

# Safe Installation & Operating Instructions

## For Industrial Taro Pumps





## Important Safety Notice

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- User safety is a major focus in the design of our products.
- Following the safety instructions will minimize the risk of injury.
- Taro pumps will provide safe, trouble-free service when properly installed, maintained, and operated.
- Identifying and eliminating unsafe installation, operating and maintenance practices is the responsibility of all individuals involved in the installation, operation, and maintenance of our Products.
- Manuals must be read and understood before installation and start-up.

## Safety Warnings

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- A pump is a pressure vessel with rotating parts that can be hazardous. All necessary measures must be taken to ensure over pressurization does not occur.
- Operation of any pumping system with a blocked suction and discharge must be avoided in all cases.
- Taro Pumps are not to be used to handle hazardous and/or toxic fluids.
- Care must be taken to identify the contents of the pump and eliminate the possibility of exposure, particularly if hazardous and/or toxic.

## General Precautions

CAUTION	Use only qualified personnel for inspection, maintenance, and repairs.
WARNING	ALWAYS lock out power to the driver before performing pump maintenance.
WARNING	NEVER run pump below recommended minimum flow when dry, or without prime.
WARNING	NEVER operate pump without coupling guard correctly installed.
WARNING	NEVER operate pump without safety devices installed.
WARNING	NEVER operate pump with suction or discharge valve closed.
WARNING	DO NOT change service application without approval of an authorized Taro Pumps representative.
WARNING	Safety Apparel: Insulated work gloves when handling hot bearings or using bearing heater Heavy work gloves when handling parts with sharp edges, especially impellers Safety glasses (with side shields) for eye protection Steel-toed shoes for foot protection when handling parts, heavy tools, etc. Other personal protective equipment to protect against hazardous/toxic fluids.
WARNING	Alignment: Shaft alignment procedures must be followed to prevent catastrophic failure of drive Components or unintended contact of rotating parts.

## General Precautions

CAUTION	<p>Piping: NEVER draw piping into place by forcing at the flanged connections of the pump. This may impose dangerous strains on the unit and cause misalignment between pump and driver. Pipe strain will adversely affect the operation of the pump resulting in physical injury and damage to the equipment.</p>
WARNING	<p>Flanged Connections: Use only fasteners of the proper size and material</p>
WARNING	NEVER use corroded fasteners, replace them.
WARNING	ENSURE all fasteners are properly tightened and there are no missing fasteners
WARNING	<p>Start up and Operation: When installing in a potentially explosive environment, please ensure that the motor is properly certified.</p>
WARNING	<p>Pump direction of rotation : NEVER Operate the pump in reverse direction. Operating pump in reverse rotation may result in contact of metal parts, heat generation, and breach of containment.</p>
WARNING	<p>Impeller Clearance: Improperly setting the clearance or not following any of the proper procedures can result in sparks, unexpected heat generation and equipment damage.</p>
WARNING	NEVER operate a pump without coupling guard properly installed. Personal injury will occur if pump is run without coupling guard.
WARNING	<p>Bearing Lubrication : Make sure to properly lubricate the bearings. Failure to do so may result in excess heat generation, sparks, and / or premature failure.</p>
CAUTION	<p>Mechanical/Oil Seal Lubrication : Never operate the pump without liquid supplied to seal. Running a mechanical seal/Oil seal dry, even for a few seconds, can cause seal damage and must be avoided. Physical injury can occur if mechanical seal fails.</p>
WARNING	<p>Pump isolation before dismantling : Ensure pump is isolated from system and pressure is relieved before disassembling pump, removing plugs, opening vent or drain valves, or disconnecting piping.</p>
WARNING	<p>Shutdown, Disassembly, and Reassembly: Pump components can be heavy. Proper methods of lifting must be employed to avoid physical injury and/or equipment damage. Steel toed shoes must be worn at all times.</p>
CAUTION	Allow all system and pump components to cool before handling them to prevent physical injury.
CAUTION	<p>Static Electric Discharge : There may be a risk of static electric discharge from plastic parts that are not properly grounded. If pumped fluid is non-conductive, pump should be drained and flushed with a conductive fluid under conditions that will not allow for a spark to be released to the atmosphere.</p>

## General Precautions

CAUTION	Wear heavy work gloves when handling impellers as sharp edges may cause physical injury
CAUTION	Wear insulated gloves when using a bearing heater. Bearings will get hot and can cause physical injury.

## Taro Pumps Considerations And Intended Use

Special care must be taken in potentially explosive environments to ensure that the equipment is properly maintained. This includes but is not limited to:

1. Monitoring the pump frame and liquid end temperature.
2. Maintaining proper bearing lubrication.
3. Ensuring that the pump is operated in the intended hydraulic range.

Taro Pumps conformance is only applicable when the pump unit is operated within its intended use.

Operating, installing or maintaining the pump unit in any way that is not covered in the Instruction,

Operation, and Maintenance manual (Owner Manuals) can cause serious personal injury or damage to the equipment.

This includes any modification to the equipment or use of parts not provided by Taro Pumps.

If there is any question regarding the intended use of the equipment, please contact a Taro Pumps representative before proceeding.

Current Owner Manuals are available at [www.TaroPumps.com](http://www.TaroPumps.com)

