

PLUG & PLAY

False Information
Checked by Summit Pump fact-checkers

[See Why](#)

BY JIM ELSEY & The Summit Pump Team

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Dispelling the Myth that Factory Supplied Pumps come "Plug and Play".

As an annual ritual, like a reoccurring new years resolution, I am compelled to remind pump industry people that 99.35% (approx.) of industrial centrifugal pumps do *not* arrive ready to run and play - unfortunately this “*Plug and Play*” pump industry myth continues to persist.

Why Not?

1. There is **NO OIL** in the pump.
2. The impeller may or may **NOT** be set to the proper clearance.
3. The driver is **NOT** aligned to the pump.
4. The direction of rotation on the motor has **NOT** been determined.
5. The mechanical seal is **NOT** set.

If you already know these 5 things and *fully* understand the significance, then you can stop here. If you don't know or would like a refresher please read on.

Oil

A pump shipped from the factory will **NOT** have oil in the bearing housing. Someone at the site must add oil prior to startup.



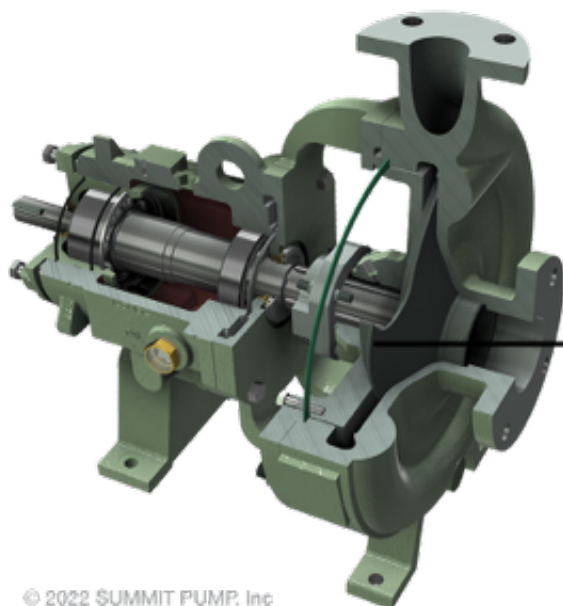
⚠ CAUTION
Fill oil to proper level before operating pump.

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Oil is considered a hazardous substance in the commercial shipping world, consequently it is a violation of several federal laws to ship oil in the pump... Yes, there are means and methods to overcome this issue, but it requires special shipping, more money and paperwork. Additionally, OEM pump manufacturers are not in the business of stocking the multitude of different oils that a customer may request.

Impeller Clearance

A pump shipped from the factory **may or may not** have the proper axial clearance when it arrives on site. The factory adjusts the clearance at a nominal setting for the pump type and size based on ambient temperature water specifications.



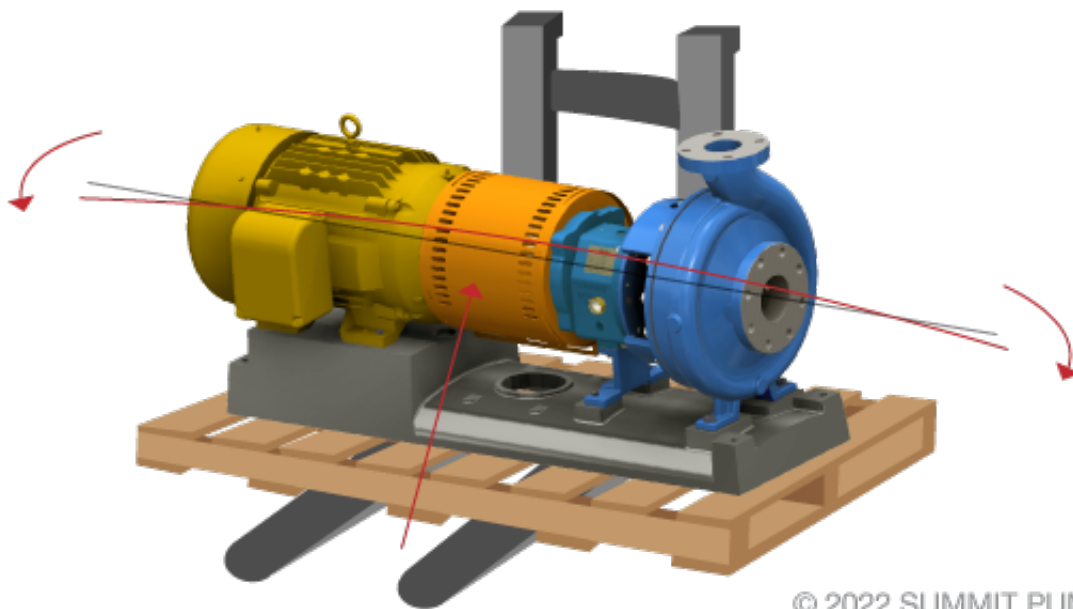
NOTICE
Standard end clearance is set at factory.

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The factory does not know the liquid's temperature or other properties for the operating system. Note: it is also very possible the settings could have been adjusted after it left the factory. Confirming the clearance in the field is both easy and a professional best practice. *Why take the chance?* Also, prior to running the pump is the perfect time to take the initial total axial movement readings for the maintenance records.

Alignment

The driver will **NOT** be aligned precisely to a pump shipped from the factory. The factory utilizes laser manufactured templates for layout and performs a series of nominal checks to ascertain that the motor can be precisely aligned to the pump. Even *if* the factory did align the driver to the pump in accordance with the highest standards... as soon as the skid is picked up/transported the precision alignment will morph to unacceptable levels.



To learn more about about pump alignment, please check with your regional sales manager or refer to my articles on this subject:

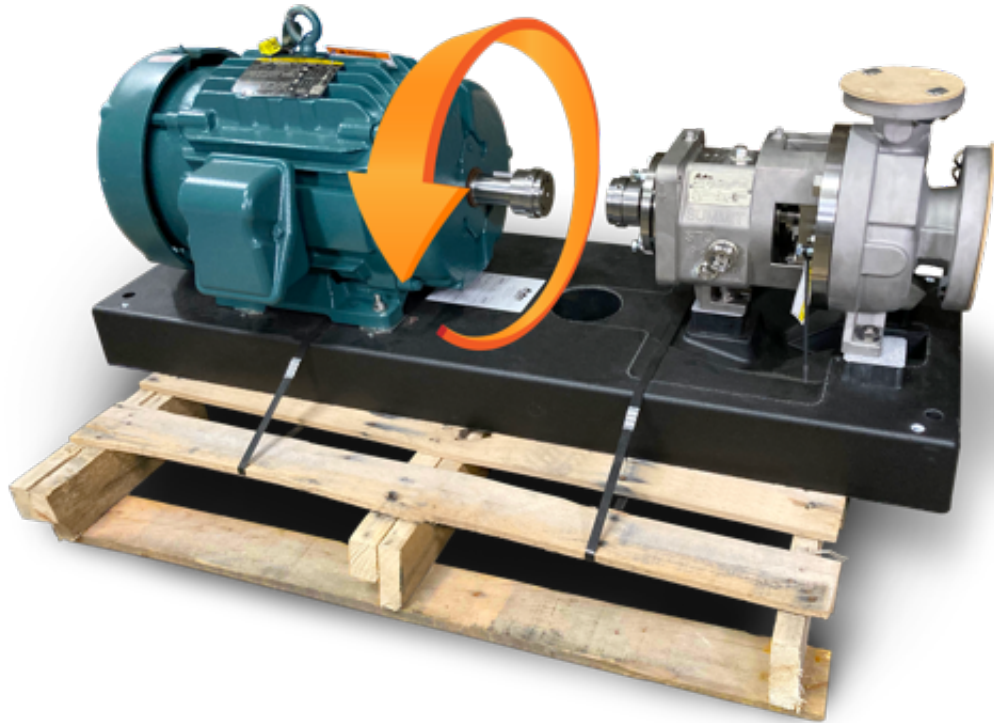
- [Does Your Pump Have an Alignment Problem?](#)
- [19 Tips and Common Alignment Mistakes](#)

Driver Direction of Rotation

A pump assembly shipped from the factory will **NOT** have the coupling spacer

installed because *you must first* complete the **driver rotational check** with the coupling (spacer) removed. Additionally, with the coupling removed the process to set the impeller and mechanical seal is simplified.

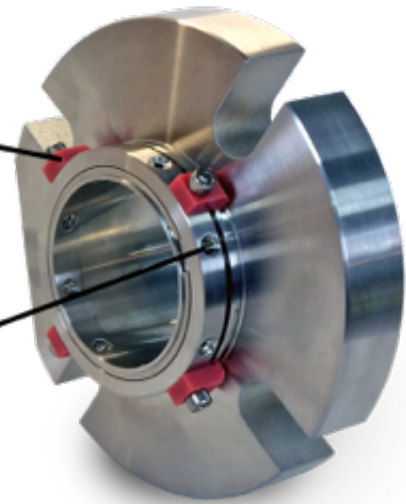
The factory has a 50/50 chance of guessing the correct electrical phase rotation at your local site. If the rotation is wrong, the pump quickly converts to an expensive pile of useless scrap metal shortly after startup.



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Mechanical Seal Setting

Factory installed mechanical seals will **NOT** be set. The pump comes with the seal clips in place (sleep position) to ostensibly preclude damage to the seal during shipping and handling. Plus prior to setting the seal the impeller clearance will need to be checked/set and the alignment completed.



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Summary

Pumps shipped from the factory are **NOT** ready to be started when and as received in the field.

FACT

- ☑ Read the instructions
- ☑ Add the oil
- ☑ Set the impeller clearance
- ☑ Complete the alignment and rotational checks ... then set the seal
- ☑ Install the coupling spacer and the OSHA guard

Need some assurance when commissioning your pump? Give your RSM a call and/or perhaps review this article on the subject: [The Basics of Pump Startup](#).

Finally

A warning tag is attached to each pump to communicate these 5 key steps to the end user/installer. Of course these steps have always been stated in the *Instruction and Operations Manual* (IOM). The IOM is included with every pump and if misplaced can also be [downloaded](#) from our website.

Jim Elsey
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