

Please read and save this Repair Parts Manual. Read this manual and the General Operating Instructions carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. The Safety Instructions are contained in the General Operating Instructions. Failure to comply with the safety instructions accompanying this product could result in personal injury and/or property damage! Retain instructions for future reference.

SHURflo Corrosion-Resistant Pedestal Centrifugal Pumps

Noryl® Series and Polypropylene Series

Refer to form L-4077 for General Operating and Safety Instructions and Applicable Warranty.

Description

SHURflo pedestal non-metallic pumps produce high flow rates under moderate head conditions.

Designed for continuous medium pressure circulation and transfer of nonflammable liquids, water circulation, booster service, irrigation, spraying systems, jockey pump service, aggressive liquid applications, and other general-purpose pumping compatible with pump component materials where no suction lift is required. Water seal flush port is provided for the decontamination of chemicals on the seal and seat elastomers.

- Capacities to 110 GPM, heads to 95 ft.
- 1/3 to 3 HP AC requirement range.
- Discharge can be rotated in 90-degree intervals.
- All pumps have 1½" female NPT inlet and outlet ports.
- Standard pump models (at 3450 RPM) will handle specific gravities to 1.1 (at 100 SSU or less). For specific gravities to 1.4 (at 100 SSU or less), increase motor HP by one size but not to exceed standard 3 HP motor at 3450 RPM or 65 in.-lbs. of torque maximum. Higher specific gravity fluids are not recommended.
- Standard pump models (at 3450 RPM) will handle viscosity to 100 SSU (at 1.1 specific gravity or less) and up to 200 SSU (specific gravity of 1.0 or less). For viscosity up to 400 SSU (specific gravity of 1.0 or less), increase motor HP by one size but not to exceed standard 3 HP motor at 3450 RPM or 65 in.-lbs. of torque. For fluids with a viscosity greater than 400 SSU, pump speed must be reduced below 3450 RPM.
- Maximum operating speed is 3600 rpm.
- Pedestal-mount models feature a 5/8" diameter; 316 stainless steel solid shaft; a corrosion-resistant coated cast iron bearing housing and sealed ball bearings. They may be either long coupled or pulley driven with any base-mounted motor such as ODP, TEFC or wash-down motors.

CLOSE COUPLED – Non-metallic pumps are also available that feature NEMA 56J frame motors with base.

NORYL SERIES – This series is designed for industrial chemical application. The pumps are made of Noryl, which is non-metallic and chemical-resistant to most acids, alkalis, and inorganic solvents. This material is stiffer under pressure and temperature than the Polypropylene Series. Noryl models handle inlet booster pressures to 30 PSI and maximum temperatures up to 180° F. These pumps are equipped with a unique chemical-resistant, carbon and ceramic mechanical seal with Viton elastomer having the stainless steel components sealed in Noryl allowing for a complete non-metallic Noryl wet end. This unique seal guarantees reliability through simplicity and balance of design. Even the pedestal drive shaft is protected by the seal design.

POLYPROPYLENE SERIES – This series is designed for light industrial or commercial water-based applications. The pumps are made of non-metallic, glass-filled polypropylene construction offering chemical resistance to most acids, alkalis, and inorganic solvents as does the Noryl Series. The difference is these pumps are equipped with a carbon ceramic mechanical seal with Buna-N elastomers with the stainless steel components that are not sealed, but still protect the pedestal shaft from chemical exposure. The polypropylene series cannot handle added inlet booster pressures and is rated for a maximum temperature of 140° F. However, upgraded chemical-resistant, polypropylene-encased seals are available.

REPAIR SEALS AND OPTIONS – Standard and upgraded seals are available for both the Noryl and Polypropylene pumps. If abrasive or small, particulated fluids are being pumped, upgrading to either the encased Noryl or polypropylene silicon carbide mechanical seal with Viton elastomers is recommended. Standard and upgraded seals can be located on the repair parts list pages in this manual.

PUMP HEADS AND PEDESTAL MOUNT BASE – Complete pump heads and pedestal base can be ordered. Pump head and pedestal base model numbers are called out in the repair parts list pages in this manual.



Do not use to pump flammable or explosive fluids such as gasoline, fuel oil, kerosene, etc. Do not use in flammable and/or explosive atmospheres. When pumping hazardous or dangerous materials, use only in room or area designated for that purpose. For your protection, always wear proper clothing, eye protection, etc. in case of any malfunction. For proper handling techniques and cautions, contact your chemical supplier, insurance company and local agencies (fire dept., etc.). Failure to comply with this warning could result in personal injury and/or property damage.

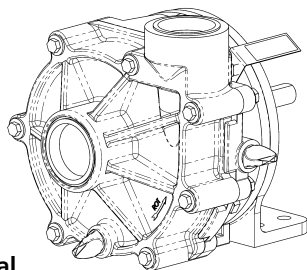
⚠ CAUTION

Pumps are not self-priming and cannot suction lift, flooded inlet is required. If inlet is not flooded when the pump is running, seal failure will result and is not covered under the manufacturer's warranty.

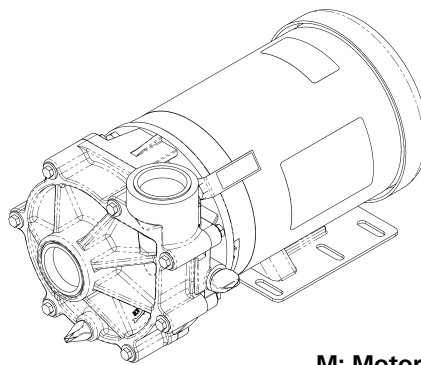
SHURflo Corrosion-Resistant Pedestal Centrifugal Pumps

Noryl® Series and Polypropylene Series

Model Ordering Codes and Options



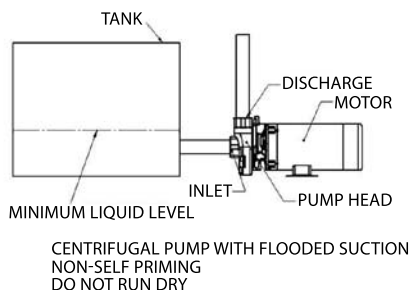
P: Pedestal



M: Motor (with base)

Example Model: CHPPB4 (will require 1½ HP ODP motor with >1.15 Service Factor*)
(motor not supplied with pedestal pump)

		(1) CH	(2) P	(3) P	(4) B	(5) 4	(6)	(7)	(8)
1st	2nd	3rd	4th	5th	6th	7th	8th		
Series	Mounting	Material	Seal** (Mech)	Impeller Sz. (NPT Ports)	Motor-Mounted Only		Impeller Type		
					HP	AC Type			
CH: Centrifugal High Head Closed Impellers (Open Impellers Optional)	M: Motor (with base) P: Pedestal	N: Noryl P: Polypropylene	A: Viton (Noryl Encased) B: Buna-N (Stainless Steel Case) C: Viton (Polypropylene Case) (Silicon Carbide Seal / Seat Faces) N: Neoprene (Polypropylene Case) (Ni-Resist Seat) P: Viton (Polypropylene Case) V: Viton (Stainless Steel Case) X: Viton (Noryl Case) (Silicon Carbide Seal / Seat Faces)	1 (1½" - 1½") 2 (1½" - 1½") 3 (1½" - 1½") 4 (1½" - 1½") 5 (1½" - 1½") 6 (1½" - 1½") <i>To identify your impeller size, see chart in owner's manual.</i>	1: 1/3 2: 1/2 3: 3/4 4: 1 5: 1½ 6: 2 7: 3 X: 56J Frame Motor "wet-end kit" Example: CHMNP1X	Blank: no code single phase ODP motor 3: 3 phase ODP motor T: 1 phase TEFC 3T: 3 phase TEFC	Blank: closed O: open Impellers (Poly- propylene only)		



NOTE: Not all order code combinations (configurations) are standard models available from the manufacturer. Custom model configurations may require ordering standard components and/or optional parts that will need to be assembled by the customer.

Manufacturer reserves the right to change model order codes, standard models, specifications and performance without notification.

(*) ODP motors have > 1.15 service factors. Due to service factor, it is recommended TEFC motors are oversized by one HP increment.

Pedestal Pumps are not supplied with a motor.

(**) Unless otherwise noted, seal faces are carbon on ceramic.

Noryl® Series and Polypropylene Series

Performance – Standard Models (Water at 70°)

Noryl Models	Polypro- pylene Models	HP**	3450 RPM Pump Driven Speed GPM of water at Total Head in Feet*								Max. Head
			10	20	30	40	50	60	70	80	
CHPNA2	CHPPB2	1/2	37	33	29	24	18	10	2		72
CHPNA4	CHPPB4	1½	85	78	73	66	59	50	41	21	89
CHPNA5	CHPPB5	2	96	89	83	77	68	58	47	31	91
CHPNA6	CHPPB6	3	123	115	106	97	86	76	63	48	95

Noryl Models	Polypro- pylene Models	HP**	2850 RPM Pump Driven Speed GPM of water at Total Head in Feet*								Max. Head
			7	13	20	26	33	40	46	53	
CHPNA2	CHPPB2	1/3	30	27	24	19	15	8	2	0	48
CHPNA4	CHPPB4	1	69	63	59	54	48	41	33	17	59
CHPNA5	CHPPB5	1½	78	72	67	63	55	47	38	25	60
CHPNA6	CHPPB6	2	100	93	86	79	70	62	51	39	63

Noryl Models	Polypro- pylene Models	HP**	1725 RPM Pump Driven Speed GPM of water at Total Head in Feet*								Max. Head
			3	4	5	8	10	13	15	20	
CHPNA2	CHPPB2	1/4	19	17	15	12	9	5	1	0	18
CHPNA4	CHPPB4	1/2	43	39	37	33	30	25	21	11	22
CHPNA5	CHPPB5	3/4	48	45	42	39	34	29	24	16	23
CHPNA6	CHPPB6	1	62	58	53	49	43	38	32	24	24

(*) Test data is taken with water at 70°F (to convert data to PSI, divide feet of head by 2.31).

Pump performance when pump is new. As pump wears, the performance will decrease.

(**) AC HP required at specified RPM is HP rated to handle up to 100 SSU at full flow, with a maximum specific gravity of 1.1, or up to 200 SSU at 1.0 specific gravity or less.

NOTES: Max. Viscosity = For viscosity up to 400 SSU (at 1.0 specific gravity or less), increase motor HP by one size but not to exceed standard 3 HP motor at 3450 RPM or 65 in.-lbs. of torque. For fluids with a viscosity greater than 400 SSU, pump speed must be reduced below 3450 RPM.

Max. Casing PSI = 100

Max. RPM = 3450

Max. Specific Gravity = up to 1.1 for standard models (at 100 SSU or less); HP must be increased by one size for specific gravities up to 1.4.

Driver data is subject to change without notice; see label on driver for actual specifications.

Manufacturer reserves the right to change performance without notification.

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Specifications – Standard Models

DRIVER				PUMP CONSTRUCTION (Wet End)					Ship Wt. (lbs.)
Model	Shaft Dia.	Pedestal Base	Shaft Material	Port Size NPT Female	Housing	Impeller	Motor Adapter	Seals*	
Noryl Models									
CHPNA2	5/8"	CI	316 SS	1½"	Noryl	Noryl	Noryl	Noryl / Viton**	13
CHPNA4	5/8"	CI	316 SS	1½"	Noryl	Noryl	Noryl	Noryl / Viton**	13
CHPNA5	5/8"	CI	316 SS	1½"	Noryl	Noryl	Noryl	Noryl / Viton**	13
CHPNA6	5/8"	CI	316 SS	1½"	Noryl	Noryl	Noryl	Noryl / Viton**	13
Polypropylene Models									
CHPPB2	5/8"	CI	316 SS	1½"	PP	PP	PP	Buna-N***	13
CHPPB4	5/8"	CI	316 SS	1½"	PP	PP	PP	Buna-N***	13
CHPPB5	5/8"	CI	316 SS	1½"	PP	PP	PP	Buna-N***	13
CHPPB6	5/8"	CI	316 SS	1½"	PP	PP	PP	Buna-N***	13

SS = Stainless Steel CI = Cast Iron PP = Polypropylene

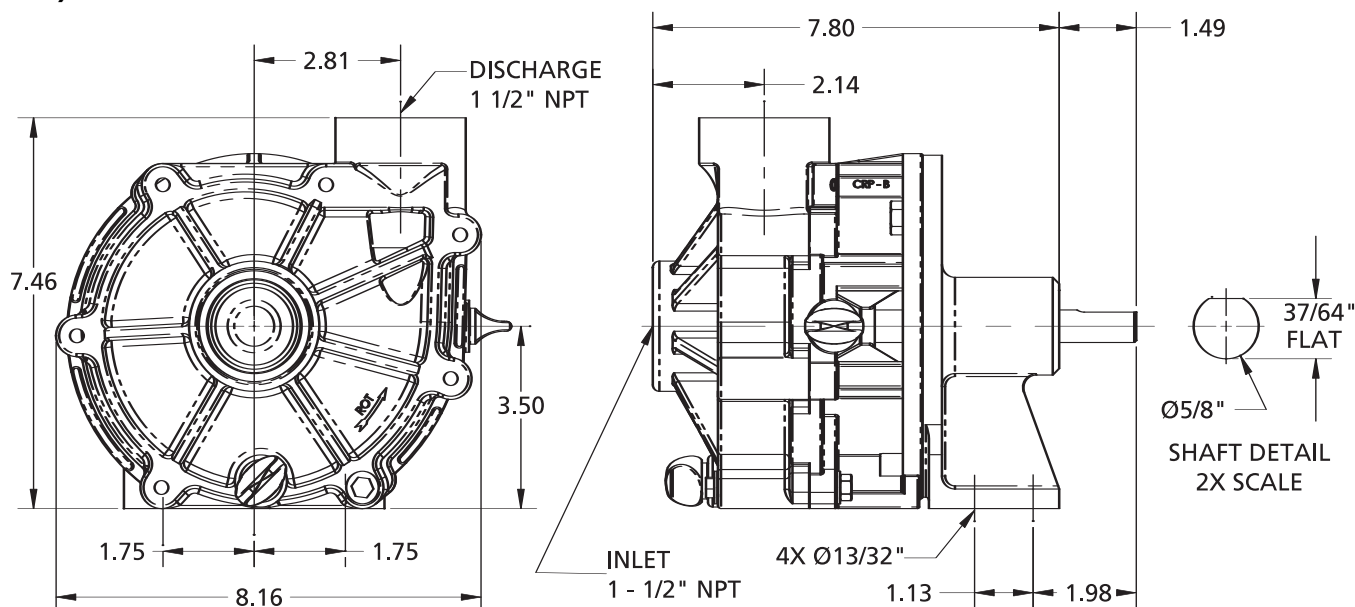
(*) Shaft Seals also contain ceramic and carbon components.

(**) Seals are Noryl encased with viton elastomer. No metallic components are exposed to fluid.

(***) Seal is not encased. 18-8 stainless steel spring and casing are exposed to fluid.

NOTE: Manufacturer reserves the right to change specifications without notification.

Dimensions (Inches)



NOTE: Dimensions have a tolerance of $\pm 1/8"$.

(Ø) Diameter.

Noryl® Series and Polypropylene Series

⚠ CAUTION *Make certain that the unit is disconnected from the power source before attempting to service or remove any components! Do not exceed 3600 rpm operating speed.*

Drive Source Installation for the Pedestal-Mount Pump

This manual covers the installation of the basic drive configuration for the pedestal polypropylene and noryl centrifugal pumps. Consult the manufacturer of motor or engine for additional information. Read all instructions before attempting to install or operate the pump. The unit should run clockwise as viewed facing the shaft end. Counterclockwise rotation can result in damage to the pump motor, property damage and/or personal injury.

⚠ DANGER *Safety shields are required and must be mounted and kept in place while power is supplied to pump drive.*

BELT/PULLEY DRIVE INSTALLATION

1. For pulley-driven pumps, a single 1/2" [12.7 mm] (A or 4L section) "V" belt is satisfactory for drive sizes and speed up to 1 HP, 3450 RPM. For larger sizes, double "V" belts are recommended.

2. Mount pulleys as close to the pump and motor engine shaft bearings as possible. Check the alignment with a straight edge as shown in Figure 1. Make sure that the belt has proper tension. (Too much tension will cause bearing wear; too little will cause slippage). See Figure 2. Check with belt and pulley sources for specific recommendation. A safety shield (belt guard) must be installed over the motor/pump pulleys and belts.
3. To figure proper diameter of pump pulley, multiply motor/engine RPM by the diameter of the motor/engine pulley and divide that figure by the desired pump speed.

$$\text{Pump Pulley Size} = \frac{\text{Motor RPM} \times \text{Motor Pulley Size}}{\text{Desired Pump Speed}}$$

4. A safety shield (belt shield) must be installed over the pump and motor shafts, pulleys and belt.

NOTE: Refer to the pump performance charts to determine the desired speed to obtain the desired maximum flow.

Direct Drive - Flexible Coupling

For direct driving of pedestal centrifugal pumps with flexible couplings, make sure that the speed (RPM) of the gas engine or electric motor is within the maximum rated RPM of your pump. Make sure that shaft rotation is correct between the pump and the motor or gas engine (see Figure 3).

1. Mount the motor or engine into position on the base.
2. Line up the pump shaft with the straight edge as shown in Figure 4 to assure they are aligned. Shim the pump if necessary to match the shaft height of the engine or motor. The shaft ends should not touch.
3. Mark the exact position of the pump on the base. Remove and install the coupling halves on both shafts. Place the coupling center disc into one of the coupling halves.
4. Re-position the pump, sliding the coupling halves together.

NOTE: No end thrust should be applied to the pump when the coupling is connected.

5. Tighten the pump mounting and then the set screws on each coupling.
6. A safety shield (coupling guard) must be installed over the pump and motor shafts and coupling.

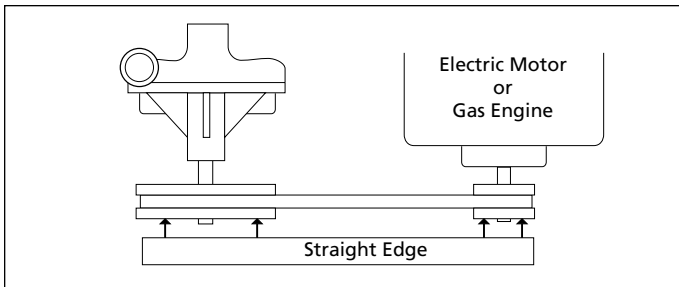


Figure 1 – Belt/Pulley Drive Installation

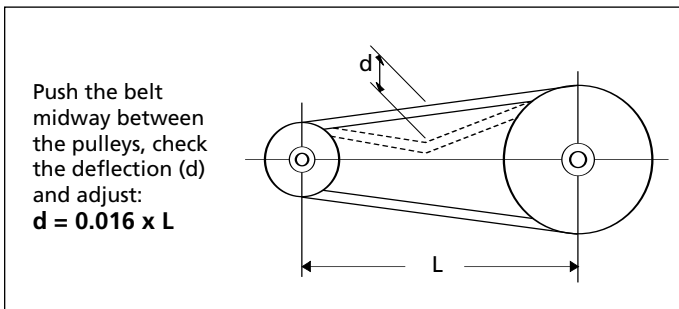


Figure 2 – Belt Tension

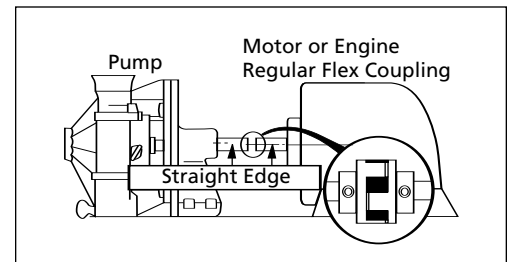


Figure 3 – Shaft Alignment

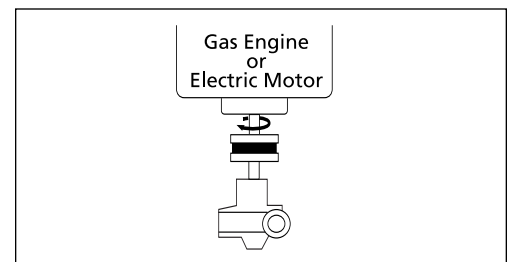


Figure 4 – Flexible Coupling Installation

SHURflo Corrosion-Resistant Pedestal Centrifugal Pumps

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Troubleshooting Chart

Symptom	Probable Cause(s)	Corrective Action
Pump will not prime or retain prime after operating	1. Air Leak in suction line 2. Clogged strainer 3. Leaky foot valve	1. Repair or replace suction line 2. Clean or replace strainer 3. Clean, repair or replace foot valve
Flow rate is low	1. Incorrect speed 2. Piping is fouled or damaged 3. Clogged impeller or worn impeller 4. Discharge line restricted or undersized 5. High discharge pressure	1. Check drive 2. Clean or replace 3. Clean or replace 4. Flush out piping or replace 5. Check and reduce
Pump runs but there is no fluid	1. Faulty suction piping 2. Pump is located too far from the fluid source 3. Gate valve is closed 4. Clogged strainer 5. Fouled foot valve 6. Discharge height is too great 7. Suction lift is too great 8. Reverse rotation	1. Replace 2. Relocate 3. Open 4. Clean or replace 5. Clean or replace 6. Lower the height 7. Lower the pump 8. Reverse rotation
Liquid drips from point where shaft enters the pump casing, when pump is full of liquid	1. Damaged mechanical seal 2. Liquid not compatible with seal	1. Replace mechanical seal 2. Check compatibility; use components that are compatible
The pump starts and stops pumping	1. Fouled impeller 2. Faulty mechanical seal 3. Leak in the suction line 4. Leak in the foot valve 5. Impeller spun off and jammed against housing	1. Clean 2. Replace 3. Repair 4. Repair or replace 5. Check motor rotation Reverse if necessary
Excessive noise while pump is in operation	1. Pump not secured to firm foundation 2. Piping not supported to relieve any strain on the pump assembly 3. Restricted suction line 4. Cavitation	1. Secure properly 2. Make necessary adjustments 3. Clean or correct 4. a. Reduce speed b. Increase inlet size c. Use thinner material
Pump runs but poor performance	1. Check pump rotation to see if it is CCW as viewed from motor face. On three-phase motors, rotation must be checked prior to running pump under load.	1. On three-phase motors, switch any two motor wire leads to reverse rotation.

⚠ WARNING Failure to check rotation before pump is run can result in severe damage to the pump and motor unit.

Pump Installation

⚠ WARNING Do not run the pump dry! Check pump rotation before operating. Pump rotation should be clockwise as seen from shaft end. Reverse rotation can result in severe pump damage.

1. Position the pump as close as possible to the source being pumped. A flooded suction situation is required. The pump is NOT self-priming, therefore, if the fluid level is below the pump, a foot valve must be installed and the pump primed prior to start-up.

2. Mount the pedestal base to a secure, immobile foundation.
3. Use only composite fittings on both the intake and discharge ports. Seal the pipe connections with Teflon™ tape. These fittings should be self-supported and in neutral alignment with each port. Fittings must not be forced into alignment because it may cause premature line failure or damage to the pump housing volute.
4. Never choke the intake. Keep both input and discharge lines as free of elbows and valves as much as possible.

5. For positive pump start-up upon initial installation or after pump has been maintained or fluid drained from pump, fill pump with water or liquid compatible with pumped material. This is accomplished by installing a "T" fitting on the discharge with the fill portion of the fitting facing up.

Noryl® Series and Polypropylene Series

Maintenance

⚠ WARNING *Make certain that the unit is disconnected from the power source before attempting to service or remove any components!*

REMOVAL OF OLD SEAL ASSEMBLY

Should the mechanical seal (Ref. No. 5) require repair, proceed as follows and refer to Figures No. 5 - 7.

IMPORTANT: Always replace both the seal seat and seal as an assembly to ensure proper mating of components!

1. Remove bolts (Ref. No. 8) connecting the pump housing casing (Ref. No. 2) to the body adapter (Ref. No. 1).
2. Remove the pump housing casing (Ref. No. 2).

⚠ CAUTION *Care should be taken not to pinch or "shave" the O-ring gasket (Ref. No. 6) between the body adapter and the housing casing.*

3. Remove the impeller (Ref. No. 4) from the shaft by unscrewing it counterclockwise as viewed from the pedestal pump face.

NOTE: Pump shaft must be held in place to remove impeller. Impeller (Ref. No. 4) unscrews CCW when looking at the front of the pump.

4. The ceramic seat is located on the back side of the impeller (part of Ref. No. 5). Pry the seat out by using a screwdriver in the inside hole (see Figure 5). Be careful not to damage or scratch the inside surfaces of the bore holding the seat. Such scratches can cause leaks. Replace the impeller if such damage occurs.

5. Remove the body adapter (Ref. No. 1) from the pedestal by removing the adapter bolts.

6. Use a wooden dowel to push out the mechanical seal (part of Ref. No. 5) from the body adapter (Ref. No. 1). (See Figure 5.) Do not dig the seal out from the front.

INSTALLATION OF NEW SEAL ASSEMBLY

⚠ CAUTION *The precision carbon/ceramic faces on the mechanical seal are easily damaged. Handle your repair seal carefully. Do not touch the carbon/ceramic seal faces.*

IMPORTANT: Be sure that shaft shoulder does not damage carbon face.

1. Thoroughly clean all surfaces of the seal cavity in body adapter (Ref. No. 1).
2. Replace the o-ring inside the cavity (Ref. No. 11). Using seal installation tool (see Figure 6), press in new mechanical seal being careful not to scratch the polished carbon face.
3. Wet the rubber portion of the new seal seat (part of Ref. No. 5) with a light coating of soapy water. While wearing clean gloves or using a clean light rag, press seal seat squarely into impeller recess. Use the cardboard washer (usually supplied with new seal) to place over the polished ceramic surface and use a piece of pipe or dowel rod to press in firmly but gently (see Figure 5). Avoid scratching the ceramic face, usually white.

4. Dispose of cardboard washer. Check again to see that ceramic surface is free of dirt and all other foreign particles and that it has not been scratched or damaged.

5. Install the body adapter (Ref. No. 1) to the pedestal using bolts. Be careful not to damage the seal when sliding over the shaft.

6. While preventing the shaft from turning, screw impeller (Ref. No. 4) onto shaft and tighten (see Figure 5).

NOTE: A short "run-in" period may be necessary to provide completely leakproof seal operation.

This completes the seal installation.

7. Check if shaft turns freely by spinning impeller. If rubbing or binding is found, remove impeller.
8. Place o-ring (Ref. No. 6) into groove on back side of housing. It may be necessary to temporarily hold the o-ring in the groove with grease.

⚠ CAUTION *Seal assembly will produce minor drag when spinning shaft, but rubbing anywhere else must be eliminated! Otherwise, damage to pump and/or motor may occur.*

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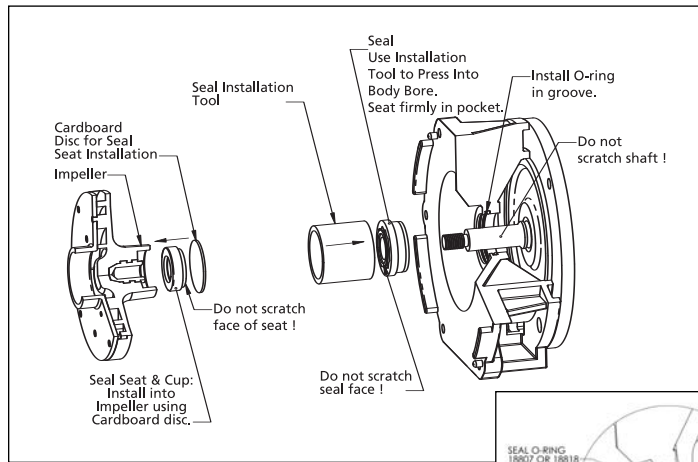


Figure 5 - Seal Install

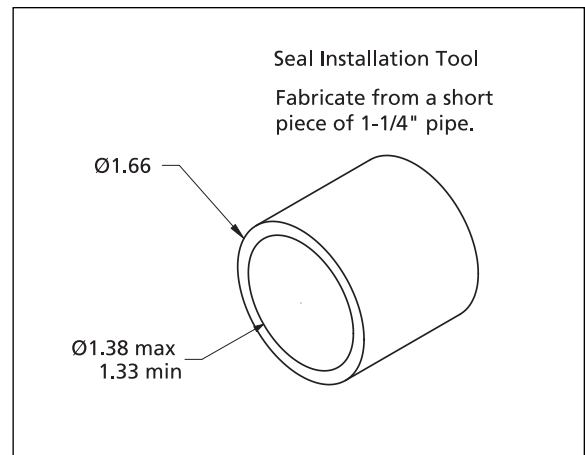
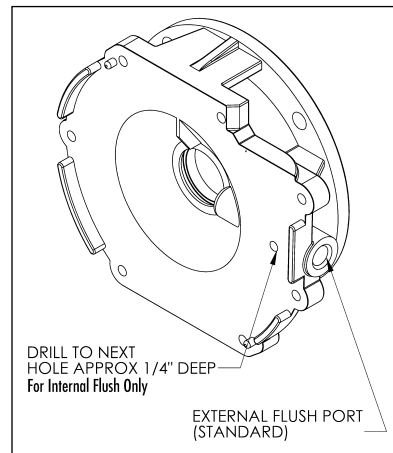


Figure 6 - Seal Install Tool

Water-Flushed Seals

1. Water-flushed seals are recommended for abrasive solutions, high temperature service, or when pumps may be run dry or against deadhead conditions.
2. When conditions cause the pumped liquid to form crystals, or if the pump remains idle for a period of time without adequate flushing, a water-flush seal system is advised.
3. The water flush will provide decontamination of chemicals on elastomers and seal and seat faces, while providing lubrication required for start-up. Two (2) methods of water flush can be used:
 - a. **Direct Plumbing to City Water**
This provides the best possible approach to flushing the seal and seat faces. Caution must be taken to conform to local city ordinances that may require backflow preventers. These are a series of check valves required to prevent contamination of city water if the water supply is shut off. Also be aware of the addition of water into the chemicals pumped where some imbalance may be created, altering the chemical's formulation and aggressiveness.

- b. The flush port is provided on the side of the pump below the discharge.



- c. **Recirculation of Solution Pumped**
This system takes a bleed off the pump discharge and recirculates the solution in the seal chamber. Although not nearly as effective as the direct water flush, it will provide cooling to the seal and seat faces under operation. This system is not effective where crystallization occurs or for pumps in idle conditions.

For internal recirculation to seal, drill the recess plug on the pump body located at 3 o'clock with a 1/8" drill.

⚠ WARNING *Hazardous substance alert!*

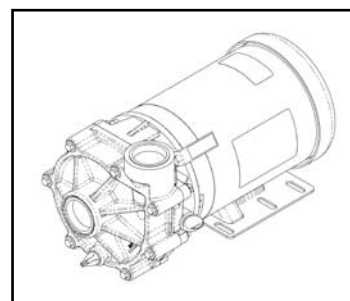
4. Always drain and flush the pump before servicing, disassembling for any reason or returning the unit for repair.
5. Never store pumps containing hazardous chemicals.
6. Before returning the pump for service/repair, drain out all liquids and flush the unit with a neutralizing liquid. Then, drain the pump. Attach a tag or include a written notice certifying that this has been done. Please note that it is illegal to ship or transport any hazardous chemicals without United States Environmental Protection Agency Licensing.

To order parts, contact a **SHURflo Distributor** or **Order Direct.**

Distributors can be found at www.shurfloindustrial.com.

Please provide following information:

- Model number
- Serial number (if any)
- Part description and number as shown in parts list



**Optional motor mount shown
with pump head.**

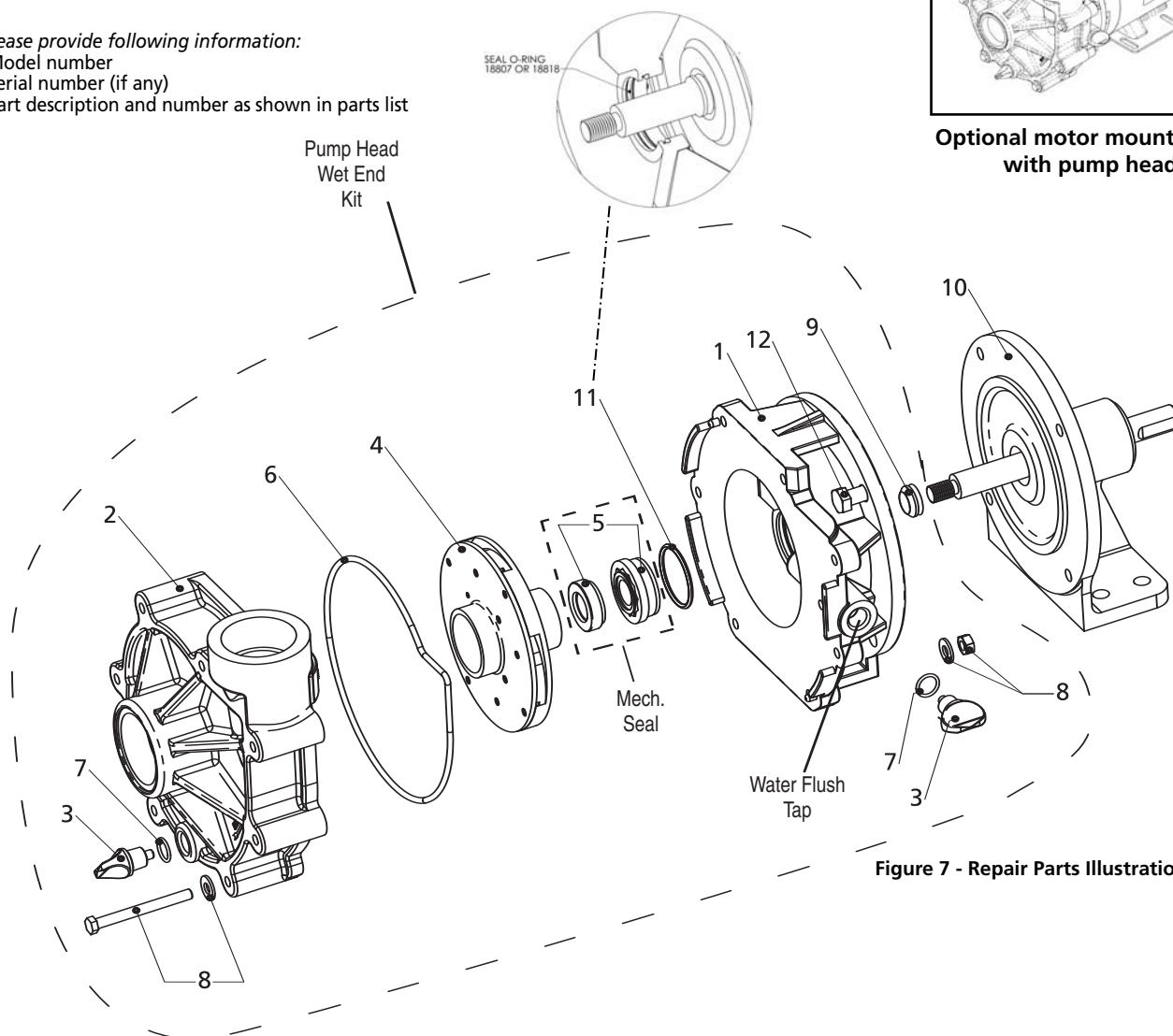


Figure 7 - Repair Parts Illustration

Electric Motors (Optional)

HP	1 Phase ODP P/N	Motor Suffix	3 Phase ODP P/N	Motor Suffix	1 Phase TEFC P/N	Motor Suffix	3 Phase TEFC P/N	Motor Suffix
1/3	14010H	1	NA	13	NA	1T	NA	13T
1/2	14011H	2	24361H	23	24499H	2T	13431H	23T
3/4	14012H	3	14015H	33	13409H	3T	14017H	33T
1	14013H	4	12991H	43	24500H	4T	18741H	43T
1-1/2	14014H	5	14016H	53	13410H	5T	14018H	53T
2	12985H	6	13341H	63	13411H	6T	19495H	63T
3	24364H	7	24365H	73	24366H	7T	23424H	73T

NA = Not Available

Note: The standard pump and motor combinations are offered with ODP motors which have larger service factors than the same TEFC motor. When mating a TEFC motor to a pump head or replacing an ODP motor with a TEFC motor, use one HP rating higher for 1/3, 1/2, 3/4, 1 and 1-1/2 HP motors.

Example: A TEFC motor on a standard model is a COMC11, which uses a 1/3 HP ODP motor.

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Repair Parts List for Noryl Pumps

Ref. No.	Description	Part Number for Pump Head Model:				Qty.
		CHPNA2	CHPNA4	CHPNA5	CHPNA6	
1	Body Adapter	18775	18775	18775	18775	1
2	Pump Housing	13257	13257	13257	13257	1
3	Drain Plug or Water Flush Plug	13261	13261	13261	13261	2
4	Impeller	23438	13255	13256	13343	1
5	Seal / Seat Assy. (Noryl/Viton/Carbon/Ceramic) † ¹	24455S	24455S	24455S	24455S	1
	Seal Assembly (Noryl/Viton/Silicon Carbide) * † ¹	24456S	24456S	24456S	24456S	1
	Seal Assembly (Viton/Carbon/Ceramic) * † ²	13263S	13263S	13263S	13263S	1
	Seal Assembly (Viton/Silicon Carbide) * † ²	24466S	24466S	24466S	24466S	1
	Seal Assembly (SS/Neoprene/Carbon/Ni-Resist)* ³	17567S	17567S	17567S	17567S	1
6	O-ring gasket (Viton)	13259	13259	13259	13259	1
	O-ring gasket (Buna-N) *	13264	13264	13264	13264	1
7	Plug O-ring (Viton)	13312	13312	13312	13312	2
	Plug O-ring (Buna-N) *	13313	13313	13313	13313	2
8	Fastener Kit (18-8 Stainless Steel) (includes screws, washers & nuts)	13437	13437	13437	13437	1
9	Slinger (comes standard with pedestal assembly)	14990	14990	14990	14990	1
10	Pedestal Assy.	24479	24479	24479	24479	1
11	Seal O-ring (Viton)	18807	18807	18807	18807	1
	Seal O-ring (Buna-N) *	18818	18818	18818	18818	1
12	Cap screw (18-8 SS)	13309	13309	13309	13309	4

(*) Optional

(†) Seals also contain 316 stainless steel components and have Viton bellows.

(‡) Seals also contain 316 stainless steel components and have Buna-N bellows.

(1) Seals are encased with Noryl. No metallic components are exposed to fluid.

(2) Seals are not encased. Stainless steel case and spring are exposed to fluid.

(3) Seals are encased with Polypropylene. No metallic components are exposed to fluid.

Replacement Pump Heads – Noryl

Description	Pump Head No.
½ HP Noryl Pump Head	CHMNA2X
1-½ HP Noryl Pump Head	CHMNA4X
2 HP Noryl Pump Head	CHMNA5X
3 HP Noryl Pump Head	CHMNA6X

Note: All Replacement Pump Heads come with standard seal listed as Ref. No. 5 above.

Noryl® Series and Polypropylene Series

Repair Parts List for Polypropylene Pumps

Ref. No.	Description	Part Number for Pump Head Model:				Qty.
		CHPPB2	CHPPB4	CHPPB5	CHPPB6	
1	Body Adapter	18739	18739	18739	18739	1
2	Pump Housing	13474	13474	13474	13474	1
3	Drain Plug or Water Flush Plug	18355	18355	18355	18355	2
4	Impeller	19539	18351	18352	18353	1
5	Seal / Seat Assy. (Buna-N/Carbon/Ceramic) ‡ ²	24443S	24443S	24443S	24443S	1
	Seal Assembly (PP/Viton/Silicon Carbide) * † ³	15047S	15047S	15047S	15047S	1
	Seal Assembly (PP/Viton/Carbon/Ceramic) * † ³	14528S	14528S	14528S	14528S	1
	Seal Assembly (Viton/Carbon/Ceramic) * † ²	13263S	13263S	13263S	13263S	1
	Seal Assembly (Viton/Silicon Carbide) * † ²	24466S	24466S	24466S	24466S	1
	Seal Assembly (SS/Neoprene/Carbon/Ni-Resist)* ³	17567S	17567S	17567S	17567S	1
6	O-ring gasket (Buna-N)	13264	13264	13264	13264	1
	O-ring gasket (Viton) *	13259	13259	13259	13259	1
7	Plug O-ring (Buna-N)	13313	13313	13313	13313	2
	Plug O-ring (Viton) *	13312	13312	13312	13312	2
8	Fastener Kit (18-8 Stainless Steel) (includes screws, washers & nuts)	13437	13437	13437	13437	1
9	Slinger	14990	14990	14990	14990	1
10	Pedestal Assy.	24479	24479	24479	24479	1
11	Seal O-ring (Buna-N)	18818	18818	18818	18818	1
	Seal O-ring (Viton) *	18807	18807	18807	18807	1
12	Cap screw (18-8 SS)	13309	13309	13309	13309	4

(*) Optional

(†) Seals also contain 316 stainless steel components and have Viton bellows.

(‡) Seals also contain 316 stainless steel components and have Buna-N bellows.

(1) Seals are encased with Noryl. No metallic components are exposed to fluid.

(2) Seals are not encased. Stainless steel case and spring are exposed to fluid.

(3) Seals are encased with Polypropylene. No metallic components are exposed to fluid.

Replacement Pump Heads – Polypropylene

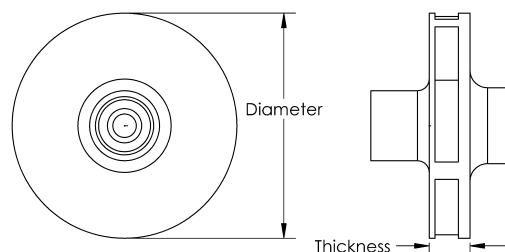
Description	Pump Head No.
½ HP Polypropylene Pump Head	CHMPB2X
1-½ HP Polypropylene Pump Head	CHMPB4X
2 HP Polypropylene Pump Head	CHMPB5X
3 HP Polypropylene Pump Head	CHMPB6X

Note: All Replacement Pump Heads come with standard seal listed as Ref. No. 5 above.

SHURflo Corrosion-Resistant Pedestal Centrifugal Pumps

Noryl® Series and Polypropylene Series

Closed Impeller Identification Chart

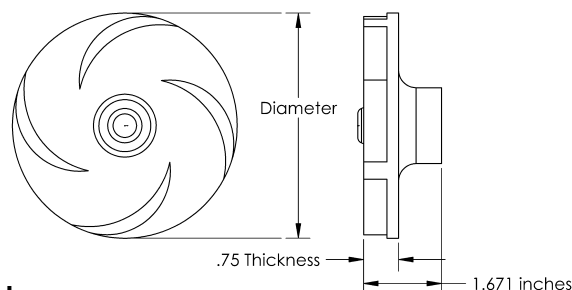


Closed Impeller Identification Chart

Size (ODP HP)	Flow to: GPM@10ft	Max. Head (ft)	Noryl Part#	Polypropylene Part#	Thickness (inches)	Diameter (inches)
1 (1/3)	33	76	24668	24669	0.39	4.82
2 (1/2)	45	82	23438	19539	0.48	4.82
3 (3/4)	65	88	13254	19540	0.59	4.82
4 (1)	85	89	13255	18351	0.73	4.82
5 (1-1/2)	96	91	13256	18352	0.61	4.82
6 (2)	123	95	13343	18353	0.75	4.82

NOTES: All Noryl impellers are black in color. All Polypropylene impellers are white.

Open Impeller Identification Chart



Open Impeller Identification Chart – Optional

Size (ODP HP)	Flow to: GPM@10ft	Max. Head (ft)	Noryl Part#	Polypropylene Part#	Thickness (inches)	Diameter (inches)
1 (1/3)	-	-	N/A	N/A	0.75	N/A
2 (1/2)	85	42	N/A	13476	0.75	3.58
3 (3/4)	92	45	N/A	13477	0.75	3.62
4 (1)	107	62	N/A	13478	0.75	4.16
5 (1-1/2)	115	71	N/A	13799	0.75	4.44
6 (2)	123	80	N/A	13800	0.75	4.83

NOTES: All Noryl impellers are black in color. All Polypropylene impellers are white.

