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Installation and Service

42026 & 42032X7J, X7W Washer-Extractors

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

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

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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 —

Safety—Suspended, Open Pocket, Non-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.

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 3: 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 4: 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 5: 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 [6]: 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 [7]: 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 [8]: 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 [9]: 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 [10]: 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 [11]: 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.

5.1.2. Hazards Resulting from Damaged Mechanical Devices

WARNING [12]: 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 [13]: 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 14: 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 15: 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 16: 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 17: 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 18: 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 —

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

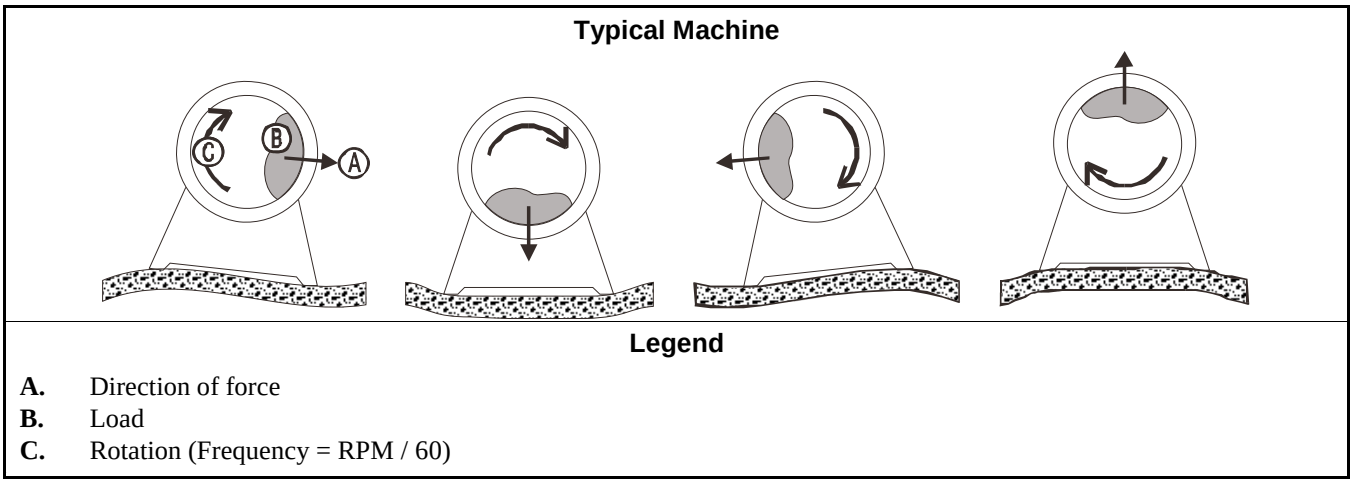


Figure 1 above is intended to depict both on-grade and above-grade installations and is equally applicable to flexibly-mounted washer-extractors, as well as to rigid models installed either directly on a floor slab or on a foundation poured integrally with the slab. Current machine data is available 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 —

BIUUUI02MX (Published) Book specs- Dates: 20160711 / 20160711 / 20160711 Lang: ENG01 Applic: MXU

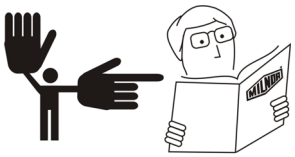
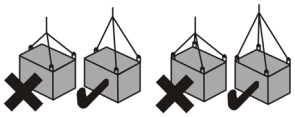
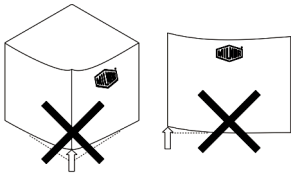
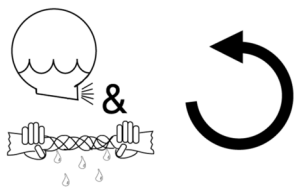
Tag Guidelines for the Models Listed Below

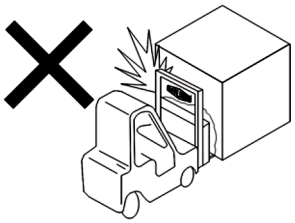
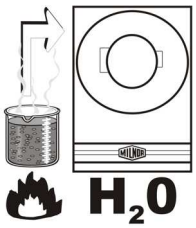
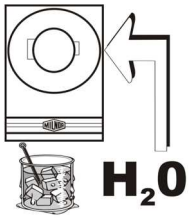
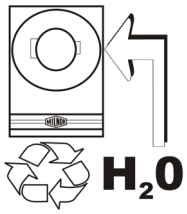
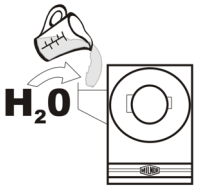
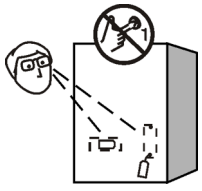
30022X8J 30022X8W 36026X8J 36026X8W 42026X7J 42026X7W 42032X7J 42032X7W

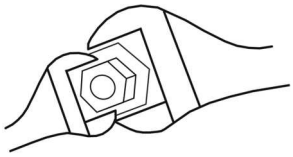
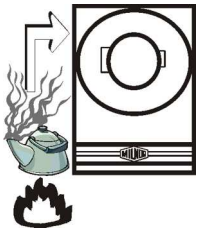
Notice 1: This information may apply to models in addition to those listed above. It applies to paper tags. It does not apply to the vinyl or metal safety placards, which must remain permanently affixed to the machine and replaced if no longer readable.

Paper tags on the machine provide installation guidelines and precautions. The tags can be tie-on or adhesive. You can remove tie-on tags and white, adhesive tags after installation. Yellow adhesive tags must remain on the machine.

The following entries explain the installation tags. Each entry includes: 1) the tag illustration, 2) the tag part number displayed st the bottom of the tag, and 3) the meaning of the tag.

Display or Action	Explanation
	Read the manuals before proceeding. This symbol appears on most tags. The machine ships with safety, operator, and routine maintenance guides for customer use. Milnor dealer manuals for installing, servicing, and commissioning this machine are also available from the Milnor Parts department.
	B2TAG88005: This carefully built product was tested and inspected to meet Milnor® performance and quality standards by (identification mark of tester).
	B2TAG94078: Do not forklift here; do not jack here; do not step here—whichever applies.
	B2TAG94079: Rig for crane lifting (either 3-point or 4-point, depending on the number of lifting eyes provided) using a steep angle on the chains (closer to vertical than horizontal).
	B2TAG94081: Motor must rotate in this direction. On single motor washer-extractors and centrifugal extractors, the drive motor must turn in this direction during draining and extraction. This tag is usually wrapped around a motor housing. If the motor turns in the opposite direction when the machine is first tested, the electrical hookup is incorrect and must be reversed as explained in the schematic manual.
	B2TAG94084: Do not lift from one corner of the machine, as this can cause the frame to rack, damaging it.
	B2TAG94097: The cylinder must rotate **counterclockwise** during draining and extraction (spin) when viewed from here (rear of machine). Otherwise, reverse the electric power connections, as explained in the schematic manual.

Display or Action	Explanation
	B2TAG94118: Do not strike shipping container during fork-lifting. Fragile components inside.
	B2T2001013: Hot water connection.
	B2T2001014: Cold water connection.
	B2T2001015: Reuse (third) water connection (optional).
	B2T2001016: Flushing water connection. This is the water that goes into the supply compartment or pumped chemical manifold to flush chemicals into the machine (optional).
	B2T2001028: Look for tags inside the machine. These tags may identify shipping restraints to be removed or components to be installed. Do not start the machine until these actions are completed.
	B2T2002013: Do not start the machine until shipping restraints are removed. This tag will appear on the outside of the machine to alert you to the presence of internal shipping restraints. A tag will also appear on the restraint to help identify it. Most, but not all shipping restraints display the color red. Some shipping restraints are also safety stands. Do not discard these.

Display or Action	Explanation
	B2T2003001: Hold the side of the connection stationary with a wrench as you tighten the connection with another wrench. Otherwise, you may twist components, such as valves, damaging them.
	B2T2004027: Steam connection (optional)

— End of BIUUUI02 —

Prevent Damage from Chemical Supplies and Chemical Systems

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All Milnor® washer-extractors and CBW® tunnel washers use stainless steel with the AISI 304 specification. This material gives good performance when chemical supplies are correctly applied. If chemical supplies are incorrectly applied, this material can be damaged. The damage can be very bad and it can occur quickly.

Chemical supply companies usually:

- supply chemical pump systems that put the supplies in the machine,
- connect the chemical pump system to the machine,
- write wash formulas that control the chemical concentrations.

The company that does these procedures must make sure that these procedures do not cause damage. **Pellerin Milnor Corporation accepts no responsibility for chemical damage to the machines it makes or to the goods in a machine.**

1. How Chemical Supplies Can Cause Damage

BNUUUR02.R01 0000160548 A.2 A.4 8/30/17 3:15 PM Released

Dangerous Chemical Supplies and Wash Formulas

Some examples that can cause damage are:

- a very high concentration of chlorine bleach,
- a mixture of acid sour and hypo chlorite,
- chemical supplies (examples: chlorine bleach, hydrofluosilicic acid) that stay on the stainless steel because they are not quickly flushed with water.

The book “Textile Laundering Technology” by Charles L. Riggs gives data about correct chemical supplies and formulas.

Incorrect Configuration or Connection of Equipment

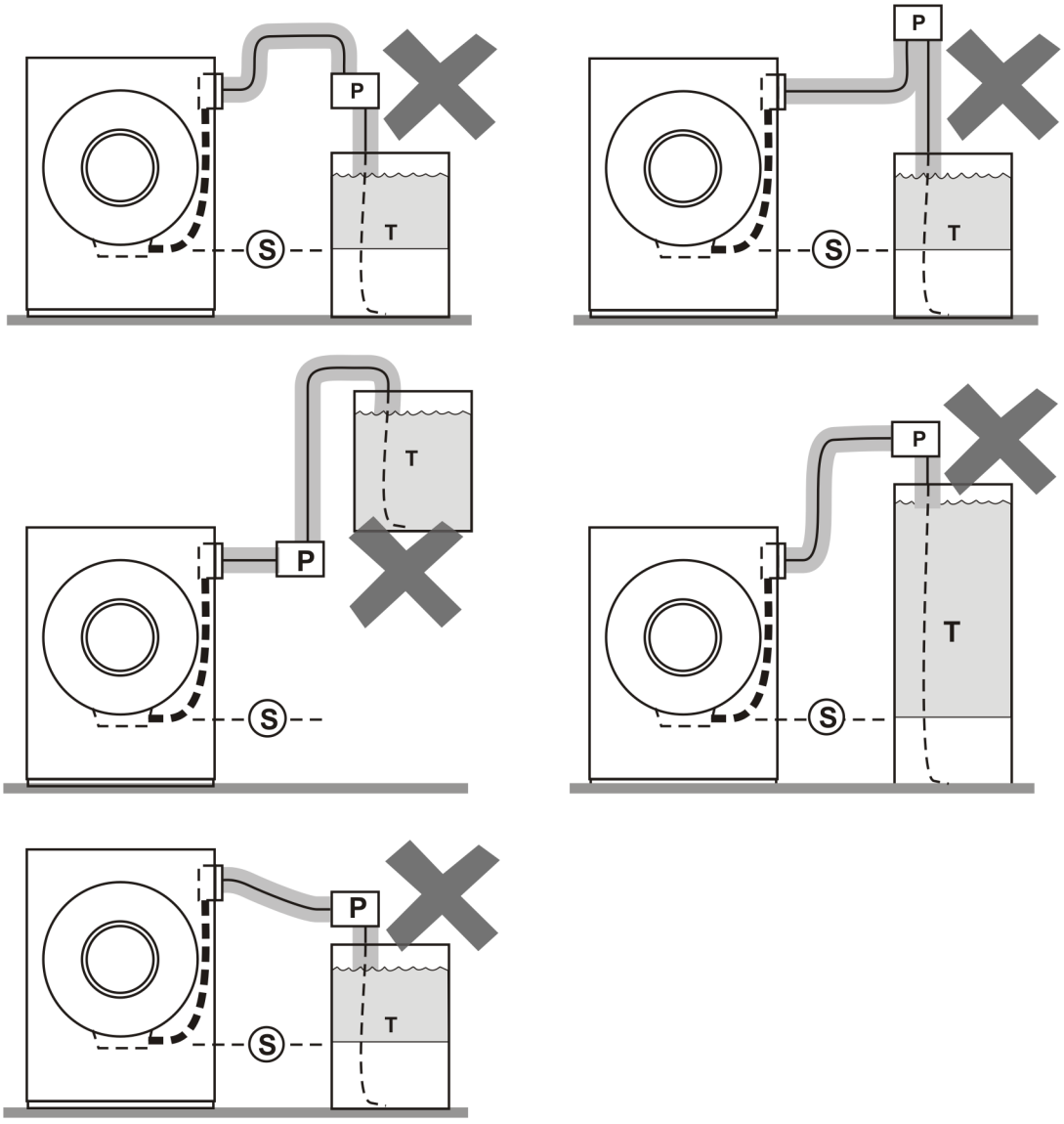
Many chemical systems:

- do not prevent a vacuum in the chemical tube (for example, with a vacuum breaker) when the pump is off,
- do not prevent flow (for example, with a valve) where the chemical tube goes in the machine.

Damage will occur if a chemical supply can go in the machine when the chemical system is off. Some configurations of components can let the chemical supplies go in the machine by a siphon (Figure 1. Incorrect Configurations That Let the Chemical Supply Go In the Machine by a Siphon). Some can let chemical supplies go in the machine by gravity (Figure 2. Incorrect Configurations That Let the Chemical Supply Go In the Machine by Gravity).

Figure 1. Incorrect Configurations That Let the Chemical Supply Go In the Machine by a Siphon

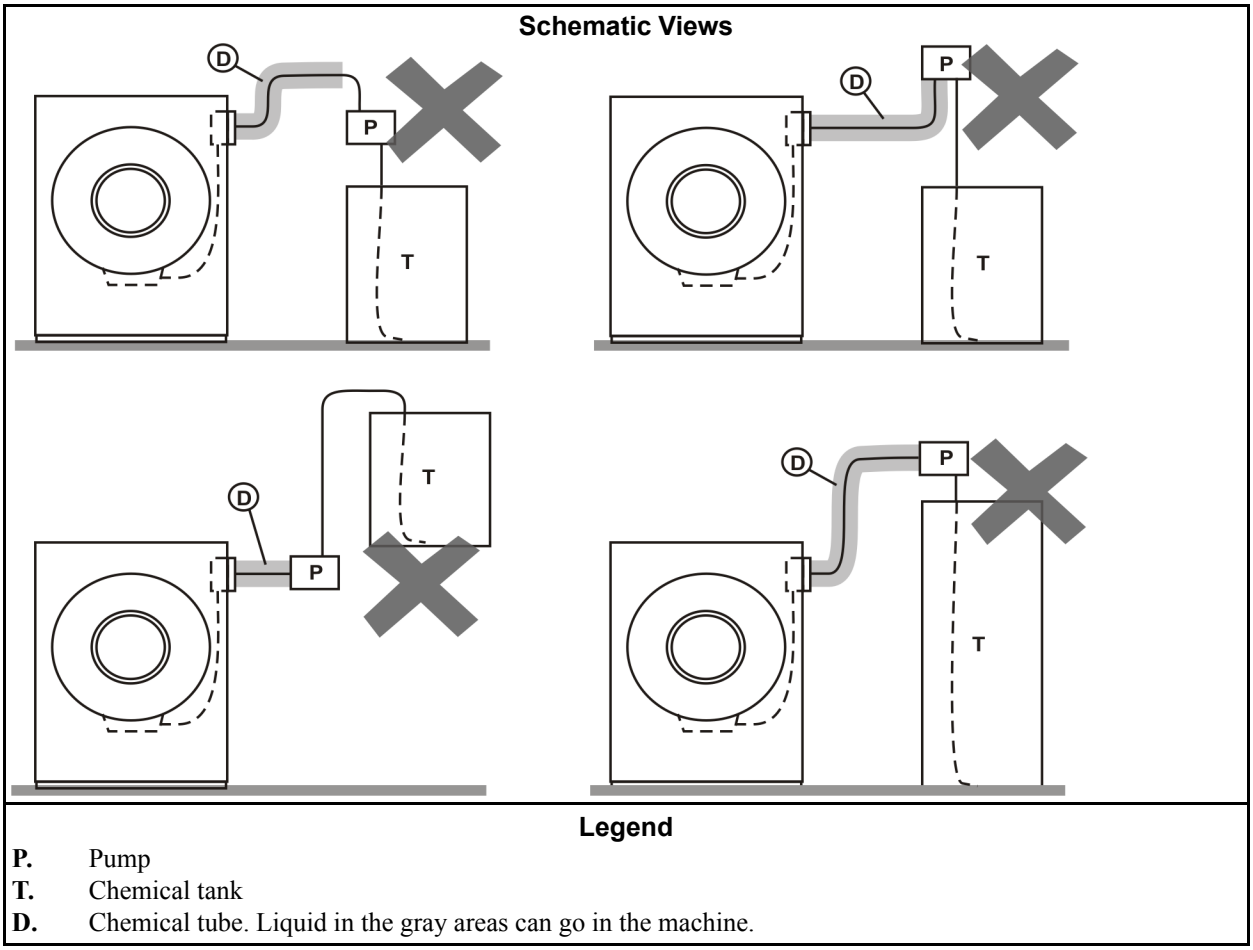
Schematic Views



Legend

P. Pump
T. Chemical tank
S. The siphon occurs above here. Liquid in the gray parts of the chemical tube and tank can go in the machine.

Figure 2. Incorrect Configurations That Let the Chemical Supply Go In the Machine by Gravity



Legend

P. Pump
T. Chemical tank
D. Chemical tube. Liquid in the gray areas can go in the machine.

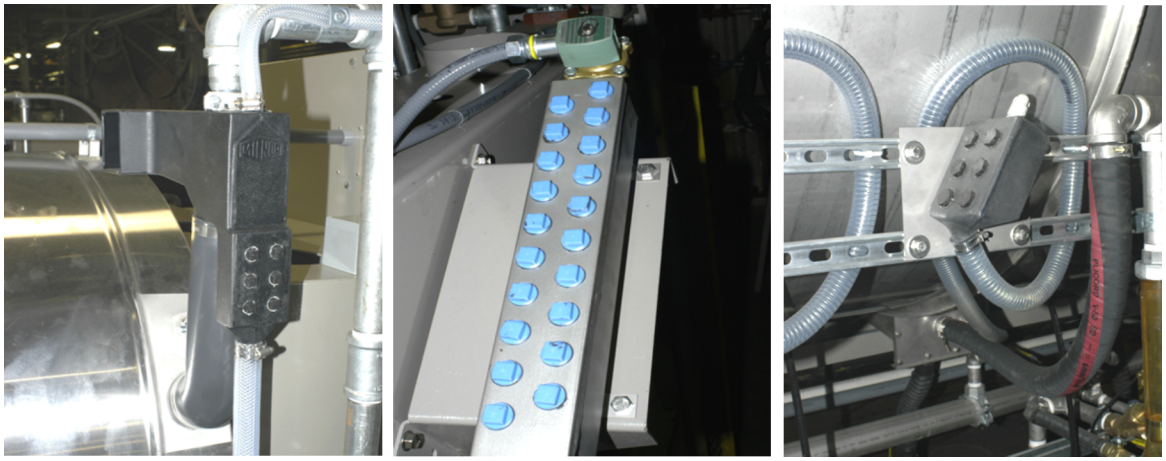
2. Equipment and Procedures That Can Prevent Damage

BNUUUR02.R02 0000160545 A.2 A.8 8/30/17 3:28 PM Released

Use the chemical manifold supplied.

There is a manifold on the machine to attach chemical tubes from a chemical pump system. The manifold has a source of water to flush the chemical supplies with water.

Figure 3. Examples of Manifolds for Chemical Tubes. Your equipment can look different.



Close the line.

If the pump does not always close the line when it is off, use a shutoff valve to do this.

Do not let a vacuum occur.

Supply a vacuum breaker in the chemical line that is higher than the full level of the tank.

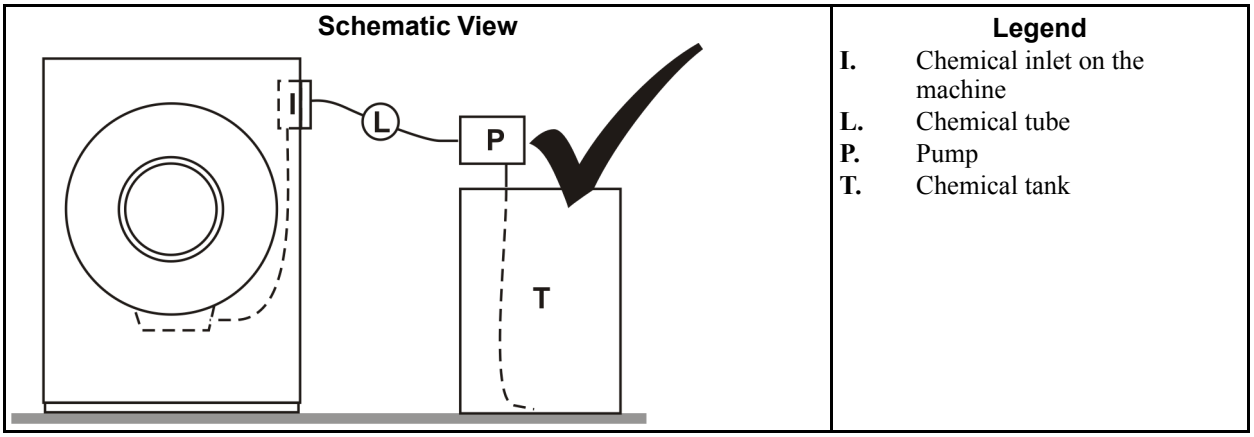
Flush the chemical tube with water.

If the liquid that stays in the tube between the pump and the machine can flow in the machine, flush the tube with water after the pump stops.

Put the chemical tube fully below the inlet.

It is also necessary that there is no pressure in the chemical tube or tank when the system is off.

Figure 4. A Configuration that Prevents Flow in the Machine When the Pump is Off (if the chemical tube and tank have no pressure)



Prevent leaks.

When you do maintenance on the chemical pump system:

- Use the correct components.
- Make sure that all connections are the correct fit.
- Make sure that all connections are tight.

End of document: BNUUUR02

Service and Maintenance

1

BIMUUI01 (Published) Book specs- Dates: 20030213 / 20030213 / 20030213 Lang: ENG01 Applic: MUU

Washer-Extractor Installation

1. Handling

Once the machine is given to the carrier for delivery, it is solely the responsibility of the carrier to ensure that no damage occurs during transit. In addition to readily apparent damage, carriers are liable for concealed damage. Do not hesitate to file a claim with the carrier if the machine is damaged in any way during shipment. Milnor will be glad to assist you in filing your claim, but is not responsible for any shipping damage to the machine once it has been delivered to the carrier in good condition.

Remove the protective coverings (leaving the machine on shipping skids) and examine carefully for possible shipping damage. If the machine is damaged, notify the transportation company immediately.

2. Moving the Machine into Place

1. Use skids for fork lifting. If possible, leave the machine on shipping skids until it is near its final position. Once skids are removed, carefully place forks under base. Do not allow the forks to come in contact with valves, piping, motors, etc., located under the machine. Do not push or hit the shell front when uncrating or installing the machine as it may cause the door to leak.
2. Never push, pull, lift, jack, or exert pressure on any components that protrude from the machine frame (shell front, door, electric boxes, controls, guards, conduits, conveyors, piping, valves, drains, vents, tilt frames, etc.).
3. Do not pull on door conduit to help move the machine as the door switch may require readjustment.

3. Site Requirements

3.1. Space Requirement

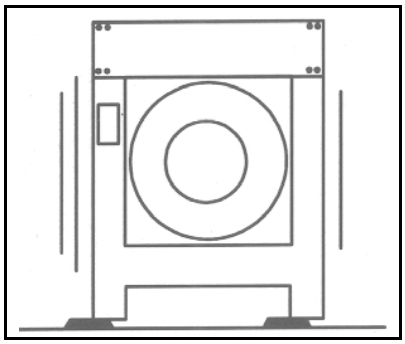
1. All openings and corridors through which equipment must pass during installation must be large enough to accommodate the width and the height of the machine as shown on the dimensional drawings. It is occasionally possible to reduce the overall dimensions by removing piping or other special modifications. Consult Milnor for additional information.
2. Sufficient clearance must be provided for normal operation and maintenance procedures.

3.2. Operational Requirements

1. Allow sufficient ventilation for the heat and vapors of normal operation to dissipate.
2. Provide easy access to controls. Operators must be able to view all status lights and reach all controls associated with the machine (e.g., electrical power connections, water and steam shutoffs, etc.)

3.3. Foundation Requirement—The floor and/or all other support components must have sufficient strength and rigidity with due consideration for the natural or resonant frequency thereof to withstand the fully loaded weight of the machine, including the wet goods and any repeated sinusoidal (rotating) forces generated during its operation. Determining the suitability of floors, foundations, and other supporting structures normally requires analysis by a qualified structural engineer.

Figure 1: Vibration warning



CAUTION 1: Machine Damage Hazards—Improperly installed suspension type machines can "walk" out of position during extract, endangering personnel and damaging equipment.

- Roughen floor. Install anchor bolts and grout under all base pads to prevent "teeter-totter" and sideways movement.
- Remove shipping restraints after machine is in place. Failure to remove all restraints (usually painted red) will cause malfunctions and damage. Restraints may be located behind access covers. These include, but are not limited to:
- Cylinder hold-down bolts, brackets, straps and/or blocking. Replace all fasteners which are part of the machine structure.
- Vibration safety switch restraint

4. Setting Procedures

To protect against lateral creeping of the machine during operation (due to vibration), roughen the area of the floor where the grout will be applied. Anchor bolts are required.

1. With the machine near the final location, unbolt the shipping skids. Observing all precautions, lift the machine off its skids and lower the machine onto blocking. Shim the blocking until the machine is level and approximately l" (25) clearance exists under each base pad. Install anchor bolts as shown on the dimensional drawing, but do not tighten bolts until grout is completely dry.
2. Apply grout between the existing foundation floor and the base pads, observing the following considerations:
   - Use only industrial strength non-shrinking grout. Pack or trowel by hand.
   - If the grout after mixing is too thin (causing it to flow from under the base pads) install temporary cardboard framing around pads to retain the grout until it cures.

CAUTION 2: Vibration and Malfunction Hazard—Voids under the base pads can magnify vibration and cause unsatisfactory operation.

- Grout must displace total clearance between base pads and existing foundation floor.
- Voids must not exist.

3. Tighten anchor bolts evenly using only one-quarter turn on each bolt before moving to the next one. While tightening, frequently skip from front to back and right to left to insure uniform tension. After tightening all bolts, check each bolt at least twice during the first week of operation.

5. Before Running Machine

CAUTION 3: Machine Damage Hazards—Machine can be damaged if shipping restraints are improperly utilized. These include various bolts, brackets, weldments and safety stands (painted red), and the vibration safety switch (tie wrapped).

- DO NOT remove shipping restraints until installation is complete
- DO remove all shipping restraints before operating machine.

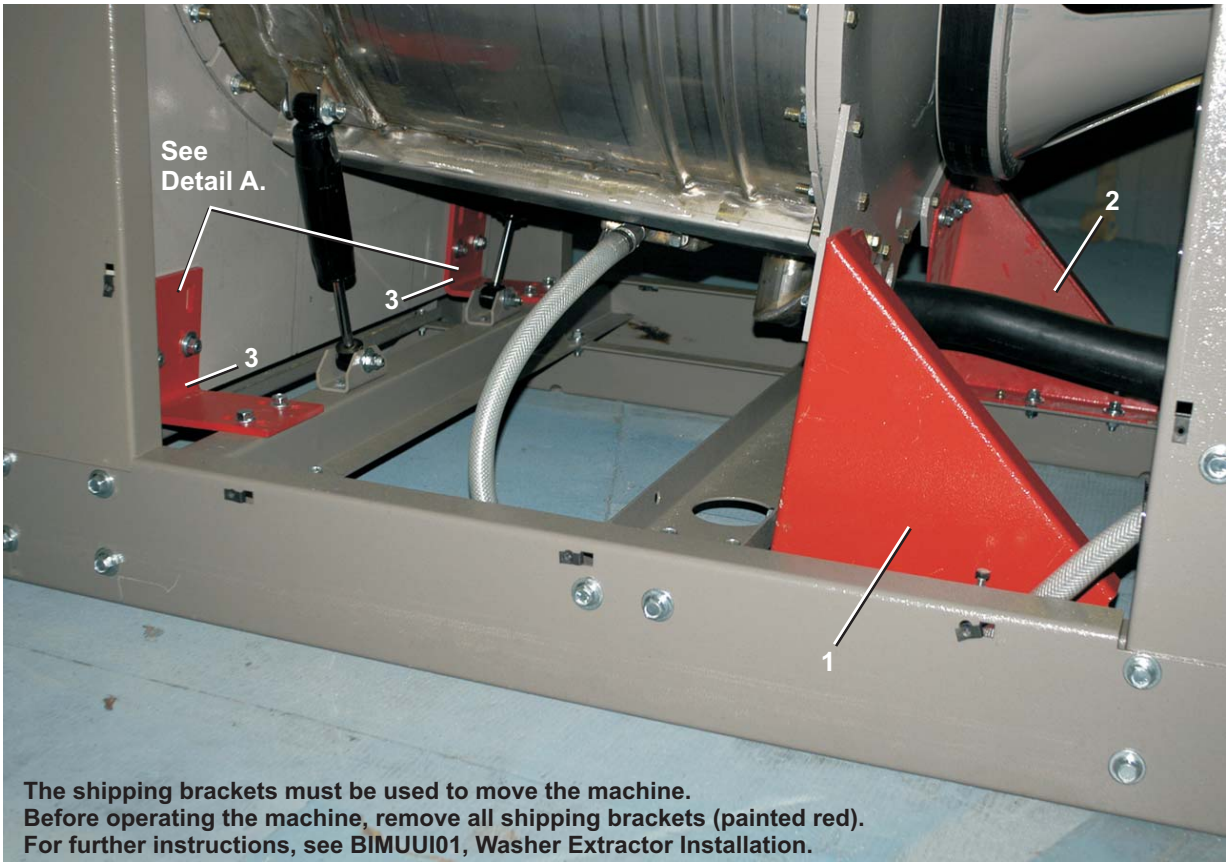
Prior to operation,

- Remove the red locking bolts from the front and back of the shell.
- Remove the red shipping bracket stands.
- Remove the tie wrap that secures the vibration safety switch.
- Check the perforated cylinder for smoothness before placing machine in service. Milnor cannot accept cylinder finish damage claims after machine is in service.

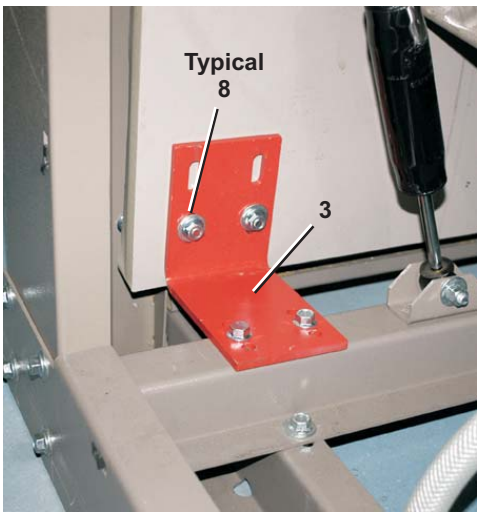
— End of BIMUUI01 —

Shipping Brackets

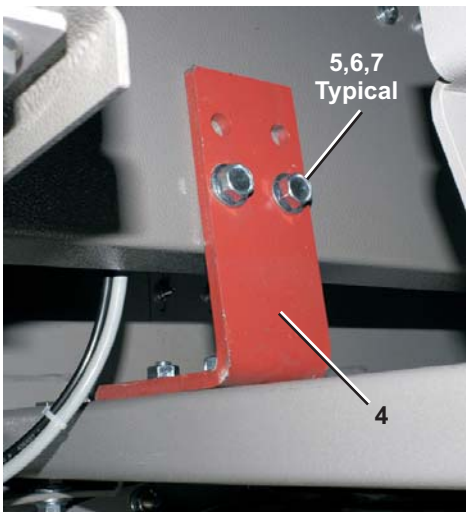
3626X8J,X8W,X8R 4226X7J,X7W,X7R 4232X7J,X7W,X7R



The shipping brackets must be used to move the machine.
Before operating the machine, remove all shipping brackets (painted red).
For further instructions, see BIMUUI01, Washer Extractor Installation.



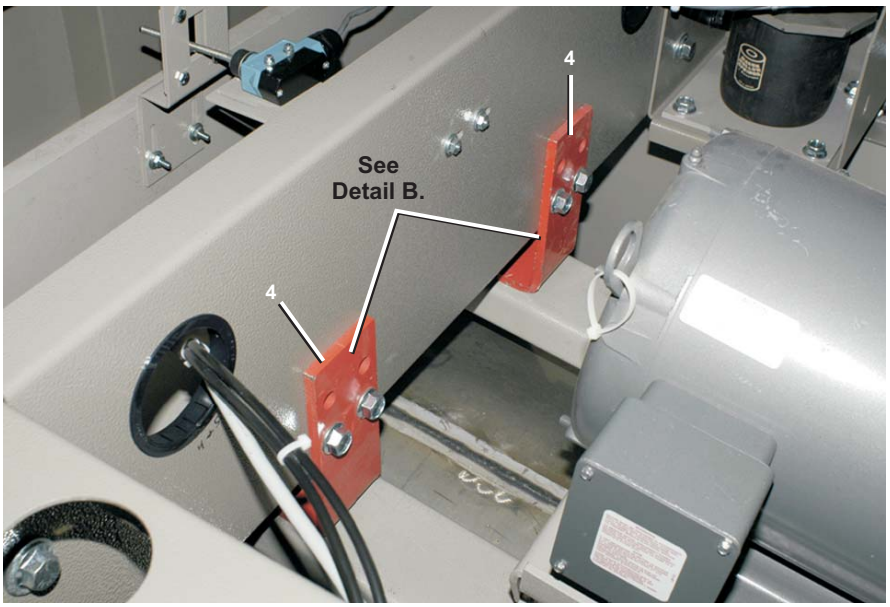
Detail A: Lower Front



Detail B: Upper Front

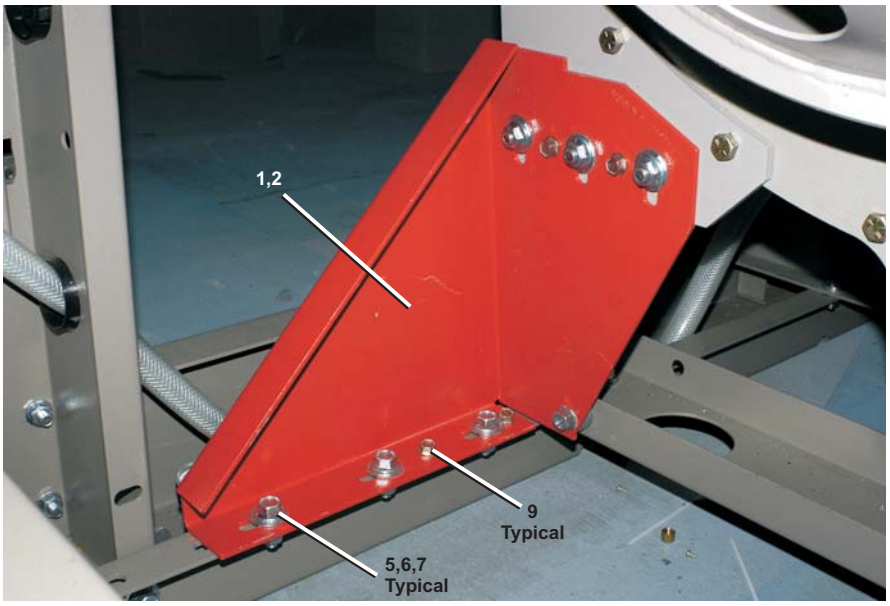
Shipping Brackets

3626X8J,X8W,X8R 4226X7J,X7W,X7R 4232X7J,X7W,X7R



Upper Front

Rear Shipping Bracket



Shipping Brackets

3626X8J,X8W,X8R 4226X7J,X7W,X7R 4232X7J,X7W,X7R

Parts List—Shipping Brackets

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	REFERENCE		36026X8J,X8W,X8R
	B	REFERENCE		42026X7J,X7W,X7R
				42032X7J,X7W,X7R
			----------COMPONENTS----------	
A	1	02 13595	BRKT=SHIP REAR RT 36X	
B	1	02 23596	BRKT=SHIP REAR RT 42X	
A	2	02 13595A	BRKT=SHIP REAR LEFT 36X	
B	2	02 23596A	BRKT=SHIP REAR LFT 42X	
all	3	02 23543	BRKT=SHIP LOWER FRNT	
all	4	02 23544	BRKT=SHIP 42/36X UPPER FRNT	
all	5	15K129	HEXFLGSCR 1/2-13X1-1/4ZN. GR 5	
all	6	15G222B	HEXFLGNUT 1/2-13 ZINC	
all	7	15U280	FL+WASHER(USS STD)1/2 ZNC PL+D	
all	8	15K154G	INDHEXFLGSCR 1/2-13X1+3/4GR5 Z	
all	9	15P200	TRDCUT-F HXWASHD 3/8-16X3/4NIK	

BIMUUI02 (Published) Book specs- Dates: 20050117 / 20050117 / 20050117 Lang: ENG01 Applic: MXC MXD

Service Connections

1. General

Required service connections, (depending on machine model and optional features) are as follows:

1. Piped inlets and outlets (cold water, hot water, flush water, direct steam, liquid supply and drain to sewer). The sizes and locations of piped inlets and outlets are shown on the dimensional drawing for your machine.
2. Electrical power connections.

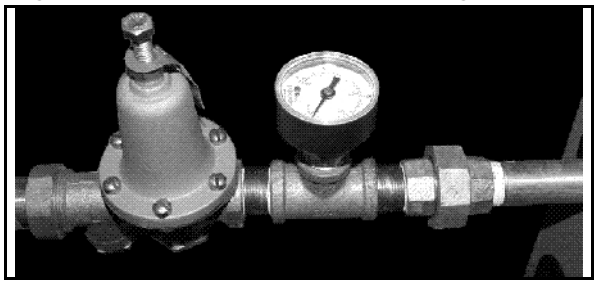
2. Requirements for Piped Connections

Notice 1: Machine Damage Hazards—Valve bodies will be ruined if twisted and distorted.

- Hold the connection side of the valve with a wrench when connecting plumbing.

1. Inlet pressures must be within the minimum/maximum range specified. Pressure outside of the specified range may cause the machine to operate inefficiently or malfunction and may damage machine components.
2. A separate flush water valve pressure regulator set for approximately 28 psi (193 kPa) is shipped with the machine (Figure 1). Install this regulator on the flush water inlet when installing piping.
3. Throughly flush all water lines before making connections.
4. We recommend installing 40 mesh strainers or filters in front of the cold, hot and third water valves.
5. When connecting water and steam inlets, always install unions and shut off valves at the point of connection to permit removal of the machine components for servicing, when necessary.

Figure 1: Flush water valve pressure regulator



CAUTION 2: Machine Damage Hazards—Pumped chemical systems, if not properly installed, can cause corrosion damage.

- See the reference manual for precautions and additional information before making any chemical connections.

2.1. Piped Inlet Specifications

Table 1: Piped Inlets

Connection Description	Source Requirements	Piping Requirements, Comments
Cold water inlet	1-1/4" NPT	Pipe material per plumbing code
Hot water inlet		
Third water inlet (optional)		
Air supply	1/4" NPT	
Hot water for supply	3/4" NPT	
Steam inlet (if equipped)	1-1/4" NPT	
Liquid supply inlet	3/8" or 1/2"	Flexible tubing as supplied by the chemical supplier

2.2. Piped Outlet Specifications

Table 2: Outlets

Connection Description	Destination Requirements or Description	Piping Specifications
Drain	3" pipe socket joint, unrestricted gravity feed to sewer (external back pressure may extend wash times - Do not reduce)	Rubber hose, PVC or other approved material per plumbing code
Vent	3"	

3. Power Connections and Precautions

WARNING 3: Electrocution and Electrical Burn Hazards—Contact with high voltage will electrocute or burn you. Power switches on the machine and the control box do not eliminate these hazards. High voltage is present at the machine unless the main machine power disconnect is off.

- Do not service machine unless qualified and authorized.

Notice 4: Machine Damage Hazards—Voltage fluctuations of more than 10% above or below the specified voltage for your machine can damage electrical components, especially motors.

- Any such conditions should be corrected prior to commissioning your machine.

The customer must furnish a remotely mounted disconnect switch with lag type fuses or circuit breakers, and wiring between the electrical service box and the junction box on the machine. The sizes of these fuses and wires, along with the motor fuses supplied with the machine, depend on the machine voltage. See the fuse and wire sizing information in the schematic manual and on the machine nameplate. See dimensional drawings in this manual for electrical connection locations.

1. Electrical connections must be made by a competent electrician.
2. See fuse and wire sizing information in the schematic manual and on the machine nameplate. If the wire runs more than 50 feet, increase by one wire size for each additional 50 feet.
3. Only use Bussman Fusatron FRN (up to 250V), FRS (up to 600V) or similar lag fuses, the nameplate fuse sizes must not be applied to standard fuses.
4. Stinger leg, if any, must be connected to terminal L3, never to terminals L1 or L2.
5. Make power and liquid supply electrical connections within junction boxes on the rear of the machine.

6. Verify motor rotation (Figure 2). See the operating and trouble shooting manual for more information. If the cylinder turns in the wrong direction, interchange the wires connected to L1 and L2. Never move L3 under any circumstances. All motors are phased for proper rotation. Never attempt to reconnect motors or the motor control devices.
7. 240/208 volt machines are shipped set for 240 volt operation from the factory (Figure 3). Place the line voltage switch in the 208 volt position if the supply voltage is 208 volts.

Figure 2: Correct Rotation During Drain and Extract (when viewing front of machine)

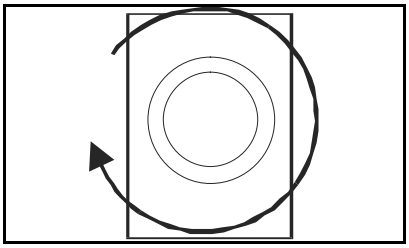
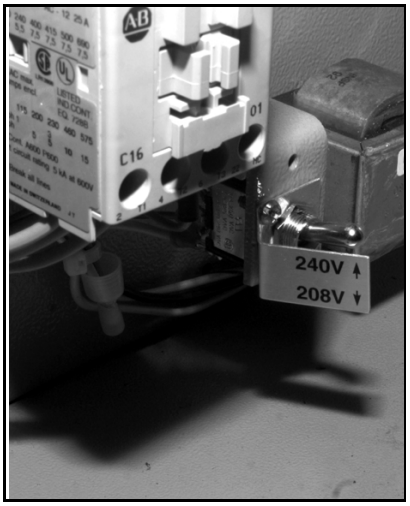


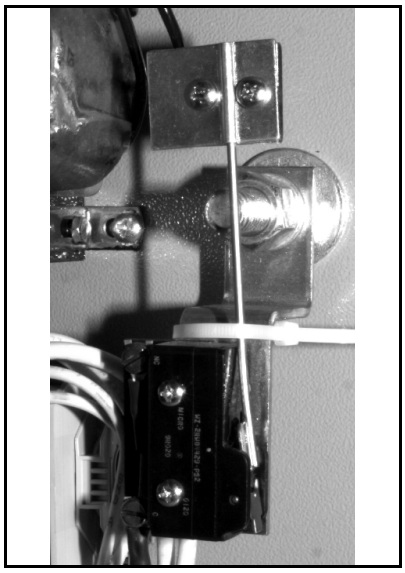
Figure 3: Line Voltage Switch Set for 240 Volt Operation



4. Remove Shipping Restraints

Remove all shipping restraints (usually marked in red). Restraints may be located behind access panels. Restraints may include the vibration switch restraint (Figure 4).

Figure 4: Typical Vibration Switch Showing Restraint in Place



5. Check Cylinder Surface

Check the perforated cylinder for smoothness. Milnor will not accept responsibility for the cylinder finish after the machine is placed in service.

— End of BIMUUI02 —

BIUUUM04 (Published) Book specs- Dates: 20180109 / 20180109 / 20180109 Lang: ENG01 Applic: UUU

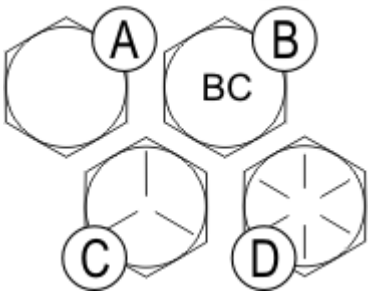
Torque Requirements for Fasteners

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

The document about the assembly gives the torque requirements for other fasteners. **If fastener torque specifications or threadlocker requirements in an assembly document are different from this document, use the assembly document.**

Figure 1: The Bolts in Milnor® Equipment

The Marks on Bolt Heads



Legend

A. SAE Grades 1 and 2, ASTM A307, and stainless steel
B. Grade BC, ASTM A354
C. SAE Grade 5, ASTM A449
D. SAE Grade 8 and ASTM A354 BD

1. Torque Values

These tables give the standard dimension, grade, threadlocker, and torque requirements for fasteners frequently used on Milnor® equipment.

Note 1: Data from the Pellerin Milnor® Corporation “Bolt Torque Specification” (bolt_torque_milnor.xls/2002096).

1.1. Fasteners Made of Carbon Steel

1.1.1. Without a Threadlocker

Table 1: Torque Values for Standard Fasteners with Maximum 5/16-inch Diameters and No Lubricant

	The Grade of the Bolt							
	Grade 2		Grade 5		Grade 8		Grade BC	
Dimension	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 Standard Fasteners Larger Than 5/16-inch Diameters and No Lubricant

	The Grade of the Bolt							
	Grade 2		Grade 5		Grade 8		Grade BC	
Dimension	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 with Maximum 5/16-inch Diameters and No Lubricant

	The Grade of the Bolt							
	Grade 2		Grade 5		Grade 8		Grade BC	
Dimension	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 Diameters and No Lubricant

	The Grade of the Bolt							
	Grade 2		Grade 5		Grade 8		Grade BC	
Dimension	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 a Threadlocker

Table 5: Threadlocker by the Diameter of the Bolt (see Note 2)

	Dimension			
LocTite Product	1/4-inch	1/4- to 5/8-inch	5/8- to 7/8-inch	1-inch +
LocTite 222	OK			
LocTite 242		OK		
LocTite 262			OK	
LocTite 272			High temperature	
LocTite 277				OK

Note 2: The acceptable bolt size ranges for various LocTite® threadlocking products is the LocTite manufacturer's **general** recommendation. Specific applications sometime require that a LocTite product is applied to a bolt size outside the ranges shown here. For example, Milnor specifies LocTite 242 for use on certain 1" bolt applications and has confirmed this usage with the LocTite manufacturer. You may see variances such as this in the documentation for specific machine assemblies.

Table 6: Torque Values if You Apply LocTite 222

Dimension	The Grade of the Bolt							
	Grade 2		Grade 5		Grade 8		Grade BC	
	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 if You Apply LocTite 242

Dimension	The Grade of the Bolt							
	Grade 2		Grade 5		Grade 8		Grade BC	
	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 if You Apply LocTite 262

Dimension	The Grade of the Bolt							
	Grade 2		Grade 5		Grade 8		Grade BC	
	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 if You Apply LocTite 272 (High-Temperature)

	The Grade of the Bolt							
	Grade 2		Grade 5		Grade 8		Grade BC	
Dimension	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 if You Apply LocTite 277

	The Grade of the Bolt							
	Grade 2		Grade 5		Grade 8		Grade BC	
Dimension	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	
Dimension	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

	316 Stainless		18-8 Stainless		18-8 Stainless with Loctite 767	
Dimension	**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 2: Fire Hazard—Some solvents and primers are flammable.

- Use threadlocker and primers with sufficient airflow.
- Do not use flammable material near ignition sources.

1. Clean all threads with a wire brush or a different tool.
2. Remove the grease from the fasteners and the mating threads with solvent. Make the parts dry.

   Note 3: LocTite 7649 Primer™ or standard solvents will remove grease from parts.

3. Apply a spray of LocTite 7649 Primer™ or equal on the fasteners and the mating threads. Let the primer dry for one minute minimum.

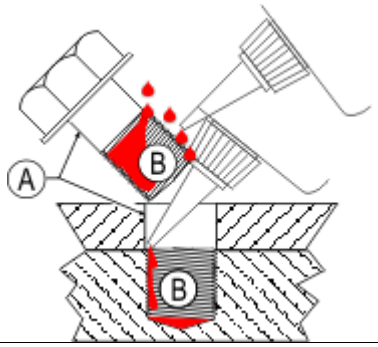
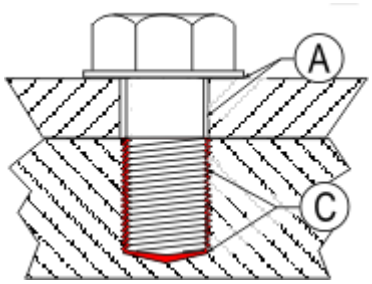
3. How to Apply a Threadlocker

CAUTION 3: Malfunction Hazard—Heat, vibration, or mechanical shocks can let the fasteners loosen if you do not apply the threadlocker correctly. Loose fasteners can cause malfunctions of the equipment.

- Read the threadlocker manufacturer's instructions and warnings. Obey these instructions.

Apply the threadlocker only to the areas where the fastener threads and the mating threads engage.

Figure 2: Blind Hole

Application	Coverage
	

Legend

A. No threadlocker here
B. Apply here
C. Fill all space with threadlocker

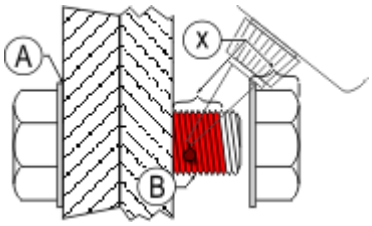
3.1. Blind Holes

1. Apply the threadlocker down the threads to the bottom of the hole.
2. Apply the threadlocker to the bolt.
3. Tighten the bolt to the value shown in the correct table (Table 5 to Table 11).

3.2. Through Holes

1. Put the bolt through the assembly.
2. Apply the threadlocker only to the bolt thread area that will engage the nut.
3. Tighten the bolt to the value shown in the correct table (Table 5 to Table 11).

Figure 3: Through Hole

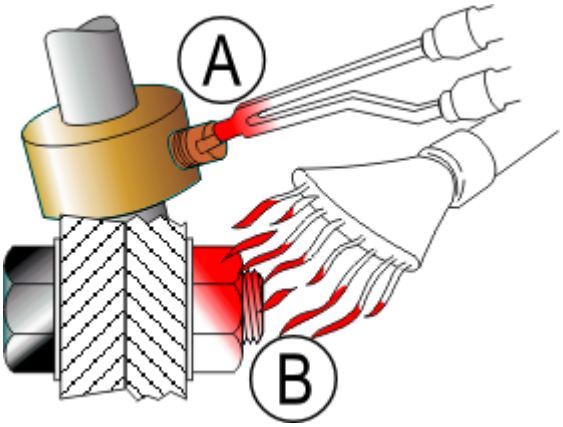
Application	Legend
	**A.** No threadlocker here **B.** Apply the threadlocker to this area **x.** Nut depth

3.3. Disassembly—For high-strength threadlocker, apply heat for five minutes. Disassemble with hand tools while the parts are hot.

For low-strength and moderate-strength threadlocker, disassemble with hand tools.

Figure 4: Disassembly

Apply Heat to a Small Area



Legend

A. How to apply heat to a small fastener
B. How to apply heat to a large fastener

— End of BIUUUM04 —

BIEUUM01 (Published) Book specs- Dates: 20120629 / 20120629 / 20120629 Lang: ENG01 Applic: HDU IFL IFG IFS IHU IEU PVU MXC MXD

Disk Brake Maintenance

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

NOTICE P1: "Remove power from the machine" means use the necessary safety procedure for your location. In the USA, this is the OSHA lockout/tagout (LOTO) procedure. More local requirements can also apply.

You can do these types of maintenance on the disk brake:

- do an inspection of the brake as specified in the maintenance schedule,
- replace the friction pads,
- do an overhaul on the calipers,
- replace the hydraulic fluid,
- adjust the connection between the brake cylinder and the air cylinder.

For the first four types of maintenance, you must remove air from (bleed) the hydraulic circuit.

Section 6 tells how to operate the disk brakes. You can use it in some of the types of maintenance in this procedure.

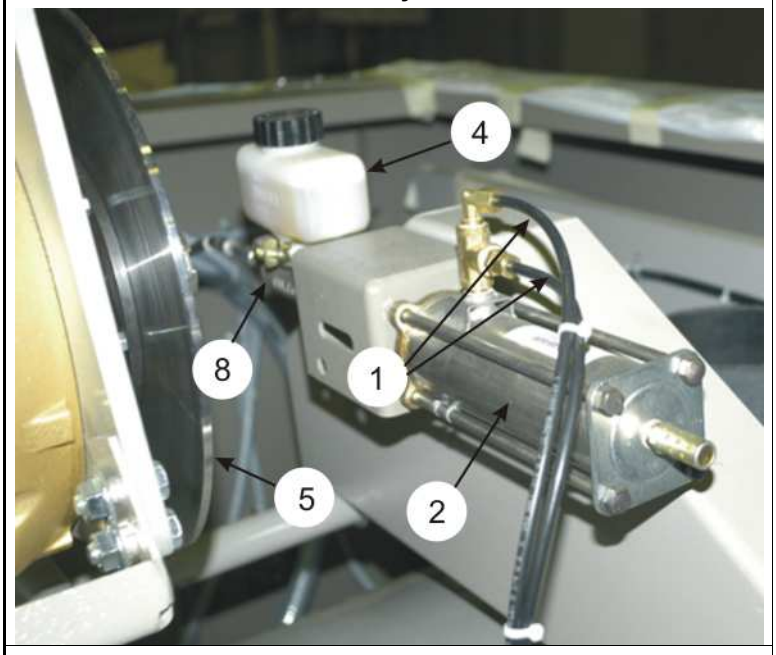
WARNING 2: Risk of injury or death —A machine in operation without safety guards is dangerous.

- You must be an approved maintenance technician.
- Use special caution when this instruction tells you to do work with electrical power on. Remove power from the machine for all other maintenance. Obey safety codes.
- Replace all guards and covers.

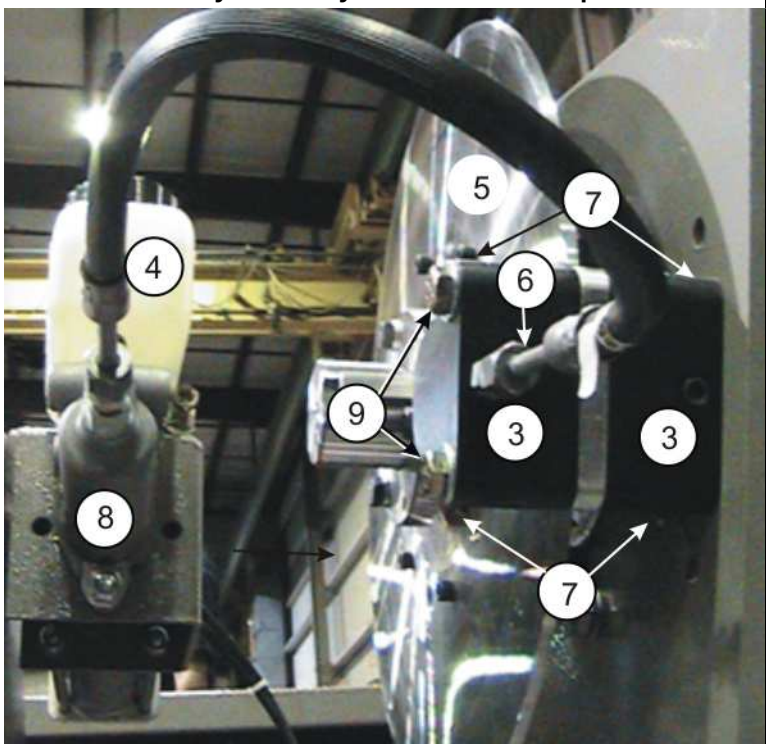
Tip: During parts of this procedure when you open up the calipers or hydraulic lines, put a cloth under the calipers to catch hydraulic fluid and parts that will fall. For safety, fully remove spilled hydraulic fluid after brake maintenance. This will help you easily identify leaks.

Figure 1: A typical hydraulic brake system

The air cylinder



The hydraulic cylinder and the caliper



Legend

1. Tubing for air
2. Air cylinder
3. Caliper body halves (Figure 2, item 2)
4. Hydraulic reservoir
5. Rotor disk
6. Hydraulic inlet
7. Valves to drain fluid and bleed the brake
8. Hydraulic cylinder
9. Bolts to attach the caliper (Figure 2, item 1)

1. The Inspection of the Brake

Note 1: The brakes shown in this document can look different from your equipment.

Note 2: Do this inspection when the maintenance schedule tells it is necessary. Do this inspection after you replace friction pads or do a caliper overhaul.

1.1. Examine the fluid in the reservoir. —Change the hydraulic fluid if it smells, has contamination, or has an unusual color. See Section 4.

> **Note 3:** Brake fluid can become defective from heat in the brake system. Brake fluid absorbs water from air. Water in the brake system causes corrosion.

If necessary, add new DOT 3 fluid to 0.25 inch (6.35 millimeters) from the top of the reservoir. Follow the precautions on the container.

1.2. Examine the rotor disk surface (Figure 1, item 5). —Replace the disk if it is worn or if it is not flat.

1.3. Examine the brake pads (Figure 2, item 4). —To do this, you will remove/replace the calipers and bleed the hydraulic system. See Section 3 and Section 4.

1. **Remove power from the machine (see Notice P1).**
2. Remove the bolts (Figure 1, item 9) that attach the caliper halves (Figure 1, item 7).
3. Remove the caliper halves.
4. Replace the pads as told in Section 2 if
   - the pads make an unusual noise when you apply the brake
   - if the rotor is worn or damaged
   - if the pad thickness is less than 1/16 inches (2 mm) (Figure 2, item 14) above the mounting screw (Figure 2, item 3). Always replace the two brake pads at the same time.
5. Put the caliper halves in their positions on the brake assembly. Tighten the mounting bolts to 30 foot-pounds (41 Newton-meters).
6. Bleed the hydraulic systems as told in Section 4.4.
7. Supply electrical power to the machine.

1.4. Examine the condition of all of the brake system.

1. Make sure that brake mounting components are tightly installed.
2. Make sure that fittings are tight. Make sure that there are no leaks.

2. How to Do a Friction Pad Replacement

You must have the necessary replacement friction pads for your machine. Refer to the brake parts document in your machine manual. You will find part numbers for components or overhaul/repair kits. The overhaul/repair kit contains O-rings, pads, and other components.

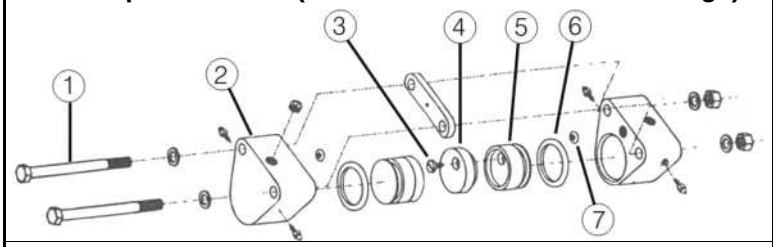
1. **Remove power from the machine (see Notice P1).**
2. Remove the used fluid. See Section 4.3.
3. Remove the two bolts that attach the caliper (Figure 1, item 9) and the two caliper halves (Figure 1, item 3) to get access to the friction pads. Do not disconnect the hydraulic line (Figure 1, item 6).
4. If there are leaks, see Section 3 "How to Do a Caliper Overhaul " before you continue.
5. Replace each friction pad:
   a. Remove the brass screw (Figure 2, item 3) that attaches the pad to the piston.
   b. Attach the new pad to the piston. Tighten the screw.
   c. Make sure that the screw head is fully in the recess in the pad.
6. Make sure that the connection o-rings are clean and in their positions (Figure 2, item 7).

7. Put the caliper halves in their positions on the brake assembly. Tighten the mounting bolts to 30 foot-pounds (41 Newton-meters).
8. Bleed the brake. See Section 4 "How to Change Hydraulic Fluid and Remove (Bleed) Air from the Brake Circuit ".
9. Supply electrical power to the machine.

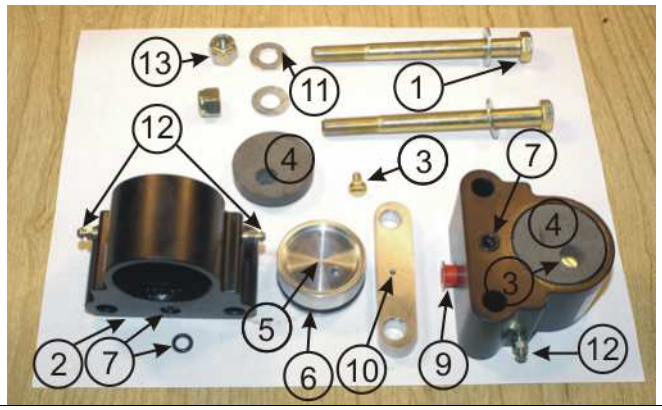
3. How to Do a Caliper Overhaul

Figure 2: The Caliper Components

The Expanded View (Shows the Piston and the O-rings)



The Caliper and the Pad



Legend

1. The bolts to attach the caliper (Figure 1, item 9)
2. Caliper body halves (Figure 1, item 3)
3. Brass screw
4. Friction pad
5. Piston
6. The Piston O-ring
7. The connection O-ring and its position
8. Plug for the hydraulic inlet
9. A hydraulic inlet (connected on one caliper, a plug (item 8) on the other)
10. The hole in the spacer
11. Washer
12. One of the four valves to bleed the fluid
13. Nut
14. The pad thickness must be more than than 1/16 inches (2 mm) above item 3

Fittings for the Hydraulic Inlet

Look at the pad thickness above the top of the screw

Tip: Hydraulic fluid flows from one caliper to the other caliper. Fluid flows through the connection O-rings (Figure 2, item 7) and the hole in the spacer (Figure 2, item 10). When you disconnect the calipers, hydraulic fluid can flow from the hole at the connection O-rings. Air can get in the line. After you connect the calipers, you must bleed the system.

You must have the necessary kit for the overhaul of your machine. Refer to the brake parts document in your machine's manual.

1. **Remove power from the machine (see Notice P1).**
2. Get access to the caliper halves (see Section 2).
3. Do an overhaul on each caliper:
   a. Remove and discard the connection O-rings (Figure 2, item 7) on the caliper bodies.
   b. Apply compressed air to the fitting for the hydraulic inlets (see Figure 2, item 8) to push the pistons out.
   c. Replace the piston O-rings (Figure 2, item 6).
   d. Put the pistons in the caliper body. Carefully tap the pistons with a wood or rubber hammer to install it.
   e. Replace the connection O-rings. (Figure 2, item 7)
   f. Replace the friction pads (see Section 2).
4. Replace the caliper halves as specified in Section 2.
5. Bleed the brake circuit (see Section 4).
6. Supply electrical power to the machine.

4. How to Change Hydraulic Fluid and Remove (Bleed) Air from the Brake Circuit

4.1. Risks and Precautions

WARNING 3: Risk of injury —Machine power must be on for these procedures.

- Stay away from operating mechanisms.

CAUTION 4: Risk of injury and damage —This procedure releases pressurized brake fluid.

- Keep brake fluid out of your eyes and mouth. Wear eye protection.
- Follow procedures carefully to prevent damage to the face of the disk or the pistons.

CAUTION 5: Risk of malfunction . —Air in hydraulic fluid will compress. Compressed air in the brake line will cause brake malfunctions.

- Remove (bleed) air from the brake circuit before you operate the machine.

4.2. Requirements —These personnel and items are necessary for this procedure:

- two technicians
- an 8-ounce container of new brake fluid
- Alternative procedures to remove air and used brake fluid:
  - » a suction pump (faster procedure) (see Figure 3)
  - » with pressure in the hydraulic cylinder and gravity (see Figure 4)

Tip: The Vacula suction pump can do the work more quickly than by gravity and pressure in the hydraulic cylinder. It is also cleaner because all of the hydraulic fluid goes into the container supplied. It helps you not spill the hydraulic fluid.

- If you use a suction pump as shown in Figure 3, follow the manufacturer's instructions.
- If you use the tools as shown in Figure 4, follow the instructions in Section 4.3 and Section 4.4.

Figure 3: Pumps Used to Remove Hydraulic Fluid Quickly

Alternative Pumps for Suction of Hydraulic Fluid

Legend

1. A manual suction pump
2. The Vacula suction pump uses compressed air and holds used hydraulic fluid.

Figure 4: Typical Tools to Remove Air (Bleed) Brakes and Used Hydraulic Fluid

These tools use gravity and pressure in the hydraulic cylinder	Legend
	**1.** a clean 12 ounce container **2.** a flexible hose to attach from the bleed valves to a container **3.** a wrench for the bleed valves (Figure 2, item 12) **4.** a suction device to remove brake fluid from the reservoir

4.3. Use the tools in Figure 4 to remove the used hydraulic fluid and clean the line. —Do these steps:

1. Use a suction tool (Figure 4, item 4) to remove the used fluid from the reservoir. Clean the contamination.
2. Connect the tubing (Figure 4, item 2) and container (Figure 4, item 1) to the valve on the caliper (Figure 1, item 7).
3. Open the valve.
4. Add new fluid to flush out the lines.
5. Apply/release the brake (See Section 6) approximately 5 to 15 times. This will flush the used fluid out of the lines.
6. Close the valve.

Note 4: These steps will cause air to go into the line.

4.4. Add new hydraulic fluid and remove (bleed) air from the brake circuit.

Note 5: This procedure uses pressure in the hydraulic cylinder and the tools in Figure 4.

1. Fill the reservoir with new DOT 3 brake fluid. When you do the remaining steps, continue to add new fluid to the reservoir. Do not let the reservoir become more than half empty. You must make sure that the reservoir has fluid to prevent air flow into the system from the reservoir.
2. Apply electrical power to the machine. Release the brake.
3. See the part of the machine reference manual that tells how to operate the outputs manually.

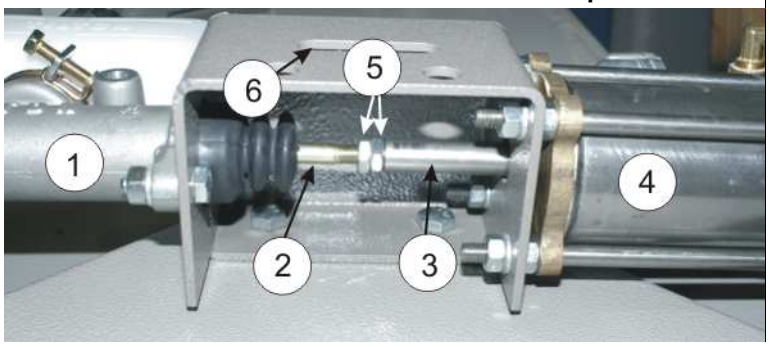
4. Put a small quantity of new brake fluid (approximately inches (50 mm)) in the 12 ounce container (Figure 4, item 1).
5. Do these steps for each bleed valve (Figure 1, item 1) . Two technicians are necessary. This will move the fluid in one direction and push air out of the line:
   a. Attach a clean tube to the valve. Put the other end in the container (Figure 4, item 1) below the fluid.
   b. Make sure that the reservoir is full of fluid.
   c. Apply the brake (See section 6).
   d. Open the bleed valve. (Figure 2, item 12)
   e. Look for air bubbles in the container when you push the air and fluid out through the tube.
   f. Close the valve.
   g. Release the brake.
   h. Continue the steps b through g until no more air comes out of the line.
6. Add fluid to the top of the reservoir. Replace the cap.
7. Operate the brake many times. Make sure that it operates correctly.

5. How to Adjust the Connection between the Brake Cylinder and the Air Cylinder

If you removed the brake cylinder or the air cylinder, you must adjust this connection.

Figure 5: The Connection between the Brake Cylinder and the Air Cylinder

A view of the brake rod and related components

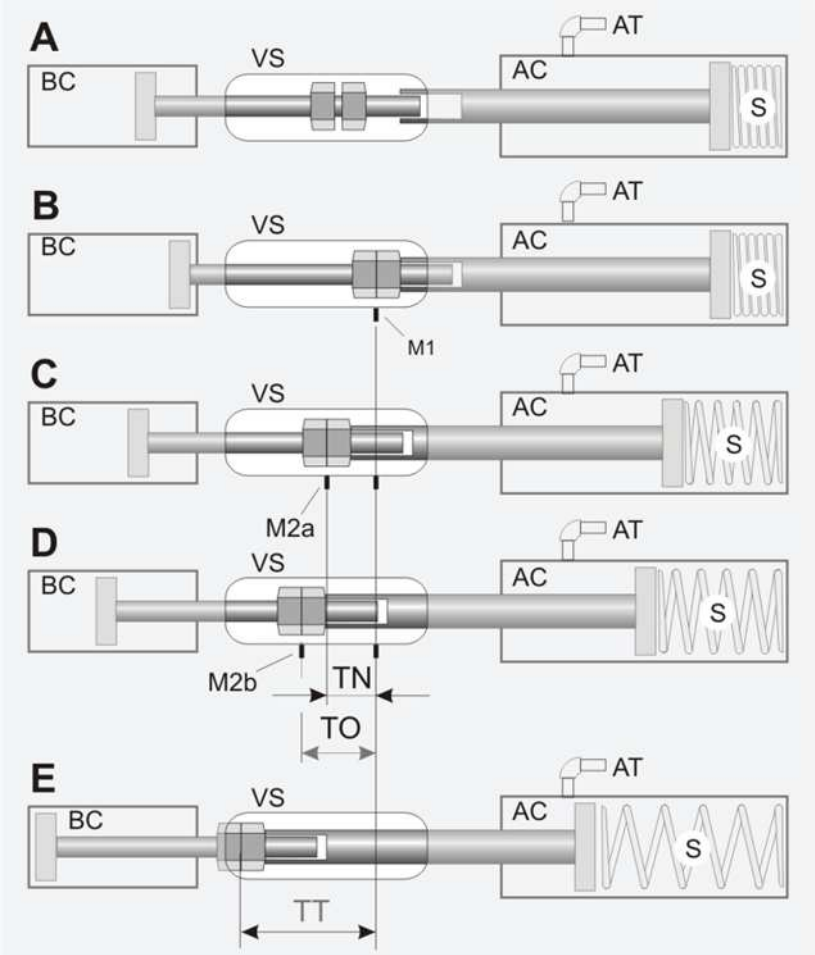


Legend

1. The brake cylinder
2. The rod for the brake cylinder
3. The rod for the air cylinder
4. The air cylinder
5. Two nuts to lock the rods together
6. The slot to see the nuts

Figure 6: The Adjustment between the Brake Rod and the Air Cylinder

Schematic Views of Different Conditions



Legend

AC. Air cylinder (Figure 5, item 4)
BC. Brake cylinder (Figure 5, item 1)
VS. Slot to see the nuts (Figure 5, item 6)
A. Before travel adjustment -- Rods not locked by nuts (Figure 5, item 5)
B. After travel adjustment -- the brake released (See Section 6.2)
C. Brake applied--NEW pads (See Section 6.1)
D. Brake applied--OLD pads
E. This will occur if you apply the brake with the hydraulic line removed
TN. Rod travel, new pads
TO. Rod travel, very worn pads
TT. Full travel with the hydraulic line removed
M1 First mark at the view slot -- the brake released
M2a. Second mark--one possible position -- the brake applied
M2b. Second mark-- a different position -- the brake applied
AT. Air tubing (See Figure 1,1). Air releases the brake.
S. Spring applies the brake

5.1. Adjust for maximum rod travel.

1. Operate the master switch to energize control power.
2. Make sure that the air pressure that releases the brake (Figure 7, item 1) is 85 -100 PSI (5.95 - 07.0 kg/cm-cm).
3. Make sure that the nuts that lock the rods together (Figure 5, item 5) are loose.
4. Release the brake (see Section 6). Let the air cylinder rod fully retract into the air cylinder as shown in Figure 6, A.
5. Turn the brake rod into the air cylinder rod until the brake rod comes out of the brake cylinder fully. See Figure 6, B.
6. Lock the brake rod (Figure 5, item 2) to the air cylinder rod (Figure 5, item 3) with two nuts (Figure 5, item 5).

5.2. Make sure that the brake will continue to operate while the pads wear.

1. Release the brake. On the view slot, put a mark at the position of the lock nuts. (Figure 6, item M1).
2. Apply the brake. See Section 6.
3. Put a mark at the position of the lock nuts when the brake is applied. This can be at position M2a, M2b, or between M2a and M2b. When the pads wear this position will move.
4. Make sure that the distance the rod moves when you apply the brake is 0.75 to 1.0 inches (19-25 mm). If the travel is more than this, the brake piston can hit the mechanical stop before the brake engages fully. This condition is shown in Figure 6 , E (dimension TT).

6. Operation of Brake Systems

Look at the electrical schematics of your machine to find how your brake is controlled. Some machines release the brake when you close the door. Some machines have a control relay to release or apply the brake.

6.1. How to Apply the Brake for Machines with a "Break Release" Output

1. Turn the "brake release" control output off to de-energize the air valve to remove air pressure to the air cylinder (Figure 1, item 1).
2. With no air pressure, a spring in the air cylinder will apply force to the hydraulic cylinder (Figure 1, item 8). This will apply pressure to the brake pads (Figure 2, item 4) against the rotor disk (Figure 1, item 5). (Figure 6, item C,D)

Note 6: If electrical power or compressed air is missing, hydraulic pressure will apply the brake.

6.2. How to Release the Brake for Machines with a "Brake Release" Output

1. Turn the control output called "brake release" on to energize the air cylinder valve.
2. Air pressure compresses the spring and releases the brake. (Figure 6, item B)

6.3. How to Apply and then Release the Brake Quickly —There are two air tubes at (Figure 1, item 1). One supplies compressed air from an air valve. The other sends this compressed air to a pressure switch. If you remove one of the two tubes when compressed air is there, you will apply the brake.

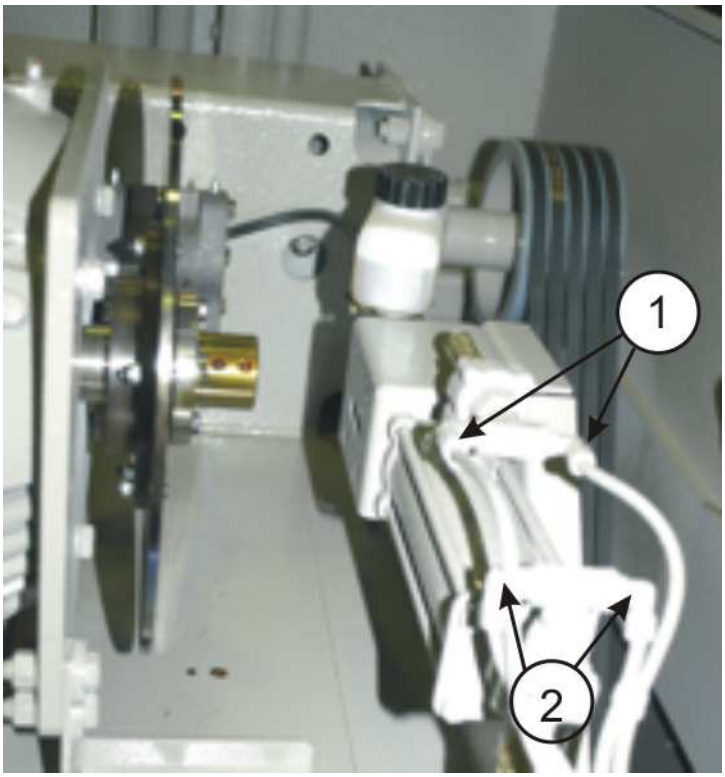
1. Disconnect the air tubing (Figure 1, item 1).

2. Turn the "brake release" output on. The air valve will supply compressed air to one of the tubes. (Figure 1, item 1).
3. Quickly move one of the compressed air tubes (Figure 1, item 1) on and off the air cylinder.
4. After you complete this procedure, connect the air tubing.

6.4. How the Brake Operates on Divided Cylinder Machines

Figure 7: A Typical First and Second Brake on a Divided Cylinder Machine

Two pairs of air tubing connect to different ends of the air cylinder.



Legend

1. Tubing for air that releases the first brake (85 -100 PSI) (5.95 - 07.0 kg/cm-cm)

2. Tubing for air that applies the second brake (10 – 12 PSI) (0.7-0.84 kg/cm-cm)

- On divided cylinder machines, two pair of air tubes connect to different ends of the air cylinder.
- When the cylinder turns, air pressure at Figure 7, item 1 compresses the spring and releases the brake.
- When you operate the stop control, air pressure at 1 is removed. Then the spring in the air cylinder applies the brake.
- If you open the door, the 2nd brake is applied. Then the air pressure at Figure 7, item 2 and the spring apply the brake.

6.5. The Second Brake —If your machine has a second brake which uses air pressure and spring pressure, it will have a pressure regulator. Make sure that you adjust the air pressure of the second brake (Figure 7, item 2) to 10 – 12 PSI (0.7-0.84 kg/cm-cm).

— End of BIEUUM01 —

Safety Placard Use and Placement

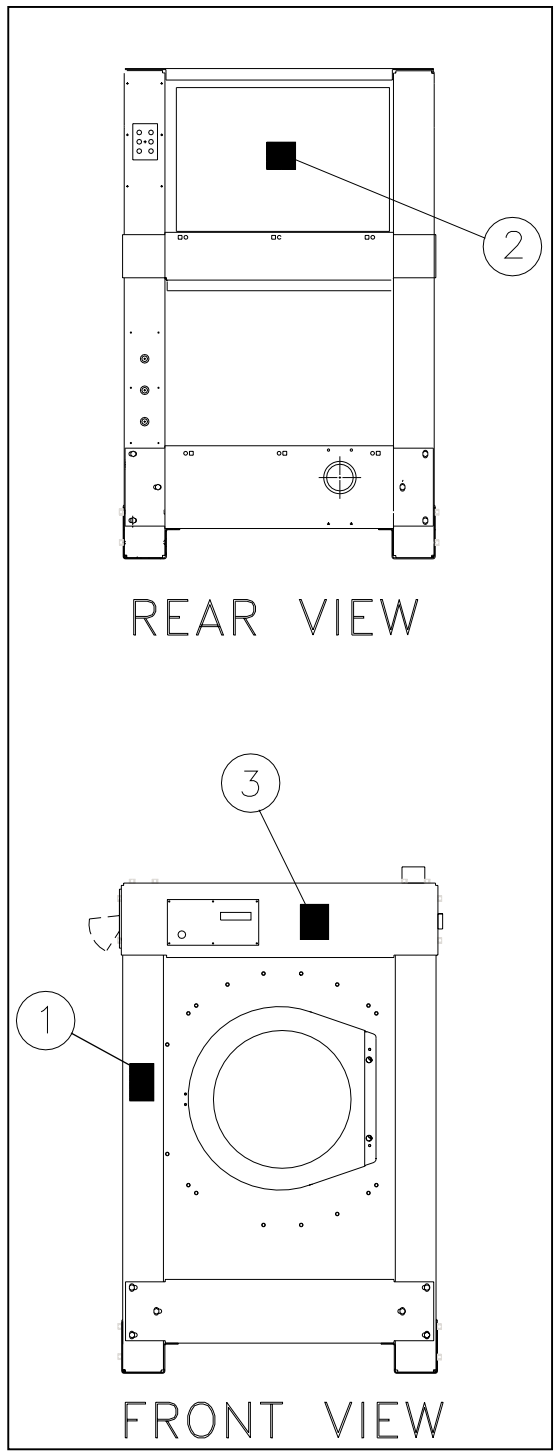
30022, 36026X8J & 42026, 42032X7J

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

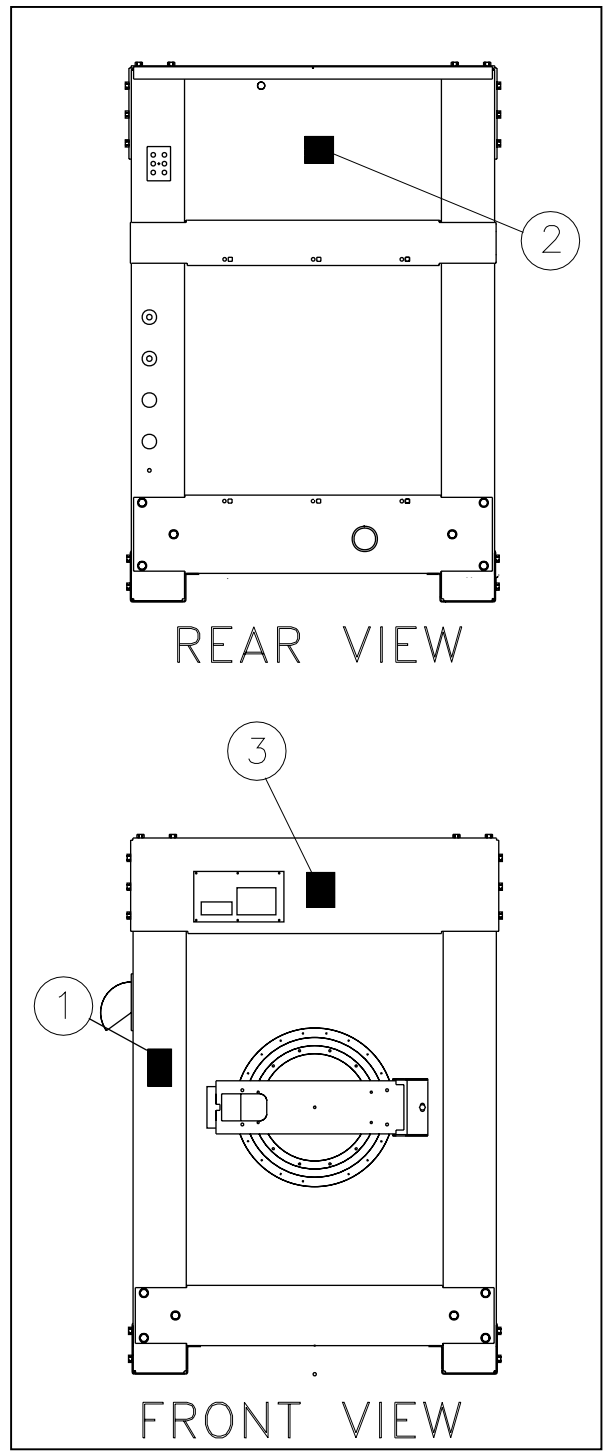
Litho in U.S.A.

Notes:

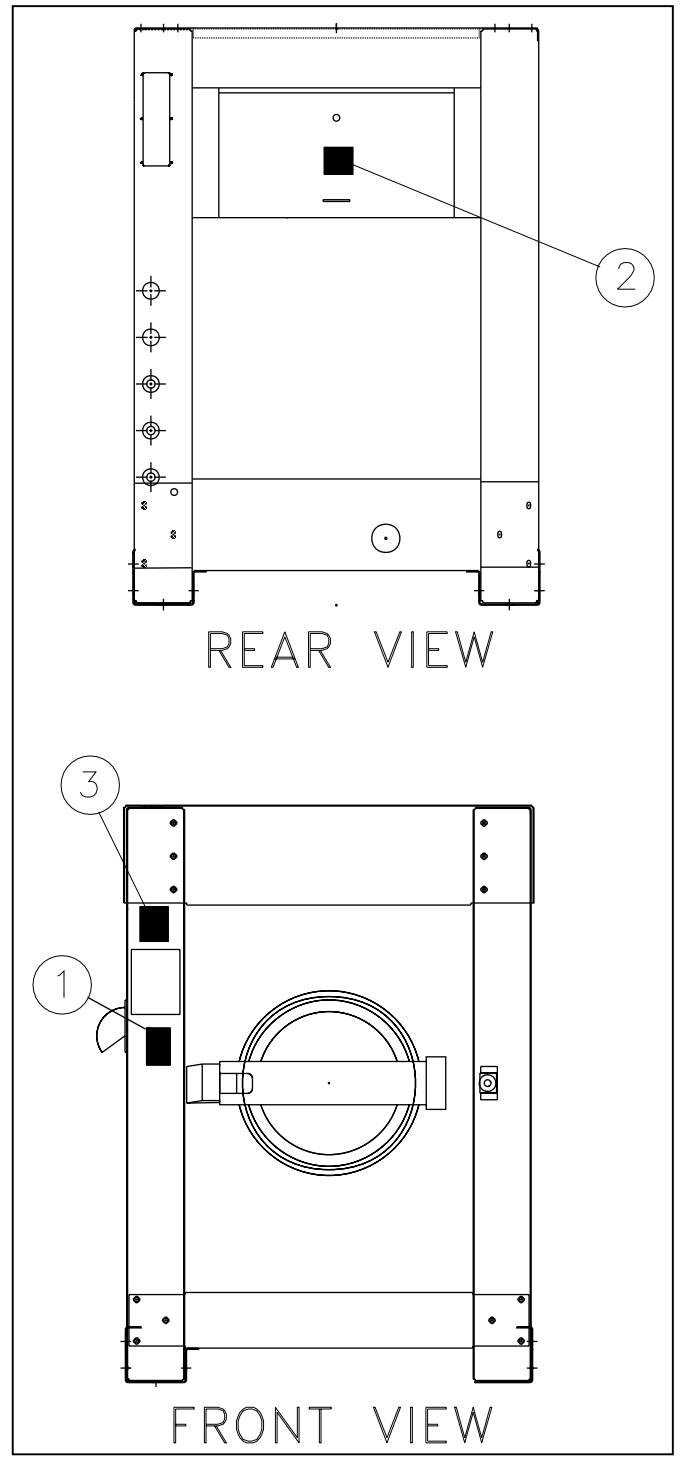
1. **Replace placard immediately, if removed or unreadable.**
2. **Approximate locations of placards are shown. Mounting holes are provided on machine. Use #8 self-tapping screws.**



30022X8J



36026X8J



42026 & 42032X7J

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

Parts List—Safety Placard Use and Placement

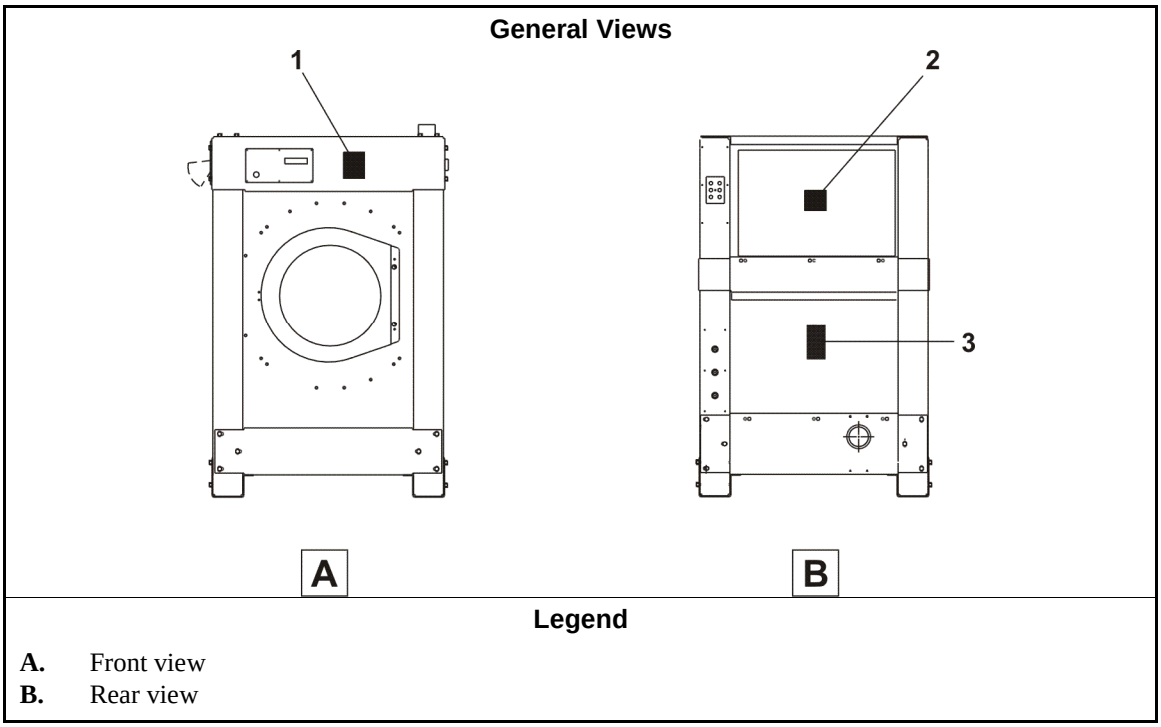
Find the correct assembly first, then find the needed components. The item letters (A, B, C, etc.) assigned to assemblies are referred to in the "Used In" column to identify which components belong to an assembly. The item numbers (1, 2, 3, etc.) assigned to components relate the parts list to the illustration.

Used In	Item	Part Number	Description	Comments
			----------ASSEMBLIES----------	
			none	
			----------COMPONENTS----------	
all	1	01 10631A	NPLT:SHELL FRT WARN NOTILT-TCA	
all	2	01 10377A	NPLT:ELEC HAZARD LG-TCATA	
all	3	01 10699A	NPLT:SERV HZRD-PLYEST-TCATA	

Safety Placards and Locations— ISO 30022X8J, 36026X8J, 42026X7J, 42032X7J

- This document is for placards that agree with: ISO
- If the placard is removed or you cannot read it, replace the placard immediately.
- If the placard is aluminum, the mounting holes are on the machine. Use #8 self-tapping screws. If the placard is vinyl, put the placard in the approximate location shown.

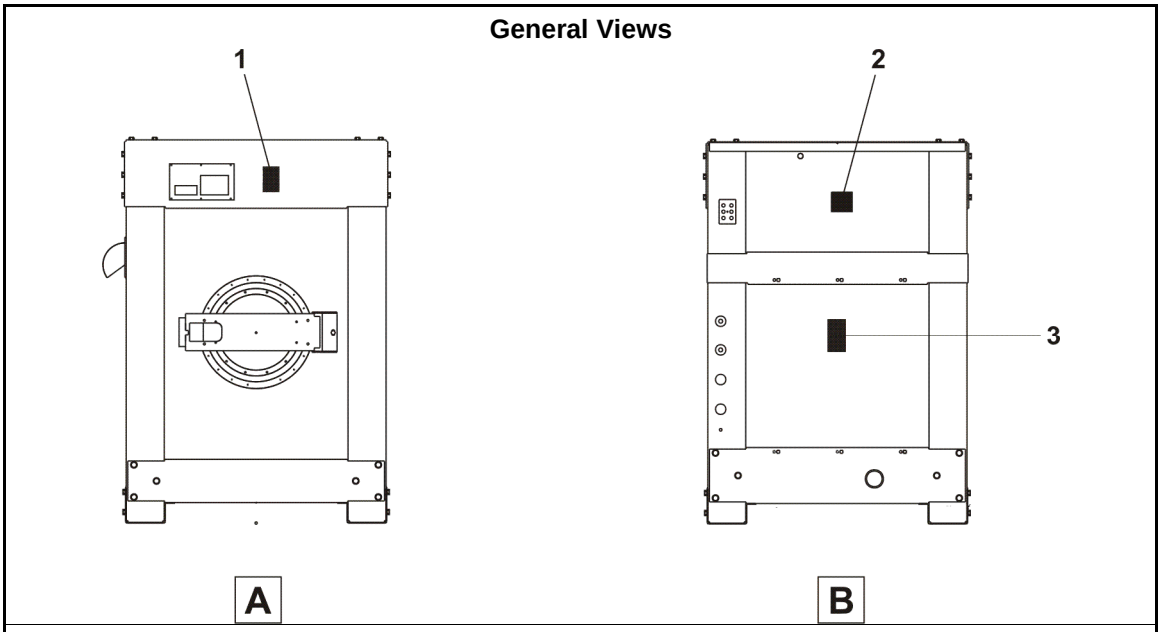
Figure 1: 30022X8J



Legend

A. Front view
B. Rear view

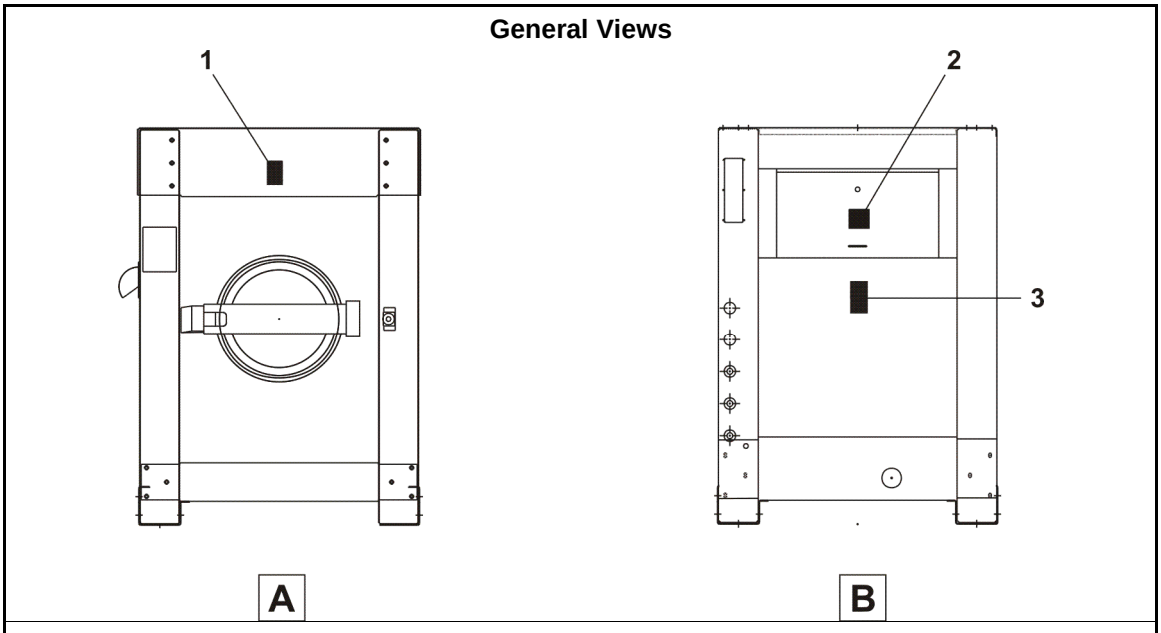
Figure 2: 36026X8J



Legend

A. Front view
B. Rear view

Figure 3: 42026X8J, 42032X8J



Legend

A. Front view
B. Rear view

Table 1: Parts List—Safety Placards and Locations - ISO

Find the assembly for your machine and the letter shown in the "Item" column. The components for your machine will show this letter or the word "all" in the "Used In" column. The numbers shown in the "Item" column are those shown in the illustrations.

Used In	Item	Part Number	Description/Nomenclature	Comments
Assemblies				
none				
Components				
all	1	01 10631X	Safety placard	
all	2	01 10377	Safety placard	
all	3	01 10628X	Safety placard	

— End of BIIFBM02 —

Safety Placard Use and Placement

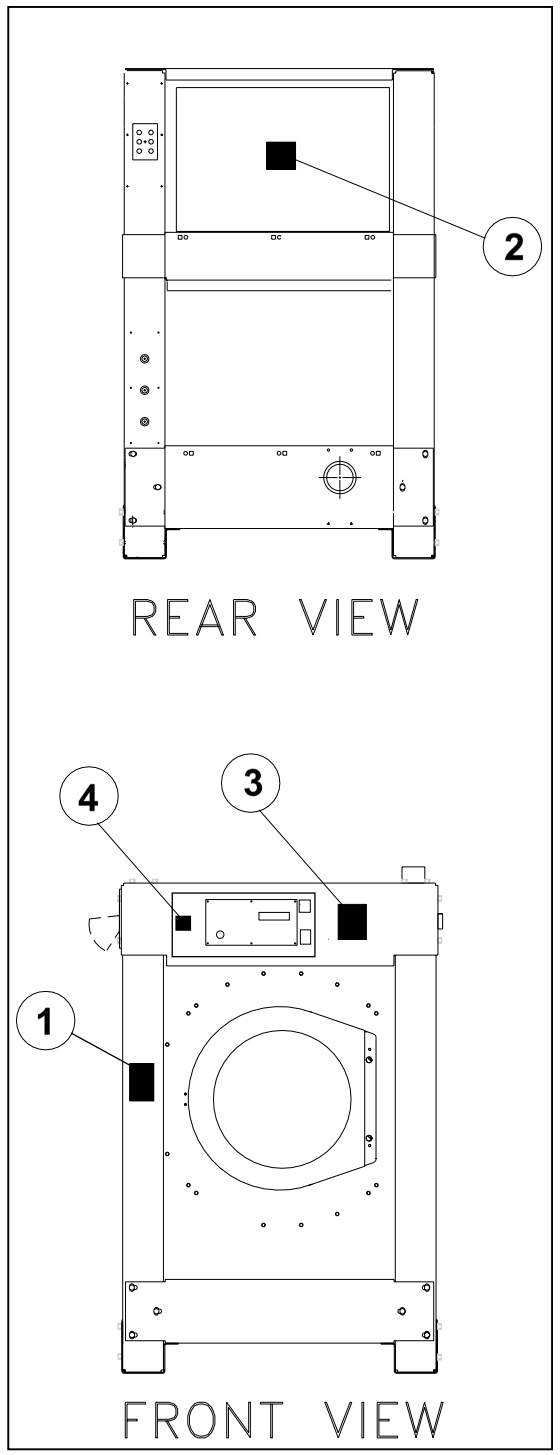
30022, 36026X8W & 42026, 42032X7W

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

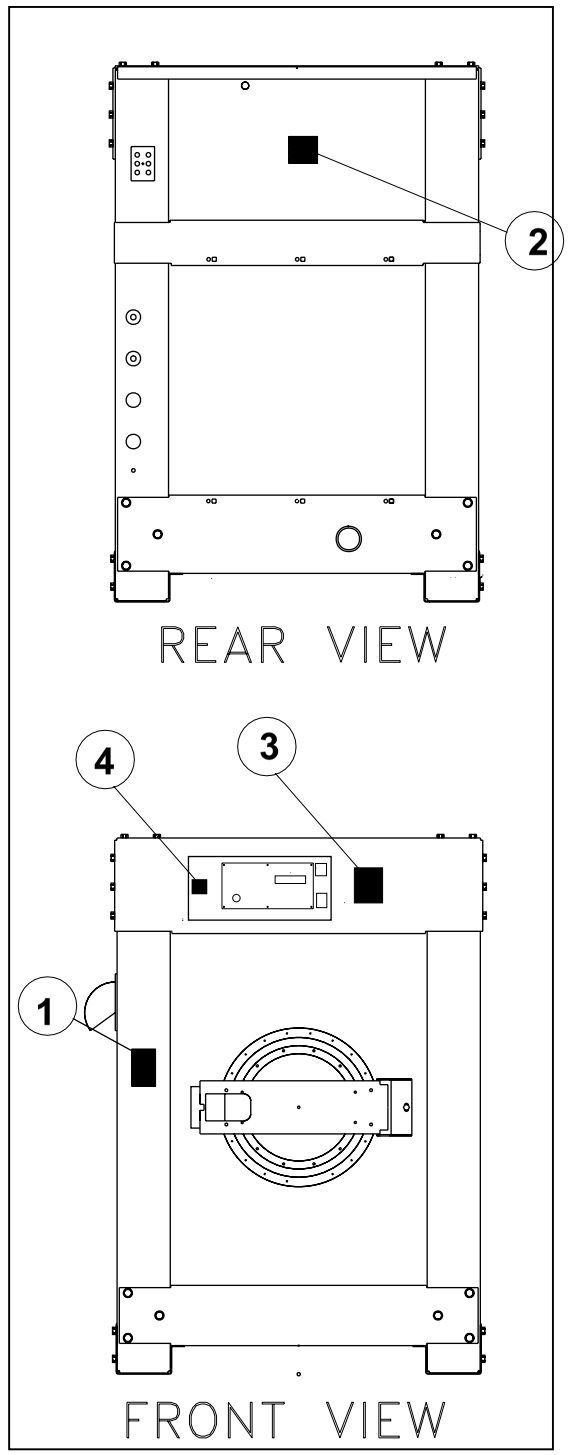
Litho in U.S.A.

Notes:

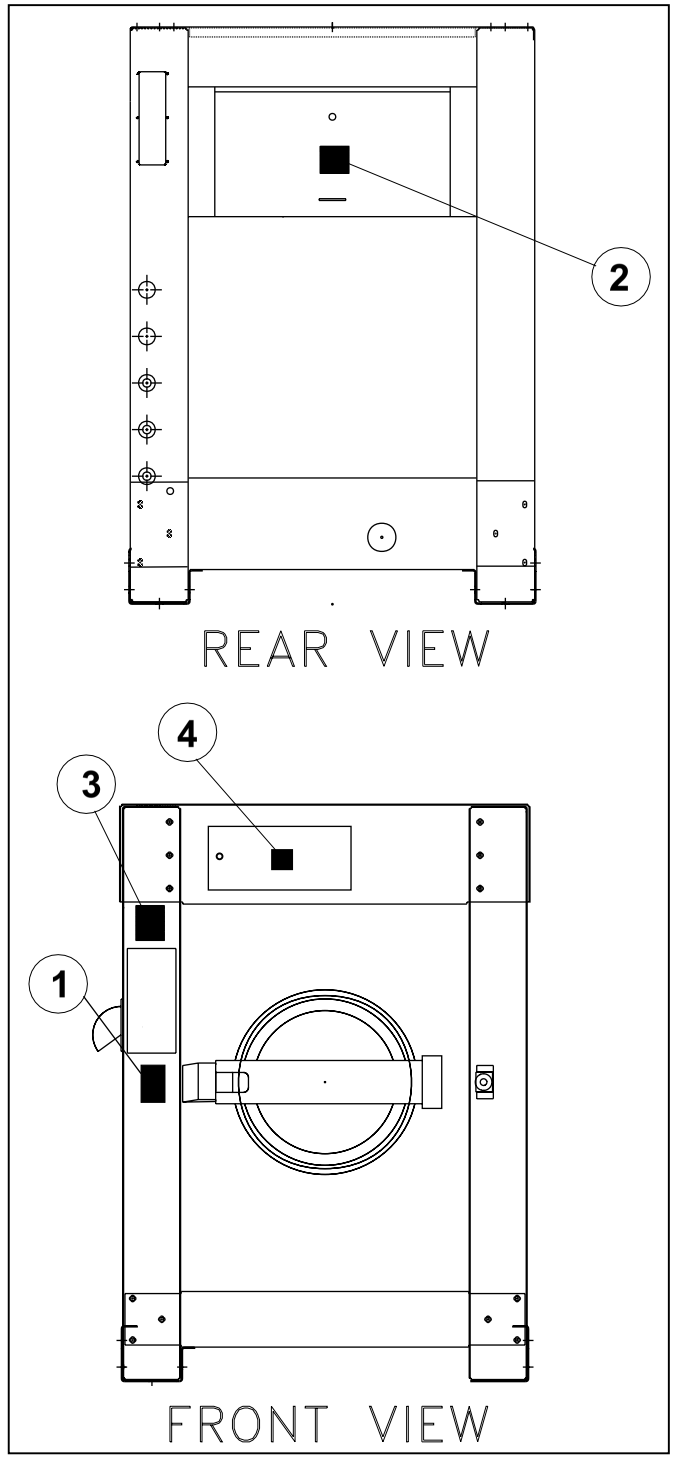
1. **Replace placard immediately, if removed or unreadable.**
2. **Approximate locations of placards are shown. Mounting holes are provided on machine. Use #8 self-tapping screws.**



30022X8W



36026X8W



42026 & 42032X7W

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

Litho in U.S.A.

Parts List—Safety Placard Use and Placement

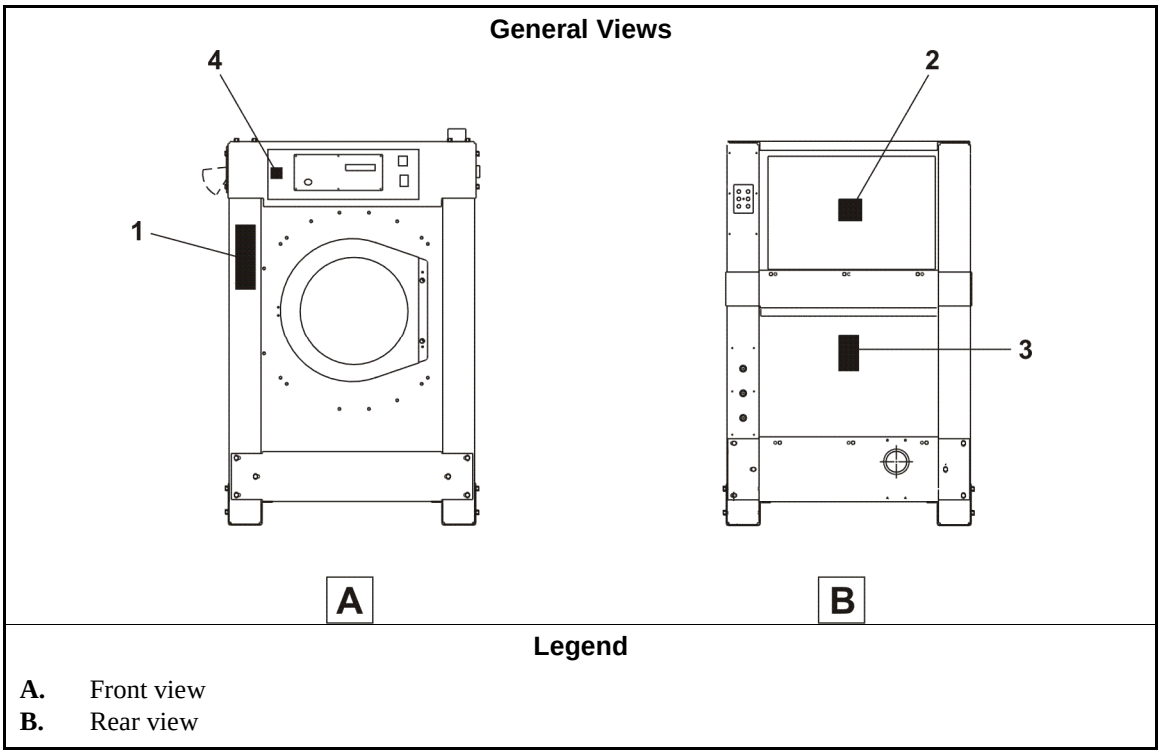
Find the correct assembly first, then find the needed components. The item letters (A, B, C, etc.) assigned to assemblies are referred to in the "Used In" column to identify which components belong to an assembly. The item numbers (1, 2, 3, etc.) assigned to components relate the parts list to the illustration.

Used In	Item	Part Number	Description	Comments
----------ASSEMBLIES----------				
			none	
----------COMPONENTS----------				
all	1	01 10631A	NPLT:SHELL FRT WARN NOTILT-TCA	
all	2	01 10377A	NPLT:ELEC HAZARD LG-TCATA	
all	3	01 10699A	NPLT:SERV HZRD-PLYEST-TCATA	
X8W	4	01 10375C	NPLT:E-HAZARD SM VERTCL-TCATA	
X7W	4	01 10377A	NPLT:ELEC HAZARD LG-TCATA	

Safety Placards and Locations—ISO 30022X8W, 36026X8W, 42026X7W, 42032X7W

- This document is for placards that agree with: ISO
- If the placard is removed or you cannot read it, replace the placard immediately.
- If the placard is aluminum, the mounting holes are on the machine. Use #8 self-tapping screws. If the placard is vinyl, put the placard in the approximate location shown.

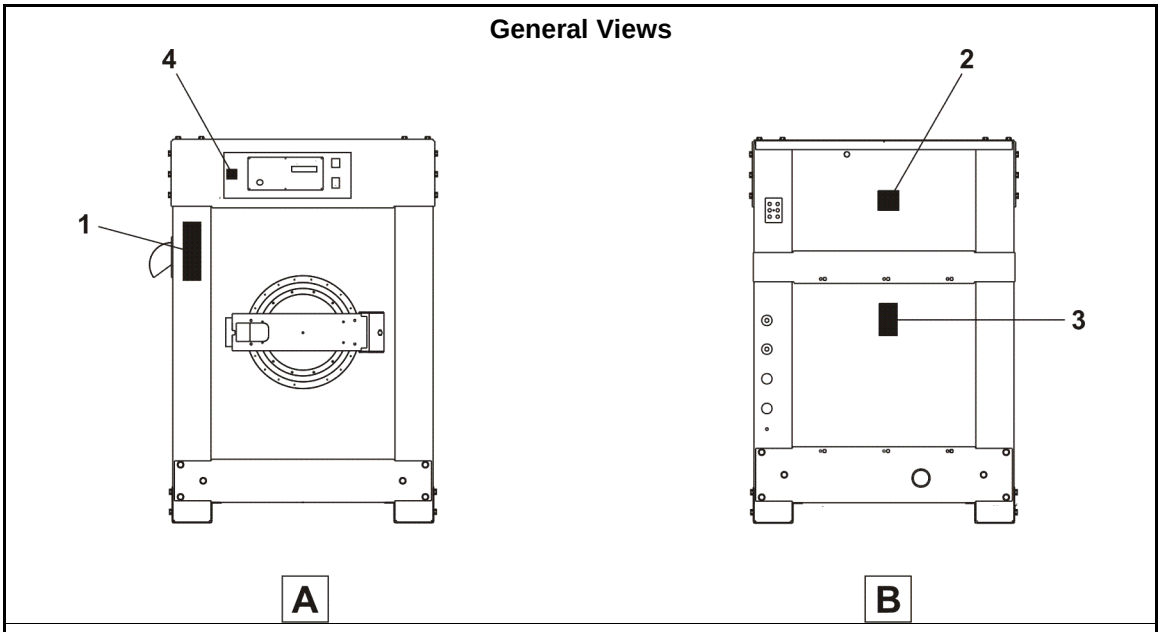
Figure 1: 30022X8W



Legend

A. Front view
B. Rear view

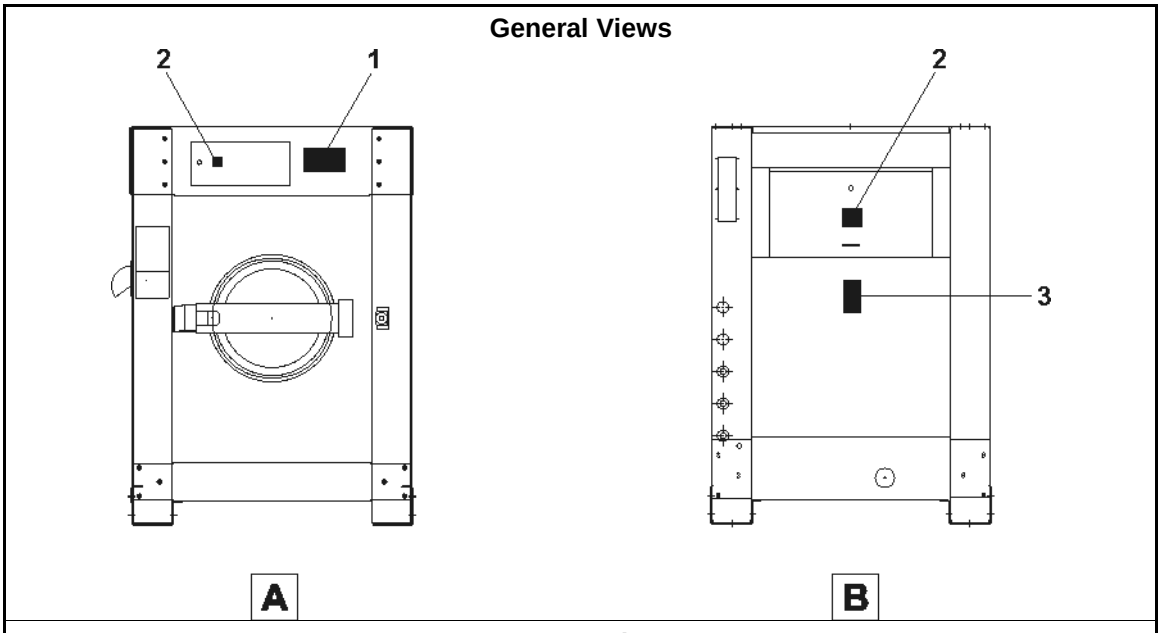
Figure 2: 36026X8W



Legend

A. Front view
B. Rear view

Figure 3: 42026X7W and 42032X7W



Legend

A. Front view
B. Rear view

Table 1: Parts List—Safety Placard Location X8W - ISO

Find the assembly for your machine and the letter shown in the "Item" column. The components for your machine will show this letter or the word "all" in the "Used In" column. The numbers shown in the "Item" column are those shown in the illustrations.

Used In	Item	Part Number	Description/Nomenclature	Comments
Assemblies				
none				
Components				
X8W	1	01 10631X	Safety placard	
X7W	1	01 10631Y	Safety placard	
all	2	01 10377	Safety placard	
all	3	01 10628X	Safety placard	
X8W	4	01 10375	Safety placard	

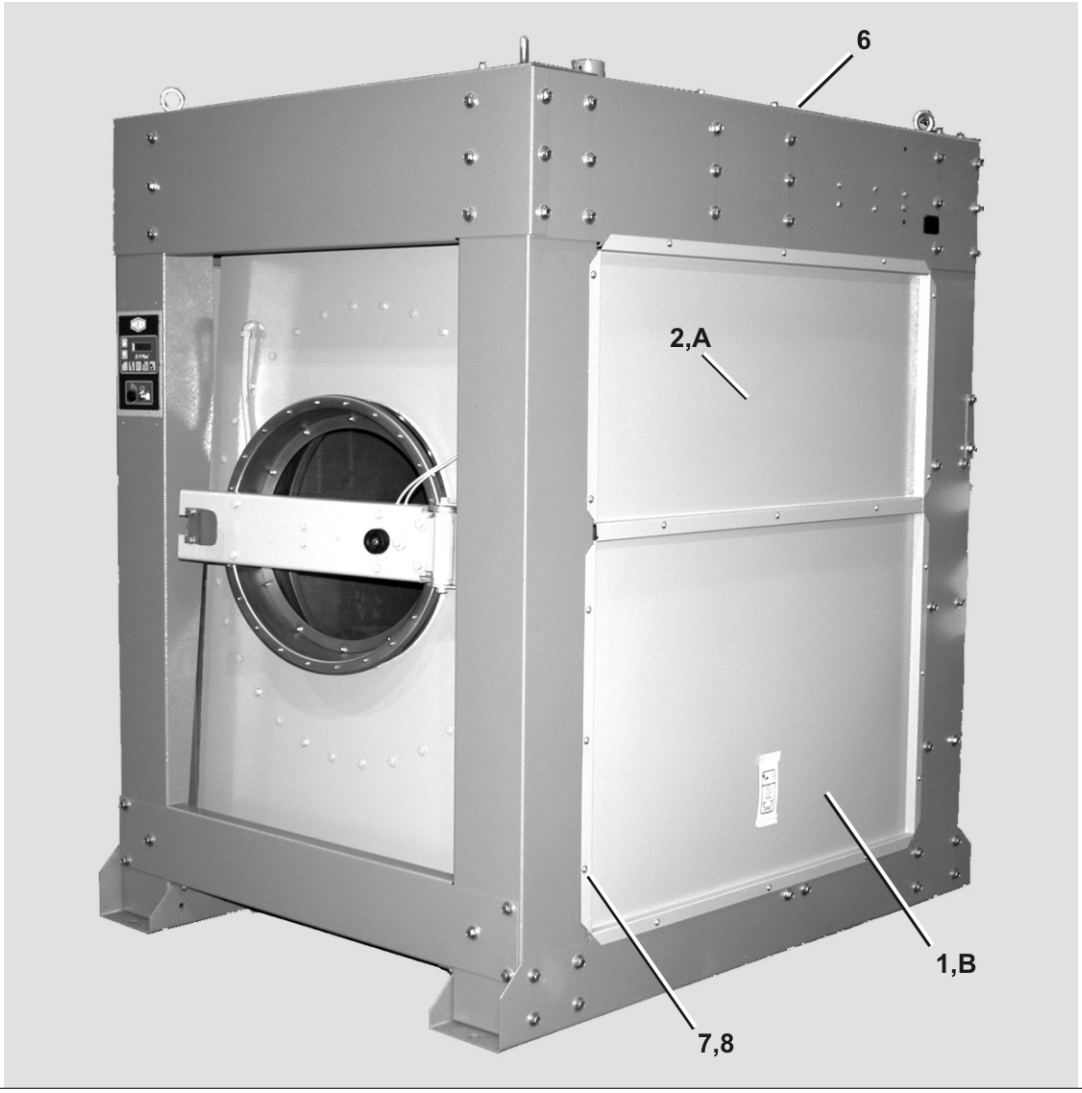
— End of BIIFBM03 —

BIMXCM01 (Published) Book specs- Dates: 20110914 / 20110914 / 20110914 Lang: ENG01 Applic: MXC

Panels and Covers

Figure 1: Panels and Covers

Front view

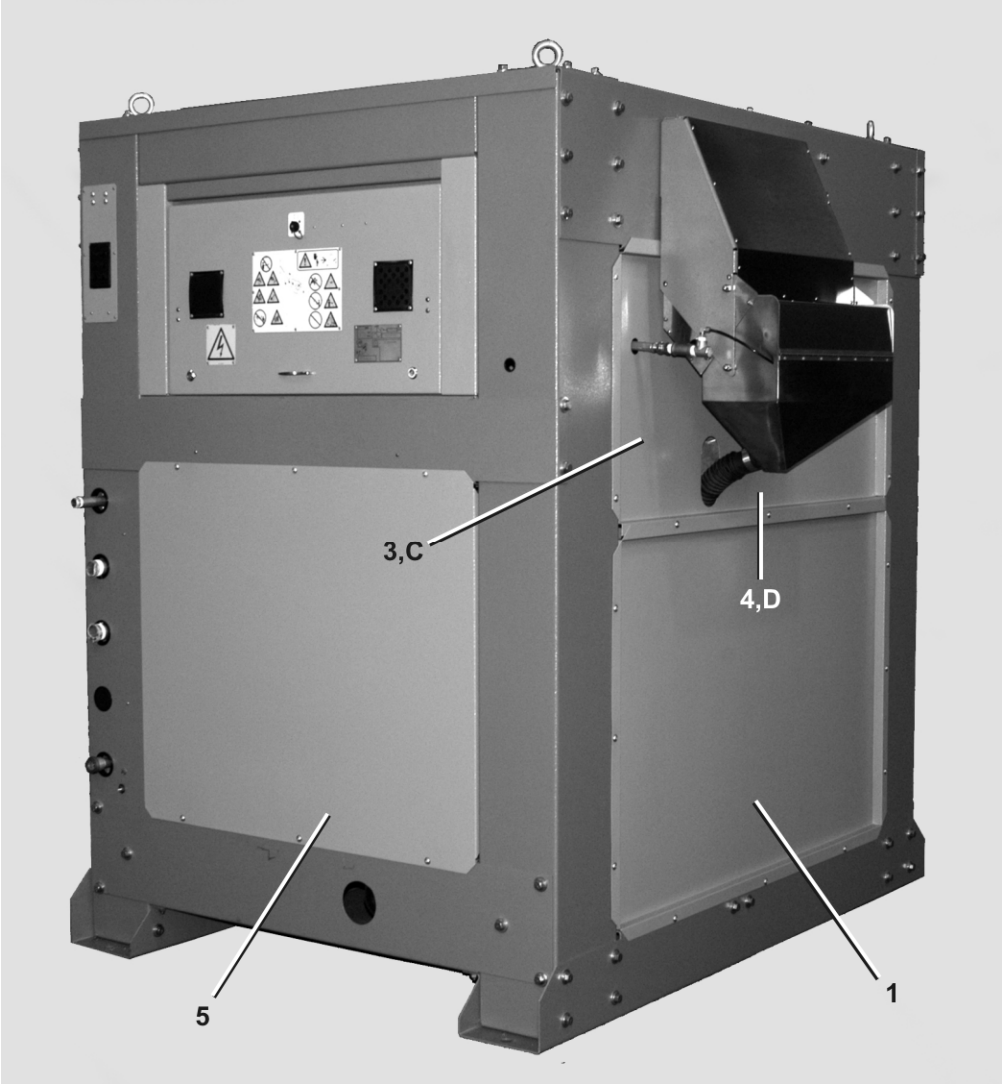


Legend

A. Models: 4226X,4232X
B. Models: 3626 The right cover is one piece.

Figure 2: Panels and Covers

Rear view



Legend

C. This is the cover used with the soap chute.
D. This is the cover used with the five compartments for dry chemical supply.

Table 1: Parts List— Panels and Covers

Find the assembly for your machine and the letter shown in the "Item" column. The components for your machine will show this letter or the word "all" in the "Used In" column. The numbers shown in the "Item" column are those shown in the illustrations.

Used In	Item	Part Number	Description/Nomenclature	Comments
			Assemblies	
	A	GGS3626X7	Installation Group 3626X7	3626X7
	B	GGS4226X	Installation Group 4226X	4226X
	C	GGS4232X	Installation Group 4232X	4232X
			Components	
A	1	02 13525	Cover, Right side, 3626X	
A	1	02 13525A	Cover, Left side, 3626X	
B	1	02 23525A	Cover, Left side, Right side, 4226X	
C	1	02 24525	Cover, Left side, Right side, 4232X	
B	2	02 23585	Cover, Right side, 4226X	
C	2	02 24525A	Cover, Right side, 4232X	
A	3	02 13585A	Cover, Soap chute, 3626X	
B	3	02 23585A	Cover, Soap chute,4226X	
C	3	02 24525B	Cover, Soap chute, 4232X	
A	4	02 13585B	Cover, Five compartments for dry chemical supplies, 3626X	
B	4	02 23585B	Cover, Five compartments for dry chemical supplies, 4226X	
C	4	02 24525C	Cover, Five compartments for dry chemical supplies, 4232X	
all	5	02 13529	Cover, Rear	
A	6	02 13532	Cover, Top, 3626X	
B	6	02 23532	Cover, Top, 4226X	
C	6	02 24532	Cover, Top, 4232X	
all	7	15N110H	Bolt	
all	8	15G004HB	Nut	

— End of BIMXCM01 —

Drive Assemblies 2

BIMXCM02 (Published) Book specs- Dates: 20140401 / 20140401 / 20140401 Lang: ENG01 Applic: MXC

Drive Components Identification

Figure 1: General View

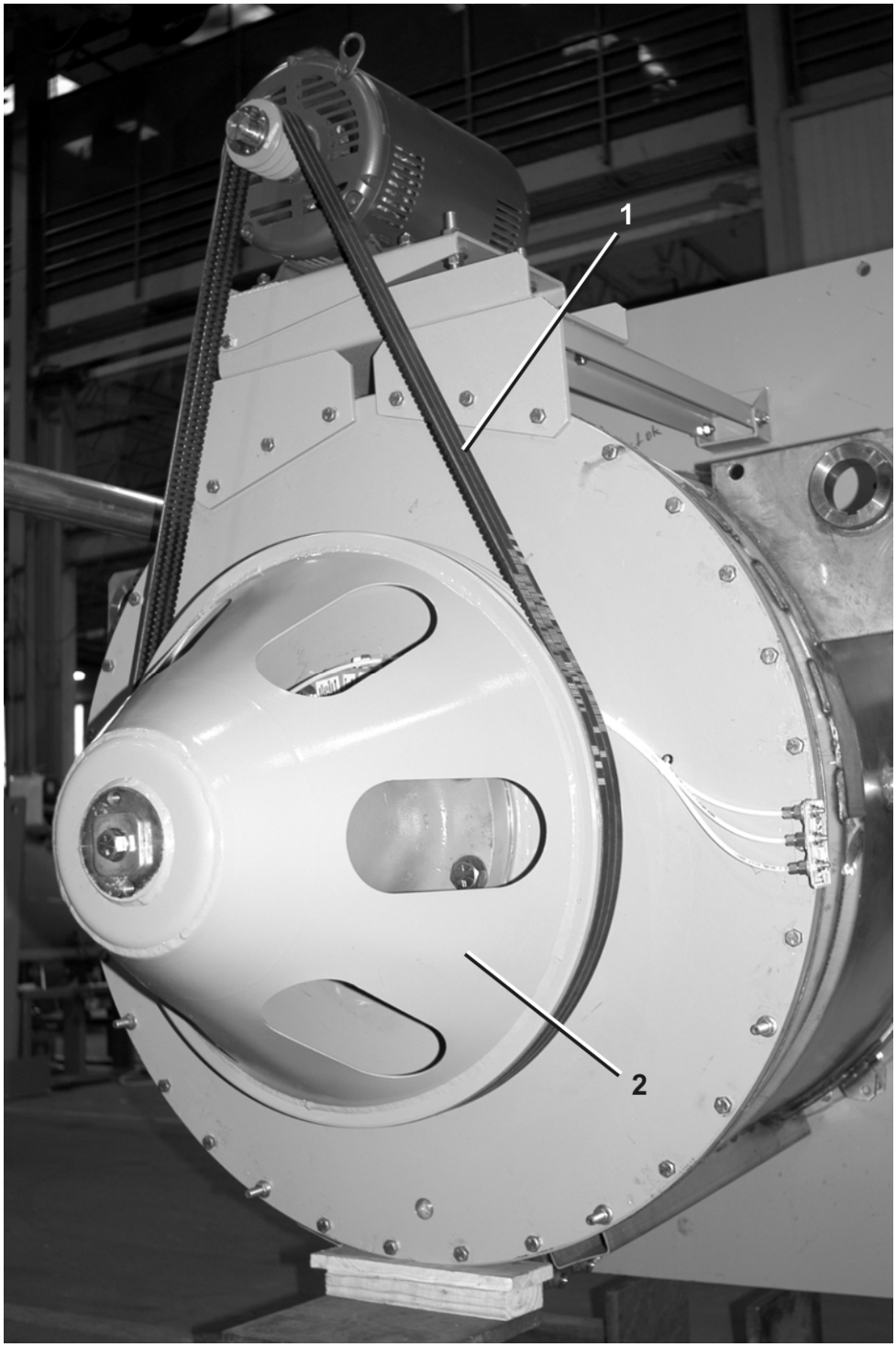
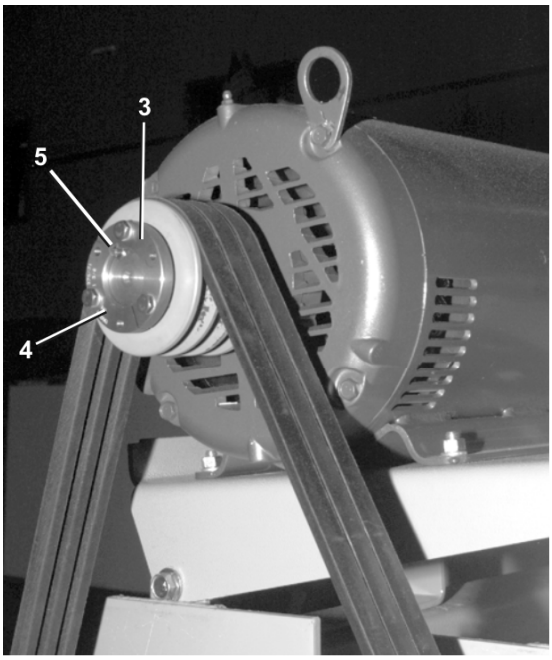


Figure 2: Detailed views



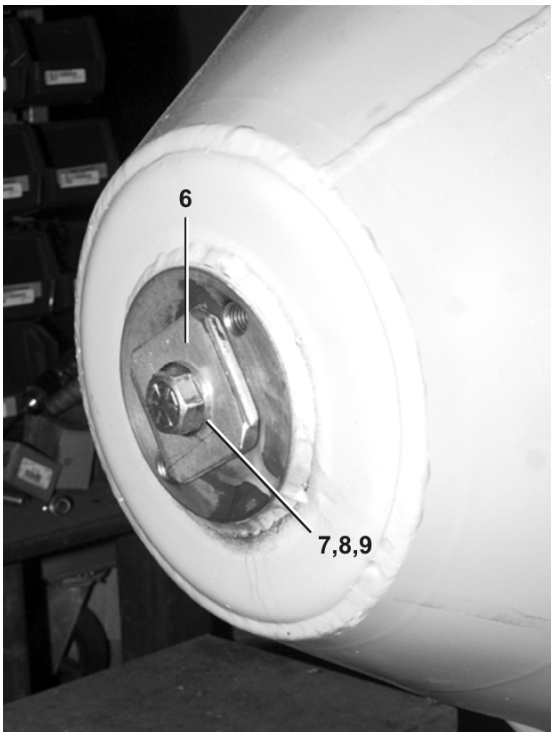


Table 1: Parts List—Drive Components Identification

Find the assembly for your machine and the letter shown in the "Item" column. The components for your machine will show this letter or the word "all" in the "Used In" column. The numbers shown in the "Item" column are those shown in the illustrations.

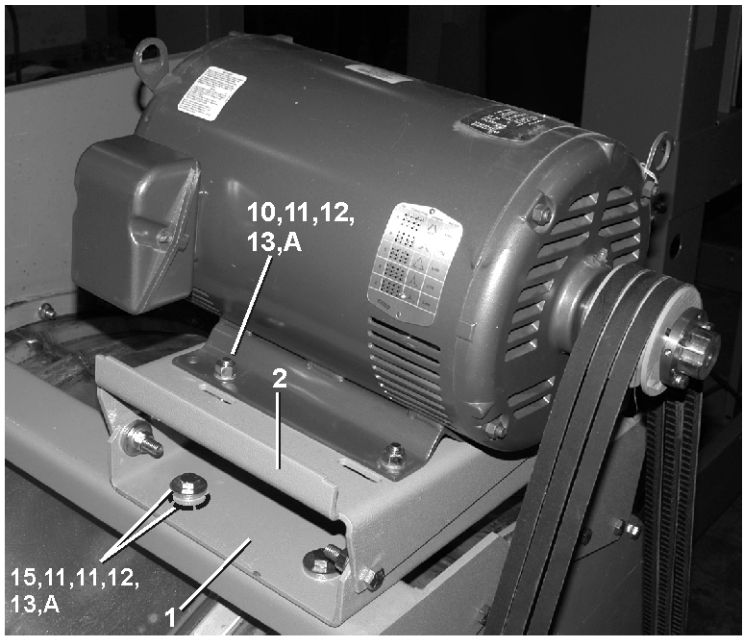
Used In	Item	Part Number	Description/Nomenclature	Comments
Assemblies				
	A	D17 00550	Drive chart 3626X 50/60CYL	36026X8J,X8R
	B	D17 00650	Drive chart 4226/32X 50/60CYC	42026X7J,X7W,X7R 42032X7J,X7W,X7R
Components				
A	1	56VB122XM3	V-belt	
B	1	56VB131XB3	V-belt	
all	2	X2 21931	Pulley	
all	3	56034B3SH	V-pulley	
A	4	56Q1GSH	Bushing 1-3/8"	
B	4	56Q1MSH	Bushing 1-5/8"	
all	5	15E230	Key	
all	6	02 14359A	Spacer	
all	7	15U321H	Washer	
all	8	15K232A	Bolt	
all	9	20C008C	Adhesive, LCT24241	

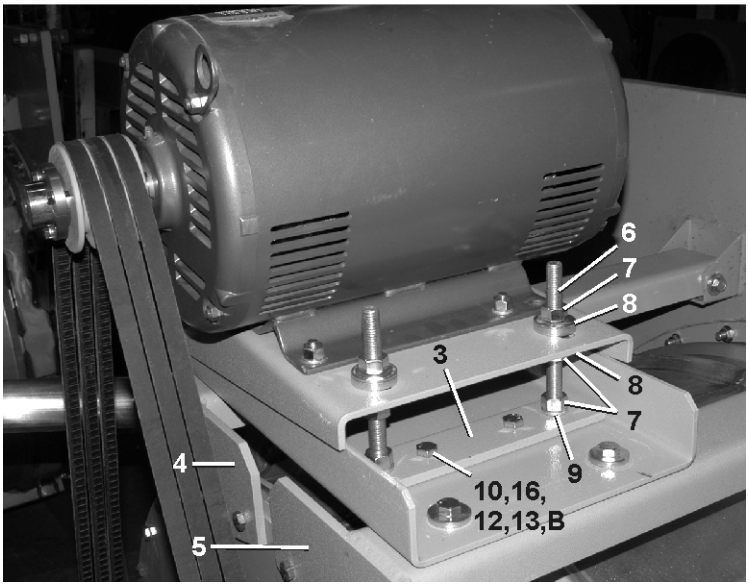
— End of BIMXCM02 —

BIMXCM03 (Published) Book specs- Dates: 20140401 / 20140401 / 20140401 Lang: ENG01 Applic: MXC

Drive Motor Installation

Figure 1:



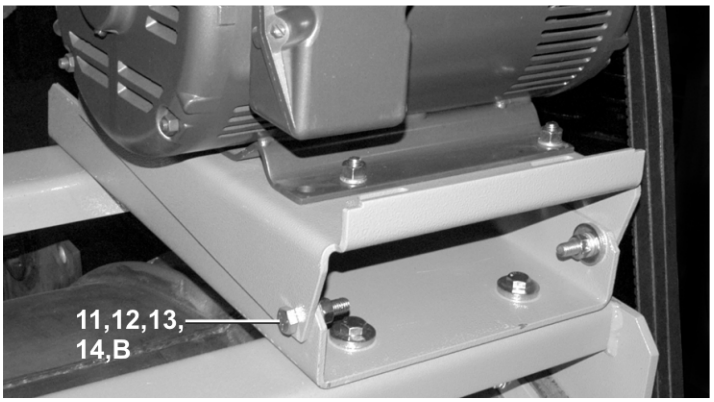


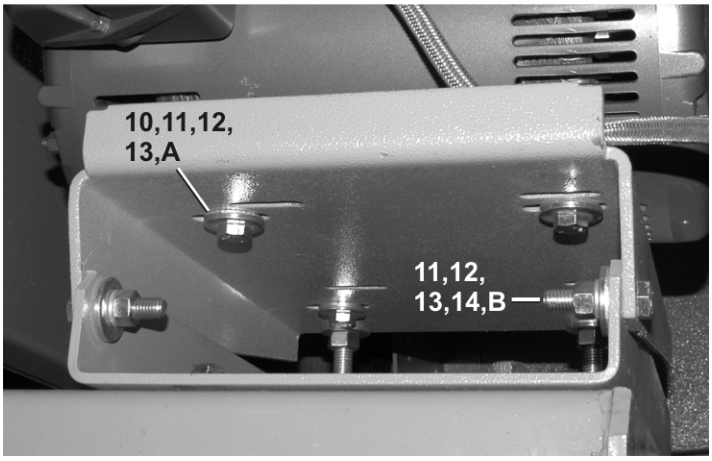
Legend

A. instances 4
B. instances 2

Figure 2: Drive Motor Installation

Additional Views





Legend

A. instances 4
B. instances 2

Table 1: Parts List— Drive Motor Installation

Find the assembly for your machine and the letter shown in the "Item" column. The components for your machine will show this letter or the word "all" in the "Used In" column. The numbers shown in the "Item" column are those shown in the illustrations.				
Used In	**Item**	**Part Number**	**Description/Nomenclature**	**Comments**
Assemblies				
	A	ADB3626X7	Installation Group 3626X7	3626X8J,X8W,X8R
	B	ADB4226X	Installation Group 4226X, 4232X	4226X7J,X7W,X7R 4232X7J,X7W,X7R
Components				
all	1	02 21061B	Mounting plate	
all	2	02 21061	Mounting plate	
all	3	02 21062	Plate	
all	4	W2 13504	Piece part	
all	4	W2 23504	Weldment	
A	5	W2 13504A	Piece part	
B	5	W2 23504A	Piece part	
all	6	15B186	Bolt, 5/8-11x7	
all	7	15G238	Nut, 5/8	
all	8	17W030	Washer, Spherical, 5/8	
all	9	15U315	Washer, Lock, 5/8	
all	10	15K162	Bolt, 1/2-13X1.5	
all	11	15U490	Washer, 1+1/2X17/32X1/4	
all	12	15U300	Washer, Lock, 1/2	
all	13	15G230	Nut, 1/2-13	
all	14	15K180	Bolt, 1/2-13X2	
all	15	15K173A	Bolt, 1/2-13X1.75	
all	16	15U280	Washer	

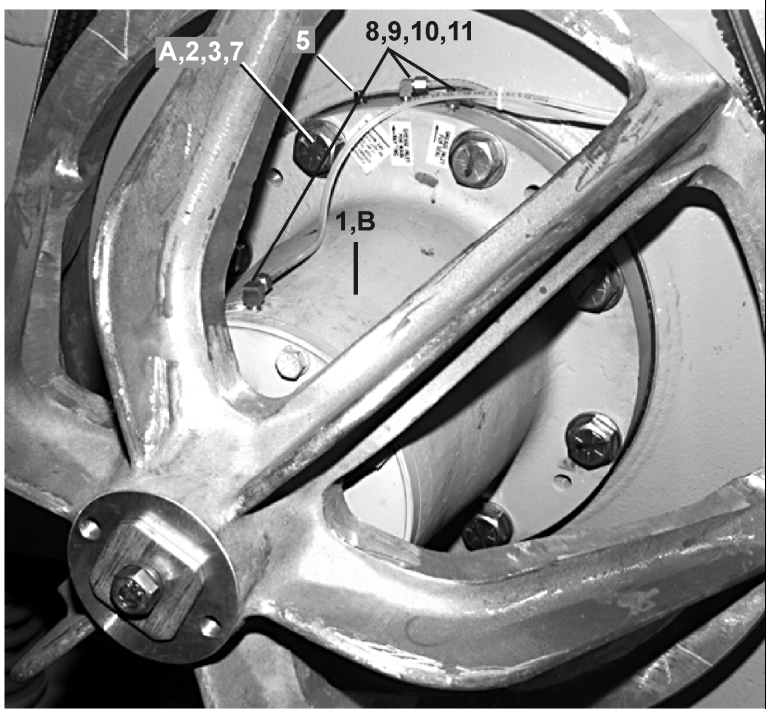
— End of BIMXCM03 —

BIMXCM04 (Published) Book specs- Dates: 20130228 / 20130228 / 20130228 Lang: ENG01 Applic: MXC

Bearing Housing Installation

Figure 1: Bearing Housing Installation

General View



Legend

A. instances 8
B. shown: 3630F8J, 4232F7J

Figure 2: Lubricant

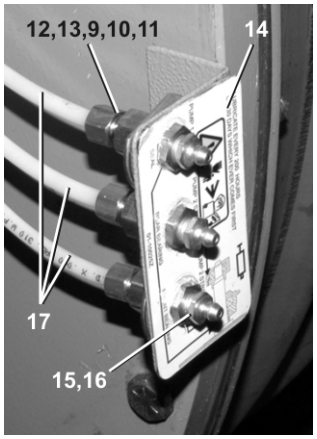


Figure 3: O-ring

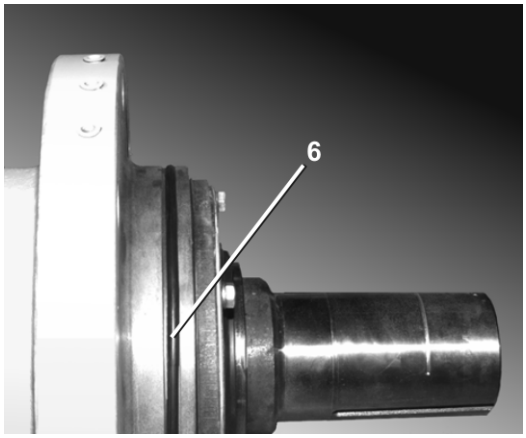


Table 1: Parts List—Bearing Housing Components and Installation

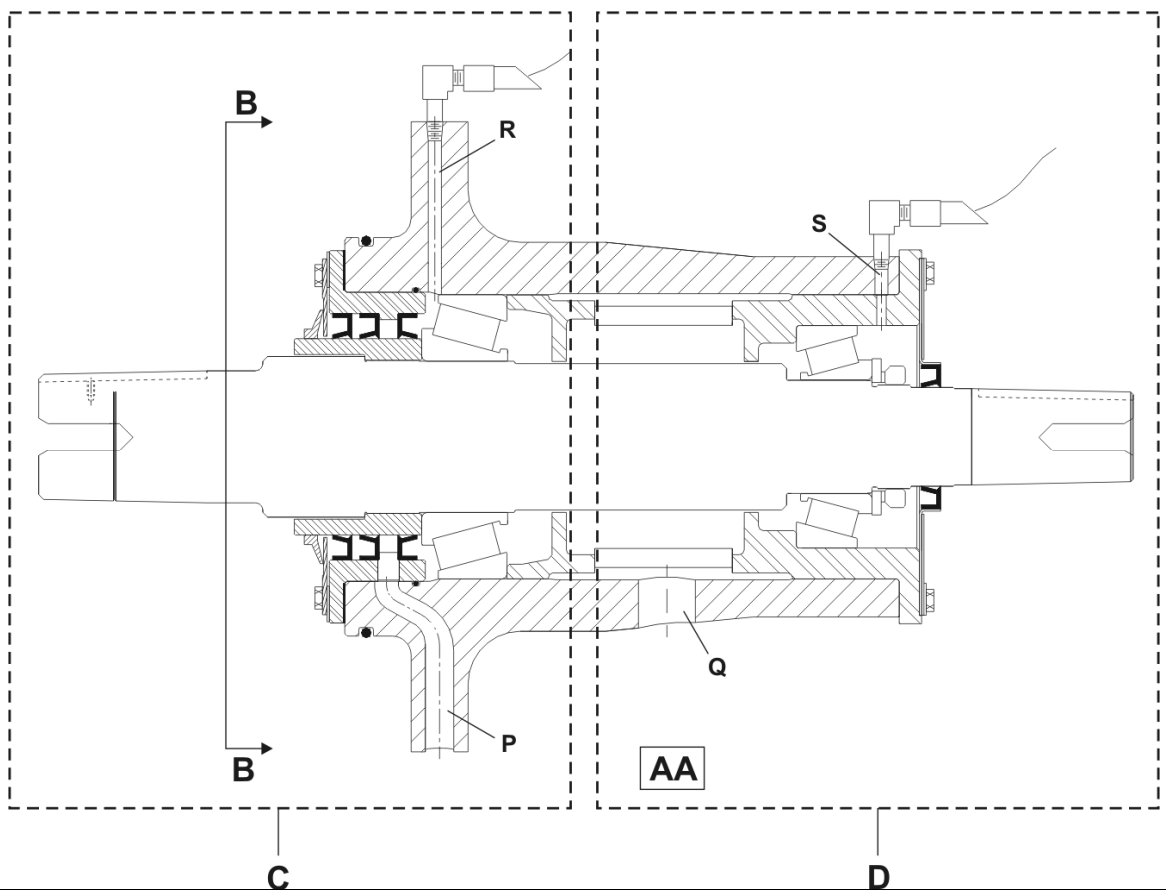
Find the assembly for your machine and the letter shown in the "Item" column. The components for your machine will show this letter or the word "all" in the "Used In" column. The numbers shown in the "Item" column are those shown in the illustrations.

Used In	Item	Part Number	Description/Nomenclature	Comments
Assemblies				
	A	GBM4226X7	Installation Group 4226X, 4232X	4226X, 4232X
	B	GBM3626X7	Installation Group 3626X7	3626X
	X			USA-made models only
	Y			China-made models only
Components				
A,X	1	ABM42001	Assembly, Bearing housing	
A,Y	1	98CMCR4205	Assembly, Bearing housing	
B,X	1	ABM35001	Assembly, Bearing housing	
B,Y	1	98CMCR3606	Assembly, Bearing housing	
all	2	15K235K	Bolt, 1-14X3	
all	3	15U393	Washer, Flat, 1"	
all	5	5SP0CFESSV	Plug, Square head with vent, 1/8"	
A	6	60C176	O-ring, 10"X1/4"	
B	6	60C170	O-ring, 8"X3/16	
all	7	20C007G	Adhesive, Threadlock, LCT24231	
all	8	53A031B	Pipe Fitting, 90 degree, .25X1/8	
all	9	53A059A	Nut, 1/4"	
all	10	53A500	Pipe fitting, 1/4"	
all	11	53A501	Pipe fitting	
all	12	53A007B	Pipe fitting	
all	13	15U281A	Washer, Clipped, 1/2	
all	14	01 10025Z	Label, Lubricant	
all	15	5SB0E0CBEO	Hexbush, 1/4X1/8	
all	16	54M015	Pipe fitting, Lubricant	
all	17	60E004TC	Flexible tubing, 1/4"	

— End of BIMXCM04 —

Bearing Housing Components
4226X7J,X7W,X7R 4232X7J,X7W,X7R 4232F7R,F7S

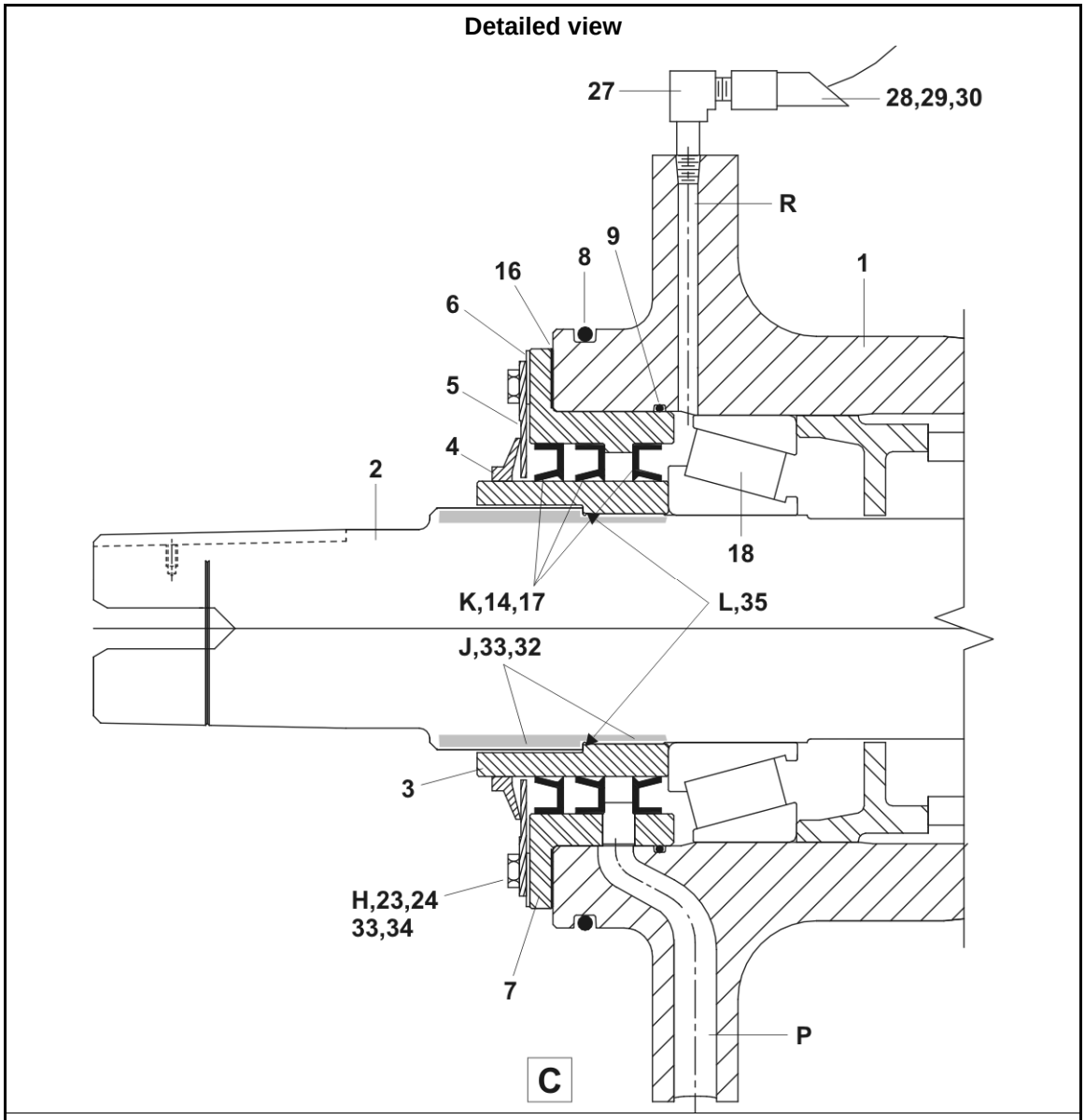
Figure 1: Bearing Housing Components



Legend

AA. Cross Section
C. Detail view of the bearing housing front
D. Detail view of the bearing housing rear
P. Water outlet
Q. Vent
R. Grease inlet for the front bearing
S. Grease inlet for the rear bearing

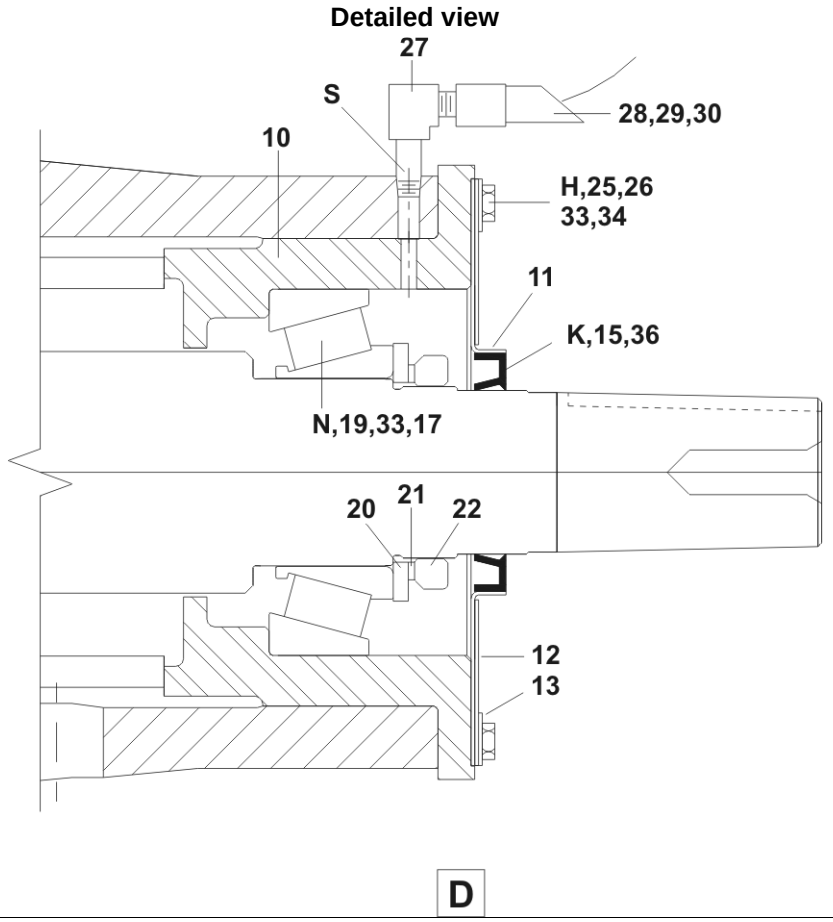
Figure 2: Bearing Housing Components



Legend

C. Detail view of the bearing housing front
H. Apply primer and antiseize compound to the bolt.
J. Clean the shaft and the inner sleeve. Make sure that they are clean and free from oil. Apply adhesive, then the sleeve. Make sure of a bond on a minimum of 75% of the surface.
K. Apply adhesive to the outer circumference of the seals. Let the adhesive dry for 24 hours. Make sure that all applicable surfaces are clean and free from oil before you assemble.
L. Apply a bead of high-temperature silicone around this surface of the shaft before you push on the sleeve.
P. Water outlet
R. Grease inlet for the front bearing

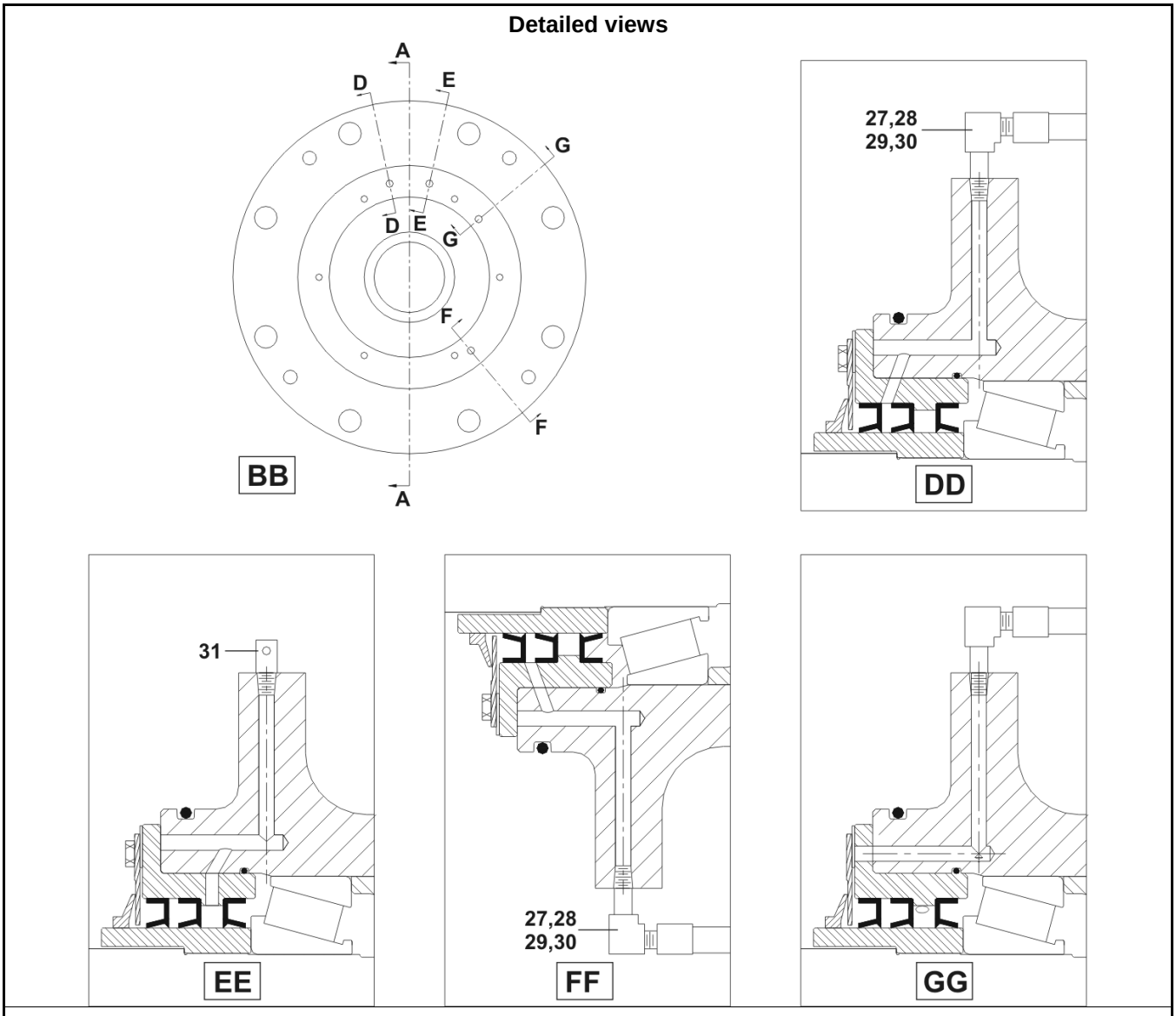
Figure 3: Bearing Housing Components



Legend

D. Detail view of the bearing housing rear
H. Apply primer and antiseize compound to the bolt.
K. Apply adhesive to the outer circumference of the seals. Let the adhesive dry for 24 hours. Make sure that all applicable surfaces are clean and free from oil before you assemble.
M. The seal holders must be fully down before you tighten the fasteners.
N. Apply primer and adhesive to the rear bearing cup and holder housing.
Q. Vent
S. Grease inlet for the rear bearing

Figure 4: Bearing housing



Legend

BB. Front view
DD. Grease inlet for the seals
EE. Fluid inlet to flush the space between the seals
FF. Grease outlet for the seals
GG. Compressed air inlet for the outer seal, Air injection, (optional)

Table 1: Parts List—Bearing Housing Components

Find the assembly for your machine and the letter shown in the "Item" column. The components for your machine will show this letter or the word "all" in the "Used In" column. The numbers shown in the "Item" column are those shown in the illustrations.				
Used In	**Item**	**Part Number**	**Description/Nomenclature**	**Comments**
Assemblies				
	A	ABN42001	Assembly, Front bearing	4232F7R, F7S 4226X7J, X7W, X7R 4232X7J,X7W, X7R
	B	ABM42001	Assembly, Bearing housing	4232F7R, F7S 4226X7J, X7W, X7R 4232X7J,X7W, X7R
Components				
all	1	X2 21040	Bearing housing	
all	2	X2 21043	Shaft	
all	3	02 21044	Seal sleeve	
all	4	24S137	Seal 5.188X6.75X.5	
all	5	02 21049	Cover	
all	6	02 21048	Gasket	
all	7	X2 21041	Seal holder	
all	8	60C176	O-ring 10X1/4"	
all	9	60C169	O-ring 7+3/4x1/8	
all	10	X2 21042	Bearing holder	
all	11	02 21045	Seal holder	
all	12	02 21046	Spacer	
all	13	02 21045A	Seal holder	
all	14	24S135	Seal 5.188X6.5X.5	
all	15	24S053	Seal 2.625X3.625X.437	
all	16	02 21047	Gasket	
all	17	20C011C	Adhesive, LOC#60941	
all	18	54AT101190	Bearing	
all	19	54A050S	Bearing	
all	20	56ATW14	Washer	
all	21	56AHW114	Washer	
all	22	56AHN14	Bearing locknut	
all	23	15K112	Bolt, 3/8-16X1+1/2	
all	24	15U260	Washer, Lock, 3/8	
all	25	15K176A	Bolt, 1/2-13X1.75	
all	26	15U317B	Washer, 1.062X.531X.115	
all	27	53A031B	Pipe fitting , 90 degree, .25X1/8	
all	28	53A500	Pipe fitting	
all	29	53A501	Pipe fitting	
all	30	53A059A	Pipe fitting	
all	31	5SP0CFESSV	Plug, Square head with vent, 1/8	
all	32	20C012D	Adhesive, LCT#68015 10CC	
all	33	20C006P	Primer, #7649 LCT#21348-4	
all	34	20C007H	Threadlock, Removable, #24221	
all	35	20C041	Silicone, High temperature, 10.2OZ	

Find the assembly for your machine and the letter shown in the "Item" column. The components for your machine will show this letter or the word "all" in the "Used In" column. The numbers shown in the "Item" column are those shown in the illustrations.

Used In	Item	Part Number	Description/Nomenclature	Comments
all	36	20C009	Threadlock, LCT#27731 50CC	

— End of BIMXCM05 —

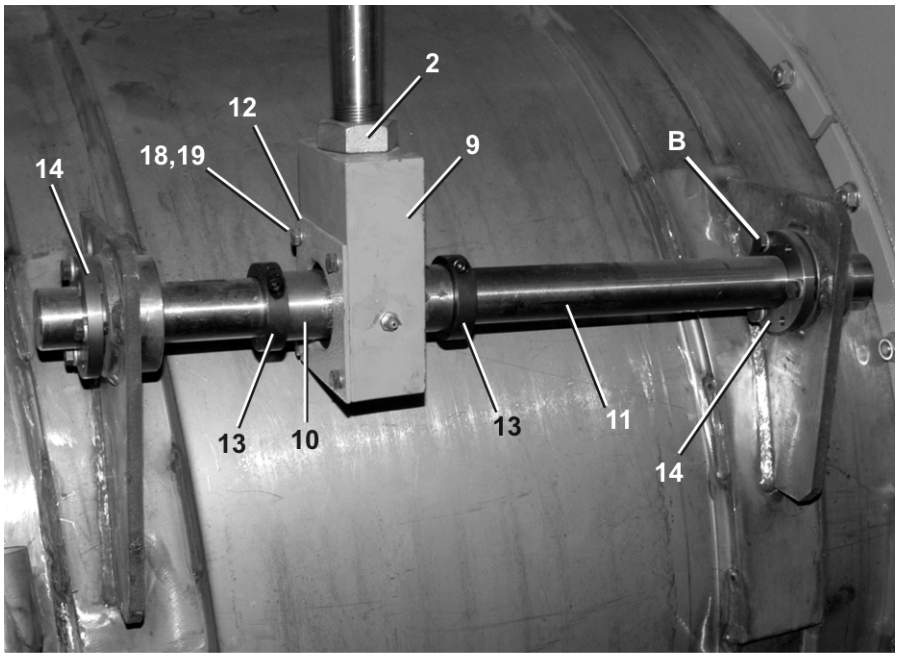
Suspension 3

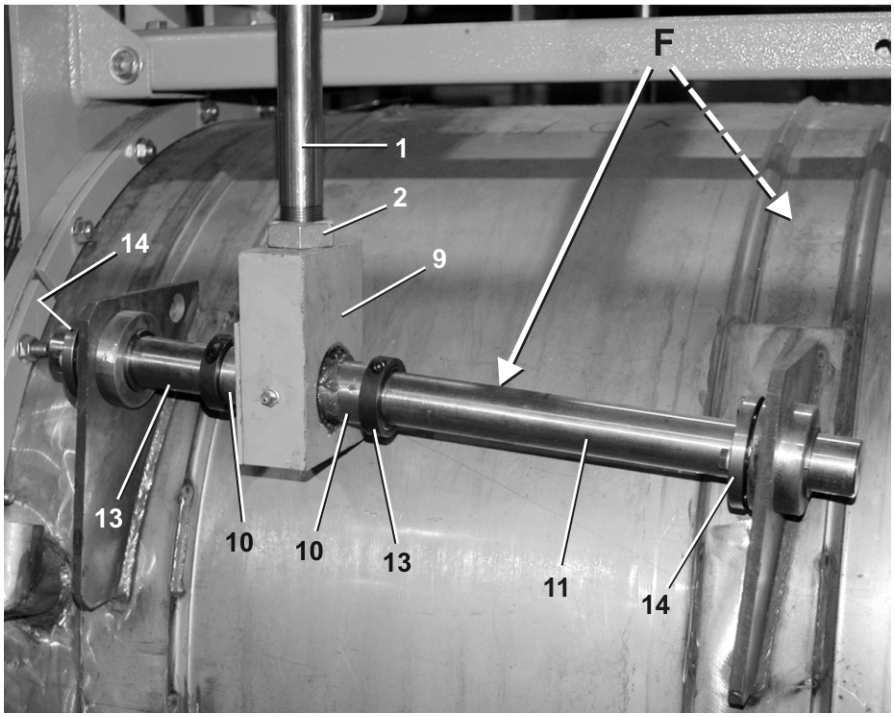
BIMXCM06 (Published) Book specs- Dates: 20140401 / 20140401 / 20140401 Lang: ENG01 Applic: MXC

Suspension Components and Installation

Figure 1: Suspension Components and Installation

General Views





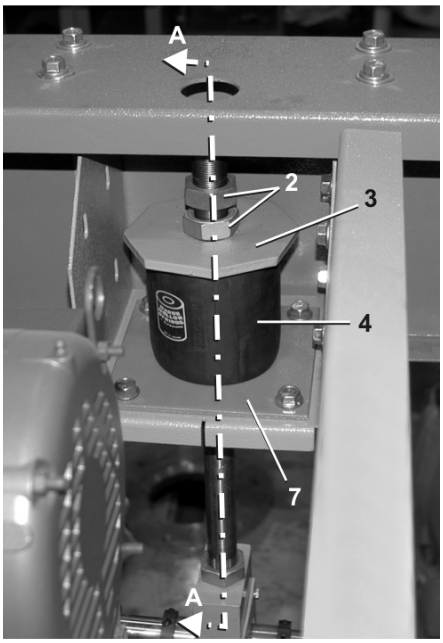
Legend

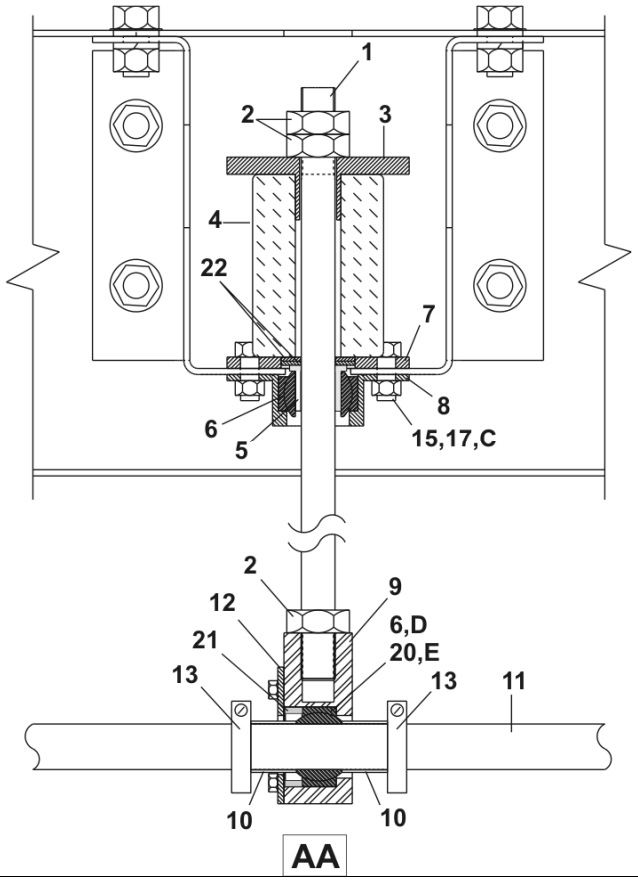
B. Torque to 30 Ft. Lbs.

F. The two sides use the same suspension.

Figure 2: Suspension Components and Installation

Detailed views





Legend

AA. Cross Section
C. instances 4
D. Models: 3626X
E. Models: 42226X, 4232X

Figure 3: Bottom view

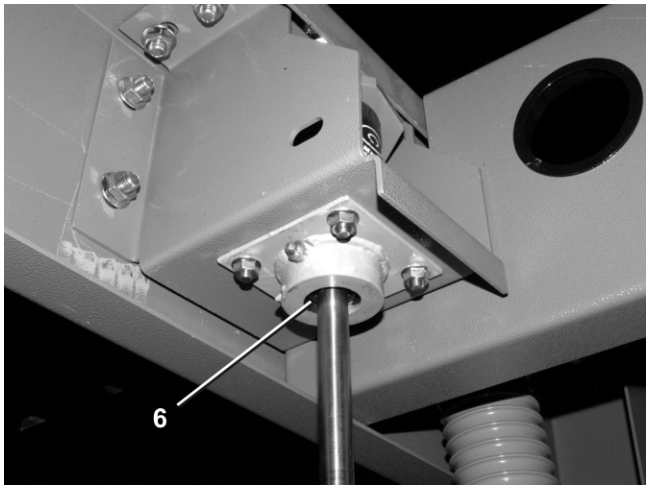


Table 1: Parts List— Suspension Components and Installation

Find the assembly for your machine and the letter shown in the "Item" column. The components for your machine will show this letter or the word "all" in the "Used In" column. The numbers shown in the "Item" column are those shown in the illustrations.				
Used In	**Item**	**Part Number**	**Description/Nomenclature**	**Comments**
Assemblies				
	A	GMS3626X7	Installation Group	3626X8J,X8W,X8R
	B	GMS4226X	Installation Group 4226X	4226X7J,X7W,X7R
	C	GMS4232X	Installation Group 4232X	4232X7J,X7W,X7R
Components				
A	1	02 13521	Rod	
BC	1	02 23521	Rod	
all	2	15G264A	Nut, 1+1/4-12	
A	3	W2 13524	Washer	
BC	3	W2 23524	Washer	
A	4	60B136	Rubber spring, 4.5X2X6	
BC	4	60B141	Rubber spring, 6.5X2X8	
all	5	54E024DRF	Flange bearing, 1.25X1.5X2.0	
all	6	54A724	Ball bushing, 1.5"	
A	7	02 13523	Plate	
BC	7	02 23523	Plate	
A	8	W2 13522	Mounting components	
BC	8	W2 23522	Mounting components	
A	9	X2 13521E	Mounting components	
BC	9	X2 23521E	Mounting components	
A	10	02 13524D	Spacer	
BC	10	02 23524D	Spacer	
A	11	02 13521F	Rod	
B	11	02 23521F	Rod	
C	11	02 24521F	Rod	
A	12	02 13521E	Plate	
BC	12	02 23521E	Plate	
A	13	54JH11500A	Shaft collar, 1.5"	
BC	13	54JH22000C	Shaft collar, 2"	
A	14	56Q1KP1	Bushing, 1+1/2"	
BC	14	56Q2AQ1S	Bushing, 2.0	
A	15	15K129	Bolt, 1/2-13X1-1/4	
BC	15	15K154G	Bolt, 1/2-13X1+3/4	
all	17	15G222B	Nut, 1/2-13	
all	18	15K041	Bolt, 1/4-20X1	
all	19	15U180	Washer, Lock, 1/4	
BC	20	54A732	Ball bushing, 2"	
A	21	02 13521J	Spacer	
BC	21	02 23521J	Spacer	
all	22	15U349A	Washer, 1.275X 2.275X.120	

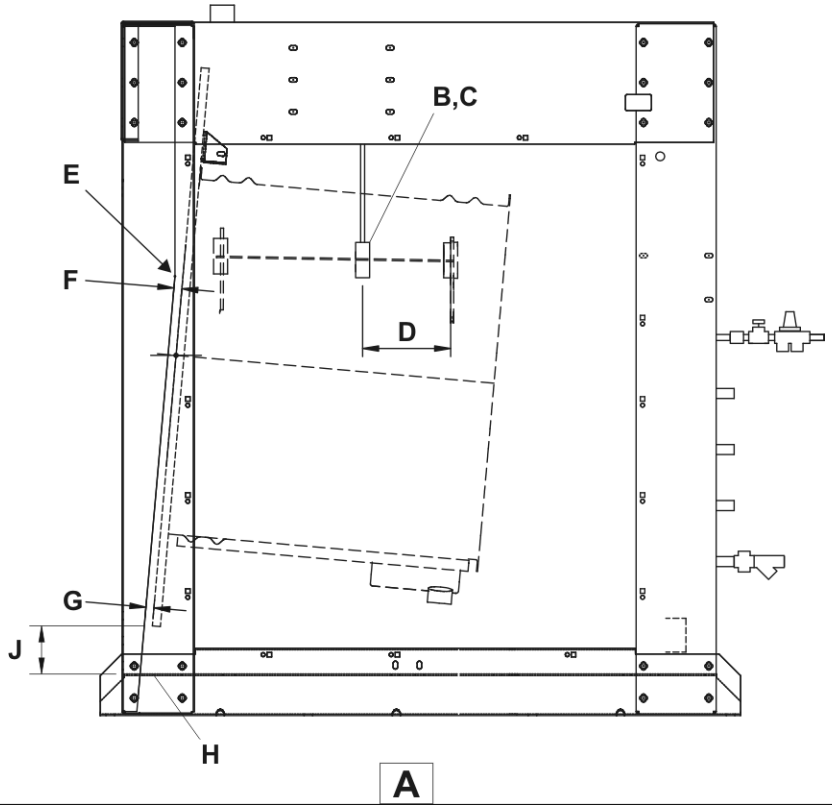
— End of BIMXCM06 —

BIMXCM07 (Published) Book specs- Dates: 20110914 / 20110914 / 20110914 Lang: ENG01 Applic: MXC

Suspension Settings

Figure 1: Suspension Settings

The initial positions for the suspension.



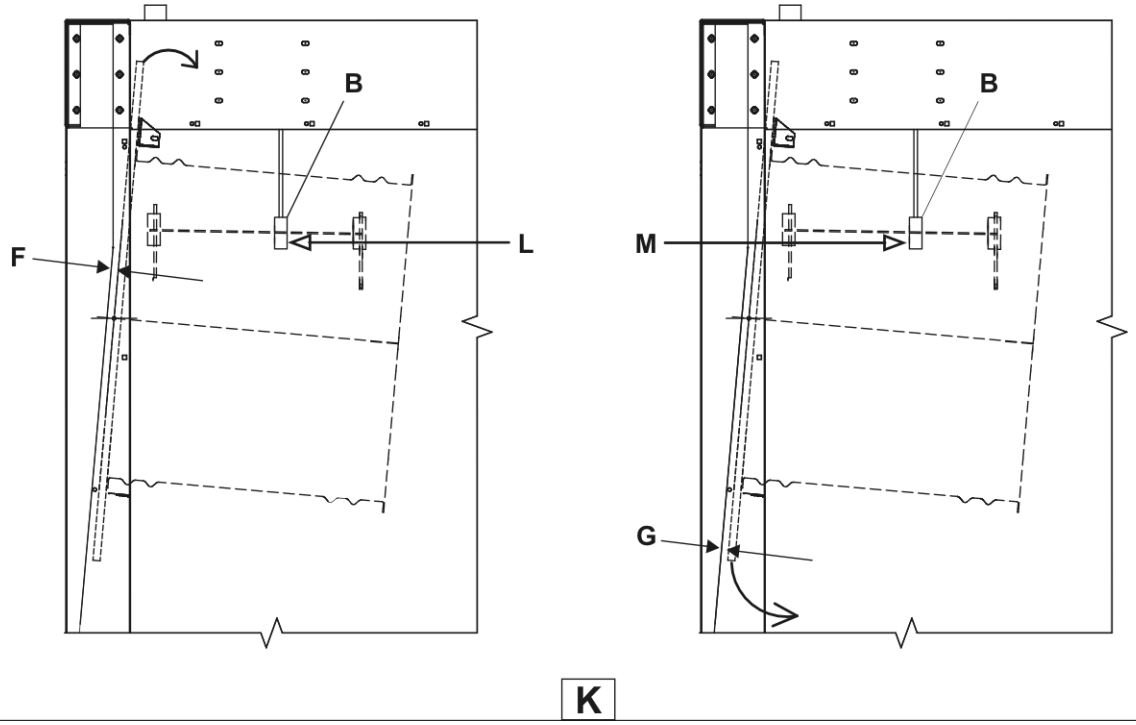
	D
3022X8_	4-1/2”[114]
3626X8_	6-1/2”[165]
4226X7_	8”[203]
4232X7_	11”[279]

Legend

A. The initial positions for the suspension.
B. Lower ball bushing
C. Initially set the lower ball bushing the distance "D" from the shell mounting bracket.
D. Chart dimensions
E. The point on the front corner posts where the angle changes.
F. This dimension must be in this range: 1.50"[38] +/- .125"[3].
G. This dimension must be in this range: 1.25"[32] +/- .125"[3].
H. The top of the inside base channel.
J. This dimension must be in this range: 6"[152] +/- .5"[13].

Figure 2: Detailed views

Adjusting the shell front positions.



Legend

F. This distance should be 1.50"[38] +/- .125"[3].
G. This distance should be 1.25"[32] +/- .125"[3].
K. Adjusting the shell front positions.
L. Tap the ball bushing forward to increase the space between the upper shell front and the angle of the corner posts.
M. Tap the ball bushing rearward to increase the space between the lower shell front and the angle of the corner posts.

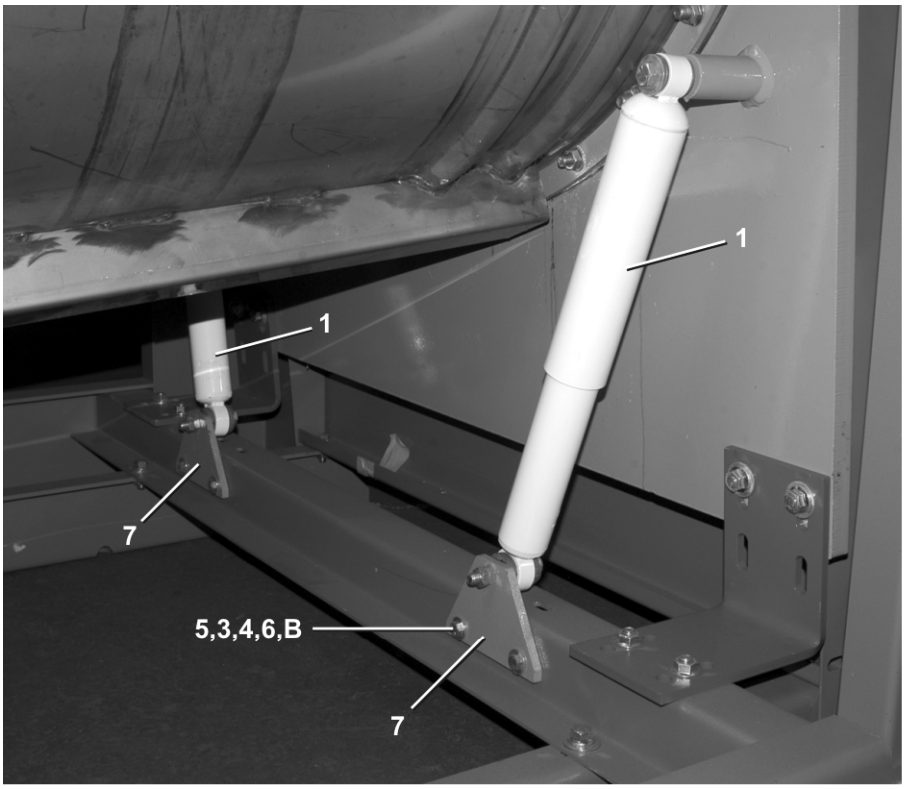
— End of BIMXCM07 —

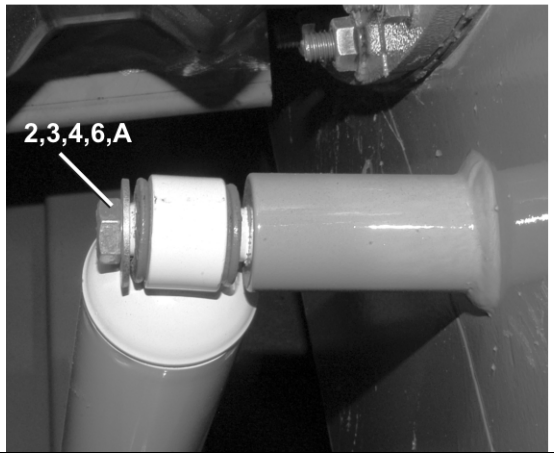
BIMXCM08 (Published) Book specs- Dates: 20140401 / 20140401 / 20140401 Lang: ENG01 Applic: MXC

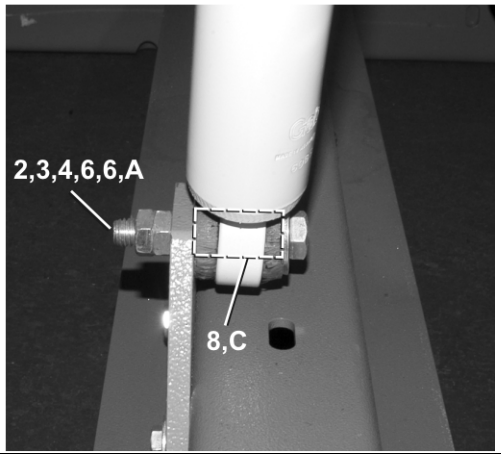
Shock Absorbers

Figure 1: Shock Absorbers

Installed views







Legend

A. instances 2
B. instances 4
C. Models: 4226X7J,X7W,X7R, 4232X7J,X7W,X7R

Table 1: Parts List—Shock Absorbers

Find the assembly for your machine and the letter shown in the "Item" column. The components for your machine will show this letter or the word "all" in the "Used In" column. The numbers shown in the "Item" column are those shown in the illustrations.

Used In	Item	Part Number	Description/Nomenclature	Comments
			Assemblies	
	A	GIC3626X7	Installation Group	3626X8J,X8W,X8R
	B	GIC4226X	Installation Group	4226X7J,X7W,X7R 4232X7J,X7W,X7R
			Components	
A	1	60BS6838	Shock absorber	
B	1	60BS6832	Shock absorber	
all	2	15K198	Bolt, 1/2-13X3	
all	3	15U300	Washer, Lock, 1/2	
all	4	15U280	Washer, 1/2	
all	5	15K173A	Bolt, 1/2-13X1.75	
all	6	15G230	Nut, 1/2-13	
all	7	02 23501C	Mounting components	
B	8	05 20187B	Mounting stud	

— End of BIMXCM08 —

Shell and Door Assemblies

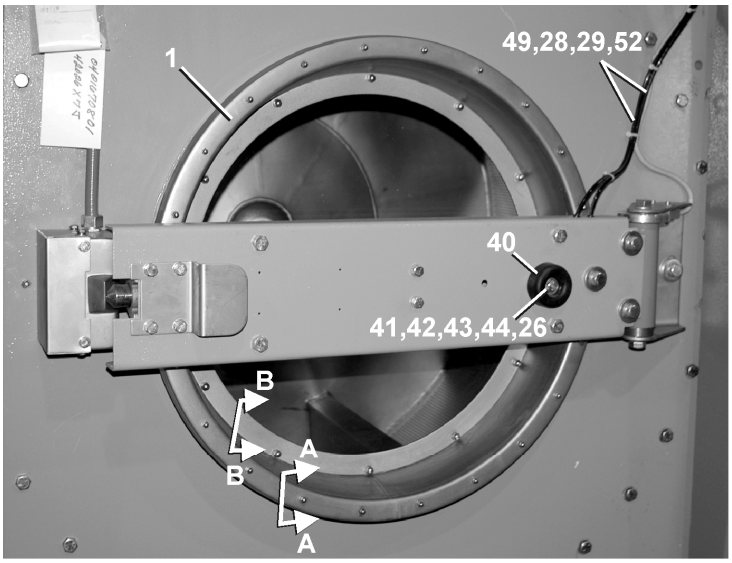
4

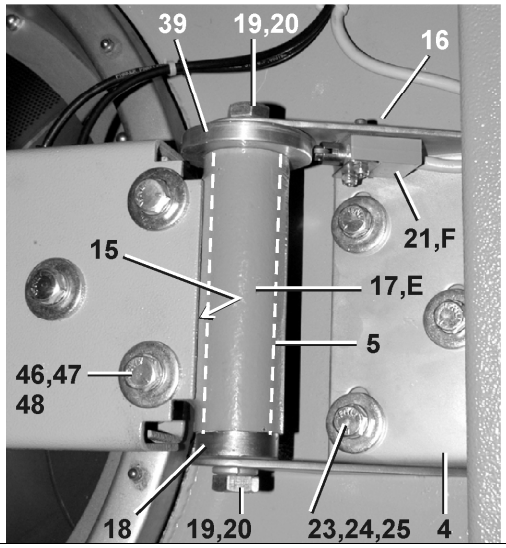
BIMXCM09 (Published) Book specs- Dates: 20170718 / 20170718 / 20170718 Lang: ENG01 Applic: MXC

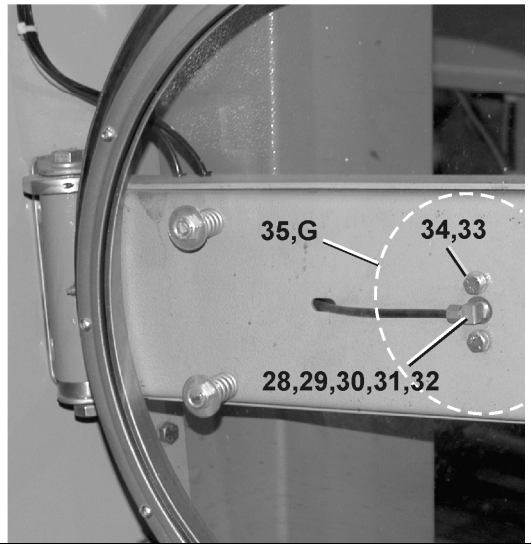
Components, Shell Doors

Figure 1: Components, Shell Doors

General Views



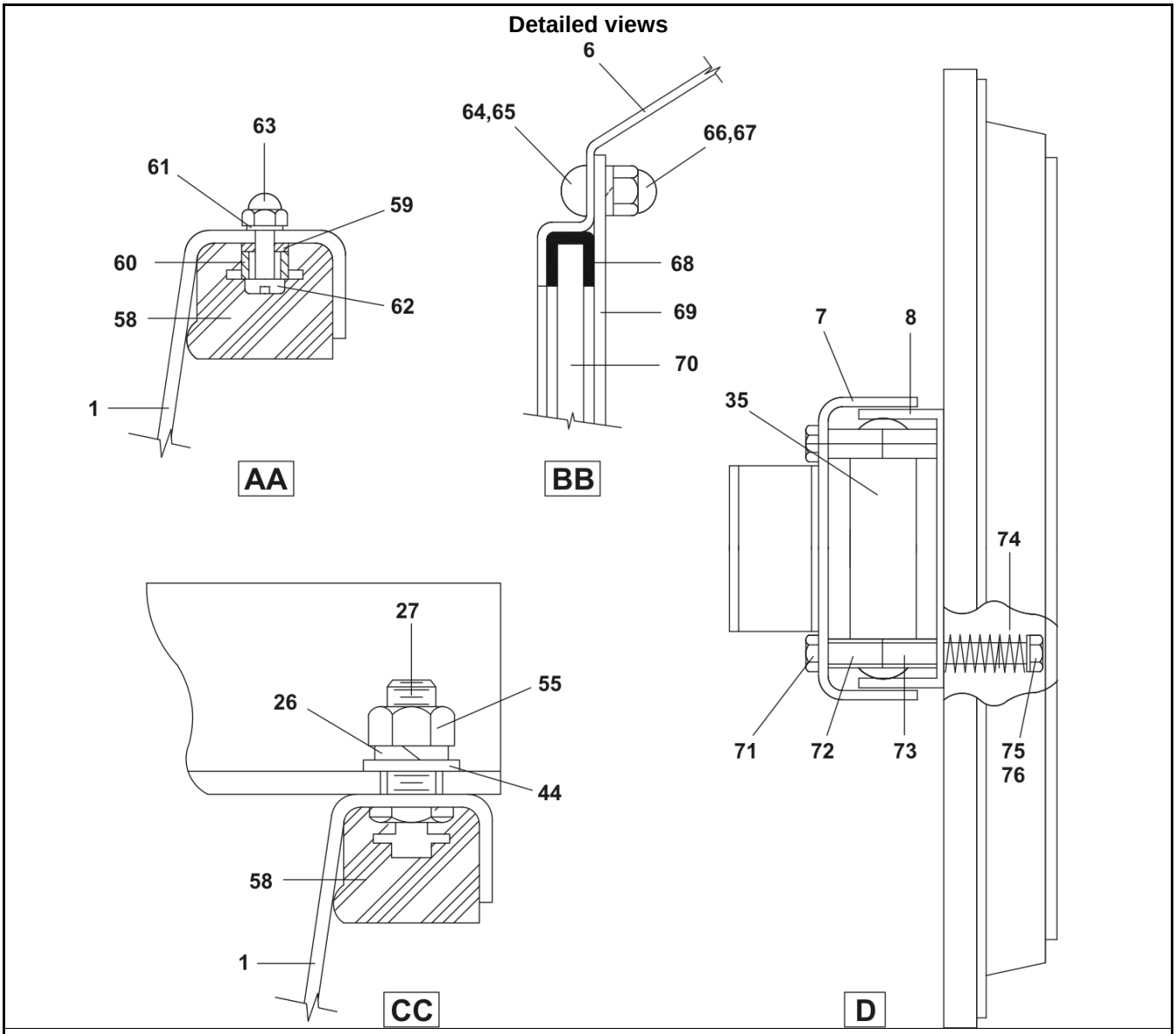




Legend

AA. Cross Section
BB. Cross Section
E. Hinge
F. Second door switch
G. Door seal

Figure 2: Components, Shell Doors

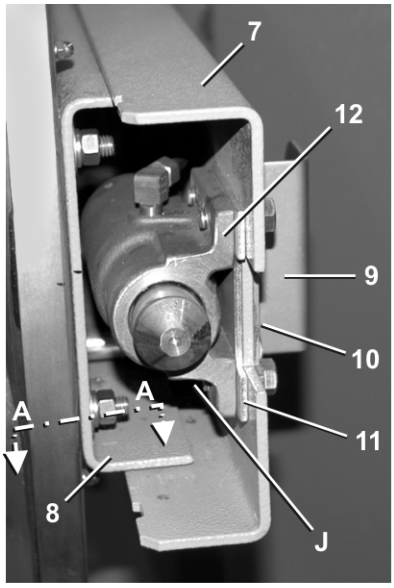


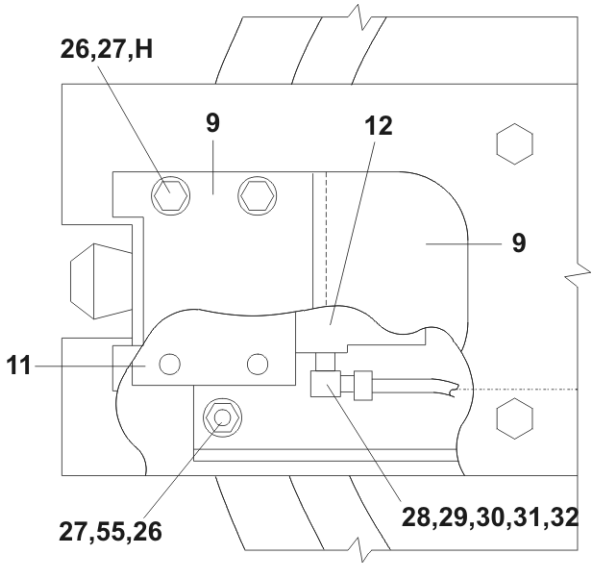
Legend

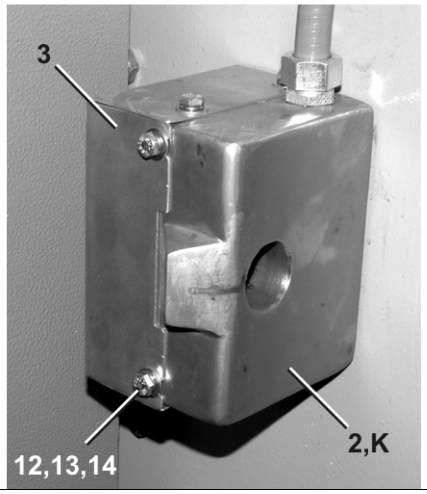
AA. Cross Section, Door frame and gasket
BB. Cross Section, Door glass and gasket
CC. Cross Section, Door channel and door frame
D. Right side view, Shell door

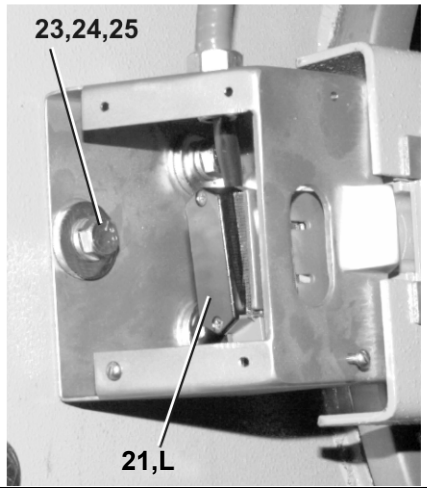
Figure 3: Additional Views

Door Latch, Striker









Legend

AA. Cross Section
H. instances 4
J. Door latch, See the document BIIFGM19.
K. Striker
L. Door locked switch (Door interlock)

Figure 4: Water flow from the reuse tank to the door

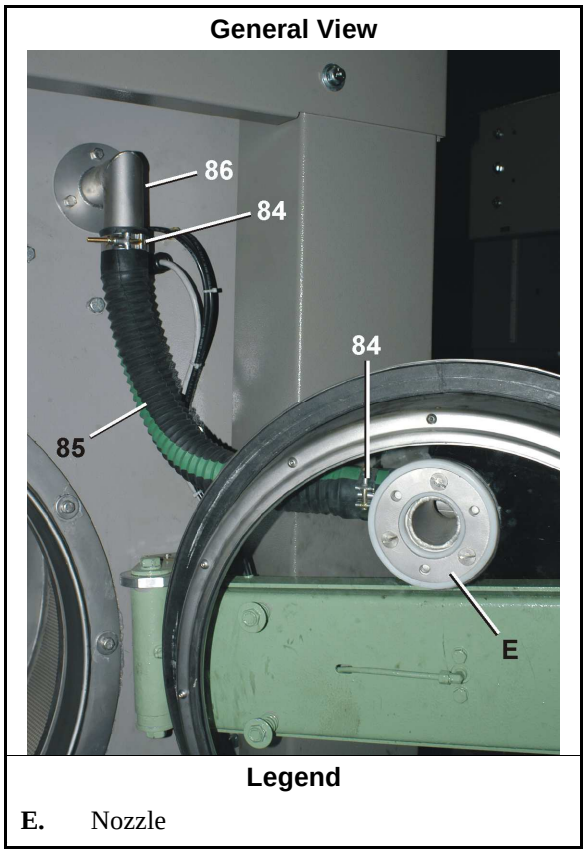


Figure 5: Inside view

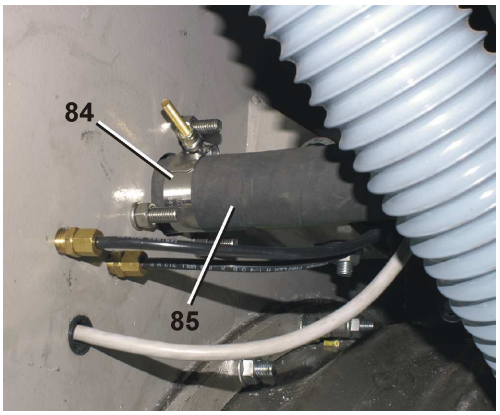


Figure 6: Detailed view

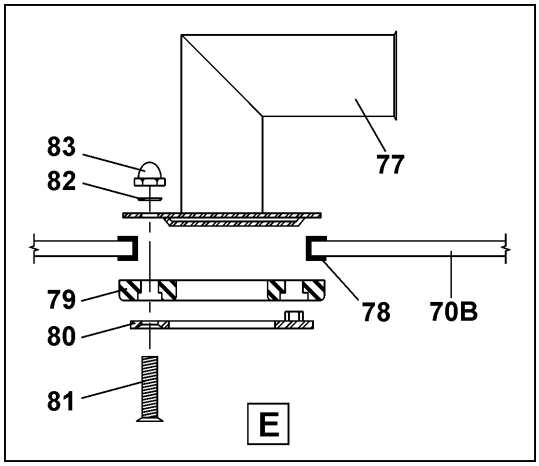


Table 1: Parts List—Components, Shell Doors

Find the assembly for your machine and the letter shown in the "Item" column. The components for your machine will show this letter or the word "all" in the "Used In" column. The numbers shown in the "Item" column are those shown in the illustrations.

Used In	Item	Part Number	Description/Nomenclature	Comments
			Assemblies	
	A	GSD4226X	Installation Group	42026X7J,X7W,X7R 42032X7J,X7W,X7R
	B	GSD42001R	Installation Group	Recirculation piping
			Components	
all	1	03 48048A	Frame, Door, 26"	
all	2	W2 23507A	Striker	
all	3	02 23507E	Cover	
all	4	02 21181A	Bracket	
all	5	02 11162B	Hinge pin	
all	7	03 48060	Door outer channel	
all	8	03 48061	Door inner channel	
all	9	02 15633A	Door handle	
A	10	02 15633	Adjustment plate 10 GA	
B	10	02 15633B	Adjustment plate 10 GA SS	
all	11	02 15633S	Adjustment plate 16 GA	
all	12	SA 15 028	Assembly, Latch	
all	13	15N117	Bolt, 10-24X3/8	
all	14	15U160	Washer, Lock, #10	
all	15	02 15016	Shim	
all	16	02 10391A	Mounting plate	
all	17	X2 15016A	Hinge	
all	18	15U349	Washer, Flat, Nylon, 1.93X1.25	
all	19	15K221	Bolt, 5/8-11X2	
all	20	15U315	Washer, Lock, 5/8"	
all	21	09RM01212S	Switch	
all	23	15K145	Bolt, 1/2-13X3/4	
all	24	15U310	Washer, Lock, 1/2	
all	25	15U285	Washer, Flat, 1/2"	
all	26	15U260	Washer, Lock, 3/8"	
all	27	15K096A	Bolt, .3/8-16X1	
all	28	53A500	Pipe fitting	
all	29	53A501	Pipe fitting	
all	30	53A059A	Pipe fitting	
all	31	53A005B	Pipe fitting	
all	32	53A031B	Pipe fitting	
all	33	15K095	Bolt, 3/8-16X1	
all	34	15U255	Washer, Lock, 3/8	
all	35	60B090	Pneumatic bellows actuator	
all	39	54JH13125C	Split collar	
all	40	60C075	Bumper, 2+1/2"	

Find the assembly for your machine and the letter shown in the "Item" column. The components for your machine will show this letter or the word "all" in the "Used In" column. The numbers shown in the "Item" column are those shown in the illustrations.

Used In	Item	Part Number	Description/Nomenclature	Comments
all	41	15G206	Nut, 3/8-16	
all	42	15K100	Bolt, 3/8-16X1-1/4	
all	43	15U243S	Washer, Flat, 7/8X33/64X16	
all	44	15U245	Washer, Flat, 3/8	
all	46	15K151	Bolt, 1/2-13X1.25	
all	47	15U490	Washer, Flat, 1+1/2X17/32X1/4	
all	48	15U300	Washer, Lock, 1/2	
all	49	60E004TE	Flexible tubing, 1/4"	
all	52	53A509	Pipe fitting, 5/16"X.53"	
all	55	15G205	Nut, 3/8-16	
all	58	03 48152	Gasket	
all	59	03 48157	Retainer ring	
all	60	27B260156S	Spacer, .26X.375X.156	
all	61	15U120B	Washer, Lock, #8	
all	62	15N091	Bolt, 8/32X1/2	
all	63	15G095	Nut , 8-32	
all	64	15K033	Bolt , 1/4-20X5/8	
all	65	24G020N	Washer, Rolled, Nylon, .252	
all	66	15U181	Washer, Lock, 1/4	
all	67	15G140	Nut, 1/4-20	
all	68	03 48052	Gasket	
all	69	03 48049	Retainer	
A	70	03 48050	Door glass	
B	70	03 48050A	Door glass,Recirculation piping	
all	71	15K202T	Bolt, 1/2-13X4.75	
all	72	27B2400K0N	Spacer, .5X.687X.062	
all	73	27B2400K1P	Spacer, .5IX1.75X.062	
all	74	02 18187	Spring	
all	75	15G234	Nut, Lock, 1/2-13	
all	76	15U280	Washer, Flat, 1/2"	
B	77	W2 10583M	Nozzle	
B	78	02 10204	Gasket	
B	79	02 03127	Water ring	
B	80	W2 03128	Plate	
B	81	15N223A	Bolt, 3/8-16X1+1/2	
B	82	24G030N	Washer, Rolled, Nylon, .379	
B	83	15G200	Nut, 3/8-16	
B	84	27A066A	Hose clamp, 1.66-1.97"	
B	85	6E+99	Hose, 1.5"	
B	86	W2 14675W	Elbow	

— End of BIMXCM09 —

BIIFGM19 (Published) Book specs- Dates: 20100708 / 20100708 / 20120629 Lang: ENG01 Applic: EUU

Door Latch

Figure 1: Door Latch

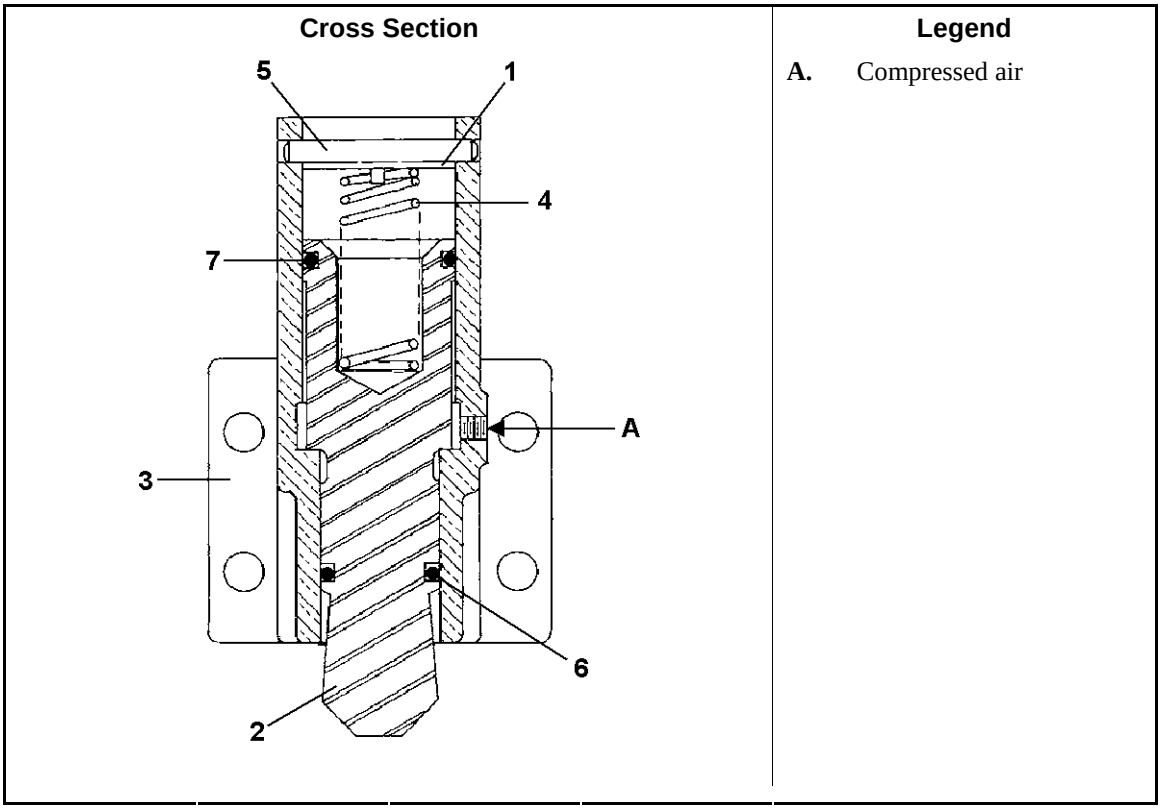


Table 1: Parts List—Door Latch

Find the assembly for your machine and the letter shown in the "Item" column. The components for your machine will show this letter or the word "all" in the "Used In" column. The numbers shown in the "Item" column are those shown in the illustrations.

Used In	Item	Part Number	Description/Nomenclature	Comments
Assemblies				
	A	SA 15 028	Assembly, Door latch	
Components				
all	1	02 15105	Retainer ring	
all	2	02 15297	Striker	
all	3	02 15298	Cylinder	
all	4	02 15836	Spring	
all	5	15H090	Pin	
all	6	60C122	O-ring, 1"X1/8	
all	7	60C128	O-ring, 1+3/8X1/8	

— End of BIIFGM19 —

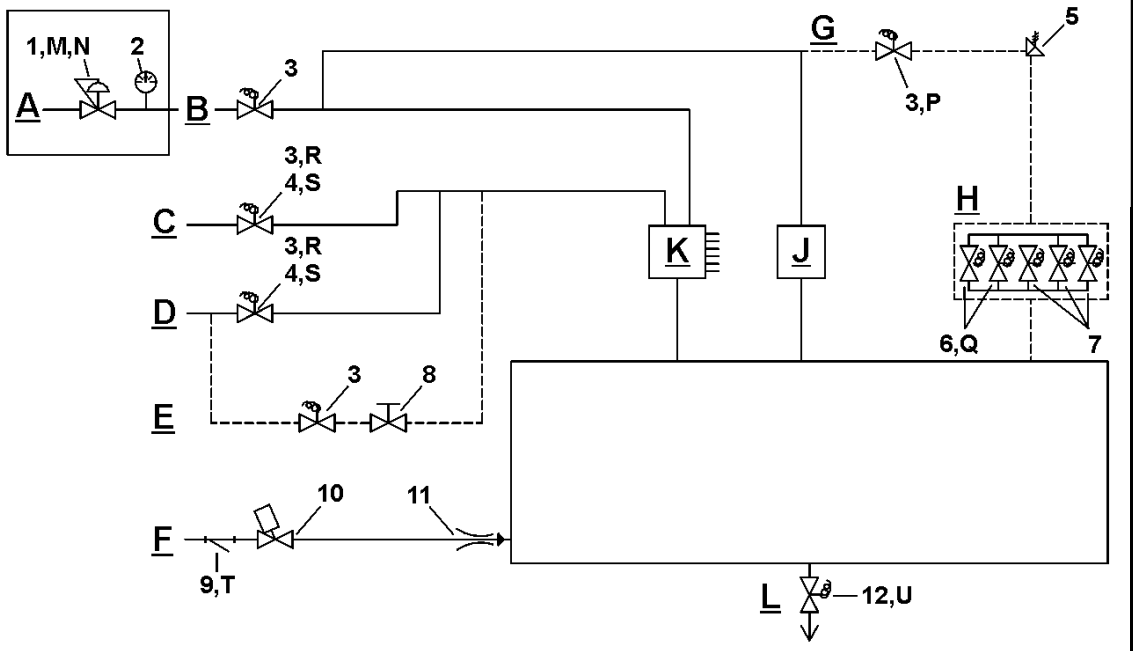
5 Water and Steam Piping and Assemblies

BIMXCM20 (Published) Book specs- Dates: 20130228 / 20130228 / 20130228 Lang: ENG01 Applic: MXC

Water and Steam Schematic and Primary Components

Figure 1: Water and Steam Schematic and Primary Components

Schematic



Legend

- **A.** Pressure regulator assembly
- **B.** Hot water to flush the chemical supplies
- **C.** Hot water line
- **D.** Cold water line
- **E.** Cooldown water line (optional)
- **F.** Steam line (optional)
- **G.** Water to the five compartments for dry chemical supplies
- **H.** Five compartments for dry chemical supplies (optional)
- **J.** Soap chute
- **K.** Six Inlets for Peristaltic Liquid Chemical Systems (optional)
- **L.** Drain valve
- **M.** Keep this component set to the correct pressure. 28 PSI (1.9 ATU)
- **N.** See the document BIMXCM22.
- **P.** Secondary location
- **Q.** See the document BIMXCM17.
- **R.** Models: 3626X8J, X8W
- **S.** Models: 4226X7J, X7W, 4232X7J, X7W
- **T.** Keep this component clean.
- **U.** See the document BIMXCM14.

Table 1: Parts List—Water and Steam Schematic and Primary Components

Find the assembly for your machine and the letter shown in the "Item" column. The components for your machine will show this letter or the word "all" in the "Used In" column. The numbers shown in the "Item" column are those shown in the illustrations.

Used In	Item	Part Number	Description/Nomenclature	Comments
Models:				
	A			3626X8J,X8W
	B			4226X7J,X7W, 4232X7J,X7W
	X			USA-made models only
	Y			China-made models only
Components				
X	1	96J031D	Pressure regulator, 3/4", 28#	
X	2	30N100	Pressure gauge, 1/8", 0-30 PSI	
A	3	96P056B71	Water valve, 3/4", usually closed, 230V50/60 ,electric operated	
B,X	4	96P152A71	Water valve, 1+1/4", usually closed, 240V, electric operated	
B,Y	4	98CX880115	Water valve, 1+1/4", usually closed, air operated	
all	5	96M001	Pressure relief valve, 1/2X3/8" , 31#	
all	6	96TDC2AA71	Water valve, 1/2", usually closed, 240V50/60C, electric operated	
all	7	96TCC2AA71	Water valve, 3/8", usually closed 240V50/60C, electric operated	
X	8	96D050A	Water valve, 3/4"	
X	9	51T030	Y-strainer, 3/4"	
X	10	96P040A71	Steam valve, 3/4", 240V50/60C 150PSI	
X	11	W2 02555A	Nozzle	
Y	11	98CX02555A	Nozzle	
X	12	96D250A71	Drain valve, 2", usually open, 240V 50/60C, electric operated	
Y	12	98CMCR3604	Drain valve, 2", usually open, air operated	

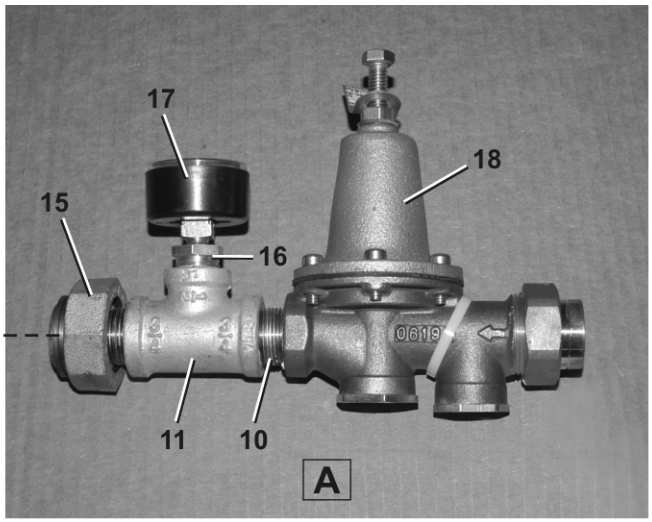
— End of BIMXCM20 —

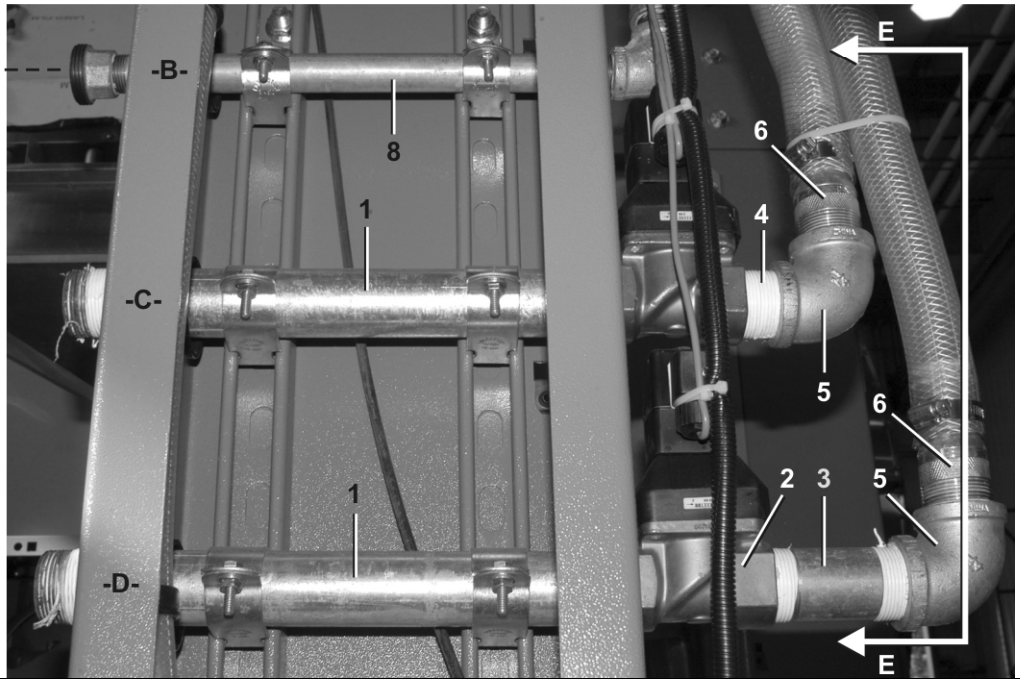
BIMXCM10 (Published) Book specs- Dates: 2018116A / Lang: ENG01 Applic: MXC

Water Inlet Components and Installation

Figure 1: Water Inlet Components and Installation

Detailed views



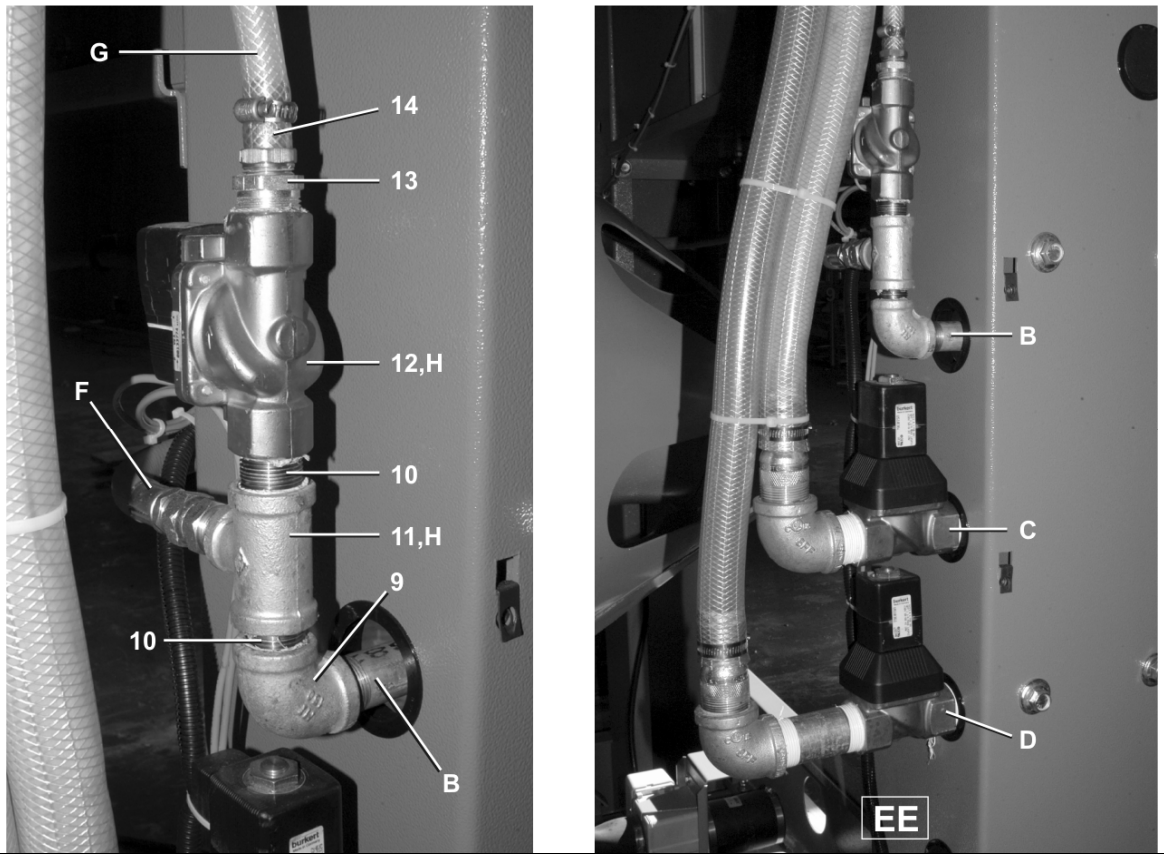


Legend

A. Pressure regulator assembly
B. Hot water to flush the chemical supplies
C. Hot water line
D. Cold water line
EE. Inside view

Figure 2: Water Inlet Components and Installation

Additional Views



Legend

B. Hot water to flush the chemical supplies
C. Hot water line
D. Cold water line
EE. Inside view
F. Water to the five compartments for dry chemical supplies
G. Water to the peristaltic water inlet manifold
H. The electrical valve and the tee are opposite when there are no five compartments for dry chemical supplies.

Figure 3: Water Inlet Components and Installation

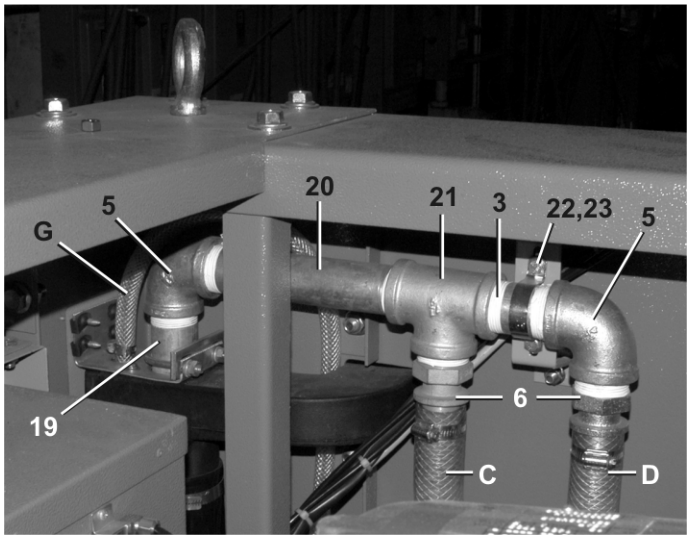
Inlet manifold	Legend
	**C.** Hot water line **D.** Cold water line **G.** Water to the peristaltic water inlet manifold

Table 1: Parts List—Water Inlet Components and Installation

Find the assembly for your machine and the letter shown in the "Item" column. The components for your machine will show this letter or the word "all" in the "Used In" column. The numbers shown in the "Item" column are those shown in the illustrations.

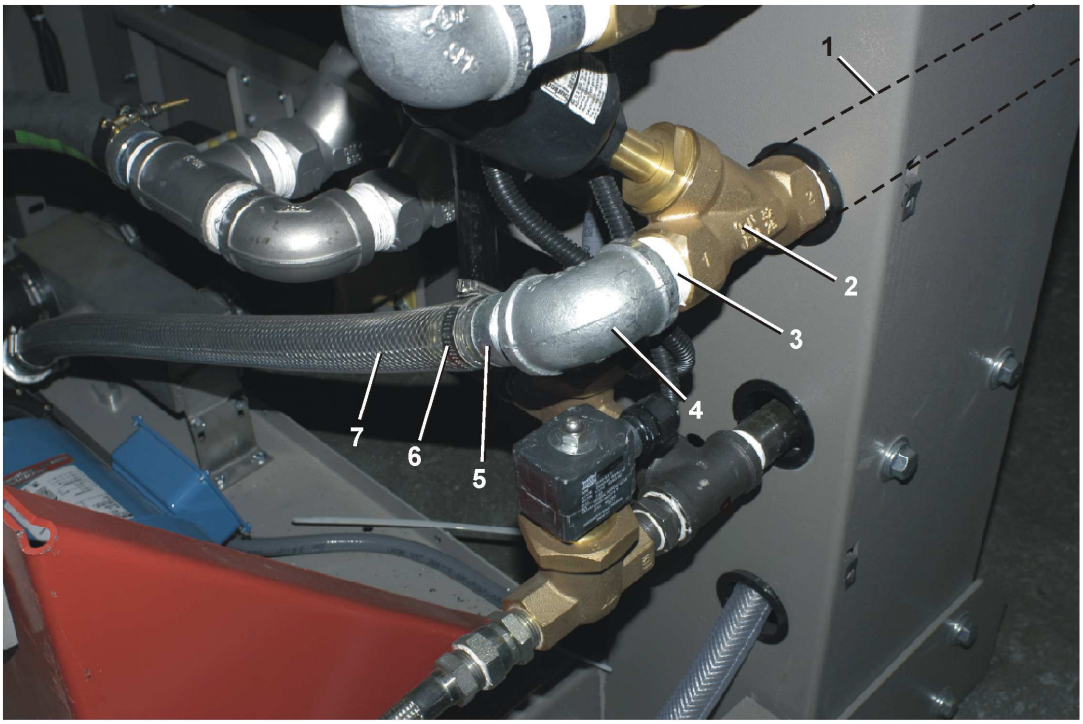
Used In	Item	Part Number	Description/Nomenclature	Comments
			Assemblies	
	A	AVW11916	Assembly, Cold water line, 1.25"	4226X7J,X7W 4232X7J,X7W
	B	AVW11917	Assembly, Hot water line, 1.25"	4226X7J,X7W 4232X7J,X7W
	C	AVW42006	Assembly, Hot water to flush the chemical supplies	
	D	AVW42007	Assembly, Inlet manifold	
	X			USA-made models only
	Y			China-made models only
			Components	
all	1	5N1E13AG42	Pipe nipple, 1.25X13	
X	2	96P152A71	Valve, 1+1/4"NC 240V, electric operated	
Y	2	98CX880115	Valve, 1+1/4"NC, air operated	
all	3	5N1E03AG42	Pipe nipple, 1.25X3	
all	4	5N1ECLSG42	Pipe nipple, 1.25XCLS	
all	5	5SL1ENFA	Elbow, 90 degree, 1.25	
all	6	51E099STC	Hose stem, 1.25	
all	8	5N0P14AG42	Pipe nipple, 3/4X14	
all	9	5SL0PNFA	Elbow, 90 degree, 3/4	
all	10	5N0PCLSG42	Pipe nipple, 3/4XCLS	
all	11	5S0PNFA0K	Tee, 3/4X3/4X1/2	
all	12	96P056B71	Valve, 3/4"NC 230V50/60	
all	13	5SB0P0KBEO	Hexbush, 3/4X1/2	
all	14	51E509	Hose stem, 1/2"	
all	15	5SU0PNF	Unified fine, 3/4"	
all	16	5SB0K0CDEO	Hexbush, 1/2X1/8	
all	17	30N100	Pressure gauge, 1/8", .0-30PSI	
all	18	96J031D	Pressure regulator, 3/4", 28#	
all	19	5N1E02KG41	Pipe nipple, 1.25X2.5	
all	20	5N1E08AG42	Pipe nipple, 1.25X8	
all	21	5S1ENFA	Tee, 1.25"	
all	22	02 175012	Bracket	
all	23	27A020	Bracket, 1+1/4"	

— End of BIMXCM10 —

BIMXCM26 (Published) Book specs- Dates: 20120622 / 20120622 / 20120625 Lang: ENG01 Applic: MXC

Reuse Water Lines

Figure 1: Installed views



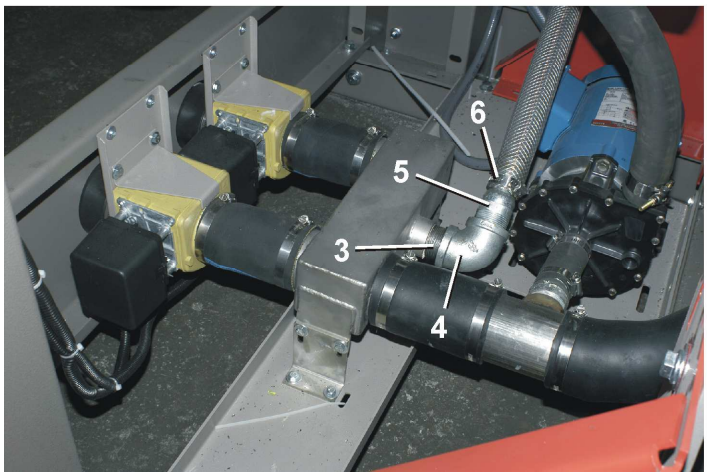


Table 1: Parts List—Reuse Water Lines

Find the assembly for your machine and the letter shown in the "Item" column. The components for your machine will show this letter or the word "all" in the "Used In" column. The numbers shown in the "Item" column are those shown in the illustrations.

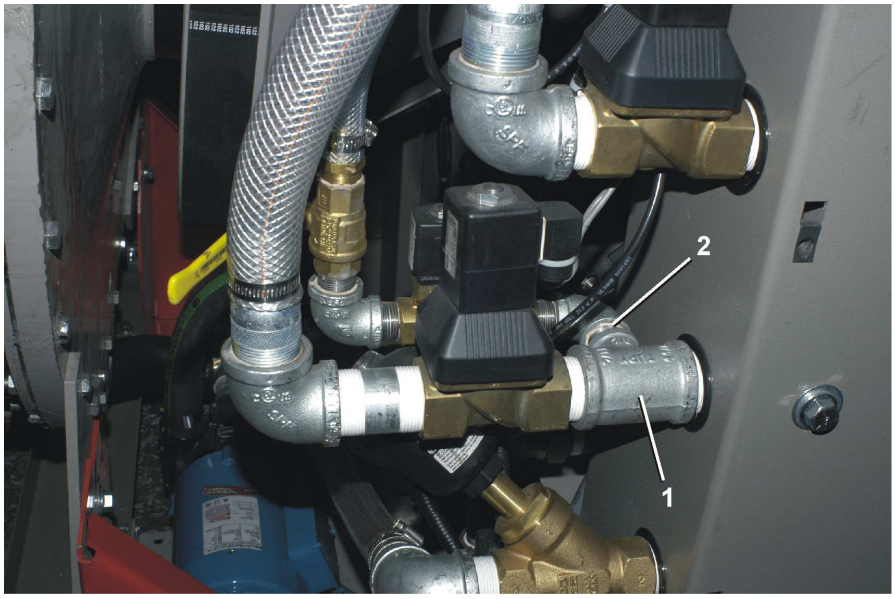
Used In	Item	Part Number	Description/Nomenclature	Comments
			Assemblies	
	A	AVW42008	Installation Group	
			Components	
all	1	5N1E13AG42	Pipe nipple, 1.25X13	
all	2	96D086WE	Water valve, 1.25", air operated, usually closed	
all	3	5N1ECLSG42	Pipe nipple, 1.25XCLS	
all	4	5SL1ENFA	Elbow, 1.25"	
all	5	51E099STC	Hose stem, 1.25"	
all	6	27A090S	Hose clamp, 13/16-1.5"	
all	7	60E014R	Flexible tubing, 1.25X1.75	

— End of BIMXCM26 —

BIMXCM24 (Published) Book specs- Dates: 20120622 / 20120622 / 20120625 Lang: ENG01 Applic: MXC

Cooldown Components and Installation

Figure 1: Installed views



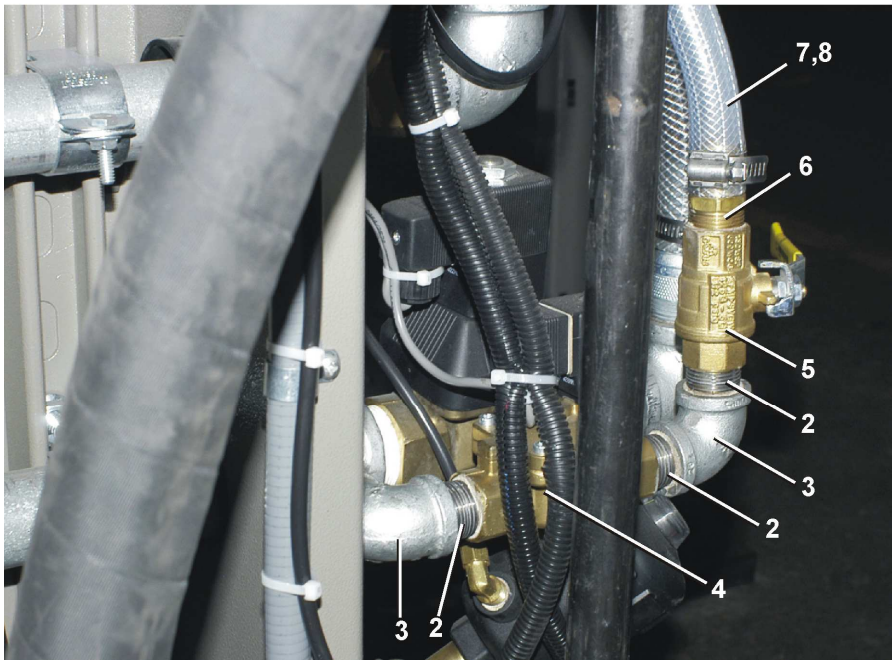


Table 1: Parts List— Cooldown Components and Installation

Find the assembly for your machine and the letter shown in the "Item" column. The components for your machine will show this letter or the word "all" in the "Used In" column. The numbers shown in the "Item" column are those shown in the illustrations.

Used In	Item	Part Number	Description/Nomenclature	Comments
Assemblies				
	A	AVC42X001	Cooldown water line	
Components				
all	1	5S1ENFA0P	Tee, 1.25X3/4X3/4	
all	2	5N0PCLSG42	Pipe Fitting, 3/4XCLS	
all	3	5SL0PNFA	Elbow, 3/4"	
all	4	96P056B71	Water valve, 3/4"NC 230V50/60	
all	5	96D050A	Water valve, 3/4"	
all	6	51E511	Hose stem, 3/4"	
all	7	60E010	Hose, 1"X1.312	
all	8	27A090	Hose clamp, 13/16-1.5"	

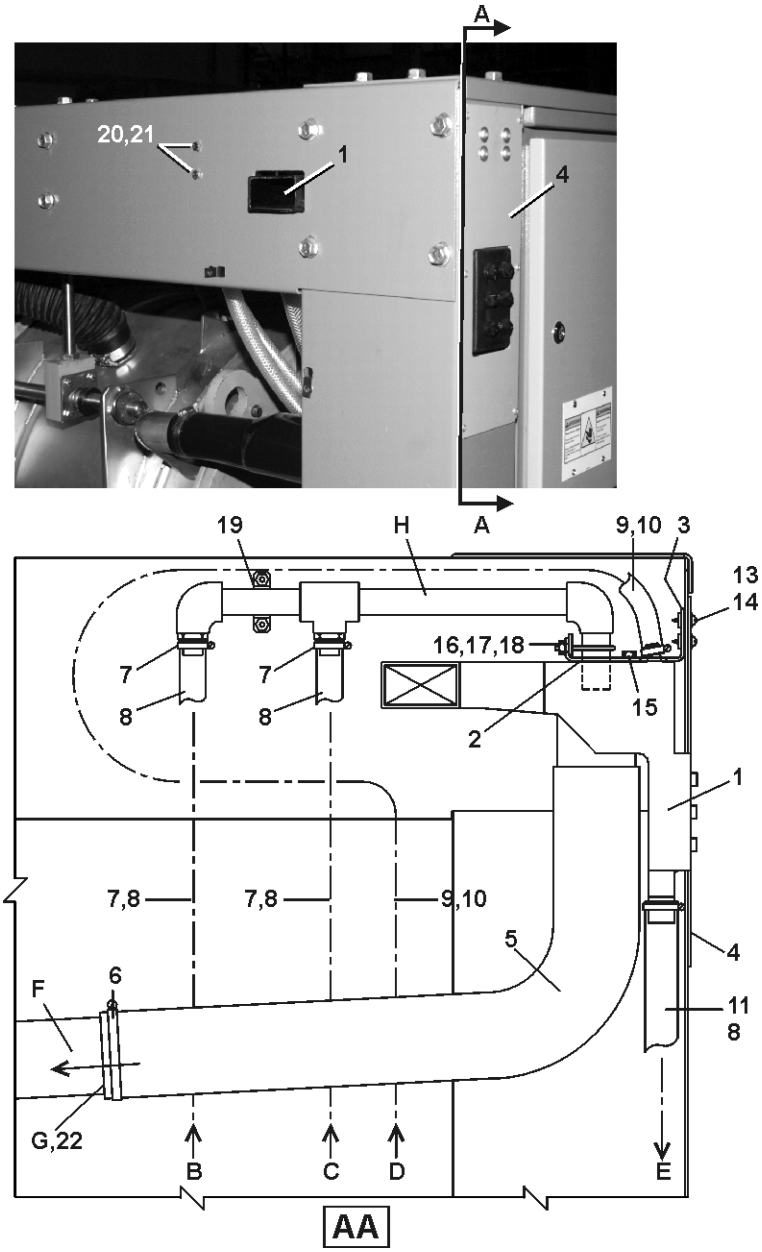
— End of BIMXCM24 —

BIMXCM11 (Published) Book specs- Dates: 20151210 / 20151210 / 20151210 Lang: ENG01 Applic: MXC

Inlet for Peristaltic Chemical Supplies and Water

Figure 1: Inlet for Peristaltic Chemical Supplies and Water

Right side view, Cross Section



Legend

- **AA.** Cross Section
- **B.** Cold water line
- **C.** Hot water line
- **D.** Water to the five compartments for dry chemical supplies
- **E.** Water and chemical supplies to the drain trough
- **F.** Water and chemical supplies to the shell
- **G.** Apply adhesive to the surfaces that connect. Then, tighten the clamp.
- **H.** See the document BMP040028, BIMXCM10.

Table 1: Parts List—Inlet for Peristaltic Chemical Supplies and Water

Find the assembly for your machine and the letter shown in the "Item" column. The components for your machine will show this letter or the word "all" in the "Used In" column. The numbers shown in the "Item" column are those shown in the illustrations.				
Used In	**Item**	**Part Number**	**Description/Nomenclature**	**Comments**
Assemblies				
	A	ZBXJFVE20A	3626X8J H+C H2O INLET	36026X8J,X8W,X8R
	B	ZBXJFVE20A	42X H+C WATER VALVES	42026X7J,X7W,X7R 42032X7J,X7W,X7R
none				
Components				
all	1	02 03588M	Inlet manifold	
all	2	02 03588K	Cover	
all	3	02 03195A	Mounting bracket	
all	4	02 02930	Mounting plate	
all	5	02 03588X	Inlet manifold hose	
all	6	27A074	Clamp, 2+1/16-3"	
A	7	60E008A	Flexible tubing, .75"X1.025"	
B	7	60E014R	Flexible tubing, 1.25X1.75	
all	8	27A090	Clamp, 13/16-1.5"	
all	9	60E006C	Flexible tubing, .5X.75	
all	10	27A040	Clamp, 7/16-25/32	
all	11	600000000000	Flexible tubing, 1"X1.312	
all	13	15N110H	Bolt, M6-1X25MM	
all	14	15G004HB	Nut, M6-1, 0.8-4MM	
all	15	15K031	Bolt, 1/4-20X1/2	
all	16	27A031C	U-bolt, 1.25, 5/16-18	
all	17	15G196	Nut, 5/16-18	
all	18	02 10539	Spacer	
all	19	12K108	Mounting bracket	
all	20	15K041	Bolt, 1/4-20X1	
all	21	15G178	Nut, 1/4-20	
all	22	20C009CA	Adhesive #3032	

— End of BIMXCM11 —

BIMXCM12 (Published) Book specs- Dates: 20130228 / 20130228 / 20130228 Lang: ENG01 Applic: MXC

Steam Inlet Components and Installation

Figure 1: Steam line

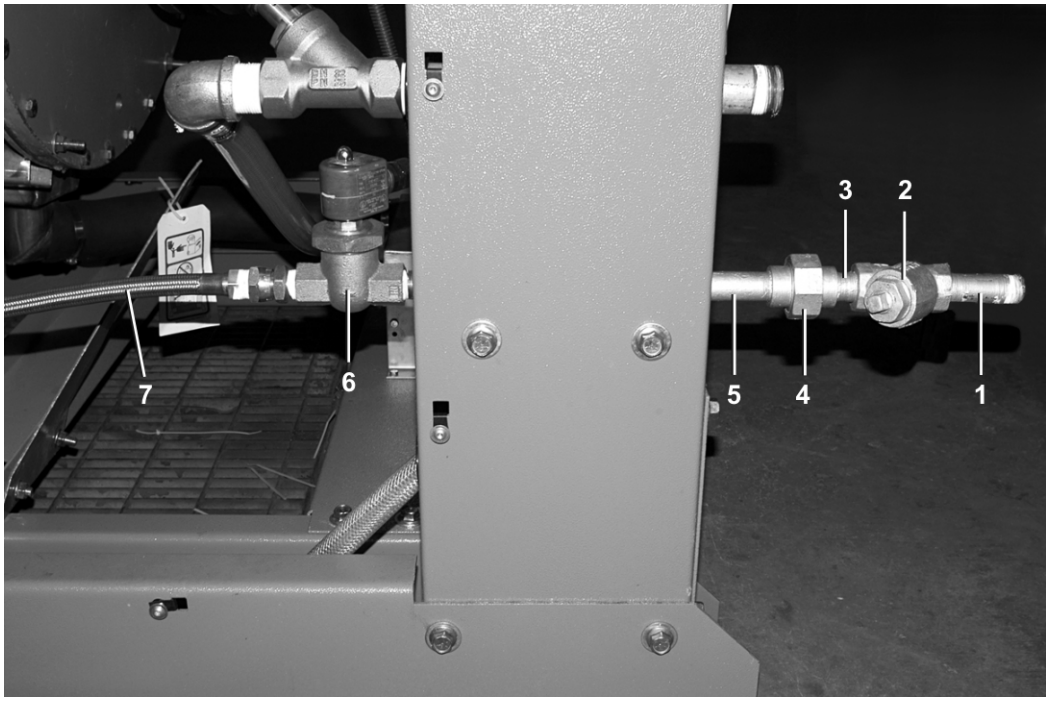


Figure 2: Steam nozzle

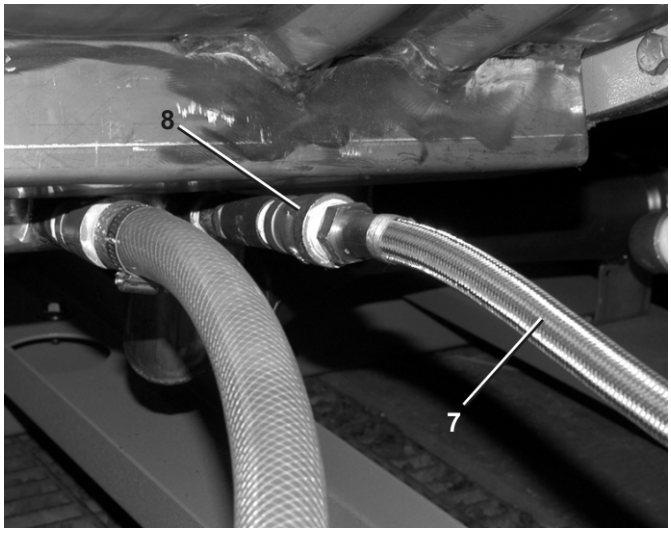


Table 1: Parts List—Steam Inlet Components and Installation

Find the assembly for your machine and the letter shown in the "Item" column. The components for your machine will show this letter or the word "all" in the "Used In" column. The numbers shown in the "Item" column are those shown in the illustrations.				
Used In	**Item**	**Part Number**	**Description/Nomenclature**	**Comments**
Assemblies				
	A	AVS3626001	Assembly	3626X8J,X8W 4226X7J,X7W 4232X7J,X7W
	X			USA-made models only
	Y			China-made models only
Components				
all	1	5N0P05AF42	Pipe nipple, 3/4X5	
all	2	51T030	Y-strainer, 3/4"	
all	3	5N0PCLSF42	Pipe nipple, 3/4XCLS	
all	4	51X019	Union, 3/4"	
all	5	5N0P16AF42	Pipe nipple, 3/4X16	
all	6	96P040A71	Valve, 3/4", 240V50/60C 150PSI	
X	7	60E512C28	Hose, 5/8"	
Y	7	98CX800414	Hose, 3/4"	
X	8	W2 02555A	Steam nozzle, 3/8"	
Y	8	98CX02555A	Steam nozzle, 3/8"	

— End of BIMXCM12 —

BIMXCM13 (Published) Book specs- Dates: 20140403 / 20140403 / 20140403 Lang: ENG01 Applic: MXC

Drain Valve Installation

Figure 1: General View

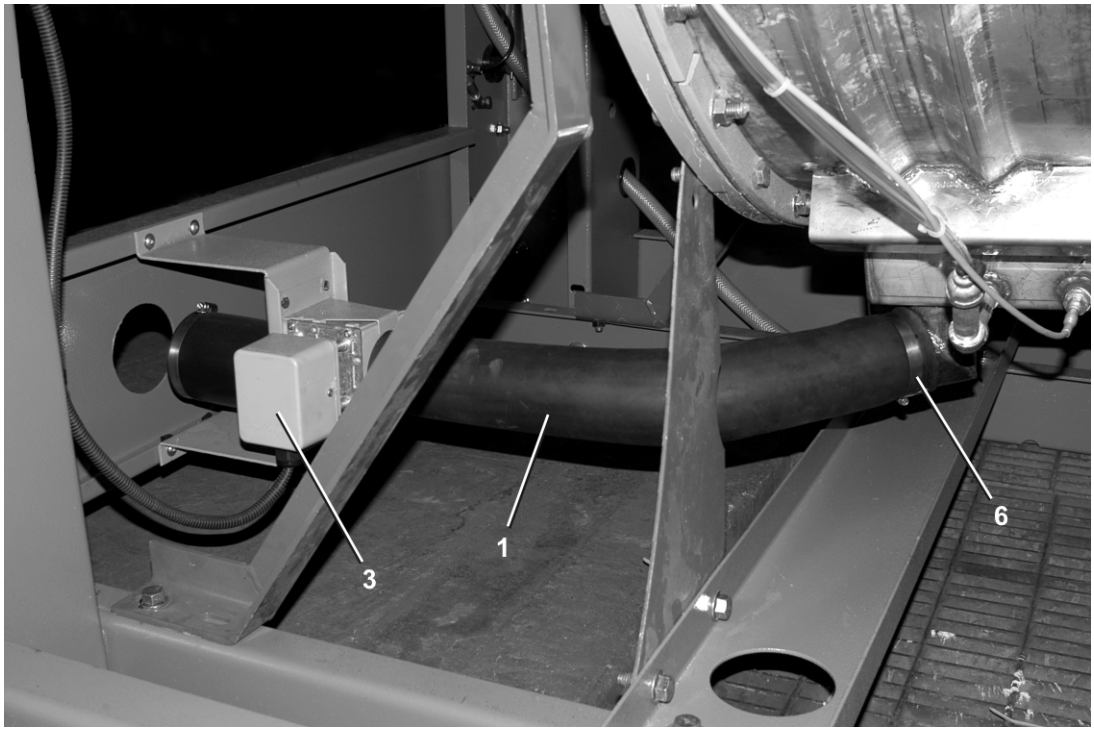
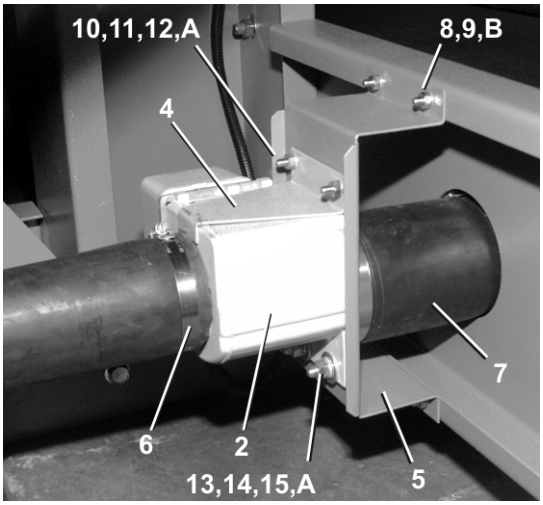


Figure 2: Drain valve

Detailed view



Legend

A. instances 2
B. instances 4

Table 1: Parts List—Drain Valve Installation

Find the assembly for your machine and the letter shown in the "Item" column. The components for your machine will show this letter or the word "all" in the "Used In" column. The numbers shown in the "Item" column are those shown in the illustrations.

Used In	Item	Part Number	Description/Nomenclature	Comments
			Assemblies	
	A	GVD3626X7	Installation Group, 3626X	36026X8J,X8W,X8R
	B	GVD4226X	Installation Group, 4226X7Z	42026X7J,X7W,X7R 42032X7J,X7W,X7R
			Components	
all	1	02 03245	Hose	
all	2	96D350A71	Drain valve, 3", 240V 50/60C	
all	3	96D35C0V	Cover	
all	4	02 02934A	Bracket	
A	5	02 13534	Bracket	
B	5	02 23534	Bracket	
all	6	27A088S	Clamp, 3+1/16-4"	
all	7	60B075	Hose	
all	8	15N110H	Bolt, M6-1X25MM	
all	9	15G004HC	Nut, M6-1, 3.5-6.5MM	
all	10	15K039	Bolt, 1/4-20X3/4	
all	11	15U185	Washer, 1/4"	
all	12	15G178	Nut, 1/4"-20	
all	13	15K095	Bolt, 3/8-16X1	
all	14	15U240	Washer, 3/8"	
all	15	15G198	Nut, 3/8-16	

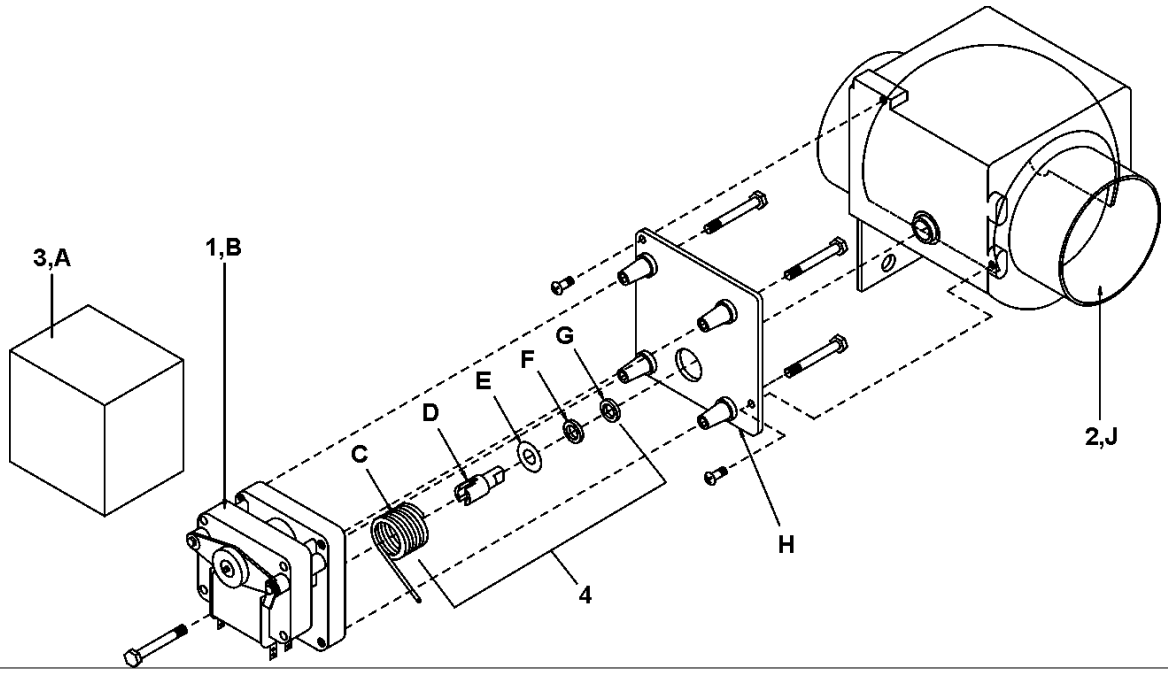
— End of BIMXCM13 —

BIMXCM14 (Published) Book specs- Dates: 20110915 / 20110915 / 20110915 Lang: ENG01 Applic: MXC

3 Inch Electrical Drain Valve

Figure 1: 3 Inch Electrical Drain Valve

Detailed view



Legend

- **A.** Cover
- **B.** Motor
- **C.** Spring
- **D.** Drive Pin
- **E.** Washer
- **F.** Bearing
- **G.** Seal
- **H.** Mounting plate
- **J.** Valve body

Table 1: Parts List—3 Inch Electrical Drain Valve

Find the assembly for your machine and the letter shown in the "Item" column. The components for your machine will show this letter or the word "all" in the "Used In" column. The numbers shown in the "Item" column are those shown in the illustrations.

Used In	Item	Part Number	Description/Nomenclature	Comments
Assemblies				
	A	96D350A37	Assembly, 120V 50/60C, Usually open	
	B	96D350A71	Assembly, 240V 50/60C , Usually open	
	C	96D350B71	Assembly, 240V 50/60C, Usually closed	
Components				
A	1	96D35MTR37	3 Inch electrical drain valve, 120V 50/60C	
BC	1	96D35MTR71	3 Inch electrical drain valve, 240V 50/60C	
B	2	96D35B0D	Body and ball	
all	3	96D35C0V	Cover	
all	4	96D35PIN	Drive pin kit	

— End of BIMXCM14 —

BIMXCM25 (Published) Book specs- Dates: 20140404 / 20140404 / 20140404 Lang: ENG01 Applic: MXC

Dual Drains to the Sewer and Reuse Water

Figure 1: Installed view

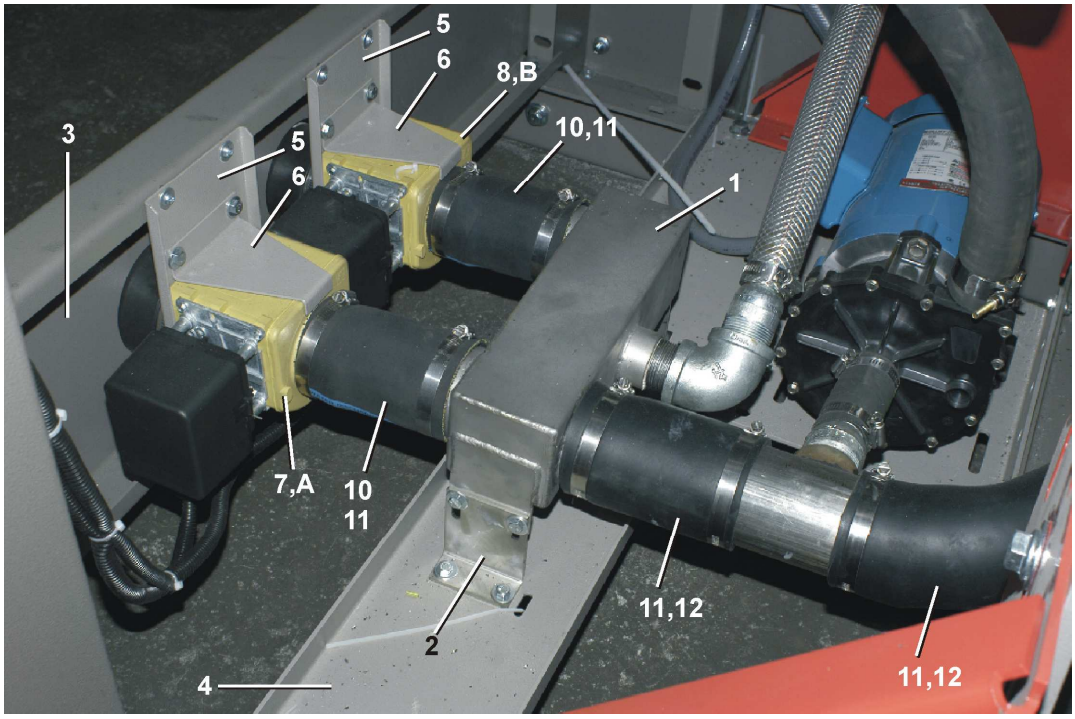
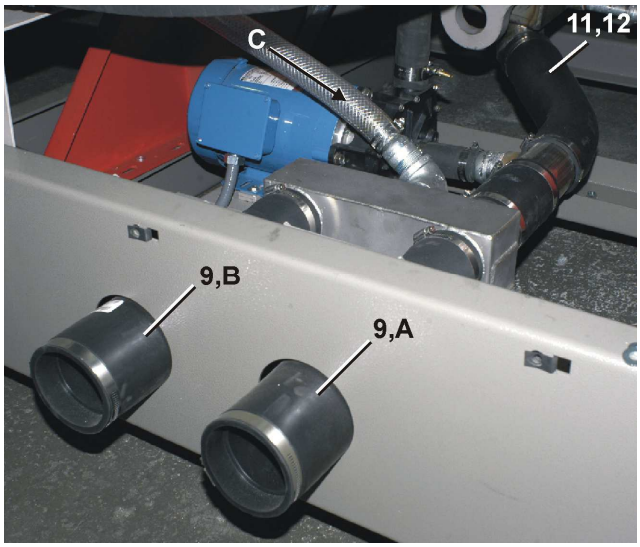


Figure 2: Rear view

Dual drain valves



Legend

A. Drain valve to the sewer, usually open

B. Drain valve to reuse water, usually closed

C. Reuse water inlet

Table 1: Parts List— Dual Drains to the Sewer and Reuse Water

Find the assembly for your machine and the letter shown in the "Item" column. The components for your machine will show this letter or the word "all" in the "Used In" column. The numbers shown in the "Item" column are those shown in the illustrations.

Used In	Item	Part Number	Description/Nomenclature	Comments
			Assemblies	
	A	GVD3626X7A	Installation Group	36026X8J,X8W,X8R
	B	GVD4226XA	Installation Group	42026X7J,X7W,X7R 42032X7J,X7W,X7R
			Components	
all	1	W2 03412A	Diverter box	
all	2	02 03412Q	Mounting bracket	
A	3	02 13513A	Cross brace	
B	3	02 23513A	Cross brace	
A	4	02 02934D	Mounting bracket	
B	4	02 03412P	Mounting bracket	
all	5	02 02934B	Mounting bracket	
all	6	02 02934A	Mounting bracket	
all	7	96D350A71	3 Inch electrical drain valve, 240V 50/60C, usually open	
all	8	96D350B71	3 Inch electrical drain valve, 240V 50/60, usually closed	
all	9	60B075	Pipe Fitting, Rubber	
all	10	60E303A05A	Hose, 3"X 5"	
all	11	27A082S	Hose clamp, 2+9/16-3.5	
all	12	02 03245	Hose	
all	13	W2 13546	Tee, 3"X1.5"	

— End of BIMXCM25 —

BIMXCM22 (Published) Book specs- Dates: 20130228 / 20130228 / 20130228 Lang: ENG01 Applic: MXC

Pneumatic Drain Valve (optional)

Figure 1: General Views

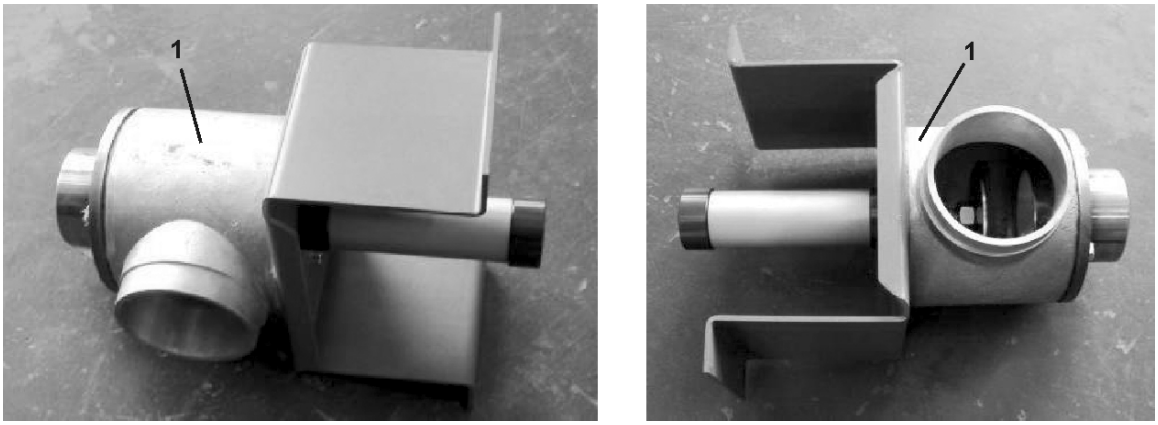


Figure 2: Installed view

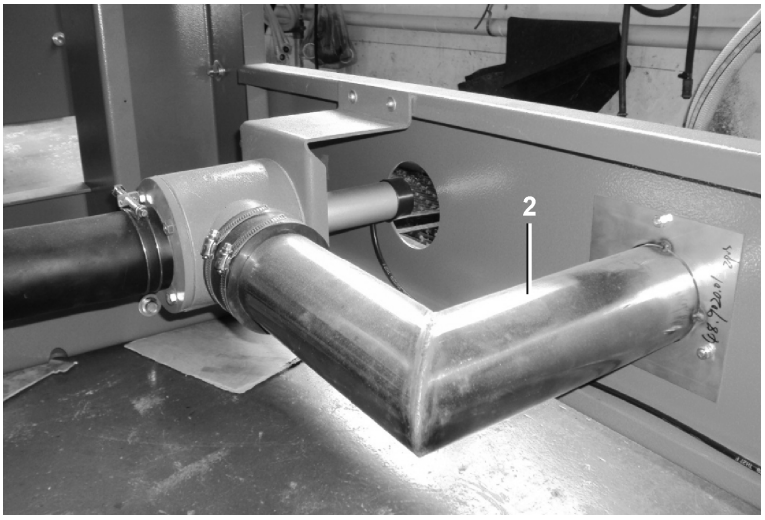


Table 1: Parts List— Pneumatic Drain Valve

Find the assembly for your machine and the letter shown in the "Item" column. The components for your machine will show this letter or the word "all" in the "Used In" column. The numbers shown in the "Item" column are those shown in the illustrations.

Used In	Item	Part Number	Description/Nomenclature	Comments
Components				
all	1	98CMCR3604	Pneumatic drain valve	
all	2	98CX489020	Weldment	

— End of BIMXCM22 —

BIMXCM23 (Published) Book specs- Dates: 20110915 / 20110915 / 20110915 Lang: ENG01 Applic: MXC

Electrical Heat (optional)

Figure 1: Electrical heat probe

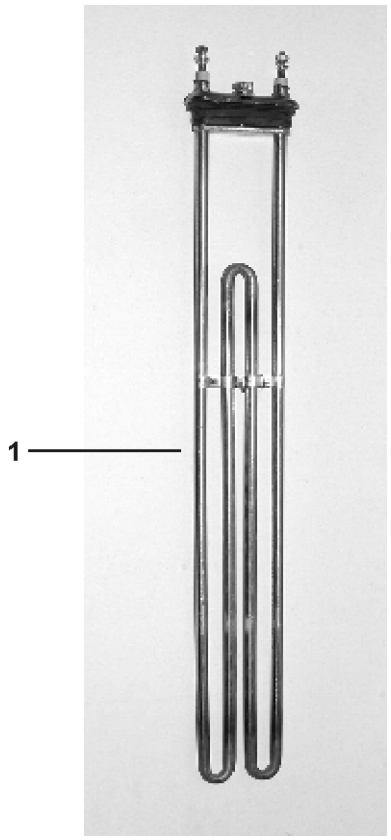


Table 1: Parts List— Electrical Heat

Find the assembly for your machine and the letter shown in the "Item" column. The components for your machine will show this letter or the word "all" in the "Used In" column. The numbers shown in the "Item" column are those shown in the illustrations.

Used In	Item	Part Number	Description/Nomenclature	Comments
Components				
all	1	98CMCR3604	Electrical heat probe	

— End of BIMXCM23 —

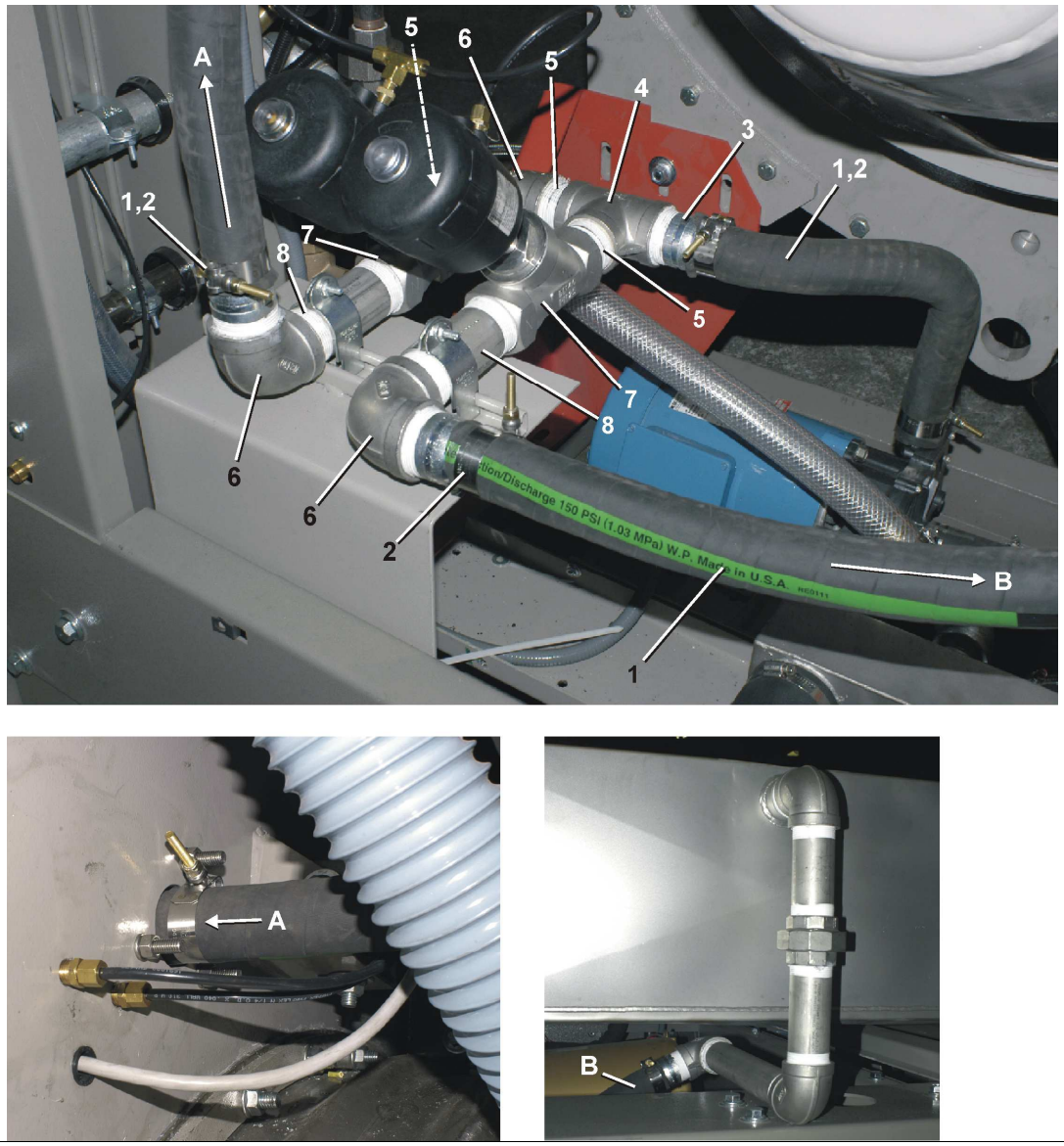
Recirculation 6

BIMXCM27 (Published) Book specs- Dates: 20120622 / 20120622 / 20120625 Lang: ENG01 Applic: MXC

Recirculation Piping

Figure 1: Installed views

Recirculation piping



Legend

A. Reuse water through the recirculation pump to the door
B. Reuse water through the recirculation pump to the tank

Table 1: Parts List—

Find the assembly for your machine and the letter shown in the "Item" column. The components for your machine will show this letter or the word "all" in the "Used In" column. The numbers shown in the "Item" column are those shown in the illustrations.

Used In	Item	Part Number	Description/Nomenclature	Comments
			Assemblies	
	A	AVW30209	Installation Group	
			Components	
all	1	60E098	Hose, 1.5"	
all	2	27A066A	Hose clamp, 1.66-1.97"	
all	3	51E098	Hose stem, 1.5"	
all	4	5S1KSFA	Tee, 1.5"	
all	5	5N1KCLSS42	Pipe nipple, 1.5XCLS	
all	6	5SL1KSFA	Elbow, 1.5	
all	7	96D087WESS	Water valve, 1.5", air operated, usually closed	
all	8	5N1K05AS42	Pipe nipple, 1.5X5	

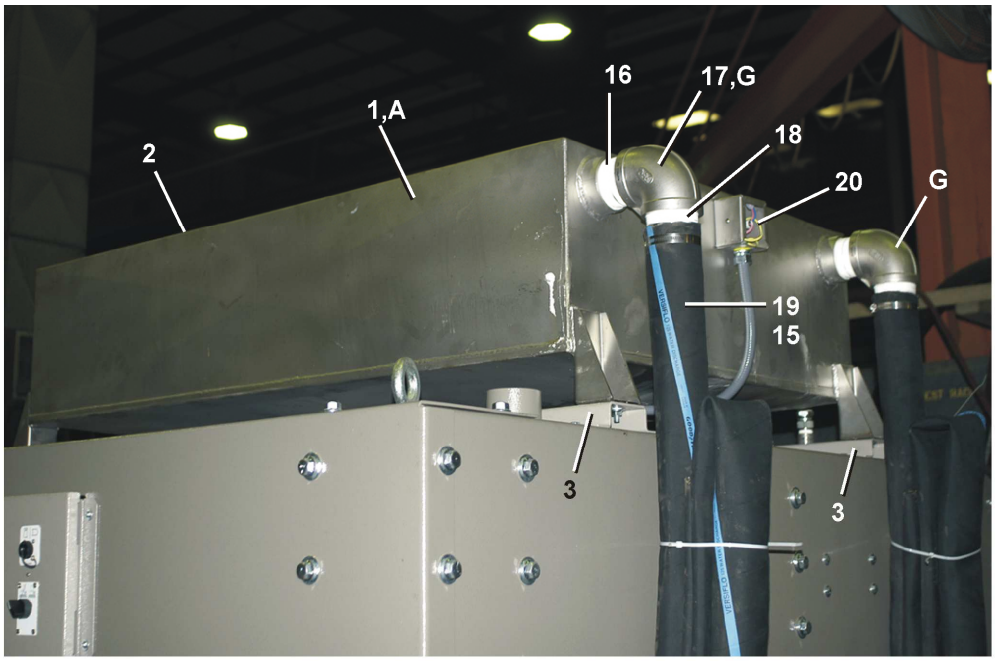
— End of BIMXCM27 —

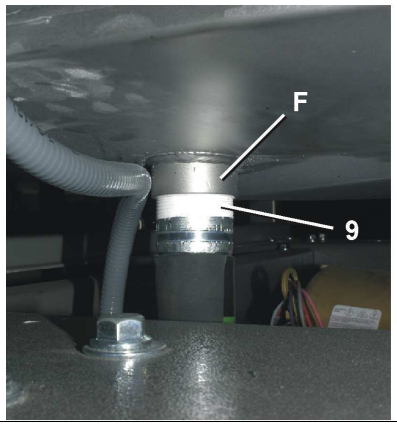
BIMXCM28 (Published) Book specs- Dates: 20120622 / 20120622 / 20120625 Lang: ENG01 Applic: MXC

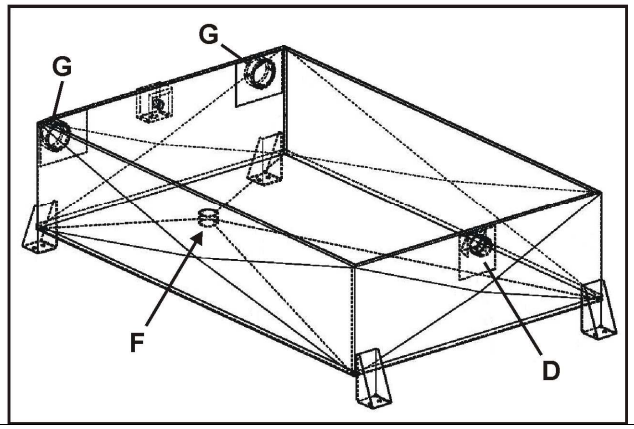
Reuse Tank Components and Installation

Figure 1: Reuse tank

Installed views





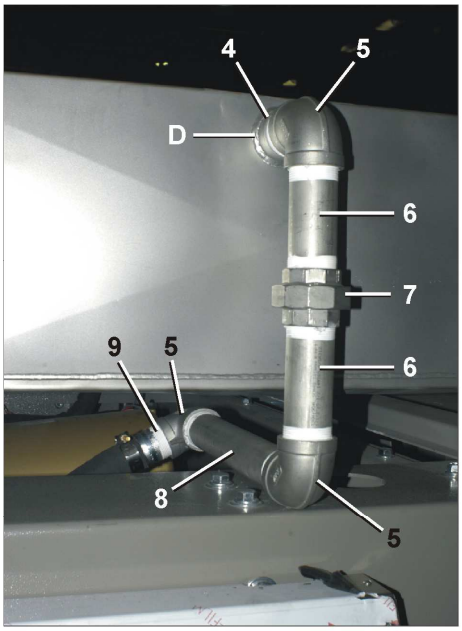


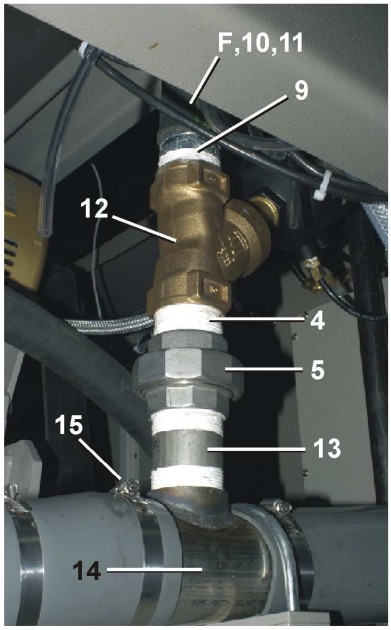
Legend

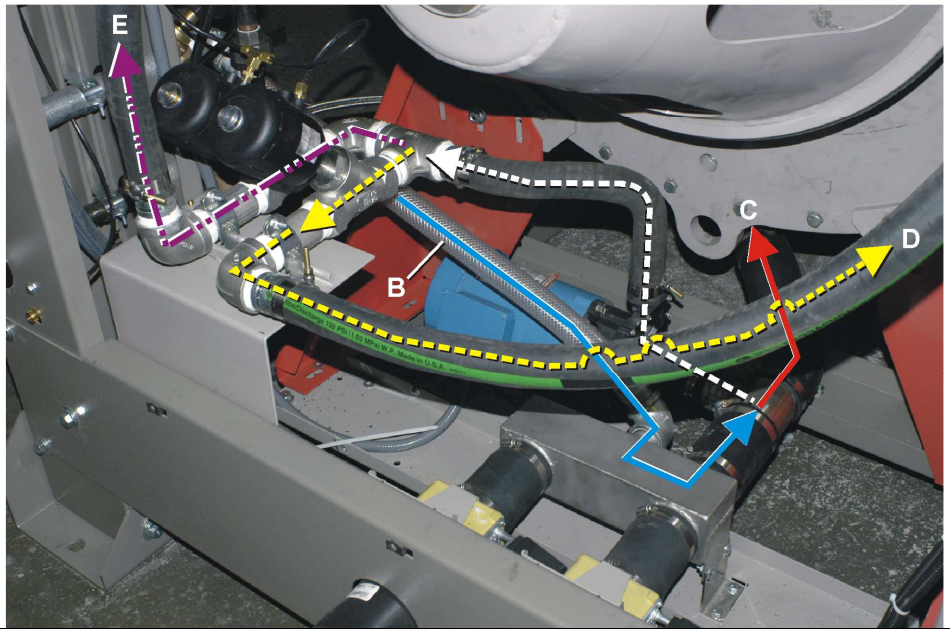
A. Reuse tank
D. Reuse water through the recirculation pump to the tank
F. Reuse water from the tank to the shell through the fill hose
G. Overflow from the tank to the sewer

Figure 2: Recirculation Piping

Additional Views







Legend

B. Reuse inlet water to the diverter box
C. Reuse water to the bottom of the shell
D. Reuse water through the recirculation pump to the tank
E. Reuse water through the recirculation pump to the door
F. Reuse water from the tank to the shell through the fill hose

Table 1: Parts List—Reuse Tank Components and Installation

Find the assembly for your machine and the letter shown in the "Item" column. The components for your machine will show this letter or the word "all" in the "Used In" column. The numbers shown in the "Item" column are those shown in the illustrations.

Used In	Item	Part Number	Description/Nomenclature	Comments
Assemblies				
	A	GVW42004	Installation Group	
Components				
all	1	W2 21225	Reuse tank	
all	2	W2 21229	Cover	
all	3	02 21238	Support	
all	4	5N1KCLSS42	Pipe nipple, 1.5XCLS	
all	5	5SL1KSFA	Elbow, 1.5"	
all	6	5N1K05AS42	Pipe nipple, 1.5"X5"	
all	7	5SU1KSF	Union, 1.5"	
all	8	5N1K13AS42	Pipe nipple, 1.5"X13"	
all	9	51E098	Hose stem, 1.5"	
all	10	60E098	Hose, 1.5"	
all	11	27A066A	Hose clamp, 1.66-1.97"	
all	12	96D087WE	Water valve1.5", air operated, usually closed	
all	13	5N1K03AS42	Pipe nipple, 1.5"X3"	
all	14	W2 13546	Elbow, 3"X1.5"	
all	15	27A082S	Hose clamp, 2+9/16-3.5	
all	16	5N2KCLSS42	Pipe nipple, 2.5"XCLS	
all	17	5SL2KSFA	Elbow, 2.5"	
all	18	5N2K04AS41	Pipe nipple, 2.5"X4"	
all	19	60E303W	Hose, 3"	
all	20	09RL001	Level switch	

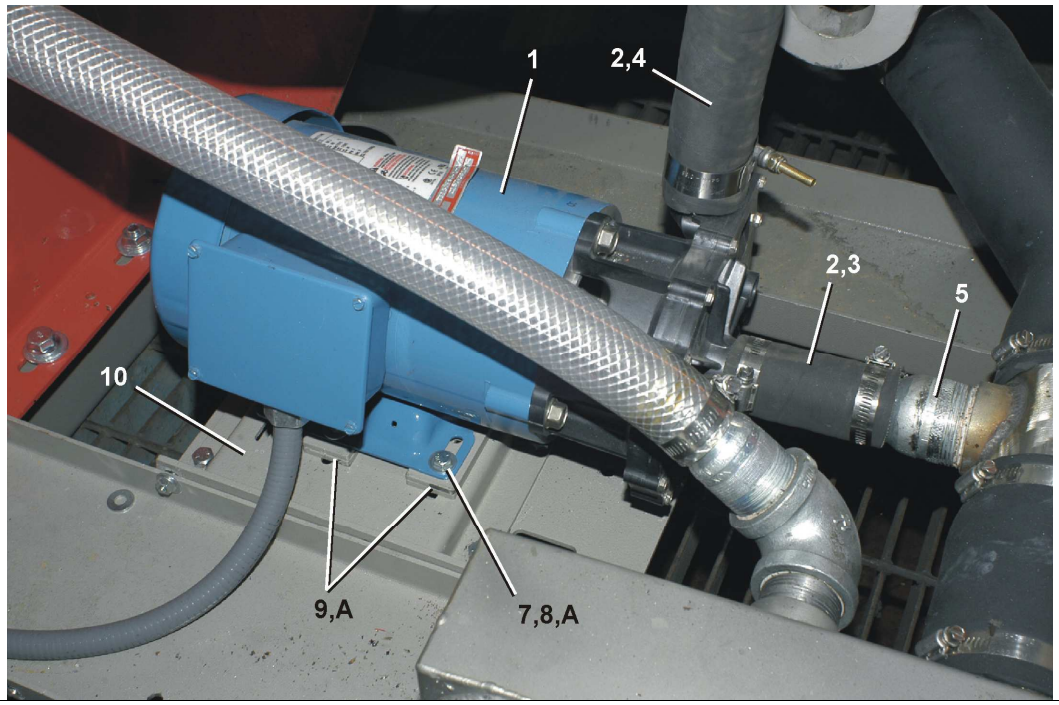
— End of BIMXCM28 —

BIMXCM29 (Published) Book specs- Dates: 20120622 / 20120622 / 20120625 Lang: ENG01 Applic: MXC

Recirculation Pump

Figure 1: Installed view

Recirculation pump



Legend

A. instances 4

Figure 2: Left side view

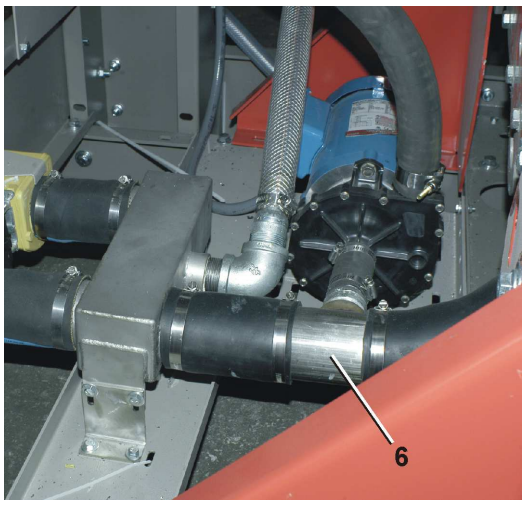


Table 1: Parts List—Recirculation Pump

Find the assembly for your machine and the letter shown in the "Item" column. The components for your machine will show this letter or the word "all" in the "Used In" column. The numbers shown in the "Item" column are those shown in the illustrations.

Used In	Item	Part Number	Description/Nomenclature	Comments
Assemblies				
	A	GVW42009	Installation Group	
Components				
all	1	27E955M96	Recirculation pump, 3/4HP 3P PMP 240/420/480 5/6C	
all	2	60E098	Hose, 1.5"	
all	3	27A065S	Hose clamp, 1.56"-2.5"	
all	4	27A066A	Hose clamp, 1.66-1.97"	
all	5	51E098	Hose stem, 1.5"	
all	6	W2 13546	Elbow, 3"X1.5"	
all	7	15K095	Bolt, 3/8-16X1	
all	8	15G198	Nut, 3/8-16	
all	9	02 03839B	Shim	
all	10	02 19285	Mounting bracket	

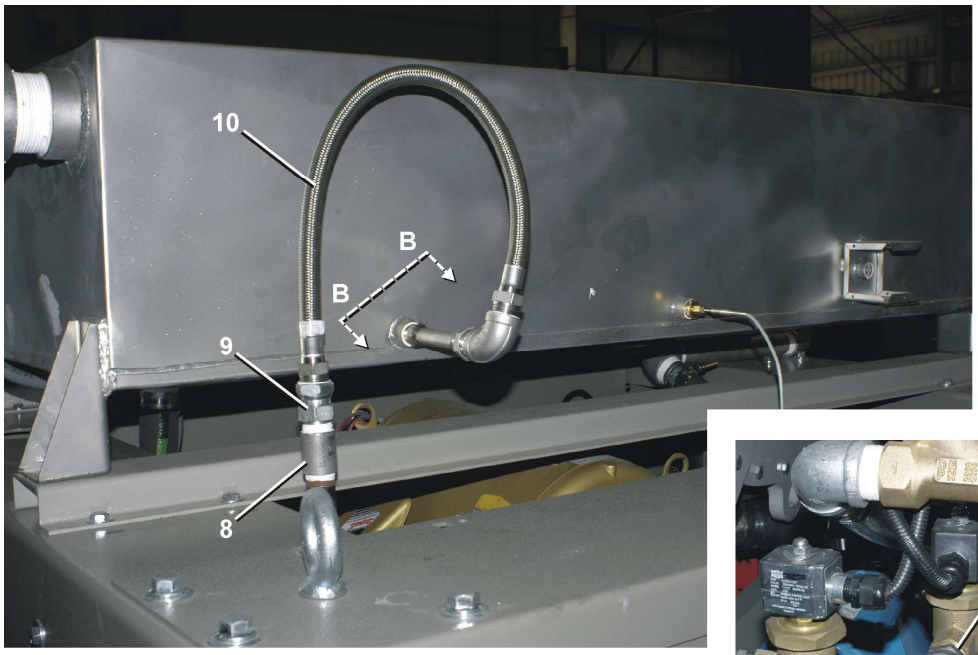
— End of BIMXCM29 —

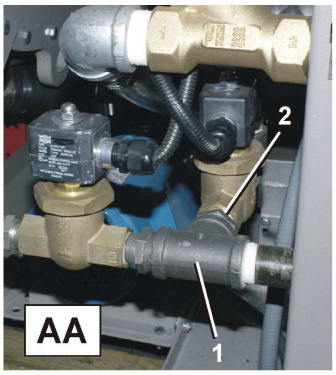
BIMXCM30 (Published) Book specs- Dates: 20120622 / 20120622 / 20120625 Lang: ENG01 Applic: MXC

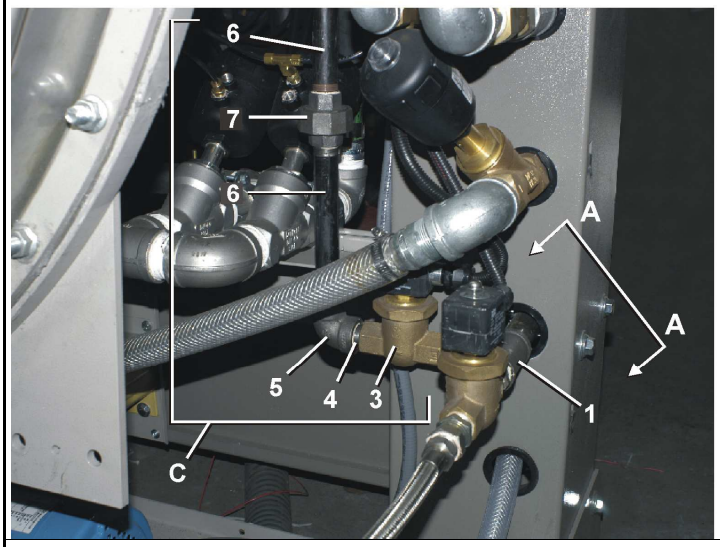
Steam Option to the Reuse Tank

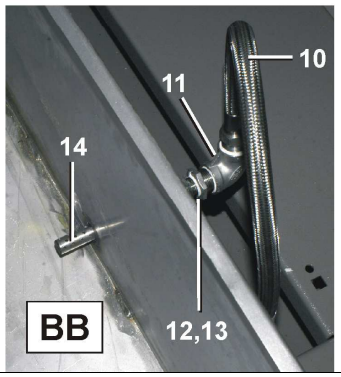
Figure 1: Steam inlet, Nozzle

Detailed views









Legend

AA. Detailed view
BB. Detailed view
C. Steam option to the reuse tank

Table 1: Parts List—Steam Option to the Reuse Tank

Find the assembly for your machine and the letter shown in the "Item" column. The components for your machine will show this letter or the word "all" in the "Used In" column. The numbers shown in the "Item" column are those shown in the illustrations.

Used In	Item	Part Number	Description/Nomenclature	Comments
Assemblies				
none				
Components				
all	1	5S1AMFA	Tee, 1"	
all	2	5SB1A0PMFO	Hexbush, 1"X3/4"	
all	3	96P040A71	Steam valve, 3/4", electric operated, 240V50/60C 150PSI	
all	4	5N1ACLSF42	Pipe nipple, 1X CLS	
all	5	5SL0PMFA	Elbow, 3/4"	
all	6	5P0PF4WN	Pipe nipple, 3/4"	
all	7	51X020FS	Union, 3/4"	
all	8	5SCC0PSF	Coupling, 3/4"	
all	9	51X019	Adapter, 3/4"	
all	10	60E512C28	Hose, 3/4" X 28"	
all	11	5SL0PSFA	Elbow, 3/4"	
all	12	5SR0P0KSF	Reducer, 3/4"X1/2"	
all	13	5SB0K0GSFO	Hexbush, 1/2"X3/8"X5/8"	
all	14	W2 02555A	Nozzle, 3/8"	

— End of BIMXCM30 —

Chemical Supply Assemblies

7

BIMXCM15 (Published) Book specs- Dates: 20140403 / 20140403 / 20140403 Lang: ENG01 Applic: MXC

Soap Chute Components and Installation

Figure 1: Detailed views

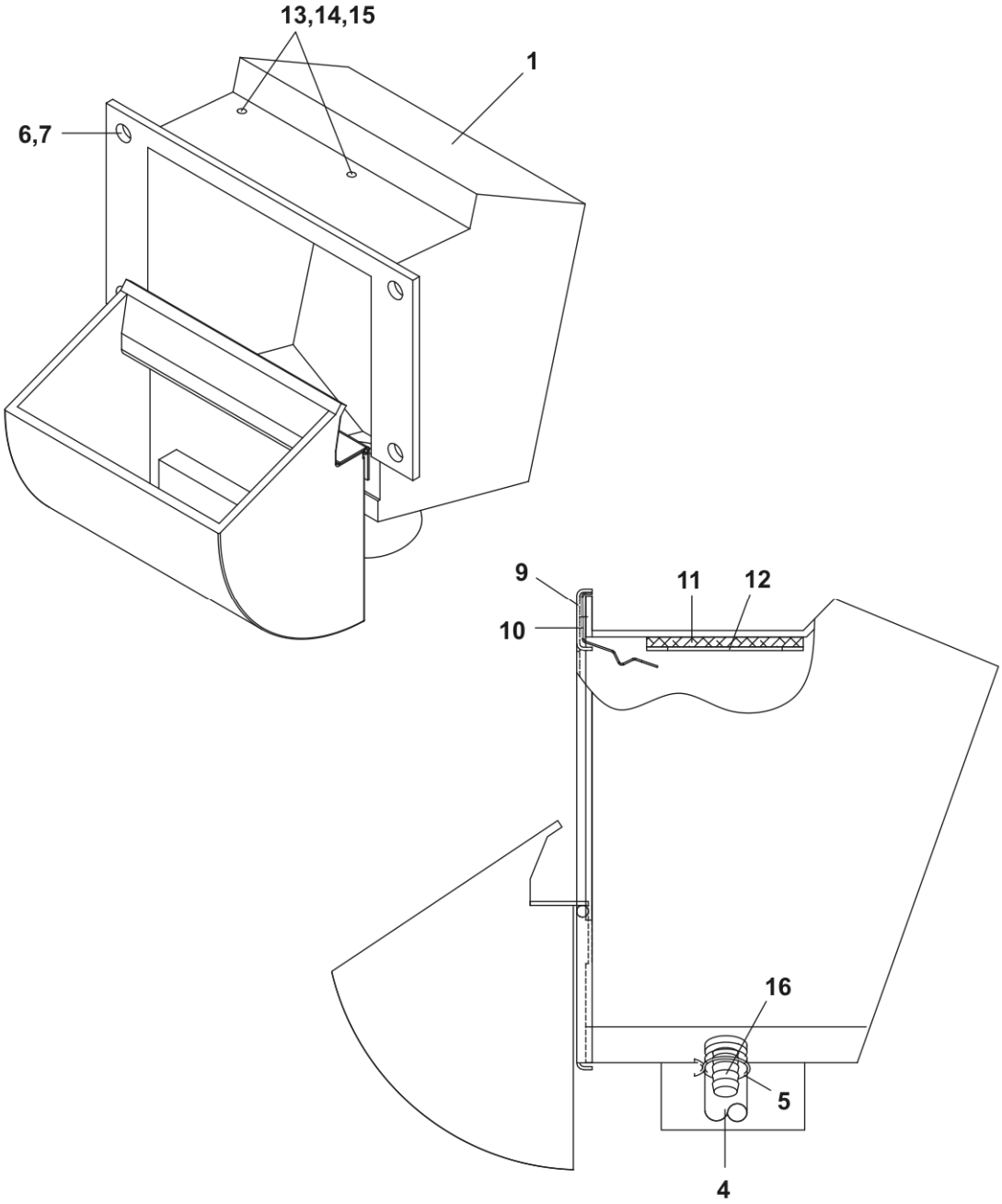
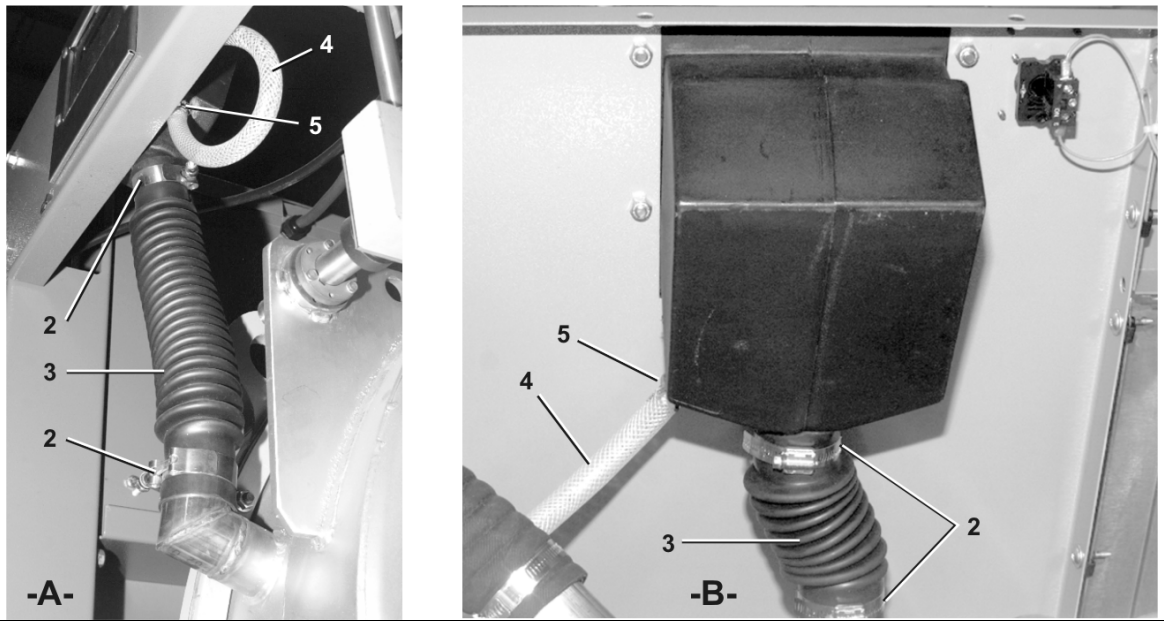


Figure 2: Soap Chute Components and Installation

Installed views



Legend

A. shown 3022X8J
B. shown 3022H8J

Table 1: Parts List—Soap Chute Components and Installation

Find the assembly for your machine and the letter shown in the "Item" column. The components for your machine will show this letter or the word "all" in the "Used In" column. The numbers shown in the "Item" column are those shown in the illustrations.

Used In	Item	Part Number	Description/Nomenclature	Comments
			Assemblies	
	A	GWS3022X8	Installation Group	3022X8J
	B	GWS3022H8	Installation Group	3022H8J
	C	GWS3626X7	Installation Group	36026X8J,X8W,X8R
	D	GWS4226X	Installation Group	42026X7J,X7W,X7R
	E	GWS4232X	Installation Group	42032X7J,X7W,X7R
	F	GWS35001C	Installation Group	3630F8R,F8S
	G	GWS42001C	Installation Group	4232F7R,F7S
			Components	
all	1	AWS30211A	Soap chute	
all	2	27A070	Hose clamp, T-bolt, 1.94"-2.25"	
ACF	3	02 03870D	Flexible tubing, 2"X14"	
B	3	02 03870C	Flexible tubing, 2"X8"	
DEG	3	02 03870	Flexible tubing, 2"X24"	
all	4	60E006C	Flexible tubing, .5"X.75"	
all	5	27A045	Hose clamp,Spring, .75"	
all	6	15K053	Bolt, 5/16-18X3/4"	
all	7	15G188	Nut, 5/16-18	
all	9	02 04215	Bezel	
all	10	02 04217	Latch	
all	11	02 04216	Mounting plate	
all	12	98A002AT	Pad, 6"X9"	
all	13	15G105	Nut, 8-32	
all	14	15N095	Bolt, 8-32X3/4"	
all	15	15U120B	Washer, Lock, 8-32	
all	16	51BB0KN00B	Hose stem, 1/2"	

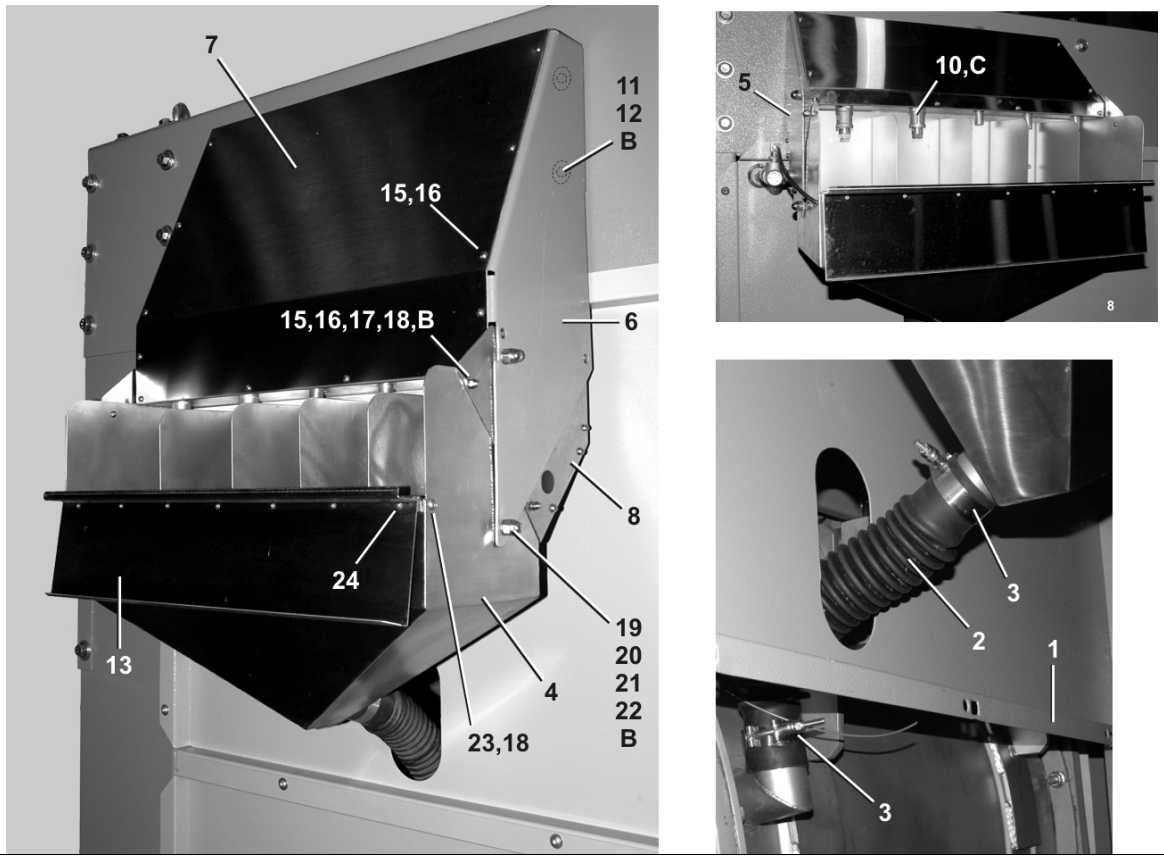
— End of BIMXCM15 —

BIMXCM16 (Published) Book specs- Dates: 20140403 / 20140403 / 20140403 Lang: ENG01 Applic: MXC

Five Compartments for Dry Chemical Supplies

Figure 1: Five compartments for dry chemical supplies

Installed views



Legend

B. instances 4
C. Valve manifold- See the document BIMXCM17.

Figure 2: Chemical supply inlets

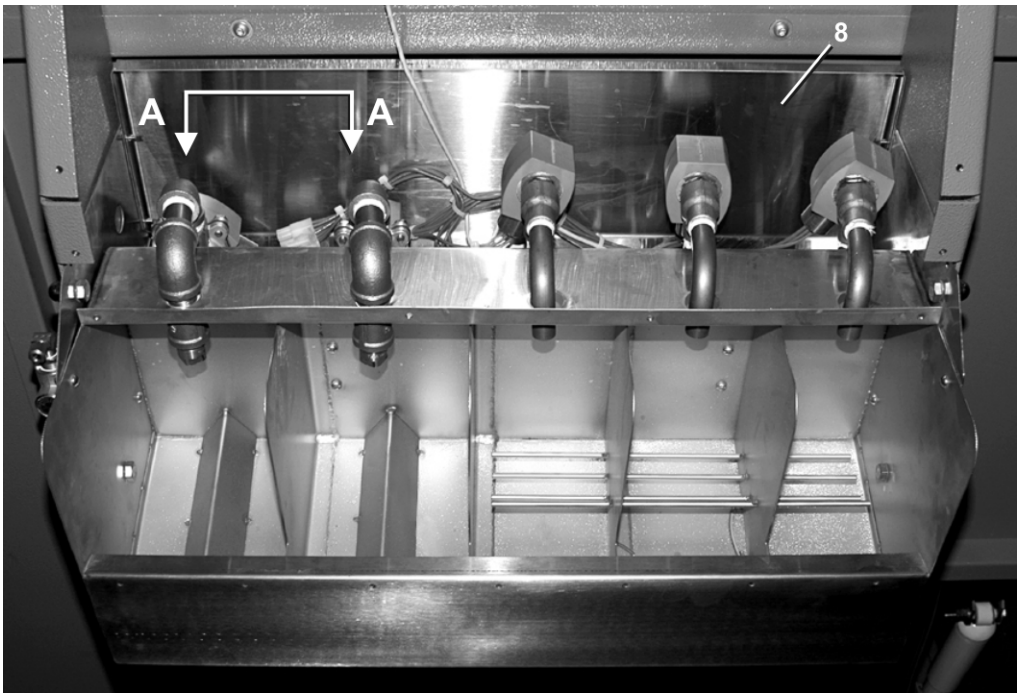
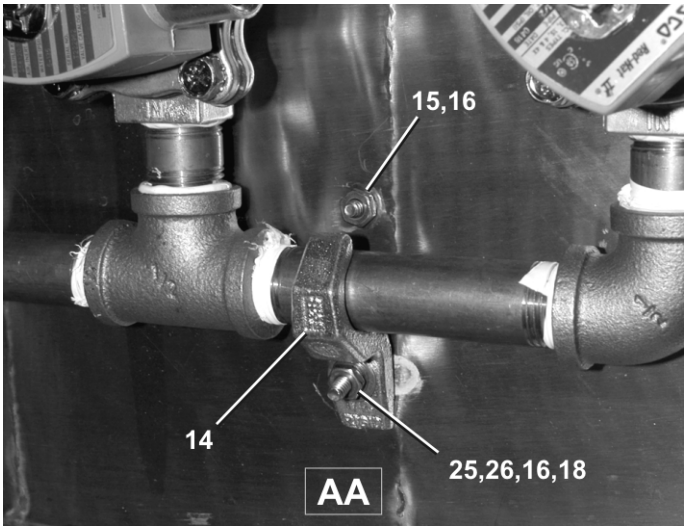


Figure 3: Valve manifold

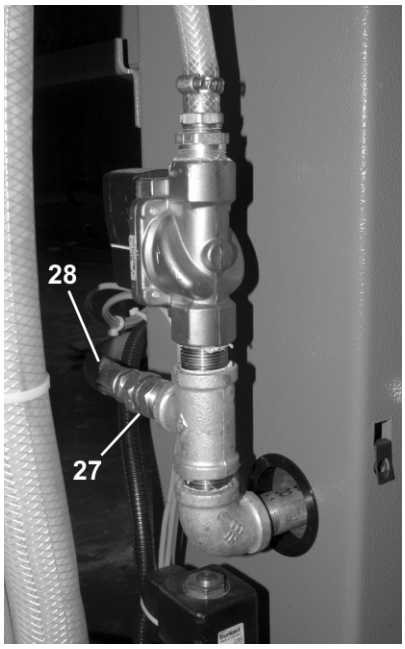
Mounting bracket



Legend

AA. Inside view

Figure 4: Hot water to flush the chemical supplies



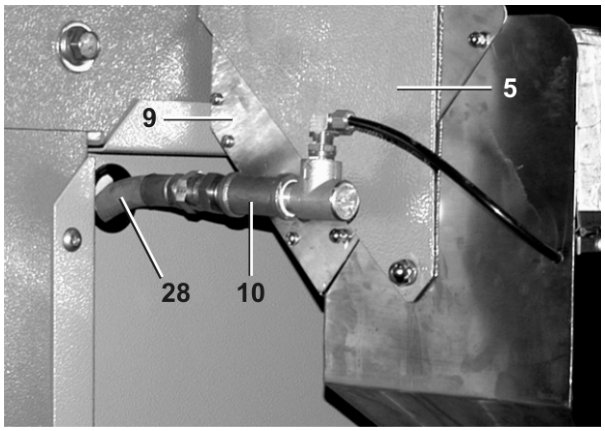


Table 1: Parts List—Five compartments for dry chemical supplies

Find the assembly for your machine and the letter shown in the "Item" column. The components for your machine will show this letter or the word "all" in the "Used In" column. The numbers shown in the "Item" column are those shown in the illustrations.

Used In	Item	Part Number	Description/Nomenclature	Comments
			Assemblies	
	A	GWS3626X5	Installation Group	36026X8J,X8W,X8R
	B	GWS4226X5	Installation Group	42026X7J,X7W,X7R
	C	GWS4232X5	Installation Group	42032X7J,X7W,X7R
	D	AWS3626X5	Assembly	36026X8J,X7W,X8R
	E	AWS4226X5	Assembly	42026X7J,X7W,X7R 42032X7J,X7W,X7R
			Components	
A	1	02 13585B	Cover	
B	1	02 23585B	Cover	
C	1	02 24525C	Cover	
all	2	02 03870D	Flexible tubing, 2"X 14"	
all	2	02 03870	Flexible tubing, 2"X24"	
all	3	27A070	Hose clamp, T-bolt, 1.94"-2.25"	
all	4	W2 21162B	Weldment	
A	5	02 13590	Bracket	
BC	5	02 23590	Bracket	
A	6	02 13590A	Bracket	
BC	6	02 23590A	Bracket	
A	7	02 13591	Cover	
BC	7	02 23591	Cover	
A	8	02 13592	Cover	
BC	8	02 23592	Cover	
all	9	02 09100	Piece part	
all	10	SA 16 034C	Valve assembly	
all	11	15K095	Bolt, 3/8-16X1	
all	12	15G198	Nut, 3/8-16	
all	13	SA 09 047	Cover	
all	14	27A017	Strap, 1/2"	
all	15	15N117	Bolt, 10-24X3/8	
all	16	15U160	Washer, Lock, #10	
all	17	24G018N	Washer, Nylon, .194	
all	18	15G130	Nut, 10-24	
all	19	15K086	Bolt, 3/8-16X3/4	
all	20	15U260	Washer, Lock, 3/8	
all	21	24G030N	Washer, Nylon, .379	
all	22	15G200SS	Nut, 3/8-16	
all	23	15K017	Bolt, 10-24X1/2	
all	24	15P100	Bolt, #8X3/8	
all	25	15N146	Bolt, 10-24X1	
all	26	15U135	Washer, Flat, 10-.437X.203X.04	
all	27	51X017	Union, 1/2"	

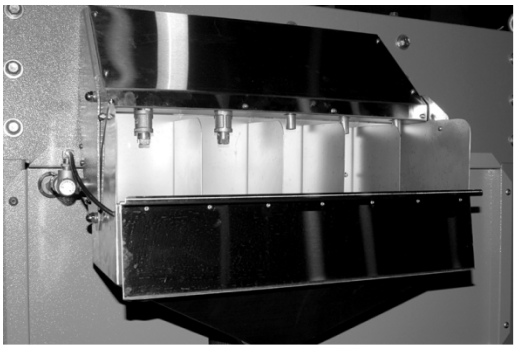
Find the assembly for your machine and the letter shown in the "Item" column. The components for your machine will show this letter or the word "all" in the "Used In" column. The numbers shown in the "Item" column are those shown in the illustrations.

Used In	Item	Part Number	Description/Nomenclature	Comments
all	28	60E085C75A	Hose, 1/2"X75"	

— End of BIMXCM16 —

Valve Manifold for Five Compartments for Dry Chemical Supplies

Figure 1: General Views, Detailed view



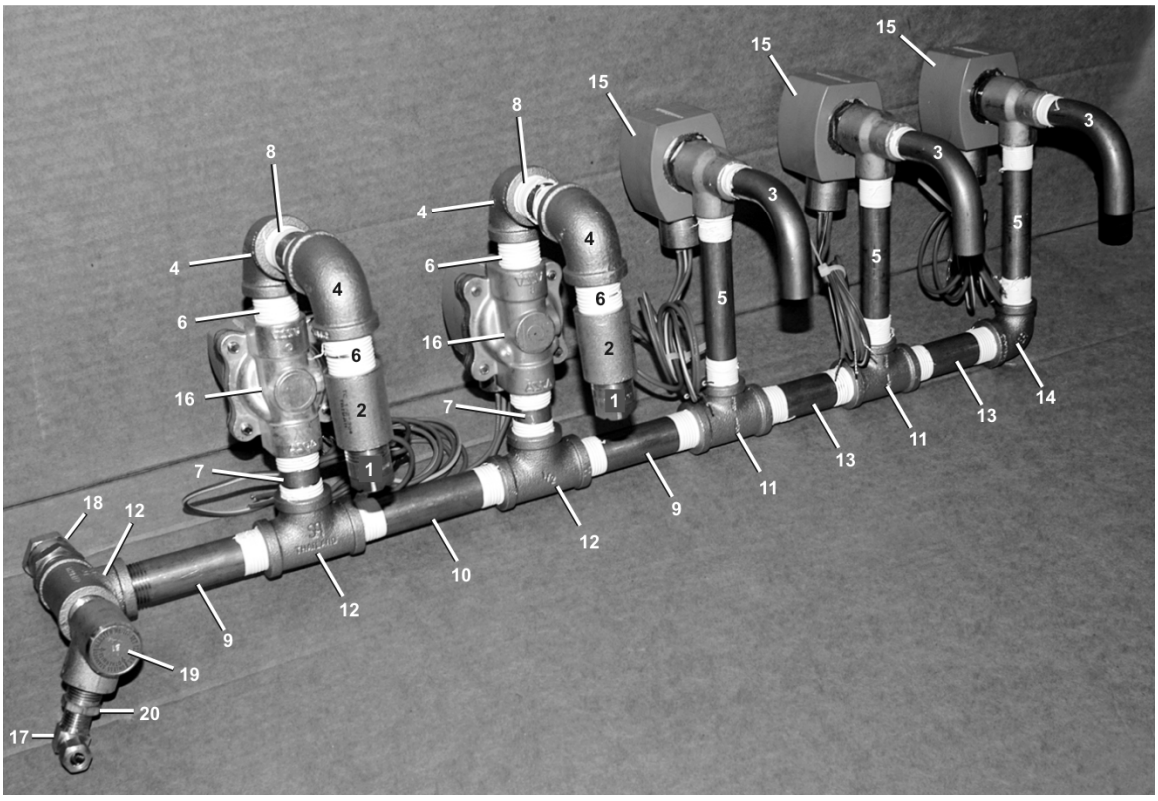


Table 1: Parts List—Valve Manifold for Five Compartments for Dry Chemical Supplies

Find the assembly for your machine and the letter shown in the "Item" column. The components for your machine will show this letter or the word "all" in the "Used In" column. The numbers shown in the "Item" column are those shown in the illustrations.

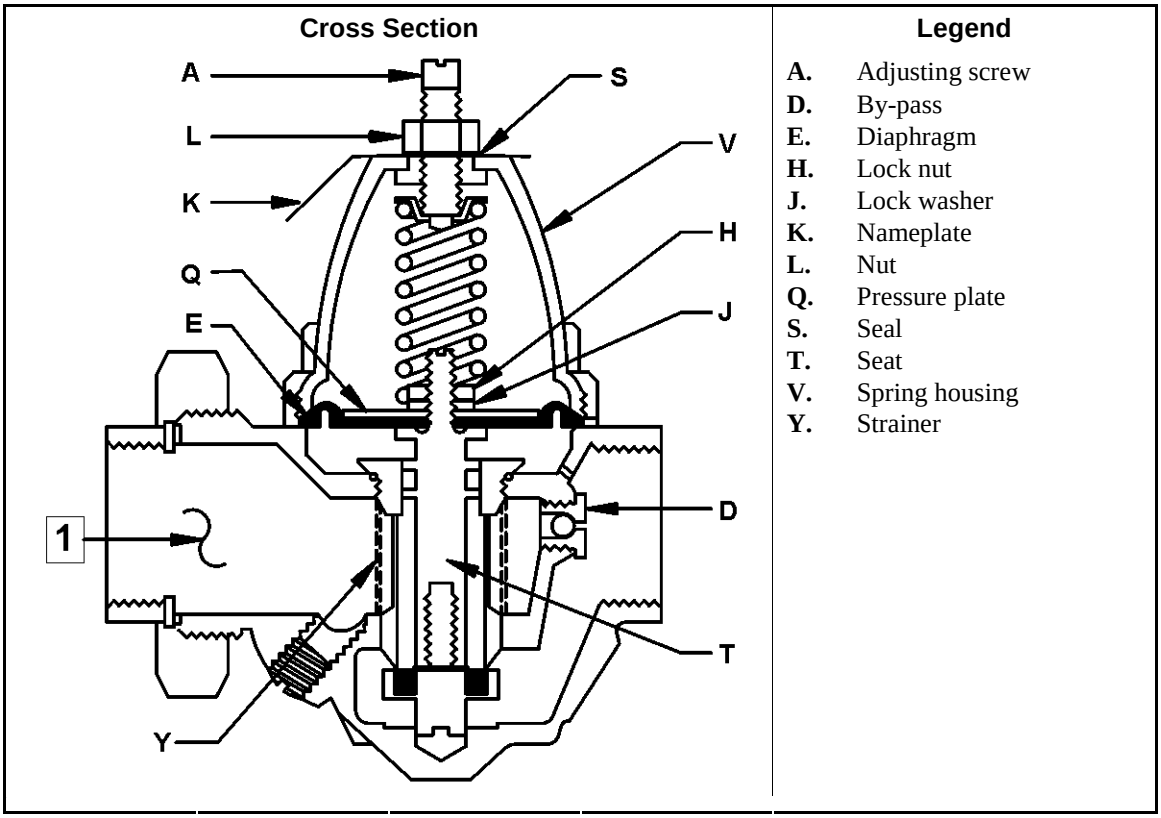
Used In	Item	Part Number	Description/Nomenclature	Comments
Assemblies				
	A	SA 16 034C	Assembly	
Components				
all	1	27A001	Nozzle, 1/2"	
all	2	5SCC0KSF1	Coupling, 1/2"	
all	3	02 09237	Pipe nipple	
all	4	5SL0KBEA	Elbow, 90 degree, 1/2"	
all	5	5N0G04KBE2	Pipe nipple, 3/8X4.5	
all	6	5N0KCLSBE2	Pipe nipple, 1/2XCLS	
all	7	5N0K01KBE2	Pipe nipple, 1/2X1.5	
all	8	5N0K02ABE2	Pipe nipple, 1/2X2	
all	9	5N0K03KB42	Pipe nipple, 1/2X3.5	
all	10	5N0K04ABE2	Pipe nipple, 1/2X4	
all	11	5S0KBEA0G	Tee, 1/2X1/2X3/8	
all	12	5S0KBEA	Tee, 1/2"	
all	13	5N0K03ABE2	Pipe nipple, 1/2X3	
all	14	5SL0KBEA0G	Elbow, 90 degree, 1/2X3/8	
all	15	96TCC2AA71	Valve, 3/8", 240V50/60C	
all	16	96TDC2AA71	Valve, 1/2", 240V50/60C	
all	17	53A031XB	Elbow, 90 degree, .25X.25	
all	18	51X017	Union, 1/2"	
all	19	96M001	Pressure relief valve, 1/2X3/8", 31#	
all	20	5SB0G0EDEO	Hexbush, 3/8X1/4, 125#	

— End of BIMXCM17 —

BIWUUM04 (Published) Book specs- Dates: 20140515 / 20140515 / 20140515 Lang: ENG01 Applic: WUU

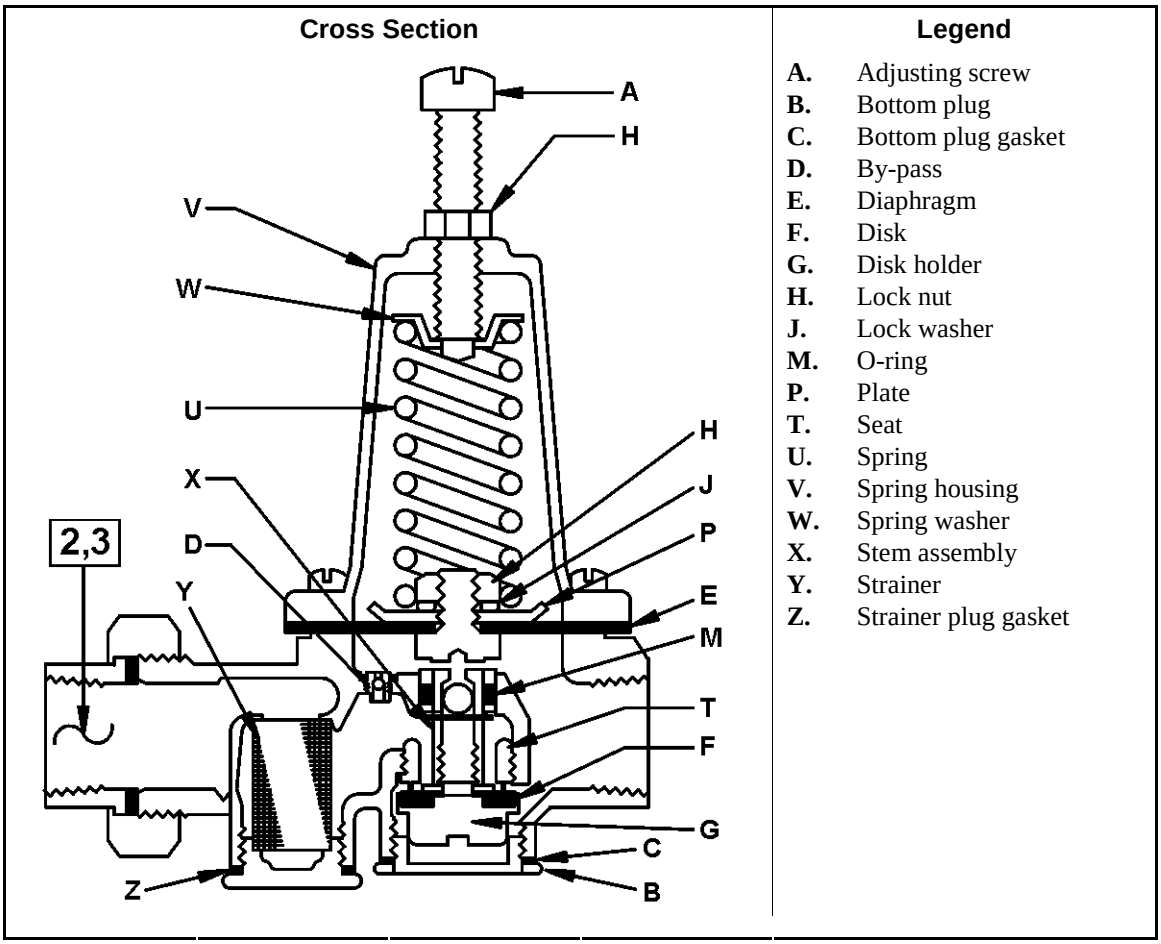
Pressure Regulators

Figure 1: Components and the procedure to clean pressure regulator (Item 1).



1. Remove the spring's housing and all parts above the diaphragm.
2. Remove the diaphragm lock nut, the lock washer, pressure plate, and diaphragm from the valve stem.
3. Loosen the seat cylinder from the body and remove the assembly.
4. Open the gate valve to clean.
5. Clean all strainers.
6. To assemble the regulator, use the opposite procedure. Tighten or loosen the adjustment screw to get the necessary pressure of 28 PSI (1.9 ATU).

Figure 2: Components and the procedure to clean pressure regulators (Items 2 & 3).



1. Remove the bottom plug and gasket.
2. Loosen the disk holder with a screwdriver or socket wrench.
3. Examine the disk and clean.
4. Remove the seat, if necessary, with an allen wrench or socket wrench.
5. Remove the adjustment screw, the nut, and the screws for the spring housing. Lift off the spring housing, the washer, and the spring.
6. Remove the lock nut, lock washer, plate, and diaphragm.
7. Lift the stem assembly up to remove it from the body.
8. Clean all strainers.
9. To assemble the regulator, use the opposite procedure. Tighten or loosen the adjustment screw to get the necessary pressure of 28 PSI (1.9 ATU).

Table 1: Parts List—Pressure regulator

Find the assembly for your machine and the letter shown in the "Item" column. The components for your machine will show this letter or the word "all" in the "Used In" column. The numbers shown in the "Item" column are those shown in the illustrations.

Used In	Item	Part Number	Description/Nomenclature	Comments
Assemblies				
none				
Components				
all	1	96J030FF	Pressure regulator, 1/2", 28#	1/2" Regulator (used on 3621V models only)
all	2	96J030D	Pressure regulator, 1/2", 28#	1/2" Regulator (used all other models)
all	3	96J031D	Pressure regulator, 3/4", 28#	3/4" Regulator (all models that use 3/4" regulators)

— End of BIWUUM04 —

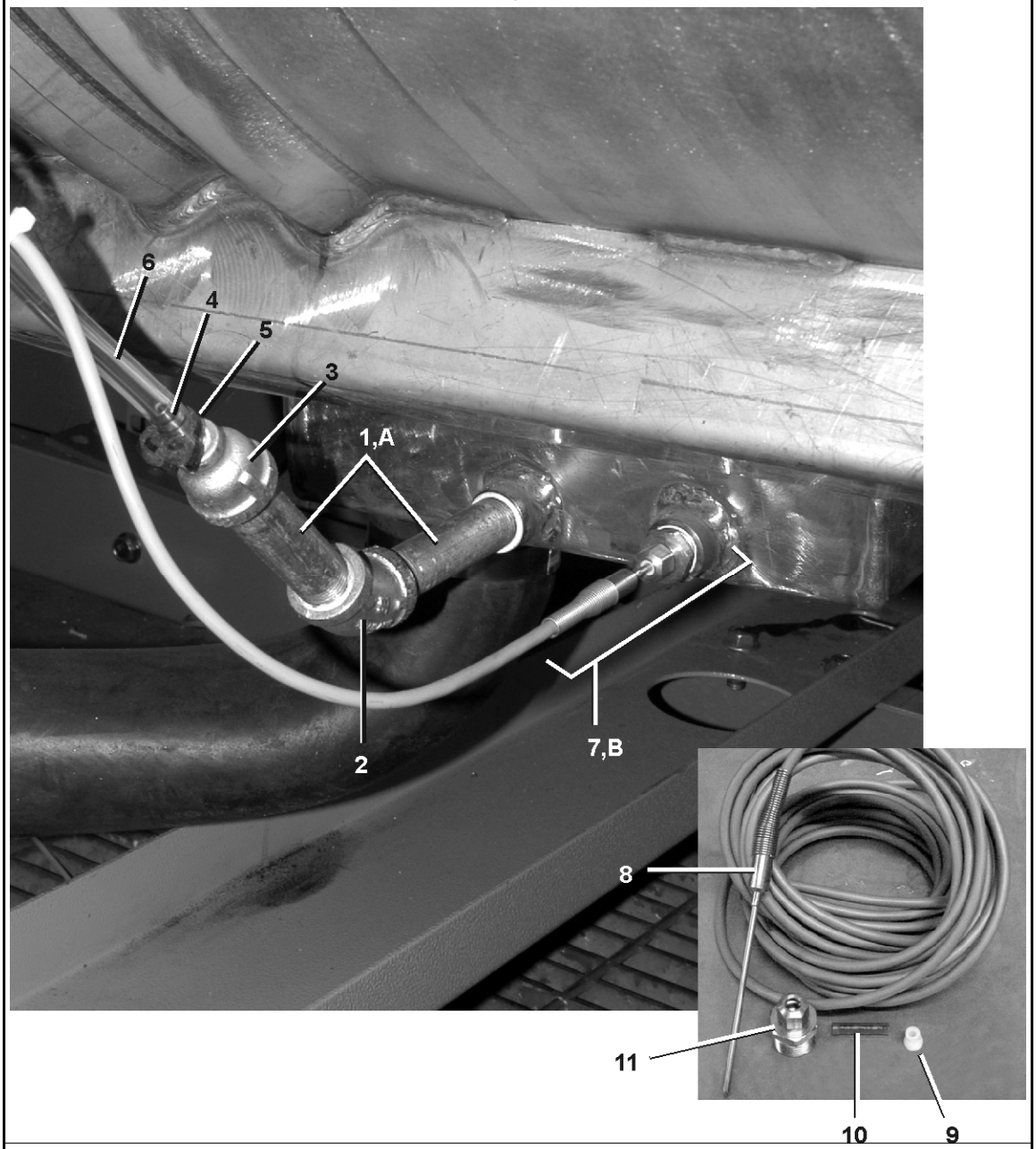
8 Control and Sensing Assemblies

BIMXCM18 (Published) Book specs- Dates: 20110915 / 20110915 / 20110915 Lang: ENG01 Applic: MXC

Water Level Switch and Temperature Sensor

Figure 1: Water Level Switch and Temperature Sensor

Installed view, Detailed view



Legend

A. Air chamber for the pressure switch
B. Temperature sensor

Table 1: Parts List—Water Level Switch and Temperature Sensor

Find the assembly for your machine and the letter shown in the "Item" column. The components for your machine will show this letter or the word "all" in the "Used In" column. The numbers shown in the "Item" column are those shown in the illustrations.

Used In	Item	Part Number	Description/Nomenclature	Comments
Assemblies				
	A	ALL30211	Assembly	
Components				
all	1	5N0K04AG42	Pipe nipple, 1/2X4	
all	2	5SL0KNFK	Elbow, 45 degree, 1/2"	
all	3	5SR0K0ENF	Reducer, 1/2X1/4	
all	4	51E502A	Hose stem, 1/8X3/16	
all	5	27A047	Hose clamp, 1/8	
all	6	60E004NT	Flexible tubing, 1/4"X1/8"	
all	7	30R0043PB	Assembly, Temperature sensor	
all	8	30R0043P	Temperature sensor	
all	9	30R0043PF	Pipe fitting .25	
all	10	09B067	Connector 16-22GA.	
all	11	51A026E	Connector, 1/4X1/2MPT	

— End of BIMXCM18 —

Excursion Switch (Unwanted Movement Switch) Components and Installation

Figure 1: Excursion switch

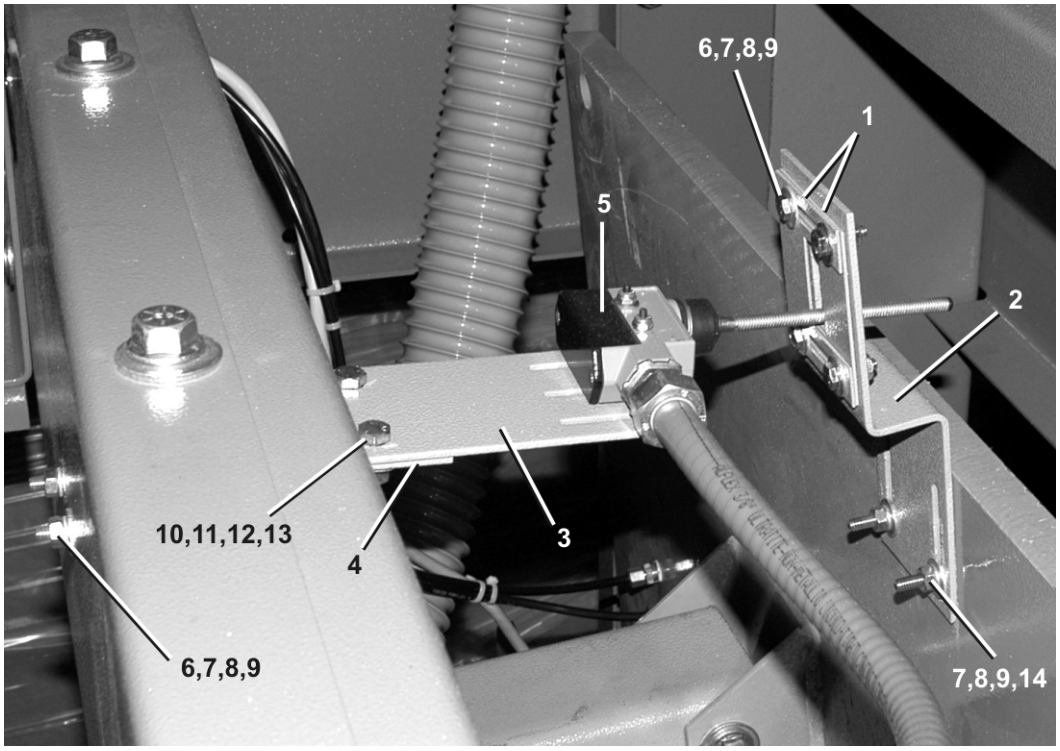


Table 1: Parts List—Excursion switch

Find the assembly for your machine and the letter shown in the "Item" column. The components for your machine will show this letter or the word "all" in the "Used In" column. The numbers shown in the "Item" column are those shown in the illustrations.				
Used In	**Item**	**Part Number**	**Description/Nomenclature**	**Comments**
Assemblies				
	A	GES36261	Installation Group	36026X8J,X8W,X8R
	B	GES4226X	Installation Group	42026X7J,X7W,X7R 42032X7J,X7W,X7R
Components				
all	1	02 02938B	Bracket	
all	2	02 02938	Bracket	
all	3	02 13539B	Bracket	
all	4	02 13539A	Bracket	
all	5	09R008ASTD	Switch	
all	6	15K039	Bolt, 1/4-20X3/4	
all	7	15U185	Washer, 1/4"	
all	8	15G177	Nut, 1/4-28	
all	9	15U180	, 1/4	
all	10	15G205	Nut, 3/8-16	
all	11	15U255	Washer, Lock, 3/8	
all	12	15U240	Washer, Flat, 3/8"	
all	13	15K085	Bolt, 3/8-16X3/4	
all	14	15K046	Bolt, 1/4-20X 2"	

— End of BIMXCM19 —

Pneumatic Assemblies

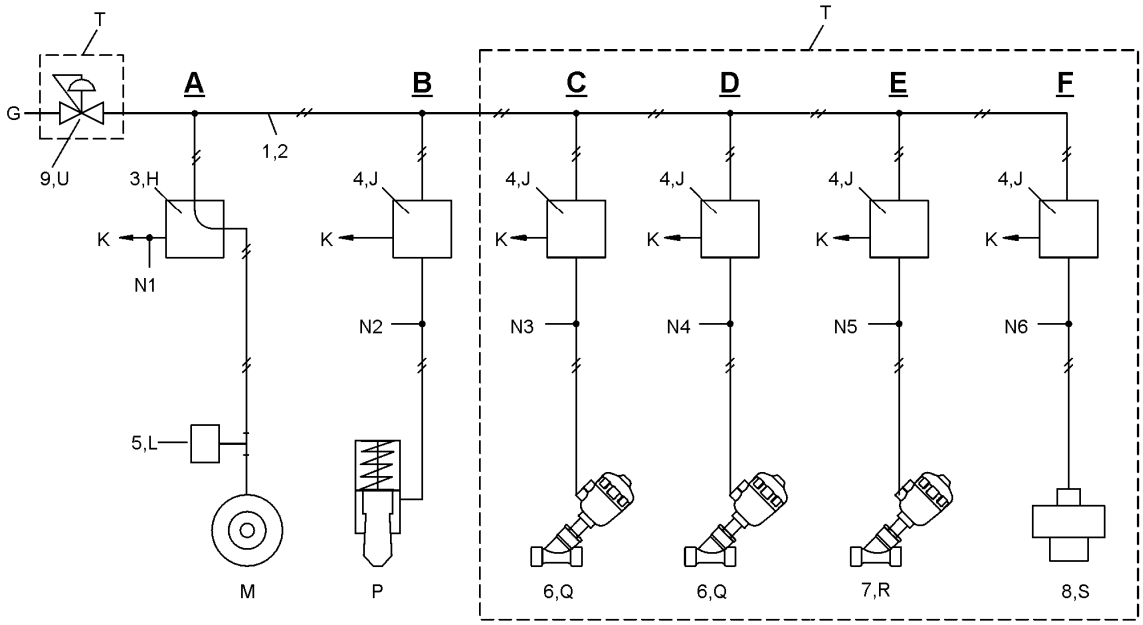
9

BIMXCM21 (Published) Book specs- Dates: 20130827 / 20130827 / 20130827 Lang: ENG01 Applic: MXC

Pneumatic Schematic

Figure 1: Pneumatic Schematic

Schematic



Legend

A. Door seal
B. Door latch
C. Compressed air, 85-125 PSI (5.8-8.5 ATU)
D. Hot water line
E. Cold water line
F. Steam line
G. Drain valve
H. Usually open
J. Usually closed
K. Exhaust
L. Pressure switch, Close at 62 lbs.
M. Pneumatic bellows actuator
N1. The door seals are deflated when the pilot valve is energized.
N2. The spring locks the door closed latch. The door closed latch is opened when the pilot valve is energized.
N3. The hot water valve is opened when the pilot valve is energized.
N4. The cold water valve is opened when the pilot valve is energized.
N5. The steam valve is opened when the pilot valve is energized.
N6. The drain valve is opened when the pilot valve is energized.
P. Door latch
Q. Water valve, air operated
R. Steam valve, air operated
S. Drain valve, air operated
T. China-made models only
U. Air regulator

Table 1: Parts List— Pneumatic Schematic

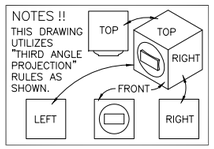
Find the assembly for your machine and the letter shown in the "Item" column. The components for your machine will show this letter or the word "all" in the "Used In" column. The numbers shown in the "Item" column are those shown in the illustrations.				
Used In	**Item**	**Part Number**	**Description/Nomenclature**	**Comments**
Assemblies				
		AVA75X7J	Assembly	
	A			3626X8J,X8W 4226X7J,X7W 4232X7J,X7W USA-made models only
	B			3626X8J,X8W 4226X7J,X7W 4232X7J,X7W China-made models only
Components				
A	1	X3 01507D	Manifold	
A	2	03 LF1X5K	Manifold, Retainer	
all	3	96R302B71	Pilot valve, 1/8", Usually open, 240V50/60	
all	4	96R301B71	Pilot valve 1/8", Usually closed, 240V50/60	
all	5	09N082A	Pressure switch, 62#	
B	6	98CX880115	Water valve, 1-1/4",air operated	4226X7J,X7W 4232X7J,X7
B	7	96D0009E	Steam valve, 3/4", air operated	
B	8	98CMCR3604	Drain valve, air operated	
B	9	98CX880511	Air regulator	

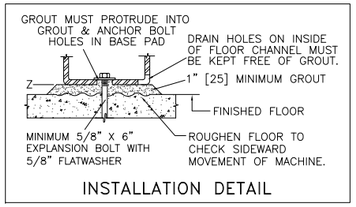
— End of BIMXCM21 —

Dimensional Drawings

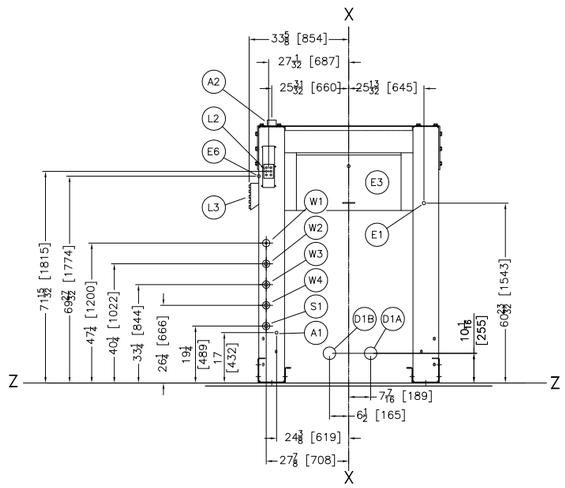
10

NOTES !!
THIS DRAWING UTILIZES "THIRD ANGLE PROJECTION" RULES AS SHOWN.

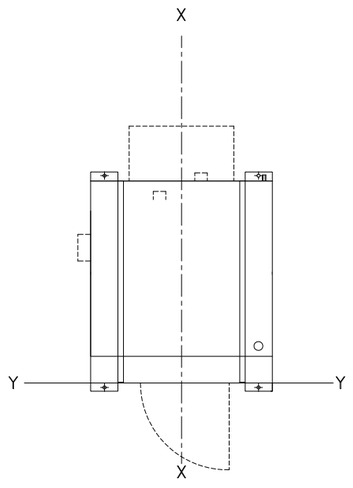




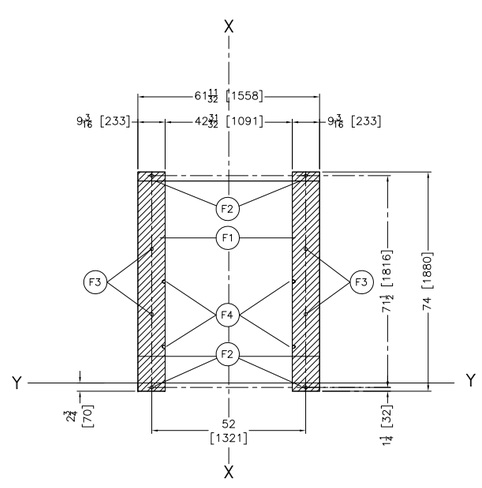
INSTALLATION DETAIL



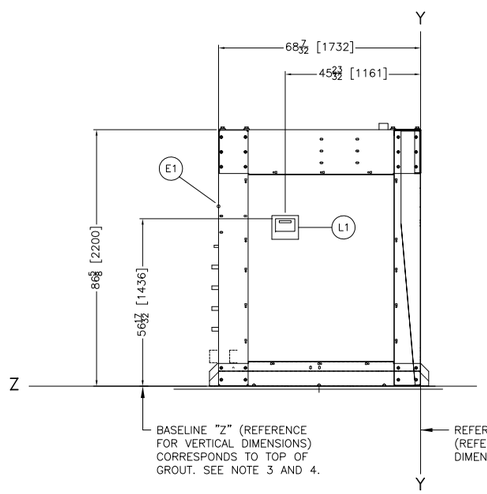
REAR VIEW



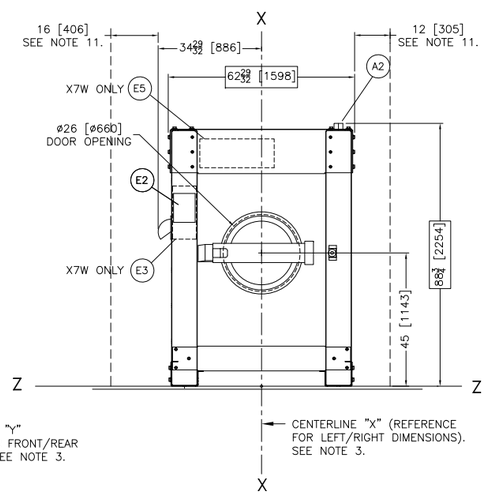
PLAN VIEW



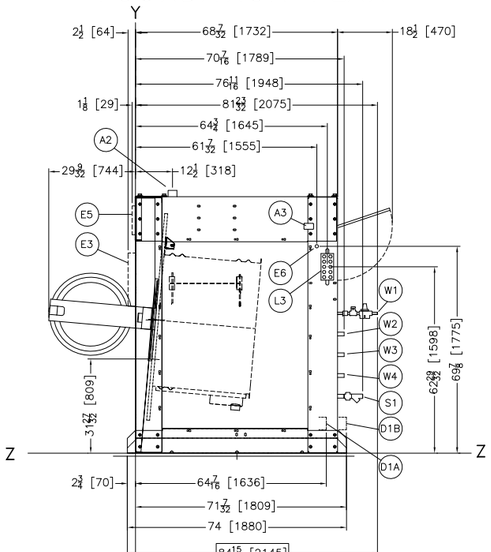
FOUNDATION PLAN



LEFT VIEW



FRONT VIEW



RIGHT VIEW

ITEM	LEGEND
W4	OPTIONAL THIRD (REUSE) WATER INLET, 1–1/4" NPT
	CONNECTION
W3	COLD WATER INLET, 1–1/4" NPT CONNECTION
W2	HOT WATER INLET, 1–1/4" NPT CONNECTION
W1	HOT WATER FOR SUPPLY, 3/4" NPT CONNECTION, PRESSURE
	REGULATOR ASSEMBLY, REMOVED FOR SHIPPING, MUST BE
	ADDED AT INSTALLATION.
S1	OPTIONAL STEAM INLET, 3/4" NPT CONNECTION, Y–STRAINER,
	REMOVED FOR SHIPPING, MUST BE ADDED AT INSTALLATION.
L3	ADDITIONAL LIQUID SUPPLY INLETS FOR 15 PORT PERISTALTIC
	X7W MODELS ONLY.
L2	STANDARD LIQUID SUPPLY INLETS, SEE NOTE 10.
L1	STANDARD SOAP CHUTE
F4	DRAIN HOLES
F3	GROUT HOLES
F2	(4) 1–1/16" DIAMETER ANCHOR BOLT HOLES, USE
	5/8" X 6" BOLTS MINIMUM.
F1	BASEPADS, SEE NOTE 8.
E6	MAIN ELECTRICAL CONNECTION, X7W ONLY
E5	MICROPROCESSOR BOX, X7W ONLY
E4	MICROPROCESSOR CONTROL BOX
E3	MICROPROCESSOR CONTROL PANEL, X7W ONLY
E2	MICROPROCESSOR CONTROL PANEL, X7J ONLY
E1	MAIN ELECTRICAL CONNECTION, X7J ONLY
D1B	PNEUMATIC DRAIN TO REAR, 3" PIPE SOCKET JOINT
	(AZ MODELS)
D1A	ELECTRIC DRAIN TO REAR, 3" PIPE SOCKET JOINT
	(NOT AZ MODELS)
A3	CHEMICAL SUPPLY VENT
A2	VENT, 3" O.D. DIAMETER
A1	MAIN AIR, 1/4" NPT CONNECTION

NOTES

11 12"[305] MINIMUM CLEARANCE IS RECOMMENDED FOR SERVICE TO MACHINE ON SIDES NOT REQUIRING OPERATOR ACCESS. 16"[406] MINIMUM IS RECOMMENDED FOR OPERATOR ACCESS TO SOAP SUPPLY. SEE LOCAL ELECTRIC CODES FOR REQUIRED CLEARANCES.

10 STANDARD LIQUID SUPPLY INLETS COMES WITH THREE SETS OF FIVE FITTINGS. ONE SET OF 3/8" FITTINGS, ONE SET OF 1/2" FITTINGS, AND ONE SET OF PLUGS WHICH ARE SHIPPED ON MACHINE.

9 SHIM TO LEVEL THE MACHINE AND ALLOW FOR 1" [25] MINIMUM GROUT. ANCHOR ALL LABELED ANCHOR BOLT HOLES, USE 5/8" X 6" BOLTS, MINIMUM. SEE INSTALLATION MAINTENANCE MANUAL FOR FURTHER INSTRUCTIONS.

8 SHADED AREA DENOTES BASE PADS WHICH MUST BE CONTINUOUSLY SUPPORT.

7 DO NOT PRE-PIPE ANY CLOSER THAN 60 [1524].

6 AS OF THIS WRITING, THE MINIMUM CLEARANCE REQUIRED BY U.S. NATIONAL ELECTRIC CODES, FROM ELECTRIC BOX TO ANY OBJECT IS:
36 [914] IF OBJECT IS AN UNGROUNDED (INSULATED) WALL.
42 [1067] IF OBJECT IS A GROUNDED WALL (ie. BARE CONCRETE, BRICK, ETC.)
48 [1219] IF OBJECT IS ANY LIVE PART.
CHECK LOCAL ELECTRIC CODES FOR FURTHER RESTRICTIONS.

5 CUSTOMER TO SUPPLY CIRCUIT BREAKER OR FUSED BRANCH CIRCUIT DISCONNECT (SAFETY) SWITCHES WITH LAG TYPE FUSES FROM POWER SOURCE TO MACHINE. A SEPARATE GROUND WIRE MUST BE CONNECTED FROM DISCONNECT TO EQUIPMENT.

4 BASELINE "Z" IS THE SAME FOR ALL MILNOR MACHINES AND IS SHOWN ON ALL DIMENSIONAL DRAWINGS. THE DISTANCE BETWEEN BASLINE "Z" AND THE FINISHED FLOR MAY VARY (WITH CHANGES IN FLOOR HEIGHT) AS REQUIRED TO INSURE THAT BASELINE "Z" IS HORIZONTAL AND ALL COMPONENTS REQUIRING GROUT ARE SET ON A MINIMUM 1"[25] THICK GROUT BED.

3 USE REFERENCE LINES "X", "Y", AND "Z" TO LOCATE ALL SERVICE CONNECTIONS.

2 NUMBERS IN BRACKETS [] DENOTE DIMENSIONS IN MILLIMETERS.

1 ALL DIMENSIONS SHOWN ARE APPROXIMATE, SUBJECT TO NORMAL MANUFACTURING TOLERANCES, AND TO OCCASIONAL CHANGES WITHOUT NOTICE THROUGH REDESIGN AND/OR RELOCATION OF COMPONENTS, ETC. DO NOT USE FOR CONSTRUCTION UNLESS CERTIFIED, AND IN NO EVENT PRE-PIPE CLOSER THAN FIVE FEET FROM MACHINE. FACTORY MUST BE CONSULTED FOR DIMENSIONS IF MACHINE IS TO BE MOVED THROUGH NARROW OR LOW CORRIDORS OR OPENINGS.

ATTENTION

MOST REGULATORY AUTHORITIES (INCLUDING OSHA IN THE USA) HOLD THE OWNER/USER ULTIMATELY RESPONSIBLE TO MAINTAIN A SAFE WORKING ENVIRONMENT. ACCORDINGLY, THE OWNER/USER MUST RECOGNIZE ALL FORESEEABLE SAFETY HAZARDS, FURNISH SAFETY INSTRUCTIONS AND GUIDANCE TO ALL PERSONNEL WHO MAY COME IN CONTACT WITH THE INSTALLATION, AND PROVIDE ALL NECESSARY ADDITIONAL SAFETY GUARDS, FENCES, RESTRAINTS, DEVICES, ETC., NOT FURNISHED BY THE EQUIPMENT MANUFACTURER OR VENDOR.

ATTENTION

THE FLOOR AND/OR OTHER SUPPORT COMPONENTS MUST HAVE SUFFICIENT STRENGTH (AND RIGIDITY WITH DUE CONSIDERATION FOR NATURAL OR RESONANT FREQUENCY THEREOF) TO WITHSTAND THE FULLY LOADED WEIGHT OF THE MACHINE INCLUDING THE GOODS, THE WATER, AND ANY REPEATED SINUSOIDAL (ROTATING) FORCES GENERATED DURING ITS OPERATION. WRITE THE FACTORY FOR ADDITIONAL MACHINE DATA FOR USE BY A COMPETENT SOIL AND/OR STRUCTURAL ENGINEER.

4226X7J,X7W

DM 0 0.5M 1M
INCHES 0 12 24 36

DWG# BD4226X7BE
2012365D

PELLERIN MILNOR CORPORATION
P.O. Box 400 Kenner, LA 70063, USA, Phone 504/467-9591,
FAX 504/469-1849, Email: mktg@milnor.com

NOTES !!
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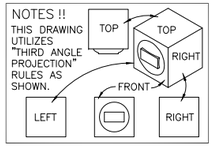
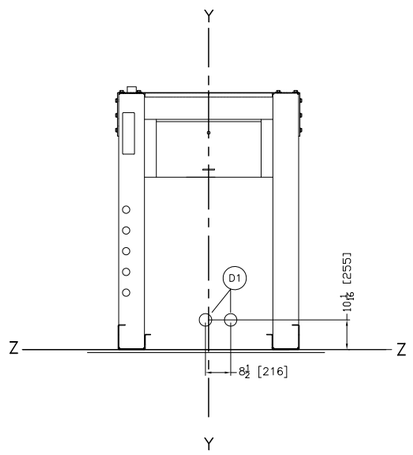
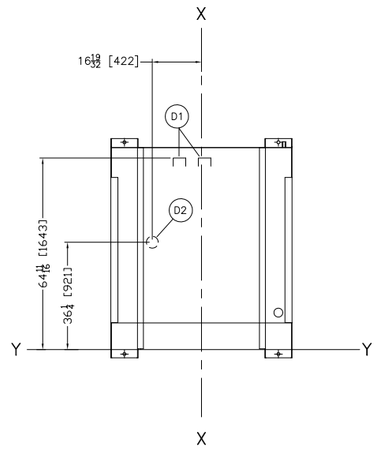
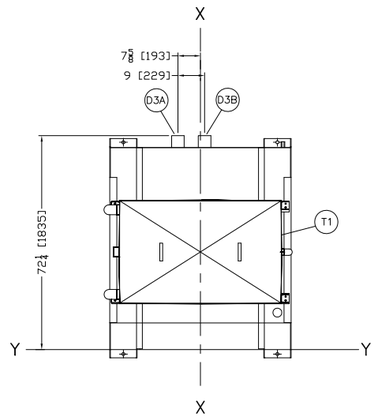




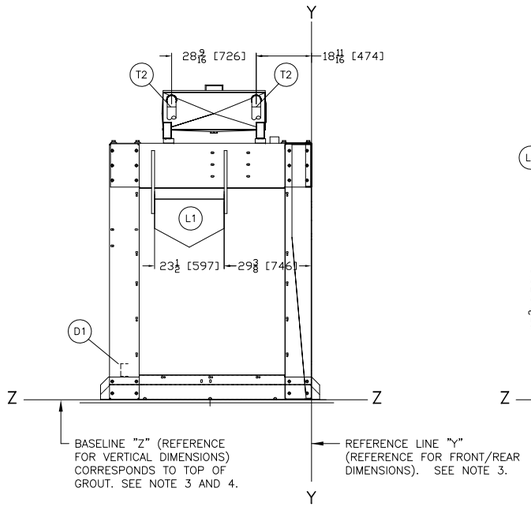
REAR VIEW



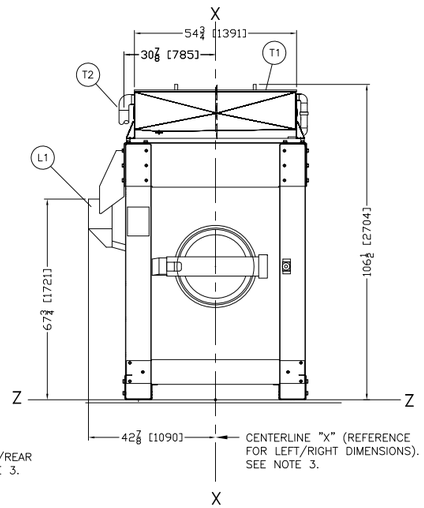
PLAN VIEW



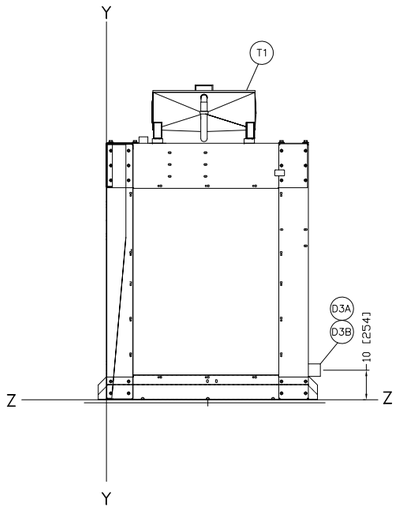
PLAN VIEW
RECIRCULATION



LEFT VIEW



FRONT VIEW



RIGHT VIEW

ITEM	LEGEND
T2	REUSE TANK OVERFLOW TO SEWER, 3"ID HOSE TO
	SEWER PROVIDED, X7W MODEL ONLY
T1	OPTIONAL REUSE TANK, X7W MODEL ONLY
D3B	DUAL DRAINS FOR RECIRCULATION, DRAIN TO REUSE, 3" PIPE
	SOCKET JOINT, X7W MODEL ONLY
D3A	DUAL DRAINS FOR RECIRCULATION, DRAIN TO SEWER, 3" PIPE
	SOCKET JOINT, X7W MODEL ONLY
D2	OPTIONAL SINGLE DRAIN DOWN, 3" PIPE SOCKET JOINT
	CONNECTION
D1	OPTIONAL DUAL DRAIN, 3" PIPE SOCKET JOINT CONNECTIONS
L1	5 COMPARTMENT SUPPLY

NOTES

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48 [1219] IF OBJECT IS ANY LIVE PART.
CHECK LOCAL ELECTRIC CODES FOR FURTHER RESTRICTIONS.

5 CUSTOMER TO SUPPLY CIRCUIT BREAKER OR FUSED BRANCH CIRCUIT DISCONNECT (SAFETY) SWITCHES WITH LAG TYPE FUSES FROM POWER SOURCE TO MACHINE. A SEPARATE GROUND WIRE MUST BE CONNECTED FROM DISCONNECT TO EQUIPMENT.

4 BASELINE "Z" IS THE REFERENCE FOR ALL VERTICAL DIMENSIONS. ON MACHINES WITH WITH FIXED BASE PADS, BASELINE "Z" CORRESPONDS TO THE BOTTOM OF THE BASE PAD. ON MACHINES WITH ADJUSTABLE FEET, BASELINE "Z" CORRESPONDS TO THE BOTTOM OF THE FEET WHEN ADJUSTED SO THAT THE MACHINE IS AT ITS MINIMUM ACCEPTABLE HEIGHT. ON TRAVERSING SHUTTLES, BASELINE "Z" CORRESPONDS TO THE BOTTOM OF THE BOTTOM RAIL. THE DISTANCE BETWEEN BASELINE "Z" AND THE FINISHED FLOOR WILL VARY AS REQUIRED TO ENSURE BASELINE "Z" IS HORIZONTAL AND ANY INTERFACING MACHINES REQUIRING GROUT ARE SET ON A MINIMUM 1"[25] THICK GROUT BED.

3 USE REFERENCE LINES "X", "Y", AND "Z" TO LOCATE ALL SERVICE CONNECTIONS.

2 NUMBERS IN BRACKETS [] DENOTE DIMENSIONS IN MILLIMETERS.

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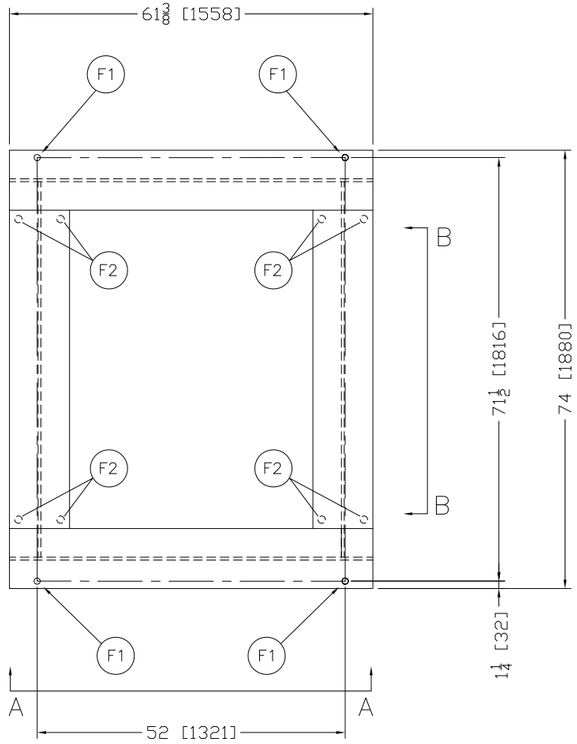
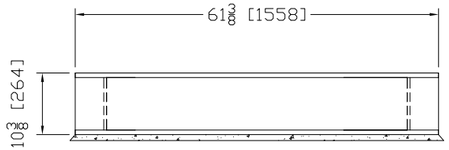
4226X7J, X7W OPTIONS

DM 0 0.5M 1M
INCHES 0 12 24 36

DWG# BD4226X7BB
2012264D

PELLERIN MILNOR CORPORATION
P.O. Box 400 Kenner, LA 70063, USA, Phone 504/467-9591,
FAX 504/469-1849, Email: mktg@milnor.com





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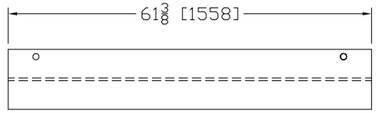
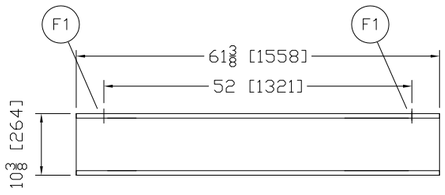
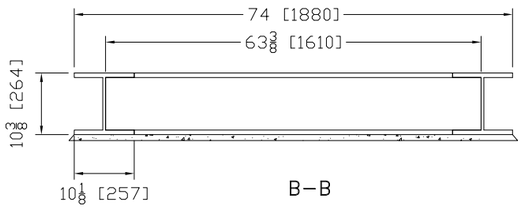


(FOR HOLES IN P1, SEE ASSEMBLED PLAN)

P1: PLAN VIEW



P1: SIDE VIEW



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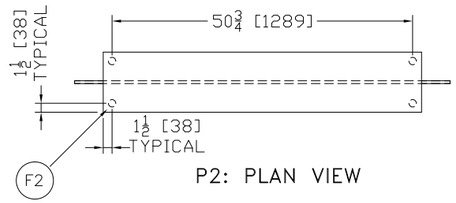
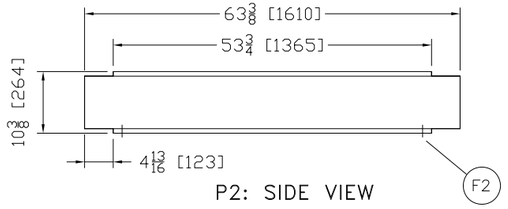
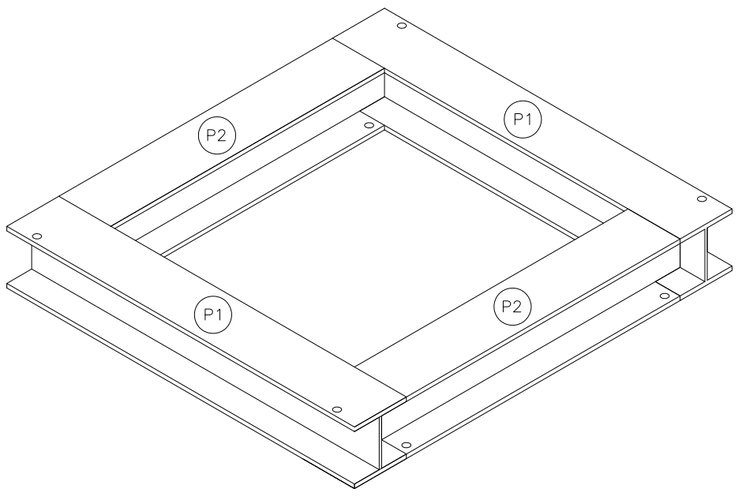


P2: PLAN VIEW

(HOLES IN P2 BOTTOM FLANGE ONLY)



P2: SIDE VIEW



W10x68
RECOMMENDED

ITEM	LEGEND
F2	1 1/4" [32] GROUT HOLES, PEDESTAL BOTTOM FLANGE
	TO TOP OF GROUT
F1	1 1/4"[32] ANCHOR BOLT HOLES, PEDESTAL TOP FLANGE
	TO MACHINE

NOTES

5 THIS DRAWING SHOWS THE PEDESTAL DESIGN FOR MILNOR 42032F7J/F7P, F7W MACHINES. THIS BASE MAY BE USED WHENEVER LOCAL CONDITIONS ARE SUCH THAT MACHINE OPERATION WOULD BE ENHANCED BY RAISING THE MACHINE SETTING 10 3/8" [264] INCHES.

4 IF MACHINE IS TO BE BOLTED TO PEDESTAL BASE, BOLT HOLES IN PEDESTAL TOP FLANGE SHOULD BE LOCATED AND DRILLED ONLY AFTER MACHINE IS ON SITE AND CAN BE USED AS A TEMPLATE FOR BOLT HOLE LOCATIONS. IF BASE IS TO BE BOLTED TO FOUNDATION, CUSTOMER MUST DETERMINE LOCATION OF BOLT HOLES IN BOTTOM FRAME.

3 WHEN INSTALLING MACHINE AND PEDESTAL BASE, IT IS RECOMMENDED TO LAY THE PEDESTAL ON A MINIMUM 1 [25] THICK GROUT BED AND BOLT THE MACHINE TO IT. ALTERNATELY, THE MACHINE MAY BE WELDED TO THE BASE, PROVIDED IT IS SHIMMED AS REQUIRED TO INSURE THERE IS NO DISTORATION OF THE MACHINE BASE PLATES OR FRAME.

2 THIS BASE MUST BE FABRICATED LOCALLY AND SHOULD BE MADE SQUARE AND LEVEL. IT IS NOT SUPPLIED BY PELLERIN MILNOR CORP. THIS DRAWING CONVEYS NO EXPRESS OR IMPLIED WARRANTY WITH REGARD TO THE CONSTRUCTION AND/OR SUITABILITY OF THIS ASSEMBLY.

1 NUMBERS IN BRACKETS [ ] DENOTE DIMENSIONS IN MILLIMETERS.

ATTENTION

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PEDESTAL BASE 4226X7J,X7W

SCALE: 1" = 1'–0"

DWG# BD4226BASE 2012365D

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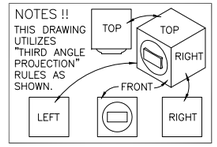
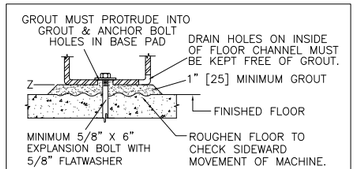
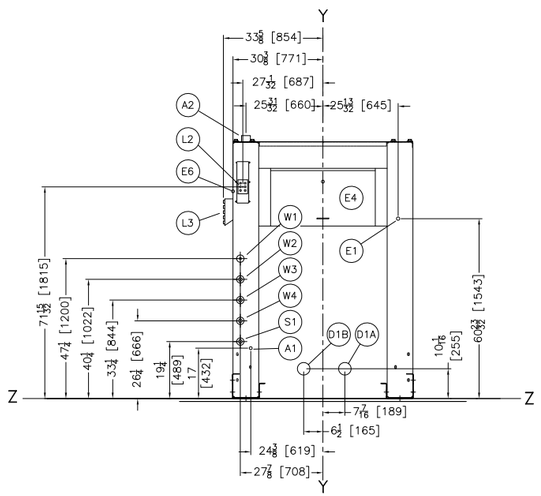
NOTES !!
THIS DRAWING UTILIZES "THIRD ANGLE PROJECTION" RULES AS SHOWN.

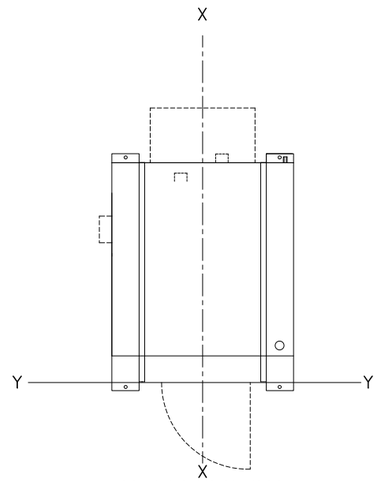




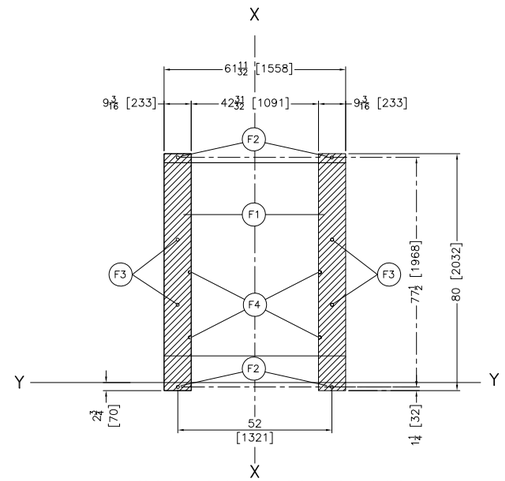
INSTALLATION DETAIL



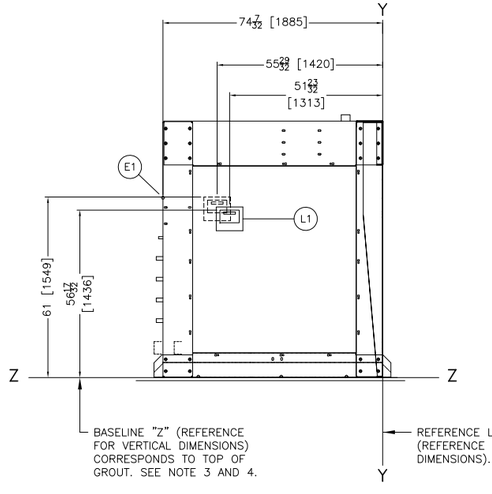
REAR VIEW



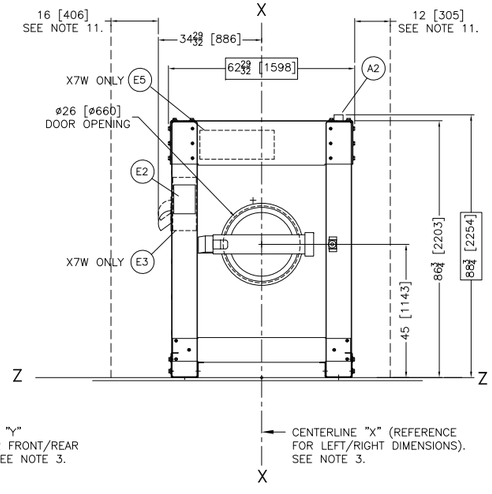
PLAN VIEW



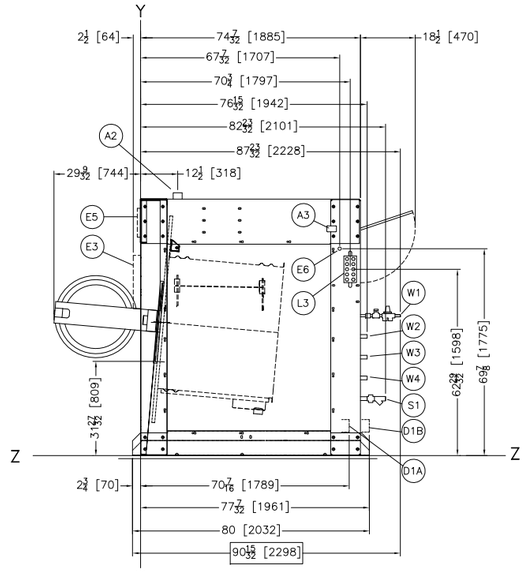
FOUNDATION PLAN



LEFT VIEW



FRONT VIEW



RIGHT VIEW

ITEM	LEGEND
W4	OPTIONAL THIRD (REUSE) WATER INLET, 1-1/4" NPT
	CONNECTION
W3	COLD WATER INLET, 1-1/4" NPT CONNECTION
W2	HOT WATER INLET, 1-1/4" NPT CONNECTION
W1	HOT WATER FOR SUPPLY, 3/4" NPT CONNECTION, PRESSURE
	REGULATOR ASSEMBLY, REMOVED FOR SHIPPING, MUST BE
	ADDED AT INSTALLATION.
S1	OPTIONAL STEAM INLET, 3/4" NPT CONNECTION, Y-STRAINER,
	REMOVED FOR SHIPPING, MUST BE ADDED AT INSTALLATION.
L3	ADDITIONAL LIQUID SUPPLY INLETS FOR 15 PORT PERISTALTIC
	X7W MODELS ONLY.
L2	STANDARD LIQUID SUPPLY INLETS, SEE NOTE 10.
L1	STANDARD SOAP CHUTE
F4	DRAIN HOLES
F3	GROUT HOLES
F2	(4) 1-1/16" DIAMETER ANCHOR BOLT HOLES, USE
	5/8" X 6" BOLTS MINIMUM.
F1	BASEPADS, SEE NOTE 8.
E6	MAIN ELECTRICAL CONNECTION, X7W ONLY
E5	MICROPROCESSOR BOX, X7W ONLY
E4	MICROPROCESSOR CONTROL BOX
E3	MICROPROCESSOR CONTROL PANEL, X7W ONLY
E2	MICROPROCESSOR CONTROL PANEL, X7J ONLY
E1	MAIN ELECTRICAL CONNECTION, X7J ONLY
D1B	PNEUMATIC DRAIN TO REAR, 3" PIPE SOCKET JOINT
	(AZ MODELS)
D1A	ELECTRIC DRAIN TO REAR, 3" PIPE SOCKET JOINT
	(NOT AZ MODELS)
A3	CHEMICAL SUPPLY VENT
A2	VENT, 3" O.D. DIAMETER
A1	MAIN AIR, 1/4" NPT CONNECTION

NOTES

11 12"[305] MINIMUM CLEARANCE IS RECOMMENDED FOR SERVICE TO MACHINE ON SIDES NOT REQUIRING OPERATOR ACCESS. 16"[406] MINIMUM IS RECOMMENDED FOR OPERATOR ACCESS TO SOAP SUPPLY. SEE LOCAL ELECTRIC CODES FOR REQUIRED CLEARANCES.

10 STANDARD LIQUID SUPPLY INLETS COMES WITH THREE SETS OF FIVE FITTINGS, ONE SET OF 3/8" FITTINGS, ONE SET OF 1/2" FITTINGS, AND ONE SET OF PLUGS WHICH ARE SHIPPED ON MACHINE.

9 SHIM TO LEVEL THE MACHINE AND ALLOW FOR 1" [25] MINIMUM GROUT. ANCHOR ALL LABELED ANCHOR BOLT HOLES, USE 5/8" X 6" BOLTS, MINIMUM. SEE INSTALLATION MAINTENANCE MANUAL FOR FURTHER INSTRUCTIONS.

8 SHADED AREA DENOTES BASE PADS WHICH MUST BE CONTINUOUSLY SUPPORT.

7 DO NOT PRE-PIPE ANY CLOSER THAN 60 [1524].

6 AS OF THIS WRITING, THE MINIMUM CLEARANCE REQUIRED BY U.S. NATIONAL ELECTRIC CODES, FROM ELECTRIC BOX TO ANY OBJECT IS:
36 [914] IF OBJECT IS AN UNGROUNDED (INSULATED) WALL.
42 [1067] IF OBJECT IS A GROUNDED WALL (ie. BARE CONCRETE, BRICK, ETC.)
48 [1219] IF OBJECT IS ANY LIVE PART.
CHECK LOCAL ELECTRIC CODES FOR FURTHER RESTRICTIONS.

5 CUSTOMER TO SUPPLY CIRCUIT BREAKER OR FUSED BRANCH CIRCUIT DISCONNECT (SAFETY) SWITCHES WITH LAG TYPE FUSES FROM POWER SOURCE TO MACHINE. A SEPARATE GROUND WIRE MUST BE CONNECTED FROM DISCONNECT TO EQUIPMENT.

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3 USE REFERENCE LINES "X", "Y", AND "Z" TO LOCATE ALL SERVICE CONNECTIONS.

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4232X7J,X7W

DM 0 0.5M 1M
INCHES 0 12 24 36

DWG# BD4232X7BE 2012365D

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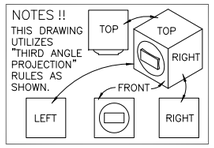
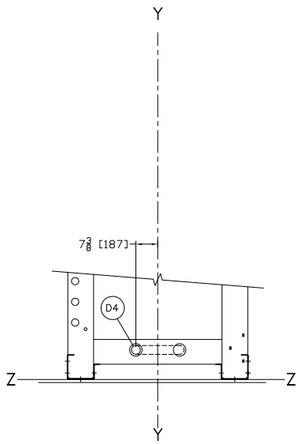
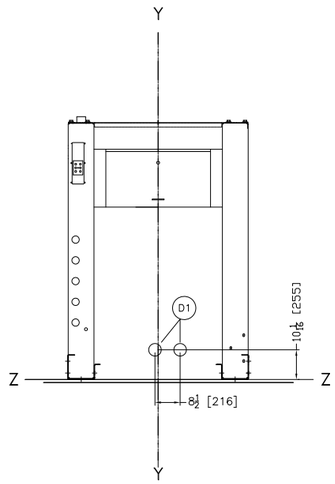
FAX 504/469-1849, Email: mktg@milnor.com

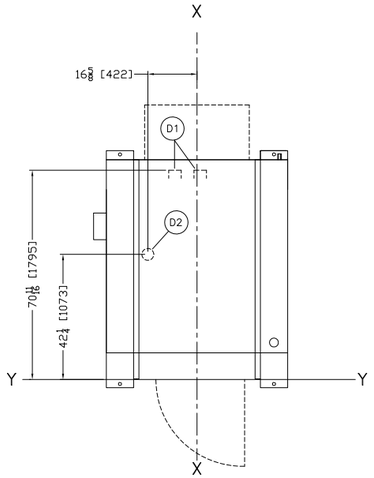




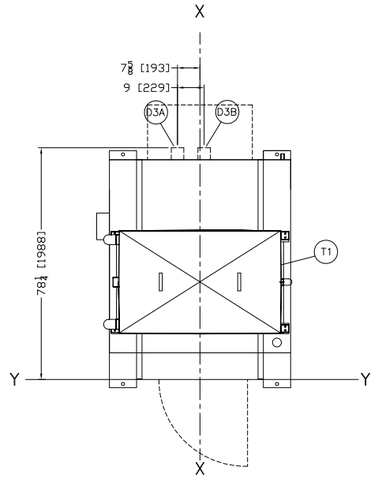
PARTIAL REAR VIEW



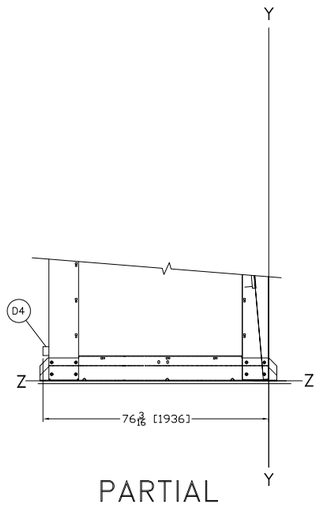
REAR VIEW



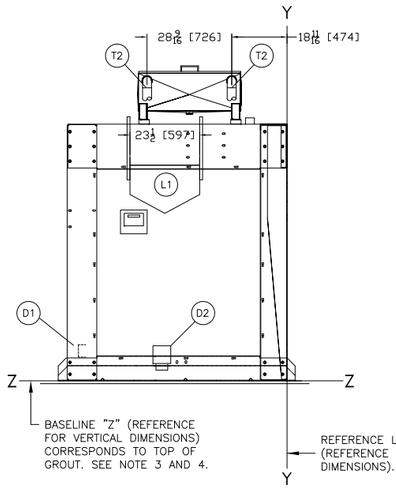
PLAN VIEW



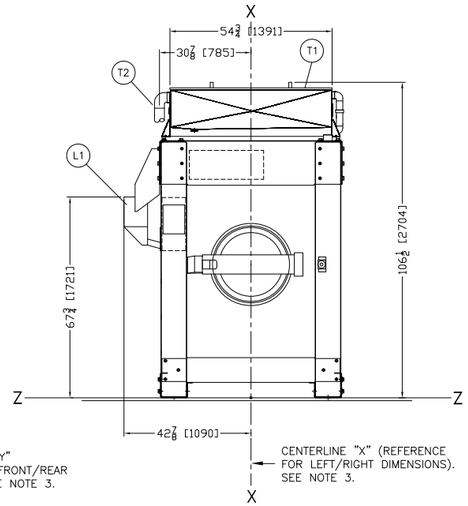
PLAN VIEW RECIRCULATION



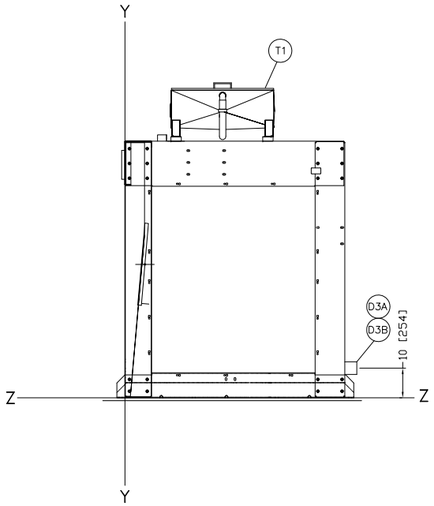
PARTIAL LEFT VIEW



LEFT VIEW



FRONT VIEW



RIGHT VIEW

T2	REUSE TANK OVERFLOW TO SEWER, 3"ID HOSE TO
	SEWER PROVIDED, X7W MODEL ONLY
T1	OPTIONAL REUSE TANK, X7W MODEL ONLY
D4	OPTIONAL SINGLE AIR-OPERATED DRAIN, 3" PIPE SOCKET
	JOINT CONNECTION
D3B	DUAL DRAINS FOR RECIRCULATION, DRAIN TO REUSE, 3" PIPE
	SOCKET JOINT, X7W MODEL ONLY
D3A	DUAL DRAINS FOR RECIRCULATION, DRAIN TO SEWER, 3" PIPE
	SOCKET JOINT, X7W MODEL ONLY
D2	OPTIONAL SINGLE DRAIN DOWN, 3" PIPE SOCKET JOINT
	CONNECTION
D1	OPTIONAL DUAL DRAIN, 3" PIPE SOCKET JOINT CONNECTIONS
L1	5 COMPARTMENT SUPPLY
ITEM	LEGEND

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OPTIONS 4232X7J,X7W

DM 0 0.5M 1M
INCHES 0 12 24 36

DWG# BD4232X7BB 2012264D

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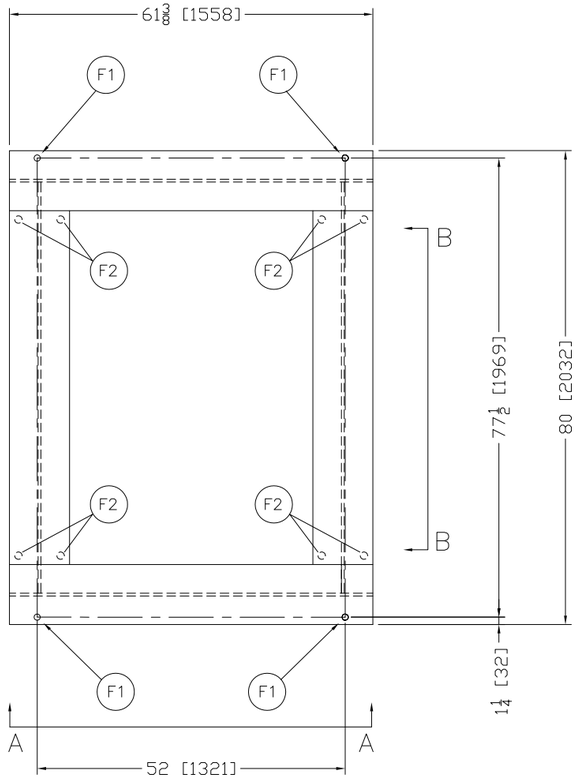

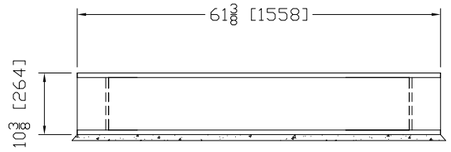

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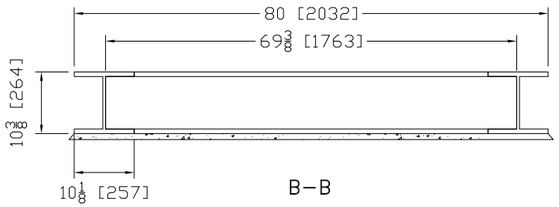

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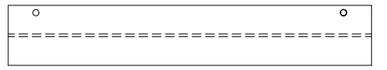
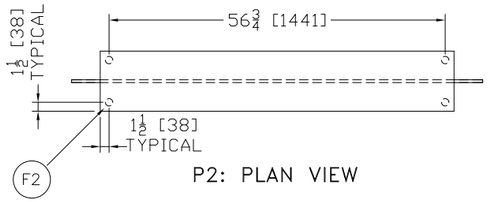


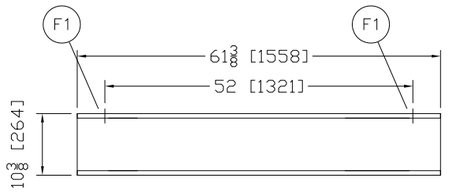
(FOR HOLES IN P1, SEE ASSEMBLED PLAN)

P1: PLAN VIEW

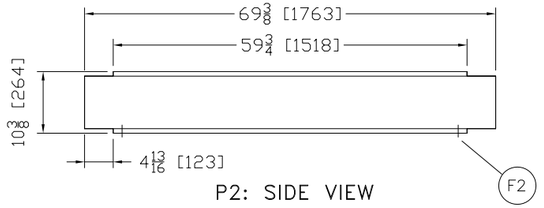


P2: PLAN VIEW

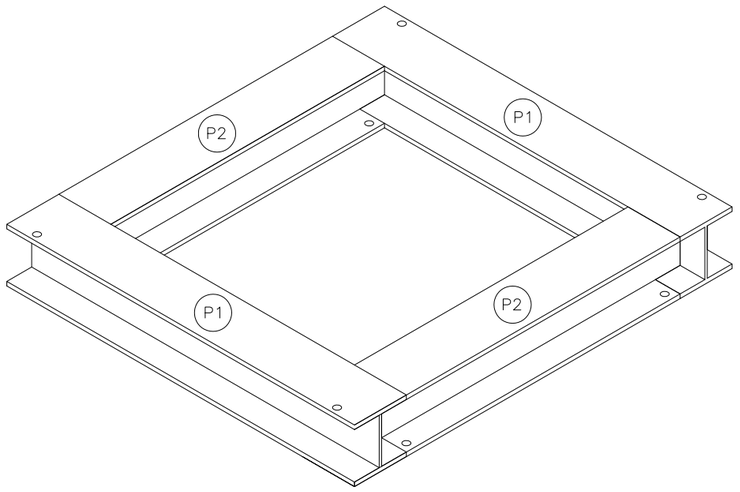
(HOLES IN P2 BOTTOM FLANGE ONLY)



P1: SIDE VIEW



P2: SIDE VIEW



W10x68
RECOMMENDED

ITEM	LEGEND
F2	1 1/4" [32] GROUT HOLES, PEDESTAL BOTTOM FLANGE TO TOP OF GROUT
F1	1 1/4"[32] ANCHOR BOLT HOLES, PEDESTAL TOP FLANGE TO MACHINE

NOTES

5 THIS DRAWING SHOWS THE PEDESTAL DESIGN FOR MILNOR 42032F7J/F7P, F7W MACHINES. THIS BASE MAY BE USED WHENEVER LOCAL CONDITIONS ARE SUCH THAT MACHINE OPERATION WOULD BE ENHANCED BY RAISING THE MACHINE SETTING TO 3/8" [264] INCHES.

4 IF MACHINE IS TO BE BOLTED TO PEDESTAL BASE, BOLT HOLES IN PEDESTAL TOP FLANGE SHOULD BE LOCATED AND DRILLED ONLY AFTER MACHINE IS ON SITE AND CAN BE USED AS A TEMPLATE FOR BOLT HOLE LOCATIONS. IF BASE IS TO BE BOLTED TO FOUNDATION, CUSTOMER MUST DETERMINE LOCATION OF BOLT HOLES IN BOTTOM FRAME.

3 WHEN INSTALLING MACHINE AND PEDESTAL BASE, IT IS RECOMMENDED TO LAY THE PEDESTAL ON A MINIMUM 1 [25] THICK GROUT BED AND BOLT THE MACHINE TO IT. ALTERNATELY, THE MACHINE MAY BE WELDED TO THE BASE, PROVIDED IT IS SHIMMED AS REQUIRED TO INSURE THERE IS NO DISTORATION OF THE MACHINE BASE PLATES OR FRAME.

2 THIS BASE MUST BE FABRICATED LOCALLY AND SHOULD BE MADE SQUARE AND LEVEL. IT IS NOT SUPPLIED BY PELLERIN MILNOR CORP. THIS DRAWING CONVEYS NO EXPRESS OR IMPLIED WARRANTY WITH REGARD TO THE CONSTRUCTION AND/OR SUITABILITY OF THIS ASSEMBLY.

1 NUMBERS IN BRACKETS [ ] DENOTE DIMENSIONS IN MILLIMETERS.

ATTENTION

MOST REGULATORY AUTHORITIES (INCLUDING OSHA IN THE USA) HOLD THE OWNER/USER ULTIMATELY RESPONSIBLE TO MAINTAIN A SAFE WORKING ENVIRONMENT. ACCORDINGLY, THE OWNER/USER MUST RECOGNIZE ALL FORESEEABLE SAFETY HAZARDS, FURNISH SAFETY INSTRUCTIONS AND GUIDANCE TO ALL PERSONNEL WHO MAY COME IN CONTACT WITH THE INSTALLATION, AND PROVIDE ALL NECESSARY ADDITIONAL SAFETY GUARDS, FENCES, RESTRAINTS, DEVICES, ETC., NOT FURNISHED BY THE EQUIPMENT MANUFACTURER OR VENDOR.

ATTENTION

THE FLOOR AND/OR OTHER SUPPORT COMPONENTS MUST HAVE SUFFICIENT STRENGTH (AND RIGIDITY WITH DUE CONSIDERATION FOR NATURAL OR RESONANT FREQUENCY THEREOF) TO WITHSTAND THE FULLY LOADED WEIGHT OF THE MACHINE INCLUDING THE GOODS, THE WATER, AND ANY REPEATED SINUSOIDAL (ROTATING) FORCES GENERATED DURING ITS OPERATION. WRITE THE FACTORY FOR ADDITIONAL MACHINE DATA FOR USE BY A COMPETENT SOIL AND/OR STRUCTURAL ENGINEER.

PEDESTAL BASE 4232X7J,X7W

SCALE: 1" = 1'–0"

DWG# BD4232BASE 2012365D

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