



VERTICAL WATER CIRCULATOR INSTALLATION & OPERATING INFORMATION

Installing Circulator

Install flanges on pipe before connecting flanges to circulator casing. Be sure ring gaskets are in place on casing before drawing up flange bolts.

Lubrication

Oil all three cups before starting and every three months thereafter. Fill motor oil cups with S.A.E. #20 non-detergent oil. Use S.A.E. #30 non-detergent oil for bracket. For high temperature or continuous operation, more frequent oiling will be necessary.

Wiring

Circulator motors have openings for BX connector and two wiring posts under the terminal cover. Be sure two lead wires are securely fastened under the terminal nuts. **DO NOT CONNECT SOLID CONDUIT TO CIRCULATOR MOTOR.** Use 18" flexible conduit between the end of the solid conduit and motor.

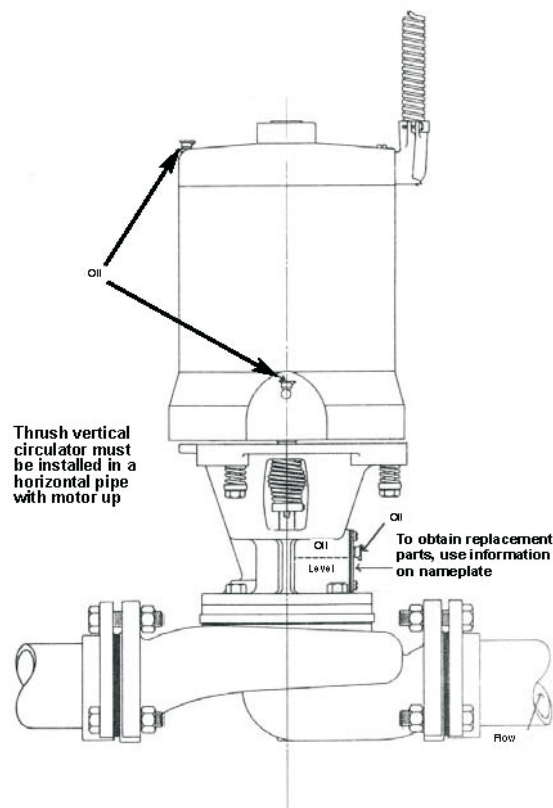
Motor Rotation

All motors on Thrush circulators have counter clockwise rotation looking a shaft end. When looking at motor end, rotation will be clockwise.

Caution

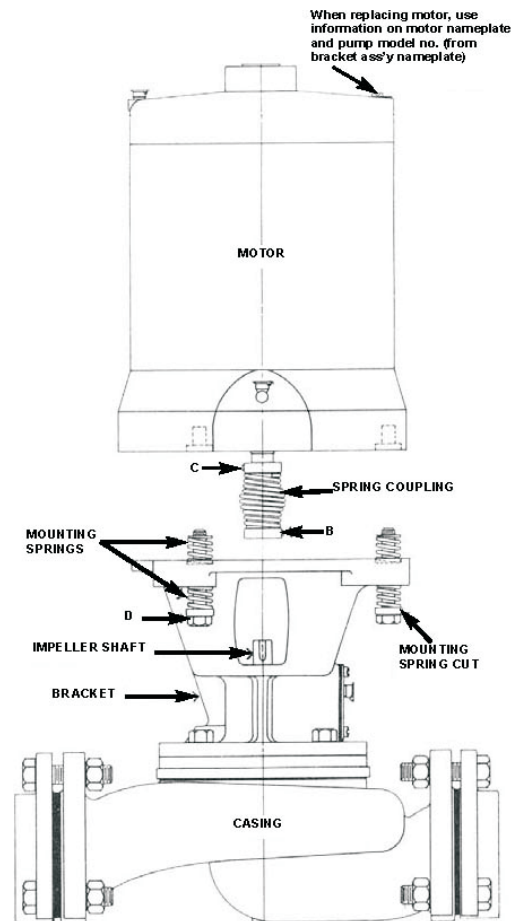
Mechanical seal life is affected adversely by the presence of abrasive impurities in the system. One of the most common abrasives is black iron oxide. Another important factor in seal life is water treatment. It is recommended that the chromate content of the system not exceed 250 PPM.

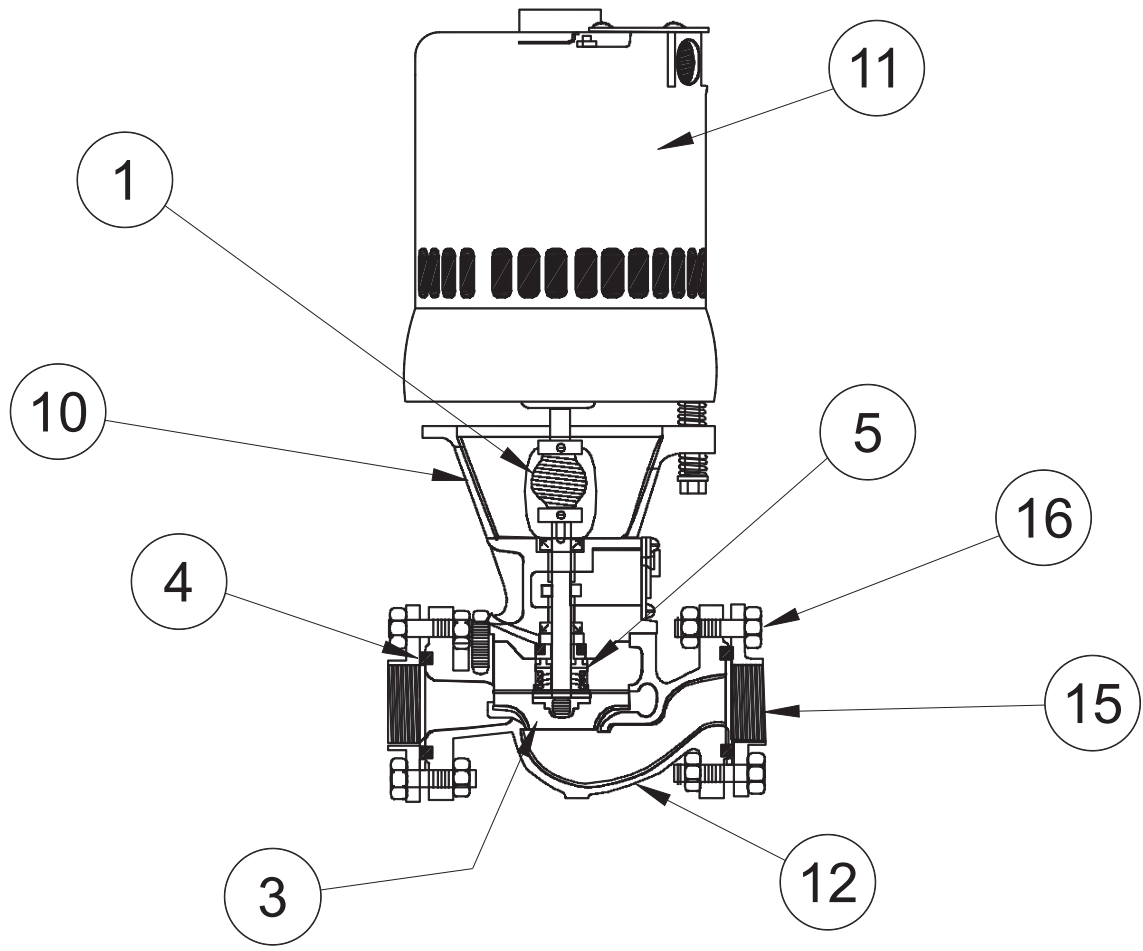
OIL MOTOR AND BRACKET BEFORE STARTING



VERTICAL WATER CIRCULATOR TO REMOVE AND REINSTALL MOTOR

1. Turn off current and disconnect wiring to motor.
2. Loosen set screw "B".
3. Remove three bolts "D", and lift motor (with coupling attached) from bracket. Each bolt has two mounting springs (one above and one below bracket) and a spring cup; caution should be exercised with these parts as replacements are not furnished.
4. When replacing the motor, loosen the set screw "C" and slide the coupling off of the old motor shaft. Fasten the spring coupling to the new motor shaft by tightening the set screw "C" down on flat of motor shaft. Coupling should be within 1/4" of the motor face.
5. Set mounting springs in recesses on top of the bracket
6. Set motor in place on springs. Guide coupling over impeller shaft. Assure mounting springs are in motor base recesses.
7. Start motor mounting bolts "D" into motor, push down on top of motor, applying enough pressure to relieve spring tension on bolts "D" and hand tighten. Assure that springs are seated in spring cups as shown in illustration.
8. Stretch spring coupling approximately 1/8" toward casing. CAUTION: Spring coils should not touch; as this will result in excessive noise. Tighten set screw "B" down flat on impeller shaft.
9. Rewire motor and turn on current. In installing new motor, fill motor oil cups with S.A.E. #20 non-detergent oil.





VERTICAL WATER CIRCULATORS

**MODEL "V" CIRCULATOR
PART NUMBER 1501-1020***

ITEM NUMBER	PART NUMBER	DESCRIPTION
1	7304-0001	Barrel Spring Coupling
3	9600-3260	Impeller (Brass)
4	9754-0020	Flange Gasket 2 bolt (Included in P/N 810-191)
5	7302-3000	Seal Kit – Type HVN/HVC
10	1501-900	Bracket Assembly – HV-300N
11	1030-2	Motor 115/60/1ph 1/4 HP 48 Frame ODP Encl.
12	9600-1031	Casing (Cast Iron)
15	810-1 810-2 810-3 810-4	3/4" 2 – Bolt Steel Flange Set 1" 2 – Bolt Steel Flange Set 1 1/4" 2 – Bolt Steel Flange Set 1 1/2" 2 – Bolt Steel Flange Set
16	810-191	Nuts, Bolts, Gaskets for 2 Bolt Flange Sets

*See page 7 for exploded view.

**MODEL "22V" CIRCULATOR
PART NUMBER 1503-1030***

ITEM NUMBER	PART NUMBER	DESCRIPTION
1	7304-0001	Barrel Spring Coupling
3	9600-3100	Impeller (Bronze)
4	9754-0020	Flange Gasket 2 bolt (Included in P/N 810-191)
5	7302-3000	Seal Kit – Type HVN/HVC
10	1503-900	Bracket Assembly – HV-500N
11	1030-2	Motor 115/60/1ph 1/4 HP 48 Frame ODP Encl.
12	9601-1011	Casing (Cast Iron)
15	810-6	2" 3 – Bolt Steel Flange Set
16	810-191	Nuts, Bolts, Gaskets for 2 Bolt Flange Sets

*See page 7 for exploded view.