Published Manual Number/ECN: MAP72J2NAE/2011304A
- **Publishing System: TPAS**
- **Access date: 7/20/2011**
- **Document ECN's: Latest Available**

Service & Mechanical Parts—

72058 and 72075Jxx Slim Washer Extractor

Read the separate safety manual before installing, operating, or servicing

PELLERIN MILNOR CORPORATION POST OFFICE BOX 400, KENNER, LOUISIANA 70063-0400, U.S.A.

Table of Contents
for MAP72J2NAE/2011304A
72058 and 72075Jxx Slim Washer Extractor

Table of Contents, cont.

PELLERIN MILNOR CORPORATION
LIMITED STANDARD WARRANTY

We warrant to the original purchaser that MILNOR machines including electronic hardware/software (hereafter referred to as "equipment"), will be free from defects in material and workmanship for a period of one year from the date of shipment (unless the time period is specifically extended for certain parts pursuant to a specific MILNOR published extended warranty) from our factory with no operating hour limitation. This warranty is contingent upon the equipment being installed, operated and serviced as specified in the operating manual supplied with the equipment, and operated under normal conditions by competent operators.

Providing we receive written notification of a warranted defect within 30 days of its discovery, we will at our option repair or replace the defective part or parts, FOB our factory. We retain the right to require inspection of the parts claimed defective in our factory prior to repairing or replacing same. We will not be responsible, or in any way liable, for unauthorized repairs or service to our equipment, and this warranty shall be void if the equipment is tampered with, modified, or abused, used for purposes not intended in the design and construction of the machine, or is repaired or altered in any way without MILNOR's written consent.

Parts damaged by exposure to weather, to aggressive water, or to chemical attack are not covered by this warranty. For parts which require routine replacement due to normal wear such as gaskets, contact points, brake and clutch linings, belts, hoses, and similar parts the warranty time period is 90 days.

We reserve the right to make changes in the design and/or construction of our equipment (including purchased components) without obligation to change any equipment previously supplied.

ANY SALE OR FURNISHING OF ANY EQUIPMENT BY MILNOR IS MADE ONLY UPON THE EXPRESS UNDERSTANDING THAT MILNOR MAKES NO EXPRESSED OR IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR USE OR PURPOSE OR ANY OTHER WARRANTY IMPLIED BY LAW INCLUDING BUT NOT LIMITED TO REDHIBITION. MILNOR WILL NOT BE RESPONSIBLE FOR ANY COSTS OR DAMAGES ACTUALLY INCURRED OR REQUIRED AS A RESULT OF: THE FAILURE OF ANY OTHER PERSON OR ENTITY TO PERFORM ITS RESPONSIBILITIES, FIRE OR OTHER HAZARD, ACCIDENT, IMPROPER STORAGE, MIS-USE, NEGLECT, POWER OR ENVIRONMENTAL CONTROL MALFUNCTIONS, DAMAGE FROM LIQUIDS, OR ANY OTHER CAUSE BEYOND THE NORMAL RANGE OF USE. REGARDLESS OF HOW CAUSED, IN NO EVENT SHALL MILNOR BE LIABLE FOR SPECIAL, INDIRECT, PUNITIVE, LIQUIDATED, OR CONSEQUENTIAL COSTS OR DAMAGES, OR ANY COSTS OR DAMAGES WHATSOEVER WHICH EXCEED THE PRICE PAID TO MILNOR FOR THE EQUIPMENT IT SELLS OR FURNISHES.

THE PROVISIONS ON THIS PAGE REPRESENT THE ONLY WARRANTY FROM MILNOR AND NO OTHER WARRANTY OR CONDITIONS, STATUTORY OR OTHERWISE, SHALL BE IMPLIED.

WE NEITHER ASSUME, NOR AUTHORIZE ANY EMPLOYEE OR OTHER PERSON TO ASSUME FOR US, ANY OTHER RESPONSIBILITY AND/OR LIABILITY IN CONNECTION WITH THE SALE OR FURNISHING OF OUR EQUIPMENT TO ANY BUYER.

BIUUUD19 (Published) Book specs- Dates: 20081231 / 20081231 / 20081231 Lang: ENG01 Applic: UUU

How to Get the Necessary Repair Components

This document uses Simplified Technical English.
Learn more at http://www.asd-ste100.org.

You can get components to repair your machine from the approved supplier where you got this machine. Your supplier will usually have the necessary components in stock. You can also get components from the Milnor® factory.

Tell the supplier the machine model and serial number and this data for each necessary component:

- The component number from this manual
- The component name if known
- The necessary quantity
- The necessary transportation requirements
- If the component is an electrical component, give the schematic number if known.
- If the component is a motor or an electrical control, give the nameplate data from the used component.

To write to the Milnor factory:

Pellerin Milnor Corporation
Post Office Box 400
Kenner, LA 70063-0400
UNITED STATES

Telephone: 504-467-2787
Fax: 504-469-9777
Email: parts@milnor.com

— End of BIUUUD19 —

BIUUUS27 (Published) Book specs- Dates: 20051111 / 20051111 / 20060323 Lang: ENG01 Applic: EOT

Safety—Tilting Washer-Extractors

1. General Safety Requirements—Vital Information for Management Personnel [Document BIUUUS04]

Incorrect installation, neglected preventive maintenance, abuse, and/or improper repairs, or changes to the machine can cause unsafe operation and personal injuries, such as multiple fractures, amputations, or death. The owner or his selected representative (owner/user) is responsible for understanding and ensuring the proper operation and maintenance of the machine. The owner/user must familiarize himself with the contents of all machine instruction manuals. The owner/user should direct any questions about these instructions to a Milnor® dealer or the Milnor® Service department.

Most regulatory authorities (including OSHA in the USA and CE in Europe) hold the owner/user ultimately responsible for maintaining a safe working environment. Therefore, the owner/user must do or ensure the following:

- recognize all foreseeable safety hazards within his facility and take actions to protect his personnel, equipment, and facility;
- work equipment is suitable, properly adapted, can be used without risks to health or safety, and is adequately maintained;
- where specific hazards are likely to be involved, access to the equipment is restricted to those employees given the task of using it;
- only specifically designated workers carry out repairs, modifications, maintenance, or servicing;
- information, instruction, and training is provided;
- workers and/or their representatives are consulted.

Work equipment must comply with the requirements listed below. The owner/user must verify that installation and maintenance of equipment is performed in such a way as to support these requirements:

- control devices must be visible, identifiable, and marked; be located outside dangerous zones; and not give rise to a hazard due to unintentional operation;
- control systems must be safe and breakdown/damage must not result in danger;
- work equipment is to be stabilized;
- protection against rupture or disintegration of work equipment;
- guarding, to prevent access to danger zones or to stop movements of dangerous parts before the danger zones are reached. Guards to be robust; not give rise to any additional hazards; not be easily removed or rendered inoperative; situated at a sufficient distance from the danger zone; not restrict view of operating cycle; allow fitting, replacing, or maintenance by restricting access to relevant area and without removal of guard/protection device;
- suitable lighting for working and maintenance areas;
- maintenance to be possible when work equipment is shut down. If not possible, then protection measures to be carried out outside danger zones;
- work equipment must be appropriate for preventing the risk of fire or overheating; discharges of gas, dust, liquid, vapor, other substances; explosion of the equipment or substances in it.

1.1. **Laundry Facility**—Provide a supporting floor that is strong and rigid enough to support–with a reasonable safety factor and without undue or objectionable deflection–the weight of the fully loaded machine and the forces transmitted by it during operation. Provide sufficient clearance for machine movement. Provide any safety guards, fences, restraints, devices, and verbal and/or posted restrictions necessary to prevent personnel, machines, or other moving machinery from accessing the machine or its path. Provide adequate ventilation to carry away heat and vapors. Ensure service connections to installed machines meet local and national safety standards, especially regarding the electrical disconnect (see the National Electric Code). Prominently post safety information, including signs showing the source of electrical disconnect.

1.2. **Personnel**—Inform personnel about hazard avoidance and the importance of care and common sense. Provide personnel with the safety and operating instructions that apply to them. Verify that personnel use proper safety and operating procedures. Verify that personnel understand and abide by the warnings on the machine and precautions in the instruction manuals.

1.3. **Safety Devices**—Ensure that no one eliminates or disables any safety device on the machine or in the facility. Do not allow machine to be used with any missing guard, cover, panel or door. Service any failing or malfunctioning device before operating the machine.

1.4. **Hazard Information**—Important information on hazards is provided on the machine safety placards, in the Safety Guide, and throughout the other machine manuals. **Placards must be kept clean so that the information is not obscured. They must be replaced immediately if lost or damaged. The Safety Guide and other machine manuals must be available at all times to the appropriate personnel.** See the machine service manual for safety placard part numbers. Contact the Milnor Parts department for replacement placards or manuals.

1.5. **Maintenance**—Ensure the machine is inspected and serviced in accordance with the norms of good practice and with the preventive maintenance schedule. Replace belts, pulleys, brake shoes/disks, clutch plates/tires, rollers, seals, alignment guides, etc. before they are severely worn. Immediately investigate any evidence of impending failure and make needed repairs (e.g., cylinder, shell, or frame cracks; drive components such as motors, gear boxes, bearings, etc., whining, grinding, smoking, or becoming abnormally hot; bending or cracking of cylinder, shell, frame, etc.; leaking seals, hoses, valves, etc.) Do not permit service or maintenance by unqualified personnel.

2. Safety Alert Messages—Internal Electrical and Mechanical Hazards [Document BIUUUS11]

The following are instructions about hazards inside the machine and in electrical enclosures.

WARNING 1: Electrocution and Electrical Burn Hazards—Contact with electric power can kill or seriously injure you. Electric power is present inside the cabinetry unless the main machine power disconnect is off.

- Do not unlock or open electric box doors.
- Do not remove guards, covers, or panels.
- Do not reach into the machine housing or frame.
- Keep yourself and others off of machine.
- Know the location of the main machine disconnect and use it in an emergency to remove all electric power from the machine.

WARNING 2: Entangle and Crush Hazards—Contact with moving components normally isolated by guards, covers, and panels, can entangle and crush your limbs. These components move automatically.

- Do not remove guards, covers, or panels.
- Do not reach into the machine housing or frame.
- Keep yourself and others off of machine.
- Know the location of all emergency stop switches, pull cords, and/or kick plates and use them in an emergency to stop machine motion.

WARNING 3: Crush Hazards—Tilting machines only—The machine housing will crush your body or limbs if it descends or falls while you are under it. Housing can descend with power off or on. Manual operation of tilting valves overrides safety interlocks. Improper operation of manual tilting valves may cause the housing to descend.

- Do not remove guards, covers, or panels.
- Do not reach into the machine housing or frame.

3. Safety Alert Messages—External Mechanical Hazards [Document BIUUUS12]

The following are instructions about hazards around the front, sides, rear or top of the machine.

WARNING 4: Strike and Crush Hazards—Machines with power operated door—The moving door can strike you or crush or pinch your limbs if caught between the door and machine. Some doors move automatically.

- Keep yourself and others clear of movement areas and paths.
- Keep both hands on the controls while operating.
- Do not operate the machine with malfunctioning two-hand manual controls.

WARNING 5: Crush Hazards—Tilting machines only—The machine can crush your body or limbs if you are caught between the tilting housing and a stationary object. Some machines tilt automatically.

- Keep yourself and others clear of movement areas and paths.
- Keep both hands on the controls while operating.
- Do not operate the machine with malfunctioning two-hand manual controls.

WARNING 6: Crush Hazards—Suspended machines only—Spaces between the shell and housing can close and crush or pinch your limbs. The shell moves within the housing during operation.

- Do not reach into the machine housing or frame.
- Keep yourself and others clear of movement areas and paths.

4. Safety Alert Messages—Cylinder and Processing Hazards

[Document BIUUUS13]

The following are instructions about hazards related to the cylinder and laundering process.

DANGER 7: Entangle and Sever Hazards—Contact with goods being processed can cause the goods to wrap around your body or limbs and dismember you. The goods are normally isolated by the locked cylinder door.

- Do not attempt to open the door or reach into the cylinder until the cylinder is stopped.
- Do not touch goods inside or hanging partially outside the turning cylinder.
- Do not operate the machine with a malfunctioning door interlock.
- Open pocket machines only—Do not jog the cylinder and pull the goods at the same time.
- Open pocket machines only—Keep yourself and others clear of cylinder and goods during jogging operation.
- Do not operate the machine with malfunctioning two-hand manual controls.
- Know the location of all emergency stop switches, pull cords, and/or kick plates and use them in an emergency to stop machine motion.
- Know the location of the main machine disconnect and use it in an emergency to remove all electric power from the machine.

WARNING 8: Crush Hazards—Contact with the turning cylinder can crush your limbs. The cylinder will repel any object you try to stop it with, possibly causing the object to strike or stab you. The turning cylinder is normally isolated by the locked cylinder door.

- Do not attempt to open the door or reach into the cylinder until the cylinder is stopped.
- Do not place any object in the turning cylinder.
- Do not operate the machine with a malfunctioning door interlock.
- Open pocket machines only—Keep yourself and others clear of cylinder and goods during jogging operation.
- Do not operate the machine with malfunctioning two-hand manual controls.

WARNING 9: Confined Space Hazards—Confinement in the cylinder can kill or injure you. Hazards include but are not limited to panic, burns, poisoning, suffocation, heat prostration, biological contamination, electrocution, and crushing.

- Do not attempt unauthorized servicing, repairs, or modification.

WARNING 10: Explosion and Fire Hazards—Flammable substances can explode or ignite in the cylinder, drain trough, or sewer. The machine is designed for washing with water, not any other solvent. Processing can cause solvent-containing goods to give off flammable vapors.

- Do not use flammable solvents in processing.
- Do not process goods containing flammable substances. Consult with your local fire department/public safety office and all insurance providers.

5. Safety Alert Messages—Unsafe Conditions [Document BIUUUS14]

5.1. Damage and Malfunction Hazards

5.1.1. Hazards Resulting from Inoperative Safety Devices

DANGER 11: Entangle and Sever Hazards—Cylinder door interlock—Operating the machine with a malfunctioning door interlock can permit opening the door when the cylinder is turning and/or starting the cycle with the door open, exposing the turning cylinder.

- Do not operate the machine with any evidence of damage or malfunction.

WARNING 12: Multiple Hazards—Operating the machine with an inoperative safety device can kill or injure personnel, damage or destroy the machine, damage property, and/or void the warranty.

- Do not tamper with or disable any safety device or operate the machine with a malfunctioning safety device. Request authorized service.

WARNING 13: Electrocution and Electrical Burn Hazards—Electric box doors—Operating the machine with any electric box door unlocked can expose high voltage conductors inside the box.

- Do not unlock or open electric box doors.

WARNING 14: Entangle and Crush Hazards—Guards, covers, and panels—Operating the machine with any guard, cover, or panel removed exposes moving components.

- Do not remove guards, covers, or panels.

WARNING 15: Crush Hazards—Down limit switches (machines with front and rear tilt cylinders)—Failure of both front or both rear limit switches allows the seated tilt wheels on a tilted machine to lift from their cradles. The housing will fall and lunge forward or rearward.

- Do not operate the machine with any evidence of damage or malfunction.

5.1.2. Hazards Resulting from Damaged Mechanical Devices

WARNING 16: Multiple Hazards—Operating a damaged machine can kill or injure personnel, further damage or destroy the machine, damage property, and/or void the warranty.

- Do not operate a damaged or malfunctioning machine. Request authorized service.

WARNING 17: Explosion Hazards—Cylinder—A damaged cylinder can rip apart during extraction, puncturing the shell and discharging metal fragments at high speed.

- Do not operate the machine with any evidence of damage or malfunction.

WARNING 18: Explosion Hazards—Clutch and speed switch (multiple motor machines)—A damaged clutch or speed switch can permit the low speed motor to engage during extract. This will over-speed the motor and pulleys and can cause them to rip apart, discharging metal fragments at high speed.

- Stop the machine immediately if any of these conditions occur: • abnormal whining sound during extract • skidding sound as extract ends • clutches remain engaged or re-engage during extract

5.2. Careless Use Hazards

5.2.1. Careless Operation Hazards—Vital Information for Operator Personnel (see also operator hazards throughout manual)

WARNING 19: Multiple Hazards—Careless operator actions can kill or injure personnel, damage or destroy the machine, damage property, and/or void the warranty.

- Do not tamper with or disable any safety device or operate the machine with a malfunctioning safety device. Request authorized service.
- Do not operate a damaged or malfunctioning machine. Request authorized service.
- Do not attempt unauthorized servicing, repairs, or modification.

- Do not use the machine in any manner contrary to the factory instructions.
- Use the machine only for its customary and intended purpose.
- Understand the consequences of operating manually.

5.2.2. Careless Servicing Hazards—Vital Information for Service Personnel (see also service hazards throughout manuals)

WARNING 20: Electrocution and Electrical Burn Hazards—Contact with electric power can kill or seriously injure you. Electric power is present inside the cabinetry unless the main machine power disconnect is off.

- Do not service the machine unless qualified and authorized. You must clearly understand the hazards and how to avoid them.
- Abide by the current OSHA lockout/tagout standard when lockout/tagout is called for in the service instructions. Outside the USA, abide by the OSHA standard in the absence of any other overriding standard.

WARNING 21: Entangle and Crush Hazards—Contact with moving components normally isolated by guards, covers, and panels, can entangle and crush your limbs. These components move automatically.

- Do not service the machine unless qualified and authorized. You must clearly understand the hazards and how to avoid them.
- Abide by the current OSHA lockout/tagout standard when lockout/tagout is called for in the service instructions. Outside the USA, abide by the OSHA standard in the absence of any other overriding standard.

WARNING 22: Crush Hazards—Tilting machines only—The machine housing will crush your body or limbs if it descends or falls while you are under it. Housing can descend with power off or on. Manual operation of tilting valves overrides safety interlocks. Improper operation of manual tilting valves may cause the housing to descend.

- Secure both red safety supports in accordance with the instructions furnished, then lock out and tag out power at the main machine disconnect before working under the tilted machine.
- Do not operate the manual tilt valves with anyone under the machine.
- Do not operate the tilt controls with anyone under the machine.

WARNING 23: Crush Hazards—Tilting machines with front and rear tilt cylinders—The housing will fall and lunge forward or rearward if the tilt wheels on the non-tilted end lift out of their cradles, even with safety supports in place.

- Understand the consequences of operating manually.

WARNING 24: Confined Space Hazards—Confinement in the cylinder can kill or injure you. Hazards include but are not limited to panic, burns, poisoning, suffocation, heat prostration, biological contamination, electrocution, and crushing.

- Do not enter the cylinder until it has been thoroughly purged, flushed, drained, cooled, and immobilized.

— End of BIUUUS27 —

How To Use the Safety Stands on J2N (Slim), Hydraulic-tilting Washer-extractors

These machines are provided with two safety stands (painted red) for maintenance. After the shell is tilted to the full up position, the stands are placed around the shafts of the extended hydraulic cylinders and secured in position. Use the safety stands to perform maintenance on the machine while the shell is raised.

WARNING 1: Crush Hazard—The safety stands provide protection against the un-powered drifting down of the shell during maintenance in the event of a leak in the hydraulic system.

- Never work **under** the raised shell unless both safety stands are installed and power is locked out/tagged out. Do not work **near** the raised shell with power on unless both safety stands are installed.
- Install these safety components using the procedure prescribed in this document.
- Maintain these safety components in good condition.
- Designate a convenient, secure area to stow these safety components when not in use.

Figure 1: Safety Stands for J2N (Slim), Hydraulic-tilting Washer-extractors

Install the safety stands as follows:

1. At the controls, tilt the machine as in normal operation. Tilt up only as far as needed to insert the stands securely.
2. Referring to the figure, place the safety stands around the tilt cylinder shafts. Lock each stand in position with the bolt, nut and washers provided. Always use both stands.

3. See caution statement 2 below. At the controls, carefully lower the shell just until it is resting on the stands.

CAUTION 2: Machine Damage Hazard—Damage can occur if hydraulic power is applied to the safety stands for an extended time.

- Release the controls as soon as the shell is resting on the stands.

4. Lock out/tag out power to the machine.

— End of BIUUUS06 —

About the Forces Transmitted by Milnor® Washer-extractors

During washing and extracting, all washer-extractors transmit both static and dynamic (cyclic) forces to the floor, foundation, or any other supporting structure. During washing, the impact of the goods as they drop imparts forces which are quite difficult to quantify. Size for size, both rigid and flexibly-mounted machines transmit approximately the same forces during washing. During extracting, rigid machines transmit forces up to 30 times greater than equivalent flexibly-mounted models. The actual magnitude of these forces vary according to several factors:

- machine size,
- final extraction speed,
- amount, condition, and type of goods being processed,
- the liquor level and chemical conditions in the bath preceding extraction, and
- other miscellaneous factors.

Estimates of the maximum force normally encountered are available for each Milnor® model and size upon request. Floor or foundation sizes shown on any Milnor® document are only for on-grade situations based only on previous experience without implying any warranty, obligation, or responsibility on our part.

1. Rigid Machines

Size for size, rigid washer-extractors naturally require a stronger, more rigid floor, foundation, or other supporting structure than flexibly-mounted models. If the supporting soil under the slab is itself strong and rigid enough and has not subsided to leave the floor slab suspended without support, on grade installations can often be made directly to an existing floor slab if it has enough strength and rigidity to safely withstand our published forces without transmitting undue vibration. If the subsoil has subsided, or if the floor slab itself has insufficient strength and rigidity, a deeper foundation, poured as to become monolithic with the floor slab, may be required. Support pilings may even be required if the subsoil itself is “springy” (i.e., if its resonant frequency is near the operating speed of the machine). Above-grade installations of rigid machines also require a sufficiently strong and rigid floor or other supporting structure as described below.

2. Flexibly-mounted Machines

Size for size, flexibly-mounted machines generally do not require as strong a floor, foundation, or other supporting structure as do rigid machines. However, a floor or other supporting structure having sufficient strength and rigidity, as described in Section 3, is nonetheless vitally important for these models as well.

3. How Strong and Rigid?

Many building codes in the U.S.A. specify that laundry floors must have a minimum live load capacity of 150 pounds per square foot (732 kilograms per square meter). However, even compliance with this or any other standard does not necessarily guarantee sufficient rigidity. In any event, it is the sole responsibility of the owner/user to assure that the floor and/or any other supporting structure exceeds not only all applicable building codes, but also that the floor and/or any other supporting structure for each washer-extractor or group of washer-extractors actually has sufficient strength and rigidity, plus a reasonable factor of safety for both, to support the weight of all the fully loaded machine(s) including the weight of the water and goods, and including the published 360º rotating sinusoidal RMS forces that are transmitted by the machine(s). Moreover, the floor, foundation, or other supporting structure must have sufficient

rigidity (i.e., a natural or resonant frequency many times greater than the machine speed with a reasonable factor of safety); otherwise, the mentioned 360º rotating sinusoidal RMS forces can be multiplied and magnified many times. It is especially important to consider all potential vibration problems that might occur due to all possible combinations of forcing frequencies (rotating speeds) of the machine(s) compared to the natural frequencies of the floor and/or any other supporting structure(s). A qualified soil and/or structural engineer must be engaged for this purpose.

Figure 1: How Rotating Forces Act on the Foundation

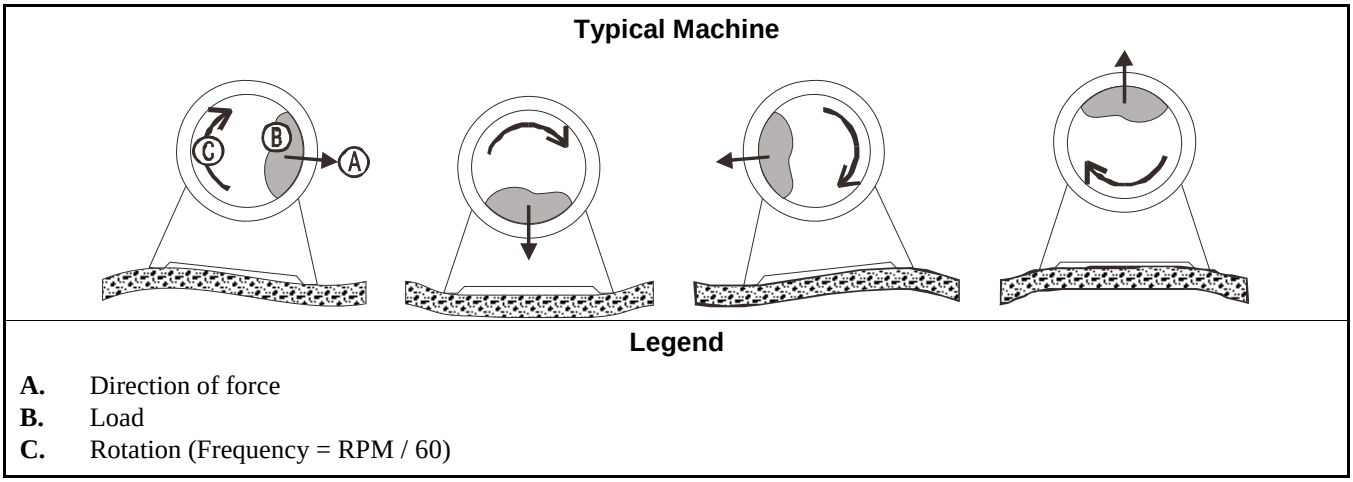


Figure 1 above is intended to depict both on-grade and above-grade installations and is equally applicable to flexibly-mounted washer-extractors, as well as to rigid models installed either directly on a floor slab or on a foundation poured integrally with the slab. Current machine data is available from Milnor® upon request. All data is subject to change without notice and may have changed since last printed. It is the sole responsibility of every potential owner to obtain written confirmation that any data furnished by Milnor® applies for the model(s) and serial number(s) of the specific machines.

— End of BIWUUI02 —

Avoiding Damage From Allied Remote Chemical Delivery Systems

Milnor® does not manufacture or supply remote chemical delivery systems and this document is meant only to illustrate some of the possible problems that can be minimized during installation of such systems by the chemical supply company. Milnor washer-extractors and CBW® batch washers (tunnels) are available with convenient inlets for such systems (see Figure 1). Most common of the types of systems currently used in commercial laundering operations are pumped chemical systems. Other types, such as constant pressure, re-circulating ring main systems have also been, and may continue to be used with Milnor equipment.

This document warns about some of the possible hazards posed by chemical systems and lists certain requirements needed to minimize those hazards. The procedures for interfacing with allied chemical systems and information pertinent to chemical use in general are provided elsewhere in the product manuals (see Note 1).

Figure 1: Pumped Chemical Inlets on CBW Batch Washer

Note 1: Misuse of laundering chemicals (such as injecting excessive concentrations of chlorine bleach or permitting acid sours to react with hypo chlorite) due to incorrect formulation can also be hazardous. Information pertinent to chemical use is provided elsewhere in the product manuals.

1. How a Chemical System Can Damage the Machine It Serves

Milnor has manufactured washer-extractors and tunnel washers with the same stainless steel specification since its founding. Every batch of steel used is certified and documented by the steel mill. Testing of samples damaged by corrosion have, in every case, proven the steel to be well within the AISI 304 specification.

Chemical products commonly found in the laundry industry, when used in **established** dosages and proper operating parameters, under the auspices of an experienced chemical specialist, should produce satisfactory results, with no consequential detrimental effects. The industry has published standards in Riggs and Sherrill, “Textile Laundering Technology”. However, the stainless steel can be damaged and even destroyed by **abnormal** contact with chlorine bleach, hydrofluosilicic acid and other commonly used chemicals, as will occur if chemicals are unintentionally leaked into the machine, particularly when it is no longer in use and especially when machine surfaces are dry.

Some chemical systems have been found to permit chemicals to dribble from the supply lines, or worse, to siphon from the supply tank into the machine, during operation and long after the system is shut down—as after working hours and during weekends. If this occurs, **deterioration (rusting) of the stainless steel and damage to any textiles therein will inevitably result. If this condition goes undetected, machine damage is likely to be catastrophic.** No machine is immune to such damage.

CAUTION 1: Equipment and Textile Damage Hazards—Chemicals leaked into the machine, particularly when it is idle can destroy machine components and textiles left in the machine. **Pellerin Milnor Corporation accepts absolutely no responsibility for damage to its equipment or to textiles therein from abnormal contact with chemicals.**

- Ensure that the chemical system prevents unintentional release of chemicals.
- Inspect regularly for proper operation and evidence of damage.

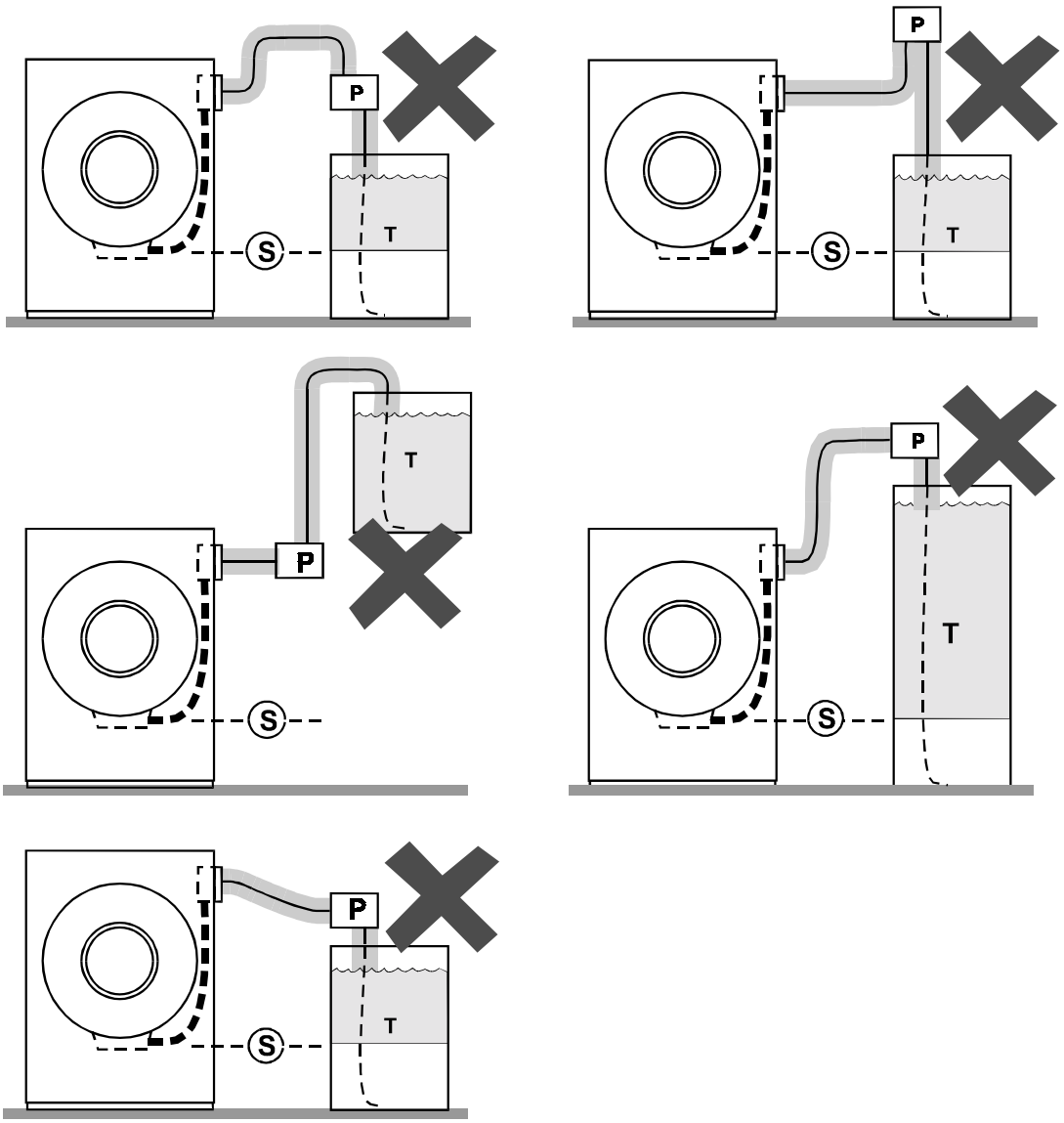
2. Requirements for Chemical Systems Used With Milnor Machines

It is the responsibility of the chemical system manufacturer and supplier to ensure that their system is safe for personnel and equipment. Some important points are described below.

2.1. Ensure the System Cannot Siphon.—The supply system must be designed to counteract any siphoning that could occur as a result of having a sealed supply line between the bottom of the chemical tank and the internal machine connection at the drain trough. As shown in the Figure 2 examples, if the pump (P) and/or the valving does not provide positive closure and there is no vacuum breaker protection, siphoning is likely to occur. In each of the Figure 2 illustrations, the volume of chemical in the tank above the siphon level (S), and indicated by shading, will flow into the machine.

Figure 2: Siphoning From the Chemical Tank into the Machine

Examples

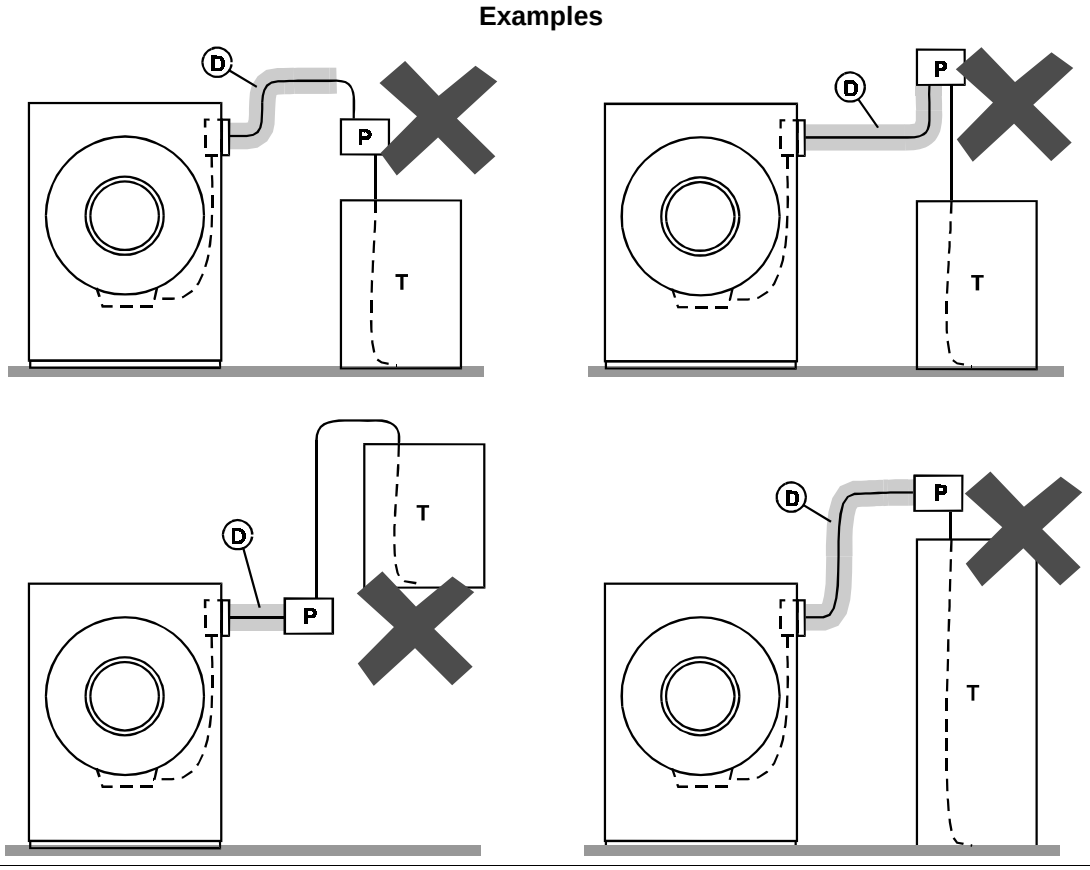


Legend

P. Pump
S. Siphon level. Shading indicates the chemical delivery line and tank content that can siphon into the machine.
T. Chemical tank

2.2. Ensure the Chemical Lines Cannot Dribble—The pumped chemical system may provide a means of positively closing the chemical line at the pump location, but not at the injection site. Hence, any concentrated chemical that remains in the injection line between the pump and the machine is free to flow into the machine. Some examples of this are shown in Figure 3.

Figure 3: Dribbling From Chemical Supply Line Into Machine (assumes positive closure at the pump)



Legend

D. Portion of supply line, the contents of which can dribble into the machine
P. Pump
T. Chemical tank

3. Design and Installation Recommendations

It is the responsibility of the chemical system manufacturer and supplier to use whatever measures are necessary to ensure that their system is safe for personnel and equipment. The following are some of the possible methods the manufacturer or supplier may wish to use, as appropriate.

3.1. Siphoning: Positively close the line.—If the pump does not provide positive closure when the system is off, employ a shutoff valve in the line to serve this purpose.

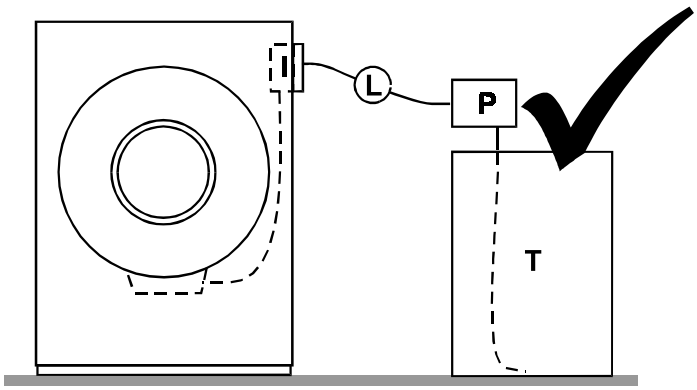
3.2. Siphoning: Break the siphon.—Provide an air gap or vacuum breaker in the chemical delivery line. This must be located above the "full" line of the tank.

3.3. Dribbling: Flush the entire chemical delivery line.—If any concentrated chemical that remains in the injection line between the pump and the machine is free to flow into the machine, employ a system that flushes the entire line between the pump and the injection point with fresh water after each injection.

3.4. Dribbling: Locate the entire chemical line below the machine inlet.—Assuming the chemical system does not retain any line pressure and that the pump provides positive closure when the system is off, locate the entire chemical delivery line below the level of the chemical inlet. An example of this is shown in Figure 4.

Figure 4: Locating a Pumped Chemical System With Positive Closure To Protect Against Machine Damage

Example of Correct Placement



Legend

I. Chemical inlet on machine
L. Chemical delivery line
P. Pump with positive closure when system is off
T. Chemical tank

4. Guarding Against Leaks

All personnel who may work with the chemical system (e.g., chemical system manufacturer, chemical system supplier, chemical supplier, operator, maintenance personnel) should be vigilant in observing for leaks in the system. When connecting, or reconnecting chemical lines, whether at installation, after taking samples, or when replacing components, at a minimum ensure that:

1. the proper components are used,
2. all connections are the proper fit, and
3. all components are securely connected.

CAUTION 2: Injury and Damage Hazards—Chemicals leaking from a chemical system may be corrosive or toxic. Such chemicals can injure personnel and damage equipment.

- Use care when connecting chemical lines.
- Inspect regularly for leaks.

— End of BIWUUI03 —

Lubrication and Preventive Maintenance For 64" and 72"ExN and JxN Models

Follow these schedules, instructions and precautions to achieve optimum performance and service life from your Milnor ™washer-extractors and comply with warranty requirements.

1. Required Equipment

Maintenance procedures require a hand operated grease gun and the specified lubricants.

2. Lubrication Precautions [Document BIUUUM01]

CAUTION 1: Machine Damage Hazard—Improper lubrication can damage machine components and cause the machine to malfunction.

- Do not mix petroleum and synthetic based lubricants.
- Do not use an unspecified lubricant without consulting the lubricant manufacturer.
- Do not apply grease with a pneumatic grease gun. Use only a hand-operated grease gun.
- Do not over-lubricate.
- Always clean grease fittings before adding grease. Clean off excess grease.
- Ensure that lubricants do not drip onto belts, brake shoes or drums.

WARNING 2: Entangle and Crush Hazards—Contact with moving components normally isolated by guards, covers, and panels, can entangle and crush your limbs. These components move automatically.

- Lock out and tag out power at the main machine disconnect before servicing, or in accordance with factory service procedures.
- Do not service machine unless qualified and authorized.

2.1. Pumping Grease—Pump grease slowly, taking 10-12 seconds to complete each stroke. A grease gun can build up extremely high pressure which will force seals out of position and cause them to leak.

2.2. Grease Quantity—Apply the quantity of grease called for in the checklist. Over-lubrication can be as damaging as under-lubrication. Where quantities are stated in strokes, one stroke of the grease gun is assumed to provide .0624 fluid oz. (1.77 grams) (by volume) of grease. Therefore, one fluid ounce (28.3 grams) of grease would be provided by 16 stokes of the grease gun. Determine the flow rate of your grease gun by pumping one ounce into a calibrated container. If fewer than 16 stokes are required, all quantities in strokes in the chart should be reduced accordingly, and if more than 16 strokes are required, the number of strokes should be increased. Before starting lubrication, make sure your grease gun is working and that you get a full charge of grease with every stroke.

2.3. Lubricant Specifications—Lubricant specifications are provided in the preventive maintenance checklist. Lubricants should be purchased locally. If a specified lubricant is not available locally, it is permissible to substitute a product that has been specified as equivalent by the lubricant manufacturer. If you cannot obtain either the specified lubricant or a valid equivalent locally, contact the Milnor Service Department for assistance.

3. Specified Lubricants

Table 1: Lubricants Table

Assembly	Components	Specifications
Bearing housing	Seals and bearings	Shell Alvania EP or equivalent
Hydraulics	Shell pivot grease fittings, hydraulic cylinder grease fittings, pump	Shell Alvania EP or equivalent
	Hydraulic fluid reservoir	Shell Tellus 68 or equivalent
Motors	Motor bearings	Use Shell Alvania EP or equivalent.
Gear reducer	Gear reducer	Shell Morlina 220
Braking	Brake reservoir	DOT 3 brake fluid or equivalent
Isolators (Figure 4)	Isolator bodies	10W30 (ISO 30-100) motor oil or equivalent
Load door	Locking latches	Door-ease stick lubricant or equivalent
	Gears and hinges	Shell Alvania EP or equivalent

4. Greasing Bearings and Seals

DANGER 3: Entangle and Crush Hazards—Guards, covers, and panels—Operating the machine with any guard, cover, or panel removed exposes moving components.

- Power is ON and cylinder is turning during the following procedure. Permit only qualified maintenance personnel to perform this procedure.

Grease seals and main bearing as follows:

1. Locate the seal and bearing grease fittings (Figure 1, item 9).
2. Place the machine in a wash step.
3. With the cylinder turning, grease the seals and bearings as called for on the “Preventive Maintenance Checklist” and “Lubrication Precautions.”

5. Maintenance Checklist

Table 2: Preventive Maintenance Checklist

Components		Action	Frequency (hours of operation)	Figure Number
Pulleys and Belts	Pulley condition and alignment (See Note 1)	Check sheaves for wear and alignment	Monthly (167 hours)	Figure 1
	Belts	Check for wear, replace if required		
Gear Reducer, Motors and Drive Components	Drive gear reducer (if so equipped)	Check level at plug, add oil as required	Semiannually (1000 hours)	
		Change oil (drain valve below)	Annually (2000 hours)	
	Centrifugal switch (if so equipped)	Check brushes for wear, replace as required	Monthly (167 hours)	
	Jack shaft (if so equipped) See Note 2	0.19 ounces (5.31 grams) (three strokes) at two locations	Monthly (167 hours)	
	Motor(s)	See "BALDOR MOTOR MAINTENANCE...MSSM0274AE" in this manual.		
	Air clutch quick release valve (if so equipped)	Change internal diaphragm	Annually (2000 hours)	
Bearing Housing	Front bearing grease fitting (Note 2)	Slowly grease: 0.62 ounces (17.7 grams), ten strokes at one location	Monthly (167 hours)	
	Rear bearing grease fitting (Note 2)	Slowly grease: 0.31 ounces (8.8 grams), five strokes at one location		
	Seal grease fitting (except J2N)	Slowly grease: 0.19 ounces (5.31 grams), three strokes at one location		
	J2N seal grease fitting	Slowly grease: 0.19 ounces (5.31 grams), three strokes at one location	Weekly (40 hours)	
	Main bearing air pad gauge	Verify pressure: 10 psi (0.70 kg/sq.cm)	Monthly (167 hours)	
	Water seals and leak-offs	See "Flushing water seals and leak-offs...MSSM0271AE" in this manual	Semiannually (1000 hours)	
Brake Components	Reservoir (if so equipped)	Check levels, add fluids if required	Monthly (167 hours)	Figure 2
	Pad/Shoes	Check for wear, replace if required		
Hydraulic Components	Hydraulic cylinders	Slowly grease: 0.12 ounces (3.54 grams) (two strokes) at two locations	Monthly (167 hours)	Figure 1

Components		Action	Frequency (hours of operation)	Figure Number
	Shell pivot	Slowly grease: 0.12 ounces (3.54 grams) (two strokes) at two locations	Monthly (167 hours)	
	Shell stop(s)	Check for wear, replace if required	Semiannually (1000 hours)	
	Line pressure (E6N and J5N machines)	Check pressure while machine is tilting to the load position 900-1000 PSI (62-69 bar) E6N and J5N machines	Daily (8 hours)	Figure 3
	Filter	Replace	Semiannually (1000 hours)	
	Filter pressure	Check pressure while machine is tilting to the load position 30-60 PSI (2-4 bar)	Daily	
	Pump motor	Slowly grease: 0.12 ounces (3.54 grams) (two strokes) at two locations	Semiannually (1000 hours)	
	All hoses/couplings	Check for leaks, cracks and bulges	Monthly (167 hours)	
	Reservoir level	Check level with machine tilted to the load position. Add if below black mark on gauge	Daily (8 hours)	
		Have oil tested by a reputable testing facility. Tests should include viscosity, the presence of insolubles, acid number and spectrographic wear analysis. Retain or replace oil as advised by the testing facility.	Annually (2000 hours of operation)	
Shocks and Isolators	Isolators	Check oil level	Quarterly (500 hours)	Figure 4
		Replace oil	Annually (2000 hours)	
	Shocks	Check for leaks, replace as required (four locations)	Semiannually (1000 hours)	
	Isolator cushions	Check cushions for cracks and deterioration (eight locations)	Monthly (167 hours)	
Doors	Gears	Lubricate	Monthly (167 hours)	Figure 5
	Hinges	0.12 ounces (3.54 grams) (two strokes) at three locations		
	Locking latches	Lubricate (two locations)		
Water	Cooldown water adjustment	Adjust as required	Monthly (167 hours)	Figure 6
Water	Water pressure regulator	Check water pressure (28 PSI) when there is no flow of flushing or balancing water	Monthly (167 hours)	Figure 7

Components		Action	Frequency (hours of operation)	Figure Number
Inverter	Enclosure, screen and fan	Vacuum out enclosure, clean screen and verify fan operation	Weekly (40 hours)	Figure 8
	Inverter vents	Vacuum out vents		Figure 9
Recirculation (if so equipped)	All recirculation hoses and couplings	Check for leaks, cracks and bulges	Monthly (167 hours)	Figure 10
	Door hose	Replace door hose every 6 months or 840 hours, whichever occurs first.	Semiannually	

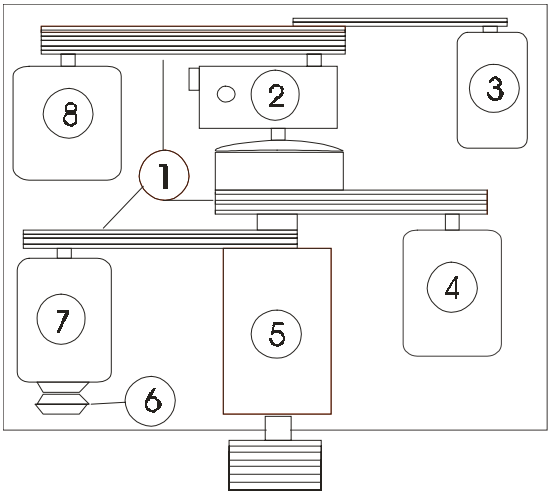
Note 1: See "Tensioning and Aligning Main Drive Belts...BIIEUM01" in this manual.

Note 2: Main bearings and jack shaft bearings (if equipped) are pre-packed with lubricant at the factory. Do not grease for 30 days. Some grease will ooze out of the grease relief fittings during the first month of operation and every time the bearings are re-lubricated. These fittings avoid overheating by permitting excessive grease to escape. The escaping lubricant does not have to been replaced. Bearings run hot enough to be uncomfortably warm to the touch. This is normal.

6. Maintenance Points

Figure 1: Motor Platform, Hydraulic Cylinder, Shell and Suspension Maintenance Points

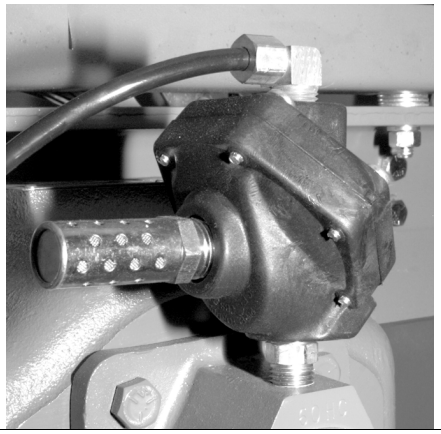
Motor Platform (four motor platform shown)



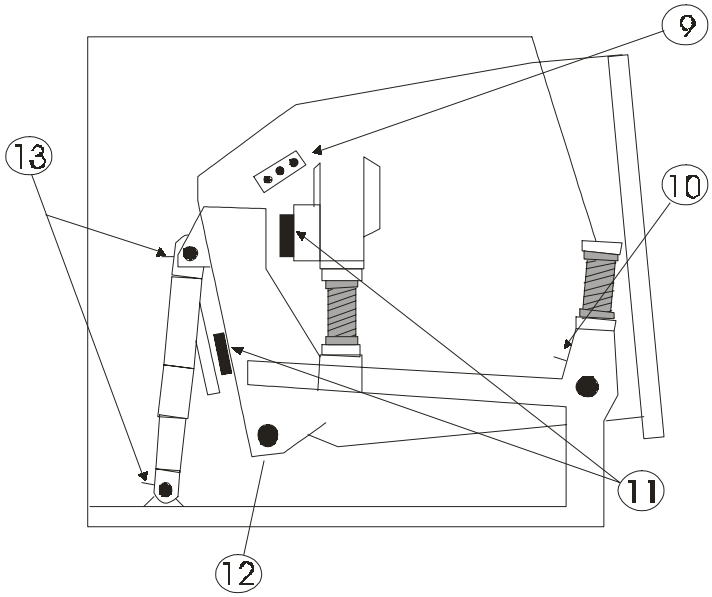
Legend

1. Check pulley sheaves and belts for wear and alignment
2. Gear reducer level plug (drain below)
3. Drain motor grease points
4. Low extract motor grease points
5. Jack shaft grease fittings (Note 2)
6. Centrifugal switch (if so equipped)
7. High extract motor grease fittings
8. Wash motor grease fittings
9. Seal and bearing grease fittings
10. Shell pivot grease fittings (two locations)
11. ExN and J5N shell stops (four locations)
12. J2N shell stop (if equipped)
13. Hydraulic cylinder grease fittings

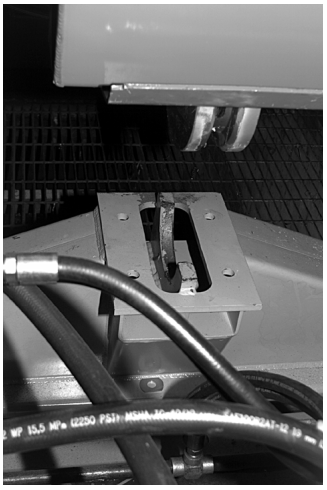
Air Clutch Quick Release Air Valve (if equipped)



Hydraulic Cylinder and Shell Maintenance Points



J2N Shell Stop



Main Bearing Air Pad

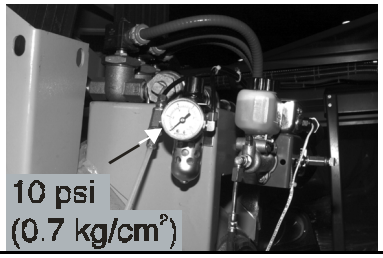


Figure 2: Brake Components

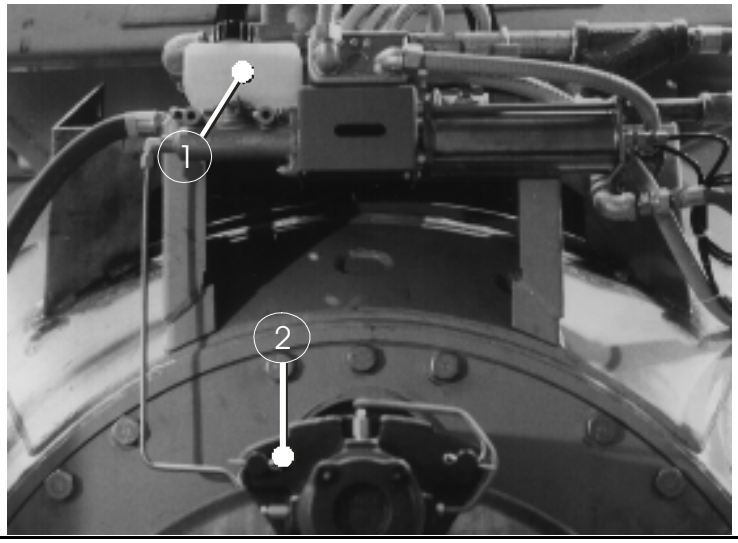
Brake Reservoir and Pads (E6N and J5N machines only)	Legend
	**1.** Brake reservoir **2.** Brake pads

Figure 3: Hydraulic System Maintenance Points

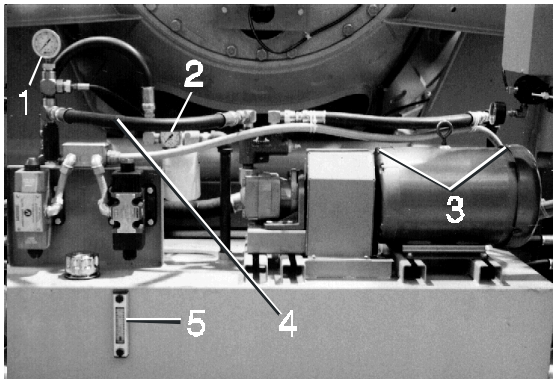
E6N and J5N Hydraulic System	J2N Hydraulic System	Legend
		**1.** Line pressure gauge (E6N and J5N) **2.** Filter and filter pressure gauge **3.** Pump grease fittings (two locations) **4.** Hoses and couplings (throughout machine) **5.** Reservoir level

Figure 4: Isolators and Shocks

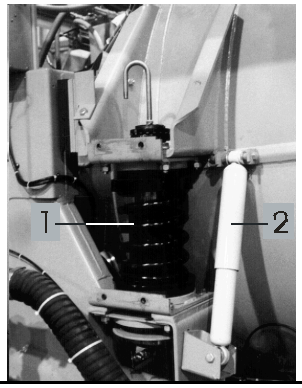
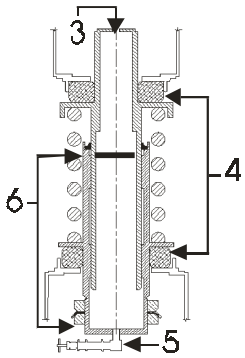
E6N and J5N Isolators and Shocks	Isolator Details	Legend
		**1.** Isolators (four locations) **2.** Shocks (four locations) **3.** Remove vent and check or add oil here **4.** Cushions (8 locations) **5.** Drain **6.** Oil Level 11-12" (279-305) above bottom of isolator

Figure 5: Door Maintenance Points

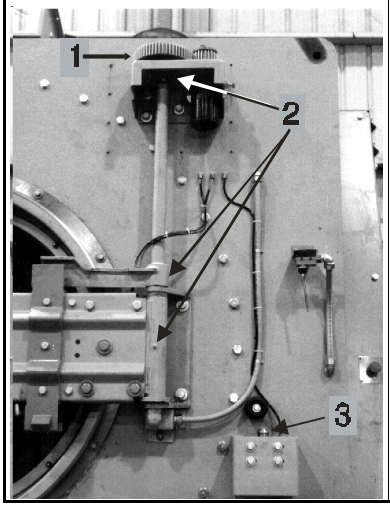
Gears, hinge and locking latches	Legend
	**1.** Gears **2.** Hinge grease fittings (three locations) **3.** Locking latches (two locations)

Figure 6: Cooldown Vernier Valve

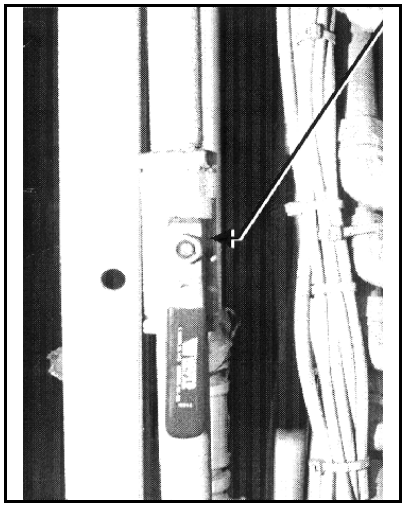


Figure 7: Water Pressure Adjustment

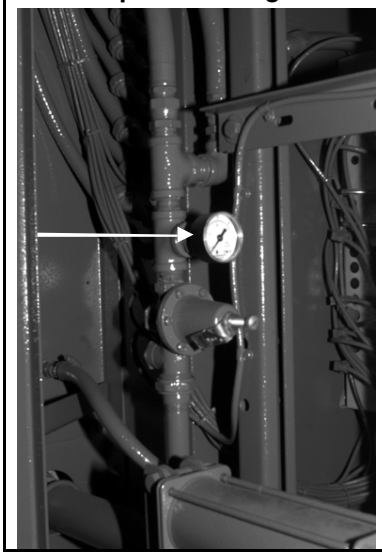
Water pressure regulator	Legend
	**Use hot water if it is available.** Set pressure regulator for 28 psi when there is no flow of flushing or balancing water.

Figure 8: Inverter Enclosure, Screen and Fan

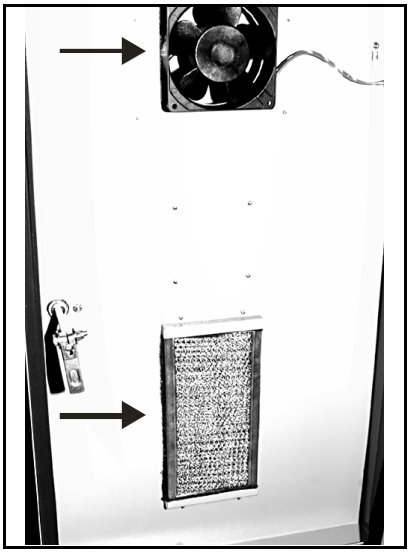


Figure 9: Inverter Vents

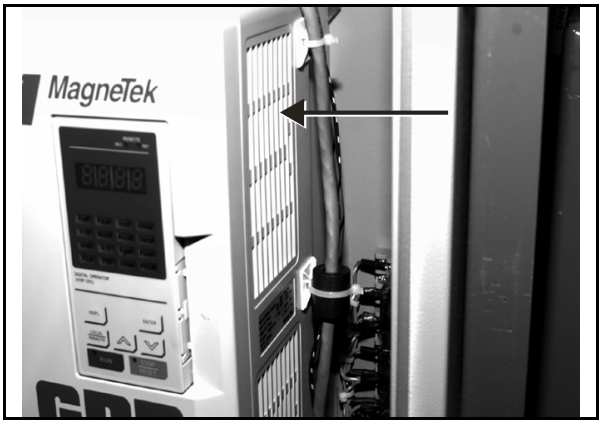
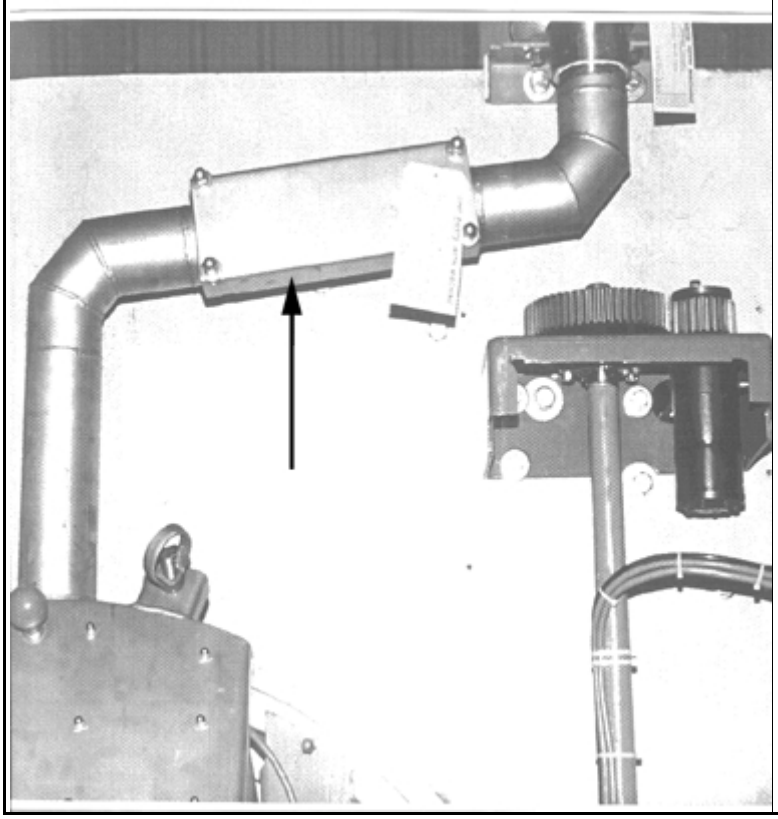


Figure 10: Recirculation Equipped Machines

Recirculation hoses	Legend
	The hose behind this plate must be replaced every 6 months or 840 hours of operation. A weak hose can burst, causing hot bath liquor to spray onto personnel, scalding them.

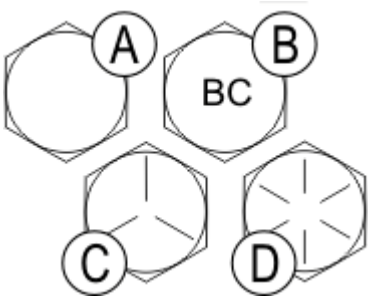
— End of BIIEAM01 —

BIUUUM04 (Published) Book specs- Dates: 20080506 / 20080506 / 20080506 Lang: ENG01 Applic: UUU

Fastener Torque Requirements

Torque requirements for other fasteners are specified in the specific document which describes the assembly. **If fastener torque specifications or threadlocking compound requirements in an assembly document vary from the specifications in this document, use the assembly document.**

Figure 1: Common Bolts Used in Milnor Equipment

Bolt Head Identifying Marks	Legend
	**A.** SAE Grades 1 and 2, ASTM A307, and stainless steel **B.** ASTM A354 Grade BC **C.** SAE Grade 5, ASTM A449 **D.** SAE Grade 8 and ASTM A354 BD

1. Torque Values

The tables below list the standard size, grade, threadlocking compound, and torque requirements for fasteners commonly used on Milnor® equipment.

Note 1: Data derived from Pellerin Milnor® Corporation "Bolt Torque Specification" (bolt_torque_milnor.xls/2002096).

1.1. Carbon Steel Fasteners

1.1.1. Without Threadlocking Compound

Table 1: Torque Values for Dry Fasteners 5/16-inch and Smaller

	Bolt Grade							
	Grade 2		Grade 5		Grade 8		Grade BC	
Bolt Size	Pound-Inches	N-m	Pound-Inches	N-m	Pound-Inches	N-m	Pound-Inches	N-m
1/4 x 20	66	7	101	11	143	16	126	14
1/4 x 28	76	9	116	13	163	18	--	--
5/16 x 18	136	15	209	24	295	33	258	29
5/16 x 24	150	17	232	26	325	37	--	--

Table 2: Torque Values for Dry Fasteners Larger Than 5/16-inch

	Bolt Grade							
	Grade 2		Grade 5		Grade 8		Grade BC	
Bolt Size	Pound-feet	N-m	Pound-feet	N-m	Pound-feet	N-m	Pound-feet	N-m
3/8 x 16	20	27	31	42	44	59	38	52
3/8 x 24	23	31	35	47	50	68	--	--
7/16 x 14	32	43	49	66	70	95	61	83
7/16 x 20	36	49	55	75	78	105	--	--
1/2 x 13	49	66	75	102	107	145	93	126
1/2 x 20	55	75	85	115	120	163	--	--
9/16 x 12	70	95	109	148	154	209	134	182
9/16 x 18	78	106	121	164	171	232	--	--
5/8 x 11	97	131	150	203	212	287	186	252
5/8 x 18	110	149	170	231	240	325	--	--
3/4 x 10	172	233	266	361	376	510	329	446
3/14 x 16	192	261	297	403	420	569	--	--
7/8 x 9	167	226	429	582	606	821	531	719
7/8 x 14	184	249	473	641	668	906	--	--
1 x 8	250	339	644	873	909	1232	796	1079
1 x 12	274	371	704	954	994	1348	--	--
1 x 14	281	381	723	980	1020	1383	--	--
1 1/8 x 7	354	480	794	1077	1287	1745	1126	1527
1 1/8 x 12	397	538	891	1208	1444	1958	--	--
1 1/4 x 7	500	678	1120	1519	1817	2464	1590	2155
1 1/4 x 12	553	750	1241	1682	2012	2728	--	--
1 3/8 x 6	655	888	1469	1992	2382	3230	2085	2827
1 3/8 x 12	746	1011	1672	2267	2712	3677	--	--
1 1/2 x 6	869	1178	1949	2642	3161	4286	2767	3751
1 1/2 x 12	979	1327	2194	2974	3557	4822	--	--

Table 3: Torque Values for Plated Fasteners 5/16-inch and Smaller

	Bolt Grade							
	Grade 2		Grade 5		Grade 8		Grade BC	
Bolt Size	Pound-Inches	N-m	Pound-Inches	N-m	Pound-Inches	N-m	Pound-Inches	N-m
1/4 x 20	49	6	76	9	107	12	95	11
1/4 x 28	56	6	88	10	122	14	--	--
5/16 x 18	102	12	156	18	222	25	193	22
5/16 x 24	113	13	174	20	245	28	--	--

Table 4: Torque Values for Plated Fasteners Larger Than 5/16-inch

	Bolt Grade							
	Grade 2		Grade 5		Grade 8		Grade BC	
Bolt Size	Pound-feet	N-m	Pound-feet	N-m	Pound-feet	N-m	Pound-feet	N-m
3/8 x 16	15	20	23	31	33	44	29	38
3/8 x 24	17	23	26	35	37	49	--	--
7/16 x 14	24	32	37	50	52	71	46	61
7/16 x 20	27	36	41	55	58	78	--	--
1/2 x 13	37	49	56	76	80	106	70	93
1/2 x 20	41	55	64	85	90	120	--	--
9/16 x 12	53	70	81	110	115	153	101	134
9/16 x 18	59	79	91	122	128	174	--	--
5/8 x 11	73	97	113	150	159	212	139	186
5/8 x 18	83	110	127	172	180	240	--	--
3/4 x 10	129	173	200	266	282	376	246	329
3/14 x 16	144	192	223	297	315	420	--	--
7/8 x 9	125	166	322	430	455	606	398	531
7/8 x 14	138	184	355	474	501	668	--	--
1 x 8	188	250	483	644	682	909	597	796
1 x 12	205	274	528	716	746	995	--	--
1 x 14	210	280	542	735	765	1037	--	--
1 1/8 x 7	266	354	595	807	966	1288	845	1126
1 1/8 x 12	298	404	668	890	1083	1444	--	--
1 1/4 x 7	375	500	840	1120	1363	1817	1192	1590
1 1/4 x 12	415	553	930	1261	1509	2013	--	--
1 3/8 x 6	491	655	1102	1470	1787	2382	1564	2085
1 3/8 x 12	559	758	1254	1672	2034	2712	--	--
1 1/2 x 6	652	870	1462	1982	2371	3161	2075	2767
1 1/2 x 12	733	994	1645	2194	2668	3557	--	--

1.1.2. With Threadlocking Compound

Table 5: Threadlocking Compound Selection by Bolt Size

	Bolt Size			
LocTite Product	1/4"	1/4" – 5/8"	5/8" – 7/8"	1" +
LocTite 222	OK			
LocTite 242		OK		
LocTite 262			OK	
LocTite 272			High temperature	
LocTite 277				OK

Table 6: Torque Values for Applications of LocTite 222

	Bolt Grade							
	Grade 2		Grade 5		Grade 8		Grade BC	
Bolt Size	Pound-inches	N-m	Pound-inches	N-m	Pound-inches	N-m	Pound-inches	N-m
1/4 x 20	60	7	96	11	132	15	108	12
1/4 x 28	72	8	108	12	144	16	--	--

Table 7: Torque Values for Applications of LocTite 242

	Bolt Grade							
	Grade 2		Grade 5		Grade 8		Grade BC	
Bolt Size	Pound-feet	N-m	Pound-feet	N-m	Pound-feet	N-m	Pound-feet	N-m
5/16 x 18	11	15	17	23	25	34	22	30
5/16 x 24	13	18	19	26	27	37	27	37
3/8 x 16	20	27	31	42	44	60	38	52
3/8 x 24	23	31	35	47	50	68	--	--
7/16 x 14	32	43	49	66	70	95	61	83
7/16 x 20	36	49	55	75	78	106	--	--
1/2 x 13	49	66	75	102	107	145	93	126
1/2 x 20	55	75	85	115	120	163	--	--
9/16 x 12	70	95	109	148	154	209	134	182
9/16 x 18	78	106	121	164	171	232	--	--
5/8 x 11	97	132	150	203	212	287	186	252
5/8 x 18	110	149	170	230	240	325	--	--

Table 8: Torque Values for Applications of LocTite 262

	Bolt Grade							
	Grade 2		Grade 5		Grade 8		Grade BC	
Bolt Size	Pound-feet	N-m	Pound-feet	N-m	Pound-feet	N-m	Pound-feet	N-m
3/4 x 10	155	210	240	325	338	458	296	401
3/4 x 16	173	235	267	362	378	512	--	--
7/8 x 9	150	203	386	523	546	740	477	647
7/8 x 14	165	224	426	578	601	815	--	--

Table 9: Torque Values for Applications of LocTite 272 (High Temperature)

	Bolt Grade							
	Grade 2		Grade 5		Grade 8		Grade BC	
Bolt Size	Pound-feet	N-m	Pound-feet	N-m	Pound-feet	N-m	Pound-feet	N-m
1 x 8	350	475	901	1222	1272	1725	1114	1510
1 x 12	383	519	986	1337	1392	1887	--	--
1 x 14	393	533	1012	1372	1428	1936	--	--
1-1/8 x 7	496	672	1111	1506	1802	2443	1577	2138
1-1/8 x 12	556	754	1247	1691	2022	2741	--	--
1-1/4 x 7	700	949	1568	2126	2544	3449	2226	3018
1-1/4 x 12	774	1049	1737	2355	2816	3818	--	--
1-3/8 x 6	917	1243	2056	2788	3335	4522	2919	3958
1-3/8 x 12	1044	1415	2341	3174	3797	5148	--	--
1-1/2 x 6	1217	1650	2729	3700	4426	6001	3873	5251
1-1/2 x 12	1369	1856	3071	4164	4980	6752	--	--

Table 10: Torque Values for Applications of LocTite 277

	Bolt Grade							
	Grade 2		Grade 5		Grade 8		Grade BC	
Bolt Size	Pound-feet	N-m	Pound-feet	N-m	Pound-feet	N-m	Pound-feet	N-m
1 x 8	325	441	837	1135	1181	1601	1034	1402
1 x 12	356	483	916	1242	1293	1753	--	--
1 x 14	365	495	939	1273	1326	1798	--	--
1-1/8 x 7	461	625	1032	1399	1674	2270	1464	1985
1-1/8 x 12	516	700	1158	1570	1877	2545	--	--
1-1/4 x 7	650	881	1456	1974	2362	3202	2067	2802
1-1/4 x 12	719	975	1613	2187	2615	3545	--	--
1-3/8 x 6	851	1154	1909	2588	3097	4199	2710	3674
1-3/8 x 12	970	1315	2174	2948	3526	4781	--	--
1-1/2 x 6	1130	1532	2534	3436	4110	5572	3597	4877
1-1/2 x 12	1271	1723	2852	3867	4624	6269	--	--

1.2. Stainless Steel Fasteners

Table 11: Torque Values for Stainless Steel Fasteners 5/16-inch and Smaller

	316 Stainless		18-8 Stainless		18-8 Stainless with Loctite 767	
Nominal Bolt Size	Pound-Inches	N-m	Pound-Inches	N-m	Pound-Inches	N-m
1/4 x 20	79	9	76	9	45	5
1/4 x 28	100	11	94	11	56	6
5/16 x 18	138	16	132	15	79	9
5/16 x 24	148	17	142	16	85	10

Table 12: Torque Values for Stainless Steel Fasteners Larger Than 5/16-inch

Bolt Size	316 Stainless		18-8 Stainless		18-8 Stainless with Loctite 767	
	Pound-feet	N-m	Pound-feet	N-m	Pound-feet	N-m
3/8 x 16	21	28	20	27	12	16
3/8 x 24	23	31	22	29	13	18
7/16 x 14	33	44	31	42	19	25
7/16 x 20	35	47	33	45	20	27
1/2 x 13	45	61	43	58	26	35
1/2 x 20	47	64	45	61	27	37
9/16 x 12	59	81	57	77	34	46
9/16 x 18	66	89	63	85	38	51
5/8 x 11	97	131	93	125	56	75
5/8 x 18	108	150	104	141	62	84
3/4 x 10	132	179	128	173	77	104
3/4 x 16	130	176	124	168	75	101
7/8 x 9	203	275	194	263	116	158
7/8 x 14	202	273	193	262	116	157
1 x 8	300	406	287	389	172	233
1 x 14	271	367	259	351	156	211
1-1/8 x 7	432	586	413	560	248	336
1-1/8 x 12	408	553	390	529	234	317
1-1/4 x 7	546	740	523	709	314	425
1-1/4 x 12	504	683	480	651	288	390
1-1/2 x 6	930	1261	888	1204	533	722
1-1/2 x 12	732	992	703	953	422	572

2. Preparation

WARNING 1: Fire Hazard—Some solvents and primer products are flammable.

- Use in a well ventilated area.
- Do not use flammable products near ignition sources.

1. Clean all threads with a wire brush, a tap, or a die.
2. Degrease the fasteners and the mating threads with a cleaning solvent. Wipe the parts dry.

   Note 2: LocTite 7649 Primer N™ will remove grease from parts, but it costs more than a standard organic or petroleum solvent.

3. Prime the fasteners and the mating threads with LocTite 7649 Primer N™ or equal. Allow the primer to dry for at least one minute.

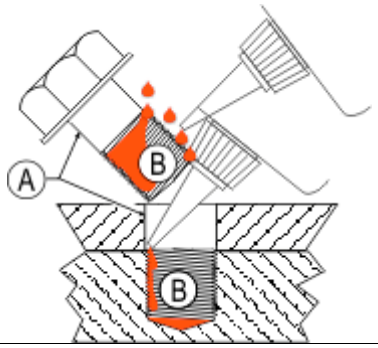
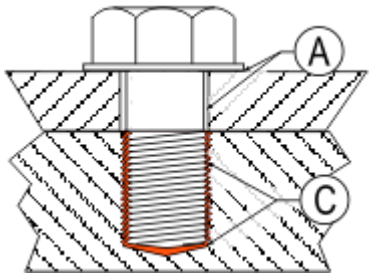
3. Application of Threadlocking Compound

CAUTION 2: Malfunction Hazard—Improper application of threadlocking compounds may result in fasteners becoming loose from impact, heat, or vibration. Loose fasteners can cause the equipment to malfunction.

- Read and follow the threadlocking compound manufacturer's instructions and warnings.

Apply threadlocking compound to the thread engagement areas of fasteners and mating threads only.

Figure 2: Blind Hole

Application	Coverage
	

Legend

A. No threadlocking compound here
B. Apply here
C. Fill all gaps with threadlocking compound

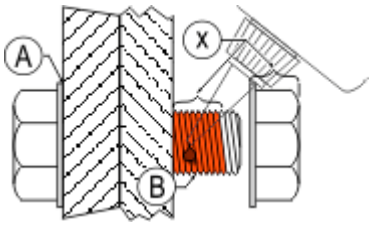
3.1. Blind Holes

1. Apply several drops of threadlocking compound down the female threads to the bottom of the hole.
2. Apply several drops of threadlocking compound to the bolt.
3. Tighten bolt to value shown in the appropriate table (Table 5 through Table 11).

3.2. Through Holes

1. Insert bolt through assembly.
2. Apply several drops of threadlocking compound to the bolt thread area that will engage the nut.
3. Tighten bolt to value shown in the appropriate table (Table 5 through Table 11).

Figure 3: Through Hole

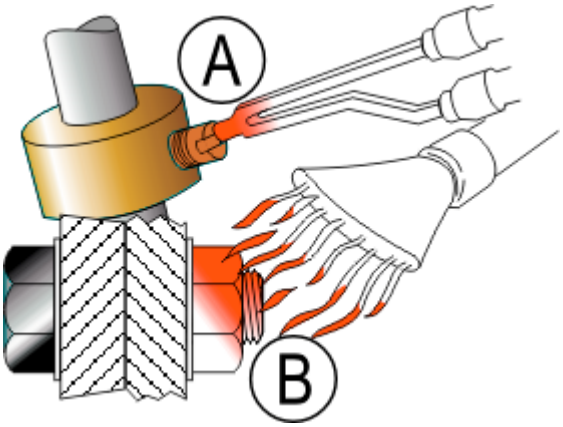
Application	Legend
	**A.** No threadlocking compound here **B.** Cover this area **x.** Nut depth

3.3. Disassembly—For low-strength and medium-strength products, disassemble with hand tools.

For high-strength products, apply localized heat for five minutes. Disassemble with hand tools while the parts are still hot.

Figure 4: Disassembly

Use Localized Heat



Legend

A. Soldering gun heating small fastener
B. Torch heating large fastener

— End of BIUUUM04 —

Section 1

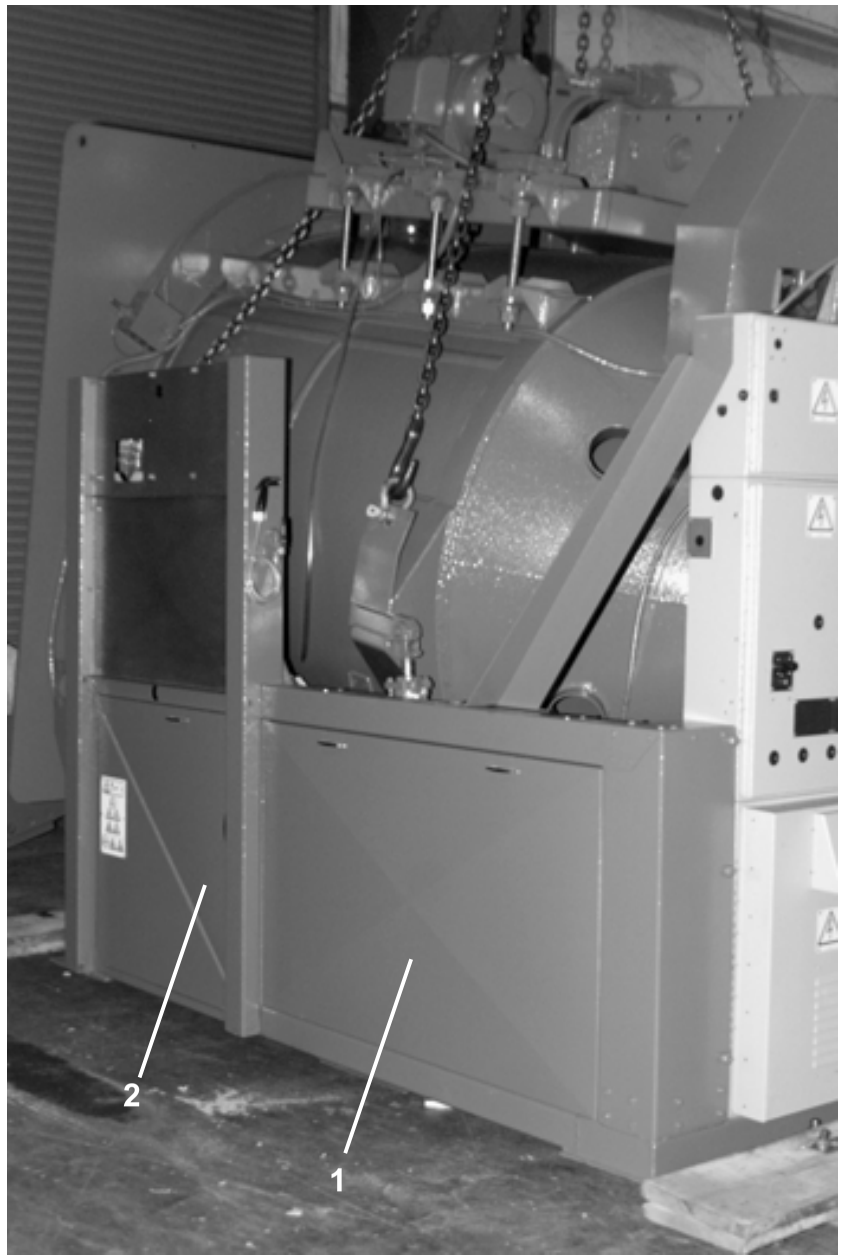
Guards & Covers

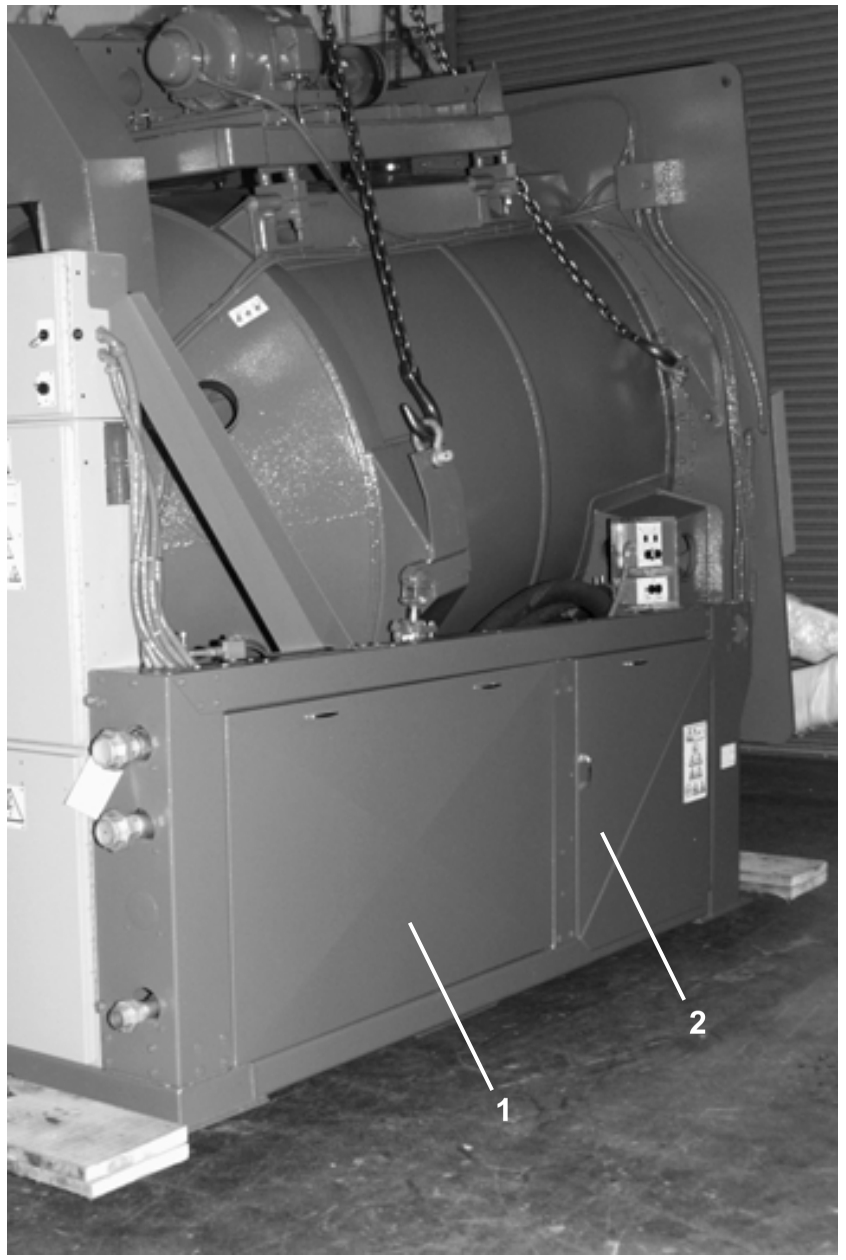
Cosmetic Covers

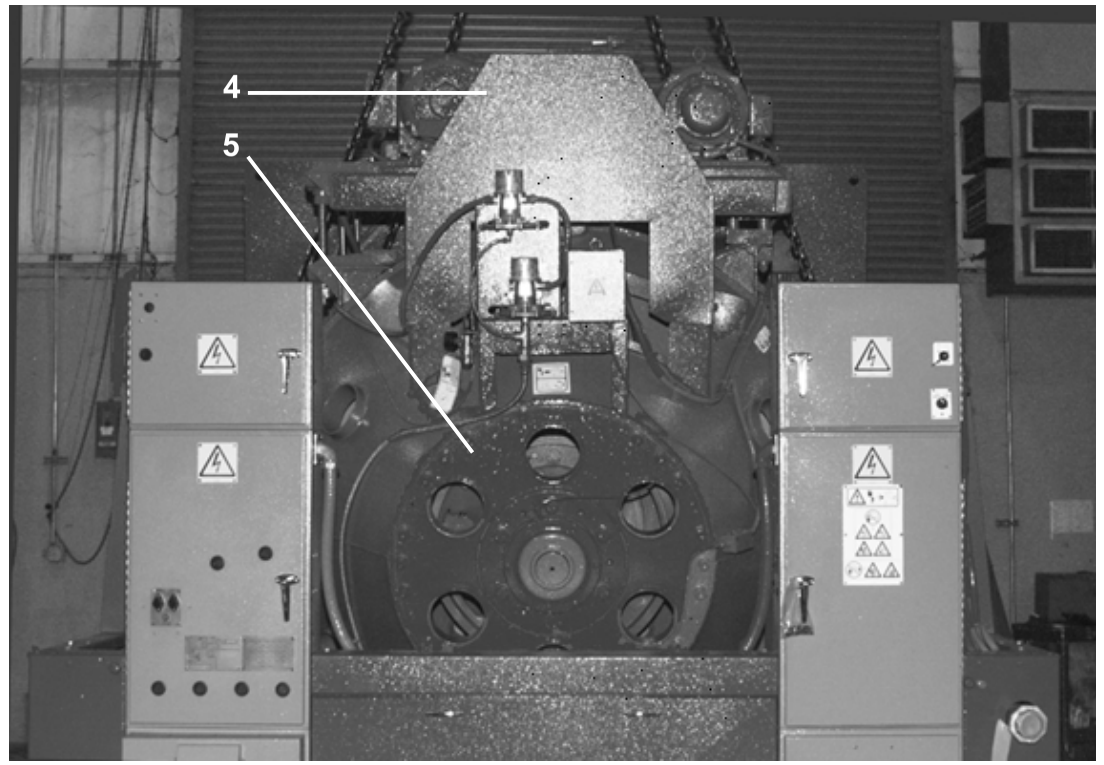
72058J2N, 72075J2N

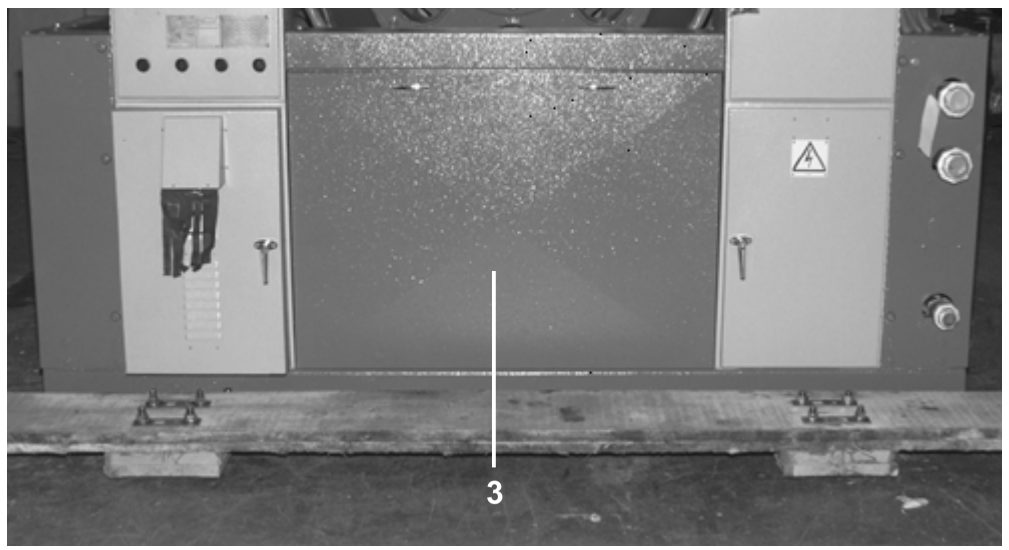
Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400

Litho in U.S.A.









Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400
Litho in U.S.A.

Parts List, cont.—Cosmetic Covers

Used In	Item	Part Number	Description	Comments
			----------ASSEMBLIES----------	
	A	GGS58001T	INST=LOW CSMTC CVRS 72J2N	
			----------COMPONENTS----------	
all	1	AGS58003T	ASSY=CVR R/L SIDE LOW COS	
all	2	AGS58009T	ASSY=CVR FRT R/L SIDE LOW CS	
all	3	AGS58003U	ASSY=CVR REAR LOW COS	
all	4	W5 58210E	WLMT=BELT GUARD CVR 72J2 NB	
all	5	W3 65209	*WLMT=DISC BRAKE COVER MOD2	

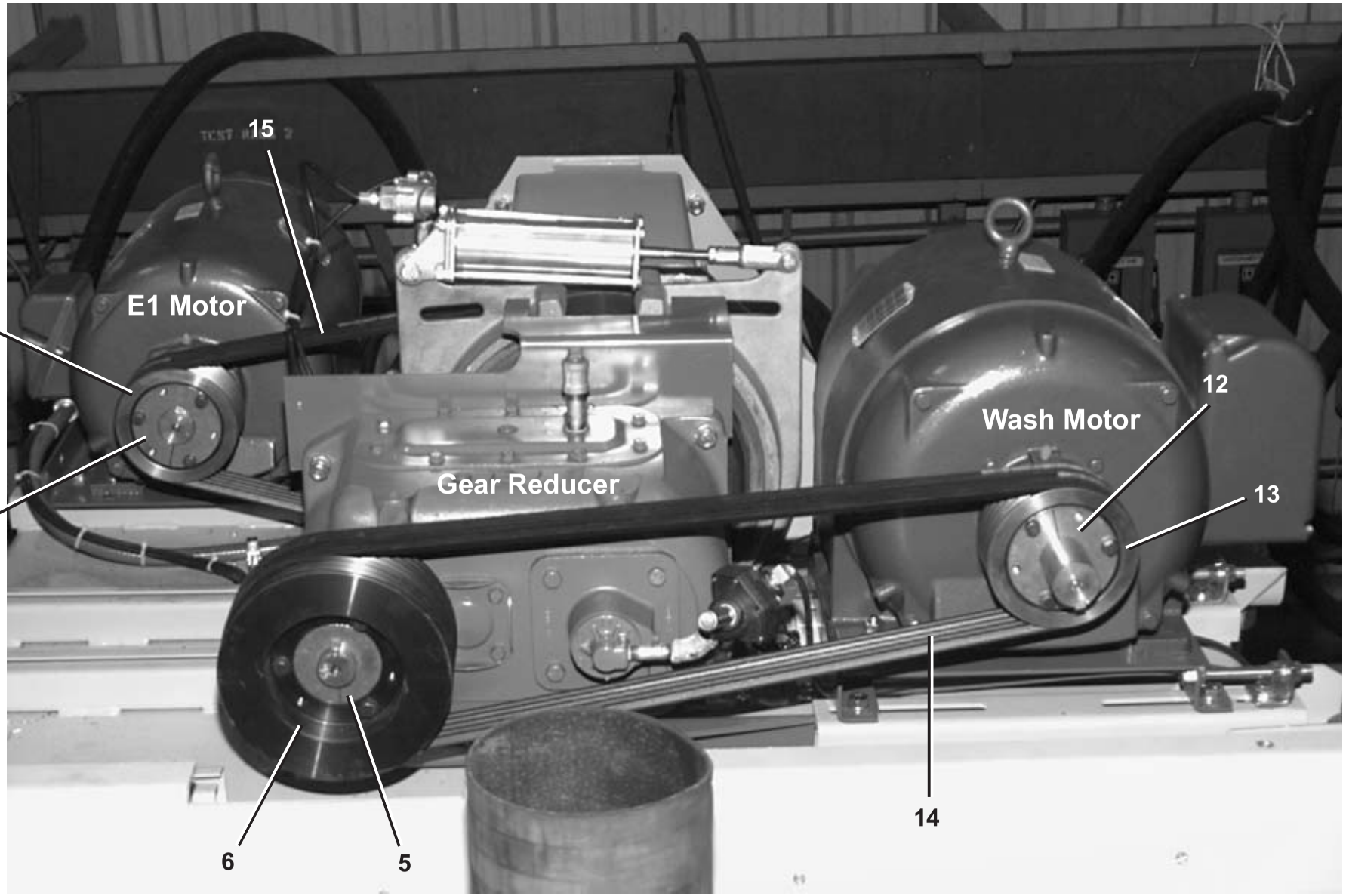
Section 2

Drive and Brake Assemblies

Drive Chart
72058/72075J2N

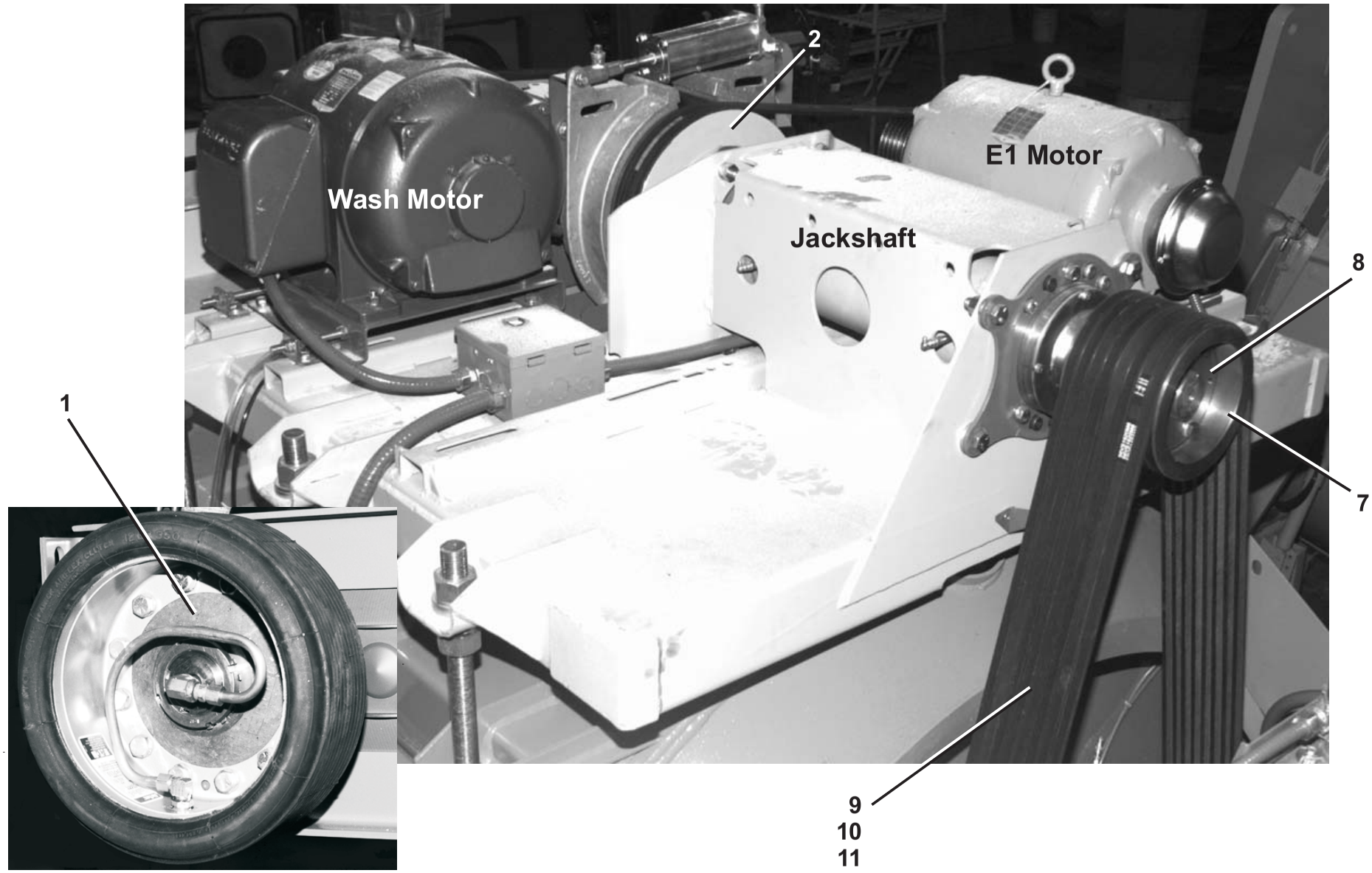
Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400

Litho in U.S.A.



Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400

Litho in U.S.A.



Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400

Litho in U.S.A.

Parts List—Drive Chart

Find the correct assembly first, then find the needed components. The item letters (A, B, C, etc.) assigned to assemblies are referred to in the "Used In" column to identify which components belong to an assembly. The item numbers (1, 2, 3, etc.) assigned to components relate the parts list to the illustration.

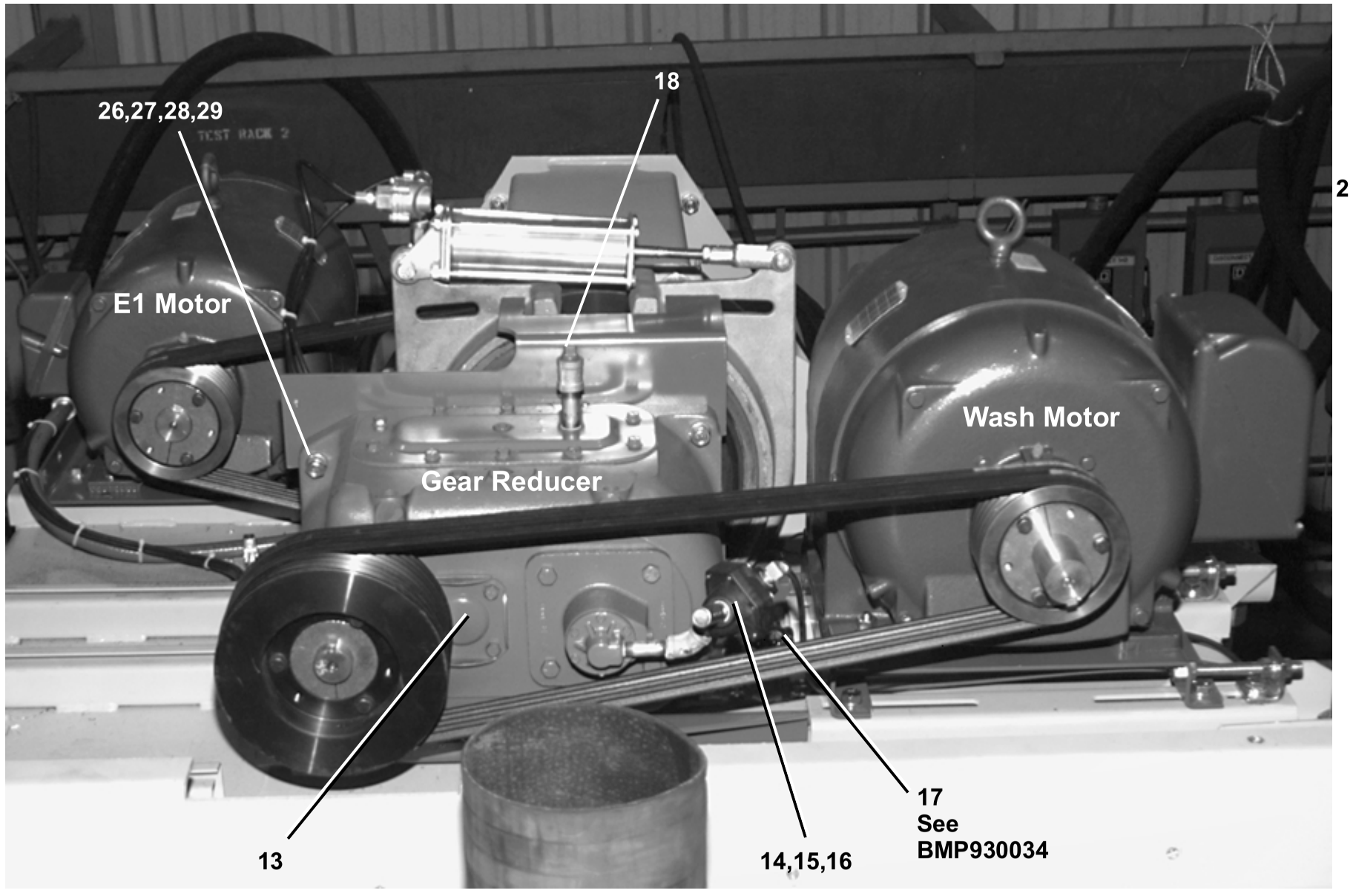
Used In	Item	Part Number	Description	Comments
			----------ASSEMBLIES----------	
	A	D58 00250	98253S DRIVE CHART 7258J2N 50 CYC	72058/72075J2N
	B	D58 00260	98253S DRIVE CHART 7258J2N 60CYC	72058/72075J2N
			----------COMPONENTS----------	
all	1	X2 15106	94251B FLANGE=CLUTCH DRIVE 32.5	
all	2	X5 20111	79512D CLUTCH DRUM+VPUL 5G13.45+9.0	
all	3	56Q1MSH	1+5/8" BUSH VPUL QD TYPE SH	
all	4	560407R4SH	VPUL 4G3V4.07 (SH) TYPE QD	
all	5	56Q1GSF	1-3/8" BUSH VPUL QD TYPE SF	
all	6	02 19201D	92102C V-PUL 8G3V7.95 QD TYPE "SF"	
all	7	56Q2HF	2+7/16" BUSH VPUL QD TYPE F	A
all	7	56Q2HE	2+7/16" BUSH VPUL QD TYPE E	B
all	8	561020S10F	VPUL 10G5V10.2PD/10.3D F QD	A
All	8	560840S10E	VPUL 10G5V8.4PD/8.50D E QD	B
all	9	56Q5EM	5+1/4" BUSH VPUL QD TYPE M	
all	10	X5 58160	VPUL 10G5V31.4PD/31.5OD MACH	
all	11	56VS1700X5	SET OF TWO 5R5VX1700 VBANDS	
all	11	56VS1650X5	SET OF TWO 5R5VX1650 VBANDS	
All	12	56Q1MSK	1+5/8" BUSH VPUL QD TYPE SK	
all	13	560470R6SK	VPUL 6G3V4.7 (SK) TYPE QD	
all	14	56VR071S	VBELT 3V710.	
all	15	56VR063X	VBELT 3VX630	

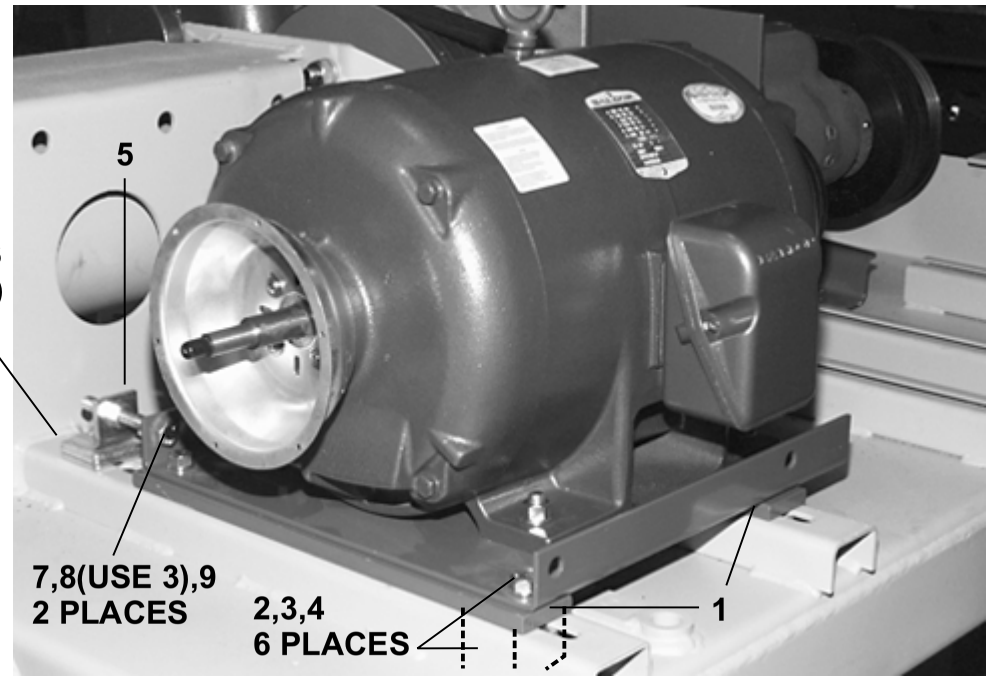
Drive Base Assembly

72058/72075J2N

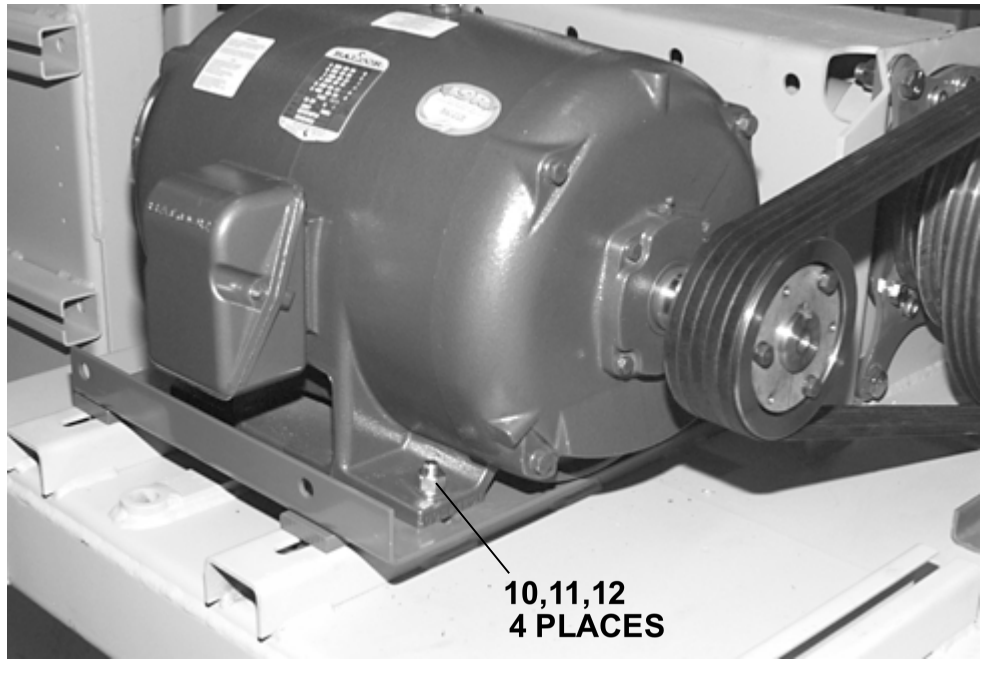
Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400

Litho in U.S.A.





E1 Motor



E1 Motor

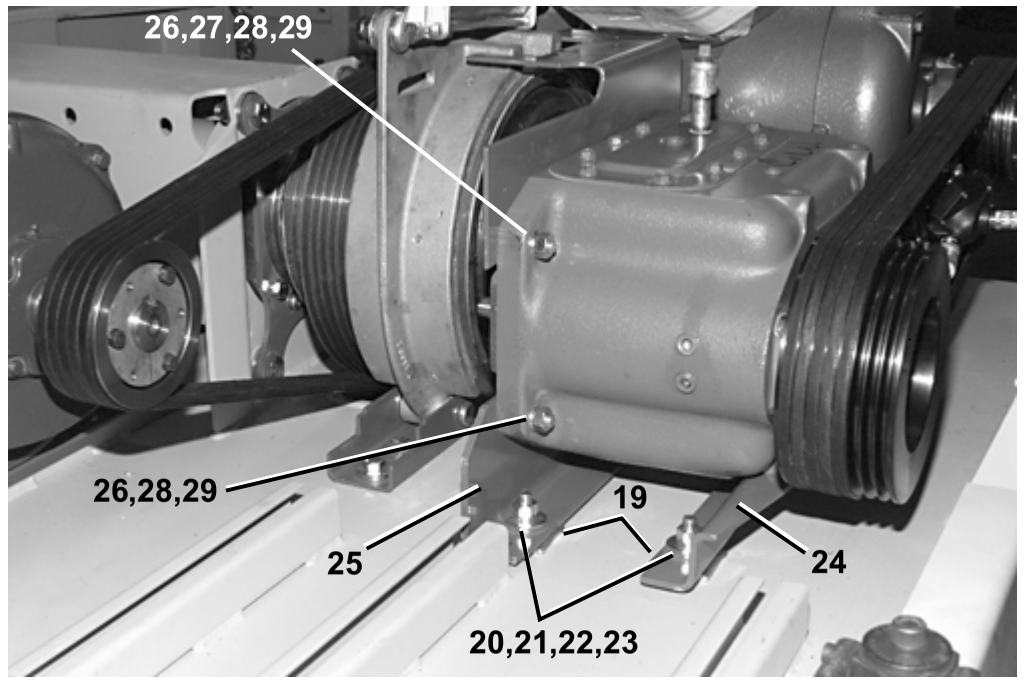
Drive Base Assembly

72058/72075J2N

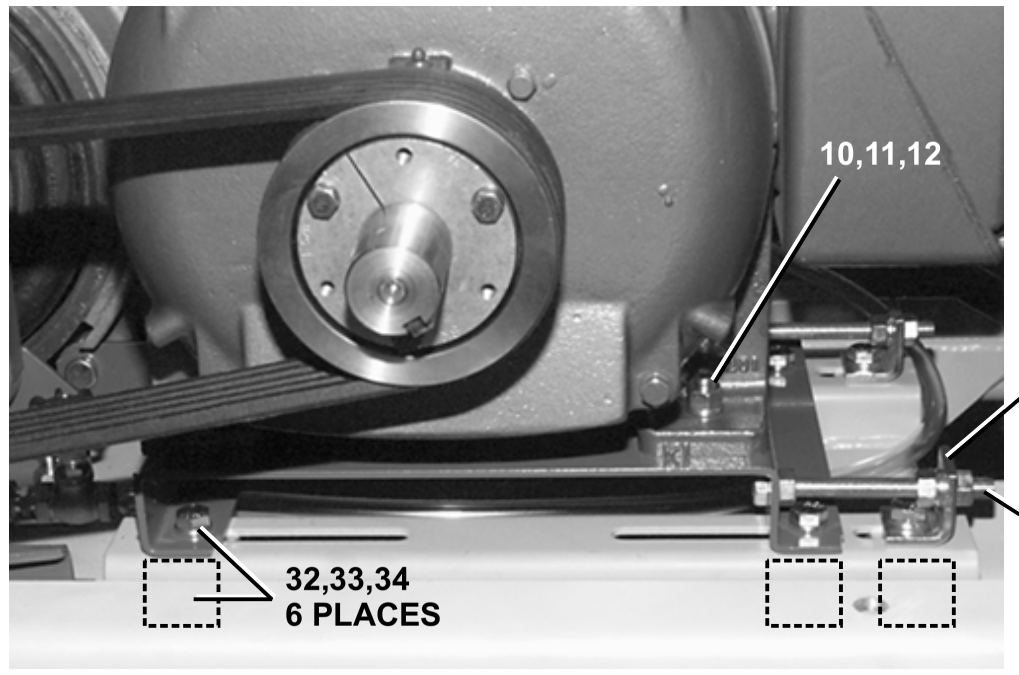
Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400

BMP980054/2000077V (2 of 3)

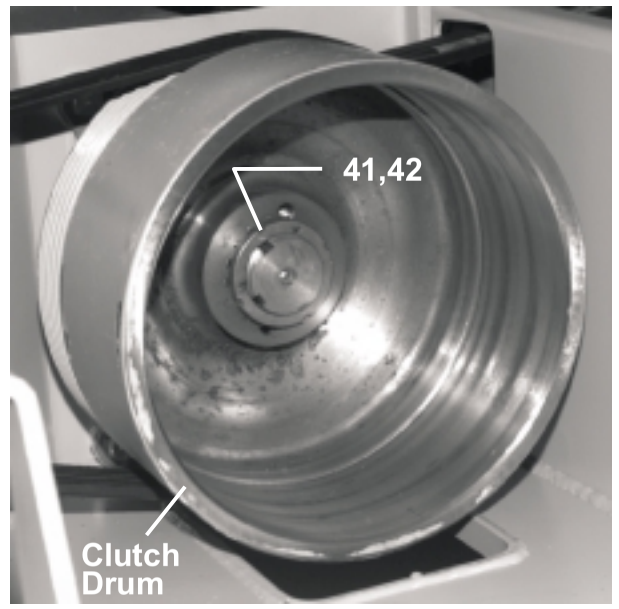
Litho in U.S.A.



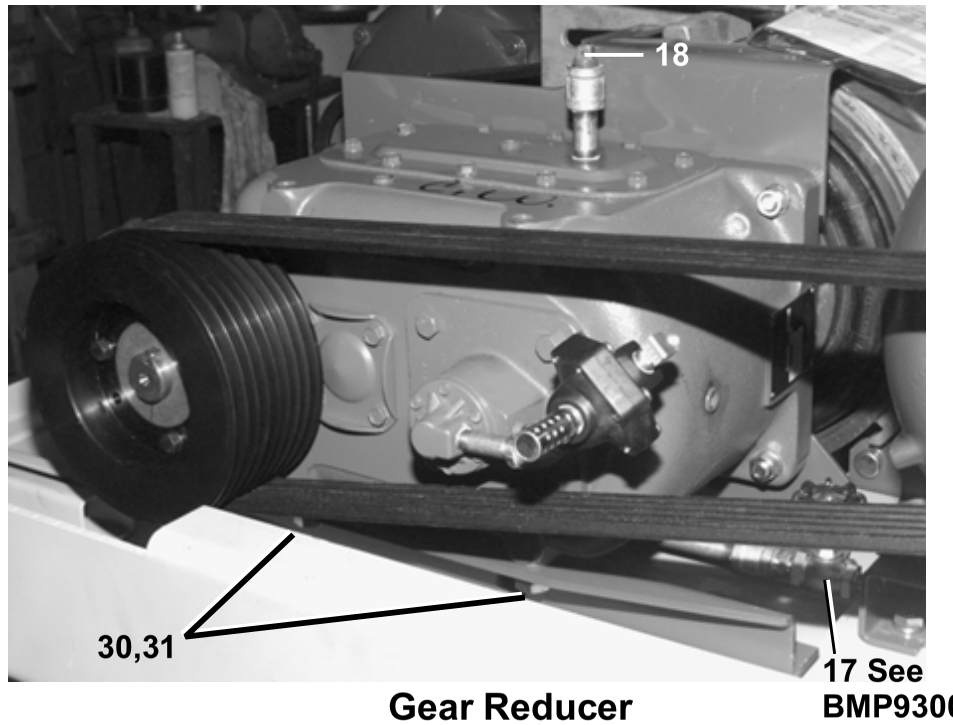
Gear Reducer



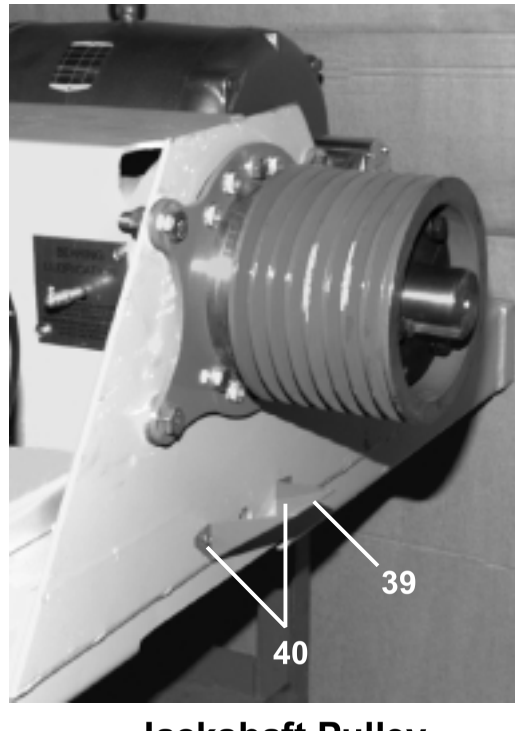
Wash Motor



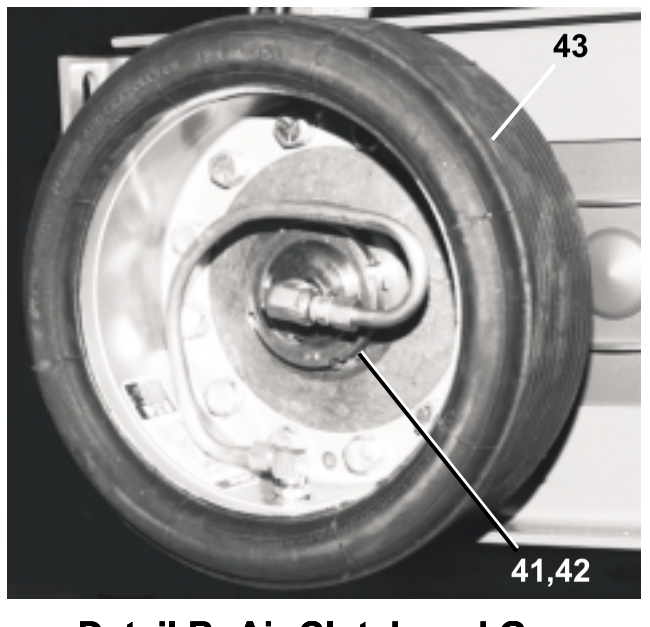
Detail A: Clutch Drum and Jackshaft Bearing Locknut



Gear Reducer



Jackshaft Pulley



Detail B: Air Clutch and Gear Reducer Bearing Locknut

Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400

Litho in U.S.A.

Parts List—Drive Base Assembly

Find the correct assembly first, then find the needed components. The item letters (A, B, C, etc.) assigned to assemblies are referred to in the "Used In" column to identify which components belong to an assembly. The item numbers (1, 2, 3, etc.) assigned to components relate the parts list to the illustration.

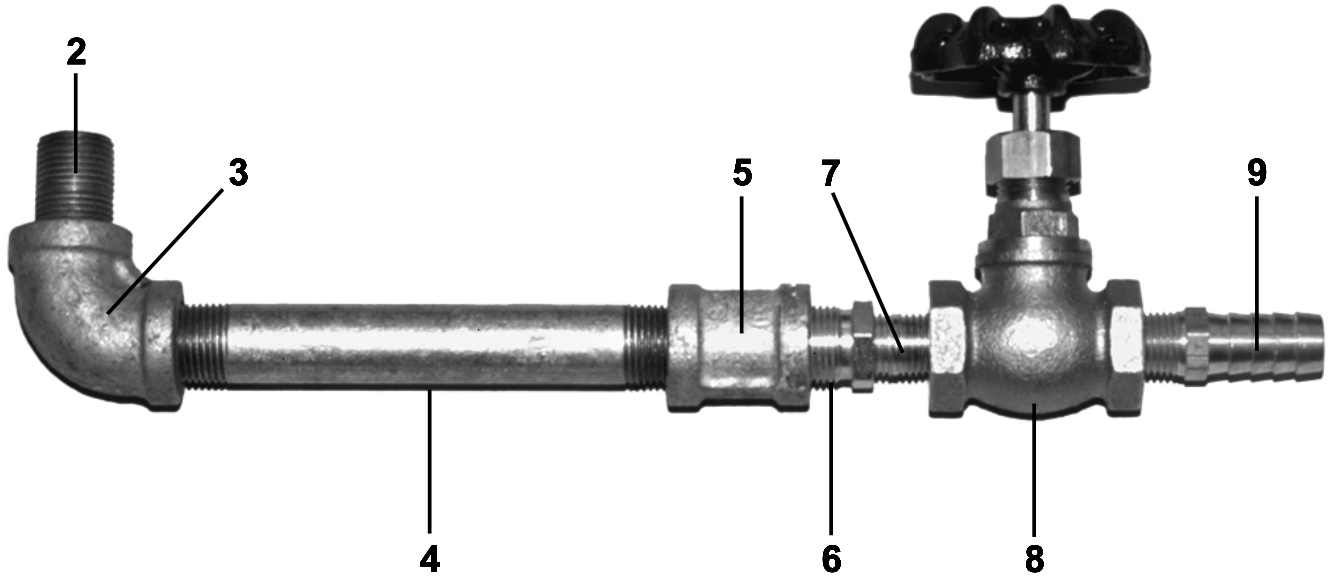
Used In	Item	Part Number	Description	Comments
----------ASSEMBLIES----------				
	A	ADB58501	94000Z ASSY =DRIVE BASE 7258J2N	
----------COMPONENTS----------				
all	1	03 65254	SPACER=E1 MOTOR	
all	2	15K173A	HXCAPSCR 1/2-13UNC2AX1.75 GR5	
all	3	15U300	LOKWASHER REGULAR 1/2 ZINC PLT	
all	4	02 19283	NUT=1/2-13UNCX1+1/25Q SPEC	
all	5	02 19288	BRACKET=ADJUSTING-1.5X1.75	
all	6	15U477	SQFLTWSHR 1/8X2X2 9/16ID HTDIP	
all	7	15D119	HXTAPSCR 1/2-13X4 GR5 ZNC FULL	
all	8	15G230	HXNUT 1/2-13UNC2B SAE ZINC GR2	
all	9	15U300	LOKWASHER REGULAR 1/2 ZINC PLT	
all	10	15K182	HEXTAPSCR 1/2-13X2ZINC GR5 FUL	
all	11	15U300	LOKWASHER REGULAR 1/2 ZINC PLT	
all	12	15G230	HXNUT 1/2-13UNC2B SAE ZINC GR2	
all	13	54S025A	REDUCR 10.16:1 3210-600EC2	
all	14	5N0E02AG42	NPT NIP 1/4X2 TBE GALSTL SK40	
all	15	96M051	QUICK EXHAUST VALVE 1/4"	
all	16	27A005	MUFFLER 3/8" BANTAM B38	
all	17	AD 28 008	DRAIN=DIVCYL GEAR REDUCER	
all	18	5SP0GFFSSV	NPT PLUG 3/8 SQSOLIDVENTBLKSTL	
all	19	15U475	SQFLATWASHER 1/64X2X2 9/16ID Z	
all	19	15U476	SQFLATWASHER 1/32X2X2 9/16ID Z	
all	19	15U477	SQFLTWSHR 1/8X2X2 9/16ID HTDIP	
all	19	15U478	SQFLATWASHER 3/16X2X2 9/16ID Z	
all	20	15K182	HEXTAPSCR 1/2-13X2ZINC GR5 FUL	
all	21	15U300	LOKWASHER REGULAR 1/2 ZINC PLT	
all	22	15G230	HXNUT 1/2-13UNC2B SAE ZINC GR2	
all	23	02 11603C	WASHER DBLR=1.5W/CUTOFF SIDE	
all	24	02 19131	BRACKET=FRONT REDUCER MOUNT	
all	25	03 06247	BRACKET-REDUCER MTG=SGD	
all	26	15K173A	HXCAPSCR 1/2-13UNC2AX1.75 GR5	
all	27	15U280	FL+WASHER(USS STD)1/2 ZNC PL+D	
all	28	15U300	LOKWASHER REGULAR 1/2 ZINC PLT	
all	29	15G230	HXNUT 1/2-13UNC2B SAE ZINC GR2	
all	30	15K211	HXCAPSCR 5/8-11UNC2AX1 GR5 ZIN	
all	31	15U314	FLATWASHER(USS STD) 5/8" ZNC P	
all	32	02 19283	NUT=1/2-13UNCX1+1/25Q SPEC	
all	33	15K162	HXCAPSCR 1/2-13UNC2AX1.5 GR5 P	
all	34	15U300	LOKWASHER REGULAR 1/2 ZINC PLT	
all	35	02 19288	BRACKET=ADJUSTING-1.5X1.75	
all	36	15K203	HXCAPSCR TFL 1/2-13X5 GR5 ZINC	
all	37	15G230	HXNUT 1/2-13UNC2B SAE ZINC GR2	
all	38	15U300	LOKWASHER REGULAR 1/2 ZINC PLT	
all	39	02 175257	GREASE RELIEF=DRIP SHIELD	
all	40	15P175	TRDCUT-F HXHD 1/4-20UNC2AX1/2	
all	41	56AHN12	N12 BEARING LOCKNUT	
all	42	56AHW12	W12 BEARING LOCKWASHER	
all	43	A28 18010	ASSY=CLUTCH DRUM TIRE+MNT HD	

Drain for Gear Reducer

64040/64050E6N 64046E6N/J6N/D6N 72046E5N/J5N 72058J2N/J5N

Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400

Litho in U.S.A.



Parts List—Drain for Gear Reducer

Find the correct assembly first, then find the needed components. The item letters (A, B, C, etc.) assigned to assemblies are referred to in the "Used In" column to identify which components belong to an assembly. The item numbers (1, 2, 3, etc.) assigned to components relate the parts list to the illustration.

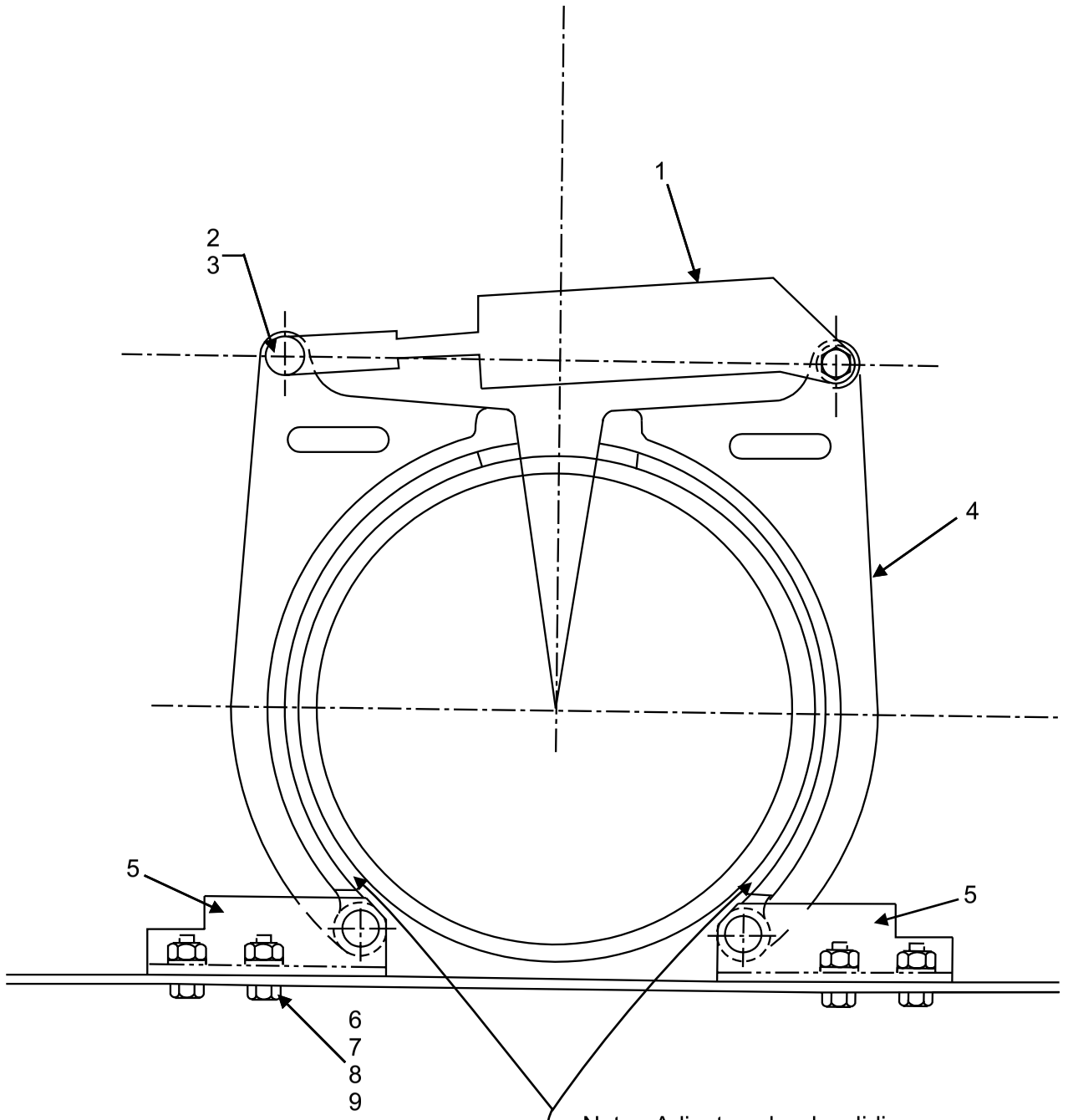
Used In	Item	Part Number	Description	Comments
			----------ASSEMBLIES----------	
	A	AD 28 008	93456B DRAIN=DIVCYL GEAR REDUCER	
			----------COMPONENTS----------	
all	2	5N0GCLSG42	NPT NIP 3/8XCLS TBE GALSTL S40	
all	3	5SL0GNFA	NPTELB 90DEG 3/8 GALMAL 150#	
all	4	5N0G04KG42	NPT NIP 3/8X4.5 TBEGALSTL SK40	
all	5	5SCC0GNF	NPT COUP 3/8 GALMAL 150#	
all	6	51A025	REPLACED BY 5SB0G0EDEO ON 93274	
all	7	51LL0EN00A	REPLACED BY 5N0ECLSBE2 ON 93214	
all	8	96D026	1/4"GLOBEVAL BRZ125 STEAM	
all	9	51E507	HOSESTEM BRASS 1/4MPX1/2HOSEID	

Brake Assembly

72058, 72075J2N

Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400

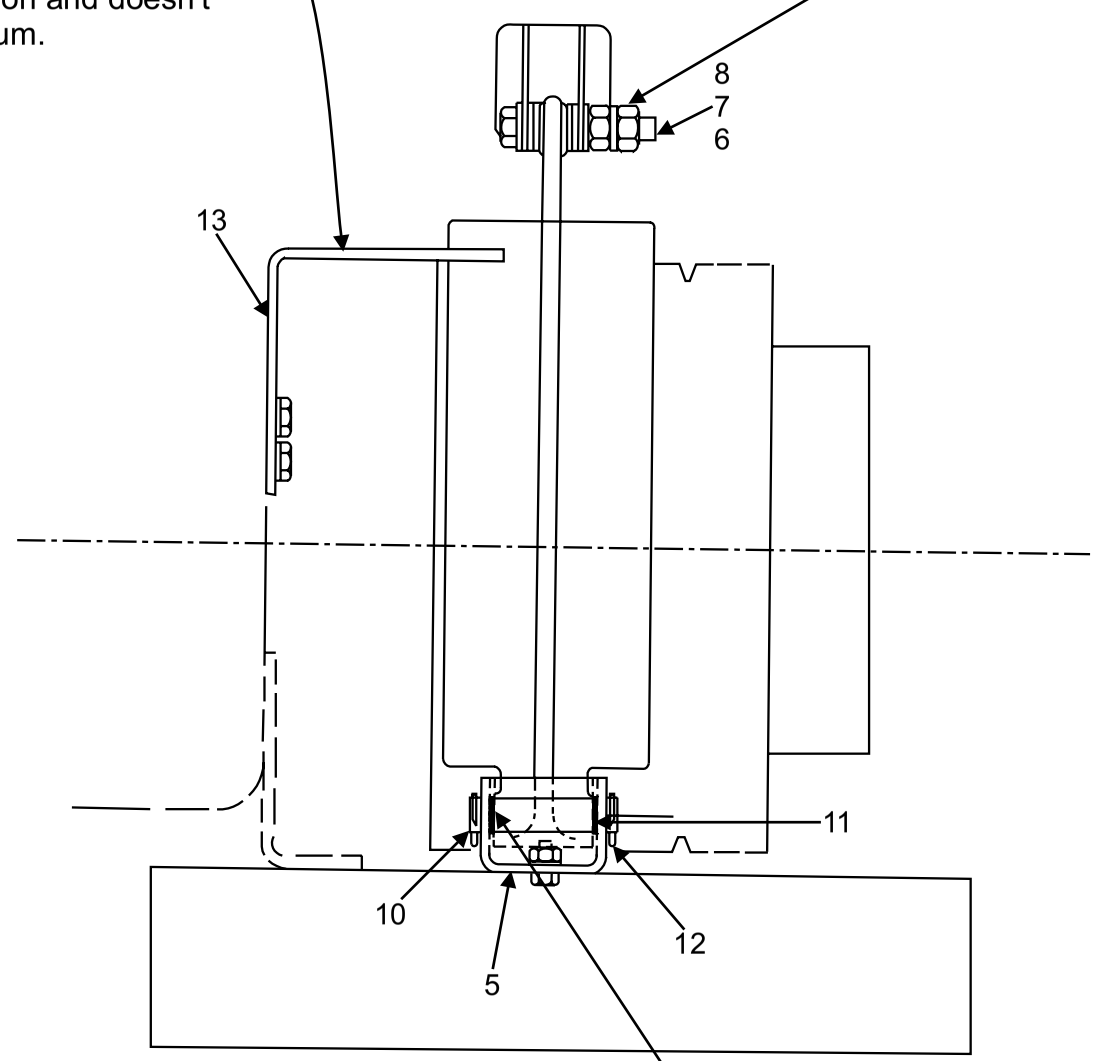
Litho in U.S.A.



Note: Adjust anchor by sliding back and forward so that brake lining clears drum in open position and contacts drum in closed position.

Note: When Brake is off the back of the shoe pushes against the stop to prevent the brake from rattling. Center open in stop with shoe so that shoe pushes on stop in open position and doesn't drag on drum.

Note: Tighten these jam nuts enough to take out excess clearence. Do Not Over Tighten, Air Cylinder must move freely.



Do not lubricate make sure nyliners are in place.

Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400
Litho in U.S.A.

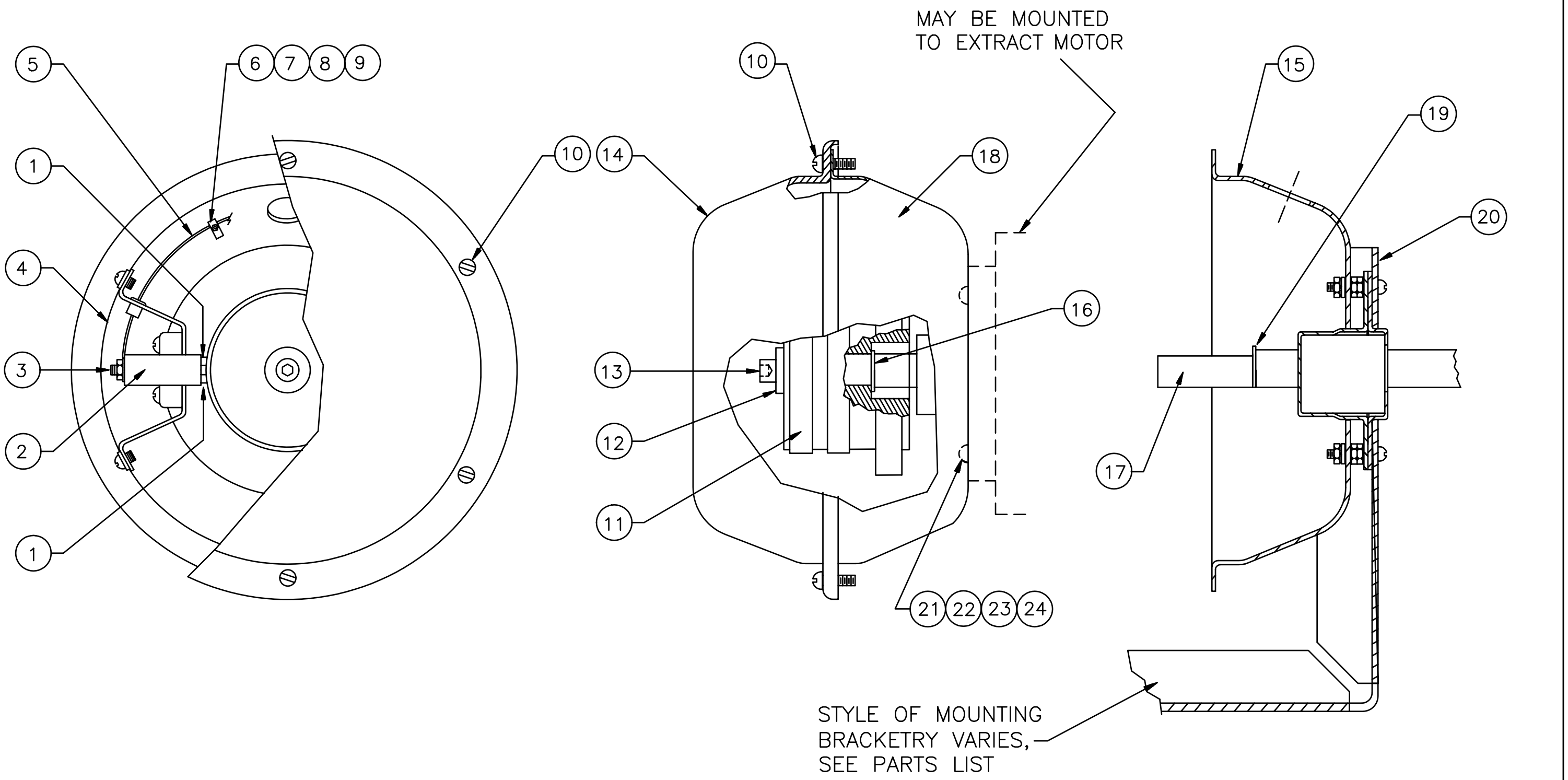
Parts List, cont.—Brake Assembly

Used In	Item	Part Number	Description	Comments
.				
			----------ASSEMBLIES----------	
	A	G40 00200B	95391J BRAKE ASSY=MOTOR MT 72J2N	72058,72075J2N
			----------COMPONENTS----------	
all	1	AAC58001	95000Z AIRCYL=BRAKE ASSY 7258J2N	
all	2	17A040	CLEVISPIN 1/2"X1+3/8" DRILLED	
all	3	15H045	STDCOTTERPIN 1/8X1 SS18-8	
all	4	SA 28 131N	85131C*BRAKESHOE(NON-ASB)72SG+WETCH	
all	5	02 18986	95521B ANCHOR=BRAKE END 1/60SGH	
all	6	15G230	HXNUT 1/2-13UNC2B SAE ZINC GR2	
all	7	15U300	LOKWASHER REGULAR 1/2 ZINC PLT	
all	8	15U490	FLAWASH 1+1/2X17/32X1/4ZINC	
all	9	15K173A	HXCAPSCR 1/2-13UNC2AX1.75 GR5 PLATD	
all	10	17A045	CLEVIS PIN 3/4"X 3" DRILLED + ZNC	
all	11	54E223	NYLNR12L12-FBUSH3/4X13/16X3/4	
all	12	15H051	STDCOTTERPIN 1/8X1+1/2ZINCPL	
all	13	04 00331A	95391# LIMIT BKT=BRAKEASSY 72J2N	
all	15	15K105	HXCAPSCR 3/8-16UNC2A1.25 GR5 PLATED	
all	16	15U255	LOCKWASHER MEDIUM 3/8 ZINCPL	
all	17	15U240	FLATWASHER(USS STD) 3/8" ZNC PLT	
all	18	02 18984	81047A SHIM=BRAKE END 16GA	
all	19	02 18984A	85403B SHIM BRAKE END 10GA	AS REQUIRED

Centrifugal Switch Assembly

Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400

Litho in U.S.A.



Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400

Litho in U.S.A.

Parts List—Centrifugal Switch Assembly

Find the correct assembly first, then find the needed components. The item letters (A, B, C, etc.) assigned to assemblies are referred to in the "Used In" column to identify which components belong to an assembly. The item numbers (1, 2, 3, etc.) assigned to components relate the parts list to the illustration.

Used In	Item	Part Number	Description	Comments
			----------ASSEMBLIES----------	
	N	EDC14003	92000Z*CENTSW + MTG BRKT 3621/26F	3621Q'S MANUFACTURED AFTER JAN. 6,1993
	P	EDC14002	90000Z CENTSW+MTG BRKT 36/42QG/J/P	3621/26+4226Q4'S, Q6'S
	Q	G10 05000B	84412# CENTSW ASSY=FRAME NO-PLATE	3621CPE,BWP,NSP 4226DA1, 64040/64050E6N 64046E6N/J6N/D6N
	R	G03 04500A	84412C CENTSWITCH=MOTOR MT NO-PLATE	6044,6442,6446,7244
	T	SAE03 088	792571 ASSY=CENSW + MOUNTBKT 42	42031,42044,48032,48036
	U	SAE03 088A	83417J ASSY=CENSW + MOUNTBKT 42DYA	5238 DYE
	V	ADC11001	84122D ASSY=CENSW + MOUNTBKT4226QH	4226
	W	ADC14001	90351C CENT SWITCH ASSY 3621F8P	3621F8P
	X	EDC14801	86252C ASSY=CENSW+MTGBRKT RWP	3621/26,4226RWP/SYS 7
	Y	SAE13 001	83246I ASSY=CENSW + MOUNTBKT SWE	3626SWE
	Z	SAE13 001A	83417J CENTRIFUGAL SW ASSY 42QHE	4226,4832,4836
			----------COMPONENTS----------	
all	1	09X100	CARBON BRUSH 3/16"SQ=CENSW	
all	2	ESC0001	82281B* CENT SWITCH BRUSHOLDER ASSY	
all	3	15G071	MACHSCRLOKNUT 6-32 NM SER ZINC	
all	4	03 IF2X3	85046B INSUL.AUTOSPOT/CENTRIFUGL.SW	
all	5	60E005E	TUBING VINYL 3/8IDX.025"W #HT105C *	
all	6	12P015C	CABLECLAMP 5/16-1/2	
all	7	15G070	HXMACHSCRNUT 6-32UNC2B ZINC GR2	
all	8	15N045	RDMACHSCR 6-32UNC2AX3/8 ZINC GR2	
all	9	15U100	LOKWASHER MEDIUM #6 ZINCPL	
all	10	15P010	12Z PHILPAN TRDCUTSCRTYP10-24X1/2SS	
all	11	SAE03 012B	83407#*SLIPRING+CENT SW.ASSY(LORES)	
all	12	15U342	FLTWASH .255/.260IDX.750DX.125T SS	
all	13	15K036	05Z SKSELL0KCP SCR 1/4-20X5/8	

Parts List, cont.—Centrifugal Switch Assembly

Used In	Item	Part Number	Description	Comments
all	14	02 15582	COVER=CENTSW-CADSTL	
N-R	15	03 01147	HOUSING FOR CENTRIFUGAL SWITCH	
all	15	A33 11000	75675B$ HOUSE+BKT+SHAF=CENSW CWM	00S
T	15	A03 01300	75491C*HOUSE+BKT+SHAFT=CENSW 42+52U	
U	15	A03 01300A	75491#* HOUSE+BKT+SHAF=CENSW 42DYA	
V	15	A03 11000	82506T*CENTSWITCH=HOUSING+BRKT 42Q	
W	15	ADC14001A	93381C*C-SWITCH=MNT BRKT+HOUSING	
X	15	ADC14801	86246C*CENT SW HOUSING & BRKT ASSY	
Y	15	A13 02700	83246C$ HOUSE+BKT+SHAF=CENSW SWE	
Z	15	A13 02700A	83246# CENSW HSG+BRKT ASSY 2SPD WAS	
T-Z onlY	16	17B059W	RETAIN RING-ROTOR CLIP# SH-62-ST	
T-Z onlY	17	A03 01400	71103B SHAFT ASSY=CENTSWITCH	
T-Z onlY	18	03 01147	HOUSING FOR CENTRIFUGAL SWITCH	
T-Z onlY	19	17B059W	RETAIN RING-ROTOR CLIP# SH-62-ST	
T	20	02 15359	CENTSW MOUNTBRACKET	
U	20	03 25417	76154C BRKT=CENT SWITCH MT	
V	20	02 11452	94222D CENTRIFUGAL SWITCH BRKT-42Q	
W	20	02 14609	93381D+BRKT=CENTRIF SWITCH 3621F8P	
X	20	02 14836	89391C CENT=SW MTG BRKT	
Y	20	02 13111	77481C BRKT=CENT-SWITCH MT BND@PRNT	
Z	20	03 48170	83246C BRACKET=CENT.SW.MT.2SP WASH	
all	21	15N117	RDMACSCR 10-24UNC2X3/8SS18-8	
all	22	15U130	FLAWAS#10 .031X7/16ODX.203ID ZINCPL	
all	23	15U150	LOCKWASHER MEDIUM #10 ZINCPL	
all	24	15G201	01Z HXLOKNUT 3/8-16 NYL/SS TYPE NE	

Section 3

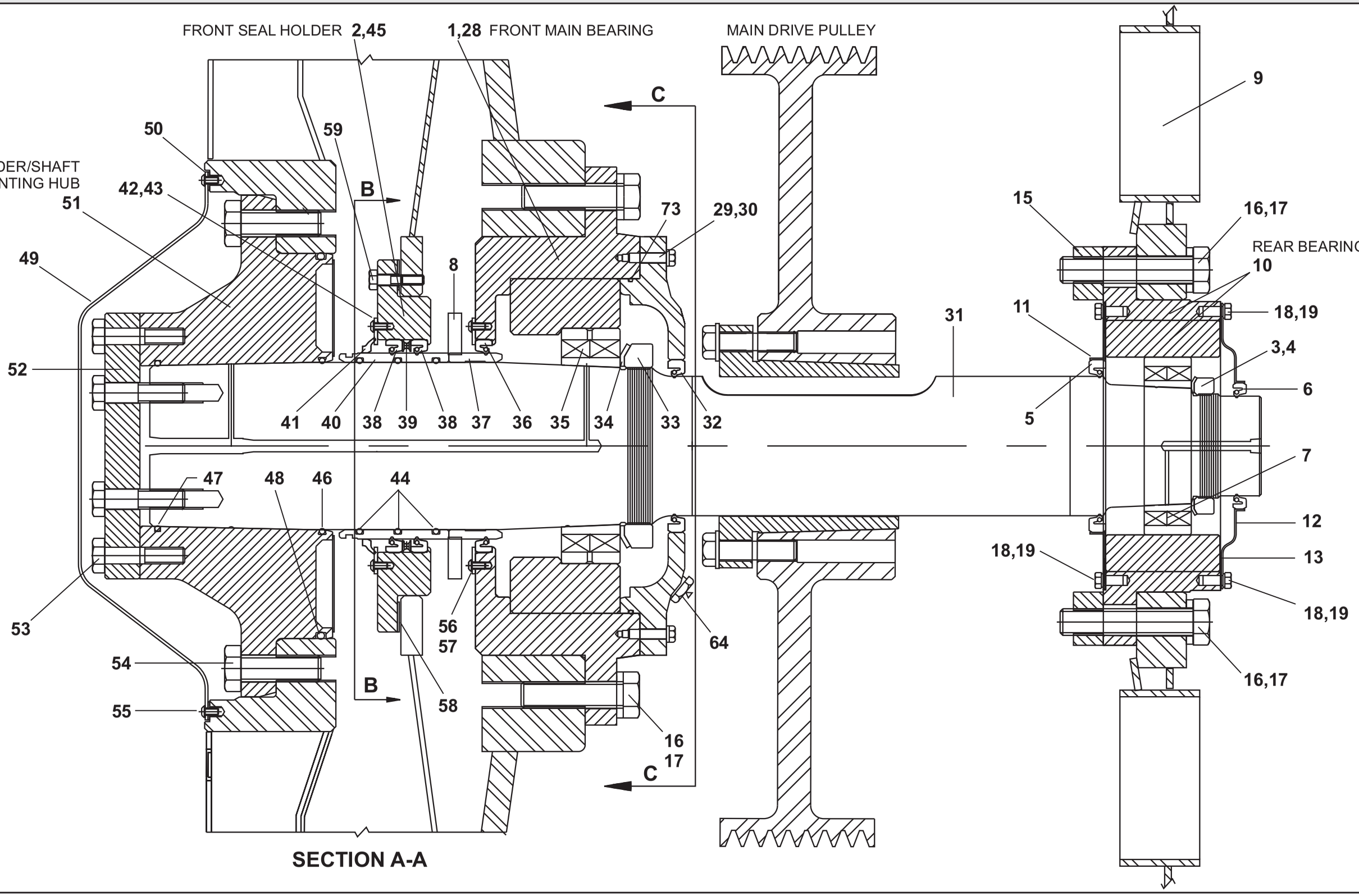
Bearing Assemblies

Bearing Installation

72058J2N

Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400

Litho in U.S.A.



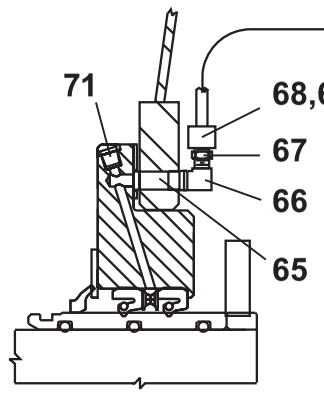
SECTION A-A

Bearing Installation

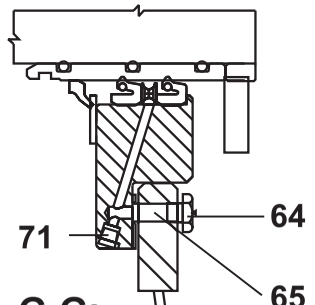
72058J2N

Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400

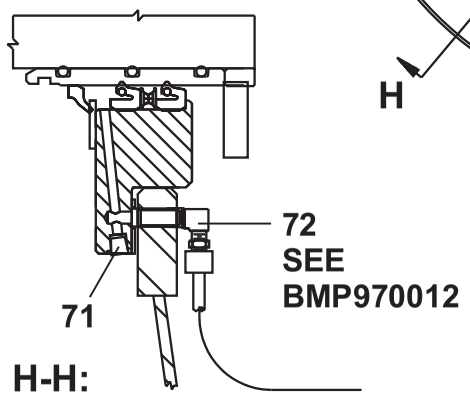
Litho in U.S.A.



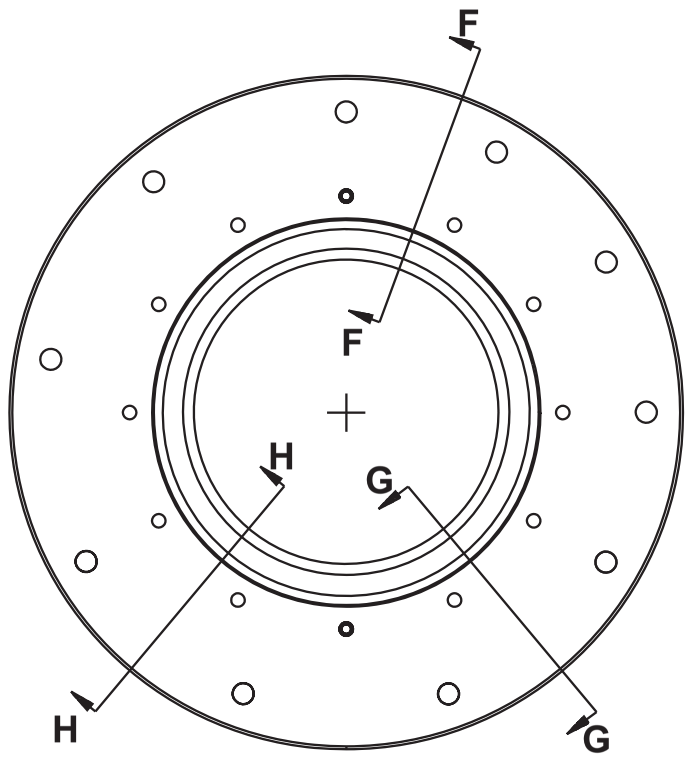
F-F:
GREASE INLET
TO SEALS



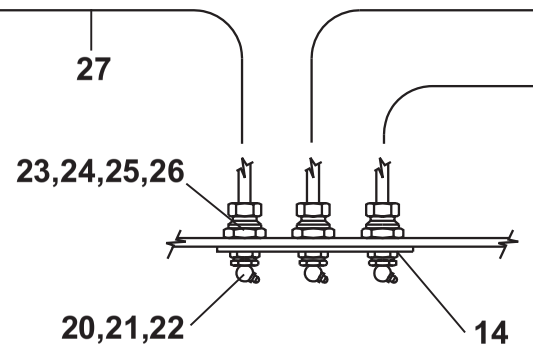
G-G:
GREASE REFIEF
FOR SEALS

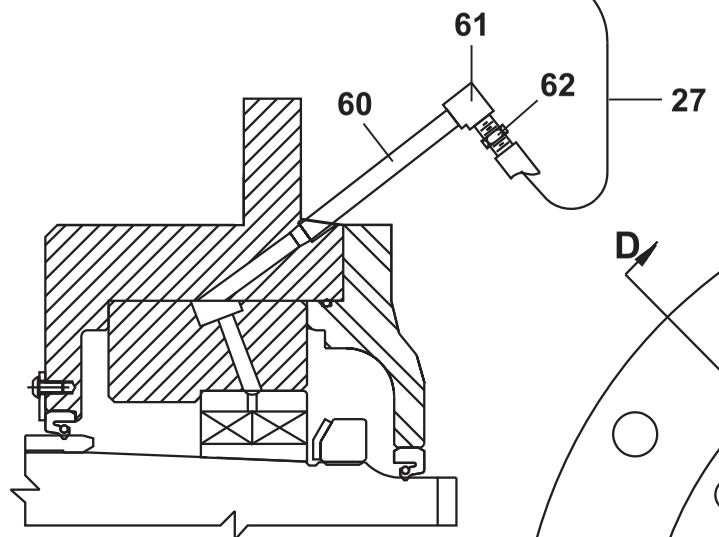


H-H:
FRONT SEAL
AIR INJECT

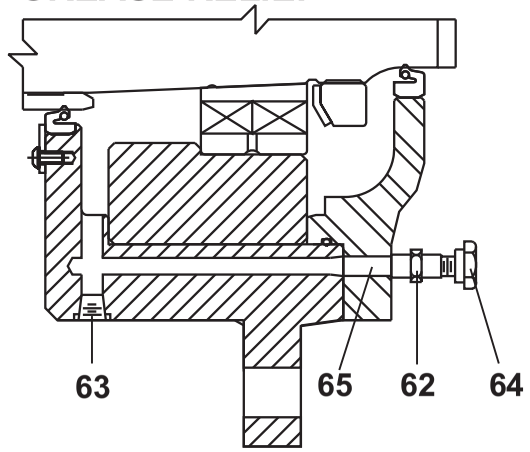


B-B
FRONT SEAL

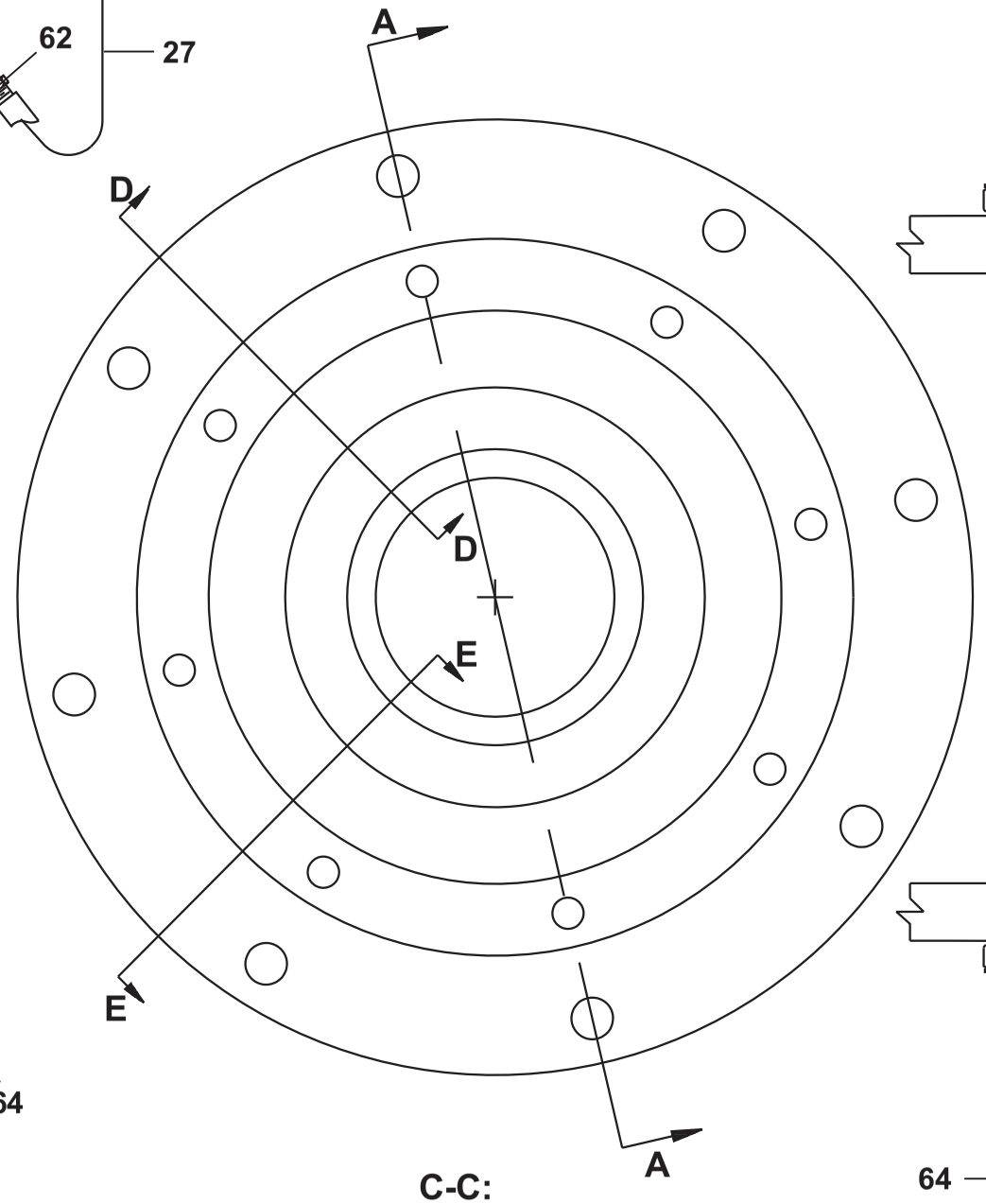




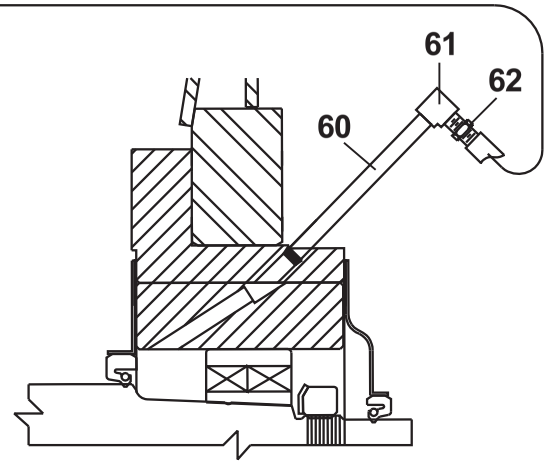
D-D:MAIN BEARING
GREASE INLET



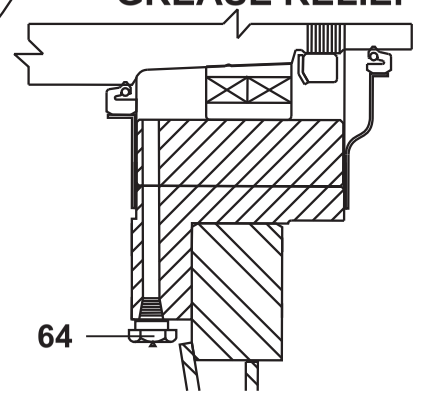
E-E:MAIN BEARING
GREASE RELIEF



C-C:
MAIN BEARING



REAR BEARING
GREASE INLET



REAR BEARING
GREASE RELIEF

Bearing Installation

72058J2N

Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400

Litho in U.S.A.

Parts List—Bearing Installation

Find the correct assembly first, then find the needed components. The item letters (A, B, C, etc.) assigned to assemblies are referred to in the "Used In" column to identify which components belong to an assembly. The item numbers (1, 2, 3, etc.) assigned to components relate the parts list to the illustration.

Used In	Item	Part Number	Description	Comments
			ASSEMBLIES	
	A	GBM58002FV	97000Z INST-MAINBRG-VITON 7258J2	
	B	GBM58002FE	97000Z INST-MAINBRG-BUNA 7258J2	
	C	ABM58001FV	96031Z ASSY=FRNT BRG 7258J2N	00A,00B
	D	ASB58001FV	97000Z ASSY=SEAL-VITON W/FT REMOVE	00A
	E	ASB58001FE	97000Z ASSY=SEAL-BUNA W/FTREMOVE	00B
	F	GSC58501	94000Z INST=SHELL+CYLINDER 7258J2N	
			COMPONENTS	
A,B	1	ABM58001FV	96031Z ASSY=FRNT BRG 7258J2N	
A	2	ASB58001FV	97000Z ASSY=SEAL-VITON W/FT REMOVE	
B	2	ASB58001FE	97000Z ASSY=SEAL-BUNA W/FTREMOVE	
all	3	56AHN20	AN20 BEARING LOCKNUT	
all	4	56AHW20	W20 BEARING LOCKWASHER	
all	5	24S127	06ZSEAL5.25X6.50X.625 JM#7112LUP	
all	6	24S112	03Z SEAL 3.75X4.75X.500 CS/BUNA	
all	7	56S23022T	SPHEROLBRG SKF#23022CCK/C3/W33	
all	8	03 60106	97156C SLINGER=BRG FRNT SEALS	
all	9	W3 60100	97282D*WLMT=MAIN MNT RING RR BRG HS	
all	10	Y3 25108D	95386T BRG SLEEVE REAR 7258J2N	
all	11	03 16337	93063C REAR BRG SEALHOLDER 42M7E	
all	12	03 16339	93063C REAR BRG SEALHLDER EXT 42M7E	
all	13	03 16339A	93063B GASKET= REAR BRG HSE SLHLDR	
all	14	01 10025X	97263B NPLT:BEARING+SEAL LUB - ISO	
all	15	X3 60096	97076B DRILL=BOLT RING REAR BRG HS	
all	16	15K236C	09Z HXCPSCR-1-8X2.75 GR8/ZC	
all	17	15U393	03Z FLATWASHER 1"GR 9 ZN DICHR	
all	18	15K083	HXCAPSCR 3/8-16 UNC2AX1/2 GR5 ZNC	
all	19	15U255	LOCKWASHER MEDIUM 3/8 ZINCPL	
all	20	5SB0E0CBEO	NPTHEXBUSH 1/4X1/8 BRASS 125#	
all	21	54M020	GREASEFIT 30DEG 1611-B ALEMITE	
all	22	54M029	RELIEFFIT 1/8STR ALEMITE 47200	
all	23	53A059A	NUT 1/4"BR.HOLYOKE AND #61A-4	
all	24	53A500	1/4" SLEEVE-DELRIN	
all	25	53A501	TUBEINSERT .170"OD	
all	26	53A007B	BODYFEMCON.25X.25COMP#B66A-4B	
all	27	60E004TC	02ZTUBING NYL(NAT)1/4"ODX.17ID *	
all	28	Y3 60090R	97092D ASSY=BRG+SLEV-FRNT REWORK 72	
all	29	15K225	05Z HXCPSCR 5/8-11X2+1/2	
all	30	15U315	LOKWASHER MEDIUM 5/8 ZINCPL	
all	31	X5 58578	97082E MAIN SHAFT 7258J2N	
all	32	24S127	06ZSEAL5.25X6.50X.625 JM#7112LUP	
all	33	56AHN30	AN30 BEARING LOCKNUT	

Parts List, cont.—Bearing Installation

Used In	Item	Part Number	Description	Comments
all	34	56AHW30	W30 BEARING LOCKWASHER	
all	35	56S23030T	SPHEROLBRG SKF#23030CCK/C3/W33	
all	36	24S130	04Z SEAL 7X8X.625 JM#6862 NITRILE	
all	37	X3 60084	97032C SLEEVE=GRS SEAL PRESFIT	
D	38	24S130V	05ZSEAL7.0X8.0X.625 JM#19636LUPV	
E	38	24S130	04Z SEAL 7X8X.625 JM#6862 NITRILE	
all	39	24S130LR	96523C LANTERN RING=7X8X.313	
all	40	X3 60084A	97302C SLEEVE=H2O SEAL ORING	
D	41	24S146V	00Z SEAL 7.0X8.0X.437 TYPE SSW VIT	
E	41	24S146	00Z SEAL 7.0X8.0X.437 TYPE SSW NTRL	
all	42	X3 60088	97057B MACH=EXCLUDER WEAR PLT	
all	43	15K084	85196B TRUSS HXSOK 3/8-16 X 23/32SS	
D	44	60C160DV	O-RING 6.25NDX3/16CSY1TON 70DUR#362	
E	44	60C160DB	O-RING 6.25NDX3/16CSBUNA-N70DUR#362	
all	45	X3 60087	97297D MACH=FRNT SEAL HOLDER	
F	46	60C160DV	O-RING 6.25NDX3/16CSY1TON 70DUR#362	
F	47	60C159X	ORING5.97IDX3/16 VITON 70 #361	
F	48	60C190	ORING 13.9"IDX1/4CS BUNA-N 70 #457	
all	49	X3 60085	97096C DRILL=COVER CYL/SHFT MNT HUB	
all	50	03 60085A	97031B GASKT=CVR CYL/SHT HUB	
all	51	Y3 60082	97167D MACH=CYL/SHFT MNT HUB	
all	52	X3 60089	97123C MACH=WASHER CYL/SHFT MNT HUB	
all	53	15K240D	HEXCAPSCR 3/4-16X3 GR8 ZNC	
all	54	15K235K	02Z HXCAPSCR 1-14X3 GR 8 ZINC	
all	55	15K084	85196B TRUSS HXSOK 3/8-16 X 23/32SS	
all	56	X3 60088	97057B MACH=EXCLUDER WEAR PLT	
all	57	15N188D	HXCAPSCR 1/4-20UNC2X7/8SS18-8	
all	58	03 60087A	97031B GSKT=FRNT SEAL HOLDER	
all	59	15K100	HEXCAPSCR 3/8-16X1+1/4 SS18-8	
all	60	5N0C03AG42	NPT NIP 1/8X3 TBE GALSTL SK40	
all	61	5SL0CBEA	NPTELB 90DEG 1/8 BRASS 125#	
all	62	53A005B	BODYMALCON1/4X1/8COMP #B68A-4A	
all	63	51P013	PLUG HXCNTRSUNK 1/4"BRASS	
all	64	54M029	RELIEFFIT 1/8STR ALEMITE 47200	
all	65	5N0C01KG42	NPT NIP 1/8X1.5 TBE GALSTL S40	
all	66	5SL0CBEA	NPTELB 90DEG 1/8 BRASS 125#	
all	67	5SCC0CBE	NPT COUP 1/8 BRASS 125# 103A-A	
all	68	53A059A	NUT 1/4"BR.HOLYOKE AND #61A-4	
all	69	53A500	1/4" SLEEVE-DELRIN	
all	70	53A501	TUBEINSERT .170"OD	
all	71	5SP0CBEHS	NPT PLUG 1/8 HXCTRSNK BRASS	
all	72	AIR58003	97000Z AIR INJECT ASSY=BNG HOUSE	
all	73	60C186	ORING 12.0IDX1/8CS BUNA-N 70 #278	

Section 4

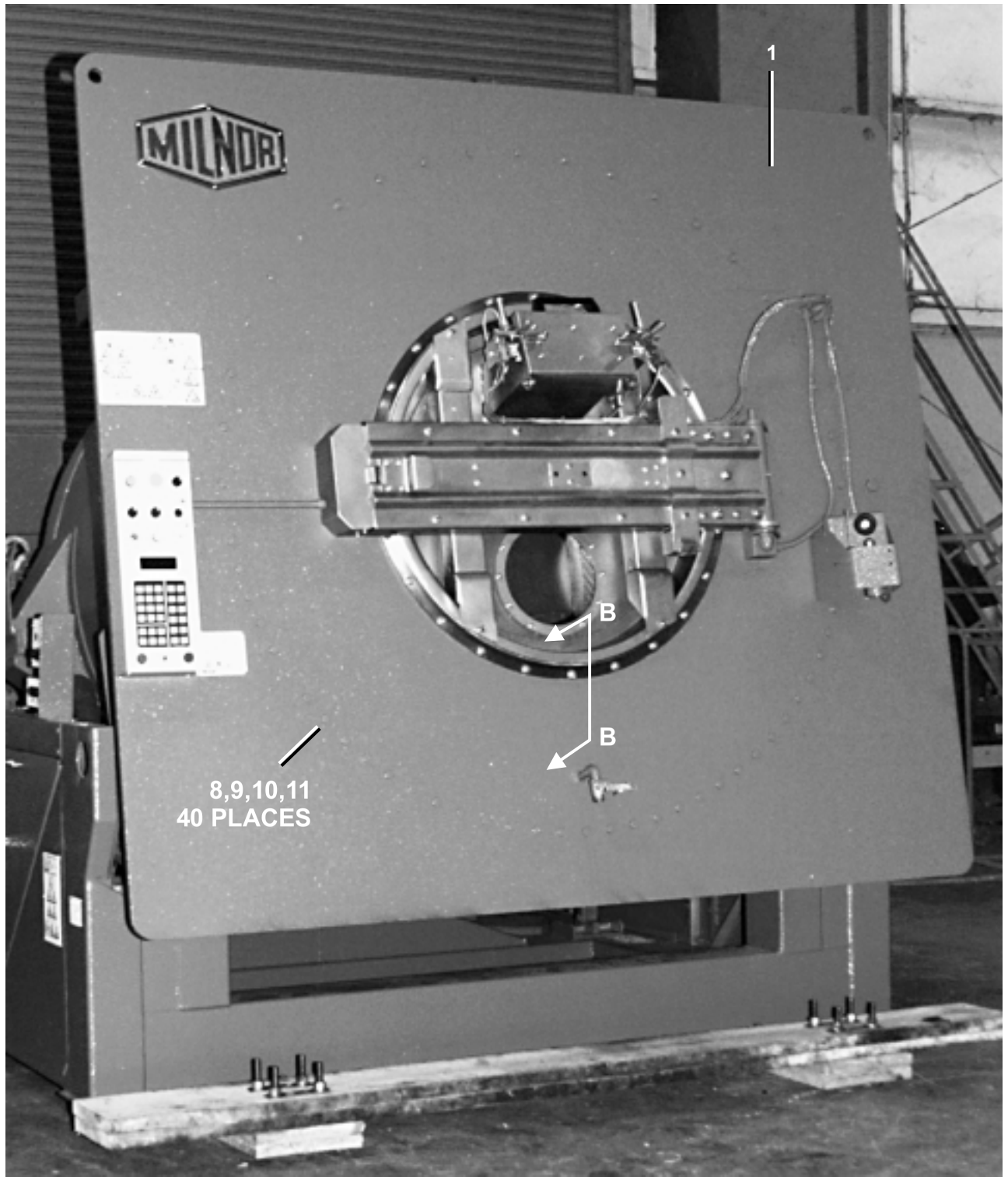
Shell and Door Assemblies

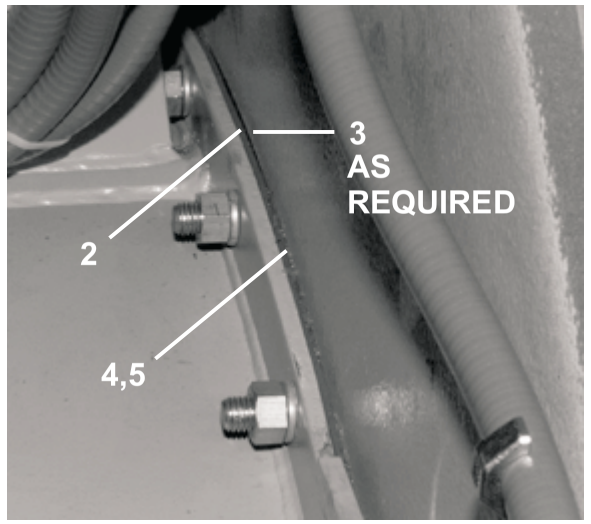
Installation Shellfront

64040,64050E6N 72058,72075J2N

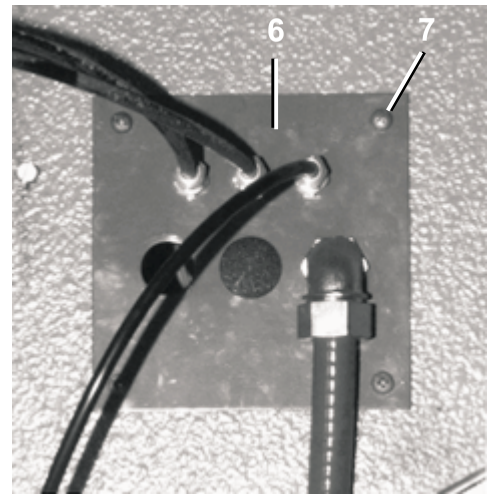
Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400

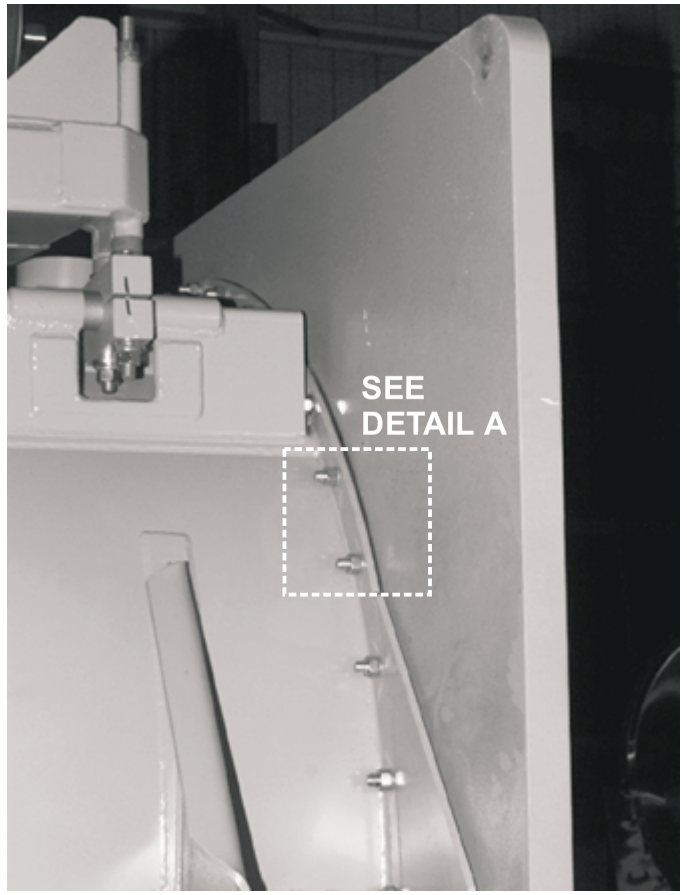
Litho in U.S.A.

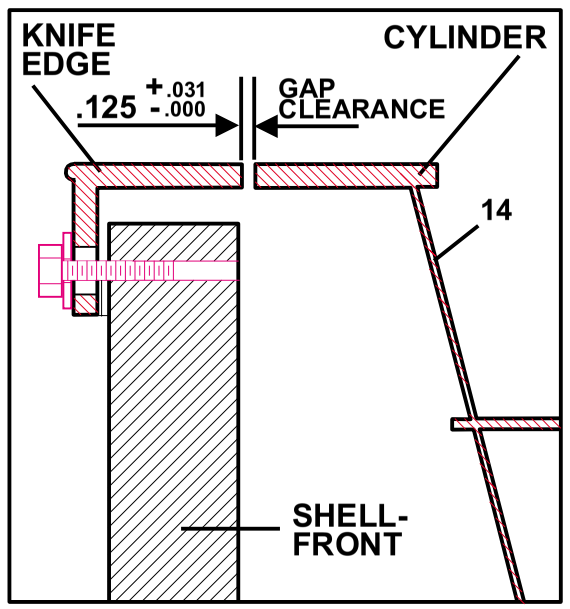




DETAIL A: SHELLFRONT GASKET







SECTION B-B

Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400

Litho in U.S.A.

Parts List—Installation Shellfront

Find the correct assembly first, then find the needed components. The item letters (A, B, C, etc.) assigned to assemblies are referred to in the "Used In" column to identify which components belong to an assembly. The item numbers (1, 2, 3, etc.) assigned to components relate the parts list to the illustration.

Used In	Item	Part Number	Description	Comments
			----------ASSEMBLIES----------	
	A	GSF58002	94000Z INST=SHELL FRONT 7258J2N	7258J2N
	B	GSF58003	98531N INST=SHL FRNT 7275J2N W/48”DR	7275J2N
	C	GSF60001	98000Z INST=6440 SHL FRNT W/40DRLG	6440E6N 40”DOOR
	D	GSF60002	99000Z INST=6450 SHL FRNT-48”DOOR	6450E6N 48”DOOR
	E	GSF60011	INST=6440 SHL FRNT W/48DRLG	6440E6N 48”DOOR
			----------COMPONENTS----------	
A	1	W5 58540	94000Z*WLMT=SHELL FRONT 7258 STONE	
B	1	W5 75540	98477N WLDMT=SHELL FRONT 7275J2N	
C	1	W3 60040	98077C WLMT=SHELL FRONT 6440 40”DRLG	
D	1	W3 60200	99122C WLMT=SHELL FRONT 6450 48”DR	
E	1	W3 60140	98000Z WLMT=SHELL FRONT 6440 48”DRLG	
A,B	2	05 58044	94347C 3"W GASKET 38.88BR 1/8T DY	
C,D,E	2	03 65044D	93123C GASKET=70.0BC 1/8”THK 6446D6	
A,Bl	3	05 58044A	94347# 3"W GASKET 38.88BR 1/16 DY	
C,D,E	3	03 65044E	93123# GASKET=70.0BC 1/16THK 6446D6	
all	4	20C044	041290ADHESIVE-EC1300-PINT	
all	5	20C036	PERMATEX NO 1C IN 11 OZ TUBES	
all	6	03 CF551	98322BSF COVER PLATE W/HOLES HRS	
all	7	15P059	01Z SCRHXSELFDR:10-16X1/2 #2 ZINC	
all	8	15K227	HXCAPSCR 5/8-11UNC2AX4 GR5 ZINC/CAD	
all	9	15U318	FLATWASH 1+1/8 ODX21/32 IDX3/32 PL	
all	10	15U315	LOKWASHER MEDIUM 5/8 ZINCPL	
all	11	15G238	HXNUT 5/8-11UNC2B SAE ZINC GR2	
all	12	03 65050	93236B PLATE=GEAR BOX COVER 6446E6N	
all	13	15P100	07Z THDCUT-F PANHD 8-32 X 3/8 Ss410	
C	14	ACA6440E6N	2001386D ASSY=STANDARD 6440CYL 304	
E	14	ACA6440LDR	2001386D ASSY=6440CYL W/LARGE DOOR 304L	
D	14	ACA6450LDR	2002022D ASSY=6450 CYL W/48" DOOR 304	
A	14	ACA7258J2	2002085D CYL 72J2 12GA W/O LINER 304	
B	14	ACA7275JNL	2002103N CYL=7275 7GA CYLBCK W/O LINERS	

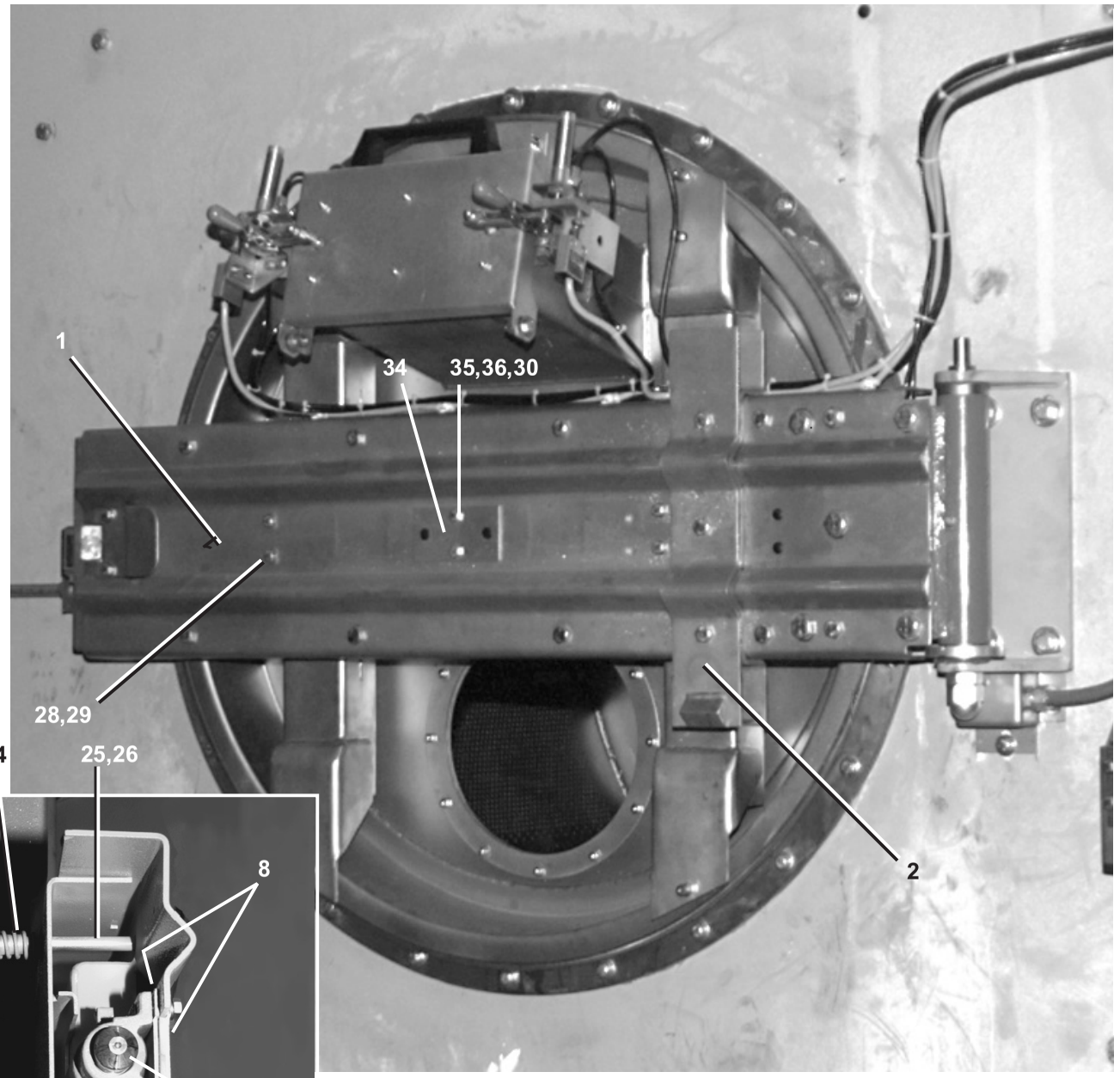
Door Assembly with Sample Port

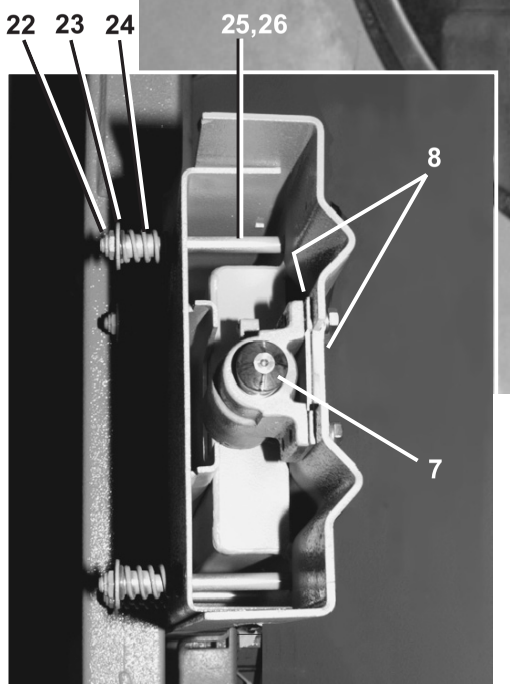
64046E6N/J6N, 72046E5N/J5N, 720582/J5N

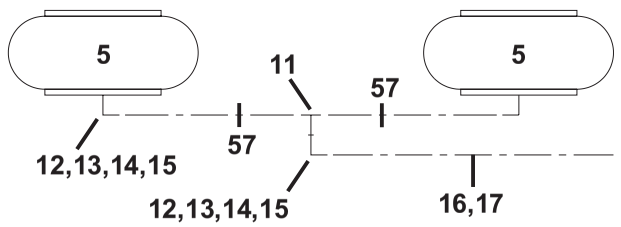
BMP980030/98181V
(Sheet 1 of 2)

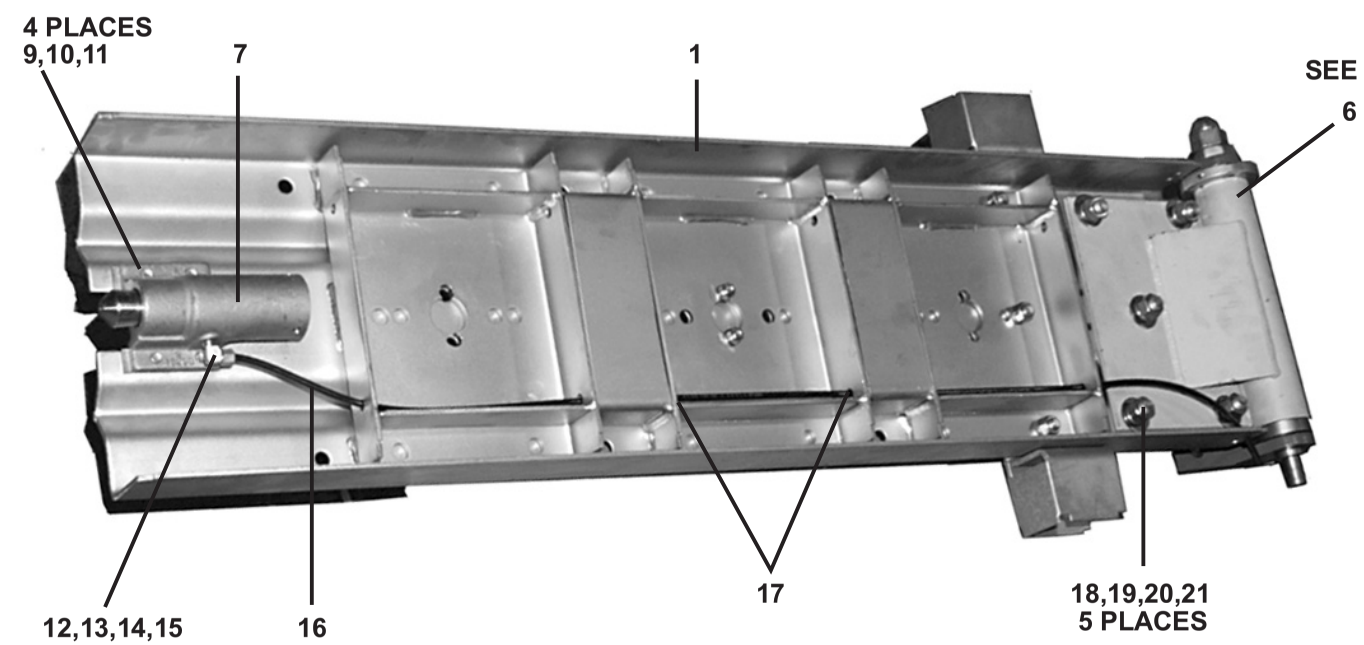
Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400

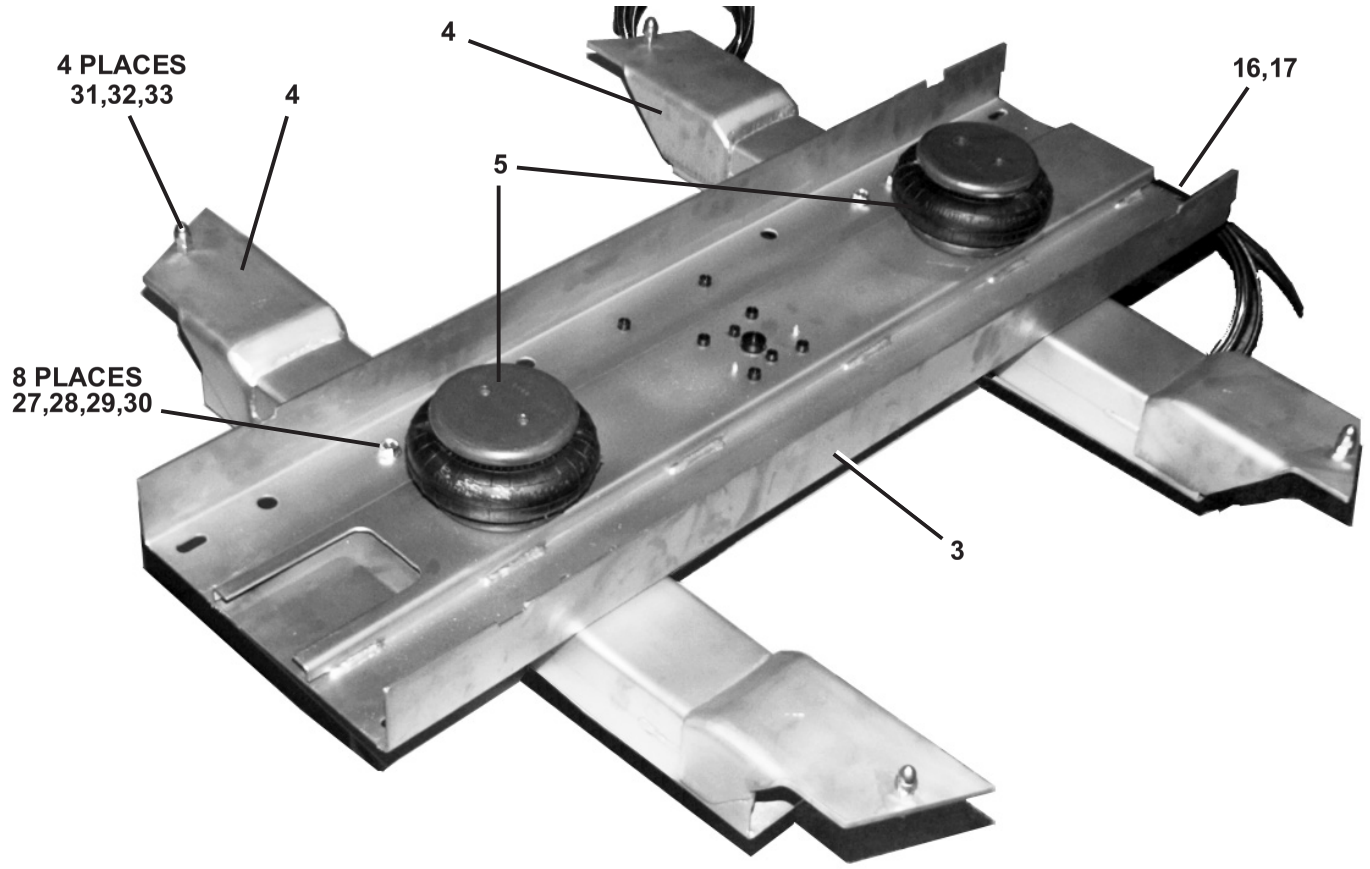
Litho in U.S.A.











Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400

Litho in U.S.A.

Parts List—Door Assembly with Sample Port

Find the correct assembly first, then find the needed components. The item letters (A, B, C, etc.) assigned to assemblies are referred to in the "Used In" column to identify which components belong to an assembly. The item numbers (1, 2, 3, etc.) assigned to components relate the parts list to the illustration.

Used In	Item	Part Number	Description	Comments
			----------ASSEMBLIES----------	
	A	GSD66022A	97000Z INST=40X4DR316 SML PRT AC304	
	B	ADC66002	97000Z ASSY=DR CHNL 2AIR BSK 304	
			----------COMPONENTS----------	
all	1	W5 20020S	98226#*CHANNEL WELD=OUTER 40"DR S/S	
all	2	W5 20155D	93477#*WELD=BRKT DOOR ACTUR RT64D6N	
all	3	W5 20019S	94247#*CHANNEL WELD=INNER 40"DR S/S	
all	4	W5 20197S	92316#*WELDMENT=DOOR BRACE 72D6N SS	
all	5	60B090	01ZAIRMT S-131 1CONV.F#W013587731	
all	6	ADH66001	97000Z PRTS=DR HINGE CRB	
all	7	SA 15 028	70239D* DOOR LATCH ASSY-DIVCYLS	
all	8	02 15633S	93216# DOOR LATCH ADJPLT=S/S	
all	9	15K100	HEXCAPSCR 3/8-16X1+1/4 SS18-8	
all	10	15U260	LOCKWASHER MEDIUM 3/8 SS18-8	
all	11	53A044A	BODY=TEE 1/4TX1/8FP #177C-4-2B	
all	12	53A031B	BODY-EL90MALE.25X1/8 #269C-42B	
all	13	53A059A	NUT 1/4"BR.HOLYOKE AND #61A-4	
all	14	53A500	1/4" SLEEVE-DELRIN	
all	15	53A501	TUBEINSERT .170"OD	
all	16	60E004TE	04Z 1/4"OD X.170"ID NYL TUBING *	
all	17	12P1AGSB	SNAPBUSH 3/8"MH X 1/4" T=1/8	
all	18	15K214C	HEXCAPSCR 5/8-11X1-1/2 S/S 18-8	
all	19	15U314S	01Z FLTWSHR 5/8 STDCOMM SS18-8	
all	20	15U315S	LOKWASHER MEDIUM 5/8 18-8 S/S	
all	21	15G238S	HEXNUT 5/8-11UNC2B SS18-8	
all	22	15G233	HEXSLOTNUT 1/2-13UNC2 SS18-8	
all	23	15U285	01Z FLATWASHER 1/2 STD COMM SS18-8	
all	24	02 18187S	82477B SPRING=DOOR STAINLESS STEEL	
all	25	27B2750L0T	01ZSPCRROLL.562ID.937L.048T ZNC	
all	26	15K203E	HEXCAPSCR 1/2-13X5.5UNC2A SS18-8	
all	27	15P200	02Z TRDCUT-F HXWASHD 3/8-16X3/4NIK	

Parts List, cont.—Door Assembly with Sample Port

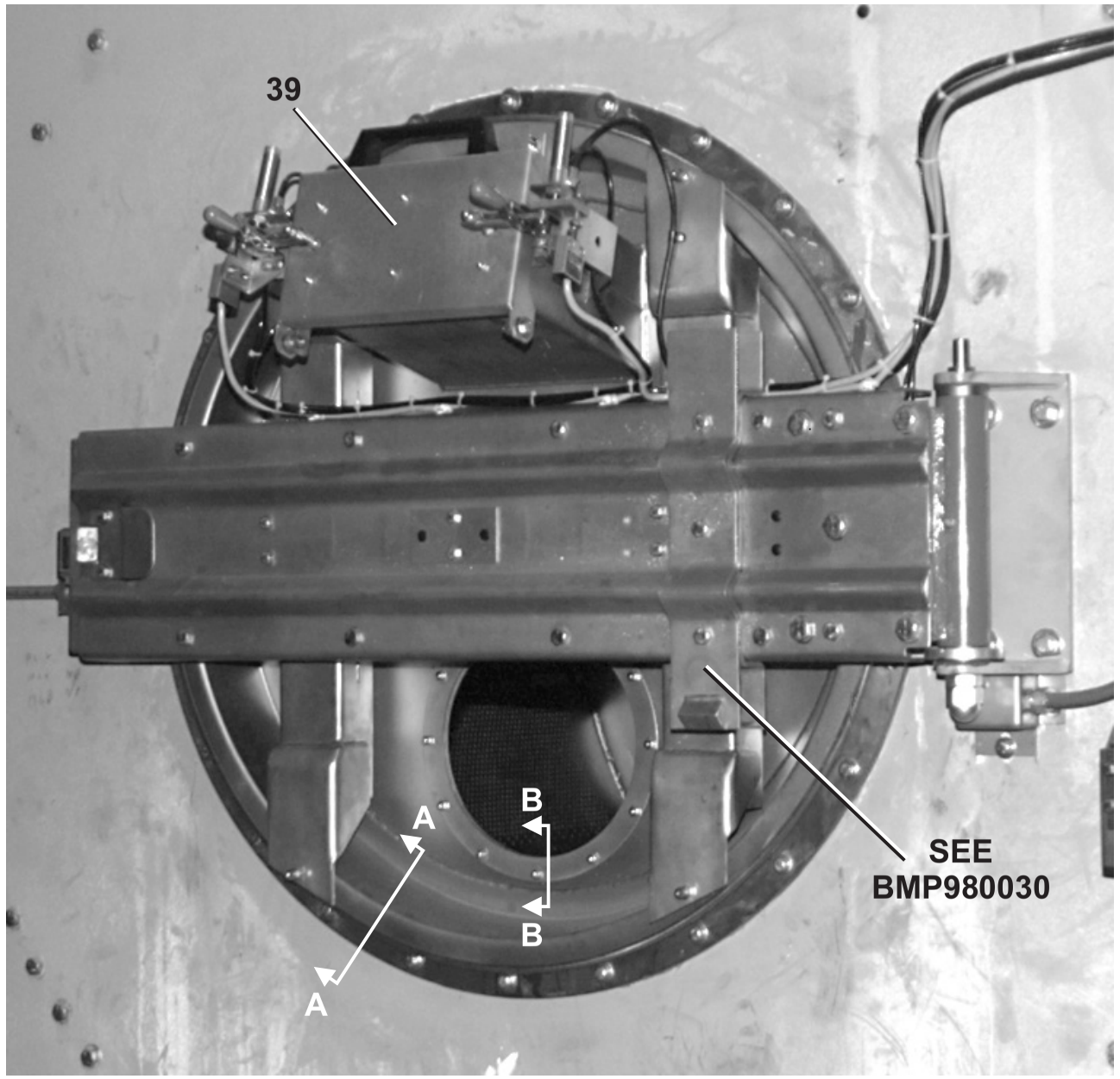
Used In	Item	Part Number	Description	Comments
all	28	15K095	HXCPSCR 3/8-16UNC2AX1 GR5 ZINC/CAD	
all	29	15U255	LOCKWASHER MEDIUM 3/8 ZINCPL	
all	30	15G206	HEXNUT 3/8-16 UNC2 SS 18-8	
all	31	15U260	LOCKWASHER MEDIUM 3/8 SS18-8	
all	32	15K100	HEXCAPSCR 3/8-16X1+1/4 SS18-8	
all	33	15G200C	01Z HXCPNUT HI 3/8-16 BRASS NIK PLT	
all	34	15K096	HEXCAPSCR 3/8-16UNC2X1SS18-8	
all	35	15U260	LOCKWASHER MEDIUM 3/8 SS18-8	
all	36	03 64039E	97192# COVER PLATE W/O HANDWHEELS/S	

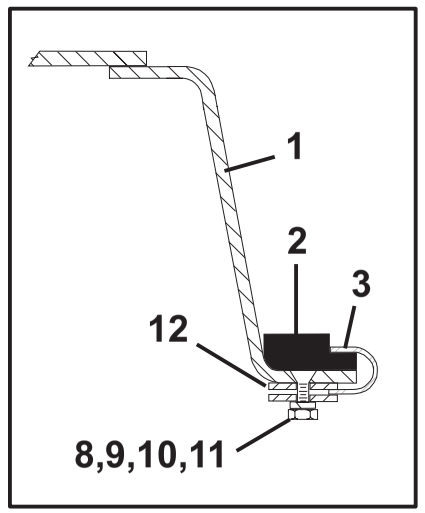
Installation Door with Sample Port

64046E6N/J6N, 72046E5N/J5N, 72058J2N/J5N

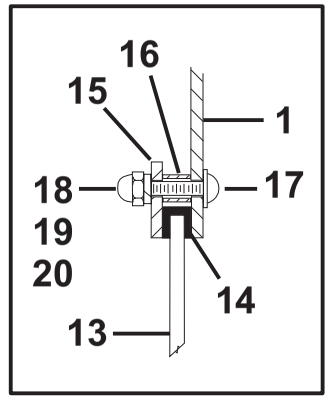
Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400

Litho in U.S.A.

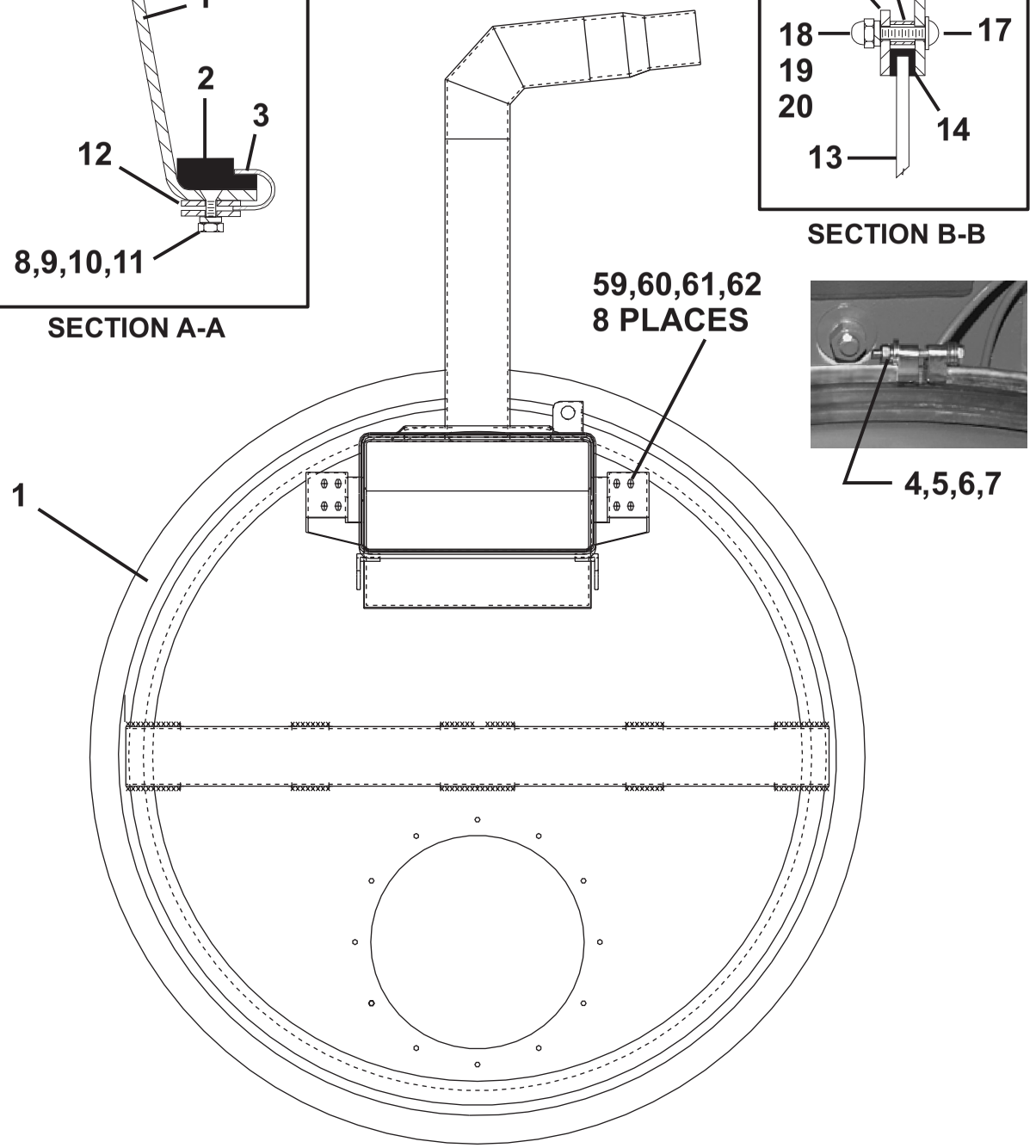




SECTION A-A



SECTION B-B

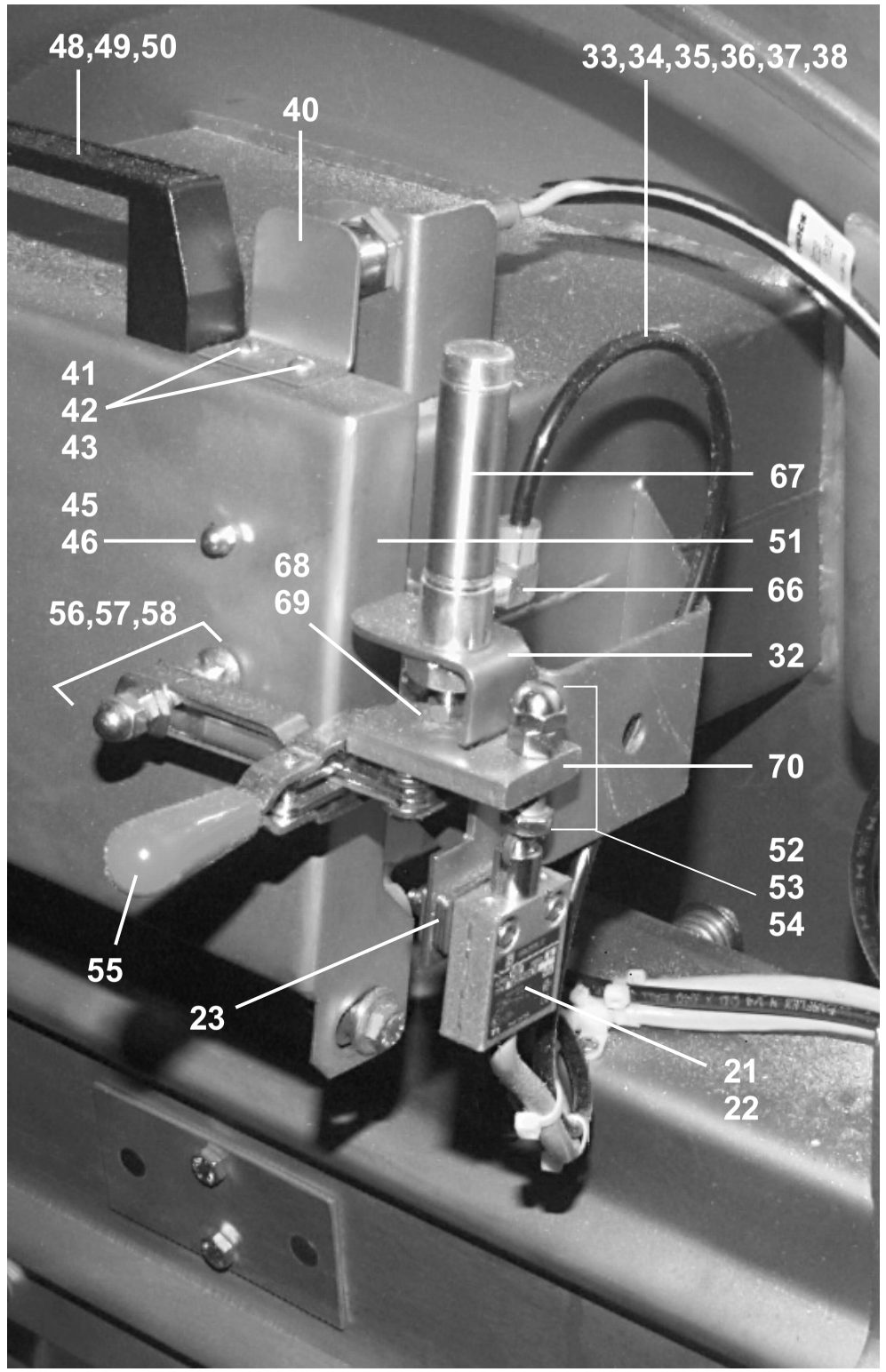


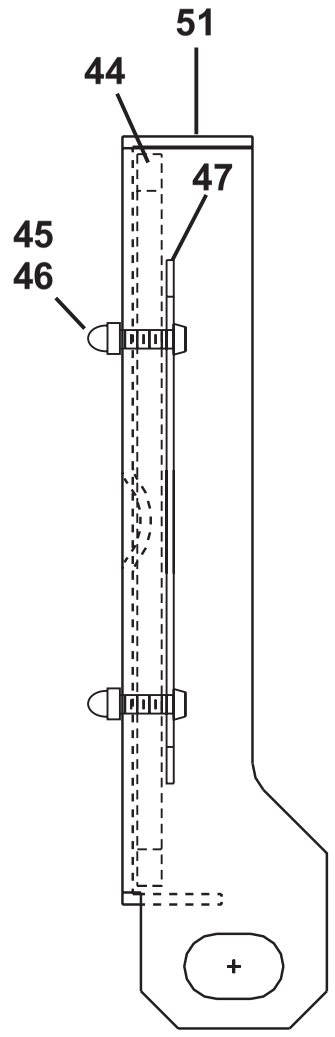
Installation Door with Sample Port

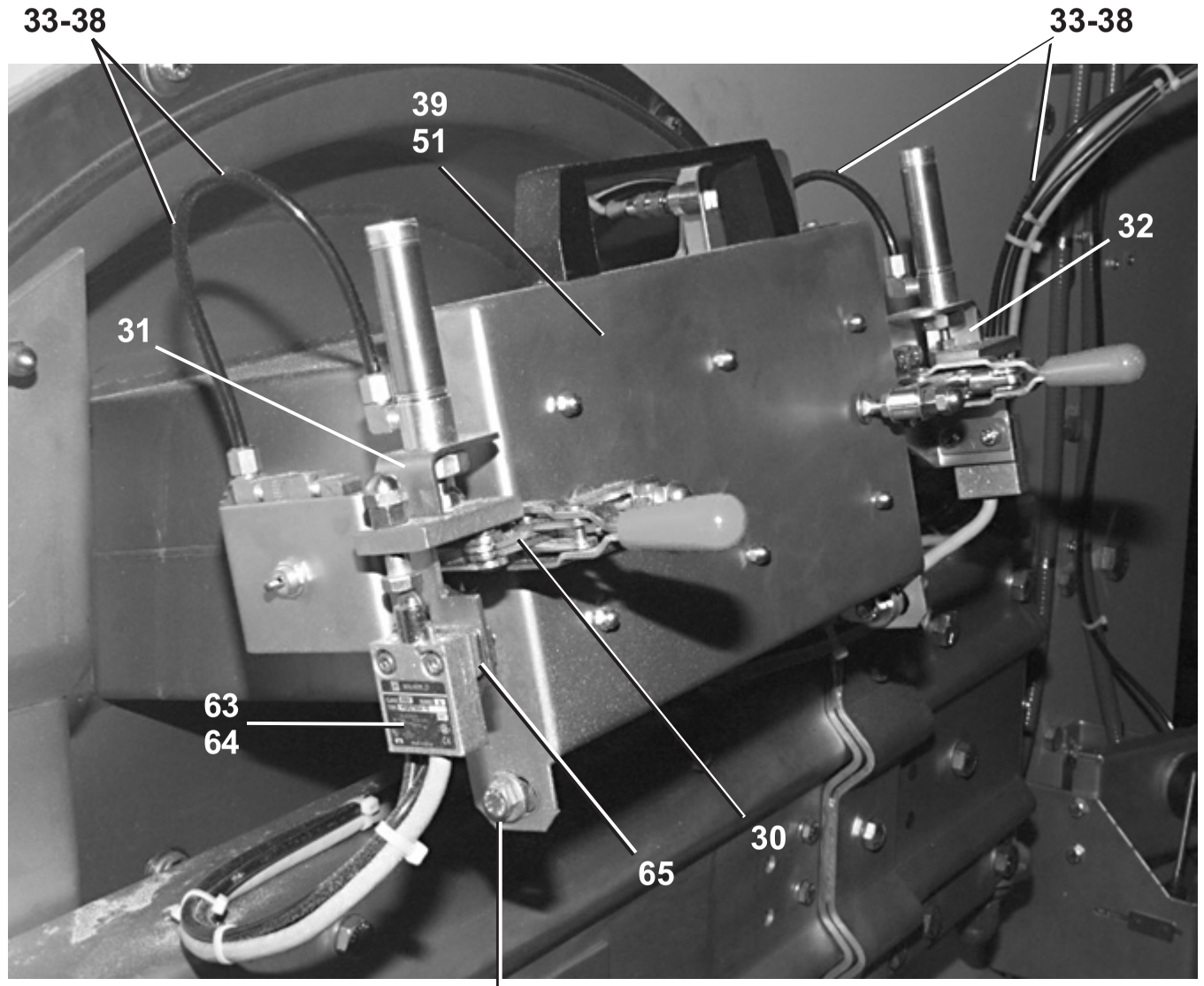
64046E6N/J6N, 72046E5N/J5N, 72058J2N/J5N

Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400

Litho in U.S.A.





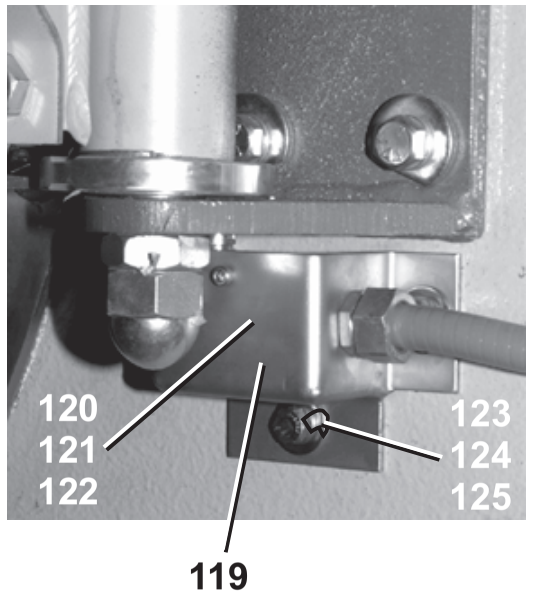


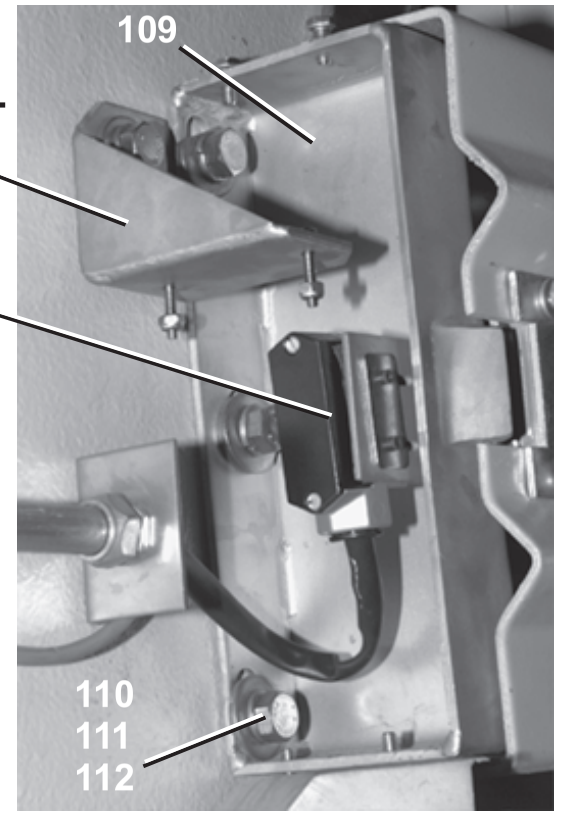
Installation Door with Sample Port

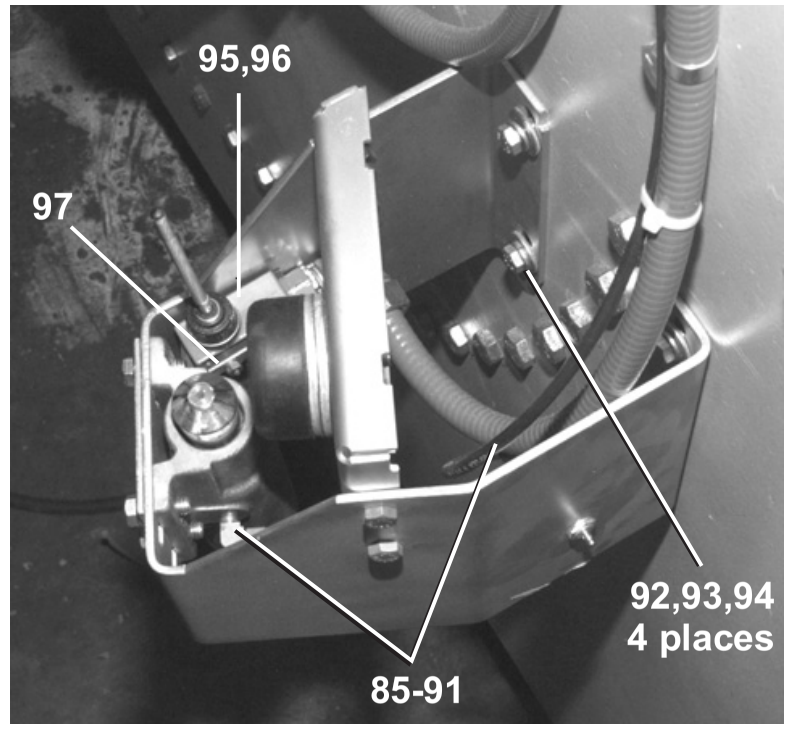
64046E6N/J6N, 72046E5N/J5N, 72058J2N/J5N

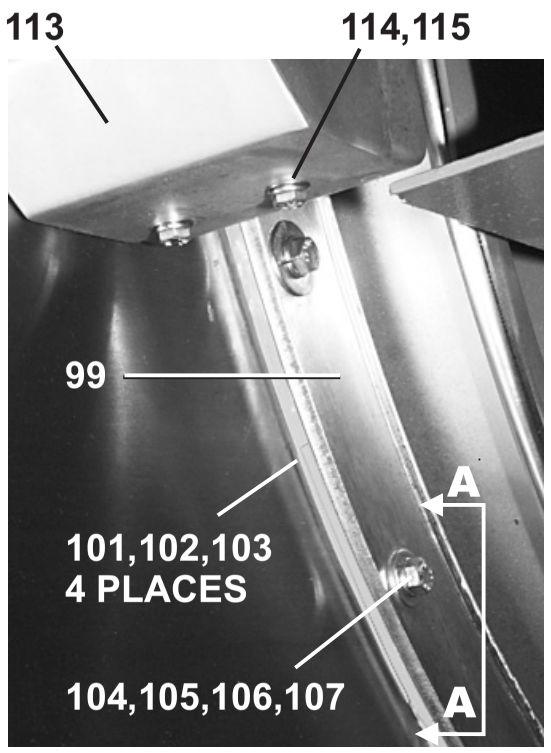
Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400

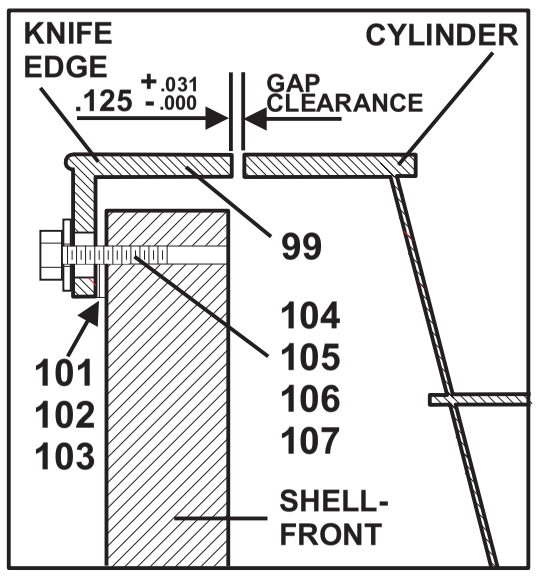
Litho in U.S.A.



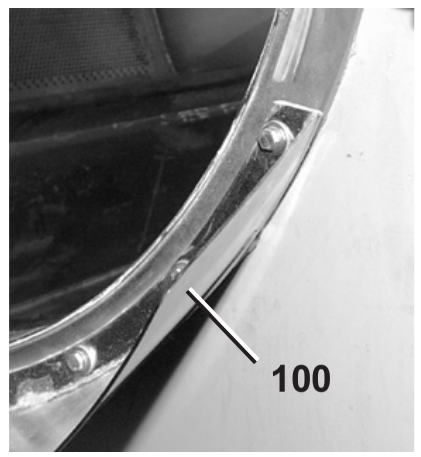


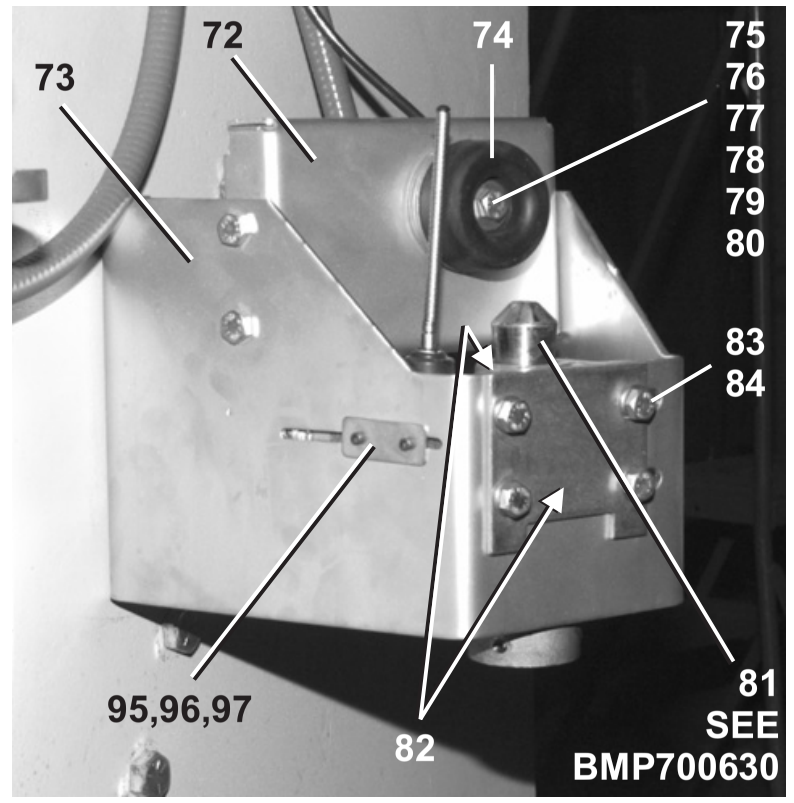






SECTION A-A





Installation Door with Sample Port

64046E6N/J6N, 72046E5N/J5N, 72058J2N/J5N

Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400

Litho in U.S.A.

Parts List—Installation Door with Sample Port

Find the correct assembly first, then find the needed components. The item letters (A, B, C, etc.) assigned to assemblies are referred to in the "Used In" column to identify which components belong to an assembly. The item numbers (1, 2, 3, etc.) assigned to components relate the parts list to the illustration.

Used In	Item	Part Number	Description	Comments
			----------ASSEMBLIES----------	
	A	ASD66022	97000Z ASSY=40X4DR SMPL PRT 316	
	B	ASD66020	97000Z PRTS/COMMON 40X4DR SMPL PORT	
	C	ADT66002	97000Z PRTS=DOOR GASKET DYE 304	
	D	ASL66001	97000Z ASSY=LID 6X12 SAMPL PORT 316	
	E	ASD66020A	97000Z PRTS=SMP LID CLMP+SFTY INTLC	
	F	ADL66021	97000Z ASSY=SMP DR FL OPN LH+SW 316	
	G	GKE65001D	95253@ INST=DOOR KNIFE EDGE 316L	
	H	ADL66001	97000Z ASSY=DR CLOSED STRIKER 304	
	J	ADS66001	97000Z PRTS=SECONDARY DR SWITCH 304	
			----------COMPONENTS----------	
all	1	W3 66001	97373D*WLMT=40"X4"DR SMPL PORT 316	
all	2	05 20036D	92157# GASKET=40DURO 1/2T=40"DR DYE	
all	3	W5 20021	94222#*RING=DOOR GASKET RETAIN WELD	
all	4	15N200	FILMACSCR 1/4-20UNCX2 SS18-8 SLTD	
all	5	15U188	01Z FLTWASH 1/4 STD COMM SS18-8	
all	6	15U181	LOCKWASHER MEDIUM 1/4 SS18-8	
all	7	15G170	HEXNUT 1/4-20UNC2 SS18-8	
all	8	15N223	FLATMACSCR 3/8-16NC2 X 1+1/4 SS18-8	
all	9	15U245	01Z FLTWASH 3/8 STD COMM 18-8 SS	
all	10	15U260	LOCKWASHER MEDIUM 3/8 SS18-8	
all	11	15G206	HEXNUT 3/8-16 UNC2 SS 18-8	
all	12	15U245B	93262B FLATWASH SPECIAL DOOR 52+72	
all	13	02 09215	83096A DRGLASS 12 3/8DIA SS STAMPED	
all	14	02 02366	93516A GASKET DOORGLAS GTR52-5220-3	
all	15	03 66030	97373B RETAINER RING DOOR GLASS	
all	16	27B20006SS	00000Z SPACER=.322IDX.375LX.042WT S	
all	17	15K039A	BUTSOKCPSCR 1/4-20X7/8 SS 18-8 E=1	
all	18	24G020N	ROLLED WASH.252ID NYLTITE 25W	
all	19	15U181	LOCKWASHER MEDIUM 1/4 SS18-8	
all	20	15G140	03Z HXCPNT 1/4-20 #C250=20 NKLPLT	
all	21	09RM01212G	04Z CAPSW 12FT 180DEG ROLLER GOLD	
all	22	09R008BSTD	82026#* 09R008B+MOUNTING HDWRE+INST	
all	23	02 10391	COVERSTRIP-ELECTROPOL	
all	24	ADT66002	97000Z PRTS=DOOR GASKET DYE 304	
all	25	ASL66001	97000Z ASSY=LID 6X12 SAMPL PORT 316	
all	26	15K086E	SOKCAPSCR 3/8-16X3/4 18-8SS	
all	27	54E016M	FLGBRG 3/8X5/8X3/8BRZ#FB610-3	
all	28	15U245	01Z FLTWASH 3/8 STD COMM 18-8 SS	
all	29	15G206	HEXNUT 3/8-16 UNC2 SS 18-8	
all	30	ASD66020A	97000Z PRTS=SMP LID CLMP+SFTY INTLC	
all	31	02 14488C	87336# BKT-AIRCYL SAMPLE LOCK 42DYP	
all	32	02 14488A	87336C BKT-AIRCYL SAMPLE LOCK	

Parts List, cont.—Installation Door with Sample Port

Used In	Item	Part Number	Description	Comments
all	33	53A031B	BODY-EL90MALE.25X1/8 #269C-42B	
all	34	53A501	TUBEINSERT .170"OD	
all	35	53A500	1/4" SLEEVE-DELRIN	
all	36	53A059A	NUT 1/4"BR.HOLYOKE AND #61A-4	
all	37	60E004TE	04Z 1/4"OD X.170"ID NYL TUBING *	
all	38	53A031B	BODY-EL90MALE.25X1/8 #269C-42B	
all	39	ASL66001	97000Z ASSY=LID 6X12 SAMPL PORT 316	
all	40	03 66028	97373B TARGET=SAMPLE PORT	
all	41	15K021A	SOKCAPSCR 10-24UNCX1" LG S/S	
all	42	15G121	HXCAPNUT 10-24UNC2 #3266BR NKLPLTG2	
all	43	15U160	LOCKWASHER MEDIUM #10 SS18-8	
all	44	03 66027	97373B GASKET SAMPLE PORT	
all	45	15G121	HXCAPNUT 10-24UNC2 #3266BR NKLPLTG2	
all	46	15U160	LOCKWASHER MEDIUM #10 SS18-8	
all	47	W3 66026	97373#*WLMT=BACKING PLATE GASKET	
all	48	27A109	GRAB HANDLE #B8-20-503-10	
all	49	15K041S	HEXCAPSCR 1/4-20UNC2AX1 SS18-8	
all	50	15U181	LOCKWASHER MEDIUM 1/4 SS18-8	
all	51	W3 66025	97373#*WLMT=LID SAMPLE PORT	
all	52	15K100	HEXCAPSCR 3/8-16X1+1/4 SS18-8	
all	53	15G214	HXJAMNUT 3/8-16UNC2B SAE ZINC GR2	
all	54	15G200	01Z HXCPNUT 3/8-16 UNC2A 5/8X1/2	
all	55	27A700	TOGGLECLAMP GOODHAND E=1	
all	56	15G187	LOWCROWN ACORN NUT5/16-18BRASS,NICK	
all	57	15G190	HEXFINJAMNUT 5/16-18NC2 SS18-8	
all	58	15A005A	CARSCR 5/16-18X3+1/2 FUL THD SS18-8	
all	59	15G168	SQNUT 1/4-20UNC2 SS18-8	
all	60	15U181	LOCKWASHER MEDIUM 1/4 SS18-8	
all	61	15K041S	HEXCAPSCR 1/4-20UNC2AX1 SS18-8	
all	63	09RM01212G	04Z CAPSW 12FT 180DEG ROLLER GOLD	
all	64	09R008BSTD	82026#* 09R008B+MOUNTING HDWRE+INST	
all	65	02 10391	COVERSTRIP-ELECTROPOL	
all	66	53A031B	BODY-EL90MALE.25X1/8 #269C-42B	
all	67	27C075010B	03Z AIRCYL 3/4"BORE1"STK EXTROD	
all	68	15G220	02Z LTHX THIN LOKNUT 3/8-24 SSNTE	
all	69	15G177	HXNUT 1/4-28UNF2B SAE ZINC GR2	
all	70	02 14487B	87336B PLUNGER-SAMPLE DOOR LATCH	
all	71	ADL66021	97000Z ASSY=SMP DR FL OPN LH+SW 316	
all	72	03 66036	97373B FULL OPEN BUMPER MNT L-SMPL	
all	73	03 66035	97417CFULL OPEN LATCH MNT L-SMPL-D	
all	74	60C075	TRUCK BUMPER 2+1/2ODW3/8HO.613	
all	75	15K100	HEXCAPSCR 3/8-16X1+1/4 SS18-8	
all	76	15U260	LOCKWASHER MEDIUM 3/8 SS18-8	
all	77	15U246	FLATWASHER 1"ODX25/64IDX1/8"304 S/S	
all	78	15U245	01Z FLTWASH 3/8 STD COMM 18-8 SS	
all	79	15G207	HEXLIGHTLOKNUT 3/8-16 18-8SS NTE066	

Installation Door with Sample Port

64046E6N/J6N, 72046E5N/J5N, 72058J2N/J5N

Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400

Litho in U.S.A.

Parts List—Installation Door with Sample Port

Find the correct assembly first, then find the needed components. The item letters (A, B, C, etc.) assigned to assemblies are referred to in the "Used In" column to identify which components belong to an assembly. The item numbers (1, 2, 3, etc.) assigned to components relate the parts list to the illustration.

Used In	Item	Part Number	Description	Comments
all	80	15G206	HEXNUT 3/8-16 UNC2 SS 18-8	
all	81	SA 15 028	70239D* DOOR LATCH ASSY-DIVCYLS	
all	82	02 15633S	93216# DOOR LATCH ADJPLT=S/S	
all	83	15K100	HEXCAPSCR 3/8-16X1+1/4 SS18-8	
all	84	15U260	LOCKWASHER MEDIUM 3/8 SS18-8	
all	85	53A031B	BODY-EL90MALE.25X1/8 #269C-42B	
all	86	53A059A	NUT 1/4"BR.HOLYOKE AND #61A-4	
all	87	53A500	1/4" SLEEVE-DELRIN	
all	88	53A501	TUBEINSERT .170"OD	
all	89	60E004TE	04Z 1/4"OD X.170"ID NYL TUBING *	
all	90	53A042	BULKHDUNION 1/4"COMP.BODY ONLY	
all	91	53A042A	BULKHDUNION 1/4"COMP.=JAMNUT	
all	92	15K112	HXCAPSCR 3/8-16X1+1/2 SS18-8	
all	93	15U260	LOCKWASHER MEDIUM 3/8 SS18-8	
all	94	15U245	01Z FLTWASH 3/8 STD COMM 18-8 SS	
all	95	15P180	TRDCUT-F HXHD 1/4-20UNC2X5/8 SS304	
all	96	09R008BSTD	82026#* 09R008B+MOUNTING HDWRE+INST	
all	97	02 10391	COVERSTRIP-ELECTROPOL	
all	98	GKE65001D	95253@ INST=DOOR KNIFE EDGE 316L	
all	99	Y3 65045D	95253# MACH=KNIFE EDGE 40"DR 6446D6	
all	100	W3 65338A	95246D*WLMT=LOAD/UNLOAD SCOOP W/TUB	
all	101	05 20052C	93287# 1/8 GASKET DR 72D E=1SEGMENT	
all	102	05 20052D	93287# 1/16GASKET DR 72D E=1SEGMENT	
all	103	05 20052E	93287# 1/32GASKET DR 72D E=1SEGMENT	
all	104	15K100	HEXCAPSCR 3/8-16X1+1/4 SS18-8	
all	105	15U260	LOCKWASHER MEDIUM 3/8 SS18-8	
all	106	15U246	FLATWASHER 1"ODX25/64IDX1/8"304 S/S	
all	107	20C040B	SILSEAL RTV CLR10.2 OZ #59575	
all	108	ADL66001	97000Z ASSY=DR CLOSED STRIKER 304	
all	109	05 20143	84492C PLATE=DOOR LATCH STRIKER 72T	
all	110	15K173A	HXCAPSCR 1/2-13UNC2AX1.75 GR5 PLATD	
all	111	15U490	FLAWASH 1+1/2X17/32X1/4ZINC	
all	112	15U300	LOKWASHER REGULAR 1/2 ZINC PLT	
all	113	W5 20146	93303C* COVER=WLMT,DOORSW=7244TILTS	
all	114	15K031	BUTSOKCAPSCR 1/4-20X1/2 SS18-8	
all	115	15U181	LOCKWASHER MEDIUM 1/4 SS18-8	
all	116	E25 00100A	94102B DOOR INTLK SWITCH ASSY E6N	
all	117	09R008BSTD	82026#* 09R008B+MOUNTING HDWRE+INST	
all	118	02 10391	COVERSTRIP-ELECTROPOL	
all	119	ADS66001	97000Z PRTS=SECONDARY DR SWITCH 304	
all	120	09RM01212S	03Z CAPSW 12' 180DEG ROLLER SILVE	
all	121	09R008BSTD	82026#* 09R008B+MOUNTING HDWRE+INST	
all	122	W5 20024E	92703#*WLMT=BRKT SECOND DR SW 6446	

Parts List, cont.—Installation Door with Sample Port

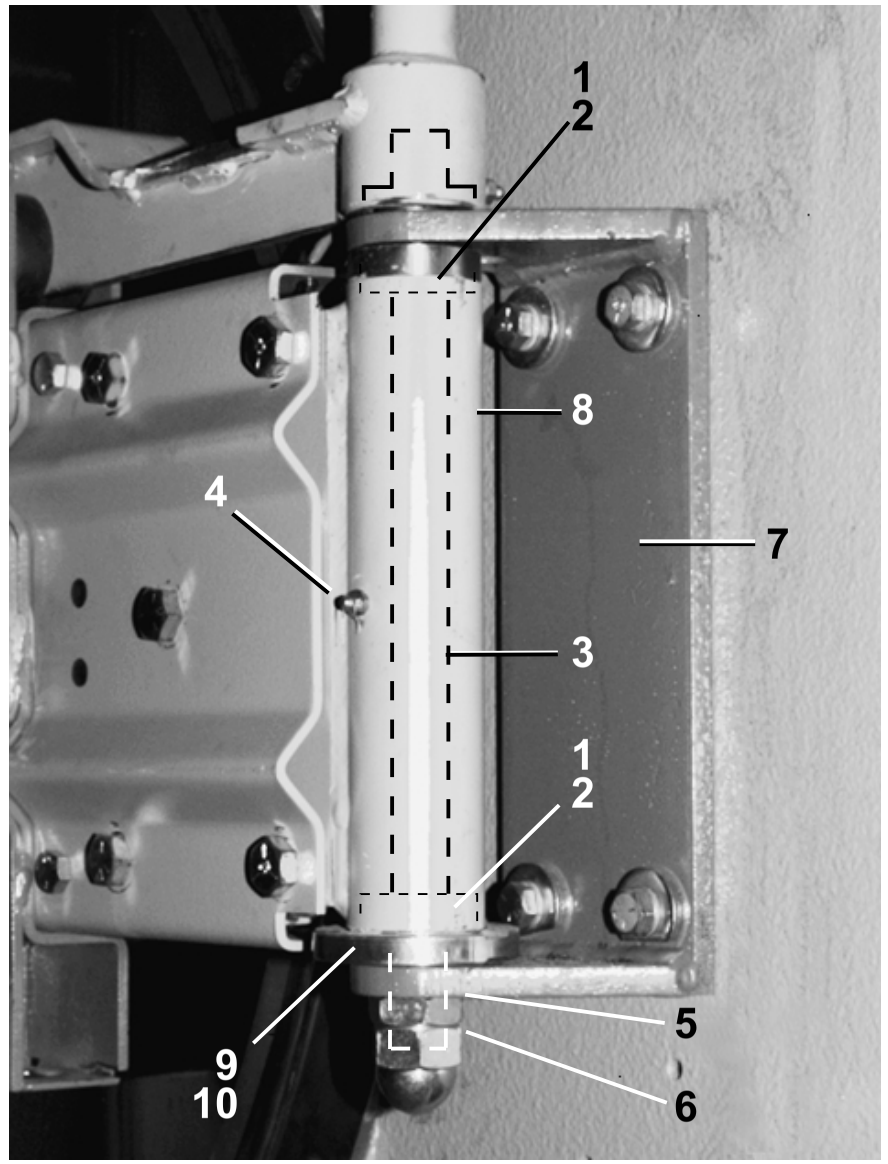
Used In	Item	Part Number	Description	Comments
all	123	15K084S	HXCAPSCR 3/8-16NCX5/8 SS18-8	
all	124	15U245	01Z FLTWASH 3/8 STD COMM 18-8 SS	
all	125	15U260	LOCKWASHER MEDIUM 3/8 SS18-8	

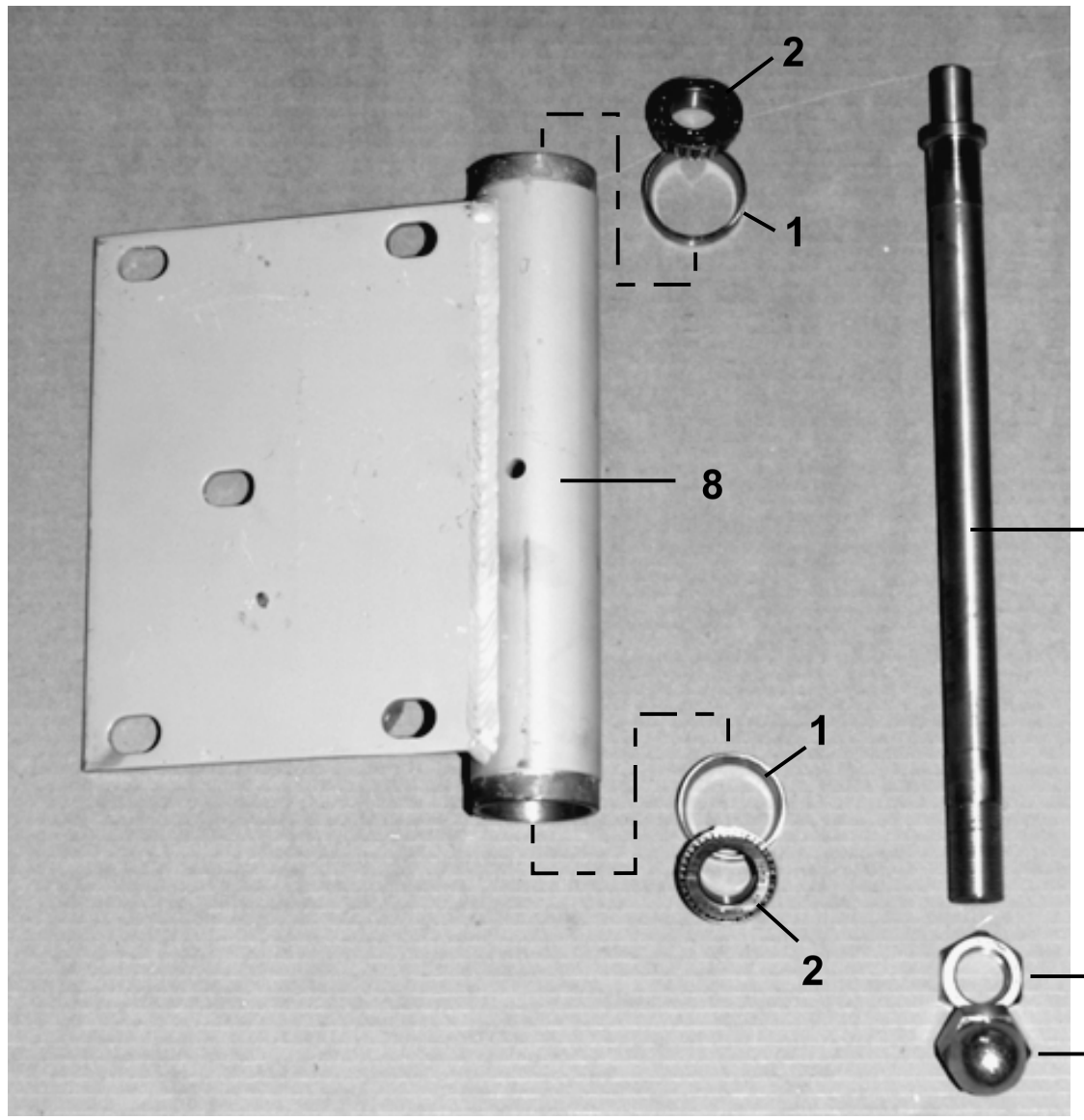
.

Door Hinge

64046E6N/J6N, 72046E5N/J5N, 72058J2N/J5N

Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400
BMP940014/98181V (1 of 2)
Litho in U.S.A.





Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400

Litho in U.S.A.

Parts List—Door Hinge

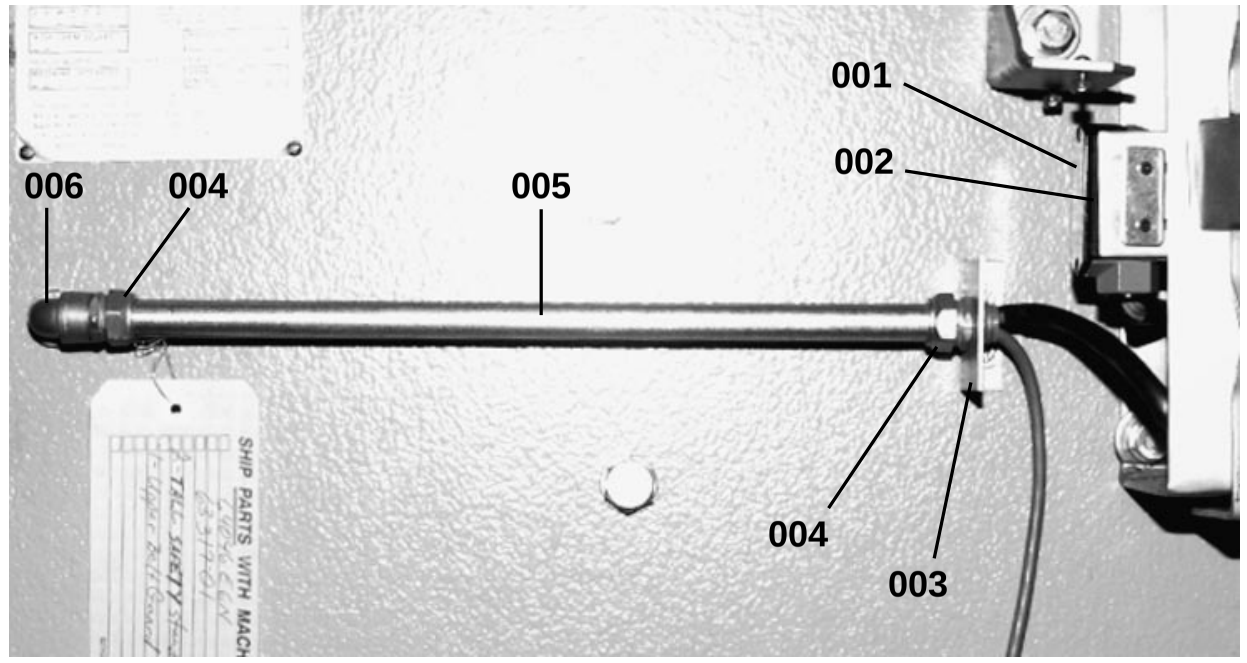
Find the correct assembly first, then find the needed components. The item letters (A, B, C, etc.) assigned to assemblies are referred to in the "Used In" column to identify which components belong to an assembly. The item numbers (1, 2, 3, etc.) assigned to components relate the parts list to the illustration.

Used In	Item	Part Number	Description	Comments
			----------ASSEMBLIES----------	
	A	ABD65001	94091L ASSY=DOOR BERING&HINGE P/N	
			----------COMPONENTS----------	
all	1	54A976	CUP TIMKN #L44610 2"OD 1BX+PT#	
all	2	54A977	CONE TIMKN #L44643 1"ID 1BX+P#	
all	3	05 20140A	82047B PIN-DOOR HINGE 15.625LG 72T	
all	4	54M015	65408A GREASEFIT 60X36/60X44 1610BL	
all	5	15G248	HXJAMNUT 1-14UNF2B ZINC GR2	
all	6	15G249	HXCAPNUT L-CROWN 1-14UNF2B ZINC GR2	
all	7	W5 20024A	92707B*HINGE BRACKET WELDMENT 72T	
all	8	W5 20017	92707C* WELDMENT=40" DOOR HINGE	
all	9	54JH13562B	93262C HINGE COL SPLIT 3.56 FL TOP	
all	10	15K041E	05Z SKCPSCR 1/4-20X1+1/4"BLK	

PELLERIN MILNOR CORPORATION
700 JACKSON STREET/POST OFFICE BOX 400
KENNER, LOUISIANA 70063-0400 USA

DRAWING
(See other page for parts list, if applicable.)

DOOR INTERLOCK SWITCH ASSEMBLY
64046E6N/J6N/D6N 72046E5N/J5N/D5N 72058J5N



LITHO IN USA

PELLERIN MILNOR CORPORATION
700 JACKSON STREET/POST OFFICE BOX 400
KENNER, LOUISIANA 70063-0400 USA

PARTS LIST
(See other page for drawing.)

DOOR INTERLOCK SWITCH ASSEMBLY
64046E6N/J6N/D6N 72046E5N/J5N/D5N 72058J5N

ITEM	PART NUMBER	DESCRIPTION	HOW PART IS USED IN ASSEMBLY (Only if pertinent)
00A	E25 00100A	94102B DOOR INTLK SWITCH ASSY E6N	REFERENCE ASSEMBLY
001	09R012STDG	82026#* 09R012 +MOUNTING HDWRE+INST	
002	20A015GA	73115A SHIM=FRICTION=CWU DOORSWITCH	
003	03 BL3X2	92607B BRKT:72DYE DOOR CABLE	
004	12K040	1/2" COND.EMT CONDUIT PECO #260B	
005	12C050	TUBING 1/2 EMT THIN WALL *10RML	
006	12M036L	1/2" 90-DEG SHORT ELLS PECO #780DC	
		******** END OF PARTS LIST ********	

How to Read Parts List

Reference Item Numbers—Items 00A, 00B, 00C, etc., or 00X, 00Y, 00Z, etc., appearing at the top of **some** parts lists, are for reference and provide:

1. The part number for the entire assembly depicted in the drawing or a major sub-assembly thereof, and/or
2. The range of machine models this drawing applies to.

If more than one reference item appears, this usually means this drawing applies to more than one assembly (and thus to more than one range of machines).

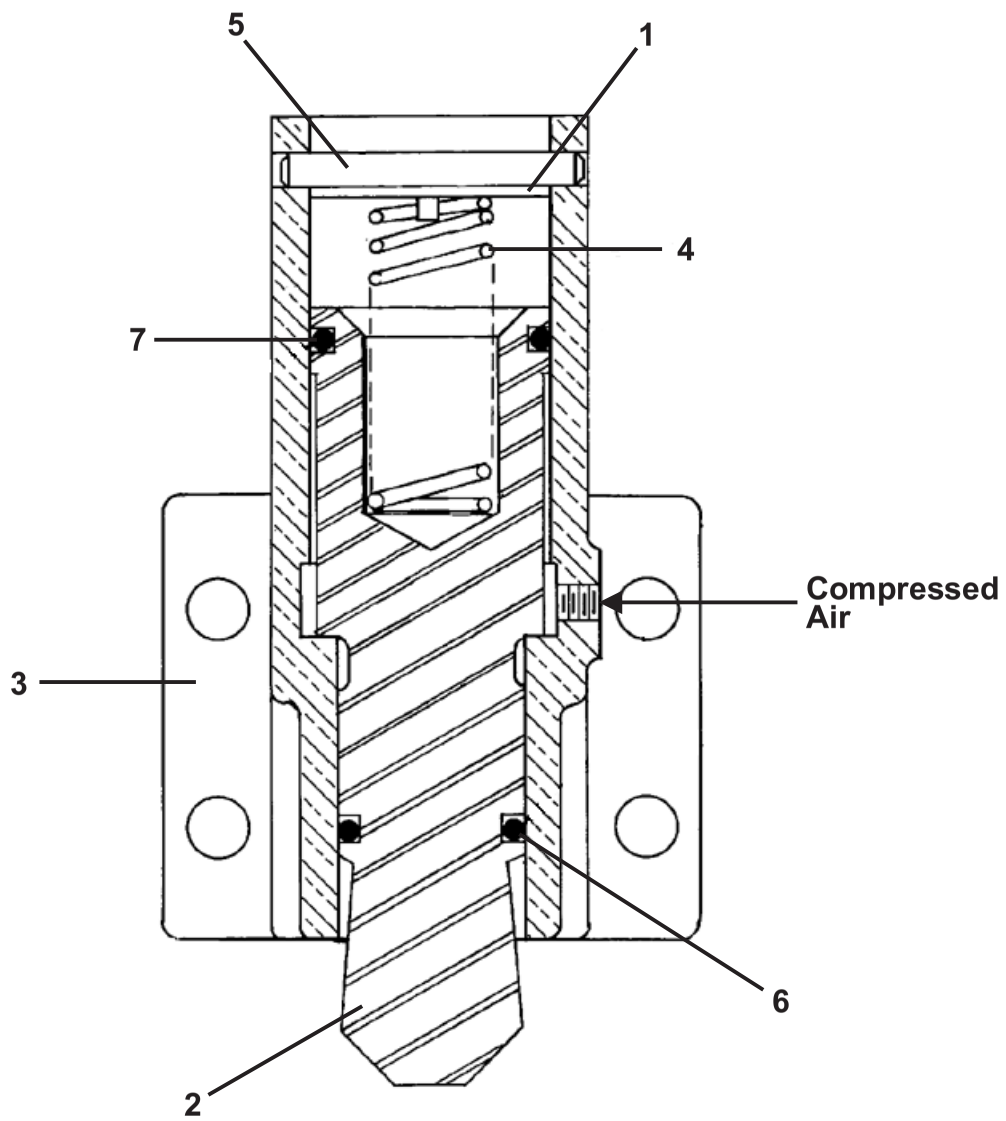
Component Item Numbers—For any item on the drawing (e.g., item ①), there may be several corresponding items on the parts list (e.g., 001A, 001B, 001C, etc.) which are similar components on different assemblies. "How Part Is Used In Assembly" identifies which components apply to your machine, by listing either the machine model, or the reference item number from the top of the parts list (e.g., 00A, 00B, 00C, etc.), or a particular characteristic (e.g., bronze or stainless steel), or special ordering information, such as a repair kit number.

LITHO IN USA

Door Latch

Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400

Litho in U.S.A.



Parts List—Door Latch

Find the correct assembly first, then find the needed components. The item letters (A, B, C, etc.) assigned to assemblies are referred to in the "Used In" column to identify which components belong to an assembly. The item numbers (1, 2, 3, etc.) assigned to components relate the parts list to the illustration.

Used In	Item	Part Number	Description	Comments
			----------ASSEMBLIES----------	
	A	SA 15 028	70239D* DOOR LATCH ASSY-DIVCYLS	
			----------COMPONENTS----------	
all	1	02 15105	RETAINER LATCHSPRING	
all	2	02 15297	91103B PLUNGER=DOORLOCK(DIVCYL)	
all	3	02 15298	CYLINDER-DOORLATCH INTERLOCK	
all	4	02 15836	68201A DOOR LATCH SPRING (302SS)	
all	5	15H090	01Z SPRNG PIN 1/4X1+7/8 LONG PLAIN	
all	6	60C122	ORING 1" ID 1/8CS BN 70 DURO #214	
all	7	60C128	ORING 1+3/8 ID 1/8CS BN 70DURO #220	

Section 5

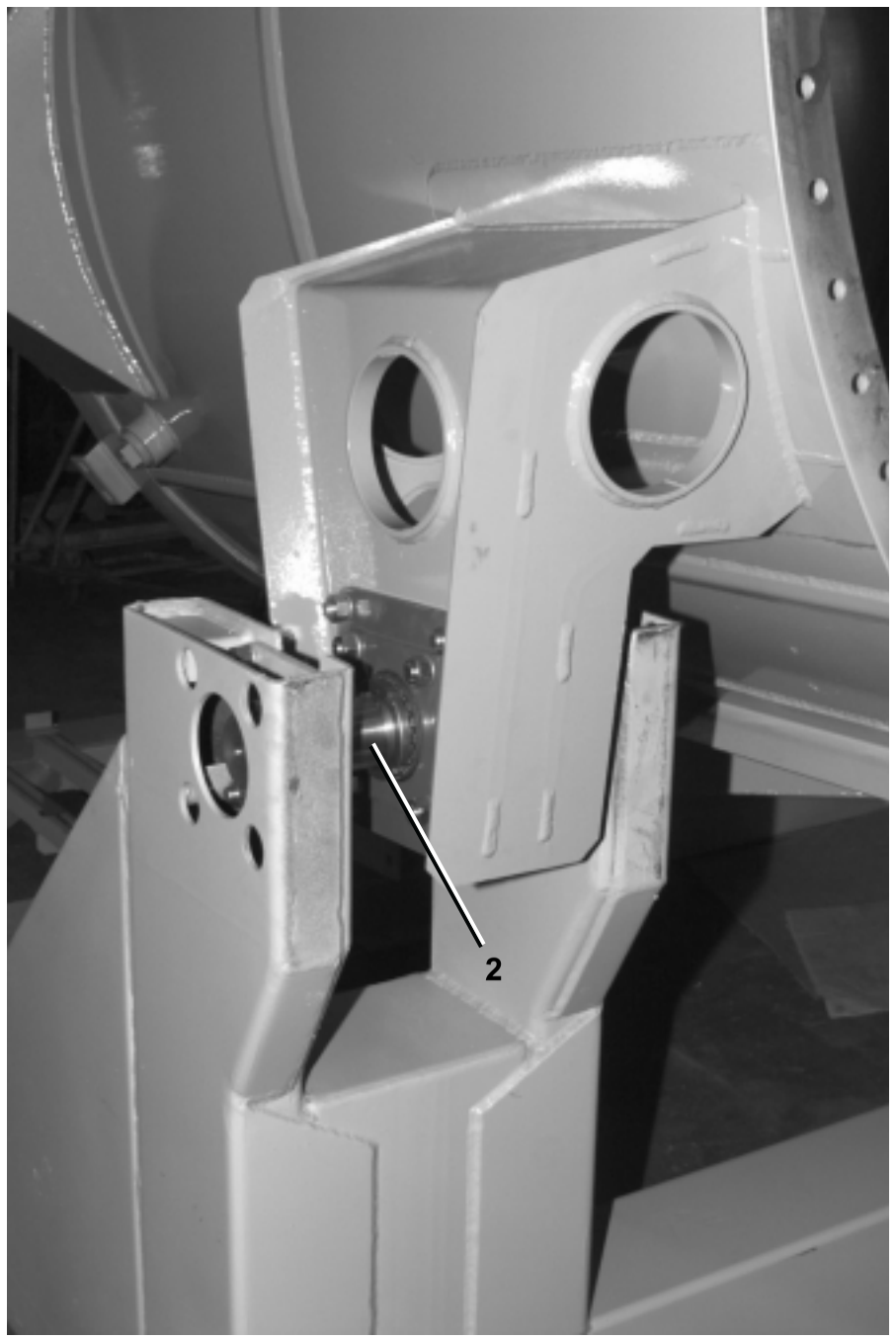
Tilt Frame and Pivots

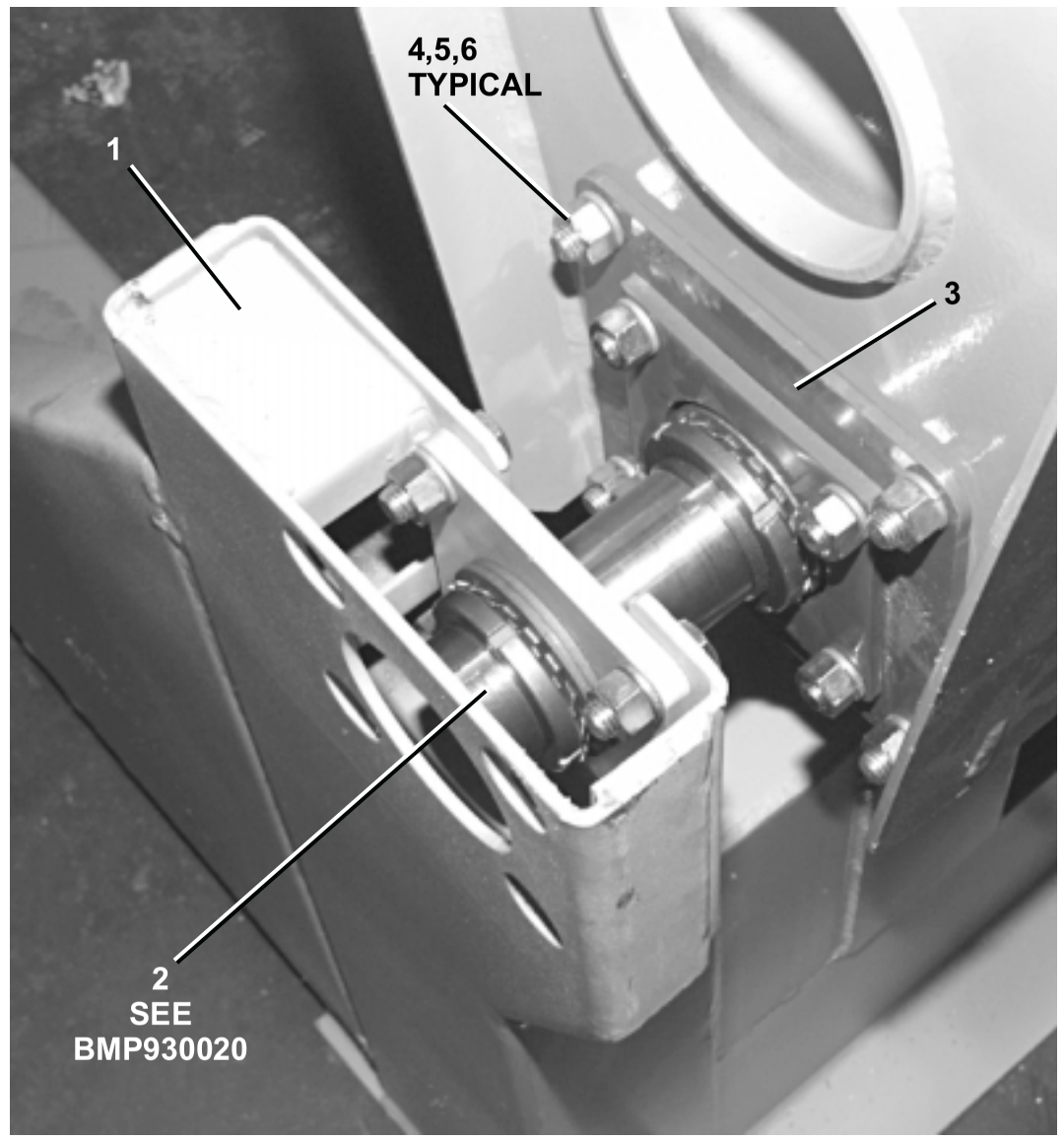
Pivot Installation

72058/72075J2N

Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400

Litho in U.S.A.





Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400

Litho in U.S.A.

Parts List—Pivot Installation

Find the correct assembly first, then find the needed components. The item letters (A, B, C, etc.) assigned to assemblies are referred to in the "Used In" column to identify which components belong to an assembly. The item numbers (1, 2, 3, etc.) assigned to components relate the parts list to the illustration.

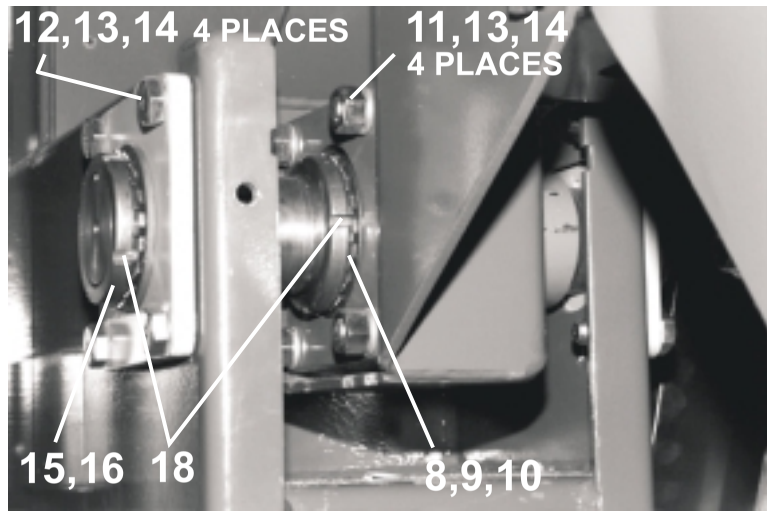
Used In	Item	Part Number	Description	Comments
			----------ASSEMBLIES----------	
	A	GHF58501T	98000Z INST=FRAME+HYD CYL+PVTS	
			----------COMPONENTS----------	
	1	W5 58671T	99481E WLMT=BASE FRAME 7258J2N THIN	
	2	GBM16003	93491B INSTL=BAL BUSH PIVOT M7E/E6N	
	3	X5 58570	99407C PLATE=PIVOT MNT BLOCK	
	4	15K214E	HXCAPSCR 5/8-11UNC2AX1.5 Gr5	
	5	15U315	LOKWASHER MEDIUM 5/8 ZINCPL	
	6	15G238	HXNUT 5/8-11UNC2B SAE ZINC GR-	

Installation of Pivot Ball Bushing

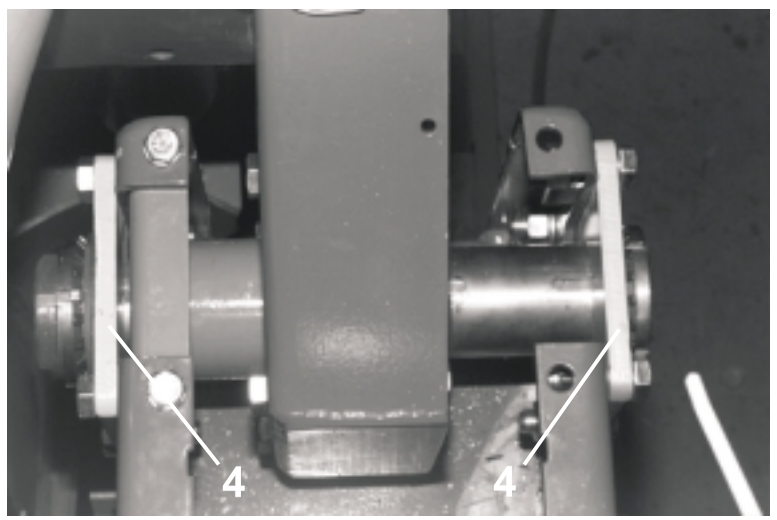
42032M7/M9 64040,64050E6N 64046E6N/J6N 72046E5N/J5N 72058J2N/J5N 72075J2N

Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400

Litho in U.S.A.

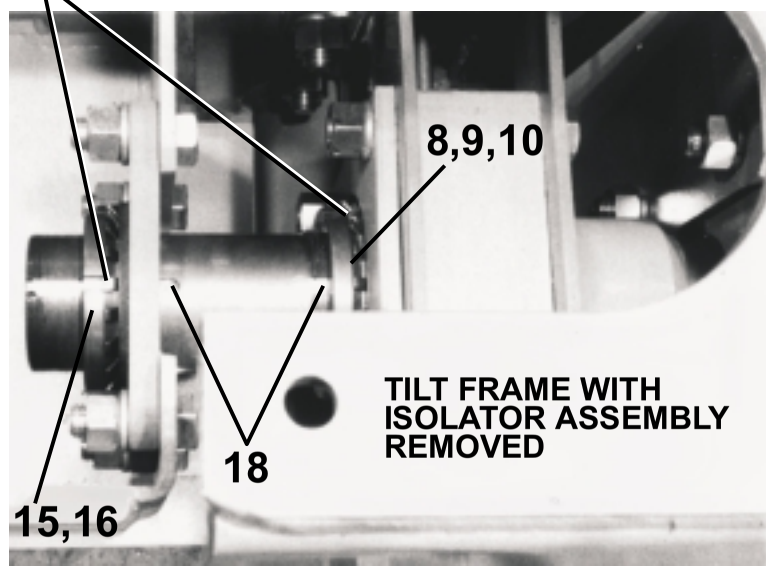


Note: These two views are of the 42032M7E Pivot Installation-Right Side



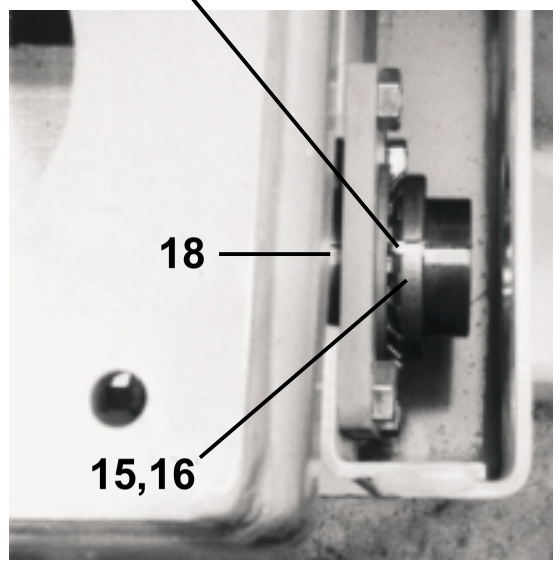
Top View of Right Pivot

LOCKTAB BENT OVER GROOVE IN LOCKNUT

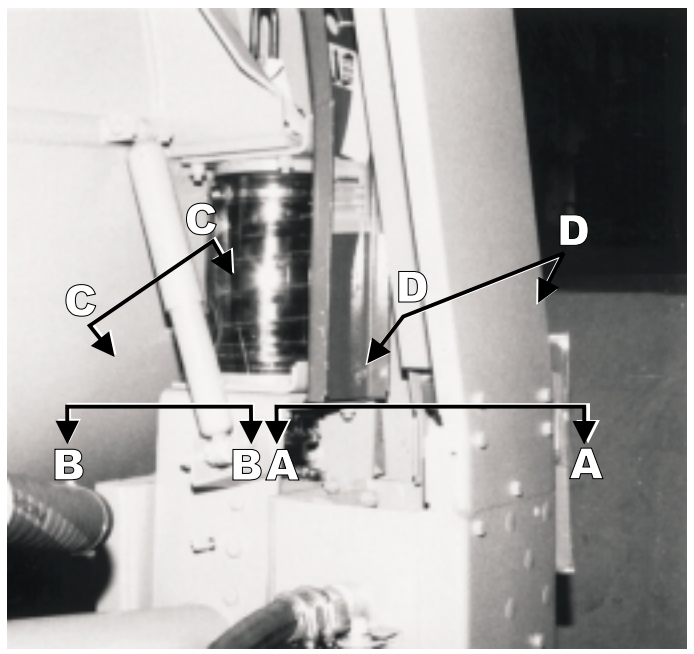


View A-A

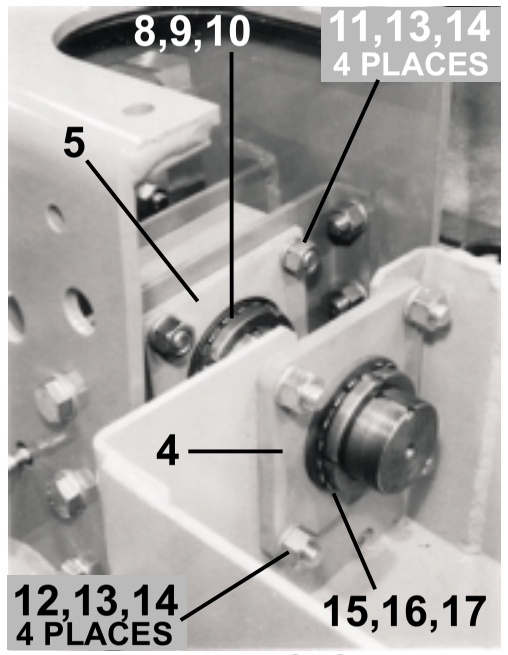
LOCKTAB BENT OVER GROOVE IN LOCKNUT



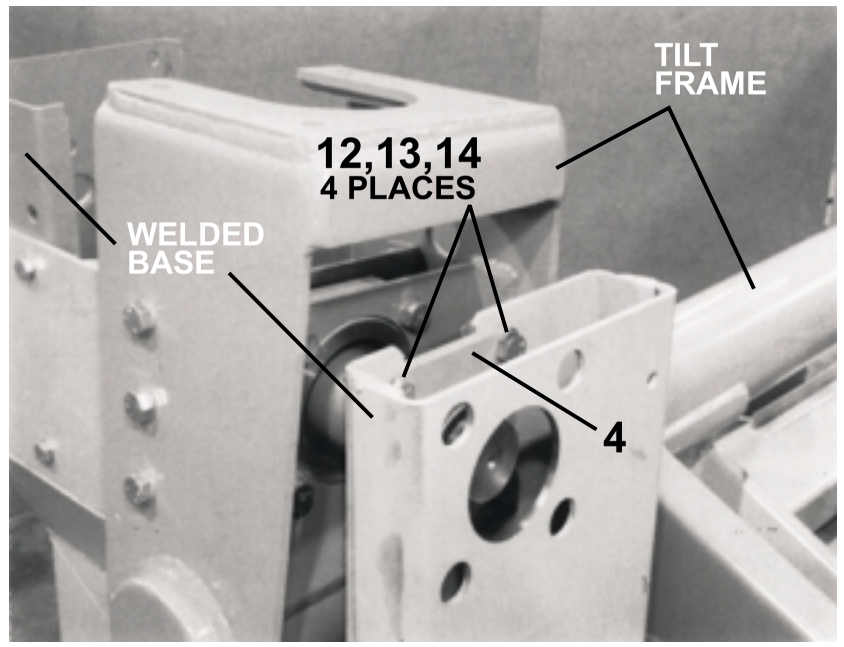
View B-B



Overview Pivot Installation 64046E6N-Left Side

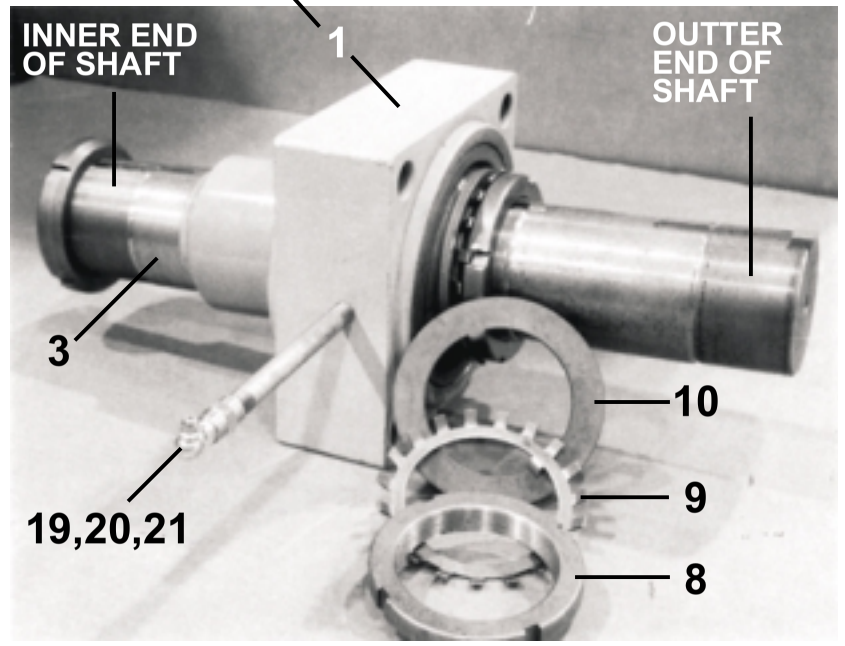


View C-C



View D-D

SEE BMP930026



Ball Bushing and Shaft

Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400
Litho in U.S.A.

Parts List—Pivot Ball Bushing

Find the correct assembly first, then find the needed components. The item letters (A, B, C, etc.) assigned to assemblies are referred to in the "Used In" column to identify which components belong to an assembly. The item numbers (1, 2, 3, etc.) assigned to components relate the parts list to the illustration.

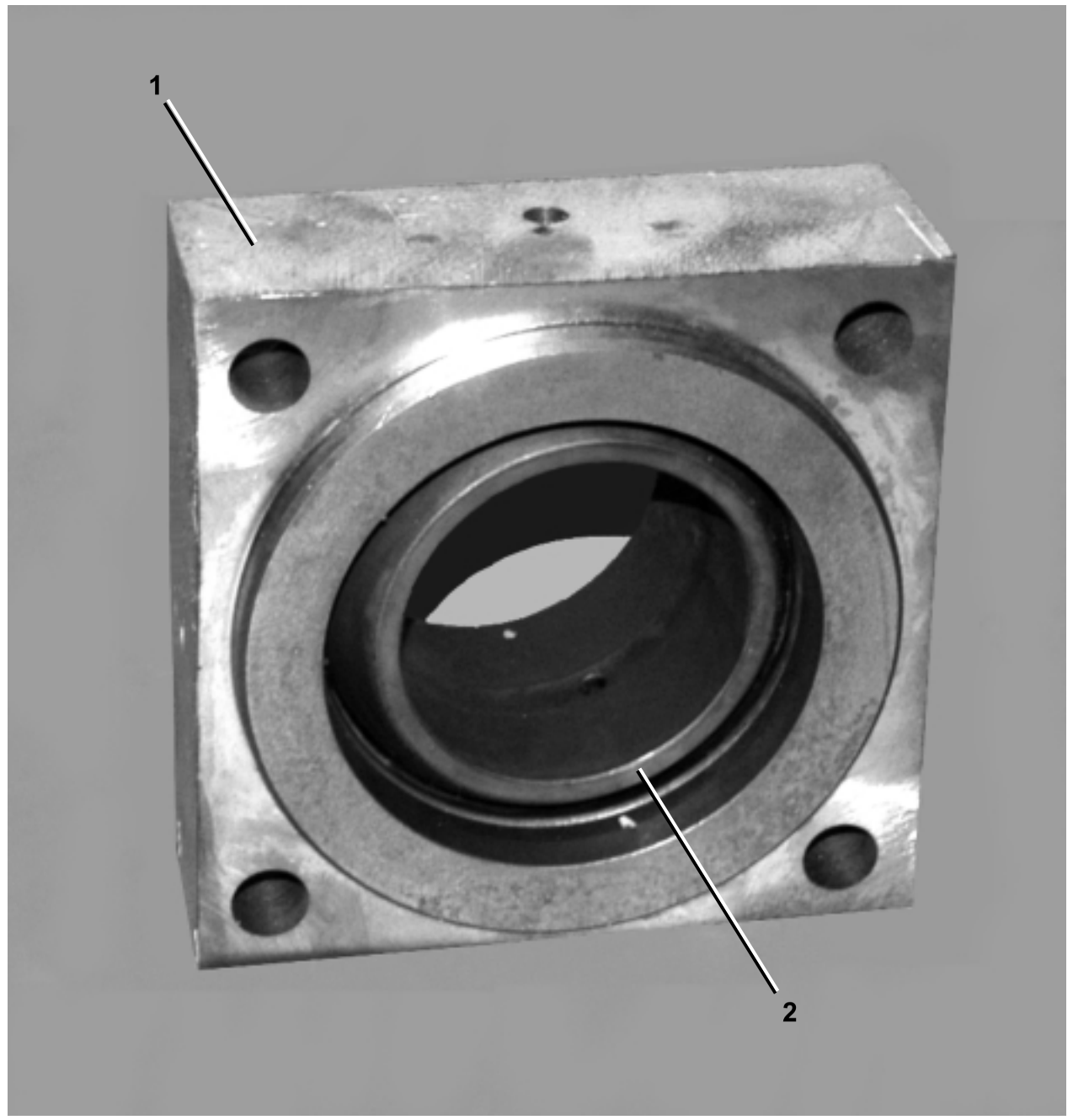
Used In	Item	Part Number	Description	Comments
			----------ASSEMBLIES----------	
	A	GBM16003	93491B INSTL=BAL BUSH PIVOT M7E/E6N	
			----------COMPONENTS----------	
all	1	ABM16003	93442B ASSY=BAL BUSH PIV 42M7E64E6N	
all	3	X3 65150	94277C SHAFT=3" BALL BUSH PIVOT	
all	4	X3 65153	93023B MNT PLT=3" BALL BUSH PIVOT	
all	5	03 65152	93491B LOCK PLT=3" BALL BUSH PIVOT	
all	8	56AHN14	N14 BEARING LOCKNUT	
all	9	56AHW14	W14 BEARING LOCKWASHER	
all	10	56ATW14	TONGUE WASH TIM K91514 FOR N14	
all	11	15K227A	HXCAPSCR 5/8-11X4.5 Gr8 ZINC	
all	12	15K214E	HXCAPSCR 5/8-11UNC2AX1.5 GR5 ZNC/CD	
all	13	15U315	LOKWASHER MEDIUM 5/8 ZINCPL	
all	14	15G238B	HEXFINNUT 5/8-11UNC2 Gr8 ZINC	
all	15	56AHN13	N13 BEARING LOCKNUT	
all	16	56AHW13	W13 BEARING LOCKWASHER	
all	18	15E212	STDSQMACHKEY 5/16X2+1/2 C1018	
all	19	5N0C04AG42	NPT NIP 1/8X4 TBE GALSTL SK40	
all	20	5SCC0CBE	NPT COUP 1/8 BRASS 125# 103A-A	
all	21	54M023	GRSFIT 45DEG ALEMITE 1688-B	

Ball Bushing

64046E6N/J6N, 72046E5N/J5N, 72058J2N/J5N, 42032M7E, M7V4840C, M7V4836C

Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400

Litho in U.S.A.



Parts List—Assembly Ball Bushing

Find the correct assembly first, then find the needed components. The item letters (A, B, C, etc.) assigned to assemblies are referred to in the "Used In" column to identify which components belong to an assembly. The item numbers (1, 2, 3, etc.) assigned to components relate the parts list to the illustration.

Used In	Item	Part Number	Description	Comments
			----------ASSEMBLIES----------	
	A	ABM16003	ASSY=BAL BUSH PIV 42M7E64E6N	
			----------COMPONENTS----------	
all	1	X3 65151	MNT BLOCK=3" BALL BUSH PIVOT	
all	2	54A707	BALL BUSHING 3" RBC# B48-L	

Hydraulic Cylinder Mounting 2” Ball Bushing

64040/64050E6N 64046E6N/J6N 72046E5N/J5N 72058J5N 72058/72075J2N

Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400

Litho in U.S.A.

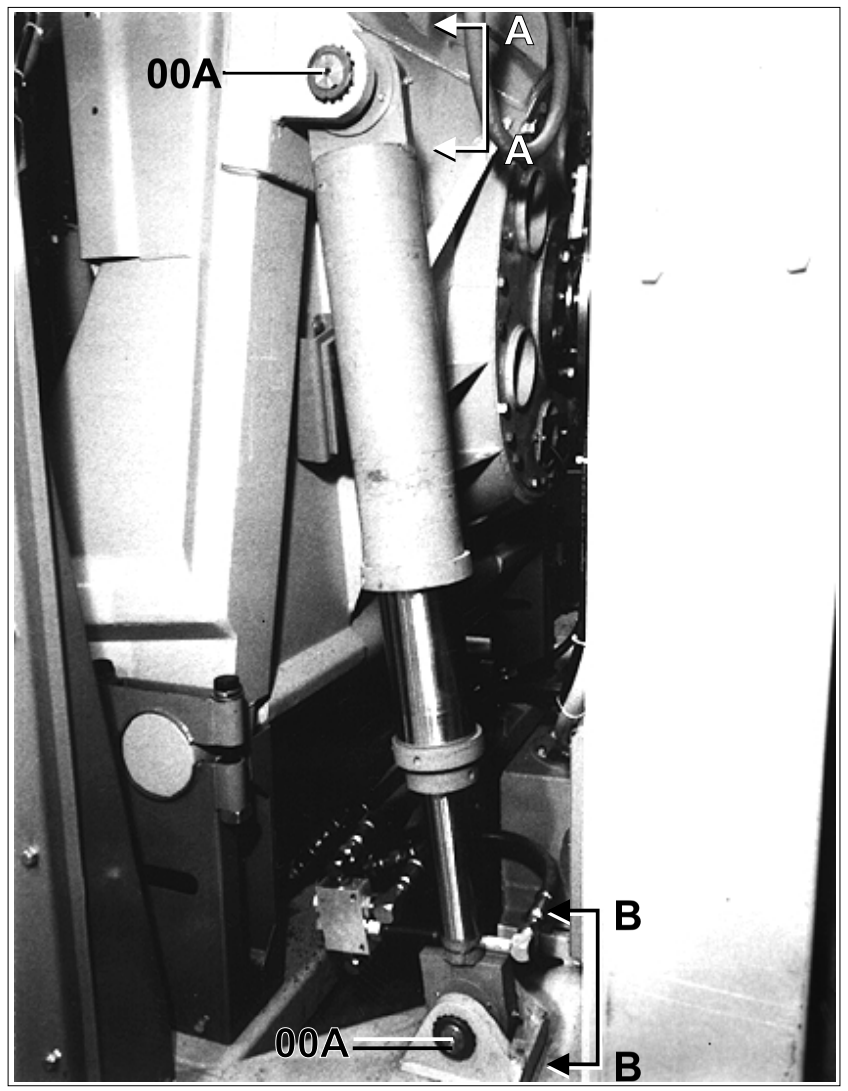


Figure 1:

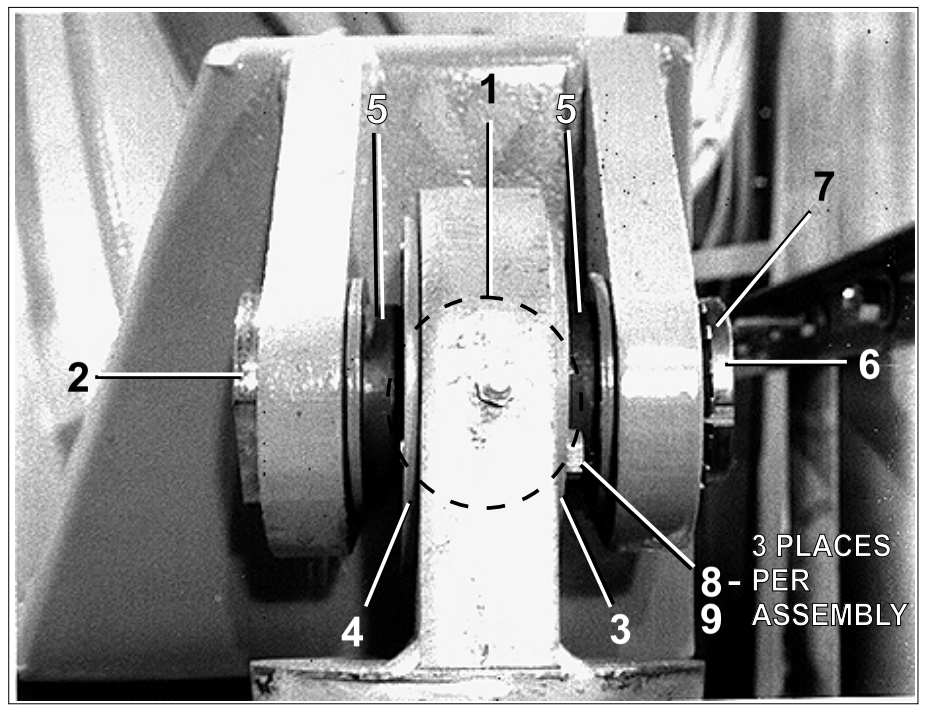


Figure 2: View A-A

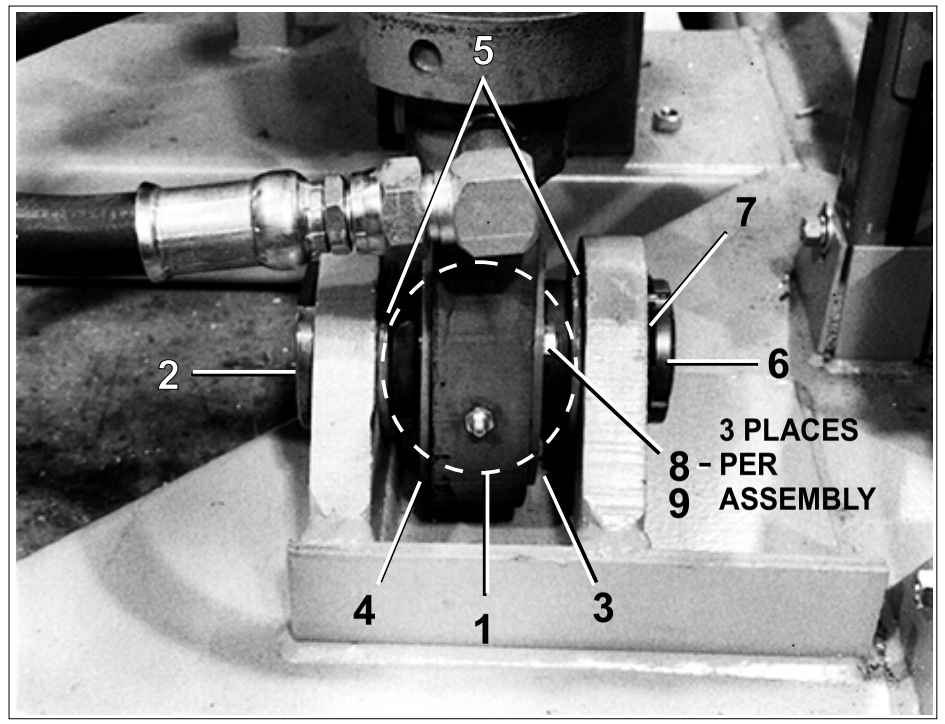


Figure 3: View B-B

Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400
Litho in U.S.A.

Parts List—Hydraulic Cylinder Mounting 2” Ball Bushing

Find the correct assembly first, then find the needed components. The item letters (A, B, C, etc.) assigned to assemblies are referred to in the "Used In" column to identify which components belong to an assembly. The item numbers (1, 2, 3, etc.) assigned to components relate the parts list to the illustration.

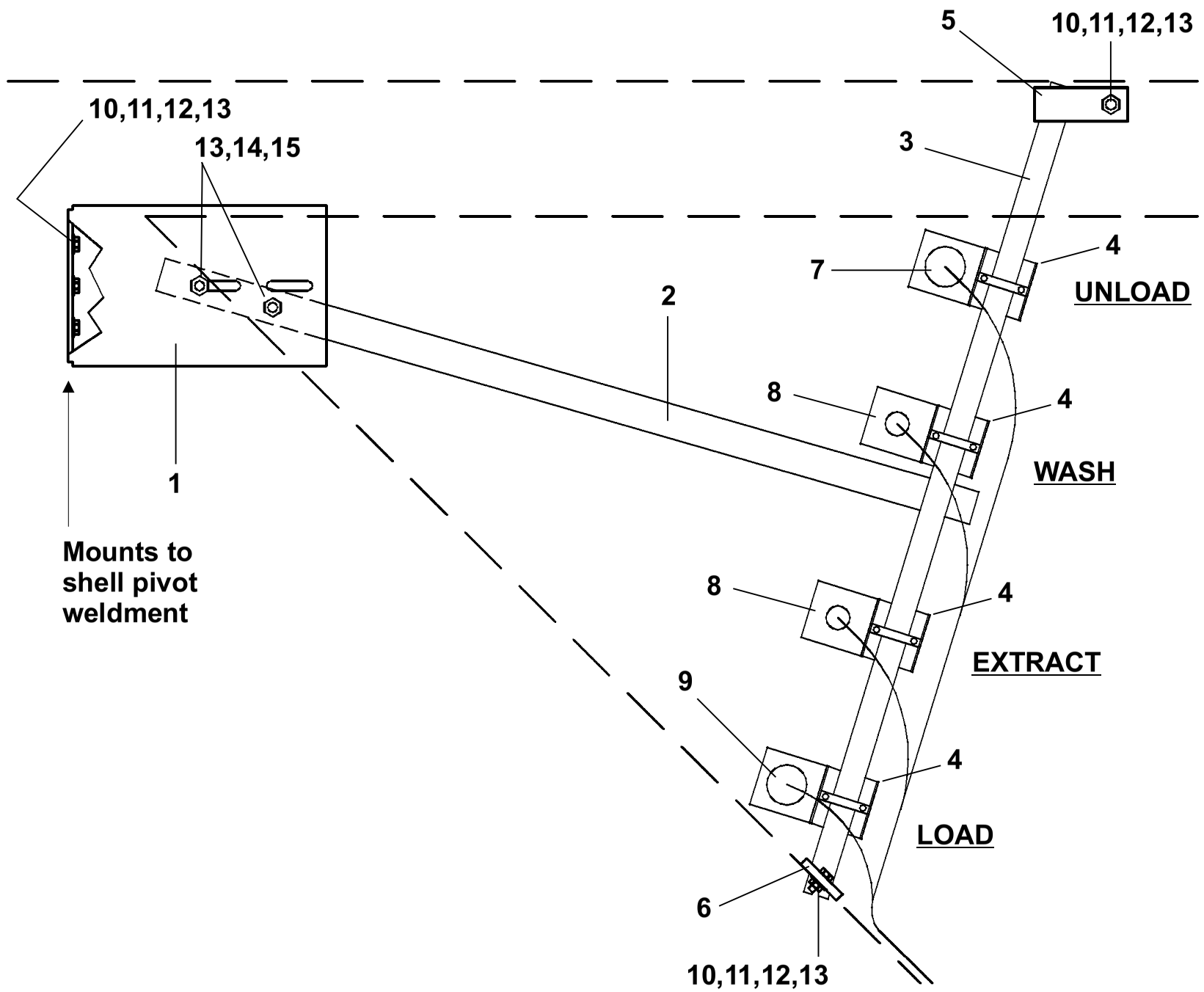
Used In	Item	Part Number	Description	Comments
----------ASSEMBLIES----------				
	A	AHT65001	94407B ASSY=HYDRAULIC MNT 2"BALBUSH	
----------COMPONENTS----------				
all	1	54A705A	00Z BALL-BUSH 2" SKF #GEZ200ES	
all	2	X3 65141	93387B BOLT=2.00 SFTDIA X 5.25L HYD	
all	3	03 65142	92483B WASH=HYD4.75ODX2.62IDW/HOLES	
all	4	X3 65142A	92483B WASH=HYD4.75ODX2.62IDW/TAP	
all	5	X3 65145	94283B SPCR=HYDCYL MNT2"BALBUSH SM	
all	6	56AHN09	N09 BEARING LOCKNUT	
all	7	56AHW09	W09 BEARING LOCKWASHER	
all	8	15K120	HXCAPSCR 3/8-16UNC2AX2 GR5 ZINC/CAD	
all	9	15U255	LOCKWASHER MEDIUM 3/8 ZINCPL	

Proximity Switch Installation

72058/72075J2N

Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400

Litho in U.S.A.



Parts List—Proximty Switch Installation

Find the correct assembly first, then find the needed components. The item letters (A, B, C, etc.) assigned to assemblies are referred to in the "Used In" column to identify which components belong to an assembly. The item numbers (1, 2, 3, etc.) assigned to components relate the parts list to the illustration.

Used In	Item	Part Number	Description	Comments
			----------ASSEMBLIES----------	
	A	GPS75501T	INST=PROX SWTCH BRKT 7275J2N	
			----------COMPONENTS----------	
all	1	W5 58721	WELD=PROC SWTCH TARGET MNT BRT	
all	2	05 58721B	PROC SWITCH TARGET	
all	3	W5 75015	WLDMT=TILT SWITCH BAR	
all	4	W3 60220B	PROX SW MTG WLMT 30MM, 6440	
all	5	W3 60220A	PROX SW MTG WLMT 18MM, 6440	
all	6	09RPS30AAS	PRXSW QK CONN 30M NO-AC SHLD	
all	7	09RPS30BAS	PRXSW QK CONN 30M NC-AC SHLD	
all	8	09RPS30ADS	PRXSW QK CONN 30M NO-DC SHLD	
all	9	15K041	HXCAPSCR 1/4-2OUNC2AX1 GR 5 ZI	
all	10	15G165	HXNUT 1/4-20UNC2BSAE ZC GR2	
all	11	15U180	LOCKWASHER MEDIUM 1/4 ZINCPL	
all	12	15U185	FLATWASHER(USS STD) 1/4" ZNC P	
all	13	15K046	HXCAPSCR 1/4-20 UNC2A X 2"GR5	
all	14	15G140	HXCPNT 1/4-20 #C250=20 NKLPLT	

Section 6

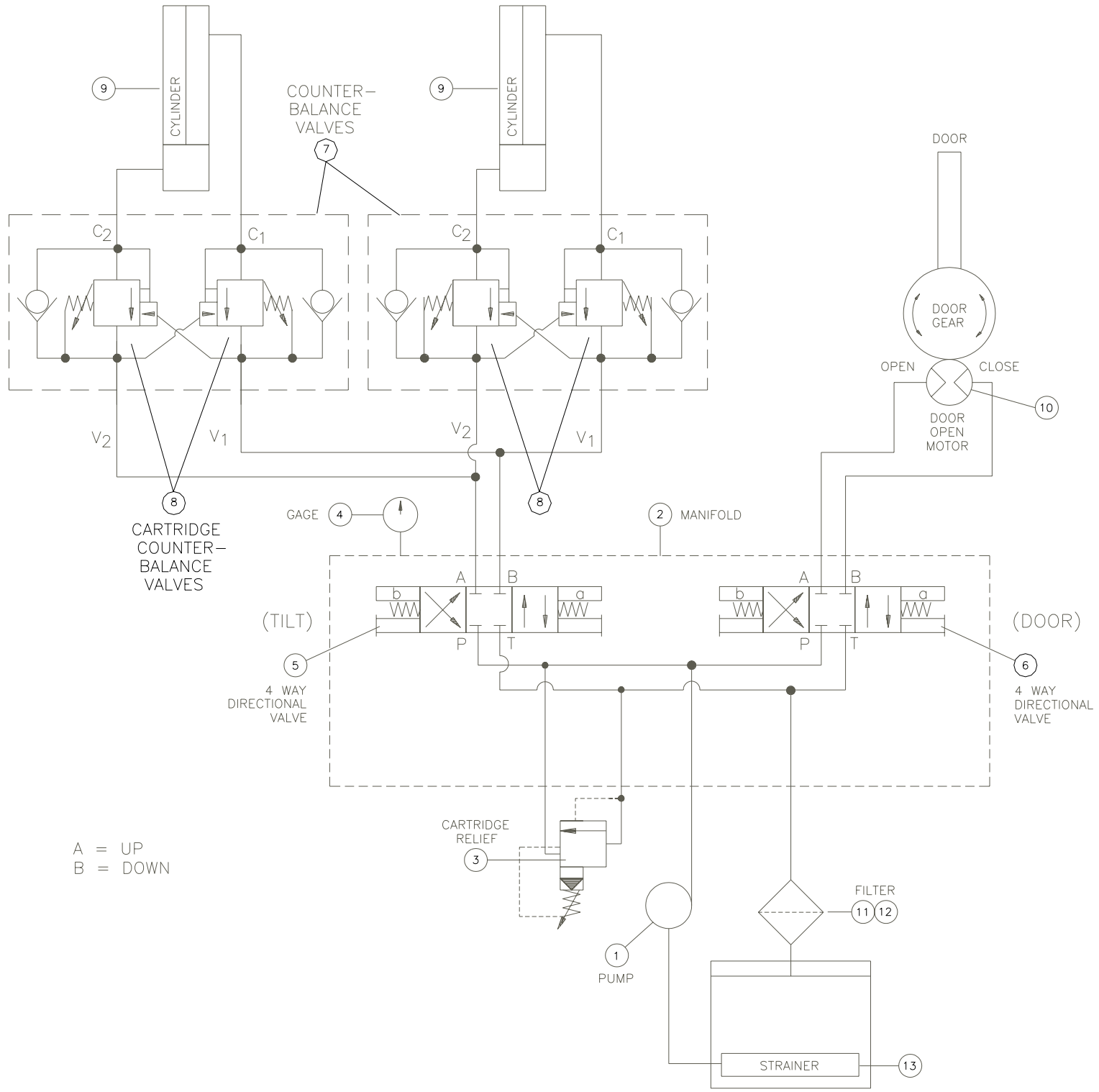
Hydraulic Piping and Assemblies

Hydraulic Schematic

64040/64050E6N 72058/72075J2N

Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400

Litho in U.S.A.



Parts List—Hydraulic Schematic

Find the correct assembly first, then find the needed components. The item letters (A, B, C, etc.) assigned to assemblies are referred to in the "Used In" column to identify which components belong to an assembly. The item numbers (1, 2, 3, etc.) assigned to components relate the parts list to the illustration.

Used In	Item	Part Number	Description	Comments
			----------ASSEMBLIES----------	
	A	GSD58001	INST=40"DR HYDMTR TRBKT 72J2	40”DOOR 72J2
	B	GSH60001	INST=40"DR HYDMTR+BRKTS 6440	40”DOOR 6440 & 48”DOOR 6450
	C	GSH60001A	INST=48"DR HYDMTR+BRKTS 72J2	48”DOOR 72J2N
	D	AHT60120	ASSY=6440 TANK TOP ASSY	TANK ASSEMBLY “ALL”
	E	AHT60102	ASSY=34/48GAL-2ND VALV 6440	OPTIONAL 2ND VALVE “ALL”
	F	AHT60020	ASSY=1STG.HYD.CYL.39.2ST+PIPNG	1 STAGE 14 DEG 6440/50
	G	AHT60030	ASSY=3STG.HYD.CYL.59.6ST+PIPNG	3 STAGE 21DEG 6440/50
	H	AHT58020	ASSY=1STG HYD CYL J2N 7275	1 STAGE 7275 J2
	J	AHT58021	ASSY=1STG HYD CYL J2N 7258	1 STAGE 7258 J2
			----------COMPONENTS----------	
all	1	27E5500	PUMPHVDVANE;VICK#V20-1P13PD11	
all	2	96DH455	MANIFOLD, 2-VALVE D05 PARALLEL	
all	3	96DH455A	CARTRIDGE,RELIEFVICK#RV510S020	
all	4	27E731500	LIQFILL GAGE 0-1500PSI/BAR BRZ	
all	5	96RH711E37	DIRECTIONAL CONT. VLV.D05-NG10	TILT
all	6	96RH705E37	VALVE-HYD.4-WAY DIRECTIONAL	AUTO DOOR
all	7	96DH471	COUNTERBALANCE VALVE-SUN BODY	F,H,J
all	7	96DH472	C0UNTERBALANCE VALVE-SUN BODY	G
all	8	96DH471A	CARTRIDGE-COUNTERBAL.SUN	F,H,J
all	8	96DH472A	CARTRIDGE, COUNTERBALANCE VLV.	G
all	9	27E164039A	HYD.CYL.D/A 4"X2"X39.18"STK.	F (1 STAGE)
all	9	27E1657A59	HYD.CYL.3-STAGE 59.57"STROKE	G (3 STAGE)
all	9	27E16330MT	3X30 PRINCE HYDCYL W/MTG HDW	H (PRINCE 3X30)
all	9	27E16329MT	3X29 PRINCE HYDCYL W/MTG HDW	J (PRINCE 3X29)
all	10	27E320025	TDRQMOTOR- HYRAULIC	
all	11	27E7112	INTANK RETURN FILTER 1+1/4"	
all	12	27E7201	FILLER-BREATH-FILT.LHA#ABB-40N	
all	13	27E7113	STRAINER,TANKMT LHA#TM-25-100	6440/6450 ONLY
all	13	27E7107	SUCTION STRAINER 1+1/4"PORT	7258/7275 ONLY

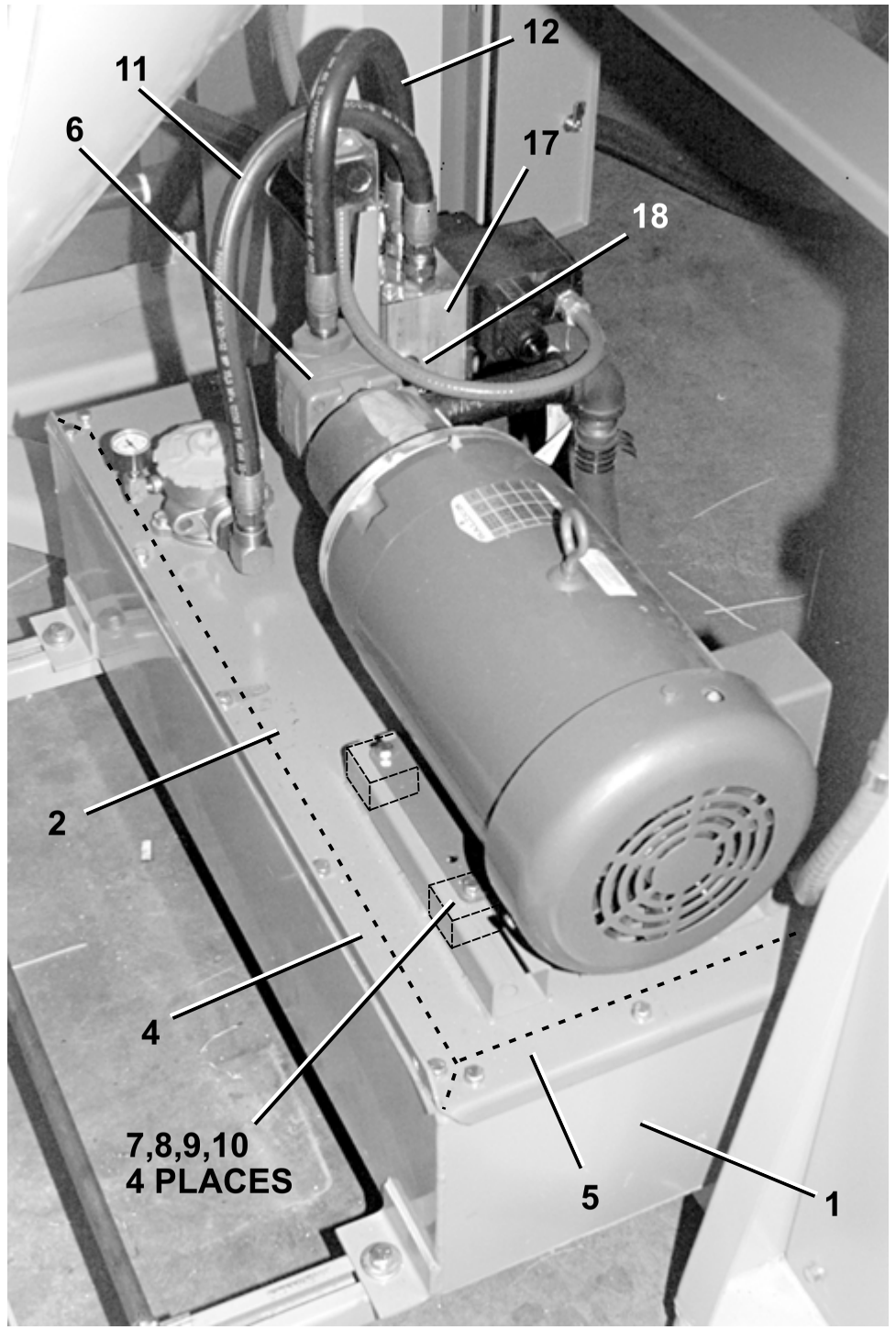
Hydraulic Tank and Installation

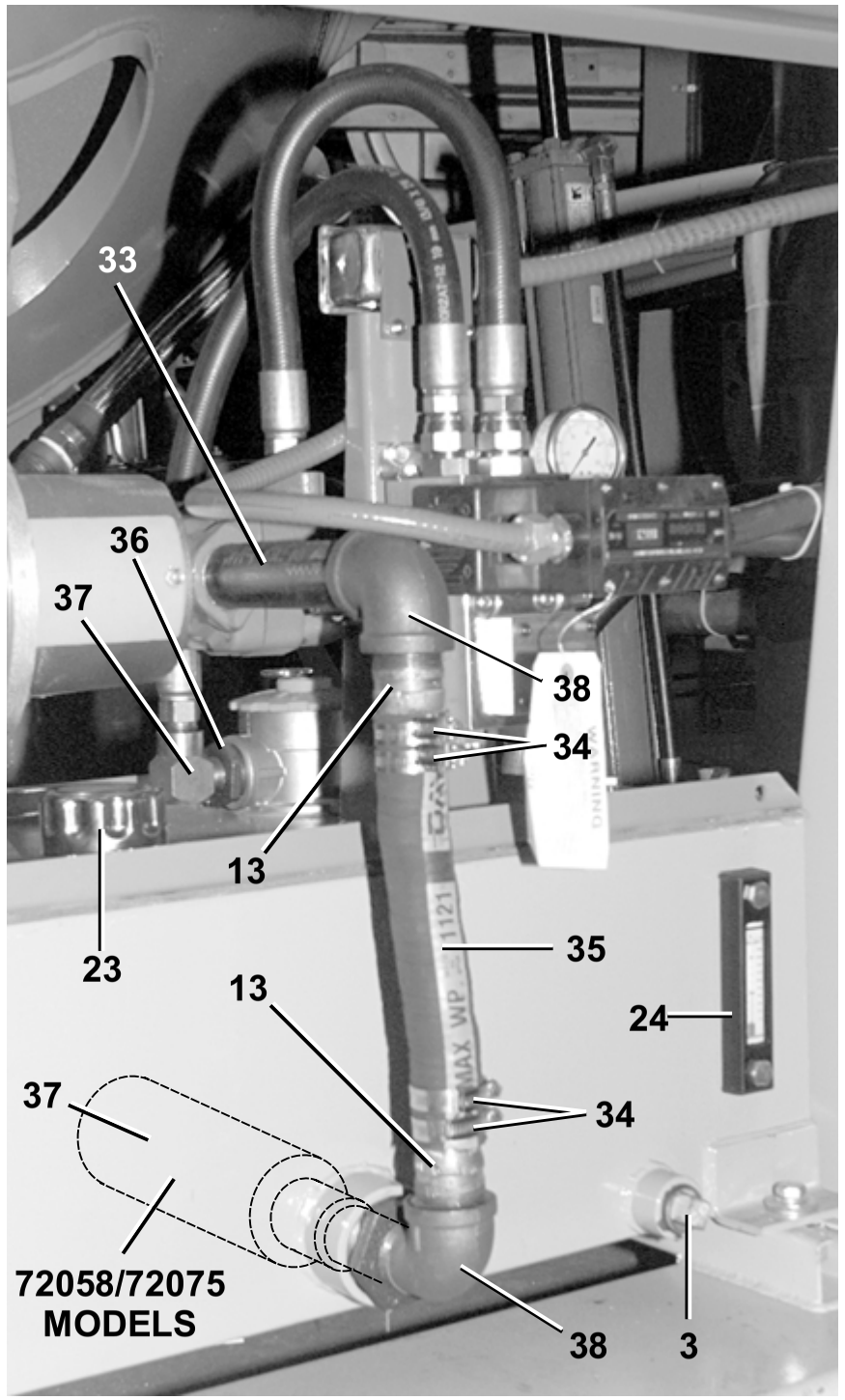
64040/64050E6N 72058/72075J2N

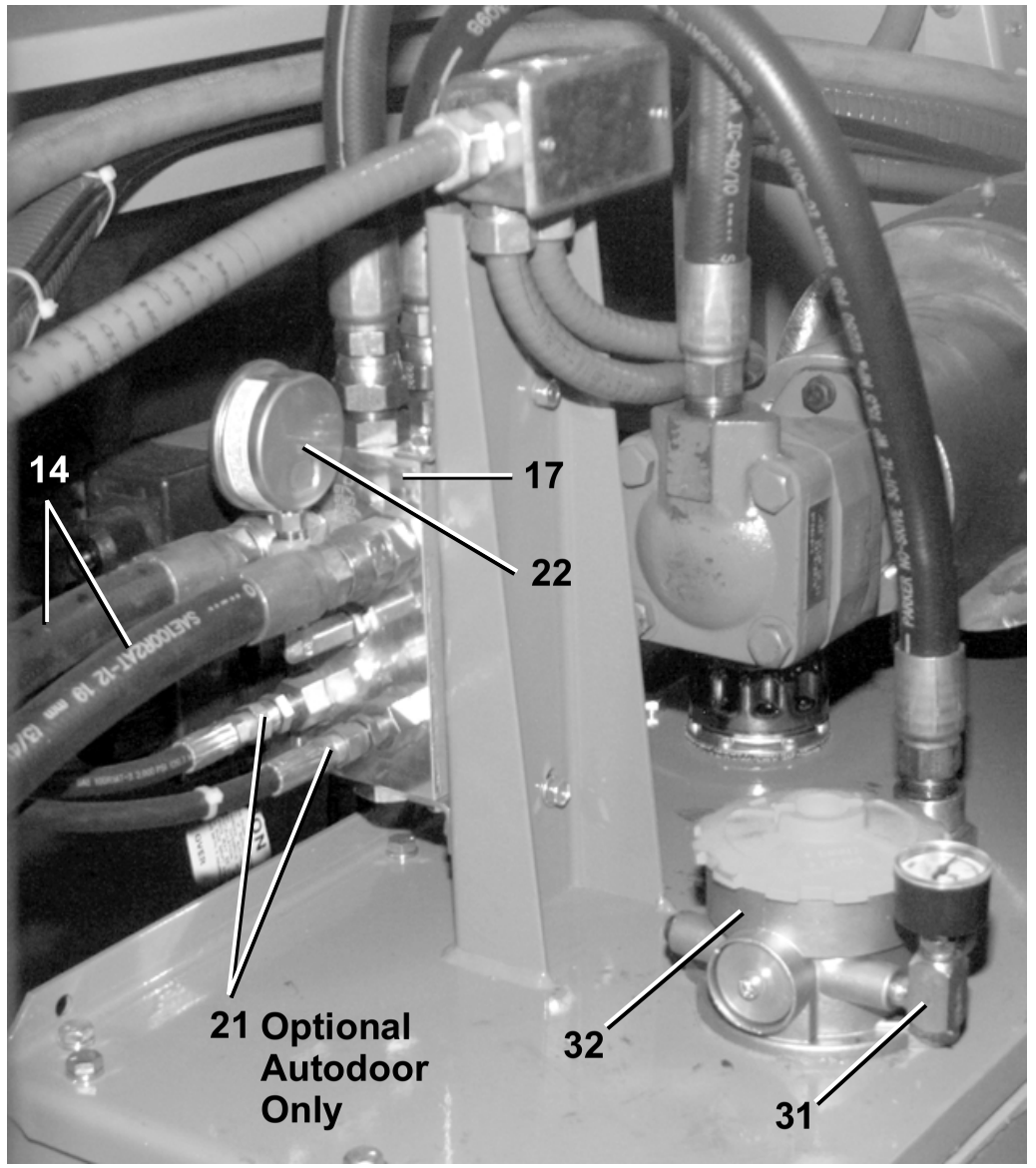
BMP990050/2000196V
(Sheet 1 of 3)

Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400

Litho in U.S.A.





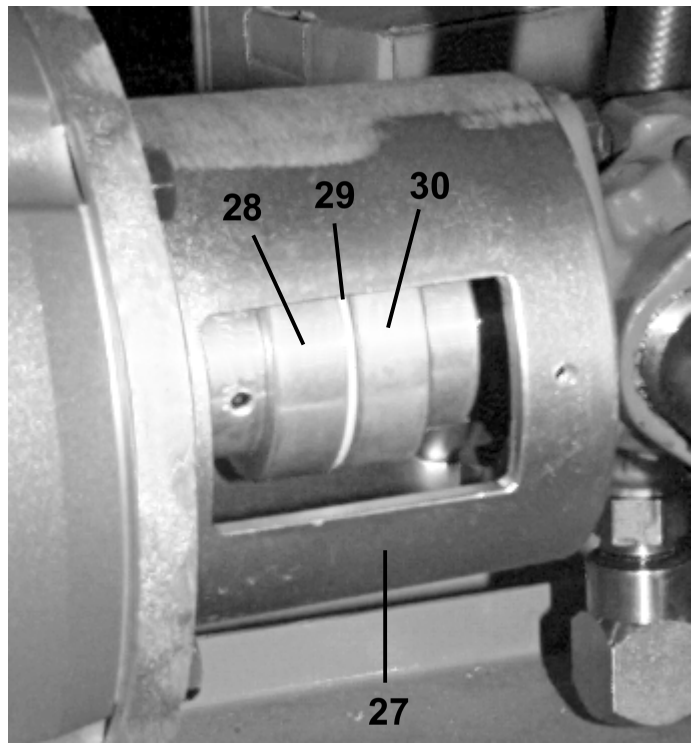


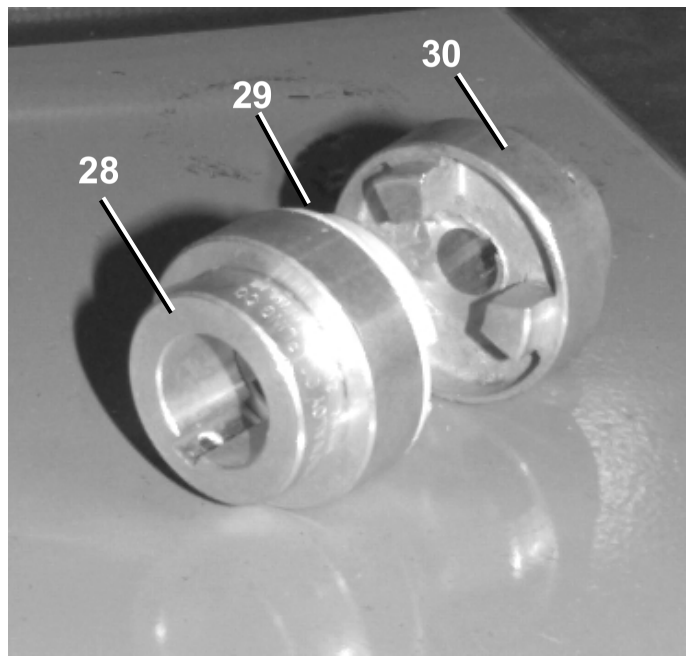
Hydraulic Tank and Installation

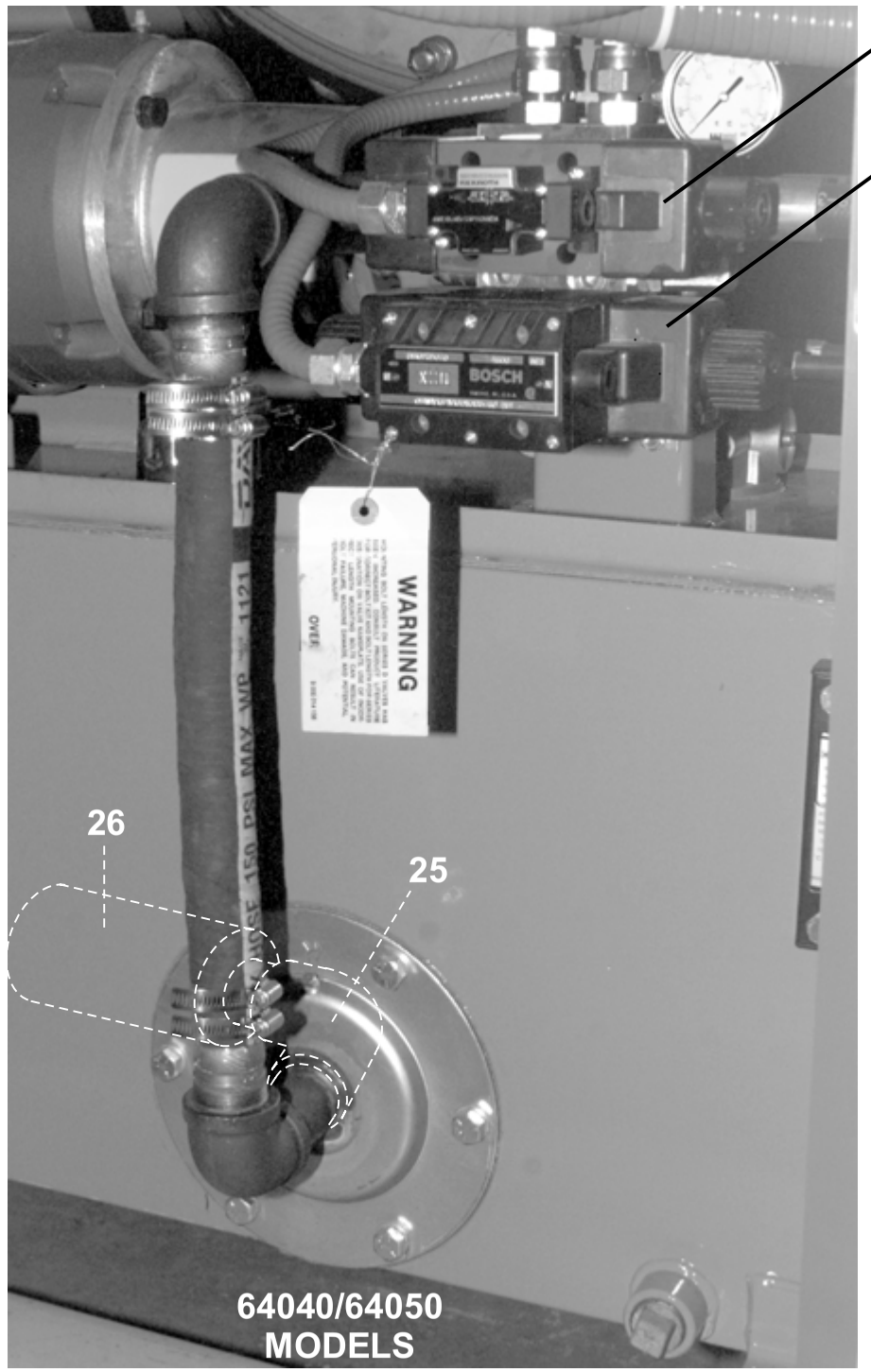
64040/64050E6N 72058/72075J2N

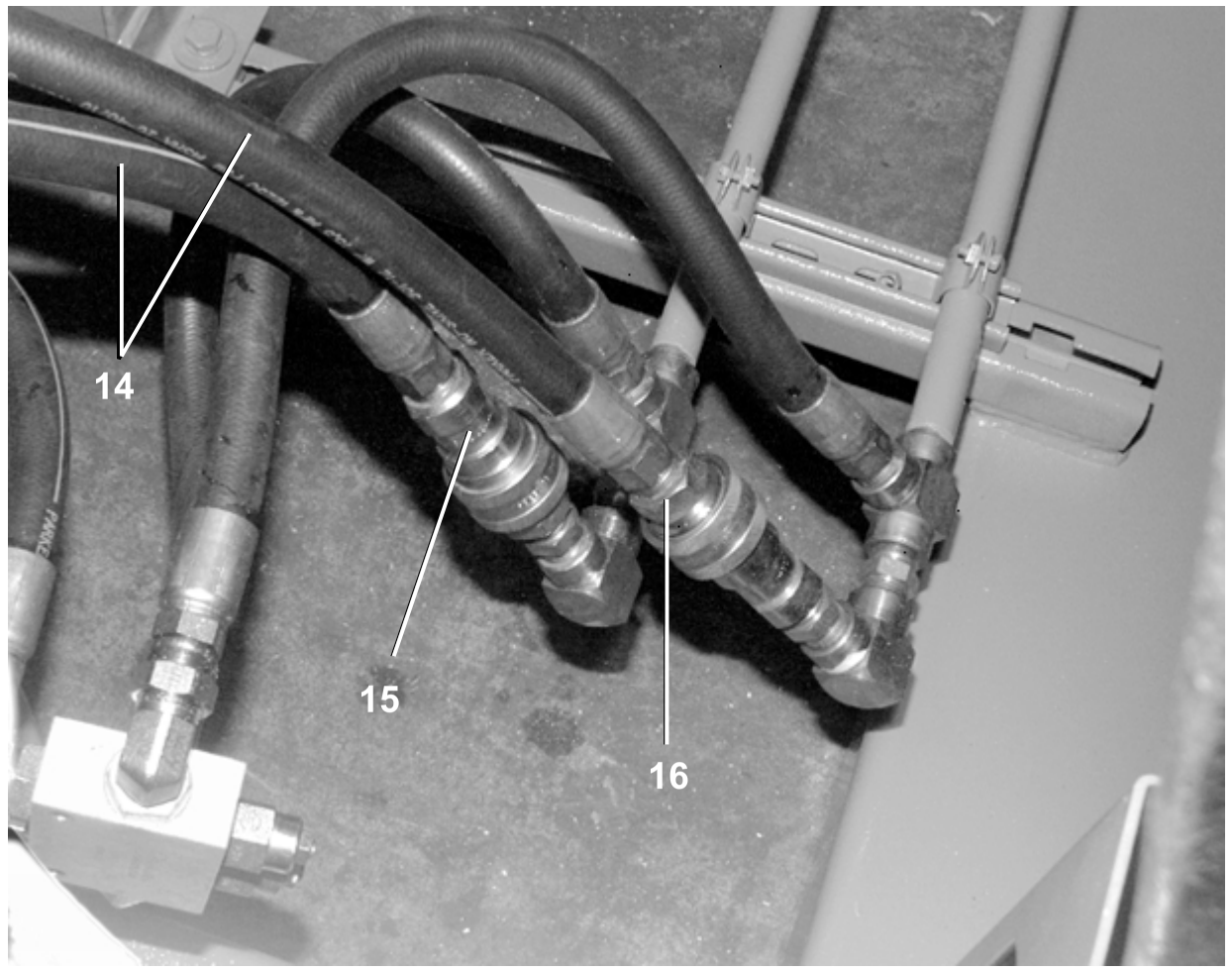
Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400

Litho in U.S.A.









Hydraulic Tank and Installation

64040/64050E6N 72058/72075J2N

Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400

Litho in U.S.A.

Parts List—Hydraulic Tank Installation

Find the correct assembly first, then find the needed components. The item letters (A, B, C, etc.) assigned to assemblies are referred to in the "Used In" column to identify which components belong to an assembly. The item numbers (1, 2, 3, etc.) assigned to components relate the parts list to the illustration.

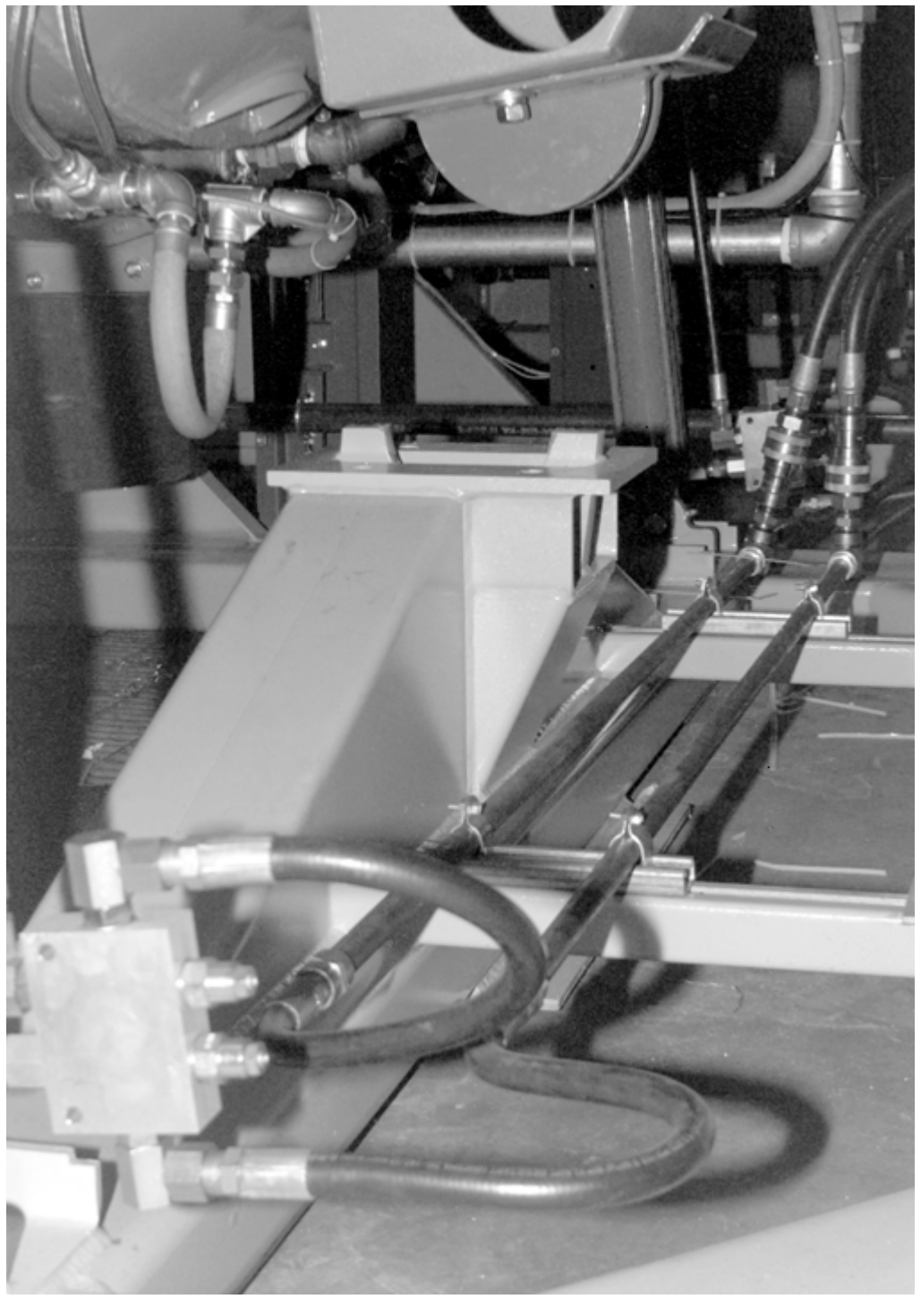
Used In	Item	Part Number	Description	Comments
.			----------ASSEMBLIES----------	
	00A	GHT60100	98000Z INST=34/48GL HYD TNK 1VLV 6440	6440/6450 E6N
	00B	GHT58006	20000Z INST=HYD CYL+TANK 27GAL TANK	7258J2/7275J2
A	00C	AHT60110	98000Z ASSY=34/48GAL HYD TNK WELD 6440	6440/6450
B	00D	AHT58110	20000Z ASSY=27GAL HYD TANK WELD J2N	7258/7275
	00E	AHT60120	98000Z ASSY=6440 TANK TOP ASSY	ALL
			----------COMPONENTS----------	
C	1	W3 60360	20001D WLMT=TNK 34/48GAL HYD TNK 6440	
D	1	W3 60360A	20001D WLMT=J2N HYDRAULIC TANK	
	2	W3 60362	98472C WLMT=TNK 34/48GL TOP 6440	
	3	5SP1ACESC	NPT PLUG 1” SQ CORED BLK CI	
	4	03 60363	99016B 34/48GAL HYD TANK GASKET-LNG	
	5	03 60363A	99016B 34/48GAL HYD TANK GASKET-SHT	
	6	27E5500	PUMPHVANE;VICK#V20-1P13PD11	
	7	15K105	HXCAPSCR 3/8-16UNC2A1.25 Gr5 P	
	8	15U255	LOCKWASHER MEDIUM 3/8 ZINCPL	
	9	17N070AP	01Z RETAIN NUT#S10222-27	
	10	02 11942	90387B H2O BRKT JAM PLATE 36/42QU	
	11	60EH50C28B	98503N ASSY=HYD HOSE 3/4”X28”L 6440	28” HOSE
	12	60EH50C24A	01Z HYD.HOSE 3/4”+MPTXFJIC=24”LG.	24” HOSE
	13	51E099ST	DIXON 1.25KINGNIP NPTEND #St15	
	14	60EH50C48A	01Z HYD.HOSE 3/4”+MPTXFJIC=48”LG	48” HOSE
	15	52XY0BP00X	3/4”QUICK DISCONN.FEM #H6-62	
	16	52XY0BP00Y	3/4”QUICK DISCONN.MALE#H6-63	
	17	96DH455	MANIFOLD, 2-VALVE D05 PARALLEL	
	18	96DH455A	CARTRIDGE,RELIEFVICK#RV510S020	
	19	96RH711E37	DIRECTIONAL CONT.VLV.D05-NG10	
	20	96RH705E37	04Z VALVE-HYD 4 WAY- DIRECTIONAL	
	21	60EH15C265	93077N HYD HOSE 3/16”TENDS=265”	265” HOSE
	22	27E731500	01Z LIQFILL GAGE 0-1500PSI/BAR BRZ	
	23	27E7201	FILLER-BREATH-FILT.LHA#ABB-40N	
	24	27E7301	03Z SIGHTGAUGE-FLUID:STAUFF#SNA-2T	
	25	5SL1EMFC	NPTELBOW 90D STRT 1.25” BLKMAL	
	26	27E7113	STRAINER,TANKMT LHA#TM-25-100	
	27	27E5507	PUMP-TO-MOTOR MOUNT 5.81”LG.	
	28	27E5505A	1+3/8”BORE W/5/16KW=CPLG.ASSY	
	29	27E5505B	HYTREL INSERT-MAGNA#M270H9	
	30	27E5508	COUP ASSY=3/4”BOREX3/16”KW	
	31	52JY0ER007	EI90 1/4”MPX1/8”FP #5502-4-2	
	32	27E7112	INTANK RETURN FILTER 1+1/4”	
	33	5N1E08AF42	NPT NIP 1.25X8 TBE BLKSTL Sk40	
	34	27A060	HOSECLAMP1+5/16-2.25CADSC#HS28	
	35	60E097	05Z HOSE 1.25”WIRE INSERT 4684C	
	36	5SR1E0PMF	NPT RED 1.25X3/4 BLKMAL 150#	
	37	27E7107	SUCTION STRAINER 1+1/4”PORT	

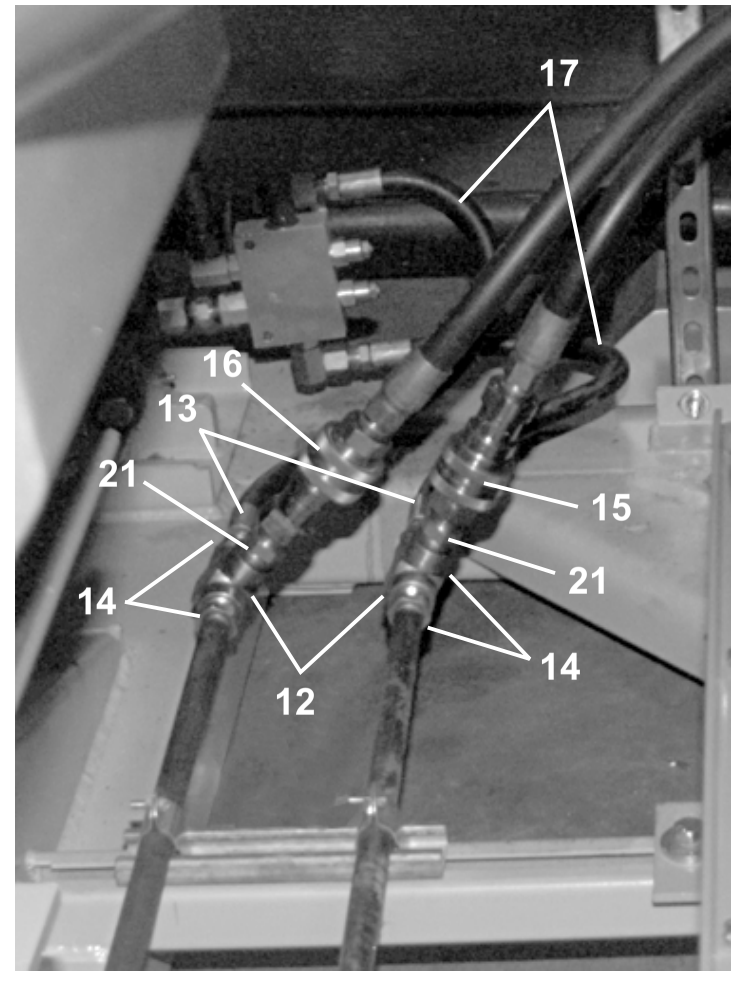
Hydraulic Cylinder Piping

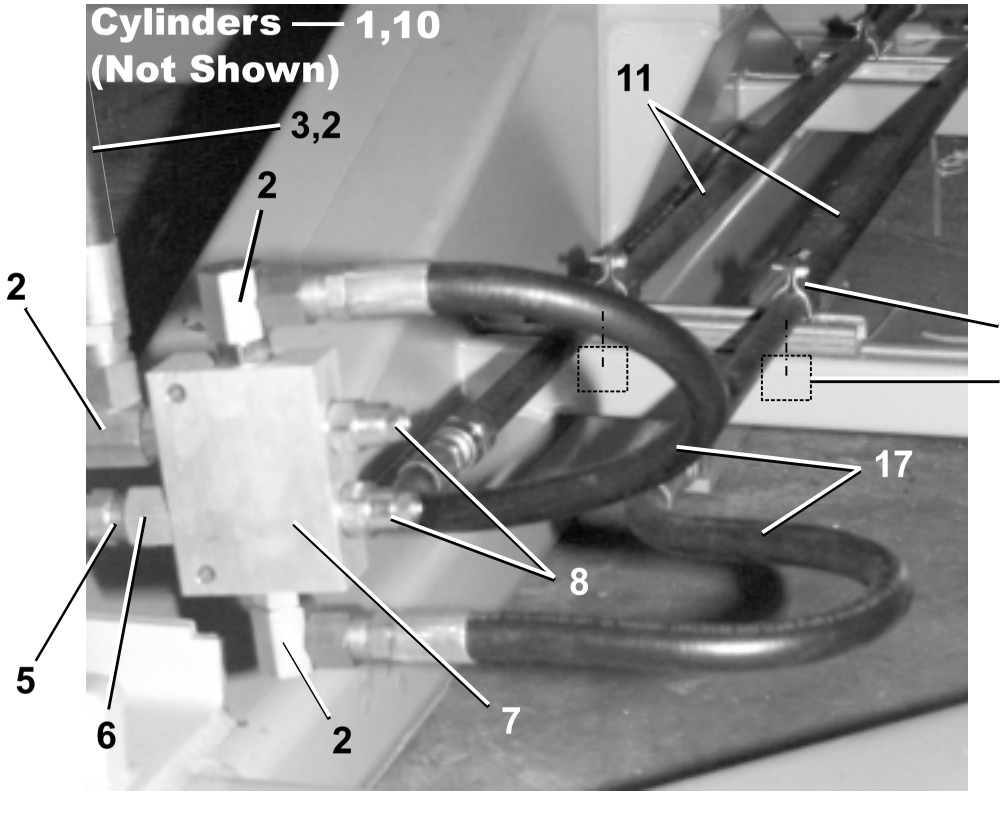
72058/72075J2N

Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400

Litho in U.S.A.







Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400
Litho in U.S.A.

Parts List—Hydraulic Cylinder Piping

Find the correct assembly first, then find the needed components. The item letters (A, B, C, etc.) assigned to assemblies are referred to in the "Used In" column to identify which components belong to an assembly. The item numbers (1, 2, 3, etc.) assigned to components relate the parts list to the illustration.

Used In	Item	Part Number	Description	Comments
			----------ASSEMBLIES----------	
	A	AHT58020	ASSY=1STG HYD CYL J2N 7275	
	B	AHT58021	ASSY=1STG HYD CYL J2N 7258	
	C	GHT58020	INST=1STG HYD CYL J2N 7275	
	D	GHT58021	INST=1STG HYD CYL J2N 7258	
			----------COMPONENTS----------	
A	1	27E16330MT	3X30 PRINCE HYDCYL W/MTG HDW	
B	1	27E16329MT	3X29 PRINCE HYDCYL W/MTG HDW	
all	2	52JY0KR012	EL90 1/2MORINGX FEM.SWIVEL	
all	3	60EH40C30A	*HYD HOSE 1/2"+ENDS=30"	
all	5	52LY0KR001	HEXPIPNIP 1/2XCLOSE #5404-8-8	
all	6	52XY0KR029	STRADAPT 1/2"0RXFP #6405-8-8-0	
all	7	96DH471	COUNTERBALANCE VALVE-SUN BODY	
all	8	96DH471A	CARTRIDGE-COUNTERBAL.SUN	
A	10	AHT58020	ASSY=1STG HYD CYL J2N 7275	
B	10	AHT58021	ASSY=1STG HYD CYL J2N 7258	
all	11	03 60365	HYD LINE PIPE 1/2SCH80 60LNG	
all	12	52VY0PR003	TEE 3/4"FP #5605-12-12-12	
all	13	52EY0KR002	COUP.STR 1/2"FP #5000-8-8	
all	14	52AY0PR004	HEXPIPEBUSH 3/4X1/2 STEEL BAR/	
all	15	52XY0BP00X	3/4"QUICK DISCONN.FEM #H6-62	
all	16	52XY0BP00Y	3/4"QUICK DISCONN.MALE#H6-63	
all	17	60EH40C20A	*HYD HOSE 1/2" +ENDS=20"	
all	18	27A0050	CLP-RGDSTL COND #P1100-1/2	
all	19	17N070AP	RETAIN NUT#S10222-27	
all	20	02 11942	H20 BRKT JAM PLATE 36/42QU	
all	21	52LY0PR002	HEXPIPNIP 3/4X3/4 #5404-12-12	

Assuring Proper Counterbalance Valve Operation-Hydraulic Tilting Washer-Extractors and Centrifugal Extractors

Various conditions, such as a non-functioning or misadjusted limit switch, a seized pivot ball bushing or, a counterbalance valve failure, can cause erratic or uneven up/down movement of the hydraulic tilt cylinders. This document addresses normal counterbalance valve operation and adjustment.

In most cases, it is not possible to perform counterbalance valve adjustments without entering the housing and/or reaching under the raised cylinder.

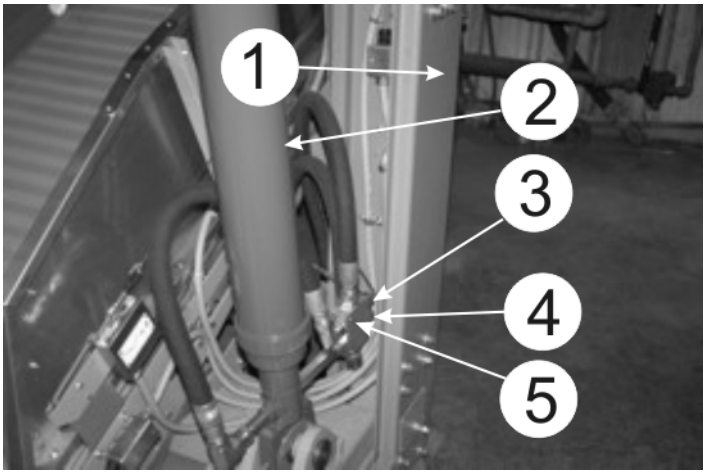
WARNING 1: Entangle and Crush Hazard—The machine shell will crush your body or limbs if it descends or falls while you are under it. The housing can descend with power off or on. Manual operation of tilting valves overrides safety interlocks. Improper operation of manual tilting valves may cause the shell to descend.

- Never operate the manual tilting with anyone under the machine.
- Use the safety stands as appropriate. If used, follow instructions in the manual.
- Read the SAFETY ALERT on use of the *access panel interlock safety bypass* switch in the service manual before setting the maintenance key switch to "Maintenance Only "
- After adjustments, return the key switch to "Safe Operation" and remove the key to a secure area before resuming normal operation.

1. Observing Tilt Cylinder Operation

Figure 1: Right Cylinder and associated Counterbalance Valves

Components of Hydraulic Manifold



Legend

1. Right rear corner of machine
2. Tilt cylinder
3. Upper counterbalance screw-in cartridge valve (controls the ascending speed of a tilt cylinder)
4. Lower counterbalance screw-in valve cartridge (controls the descending speed of a tilt cylinder)
5. Counterbalance valve manifold body

1.1. Setup

1. Remove the left and right door side panels and identify the components shown in Figure 1.
2. Set the *access panel interlock safety bypass key* switch to the "Maintenance Only" position.

1.2. Observations

Use the key pad controls, as explained in the manuals, to manually raise and lower the shell several times as described below, and verify the following proper operation.

1. Carefully move the shell from full down to full up. Verify that the cylinders move in unison and reach the top at approximately the same time.
2. Raise the shell fully and release the controls. Observe the machine for at least 3 minutes to assure that the shell does not drift down.
3. Manually lower the shell completely. Verify that the tilt cylinders move in unison and reach the bottom at approximately the same time.
4. If the cylinders exhibit any erratic movement that can be attributed to the counterbalance valves, perform the service explained below.

2. Tilt Cylinder Hydraulic Components and Functions

The hydraulic schematic provided in the service manual titled "Hydraulic Schematic " shows the counterbalance circuitry.

2.1. Components—Figure 1, item 5 shows one of the two counterbalance manifolds. Each manifold has two screw-in counterbalance valve cartridges (items, 3 and 4). Referring to Figure 2, each counterbalance valve cartridge has the following:

- A base nut (item 5) used to screw the valve into the manifold.
- A lock nut which must be turned slightly using an open-end wrench (item 1).
- An adjustment screw, (item 3) which must be turned with a hex key wrench.

2.2. Functions of Components

Manifold (Milnor P/N 96DH472)—Provides feedback between the two counterbalance valves

Counterbalance valve (Milnor P/N 96DH472A)—Provides the following:

- Permits unrestricted flow into a cylinder, while controlling exhaust flow from the cylinder.
- Protects against cylinder drifting down
- Reduces flow when lowering to limit speed
- Provides speed adjustment so cylinders can be made to travel in unison
- Pilot action locks machine shell from coming down if pressure is lost due to leaks

Tip: For an in-depth explanation of these components, see www.sunhydraulics.com or download Sun´s virtual counterbalance valve simulation (www.e4training.com/hyd03/sitemap.htm).

3. Counterbalance Valve Adjustments

Use this procedure on all four counterbalance valves if you observes any erratic movements listed above.

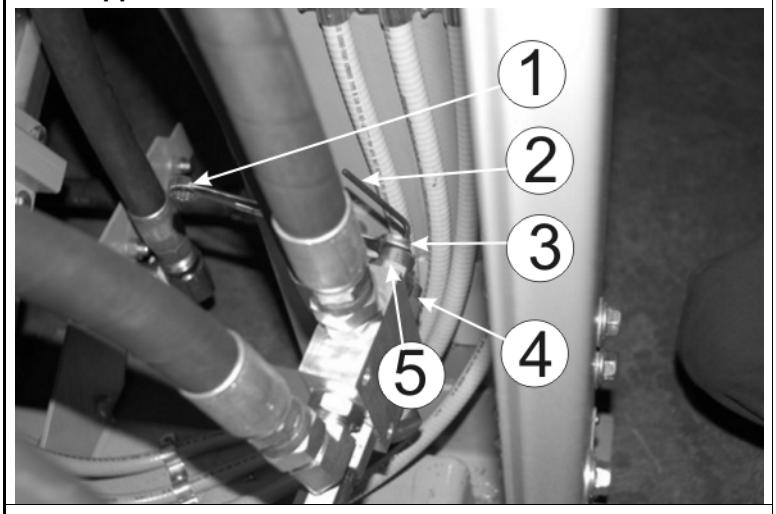
3.1. Coarse Adjustments—Referring to Figure 2,

1. Loosen the lock nut with a 9/16" open end wrench (item 1) .
2. Using a 5/32" hex key wrench (Allen wrench, Unbrako key), screw the adjustment nut (Figure 2, item 2) in fully.

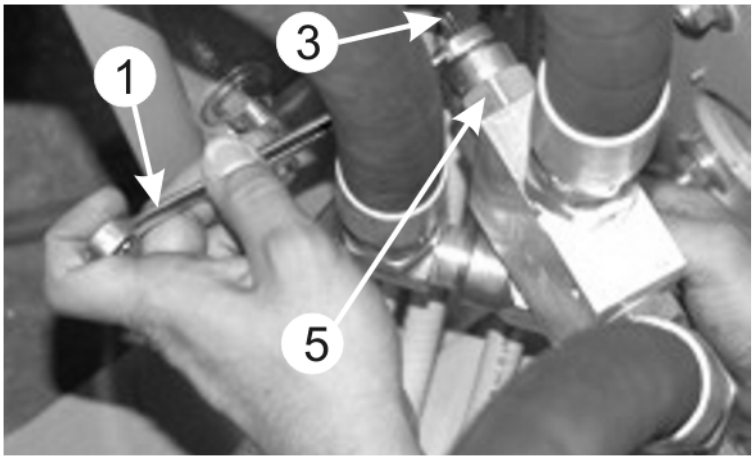
3. Back off the adjustment screws
   a. upper valve -- one full turn (360 degrees)
   b. lower valve -- 3/4 turn (270 degrees)
4. While holding the adjustment nut stationary, tighten the lock nut.

Figure 2: Right Side Hydraulic Manifold

Upper and lower counterbalance valve locations



Adjusting the Upper Counterbalance Valve



Legend

1. 9/16" open end wrench connected to lock nut on upper counterbalance valve
2. 5/32" hex key wrench (Allen wrench, Unbrako key) in adjustment screw
3. Adjustment screw (recessed socket for hex key wrench)
4. Lower counterbalance valve
5. Base nut screwed into hydraulic manifold

3.2. Fine Adjustments—By making small adjustments of about a 1/4 of a turn to either counterbalance valve, you should be able to get the two cylinders to move up and down in unison so that both sides reach end of travel at approximately the same time. Be careful to hold the adjustment screw (Figure 2, item 3) stationary, while tightening the lock nut (Figure 2, item 1). Screw out the adjustment (Figure 2, item 3) to slow downward movement. Screw in the adjustment (Figure 2, item 3) to increase speed.

4. Return Machine to Normal Operation

Remove the tilt safety stands if they were used.

1. Manually tilt the shell down.

2. Replace the door side panels. Return the key switch to "safe operations" and move the key to a secure area.

— End of BIPEUM01 —

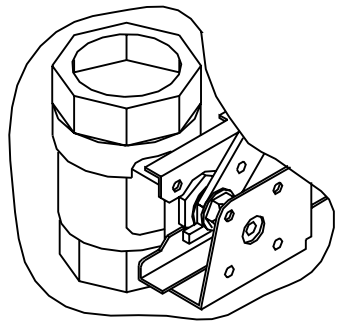
Section 7

Water & Steam

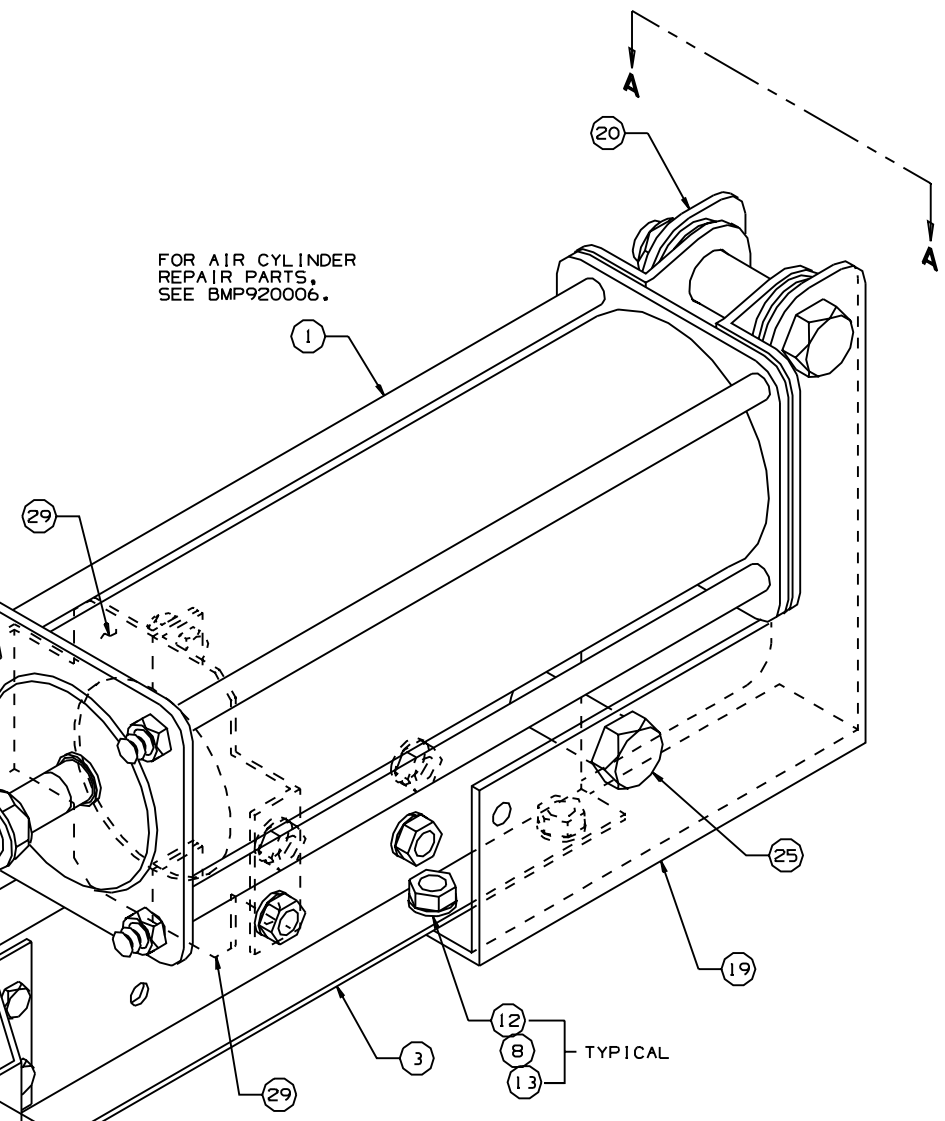
Universal Actuators & Mounting Hardware for Watts Ball Valves - New Pivot

Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400

Litho in U.S.A.

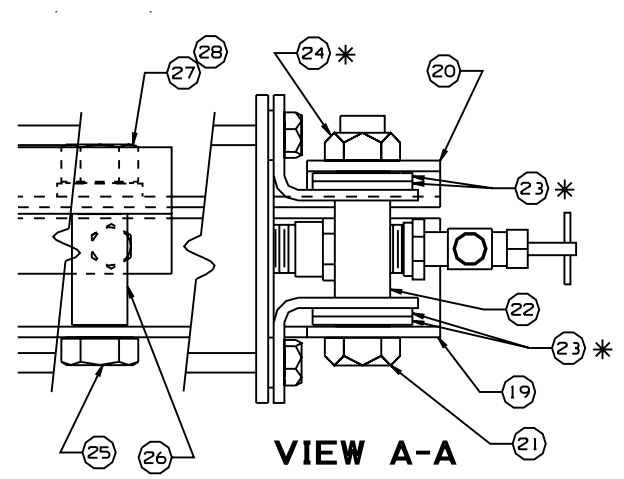


90° VALVE SET

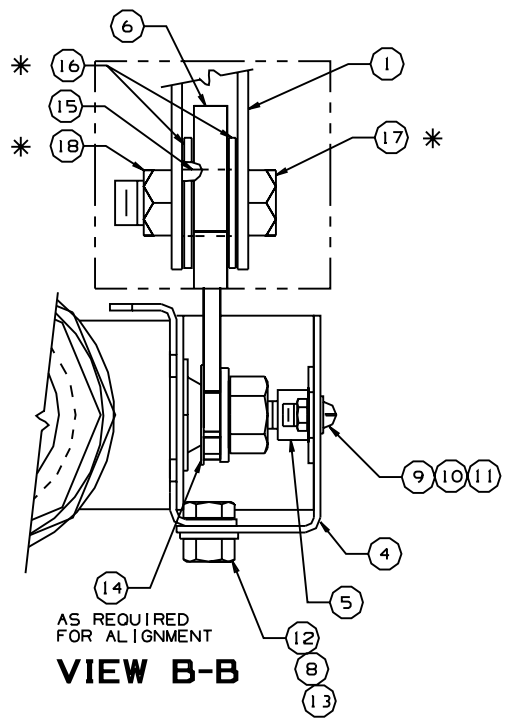


FOR PROPER ALIGNMENT OF ASSEMBLY:

1. WITH THE BALL IN ITS FULLY CLOSED POSITION AND THE ACTUATOR IN ITS FULLY RETRACTED POSITION, ADJUST ALIGNMENT NUT UNTIL THE CRANK ALIGNMENT HOLE IS 100% IN LINE WITH THE BEARING SUPPORT ALIGNMENT HOLE AND THE SOCKET HEXHEAD SCREW. THEN LOCK WITH LOCKNUT. THE ASSEMBLY MUST CLOSE 100%.

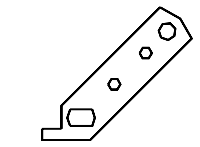


VIEW A-A

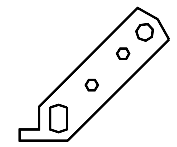


AS REQUIRED FOR ALIGNMENT

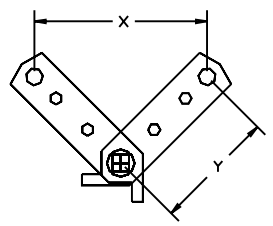
VIEW B-B



NORMALLY OPEN CRANK (ITEM 6)



NORMALLY CLOSED CRANK (ITEM 6)



STROKE DIMENSIONS

SIZE	X	Y
2" VALVES	3.89	2.75

NOTES:

1)RIGHT HAND ASSEMBLY IS SHOWN, LEFT HAND ASSEMBLY IS OPPOSITE.

2) FOR 90 DEGREE VALVE SET, VALVE IS ROTATED 90 DEGREES.

3) ASSEMBLE SO THAT THE LINKAGE IS FREE TO MOVE IN THE SPACER, THIS MEANS THAT THERE SHOULD BE DAYLIGHT BETWEEN THE CRANK AND EACH ADJACENT WASHER WITHOUT EXCESSIVE CLEARANCE.

Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400

Litho in U.S.A.

Parts List—Actuators & Mounting Hardware for Watts Ball Valves

Find the correct assembly first, then find the needed components. The item letters (A, B, C, etc.) assigned to assemblies are referred to in the "Used In" column to identify which components belong to an assembly. The item numbers (1, 2, 3, etc.) assigned to components relate the parts list to the illustration.

Used In	Item	Part Number	Description	Comments
			----------ASSEMBLIES----------	
	AA	96D085BCSL	92000Z 1.00WAT BVAL+ACT/BR/NC/ST/LH	
	AB	96D085BCSR	93513S 1.00WAT BVAL+ACT/BR/NC/ST/RH	
	AC	96D085BOSL	93513S 1.00WAT BVAL+ACT/BR/NO/ST/LH	
	AD	96D085BOSR	93513S 1.00WAT BVAL+ACT/BR/NO/ST/RH	
	AE	96D085SOSR	92000Z 1.00WAT BVAL+ACT/SS/NO/ST/RH	
	AF	96D085SCSR	92000Z 1.00WAT BVAL+ACT/SS/NC/ST/RH	
	BA	96D086BCSL	93513S 1.25WAT BVAL+ACT/BR/NC/ST/LH	
	BB	96D086BCSR	93513S 1.25WAT BVAL+ACT/BR/NC/ST/RH	
	BC	96D086BOSL	93513S 1.25WAT BVAL+ACT/BR/NO/ST/LH	
	BD	96D086BOSR	93513S 1.25WAT BVAL+ACT/BR/NO/ST/RH	
	BE	96D086SCNR	92000Z 1.25WAT BVAL+ACT/SS/NC/90/RH	
	BF	96D086SCSL	92000Z 1.25WAT BVAL+ACT/SS/NC/ST/LH	
	BG	96D086SCSR	92000Z 1.25WAT BVAL+ACT/SS/NC/ST/RH	
	BH	96D086SOSL	92000Z 1.25WAT BVAL+ACT/SS/NO/ST/LH	
	BJ	96D086SOSR	92000Z 1.25WAT BVAL+ACT/SS/NO/ST/RH	
	CA	96D087BCSL	93513S 1.50WAT BVAL+ACT/BR/NC/ST/LH	
	CB	96D087BCSR	93513S 1.50WAT BVAL+ACT/BR/NC/ST/RH	
	CC	96D087BOSR	93513S 1.50WAT BVAL+ACT/BR/NO/ST/RH	
	CD	96D087SCNR	92000Z 1.50WAT BVAL+ACT/SS/NC/90/RH	
	CE	96D087SCSR	92000Z 1.50WAT BVAL+ACT/SS/NC/ST/RH	
	CF	96D087SOSR	92000Z 1.50WAT BVAL+ACT/SS/NO/ST/RH	
	DA	96D088BCSR	92177S 2.00WAT BVAL+ACT/BR/NC/ST/RH	
	DB	96D088BCNR	92177S 2.00WAT BVAL+ACT/BR/NC/90/RH	
	DC	96D088BCSL	92177S 2.00WAT BVAL+ACT/BR/NC/ST/LH	
	DD	96D088BOSR	92177S 2.00WAT BVAL+ACT/BR/NO/ST/RH	
	DE	96D088SCNR	92177S 2.00WAT BVAL+ACT/SS/NC/90/RH	
	DF	96D088SCSR	92177S 2.00WAT BVAL+ACT/SS/NC/ST/RH	
	DG	96D088SOSR	92177S 2.00WAT BVAL+ACT/SS/NO/ST/RH	
	DH	96D088BCNL	92177S 2.00WAT BVAL+ACT/BR/NC/90/LH	
	DJ	96D088BOSL	92177S 2.00WAT BVAL+ACT/BR/NO/ST/LH	
	DK	96D088SCSL	92177S 2.00WAT BVAL+ACT/SS/NC/ST/LH	
	DL	96D088SOSL	92177S 2.00WAT BVAL+ACT/SS/NO/ST/LH	
			----------COMPONENTS----------	
AA-AD, BA-BD, CA-CC	1	SA 10 056F	92000Z AIRCYL=2.38ODX2.70STX20.5#CD	
AE-AF, BE-BJ, CD-CF	1	SA 10 056G	92000Z*AIRCYL=2.38ODX2.70STX20.5#SS	
DA-DD, DH-DJ	1	SA 10 057C	95222D AIRCYL=3.0ODX3.89ST171/176CD	
DE-DG, DK-DL	1	SA 10 057D	95222# AIRCYL=3.0ODX3.89ST171/176SS	
AA-AE	2	96D085WEXS	07Z BALVAL 1" BRZ WATTS#B6400SSZ107	
AF	2	96D085WSS	07Z BALVAL 1" SS WATTS S8000-Z107	
BA-BD	2	96D086WEXS	08Z BAVAL 1+1/4BRZ WATS#B6400SSZ107	
BE-BJ	2	96D086WSS	08Z BAVAL 1+1/4"SS WATTS S8000-Z107	
CA-CC	2	96D087WEXS	09Z BAVAL 1+1/2BRZ WATS#B6400SSZ107	

Parts List, cont.—Actuators & Mounting Hardware for Watts Ball Valves

Used In	Item	Part Number	Description	Comments
CD-CF	2	96D087WSS	08Z BAVAL 1+1/2"SS WATTS S8000-Z107	
DA-DD, DH-DJ	2	96D088WEXS	09Z BALVAL 2" BRZ WATTS#B6400SSZ107	
DE-DG, DK-DL	2	96D088WSS	09Z BALVAL 2" SS WATTS S8000-Z107	
AA,AC	3	03 01634A	94053# ACTUATOR CHANNL SUPPORT-LEFT	
AB,AD,AE, AF	3	03 01634	94053C ACTUATOR CHANNL SUPPORT 1.0"	
BA,BC,BF, BH,CA	3	07 20700L	88512# ACTUATOR ZEE SUPPORT-LEFT	
BB,BD,BE, BG,BJ,CB, CC,CE, CF	3	07 20700	88512D ACTUATOR ZEE SUPPORT	
CD	3	03 01633	92651C ACTUATOR SUPPORT BRKT 1.0"	
DA,DB, DD-DG	3	03 01628	92126D ACTUATOR ZEE SUP 3"AIRCYL	
DC,DH-DL	3	03 01628L	92126# ACT ZEE SUP 3" AIRCYL-LEFT	
AA,AC	4	03 01632A	90507# ACTUATOR BEARING SUPPRT-LEFT	
AB,AD-AF, CD	4	03 01632	90507C ACTUATOR BEARING SUPPORT-1"	
BA,BC,BF, BH,CA	4	07 20702L	88512# ACTUATOR BEARING SUPPORT-LFT	
BB,BD,BE, BG,BJ,CB, CC,CE, CF	4	07 20702A	88512C ACTUATOR BEARING SUPPORT	
DA,DB, DD-DG	4	03 01629	92023C ACTUATOR BEARING SUPPORT 3	
DC,DH-DL	4	03 01629L	92023# ACT BEARING SUPPORT 3"-LEFT	
AA-AF,CD	5	54E001PABA	89281B ASSY=1/4"PRESSBEARING	
BA-BJ, CA-CC,CF, DA-DL	5	54E002PABA	89281B ASSY=5/16"PRESSBEARING	
AA,AB,AF, CD	6	03 01631	91507B+VALVE CRANK N.C.WATTS 1.0"	
AC-AE	6	03 01631A	88381B VALVE CRANK N.O.WATTS-1.0"	
BA,BB,BE, BF,BG,CA, CB,CE	6	07 20703A	91507B VALVE CRANK N.C.WATTS 1.5"	
BC,BD,BH, BJ	6	07 20703B	88153B VALVE CRANK N.O.WATTS 1.5"	
DA,DC,DF, DK	6	03 01624B	92061B CRANK=NC 2"BALVAL .626 STEM	
DB,DD,DE, DG,DH,DJ, DL	6	03 01624C	92061B CRANK=NO 2"BALVAL .626 STEM	
all except CC,CD	7	15K031	BUTSOKCAPSCR 1/4-20X1/2 SS18-8	
CC,CD	7	15N117	RDMACSCR 10-24UNC2X3/8SS18-8	
all	8	15U181	LOCKWASHER MEDIUM 1/4 SS18-8	
all	9	15N130	RDMACHSCR 10-24UNC2A X 1/2 SS18-8	
all	10	15U135	FLATWASH#10 .4370DX.203IDX.04TSS188	

Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400
Litho in U.S.A.

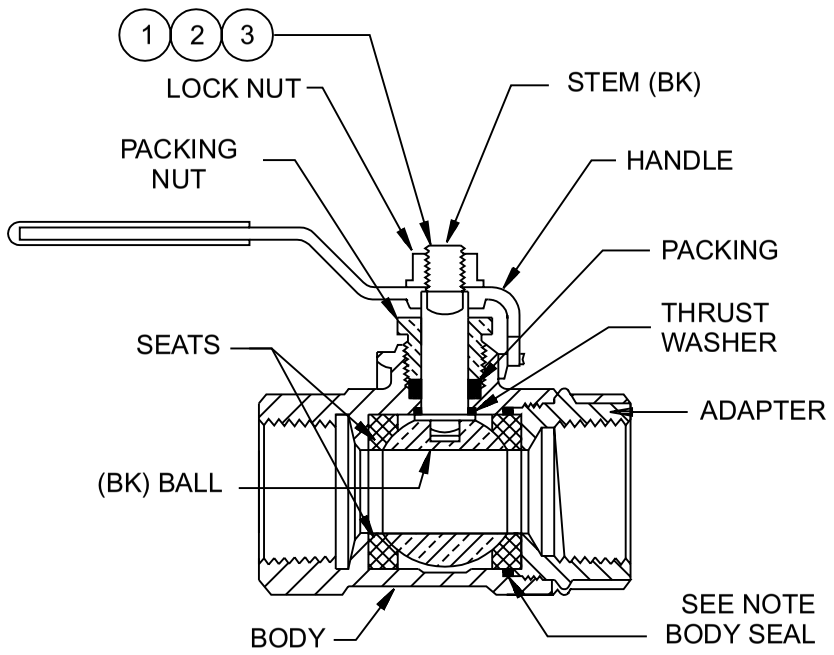
Parts List, cont.—Universal Actuators & Mounting Hardware for Watts Ball Valves

Used In	Item	Part Number	Description	Comments
all	11	15G126	01Z HXLOCKNUT NYLON 10-24 UNC SS NM	
all	12	15N159	HEXCAPSCR 1/4-2OUNC2AX7/16 18-8SS	
all	13	15G170	HEXNUT 1/4-20UNC2 SS18-8	
AA-AF,BE, CD,DA-DL	14	07 20703D	89354B WASHER=2.00"WATTS CRANK	
BA-BD, BF-BJ, CA-CC,CE, CF	14	07 20703C	89354B WASHER=1.25-1.50 WATTS CRANK	
all	15	02 15893	92683B SPACER=BALL VALVE CRANK STEM	
all	16	15U188	01Z FLTWASH 1/4 STD COMM SS18-8	
all	17	15N186	HXCAPSCR 1/4-20UNC2X3/4SS18-8	
all	18	15G164	01Z HX THIN LOCKNUT NYL1/4-20 SS	
BA,BB,BE, BJ,CE	19	03 01661A	92271B BRKT=RHT AIR CYL SUPT-S/S	
DA,DB, DD-DG	19	03 01625A	92271B 3" AIR-CYL SPT BRK R-SIDE RT	
DC,DH-DL	19	03 01625B	92271# 3" AIR-CYL SPT BRK R-SIDE LT	
BE,BG,BJ, CE-CF	20	03 01662A	92271B BRKT=LFT AIR CYL SUPT-S/S	
DA,DB, DD-DG	20	03 01625C	92271B 3" AIR-CYL SPT BRK L-SIDE RT	
DC,DH, DJ-DL	20	03 01625D	92271# RIGHT=3"AIR CYL SUPT BRKT	
all	21	15K190S	HXCAPSCR 1/2-13UNC2AX2.5 FLTHRD SS	
all	22	27B24S0K1P	SPACER ROLL.5ID1.75L.062T 304 SS	
all	23	15U318S	FLATWASH 1.12ODX.656IDX.09T 304 SS	
AB,DA-DL	24	15G234NS	HXLOCKNUT NYL 1/2-13UNC2 SS18-8	
all	25	15K180S	HXCAPSCR 1/2-13UNCAX2 18-8SS	
all	26	27B24SSK1F	SPACER ROLL.5ID1.25L.062T S/S	
all	27	15U310	LOKWASHER REGULAR 1/2 SS18-8	
all	28	15G231S	HXFINJAMNUT 1/2-13UNC2B SS18-8	
AA-AF	29	03 01633	92651C ACTUATOR SUPPORT BRKT 1.0"	
BA-BJ	29	07 20771	88407C ACTUATOR SUPPORT BRKT 1.25"	
CA-CF	29	07 20770	88243B ACTUATOR SUPPORT BKT 1+1/2	
DA-DL	29	03 01626	89473B ACTUATOR SUPPORT BRKT 2"VAL	

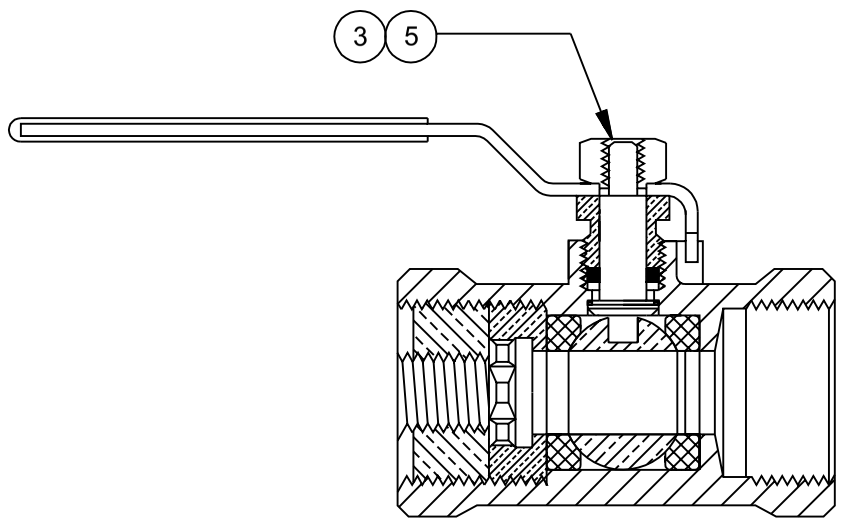
Watts Ball Valves and Repair Kits

Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400
BMP920007/96067V (1 of 2)
Litho in U.S.A.

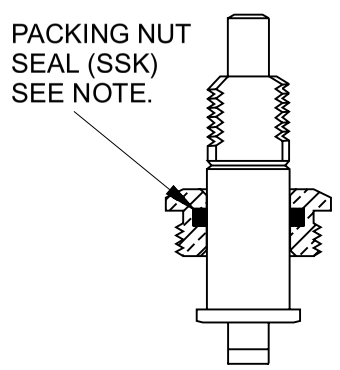
BALL VALVES WITHOUT ACTUATOR PADS FOR MANUAL OPERATION



1/2" BRONZE OR 1/2", 3/4" STAINLESS
NO REPAIR KITS

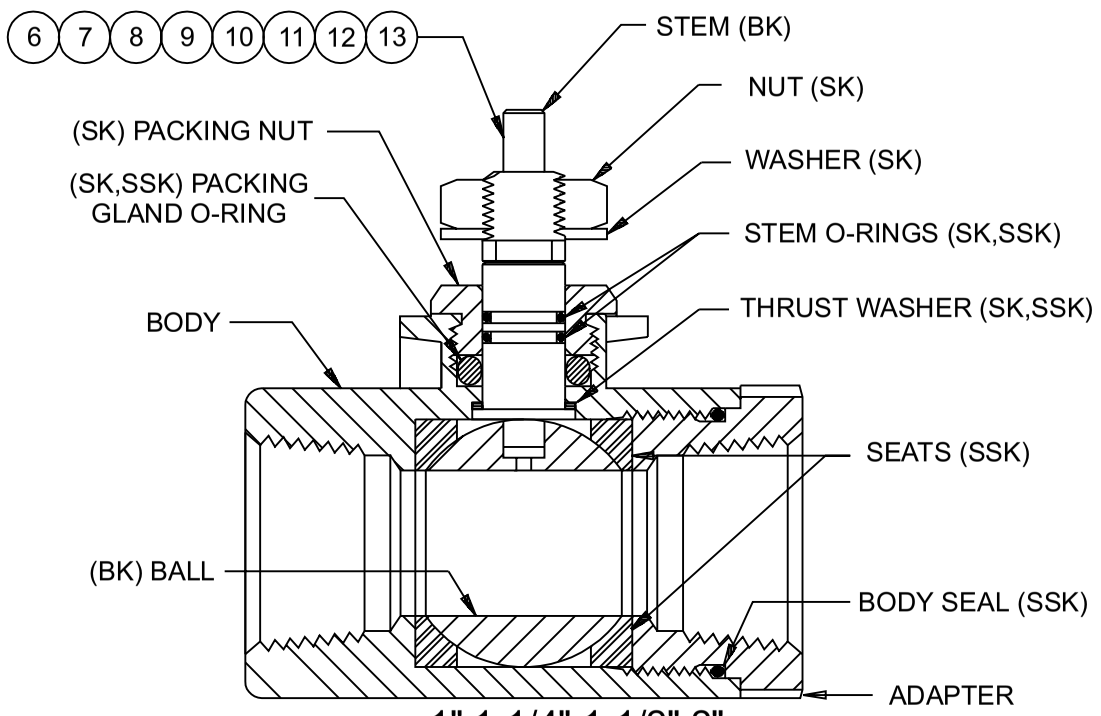


3/4",1"
BRONZE
NO REPAIR KITS



DETAIL
OLD STYLE STEM

AIR OPERATED BALL VALVES



1",1-1/4",1-1/2",2"
BRONZE & STAINLESS

(For Bracketry and Mounting Hardware, See BMP920005. For Air Cylinders that Operate Watts Ball Valves, See BMP920006.)

HOW TO USE THIS DRAWING:

The ball valves are separated by size, material, and type of operation. Find the cross section which shows your ball valve (example 1-1/2" bronze air operated). See the parts list for the item number which represents your ball valve (1-1/2" bronze air operated would be item 10 on the parts list). For valves that offer repair kits the internal parts are labled and marked as to which kit they are found in:
- (BK) part of Ball Kit
- (SK) part of Stem Kit
- (SSK) part of Seat/Seal Kit

For the part number of the Seat/Seal Kit for item 10 (1-1/2" bronze air operated valve) see the parts list and look for item 10SSK, likewise the Stem Kit will be 10SK.

NOTE:
AIR OPERATED VALVES: (SSK) kits for air operated ball valves include all parts required to repair either our old style or new style stems. A packing nut seal is provided to repair our old style stems which had a seal in the packing nut (see Detail). Our new style stem uses a double o-ring design.

Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400

Litho in U.S.A.

Parts List—Watts Ball Valves and Repair Kits

Find the correct assembly first, then find the needed components. The item letters (A, B, C, etc.) assigned to assemblies are referred to in the "Used In" column to identify which components belong to an assembly. The item numbers (1, 2, 3, etc.) assigned to components relate the parts list to the illustration.

Used In	Item	Part Number	Description	Comments
----------ASSEMBLIES----------				
			none	
----------COMPONENTS----------				
all	1	96D034	04Z BALLVALVE 1/2" WATTS #6400-SS	1/2"BRONZE-MANUAL, NO KITS
all	2	96D040WSS	01Z 1/2" BALLVALVE S/S WATTS#S-8000	1/2"STAINLESS-MANUAL
all	002BK	96V040BK	BALL KIT WATTS #BV4SSA6	
all	002SSK	96V040SSK	01Z REPKIT 1/2"VAL WATTS#3SSK-02-RK	
all	3	96D050A	01Z 3/4"BALLVALVE BRZ WATTS#B6100	3/4"BRONZE-MANUAL, NO KITS
all	4	96D055WSS	01Z 3/4"BALLVALVE S/S WATTS#S-8000	3/4"STAINLESS-MANUAL
all	004BK	96V055BK	BALL & STEM KIT WATTS #4BSK-SSRK	
all	004SSK	96V055SSK	01Z REPKIT 3/4"VAL WATTS#4SSK-02-RK	
all	5	96D084	01Z BALL VALVE 1" WATTS#B6100 BRZ	1" BRONZE-MANUAL , NO KITS
all	6	96D085WEXS	07Z BALVAL 1" BRZ WATTS#B6400SSZ107	1" BRONZE-AIR OPERATED
all	006BK	96V085BK	BALL KIT WATTS #1-BALL-RK-Z107	
all	006SK	96V085SK	02Z STEM KIT 1" WATTS#1-ST-RK-Z107	
all	006SSK	96V085SSK	02Z REPKIT 1"BALVAL#1SSK-02-KK-Z107	
all	7	96D085WSS	07Z BALVAL 1" SS WATTS S8000-Z107	1" STAINLESS-AIR OPERATED
all	007BK	96V085BK	BALL KIT WATTS #1-BALL-RK-Z107	
all	007SK	96V085SK	02Z STEM KIT 1" WATTS#1-ST-RK-Z107	
all	007SSK	96V085SSK	02Z REPKIT 1"BALVAL#1SSK-02-KK-Z107	
all	8	96D086WEXS	08Z BAVAL 1+1/4BRZ WATS#B6400SSZ107	1-1/4"BRONZE-AIR OPERATED
all	008BK	96V086BK	BALL KIT WATTS #1.25-BALL-RK-Z107	
all	008SK	96V086A7SK	02Z STEMKIT 1.25-1.5-ST-RK-Z107	

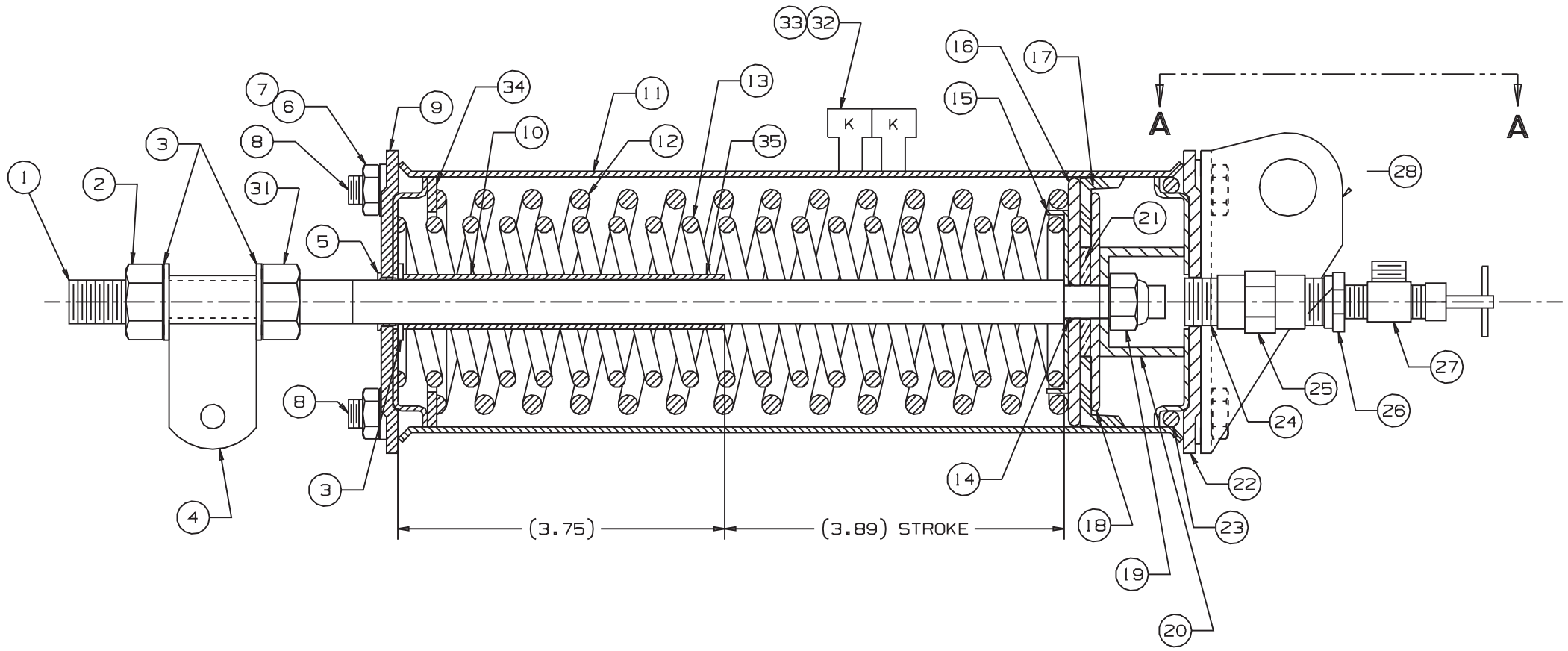
Parts List, cont.—Watts Ball Valves and Repair Kits

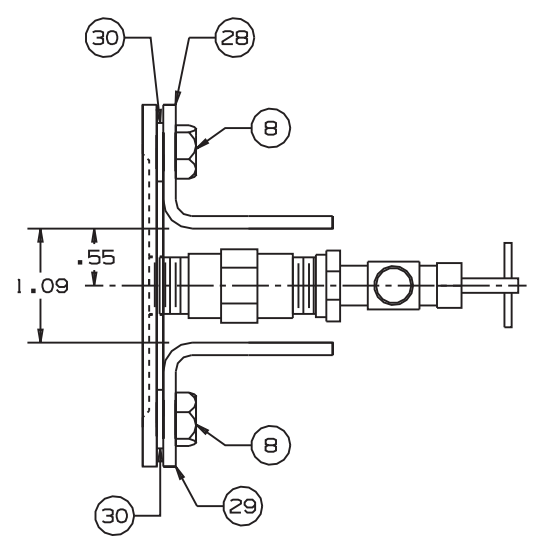
Used In	Item	Part Number	Description	Comments
all	008SSK	96V086SSK	02Z REPKIT 1.25BALVALSSK-02-RK-Z107	
all	9	96D086WSS	08Z BAVAL 1+1/4"SS WATTS S8000-Z107	1-1/4"STAINLESS-AIR OPER.
all	009BK	96V086BK	BALL KIT WATTS #1.25-BALL-RK-Z107	
all	009SK	96V086A7SK	02Z STEMKIT 1.25-1.5-ST-RK-Z107	
all	009SSK	96V086SSK	02Z REPKIT 1.25BALVALSSK-02-RK-Z107	
all	10	96D087WEXS	09Z BAVAL 1+1/2BRZ WATS#B6400SSZ107	1-1/2"BRONZE-AIR OPERATED
all	010BK	96V087BK	BALL KIT WATTS #1.5-BALL-RK-Z107	
all	010SK	96V086A7SK	02Z STEMKIT 1.25-1.5-ST-RK-Z107	
all	010SSK	96V087SSK	02Z REPAIR KIT 1.5" BALL VALVE	
all	11	96D087WSS	08Z BAVAL 1+1/2"SS WATTS S8000-Z107	1-1/2"STAINLESS-AIR/ OPER.
all	011BK	96V087BK	BALL KIT WATTS #1.5-BALL-RK-Z107	
all	011SK	96V086A7SK	02Z STEMKIT 1.25-1.5-ST-RK-Z107	
all	011SSK	96V087SSK	02Z REPAIR KIT 1.5" BALL VALVE	
all	12	96D088WEXS	09Z BALVAL 2" BRZ WATTS#B6400SSZ107	2"BRONZE-AIR OPERATED
all	012BK	96V088BK	BALL KIT WATTS #2-BALL-RK-Z28	
all	012SK	96V088SK	03Z STEM KIT 2" WATTS#2-ST-RK-Z107	
all	012SSK	96V088SSK	02Z REPKIT 2"VAL WAT2SSK-02-RK-Z107	
all	13	96D088WSS	09Z BALVAL 2" SS WATTS S8000-Z107	2"STAINLESS-AIR OPERATED
all	013BK	96V088BK	BALL KIT WATTS #2-BALL-RK-Z28	
all	013SK	96V088SK	03Z STEM KIT 2" WATTS#2-ST-RK-Z107	
all	013SSK	96V088SSK	02Z REPKIT 2"VAL WAT2SSK-02-RK-Z107	

Air Cylinders for 1", 1.25”, 1.5” & 2” Watts Ball Valves

Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400

Litho in U.S.A.





VIEW A-A

NOTES:

1. LUBRICATE SPRINGS WITH A LAYER OF GREASE BUT NOT SO MUCH AS TO CAUSE EXCESS TO LEAK OUT.
2. DO NOT GREASE THE CUP, ITEM 17! DOING SO WOULD BLOCK THE AIR LINES.

Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400

Litho in U.S.A.

Parts List—Air Cylinders for 2" Watts Ball Valves

Find the correct assembly first, then find the needed components. The item letters (A, B, C, etc.) assigned to assemblies are referred to in the "Used In" column to identify which components belong to an assembly. The item numbers (1, 2, 3, etc.) assigned to components relate the parts list to the illustration.

Used In	Item	Part Number	Description	Comments
			----------ASSEMBLIES----------	
	A	SA 10 057C	95222D AIRCYL=3.0ODX3.89ST171/176CD	FOR 2” BALLVALVES
	B	SA 10 057D	95222# AIRCYL=3.0ODX3.89ST171/176SS	FOR 2” STAINLESS BALLVALVES
	C	SA 10 056F	92000Z AIRCYL=2.38ODX2.70STX20.5#CD	FOR 1,1.25,1.5 BALLVALVES
	D	SA 10 056G	92000Z AIRCYL=2.38ODX2.70STX20.5#SS	FOR 1,1.25,1.5 STAINLESS BALLVALVES
			----------COMPONENTS----------	
A,B	1	03 01615	94191B PISTON STEM 3"AIRCYL	
C,D	1	02 18650	96461B STEM=2 WAY AIRCYLINDER BRAKE	
all	2	15G234NS	HXLOCKNUT NYL 1/2-13UNC2 SS18-8	
all	3	15U243S	FLAWASHER 7/8ODX33/64IDX16GA 18-8SS	
all	4	03 01209A	92536B STEMCLIP H=1.313 BALVAL S/S	
all	5	54E220	NYLINER 8L2FF BUSHING 1/2X9/16X.140	
A	6	15G191	HXFINJAMNUT 5/16-24UNC2 ZINC GR2	
B,C,D	6	15G190	HEXFINJAMNUT 5/16-18NC2 SS18-8	
A	7	15U210	LOKWASHER MEDIUM 5/16 ZINCPL	
B,C	7	15U205	LOCKWASHER MEDIUM 5/16" 18-8SS	
D	7	15U200S	FLATWASHER US STD 5/16 SS18-8	
A	8	02 10585H	91142# TIE BOLT=5/16-18X10LNG PLTD	
B	8	02 10585G	91142# TIE BOLT=5/16-18X10LG (SS)	
C	8	02 10585E	91142# TIE BOLT=5/16-18X8.25LG PLTD	
D	8	02 10585A	91142# TIE ROD-5/16-18X8+1/4 (SS)	
A	9	03 01623	90351C CYLINDER HEAD 3"AIRCYLINDER	
Bl	9	03 01623A	90351# CYLHEAD 3"AIRCYLINDER-S/S	
C	9	02 02546	87341C CYLHEAD=SLIDESTEM	
D	9	02 02546S	87341# CYLINDER HEAD=SLIDE STEM SS	
all	10	27B32024SS	SPACER ROLL .51IDX.6250DX1.5L STN S	
A,B	11	03 01621	94266BTUBE 2+7/8 AIR CYLINDER 9"	
C,D	11	02 02068	94266A AIRCYL-STAINLESS=DUMPVALVE	
A,B	12	03 01617C	92133B SPRING=FL11.5SR23.5#MD2.368	
C	12	02 15881	96471# SPRING=BRAKE2.1OD11FL15.5#/”	
D	12	02 15881A	85504Z SPRING,02 -15881+HEAVY PAINT	
A,B	13	03 01616C	92133B SPRING=FL11.35SR20.5MD1.811	
C	13	02 15880	96471B SPRING=BRAKE1.5OD10.3FL17#/”	
D	13	02 15880A	85504Z SPRING,02-15880 +HEAVY PAINT	
all	14	60C106	ORING 5/16ID 1/16CS BN 70 DURO #011	
A,B	15	03 01620A	92133B 3"AIR CYL=SPRING RETAINER	

Parts List, cont.—Air Cylinders for 2" Watts Ball Valves

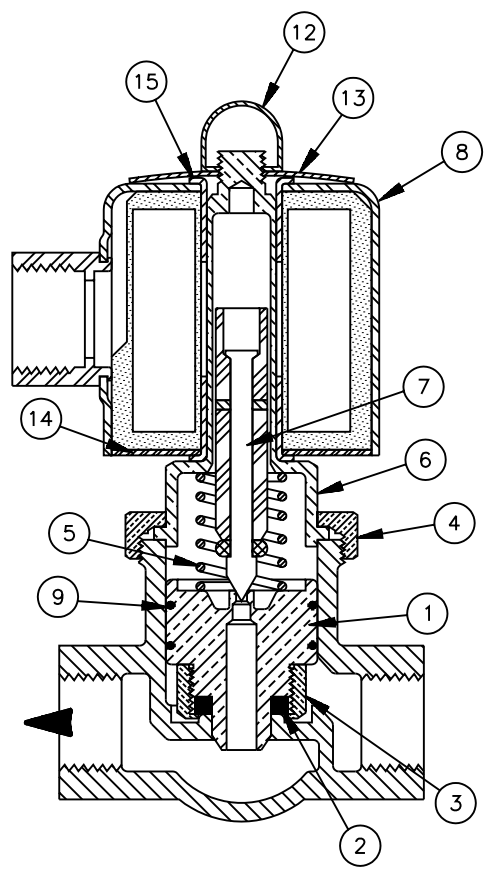
Used In	Item	Part Number	Description	Comments
C,D	15	02 18651	73171A WASHER=2 WAY BRAKE CYL	
A,B	16	X3 01619A	92066# MACH=3"ACYL BRASS PISCUP WSH	
C,D	16	02 02105B	92253B 2.38”ACYL BRASS PISCUP WASHR	
A,B	17	02 19302	93356B PISTON CUP 2+7/81D CYLINDER	
C,D	17	02 02194	93217B PISTONCUP=DUMPVALVE 2+3/8”	
A,B	18	03 01618	91522B PISTON CUP WASHER 3"AIRCYL	
C,D	18	02 02085	94092B UP WASHER=2”OD=PISTON CUP	
all	19	15G220	02Z LTHX THIN LOKNUT 3/8-24 SSNTE	
A,B,D	20	03 01313S	85506B+STOP=AIRCYL W/2+11/16STR.SS	
C	20	03 01313	70219A STOP=AIR CYL W/2+11/16STROKE	
A,B	21	03 01630	87506B 3"AIRCYL PSTN CUP COMPLMTWSH	
C,D	21	02 02185	79237A WASHER=PISTON CUP COMP LIMIT	
A	22	03 01622	88531# CYL HEAD TAPHOLE 3"AIRCYL SS	
B	22	03 01622A	88531# CYLHEAD TAPHOLE-3"ARCYL S/S	
C	22	02 02101	71334A CYLHEAD W/TAPPED HOLE	
D	22	02 02101S	88531B CYLINDER HEAD TAP HOLE (SS)	
A,Bl	23	60C134	ORING 2.5 ID 3/16CS BN 70 DURO #333	
C,D	23	60C132	ORING 2”IDX3/16CS BUNA70 #32	
all	24	5N0ECLSBE2	NPT NIPPLE 1/4XCLS TBE BRASS 125#	
all	25	5SCC0EBE	NPT COUP 1/4 BRASS 125# #103	
all	26	5SB0E0CBEO	HEXPIPBUSH 1/4 X 1/8 BRASS 125#	
all	27	96H018	NEEDLE VALVE	
A,B	28	03 01627B	92023# LEFT=3"AIR CYL MNTG BRKT	
C	28	03 01660C93231B	BRKT=AIR CYL MONUT LEFT	
D	28	03 01660A	92271B BRKT=AIR CYL MNT LFT-S/S	
A,B	29	03 01627A	92023B RIGHT=3"AIR CYL MNTG BRKT	
C	29	03 01660D	BRKT=AIR CYL MOUNT RIGHT	
D	29	03 01660B	92271# BRKT=AIR CYL MNT RHT-S/S	
all	30	15U200	FLATWASHER(USS STD) 5/16"ZNC PLT	
all	31	15G231S	HXFINJAMNUT 1/2-13UNC2B SS18-8	
all	32	20L601K	ID TAG NAT'L #1614 ALUM EMB LET "K"	
all	33	27B2400K0N	SPACER ROLL.5ID .687L .062T STL/ZNC	
all	34	03 01620E	92136B.WASHER=2.86ODX2.06IDX.105THK	

Hays Electric Inlet Valves

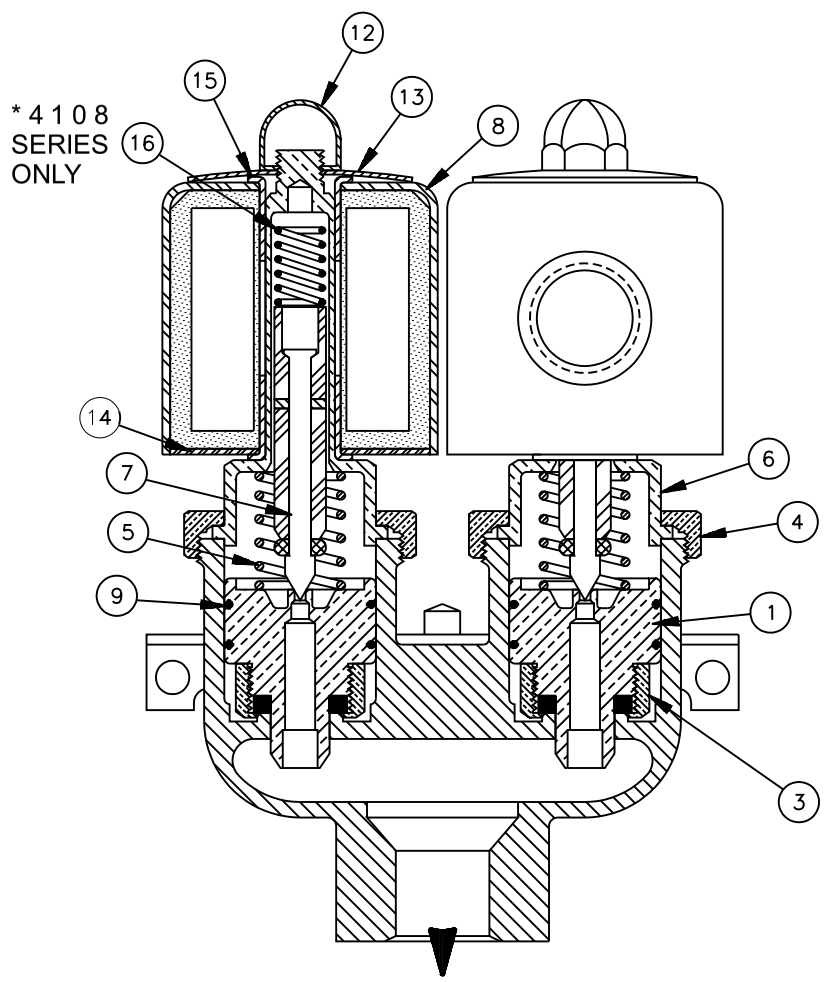
Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400

Litho in U.S.A.

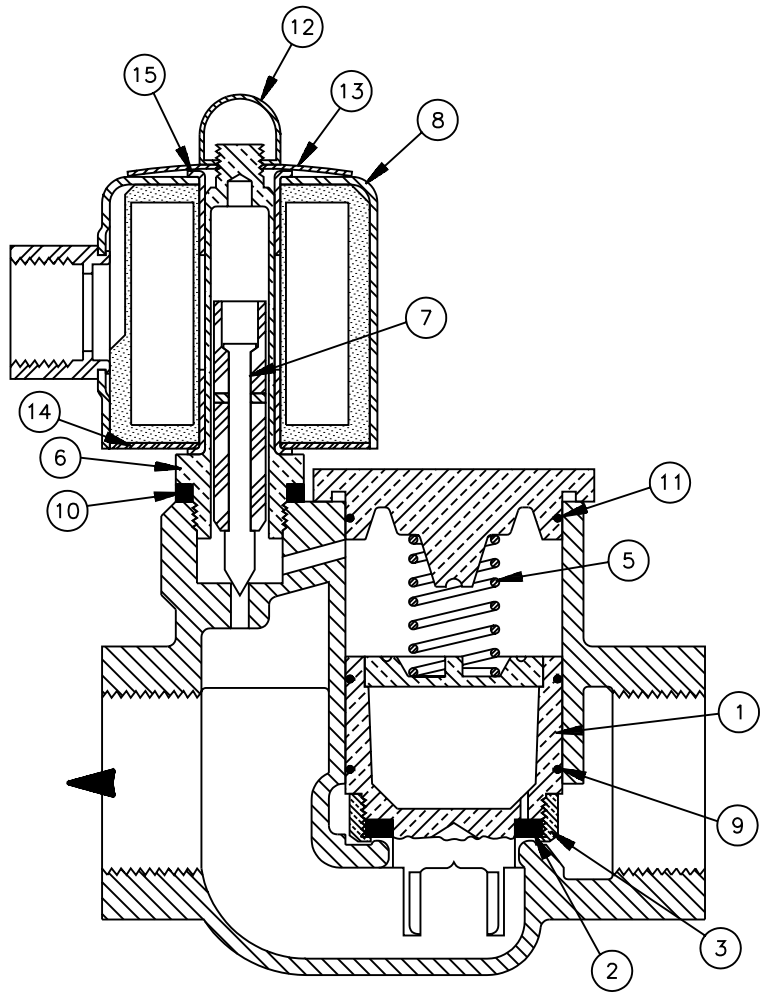
NOTE:
HAYS 4108 SERIES DUOVALVE IS REPLACED BY THE 3108 SERIES(SHOWN). IF REPLACEMENT PARTS ARE NEEDED FOR THE OBSOLETE 4108 SERIES SEE PARTS LIST ON REVERSE SIDE.



00S,00W,00X,00XX
3/8" BALANCING & 3/4" VALVES



00T,00U,00V
1/2" DUO VALVES



00Y,00Z,00ZZ
1-1/4" VALVES

GENERAL MAINTENANCE:

1) THOSE VALVES WITH COUPLING NUTS MUSTY NOT BE EXCESSIVELY TIGHTENED. USE A STEADY PULL WITH A 14" OR SMALLER WRENCH. DO NOT HAMMER ON NUT OR WRENCH. LIMIT MAXIMUM TORQUE ON COUPLING NUT TO 600LB/INCH. EXCESSIVE THIGHTENING OF COUPLING NUT WILL DISTORT VALVE BODY CAUSING THE PISTON BODY TO JAM AND THE VALVE WILL NOT SHUT OFF.

2) IF THE VALVE LEAKS BETWEEN THE BODY AND BONNET, LOOSEN THE COUPLING NUT AND TURN THE BODY SLIGHTLY, THEN TIGHTEN THE COUPLING NUT. IF THE VALVE STILL LEAKS, REPEAT THE OPERATION. IN NO CASE MUST THE NUT BE TIGHTENED EXCESSIVELY.

Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400
BMP700710/96081V (2 of 2)
Litho in U.S.A.

Parts List—Hays Electric Inlet Valves

Find the correct assembly first, then find the needed components. The item letters (A, B, C, etc.) assigned to assemblies are referred to in the "Used In" column to identify which components belong to an assembly. The item numbers (1, 2, 3, etc.) assigned to components relate the parts list to the illustration.

Used In	Item	Part Number	Description	Comments
			----------ASSEMBLIES----------	
	S	96P014	02Z 3/8" VALVE 120V HAYS 2195-0055	
	T	96P016	10Z 1/2" DUOVAL 120V HAYS3108-6021	
	U	96P016A24	08Z 1/2" DUOVAL 24V HAYS3108-6421	
	V	96P016A71	05Z 1/2" DUOVAL 240V HAYS3108-6121	
	W	96P053	05Z 3/4"VAL 24V HAYS 2110-6421IS	
	X	96P053A37	06Z 3/4"VAL 110V HAYS #2110-6021IS	
	XX	96P053A71	3/4" HAYS VALVE 240V60/50C FACTMADE	
	Y	96P151	09Z 1+1/4" VAL 24V HAYS 2110-6421IS	
	Z	96P151A37	05Z 1+1/4" VAL 110V HAYS2110-6021IS	
	ZZ	96P151A71	1.25" HAYSVALVE 240V60/50C FACTMADE	
			----------COMPONENTS----------	
S	1	96V245	PISTON ASSY HAYS #7735505	
T-V	1	96V216	PISTON-TEFLON FOR HAYS STYLE 3108	
W-XX	1	96V222	PISTON ASSY HAYS 7730004 FOR 96P053	
Y-ZZ	1	96V224B	PISTON ASSY HAYS #7643101=96P151	
all	1	96V216A	PISTON-TEFLON FOR HAYS STYLE 4108	OBSOLETE 4108 DUOVALVE
S-V,	2	96V247	SEATWASHER HAYS #8222301 96P014+16	OBSOLETE 4108 DUOVALVE ALSO
W-XX	2	96V225	SEAT WASHER HAYS #8249801	
Y-ZZ	2	96V225A	SEAT WASHER HAYS #84048 FOR 96P151	
S-V,	3	96V248	SEATWASHER NUT HAYS#82222 96P014+16	OBSOLETE 4108 DUOVALVE ALSO
W-Z	3	96V226	SEAT WASHER NUT HAYS #86030 =96P053	
S-V	4	96V246	COUPLING NUT HAYS #76303 96P014+16	
W-Z	4	96V254	COUPLING NUT HAYS #76028 = 96P053	
S-V,Y-ZZ	5	96V244	PISTON SPRING FOR HAYS STYLE 3108	
W-XX	5	96V222A	PISTON SPRING HAYS 82488	
all	5	96V244A	PISTON SPRING HAYS 4108 HAYS #88108	OBSOLETE 4108 DUOVALVE
S-V	6	96V242	BONNET FOR HAYS 3108 HAYS#83021	
W-XX	6	96V258	BONNET HAYS #73026 FOR 96P053	
Y-Z	6	96V260	BONNET HAYS #83192 FOR 96P151	
S onlY	7	96V243	PLUNGER ASSY TEFLON TIP HAYS #74327	
T-ZZ	7	96V223	PLUNGER HAYS #7319503	
all	7	96V223A	PLUNGER ASSY FOR HAYS STYLE 4108	OBSOLETE 4108 DUOVALVE

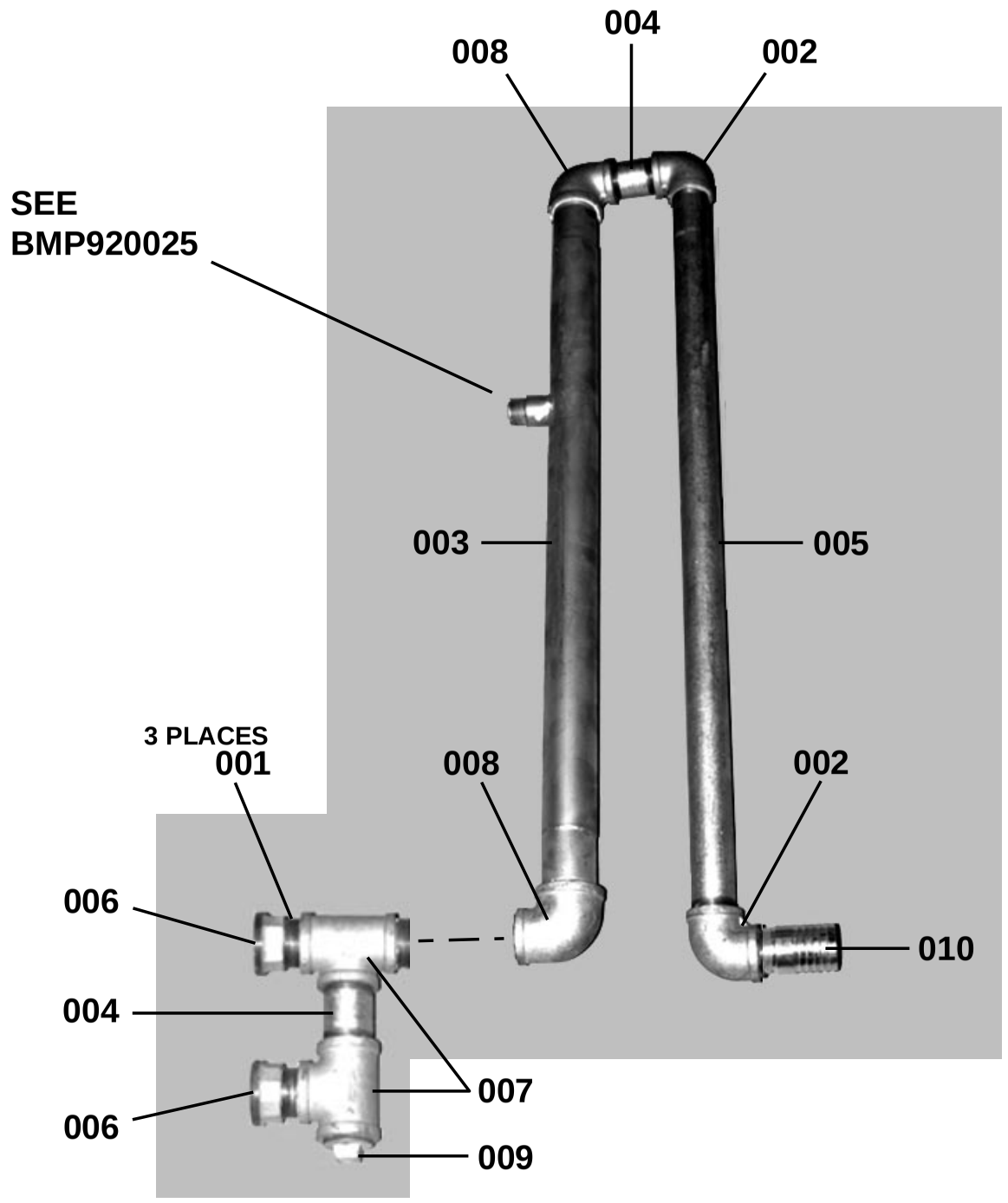
Parts List, cont.—Hays Electric Inlet Valves

Used In	Item	Part Number	Description	Comments
S-T,X,Z	8	96V211	COIL 120V50/60C FOR HAYS STYLE 3108	
U,W,Y,ZZ	8	96V210	COIL 24V50/60C FOR HAYS STYLE 3108	
V,XX	8	96V212	COIL 240V50/60C FOR HAYS STYLE 3108	
S-V,	9	96V217	TEFLON SPLIT RING 1/2" HAYS#8502901	OBSOLETE 4108 DUOVALVE ALSO
W-XX	9	96V222T	TEFLON SPLIT RING HAYS #8503002	
Y-ZZ	9	96V224T	TEFLON SPLITRING 1 1/4"HAYS#8503102	
Y-ZZ onlY	10	96V229	BONNET GASKET HAYS #82224= 96P151	
Y-Z onlY	11	96V261	O-RING (SEAL CAP) HAYS#87407=96P151	
all	12	96V250	PALNUT HAYS #3069-PC	
all	13	96V251	SPRING WASHER HAYS #83600	
all	14	96V264	BOTTOM PLATE (COIL) HAYS#8223601	
all	15	96V262	FERRULE (COIL SLEEVE) HAYS #82239	
all	16	96V244PS	PLUNGER SPRING FOR HAYS STYLE 4108	OBSOLETE 4108 DUOVALVE ONLY
all	17	96V250A	COIL RETAINER HAYS4108 HAYS #82958	(NOT SHOWN) OBSOLETE 4108 DUOVALVE

PELLERIN MILNOR CORPORATION
700 JACKSON STREET/POST OFFICE BOX 400
KENNER, LOUISIANA 70063-0400 USA

DRAWING
(See other page for parts list, if applicable.)

FLOW METER PIPING
64046E6N/J6N 72046E5N/J5N 72058J5N



LITHO IN USA

PELLERIN MILNOR CORPORATION
700 JACKSON STREET/POST OFFICE BOX 400
KENNER, LOUISIANA 70063-0400 USA

PARTS LIST
(See other page for drawing.)

FLOW METER PIPING
64046E6N/J6N 72046E5N/J5N 72058J5N

ITEM	PART NUMBER	DESCRIPTION	HOW PART IS USED IN ASSEMBLY (Only if pertinent)
00A	AVW65006	94052B ASSY=FLOWMETER PIP 6446E/T6N	REFERENCE ASSEMBLY
001	5N2ACLSG42	NPT NIPPLE 2XCLS TBE GALSTL SK40	
002	5SL2ANFA	NPT ELBOW 90DEG 2" GALMAL 150#	
003	W3 64077	92631C*FLOWMETER MANIFOLD	
004	5N2A04AG42	NPT NIPPLE 2X4 TBE GALSTL SK40	
005	5N2A48AG42	NPT NIPPLE 2X48 TBE GALSTL SK40	
006	5SU2ANF	NPT UNION 2" GALMAL 150#	
007	5S2ANFA	NPT TEE 2" GALMAL 150#	
008	5SL2KNFA2A	NPT ELBOW 90DEG 2.5X2" GALMAL 150#	
009	51P060	PLUG PIPE SQ 2"GALCORED CI 125#	
010	02 15847C	85426B ADAPTER,CARBSTL2-1/2HOSX2NPT	
		******** END OF PARTS LIST ********	

How to Read Parts List

Reference Item Numbers—Items 00A, 00B, 00C, etc., or 00X, 00Y, 00Z, etc., appearing at the top of **some** parts lists, are for reference and provide:

1. The part number for the entire assembly depicted in the drawing or a major sub-assembly thereof, and/or
2. The range of machine models this drawing applies to.

If more than one reference item appears, this usually means this drawing applies to more than one assembly (and thus to more than one range of machines).

Component Item Numbers—For any item on the drawing (e.g., item ①), there may be several corresponding items on the parts list (e.g., 001A, 001B, 001C, etc.) which are similar components on different assemblies. "How Part Is Used In Assembly" identifies which components apply to your machine, by listing either the machine model, or the reference item number from the top of the parts list (e.g., 00A, 00B, 00C, etc.), or a particular characteristic (e.g., bronze or stainless steel), or special ordering information, such as a repair kit number.

LITHO IN USA

Paddlewheel Flow Sensor

Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400
BMP920025/92662V (1 of 2)
Litho in U.S.A.

Identification and Description

The flow sensor is installed in a pipe line to measure flow rate. The flow passing by the flow sensor paddlewheel rotates the paddlewheel, moving the magnets past a coil in the transducer body. An AC voltage is induced in the coil by the rotating magnets of the paddlewheel.

Both frequency and amplitude of the output of the coil are directly proportional to the velocity of the fluid flow in the pipe. A complete cycle occurs every time two of the paddlewheel blades go by the coil; therefore, two entire cycles are generated for each paddlewheel rotation.

Safety Instructions

⚠ DANGER ⚠

SHOCK HAZARD will cause death or severe injury.

Lock OFF and tag out power to machine at wall disconnect. Power switches on machine and control box disable only control circuit power in electrical boxes.

⚠ CAUTION ⚠

Turn off fluids before removing flow sensor from pipe line.

Maintenance

The flow sensor requires minimal care. Check your flow sensor every three months until actual maintenance intervals can be determined. After removing flow sensor:

1. Paddlewheel must turn freely, if not, see troubleshooting below.
2. Inspect flow sensor electrical connections and cable.
3. Check O-rings and lubricate with G.E. Silcone Compound G660 or similar. Keep paddlewheel and pin free of lubrication (replacement paddlewheels and other parts are available from manufactuer).

Troubleshooting

The paddlewheel is designed to rotate on the shaft; the shaft should not rotate with respect to the housing. The paddlewheel must turn freely. If it does not, clean the paddlewheel assembly as follows:

1. Remove the flow sensor from the pipe and insert the plug into the pipe fitting. Clean any external debris from the paddlewheel.
2. Using a small flat-bladed screwdriver, gently pry one of the paddlewheel mounting ears away from the pin (see FIGURE 2).
3. When one end of the pin is free, gently work the paddlewheel and pin out of the remaining mounting ear.
4. Throughly clean the pin, paddle, and pin holes with a wire brush and/or toothpick along with alcohol and/or soap and water.
5. To reinstall the paddlewheel and pin, reverse steps 1, 2, and 3.
6. After cleaning, the paddlewheel should spin freely without binding or sticking.

FIGURE 2: REMOVAL OF PADDLEWHEEL PIN

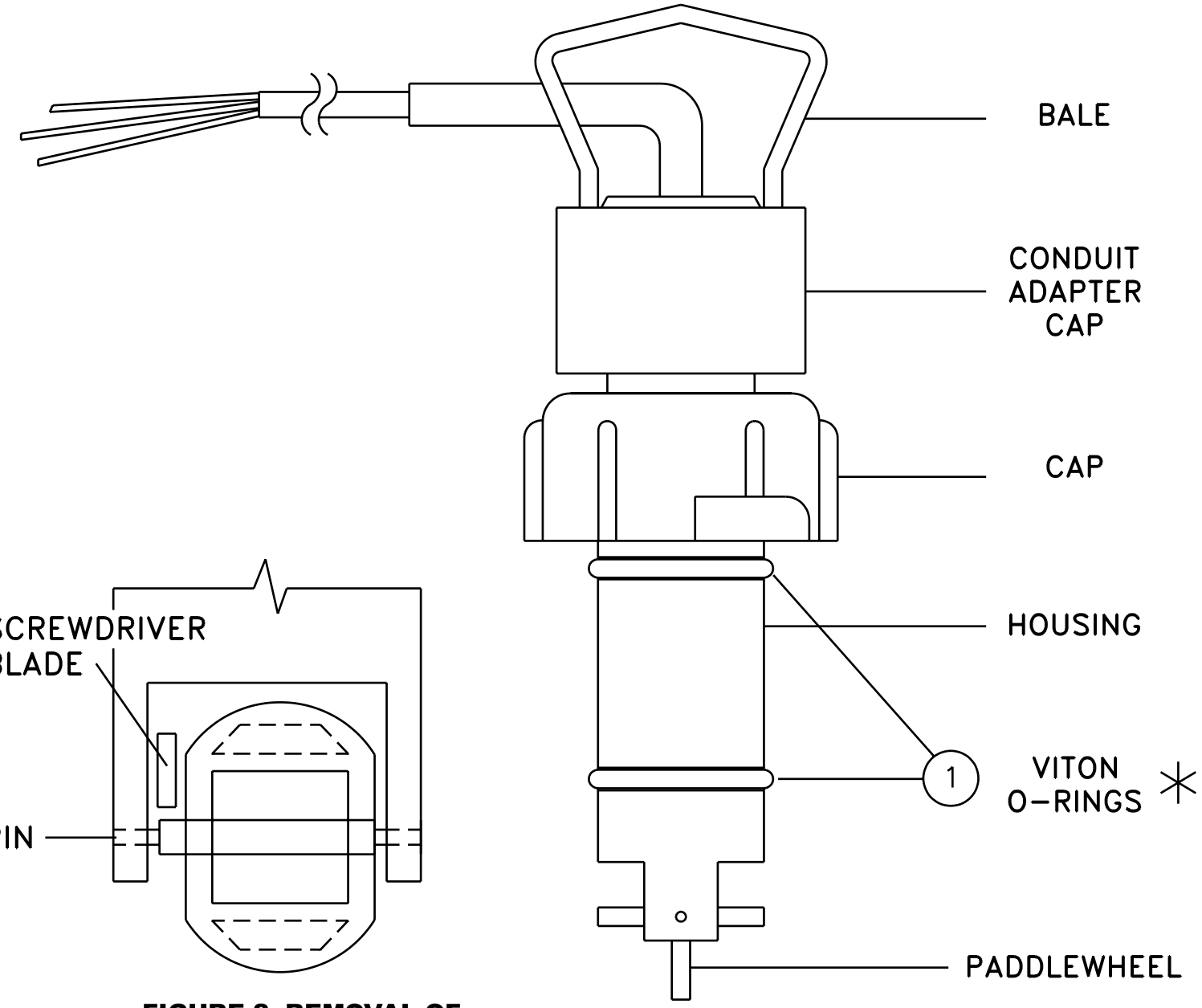


FIGURE 1: FLOW SENSOR

Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400

Litho in U.S.A.

Parts List—Paddlewheel Flow Sensor

Find the correct assembly first, then find the needed components. The item letters (A, B, C, etc.) assigned to assemblies are referred to in the "Used In" column to identify which components belong to an assembly. The item numbers (1, 2, 3, etc.) assigned to components relate the parts list to the illustration.

Used In	Item	Part Number	Description	Comments
	00A	30F515	FLOW SENSOR SIGNET #MK515-PO	COMPLETE FLOW SENSOR
	001	30F515R01	VITON O-RING FOR FLOW SENSOR SIGNET	REPAIR KIT O-RINGS (2PER)

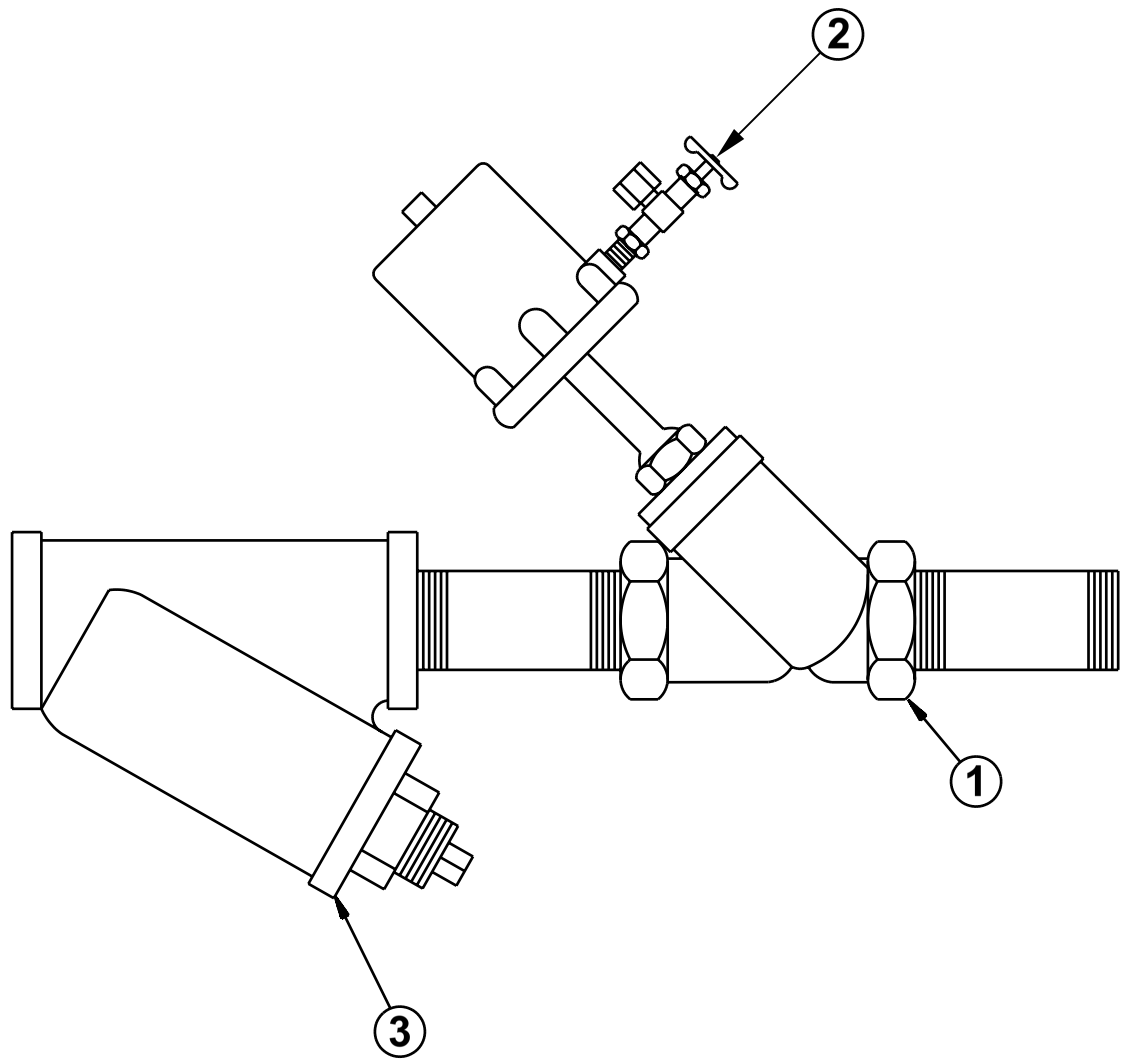
Parts List, cont.—Paddlewheel Flow Sensor

Used In	Item	Part Number	Description	Comments

Burket Steam Valve

Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400

Litho in U.S.A.



Parts List—Burket Steam Valve

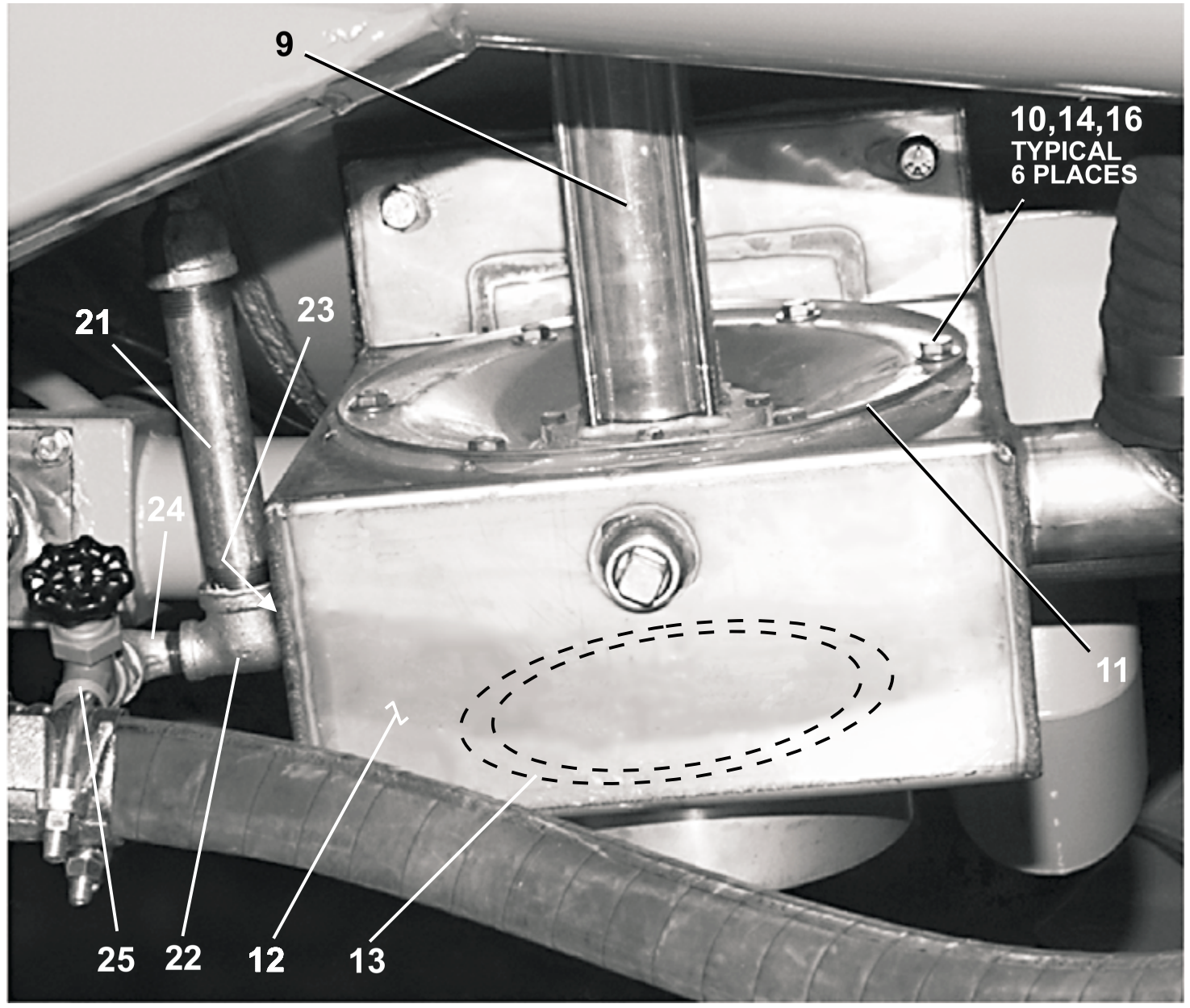
Find the correct assembly first, then find the needed components. The item letters (A, B, C, etc.) assigned to assemblies are referred to in the "Used In" column to identify which components belong to an assembly. The item numbers (1, 2, 3, etc.) assigned to components relate the parts list to the illustration.

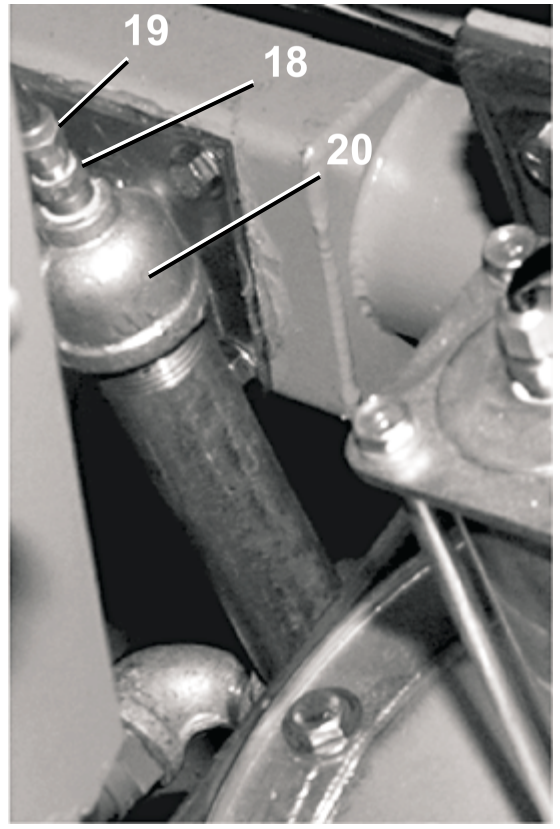
Used In	Item	Part Number	Description	Comments
			----------ASSEMBLIES----------	
	W	96D0009ER1	02Z REPAIRKIT 3/4" STEAM VALVE	KIT FOR 001A
	X	96D0011ER1	02Z REPAIR KIT 1.25" STEAM VALVE	KIT FOR 001B
	Y	96D0011ER2	ACTUATOR HOUSING FOR BURKET #251	KIT FOR 001B
	Z	96D0011ER3	REPAIR KIT MULLER 1.25 VALVE #554	KIT FOR 001B
			----------COMPONENTS----------	
all	1	96D0009E	03Z 3/4"NPT N/C STEAMVAL ANGLE BODY	3/4"
all	1	96D0011E	08Z 1/25"NPT N/C STEAMVAL ANGLEBODY	1-1/4"
all	2	96H018	NEEDLE VALVE	
all	3	51T030	01Z Y-STRAINER 3/4" CAST IRON	USED WITH 001A
all	3	51T060	01Z Y-STRAINER 1+1/4" CAST IRON	USED WITH 001B

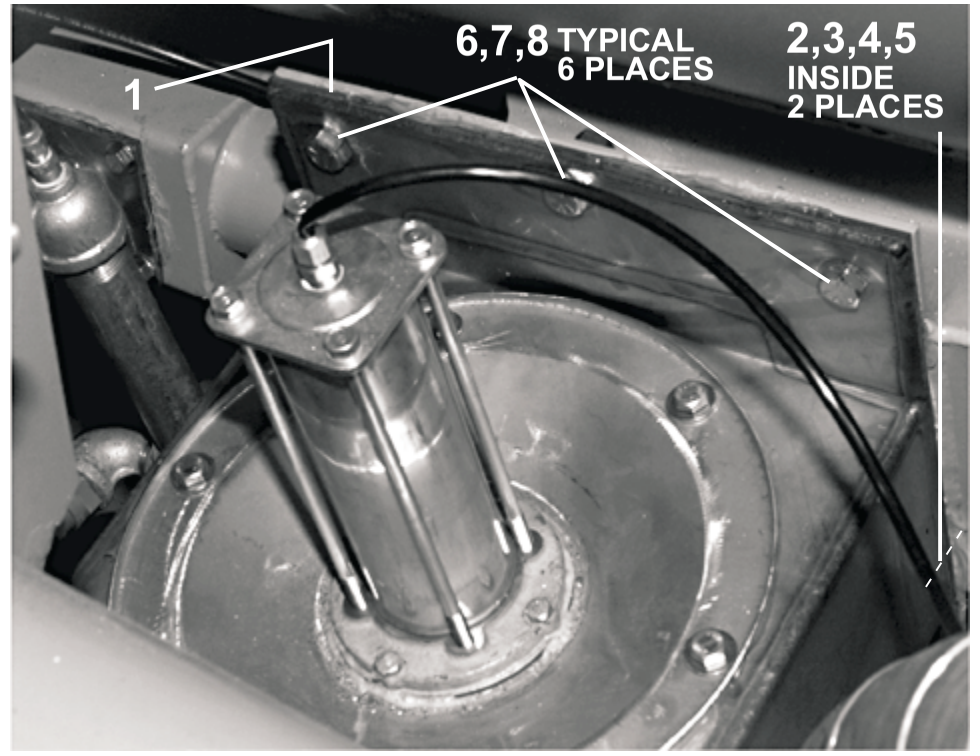
8” Dump Valve Assembly & Installation

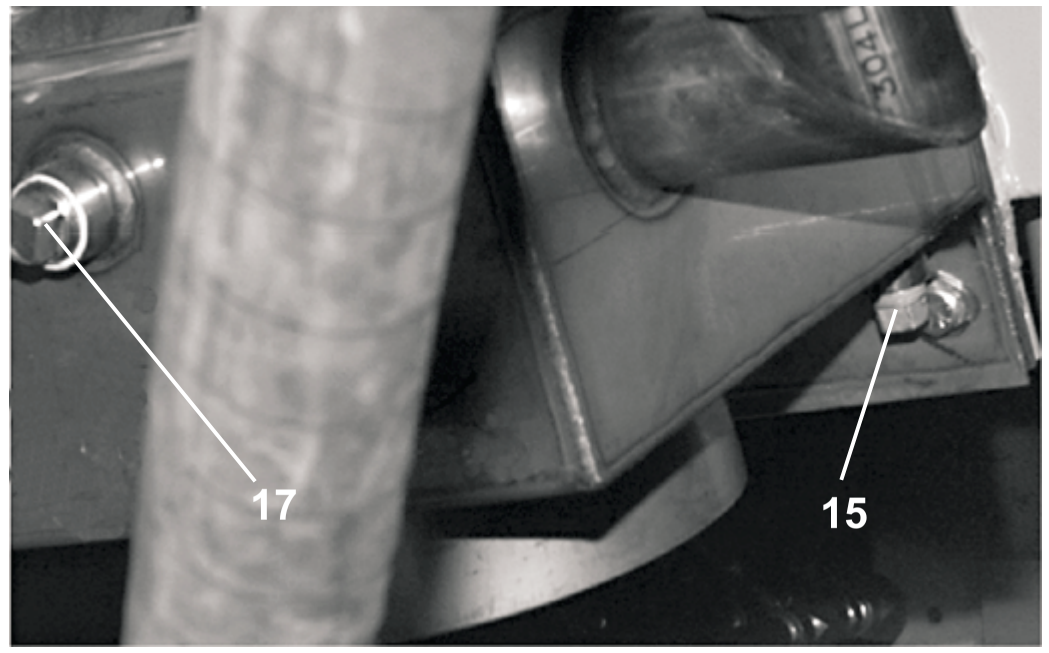
Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400

Litho in U.S.A.









Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400
Litho in U.S.A.

Parts List—8” Dump Valve Assembly

Find the correct assembly first, then find the needed components. The item letters (A, B, C, etc.) assigned to assemblies are referred to in the "Used In" column to identify which components belong to an assembly. The item numbers (1, 2, 3, etc.) assigned to components relate the parts list to the illustration.

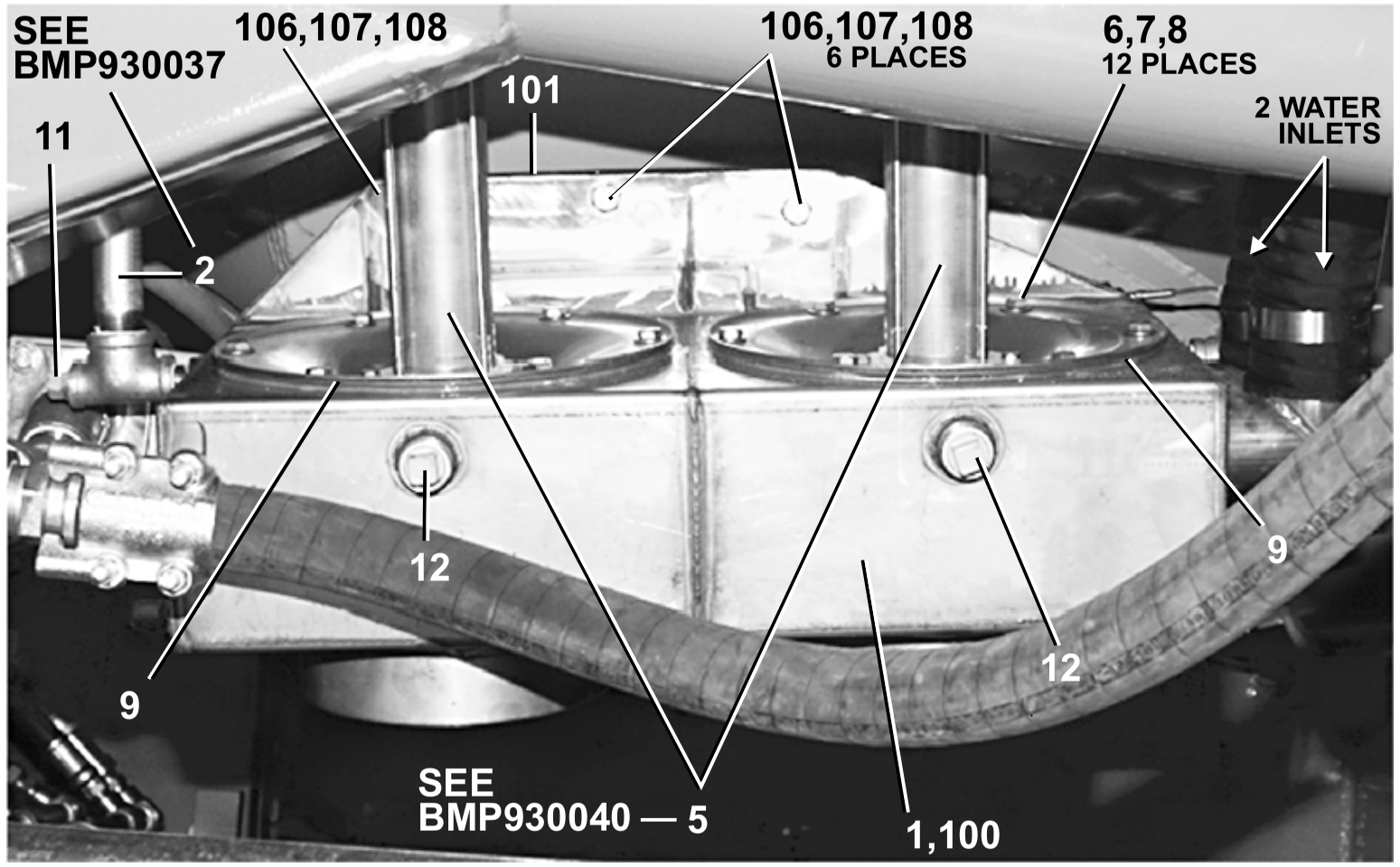
Used In	Item	Part Number	Description	Comments
			----------ASSEMBLIES----------	
	A	GVD65001J	INST=8"DUMPVAL DBLACTB 6446J	64046J6N,7258J2N
	B	GVD60001	INSTALL=8”DUMPVAL 6440E6N	64040,64050
	C	GVD65001	INSTALL= 8"DUMPVAL 6446E6N	64046,72046,72058
	D	AVD65001	ASSY= 8" DUMPVAL 6446E6N	64040,64050 64046,72046,72058
	E	AVD65001J	ASSY=8"DUMPVAL DBLACTB 6446J	64046J6N,7258J2N
	F	AD 15 090A	AIRCHAMBER PRESWITCH INSTALL	ALL MODELS
	G	SA 28 124	8”SGL DMPVALVE 4244+52+60	4244,5238,6044
			----------COMPONENTS----------	
A,B,C,G	1	02 18107	GASKET=8"FLANGED DUMP VALVE	
A,B,C	2	15K153	HXPSCR 1/2 WCX1.25S.S.	
A,B,C	3	24G032N	ROLLED WASH.50ID NYLTITE 50W	
A,B,C	4	15U310	LOKWASHER REGULAR 1/2 SS18-8	
A,B,C	5	5SP0KGFSS	NPT PLUG 1/2 SOSOLID GALSTL	
A,B,C	6	15K151	HXCAPSCR 1/2-13UNC24X1.25 GR5	
A,B,C	7	15U300	LOKWASHER REGULAR 1/2 ZINC PLT	
A,B,C	8	15G230	HXNUT 1/2-13UNC2B SAE ZINC GR2	
D,E,G	9	SA 28 158	* BONNET+AIRCYL=8"SS DUMPVALV	
E	9	SA 28 158J	ASSY=DBL ACT 8"SS BON+AIRCYL	
D,E,G	10	24G030N	ROLLED WASH.379ID NYLTITE 37W	
D,E,G	11	02 18104	GASKET=8"DUMP VALVE BONNET	
D,E,G	12	W2 18931C	*BODY=8" DUMPVALVE 6446E6N	
D,E,G	13	02 18068	9 SEAT-RESILIENT=8"DUMPVALVE	
D,E,G	14	15K086	HXCAPSCR 3/8-16NCX3/4 SS18-8	
D,E,G	15	5SP0KGFSS	NPT PLUG 1/2 SOSOLID GALSTL	
D,E,G	16	15U200	FLATWASHER(USS STD) 5/16"ZNC P	
D,E,G	17	5SP0PBESC	PLUG PIPE SQ 3/4" BRASS CORED	
F	18	5SB0E0CBEO	NPTHEXBUSH 1/4X1/8 BRASS 125#	
F	19	53A047H	MALCON 5/16X1/8POLY PH#68P-5-2	
F	20	5SR1A0ENF	NPT RED 1X1/4 GALMAL 150#	
F	21	5N1A07AG42	NPT NIP 1X7 TBE GALSTL SK40	
F	22	5S0KNFA1A	NPT TEE 1/2X1/2X1" GALMAL 150#	
F	23	5N0KCLSG42	NPT NIP 1/2XCLS TBE GALSTLSK40	
F	24	5SL0PNFC0K	NPT 90D STREET 3/4X1/2 GAL150#	
F	25	96DB0PNA	HOSEBIBB 3/4" MALEINLT CELCON	

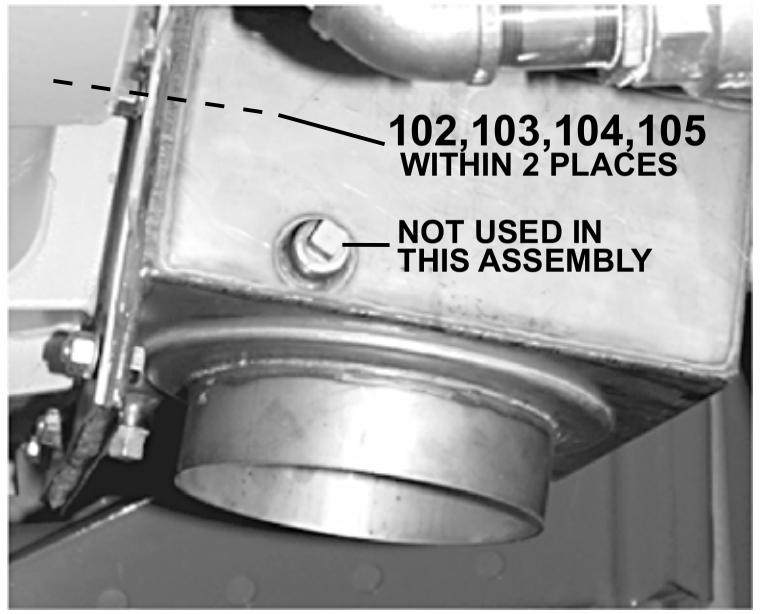
Dual Dump Valve Assembly

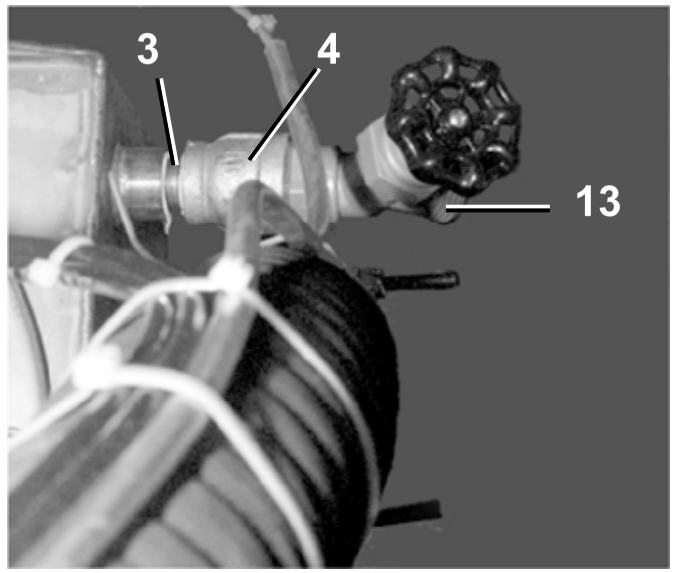
64046E6N/J6N/D6N 7258J2N

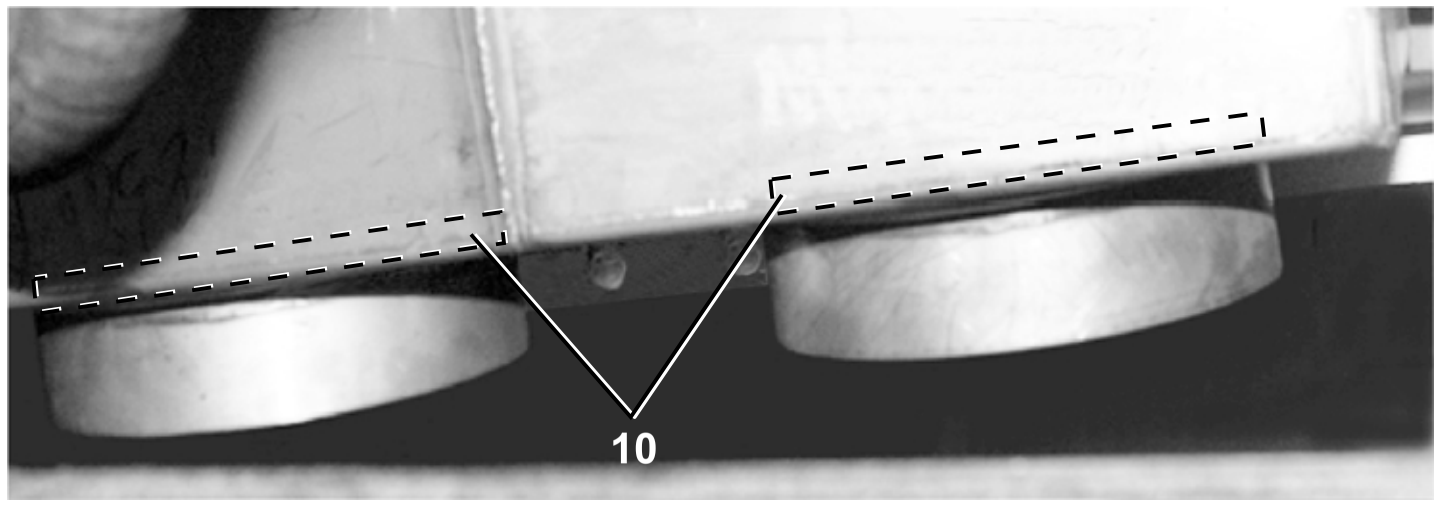
Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400

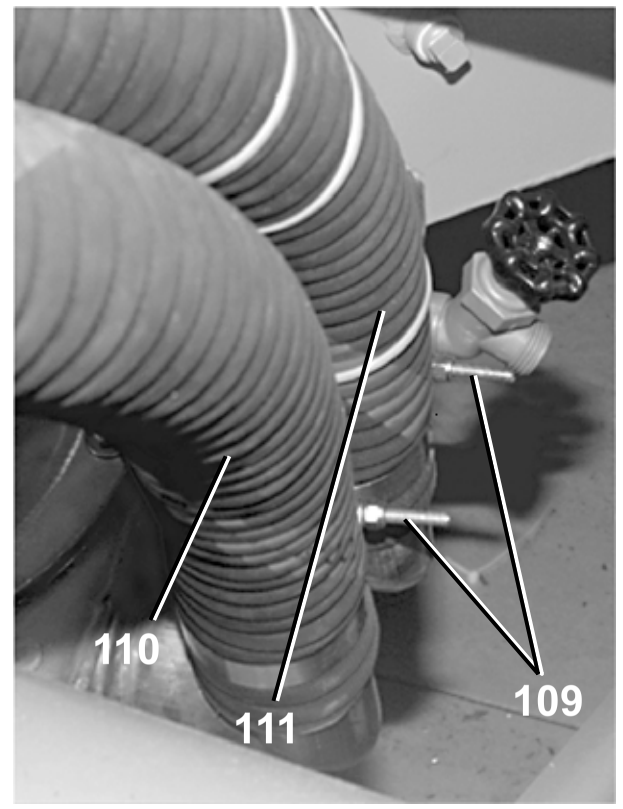
Litho in U.S.A.











Pellerin Milnor Corporation
P. O. Box 400, Kenner, LA 70063-0400
Litho in U.S.A.

Parts List—Dual Dump Valve Assembly

Find the correct assembly first, then find the needed components. The item letters (A, B, C, etc.) assigned to assemblies are referred to in the "Used In" column to identify which components belong to an assembly. The item numbers (1, 2, 3, etc.) assigned to components relate the parts list to the illustration.

Used In	Item	Part Number	Description	Comments
			----------ASSEMBLIES----------	
	A	AVD65002	92000Z ASSY=DUAL-DUMPVAL 6446E6N	
	B	AVD65002J	ASSY=DUALDMPVL DBLACTB 6446J	
			----------COMPONENTS----------	
A	1	W2 18931F	*BODY, 8"DUALDUMP=6446E6N	
B	1	W3-65500B	*BODY 8"DUALDUMP 11GA	
all	2	AD 15 090A	AIRCHAMBER PRESWITCH INSTALL	
all	3	5N0KCLSG42	NPT NIP 1/2XCLS TBE GALSTLSK40	
all	4	5SR0P0KNF	NPT RED 3/4X1/2 GALMAL 150#	
A	5	SA 28 158	* BONNET+AIRCYL=8"SS DUMPVALV	
B	5	SA-28-158J	ASSY=DBL ACT 8"SS BON+AIRCYL	
all	6	24G030N	ROLLED WASH.379ID NYLTITE 37W	
all	7	15K086	HXCAPSCR 3/8-16NCX3/4 SS18-8	
all	8	15U200	FLATWASHER(USS STD) 5/16"ZNC P	
A	9	02 18104	GASKET=8"DUMP VALVE BONNET	
B	9	02 18104D	GSKT=8"DPVAL BON RED SILICON	
A	10	02 18068	9 SEAT-RESILIENT=8"DUMPVALVE	
all	11	5SP0KGFSS	NPT PLUG 1/2 SOSOLID GALSTL	
all	12	5SP0PBESC	PLUG PIPE SQ 3/4" BRASS CORED	
all	13	96DB0PNA	HOSEBIBB 3/4" MALEINLT CELCON	
all	101	02 18107	GASKET=8"FLANGED DUMP VALVE	
all	102	15K153	HXPSCR 1/2 WCX1.25S.S.	
all	103	24G032N	ROLLED WASH.50ID NYLTITE 50W	
all	104	15U310	LOKWASHER REGULAR 1/2 SS18-8	
all	105	15G225	HEXNUT 1/2-13UNC2 SS18-8	
all	106	15K151	HXCAPSCR 1/2-13UNC24X1.25 GR5	
all	107	15U300	LOKWASHER REGULAR 1/2 ZINC PLT	
all	108	15G230	HXNUT 1/2-13UNC2B SAE ZINC GR2	
all	109	27A075	T-BOLT HOSECLAMP 2.75"-3.06"	
All	110	60E301A48A	HOSE= *2.5"2D PE X48"	
all	111	60E301A64A	HOSE= *2.5"ID PE X 64"	
all	112	60E328A18A	HOSE-8"1DX18"LONG GATES 4175EC	
All	113	27A092	HOSECLAMP S.S.SCR 7+1/8-10"	