

NEW DESIGN IMPELLER R&R

This documentation was created to provide the service technician with a base level of knowledge regarding the latest designed impeller R & R procedures.

If you are replacing the old style impeller with the new design and need instructions how to remove the old style impeller, see TI document titled: “**TI QP Impeller Removing Tips**”.



WARNING: This unit has several sharp edges! Safety precautions should be followed at all times when servicing this equipment. Consult operations manual for more safety



NOTE: The newly designed impeller is not interchangeable with the older style impeller, mounting hardware parts are different.

R & R INSTRUCTIONS

- 1) The impeller has threads machined into the center to assist with removal.
- 2) Remove the mounting bolt which is smaller in diameter than the bolt used for removing the impeller (see page 2).
- 3) Before proceeding with removal, make sure threads on the impeller are clean of debris by using compressed air.
- 4) When separating the impeller from the shaft, always use a small amount of lubricant on the threads of the bolt to help with the disassembly process.
- 5) Insert bolt into machined threads of the impeller. Turning the bolt clockwise will remove the impeller.
- 6) When installing the impeller, place the shaft key onto the engine shaft with impeller.
- 7) Set the O-ring in the groove on the impeller. The O-ring now acts as a seal to prevent water from getting in between the impeller and engine shaft. **O-ring: MQ PART# 0482200180**
- 8) Place the seal washer onto bolt and thread through the center of the impeller and torque to specification. **Torque Specification (22 ft-lb), (29.8 N·m)**

The impeller is mounted with bolt size:
5/16 - 24 x 1-3/4" Unified Fine (UNF).
MQ PART# 0191190544

To remove, place a block of wood between the impeller vanes to hold in place while removing the bolt.

Use a 1/2" socket to remove bolt.



After removing the mounting bolt, notice there are threads machined into the center of impeller to assist with removal.
(see next page)

Using an **M12 x 70mm** bolt, thread into the hole to remove impeller. Bolt used in picture is a pump casing cover bolt.
MQ PART# 0131191270

By turning the bolt in clockwise this will create an effort force that will overcome the resistance force which binds the impeller to the shaft, thus separating the impeller from the shaft.



MOUNTING HARDWARE

<u>Description</u>	<u>MQ PART#</u>
Mounting bolt.....	0191190544
O-ring.....	0482200180
Shaft key.....	0520030310
Seal washer.....	0458220080

Impeller kits are available which include mounting hardware.
 For impeller and impeller kits see the Operations and Parts manual for specific model.

(See next page for closer pictures of impeller)

IMPELLER CENTER HOLE

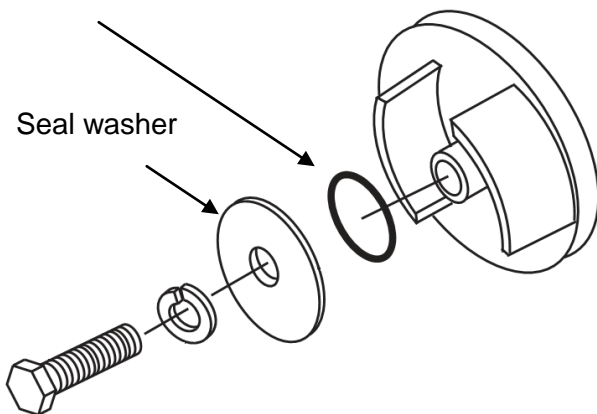
Inner side of Impeller, picture shows machined area which slides onto engine shaft with groove for key.



Outer side of Impeller, picture shows machined threads in center of hole and O-ring sitting in groove around hole.



O-ring



When impeller is mounted to the engine shaft the seal washer presses up against the O-ring, this prevents water from getting in between the impeller and the engine shaft.