PENTAIR
HYPRO®

9343 Series Hydraulically Driven, Self-priming Polypropylene Transfer Pumps

Hypro Series 9343
Form L-1581 Rev. A 10/18

Original Instruction Manual

KEEP FOR FUTURE REFERENCE

9343P Series Hydraulically Driven, Self-Priming Polypropylene Transfer Pumps

9343P-GM6-SP, 9343P-GM6-USP, 9343P-GM6Y-SP

Close-Coupled, Hyd. Motor-Driven, Self-Priming Poly Transfer Pump

Max. Flow Rate: .....450 GPM
Max. Pressure: ..... 52 PSI
Max. Total Head .....120 FT.
Max. Suction Lift: .....25 FT.
Ports: .....3" NPT Inlet(-SP)
3" NPT Outlet(-SP)
3" UF Outlet(-USP)
3" UF Inlet(-USP)
Hydraulic Ports: .....SAE-10 Inlet
SAE-12 Outlet
Hydraulic Flow: .....8-11 GPM

9343P-GM10-SP, 9343P-GM10Y-SP

Close-Coupled, Hyd. Motor-Driven, Self-Priming Poly Transfer Pump

Max. Flow Rate: .....484 GPM
Max. Pressure: ..... 58 PSI
Max. Total Head .....134 FT.
Max. Suction Lift: .....25 FT.
Ports: .....3" NPT Inlet
3" NPT Outlet
Hydraulic Ports: .....SAE-10 Inlet
SAE-12 Outlet
Hydraulic Flow: .....12-16 GPM

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Contents

EU Language Manuals

DO NOT attempt to install or operate your pump before reading the manual. Original copies of the manual for Hypro pumps are provided in English. To find a copy in your native language, go to www.hypro.pentair.com.

Vor dem Ablesen des Handbuches versuchen Sie NICHT, Ihre Pumpe zu installieren. Originale des Handbuches fur Hypro-Pumpen werden auf englisch zur Verfugung gestellt. Zu eine Kopie in Ihrer Muttersprache finden, zu www.hypro.pentair.com zu gehen (German)

N'essayez pas d'installer votre pompe avant de lire le manuel. Des exemplaires originaux du manuel pour des pompes de Hypro sont fournis en anglais. Pour trouver une copie dans votre langue maternelle pour aller a www.hypro.pentair.com (French)

NON tentare di installare la vostra pompa prima di leggere il manuale. Esemplare originale del manuale per Hypro pompe sono in inglese. Per trovare una copia nella vostra lingua andare a www.hypro.pentair.com (Italian)

Не пытайтесь установить ваш насос до чтения руководства. Оригинальные копии этого руководства для насосы Hypro на английском языке. Найти копию на ваш родной язык перейти к www.hypro.pentair.com (Russian)

NO intente instalar su bomba antes de leer el manual. Copias originales del manual para Hypro se provee de bombas en ingles. Para encontrar una copia en tu idioma nativo ir a www.hypro.pentair.com (Spanish)

NIE probować instalować pompy przed jej odczytaniem instrukcji. Oryginalne kopie instrukcji obsługi pomp Hypro są dostarczane w języku angielskim. Aby uzyskać kopię w twoim ojczystym języku przejdź do www.hypro.pentair.com (Polish)

Takmaya calışmayın okumadan once pompanın manuel. Orijinal kopyalarını Hypro pompaları icin Ingilizce olarak sunulmuştur. Bir kopyasını bulmak icin yerel dil git www.hypro.pentair.com (Turkish)

Nao tente instalar a bomba antes de ler o manual. As copias originais dos manuais para Hypro bombas sao fornecidos em Ingles. Para encontrar uma copia em sua lingua nativa ir para www.hypro.pentair.com (Portuguese)

VERGEET NIET uw pomp voor het lezen van het handboek. Exemplaren van de handleiding voor Hypro pompen zijn beschikbaar in het Engels. Op zoek naar een exemplaar in uw eigen taal ga naar www.hypro.pentair.com (Dutch)

Introduction

Description

Hypro Self-Priming Polypropylene Transfer Pumps handle big, high-capacity, liquid transfer jobs with ease. Use them for transferring water, liquid fertilizers, and other chemicals compatible with pump materials. Make short work of other farm jobs: filling nurse tanks, watering seedbeds, and transferring liquids. This self-priming model makes it ideal for de-watering applications.

Purpose of Manual

Hypro has provided this manual to provide instructions and requirements that must be met when installing, using and maintaining the product(s) included in this document.

If the product is sold, the seller must pass this manual onto the new owner.

The following special attention notices are used to notify and advise, the user of this product, of procedures that may be dangerous to the user or result in damage to the product.

ATTENTION

Attention is used to notify of installation, operation, or maintenance information that is important but not safety related.

This symbol is used to denote the presence of an electrical hazard that will result in personal injury, death or property damage.

This symbol is used to denote the presence of a hazard that will result in personal injury, death or property damage.

California Proposition 65 Warning -- This product and related accessories contain chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

Misuses

Hypro centrifugal pumps are designed to operate effectively within the specified speed, pressure and environmental ranges. Going outside of these ranges will void the warranty and could cause damage to property, serious injury, or death.

- **DO NOT** run the pump faster than the maximum specified speed.
- **DO NOT** run the pump higher than the maximum specified pressure.
- **DO NOT** run pumps when the liquid has exceeded the maximum or minimum temperature limit (see Intended Uses).
- **DO NOT** pump non-approved liquids.
- **DO NOT** pump water or other liquids for human consumption.
- **DO NOT** operate any Hypro pump under the influence of drugs or alcohol.
- **DO NOT** run the pump dry.
- **DO NOT** run the pump with a higher than recommended voltage.
- **DO NOT** run the pump hydraulic motor higher than the specified RPM, pressure or flow.
- **DO NOT** use pumps in an explosive environment.
- **DO NOT** attach a pipe, hose or fitting to the pump that is not rated for the maximum pressure of the pump (outlet) or vacuum of the pump (inlet).
- **DO NOT** run the pump in reverse of its intended rotation.
- **DO NOT** operate a pump with a gasoline engine in an enclosed area.

Pump Identification

Hypro uses serialized labeling to enable users to precisely identify the pump's manufacturing date.
Serial Number:
First and second digits: year (14 = 2014)
Third through fifth digits: consecutive day of the year the pump was manufactured.
Sixth through tenth digits: unique pump serial number.

General Safety Information

⚠ **California Proposition 65 Warning** -- This product and related accessories contain chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

NOTE

Notes are used to notify of installation, operation, or maintenance information that is important but not safety related.

⚠ CAUTION

Caution is used to indicate the presence of a hazard, which will or may cause minor injury or property damage if the notice is ignored

⚠ WARNING

Warning denotes that a potential hazard exists and indicates procedures that must be followed exactly to either eliminate or reduce the hazard, and to avoid serious personal injury, or prevent future safety problems with the product.

⚠ DANGER

Danger is used to indicate the presence of a hazard that will result in severe personal injury, death, or property damage if the notice is ignored.

⚠ DANGER

Do not pump flammable or explosive fluids such as gasoline, fuel oil, kerosene, etc. Do not use in explosive atmospheres. The pump should be used only with liquids compatible with the pump component materials. Failure to follow this notice may result in severe personal injury and/or property damage and will void the product warranty.

⚠ CAUTION

1. **Do not pump at pressures higher than the maximum recommended pressure.**
2. **Maximum liquid temperature is 140° F.**
3. **Disconnect power before servicing.**
4. **Release all pressure within the system before servicing any component.**
5. **Drain all liquids from the system before servicing any component. Flush with water.**
6. **Secure the outlet lines before starting the pump. An unsecured line may whip, causing personal injury and/or property damage.**
7. **Check hose for weak or worn condition before each use. Make certain that all connections are tightly secured.**
8. **Periodically inspect the pump and the system components. Perform routine maintenance as required (See Repair Instructions).**
9. **Use only pipe, hose and fittings rated for the maximum psi rating of the pump.**
10. **Do not use these pumps for pumping water or other liquids for human or animal consumption.**
11. **Do not run pump with discharge fully closed for over two minutes.**

Hazardous Substance Alert

⚠ CAUTION

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

⚠ DANGER

Never use your hand to check the condition of hydraulic lines or hoses. If hydraulic fluid penetrates the skin, get medical help immediately. Failure to get proper medical help may result in loss of limb or life. The safest way to check hydraulic lines or hoses is by holding a piece of cardboard next to the hydraulic line or hose.

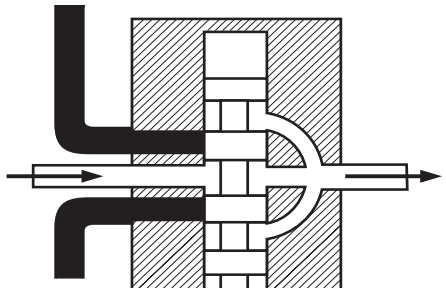
⚠ WARNING

The sound pressure level of the Pump is 80dBA. Observe all safety precautions when operating the pump within close proximity for extended periods of time by wearing hearing protectors. Extended exposure to elevated sound levels will result in permanent loss of hearing acuteness, tinnitus, tiredness, stress, and other effects such as loss of balance and awareness.

Hydraulic Pumps

Hydraulic pumps come in two basic types:

- **Constant displacement -** which will continue to put out its rated flow regardless of pressure, until the relief valve bypasses the flow.
- **Variable displacement -** which will produce only the flow needed by the implement until the total pump output is reached. If less than the full pump output is required, an automatic stroke control mechanism decreases the pump output to maintain a constant pressure and flow. The output varies according to demand.

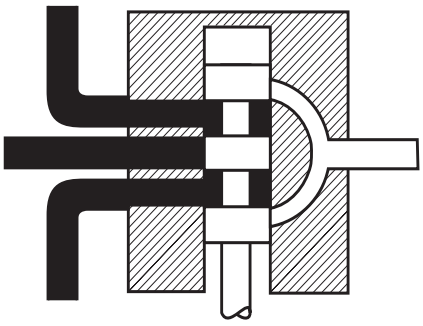


Open Center Spool Valve In Neutral Position

Figure 1

Spool Valves

There are two basic types of spool valves used in conjunction with these pumps — Open and Closed Center. In the Open Center Valve (See Figure 1), the flow goes straight through the valve when in the neutral position. This type is used for constant displacement pumps where the flow should never be shut off.



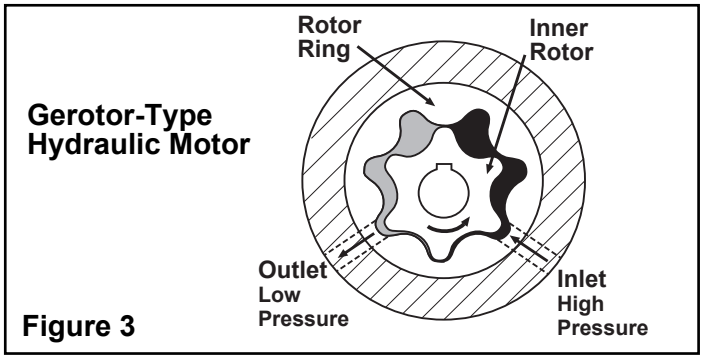
Closed Center Spool Valve In Neutral Position

Figure 2

The Closed Center Valve (See Figure 2) is used with variable displacement pumps. The flow is completely shut off in the neutral position, causing the pump stroke to adjust to zero flow. The flow stops, but the pump maintains a static pressure up to the valve.

Hydraulic Motors

Figure 3 shows an internal gear motor (Gerotor) where pressure causes the cavities between the gears to expand on one side, developing torque. The Gerotor type of hydraulic motor is used on Hypro pumps for its superior performance characteristics, including cooler running and higher rpm capabilities.



Gerotor-Type Hydraulic Motor

Figure 3

Three Systems

Fitting these components together and installing a motor, we have one of the three types of systems: Open Center, Closed Center (pressure compensated) and Closed Center Load Sensing (flow and pressure compensated).

Open Center Systems

In an Open Center System, the hydraulic pump puts out a constant flow. If the pump puts out more oil than the motor can use, a portion of the oil must be bypassed around the motor. When the oil is bypassed around a loop and does no work, the energy put into it by the pump turns into heat. Therefore, the amount of oil bypassed should be kept to a minimum. Use the largest motor possible.

Closed Center (Pressure-Compensated) Systems

The Closed Center Pressure-Compensated system has a variable displacement pump which will deliver flow at the necessary rate to maintain a specified pressure.

Note: This pump is not configured for use with these systems.

Closed Center Load Sensing Systems (Flow and Pressure-Compensating)

The Closed Center Flow-Compensated System is a variation of the pressure-compensated system, designed primarily for more efficient operation and the generation of less heat. It works on the principle of maintaining a constant pressure drop from the pump to the work port of the selector valve. Any variation in demand at the motor will cause a change in flow. The system senses this change in flow due to the change in pressure drop across the valve and causes the pump to compensate by varying the pump flow. No restrictor is used in the pressure line and no oil is bypassed.

Lifting, Transport, and Intermediate Storage

Packaging Descriptions and Unpacking Instructions

- Hypro centrifugal pumps are shipped in cardboard boxes for safe transporting.
- When pumps are shipped in large quantities, they may be put on a pallet to allow for easy storage, lifting and handling.
- Before lifting any pump or pallet, determine the weight of the item by looking at the attached packing slips to establish what lifting equipment should be used.
- Before installing the pump, determine if all the components are present and undamaged. If the pump is missing components, contact customer service immediately.
- Once the pump is unpacked, dispose of the packaging in a manner compliant with local and national regulations.

Lifting Instructions

- Before attempting to lift a Hypro pump, ensure that the surrounding working area is free of hazards which could cause injury or damage to property.
- During lifting operations, any personnel not involved in the lift should not enter the working area.
- If lifting hooks, rope or chains are being used for a lift, they must be free of damage and be rated to carry 150% of the weight of the load to be lifted.
- ⚠ Always wear steel-toed shoes and cut-resistant gloves when attempting to lift.
- When lifting and carrying, always keep the pump close to your body. (See Figure 1)
- When starting the lift, bend your knees and keep your back straight. (See Figure 1) Tightening the stomach muscles will help keep your back straight.
- During the lift, use your legs to do the work. Never use your back, and make sure your legs are at least shoulder-width apart. (See Figure 1)

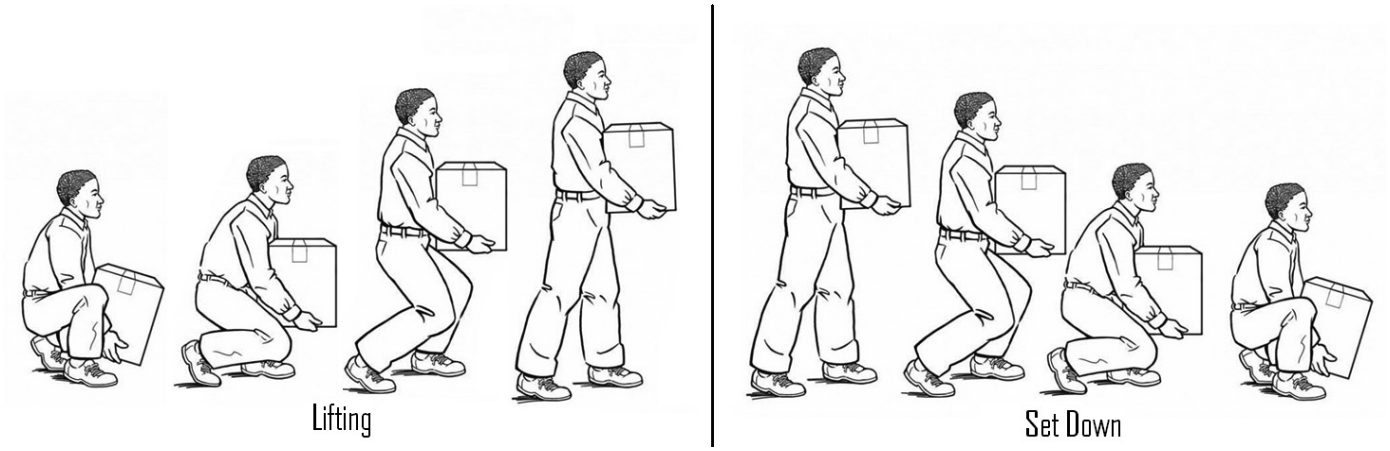


Figure 1

Transport

- All Hypro pumps are capable of being transported by air, sea, rail or motor vehicle. When the pump is shipped, ensure that the pump is moved in accordance with local and national laws and is properly secured to prevent unwanted movement which could cause damage to person or property. Prior to shipping, all fluids should be removed from the pump.

Storage

- New pumps in their boxes can be stored several years as long as the port plugs are not removed. Once the plugs have been removed, if the pump is not to be used for an extended period of time (i.e. more than 30 days), the pump must be winterized as described in the Cleaning section of this manual.

Assembly and Installation

Assembly

- This pump comes completely assembled.

Installation

Before attempting to install your Hypro centrifugal pump, it is imperative to read and understand the following:

- ⚠ Installation of a Hypro pump should only be performed by a technician having the knowledge and skills necessary to install the pump without the risk of property damage or injury.
- ⚠ When handling Hypro pumps, one should wear steel-toed shoes and protective gloves in order to protect the feet in the event the pump is dropped and protect the hands from any sharp surfaces on the pump or chemicals.
- ⚠ Pumping systems must be installed in accordance with Hypro installation instructions. Failure to do so will void your warranty and could cause damage to property, serious personal injury, or death
- ⚠ Electrical power cables and pump hoses must be routed where there is no risk of personnel tripping, walking into, or falling because they have been routed in areas where personnel are expected to move. Electrical power cables and pump hoses should be routed according to local and national standards.
- ⚠ It is the installer's responsibility to ensure that AC electric-drive motors, Hypro pumps, and metalwork of support structures are bonded to earth (ground), per local and national standards.
- ⚠ It is the installer's responsibility to conduct earth continuity tests between AC electric-drive motors, Hypro pumps, and metalwork of support structures and earth according to EN60204-1:2006/A1:2009, or its superseding standard, to confirm that all components that need to be connected to earth are satisfactorily bonded.
- ⚠ It is the installer's responsibility to conduct electrical tests in accordance with EN60204-1:2006/A1:2009, or its superseding standard, on finished pump assemblies.
- All connections to electrical components must be number, symbol, or color-coded generally as recommended by EN60204-1:2006/A1:2009, or its superseding standard.
- ⚠ Installers must provide hydraulic components that are capable of withstanding maximum source pressure.
- ⚠ The working pressure must be controlled by a pressure relief valve that is adjusted to operate at a maximum pressure of the hydraulic motor.
- ⚠ For pumps with gas engines, the exhaust must be directed away from operators and anyone standing nearby to ensure that exhaust fumes do not enter their breathing zone.
- ⚠ If a rigid plumbing system is to be used on a Hypro centrifugal pump, the system must be properly aligned with the inlet and outlet ports.
- ⚠ The working pressure in the hydraulics system must be controlled by a pressure relief valve that is adjusted to operate at 10% of the maximum system pressure.
- ⚠ When installing, adjusting or removing a Hypro centrifugal pump, ensure that there are no objects which can fall on the installer and make certain that all machinery to which the pump is to be attached is turned off.
- ⚠ Pumps must be installed in a location where they are accessible for any necessary maintenance.
- ⚠ When a main electrical supply is needed to power electric-drive motors, installers are responsible for ensuring that a supply disconnect device, capable of isolating the machine from its electricity supply, be provided.
- ⚠ When hydraulic power is used, the system should contain a quick disconnect coupling that can be disconnected to isolate the pump.

All Models — Open Center Systems

Models include Tank Port Adapter with built-in Check Valve Assembly and Pressure Port Adapter.

Preliminary to Mounting

Consult the owners manual to determine the type and capacity of the hydraulic system. Make sure the hydraulic system is recommended to operate with a continuous load. Refer to the Pump Selection Guide at www.hypro.pentair.com to confirm you have the proper pump for your hydraulic system.

Check to see that the pump impeller can be turned by hand. (Turn the shaft clockwise using a deep socket wrench on the impeller nut.) If it cannot be turned, open the pump casing to look for obstructions. Clean out any corrosion buildup where the casing fits over the eye of the impeller.

Pump Inlet Line

To achieve full capacity from the pump, the inlet line should be at least the same size as the inlet port on the pump. Reducing this line size will restrict the capabilities of the pump. The line must also be free of air leaks. Check all fittings and connections in the suction line for tightness. The introduction of air may affect the priming and pumping capabilities of the pump. Use good quality suction hose that will not be collapsed by suction.

Pump Outlet Line

The recommended orientation for the outlet port is pointing straight up. This allows liquid to stay in the pump while it is priming. The outlet line should be the same size as the pressure port on the pump to give the optimal flow. The line should have as few restrictions and elbows as possible to optimize the pump performance and reduce pressure drop from the pump to the discharge point.

Priming the Pump **NOTE**

The pump must not be run dry.

Before starting the pump, the chamber needs to be filled with liquid. The pump must not be run unless it is completely filled with liquid because there is a danger of damaging the mechanical seal, which depends on the liquid for its lubrication.

Self-priming models can be primed by removing the top vent plug and filling the priming chamber. The priming chamber will fill to the level of the inlet port. After use, the priming chamber should be flushed and drained to avoid chemical corrosion and damage from freezing. Drain by removing the lower drain plug.

Hooking Up the Hydraulic Motor to the Tractor Hydraulic System

Hypro Series 9300HMC hydraulic motor-driven pumps can be mounted on either the tractor or sprayer. When hooking up, make sure that no dirt or liquid gets into the hydraulic motor. **Keep all hydraulic connections clean.** The recommended filter for the hydraulic motor removes particulates greater than and including 10 microns. The >10 micron filter should be placed on the return line of the hydraulic system to mitigate the risk of contaminating the oil tank. Be sure to connect the hydraulic motor into the system correctly by putting the pressure line to the pressure port and return line to the tank port. The ports on the hydraulic motor are sized to accommodate 7/8” and 1 1/16” SAE fittings. For maximum performance, the hydraulic lines should also be at least 1/2” [12.7 mm] in size. For lines longer than 8 feet [2.44 m], hydraulic line size should be at least 3/4” [19.05 mm] in order to reduce heat generation.

Standard spool valves, which are found on all tractor hydraulic systems, may cause potentially damaging high peak pressures in the hydraulic system when closed, because of abrupt shut-off of oil flow in both the supply and return lines. When shutting off the pump, move the selector to the **FLOAT** position to allow the centrifugal pump to come to a stop gradually.

Operation

Open Center Systems - All Models
Adjusting Centrifugal Pump Output

NOTE

1. Install a shut-off valve and pressure gauge on the discharge line for initial setup.
2. Open the bypass adjustment screw 2-1/2 turns from fully closed. Turn the bypass screw in to achieve the flow for the desired gpm and psi.
3. Start the tractor. Leave the directional valve in the neutral position and allow hydraulic oil to circulate for approximately 10 to 15 minutes or until adequately warmed.
4. Prime the centrifugal pump with all valves open (See the Installation Instructions and System Configuration Diagram).
5. Once the pump is primed, shut off the dischage line and monitor the pressure. Shut-off pressure is not to exceed 60 PSI. Adjust discharge screw accordingly.

Closed Center (Load Sensing) All Models

Many tractors are being introduced with load sensing systems (also referred to as flow and pressure- compensated systems) which simplify system setup and eliminate many of the problems associated with using the wrong size pump motors on a given hydraulic system. Usually, any of Hypro's 9300HMC models may be used on this type of system, provided the hydraulic system produces sufficient oil flow for the hydraulic motor being used (Refer to the Pump Selection Guide).

This system maintains a constant flow of hydraulic oil for a given pressure drop. The flow is adjustable with a flow control valve installed in the hydraulic system (such as the Tortoise/ Hare control on John Deere tractors). Because this system has adjustable flow, there is no need to bypass hydraulic oil as in an open center system, or to restrict the flow with orifices as in a closed center pressure- compensated system.

Adjusting Centrifugal Pump Output

1. Install a shut-off valve and pressure gauge on the discharge line for initial setup.
2. Close and lock down the bypass adjusting screw in the hydraulic motor.
3. Set the tractor hydraulic flow control valve for minimum hydraulic oil flow to the remote outlet (Tortoise position).
4. Start the tractor and allow the hydraulic oil to circulate for approximately 10 to 15 minutes or until adequately warmed.
5. Prime the centrifugal pump with all valves open (See the Installation Instructions and System Configuration Diagram).
6. Shut off the discharge valve and monitor the pressure. Slowly adjust the tractor hydraulic flow control valve until the pump deadhead pressure approaches 60 PSI.

Storage

1. Drain pump. Flush pump after use.
   One of the most common causes for faulty pump performance is gumming or corrosion inside the pump. Flush the pump and entire system with a solution that will chemically neutralize the liquid pumped. Mix according to the manufacturer's directions. This will dissolve most residues remaining in the pump, leaving the inside of the pump clean and ready for use.
2. Store pump in a clean, dry environment.

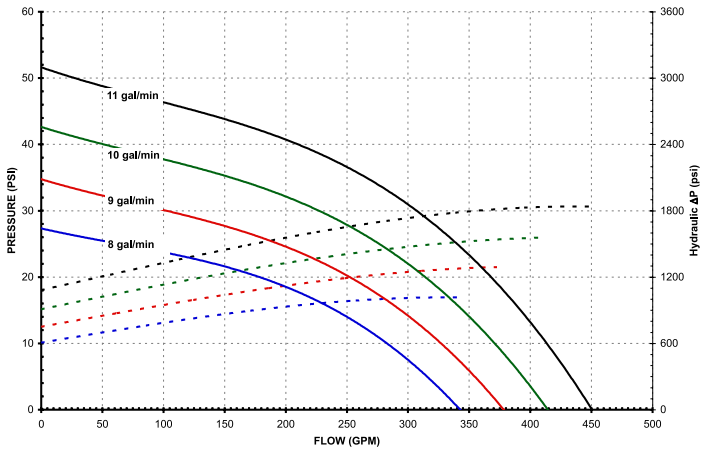
Troubleshooting Guide

SYMPTOM	PROBABLE CAUSE										
	PUMP					SYSTEM					
	A	B	C	D	E	F	G	H	I	J	K
No water delivered	X	X	X			X	X	X			X
Not enough water delivered			X	X		X	X	X			X
Not enough pressure			X	X		X	X	X			
Abnormal noise and/or vibration	X		X		X		X	X	X		
Pump works for a while then stops			X		X			X		X	X

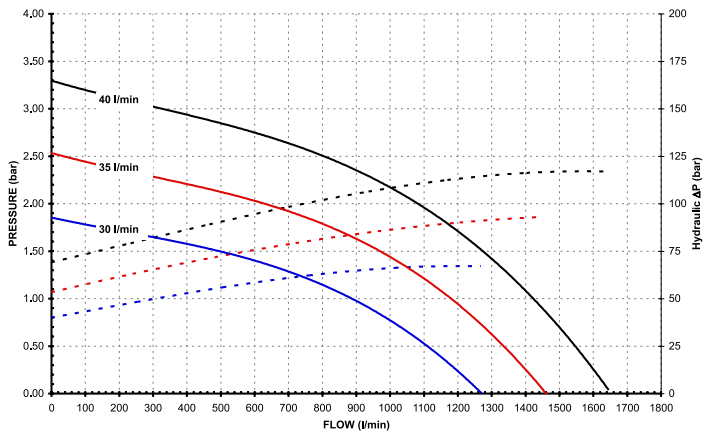
CAUSE	CORRECTIVE ACTION
1. PUMP	
A. Not primed	Reprime, inspect suction system for air leaks and/or check assembly
B. Pump takes too long to prime	Check for air leaks
C. Flow through pump completely or partially blocked	Locate and remove obstruction. Attach Strainer
D. Internal leakage	Check clearances between face of vanes and case. Should not exceed 1/32
E. Loose or broken parts	Inspect. Repair.
SYSTEM	
F. Pressure required by system at design flow rate exceeds pressure rating of pump	Compare pump pressure and flow rate against pump performance chart. reduce system pressure requirement. Increase pressure capability of pump.
G. Obstruction in suction piping	Locate and remove obstruction. Attach strainer.
H. Suction lift too high	Check with gauge or measure vertical distance between water surface and center line of pump, allowing for friction loss in suction pipe. Reduce rate of flow to obtain desired lift. Refer to pump performance chart.
I. Discharge head too low	Decrease rate of flow
J. Suction inlet not immersed deep enough	Refer to Installation
K. Leaky suction line or connection admitting air	Repair or replace suction line. Tighten connections.

Model 9343P Performance Data

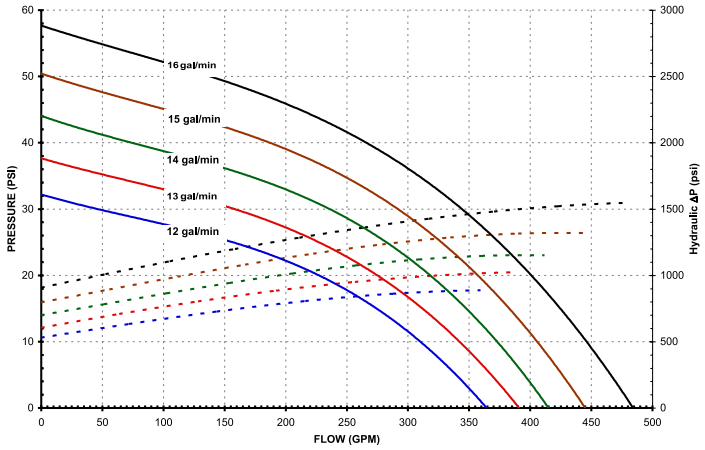
9343P-GM6-SP Pump Performance - Standard



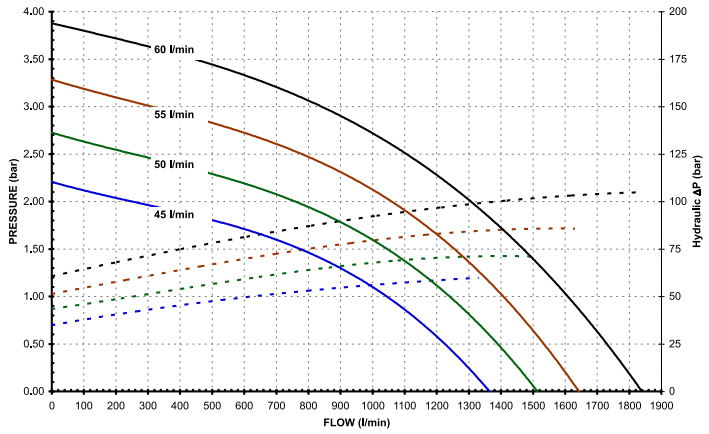
9343P-GM6-SP Pump Performance - Metric



9343P-GM10-SP Pump Performance - Standard



9343P-GM10-SP Pump Performance - Metric



9343P-GM6-SP	Feet	0	12	23	35	46	58	69	81	92	104	116	127
PERFORMANCE	PSI	0	5	10	15	20	25	30	35	40	45	50	55
8 gal/min	GPM	342	316	284	240	176	67						
9 gal/min	GPM	378	355	327	294	252	194	103					
10 gal/min	GPM	414	394	371	345	314	276	227	155	52			
11 gal/min	GPM	450	433	414	392	368	340	307	265	210	128	28	

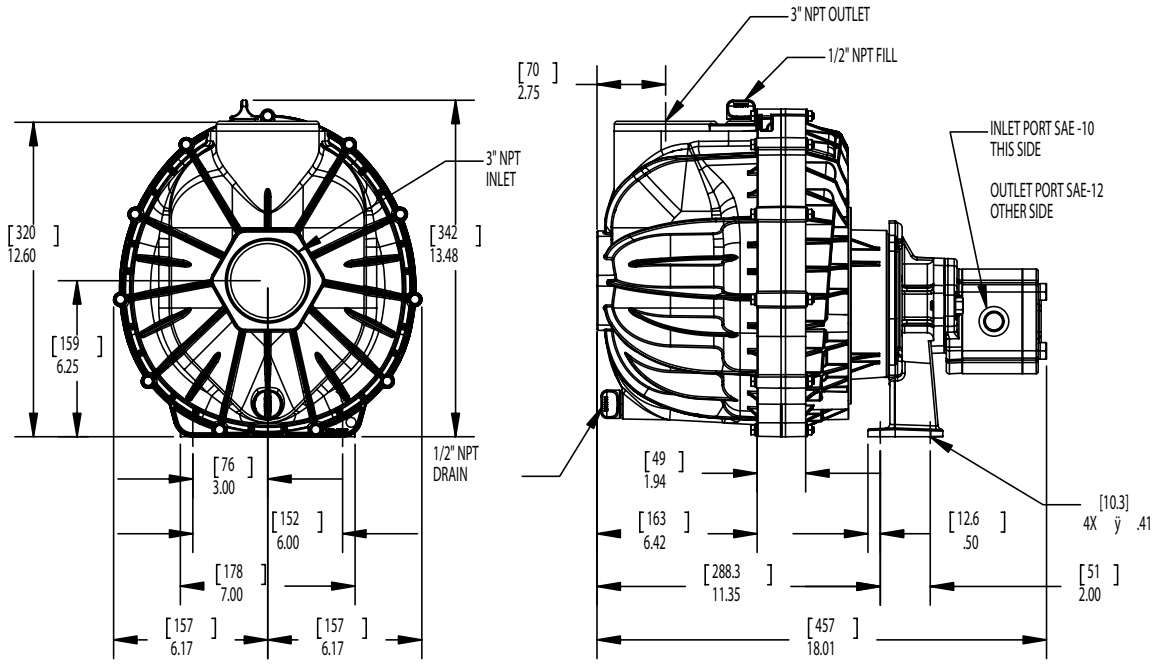
9343P-GM6-SP	m	5.1	10.2	12.8	15.3	17.9	20.4	23.0	25.5	28.1	30.6	33.2	35.7
PERFORMANCE	bar	0.50	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50
30 l/min	l/min	1110	885	730	495	145							
35 l/min	l/min	1335	1180	1085	970	825	630	345	35				
40 l/min	l/min	1545	1425	1355	1270	1185	1080	960	805	600	325	45	

9343P-GM10-SP	Feet	0	12	23	35	46	58	69	81	92	104	116	127
PERFORMANCE	PSI	0	5	10	15	20	25	30	35	40	45	50	55
12 gal/min	GPM	364	340	310	274	227	157	46					
13 gal/min	GPM	391	368	342	312	275	227	158	55				
14 gal/min	GPM	415	395	373	348	318	282	236	170	74			
15 gal/min	GPM	445	426	406	383	357	327	292	247	187	102	7	
16 gal/min	GPM	484	466	446	425	401	374	344	309	266	211	139	47

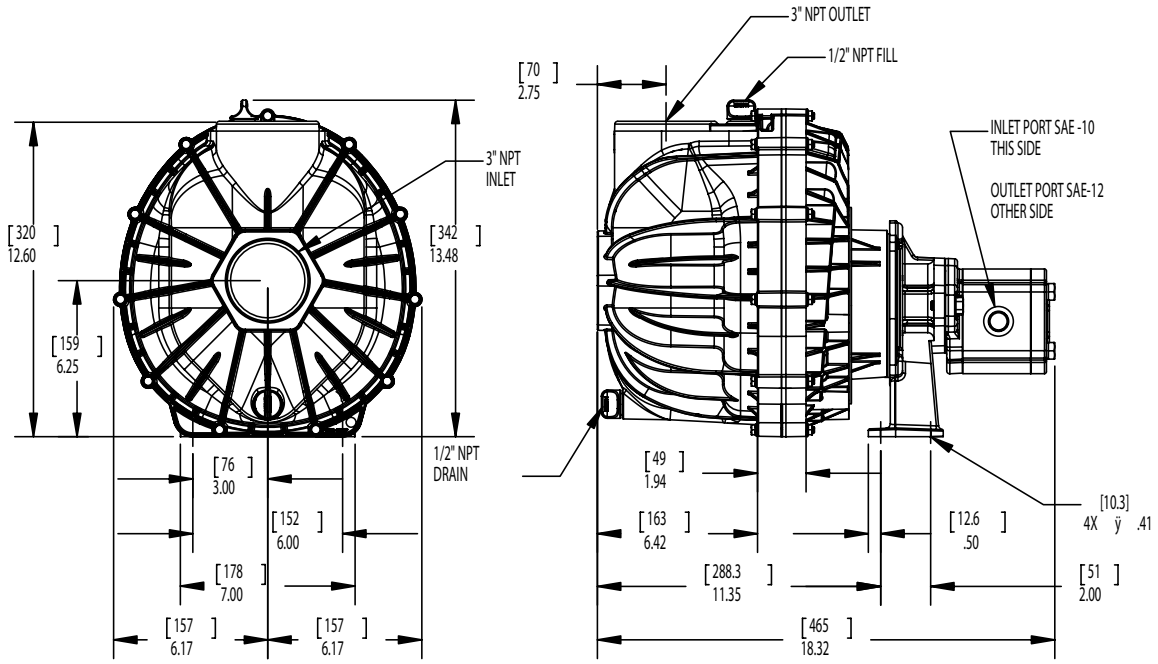
9343P-GM10-SP	m	5.1	10.2	12.8	15.3	17.9	20.4	23.0	25.5	28.1	30.6	33.2	35.7
PERFORMANCE	bar	0.50	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50
45 l/min	l/min	1225	1045	925	775	560	250						
50 l/min	l/min	1390	1240	1150	1045	920	760	540	255				
55 l/min	l/min	1535	1405	1335	1255	1165	1060	935	780	575	310	35	
60 l/min	l/min	1730	1610	1540	1470	1390	1305	1215	1105	985	840	665	445

Model 9343P Dimensional Drawings

Model 9343P-GM6-SP



Model 9343P-GM10-SP



Maintenance and Servicing

Information

- ⚠ All maintenance should be done when machinery is stationary and has been isolated from its energy sources. It is dangerous to perform maintenance while machinery is still connected to its power source. Machinery should be isolated from its electrical, hydraulic or gas engine power source.
- ⚠ Be sure to release all pressure from the system before performing any sort of maintenance on a Hypro pump.
- ⚠ DO NOT perform service or maintenance to the pump, or attached components, until the pump unit is below 109°F(43°C).
- The lubrication of this pump unit has been done at the factory prior to shipping.
- ⚠ When handling Hypro pumps, one should wear steel-toed shoes and protective gloves in order to protect the feet in the event the pump is dropped and protect the hands from any sharp surfaces on the pump or chemicals. If the pump is being repaired while the pump is in service, eye protection should also be worn.

Any hazardous liquids should be disposed of in a manner which complies with local and national regulations. Never dump fluids onto the ground.

Disposal

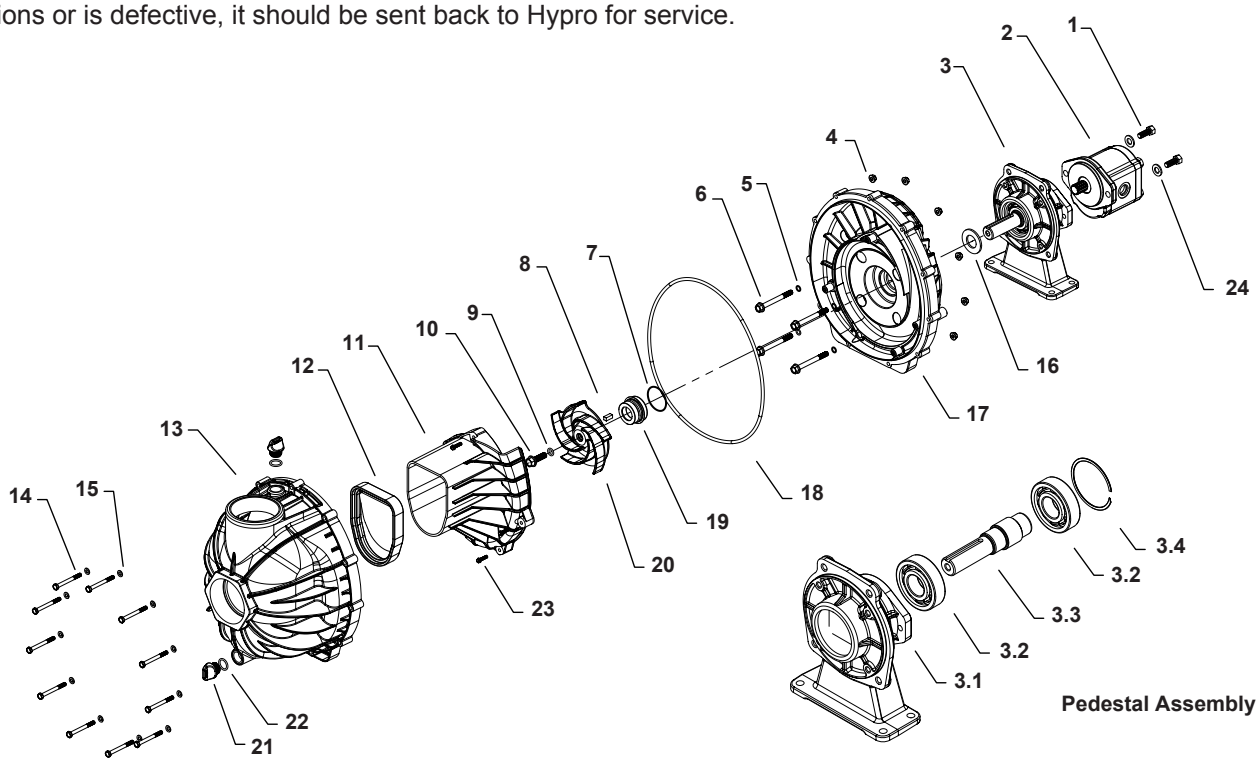
When disposing of a Hypro pump, be sure to remove all fluids from the pump before scrapping. These fluids should be disposed of in a manner which complies with local and national regulations. Never dump fluids onto the ground. Once the pump is free of all fluids, it may be scrapped in accordance with local and national laws.

Cleaning

Your pump will last longer and give best performance when properly taken care of. Proper pump care depends on the liquid being pumped and when the pump will be used again. After each use, flush pump with a neutralizing solution for the liquid just pumped. Follow with a clean water rinse. This is especially important for corrosive chemicals. It is good practice to clean the pump after each use to prevent deposits from forming and damaging the pump. For infrequent use and before long periods of storage, drain pump thoroughly. Open any drain plugs, remove suction hose from liquid, and blow pump dry with air. An antifreeze/rust inhibitor should be injected into the pump before both ports are plugged and the pump is stored. Plug all ports to keep out air until pump is used again.

Replacement Parts
9343P-GM6-SP and 9343P-GM10-SP

The following drawings show the pumps and their replacement parts. **Only genuine replacement parts should be used.Failure to follow this warning can result in damage to property, serious injury or death.** If the pump malfunctions or is defective, it should be sent back to Hypro for service.



Pedestal Assembly

Seal Repair Kit 3430-0757 contains:

(4) Ref. 5 O-ring, (1) Ref. 7 Mechanical Seal O-ring, (1) Ref. 19 Mechanical Seal, (1) Ref. 9 Impeller O-ring, (1) Ref. 12 Flapper, and (1) Ref. 18 Body O-ring.

Pump Head Kit 3430-0692 Includes all items less the mounting bolts (Ref. 1), motor (Ref. 2), pedestal (Ref. 3), and washer (Ref. 24)

Pedestal Assembly 0751-9343A contains:

(1) Ref. 3.1 Pedestal, (2) Ref. 3.2 Ball Bearing, (1) Ref. 3.3 Pump Shaft, and (1) Ref. 3.4 Snap Ring.

Motor Repair Kit 3430-0788 for GM6 and GM10 Includes all seal and gasket components.

Ref #	Torque Spec.
#1	10 ft.-lbs.
#6	10 ft.-lbs.
#10	10 ft.-lbs.
#14	45 in.-lbs.
#23	24 in.-lbs.

Ref. No.	Qty.	Part No.	Description
1	2	2220-0125	Socket Head Screw
2A	1	2500-0075	Hydraulic Motor 11.5 cc (GM6)
2B	1	2500-0119	Hydraulic Motor 11.5 cc (GM6 w/ Case Drain)
2C	1	2500-0117	Hydraulic Motor 16 cc (GM10)
2D	1	2500-0120	Hydraulic Motor 16 cc (GM10 w/Case Drain)
3	1	0751-9343A	Pedestal Assembly, Splined Shaft
4	15	2250-0087	Hex Flange Nut
5	4	1723-0149	O-ring
6	4	2210-0182	Hex Flange Bolt
7	1	1723-0148	O-ring
8	1	1610-0069	Key (square)
9	1	1723-0142	O-ring
10	1	2210-0181	Hex Flange Bolt
11	1	0150-1543P	Pump Volute

Ref. No.	Qty.	Part No.	Description
12	1	1700-0232	Flapper Valve
13	1	0100-1543PK	Pump Housing (NPT)
13A	1	0101-1543PK	Pump Housing (UF)
14	15	2210-0141	Hex Head Cap Screw
15	15	2270-0115	Flat Washer
16	1	1410-0091	Slinger Ring
17	1	0750-1543P	Back Plate
18	1	1723-0146	O-ring
19	1	2120-0055	Mechanical Seal
20	1	0400-1543P	Impeller
21	2	2404-0350P	Fill/Drain Plug
22	2	1720-0230	O-ring
23	4	2210-0183	Hex Washer Head Screw
24	2	2270-0137	Washer

EC DECLARATION OF INCORPORATION

EC Declaration of Incorporation

Manufacturers Name:	Pentair Flow Technologies, LLC
Manufacturers' Address:	375 Fifth Avenue NW, New Brighton, MN 55112, USA

Declare that the partially complete machinery described below conforms to applicable health and safety requirements of Emission Directive 2010/26/EU and of Parts 1 of Annex I of Machinery Directive 2006/42/EC. This partly completed machinery must not be put into service until the equipment into which it is to be incorporated has been declared in conformity with the provisions of these directives. Confidential technical documentation has been compiled as described in Annex VII Part B of Machinery Directive 2006/42/EC and is available to European national authorities on written request. If a request is received, documentation will be transmitted either electronically or by post. Clauses 1.1.4, 1.1.7, 1.1.8 Section 1.2, Clauses 1.3.5, 1.3.6, 1.3.7, 1.3.8.1, 1.3.8.2, 1.3.9, 1.4.1, 1.4.2.1, 1.4.2.2, 1.4.2.3, 1.4.3, 1.5.2, 1.5.7, 1.5.12, 1.5.14, 1.5.16, 1.6.2, 1.7.1.1, 1.7.1.2, 1.7.2, and 1.7.4.2 are clauses of Machinery Directive 2006/42/EC that have not been met, but could be applicable and must be addressed during installation by a third party.

Description:	PENTAIR Pump
Type: Series Numbers	Roller Pumps 1502, 1700, 4001, 4101, 6500, 7560, 7700
Type: Series Numbers	Centrifugal Pumps 1442P, 1536, 1537, 1539, 1540, 1550, 90XX, 9202, 9203, 9205, 9206, 9208, 9262, 9263, 9253, 9302, 9303, 9305, 9306, 9307, 9308, 9313, 9314, 9316, 9342P, 9343P, 9742P
Type: Series Numbers	Piston/Plunger Pumps 5315C, 5320C, 5321C, 5322C, 5324C, 5325C, 5330C, 53702, 53703

The following standards have either been referred to or been complied with in part or in full as relevant:

ENISO 12100	Machinery Safety	-	General principles for design - Risk assessment and risk reduction
EN809-1998 + A1 2009	Machinery Safety	-	Pumps and pump units for liquids - Common safety requirements
EN ISO 13732-1	Machinery Safety	-	Ergonomics of the thermal environment
EN ISO 3744:2010	Acoustics	-	Determination of sound power levels and sound energy levels of noise sources using sound pressure
EN ISO 11202/A1 1997	Machinery Safety	-	Noise emitted by machinery and equipment
EN 12162:2001+A1:2009	Machinery Safety	-	Liquid pumps - Safety requirements -Procedure for hydrostatic testing
EN ISO 4254-6:2009	Machinery Safety	-	Sprayers and liquid fertilizer distributors
EN 60204-1:2006/A1:2009	Machinery Safety	-	Electrical Equipment of Machines

Name ……...…… Position …..……..……

Signature ……..……. Date …..……..……..…….

Place of Signing……..…..

EC REP

QNET BV
Hommerterweg 286
6436 AM Amstenrade
The Netherlands

Rev 6/29/17

Limited Warranty on HYPRO/SHURFLO Agricultural Pumps & Accessories

Hypro/Shurflo (hereafter, "Hypro") agricultural products are warranted to be free of defects in material and workmanship under normal use for the time periods listed below, with proof of purchase.

- Pumps: one (1) year from the date of manufacture, or one (1) year of use. This limited warranty will not exceed two (2) years, in any event.
- Accessories: ninety (90) days of use.

This limited warranty will not apply to products that were improperly installed, misapplied, damaged, altered, or incompatible with fluids or components not manufactured by Hypro. All warranty considerations are governed by Hypro's written return policy.

Hypro's obligation under this limited warranty policy is limited to the repair or replacement of the product. All returns will be tested per Hypro's factory criteria. Products found not defective (under the terms of this limited warranty) are subject to charges paid by the returnee for the testing and packaging of "tested good" non-warranty returns.

No credit or labor allowances will be given for products returned as defective. Warranty replacement will be shipped on a freight allowed basis. Hypro reserves the right to choose the method of transportation.

This limited warranty is in lieu of all other warranties, expressed or implied, and no other person is authorized to give any other warranty or assume obligation or liability on Hypro's behalf. Hypro shall not be liable for any labor, damage or other expense, nor shall Hypro be liable for any indirect, incidental or consequential damages of any kind incurred by the reason of the use or sale of any defective product.

RETURN PROCEDURES

All products must be flushed of any chemical (ref. OSHA section 1910.1200 (d) (e) (f) (g) (h)) and hazardous chemicals must be labeled/tagged before being shipped* to Hypro for service or warranty consideration. Hypro reserves the right to request a Material Safety Data Sheet from the returnee for any pump/product it deems necessary. Hypro reserves the right to "disposition as scrap" products returned which contain unknown fluids. Hypro reserves the right to charge the returnee for any and all costs incurred for chemical testing, and proper disposal of components containing unknown fluids. Hypro requests this in order to protect the environment and personnel from the hazards of handling unknown fluids.

Be prepared to give Hypro full details of the problem, including the model number, date of purchase, and from whom you purchased your product. Hypro may request additional information, and may require a sketch to illustrate the problem.

Contact the appropriate Hypro Service Department to receive a Return Merchandise Authorization number (RMA#).
Returns are to be shipped with the RMA number clearly marked on the outside of the package. Hypro shall not be liable for freight damage incurred during shipping. Please package all returns carefully. All products returned for warranty work should be sent shipping charges prepaid:

AMERICAS
HYPRO / PENTAIR
Attention: Service Department
375 Fifth Avenue NW
New Brighton, MN 55112
Service: 800-468-3428
Fax: 651-766-6618
Technical: 800-445-8360
hypro.technicalpentair.com

EUROPE
HYPRO EU Ltd.
Station Road
Longstanton
Cambridge CB24 3DS UK
Service/Technical:
+44 1954 260097
Fax: +44 1954 260245
euagorders@pentair.com

ALL OTHER REGIONS
HYPRO / PENTAIR
Attention: Service Department
375 Fifth Avenue NW
New Brighton, MN 55112
Service: 800-468-3428
Fax: 651-766-6618
Technical: 800-445-8360
hypro.technical@pentair.com

*Carriers, including U.S.P.S., airlines, UPS, ground freight, etc., require specific identification of any hazardous material being shipped. Failure to do so may result in a substantial fine and/or prison term. Check with your shipping company for specific instructions.

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