TC Series Kit Instructions

12/08 Edition

WEBTROL

Quality Pumps

TC Series

CENTRIFUGAL

Congratulations On Your Choice In Purchasing This Webtrol Pump

Its Quality is unsurpassed in material and workmanship. If properly installed, it will give many years of trouble free service.

Kit Inspection And Handling

After receiving your TC Kit, inspect the contents and report to the carrier any items that are damaged or missing. See parts list. Keep all packaging materials until the claim is resolved.

Parts List

Description	Qty.
Casing With Vent & Drain Plugs	1
Cover	1
Bracket	1
Impeller	1
Mounting Base	1
O-Ring	1
Mechanical Seal - (Pt. # 70X120-M purchased separately)	1
Hardware Kit Bag	1
Allen Head Cap Screw 3/8”-16x1”	4
Lock Washer External serrated 3/8”	4
Allen Head Bolt M6x16mm(5/8”)	8
Lock Washer External serrated M6	8
Impeller Nut 7/16”-20 UNF	1
Hex Head Bolt M8x16mm(5/8”)	2
* Hex Head Bolt M8x45mm(1 3/4”)	1
* Hex Head Bolt M8x30mm(1 3/16”)	1
Hex Nut M8	1

** Motor support bolts. Use one only.*

Additional Parts Required for Assembly:

Motor - NEMA 56J Frame / 60HZ / 3450 RPM
Mechanical Seal - Pt. # 70X120-M / Type 21 5/8” Ø, 250 PSI

Tools Required for Assembly:

5/16” Allen Wrench
11/16’ Socket Wrench
13mm Open End Wrench
Torque Wrench Ft. Lbs. (to measure 3.4 Ft. Lbs.)
5mm Allen Head Socket (to fit torque wrench)

Lubricants & Sealants Required:

3-in-1 Oil
Loctite thread locker 242

Installation Of Motor

Make certain the motor is not connected to a power source. Do not assemble the pump on a motor connected to a power source. Serious injury could occur if the motor starts during pump assembly.

Position the motor on its end with the shaft up. The work surface should be level and capable of supporting the motor.

> **Note:** Prior to installation review Exploded view of TC pump on page 4.

1. Position the bracket on the motor with the mounting feet pointing toward the motor. Motor vents should be located on the bottom. To assemble use (4) allen head cap screws (3/8”-16x1”) and (4) 3/8” external serrated lock washers. Tighten securely with a 5/16” allen wrench.

2. Position the cover over the motor shaft. Align the (8) holes in the cover with those in the bracket. Then, firmly press the cover into position.

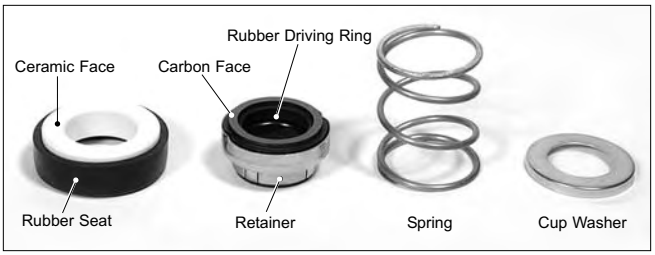
Mechanical Seal Installation

1) Lubricate the rubber element of the ceramic mechanical seal seat with mineral oil. Using a 3/4” socket or piece of 3/4” PVC pipe, press ceramic seat firmly and squarely into the seal cavity. Be sure the seal face is not damaged during assembly (cracked, scratched, or chipped) or the seal will leak.

2) Clean polished surface of ceramic seat with a soft cloth or tissue to remove all dust and grit.

3) Inspect motor shaft to make sure it is clean.

4) To prevent slip-stick, lubricate both the ceramic and carbon seal face with mineral oil. Do not let oil get on to the motor shaft or the rubber driving ring of the mechanical seal.



5) For ease of assembly lubricate the driving ring on the mechanical seal with water. By hand, carefully press the rotating seal assembly onto the motor shaft. The carbon seal face must contact the ceramic seal face. The driving ring must seal against the motor shaft. Locate spring against retainer. Now, position cup washer so end coil of spring fits inside cup washer.

Impeller And Casing Installation

1. Reposition motor horizontally.

2. To screw the impeller onto the motor shaft, remove the motor end cap located on the end oppsite the motor shaft.

3. While preventing the rotation of the exposed motor shaft, screw the 3/4" threaded impeller hub diameter protruding from impeller onto the motor shaft, continue until it contacts the shoulder on the motor shaft.

Caution: Impeller may have sharp edges, hold with a shop towel.

4. Make sure the cup washer has not become trapped between the impeller hub and the shoulder of the motor shaft during installation. Using a small tool apply pressure against the cup washer to check for movement.

5. Apply Loctite thread locker 242 to the exposed threads on the motor shaft. Install the impeller lock nut onto the shaft in the same manner as the impeller was installed. Use a 11/16 socket wrench. Make certain the impeller nut is firmly sealed against the impeller.

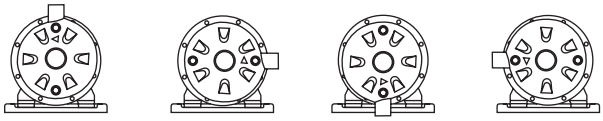
Warning: Failure to properly install the impeller and impeller lock nut could result in the impeller spinning off the shaft in three phase applications (if motor starts in reverse rotation).

Impeller Installed

6. Position the Viton o-ring over the cover. Do not nick or damage the o-ring during installation.

7. The casing can be positioned in the direction desired.

a) Position the casing over the cover.
b) Rotate the discharge in the casing to the desired position.



c) Align the bolt holes and secure the casing to the bracket with (8) M6x16mm allen head bolts and lock washers.
d) Cross tighten the bolts to 3.4 Ft. Lbs. (factory recommended torque). Over tightening may result in stripping the threads in the bracket.

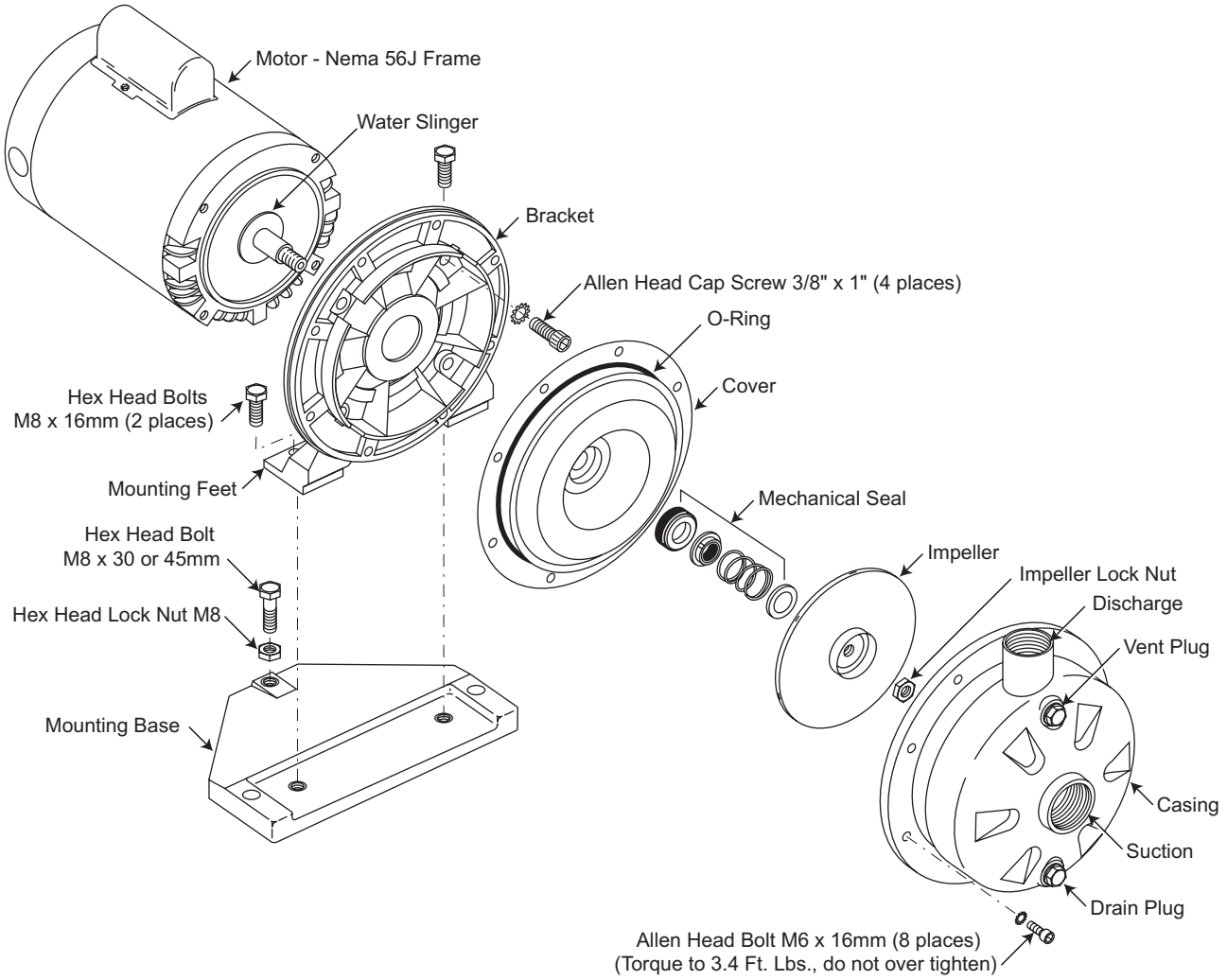
8. Place mounting base on a flat surface. Screw support bolt/nut onto the base until bolt contacts the flat surface. Two bolts are provided 1 3/4"L and 1 3/16"L. Select the correct length to accommodate the motor diameter.

9. Position the mounting base on the bracket (see exploded view) and secure with (2) M8x16mm hex head bolts. Tighten using a 13mm open end wrench. Adjust the bolt height on the mounting base to support the motor and tighten the lock nut to secure its position.

Final Inspection

After assembly, rotate the motor shaft. To do this, rotate the exposed motor shaft at the rear of the motor. If you can turn the shaft with minimum effort and no drag, the pump is operable. If not repeat the impeller and casing installation.

Exploded View



A Typical Installation