

Drake Beam Balanced Pumping Units

SAFETY MANUAL

Before proceeding with the installation, operation, or maintenance of a pumping unit, familiarize yourself with Federal, State, and Local laws, your company's safety regulations and this safety manual.

PLEASE HEED THE SAFETY TAGS ON THE PUMPING UNIT. THEY ARE FOR YOUR PROTECTION.

PROPER CLOTHING AND TOOLS

- Snug fitting clothes are recommended.
- Remove jewelry
- Wear hard hats, Side shield safety glasses and safety shoes. Steel toed preferred.
- Use proper tools for the job. Tools are designed for a specific purpose and must be used properly. Always keep tools clean and in good condition.

POINTS OF SAFETY

- Pumping Units have large and heavy moving parts. Even a temporarily stationary unit has components which can start moving due to gravity. Danger is heightened during installation, stroke change, counterbalance change, maintenance, well servicing and data readings. Whenever performing maintenance on, or working around the pumping unit, **ALWAYS** lock out/tag out energy sources and secure the cranks against rotation. Chain the walking beam in place is recommended.
- All personnel must stay alert and keep clear of the crank swing area, counterweight area, horsehead area and other potential moving parts.
- **NEVER** stand under the walking beam or horsehead during installation or removal. Double-check the horsehead for proper installation on the walking beam, including the installation of the holding bolt before rotation of the unit.
- **NEVER** stand under moving parts or loads being lifted. Always attach guide ropes to parts to aid in alignment.

- All electrical work must be performed by a qualified electrician. Regularly inspect and maintain electric motors, automatic timers and any other electrical devices.
- Be aware of power line locations. Keep unit and service equipment at least 10 feet away.
- **NEVER** assume a stationary unit is not operational. Automatic timers can start units in motion without warning.
- Drake does not recommend installing or performing maintenance during thunderstorms.
- Exercise extreme caution when installing or servicing these units in inclement weather.
- **NEVER** operate unit without all guards in place. Pumping units have heavy rotating and moving parts which must be properly guarded to prevent serious injury or death to personnel.

COMMONLY USED SAFETY PROCEDURES FOR SECURING UNIT.

STAY CLEAR OF THE AREA UNDER THE BEAM WEIGHT AND HORSEHEAD AND AWAY FROM THE SWING AREA OF THE CRANK ARM WHEN CHAINING THE BEAM OR ENGAGING THE BRAKE.

- Always install the unit or perform maintenance with the cranks at a 6 o'clock position when possible. If the cranks are straight down, no rotation will start as long as the polished rod is clamped or not attached and all energy sources are locked out/ tagged out.
- It is essential to prevent rotation of the cranks stopped in any position. **NEVER** use the brake alone as a safety stop. Always use as many methods as possible to secure the cranks and the walking beam along with your companies lock out/tag out procedure.
Note: Abrupt stopping of the unit may cause damage to the gearbox teeth. A slow, even pull on the brake handle is recommended.
Note: If servicing the bearings, the Drake Safety Bracket must be used along with the other securing practices.
- Apply chain through the pulley on the gearbox and wrap tightly around the crank arm or pitman arm. This will keep the gearbox from moving preventing movement of the walking beam.
- Securely chain the horsehead and the counterweight ends of the walking beam to the base for added safety measures.