



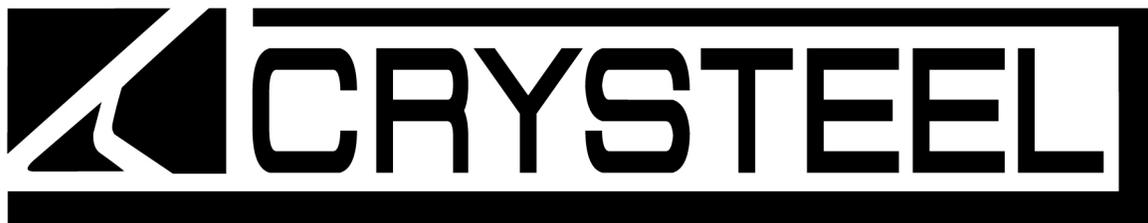
TRUCK BODIES & EQUIPMENT INTERNATIONAL, Inc.

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CRYSTEEL'S *Grain* *Tipper*

MOUNTING AND OPERATING INSTRUCTIONS



***THIS MANUAL MUST BE INCLUDED WITH THE VEHICLE
AFTER COMPLETING THE INSTALLATION.***

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Toll Free (800) 533-0494

DATE PURCHASED _____

HOIST SERIAL NUMBER _____

BODY SERIAL NUMBER _____

DEALER _____

ADDRESS _____

PHONE _____

FOREWORD

Since 1974, Crysteel has been building innovative bodies to help with the harvest. Grain bodies that are easy to use, strong and long lasting. Versatile Crysteel bodies are excellent for sweet corn, sugar beets, silage, bulk or bagged feed or seed.

This manual contains all the information needed for proper installation and operation of these bodies. Study it carefully before attempting to install or operate this product. With the proper installation, use and regular maintenance, Crysteel's Grain Body will give many years of trouble free service.

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INSTALLATION INSTRUCTIONS

GENERAL INFORMATION

It is a good idea to look through these installation instructions before beginning to mount the Grain Tipper.

When welding, protect the truck's electrical, air and brake systems by disconnecting, removing or covering. Tighten all nuts and bolts to a consistent level. Use the following table for torque values.

Size	Grade 2 Torque	Grade 5 Torque	Grade 8 Torque
			
1/4-20	3-4 lb-ft	6-7 lb-ft	10-11 lb-ft
1/4-28	4-5 lb-ft	8-9 lb-ft	11-12 lb-ft
5/16-18	8-9 lb-ft	14-15 lb-ft	21-22 lb-ft
5/16-24	9-10 lb-ft	15-16 lb-ft	21-22 lb-ft
3/8-16	17-18 lb-ft	24-26 lb-ft	37-40 lb-ft
3/8-24	19-20 lb-ft	28-30 lb-ft	40-43 lb-ft
1/2-13	38-42 lb-ft	60-65 lb-ft	90-100 lb-ft
1/2-20	43-47 lb-ft	70-75 lb-ft	95-105 lb-ft
5/8-11	75-80 lb-ft	122-130 lb-ft	180-190 lb-ft
5/8-18	85-90 lb-ft	145-150 lb-ft	200-210 lb-ft
3/4-10	132-140 lb-ft	220-230 lb-ft	315-330 lb-ft
3/4-16	152-160 lb-ft	250-260 lb-ft	355-370 lb-ft

MOUNT HOIST TO TRUCK FRAME

Install hoist and rear hinge as per instructions in the owners manual furnished with the hoist package.

MOUNT BODY

It is recommended that the body be painted before it is mounted on the truck. Place the body in position on the truck allowing three inches of clearance between the truck cab and the body. Use rivet strip mounting pads provided with the hoist between the longbeams and the truck frame. Use three on each side and weld them to the longbeams. Align body longbeams carefully with the truck frame. Securely weld the longbeams to the rear hinge bracket. Place the 1/4 inch spacer plate provided with the body between the hoist angle lift bracket and the inside of the longbeam. Securely weld this plate to the longbeam and to the hoist angle lift bracket. Be sure to do this on both sides.

MOUNT BODY PROP

The body prop is designed and intended to support an EMPTY truck body in the raised position. Use of the body prop permits service to be performed safely beneath a raised body. The body props are supplied with the hoist package.

Mount the body prop longbeam bracket provided with the body:

1. Raise the prop arm to a free standing position by allowing the prop arm to rest against the rear flange of the top pivot mount.
2. Position the longbeam bracket in the prop arm saddle. **ALLOW ROOM FOR CLEARANCE** when the body is in the lowered position.
3. Securely weld the longbeam bracket to the long-
beam.

To operate the body prop refer to the hoist owner manual.

INSTALL LIGHTS AND REFLECTORS

Install the amber clearance lights in the lower front corners of the body and the red clearance light and red taillights in the rear of the body. Connect the wiring using the connectors supplied. Mount the amber reflectors on the front side and the red reflectors on the rear sides of body. Slip the rubber hand grips on the latch levers. Mount the decals: one on each side and one at the rear of the body.

GREASE ZERK LOCATION

Lubricate all fittings at regular intervals at least every two months. Grease zerks are located on each door hinge and one on each rear latch tube guide. Refer to hoist manual for zerk location on hoist and rear hinge assembly.

INSTALLATION OF TIP TOPS

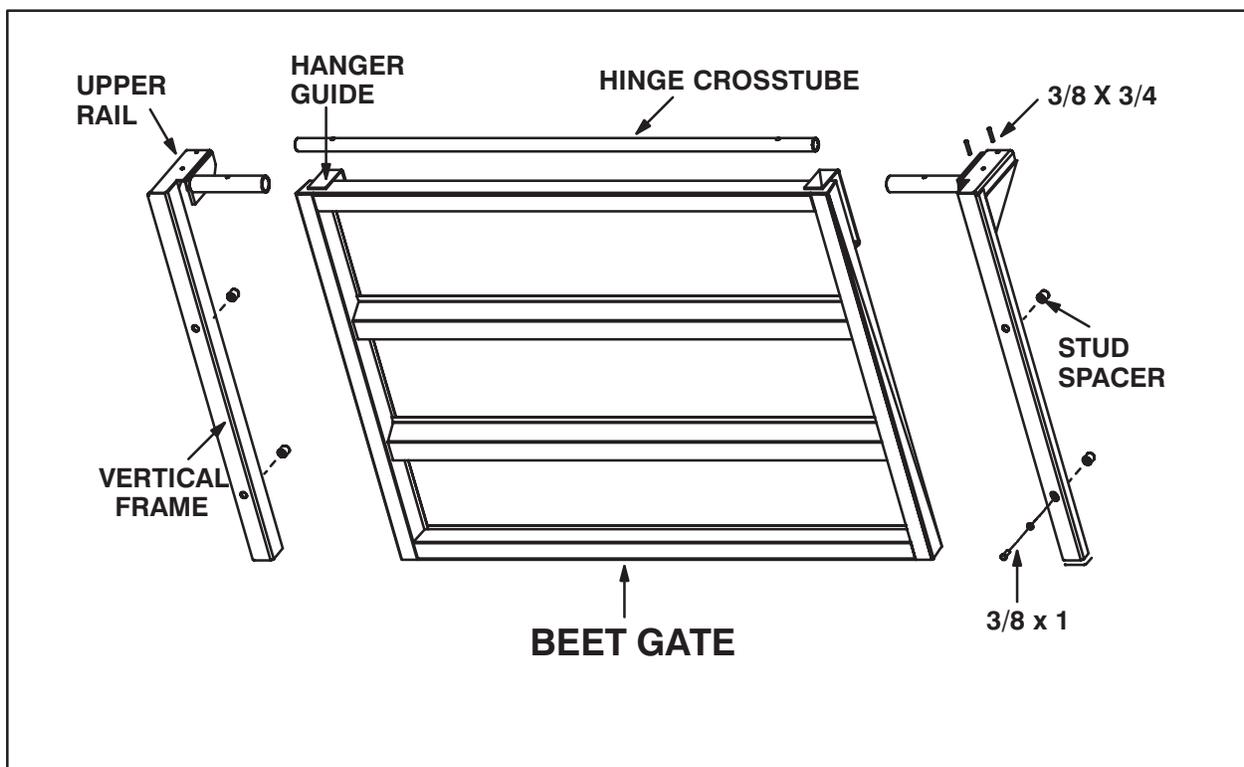
Tip tops are an optional 14 inch side and end extension. Before mounting apply the rubber self adhesive gasket strip (optional) to underside of tip tops. This will insure a weatherproof seal. Position tip top sides on top rail of body with the smooth surface out. Mount tip top ends to sides using 3/8 x 1 cap screws, flat washers, lock washers and hex nuts. Carefully align tip tops with body before securely clamping in place. Using the inner lower flange of the tip tops as a guide, drill 5/16 dia. holes and fasten tip tops to the body with 3/8 x 3/4 self tapping screws and external tooth lock washers.

MOUNTING 60 INCH BEET AND 74 INCH SWEET CORN GATES

Remove the three piece grain rear by opening the gate and lifting doors out of the hinge sockets and remove the header bar. Install tip tops if required to provide the proper gate opening height. The gate vertical frame assemblies are designed to fit over the rear pillar and the hinge sockets. **DO NOT** remove the hinge sockets! Hang the vertical frame upper rail over the top rail of the body side. Using the vertical frame as a guide, mark the approximate center of the mounting holes on the rear pillars. Remove the vertical frame and locate the mounting stud spacer over the approximate center of the mark on the rear pillar and weld stud spacers to the rear pillar.

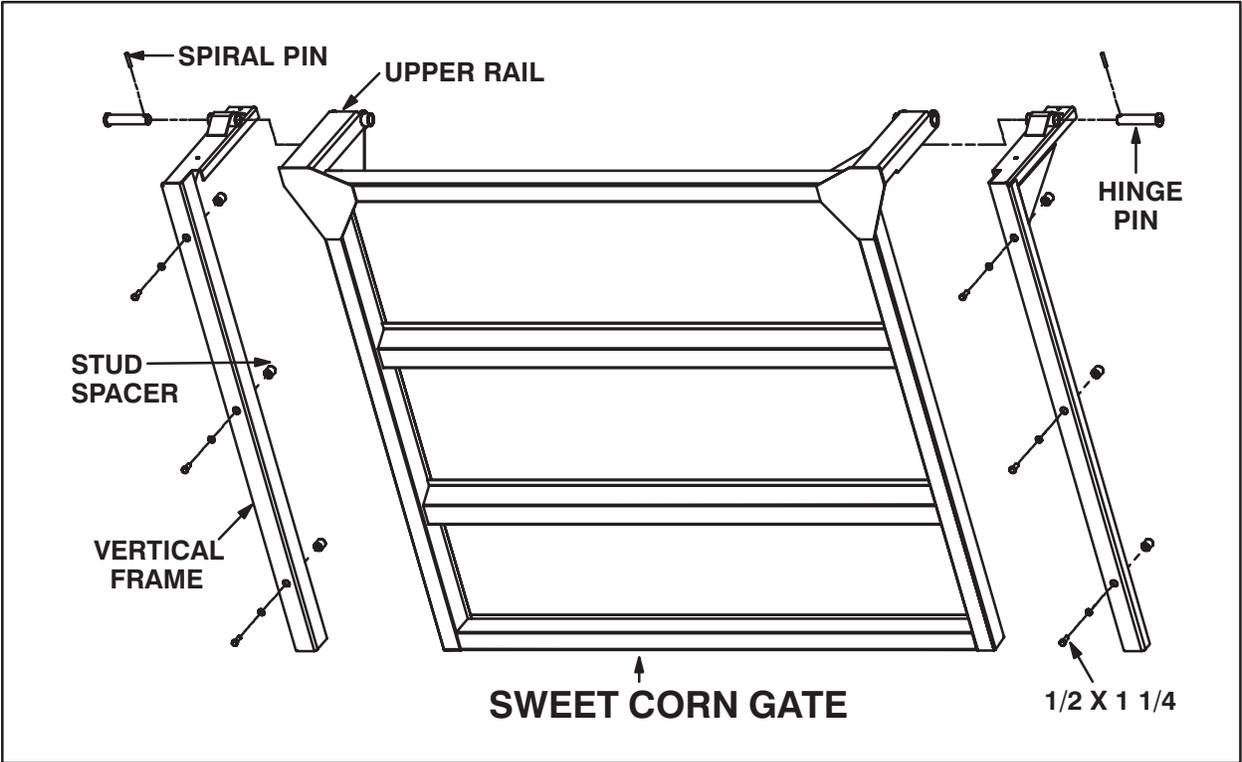
MOUNTING BEET GATE

Assemble the beet gate together by sliding the hinge crosstube through the beet gates hinge hanger guides and slide the left and right vertical frame hinge tube over the crosstube and through the hanger guides. Fasten the frames in place with 1/2 x 3 cap screws, lock washers, and hex nuts. Mount the beet gate assembly to the rear pillars with four 1/2 x 1 1/4 cap screws, lock washers and large flat washers. Using the upper rail of the frame as a guide drill 7/16" dia. holes. Fasten to the top rail of the tip tops with four 3/8 x 1 cap screws, flat washers, lock washers and hex nuts. If the body sides are 60 inches in height, drill 5/16 dia. holes and fasten to side boxed top rail with four 3/8 x 3/4 self tapping screws and ext. tooth lock washers.



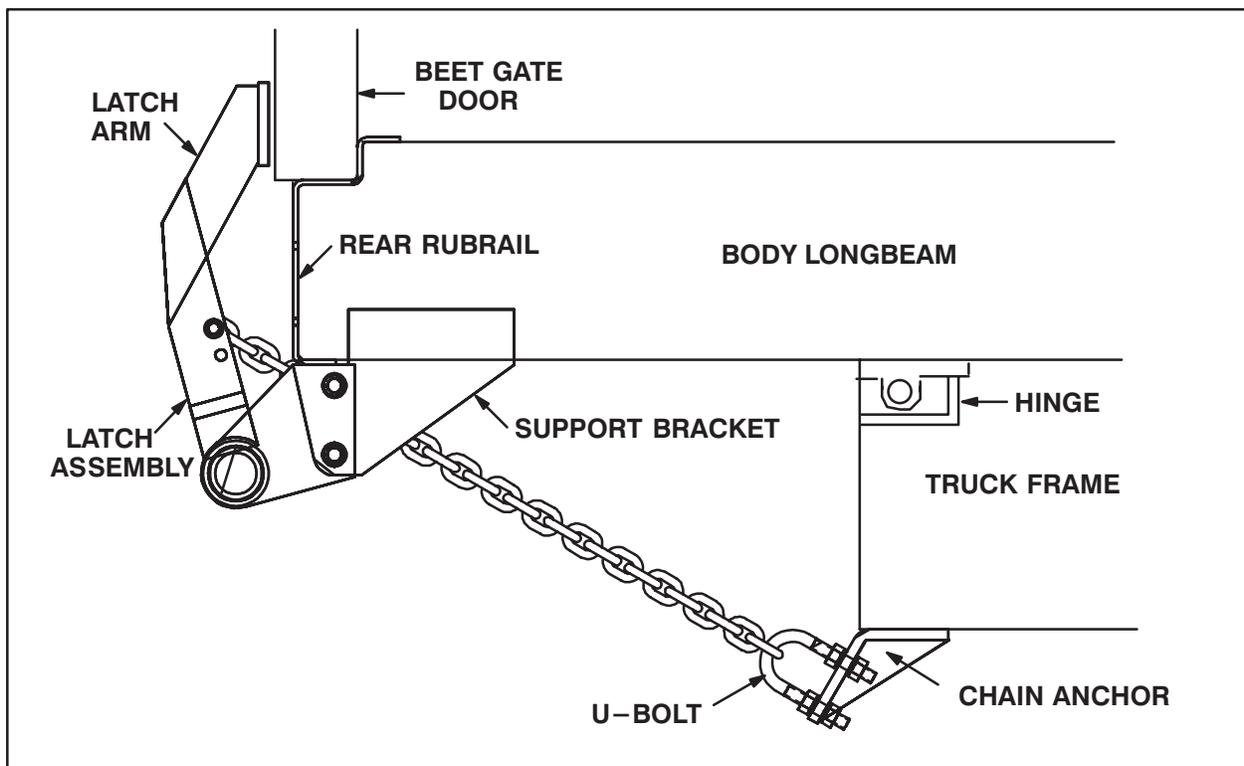
MOUNTING SWEET CORN GATE

Mount the gate frame assemblies to the rear pillars with six 1/2 x 1 1/4 cap screws, lock washers and large flat washers. Using the upper rail of the frame as a guide, drill 7/16 diameter holes. Fasten to the top rail of the tip tops with four 3/8 x 1 cap screws, flat washers, lock washers and hex nuts. Assemble sweet corn gate to frame assemblies with hinge pins and lock pins in place with 3/8 spiral pins.



INSTALLING AUTOMATIC OPENER/CLOSER

Assemble latch assembly to latch support brackets with four 1/2 x 1 3/4 cap screws, lock washers and hex nuts. Align the latch assembly with body rear under rear rubrail with support brackets on inside of longbeams. Weld brackets to body longbeams. Position latch arms in upright position with arm pads firmly against the gates lower horizontal frame. Weld chain anchors to the underside of the truck frame. Make sure chains are correctly centered on U-bolts. Take up slack and fasten chain to latch arms with 3/8 x 1 1/2 cap screws, lockwashers and hex nuts. Adjust tension with u-bolts until latch arm is tight against the door.



NOTES

**CRYSTEEL MANUFACTURING'S
5 YEAR CUSTOMER SATISFACTION PLEDGE
& WARRANTY**

Crysteel offers the most comprehensive warranty in the truck equipment industry. Crysteel warrants each product against defects in material and workmanship for 60 months from the in-service date.

For the full Customer Satisfaction Pledge and Warranty information, please visit our website.

<http://www.crysteel.com>

! CAUTION !

- **BODY MUST BE BRACED BEFORE SERVICING HOIST OR WORKING IN AREA WITH BODY IN RAISED POSITION**
- **LUBRICATE HOIST GREASE FITTINGS OFTEN – AT LEAST EACH TIME TRUCK IS SERVICED**
- **TRUCK MUST BE LEVEL FOR DUMPING**
- **DO NOT OVERLOAD**

CRYSTEEL MFG, INC.

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