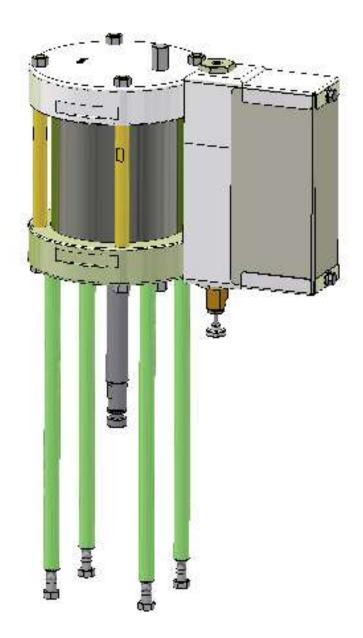
MPH/UPPH/VPH Powerhead

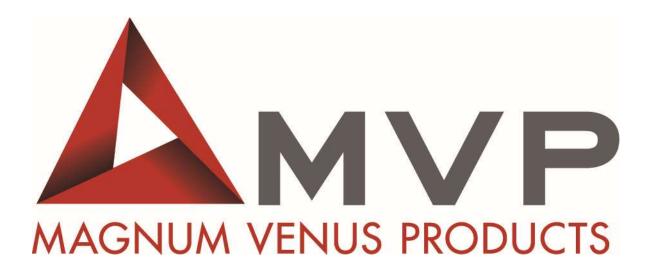
Manual

This manual is applicable to the following models:

- MPH-2500
- MPH-3250
- VPH-3250
- MPH-4250
- VPH-4250
- MPH-5000
- VPH-5000
- VPH-5000-DHV
- VPH-5000-DUO
- UPPH-5000
- MPH-7000
- VPH-7000
- VPH-7000-DHV
- VPH-7000-DUO
- VPH-7000-DUO-HD
- VPH-7000-HD
- UPPH-7000







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E-mail: info@mvpind.com

For a list of international distributors, visit our website at : www.mvpind.com/mvp-international

Use of this product confirms that Magnum Venus Products, Inc.'s standard terms and conditions of sale apply.



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Safety & Warning Information

Warnings 4

Due to the vast number of chemicals that could be used and their varying chemical reactions, the buyer and user of this equipment should determine all factors relating to the fluids used, including any of the potential hazards involved. Particular inquiry and investigation should be made into potential dangers relating to toxic fumes, fires, explosions, reaction times, and exposure of human beings to the individual components or their resultant mixtures. MVP assumes no responsibility for loss, damage, expense or claims for bodily injury or property damage, direct or consequential, arising from the use of such chemical components.

The end user is responsible for ensuring that the end product or system complies with all the relevant laws in the country where it is to be used and that all documentation is adhered to.

Recommended Occupational Safety & Health Act (OSHA) Documentation:

1910.94 Pertaining to ventilation Pertaining to flammable liquids 1910.106 Pertaining to spray finishing operations, particularly paragraph (m), 1910.107 Organic Peroxides and Dual Component Coatings

For Additional information, contact the Occupational Safety and Health Administration (OSHA) at https://www.osha.gov/about.html.

Recommended National Fire Protection Association (NFPA) Documentation:

Organic Peroxides and Dual Component Materials NFPA No.33 Chapter 14 NFPA No. 63 **Dust Explosion Prevention** National Electrical Code NFPA No. 70 Static Electricity NFPA No. 77 Blower and Exhaust System NFPA No. 91 Plastics Industry Dust Hazards NFPA No. 654

Fire Extinguisher – code ABC, rating number 4a60bc using Extinguishing Media –Foam, Carbon Dioxide, Dry Chemical, Water Fog, is recommended for this product and applications.

The following general warnings and guidelines are for the setup, use, grounding, maintenance, and repair of equipment. Additional product-specific warnings may be found throughout this manual as applicable. Please contact your nearest MVP Technical Service Representative if additional information is needed.



Safety Precautions

- Avoid skin contact and inhalation of all chemicals.
- Review Material Safety Data Sheet (MSDS) to promote the safe handling of chemicals in

 USE
- Restrict the use of all chemicals to designated areas with good ventilation.
- Chemicals are flammable and reactive.
- Noxious fumes released when combusted.
- Operate equipment in a ventilated environment only.
- Uncured liquid resins are highly flammable unless specifically labeled otherwise.
- Cured laminate, accumulations of overspray, and laminate sandings are highly combustible.
- Do not operate or move electrical equipment when flammable fumes are present.
- Ground all equipment.
- If a spark is seen or felt, immediately halt operation. Do not operate the equipment until the issue has been identified and repaired.
- Contaminated catalyst may cause fire or explosion.
- Containers may explode if exposed to fire / heat.
- Use and store chemicals away from heat, flames, and sparks.
- Do not smoke in work areas or near stored chemicals.
- Do not mix Methyl Ethyl Ketone Peroxide (MEKP) with materials other than polyethylene.
- Do not dilute MEKP.
- Keep food and drink away from work area.







FLAMMABLE



GROUNDING



EXPLOSIVE



DANGER



DANGER



Physical Hazards

- Never look directly into the spray gun fluid tip. Serious injury or death can result.
- Never aim the spray gun at or near another person. Serious injury or death can result.
- Chemical compounds can be severely irritating to the eyes and skin.
- Inhalation, ingestion, or injection may damage internal organs and lead to pulmonary disorders, cancers, lymphomas, and other diseases or health conditions.
- Other potential health effects include: irritation of the eyes and upper respiratory tract, headache, light-headedness, dizziness, confusion, drowsiness, nausea, vomiting, and occasionally abdominal pain.
- Eye contact: Immediately flush with water for at least 15 minutes and seek immediate medical attention.
- Skin Contact: Immediately wash with soap and water and seek immediate medical attention.
- Inhalation: Move the person to fresh air and seek immediate medical attention.
- Do not remove shields, covers, or safety features on equipment that is in use.
- Never place fingers, hands, or any body part near or directly in front of the spray gun fluid tip. The force of the liquid as it exits the spray tip can shoot liquid through the skin.
- Keep hands and body parts away from any moving equipment or components.
- Do not stand under plunger
- An improperly loaded drum may lead to an imbalance, causing a unit to tip over





Personal Protective Equipment (PPE)

- MVP recommends the use of personal safety equipment with all products in our catalog.
- Wear safety goggles, hearing protection, a respirator, and chemical resistant gloves.
- Wear long sleeve shirts or jackets and pants to minimize skin exposure.
- PPE should be worn by operators and service technicians to reduce the risk of injury.



For Additional information, contact the Occupational Safety and Health Administration (OSHA). https://www.osha.gov/about.html



Symbol Definitions



Indicates the risk of contact with chemicals that are hazardous, which may lead to injury or death.



Indicates the risk of contact with voltage / amperage that may lead to serious injury or death



Indicates that the materials being used are susceptible to combustion



Indicates the risk of contact with moving components that may lead to serious injury or death.



Indicates that the system or component should be grounded before proceeding with use or repair.



Indicates the use of lit cigarettes or cigars is prohibited, because the materials being used are susceptible to combustion.



Indicates that the materials and/or the process being performed can lead to ignition and explosion.



A recommendation for the use of Personal Protective Equipment (PPE) before using or repairing the product.



Polymer Matrix Materials: Advanced Composites

Potential health hazards associated with the use of advanced composites can be controlled through the implementation of an effective industrial hygiene and safety program.

https://www.osha.gov/dts/osta/otm/otm_iii/otm_iii_1.html#t iii:1_1

Resins		
Composite Component	Organ System Target (Possible Target)	Known (Possible) Health Effect
Epoxy resins	Skin, lungs, eyes	Contact and allergic dermatitis, conjunctivitis
Polyurethane resins	Lungs, skin, eyes	Respiratory sensitization, contact dermatitis, conjunctivitis
Phenol formaldehyde	Skin, lungs, eyes	As above (potential carcinogen)
Bismaleimides (BMI)	Skin, lungs, eyes	As above (potential carcinogen)
Polyamides	Skin, lungs, eyes	As above (potential carcinogen)
Reinforcing materials		
Composite Component	Organ System Target (Possible Target)	Known (Possible) Health Effect
Aramid fibers	Skin (lungs)	Skin and respiratory irritation, contact dermatitis (chronic interstitial lung disease)
Carbon/graphite fibers	Skin (lungs)	As noted for aramid fibers
Glass fibers (continuous filament)	Skin (lungs)	As noted for aramid fibers
Hardeners and curing agents		
Composite Component	Organ System Target (Possible Target)	Known (Possible) Health Effect
Diaminodiphenylsulfone	N/A	No known effects with workplace exposure
Methylenedianiline	Liver, skin	Hepatotoxicity, suspect human carcinogen
Other aromatic amines		
Composite Component	Organ System Target (Possible Target)	Known (Possible) Health Effect
Meta-phenylenediamine (MPDA)	Liver, skin (kidney, bladder)	Hepatitis, contact dermatitis (kidney and bladder cancer)
Aliphatic andcyclo-aliphatic amines	Eyes, skin	Severe irritation, contact dermatitis
Polyaminoamide	Eyes, skin	Irritation (sensitization)
Anhydride	Eyes, lungs, skin	Severe eye and skin irritation, respiratory sensitization, contact dermatitis



Catalyst - Methyl Ethyl Ketone Peroxide (MEKP)

MEKP is among the more hazardous materials found in commercial channels. The safe handling of the "unstable (reactive)" chemicals presents a definite challenge to the plastics industry. The highly reactive property which makes MEKP valuable to the plastics industry in producing the curing reaction of polyester resins also produces the hazards which require great care and caution in its storage, transportation, handling, processing and disposal. MEKP is a single chemical. Various polymeric forms may exist which are more or less hazardous with respect to each other. These differences may arise not only from different molecular structures (all are, nevertheless, called "MEKP") and from possible trace impurities left from the manufacture of the chemicals, but may also arise by contamination of MEKP with other materials in its storage or use. Even a small amount of contamination with acetone, for instance, may produce an extremely shock-sensitive and explosive compound.



WARNING

Contamination with promoters, materials containing promoters (such as laminate sandings), or with any readily oxidizing material (such as brass or iron) will cause exothermic redox reactions which can be explosive in nature. Heat applied to MEKP or heat buildup from contamination reactions can cause the material to reach its Self-Accelerating Decomposition Temperature (SADT).

Researchers have reported measuring pressure rates-of-rise well over 100,000 psi per second when certain MEKP's reach their SADT. For comparison, the highest-pressure rate-of-rise listed in NFPA Bulletin NO.68, "Explosion Venting", is 12,000 psi per second for an explosion of 12% acetylene and air. The maximum value listed for a hydrogen explosion is 10,000 psi per second. Some forms of MEKP, if allowed to reach their SADT, will burst even an open topped container. This suggests that it is not possible to design a relief valve to vent this order of magnitude of pressure rate-of-rise. The user should be aware that any closed container, be it a pressure vessel, surge chamber, or pressure accumulator, could explode under certain conditions. There is no engineering substitute for care by the user in handling organic peroxide catalysts. If, at any time, the pressure relieve valve on top of the catalyst tank should vent, the area should be evacuated at once and the fire department called. The venting could be the first indication of a heat, and therefore, pressure build-up that could eventually lead to an explosion. Moreover, if a catalyst tank is sufficiently full when the pressure relief valve vents, some catalyst may spray out, which could cause eye injury. For this reason, and many others, anyone whose job puts them in an area where this vented spray might go, should always wear full eye protection even when laminating operations are not taking place.

Safety in handling MEKP depends to a great extent on employee education, proper safety instructions, and safe use of the chemicals and equipment. Workers should be thoroughly informed of the hazards that may result from improper handling of MEKP, especially regarding contamination, heat, friction and impact. They should be thoroughly instructed regarding the proper action to be taken in the storage, use, and disposal of MEKP and other hazardous materials used in the laminating operation. In addition, users should make every effort to:

- Store MEKP in a cool, dry place in original containers away from direct sunlight and away from other chemicals.
- Keep MEKP away from heat, sparks, and open flames.
- Prevent contamination or MEKP with other materials, including polyester over spray and sandings, polymerization accelerators and promoters, brass, aluminum, and non-stainless steels.



- Never add MEKP to anything that is hot, since explosive decomposition may result.
- Avoid contact with skin, eyes, and clothing. Protective equipment should be worn at all times. During clean-up of spilled MEKP, personal safety equipment, gloves, and eye protection must be worn. Firefighting equipment should be at hand and ready.
- Avoid spillage, which can heat up to the point of self-ignition.
- Repair any leaks discovered in the catalyst system immediately, and clean-up the leaked catalyst at once in accordance with the catalyst manufacturer's instructions.
- Use only original equipment or equivalent parts from Magnum Venus Products in the catalyst system (i.e.: hoses, fitting, etc.) because a dangerous chemical reaction may result between substituted parts and MEKP.
- Catalyst accumulated from the purging of hoses or the measurement of fluid output deliveries should never be returned to the supply tank, such catalyst should be diluted with copious quantities of clean water and disposed of in accordance with the catalyst manufacturer's instructions.

The extent to which the user is successful in accomplishing these ends and any additional recommendations by the catalyst manufacturer determines largely the safety that will be present in his operation.

Clean-Up Solvents and Resin Diluents



WARNING

A hazardous situation may be present in your pressurized fluid system! Hydro carbon solvents can cause an explosion when used with aluminum or galvanized components in a closed (pressurized) fluid system (pump, heaters, filters, valves, spray guns, tanks, etc.). An explosion could cause serious injury, death, and/or substantial property damage. Cleaning agents, coatings, paints, etc. may contain Halogenated Hyrdrocarbon solvents. Some Magnum Venus Products spray equipment includes aluminum or galvanized components and will be affected by Halogenated Hydrocarbon solvents.

There are three key elements to the Halogenated Hyrdocarbon (HHC) solvent hazard.

- 1. The presence of HHC solvents.
- Aluminum or Galvanized Parts.
- 3. Equipment capable of withstanding pressure.
- 1,1,1 Trichloroethane and Methylene Chloride are the most common of these solvents. However, other HHC solvents are suspect if used; either as part of paint or adhesives formulation, or for clean-up flushing. Most handling equipment contains these elements. In contact with these metals, HHC solvents could generate a corrosive reaction of a catalytic nature.
- When HHC solvent contact aluminum or galvanized parts inside a closed container such as a pump, spray gun, or fluid handling system, the chemical reaction can, over time, result in a build-up of heat and pressure, which can reach explosive proportions. When all three elements are present, the result can be an extremely violent explosion. The reaction can be sustained with very little aluminum or galvanized metal; any amount of aluminum is too much.



- The reaction is unpredictable. Prior use of an HHC solvent without incident (corrosion or explosion) does NOT mean that such use is safe. These solvents can be dangerous alone (as a clean-up or flushing agent) or when used as a component or a coating material. There is no known inhibitor that is effective under all circumstances. Mixing HHC solvents with other materials or solvents such as MEKP, alcohol, or toluene may render the inhibitors ineffective.
- The use of reclaimed solvents is particularly hazardous. Reclaimers may not add any inhibitors. The possible presence of water in reclaimed solvents could also feed the reaction.
- Anodized or other oxide coatings cannot be relied upon to prevent the explosive reaction. Such
 coatings can be worn, cracked, scratched, or too thin to prevent contact. There is no known way
 to make oxide coatings or to employ aluminum alloys to safely prevent the chemical reaction
 under all circumstances.
- Several solvent suppliers have recently begun promoting HHC solvents for use in coating systems. The increasing use of HHC solvents is increasing the risk. Because of their exemption from many state implementation plans as Volatile Organic Compounds (VOCs), their low flammability hazard, and their not being classified as toxic or carcinogenic substances, HHC solvents are very desirable in many respects.



WARNING

Do not use Halogenated Hydrocarbon (HHC) solvents in pressurized fluid systems having aluminum or galvanized wetted parts.

Magnum Venus Products is aware of NO stabilizers available to prevent HHC solvents from reaction under all conditions with aluminum components in closed fluid systems. HHC solvents are dangerous when used with aluminum components in a closed fluid system.

- Consult your material supplier to determine whether your solvent or coating contains Halogenated Hydrocarbon solvents.
- Magnum Venus Products recommends that you contact your solvent supplier regarding the best non-flammable clean-up solvent with the heat toxicity for your application.
- If, however, you find it necessary to use flammable solvents, they must be kept in approved, electrically grounded containers.
- Bulk solvent should be stored in a well-ventilated, separate building, 50 feet away from your main plant.
- You should only allow enough solvent for one day's use in your laminating area.
- NO SMOKING signs must be posted and observed in all areas of storage or where solvents and other flammable materials are used.
- Adequate ventilation (as covered in OSHA Section 1910.94 and NFPA No.91) is important wherever solvents are stored or used, to minimize, confine and exhaust the solvent vapors.
- Solvents should be handled in accordance with OSHA Section 1910.106 and 1910.107.



Catalyst Diluents

Magnum Venus Products spray-up and gel-coat systems currently produced are designed so that catalyst diluents are not required. Magnum Venus Products therefore recommends that diluents not be used to avoid possible contamination which could lead to an explosion due to the handling and mixing of MEKP and diluents. In addition, it eliminates any problems from the diluent being contaminated through rust particles in drums, poor quality control on the part of the diluents suppliers, or any other reason. If diluents are absolutely required, contact your catalyst supplier and follow his instructions explicitly. Preferably the supplier should premix the catalyst to prevent possible "on the job" contamination while mixing.



WARNING

If diluents are not used, remember that catalyst spillage and gun, hose, and packing leaks are potentially more hazardous since each drop contains a higher concentration of catalyst and will therefore react more quickly with overspray and the leak.

Cured Laminate, Overspray and Laminate Sandings Accumulation

- Remove all accumulations of overspray, Fiberglass Reinforced Plastic (FRP) sandings, etc. from the building as they occur. If this waste is allowed to build up, spillage of catalyst is more likely to start a fire; in addition, the fire would burn hotter and longer.
- Floor coverings, if used, should be non-combustible.
- Spilled or leaked catalyst may cause a fire if it comes in contact with an FRP product, oversprayed chop or resin, FRP sandings or any other material with MEKP.

To prevent spillage and leakage, you should:

the hoses at any point.

1.	Maintain your Magnum Venus	Check the gun several times daily for catalyst and
	Products System.	resin packing or valve leaks. REPAIR ALL LEAKS IMMEDIATELY.
2.	Never leave the gun hanging over or lying inside the mold.	A catalyst leak in this situation would certainly damage the part, possibly the mold, and may cause a fire.
3.	Inspect resin and catalyst hoses daily for wear or stress at the entry and exits of the boom sections and at the hose and fittings.	Replace if wear or weakness is evident or suspected.
4.	Arrange the hoses and fiberglass roving guides so that the fiberglass strands DO NOT rub against any of	If allowed to rub, the hose will be cut through, causing a hazardous leakage of material which could increase the danger of fire. Also, the material

may spew onto personnel in the area.



Toxicity of Chemicals

- Magnum Venus Products recommends that you consult OSHA Sections 1910.94, 1910.106, 1910.107 and NFPA No.33, Chapter 14, and NFPA No.91.
- Contact your chemical supplier(s) and determine the toxicity of the various chemicals used as well as the best methods to prevent injury, irritation and danger to personnel.
- Also determine the best methods of first aid treatment for each chemical used in your plant.

Equipment Safety

Magnum Venus Products suggest that personal safety equipment such as EYE GOGGLES, GLOVES, EAR PROTECTION, and RESPIRATORS be worn when servicing or operating this equipment. Ear protection should be worn when operating a fiberglass chopper to protect against hearing loss since noise levels can be as high as 116 dB (decibels). This equipment should only be operated or serviced by technically trained personnel!



CAUTION

Never place fingers, hands, or any body part near or directly in front of the spray gun fluid tip. The force of the liquid as it exits the spray tip can cause serious injury by shooting liquid through the skin. NEVER LOOK DIRECTLY INTO THE GUN SPRAY TIP OR POINT THE GUN AT OR NEAR ANOTHER PERSON OR AN ANIMAL.



DANGER

Contaminated catalyst may cause fire or explosion. Before working on the catalyst pump or catalyst accumulator, wash hands and tools thoroughly. Be sure work area is free from dirt, grease, or resin. Clean catalyst system components with clean water daily.



DANGER

Eye, skin, and respiration hazard. The catalyst MEKP may cause blindness, skin irritation, or breathing difficulty. Keep hands away from face. Keep food and drink away from work area.

Treatment of Chemical Injuries



CAUTION

Refer to your catalyst manufacturer's safety information regarding the safe handling and storage of catalyst. Wear appropriate safety equipment as recommended.

Great care should be used in handling the chemicals (resins, catalyst and solvents) used in polyester systems. Such chemicals should be treated as if they hurt your skin and eyes and as if they are poison to your body. For this reason, Magnum Venus Products recommends the use of protective clothing and eye wear in using polyester systems. However, users should be prepared in the event of such an injury.



Precautions include:

- 1. Know precisely what chemicals you are using and obtain information from your chemical supplier on what to do in the event the chemical gets onto your skin or into the eyes, or if swallowed.
- 2. Keep this information together and easily available so that it may be used by those administering first aid or treating the injured person.
- 3. Be sure the information from your chemical supplier includes instructions on how to treat any toxic effects the chemicals have.



WARNING

Contact your doctor immediately in the event of an injury. If the product's MSDS includes first aid instructions, administer first aid immediately after contacting a doctor.

Fast treatment of the outer skin and eyes that contact chemicals generally includes immediate and thorough washing of the exposed skin and immediate and continuous flushing of the eyes with lots of clean water for at least 15 minutes or more. These general instructions of first aid treatment may be incorrect for some chemicals; you must know the chemicals and treatment before an accident occurs. Treatment for swallowing a chemical frequently depends upon the nature of the chemical.

Emergency Stop Procedure

In an emergency, follow these steps to stop a system:

1. The ball valve located where the air enters the power head of the resin pump, should be moved to the "OFF" or closed position.

Note The "open" or "on" position is when the ball valve handle is parallel (in line) with the ball valve body. The "closed" or "off" position is when the ball valve handle is perpendicular (across) the ball valve body.

- 2. Turn all system regulators to the "OFF" position (counter-clockwise) position.
- 3. Verify / secure the catalyst relief line, located on the catalyst relief valve.
- 4. Verify / secure the resin return line, located on the resin filter.
- 5. Place a container under the resin pump ball valve to catch ejected resin.
- 6. Locate the ball valve on the resin pump.
- 7. Rotate the ball valve 90 degrees to the "On" or open position.

Grounding

Grounding an object means providing an adequate path for the flow of the electrical charge from the object to the ground. An adequate path is one that permits charge to flow from the object fast enough that it will not accumulate to the extent that a spark can be formed. It is not possible to define exactly what will be an adequate path under all conditions since it depends on many variables. In any event, the grounding means should have the lowest possible electrical resistance.



Grounding straps should be installed on all loose conductive objects in the spraying area. This includes material containers and equipment. Magnum Venus Products recommends grounding straps be made of AWG No.18 stranded wire as a minimum and the larger wire be used where possible. NFPA Bulletin No77 states that the electrical resistance of such a leakage path should be 1 meg ohm (10⁶ ohms) or less.

CAUTION



Whenever flammable or combustible liquids are transferred from one container to another, or from one container to the equipment, both containers or container and equipment shall be effectively bonded and grounded to dissipate static electricity. For further information, see National Fire Protection Association (NFPA) 77, titled "Recommended Practice on Static Electrical". Refer especially to section 7-7 titled "Spray Application of Flammable and Combustible Materials".

Introduction

This manual provides information for the operation, maintenance, and simple repair of the MVP MPH/UPPH/VPH Powerhead. The following procedures are included:

• Step-by-step assembly and disassembly



Please read this manual carefully and retain for future reference. Follow the steps in the order given, otherwise you may damage the equipment or injure yourself.

This manual covers both the 4" and 5 $\frac{5}{8}$ " stroke length powerheads. The process for rebuilding the powerheads will be the same for the different models and sizes, but part numbers and quantities will vary.

Note

It is important to have the correct parts drawing for the powerhead you are working on to assist you in identifying the correct part numbers for the assembly being rebuilt.

Reassembly requires the use of removable Loctite® or equivalent thread lock compound, lithium grease, and SUPERBLUE O-ring lubricant.

As you disassemble the equipment, lay out the components in the correct order and direction and have all component drawings available for reference. This will assist you in reassembly.



WARNING

Before beginning any service work, release all fluid and air pressure from the system and remove air lines from the motor.



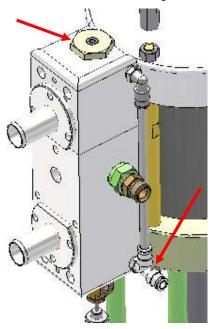


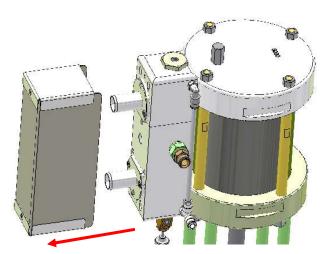
CAUTION

Always wear proper safety equipment (glasses, gloves, respirator, etc.) when working with dispensing equipment and before startup of the unit. Refer to and follow the requirements of the Material Safety Data Sheets (MSDS) supplied by your material manufacturer(s).

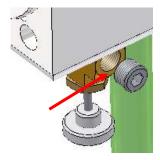
Disassembling Valve Block

- 1. Remove the hardware from the front of the muffler and remove the muffler.
- 2. Remove the socket head cap screws from the valve
- 3. Unscrew the poly fitting nut from the male elbow located on the side of the valve block.
- 4. Remove the two end caps from the valve block.





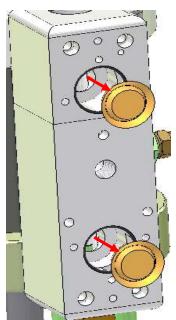
5. Remove the pipe plug from the lower valve block.

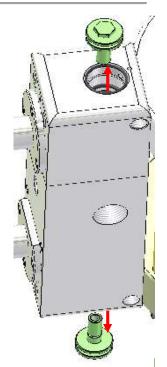


6. Use a socket or nut driver on either of the two valve pistons (top or bottom) and rotate until the hole in the valve poppet in the middle of the block aligns with the pipe plug port in the lower valve block.



- 7. Insert a $\frac{7}{32}$ " hex wrench through the pipe plug port and into the hole in the valve poppet.
- 8. Unscrew and remove the two valve pistons.
- 9. Remove the cap screw from the front of the lower valve block.
- 10. Twist and pull the upper valve block from the lower.
- 11. Remove the valve rod assembly.
- 12. Remove the two cap screws from each of the two valve exhausts and pull the valve exhausts from the valve blocks.
- 13. Using a small screwdriver, lift the inner edge of the diaphragm and remove from each valve block.





Note Be careful to avoid scratching the valve blocks.

- 14. Remove each O-ring.
- 15. Coat the diaphragm bore and both piston bores with lithium grease.
- 16. Use a wire brush to clean the valve rod threads of any dry thread lock compound.



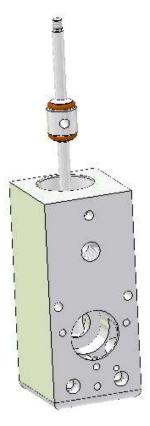
Reassembling Valve Block

Note

Removable thread lock compound will be required for reassembly. If either of the two valve rods unscrewed from the valve poppet during disassembly, put one to two drops of removable thread lock compound on the threads before screwing back in.

1. Set the valve rod assembly into the lower valve block.





Note Some models have both a long and short valve rod; insert the short one into the lower valve block.

- 2. Rotate the valve rod so that the hole in the valve poppet aligns with the pipe plug bore.
- 3. Insert a hex wrench into the pipe plug bore and into the hole in the poppet to hold the valve rod assembly in place.
- 4. Slide the upper valve block into the lower valve block and align.
- 5. Screw the button head cap screw into the lower valve block.
- 6. Use one or two drops of removable thread lock compound in the female threads of the valve pistons.

Do not block hole

- 7. Shake off any excess compound and screw back into the valve rod ends.
- 8. Remove the hex wrench from the block.
- 9. Use either Teflon tape or pipe compound on the pipe plug threads and screw into he lower valve block.
- 10. Insert the diaphragms into the upper and lower valve blocks with the outside leading edge facing out.
- 11. Push the diaphragms all the way down into the valve block bore.
- 12. Line up the holes on the side of the valve exhausts with the machined holes in the valve blocks and install the valve exhausts, being careful to use the machined holes and not to block the port holes.
- 13. Install two socket head cap screws into each of the valve exhausts and snug tight.
- 14. Install valve end caps into the upper and lower valve blocks and lightly snug.

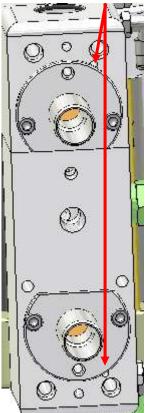
Disassembling Air Cylinder

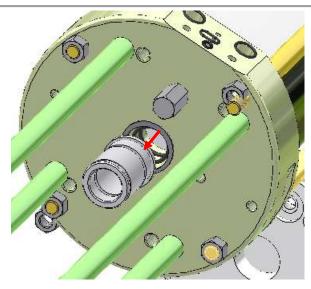
Remove all couplings, connectors, and rod ends from the piston rod end.

Note The following steps assume that the powerhead is oriented with the piston rod pointing down. Powerheads that have been removed from their units can be disassembled from either orientation. Be careful not to scratch the inside of the cylinder when removing the piston.

- 2. Remove the hex nuts from the tie rods.
- 3. Pull the upper end cap off the cylinder.
- 4. Slide the piston rod from the lower end cap.
- 5. Use a pair of snap-ring pliers to the remove the snap ring from the piston rod bushing.
- 6. Remove the piston rod bushing from the lower end cap.







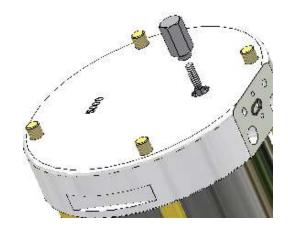
- 7. Replace all O-rings and coat the new ones with lithium grease.
- 8. Coat the inside of the cylinder, piston rod, and piston rod bushing with lithium grease.

Rebuilding Pilot Valve

Note The two pilot valves in the upper and lower end caps are the same.

- 1. Remove the inlet spring housing from the upper end cap.
- 2. Remove the spring with the inlet rod.





- 3. Turn the end cap over and a small spring will fall out.
- 4. Replace the O-ring on the spring housing and the O-ring on the inlet rod, coating the new O-rings and springs with a light coat of SUPERLUBE grease.
- 5. Set the larger spring into the spring housing with the inlet rod facing up.

Note Do not install the small spring at this time. It will be installed from the bottom of the end cap.

- 6. Screw the inlet spring housing into the upper end cap.
- 7. Remove the stem seal from the bottom of the upper end cap.



- 8. Remove the seal guide with the spring.
- 9. Replace the O-ring, coating the new one and the stem with SUPERLUBE.



- 10. Drop the small spring into the stem seal bore.
 - The spring should center itself onto the end of the inlet rod.
- 11. Insert the valve stem spring with the seal guide onto the end cap.
- 12. Set the small end of the seal guide onto the spring.
- 13. Set a new O-ring on top of the seal guide.
- 14. Screw the stem seal with the valve stem into the upper end cap.
- 15. Repeat steps 1 14 for the lower end cap.



Reassembling Air Cylinder

- 1. Install the piston rod bushing into the lower end cap and secure with the snap ring.
- 2. Insert the piston rod through the piston rod bushing.
- 3. Slide the cylinder over the piston and down onto the lower end cap O-ring.
- 4. Set the upper end cap onto the cylinder with the valve block flats facing the same direction.
- 5. Screw the hex nuts onto the tie rods and snug.
- 6. Install the appropriate connector, rod end, and clips to the end of the piston rod.
- 7. Position the O-rings on the back of the pilot valve assembly.
- 8. Mount the pilot valve assembly to the side of the powerhead using the four cap screws.

Note Be sure the pilot valve is mounted with the correct end up.

- 9. Install the muffler onto the pilot valve using the two bolts.
- 10. Connect the pilot air hose and regulated air hose to the air motor.



Parts Drawings

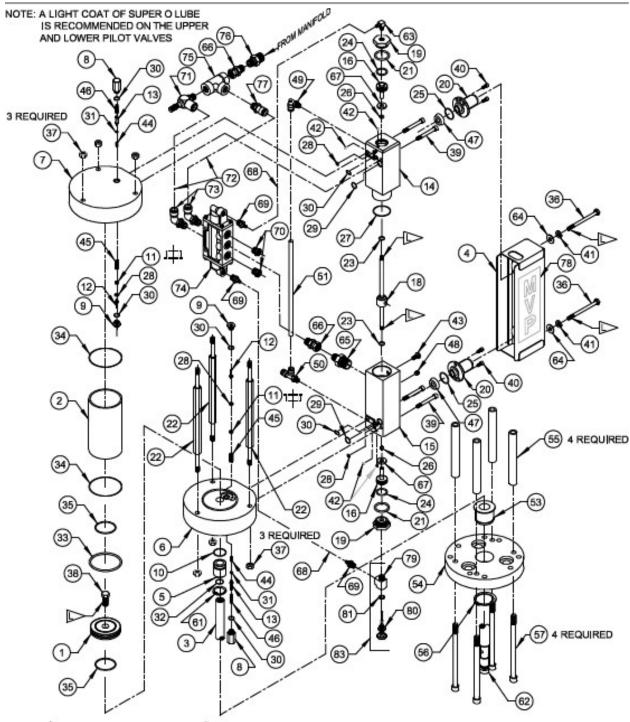
The following illustrations are included for reference when rebuilding equipment or ordering parts. Make sure you refer to the correct drawing for your specific powerhead to get the right part numbers.

Parts Drawings				
Part Number	Description			
MPH-2500	2.5" Powerhead Assembly – 5 5/8 Stroke			
VPH-2500	2.5" Powerhead Assembly – 4 Stroke			
MPH-2500-SK	Seal Kit for 2.5" Powerhead			
MPH-3250	3.25" Powerhead Assembly – 5 5/8 Stroke			
VPH-3250	3.25" Powerhead Assembly – 4 Stroke			
MPH-3250-SK	Seal Kit For 3.25" Powerhead			



Parts Drawings					
Part Number	Description				
MPH-4250	4.25" Powerhead Assembly – 5 5/8 Stroke				
MPH-4250-AAM-CK	Powerhead Replacement for AAM-4000				
VPH-4250	4.25" Powerhead Assembly – 4 Stroke				
MPH-SB	Shift Block for MPH-2500, 3250, 4250				
VPH-SB	Shift Block for VPH-2500, 3250, 4250				
MPH-4250-SK	Seal Kit for 4.25" Powerhead				
MPH-SB-SK	Seal Kit for Shift Block				
MPH-5000	5" Powerhead Assembly - 5 5/8 Stroke				
VPH-5000	5" Powerhead Assembly – 4 Stroke				
MPH-5000-SK	Seal Kit for 5" Powerhead				
VPH-5000-DHV	5" Powerhead Assembly - Dual HV Unit				
VPH-5000-DUO	5" Powerhead Assembly - DUO Units				
UPPH-5000	5" Powerhead Assembly - Ultra Proportioner				
MPH-7000	7" Powerhead Assembly - 5 5/8 Stroke				
MPH-7000-SK	Seal Kit for 7" Powerhead				
MPH-SB-XL	Shift Block for Mph-5000, 7000				
MPH-SB-XL-SK	Seal Kit for XI Shift Block				
UPPH-7000	7" Powerhead Assembly - Universal Proportioner				
UPPH-7000-SK	Seal Kit - 7" Powerhead - Universal Proportioner				
VPH-7000	7" Powerhead Assembly				
VPH-7000-DHV	7" Powerhead Assembly - DHV Units				
VPH-7000-DUO	7" Powerhead Assembly - DUO Units				
VPH-7000-DUO-HD	7" Powerhead Assembly - HD DUO Units				
VPH-7000-HD	7" Heavy Duty Powerhead Assembly				
VPH-7000-HD-SK	Seal Kit for 7" HD Powerhead Assembly				
VPH-SB-XL	Shift Block for Vph-5000, 7000, 10000				





USE REMOVABLE LOCTITE ON THESE THREADS AT ASSEMBLY

J\$\prec\$1 SHOWS ORIENTATION OF ITEM 11, (MPH-2512), SEAL GUIDE. MAGNUM VENUS PLASTECH

Assembly - 2 1/2 Power Head 5 5/8" Stroke MPH-2500

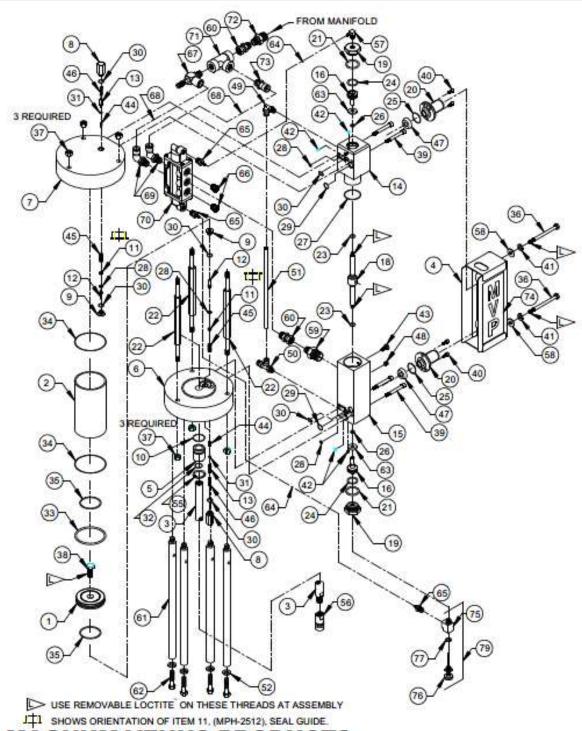
REV. P = MOVED EXHAUST PORT TO THE TOP OF ITEM 4 3/4/05 JEM Q = ADDED MPH-SB TO OPTIONAL ASSEMBLIES 10/14/05 BT2 R = ITEM 51 WAS 01417 11/09/07 BT2 S = ADDED SUPER O LUBE NOTE FOR PILOT VALVES 05/25/11 BT2



Asse	mbly - 2 1/2 Pov	ver H	ead 5 5/8" Stroke MPH-2500				
, 10001	PARTS		odd o oro Odoko IVII 11 2000		PARTS	LIST	
ITEM		QTY	DESCRIPTION	ITEM	PART NO.	QTY	DESCRIPTION
1	MPH-2501	1	PISTON - 2 1/2 PUMP	72	MPM-2583-3	2	3/8"x36" POLY TUBE
2	MPH-2502	1	CYLINDER - 2 1/2 PUMP	73	MPM-2591	2	ELBOW FITTING
3	MPH-2503	1	PISTON ROD	74	MPM-2599	1	5 WAY VALVE
4	MPH-2505-01	1	MUFFLER ASSY - 5 5/8" STROKE PUMP	75	PF-FT-04	1	TEE FITTING
5	MPH-2506	1	PISTON ROD BUSHING	76	PF-HN-06-04	1	NIPPLE
6	MPH-2507	1	LOWER ENDCAP - 2 1/2 PUMP	77	PP-1009	1	FITTING
7	MPH-2508	1	UPPER ENDCAP - 2 1/2 PUMP	78	6701-37-EN	2	MVP DECAL
8	MPH-2541	2	INLET SPRING HOUSING - PILOT VALVE	79	00276	1	TEE FITTING
9	MPH-2511-01	2	ASSY - STEM SEAL	80 81	MPH-2546-01 MPH-2545	1	VALVE STEM ASSY SEAL
* 10	O-8-117 MPH-2512	1	O-RING SEAL GUIDE				NOT OIL DECAL (NOT SHOWN)
11	MPH-2512	2	VALVE STEM - PILOT VALVE		DONOTOILAININOTON		NOT OLE DECOME (NOT GROWN,
13	MPH-2540	2	INLET ROD - PILOT VALVE				
14	MPH-2515	1	UPPER VALVE BLOCK - 5 5/8" STROKE P	UMP			
15	MPH-2516	1	LOWER VALVE BLOCK				
16	MPH-2517	2	VALVE PISTON	-	PTIONAL PAR	TS AL	ND ASSEMBLIES
18	MPH-2547	1	VALVE POPPET	_			
19	MPH-2521	2	VALVE END CAP			rs Lis	
20	MPH-2522	2	VALVE EXHAUST	ITE		QTY	
* 21	O-B-019	2	O-RING	8		1	RESET BUTTON ASSY
22	MPH-2524	3	TIE ROD 5 5/8" STROKE PUMP		MPH-SB	1	SHIFT BLOCK ASSY
* 23 * 24	O-U-204-90 O-B-116	2	O-RING O-RING				
* 24 * 25	O-B-020	2	O-RING				
* 26	O-D-010-90	2	O-RING				
* 27	O-B-125	1	O-RING				
* 28	O-B-008	4	O-RING				The same of the
* 29	O-B-013	2	O-RING		RE	PAIR	KITS
* 30	O-B-012	6	O-RING		PART N	0.	DESCRIPTION
* 31	O-U-006	2	O-RING		A MINIOR	00.01	CEAL KIT
* 32	O-B-114	1	O-RING		* MPH-25	00-SK	SEAL KIT
* 33	O-B-330	1	O-RING				
* 34	O-B-144	2	O-RING				
* 35	O-B-295	2	O-RING				
36	F-HB-04C-56-SS	6	HEX HEAD CAP SCREW HEX NUT				
37	F-HN-05F F-HBFT-06F-20-GR5		HEX HEAD CAP SCREW				
39	F-CS-04C-32-SS	4	SOCKET HEAD CAP SCREW				
40	F-CS-1024-06-SS	4	SOCKET HEAD CAP SCREW				
41	F-SW-04-SS	2	LOCK WASHER				
42	F-SS-832-02-SS	4	CUP POINT SET SCREW				
43	F-BHCS-04C-08-SS	1	BUTTON HEAD CAP SCREW			FIGL	JRE 1-1
44	MPH-2526	2	SPRING				^
45	MPH-2528	2	SPRING			_	~
46	MPH-2533	2	SPRING				
* 47	MPH-2529	2	DIAPHRAGM		/		8 Y P
48 49	PF-AP-04-SS MPH-2539	1	PIPE PLUG		l l		- 6
50	MPH-2539 MPH-2538	1	PUSH POLY FITTING - MALE ELBOW PUSH POLY FITTING - MALE TEE		()	_	<i></i> ∕r
51		.70ft	Ø1/4 x 8-3/8 POLY TUBE		\	h-	1
53	MPH-2525	1	BUSHING - MAGNUM BASE				7111
54	MPH-3257	1	MODIFIED MP BASE			Ш	
55	MPH-3258	4	INTERMEDIATE SPACER		,	411	NI I
56	MPH-2536	1	EXT SNAP RING		(Ш	
57	F-CS-06C-100	4	SOCKET HEAD CAP SCREW		N	11/_	- 91
61	MPH-2531	1	SNAP - RING			_	-)
62	MPH-2504	1	PISTON ROD END		1	1	-1
63	MPM-2589	1	BARB ELBOW FITTING				M
64	F-FW-04	2	FLAT WASHER		1	10	
65	PF-HN-08-04	1	NIPPLE		(4		(a)
66	PF-SW-04	2	SWIVEL FITTING		(톟	3/)
67	MPH-3262	2	PISTON STOP				
68	MPM-2052-1	2	Ø1/4 x 12 POLY TUBE			\Box	
69 70	MPM-2565 PF-AP-04	2	FITTING PLUG			- []	
71	PCV-1001	1	NEEDLE VALVE				
	1 01-1001		The state of the s			Н	
						H	

* COMPONENTS INCLUDED WITH SEAL KIT.





MAGNUM VENUS PRODUCTS

Assembly - 2 1/2 Power Head 4" Stroke

VPH-2500

N - ADDED DONOT DE AIR MOTOR DECALTO DWG 8/28/04 JEM
O - MOYED EXHAUST PORT IN 1TEM 4 TO THE TOP 3/4/05 JEM
P - ADDED ITEM 52 10/07/05 812
O - ADDED VPH-S8 TO OPTIONAL ASSEMBLIES 10/17/05 812



Assembly - 2 1/2 Power Head 4" Stroke VPH-2500

	PARTS	LIST	6		PARTS	LIST	
ITEM	PART NO.	QTY	DESCRIPTION	ITEM	PART NO.	QTY	DESCRIPTION
1	MPH-2501	1	PISTON - 2 1/2 PUMP	64	MPM-2052-1	2	1/4x12' POLY TUBE
2	VPH-2501	1	CYLINDER - 2 1/2 PUMP	65	MPM-2565	3	FITTING
3	VPH-2502	1	PISTON ROD	66	PF-AP-04	2	PLUG
4	VPH-4253-01	1	MUFFLER ASSY - 4" STROKE PUMP	67	PCV-1001	1	NEEDLE VALVE
5	MPH-2506	1	PISTON ROD BUSHING - Ø5/8 ROD	68	MPM-2583-3	2	3/8x36" POLY TUBE
6	MPH-2507	1	LOWER ENDCAP - 2 1/2 PUMP	69	MPM-2591	2	ELBOW FITTING
7	MPH-2508	1	UPPER ENDCAP - 2 1/2 PUMP	70	MPM-2599	1	5 WAY VALVE
8	MPH-2541	2	INLET SPRG HOUSING - PILOT VALVE	71	PF-FT-04	1	TEE FITTING
9	MPH-2511-01	2	ASSY - STEM SEAL	72	PF-HN-06-04	1	NIPPLE
* 10	O-B-117	1	O-RING	73	PP-1009	1	FITTING
11	MPH-2512	2	SEAL GUIDE	74	6701-37-EN	2	MVP DECAL
12	MPH-2513	2	VALVE STEM - PILOT VALVE	75	00276	1	TEE FITTING
13	MPH-2540	2	INLET ROD - PILOT VALVE	76	MPH-2546-01	1	VALVE STEM ASSY
14	VPH-4257	1	UPPER VALVE BLK - 4" STROKE PMP	77	MPH-2545	1	SEAL
15	MPH-2516	1	LOWER VALVE BLOCK				
16	MPH-2517	2	VALVE PISTON				
18	VPH-2504	1	VALVE POPPET	OPTIO	ONAL PARTS	AND	ACEMBLIES
19	MPH-2521	2	VALVE END CAP	OFTIC	JINAL PARTS	MIND	ASEMBLIES
20	MPH-2522	2	VALVE EXHAUST	ITEM	PART NO.	QTY	DESCRIPTION
* 21	O-B-019	2	O-RING	79	MPH-2542	1	RESET BUTTON ASSY
22	VPH-4258	3	TIE ROD 4" STROKE PUMP				
* 23	O-U-204-90	2	O-RING				
# 24	O-B-116	2	O-RING		REPA	IR KIT	S
w 25	O-B-020	2	O-RING		PART NO.		SCRIPTION
* 26	O-D-010-90	2	O-RING			es (10)	
w 27	O-B-125	1	O-RING		★ MPH-2500-SH	K SE	AL KIT
* 28	O-B-008	4	O-RING				
* 29	O-B-O13	2	O-RING				
* 30	O-B-012	6	O-RING				
* 31	O-U-006	2	O-RING				
# 32	O-B-114	1	O-RING				
* 33	O-B-330	1	O-RING				
* 34	O-B-144	2	O-RING				
* 35	O-B-295	2	O-RING				
36	F-HB-04C-56-SS	2	HEX HEAD CAP SCREW				
37	F-HN-05F	6	HEX NUT				
38	F-HBFT-06F-20-GRS	5 1	HEX HEAD CAP SCREW				
39	F-CS-04C-32-SS	4	SOCKET HEAD CAP SCREW				
40	F-CS-1024-08-SS	4	SOCKET HEAD CAP SCREW				
41	F-SW-04-SS	2	LOCK WASHER		FIGU	RE 1-	1
42	F-SS-832-02-SS	4	CUP POINT SET SCREW				
43	F-BHCS-04C-08-SS	1	BUTTON HEAD CAP SCREW				
44	MPH-2526	2	SPRING				
45	MPH-2528	2	SPRING				\sim
46	MPH-2533	2	SPRING			14	
* 47	MPH-2529	2	DIAPHRAM		-		*/
48	PF-AP-04-SS	1	PIPE PLUG			9 7	
49	MPH-2539	1	PUSH POLY FITTING - MALE ELBOW		NA.	9	0
50	MPH-2538	1	PUSH POLY FITTING - MALE TEE		(-1	
51	01417	.56ft	Ø1/4 x 6-3/4 POLY TUBING - NATURAL		m-	-11	
52	F-SW-06	4	LOCK WASHER		11		
55	MPH-2531	1	SNAP - RING				
56	VPH-2503	1	PISTON ROD END) Y	10
57	MPM-2589	1	BARB ELBOW FITTING		1	-)	
58	F-FW-04	2	FLAT WASHER		6	_	
59	PF-HN-08-04	1	NIPPLE				
60	PF-SW-04	2	SWIVEL FITTING		12.00		
61	2104-4-1	4	TIE ROD		Н		
62	F-HB-06C-24-GR8		GRADE 8 HEX CAP SCREW		8		
63	MPH-3262	2	PISTON STOP				

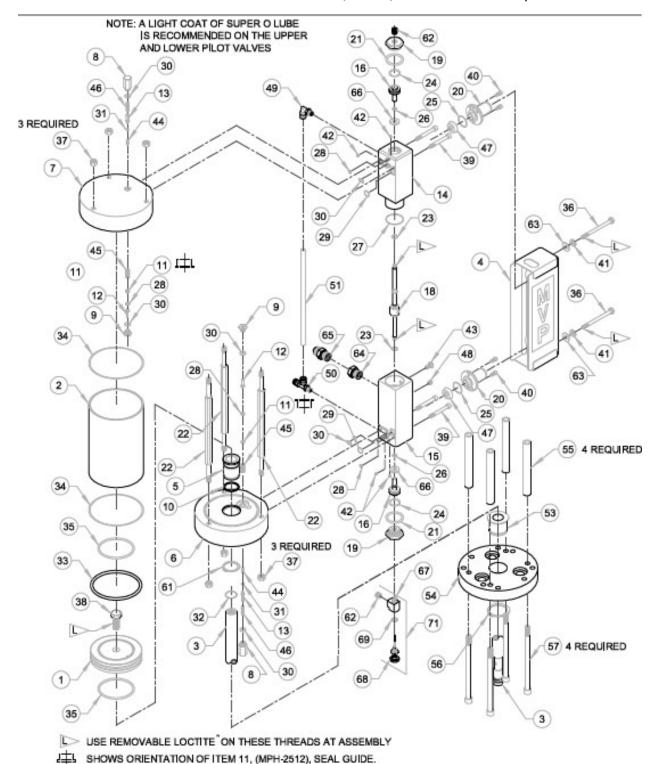




MPH-2500-SK SEAL KIT 2-1/2" AIR MOTOR 2 PCS 0-U-006 0-RING 4 PCS 0-B-008 0-RING 6 PCS 0-B-012 0-RING 2 PCS 0-B-144 0-RING 2 PCS 0-B-013 0-RING 2 PCS 0-B-019 O-RING 0-B-330 0-RING 2 PCS 0-B-116 O-RING 1 PC 0-B-114 O-RING 2 PCS 1 PC 0-B-5-295 0-B-125 0-RING 0-RING 0-D-010-90 O-RING 2 PCS 0-U-204-90 O-RING 2 PCS 0-B-020 0-RING 2 PCS



MPH-2529 1/4" DIAPHRAM



MAGNUM VENUS PLASTECH

Assembly - 3 1/4 Power Head 5 5/8" Stroke MPH-3250

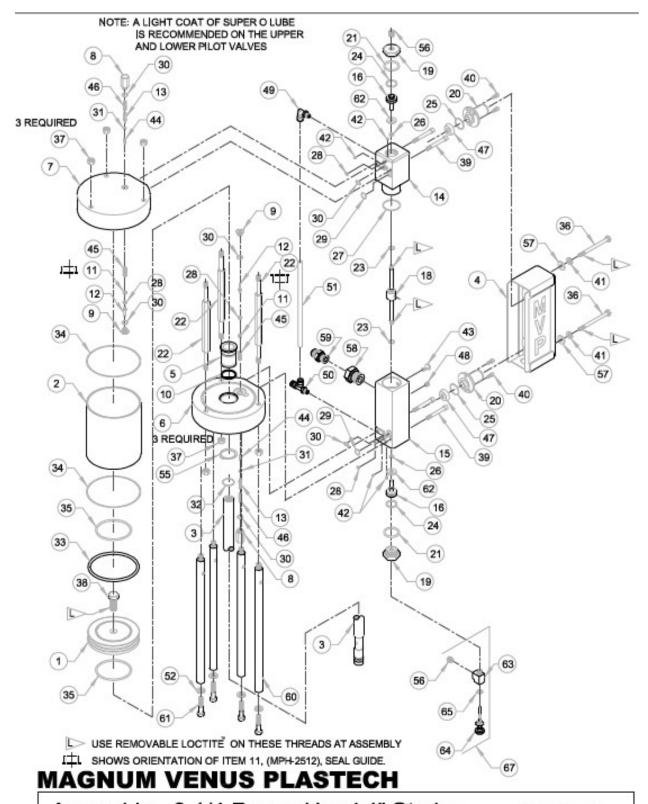
REV. O = ITEM 51 WAS 01417 11/09/07 BT2
P = ITEM 38 WAS F-HBFT-08C-20-GR5 05/08/09 BT2
Q = ADDED SUPER O LUBE FOR PILOT VALVES 05/25/11 BT2
R = REMOVE BUBBLE FOR ITEM 17 07/25/12 BT2



75.4	PARTS		DECODIFICAL	ITTE	PARTS		DECODIDATON
TEM	PART NO. MPH-3251	QTY 1	DESCRIPTION PISTON - 3 1/4 PUMP	ITEM	PART NO.	QTY	DESCRIPTION
1	MPH-3252	1	CYLINDER - 3 1/4 PUMP	61	MPH-3261	1	SNAP - RING
2	MPH-3253	1	PISTON ROD	62	PF-AP-02-SS	2	PIPE PLUG
3		1		63 64	F-FW-04 PF-RB-08-06	2	FLAT WASHER PIPE BUSHING
4	MPH-2505-01		MUFFLER ASSY - 5 5/8" STROKE PUMP	65	PF-HN-06-06S		ADAPTER
5	VPH-4254	1	PISTON ROD BUSHING	66	MPH-3262	2	PISTON STOP
6	MPH-3254	1	LOWER ENDCAP - 3 1/4 PUMP	67	00276	ī	TEE FITTING
7	MPH-3255	1	UPPER ENDCAP - 3 1/4 PUMP	- 68	MPH-2546-01	1	VALVE STEM ASSY
8	MPH-2541	2	INLET SPRING HOUSING - PILOT VALVI	69	MPH-2545	1	SEAL
9	MPH-2511-01	2	ASSY - STEM SEAL	70 DC	NOTOLAIRMOTO	R 1 DO	NOT OIL DECAL (NOT SHO
10	O-B-121	1	O-RING				
11	MPH-2512	2	SEAL GUIDE				
12	MPH-2513	2	VALVE STEM - PILOT VALVE				
13	MPH-2540	2	INLET ROD - PILOT VALVE				
14	MPH-2515	1	UPPER VALVE BLOCK - 5 5/8" STROKE	PUMP			
15	MPH-2516	1	LOWER VALVE BLOCK				
16	MPH-2517	2	VALVE PISTON	200.00			
18	MPH-2547	1	VALVE POPPET	OPTIO	NAL PARTS	AND A	ASSEMBLIES
19	MPH-2521	2	VALVE END CAP		PARTS	LIST	
20	MPH-2522	2	VALVE EXHAUST	TEM	PART NO.	QTY	DESCRIPTION
21	O-B-019	2	O-RING	71	MPH-2542	1	RESET BUTTON AS
22	MPH-2524	3	TIE ROD 5 5/8" STROKE PUMP		MPH-SB	1	SHIFT BLOCK ASSY
23	O-U-204-90	2	O-RING				
24	O-B-116	2	O-RING				
25	O-B-020	2	O-RING				
26	O-D-010-90	2	O-RING				
27	O-B-125	1	O-RING		REPAI		
28	O-B-008	4	O-RING		PART NO.	DES	SCRIPTION
29	O-B-013	2	O-RING		* MPH-3250-SK	SEA	AL KIT
30	O-B-012	6	O-RING		- MITTI-3230-310	SL	AL INI
31	O-U-006	2	O-RING				
32	O-B-118	1	O-RING				
33	O-B-336	1	O-RING				
34	O-B-152	2	O-RING				
35	O-B-404	2	O-RING				
36	F-HB-04C-56-SS	2	HEX BOLT				
37	F-HN-05F	6	HEX NUT		1	FIGUE	RE 1-1
38	F-HB-08F-20-GR5	1	HEX BOLT				
39	F-CS-04C-32-SS	4	SOCKET HEAD CAP SCREW				~
40	F-CS-1024-06-SS	4	SOCKET HEAD CAP SCREW			-	
41	F-SW-04-SS	2	LOCK WASHER			8	3
42	F-SS-832-02-SS	4	CUP POINT SET SCREW		(a		9
43	F-BHCS-04C-08-SS	1	BUTTON HEAD CAP SCREW		10		- 7
44	MPH-2526	2	SPRING		Th		-11
45	MPH-2528	2	SPRING				
46	MPH-2533	2	SPRING				
47	MPH-2529	2	DIAPHRAGM		/		
48	PF-AP-04-SS	1	PIPE PLUG		(
49	MPH-2539	1	PUSH POLY FITTING - MALE ELBOW				27
50	MPH-2538	1	PUSH POLY FITTING - MALE TEE		/		1
51	MS-2052-1	.70ft	Ø1/4 x 8-3/8 POLY TUBE		16	TOT	
53	MPH-3256	1	BUSHING - MAGNUM BASE		Jt	7 800	
54	MPH-3257	1	MODIFIED MP BASE		6	15	20
55	MPH-3258	4	INTERMEDIATE SPACER		10	8 7	8/
56	MPH-2536	1	EXT SNAP RING		1	ماه	//
57	F-CS-06C-100	4	SOCKET HEAD CAP SCREW			7	
200							

* COMPONENTS INCLUDED WITH SEAL KIT.





Assembly - 3 1/4 Power Head 4" Stroke

VPH-3250

REV. O = ITEM 51 WAS 01417 11/09/07 BT2
P = ITEM 38 WAS F-HBFT-08C-20-GR5 05/08/09 BT2
Q = ADDED SUPER O LUBE NOTE FOR PILOT VALVES 05/25/11 BT2
R = ORIENTED MUFFLER FOR DOWNWARD EXHAUST 02/23/18 BT2

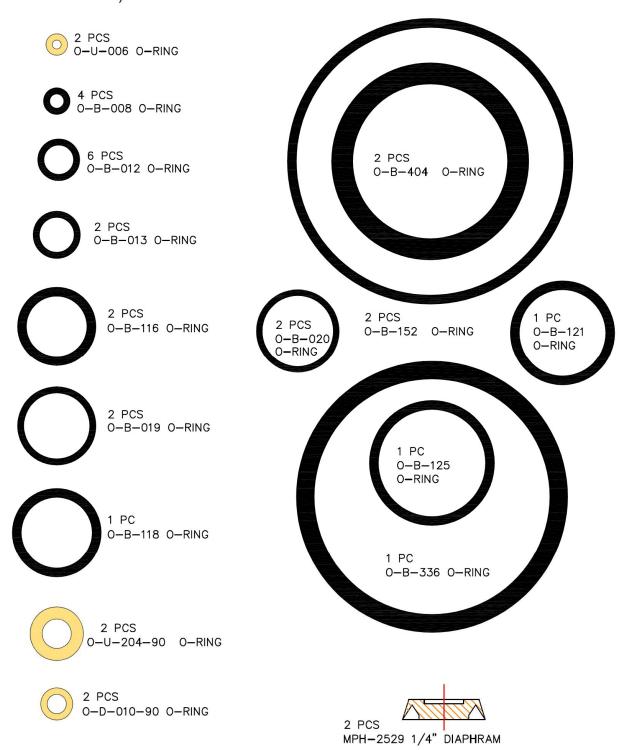


7.59.59	PARTS		Head 4" Stroke VPH-3250		PARTS	SLIST	•
ITEM	PART NO.	QTY	DESCRIPTION	ITEM	PART NO.	QTY	DESCRIPTION
1	MPH-3251	1	PISTON - 3 1/4 PUMP	63	00276	1	TEE FITTING
2	VPH-3251	1	CYLINDER - 3 1/4 PUMP	64	MPH-2546-01	1	VAVLE STEM ASSY
3	VPH-4259	1	PISTON ROD	65	MPH-2545	1	SEAL
4	VPH-4253-01	1	MUFFLER ASSY - 4" STROKE PUMP	66 DC	NOTOLAIRMOTO	R 1 DO	NOT OIL DECAL (NOT SHOW)
5	VPH-4254	1	PISTON ROD BUSHING				
6	MPH-3254	1	LOWER ENDCAP - 3 1/4 PUMP	ODT	IONAL DAD	TO AN	D ACCV
7	MPH-3255	1	UPPER ENDCAP - 3 1/4 PUMP	OPI	IONAL PAR		
8	MPH-2541	2	INLET SPRING HOUSING - PILOT VALV	E .	PARTS		
9	MPH-2511-01	2	ASSY - STEM SEAL	ITEM	PART NO.	QTY	DESCRIPTION
★ 10	O-B-121	1	O-RING	67	MPH-2542	1	RESET BUTTON ASS
11	MPH-2512	2	SEAL GUIDE		VPH-SB	1	SHIFT BLOCK ASSY
12	MPH-2513	2	VALVE STEM - PILOT VALVE				
13	MPH-2540	2	INLET ROD - PILOT VALVE	5.035			
14	VPH-4257	1	UPPER VALVE BLOCK - 4" STROKE PU	MP	REPA	RKIT	9
15	MPH-2516	1	LOWER VALVE BLOCK		PART NO.		SCRIPTION
16	MPH-2517	2	VALVE PISTON				
18	VPH-2504	1	VALVE POPPET		 MPH-3250-Sk 	SE	AL KIT
19	MPH-2521	2	VALVE END CAP				
20	MPH-2522	2	VALVE EXHAUST				
* 21	O-B-019 VPH-4258	2	O-RING				
22	O-U-204-90	3	TIE ROD 4" STROKE PUMP O-RING				
* 24	O-B-116	2	O-RING				
25	O-B-020	2	O-RING				
* 26	O-D-010-90	2	O-RING				
27	O-B-125	1	O-RING				
* 28	O-B-008	4	O-RING				
¥ 29	O-B-O13	2	O-RING				
* 30	O-B-012	6	O-RING				
* 31	O-U006	2	O-RING				
* 32	O-B-118	1	O-RING				
* 33	O-B-336	1	O-RING				
* 34	O-B-152	2	O-RING				
* 35	O-B-404	2	O-RING				
36	F-HB-04C-56-SS	2	HEX HEAD CAP SCREW				
37	F-HN-05F	6	HEX NUT				
38	F-HB-08F-20-GR5	5 1	HEX HEAD CAP SCREW				
39	F-CS-04C-32-SS	4	SOCKET HEAD CAP SCREW				
40	F-CS-1024-06-SS	4	SOCKET HEAD CAP SCREW				
41	F-SW-04-SS	2	LOCK WASHER		FIGUR	PF 1_1	
42	F-SS-832-02-SS		CUP POINT SET SCREW		1 1001		
43	F-BHCS-04C-08-S		BUTTON HEAD CAP SCREW				
44	MPH-2526	2	SPRING				
45	MPH-2528	2	SPRING			1	_
46	MPH-2533	2	SPRING			/	
* 47	MPH-2529	2	DIAPHRAGM		-		
48	PF-AP-04-SS	1	PIPE PLUG		/ 8	2	
49	MPH-2539	1	PUSH POLY FITTING - MALE ELBOW		(a	9	
50	MPH-2538	1	PUSH POLY FITTING - MALE TEE		10	-	
51	MS-2052-1	.56ft	Ø1/4 x 6-3/4 POLY TUBING LOCK WASHER			-11	
52 55	F-SW-06 MPH-3261	4	SNAP - RING				
56	PF-AP-02-SS	2	PIPE PLUG				
57	F-FW-04	2	FLAT WASHER		VI.	19	5653
58	PF-RB-08-06	1	PIPE BUSHING		(0)	1	
59	PF-HN-06-06S		ADAPTER		1		
60	2104-4-1	4	TIE ROD		2000		
61	F-HB-06C-24-GR8		GRADE 8 HEX CAP SCREW				
62	MPH-3282	2	PISTON STOP				
02	WIF IT-3202	2	FIGIOR STOP		200		

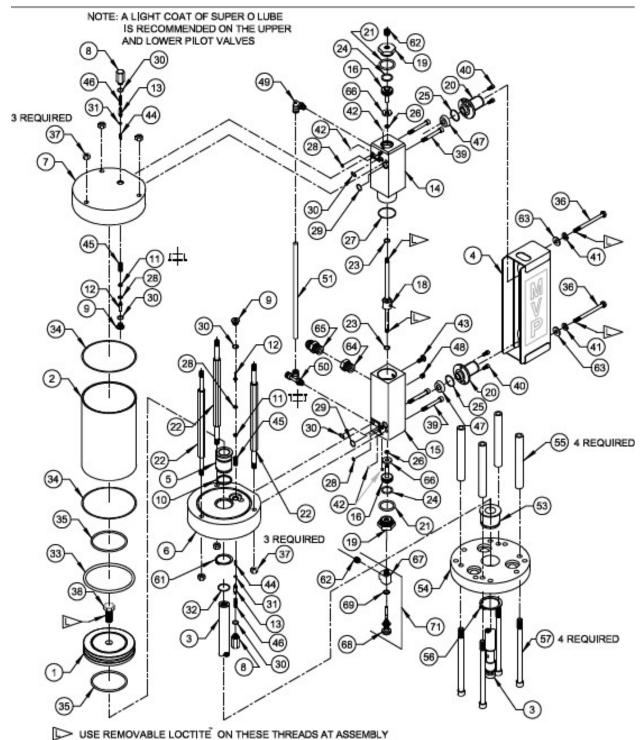
* COMPONENTS INCLUDED WITH SEAL KIT.



MPH-3250-SK SEAL KIT 3-1/4" AIR MOTOR







11 SHOWS ORIENTATION OF ITEM 11, (MPH-2512), SEAL GUIDE.

MAGNUM VENUS PLASTECH

Assembly - 4 1/4 Power Head 5 5/8" Stroke MPH-4250

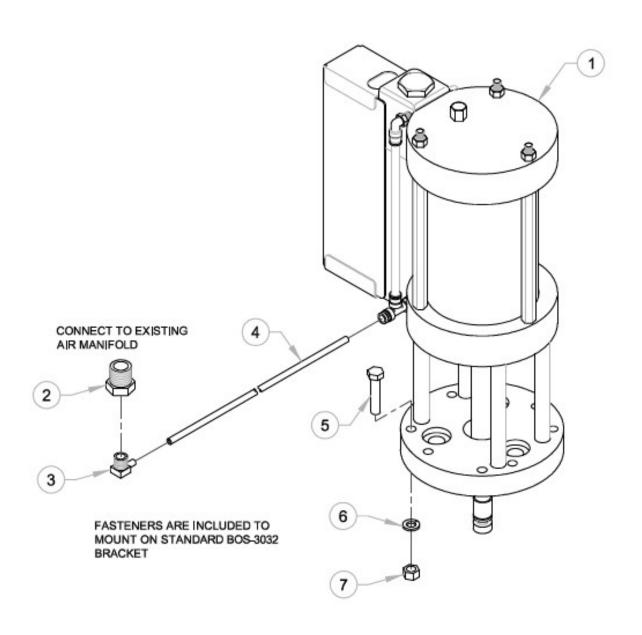
REV.N = ADDED MPH-SB TO OPTIONAL ASSEMBLIES 10/14/05 BT2
O = ITEM 51 WAS 01417 11/09/07 BT2
P = ITEM 38 WAS F-HBFT-08C-20-GR5 05/08/09 BT2
Q = ADDED SUPER O LUBE NOTE FOR PILOT VALVES 05/24/11 BT2



	PARTS				PARTS	
TEM	PART NO.	QTY	DESCRIPTION	ITEM	PART NO. Q	TY DESCRIPTION
1	VPH-4251	1	PISTON - 4 1/4 PUMP	67	00276	1 TEE FITTING
2	MPH-4251	1	CYLINDER - 4 1/4 PUMP	68	MPH-2546-01	1 VALVE STEM ASSY
3	MPH-3253	1	PISTON ROD	69	MPH-2545	1 SEAL
4	MPH-2505-01	1	MUFFLER ASSY - 5 5/8" STROKE PUMP	70 DO	NOTOLLAIRMOTOR	1 DO NOT OIL DECAL (NOT SHOW
5	VPH-4254	1	PISTON ROD BUSHING			
6 7	VPH-4255	1	LOWER ENDCAP - 4 1/4 PUMP	OPTIO	NIAL DADTO	AND ACCEMBLIES
8	VPH-4256 MPH-2541	1	UPPER ENDCAP - 4 1/4 PUMP INLET SPRING HOUSING - PILOT VALVE	OPTIO		AND ASSEMBLIES
9	MPH-2511-01	2	ASSY - STEM SEAL		PARTS	LIST
10	O-B-121	1	O-RING	ITEM		TY DESCRIPTION
11	MPH-2512	2	SEAL GUIDE	71	MPH-2542	1 RESET BUTTON ASSY
12	MPH-2513	2	VALVE STEM - PILOT VALVE		MPH-SB	1 SHIFT BLOCK ASSY
13	MPH-2540	2	INLET ROD - PILOT VALVE			
14	MPH-2515	1	UPPER VALVE BLOCK - 5 5/8" STROKE PUMP			
15	MPH-2516	1	LOWER VALVE BLOCK			
16	MPH-2517	2	VALVE PISTON		DEDAID	VITO
18	MPH-2547	1	VALVE POPPET		REPAIR	
19	MPH-2521	2	VALVE END CAP		PART NO.	DESCRIPTION
20	MPH-2522	2	VALVE EXHAUST		* MPH-4250-SK	SEAL KIT
21	O-B-019	2	O-RING			
22	MPH-2524	3	TIE ROD 5 5/8" STROKE PUMP			
23	O-U-204-90	2	O-RING			
24	O-B-116	2	O-RING			
25	O-B-020	2	O-RING			
26	O-D-010-90	2	O-RING			
27	O-B-125	1	O-RING			
28	O-B-008	4	O-RING			
29	O-B-013	8	O-RING O-RING			
30	O-B-012	2				
31	O-U-006 O-B-118	1	O-RING O-RING			
33	O-B-344	1	O-RING			
34	O-B-156	2	O-RING			
35	O-B-409	2	O-RING			
36	F-HB-04C-58-SS	2	HEX HEAD CAP SCREW			
37	F-HN-05F	6	HEX NUT			
38	F-HB-08F-20-GR5	1	HEX HEAD CAP SCREW			
39	F-CS-04C-32-SS	4	SOCKET HEAD CAP SCREW			
40	F-CS-1024-08-SS	4	SOCKET HEAD CAP SCREW		FIGURE	
41	F-SW-04-SS	2	LOCK WASHER		FIGURE	1-1
42	F-SS-832-02-SS	4	CUP POINT SET SCREW			\sim
	F-BHCS-04C-08-SS		BUTTON HEAD CAP SCREW		-	76/
44	MPH-2526	2	SPRING		0	
45	MPH-2528	2	SPRING		(4)
46	MPH-2533	2	SPRING			7 4
47	MPH-2529 PF-AP-04-SS	2	DIAPHRAGM BIRE BLUC			/ I
48		1	PIPE PLUG			11
49 50	MPH-2539 MPH-2538	1	PUSH POLY FITTING - MALE ELBOW PUSH POLY FITTING - MALE TEE			11
51	MS-2052-1	.70ft	Ø1/4 x 8-3/8 POLY TUBING		ાાા	114
53	MPH-3256	1	BUSHING - MAGNUM BASE			
54	MPH-3257	1	MODIFIED MP BASE			1
55	MPH-3258	4	INTERMEDIATE SPACER		()
56	MPH-2536	1	EXT SNAP RING			1
57	F-CS-06C-100	4	SOCKET HEAD CAP SCREW			
61	MPH-3261	1	SNAP - RING		1 1	h
62	PF-AP-02-SS	2	PIPE PLUG		(U) De	6)
63	F-FW-04	2	FLAT WASHER		(9)	1)
64	PF-RB-08-06	1	PIPE BUSHING		-	
65	PF-HN-06-06S	1	ADAPTER			
66	MPH-3262	2	PISTON STOP			
					1.1	

* COMPONENTS INCLUDED WITH SEAL KIT.





MAGNUM VENUS PLASTECH

Power Head Replacement for AAM-4000

MPH-4250-AAM-CK

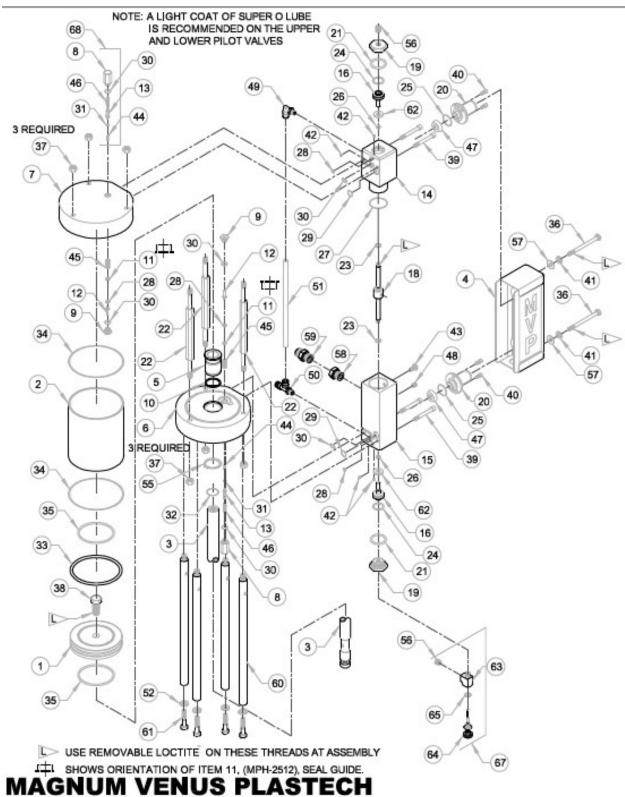
REV. - 06/01/11 BT2



Power Head Replacement for AAM-4000 MPH-4250-AAM-CK PARTS LIST

ITEM	PART NO.	QTY	DESCRIPTION
1	MPH-4250	1	POWER HEAD
2	PF-RB-08-04	1	REDUCER BUSHING
3	MPM-2585	1	ELBOW
4	MPM-2052-30	1	TUBING
5	F-HB-06C-28	4	HEX BOLT
6	F-SW-06	4	LOCK WASER
7	F-HN-06C	4	HEX NUT





Assembly - 4 1/4 Power Head 4" Stroke

VPH-4250

REV. Q = ITEM 51 WAS 01417 11/09/07 BT2
R = ITEM 38 F-HBFT-08C-20-GR5 05/08/09 BT2
S = ADDED SUPER O LUBE NOTE FOR PILOT VALVES 05/25/11 BT2
T = ORIENTED MUFFLER FOR DOWNWARD EXHAUST 02/23/18 BT2

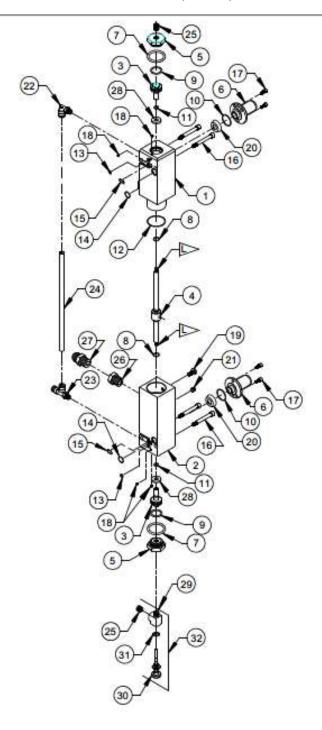


Assembly - 4 1/4 Power Head 4" Stroke VPH-4250

Ass			rieau 4 Stioke VF1F4250				
	PARTS	LIST			PARTS	LIST	
ITEM	PART NO.	QTY	DESCRIPTION	ITEM	PART NO.	QTY	DESCRIPTION
1	VPH-4251	1	PISTON - 4 1/4 PUMP	63	00276	1	TEE FITTING
2	VPH-4252	1	CYLINDER - 4 1/4 PUMP	64	MPH-2546-01	1	VALVE STEM ASSY
3	VPH-4259	1	PISTON ROD	65	MPH-2545	1	SEAL
4	VPH-4253-01	1	MUFFLER ASSY - 4" STROKE PUMP			1 00	NOT OIL DECAL (NOT SHOWN)
5	VPH-4254	1	PISTON ROD BUSHING	00 00	1010101111010101		no on one or
6	VPH-4255	1	LOWER ENDCAP - 4 1/4 PUMP	OPTIO	NAI DADTO	ANID	ASSEMBLIES
7	VPH-4256	1	UPPER ENDCAP - 4 1/4 PUMP	OPTIO	MAL PARTS	AND	ASSEMBLIES
8	MPH-2541	2	INLET SPRING HOUSING - PILOT VAL	VE	PARTS	LIST	
9	MPH-2511-01	2	ASSY - STEM SEAL	ITEM	PART NO.	QTY	DESCRIPTION
* 10	O-B-121	1	O-RING	67	MPH-2542	1	RESET BUTTON ASSY
11	MPH-2512	2	SEAL GUIDE	68	MPH-2540-CK		VALVE CONV KIT
12	MPH-2513	2	VALVE STEM - PILOT VALVE	00	VPH-SB	1	SHIFT BLOCK ASSY
13	MPH-2540	2	INLET ROD - PILOT VALVE		VI III-OU	4.	GHI I BEOOK ADOI
14	VPH-4257	1	UPPER VALVE BLOCK - 4" STROKE P	UMP			
15	MPH-2516	1	LOWER VALVE BLOCK				
16	MPH-2517	2	VALVE PISTON		REPA	IR KI	TS
18	VPH-2504	1	VALVE POPPET		PART NO.		DESCRIPTION
19	MPH-2521	2	VALVE END CAP				
20	MPH-2522	2	VALVE EXHAUST		* MPH-4250-S	K S	SEAL KIT
*21	O-B-019	2	O-RING				
22	VPH-4258	3	TIE ROD 4" STROKE PUMP				
* 23	O-U-204-90	2	O-RING				
* 24	O-B-116	2	O-RING				
* 25	O-B-020	2	O-RING				
2 8	O-D-010-90	2	O-RING				
* 27	O-B-125	1	O-RING				
* 28	O-B-008	4	O-RING				
* 29	O-B-O13	2	O-RING				
* 30	O-B-012	6	O-RING				
* 31	O-U-006	2	O-RING				
* 32	O-B-118	1	O-RING				
* 33	O-B-344	1	O-RING				
* 34	O-B-156	2	O-RING				
* 35	O-B-409	2	O-RING				
36	F-HB-04C-56-SS	2	HEX HEAD CAP SCREW				
37	F-HN-05F	6	HEX NUT				
38	F-HB-08F-20-GR5		HEX HEAD CAP SCREW				
39 40	F-CS-04C-32-SS F-CS-1024-06-SS		SOCKET HEAD CAP SCREW SOCKET HEAD CAP SCREW				
					FIGUR	RE 1-	1
41 42	F-SW-04-SS F-SS-832-02-SS	2	LOCK WASHER CUP POINT SET SCREW				200
	F-BHCS-04C-08-SS		BUTTON HEAD CAP SCREW				
44	MPH-2526	2	SPRING				
45	MPH-2528	2	SPRING				^
46	MPH-2533	2	SPRING		4	~	
* 47	MPH-2529	2	DIAPHRAGM				3
48	PF-AP-04-SS	1	PIPE PLUG		(8	7	
49	MPH-2539	1	PUSH POLY FITTING - MALE ELBOW		NA.	9	
50	MPH-2538	1	PUSH POLY FITTING - MALE TEE			-/	
51	MS-2052-1	.56ft	Ø1/4 x 6-3/4 POLY TUBING			411	
52	F-SW-06	4	LOCK WASHER				
55	MPH-3261	1	SNAP - RING			III.	
56	PF-AP-02-SS	2	PIPE PLUG		V	19	
57	F-FW-04	2	FLAT WASHER			1	
58	PF-RB-08-06	1	PIPE BUSHING		0		
59	PF-HN-06-06S	1	ADAPTER				
60	2104-4-1	4	TIE ROD				
61	F-HB-06C-24-GR8		GRADE 8 HEX CAP SCREW				
62	MPH-3262	2	PISTON STOP		. 3		

* COMPONENTS INCLUDED WITH SEAL KIT.





USE REMOVABLE LOCTITE ON THESE THREADS AT ASSEMBLY

MAGNUM VENUS PRODUCTS

Shift Block for MPH-2500,3250,4250

MPH-SB

REV. 05/28/04 BT2 REV. A - CORRECTED ITEM 24 04/30/07 BT2 REV. B - ADDED REPAIR KIT 05/04/07 BT2



Shift Block for MPH-2500,3250,4250 Power Heads PARTS LIST

REPAIR KITS

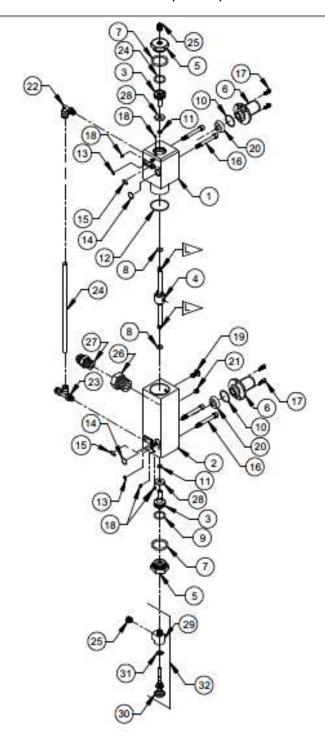
PART NO. DESCRIPTION

* MPH-SB-SK SEAL KIT

	FARIS	LIOI	
ITEM	PART NO.	QTY	DESCRIPTION
1	MPH-2515	1	UPPER VALVE BLOCK
2	MPH-2516	1	LOWER VALVE BLOCK
3	MPH-2517	2	VALVE PISTON
4	MPH-2547	1	VALVE POPPET
5	MPH-2521	2	VALVE END CAP
6	MPH-2522	2	VALVE EXHAUST
* 7	O-B-019	2	O-RING
* 8	O-U-204-90	2	O-RING
* 9	O-B-116	2	O-RING
* 10	O-B-020	2	O-RING
* 11	O-D-010-90	2	O-RING
* 12	O-B-125	1	O-RING
± 13	O-B-008	2	O-RING
* 14	O-B-013	2	O-RING
* 15	O-B-012	2	O-RING
16	F-CS-04C-32-SS	4	SOCKET HEAD CAP SCREW
17	F-CS-1024-06-SS	4	SOCKET HEAD CAP SCREW
18	F-SS-832-02-SS	4	CUP POINT SET SCREW
19	F-BHCS-04C-08-SS	1	BUTTON HEAD CAP SCREW
* 20	MPH-2529	2	DIAPHRAGM
21	PF-AP-04-SS	1	PIPE PLUG
22	MPH-2539	1	PUSH POLY FITTING - MALE ELBOW
23	MPH-2538	1	PUSH POLY FITTING - MALE TEE
24	MS-2052-1	.70ft	Ø1/4 x 8-3/8 TUBING
25	PF-AP-02-SS	2	PIPE PLUG
26	PF-RB-08-06	1	REDUCER BUSHING
27	PF-HN-06-06S	1	ADAPTER
28	MPH-3262	2	PISTON STOP
29	PF-ST-02-BR	1	TEE FITTING
30	MPH-2546-01	1	VALVE STEM ASSY.
31	MPH-2545	1	SEAL

OPTIONAL PARTS AND ASSEMBLIES





USE REMOVABLE LOCTITE ON THESE THREADS AT ASSEMBLY

MAGNUM VENUS PRODUCTS

Shift Block for VPH-3250 & VPH-4250 VPH-SB

10/14/05 BT2

REV. A - ITEM 4 WAS MPH-2504 02/20/08 BT2
REV. B - ELIMINATED DESIGNATION FOR VPH-2500 10/30/08 BT2
REV. C - ADDED REPAIR KIT 06/04/07 BT2



PART NO. ★ MPH-SB-SK

REPAIR KITS

DESCRIPTION

SEAL KIT

Shift Block for VPH-3250 & VPH-4250 VPH-SB

	PARTS LIST	
ITEM	PART NO. QTY	DESCRIPTION
1	VPH-4257 1	UPPER VALVE BLOCK
2	MPH-2516 1	LOWER VALVE BLOCK
3	MPH-2517 2	VALVE PISTON
4	VPH-2504 1	VALVE POPPET
5	MPH-2521 2	VALVE END CAP
6	MPH-2522 2	VALVE EXHAUST
± 7	O-B-019 2	O-RING
* 8	O-U-204-90 2	O-RING
* 9	O-B-116 2	O-RING
* 10	O B 020 2	O-RING
* 11	O-D-010-90 2	O-RING
* 12	O-B-125 1	O-RING
* 13	O-B-008 2	O-RING
± 14	O-B-013 2	O-RING
* 15	O-B-012 2	O-RING
16	F-CS-04C-32-SS 4	SOCKET HEAD CAP SCREW
17	F-CS-1024-06-SS 4	SOCKET HEAD CAP SCREW
18	F-SS-832-02-SS 4	SET SCREW
19	F-BHCS-04C-08-SS	BUTTON HEAD CAP SCREW
* 20	MPH-2529 2	DIAPHRAGM
21	PF-AP-04-SS 1	PIPE PLUG
22	MPH-2539 1	PUSH POLY FITTING - MALE ELBOW
23	MPH-2538 1	PUSH POLY FITTING - MALE TEE
24	MS-2052-1 .56ft	Ø1/4" X 6-3/4 TUBING
25	PF-AP-02-SS 2	PIPE PLUG
26	PF-RB-08-06 1	PIPE BUSHING
27	PF-HN-06-06S 1	ADAPTER
28	MPH-3262 2	PISTON STOP
29	PF-ST-02-BR 1	TEE FITTING
30	MPH-2546-01 1	VALVE STEM ASSY.
31	MPH-2545 1	SEAL

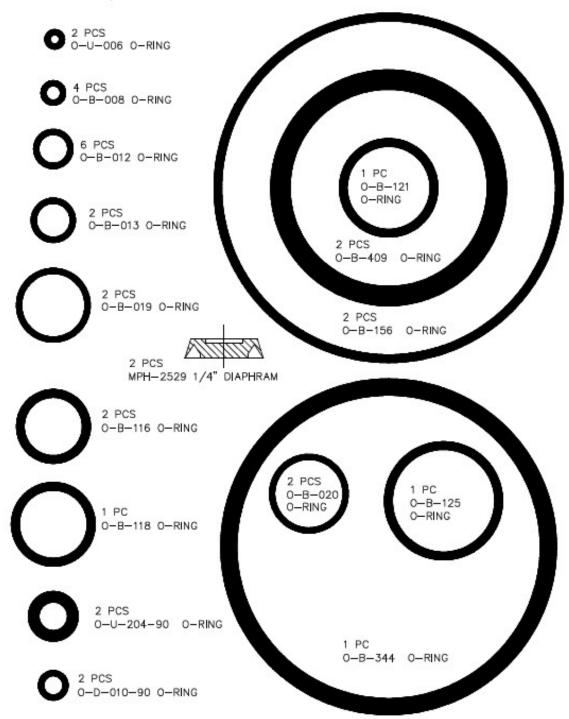
OPTIONAL PARTS AND ASSY PARTS LIST

PART NO.

ITEM MPH-2542 1 RESET BUTTON ASSY 32

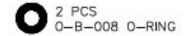


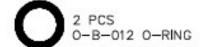
MPH-4250-SK SEAL KIT 4-1/4" AIR MOTOR

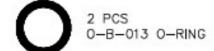




MPH-SB-SK SHIFT BLOCK SEAL KIT



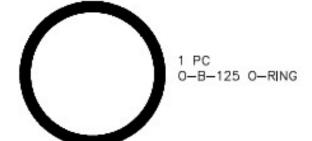




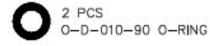






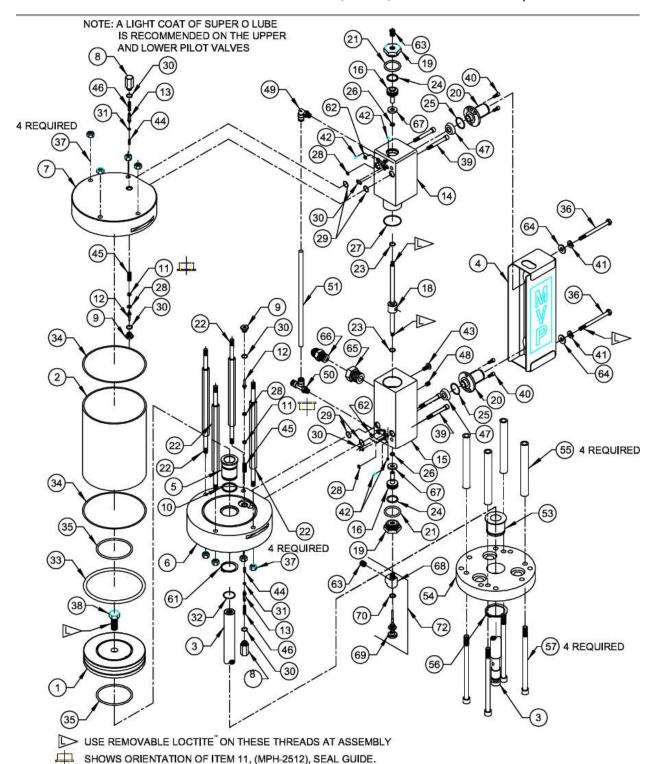












Assembly - 5" Power Head 5 5/8" Stroke MPH-5000

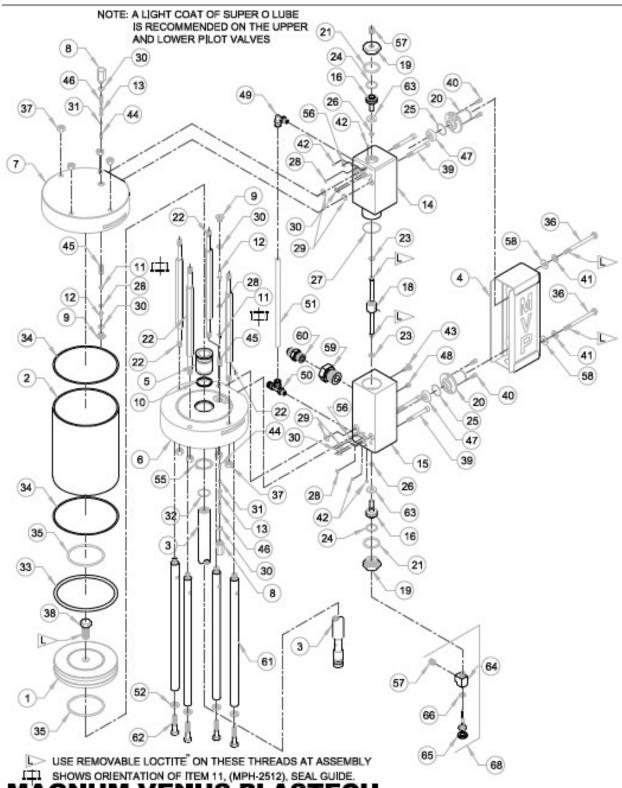
REV. Q = ITEM 51 WAS 01417 11/09/07 BT2
R = ITEM 38 WAS F+IBFT-08C-2Q-GR5 05/08/09 BT2
S = ADDED SUPER O LUBE NOTE FOR PILOT VALVES
T = CORRECTED ITEMS 21 AND 24 ON ILLUSTRATION



ГЕМ			DECODIDATION	ITES .	DADTILO	OT	DECODIDE
4		QTY	DESCRIPTION DISTON 5" PLIMP	ITEM	PART NO.	QTY	DESCRIPTION
1	MPH-5006 MPH-5005	1	PISTON - 5" PUMP CYLINDER - 5" PUMP	68 69	00276 MPH-2546-01	1	TEE FITTING VALVE STEM ASSY
3	MPH-3253	1	PISTON ROD	70	MPH-2545	1	SEAL
4	MPH-5011-01	1	MUFFLER ASSY - 5 5/8" STROKE PUMP	-			NOT OIL DECAL (NOT SHOW
5	VPH-4254	i	PISTON ROD BUSHING	/ I DON	OTOILAINWOT	JK I DO	NOT OIL DECAL (NOT SHOW
6	MPH-5004	1	LOWER ENDCAP - 5" PUMP				
7	MPH-5003	1	UPPER ENDCAP - 5" PUMP	OPTIC	MAI PART	S AND	ASSEMBLIES
8	MPH-2541	2	INLET SPRING HOUSING - PILOT VALVE	OI IIC	PARTS		AGGEMBEIEG
9	MPH-2511-01	2	ASSY - STEM SEAL				
10	O-B-121	1	O-RING	ITEM	PART NO.	QTY	DESCRIPTION
11	MPH-2512	2	SEAL GUIDE	72	MPH-MPH-25		RESET BUTTON ASSY
12	MPH-2513	2	VALVE STEM - PILOT VALVE		MPH-SB-XL	1	SHIFT BLOCK ASSY
13	MPH-2540	2	INLET ROD - PILOT VALVE				
14	MPH-5002	1	UPPER VALVE BLOCK - 5 5/8" STROKE F	PUMP	REPAI	D VITO	,
15	MPH-5001	1	LOWER VALVE BLOCK				
16	MPH-2517	2	VALVE PISTON		PART NO.	DES	SCRIPTION
18	MPH-5012	1	VALVE FND CAR	*	MPH-5000-SK	SEA	AL KIT
19 20	MPH-2521 MPH-5009	2	VALVE END CAP				
21	O-B-019	2	VALVE EXHAUST O-RING				
22	MPH-5007	4	TIE ROD 5 5/8" STROKE PUMP				
23	O-U-206-90	2	O-RING				
24	O-B-116	2	O-RING				
25	O-B-026	2	O-RING				
26	O-D-010-90	2	O-RING				
27	O-B-125	1	O-RING				
28	O-B-008	4	O-RING				
29	O-B-014	4	O-RING				
30	O-B-012	6	O-RING				
31	O-U-006	2	O-RING				
32	O-B-118	1	O-RING				
33	O-B-425	1	O-RING				
34	O-B-159	2	O-RING				
35	O-B-415	2	O-RING				
36	F-HB-04C-56-SS	2	HEX BOLT HEX NUT				
37 38	F-HN-06F F-HB-08F-20-GR5	1	HEX BOLT				
39	F-CS-04C-40-SS	4	SOCKET HEAD CAP SCREW		FIGUR	E 1 1	
40	F-CS-04C-08-SS	4	SOCKET HEAD CAP SCREW		FIGUR	⊏ 1-1	
41	F-SW-04-SS	2	LOCK WASHER				
42	F-SS-832-02-SS	4	CUP POINT SET SCREW		-		4
43	F-BHCS-04C-16-SS		BUTTON HEAD CAP SCREW		6		
44	MPH-2526	2	SPRING		(a)	
45	MPH-2528	2	SPRING			9//	
46	MPH-2533	2	SPRING			1	
47	MPH-5010	2	DIAPHRAGM			1111	
48	PF-AP-04-SS	1	PIPE PLUG				
49	MPH-2539	1	PUSH POLY FITTING - MALE ELBOW				
50 51	MPH-2538 MS-2052-1	1 .70ft	PUSH POLY FITTING - MALE TEE Ø1/4 x 8-3/8 POLY TUBING		/		
53	MPH-3256	1	BUSHING - MAGNUM BASE				
54	MPH-3257	i	MODIFIED MP BASE)	
55	MPH-3258	4	INTERMEDIATE SPACER			1	
56	MPH-2536	1	EXT SNAP RING				
57	F-CS-06C-100	4	SOCKET HEAD CAP SCREW		1 500	11	
61	MPH-3261	1	SNAP - RING		(d D a	a)	
62	O-B-011	2	O-RING		Kal "	3/	
63	PF-AP-02-SS	2	PIPE PLUG		100		
64 65	F-FW-04 PF-RB-08-06	2	FLAT WASHER				
66	PF-RB-06-06S	1	PIPE BUSHING ADAPTER				
67	MPH-3262	2	PISTON STOP				
J.		100			Ч		
					1 4		

* COMPONENTS INCLUDED WITH SEAL KIT.





Assembly 5" Power Head 4" Stroke

VPH-5000

REV P = ITEM 51 WAS 01417 11/09/07 BT2

Q = ITEM 38 WAS F-HBFT-08C-20-GRS 06/08/09 BT2 R = ADDED SUPER O LUBE NOTE FOR PILOT VALVES S = ORIENTED MUFFLER FOR DOWNWARD EXHAUST

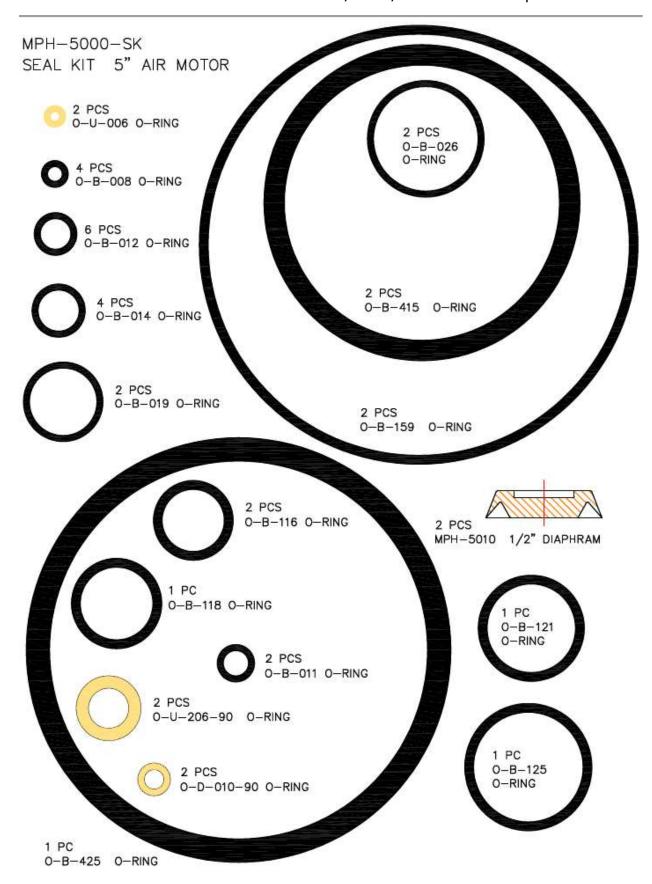
05/25/11 BT2



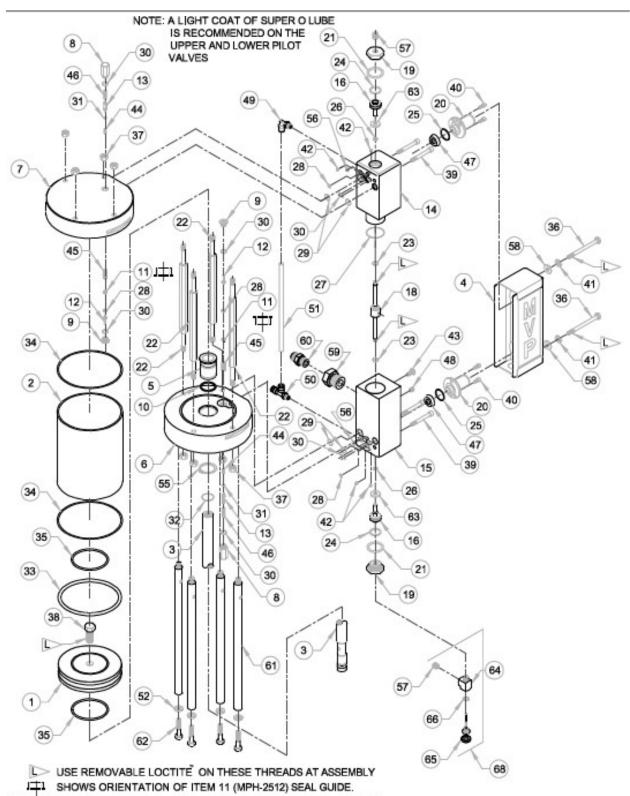
100011	PARTS		d 4" Stroke VPH-5000		PARTS	TELLS	
ITEM	PART NO.	QTY	DESCRIPTION	ITEM	PART NO.	QTY	DESCRIPTION
1	MPH-5006	1	PISTON - 5" PUMP	64	00276	1	TEE FITTING
2	VPH-5002	1	CYLINDER - 5" x 4" STROKE PUMP	65	MPH-2546-01	1	VALVE STEM ASSY
3	VPH-4259	1	PISTON ROD	66	MPH-2545	1	SEAL
4	VPH-5004-01	1	MUFFLER ASSY - 4" STROKE PUMP				NOT OIL DECAL (NOT SHOW)
5	VPH-4254	1	PISTON ROD BUSHING	0,	DONO I OILAIRMO I C	/K 1 DC	HO! OR DECAL (HO! SHOW
6	MPH-5004	1	LOWER ENDCAP - 5' PUMP				
7	MPH-5003	1	UPPER ENDCAP - 5' PUMP	0	DTIONAL DAG	DTC AI	ND ASSEMBLIES
8	MPH-2541	2	INLET SPRING HOUSING - PILOT VAL				ND ASSEMBLIES
9	MPH-2511-01	2	ASSY - STEM SEAL	_	PARTS	SLIST	
* 10	O-B-121	1	O-RING	ITEM	PART NO.	QTY	DESCRIPTION
11	MPH-2512	2	SEAL GUIDE	68	MPH-2542	1	RESET BUTTON ASSY
12	MPH-2513	2	VALVE STEM - PILOT VALVE		VPH-SB-XL	1	SHIFT BLOCK ASSY
13	MPH-2540	2	INLET ROD - PILOT VALVE				
14	VPH-5001	1	UPPER VALVE BLOCK - 4" STROKE P	JMP			
15	MPH-5001	1	LOWER VALVE BLOCK		REPAIR	KITS	
16	MPH-2517	2	VALVE PISTON		PART NO.		RIPTION
18	VPH-5005	1	VALVE POPPET		MENT COSO OR		.de
19	MPH-2521	2	VALVE END CAP		MPH-5000-SK	SEAL	KII
20	MPH-5009	2	VALVE EXHAUST				
*21	O-B-019	2	O-RING				
22	VPH-5003	4	TIE ROD 4" STROKE PUMP				
*23	O-U-206-90	2	O-RING				
* 24	O-B-116	2	O-RING				
* 25	O-B-026	2	O-RING				
* 26	O-D-010-90	2	O-RING				
* 27	O-B-125	1	O-RING				
* 28	O-B-008	4	O-RING				
* 29	O-B-O14	4	O-RING				
* 30	O-B-012	6	O-RING				
*31	O-U-006	2	O-RING				
*32	O-B-118	1	O-RING				
* 33	O-B-425	1	O-RING				
* 34	O-B-159	2	O-RING				
* 35	O-B-415	2	O-RING				
36	F-HB-04C-56-SS	2	HEX HEAD CAP SCREW				
37	F-HN-06F	8	HEX NUT				
38	F-HB-08F-20-GR5	1	HEX HEAD CAP SCREW				
39	F-CS-04C-40-SS	4	SOCKET HEAD CAP SCREW				
40	F-CS-04C-08-SS	4	SOCKET HEAD CAP SCREW				
41	F-SW-04-SS	2	LOCK WASHER		FIGU	RE 1-	1
42	F-SS-832-02-SS	4	CUP POINT SET SCREW		FIGU	KE I-	
	-BHCS-04C-16-SS		BUTTON HEAD CAP SCREW				
44	MPH-2526	2	SPRING		Ar	-84	₹
45	MPH-2528	2	SPRING		10	8	
46	MPH-2533	2	SPRING		()
* 47	MPH-5010	2	DIAPHRAGM		A	8	
48	PF-AP-04-SS	1	PIPE PLUG		1	de	7
49	MPH-2539	1	PUSH POLY FITTING - MALE ELBOW			-71	
50	MPH-2538	1	PUSH POLY FITTING - MALE TEE			- 111	
51	MS-2052-1	.56ft	Ø1/4 x 6-3/4 POLY TUBING			- 115	
52	F-SW-06	4	LOCK WASHER		(4	- 111	
55	MPH-3261	1	SNAP - RING				ſŢ.
* 56	O-B-011	2	O-RING		(-20)
57	PF-AP-02-SS	2	PIPE PLUG			-0	
58	F-FW-04	2	FLAT WASHER		0		
59	PF-RB-08-06	1	PIPE BUSHING				
60	PF-HN-06-06S		ADAPTER		4	3	
61	2104-4-1	4	TIE ROD			4	
62	F-HB-06C-24-GR8		GRADE 8 HEX CAP SCREW		1	=	
63	MPH-3262	2	PISTON STOP				

* COMPONENTS INCLUDED WITH SEAL KIT.









Assembly - 5" Power Head 4" Stroke

VPH-5000-DHV

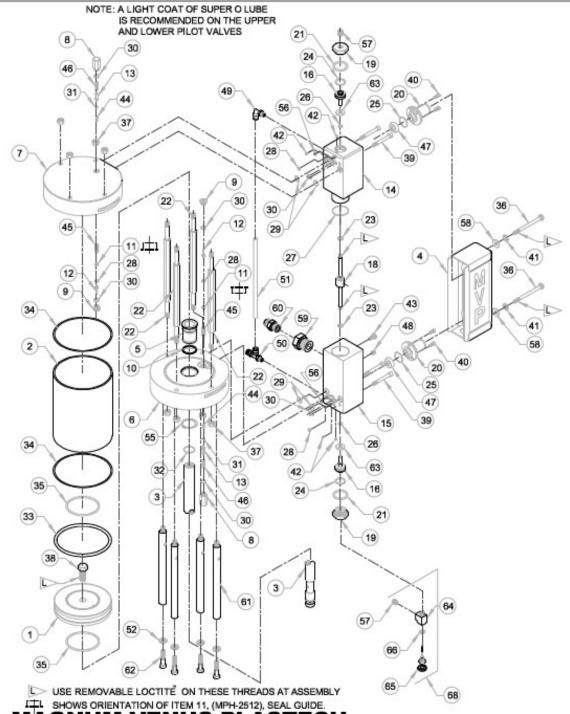
REV - 05/19/10 BT2

A - ADDED SUPER O LUBE NOTE FOR PLOT VALVES 06/25/11 BT2 B - ORIENTED MUFFLER FOR DOWNWARD EXHAUST 02/23/18 BT2



Assembl	y - 5" Power H	ead 4"	Stroke VPH-5000-DHV		******		
	PARTS				PARTS	LIST	
ITEM	PART NO.	QTY	DESCRIPTION	ITEM	PART NO.	QTY	DESCRIPTION
1	MPH-5006	1	PISTON - 5' PUMP	64	00276	1	TEE FITTING
2	VPH-5002	1	CYLINDER - 5" x 4" STROKE PUMP	65	MPH-2546-01	1	VALVE STEM ASSY
3	VPH-4259	1	PISTON ROD	66	MPH-2545	1	SEAL
4	VPH-5004-01	1	MUFFLER ASSY - 4" STROKE PUMP	67	DONOTOILAIRMOTO	R 1 DO	NOT OIL DECAL (NOT SHOWN)
5	VPH-4254	1	PISTON ROD BUSHING				
6	MPH-5004-DH		LOWER ENDCAP - 5" PUMP				
7	MPH-5003	1	UPPER ENDCAP - 5" PUMP	_ (OPTIONAL PAR	RTS AI	ND ASSEMBLIES
8	MPH-2541	2	INLET SPRING HOUSING - PILOT VAL	VE	PARTS	TRILE	
9	MPH-2511-01	2	ASSY - STEM SEAL				DECODISTICAL
*10	O-B-121	1	O-RING	ITEM		QTY	DESCRIPTION RESET BUTTON ASSY
11	MPH-2512	2	SEAL GUIDE	68	MPH-2542 VPH-SB-XL	1	
12	MPH-2513	2	VALVE STEM - PILOT VALVE		VPH-SB-AL	1	SHIFT BLOCK ASSY
13	MPH-2540	2	INLET ROD - PILOT VALVE				
14	VPH-5001	1	UPPER VALVE BLOCK - 4" STROKE PI	UMP	REPAIR	VITO	
15	MPH-5001	1	LOWER VALVE BLOCK		PART NO.		RIPTION
16 18	MPH-2517	2	VALVE PISTON		PART NO.	DESC	RIPTION
19	VPH-5005 MPH-2521	1 2	VALVE POPPET VALVE END CAP		* MPH-5000-SK	SEAL	KIT
20	MPH-2521 MPH-5009	2	VALVE EXHAUST				
*21	O-B-019	2	O-RING	3	* COMPONENTS II	NCLUDE	D WITH SEAL KIT.
22	VPH-5003	4	TIE ROD 4" STROKE PUMP				
* 23	O-U-206-90	2	O-RING				
* 24	O-B-116	2	O-RING				
* 25	O-B-026	2	O-RING				
* 26	O-D-010-90	2	O-RING				
* 27	O-B-125	1	O-RING				
* 28	O-B-008	4	O-RING				
* 29	O-B-014	4	O-RING				
* 30	O-B-012	6	O-RING				
*31	O-U-006	2	O-RING				
* 32	O-B-118	1	O-RING				
* 33	O-B-425	1	O-RING				
* 34	O-B-159	2	O-RING				
* 35	O-B-415	2	O-RING				
36	F-HB-04C-56-SS	2	HEX HEAD CAP SCREW				
37	F-HN-06F	8	HEX NUT				
38	F-HB-08F-20-GR5	1	HEX HEAD CAP SCREW				
39	F-CS-04C-40-SS	4	SOCKET HEAD CAP SCREW				
40	F-CS-04C-08-SS	4	SOCKET HEAD CAP SCREW				
41	F-SW-04-SS	2	LOCK WASHER		FIGU	DE 4 4	
42	F-SS-832-02-SS	4	CUP POINT SET SCREW		FIGU	RE 1-1	
	F-BHCS-04C-16-SS		BUTTON HEAD CAP SCREW				\sim
44	MPH-2526	2	SPRING		-	-845	3D/
45	MPH-2528	2	SPRING		/	8	
46	MPH-2533	2	SPRING		(
* 47	MPH-5010	2	DIAPHRAGM		N A	8	57
48	PF-AP-04-SS	1	PIPE PLUG		1	1	ř.
49	MPH-2539	1	PUSH POLY FITTING - MALE ELBOW			-71	
50	MPH-2538	1	PUSH POLY FITTING - MALE TEE				
51	MS-2052-1	.56ft	Ø1/4 x 6-3/4 POLY TUBING			1113	
52	F-SW-06	4	LOCK WASHER		(4	- 1117	
55	MPH-3261	1	SNAP - RING				T.
* 56	O-B-011	2	O-RING		1	-	/
57	PF-AP-02-SS	2	PIPE PLUG		-	-6	
58	F-FW-04	2	FLAT WASHER			- 25	
59	PF-RB-08-06	1	PIPE BUSHING				
60	PF-HN-06-06S		ADAPTER TIE BOD		t .	1	
61	2104-4-1 E UP 000 34 OPS	4	TIE ROD		f	1	
62 63	F-HB-06C-24-GR8 MPH-3262	2	GRADE 8 HEX CAP SCREW PISTON STOP			3	
.00	MF11-3202	2	HOTOR OTOP				





SHOWS ORIENTATION OF ITEM 11, (MPH-2512), SEAL GUIDE. MAGNUM VENUS PLASTECH

5" Power Head - 4" Stroke

VPH-5000-DUO

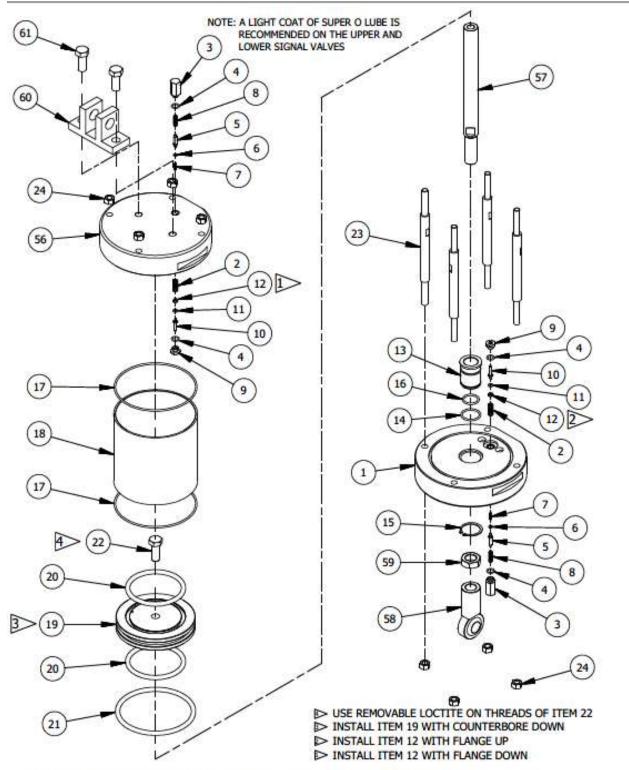
REV - 05/29/07 BT2
REV A - ITEM 51 WAS 01417 11/09/07 BT2
REV B - ADDED SUPER O LUBE NOTE FOR PLOT VALVES 05/25/11 BT2
REV C - ORIENTED MUFFLER FOR DOWNWARD EXHAUST 02/23/18 BT2



PARTS PART NO. MPH-5006 VPH-5002 VPH-4259 VPH-5004-01 VPH-4254 MPH-5004 MPH-5003 MPH-2541 MPH-2511-01 O-B-121 MPH-2512 MPH-2513 MPH-2513 MPH-2540 VPH-5001 MPH-5001 MPH-5001 MPH-5001 MPH-5001 MPH-5001 MPH-5001 MPH-5001 O-B-019 VPH-5003 O-U-206-90 O-B-116 O-B-026 O-D-010-90 O-B-125	QTY 1 1 1 1 1 2 2 1 2 2 2 1 1 2 2 2 2 1	DESCRIPTION PISTON - 5" PUMP CYLINDER - 5" x 4" STROKE PUMP PISTON ROD MUFFLER ASSY - 4" STROKE PUMP PISTON ROD BUSHING LOWER ENDCAP - 5" PUMP UPPER ENDCAP - 5" PUMP INLET SPRING HOUSING - PILOT VAL' ASSY - STEM SEAL O-RING SEAL GUIDE VALVE STEM - PILOT VALVE INLET ROD - PILOT VALVE UPPER VALVE BLOCK - 4" STROKE PI LOWER VALVE BLOCK VALVE PISTON VALVE POPPET VALVE END CAP VALVE EXHAUST O-RING TIE ROD 4" STROKE PUMP O-RING O-RING O-RING O-RING	VE OP ITEM 68		RTS AIS LIST OTY	DESCRIPTION TEE FITTING VALVE STEM ASSY SEAL NOT OIL DECAL (NOT SHOWN ND ASSEMBLIES DESCRIPTION RESET BUTTON ASSY SHIFT BLOCK ASSY
VPH-5002 VPH-4259 VPH-5004-01 VPH-4254 MPH-5004 MPH-5003 MPH-2541 MPH-2511-01 O-B-121 MPH-2512 MPH-2513 MPH-2513 MPH-5001 MPH-5001 MPH-5005 MPH-5005 MPH-5009 O-B-019 VPH-5009 O-B-116 O-B-026 O-D-010-90 O-B-125	1 1 1 1 1 1 1 2 2 1 2 2 2 1 1 2 1 2 2 2 4 2 2 2 2	CYLINDER - 5" x 4" STROKE PUMP PISTON ROD MUFFLER ASSY - 4" STROKE PUMP PISTON ROD BUSHING LOWER ENDCAP - 5" PUMP UPPER ENDCAP - 5" PUMP INLET SPRING HOUSING - PILOT VAL' ASSY - STEM SEAL O-RING SEAL GUIDE VALVE STEM - PILOT VALVE INLET ROD - PILOT VALVE UPPER VALVE BLOCK - 4" STROKE PIL LOWER VALVE BLOCK VALVE PISTON VALVE POPPET VALVE END CAP VALVE EXHAUST O-RING TIE ROD 4" STROKE PUMP O-RING O-RING O-RING	65 66 67 DO VE OP ITEM 68	MPH-2546-01 MPH-2545 DNOTOILAIRMOTO TIONAL PAR PART NO. MPH-2542 VPH-SB-XL REPAIR PART NO.	RTS AIGUST OTY	VALVE STEM ASSY SEAL NOT OIL DECAL (NOT SHOWN ND ASSEMBLIES DESCRIPTION RESET BUTTON ASSY SHIFT BLOCK ASSY
VPH-4259 VPH-5004-01 VPH-4254 MPH-5003 MPH-2541 MPH-2511-01 O-B-121 MPH-2513 MPH-2513 MPH-2540 VPH-5001 MPH-5001 MPH-5005 MPH-5005 MPH-5009 O-B-019 VPH-5009 O-B-019 VPH-5003 O-U-206-90 O-B-116 O-B-026 O-D-010-90 O-B-125	1 1 1 1 2 2 1 2 2 2 1 1 2 1 2 2 2 4 2 2 2 2	PISTON ROD MUFFLER ASSY - 4" STROKE PUMP PISTON ROD BUSHING LOWER ENDCAP - 5" PUMP UPPER ENDCAP - 5" PUMP INLET SPRING HOUSING - PILOT VAL' ASSY - STEM SEAL O-RING SEAL GUIDE VALVE STEM - PILOT VALVE INLET ROD - PILOT VALVE UPPER VALVE BLOCK - 4" STROKE PILOWER VALVE BLOCK VALVE PISTON VALVE PISTON VALVE END CAP VALVE EXHAUST O-RING TIE ROD 4" STROKE PUMP O-RING O-RING O-RING	OP ITEM 68	MPH-2545 DNOTOILAIRMOTO TIONAL PAF PARTS PART NO. MPH-2542 VPH-SB-XL REPAIR PART NO.	RTS AIGUST OTY	SEAL NOT OIL DECAL (NOT SHOWN ND ASSEMBLIES DESCRIPTION RESET BUTTON ASSY SHIFT BLOCK ASSY
VPH-5004-01 VPH-4254 MPH-5003 MPH-2541 MPH-2511-01 O-B-121 MPH-2513 MPH-2513 MPH-2540 VPH-5001 MPH-5001 MPH-5001 MPH-5005 MPH-5005 MPH-5009 O-B-019 VPH-5003 O-U-206-90 O-B-116 O-B-026 O-D-010-90 O-B-125	1 2 2 1 2 2 2 1 1 2 1 2 2 2 4 2 2 2 2	MUFFLER ASSY - 4" STROKE PUMP PISTON ROD BUSHING LOWER ENDCAP - 5" PUMP UPPER ENDCAP - 5" PUMP INLET SPRING HOUSING - PILOT VAL' ASSY - STEM SEAL O-RING SEAL GUIDE VALVE STEM - PILOT VALVE INLET ROD - PILOT VALVE UPPER VALVE BLOCK - 4" STROKE PILOWER VALVE BLOCK VALVE PISTON VALVE POPPET VALVE END CAP VALVE END CAP VALVE END CAP VALVE ROD 4" STROKE PUMP O-RING TIE ROD 4" STROKE PUMP O-RING O-RING O-RING	67 DO VE OP ITEM 68	TIONAL PARTS PART NO. MPH-2542 VPH-SB-XL REPAIR PART NO.	RTS AIGUST OF THE PROPERTY OF	ND ASSEMBLIES DESCRIPTION RESET BUTTON ASSY SHIFT BLOCK ASSY
VPH-4254 MPH-5004 MPH-5003 MPH-2541 MPH-2511-01 O-B-121 MPH-2512 MPH-2512 MPH-2540 VPH-5001 MPH-5001 MPH-5001 MPH-5005 MPH-5251 MPH-5009 O-B-019 VPH-5003 O-U-206-90 O-B-116 O-B-026 O-D-010-90 O-B-125	1 2 2 1 2 2 2 1 1 2 1 2 2 2 4 2 2 2 2	PISTON ROD BUSHING LOWER ENDCAP - 5" PUMP UPPER ENDCAP - 5" PUMP INLET SPRING HOUSING - PILOT VAL' ASSY - STEM SEAL O-RING SEAL GUIDE VALVE STEM - PILOT VALVE INLET ROD - PILOT VALVE UPPER VALVE BLOCK - 4" STROKE PILOWER VALVE BLOCK VALVE PISTON VALVE POPPET VALVE END CAP VALVE EXHAUST O-RING TIE ROD 4" STROKE PUMP O-RING O-RING O-RING	VE OP ITEM 68	TIONAL PARTS PART NO. MPH-2542 VPH-SB-XL REPAIR PART NO.	RTS AIGUST OF THE PROPERTY OF	ND ASSEMBLIES DESCRIPTION RESET BUTTON ASSY SHIFT BLOCK ASSY
MPH-5004 MPH-5003 MPH-2541 MPH-2511-01 O-B-121 MPH-2512 MPH-2513 MPH-2540 VPH-5001 MPH-5001 MPH-5005 MPH-5005 MPH-5009 O-B-019 VPH-5003 O-U-206-90 O-B-116 O-B-026 O-D-010-90 O-B-125	1 2 2 1 2 2 2 1 1 2 1 2 2 2 4 2 2 2 2	LOWER ENDCAP - 5" PUMP UPPER ENDCAP - 5" PUMP INLET SPRING HOUSING - PILOT VAL' ASSY - STEM SEAL O-RING SEAL GUIDE VALVE STEM - PILOT VALVE INLET ROD - PILOT VALVE UPPER VALVE BLOCK - 4" STROKE PI LOWER VALVE BLOCK VALVE PISTON VALVE POPPET VALVE END CAP VALVE EXHAUST O-RING TIE ROD 4" STROKE PUMP O-RING O-RING O-RING	ITEM 68 UMP	PARTS PART NO. MPH-2542 VPH-SB-XL REPAIR PART NO.	LIST QTY 1 1 1 KITS DESC	DESCRIPTION RESET BUTTON ASSY SHIFT BLOCK ASSY
MPH-5003 MPH-2541 MPH-2511-01 O-B-121 MPH-2512 MPH-2513 MPH-2540 VPH-5001 MPH-5001 MPH-5005 MPH-5005 MPH-5221 MPH-5009 O-B-019 VPH-5003 O-U-206-90 O-B-116 O-B-026 O-D-010-90 O-B-125	1 2 2 1 2 2 2 1 1 2 1 2 2 2 4 2 2 2 2	UPPER ENDCAP - 5" PUMP INLET SPRING HOUSING - PILOT VAL' ASSY - STEM SEAL O-RING SEAL GUIDE VALVE STEM - PILOT VALVE INLET ROD - PILOT VALVE UPPER VALVE BLOCK - 4" STROKE PI LOWER VALVE BLOCK VALVE PISTON VALVE POPPET VALVE END CAP VALVE EXHAUST O-RING TIE ROD 4" STROKE PUMP O-RING O-RING O-RING	ITEM 68 UMP	PARTS PART NO. MPH-2542 VPH-SB-XL REPAIR PART NO.	LIST QTY 1 1 1 KITS DESC	DESCRIPTION RESET BUTTON ASSY SHIFT BLOCK ASSY
MPH-2541 MPH-2511-01 O-B-121 MPH-2512 MPH-2513 MPH-2540 VPH-5001 MPH-5001 MPH-5005 MPH-5005 MPH-5009 O-B-019 VPH-5003 O-U-206-90 O-B-116 O-B-026 O-D-010-90 O-B-125	2 2 1 2 2 2 1 1 2 2 2 4 2 2 2 2	INLET SPRING HOUSING - PILOT VAL' ASSY - STEM SEAL O-RING SEAL GUIDE VALVE STEM - PILOT VALVE INLET ROD - PILOT VALVE UPPER VALVE BLOCK - 4" STROKE PI LOWER VALVE BLOCK VALVE PISTON VALVE POPPET VALVE END CAP VALVE EXHAUST O-RING TIE ROD 4" STROKE PUMP O-RING O-RING O-RING	ITEM 68 UMP	PARTS PART NO. MPH-2542 VPH-SB-XL REPAIR PART NO.	LIST QTY 1 1 1 KITS DESC	DESCRIPTION RESET BUTTON ASSY SHIFT BLOCK ASSY
MPH-2511-01 O-B-121 MPH-2512 MPH-2513 MPH-2540 VPH-5001 MPH-5001 MPH-5005 MPH-5005 MPH-5009 O-B-019 VPH-5003 O-U-206-90 O-B-116 O-B-026 O-D-010-90 O-B-125	2 1 2 2 1 1 2 2 2 4 2 2 2 2 2	ASSY - STEM SEAL O-RING SEAL GUIDE VALVE STEM - PILOT VALVE INLET ROD - PILOT VALVE UPPER VALVE BLOCK - 4" STROKE PI LOWER VALVE BLOCK VALVE PISTON VALVE POPPET VALVE END CAP VALVE EXHAUST O-RING TIE ROD 4" STROKE PUMP O-RING O-RING O-RING	ITEM 68 UMP	PARTS PART NO. MPH-2542 VPH-SB-XL REPAIR PART NO.	LIST QTY 1 1 1 KITS DESC	DESCRIPTION RESET BUTTON ASSY SHIFT BLOCK ASSY
O-B-121 MPH-2512 MPH-2513 MPH-2540 VPH-5001 MPH-5001 MPH-2517 VPH-5005 MPH-2521 MPH-5009 O-B-019 VPH-5003 O-U-208-90 O-B-116 O-B-026 O-D-010-90 O-B-125	1 2 2 2 1 1 2 2 2 4 2 2 2 2 2	O-RING SEAL GUIDE VALVE STEM - PILOT VALVE INLET ROD - PILOT VALVE UPPER VALVE BLOCK - 4" STROKE PI LOWER VALVE BLOCK VALVE PISTON VALVE POPPET VALVE END CAP VALVE EXHAUST O-RING TIE ROD 4" STROKE PUMP O-RING O-RING O-RING	68 UMP	PART NO. MPH-2542 VPH-SB-XL REPAIR PART NO.	QTY 1 1 KITS DESC	DESCRIPTION RESET BUTTON ASSY SHIFT BLOCK ASSY RIPTION
MPH-2512 MPH-2513 MPH-2540 VPH-5001 MPH-5001 MPH-2517 VPH-5005 MPH-2521 MPH-5009 O-B-019 VPH-5003 O-U-206-90 O-B-116 O-B-026 O-D-010-90 O-B-125	2 2 1 1 2 1 2 2 4 2 2 2 2 2 2 2 2 2 2 2	SEAL GUIDE VALVE STEM - PILOT VALVE INLET ROD - PILOT VALVE UPPER VALVE BLOCK - 4" STROKE PI LOWER VALVE BLOCK VALVE PISTON VALVE POPPET VALVE END CAP VALVE EXHAUST O-RING TIE ROD 4" STROKE PUMP O-RING O-RING O-RING	68 UMP	MPH-2542 VPH-SB-XL REPAIR PART NO.	I I KITS DESC	RESET BUTTON ASSY SHIFT BLOCK ASSY RIPTION
MPH-2513 MPH-2540 VPH-5001 MPH-5001 MPH-2517 VPH-5005 MPH-2521 MPH-5009 O-B-019 VPH-5003 O-U-206-90 O-B-116 O-B-026 O-D-010-90 O-B-125	2 2 1 1 2 1 2 2 2 4 2 2 2 2 2 2 2 2	VALVE STEM - PILOT VALVE INLET ROD - PILOT VALVE UPPER VALVE BLOCK - 4" STROKE PI LOWER VALVE BLOCK VALVE PISTON VALVE POPPET VALVE END CAP VALVE EXHAUST O-RING TIE ROD 4" STROKE PUMP O-RING O-RING O-RING	UMP	VPH-SB-XL REPAIR PART NO.	KITS DESC	SHIFT BLOCK ASSY
MPH-2540 VPH-5001 MPH-5001 MPH-2517 VPH-5005 MPH-2521 MPH-5009 O-B-019 VPH-5003 O-U-206-90 O-B-116 O-B-026 O-D-010-90 O-B-125	2 1 1 2 1 2 2 2 4 2 2 2 2 2 2 2 2 2 2 2	INLET ROD - PILOT VALVE UPPER VALVE BLOCK - 4" STROKE PI LOWER VALVE BLOCK VALVE PISTON VALVE POPPET VALVE END CAP VALVE EXHAUST O-RING TIE ROD 4" STROKE PUMP O-RING O-RING O-RING		REPAIR PART NO.	KITS DESC	RIPTION
VPH-5001 MPH-5001 MPH-2517 VPH-5005 MPH-2521 MPH-5009 O-B-019 VPH-5003 O-U-206-90 O-B-116 O-B-026 O-D-010-90 O-B-125	1 1 2 1 2 2 2 4 2 2 2 2 2 2 2 2 2 2 2 2	UPPER VALVE BLOCK - 4" STROKE PI LOWER VALVE BLOCK VALVE PISTON VALVE POPPET VALVE END CAP VALVE EXHAUST O-RING TIE ROD 4" STROKE PUMP O-RING O-RING O-RING		PART NO.	DESC	
MPH-5001 MPH-2517 VPH-5005 MPH-2521 MPH-5009 O-B-019 VPH-5003 O-U-206-90 O-B-116 O-B-026 O-D-010-90 O-B-125	1 2 1 2 2 2 4 2 2 2 2 2	LOWER VALVE BLOCK VALVE PISTON VALVE POPPET VALVE END CAP VALVE EXHAUST O-RING TIE ROD 4" STROKE PUMP O-RING O-RING O-RING		PART NO.	DESC	
MPH-2517 VPH-5005 MPH-2521 MPH-5009 O-B-019 VPH-5003 O-U-206-90 O-B-116 O-B-026 O-D-010-90 O-B-125	2 1 2 2 2 4 2 2 2 2 2	VALVE PISTON VALVE POPPET VALVE END CAP VALVE EXHAUST O-RING TIE ROD 4" STROKE PUMP O-RING O-RING O-RING	*	PART NO.	DESC	
VPH-5005 MPH-2521 MPH-5009 O-B-019 VPH-5003 O-U-206-90 O-B-116 O-B-026 O-D-010-90 O-B-125	1 2 2 2 4 2 2 2 2 2	VALVE POPPET VALVE END CAP VALVE EXHAUST O-RING TIE ROD 4" STROKE PUMP O-RING O-RING O-RING O-RING	*			
MPH-2521 MPH-5009 O-B-019 VPH-5003 O-U-206-90 O-B-116 O-B-026 O-D-010-90 O-B-125	2 2 4 2 2 2 2 2	VALVE END CAP VALVE EXHAUST O-RING TIE ROD 4" STROKE PUMP O-RING O-RING O-RING	*	MPH-5000-SK	SEAL	KIT
MPH-5009 O-B-019 VPH-5003 O-U-206-90 O-B-116 O-B-026 O-D-010-90 O-B-125	2 4 2 2 2 2	VALVE EXHAUST O-RING TIE ROD 4" STROKE PUMP O-RING O-RING O-RING	*	MPH-3000-3K	SEAL	KII
O-B-019 VPH-5003 O-U-206-90 O-B-116 O-B-026 O-D-010-90 O-B-125	2 4 2 2 2 2	O-RING TIE ROD 4" STROKE PUMP O-RING O-RING O-RING				
VPH-5003 O-U-206-90 O-B-116 O-B-026 O-D-010-90 O-B-125	4 2 2 2 2	TIE ROD 4" STROKE PUMP O-RING O-RING O-RING				
O-U-206-90 O-B-116 O-B-026 O-D-010-90 O-B-125	2 2 2 2	O-RING O-RING O-RING				
O-B-116 O-B-026 O-D-010-90 O-B-125	2 2 2	O-RING O-RING				
O-B-026 O-D-010-90 O-B-125	2 2 2	O-RING				
O-D-010-90 O-B-125	2					
O-B-125	7	O-RING				
	1					
		O-RING				
O-B-008	4	O-RING				
O-B-O14	4	O-RING				
O-B-012	6	O-RING				
O-U-006	2	O-RING				
O-B-118	1	O-RING				
O-B-425	1	O-RING				
O-B-159	2	O-RING				
O-B-415	2	O-RING				
F-HB-04C-56-SS	2	HEX HEAD CAP SCREW				
F-HN-06F	8	HEX NUT				
HBFT-08C-20-GR	5 1	HEX HEAD CAP SCREW				
F-CS-04C-40-SS	4	SOCKET HEAD CAP SCREW				
F-CS-04C-08-SS	4	SOCKET HEAD CAP SCREW				
F-SW-04-SS	2	LOCK WASHER				9
F-SS-832-02-SS	4	CUP POINT SET SCREW		FIGU	RE 1-1	1
-BHCS-04C-16-SS	1	BUTTON HEAD CAP SCREW				\wedge
MPH-2526	2	SPRING			-26	\$ 4
MPH-2528	2	SPRING		18	8	- XC
MPH-2533	2	SPRING		(0)
MPH-5010	2	DIAPHRAGM		1 -		AI I
PF-AP-04-SS	1	PIPE PLUG		(0	_9	0
MPH-2539	1	PUSH POLY FITTING - MALE ELBOW			-51	
	100					
					111	
F. SW-06	525				- 1117	
F-SW-06						<i>[</i>]
MPH-3261	1.17			1 00	Diffe	/
MPH-3261 O-B-011				BT	-0	
MPH-3261 O-B-011 PF-AP-02-SS					1	
MPH-3261 O-B-011 PF-AP-02-SS F-FW-04					1	
MPH-3261 O-B-011 PF-AP-02-SS F-FW-04 PF-RB-06-06	1	ADAPTER		1	i i	
MPH-3261 O-B-011 PF-AP-02-SS F-FW-04 PF-RB-08-06 PF-HN-06-06S	1	TIE DOD			1	
MPH-3261 O-B-011 PF-AP-02-SS F-FW-04 PF-RB-08-06 PF-HN-06-06S DUO-3006	1 1 4	TIE ROD		1		
	MPH-2538 MS-2052-1 F-SW-06 MPH-3261 O-B-011 PF-AP-02-SS	MPH-2538 1 MS-2052-1 .56ft F-SW-06 4 MPH-3261 1 O-B-011 2 PF-AP-02-SS 2 F-FW-04 2	MPH-2538 1 PUSH POLY FITTING - MALE TEE MS-2052-1 .56ft Ø1/4 x 6-3/4 POLY TUBING F-SW-06 4 LOCK WASHER MPH-3261 1 SNAP - RING O-B-011 2 O-RING PF-AP-02-SS 2 PIPE PLUG F-FW-04 2 FLAT WASHER PF-RB-08-06 1 PIPE BUSHING PF-HN-06-06S 1 ADAPTER	MPH-2538 1 PUSH POLY FITTING - MALE TEE MS-2052-1 .56ft Ø1/4 x 6-3/4 POLY TUBING F-SW-06 4 LOCK WASHER MPH-3261 1 SNAP - RING O-B-011 2 O-RING PF-AP-02-SS 2 PIPE PLUG F-FW-04 2 FLAT WASHER PF-RB-08-06 1 PIPE BUSHING PF-HN-06-06S 1 ADAPTER	MPH-2538 1 PUSH POLY FITTING - MALE TEE MS-2052-1 .56ft Ø1/4 x 6-3/4 POLY TUBING F-SW-06 4 LOCK WASHER MPH-3261 1 SNAP - RING O-B-011 2 O-RING PF-AP-02-SS 2 PIPE PLUG F-FW-04 2 FLAT WASHER PF-RB-08-06 1 PIPE BUSHING PF-HN-06-06S 1 ADAPTER DUO-3006 4 TIE ROD	MPH-2538 1 PUSH POLY FITTING - MALE TEE MS-2052-1 .56ft Ø1/4 x 6-3/4 POLY TUBING F-SW-06 4 LOCK WASHER MPH-3261 1 SNAP - RING O-B-011 2 O-RING PF-AP-02-SS 2 PIPE PLUG F-FW-04 2 FLAT WASHER PF-RB-08-06 1 PIPE BUSHING PF-HN-06-06S 1 ADAPTER

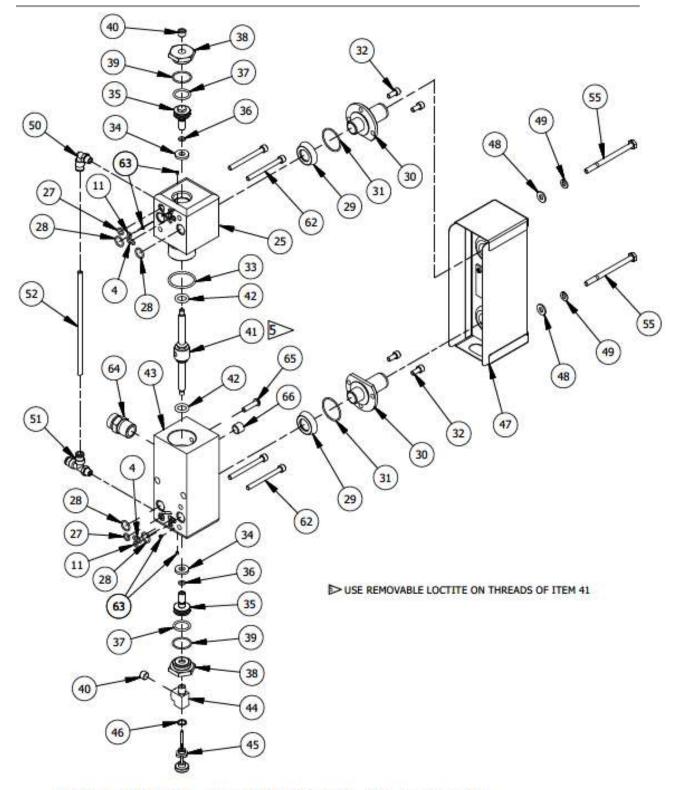
* COMPONENTS INCLUDED WITH SEAL KIT.





5" POWER HEAD		UPPH-5000
REV: B 06/03/11	SHEET 1 / 3	3/3/2010





5" POWER HEAD		UPPH-5000
REV:B 06/03/11	SHEET 2 / 3	3/3/2010



ITEM	PART NUMBER	QTY	DESCRIPTION
1	MPH-5004	1	LOWER END CAP - 5" POWER HEAD
2	MPH-2528	2	SPRING
3	MPH-2541	2	SPRING HOUSING- PILOT VALVE
4	O-B-012	6	O-RING
5	MPH-2540	2	INLET ROD- PILOT VALVE
6	O-U-006	2	O-RING
7	MPH-2526	2	SPRING
8	MPH-2533	2	COMPRESSION SPRING
9	MPH-2511-01	2	STEM SEAL ASSY- PILOT VALVE
10	MPH-2513	2	VALVE STEM- PILOT VALVE
11	O-B-008	4	O-RING
12	MPH-2512	2	SEAL GUIDE- PILOT VALVE
13	VPH-4254	1	BUSHING- 7/8 DIA. PISTON ROD
14	O-B-121	1	O-RING
15	MPH-3261	1	SNAP RING - EXTERNAL
16	O-B-118	1	O-RING
17	O-B-159	2	O-RING
18	VPH-5002	1	CYLINDER - 5" POWER HEAD 4" STROKE
19	MPH-5006	1	PISTON - Ø5"
20	O-B-415	2	O-RING
21	O-B-425	1	O-RING
22	F-HB-08F-20-GR5	1	HEX BOLT
23	VPH-5003	4	TIE ROD
24	F-HN-06F	8	HEX NUT
25	VPH-5001	1	UPPER VALVE BLOCK
27	O-B-011	2	O-RING
28	O-B-014	4	O-RING
29	MPH-5010	2	DIAPHRAGM
30	MPH-5009	2	EXHAUST PORT
31	O-B-026	2	O-RING
32	F-CS-04C-08-SS	4	SOCKET HEAD CAP SCREW
33	O-B-125	1	O-RING
34	MPH-3262	2	PISTON STOP
35	MPH-2517	2	VALVE PISTON
36	O-D-010-90	2	O-RING
37	O-B-116	2	O-RING
38	MPH-2521	2	VALVE END CAP
39	O-B-019	2	O-RING
40	PF-AP-02-SS	2	PIPE PLUG
41	VPH-5005	1	VALVE ROD POPPET
42	O-U-206-90	2	O-RING
43	MPH-5001	1	LOWER VALVE BLOCK
44	PF-ST-02-BR	1	TEE FITTING
45	MPH-2546-01	1	RESET STEM ASSEMBLY
46	MPH-2545	1	SEAL STEM ASSEMBLY
47		1	
48	VPH-5004-01	1	MUFFLER ASSEMBLY
49	F-FW-04 F-SW-04-SS	2	LOCK WASHER
_	MPH-2539	-	LOCK WASHER
50		1	MALE ELBOW
51	MPH-2538 MS-2052-1		POLY TUBE
52	MS-2052-1	-	
55	F-HB-04C-56-SS	2	HEX BOLT
56	UPPH-5012	1	UPPER END CAP - 5"
57	UPPH-7009	1	PISTON ROD
58	B-BJRE750-2-HS	1	FEMALE BALL ROD END
59	F-JN-12F	1	JAM NUT
60	UPPH-7039	1	POWERHEAD CLEVIS
61	F-HB-08C-20	2	HEX BOLT
62	F-CS-04C-40-SS	4	SOCKET HEAD CAP SCREW
63	F-SS-832-02-SS	4	SS SET SCREW
64	PF-HN-08-08S	1	HOSE ADAPTER
65	F-BHCS-04C-16-SS	1	BUTTON HEAD CAP SCREW
	PF-AP-04-SS	1	ALLEN PLUG

OPTIONAL PARTS AND ASSEMBLIES

PARTS LIST

 PART No.
 QTY
 DESCRIPTION

 MPH-2542
 1
 RESET BUTTON ASSY

 VPH-SB-XL
 1
 SHIFT BLOCK ASSY

REPAIR KITS

PART No. DESCRIPTION * MPH-5000-SK SEAL KIT

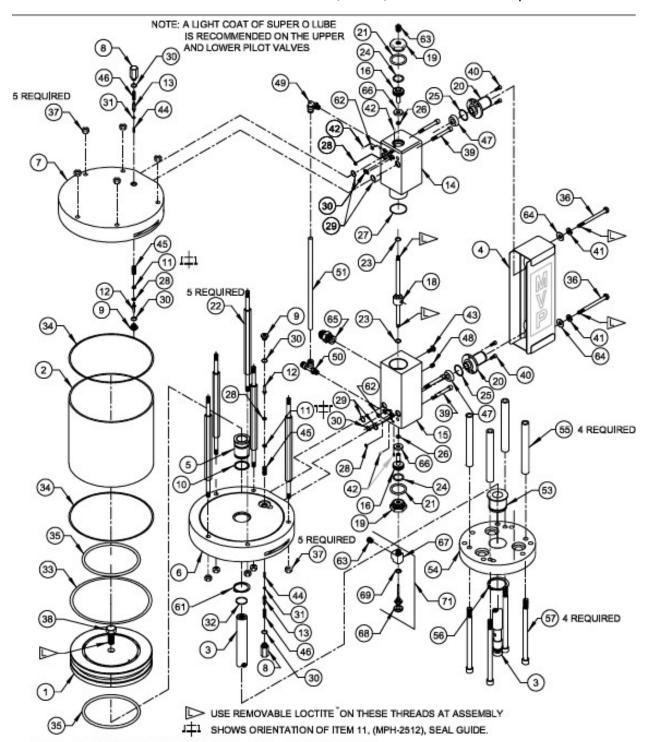
*ASTERISKS DENOTE PARTS IN SEAL KIT

MAGNUM VENUS PLASTECH

5" POWER HEAD UPPH-5000

REV: B 06/03/11 SHEET 3 / 3 3/3/2010





Assembly - 7" Power Head 5 5/8" Stroke MPH-7000

REV. N = ADDED MPH-SB-XL TO OPTIONAL ASSEMBLIES

P = ITEM 51 WAS 01417 11/09/07 BT2

P = ITEM 58 WAS F+IBFT-06C-20-GR5 05/06/08 BT2

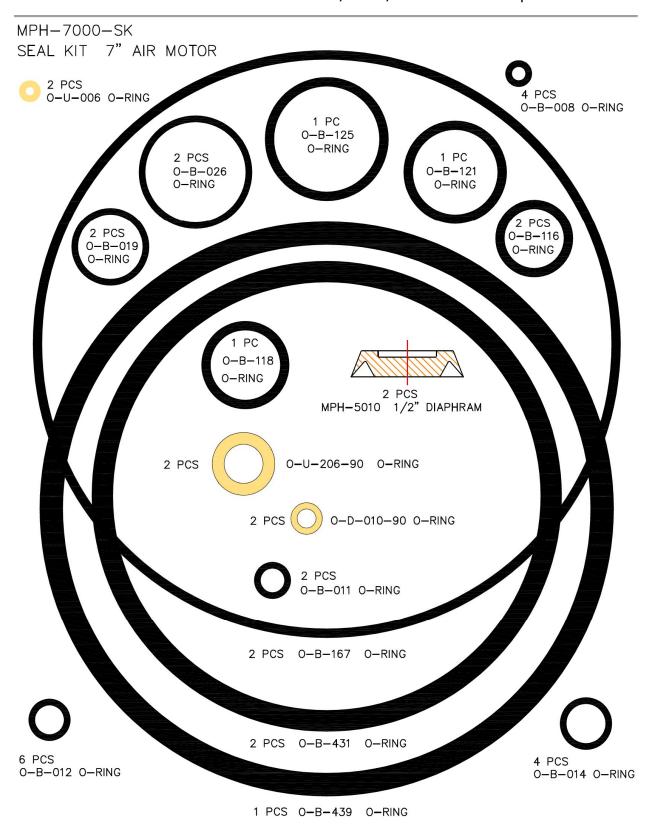
Q = ADDED SUPER O LUBE NOTE FOR PILOT VALVES 05/24/11 BT2



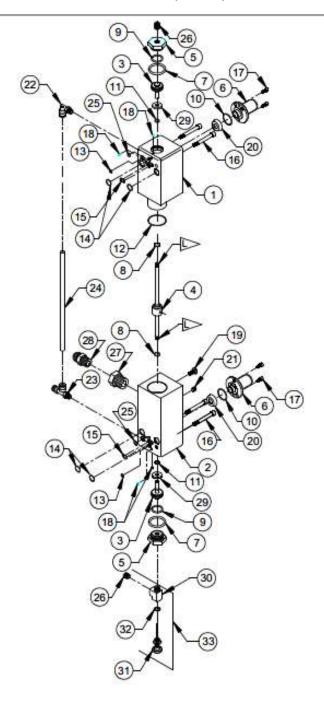
.00011	PARTS		d 5 5/8" Stroke MPH-7000		PARTS	LIST	
TEM		QTY	DESCRIPTION	ITEM	PART NO.	QTY	DESCRIPTION
1	MPH-7004	1	PISTON - 7" PUMP	67	00276	1	TEE FITTING
2	MPH-7003	1	CYLINDER - 7" PUMP	68	MPH-2546-01	1	VAVLE STEM ASSY
3	MPH-3253	1	PISTON ROD	69	MPH-2545	1	SEAL
4	MPH-5011-01	1	MUFFLER ASSY - 5 5/8' STROKE PUMP	70 DC	NOTOLAIRMOTO	DR 1 DO	NOT OIL DECAL (NOT SHOW
5	VPH-4254	1	PISTON ROD BUSHING				
6	MPH-7002	1	LOWER ENDCAP - 7" PUMP	OPTI	ONAL PART	SAND	ASSEMBLIES
7	MPH-7001	1	UPPER ENDCAP - 7' PUMP		PARTS		, tooling
8	MPH-2541	2	INLET SPRING HOUSING - PILOT VALV ASSY - STEM SEAL	75/2000			
9 10	MPH-2511-01 O-B-121	2	O-RING	ITEM	PART NO.	QTY	DESCRIPTION
11	MPH-2512	2	SEAL GUIDE	71	MPH-2542	1	RESET BUTTON ASS
12	MPH-2513	2	VALVE STEM - PILOT VALVE		MPH-SB-XL	1	SHIFT BLOCK ASSY
13	MPH-2540	2	INLET ROD - PILOT VALVE				
14	MPH-5002	1	UPPER VALVE BLOCK - 5 5/8" STROKE	PUMP	REPAII	R KITS	3
15	MPH-5001	1	LOWER VALVE BLOCK		PART NO.	DES	SCRIPTION
16	MPH-2517	2	VALVE PISTON				
18	MPH-5012	1	VALVE POPPET		* MPH-7000-SK	SEA	IL KIT
19	MPH-2521	2	VALVE END CAP				
20	MPH-5009	2	VALVE EXHAUST				
21	O-B-019	2	O-RING				
22 23	MPH-5007	5	TIE ROD 5 5/8" STROKE PUMP				
24	O-U-206-90 O-B-116	2	O-RING O-RING				
25	O-B-026	2	O-RING				
26	O-D-010-90	2	O-RING				
27	O-B-125	ī	O-RING				
28	O-B-008	4	O-RING				
29	O-B-014	4	O-RING				
30	O-B-012	6	O-RING				
31	O-U-006	2	O-RING				
32	O-B-118	1	O-RING				
33	O-B-439	1	O-RING				
34	O-B-167	2	O-RING				
35 36 F	O-B-431 -HB-04C-56-SS	2	O-RING HEX HEAD CAP SCREW				
37	F-HN-06F	10	HEX NUT				
	HB-08F-20-GR5	1	HEX HEAD CAP SCREW				
	F-CS-04C-40-SS	4	SOCKET HEAD CAP SCREW				
	F-CS-04C-08-SS	4	SOCKET HEAD CAP SCREW				
41	F-SW-04-SS	2	LOCK WASHER				
42	F-SS-832-02-SS	4	CUP POINT SET SCREW				
43 F-I	BHCS-04C-16-SS	1	BUTTON HEAD CAP SCREW		FIGU	IRE 1-	1
44	MPH-2526	2	SPRING				_
45	MPH-2528	2	SPRING				~
46	MPH-2533	2	SPRING			-	
47	MPH-5010 PF-AP-04-SS	2	DIAPHRAGM			6	1
48 49	MPH-2539	1	PIPE PLUG PUSH POLY FITTING - MALE ELBOW		(• 1
50	MPH-2538	1	PUSH POLY FITTING - MALE TEE		١.		9 /1
51		.70ft	Ø1/4"x 8-3/8 POLY TUBING		10		/d/
53	MPH-3256	1	BUSHING - MAGNUM BASE		1	_	4 111
54	MPH-3257	1	MODIFIED MP BASE			- ا	~ III
55	MPH-3258	4	INTERMEDIATE SPACER			- 111	
56	MPH-2536	1	EXT SNAP RING		/III	Ш	
57	F-CS-06C-100	4	SOCKET HEAD CAP SCREW			Ш	JUP
61	MPH-3261	1	SNAP - RING		VII.	111	//
62	O-B-011	2	O-RING		180		
63	PF-AP-02-SS	2	PIPE PLUG		1		
64 65	F-FW-04 PF-HN-08-08S	2	FLAT WASHER ADAPTER			300	
66	MPH-3262	2	PISTON STOP		(4)	5	(A)
00	WITTI SZUZ	-	FIGURATOR		Ne	6	3/
					1/3	00	/
						_	
						11	
						H	











USE REMOVABLE LOCTITE ON THESE THREADS AT ASSEMBLY

MAGNUM VENUS PRODUCTS

Shift Block for MPH-5000,7000

MPH-SB-XL

REV. 10/14/05 BT2 REV. A - ADDED REPAIR KIT 06/04/07 BT2



REPAIR KITS
PART NO. DESCRIPTION
* MPH-SB-XL-SK SEAL KIT

Shift Block for MPH-5000,7000 PARTS LIST

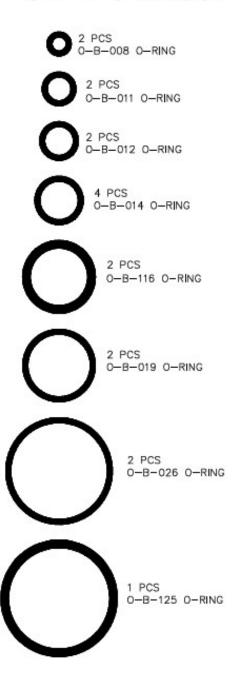
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ITEM	PART NO.	QTY	DESCRIPTION
1	MPH-5002	1	UPPER VALVE BLOCK
2	MPH-5001	1	LOWER VALVE BLOCK
3	MPH-2517	2	VALVE PISTON
4	MPH-5012	1	VALVE POPPET
5	MPH-2521	2	VALVE END CAP
6	MPH-5009	2	VALVE EXHAUST
* 7	O-B-019	2	O-RING
* 8	O-U-206-90	2	O-RING
* 9	O-B-116	2	O-RING
* 10	O-B-026	2	O-RING
* 11	O-D-010-90	2	O-RING
* 12	O-B-125	1	O-RING
* 13	O-B-008	2	O-RING
* 14	O-B-014	4	O-RING
* 15	O-B-012	2	O-RING
16	F-CS-04C-40-S	S4	SOCKET HEAD CAP SCREW
17	F-CS-04C-08-S	S4	SOCKET HEAD CAP SCREW
18	F-SS-832-02-S	S 4	SET SCREW
19	F-BHCS-04C-1	6-88 1	BUTTON HEAD CAP SCREW
* 20	MPH-5010	2	DIAPHRAGM
21	PF-AP-04-SS	1	PIPE PLUG
22	MPH-2539	1	PUSH POLY FITTING - MALE ELBOW
23	MPH-2538	1	PUSH POLY FITTING - MALE TEE
24	MS-2052-1	1	Ø1/4 X 8-3/8 TUBING
* 25	O-B-011	2	O-RING
26	PF-AP-02-SS	2	PIPE PLUG
27	PF-RB-08-06	1	PIPE BUSHING
28	PF-HN-06-06S	1	HEX NIPPLE
29	MPH-3262	2	PISTON STOP
30	PF-ST-02-BR	1	TEE FITTING
31	MPH-2546-01	1	VAVLE STEM ASSY
32	MPH-2545	1	SEAL

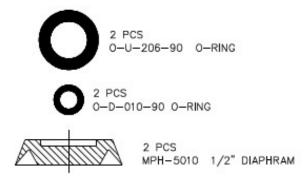
OPTIONAL PARTS AND ASSEMBLIES PARTS LIST

ITEM	PART NO.	QTY	DESCRIPTION			
33	MPH-2542	1	RESET BUTTON ASSY			

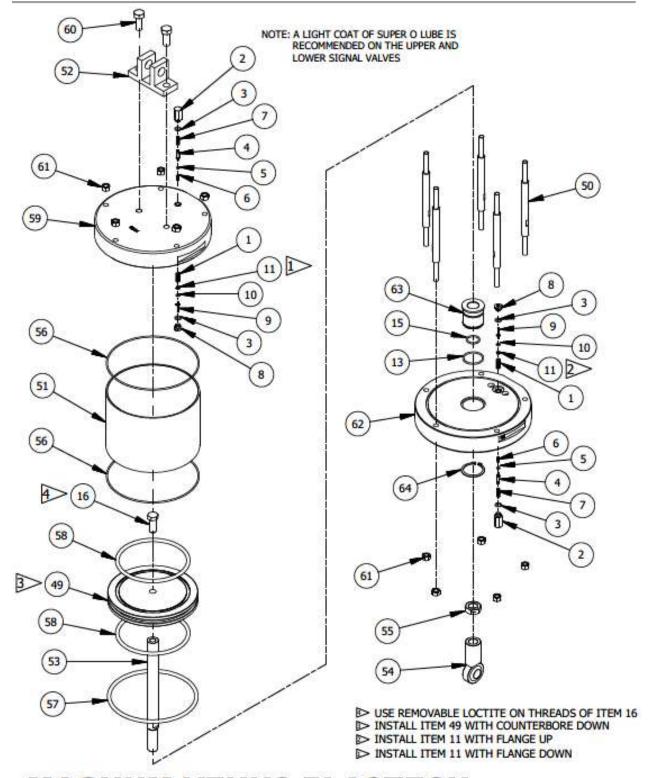


MPH-SB-XL-SK SEAL KIT 5" AIR MOTOR



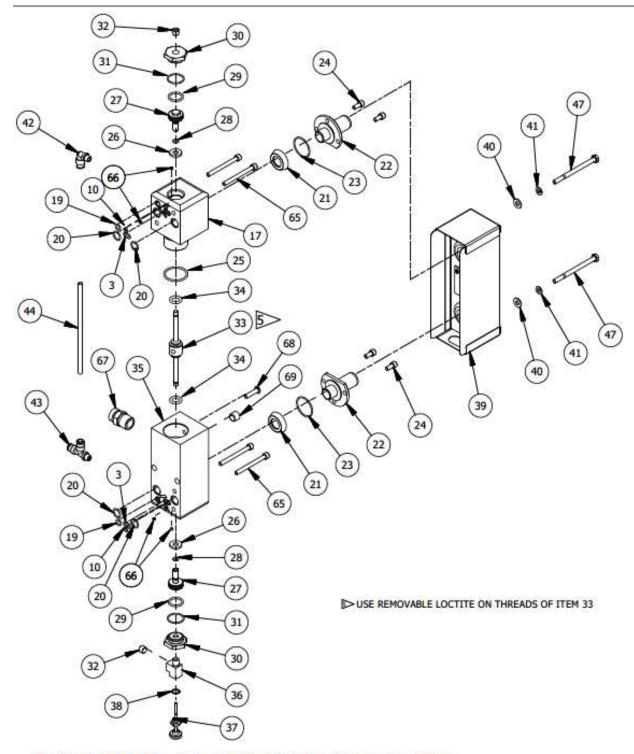






7" POWER HEAD		UPPH-7000
REV:B 06/03/11	SHEET 1 / 3	6/9/2010





7" POWER HEAD		UPPH-7000
REV:B 06/03/11	SHEET 2 / 3	6/9/2010



TEM	PART NUMBER	OTY	s List DESCRIPTION
1	MPH-2528	2	SPRING
2	MPH-2541	2	SPRING HOUSING- PILOT VALVE
3	O-B-012	6	O-RING
4	MPH-2540	2	INLET ROD- PILOT VALVE
5	O-U-006	2	O-RING
6	MPH-2526	2	SPRING
7	MPH-2533	2	COMPRESSION SPRING
8	MPH-2511-01	2	STEM SEAL ASSY- PILOT VALVE
9	MPH-2513	2	VALVE STEM- PILOT VALVE
10	O-B-008	4	O-RING
11	MPH-2512	2	SEAL GUIDE- PILOT VALVE
13	O-B-127	1	O-RING
15	O-B-127	1	O-RING
16	F-HB-08F-20-GR5	1	HEX BOLT
17	VPH-5001	1	UPPER VALVE BLOCK
19	O-B-011	2	O-RING
20	O-B-011	4	O-RING
21	MPH-5010	2	DIAPHRAGM
22	MPH-5009	2	EXHAUST PORT
23	O-B-026		O-RING
24	F-CS-04C-08-SS	2	SOCKET HEAD CAP SCREW
25		_	
	O-B-125	1	O-RING
26	MPH-3262	2	PISTON STOP
27	MPH-2517	2	VALVE PISTON
28	O-D-010-90	2	O-RING
29	O-B-116	2	O-RING
30	MPH-2521	2	VALVE END CAP
31	O-B-019	2	O-RING
32	PF-AP-02-SS	2	PIPE PLUG
33	VPH-5005	1	VALVE ROD POPPET
34	O-U-206-90	2	O-RING
35	MPH-5001	1	LOWER VALVE BLOCK
36	PF-ST-02-BR	1	TEE FITTING
37	MPH-2546-01	1	RESET STEM ASSEMBLY
38	MPH-2545	1	SEAL
39	VPH-5004-01	1	MUFFLER ASSEMBLY
40	F-FW-04	2	FLAT WASHER
41	F-SW-04-SS	2	LOCK WASHER
42	MPH-2539	1	MALE ELBOW
43	MPH-2538	1	MALE POLY TEE FITTING
44	MS-2052-1	.56 FT	POLY TUBE
47	F-HB-04C-56-SS	2	HEX BOLT
49	MPH-7004	1	PISTON - 7"
50	VPH-5003	5	TIE ROD
51	VPH-7001	1	CYLINDER
52	UPPH-7039	1	POWERHEAD CLEVIS
53	UPPH-7009	1	PISTON ROD
54	B-BJRE750-2-HS	1	FEMALE BALL ROD END
55	F-JN-12F	1	JAM NUT
56	O-B-167	2	O-RING
57	O-B-439	1	O-RING
58	O-B-431	2	O-RING
59	UPPH-7012	1	UPPER END CAP - 7"
60	F-HB-08C-20	2	HEX BOLT
61	F-HN-06F	10	HEX NUT
62	VPH-7002-HD	1	7" LOWER END CAP - HD
63	PAT-PH-5007	1	UPPER BUSHING
64	7205-2-26	1	EXTERNAL SNAP RING
65	F-CS-04C-40-SS	4	SOCKET HEAD CAP SCREW
66	F-SS-832-02-SS	4	SS SET SCREW
_	PF-HN-08-08S	1	HOSE ADAPTER
67		1 4	HOSE MUMPTER
67 68	F-BHCS-04C-16-SS	1	BUTTON HEAD CAP SCREW

OPTIONAL PARTS AND ASSEMBLIES

PARTS LIST PART No. MPH-2542 VPH-SB-XL DESCRIPTION RESET BUTTON ASSY SHIFT BLOCK ASSY

REPAIR KITS

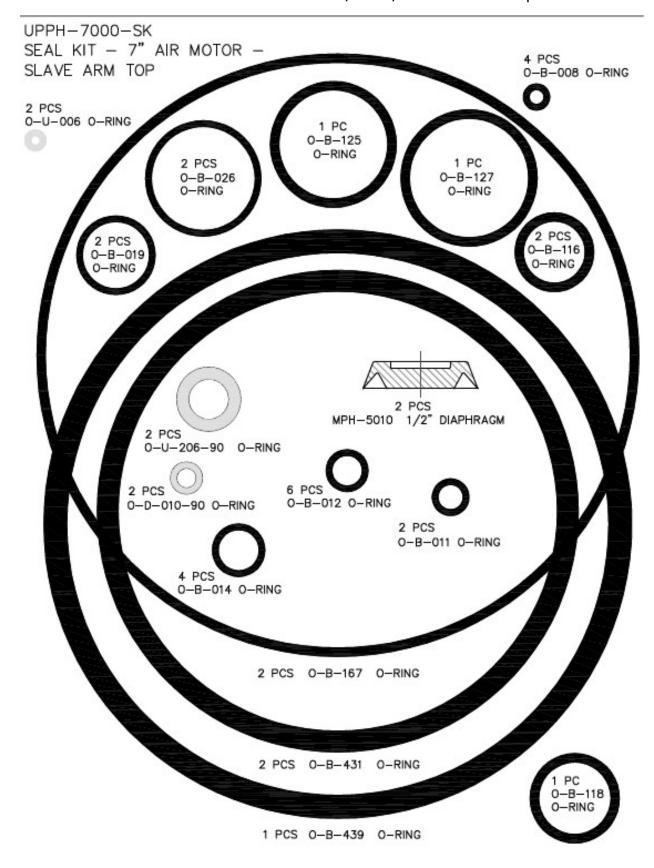
PART No. DESCRIPTION * UPPH-7000-SK SEAL KIT

* ASTERISKS DENOTE PARTS IN SEAL KIT

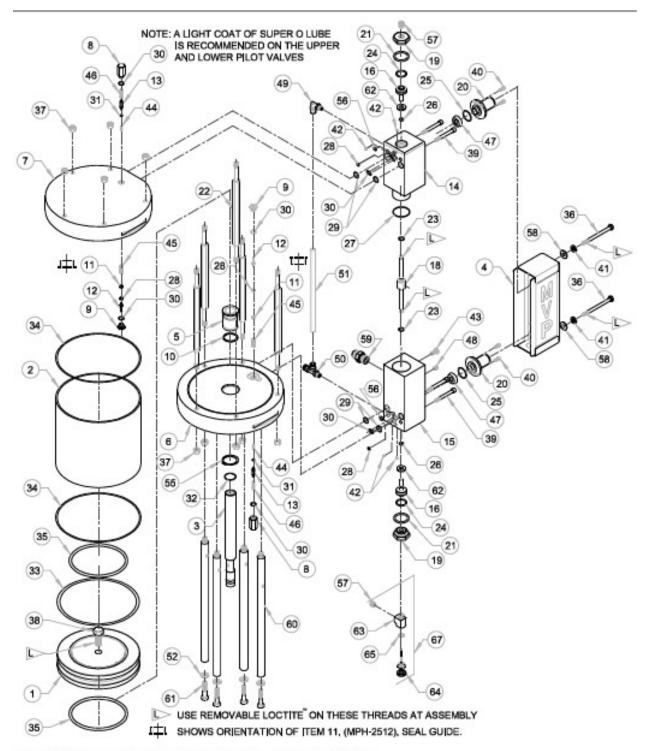
MAGNUM VENUS PLASTECH

7" POWER HEAD UPPH-7000 REV: B 06/03/11 SHEET 3 / 3 6/9/2010





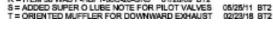




Assembly - 7" Power Head 4" Stroke

VPH-7000

REV. Q = ITEM 67 WAS MISLABLED ON DRAWING 01/28/09 BT2 R = ITEM 38 WAS F-HIBFT-D8C-20-GR5 01/28/09 BT2 S = ADDED SUPER O LUBE NOTE FOR PILOT VALVES 05/ T = ORIENTED MUFFLER FOR DOWNWARD EXHAUST 02/





Assembly - 7" Power Head 4" Stroke VPH-7000

DESCRIPTION

PISTON

O-RING

O-RING

O-RING

O-RING

O-RING

O-RING

O-RING O-RING

O-RING O-RING

O-RING

O-RING

HEX BOLT

HEX BOLT

CAP SCREW

CAP SCREW

SET SCREW

SPRING

SPRING

SPRING

DIAPHRAGM

POLY ELBOW

Ø1/4 TUBING LOCK WASHER

SNAP - RING

FLAT WASHER ADAPTER

PIPE PLUG

TIE ROD

O-RING

PIPE PLUG

POLY TEE

LOCK WASHER

BUTTON HEAD CAP SCREW

HEX NUT

SEAL GUIDE

VALVE PISTON

VALVE POPPET

VALVE END CAP

CYLINDER

PISTON ROD

LOWER ENDCAP

UPPER ENDCAP

ASSY - STEM SEAL

MUFFLER ASSEMBLY

PISTON ROD BUSHING

INLET SPRING HOUSING

VALVE STEM - PILOT VALVE

INLET ROD - PILOT VALVE

UPPER VALVE BLOCK

LOWER VALVE BLOCK

PARTS LIST

QTY

1

2

2

1

2

2

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1

.56ft

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2

1

PART NO.

MPH-7004

VPH-7001

VPH-4259

VPH-4254

MPH-7002

MPH-7001

MPH-2541

MPH-2512

MPH-2513

MPH-2540

VPH-5001

MPH-5001

MPH-2517

VPH-5005

MPH-2521

O-B-026

O-B-125

O-B-008

O-B-014

O-B-012

O-U-006

O-B-118

O-B-439

O-B-167

O-B-431 F-HB-04C-56-SS

F-HN-06F

F-HB-08F-20-GR5

F-CS-04C-40-SS

F-CS-04C-08-SS

F-SW-04-SS

F-SS-832-02-SS

F-BHCS-04C-16-SS 1

MPH-2526

MPH-2528

MPH-2533

MPH-5010

MPH-2539

MPH-2538

MS-2052-1

F-SW-06

O-B-011

F-FW-04

MPH-3261

PF-AP-02-SS

PF-HN-08-08S 2104-4-1

PF-AP-04-SS

O-D-010-90

O-B-121

MPH-2511-01

VPH-5004-01

ITEM

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***28 *29**

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PARTS LIST

ITEM	PART NO.	QT	Y DESCRIPTION
81	F-HB-08C-24-GR8	4	GR 8 HEX BOLT
62	MPH-3262	2	PISTON STOP
63	PF-ST-02-BR	1	TEE FITTING
64	MPH-2546-01	1	VALVE STEM ASSY
85	MPH-2545	1	SEAL
66	DONOTOLARMOTOR	1	DO NOT OIL DECAL (NOT SHOWN)

OPTIONAL PARTS AND ASSEMBLIES PARTS LIST

ITEM	PART NO.	QTY	DESCRIPTION
67	MPH-2542	1	RESET BUTTON ASSY
	VPH-SB-XI	1	SHIFT BLOCK ASSY

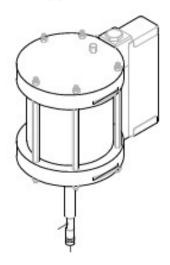
DESCRIPTION PART NO.

SEAL KIT

REPAIR KITS

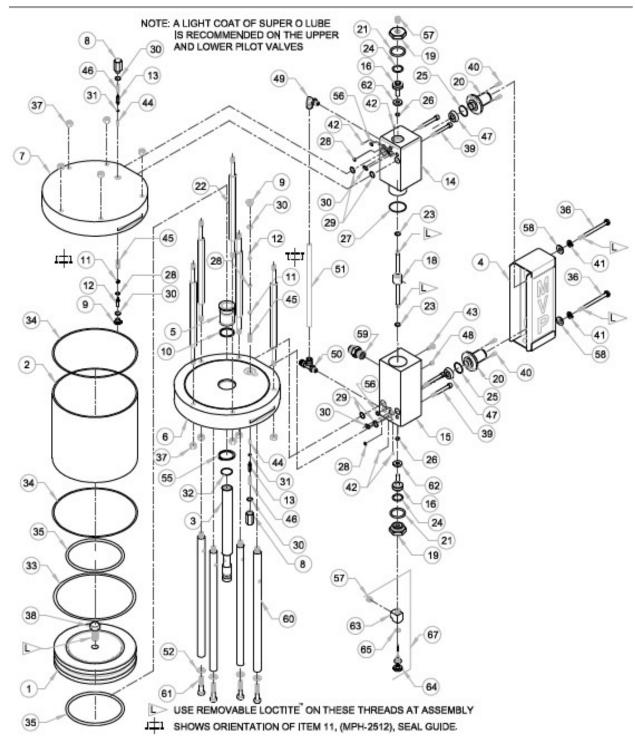
20 MPH-5009 VALVE EXHAUST O-RING ***21** O-B-019 2 * MPH-7000-SK VPH-5003 TIE ROD 22 5 ***23** O-U-206-90 2 O-RING O-B-116 O-RING 24

FIGURE 1-1



* COMPONENTS INCLUDED WITH SEAL KIT.





Assembly - 7" Power Head 4" Stroke VPH-7000-DHV

REV. - 02/14/11 BT2 REV. A - ADDED SUPER O LUBE NOTE FOR PILOT VAVLES REV. B - ORIENTED MUFFLER FOR DOWNWARD EXHAUST 05/25/11 BT2 02/23/18 BT2



Assembly - 7" Power Head 4" Stroke VPH-7000-DHV PARTS LIST

PARTS LIST

	PARTS	LIST	
ITEM	PART NO.	QTY	DESCRIPTION
1	MPH-7004	1	PISTON
2	VPH-7001	1	CYLINDER
3	VPH-4259	1	PISTON ROD
4	VPH-5004-01	1	MUFFLER ASSEMBLY
5	VPH-4254	1	PISTON ROD BUSHING
6	MPH-7002-DH\		LOWER ENDCAP
7	MPH-7001	1	UPPER ENDCAP
8	MPH-2541	2	INLET SPRING HOUSING
9	MPH-2511-01	2	ASSY - STEM SEAL
* 10	O-B-121	1	O-RING
11	MPH-2512	2	SEAL GUIDE
12	MPH-2513	2	VALVE STEM - PILOT VALVE
13	MPH-2540	2	INLET ROD - PILOT VALVE
14	VPH-5001	1	UPPER VALVE BLOCK
15	MPH-5001	1	LOWER VALVE BLOCK
16	MPH-2517	2	VALVE PISTON
18	VPH-5005	1	VALVE POPPET
19	MPH-2521	2	VALVE END CAP
20	MPH-5009	2	VALVE EXHAUST
*21	O-B-019	2	O-RING
22	VPH-5003	5	TIE ROD
* 23	O-U-206-90	2	O-RING
			O-RING
* 24	O-B-116	2	
* 25	O-B-026	2	O-RING
* 26	O-D-010-90	2	O-RING
* 27	O-B-125	1	O-RING
* 28	O-B-008	4	O-RING
* 29	O-B-014	4	O-RING
* 30	O-B-012	6	O-RING
* 31	O-U-006	2	O-RING
* 32	O-B-118	1	O-RING
*33	O-B-439	1	O-RING
*34	O-B-167	2	O-RING
* 35	O-B-431	2	O-RING
36	F-HB-04C-56-SS	2	HEX BOLT
37	F-HN-08F	10	HEX NUT
38	F-HB-08F-20-GR5	1	HEX BOLT
39	F-CS-04C-40-SS	4	CAP SCREW
40	F-CS-04C-08-SS	4	CAP SCREW
41	F-SW-04-SS	2	LOCK WASHER
42	F-SS-832-02-SS	4	SET SCREW
43	F-BHCS-04C-16-SS		BUTTON HEAD CAP SCREW
44	MPH-2526	2	SPRING
45	MPH-2528	2	SPRING
	MPH-2533		
46	=====	2	SPRING
* 47	MPH-5010	2	DIAPHRAGM
48	PF-AP-04-SS	1	PIPE PLUG
49	MPH-2539	1	POLY ELBOW
50	MPH-2538	1	POLY TEE
51	MS-2052-1	.56ft	Ø1/4 TUBING
52	F-SW-06	4	LOCK WASHER
55	MPH-3261	1	SNAP - RING
* 56	O-B-011	2	O-RING
57	PF-AP-02-SS	2	PIPE PLUG
58	F-FW-04	2	FLAT WASHER
59	PF-HN-08-08S	1	ADAPTER
60	2104-4-1	4	TIE ROD
50		7.75	

ITEM	PART NO.	QT	DESCRIPTION
61	F-HB-06C-24-GR8	4	GR 8 HEX BOLT
62	MPH-3262	2	PISTON STOP
63	PF-ST-02-BR	1	TEE FITTING
64	MPH-2546-01	1	VALVE STEM ASSY
65	MPH-2545	1	SEAL
66	DONOTOILAIRMOTOR	1	DO NOT OIL DECAL (NOT SHOWN)

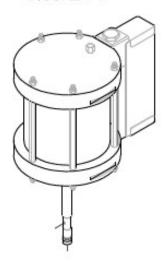
OPTIONAL PARTS AND ASSEMBLIES PARTS LIST

ITEM	PART NO.	QTY	DESCRIPTION
67	MPH-2542	1	RESET BUTTON ASSY
	VPH-SB-XL	1	SHIFT BLOCK ASSY

REPAIR KITS

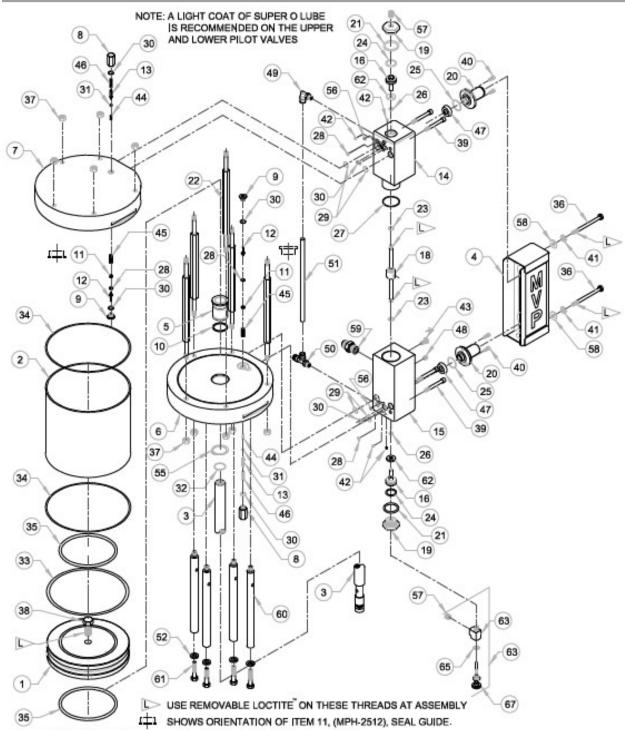
PART NO. DESCRIPTION * MPH-7000-SK SEAL KIT

FIGURE 1-1



* COMPONENTS INCLUDED WITH SEAL KIT.





Assembly - 7" Power Head 4" Stroke

VPH-7000-DUO

REV. - 08/31/07 BT2
REV. A - ITEM 51 WAS 01417 11/09/07 BT2
REV. B - ADDED SUPER O LUBE NOTE FOR PILOT VALVES
REV. C - ORIENTED MUFFLER FOR DOWNWARD EXHAUST 05/25/11 BT2

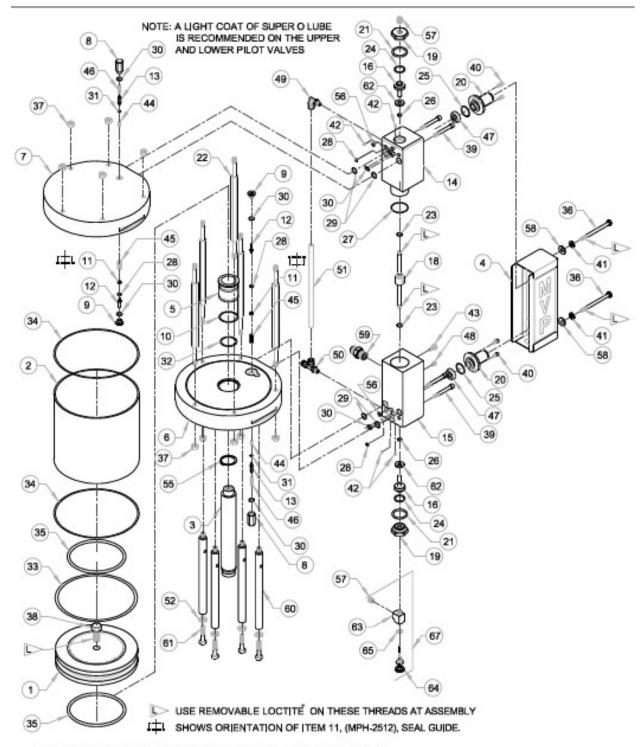


Assembly - 7" Power Head 4" Stroke VPH-7000-DUO

, 1000	PARTS		a 4 Guono VIII 1000 DOC		PARTS	LIST	
ITEM		QTY	DESCRIPTION	ITEM		QTY	DESCRIPTION
1	MPH-7004	1	PISTON - 7" PUMP	61	F-HB-06C-24-GR8		GR 8 HEX BOLT
2	VPH-7001	1	CYLINDER - 7" PUMP X 4" STROKE	62	MPH-3262	2	PISTON STOP
3	VPH-4259	1	PISTON ROD	63	00276	1	TEE FITTING
4	VPH-5004-01	1	MUFFLER ASSY - 4" STROKE PUMP	64	MPH-2546-01	4	VALVE STEM ASSY
5	VPH-4254	1	PISTON ROD BUSHING	65	MPH-2545	4	SEAL
6	MPH-7002	1	LOWER ENDCAP - 7" PUMP	66		R 1 por	NOT OIL DECAL (NOT SHOWN)
7	MPH-7001	1	UPPER ENDCAP - 7" PUMP	00	DOIG TO ID III MICTO		NOT OR DECKE (NOT GROWN)
8	MPH-2541	2	INLET SPRING HOUSING - PILOT VALVE				
9	MPH-2511-01	2	ASSY - STEM SEAL	OF	TIONAL PART	SAND	DASSEMBLIES
* 10	O-B-121	1	O-RING	-			
11	MPH-2512	2	SEAL GUIDE		PARTS	LIST	
12	MPH-2513	2	VALVE STEM - PILOT VALVE	ITEM	PART NO.	QTY	DESCRIPTION
13	MPH-2540	2	INLET ROD - PILOT VALVE	67	MPH-2542	1	RESET BUTTON ASSY
14	VPH-5001	1	UPPER VALVE BLOCK - 4" STROKE PUMP		VPH-SB-XL	1	SHIFT BLOCK ASSY
15	MPH-5001	1	LOWER VALVE BLOCK				
16	MPH-2517	2	VALVE PISTON				
18	VPH-5005	1	VALVE POPPET		22223		
19	MPH-2521	2	VALVE END CAP		REPAIR	RKITS	3
20	MPH-5009	2	VALVE EXHAUST		PART NO.	DES	SCRIPTION
*21	O-B-019	2	O-RING		* MPH-7000-SK	SEA	AL KIT
22	VPH-5003	5	TIE ROD 4" STROKE PUMP		* MITTI-7000-5IX	SLA	SE RIT
* 23	O-U-206-90	2	O-RING				
* 24	O-B-116	2	O-RING				
* 25	O-B-026	2	O-RING				
* 26	O-D-010-90	2	O-RING				
* 27	O-B-125	1	O-RING				
* 28	O-B-008	4	O-RING				
* 29	O-B-O14	4	O-RING				
* 30	O-B-012	6	O-RING				
* 31	O-U-006	2	O-RING				
* 32	O-B-118	1	O-RING				
* 33	O-B-439	1	O-RING				
* 34	O-B-167	2	O-RING				
* 35	O-B-431	2	O-RING				
36	F-HB-04C-56-SS	2	HEX HEAD CAP SCREW		1272		270
37	F-HN-06F	10	HEX NUT		FIG	URE 1	1-1
38	F-HBFT-08C-20-GR5	1	HEX HEAD CAP SCREW				
39	F-CS-04C-40-SS	4	SOCKET HEAD CAP SCREW				\sim
40	F-CS-04C-08-SS	4	SOCKET HEAD CAP SCREW		Jan.	-	
41	F-SW-04-SS	2	LOCK WASHER			-	R CO
42	F-SS-832-02-SS	4	CUP POINT SET SCREW		(2
43	F-BHCS-04C-16-SS	1	BUTTON HEAD CAP SCREW		1		9/1
44	MPH-2526	2	SPRING		10		/)
45	MPH-2528	2	SPRING			-	
46	MPH-2533	2	SPRING				<u></u>
* 47	MPH-5010	2	DIAPHRAGM		JII.		
48	PF-AP-04-SS	1	PIPE PLUG				
49	MPH-2539	1	PUSH POLY FITTING - MALE ELBOW				JUP .
50	MPH-2538	1	PUSH POLY FITTING - MALE TEE		N		//
51		.56ft	Ø1/4 x 6-3/4 POLY TUBING		1		
52	F-SW-06	4	LOCK WASHER		0		
55	MPH-3261	1	SNAP - RING			T	
* 56	O-B-011	2	O-RING				
57	PF-AP-02-SS	2	PIPE PLUG			H	
58	F-FW-04	2	FLAT WASHER			\mathcal{H}	
59	PF-HN-08-08S	1	ADAPTER			\mathbf{a}	
60	DUO-3006	4	TIE ROD				

* COMPONENTS INCLUDED WITH SEAL KIT.





Assembly - 7" Power Head 4" Stroke VPH-7000-DUO-HD

REV. - 03/01/11 BT2 REV. A - ADDED SUPER O LUBE NOTE FOR PILOT VALVES REV. B - ORIENTED MUFFLER FOR DOWNWARD EXHAUST



7" Power Head 4" Stroke VPH-7000-DUO-HD

O-RING

O-RING TIE ROD

O-RING

O-RING O-RING

O-RING

O-RING

O-RING

O-RING

O-RING O-RING

O-RING O-RING

O-RING O-RING

HEX BOLT

HEX BOLT CAP SCREW

CAP SCREW

LOCK WASHER SET SCREW

BUTTON HEAD CAP SCREW

HEX NUT

SPRING SPRING

SPRING

DIAPHRAGM

POLY ELBOW

Ø1/4 TUBING

SNAP RING

PIPE PLUG

FLAT WASHER ADAPTER

O-RING

TIE ROD

LOCK WASHER

PIPE PLUG

POLY TEE

SEAL GUIDE

VALVE PISTON

VALVE POPPET

VALVE END CAP

VALVE EXHAUST

VALVE STEM - PILOT VALVE

INLET ROD - PILOT VALVE UPPER VALVE BLOCK

LOWER VALVE BLOCK

PARTS

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O-B-127

MPH-2512

MPH-2513

MPH-2540

VPH-5001

MPH-5001

MPH-2517

VPH-5005

MPH-2521

MPH-5009

VPH-5003

O-U-206-90

O-B-019

O-B-116

O-B-026 O-D-010-90

O-B-125

O-B-008

O-B-014

O-B-012

O-U-006

O-B-124

O-B-439

O-B-167

O-R-431

F-HB-04C-56-SS

F-HN-06F

38 F-HBFT-08C-20-GR5 1

F-CS-04C-40-SS F-CS-04C-08-SS

F-SW-04-SS

MPH-2526

MPH-2528 MPH-2533

MPH-5010

MPH-2539

MPH-2538

MS-2052-1

F-SW-06

7205-2-28

PF-AP-02-SS

PF-HN-08-08S 1

O-B-011

F-FW-04

DUO-3006

PF-AP-04-SS

F-SS-832-02-SS 4 F-BHCS-04C-16-SS 1

IS LIST			PARTS LIST		
QTY	DESCRIPTION	ITEM	PART NO.	QTY	

ITEM	PART NO.	QTY	DESCRIPTION	ITEM	PART NO.	QTY	DESCRIPTION
1	MPH-7004	1	PISTON	61	F-HB-06C-24-GR8	4	HEX BOLT
2	VPH-7001	1	CYLINDER	62	MPH-3262	2	PISTON STOP
3	VPH-7012	1	PISTON ROD	63	PF-ST-02-BR	1	TEE FITTING
4	VPH-5004-01	1	MUFFLER ASSEMBLY	64	MPH-2548-01	1	VALVE STEM ASSY
5	VPH-7005	1	BUSHING	65	MPH-2545	1	SEAL
6	VPH-7002-HD	1	LOWER ENDCAP	66	DONOTOLARMOTOR	₹ 1	DO NOT OIL DECAL (NOT SHOWN)
7	MPH-7001	1	UPPER ENDCAP				
8	MPH-2541	2	INLET SPRING HOUSING				
9	MPH-2511-01	2	ASSY - STEM SEAL	OP	TIONAL PART	SΑ	ND ASSEMBLIES

OPTIONAL PARTS AND ASSEMBLIES PARTS LIST

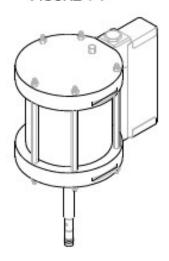
ITEM	PART NO.	QTY	DESCRIPTION
67	MPH-2542	1	RESET BUTTON ASSY
	VPH-SB-XL	1	SHIFT BLOCK ASSY

REPAIR KITS

PART NO.	DESCRIPTION
+ VPH 7000 HD CK	OFAL MIT

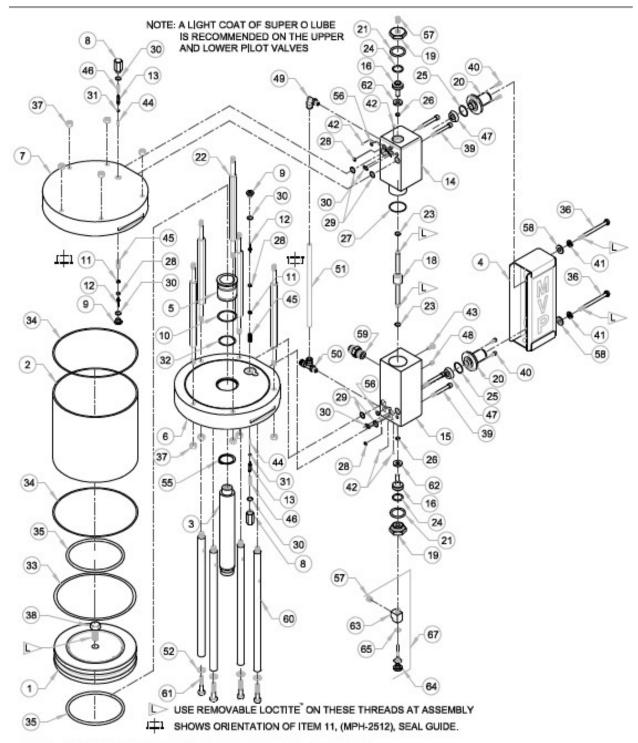
*	VPH-7000-HD-SK	SEAL KIT

FIGURE 1-1



COMPONENTS INCLUDED WITH SEAL KIT.





Assembly - 7" Power Head 4" Stroke VPH-7000-HD

REV. - 03/25/09 BT2 REV. A - ADDED SUPER O LUBE NOTE FOR PILOT VALVES REV. B - ORIENTED MUFFLER FOR DOWNWARD EXHAUST



Assembly - 7" Power Head 4" Stroke VPH-7000-HD

PA

NF	RTSL	IST			

ITEM	PART NO.	QTY	DESCRIPTION
1	MPH-7004	1	PISTON
2	VPH-7001	1	CYLINDER
3	VPH-7012	1	PISTON ROD
4	VPH-5004-01	1	MUFFLER ASSEMBLY
5	VPH-7005	1	BUSHING
6	VPH-7002-HD	1	LOWER ENDCAP
7	MPH-7001	1	UPPER ENDCAP
8	MPH-2541	2	INLET SPRING HOUSING
9	MPH-2511-01	2	ASSY - STEM SEAL
* 10	O-B-127	1	O-RING
11	MPH-2512	2	SEAL GUIDE
12	MPH-2513	2	VALVE STEM - PILOT VALVE
13	MPH-2540	2	INLET ROD - PILOT VALVE
14	VPH-5001	1	UPPER VALVE BLOCK
15	MPH-5001	1	LOWER VALVE BLOCK
16	MPH-2517	2	VALVE PISTON
18	VPH-5005	1	VALVE POPPET
19	MPH-2521	2	VALVE END CAP
20	MPH-5009	2	VALVE EXHAUST
*21	O-B-019	2	O-RING
22	VPH-5003	5	TIE ROD
* 23	O-U-206-90	2	O-RING
* 24	O-B-116	2	O-RING
* 25	O-B-026	2	O-RING
* 26	O-D-010-90	2	O-RING
* 27	O-B-125	1	O-RING
* 28	O-B-008	4	O-RING
* 29	O-B-014	4	O-RING
* 30	O-B-012	6	O-RING
*31	O-U-006	2	O-RING
* 32	O-B-124	1	O-RING
* 33	O-B-439	1	O-RING
* 34	O-B-167	2	O-RING
* 35	O-B-431	2	O-RING
36	F-HB-04C-56-SS	2	HEX BOLT
37	F-HN-06F	10	HEX NUT
38	F-HBFT-08C-20-GR5		HEX BOLT
39	F-CS-04C-40-SS	4	CAP SCREW
40	F-CS-04C-08-SS	4	CAP SCREW
41	F-SW-04-SS	2	LOCK WASHER
42	F-SS-832-02-SS	4	SET SCREW
43	F-BHCS-04C-16-SS		BUTTON HEAD CAP SCREW
44	MPH-2526	2	SPRING
45	MPH-2528	2	SPRING
46	MPH-2533	2	SPRING
* 47	MPH-5010	2	DIAPHRAGM
48	PF-AP-04-SS	1	PIPE PLUG
49	MPH-2539	1	POLY ELBOW
50	MPH-2538	1	POLY TEE
51		.56ft	Ø1/4 TUBING
52	F-SW-06	4	LOCK WASHER
55	7205-2-26	1	SNAP RING
* 56	O-B-011	2	O-RING
57	PF-AP-02-SS	2	PIPE PLUG
58	F-FW-04	2	FLAT WASHER
59	PF-HN-08-08S	1	ADAPTER
60	2104 4 1		TIE DOD

TIE ROD

PARTS LIST

ITEM	PART NO.	QT	Y DESCRIPTION
61	F-HB-06C-24-GR8	4	HEX BOLT
62	MPH-3262	2	PISTON STOP
63	PF-ST-02-BR	1	TEE FITTING
64	MPH-2546-01	1	VALVE STEM ASSY
65	MPH-2545	1	SEAL
66	DONOTOILAIRMOTOR	1	DO NOT OIL DECAL (NOT SHOWN)

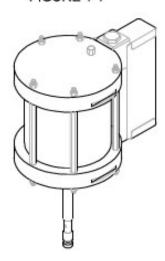
OPTIONAL PARTS AND ASSEMBLIES PARTS LIST

ITEM	PART NO.	QTY	DESCRIPTION
67	MPH-2542	1	RESET BUTTON ASSY
	VPH-SB-XL	1	SHIFT BLOCK ASSY

REPAIR KITS

	PART NO.	DESCRIPTION
*	VPH-7000-HD-SK	SEAL KIT

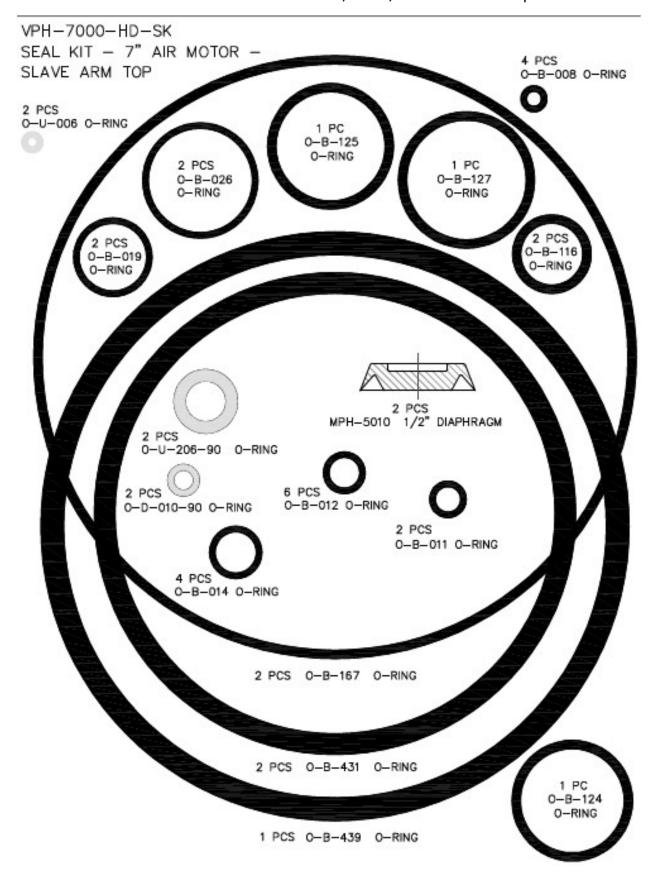
FIGURE 1-1



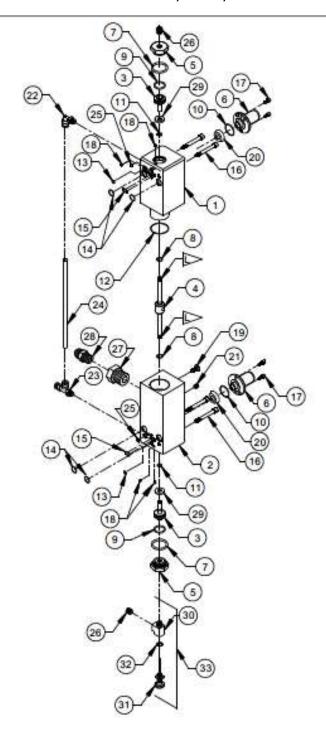
* COMPONENTS INCLUDED WITH SEAL KIT.



2104-4-1







USE REMOVABLE LOCTITE ON THESE THREADS AT ASSEMBLY

MAGNUM VENUS PRODUCTS

Shift Block for VPH-5000,7000,10000

VPH-SB-XL

REV. - 10/14/05 BT2 REV. A - ADDED REPAIR KIT 06-04-07 BT2



PART NO.

REPAIR KITS

* MPH-SB-XL-SK SEAL KIT

DESCRIPTION

Shift Block fof VPH-5000,7000,10000

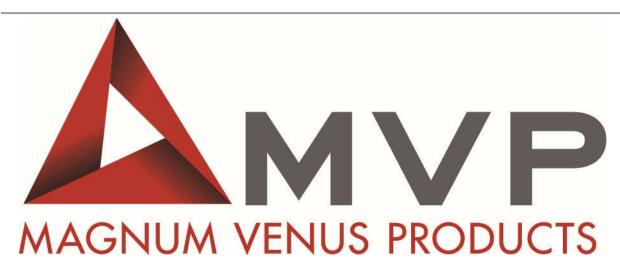
PARTS LIST

ITEM	PART NO. QTY	DESCRIPTION
1	VPH-5001 1	UPPER VALVE BLOCK
2	MPH-5001 1	LOWER VALVE BLOCK
3	MPH-2517 2	VALVE PISTON
4	VPH-5005 1	VALVE POPPET
5	MPH-2521 2	VALVE END CAP
6	MPH-5009 2	VALVE EXHAUST
* 7	O-B-019 2	O-RING
* 8	O-U-206-90 2	O-RING
* 9	O-B-116 2	O-RING
± 10	O-B-026 2	O-RING
*11	O-D-010-90 2	O-RING
* 12	O-B-125 1	O-RING
* 13	O-B-008 2	O-RING
* 14	O-B-014 4	O-RING
*15	O-B-012 2	O-RING
16	F-CS-04C-40-SS	4 SOCKET HEAD CAP SCREW
17	F-CS-04C-08-SS	4 SOCKET HEAD CAP SCREW
18	F-SS-832-02-SS	4 SET SCREW
19	F-BHCS-04C-16-SS	1 BUTTON HEAD CAP SCREW
* 20	MPH-5010 2	DIAPHRAGM
21	PF-AP-04-SS 1	PIPE PLUG
22	MPH-2539 1	PUSH POLY FITTING - MALE ELBOW
23	MPH-2538 1	PUSH POLY FITTING - MALE TEE
24	MS-2052-1 .56ft	Ø1/4 x 6-3/4 TUBING
*25	O-B-011 2	O-RING
26	PF-AP-02-SS 2	PIPE PLUG
27	PF-RB-08-06 1	PIPE BUSHING
28	PF-HN-06-06S 1	HEX NUT
29	MPH-3262 2	PISTON STOP
30	PF-ST-02-BR 1	TEE FITTING
31	MPH-2546-01 1	VALVE STEM ASSY
32	MPH-2545 1	SEAL

OPTIONAL PARTS AND ASSEMBLIES PARTS LIST

ITEM PART NO. QTY DESCRIPTION 33 MPH-2542 1 RESET BUTTON ASSY





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