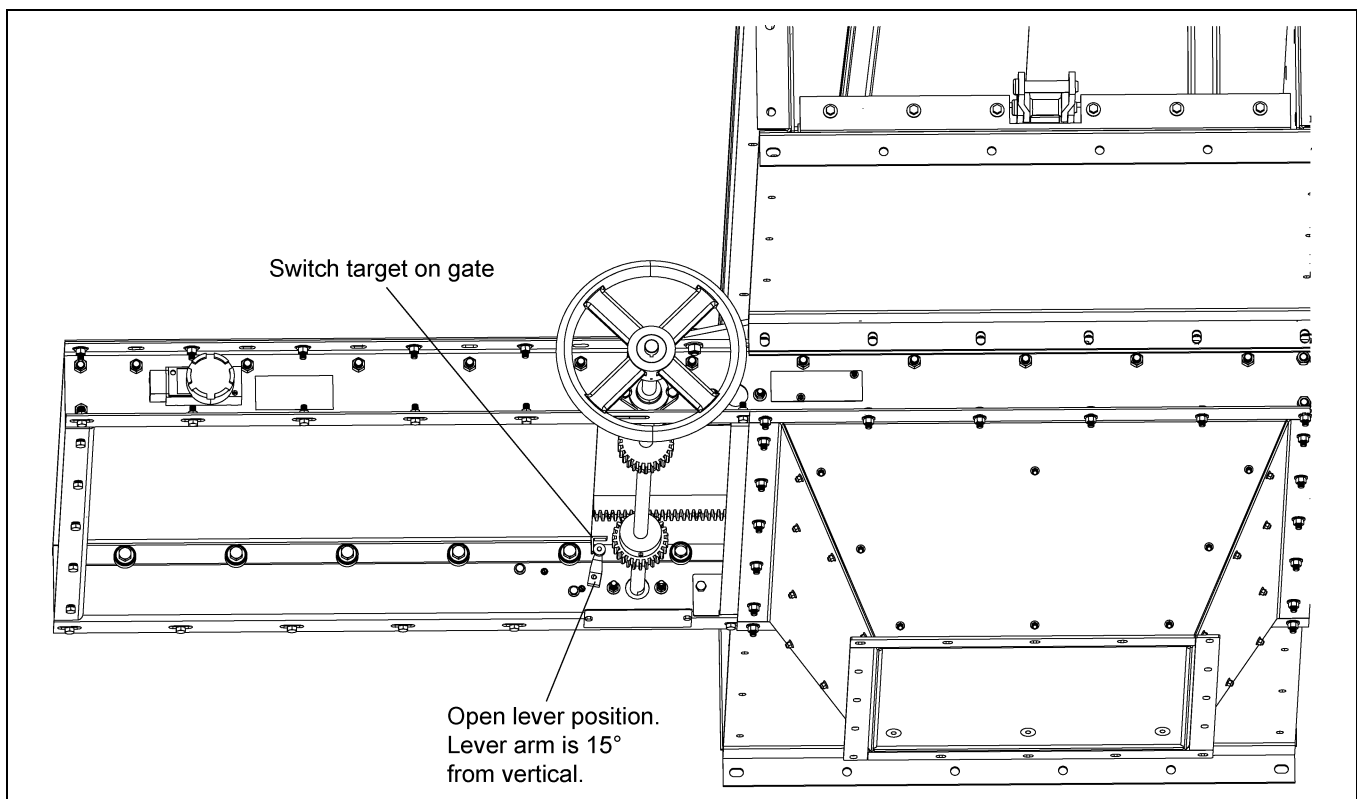


Figure 3H

3. Installation

In-Line Discharge Gate Limit Switch Installation

1. In-line switches are installed on outside of gate frame on the same side. *(See Figure 3I.)*

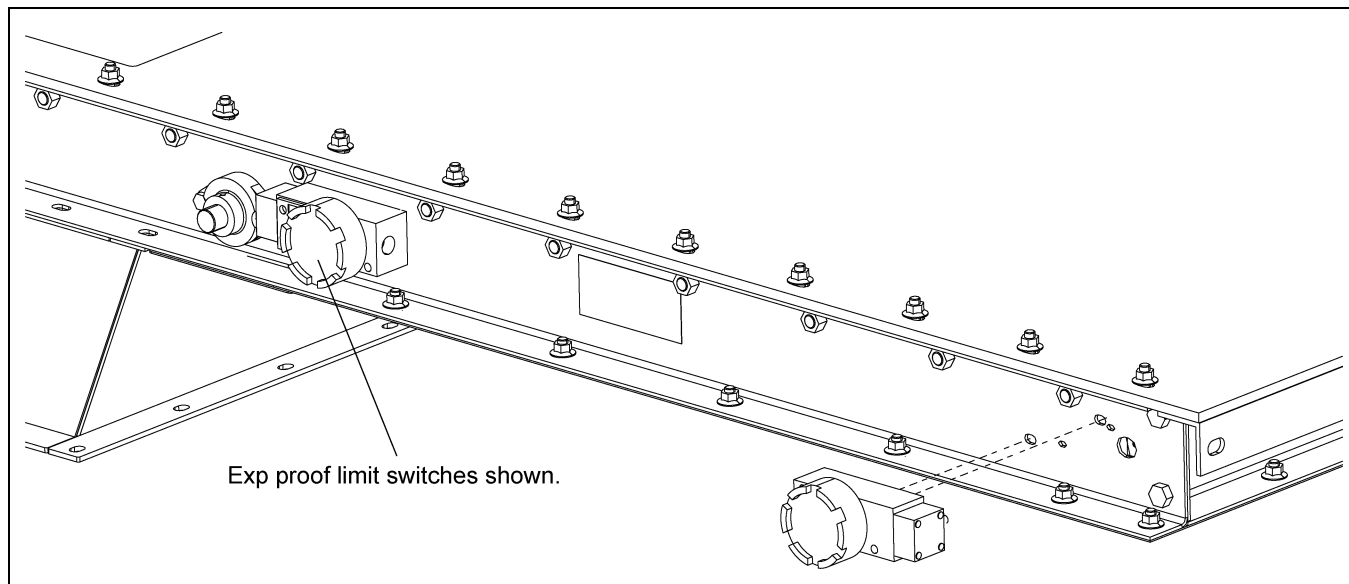


Figure 3I

2. Switch levers should be installed at a 15° angle, when a lever is activated to a vertical position by a switch target, the motor will stop. *(See Figure 3J below and Figure 3K on Page 15.)*

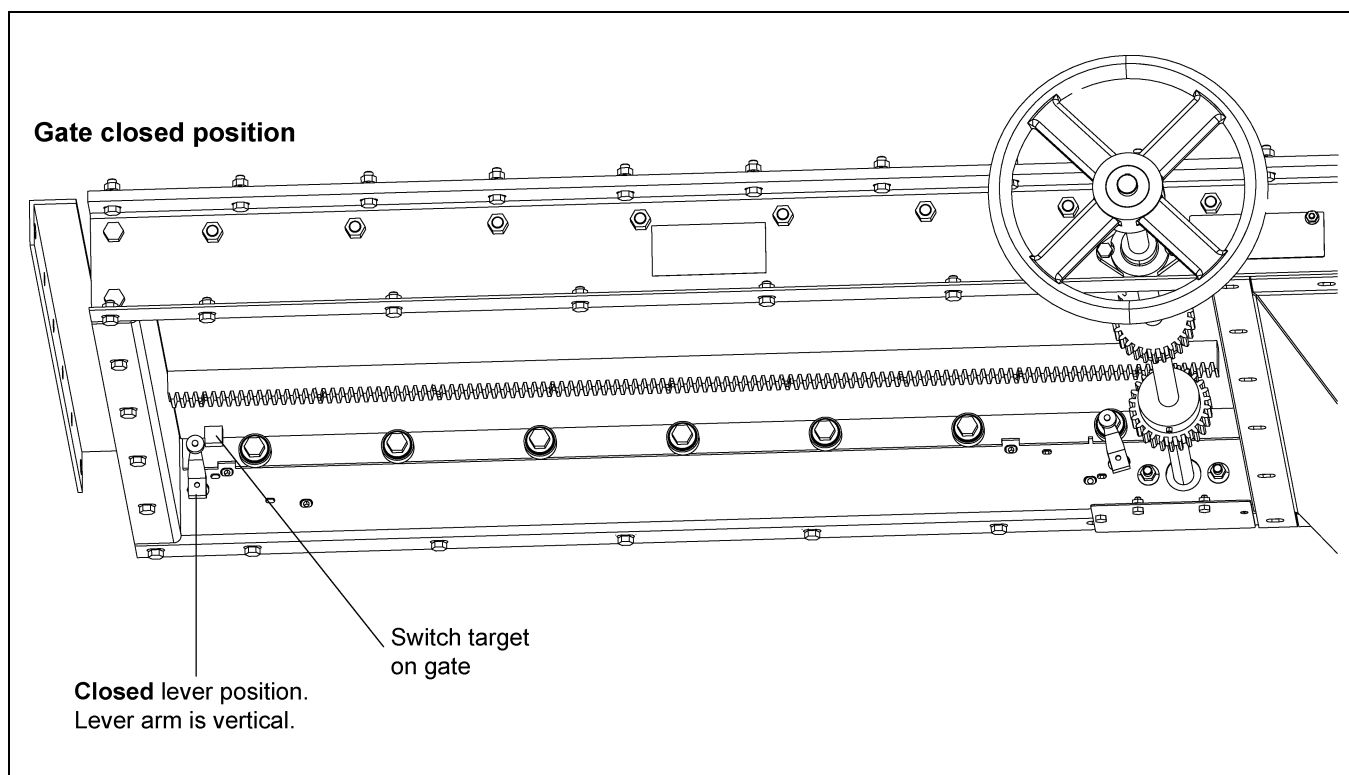


Figure 3J

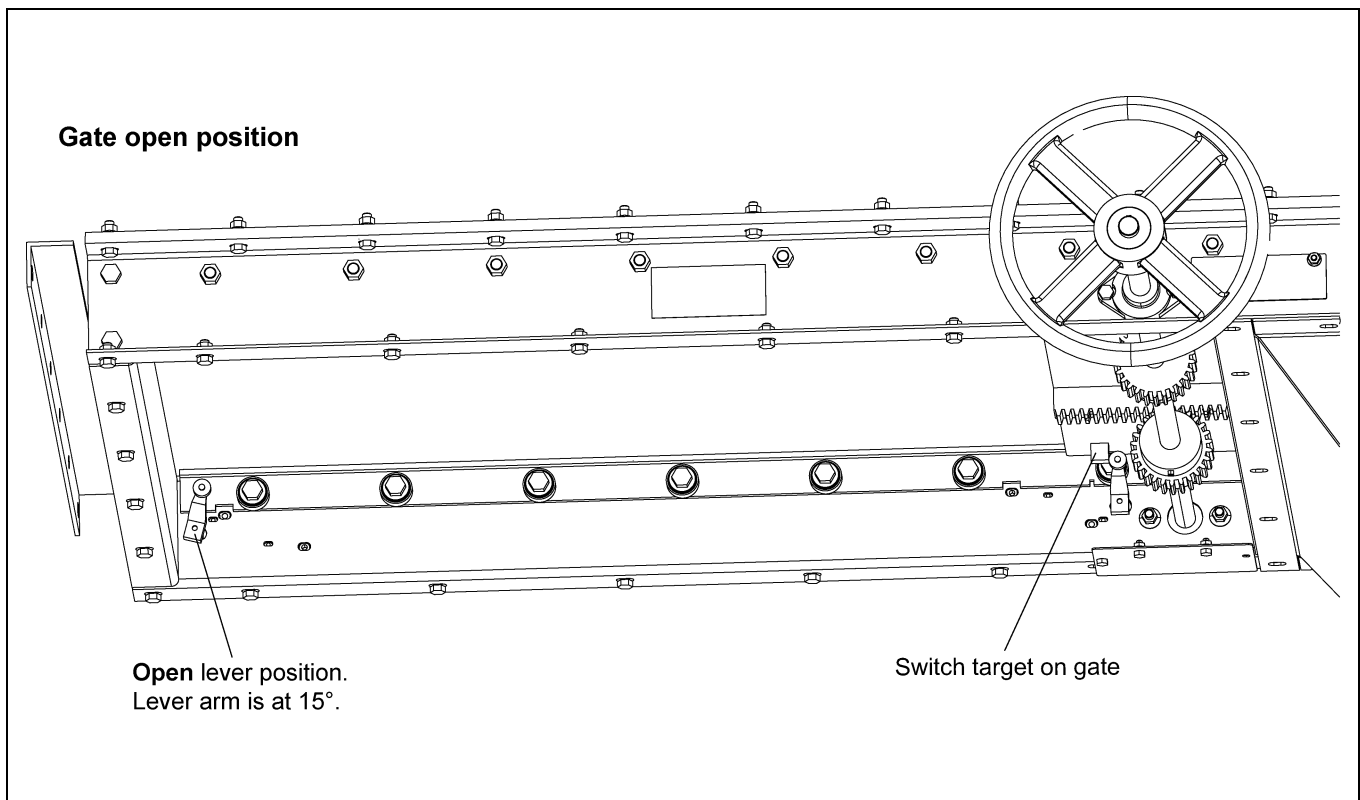


Figure 3K

3. Installation

Install Gate to Trough Bottom

1. Attach the gate to the connection flanges and trough bottom using supplied hardware.
2. Seal all connections with a silicon based caulk to make weather-resistant.
3. It may be necessary to drill holes in the trough side flange. *(See Figure 3L.)*
4. There are no carry-over bars to adjust, the carry-over feature is built into the gate.
5. On 12" tall and 14" tall conveyors, there will be some overhang (1/2") of the gate frame past the edge of the trough bottom.

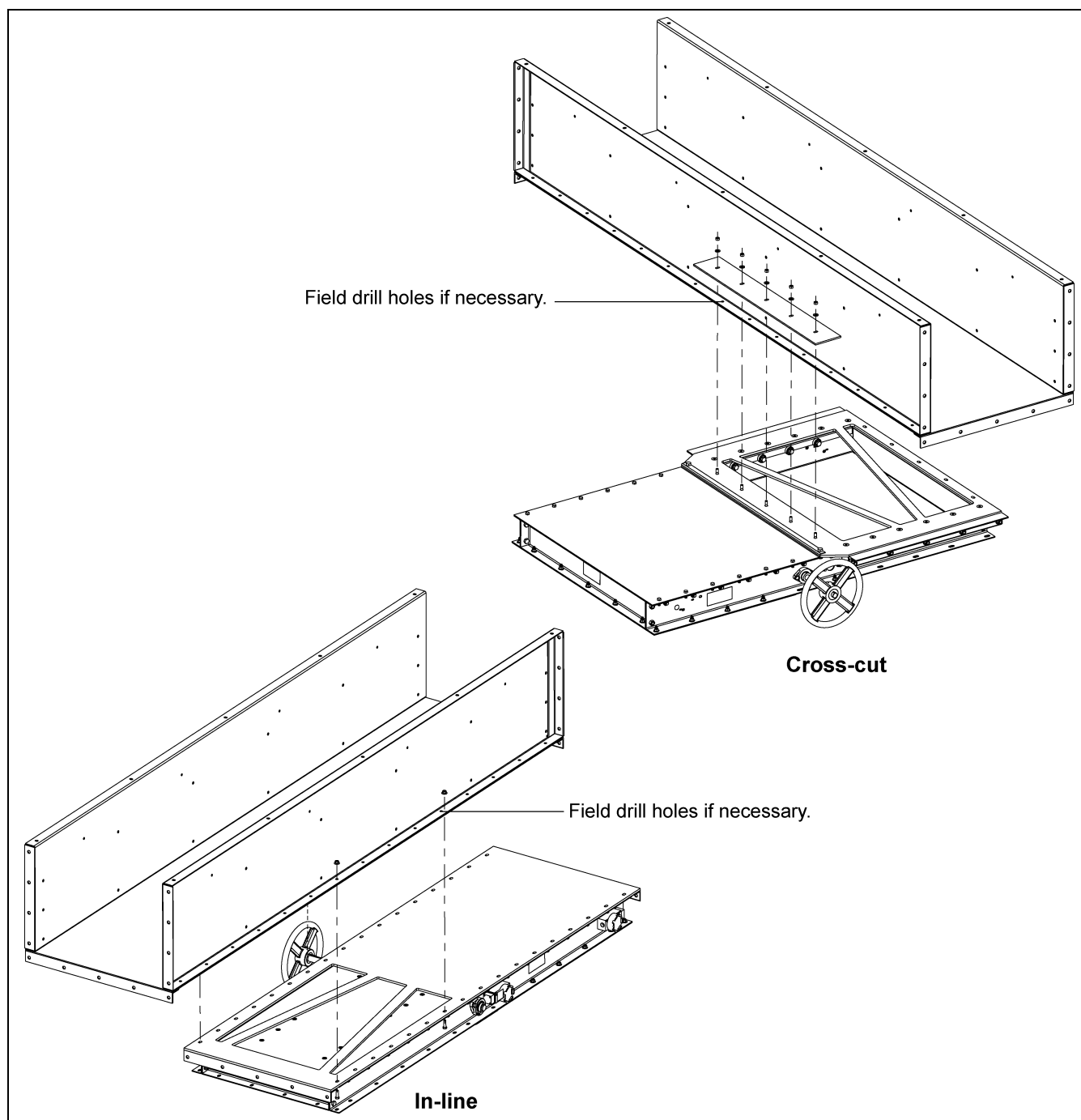


Figure 3L

Flipping the Shaft to Change Gate Drive Side

1. Loosen set screws for shaft on both bearings. *(See Figure 3M.)*
2. Remove bearing on the long side of the shaft.
3. Flip shaft and re-install bearing.
4. Tighten set screws on shaft.
5. On guard move filler plate to opposite side if applicable.
6. If gate will be electronically operated, install motor mount on appropriate side for gearbox and motor.

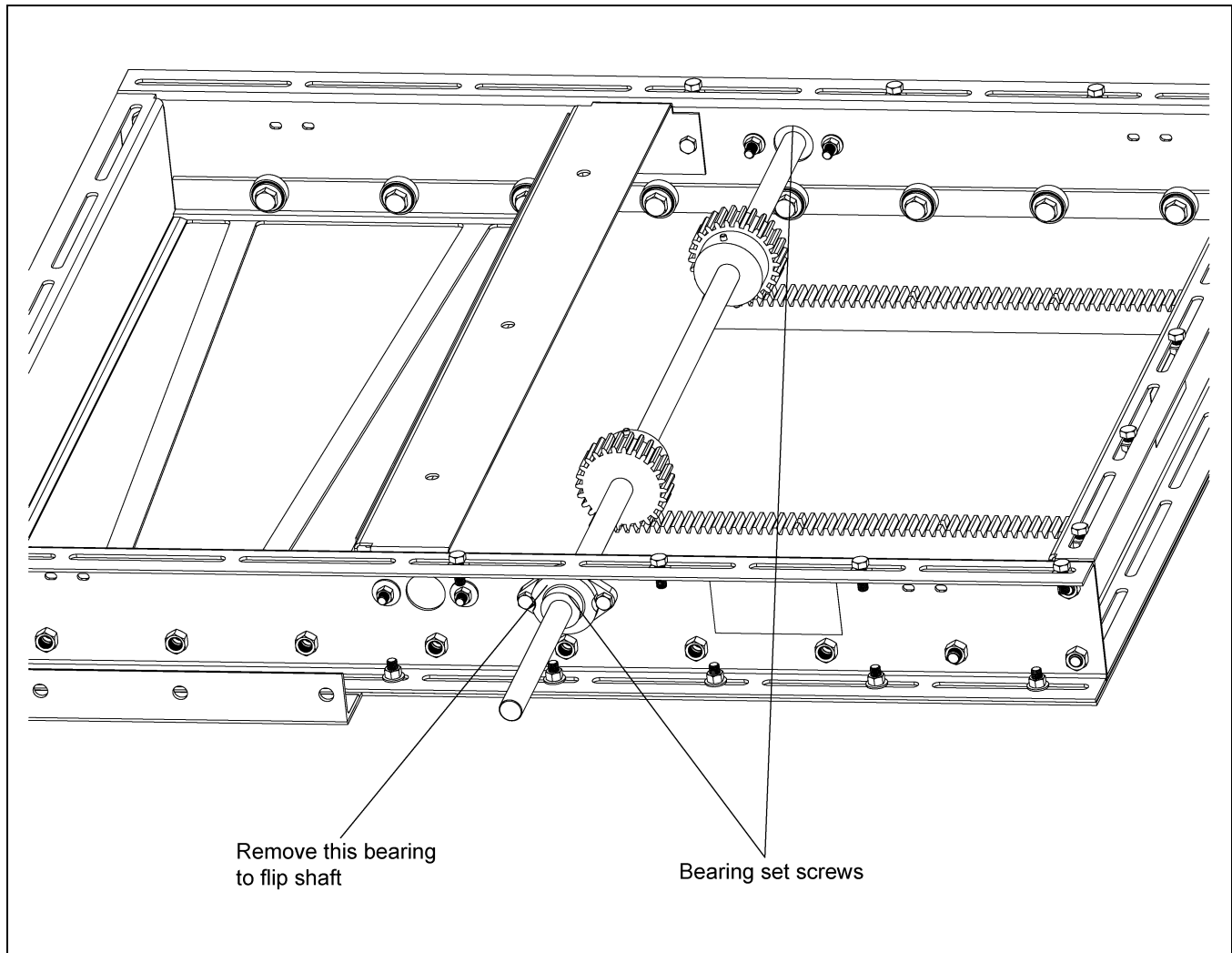
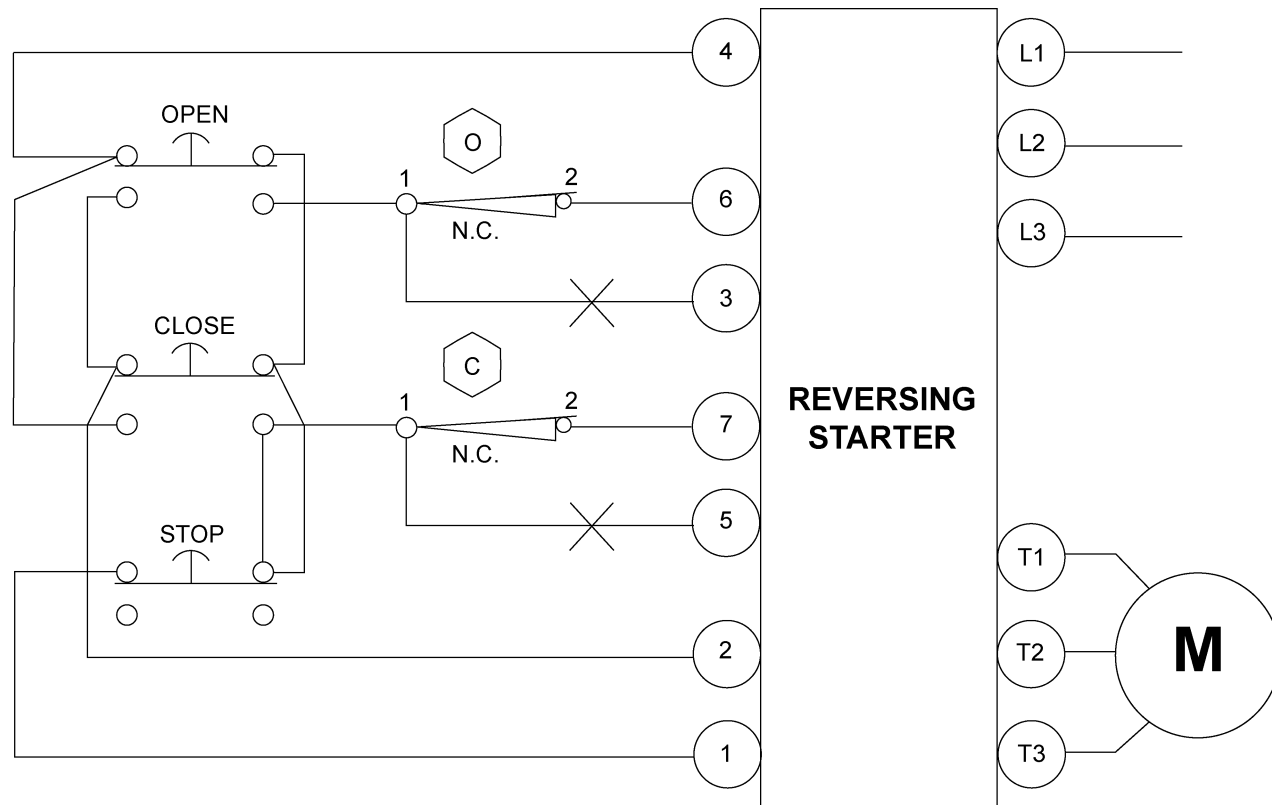


Figure 3M

4. Wiring Diagram

Typical Wiring Diagram



Remove internal jumpers 3 to 6, 5 to 7.



Open position switch



Closed position switch



Break for momentary operation

GSI Group, LLC Limited Warranty

The GSI Group, LLC ("GSI") warrants products which it manufactures to be free of defects in materials and workmanship under normal usage and conditions for a period of 12 months after sale to the original end-user or if a foreign sale, 14 months from arrival at port of discharge, whichever is earlier. The end-user's sole remedy (and GSI's only obligation) is to repair or replace, at GSI's option and expense, products that in GSI's judgment, contain a material defect in materials or workmanship. Expenses incurred by or on behalf of the end-user without prior written authorization from the GSI Warranty Group shall be the sole responsibility of the end-user.

Warranty Extensions:

The Limited Warranty period is extended for the following products:

	Product	Warranty Period	
AP Fans and Flooring	Performer Series Direct Drive Fan Motor	3 Years	* Warranty prorated from list price: 0 to 3 years - no cost to end-user 3 to 5 years - end-user pays 25% 5 to 7 years - end-user pays 50% 7 to 10 years - end-user pays 75%
	All Fiberglass Housings	Lifetime	
	All Fiberglass Propellers	Lifetime	
Cumberland Feeding/Watering Systems	Feeder System Pan Assemblies	5 Years **	** Warranty prorated from list price: 0 to 3 years - no cost to end-user 3 to 5 years - end-user pays 50%
	Feed Tubes (1-3/4" and 2.00")	10 Years *	
	Centerless Augers	10 Years *	
	Watering Nipples	10 Years *	
Grain Systems	Grain Bin Structural Design	5 Years	† Motors, burner components and moving parts not included. Portable dryer screens included. Tower dryer screens not included.
Grain Systems Farm Fans Zimmerman	Portable and Tower Dryers	2 Years	
	Portable and Tower Dryer Frames and Internal Infrastructure †	5 Years	

GSI further warrants that the portable and tower dryer frame and basket, excluding all auger and auger drive components, shall be free from defects in materials for a period of time beginning on the twelfth (12th) month from the date of purchase and continuing until the sixtieth (60th) month from the date of purchase (extended warranty period). During the extended warranty period, GSI will replace the frame or basket components that prove to be defective under normal conditions of use without charge, excluding the labor, transportation, and/or shipping costs incurred in the performance of this extended warranty.

Conditions and Limitations:

THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE LIMITED WARRANTY DESCRIPTION SET FORTH ABOVE. SPECIFICALLY, GSI MAKES NO FURTHER WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE IN CONNECTION WITH: (I) PRODUCT MANUFACTURED OR SOLD BY GSI OR (II) ANY ADVICE, INSTRUCTION, RECOMMENDATION OR SUGGESTION PROVIDED BY AN AGENT, REPRESENTATIVE OR EMPLOYEE OF GSI REGARDING OR RELATED TO THE CONFIGURATION, INSTALLATION, LAYOUT, SUITABILITY FOR A PARTICULAR PURPOSE, OR DESIGN OF SUCH PRODUCTS.

GSI shall not be liable for any direct, indirect, incidental or consequential damages, including, without limitation, loss of anticipated profits or benefits. The sole and exclusive remedy is set forth in the Limited Warranty, which shall not exceed the amount paid for the product purchased. This warranty is not transferable and applies only to the original end-user. GSI shall have no obligation or responsibility for any representations or warranties made by or on behalf of any dealer, agent or distributor.

GSI assumes no responsibility for claims resulting from construction defects or unauthorized modifications to products which it manufactured. Modifications to products not specifically delineated in the manual accompanying the equipment at initial sale will void the Limited Warranty.

This Limited Warranty shall not extend to products or parts which have been damaged by negligent use, misuse, alteration, accident or which have been improperly/inadequately maintained. This Limited Warranty extends solely to products manufactured by GSI.

Prior to installation, the end-user has the responsibility to comply with federal, state and local codes which apply to the location and installation of products manufactured or sold by GSI.

This equipment shall be installed in accordance with the current installation codes and applicable regulations which should be carefully followed in all cases. Authorities having jurisdiction should be consulted before installations are made.

G S I G R O U P



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