

INSTALLATION

Hanging cable location

- **Anchor the cable as close to the derrick crown as possible.**
- **The longer the cable is the easier it is to move the off and on the pipe.**
- **Cable location should be as high above the center of the rotary table as possible. The cable must be within 2' to 4' of the rotary table.**
- **You must be able to move the Hawkjaw from the rotary table to the mouse hole, and to the rest position.**

LOCATION

- **Place the Hawkjaw away from the set back zone, thus allowing room for the drill pipe stands to swing straight.**
- **If possible set the Hawkjaw on the opposite side of the set back zone.**
- **The unit must rest 3' to 5' away from the rotary table.**

HANGING CABLE REQUIREMENTS

- **5/8" diameter steel cable.**
- **The correct cable hardware for 5/8" cable.**
- **Enough cable to have the lift cylinder 20' above the rig floor.**
- **Enough cable to allow the unit to rest 3' to 5' from rotary table with the lift cylinder completely stroked out.**
- **The lift cylinder is 13' long when stroked out.**

HYDRAULIC REQUIREMENTS

- **Pressure compensated pump, set at 3000-psi.**
- **Minimum volume of 20-gpm, 35-gpm for best performance.**
- **1" dia. Pressure line, if hydraulic unit is more than 100' away then 1 1/4" dia. hose is required.**
- **The hose working pressure must be 3000-psi or greater.**
- **1 1/4" tank line with a minimum of 500-psi working pressure.**
- **Hydraulic power unit located in a clean, dry, and well ventilated area.**
- **Enough slack in lines for the Hawkjaw to move from the rest position to the drill and to the mouse hole.**
- **Hawk approved pressure side non-collapsible 3000-psi filter.**
- **The Hawkjaw is a closed center system you must have a pressure compensated volume pump. You can get an open center converter from Hawk.**

- **Using a constant volume pump with out putting the converter on could result in bodily injury and will cause damage to the Hawkjaw and power unit.**

AIR REQUIREMENTS

- Clean dry air at 100-psi.
- On board auto-dump air filter (supplied with unit)
- Enough slack in hoses to allow unit to move to all positions.
- **You must have clean dry air; the unit must have an approved air filter running it without the filter voids the warranty.**

RAISE/LOWER CYLINDER HOOK-UP

- Use the cap side bolt to connect the r/l cylinder to the suspension ring on the Hawkjaw.
- Secure with the lock nut.
- Connect the hanger eye to the hanging cable.
- Connect the Hawkjaw rod and cap side hoses to the rod and cap side hoses of the r/l cylinder.
- Be sure to check to see if the hose connections are tight to prevent any leaks.

START-UP PROCEDURES

- Make sure the oil reservoir is full of hydraulic oil.
- Connect the air power source.
- Connect the pressure, tank, and airlines to the corresponding lines from the hydraulic power unit.
- Be sure not to hook up the hoses backwards.
- Check hoses for leaks.

ADJUST FOR MAKE-UP

- Explain the difference between the Jr. and Sr. adjustments.
- Measure the tool joint with OD calipers.
- Use a 1 ½ “ wrench to adjust the pointer on the pipe stop.
- Adjust the wrench nuts to the appropriate tool joint size, for safety, adjust the bottom wrench nut 1”**LARGER** than the top and middle wrench.
- For Jr. rotate nut lock to fit pipe size.
- Adjusting the spinner: Measure the pipe OD (pipe OD not the tool joint)
- Remove the two quick release pins at the rear of the spinner and move the spinner motor to the appropriate holes.
- Replace the quick release pins.

- **For Jr. shift the spinner directional valve fully forward.**

POSITION FOR MAKE UP

- **Stab the drill string.**
- **Center the suspension ring on the lateral tilt screw.**
- **If the Hawkjaw is resting on the floor raise the unit 1' to 2' off the floor.**
- **Use the control handles to pull the unit onto the drill parts.**
- **Use rail and lower to center the top wrench dies and the middle wrench dies between the shoulders.**
- **Note: keep the middle wrench away form the hard banding.**
- **Keep the top wrench and middle wrench away form the shoulder.**
- **Be sure that the unit is level check the level indicator.**
- **Level adjustment is different between the Jr. and Sr.**
- **Jr. adjusts by turning the turnbuckle located at the rear of the unit.**
- **The Sr. can be adjusted by using the tilt buttons on the control handles.**
- **Make sure that the pipe stop is against the drill pipe.**

SETTING THE MAKE UP TORQUE.

- **Use the red needle adjust to rotate the torque gauge red needle to the desired torque**
- **Rotate the torque set knob counter-clockwise as far as it will turn.**
- **Rotate the selector switch to the make position.**
- **Press the grip hold button.**
- **Press and hold the spin button until the stand rotates down to the shoulder.**
- **Release the spin button.**
- **Push and hold the wrench grip.**
- **Press and hold torque. While holding down torque rotate the torque set knob clockwise.**
- **When the torque gauge needle reaches the desired torque stop rotating the torque set knob.**
- **Release torque. Immediately release the wrench grip.**
- **Pull out grip hold.**
- **The Hawkjaw torque is now set, and can be removed from the pipe.**

MAKE UP

- **Pull unit on to the pipe stand. Press the grip-hold button.**
- **Press and hold the spin button until the stand rotates sown to the shoulder.**

- Release spin.
- Push in and hold the wrench grip button.
- Push and hold torque button, watch torque gauge needle.
- The needle will rise above and settle down to the desired torque.
- Release the torque and grip button immediately.
- Pull out the grip hold button.
- The make up process is now complete.

ADJUST FOR BREAK-OUT

- Note the difference between the Jr. and Sr. adjustments.
- Measure the tool joint with calipers.
- Adjust the pipe stop.
- For safety adjust the top wrench 1" larger than the bottom and middle wrench.
- Rotate the bottom and middle wrench nut to the OD of the tool joint.
- Visually align the end face of the wrench nut with the scale.
- On Jr. rotate the nut lock down or up to fit pipe size.
- Adjust the spinner to the proper size using the scale and quick release pins on the spinner.
- On Jr. shift the spinner directional valve fully back.
- Stab the drill stand.
- Center the suspension ring on the lateral tilt screw.
- Raise the Hawkjaw 1' to 2' feet off the rig floor.
- Use the control handles to pull the unit on to the pipe.
- Use raise/lower to center the middle wrench dies and the bottom wrench dies between the shoulder.
- Keep bottom wrench dies away from the hard banding.
- Keep the middle and bottom wrench dies away from the shoulder.
- Check for tool for level.
- Adjust the Jr. with the turnbuckle, the Sr. with the tilt buttons.
- Make sure that the pipe stop is against the pipe.
- Rotate the selector switch to the break position.
- Push grip-hold.
- Push and hold the grip button.
- Push and hold down the torque button.
- When break out occurs release the grip and torque buttons immediately.
- Press and hold down the spin button until stand pops out of the connection.
- If stand dose not spin release the spin button.
- Pull out the grip-hold button.

- **Remove the Hawkjaw from the pipe.**

LOW TORQUE WARNING TEST

- **If the torque cylinder strokes out before the desired torque are reached the torque gauge will drop off to approximately 8000 ft/lb.**
- **If this happens immediately release the torque and grip.**
- **Waite for the torque cylinder to fully reset.**

TEST #1

- **Disconnect the low torque warning test connector.**
- **Torque the first connection.**
- **Note the torque gauge position.**
- **Keep the unit in the same position.**
- **Reconnect the low torque test connection.**
- **The torque should read the same.**
- **If not go through the trouble shooting procedures.**

TEST #2

- **When breaking the first connection push grip-hold, hold down both the grip and torque buttons until the torque cylinder id fully stroked out.**
- **When the torque cylinder is fully stroked out the torque gauge needle should fall off to approximately 8000 ft/lb.**
- **If these reading doses not occur see the trouble shooting procedures.**

WRENCH MAINTENANCE

GREASE ONCE PER WEEK MINIMUM

- **Make sure the Hawkjaw is off the pipe and in the rest position.**
- **Shut down the hydraulic power unit.**
- **Press the grip button repeatedly to bleed off the hydraulic pressure.**
- **Disconnect the air power cord.**
- **Push in the E-Stop**
- **Assume that there is still a load on every actuator. Proceed with caution.**

Show all grease points on unit.

FILTER MAINTENANCE

HYDRAULIC FILTER: CHANGE EVERY TWO MONTHS

AIR FILTERS: CHANGE EVERY TWO MONTHS.

Hydraulic filter:

- **If the red button is out push it back in and operate the Hawkjaw.**
- **If the red button pops out again the filter needs to be changed.**
- **Place the Hawkjaw into the rest position.**
- **Shut the unit down as previously described.**
- **Remove the filter canister.**
- **Remove the filter element.**
- **Install the new element.**
- **Replace the filter canister.**

Air filter:

- **Disconnect the air power supply.**
- **Bleed air pressure.**
- **Remove the two right corner bolts.**
- **Slide out the second stage filter cartridge, and star spacers.**
- **Do the same with the first stage filter and star spacers.**
- **Slide in the first stage filter and spacers, then the second stage and spacers.**
- **Replace the two right corner bolts.**