

MARCH PUMPS

Assembly & Disassembly Manual

TE-10KS-MD & TE-10PS-MD

PURPOSE: This manual is intended to instruct pump users on the assembly and disassembly of the TE-10KS-MD and TE-10PS-MD.

CAUTION IN ASSEMBLY & DISASSEMBLY: The magnetic coupling in the pump is strong enough to warrant caution. When servicing the pump, the attraction of the impeller magnet and drive magnet may pull the impeller from your grasp.

When **disassembling**, hold onto the outer diameter of the impeller vanes with both hands and disengage the impeller from the magnetic field. Hold the impeller firmly and resist the magnetic attraction as you pull the impeller from the rear housing. Ensure that the rear housing is secured to the motor bracket with the two screws (Item C) supplied before pulling the impeller out. Do not allow the impeller to snap into the rear housing, doing so may result in damage.

When **assembling**, *always* use the safety wooden boards (Item B) before attempting to mount the wet-end assembly onto the guide pins. Using the guide pins (Item A) supplied, use both hands to mount the wet-end assembly onto the pins. Slowly slide the wet-end assembly onto the pins to gently engage the wet-end assembly into the magnetic field. Hold the wet-end assembly firmly and resist the magnetic attraction as you slowly put it in. Do **NOT** place your fingers in between the wet-end assembly and wooden safety boards.

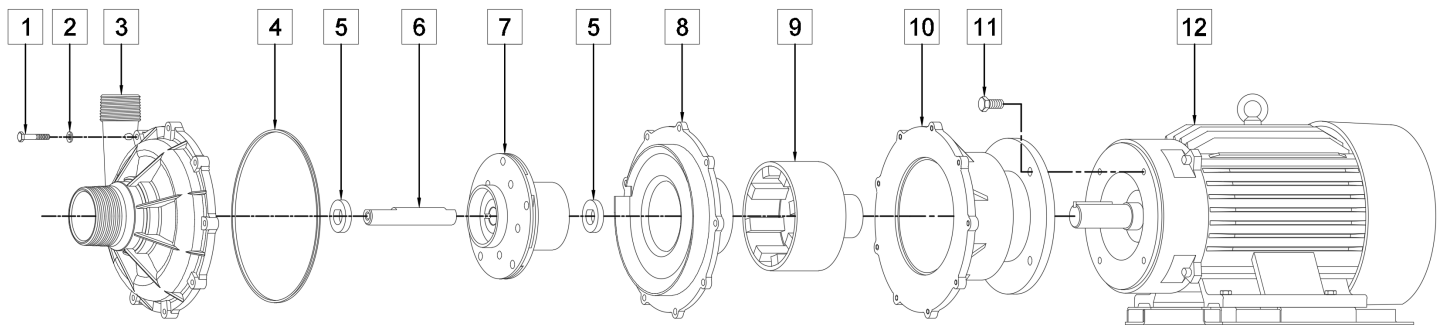
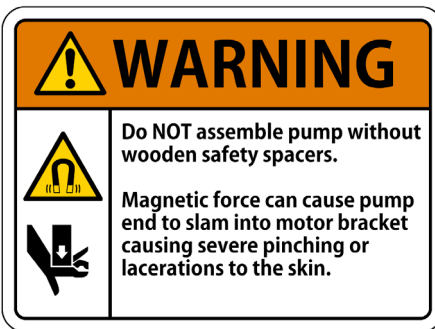
The magnetic forces are strongest between 1/3 to 2/3 of engagement and will diminish when the magnets become aligned. Exercise caution in placing any of the magnets near steel, tools, or other sensitive instruments as doing so may result in damage or personal injury. When attaching drive magnet to motor shaft, position the face of the drive magnet 3/16 inch above the face of the motor bracket.

SAFETY INSTRUCTIONS:

Ensure power to the motor is OFF before servicing the pump.

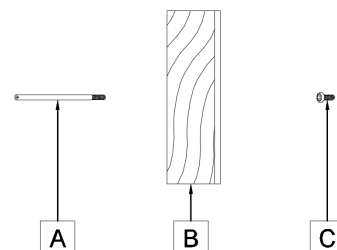
Suction and discharge valves *must* be closed before disassembling the pump. It is recommended to drain the pump and piping before servicing as they may contain fluid. If hazardous fluids are used, wear the proper personal protective equipment (PPE) and flush the pump with water or appropriate solution.

Always wear safety glasses and safety gloves when assembling or disassembling the pump.



Parts List					
Item	Description	Qty.	Item	Description	Qty.
1	Screw 5/16-18 x 1-3/4	9	9	Rear Housing	1
2	Washer (Flat) 5/16	9	10	Drive Magnet	1
3	Front Housing	1	11	Motor Bracket	1
4	Gasket	1	12	Screw 1/2-13 x 1	4
5	Thrust Washer	2	13	Motor	1
6	Shaft	1	A	Guide Pin	2
7	Impeller	1	B	Safety Wooden Board	2
8			C	Screw 5/16-18 x 3/4	2

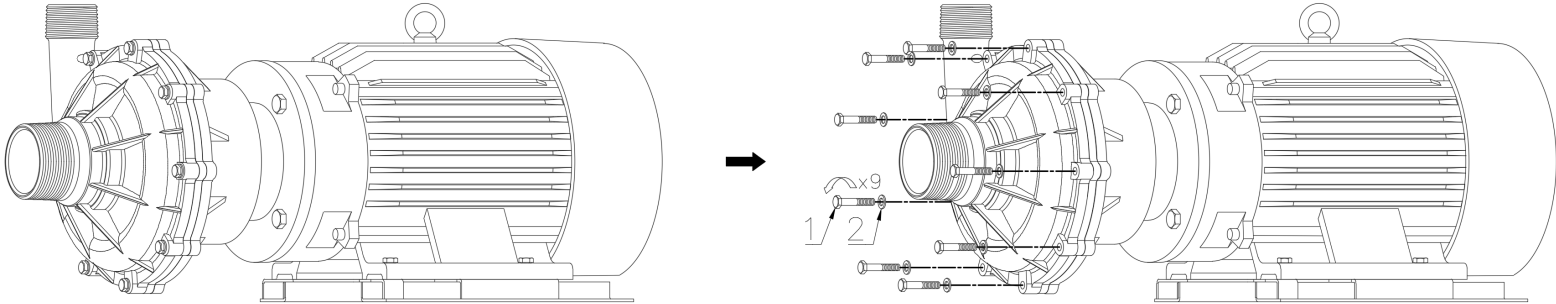
For Assembly/Disassembly



Note: Do NOT discard items A, B, or C. Retain these items in a safe location for future assembly/disassembly.

Pump End Disassembly Instructions

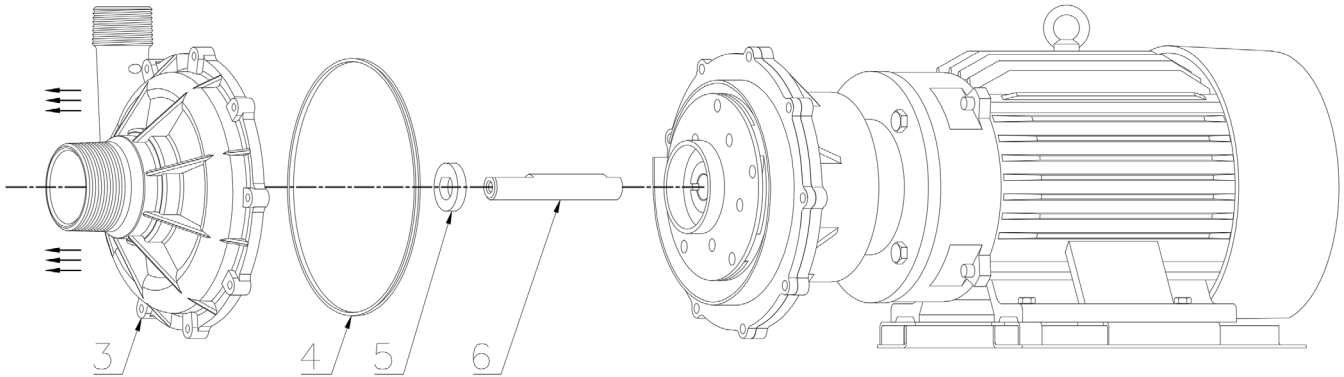
1)



Unfasten Screws from Wet-End Assembly

- a. Remove the nine hex head screws (#1) and nine flat washers (#2) with a 1/2" socket.

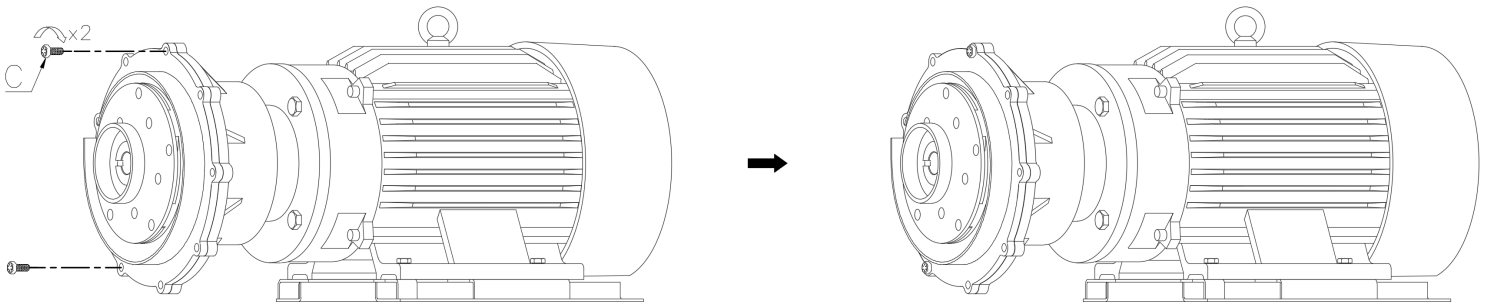
2)



Remove Wet-End Components

- a. Carefully remove the front housing (#3) by pulling it away from the motor. Be careful to not damage the shaft (#6) as it may fall out when removing the front housing.
- b. Remove the shaft from the front housing or impeller.
Note: The shaft may be attached to the front housing or inside the impeller.
- c. Remove the thrust washer (#5).
- d. Remove the gasket (#4) from the front housing groove.

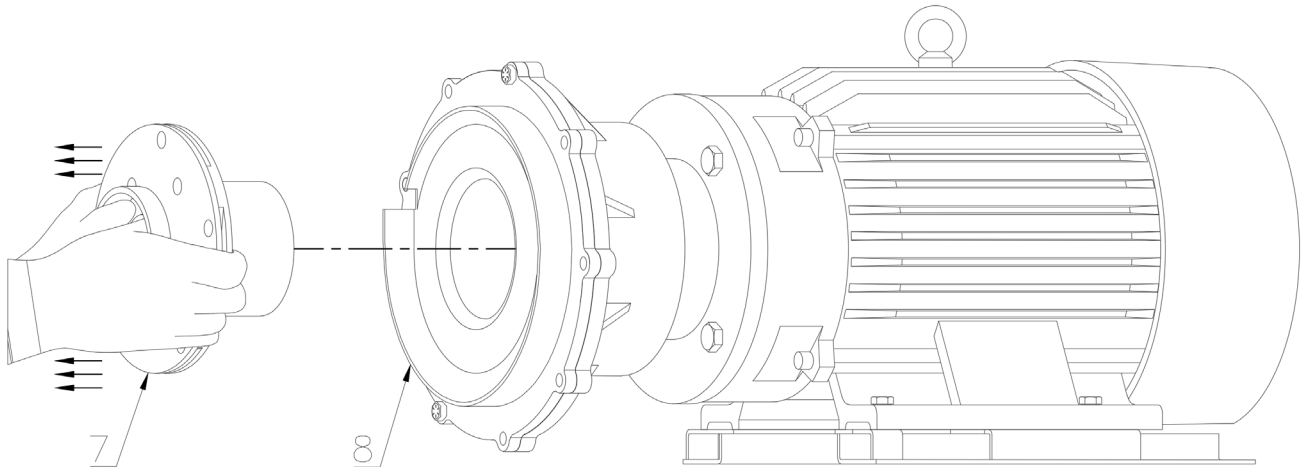
3)



Fasten Screws to Rear Housing

- a. Secure two screws (Item C) as shown above.
⚠ Warning: Failure to fasten screws (Item C) to the rear housing and motor bracket can cause the rear housing to fall out and lead to injury.

4)

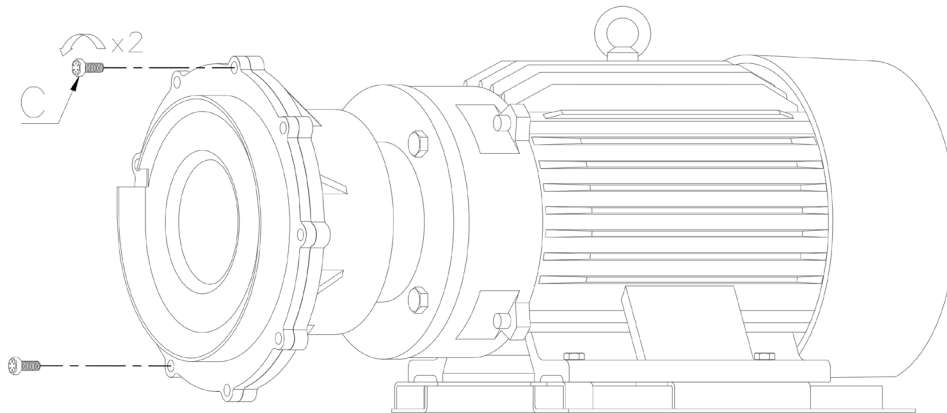


Remove Impeller

- a. Carefully pull the impeller (#7) away from the rear housing (#8). Due to the strength of the magnetic field, sufficient force is required to separate the impeller and drive magnets.

⚠ Warning: When dislodging the impeller, exercise caution to ensure adequate force is applied during the removal process; failure to do so may result in the impeller moving into the rear housing, posing a risk of finger pinching against sharp edges.

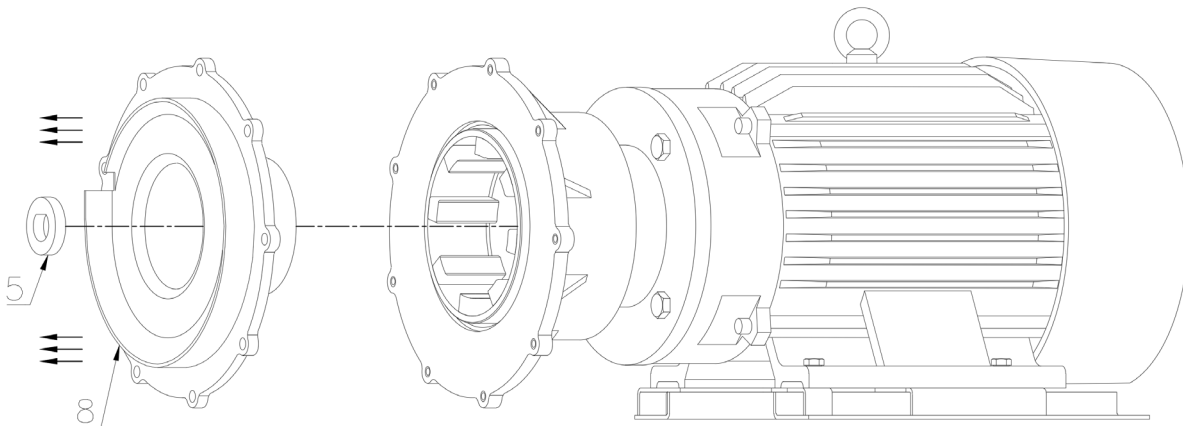
5)



Unfasten Two Screws from Rear Housing

- a. Remove the two hex head screws (Item C) from the rear housing.

6)

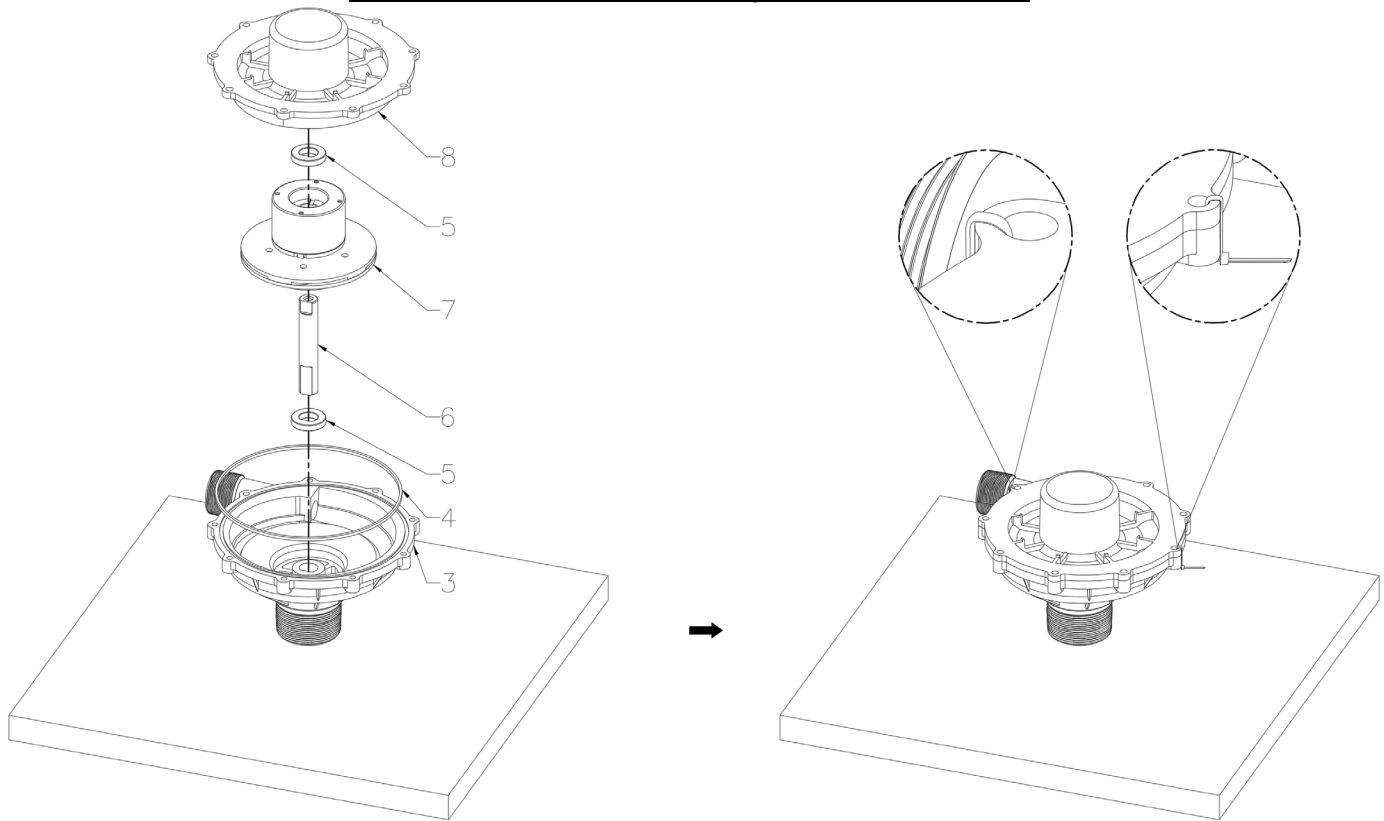


Remove Rear Housing and Thrust Washer to Complete Disassembly

- a. Using both hands, carefully remove rear housing (#8).
- b. Remove thrust washer (#5).
- c. Store the guide pins (Item A), safety wooden boards (Item B), and screws (Item C) in a safe location for future assembly/disassembly.

Pump End Assembly Instructions

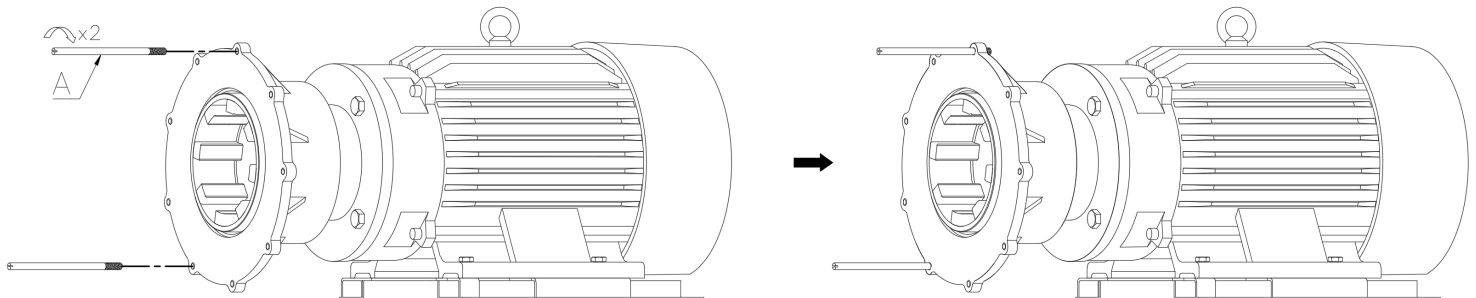
1)



Assemble the Wet-End Components

- Place the front housing (#3) on a flat surface with the inlet facing down, as shown.
- Press the gasket (#4) into the front housing groove. Ensure that the gasket is fully seated in the groove.
- Put the front thrust washer (#5) onto the shaft (#6) with the longer shaft flat facing down. Insert the thrust washer and shaft into the front housing.
- Slide the impeller (#7) onto the shaft with the impeller blades facing down.
- Put the rear thrust washer (#5) onto the shaft.
- Insert the rear housing (#8) into the shaft. Ensure the shaft and rear thrust washer flats are aligned with each other and the rear housing is coaxial with the shaft. There should be no gaps between the front and rear housing.
- Using both hands, lift the assembly and gently rock back and forth to determine if there is slight movement of the impeller. If there is no movement, the impeller cannot freely rotate on the shaft. Therefore, disassemble and inspect the components. Reassemble and ensure slight movement of components before proceeding to the next step.
- It is highly suggested to use two cable ties (minimum breaking strength of 40 lbs. each) to facilitate the assembly. Tighten the cable ties to secure the front and rear housings.

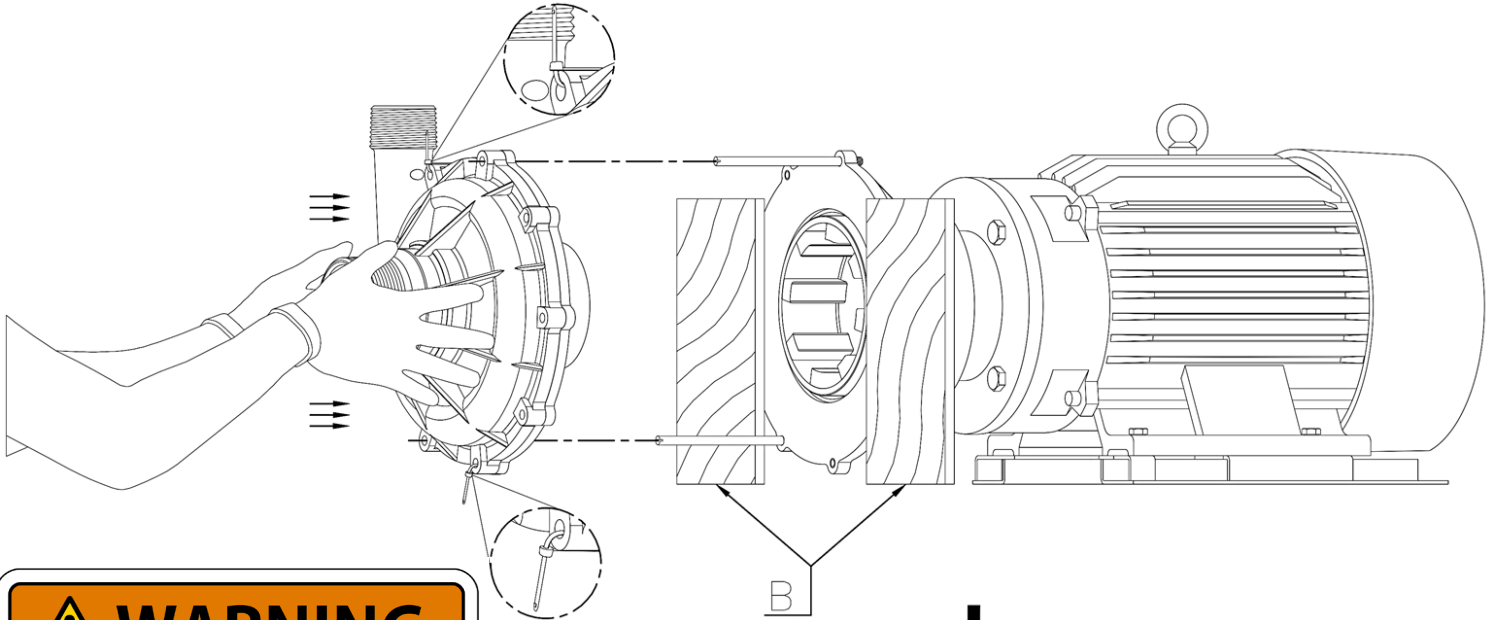
2)





Fasten the Guide Pins

- Using a flathead screwdriver, screw two guide pins (Item A) into the motor bracket as shown.

3)



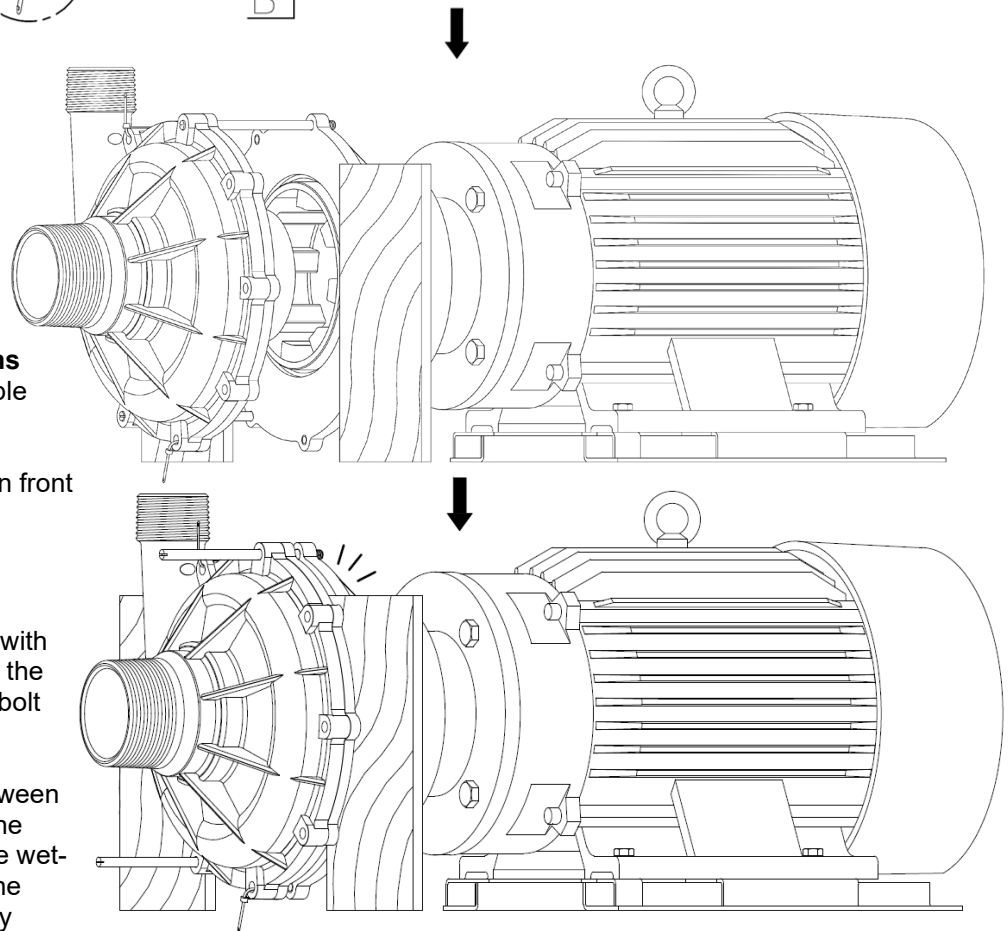
! WARNING	
	<p>Do NOT assemble pump without wooden safety spacers.</p>
	<p>Magnetic force can cause pump end to slam into motor bracket causing severe pinching or lacerations to the skin.</p>

Insert Wet-End Assembly into Guide Pins

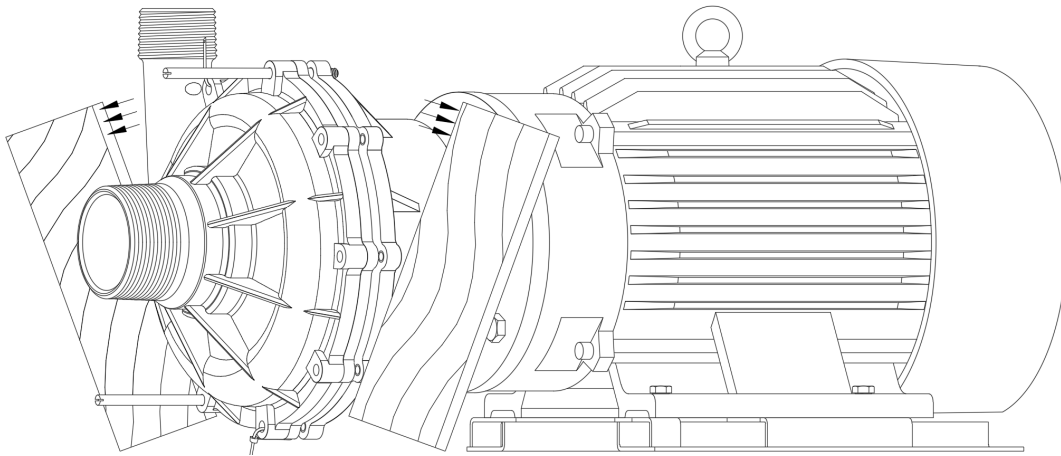
- a. Assemble on a flat surface. Do not assemble with the motor bracket overhanging.
- b. Place two safety wooden boards (Item B) in front of the motor bracket.
⚠ Warning: Failure to use safety wooden boards can lead to injury.

- c. Align the assembled wet-end components with the guide pins and slide the assembly until the guide pins are flush with the front housing bolt hole mounting surfaces.
- d. Keep your hands clear from the region between the assembled wet-end components and the wooden safety spacers. Gradually push the wet-end components into the motor bracket. The drive magnet will pull the wet-end assembly towards the motor bracket. The safety wooden boards will absorb the impact from the wet-end components.

⚠ Warning: Keep your fingers away from the motor bracket and wet-end assembly to avoid potential pinching.



4)

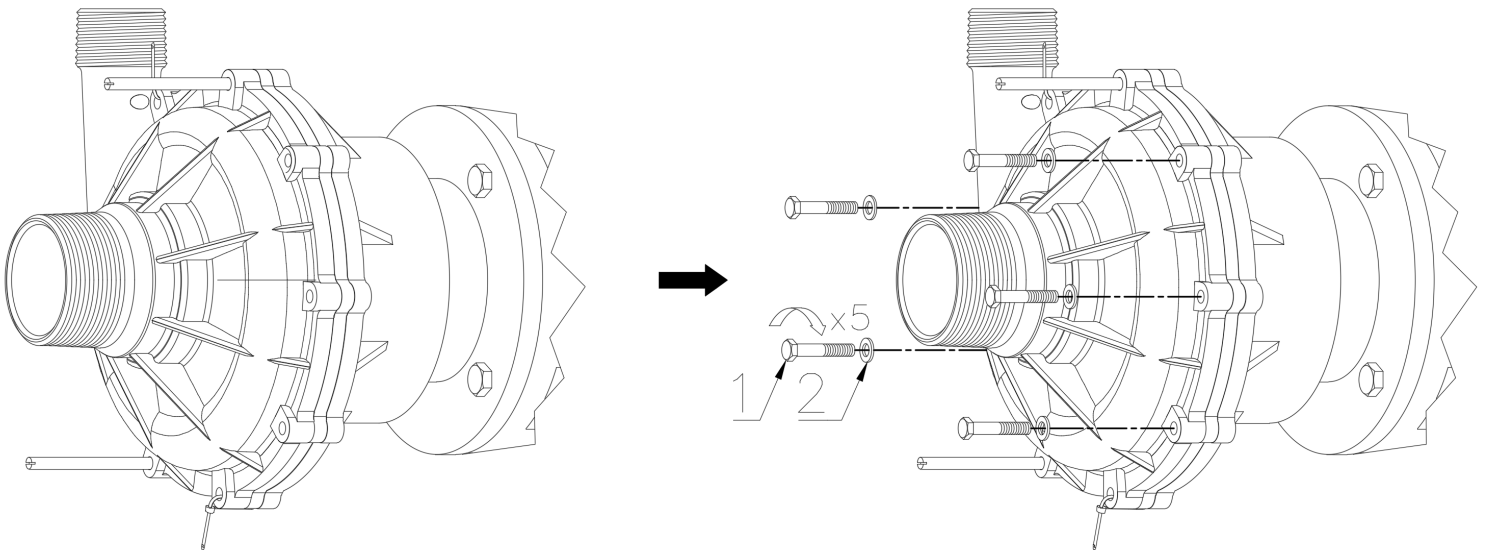


Remove Safety Wooden Boards

- a. Apply force to slide the safety wooden boards to the side. Once the safety wooden boards are removed, the magnetic force will pull the wet-end assembly towards the motor until it hits the motor bracket. Ensure there is no gap between the rear housing and motor bracket.

⚠Warning: Keep hands away from gap between the rear housing and motor bracket.

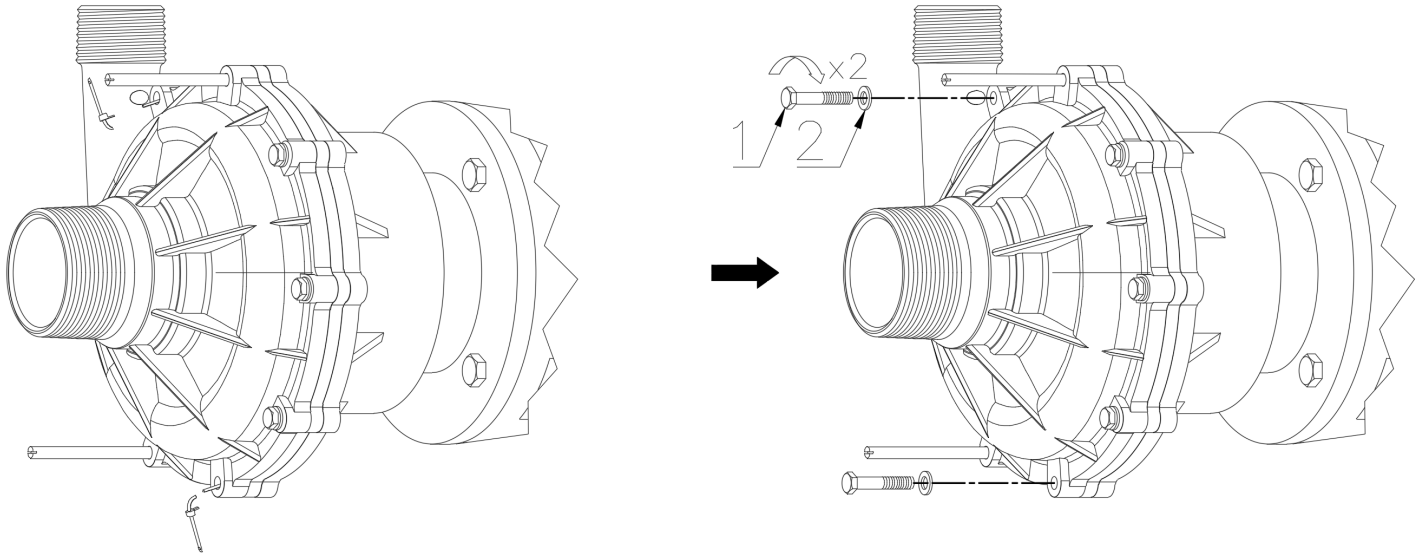
5)



Fasten Hex Head Screws and Washers

- a. Without removing the guide pins and cable ties, begin to fasten five hex head screws (#1) and five washers (#2) into the five remaining threaded holes.
- b. Fasten the screws and washers to a "finger-tight" level, exercising care as to not pinch the cable ties.

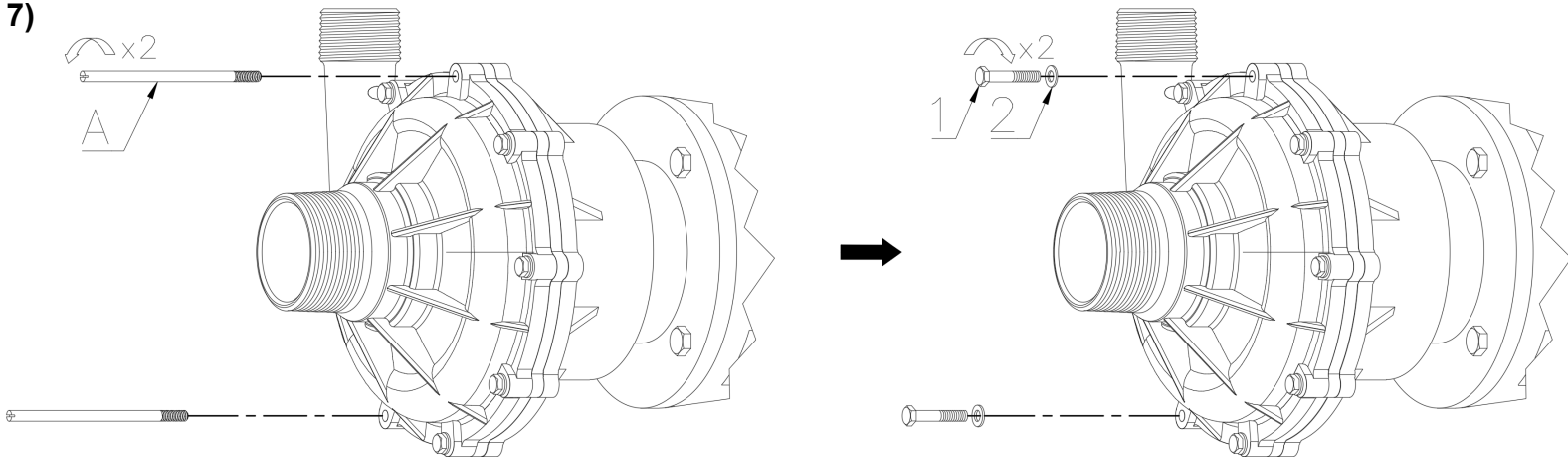
6)



Cut Cable Ties and Fasten Two Hex Head Screws and Two Washers

- Cut and fully remove the two cable ties. Do not leave any portion of the cable ties in between the rear housing and motor bracket.
- Hand-tighten two hex head screws (#1) and two washers (#2) into the threaded holes.

7)



Remove Guide Pins and Fasten Two Hex Head Screws and Two Washers to Complete Assembly

- Remove the two guide pins.
- Hand-tighten two hex head screws (#1) and two washers (#2) into the two remaining threaded holes.
- Finish tightening all nine hex head screws in a crisscross pattern to 100 in-lbs.
- Store the guide pins (Item A), safety wooden boards (Item B), and screws (Item C) in a safe location for future assembly/disassembly.