Richmond Conveyor

Hydraulic Ultimate Manual

January 2013

Table of Contents

Operator's Manual

Thank you for choosing a Richmond Conveyor

Pre-use Inspection

Before using the conveyor, check the conveyor over for any hydraulic leaks, loose bolts, loose drive chain, loose conveyor chain, bearing, etc.

STEP 1

To operate the conveyor, first position your truck so the truck is level making sure the parking brake is set.

STEP 2

Remove tie down strap from the bulkhead to the conveyor.

STEP 3

Make sure the diverter valve is in the conveyor position.

STEP 4

Engage the PTO and the pump valve lever if necessary

STEP 5

Lift and swing the conveyor into position by using the control levers at the base of the conveyor. Only use one valve at a time.

STEP 6

Once the conveyor is in place, the roof support arms need to be positioned.

STEP 7

When the conveyor is in position and ready to operate, then engage the motor valve to the forward position to start the conveyor chain in motion.

STEP 8

Adjust the flow control valve for the desired speed. Do not run the conveyor chain any faster than necessary.

STEP 9

When you are done putting shingles no the roof, shut off the conveyor chain by putting the conveyor chain valve in the neutral position.

STEP 10

Then move the conveyor back to the cradle position on the truck.

STEP 11

Disengage the pump and PTO on the truck.

STEP 12

Then strap the conveyor back down to the cradle.

IMPORTANT: Do not drive the truck with the conveyor unstrapped. Do not use the truck material straps to tie down the conveyor. Strapping the conveyor in the middle can cause damage. Do not drive the truck with the PTO engaged.

Removing Conveyor from Truck

STEP 1

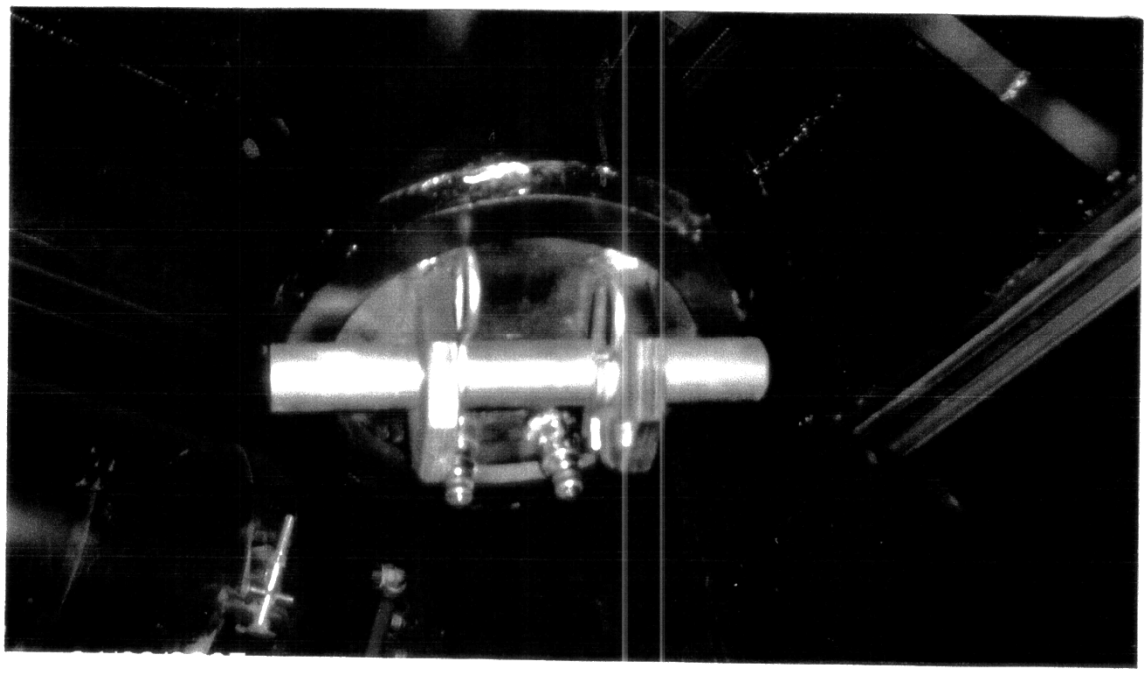
Unstrap the conveyor from the bulkhead.

STEP 2

Move the conveyor to the side of the truck so the conveyor is level with the ground.
Make sure the telescoping post is all the way down or collapsed.

STEP 3

Remove the two hairpin clips from the locking rod on the bottom of the post and remove the pin.



STEP 4

Disconnect the quick release on the hydraulic lines below the truck bed. There is a total of 4 hoses.

STEP 5

Insert forklift tines into forklift pockets.

STEP 6

Raise forklift very slowly, only a few inches at a time. Make sure the post is sliding out if the pocket. You may need to hand rock the conveyor a little to get started.

Note: Reverse the steps to install. Always grease the pocket wall and the post before putting the conveyor in the truck.

Warning: When removing the conveyor in the winter, make sure the conveyor post is not frozen in the pocket.

Maintenance Checklist

Grease post guide roller from below the bed every two weeks.

Grease conveyor hinge every two weeks.

Spray chain lube on the conveyor chain every two weeks.

Spray chain lube on the power rotation chain every two weeks.

Grease 1 ¼" bearings one pump every four months.

Check for loose gears or sprockets.

Check for stress cracks on the metal components.

Check for loose bolts or paddles.

Check for hydraulic leaks.

Lubricate spool valve of the diverter valve and emergency shut off valve every two weeks and making sure the valves work in and out freely.

Maintenance Kit Material List

1	Hold down strap
1	½ male pipe to ½” male pipe JIC adapter
1	½” male pipe to ½” female pipe swivel 90 degree fitting
1	½” male pipe to 3/8” female pipe swivel 90 degree fitting
1	Chain lube
2	3/8” hydraulic restrictor
1	Stainless paddle with rubber grip material and bolt for mounting
10	3/8 x 1 spin lock nut and bolt

Safety Information

The conveyor is equipped with an emergency stop valve. This valve is designed so the operator can push the valve in any time to shut down the conveyor chain. The valve only shuts down the conveyor chain, not any other parts of the conveyor.

The conveyor is equipped with many caution and warning labels for the protection of the operator. It is very important that the operator read all labels before operating the conveyor.

The conveyor post is equipped with a line up pin at the base of the post that inserts into the pocket on the truck. This is a safety pin to assure that the conveyor post cannot rotate in the pocket. However, it is still necessary to tighten set screws. Do not operate conveyor without set screws being tight.

Both power rotation and hydraulic lift are equipped with restrictors. These restrictions are not to be removed. Removal could cause serious damage to the conveyor or injury to the operator.

At all times the conveyor must be put in the cradle and tied down with the strap provided on the conveyor when truck is in motion.

Do not ever unload shingles without the roof stand in place supporting the end of the conveyor.

Before unstrapping conveyor, the truck must be level.

Conveyor and Pocket Installation

Index

Installation Kit Material List

Installation manual

Operator's manual

Post

Conveyor

Pocket

Gussets for pocket

¼" plate for miscellaneous support brackets – 1-12" x 12", 2- 12" x 24"

Bulkhead cradle bracket

Diverter valve with adapters

In-line relief valve

Angle iron bracket for diverter valve

2- ½" hoses 21 feet long - 1-for pressure to diverter valve/ 1- for return to tank

½" pipe elbow

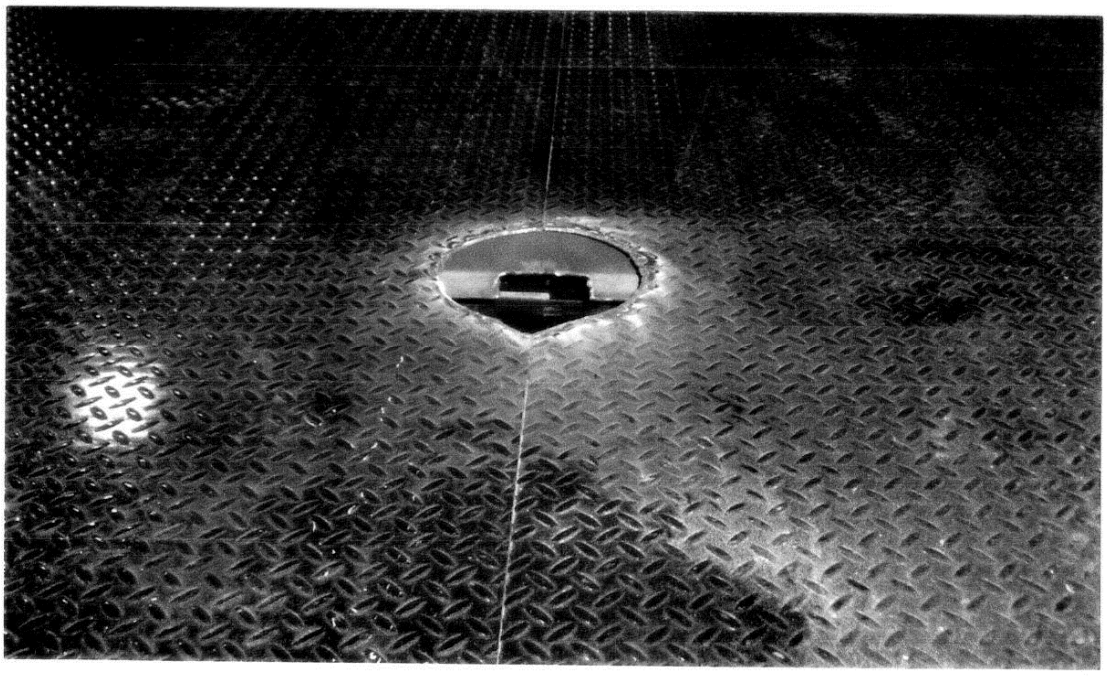
1 – Primer

1 – Black Paint

Shingle Conveyor Mounting Instructions

STEP 1

Decide on the location of the pocket, all pockets must be center mount. You need to determine the placement from the rear of the bed. Make sure the truck bed can hoist to the full capacity with the pocket in the position you would like it. The pocket is 30” from the top of the bed to the bottom of the pocket plus 3” for the locking pin.

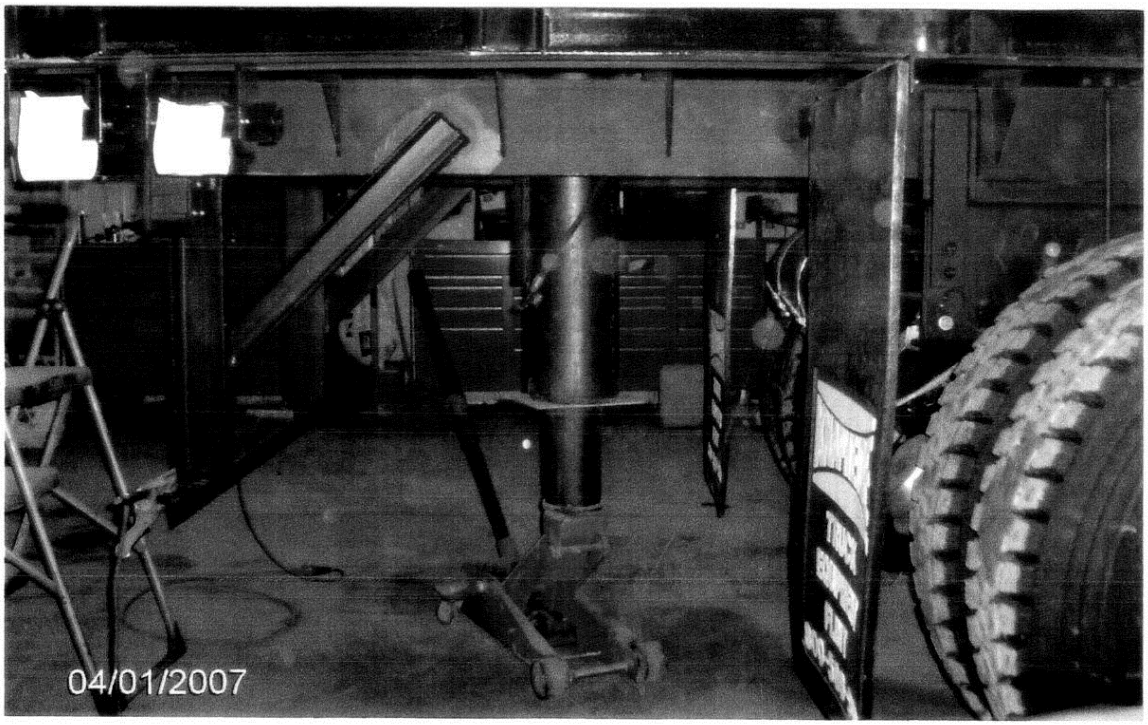


STEP 2

Cut a hole in the location of the post to insert the pocket.

STEP 3

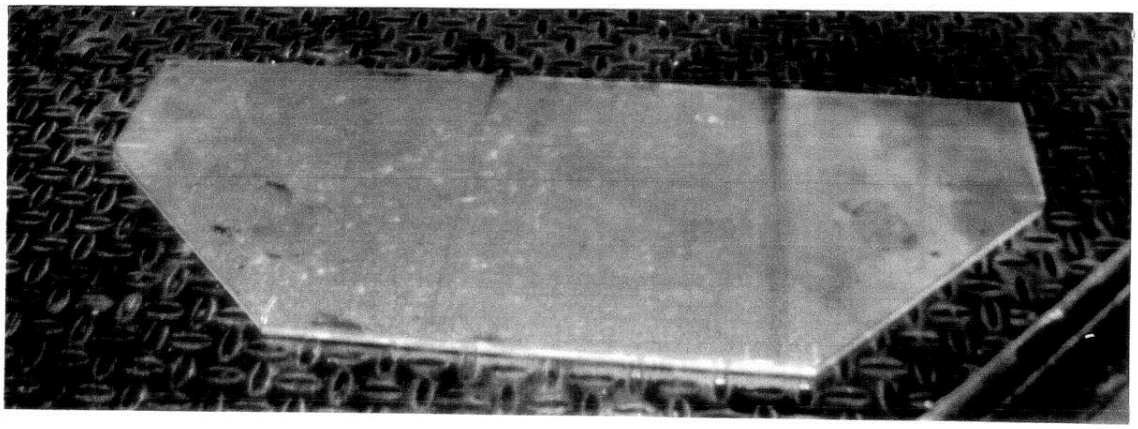
Use a floor jack to dry for the pocket into place.

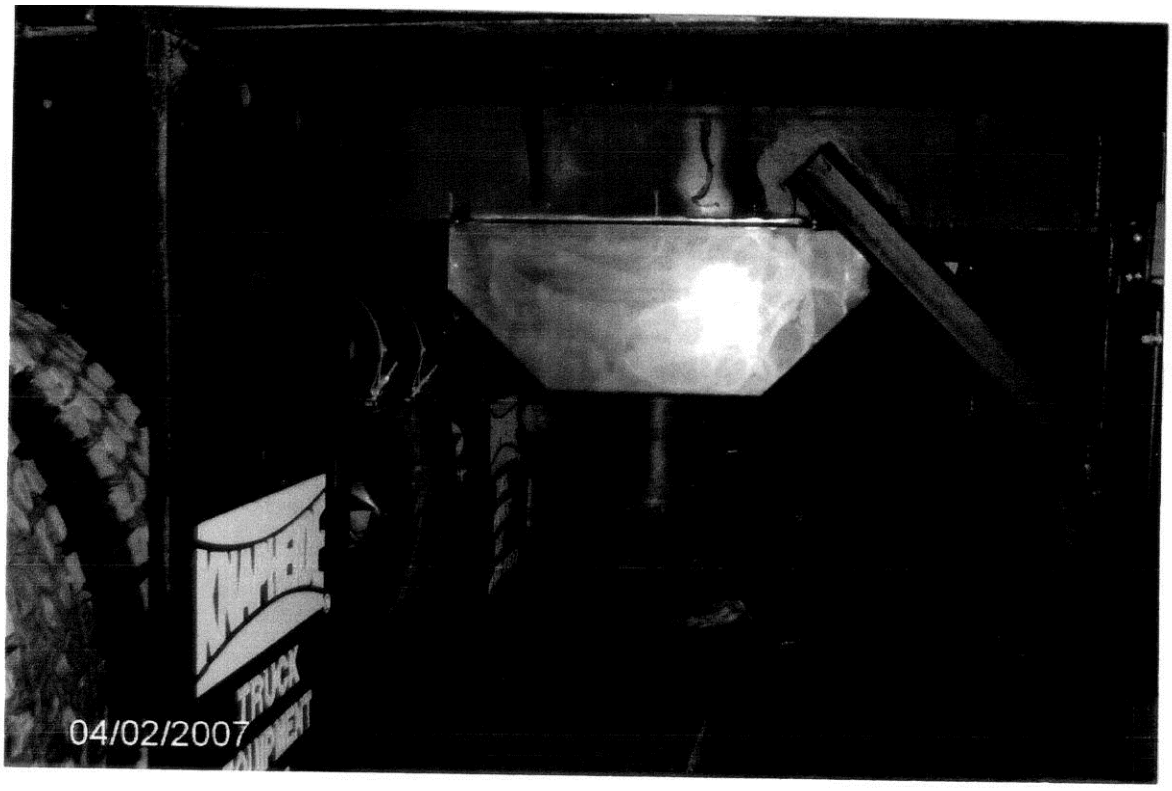


Tack pocket into place once pocket is level both ways and flush with the truck bed.

STEP 4

Using the 12” x 24” piece of ¼” plate fabricate side plates like the ones shown in the pictures. Then tack weld them to the main frame of the truck.

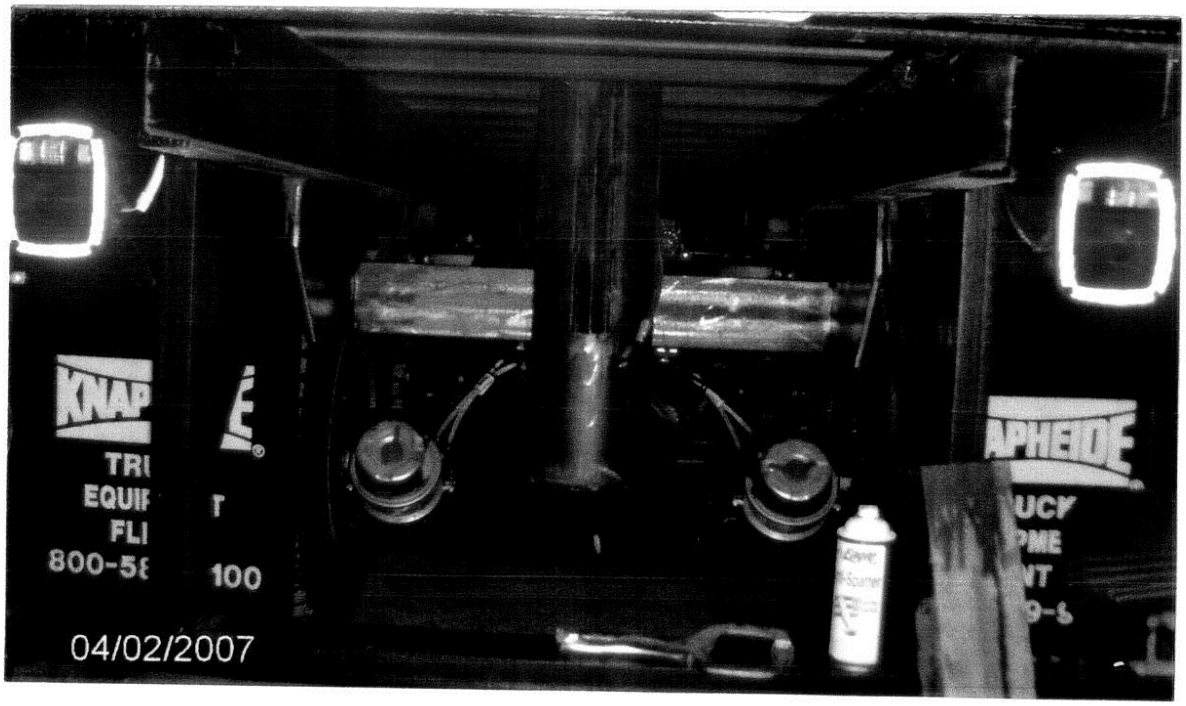




Next using 5” or 6” standard channel iron tie together the post and ¼” plates. Tack weld to the trucks frame- shown in pictures.

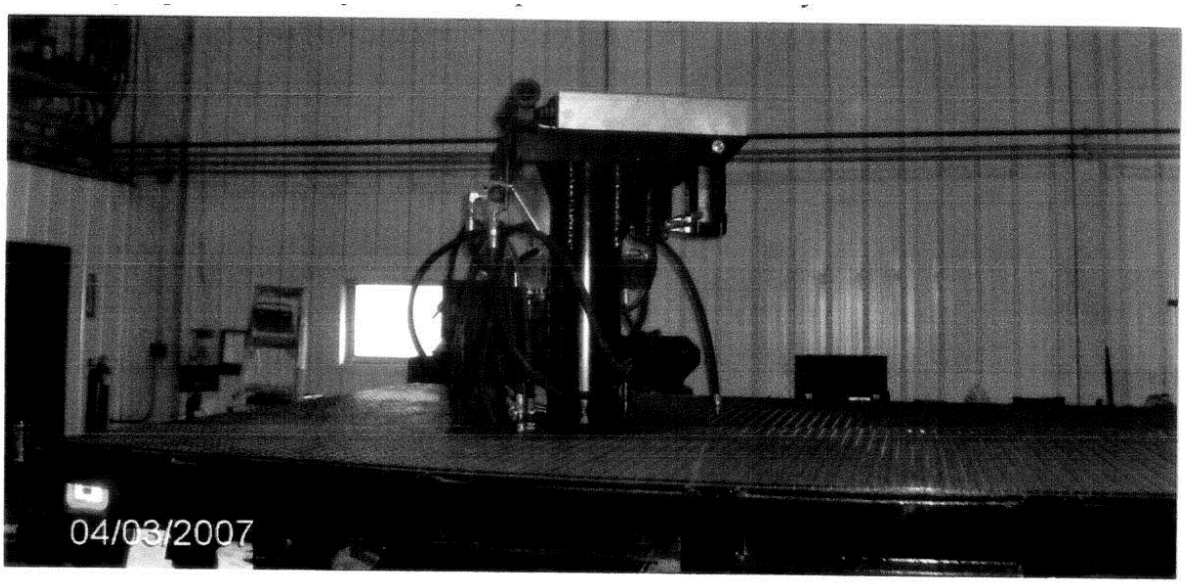
STEP 5

Once the channels are tacked into place, all fabricated pieces can be solid welded and painted.

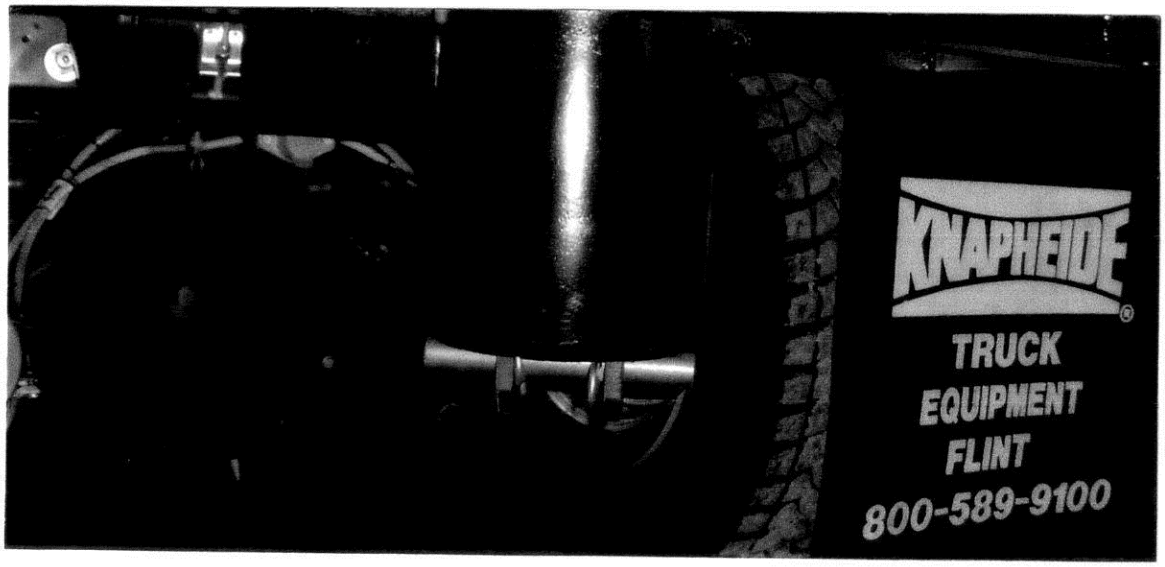


STEP 6

Insert hydraulic post into the pocket. Make sure you grease the pocket wall and the conveyor post extremely well so the post slides in smoothly.

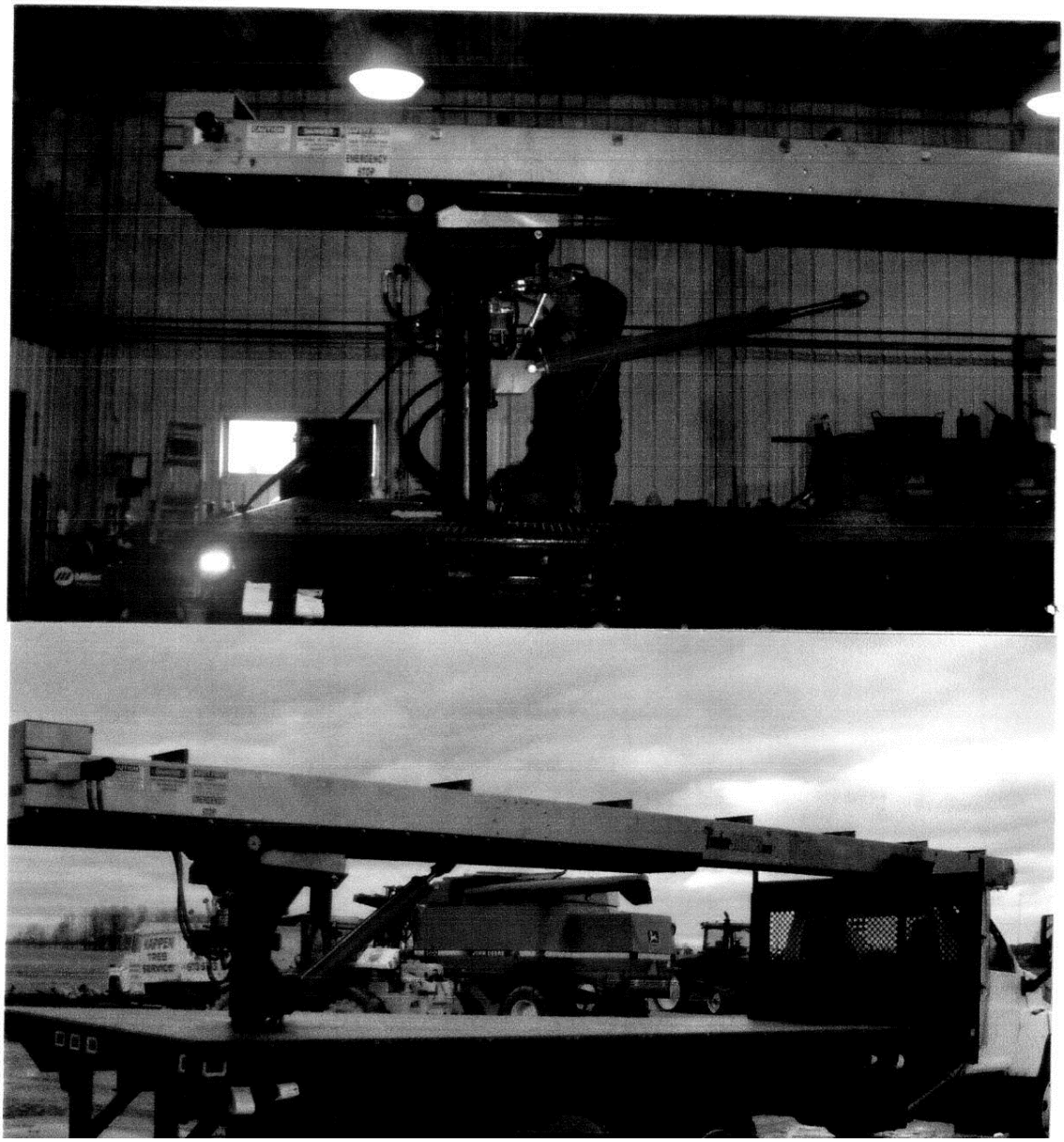


Insert hairpins into locking pin.



STEP 7

Join the conveyor and post together. Carefully lower conveyor on to the post lining up the hinge pipe and bushings. When lined up, insert the 2” pin and lock down the washer and bolt provided. Next, the two hoses going to the chain drive motor can be installed and the hydraulic lift cylinder can be pinned into place.



STEP 8

To mount the bulkhead bracket, attempt to get a flat surface on the top of the bulkhead. Occasionally, you may need to cut a half round off the top of the bulkhead.

Decide the angle to which you would like the conveyor to sit. If the bulkhead is tall enough it is nice to have the conveyor sit level when in transport.

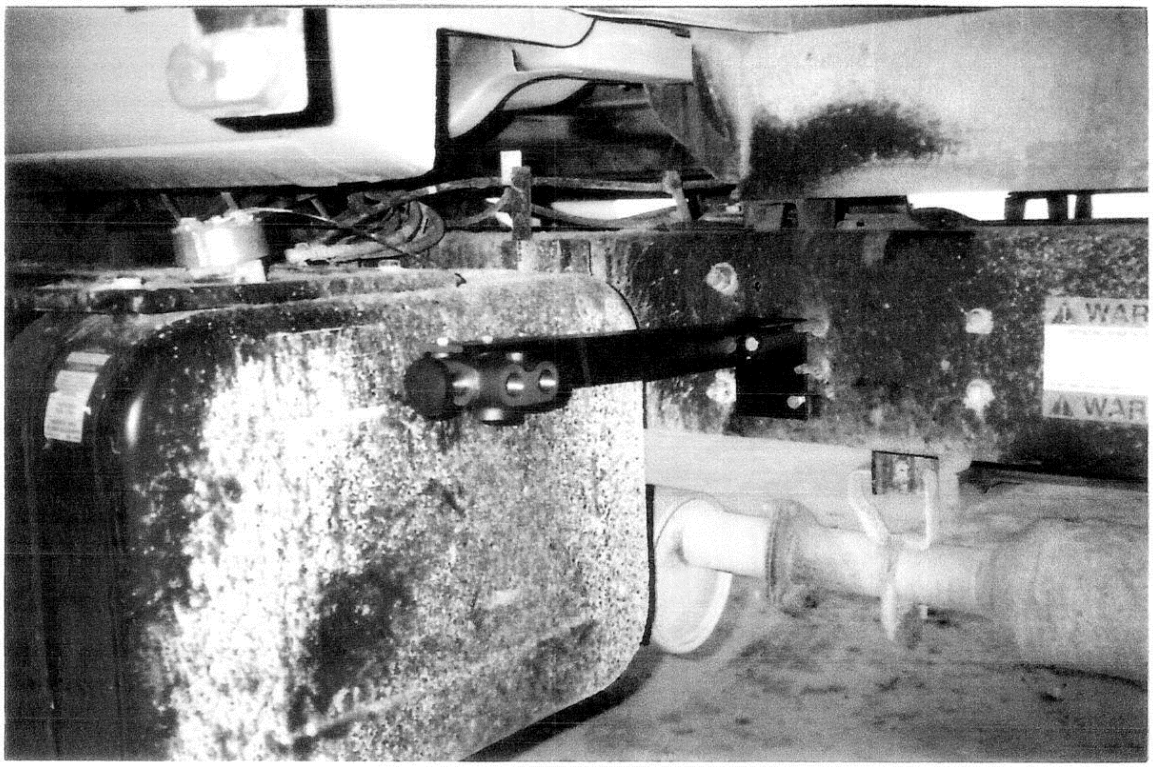
In your kit there are two pieces of ½ X 2 ½ flat irons to support the conveyor bracket. Use these irons to support the end of the bracket back to the bulkhead.

NOTE: In some cases the pieces provided may not fit the application. You may need to make new ones or alter the existing pieces. The main purpose is that the bracket gets supported back to the bulkhead.

STEP 9

In the kit you have a two-way diverter valve, a 20” piece of 2 X 2 X 3/16 angle iron and a small piece of ¼” plate. Use this to mount the diverter valve to the frame of the truck. Mount the valve to the frame on the driver side towards the front of the bed keeping in mind the hydraulic hose running from the conveyor to the diverter valve is 21 feet long so you may want to run the hose along the frame of the truck.

NOTE: If your truck does not have a hoist, you can run the hose direct to the pump and omit using the diverter valve.



STEP 10

Next you will need to put a ½" return port into the hydraulic tank. On the top side of the tank, locate the area that is away from any outlet ports. Drill a ½" hole in the tank. Weld in place and ½" elbow provided in the kit.

STEP 11

Run the return line from the quick coupler on the conveyor to the elbow you welded into place.

Note: The hoses provided are Aeroquip hoses and fittings. **DO NOT** cut and crimp fittings on the hose. If the hose is too short, you can make an extension hose and add on to the hose. **DO NOT** alter the hoses provided.

STEP 12

Complete this step if using a diverter valve.

Run a ½" hydraulic hose form the power side of the truck bed hoist to the "B" port of the diverter valve.

Note: This hose is not provided.

Hoist to diverter valve hose extension (port "B" on diverter valve)

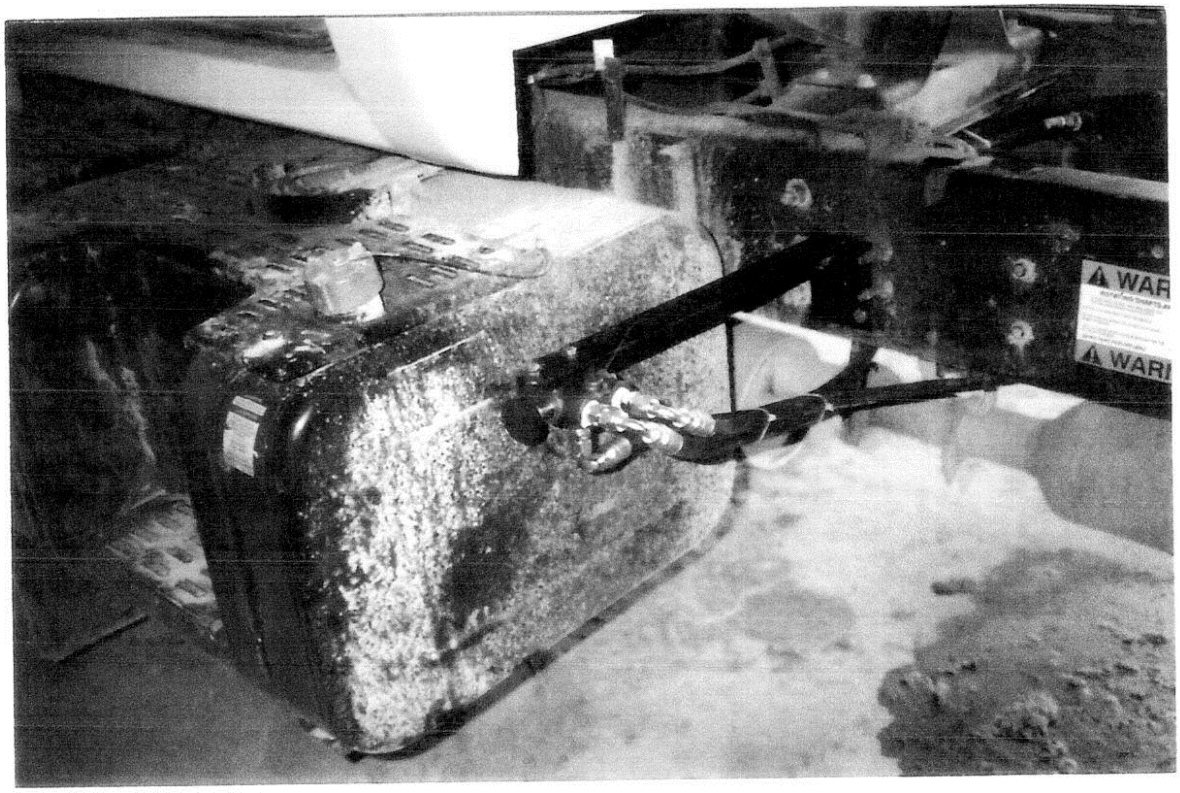
Pump to diverter valve. Hose connection to the pump (port "C" on diverter valve)

STEP 13

Complete this step if using a diverter valve.

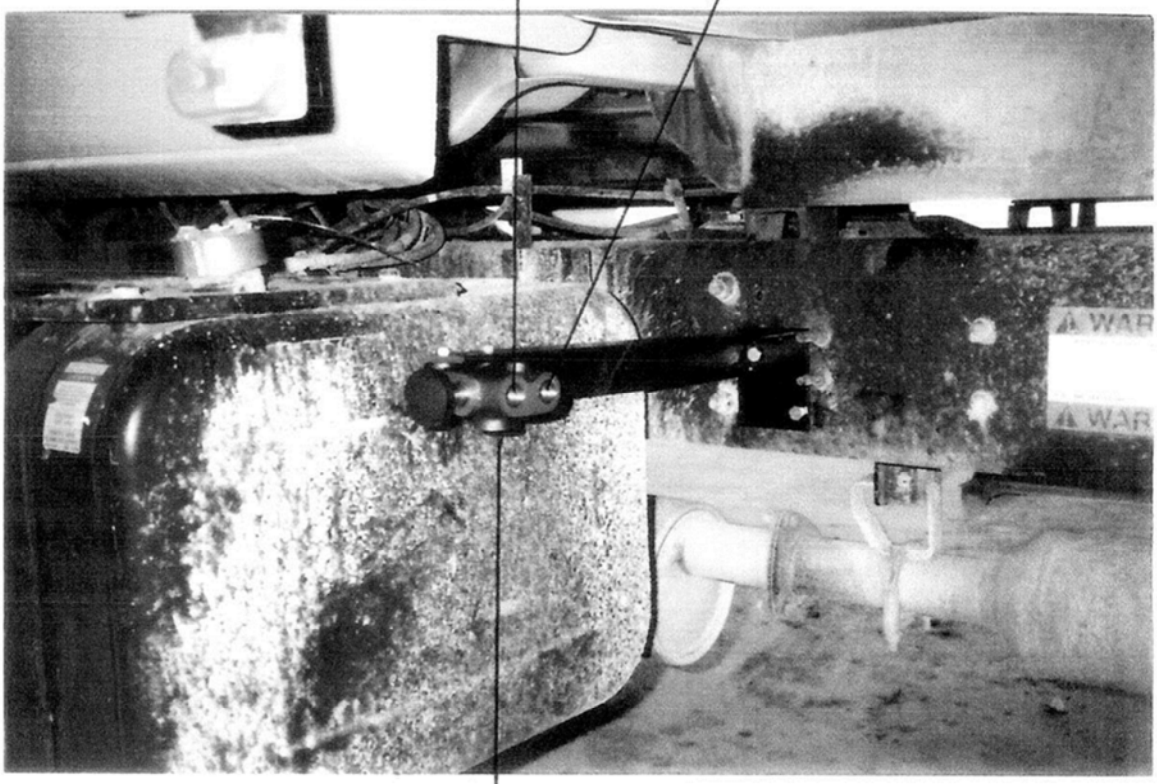
Run a ½" hydraulic hose from the hydraulic pump to the inlet side of the diverter valve-port "C".

Note: This hose is not provided.



Port “A” - ½" hose from conveyor

Port “B” - ½" hose from truck hoist

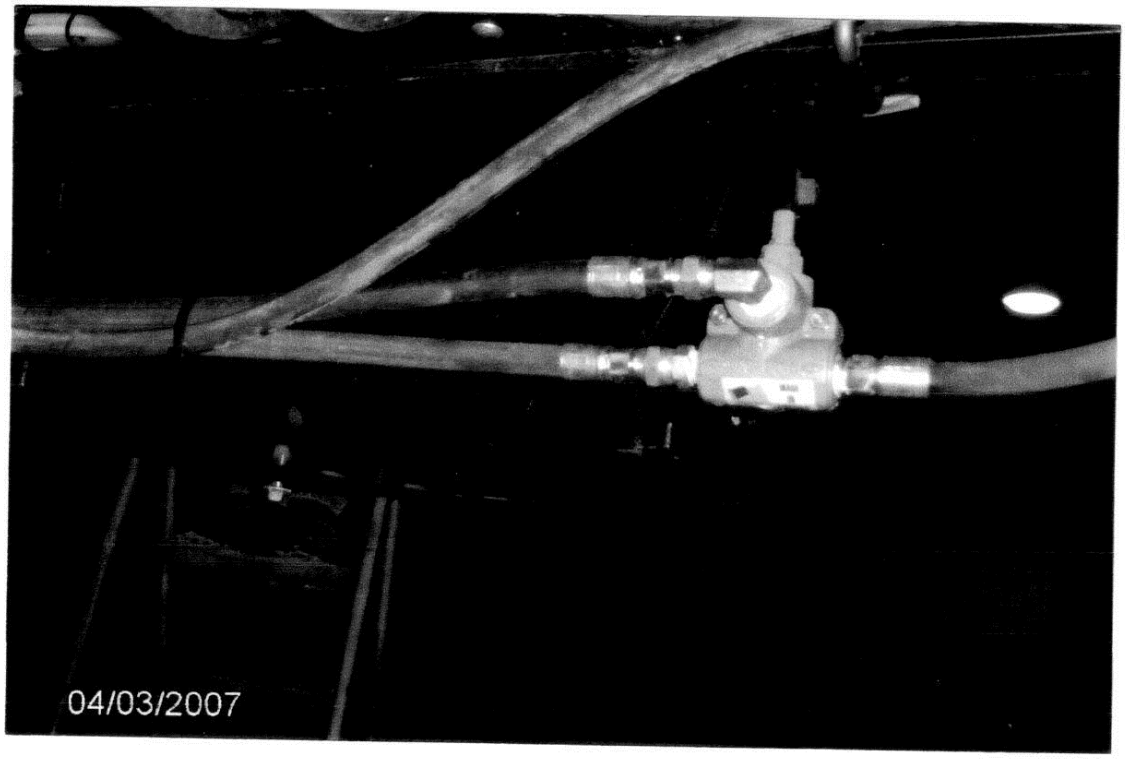


Port “C” - ½" hose from pump

STEP 14

Install the relief valve on the truck frame or cabinet wherever it is convenient.

Return to tank



Pressure to conveyor

Pressure line from diverter
valve or direct from pump

STEP 15

You should be ready to test the conveyor.

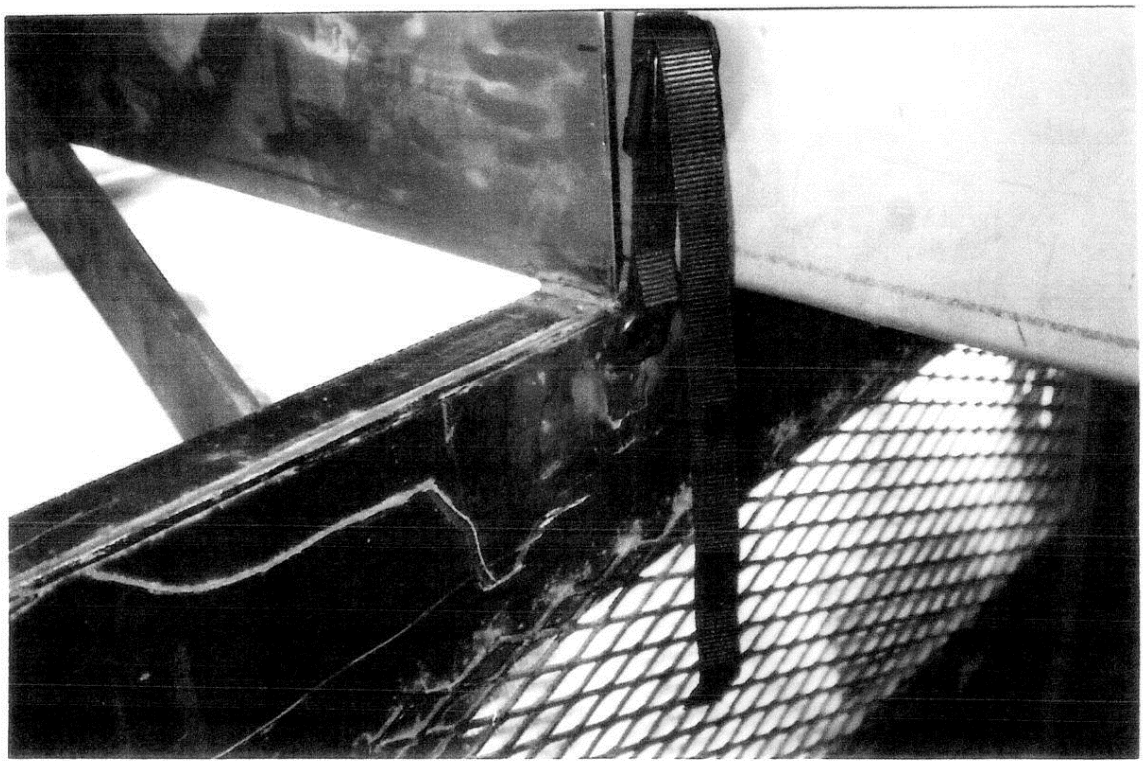
On a PTO and external pump system, you will only have to engage the PTO. On a PTO and internal pump system, you will need to engage the PTO and hoist valve. Make sure the diverter valve is in the conveyor position.

STEP 16

Test the conveyor's raise and lower feature, telescoping, rotation feature and the chain motor. Work the raise and lower lever several times to get the air out of the system.

STEP 17

A cargo strap is provided in the kit. The strap hooks go into the holes provided on the bulkhead.



STEP 18

Prime the bare metal parts and welds. Paint after primer is dry.

Note: Some trucks may need manual throttle control to increase the RPM of the motor while the conveyor is operating.

Note: Some trucks with larger hydraulic pumps may need a rotary 50/50 valve to cut down the amount of oil going to the conveyor's hydraulic system.

Limited Warranty

Richmond Brothers Fabrication (hereinafter "Manufacturer") guarantees that products are free from defects in workmanship or material for a period of 12 months from the date of shipment. This warranty shall exist for any particular defect only if

A. Buyer returns warranty card within 30 days after taking delivery. Buyer must verbally or in writing contact the Manufacturer for authorization of warranty or no warranty applied within the first 12 months after purchase.

B. Manufacturer determines to its reasonable satisfaction on inspection that the products are, and have been, subjected only to ordinary use and service.

This warranty does not cover damage through accident or misuse. Manufacturer's warranty is limited to replacing any products that are proved to be defective. Manufacturer shall not be liable for any loss, damage or injury resulting from delay in delivery or installation of the products or for any failure to perform which is due to circumstances beyond its control.

The maximum liability, if any, of Manufacturer for all damages, including without limitation, contract damages and damages for injuries to persons or property, whether arising from Purchaser's breach of this agreement, breach of warranty, negligence, strict liability or other tort, is limited to an amount not to exceed the purchase price of the products as issue in the dispute. In no event shall Manufacturer be liable to Buyer for any incidental, consequential or special damages, including without limitation, lost revenues and profits, inconvenience and expense for substitute equipment or service, even if it has been advised of the possibility of such damages.

No implied warranty, including any implied warranty of merchantability of fitness for a particular purpose, applies to the Manufacturer's products after the applicable period of express warranty stated above and no other express warranty or guaranty, except as mentioned above, given to any person or entity with respect to the Manufacturer's products shall bind the Manufacturer. Without limiting the foregoing the Buyer assumes all risk and liability for loss, damage or injury to Buyer and Buyer's property and to others and their property arising out of use or misuse of or inability to use, the Manufacturer's products not caused directly by the negligence of the Manufacturer.

This limited warranty shall not extend to anyone other than the original purchasing party of Manufacturer's products. Manufacturer makes no warranty concerning the compliance of the products with any local, state or federal laws or regulations, including without limitation electrical, building or other codes or requirements. Buyer agrees to accept full responsibility for complying with such laws, regulations, codes and requirements.

Warranty Information Sheet

Please fill out in full and return upon completion of the installation process. This form must be filled out and returned for the warranty to be valid. Make a copy for your records and return original to Richmond Brothers Fabrication, 7911 Murdoch Rd., Bay Port, MI 48720

Conveyor purchased by: _____

Company Name: _____

Contact person: _____

Address: _____

PH: _____

FX: _____

Conveyor installed by: _____

Company Name: _____

Contact person: _____

Address: _____

PH: _____

FX: _____

Name if person(s) who installed conveyor: _____

_____ _____

Date conveyor was received by company: _____

Date conveyor was installed: _____

Signature of installer: _____

Signature of representative: _____

(conveyor owner)