

# **SECTION TWO**

## **MOUNTING INSTRUCTIONS**

### **TRUCK-MOUNTED CONVEYORS**

#### **FBR-FIBERGLASS SERIES**

#### **TURNTABLES- RTH 3000, RTH 4000,**

#### **RTH 6000**

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## GENERAL

The following instructions describe a step-by-step process for mounting the conveyor and turntable. (CM) recommends that an experienced installer professionally mount your conveyor and turntable. With proper mounting, you may anticipate many years of reliable service. Conversely, improper installation may damage the equipment and actually make it hazardous to operate.

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**NOTE:**

**Cleasby Conveyors **STRONGLY** Recommends installing truck-bed stabilizers on all trucks carrying truck-mounted conveyor units.**

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The quality of construction of the truck bed and method of attachment of the bed to the truck frame are important factors underlying a quality installation. On the contrary, an improperly constructed or mounted truck bed will usually give poor service, and may in fact shorten useful life. Moreover, such compromised fabrication may damage the conveyor and /or turntable and make them hazardous to operate.

**Parts Supplied by (CM)**

(CM) completely assembles, aligns and tests each conveyor and turntable at the factory prior to shipping. In addition, each turntable is painted with a high-visibility, weather-resistant paint for protection. Each unit is furnished, fully equipped with all necessary parts. (CM) also provides WARNING LABELS that MUST be placed in the cab and bed of the truck on which the conveyor and turntable are to be mounted.

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**NOTE:**

Cleasby Conveyors is not responsible for any loss or damage resulting from improper installation of either the truck bed or the conveyor and turntable

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The turntable is mounted on a pallet and shipped, fully equipped with all necessary valves, fittings and hydraulic hoses.

(CM) provides in addition, a piton-type hydraulic pump, oil storage reservoir, and all mounting bolts to secure the turntable to the truck bed.

The installer may choose to use a different pump and oil reservoir. Substitution is acceptable, if the capacities and pressures match with those of the overall system. These instructions describe the procedures for mounting (CM)'s standard package. The mounting may vary somewhat with a different pump system.

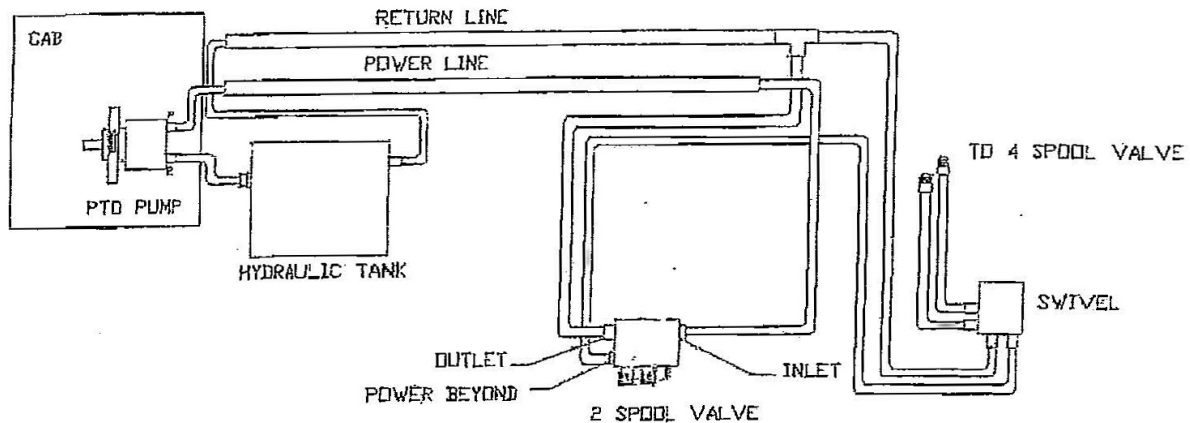
(CM) ships the stabilizer package with the stabilizers completely assembled and fastened to a pallet with the main mounting bracket. (CM) also includes a two-spool hydraulic valve and valve mounting bracket in the set, and tack two support tubes in place into the open end of the stabilizer mounting bracket (remove and discard the support tubes when the unit is mounted on the truck).

# CLEASBY CONVEYORS TRUCK AND STABILIZER HOSE SCHEMATIC

11-15-05

\*SEE NOTE

THIS ILLUSTRATION IS  
CLOCKWISE ROTATION



## NOTE:

IF THE TRANSMISSION IS CLOCKWISE ROTATION

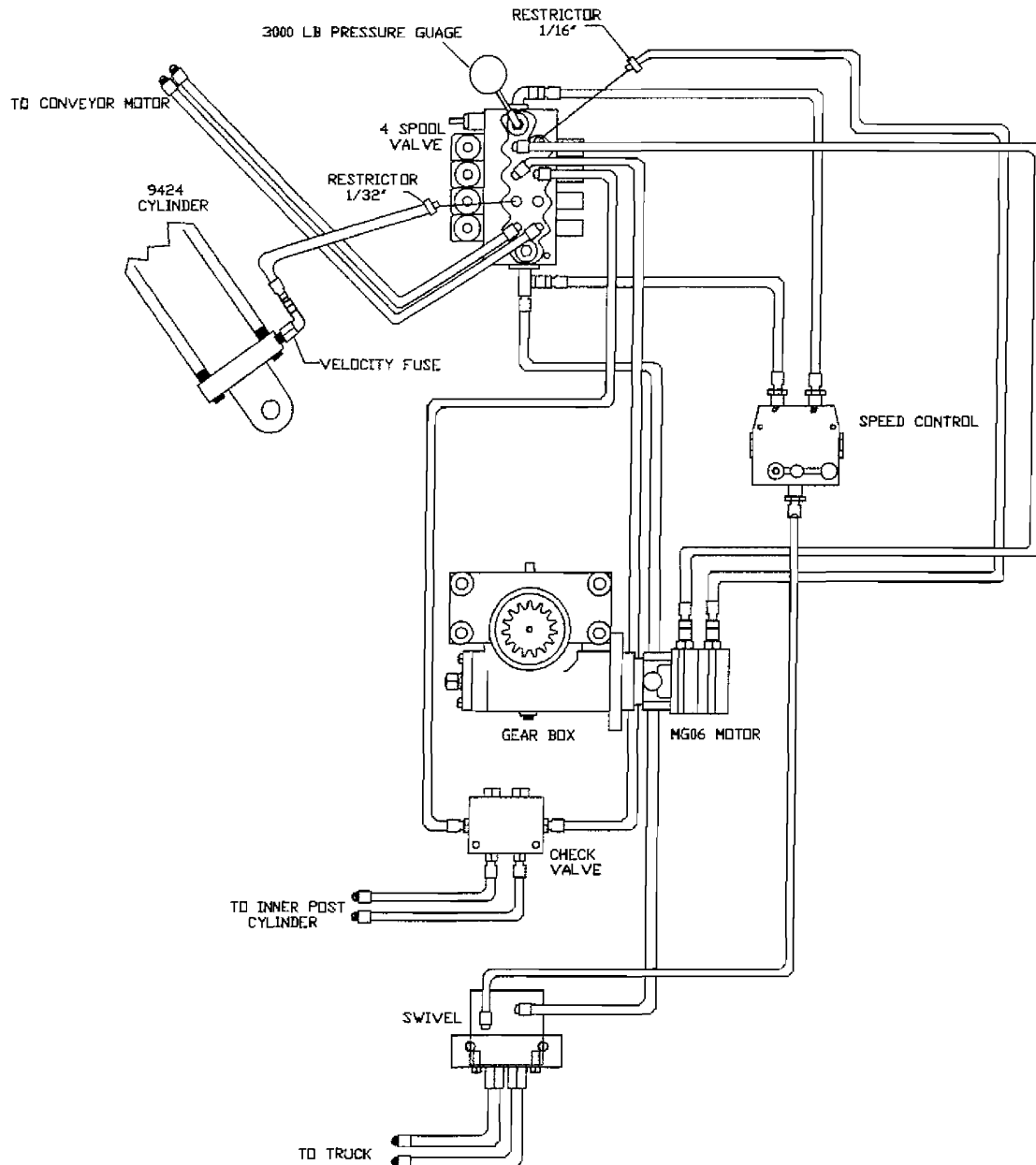
THE PRESSURE IS THE RIGHT PORT

IF THE TRANSMISSION IS COUNTERCLOCKWISE ROTATION

THE PRESSURE IS LEFT PORT

NOTE: Power Beyond Port goes to Hydraulic Swivel.

**CLEASBY CONVEYORS**  
**RTH TURNTABLE HOSE SHCEMATIC**  
**11-16-05**



CLEASBY CONVEYORS  
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**Parts to be Supplied by the Customer or Installer**

Because of the diversity in trucks and installations, there are certain parts (CM) does not supply. These include the P.T.O. and all necessary fittings to connect the pump to the truck transmission.

The turntable comes with-hydraulic hoses: however it may be necessary to acquire additional hosing in order to connect the pump. Additionally, (CM) does not supply hosing to connect the stabilizers and stabilizer control valves. Certain other small parts' and fittings are to be acquired by the customer or installer.

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## INSTALLATION PROCEDURE

(CM) recommends the following installation procedures. Please note advisories that will assist you in the process.

**Mounting the Turntable**

Securely mount the oil reservoir unit underneath the truck bed and attach to the frame. This will ensure a sufficient resistance to forces arising out of operation of the pump and corresponding torque production. Allow adequate clearance between the top of the reservoir and the truck bed to permit access to the reservoir for filling with hydraulic oil.

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**GPM 6-8 gallons** for pump and reservoir.

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**Operating Pressure Setting - 1800 psi**

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2.) Connect the pump to the customer purchased power take-off (PTO) and the truck transmission. The PTO needs to be rated minimally at 85% of engine speed and not to exceed 100%. Alternatively, the truck engine RPM should run between 700 to 800 RPM and not to exceed 1000 RPM. Please check the pump for proper rotation direction before installing.

3.) Mount the turntable centered at the rear of the truck bed. It is most important that the turntable is securely mounted to the truck frame (not just the truck bed). It has been our experience that the following method for mounting has proven effective.

a.) Cut a 34" long x 30" wide hole in the bed of the truck positioned so as to lie equal distant between the frame rails. In the case of mounting the RTH series turntable, make certain that there is clearance around the truck and bed frame for the rotation motor to freely rotate in full circle (i.e. 360 degrees) without obstruction. It may be necessary to notch out a small portion of the frame work to allow the motor to rotate,

b.) Position the turntable base plate to ensure that the turntable post is centered relative to the square hole cut in the bed of the truck. Concurrent with establishing center line position, ensure that the edges of the base plate are parallel with the sides of the truck bed.

c.) Referring to Figure 2-1, drawing (1), note that this view depicts hole pattern dimensions consistent with most truck frames. **A Note of Caution:** prior to drilling the bolt holes, measure the truck

frame to make certain that the actual dimensions of the truck frame are in fact consistent with values depicted in the drawing. If they are not, adjust the hole pattern dimensions accordingly.

d.) Given proper positioning of the turntable, drill the bolt holes with a 13/16 inch diameter drill bit through the base plate and truck bed.

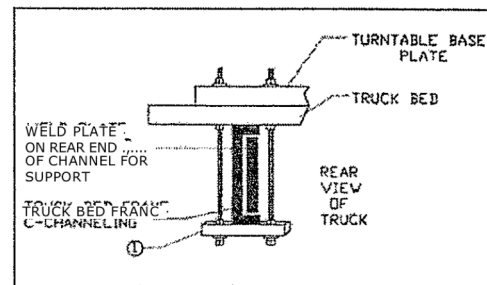
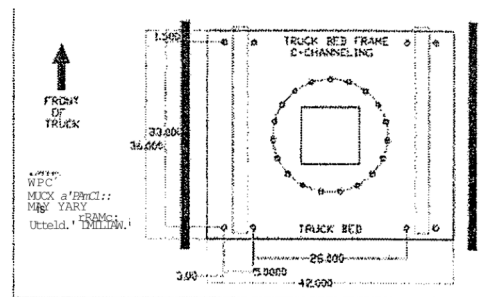
e.) Place the bolts in paired holes with washers, lock washers and nuts on the upper surface of the base plate. The bolts should be positioned an equal distance from either side of the "C-Channel" of the truck frame as viewed from below the truck bed. With the bolts properly positioned, the channel support members are ready to weld.

f.) Align the channel support members with the outer edge with the mounting block. The support members should be properly marked for reference for correct installation. Remove the bolts and mounting block and weld.

g.) Install all bolts, washers, lock washers and nuts.

h.) Initially establish a finger-tight fit and proceed with the following tightening pattern. Each pair of bolts constitutes a single station. At completion of the procedure, the bolts should be torqued to 225 (+/- 5-ft-lbs.). Select one of the four stations and tighten both paired bolts to 75-ft-lbs. Continuing, move to the station located diagonally across from the first station and tighten these bolts to 75 ft.-lbs. Now, tighten the remaining paired bolts in the alternate corner stations to 75 if-lbs. Use this same sequence through two

additional stages i.e. 150 ft.-lbs and finally, 225 ft.-lbs.



## Mounting the Conveyor

1.) Attach the saddle feature of the conveyor mount to the turntable post (see Fig. 2-3). This is accomplished by inserting the steel pivot pin (1 1/4 inch diameter by 14 3/4 inch length, provided with your installation kit) through the pivot ears on the saddle feature of the conveyor and the hub stock on the top of the turntable post. Next, insert the one (1.0) inch diameter pin through the clevis on the end of the hydraulic cylinder and the ear welded on the fore section of the saddle cross member. Lubricate the pins and make sure all washers and cotter pins are in place. Make sure the clevis nuts are tight

## Connecting Hydraulic Hoses

1.) You may now connect the hydraulic hoses to the turntable.

1.) Connect the two 1/2 inch hoses attached to the detente (locking) valve, to the hydraulic lines on the bottom of the conveyor (use Teflon tape or other suitable sealer). All other hydraulic lines have been previously connected at the factory. Observe that the orientation of the lines is such that when the valve handle is pushed forward, the belt moves forward, and in reverse, when the handle is pulled to the rear (the forward, or "up" valve direction is toward the conveyor lifting cylinder attached to the post). Switching the hoses will not cause any damage; however, if the conveyor does not run in the correct direction (as set forth supra, i.e. according to the valve position), reverse the hoses. When not in use, all hydraulic functions must be positioned in either the "neutral" or "off" position.

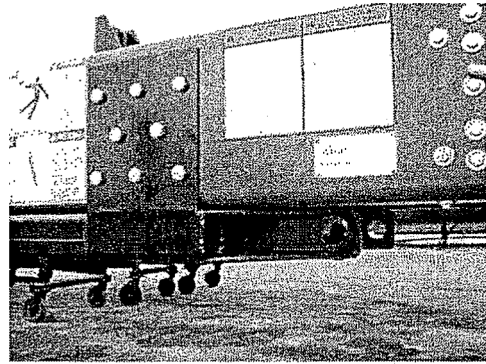
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### NOTE:

**Stabilizer hydraulic function-please refer at this time to Section Seven for proper procedures and installation instructions**

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2.) Locate the two (2) ten (10) foot hydraulic hoses (the power and return lines) and connect them to the pump and reservoir respectively. The extension should be V2 inch ID (inside diameter) hydraulic tube or two-wire braid hose rated for at least 2000 PSI. Now, attach the power line hose to the pressure port of the pump. The power line hose is connected to the top of the valve bank attached to the turntable post be sure to use a good grade of thread sealer).



The return line is connected to the lower pressure port of the pump and to the JO hose originating from the bottom of the hydraulic valve, located on the post.

2.) Tighten all fittings and hose connections. All turntables are pressure-tested and checked for leaks at the factory, prior to shipping. Sometimes, however, vibrations experienced in transit can cause the fittings to loosen which may result in leaks. The hydraulic reservoir, mounted under the truck bed, should be filled with a good grade of heat resistant oil such as Conoco # 46.

3.) When the FBR Fiberglass Conveyor is positioned in the conveyor rack, there is direct pressure applied to the lower surface of the side panels of the conveyor at the point of contact. To prevent damage from occurring at this point of high specific stress, it is recommended that you place a strip of wood or rubber in the base of the rack to act as a buffer. Be sure to mount by bolting the "U"-shaped metal frame marked "Important" which is attached to the conveyor prior to shipping. This "U"-shaped frame protector will prevent the fiberglass channel from being damaged each time the conveyor is

raised or lowered from the head board of the rack.

### Bleeding the System

1.) Start the truck engine and engage the PTO with the engine running at idle. Run the engine for a few minutes to warm-up the oil. Then engage the hydraulic motor on the conveyor in both directions (fore and aft) to expel air from the system. Run all other hydraulic functions (except swing) in both forward and reverse directions to likewise discharge trapped air in the system.

2.) Take special care when bleeding the hydraulic swing function. Gently feather the flow with the valve through the rotation motor until the oil has completely circulated through the circuit. Repeat in the reverse direction.

### Warning Labels and Safety Devices

1.) There are a variety of warning labels, cover guards, safety valves, restrictors and other safety devices installed on the conveyor and turntable for your protection. For instance, the Stop Valve (part #12AN) connected to the conveyor lifting cylinder part (prevents the conveyor boom from falling when elevated, in the event of a hydraulic hose or connection failure.). **DO NOT remove any warning labels** or safety devices. If a hydraulic function does not operate properly, check for plugged ports, and determine if the safety valves or restrictors require cleaning. If these steps fail to resolve the difficulties, contact your local dealer or call (CM) for assistance.

2.) The hydraulic system has various pressure relief valves to prevent damage from excess pressure. These relief valves are of a type that are non-adjustable, and pre-set at the factory. **DO NOT** alter or modify in any way. The system operating parameters established via these valves is sufficient and proper to operate the conveyor and turntable.



**NOTICE**

Operating the unit at excessive pressure will cause damage to the equipment and void the warranty.

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**Final Inspection and Adjustments**

- 1.) Hydraulic oil level should be checked with the conveyor in the down position and filled as necessary.
- 2.) Check and adjust the alignment and tension of the belt as necessary.
- 3.) Inspect the conveyor and turntable to make certain that all warning label stickers are in place (see Section Seven). If any sticker(s) is missing, or damaged, contact the dealer, distributor, or service center or (CM), or in the event the SAFETY VIDEO and/or pamphlet **"Conveyors and Electricity Don't Mix"** is missing, call (CM) at our toll-free number (800) 453-2446 for replacement. Attach the special Warning Decals (WARNING LABELS/STICKERS) included with these instructions as directed in Section One, WARNINGS AND CAUTIONS, paragraph "Labels to be Placed by You or Your Installer", sub-paragraphs 1 & 2. As there noted, Warning Label 24AR must be attached to the dash of the truck so as to be in clear view of the operator; and, five (5) Warning Labels as noted supra, must be attached to the side of the truck bed, around its perimeter.
- 4.) Equip the truck bed with a support rack on top of the back board on which to rest the conveyor when it is not in use. Also include a tie-down strap to this rack.

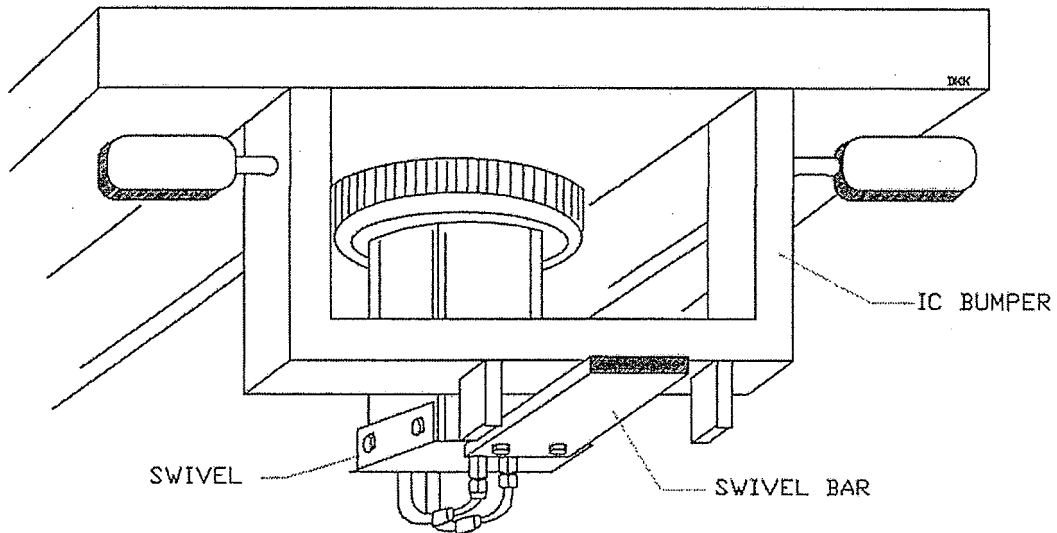
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**NOTE:**

Operating or service pressures vary depending upon load input on the system. Actual running pressure should be no more than 1800 psi. For example, an empty belt will only pull or place a demand on the system in the range of 400-500 psi, while post operation will require 2000 psi. The relief pressure is factory set at 2000 psi and can be tested by running the post down to its full retracted position; and concurrently maintaining the handle in the down position. The gauge should then read 2000 psi.

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- 5.) If the conveyor extends beyond the front bumper of the truck, provide some sort of support possibly fastened to the front bumper for the conveyor to rest on while in transit.
  - 6.) Recheck the tightness of all bolts and nuts throughout the turntable and its mounts, in addition to those of the conveyor. Check for oil leaks.
  - 7.) The conveyor and turntable were partially lubricated at the factory. It will therefore be necessary to fully lubricate the unit fully prior to placing it in service. Raise the post fully and grease it well on all sides with a thick coating of grease. Then lower the post and wipe off the excess grease from the top edge of the outer post. Also grease the turntable at the various lubrication points (look for the grease zerks) on the outer post, the turntable gear bearing and saddle pivot pin on top of the inner post (see general maintenance instructions). The conveyor and turntable are now ready to go out on the job.

# SWIVEL ASSEMBLY



NOTE: BAR PLACEMENT IN THIS DIAGRAM IS FOR ILLUSTRATION PURPOSES ONLY AND IS NOT TO BE USED AS AN EXACT REFERENCE POINT WITH REGARDS TO BAR POSITIONING. THE BAR IS MORE LIKELY TO BE POSITIONED ABOVE THE BUMPER ON MOST UNITS.

PLEASE ALLOW A MINIMUM OF 1/2" MOVEMENT IN ALL DIRECTIONS WHEN MOUNTING THE BAR. ANY TYPE OF FASTENING THAT INVOLVES WELDING OR BOLTING DOWN THE BAR WILL VOID THE WARRANTY.

IT IS CRITICAL THAT THE SPACERS PROVIDED WITH THE BAR BE PLACED BETWEEN THE BAR AND SWIVEL BASE AND THAT THE BAR IS MOUNTED IN A LEVEL PLANE, FORM BUMPER TO SWIVEL BASE.