

Please read through the instructions thoroughly before performing any of the steps.



Prior to the use of this equipment everyone that will be or will assist in the operation of this equipment must read and understand the MKT V-22/HP-365A Operating, Maintenance and Parts Manual. Failure to read and understand the MKT V-22/HP-365A Operating, Maintenance and Parts Manual will result in property damage, severe injury or death.

### SAFETY INSTRUCTIONS

The following signal words will be found in this guide and may also be found in the MKT V-22/HP-365A Operation, Maintenance and Parts Manual. These words are intended to alert the operator(s) to a hazard and the degree of severity of the hazard.



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



Indicates a hazardous situation which, if not avoided, could result in serious injury.



Indicates a hazardous situation which, if not avoided, could result in minor injury or moderate injury.



Indicates a property damage message.

### STAGE VIBRATORY HAMMER

- Elevate the MKT V-22 Vibratory
   Hammer to give Adequate room to
   install all the bolts across the bottom
   of the Beam. Elevate the MKT V-22
   Vibratory Hammer on flat level
   ground.
- When elevating the MKT V-22 make sure that what ever is being used to elevate the hammer for assembly is rated for the fully assembled weight (14,500 LBS.) including the hose bundle.

Ensure that what ever is being used to elevate the MKT V-22 Vibratory Hammer is securely positioned to prevent accidental movement or shifting of the MKT V-22 Vibratory Hammer and the Beam and Clamps.



#### STAGE BEAM

Place the beam on flat level ground.

#### NOTICE

- Ensure that what ever is supporting the beam is rated for the capacity of the beam and clamps combined (4,700 LBS.)
- Take care not to damage the hydraulic connections on the under side of the Beam.



### INSTALL CLAMPS TO BEAM

- Lift the clamp with a ¾ inch eye bolt in the ¾ inch threaded hole on the jaw guide.
- Make sure the beam is clean of debris.
- Line the clamp housing up to the beam and begin to slide it on.



### INSTALL CLAMPS TO BEAM

- Ensure all dust covers are inplace and flush.
- The wood is there to hold the dust covers for transport.

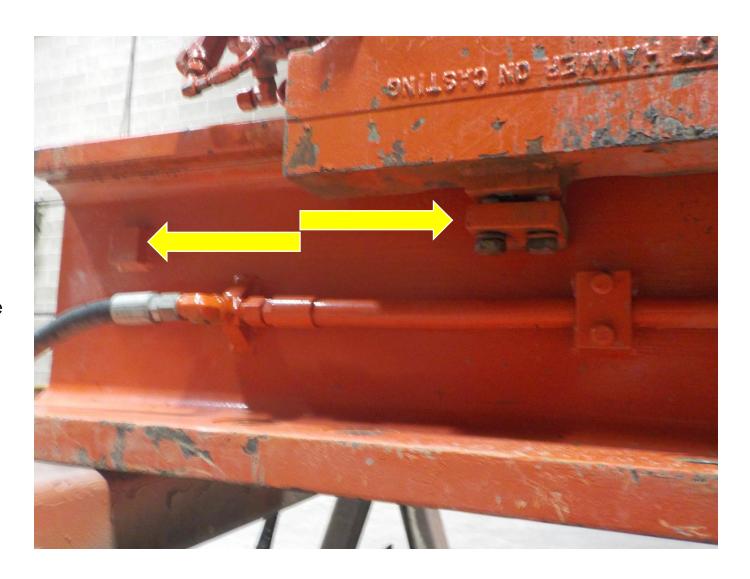


As you slide the clamp onto the beam all 3 wood blocks should slide out completely.



### INSTALL CLAMP TO BEAM

- Locate and install slide stops.
- Apply Loctite 271 to bolts and torque to 250 ft. lbs.
- When the clamp is slid to the end of the beam the stop will hit the slide stop.



### INSTALL CLAMPS TO BEAM

Contents of hydraulic components may be under pressure extreme care should be taken when opening the components.



Connect the hoses on both sides accordingly.



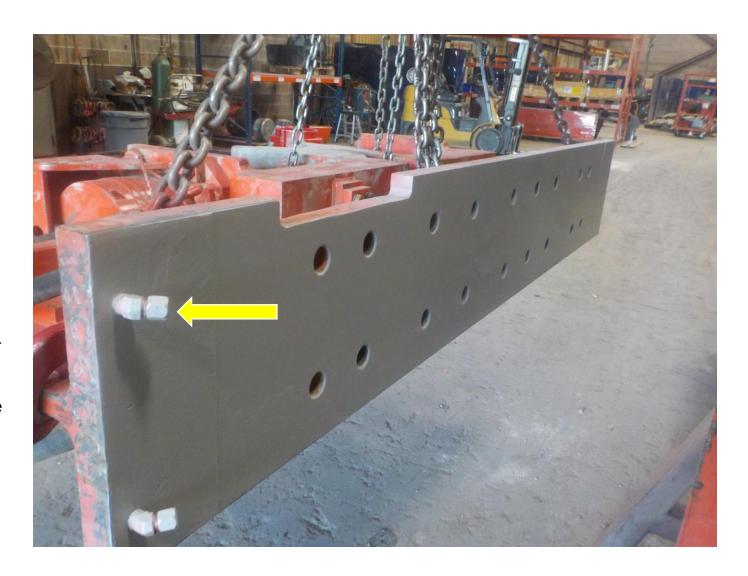
### INSTALL CLAMPS TO BEAM

- Repeat previous steps to install second clamp to the Beam.
- Center the clamps on the beam.
- The center can be located by the two fittings in the middle of the beam



### STAGE THE BEAM AND CLAMPS

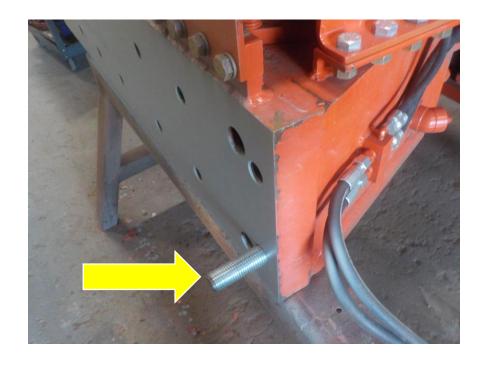
- Lay the Beam down flat, take note
  of the bolt pattern in the Beam and
  the bottom of the MKT V-22. The
  Beam will only mount one way.
- The hydraulic fittings should be on the same side as the hydraulic motor
- Suspend the Beam level with rigging capable of holding the weight of the fully assembled 6ft. Beam and Clamps (4,700 LBS.)
- Make sure the flat surface of the beam is clean before mounting to MKT V-22 Vibratory Hammer



Install the line up pins in opposite corners



Make sure the bottom of the MKT V-22 is clean before mounting to the Beam



With Line up pins in place and the Beam suspended, slowly swing the Beam onto the line up pins. Make sure that you center the Beam on the MKT V-22.



Apply a liberal coating of Anti-Seize Lubricant to the  $1 \frac{1}{2} \times 6 \times 4$  bolts. You will only need to apply it to the first 2 inches of threads.



- After applying Anti-Seize to the bolts thread all bolts into open holes by hand before removing Line-up pins.
- All bolts should thread in by hand if they do not check the thread or check the alignment of the Beam to the MKT V-22.
- Once you have all bolts installed by hand you will need to torque the 1 ½ x 6 x 4 bolts to a torque specification of 1950 ft. lbs.



 Once you have all of the bolts torqued to the proper specification 1950 ft. lbs.

**MARNING** 

hydraulic components may be under pressure extreme care should be taken when opening the components.

 Attach clamp close side and clamp open side of Beam to the proper port on the MKT V-22 clamp manifold using the ½ inch hoses 26 inches long.



# INSTALLATION OF THE BEAM TO THE MKT V-22 VIBRATORY HAMMER IS COMPLETE

Please continue to the next section to complete the start up procedures.



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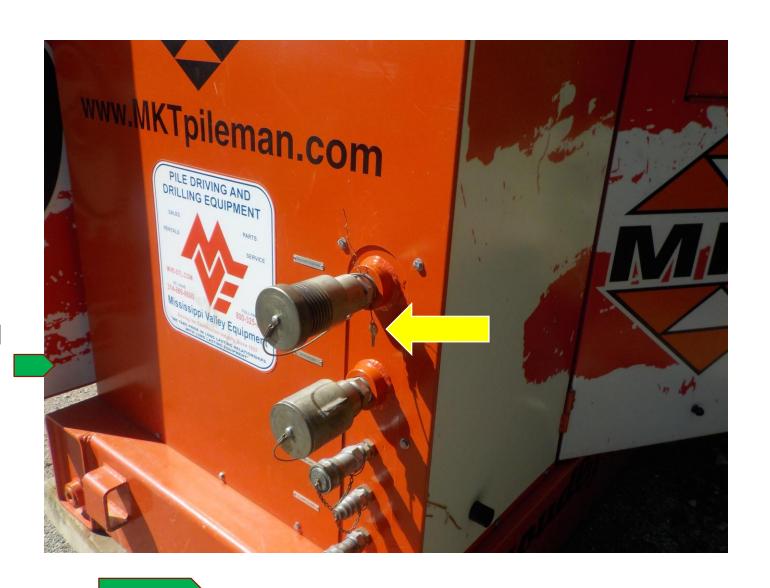
### HP-365A HYDRAULIC POWER UNIT

Place the Hydraulic power unit on flat level ground. Make sure that the MKT V-22 Vibratory Hammer will reach where the pile is being driven with a 150 foot hose bundle.



### DOOR KEYS

All power units are locked before transport. Keys to unlock the doors can be found wired to the Quick Disconnect.



### OPEN OR CLOSED

- During warm weather open all doors
- Maximum hydraulic oil temp is 180 degrees Fahrenheit. A temperature Gauge will flash if the temperature gets above 167 degrees Fahrenheit.
- During cold weather close all doors
- Hydraulic oil temperature needs to be at or above 50 degrees Fahrenheit before operating the vibratory hammer.



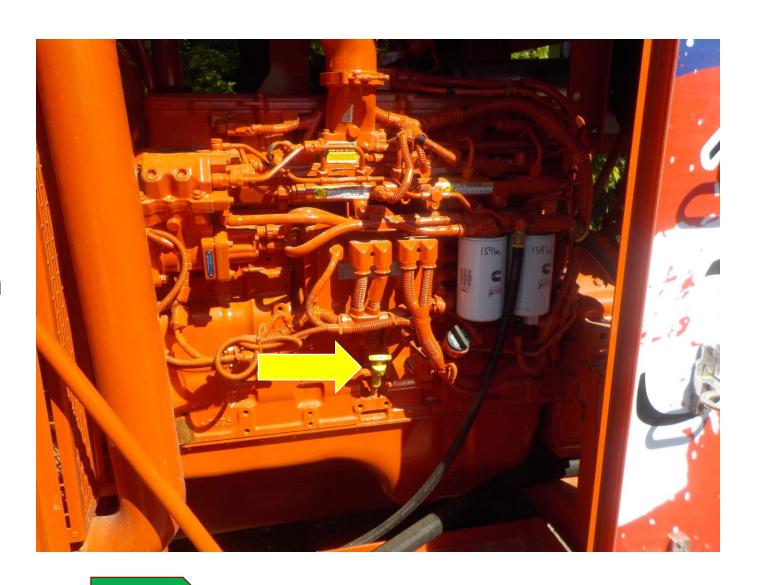
Check all fluid levels in the engine

If the radiator coolant is low, fill with Shell Rotella ELC mixed 50/50



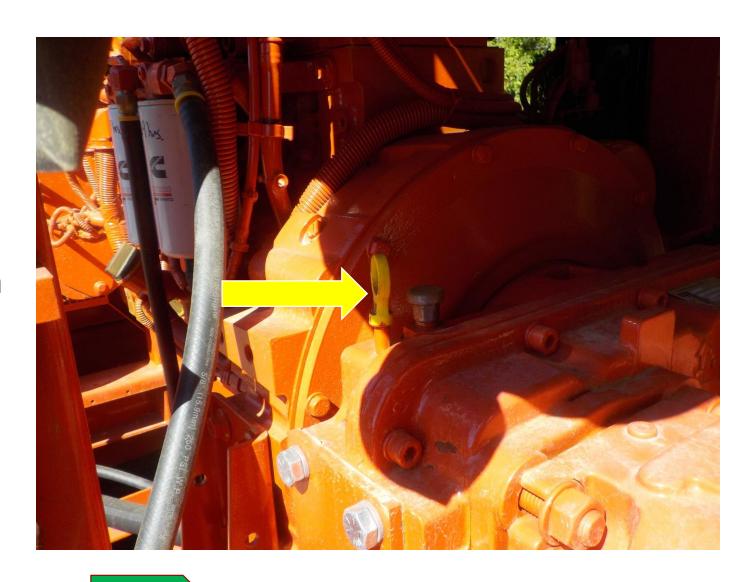
Check all fluid levels in the engine

If engine oil is low, fill with Shell Rotella T Triple Protection 15w-40



Check all fluid levels in the engine

If pump drive oil is low, fill with Shell Omalla 220 or equivalent



- Check the level of the Hydraulic fluid on the gauge on the side of the tank.
- If the hydraulic fluid is low, fill the tank with Phillips 66 Ecoterra ISO 32.

below the site glass do not start the diesel engine. Fill hydraulic tank with recommended hydraulic fluid before start up of diesel engine. Severe damage to the main hydraulic pump, and contamination of the entire hydraulic system could occur.



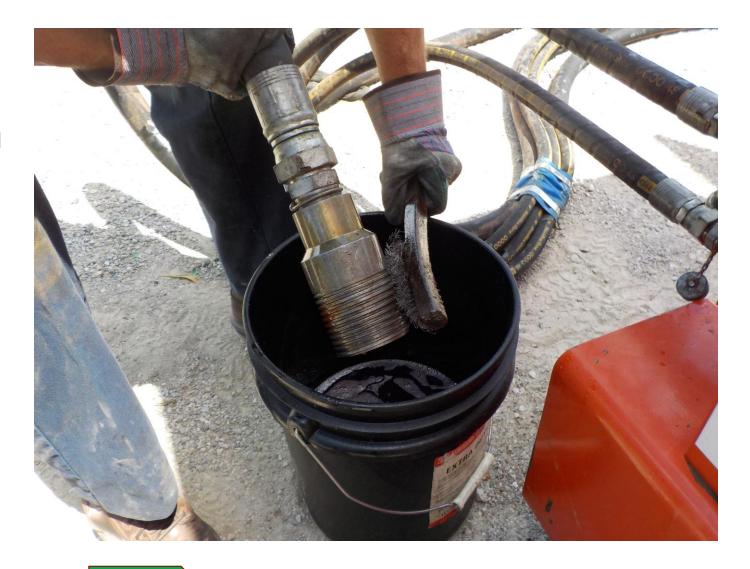
- With the MKT V-22 laying flat on the ground you can now unroll the hose bundle using a strap rating for the hose bundle's rated capacity full of oil (1,800 LBS.).
- Unroll the bundle and lay out across the ground taking care not to kink the hoses or allow loops to form In the bundle. The large 1 ½ inch high pressure and return line have a bend radius of 16½ inches.

• Do not use chains to handle the hose bundle. Chains can and will damage the hoses.



- Once you have the hose bundle laid out on the ground you can begin to make the connection to the power unit.
- Clean all Quick Disconnects with diesel fuel and wipe clean before making each connection.

type of harsh chemical to clean Quick Disconnect. An example is brake cleaner or paint thinner, these types of cleaner will damage the o'ring in the Quick Disconnect that creates the seal and prevents it from leaking.



The MKT V-22 hammer is factory fitted with its suspension assembly and is shipped on its side. It is designed to receive a 7/8 inch multiple loop wire rope sling properly sized and clamped to provide a factor of safety of five times the 45 ton maximum line pull capacity of the hammer, which in turn can be slipped over a lifting crane hook. The MKT V-22 hammer can be lifted from the horizontal to the vertical without danger of excessive stresses upon its connecting parts or structure.





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The engine is equipped with an electric heater starting aid and the use of ether may cause severe injury.

- To start the diesel engine turn the key to the on position.
- Wait until the light goes out on the Wait to Start Light.
- When the light goes out turn the key to the start position and hold until the engine starts.

start in 10 seconds turn the Key to the off position and repeat the above steps.



Once you have the diesel engine running verify that you have charge pressure on the Charge Pressure Gauge.

A minimum charge pressure of 150 psi should be visible with the Diesel engine at an idle.



### **DANGER**

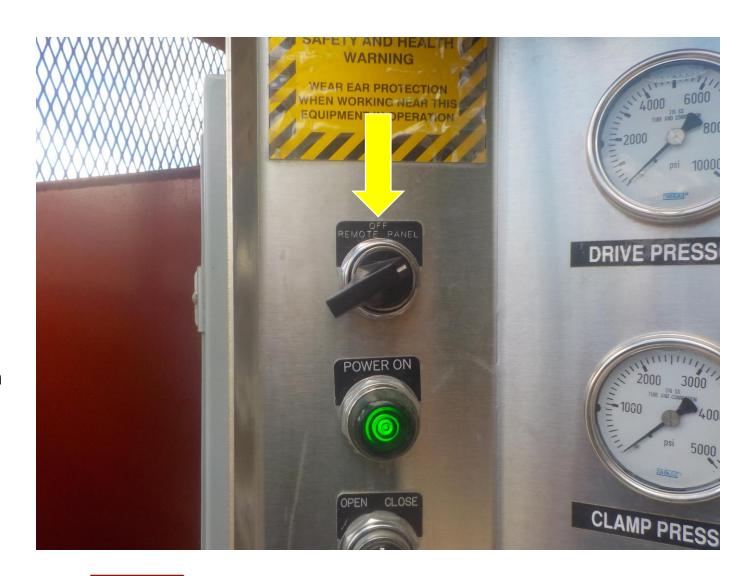
## CLEAR THE AREA

Make sure all personnel are clear of the MKT V-22 before proceeding to the next step.

Stay clear of clamps at all times.



- Turn the panel selector knob to panel to operate the MKT V-22 with the panel.
- Turn the panel selector knob to remote to operate the MKT V-22 with the remote pendant.



- Turn the clamp selector switch to close. The switch will latch to close.
- Verify that you have clamp pressure.
- This may take a few seconds for the clamps to close and build pressure.



- With the clamp selector switch in the closed position.
- Verify that the flushing orifice is functioning properly.
- You should hear a hissing noise coming from the ¼ inch hose.
- If you do not hear a hissing noise please refer to the Instructional Guide on cleaning the flushing orifice.

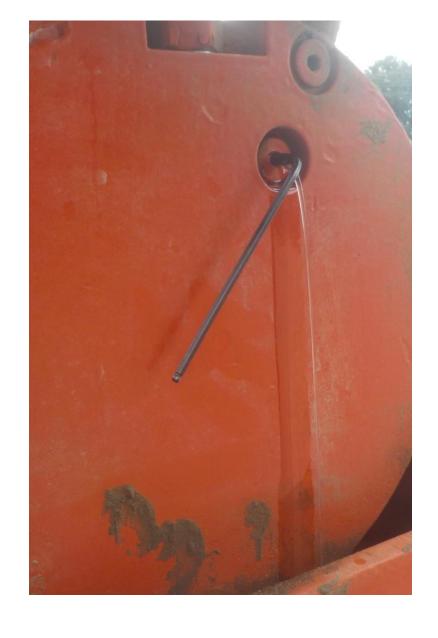


When ever the hydraulic lines of the MKT V-22 system have been reconnected and or when hydraulic repairs have been made, the clamp cylinders must be bled of entrained air.

This procedure must be done with the hammer hanging vertical.

Contents of hydraulic components may be under pressure extreme care should be taken when opening the components.

- With the clamp selector switch in the close position, using the proper tools (1/8 inch Allen) unscrew the vent valve located on the back face of both clamps. Do not back vent screw all the way out!
- Allow oil to vent approximately 30 seconds or until an air free stream of oil comes from each vent screw.
- Repeat these steps to the other clamp



when ever the hydraulic lines of the MKT V-22 system have been reconnected and or when hydraulic repairs have been made, the clamp cylinders must be bled of entrained air.

This procedure must be done with the hammer hanging vertical.

Contents of hydraulic components may be under pressure extreme care should be taken when opening the components.

- With the clamp selector switch in the close position, using the proper tools (1/8 inch Allen) unscrew the vent valve located on the inside face between both clamps. Do not back vent screw all the way out!
- Allow oil to vent approximately 30 seconds or until an air free stream of oil comes from each vent screw.
- Repeat these steps to the other clamp



when ever the hydraulic lines of the MKT V-22 system have been reconnected and or when hydraulic repairs have been made, the clamp cylinders must be bled of entrained air.

This procedure must be done with the hammer hanging vertical.

Contents of hydraulic components may be under pressure extreme care should be taken when opening the components.

- With the clamp selector switch held in the open position, using the proper tools (1/8 inch Allen) unscrew the vent valve located on the front end of the clamp cylinder of both clamps. Do not back vent screw all the way out!
- Allow oil to vent approximately 30 seconds or until an air free stream of oil comes from each vent screw.
- Repeat these steps to the other clamp







 Failure to completely bleed the clamp circuit of air may impair clamping force and damage jaws.

Adjusting clamps to fit the pile

- The clamps can be easily moved using the following method.
- A long ratchet strap will be needed to complete the following steps



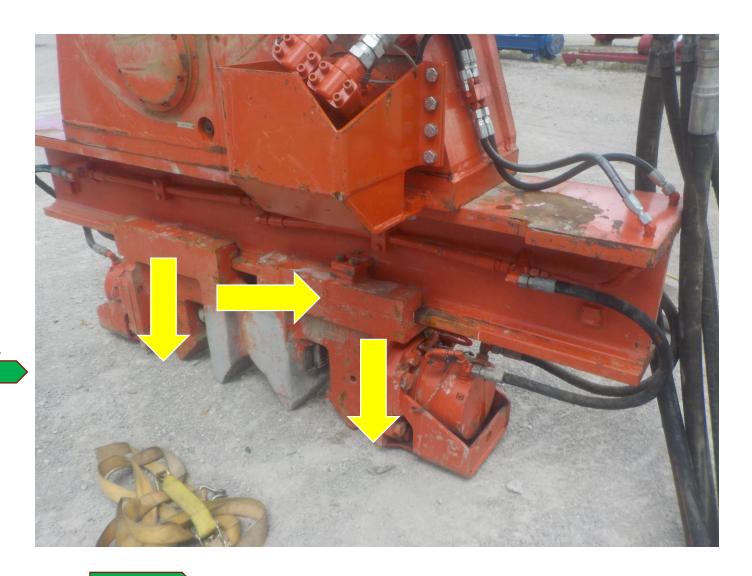
 Open the check valve on the clamp cylinder. This will allow oil to be released from the cylinders that hold the clamps in place on the beam.



With the diesel engine running turn the selector switch to panel or remote.

Hold the clamp selector switch to the open position while lowering the MKT V-22 Hammer and beam to the ground.

You will need the weight of the hammer to compress the cylinders inside the clamp housings.



Allow the weight of the MKT V-22 hammer and beam to push down on the clamps until you can see the gap move from below the beam.

To above the beam.



Raise the hammer up and install the ratchet strap as shown in the picture.

As you tighten the strap it will pull the clamp out towards the end of he beam.





Raise the hammer up and install the ratchet strap as shown in the picture.

Tightening the strap will pull the clamp to the center of the beam.



Once you have your clamps spaced properly to fit your pile.

Hand tighten the check valve knob.

NOTICE

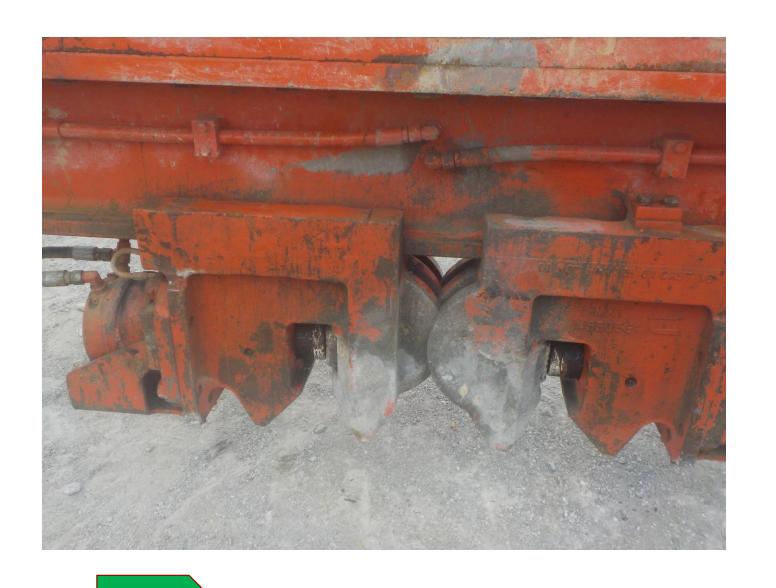
Do not over tighten the check valve knob or damage will occur to the valve.



# **DANGER**

# CLEAR THE AREA

Make sure all personnel are clear of the MKT V-22 before proceeding to the next step.



After you have tighten the check valve knob.



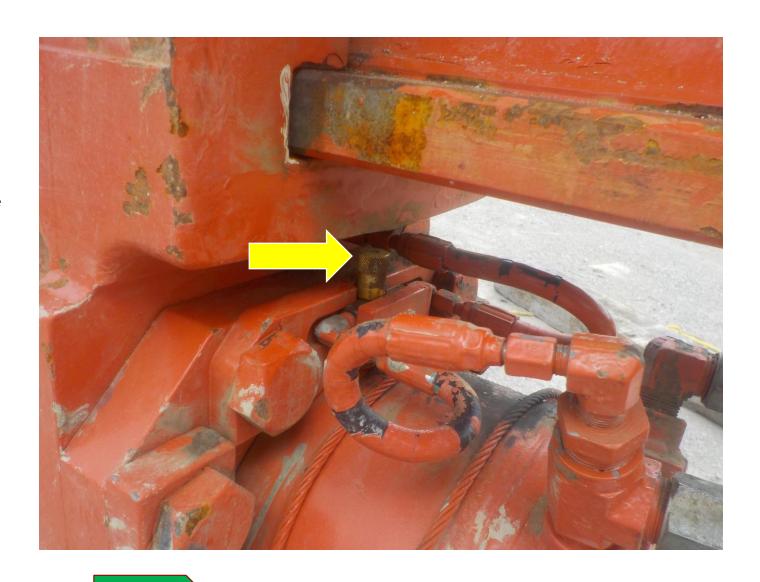
Hand tighten the check valve only.

Turn clamp close selector switch to the closed position.

This will lock the clamps to the beam and hold them in place.

#### **NOTICE**

You will not have to open the check valves again until you need to adjust the clamps to fit your pile.



With the MKT V-22 hanging vertical check the fluid level in the gear box.



Lube oil level should be ½ to ¾ full. Check oil level twice per day.





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# STARTUP PROCEDURES ARE COMPLETE

Once you have completed the start up procedures you are ready to put the MKT V-22 Vibratory Hammer to work. If you have any questions please click on <a href="https://www.mktpileman.com">www.mktpileman.com</a> for your nearest MKT representative