



*****WARNING! *** DANGER! *****

READ BEFORE STARTING PUMP!

- 1. Read and understand tags and installation and operating instructions.**
- 2. Know the operating instructions.**
- 3. Open all lines before starting pump.**
- 4. Install and properly set relief valve in discharge line. Pumps are not provided with a relief valve.**
- 5. Install proper guard(s). Never operate pump without guard(s) in place.**
- 6. Always use caution near rotating parts.**
- 7. Do not operate this equipment in excess of its rated capacity, pressure, speed and temperature or other than in accordance with instructions contained in the installation and operating instructions.**
- 8. Do not run the pump dry. Do not start pump until it's filled with liquid to be pumped.**

PRE-START UP CHECKS

1. Make sure the pump and the driver are in proper alignment.
 - a. Preparation of foundation for base mounted pumps.
 - b. Aligning driver and pump.
 - c. Installation of pipes.
2. Make sure that the driver will rotate the pump in the direction of the pump.
3. Fill the pump with the liquid to be pumped. Rotate the driveshaft of the pump four or five rotations.
4. Make sure the inlet and discharge lines are open.
5. Start the unit.
6. Check to see if the pump is delivering liquid. If it is not, refer to the section on checking pump performance.
7. Check for any vibration, excessive heat generation or excessive packing leakage.



CHECKING PUMP PERFORMANCE

A summary of possible causes of improper performance of Progressing Cavity Pumps

No liquid delivered

1. Pump rotating in the wrong direction
2. Suction lift too high
3. Clogged suction line
4. Air pockets or vapor lock
5. Air leaks in suction line
6. Faulty relief valve in system
7. Pump not properly primed
8. Suction line not submerged in product
9. Worn pump

Pump Takes Too Much Power

1. Speed too high
2. Liquid more viscous than anticipated
3. Operating pressure is higher than specified. Check this with gauge at the pump outlet
4. Outlet line obstructed
5. Mechanical defects, such as bent shaft, tight packing gland, or misalignment of piping
6. Relief valve in system not operating properly

Insufficient Liquid Delivered

1. Air leaks in suction line
2. Air leaks in through packing
3. Speed too low
4. Suction lift too high
5. Partial air pockets or vapor lock
6. Restricted suction line
7. Faulty relief valve in system
8. Worn pump

Excessive Noise

1. Starved pump, liquid not getting into pump
2. Air leaks in suction line
3. Air or gases in liquid
4. Pump speed is too high
5. Improper mounting, check alignment thoroughly
6. Excessive discharge pressure

Rapid Wear of Stator

1. Pump ran dry
2. Grit or dirt in liquid
3. Pumps running too fast
4. Excessive pressure
5. Corrosion

Loss of Suction after Start-up

1. Pump not properly primed
2. Suction piping not submerged
3. Suction piping too small
4. Air leaks in suction
5. Insufficient liquid supply

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