



Manual Number: MCWOBM01
Edition (ECN): 2023486A

Mechanical Parts and Service

**36021 & 36026V5J,
V5Z, V7Z; 42026V5J;
42026 & 42030V6Z**



Contents

1 General Service & Safety-Related Components	5
Limited Standard Warranty	6
1.1 How to Get the Necessary Repair Components	7
1.2 Trademarks	7
1.3 Safety — Rigid Washer Extractors	8
1.3.1 Safety Alert Messages—Internal Electrical and Mechanical Hazards.....	8
1.3.2 Safety Alert Messages—Cylinder and Processing Hazards.....	8
1.3.3 Safety Alert Messages—Unsafe Conditions	10
1.3.3.1 Damage and Malfunction Hazards	10
1.3.3.1.1 Hazards Resulting from Inoperative Safety Devices.....	10
1.3.3.1.2 Hazards Resulting from Damaged Mechanical Devices	10
1.3.3.2 Careless Use Hazards	11
1.3.3.2.1 Careless Operation Hazards—Vital Information for Operator Personnel (see also operator hazards throughout manual)	11
1.3.3.2.2 Careless Servicing Hazards—Vital Information for Service Personnel (see also service hazards throughout manuals).....	11
Safety Placard Use and Placement 36021CPE, NSP, V5J, V5Z and 36026V5J, V5Z.....	14
Safety Placard Use and Placement—ISO 36021CPE, NSP, V5J, V5Z and 36026V5J, V5Z	16
Safety Placard Use and Placement 36021V7J, V7Z; 36026V7J/W, V7Z; 42026V5J; 42026V6J/W, V7Z; 42030V6J, V6Z.....	18
Safety Placard Use and Placement—ISO 36021V7J, V7Z; 36026V7J/W, V7Z; 42026V5J; 42026V6J/W, V6Z; 42030V6J, V6Z.....	20
Guards & Covers 36021V5Z, 36026V5Z.....	22
Guards & Covers 36021V7Z, 36026V7Z, 42026V5J, 42026V6Z, 42030V6Z	24
1.4 Torque Requirements for Fasteners	26
1.4.1 Torque Values	26
1.4.1.1 Fasteners Made of Carbon Steel	26
1.4.1.1.1 Without a Threadlocker	26
1.4.1.1.2 With a Threadlocker	28
1.4.1.2 Stainless Steel Fasteners	30
1.4.2 Preparation.....	31
1.4.3 How to Apply a Threadlocker	32
1.4.3.1 Blind Holes	32
1.4.3.2 Through Holes	32
2 Drive Assemblies.....	34
Drive Chart 36021V5J, 36021V5Z, 36026V5J, 36021V5Z.....	36
Drive Chart 36021V7J, 36021V7Z, 36026V7J, 36026V7Z.....	38
Drive Chart 42026V5J, 42026V6J, 42026V6Z, 42030V6J, 42030V6Z	40
2.1 Drive Pulley and Belt Maintenance	42
2.1.1 Pulley Requirements.....	42
2.1.1.1 Condition of Grooves on Pulleys	42
2.1.1.2 Pulley and Shaft Position.....	43
2.1.1.3 Keep Run-Out in Tolerance.....	44
2.1.2 Belt Requirements	45
2.1.2.1 Condition of Belts.....	45
2.1.2.2 Tension of Belts	46

2.1.3	The pulleys must stay aligned when you adjust the belt tension.....	47
2.1.4	How to Do Maintenance on Pulleys and Belts	48
2.1.4.1	Typical Steps to Replace Pulleys and Belts.....	48
2.1.4.2	Examples of Procedures Used at the Milnor® Factory to Align Pulleys	49
	Motor Mount 30015, 30022, 36021, 36026, 42026, & 42030Vxx,Txx.....	51
	Bearing Assembly 36021V5J, 36021V5Z, 36026V5J, 36026V5Z with Starplate.....	54
	Bearing Assembly 36021V7Z, 36026V7Z, 42026V5J, 42026V6Z, 42030V6Z	57
3	Cylinder & Shell.....	61
	Main Bearing, Shell, Cylinder Installation 36021V5J, 36021V5Z, 36026V5J, 36026V5Z with Starplate	62
	Main Bearing, Shell, and Cylinder Installation 36021V7Z, 36026V7Z, 42026V5J, 42026V6Z, 42030V6Z.....	67
4	20 Inch Door Assemblies after 8/2016.....	71
	20” Flat Front Door 36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z.....	72
	Door Lock Mechanisms MCR12; MCT16/18/27; MWF18/27; MWR27/36; MWT12/16/18/27; 3015/3022T6X, VRJ, V8Z, VZZ; 3022X8R; 36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z. 42030V6Z	76
	Door Handle and Lock Actuator	79
5	Chemical Supply Devices.....	82
	Peristaltic Supply Assembly 36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z.....	83
	Soap Chute 36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z.....	86
	5 Compartment Supply 36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z.....	88
6	Water & Steam	92
	Water Schematic 36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z	94
	Water Inlet Assemblies 36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z.....	96
	Steam Inlet 36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z	102
	Drain Valve 36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z	104
	3 Inch Electrical Drain Valve	106
7	Control & Sensing	108
	Temperature Probe 36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z.....	109
	Level Sensing 36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z.....	110
	7.1 Vibration Safety Switch Adjustments	112
	7.1.1 What the Vibration Safety Switch Does.....	112
	7.1.2 Adjustments.....	112
	Vibration Safety Switch	114

Figures

Figure 1	Front Covers	24
Figure 2	Rear Covers and Side Gasket.....	25
Figure 3	The Bolts in Milnor® Equipment.....	26
Figure 4	Apply Threadlocker in a Blind Hole.....	32
Figure 5	Apply Threadlocker in a Through Hole.....	33

Figure 6	Use heat for disassembly of fasteners with threadlocker	33
Figure 7	Examples of drives this instruction applies to: one or more V-belts, at- tached V-belts and tooth belts	42
Figure 8	Pulley Groove Condition	43
Figure 9	Pulley and Shaft Position.....	43
Figure 10	Run-out	44
Figure 11	Typical Pulley Assembly	45
Figure 12	Types of Belt Damage.....	46
Figure 13	A Tension Mechanism that will not Change the Angle of the Pulleys	47
Figure 14	Some Pairs of Tension Mechanisms that Can Change the Angle of the Pulleys.....	47
Figure 15	Use a straight edge, a string, or a laser to make sure that all pulleys are in the same plane.....	49
Figure 16	Use a level to make sure that the pulleys are at the same slope.	50
Figure 17	Dial indicator used to find the axial and radial run-out of a pulley.	50
Figure 18	Main Bearing Cross Section	57
Figure 19	Bearing Ports and View Reference	58
Figure 20	Cross Section of Shell, Cylinder, Bearing, and Frame	67
Figure 21	Bearing Installation.....	68
Figure 22	Door Glass Installation Steps.....	74
Figure 23	Door Handle and Lock Actuator.....	79
Figure 24	Shim Adjustment Steps.....	80
Figure 25	Supply Chute.....	88
Figure 26	Valve Manifold	89
Figure 27	Vibration Switch	113

Tables

Table 1	Trademarks	7
Table 2	Parts List—Safety Placard Use and Placement 36021CPE, NSP, V5J, V5Z and 36026V5J, V5Z.....	15
Table 3	Parts List—Safety Placard Use and Placement—ISO 36021CPE, NSP, V5J, V5Z and 36026V5J, V5Z	17
Table 4	Parts List—Safety Placard Use and Placement 36021V7J, V7Z; 36026V7J/W, V7Z; 42026V5J; 42026V6J/W, V7Z; 42030V6J, V6Z	18
Table 5	Parts List—Safety Placard Use and Placement—ISO 36021V7J, V7Z; 36026V7J/ W, V7Z; 42026V5J; 42026V6J/W, V6Z; 42030V6J, V6Z	21
Table 6	Parts List—Guards & Covers 36021V5Z, 36026V5Z.....	23
Table 7	Parts List—Guards & Covers 36021V7Z, 36026V7Z, 42026V5J, 42026V6Z, 42030V6Z	25
Table 8	Torque Values for Standard Fasteners with Maximum 5/16-inch Diameters and No Lubricant	26
Table 9	Torque Values for Standard Fasteners Larger Than 5/16-inch Diameters and No Lubricant	27
Table 10	Torque Values for Plated Fasteners with Maximum 5/16-inch Diameters and No Lubricant	27
Table 11	Torque Values for Plated Fasteners Larger Than 5/16-inch Diameters and No Lubricant	28

Table 12	Threadlocker by the Diameter of the Bolt (see below Note)	28
Table 13	Torque Values if You Apply LocTite 222	29
Table 14	Torque Values if You Apply LocTite 242	29
Table 15	Torque Values if You Apply LocTite 262	29
Table 16	Torque Values if You Apply LocTite 272 (High-Temperature)	29
Table 17	Torque Values if You Apply LocTite 277	30
Table 18	Torque Values for Stainless Steel Fasteners 5/16-inch and Smaller	30
Table 19	Torque Values for Stainless Steel Fasteners Larger Than 5/16-inch	31
Table 20	Parts List—Drive Chart 36021V5J, 36021V5Z, 36026V5J, 36021V5Z	37
Table 21	Parts List—Drive Chart 36021V7J, 36021V7Z, 36026V7J, 36026V7Z	39
Table 22	Parts List—Drive Chart 42026V5J, 42026V6J, 42026V6Z, 42030V6J, 42030V6Z	41
Table 23	Typical Tools for Pulley and Belt Maintenance	48
Table 24	Parts List—Motor Mount 30015, 30022, 36021, 36026, 42026, & 42030Vxx,Txx	53
Table 25	Parts List—Bearing Assembly 36021V5J, 36021V5Z, 36026V5J, 36026V5Z with Starplate.....	55
Table 26	Parts List—Bearing Assembly 36V7Z, 42V5J, 42V6Z 36021V7Z, 36026V7Z, 42026V5J, 42026V6Z, 42030V6Z	58
Table 27	Parts List—Main Bearing, Shell, Cylinder Installation 36021V5J, 36021V5Z, 36026V5J, 36026V5Z with Starplate	65
Table 28	Parts List—Main Bearing, Shell, & Cylinder Installation 36021V7Z, 36026V7Z, 42026V5J, 42026V6Z, 42030V6Z	68
Table 29	Parts List—20” Flat Front Door 36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z.....	75
Table 30	Parts List—Door Lock Mechanisms MCR12; MCT16/18/27; MWF18/27; MWR27/36; MWT12/16/18/27; 3015/3022T6X, VRJ, V8Z, VZZ; 3022X8R; 36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z. 42030V6Z	78
Table 31	Parts List—Door Handle and Lock Actuator	81
Table 32	Parts List—Peristaltic Supply Assembly 36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z.....	85
Table 33	Parts List—Soap Chute 36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z	86
Table 34	Parts List—5 Compartment Supply 36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z.....	89
Table 35	Parts List—Water Schematic 36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z	95
Table 36	Parts List—Water Inlet Assemblies 36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z.....	99
Table 37	Parts List—Steam Inlet 36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z	103
Table 38	Parts List—Drain Valve 36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z	105
Table 39	Parts List—3 Inch Electrical Drain Valve	107
Table 40	Parts List—Temperature Probe 36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z.....	109
Table 41	Parts List—Level Sensing 36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z	111
Table 42	Effect of Tripping Vibration Safety Switch	112
Table 43	Parts List—Vibration Safety Switch	114

1 General Service & Safety-Related Components

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, EX Factory (labor and freight specifically NOT included). 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, NEGLIGENCE, 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.

BMP720097/19036

BNUUUM01 / 2019342

BNUUUM01 0000250121 I.2 1/2/20, 2:14 PM Released

1.1 How to Get the Necessary Repair Components

BNUUUM01.C01 0000250120 A.3 B.3 I.2 1/2/20, 2:14 PM Released

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: 504-712-7775

Fax: 504-469-9777

Email: parts@milnor.com

BNUUUU02 / 2023296

BNUUUU02 0000158094 I.2 7/20/23, 10:58 AM Released

1.2 Trademarks

BNUUUU02.R01 0000158093 G.2 F.2 I.2 7/20/23, 10:57 AM Released

These words are trademarks of Pellerin Milnor® Corporation and other entities:

Table 1. Trademarks

AutoSpot™	GreenFlex™	MilMetrix®	PulseFlow®
CBW®	GearTrace™	MilTouch™	RAM Command™
Drynet™	GreenTurn™	MilTouch-EX™	RecircONE®
E-P Express®	Hydro-cushion™	MilRAIL®	RinSave®
E-P OneTouch®	Mentor®	Miltrac™	SmoothCoil™

Table 1 Trademarks (cont'd.)

E-P Plus®	Mildata®	MilVision™	Staph Guard®
Gear Guardian®	Milnor®	PBW™	

BNWRUS08 / 2019335 BNWRUS08 0000249979 I.2 1/2/20, 2:19 PM Released

1.3 Safety — Rigid Washer Extractors

BNWRUS08.C01 0000249978 A.3 B.3 I.2 1/2/20, 2:19 PM Released

1.3.1 Safety Alert Messages—Internal Electrical and Mechanical Hazards

BNWRUS01.C03 0000234538 B.3 A.6 I.2 1/2/20, 2:19 PM Released

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



WARNING: 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: 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.

1.3.2 Safety Alert Messages—Cylinder and Processing Hazards

BNWRUS03.C03 0000234586 A.4 B.3 I.2 1/2/20, 2:19 PM Released

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



DANGER: 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.
- ▶ 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: 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.



WARNING: 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: 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.

1.3.3 Safety Alert Messages—Unsafe Conditions

BNWRUS04.C01 0000234585 A.3 B.3 I.2 1/2/20, 2:19 PM Released

1.3.3.1 Damage and Malfunction Hazards

BNWRUS04.C02 0000234584 A.3 B.3 I.2 1/2/20, 2:19 PM Released

1.3.3.1.1 Hazards Resulting from Inoperative Safety Devices

BNWRUS04.C03 0000234583 B.3 B.4 I.2 1/2/20, 2:19 PM Released



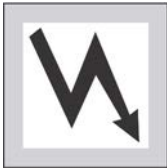
DANGER: Entangle and Sever Hazards — Cylinder door interlock— Operating the machine with a malfunctioning door interlock can permit opening the door when the cylinder is turning and/or starting the cycle with the door open, exposing the turning cylinder.

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



WARNING: 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: Electrocutation 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: 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.

1.3.3.1.2 Hazards Resulting from Damaged Mechanical Devices

BNWRUS04.C04 0000234652 B.2 B.3 I.2 1/2/20, 2:19 PM Released



WARNING: 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: 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: 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

1.3.3.2 Careless Use Hazards

BNWRUS04.C05 0000234651 A.2 B.3 I.2 1/2/20, 2:19 PM Released

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

BNWRUS04.C06 0000234650 A.3 B.3 I.2 1/2/20, 2:19 PM Released

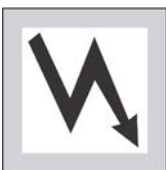


WARNING: Multiple Hazards — Careless operator actions can kill or injure personnel, damage or destroy the machine, damage property, and/or void the warranty.

- ▶ 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.

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

BNWRUS04.C07 0000234649 A.3 B.3 I.2 1/2/20, 2:19 PM Released




WARNING: 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: 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: 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.

This page intentionally blank

BPWOBM01 / 2019415

BPWOBM01.1 0000257113 A.5 1.2 1/2/20, 2:25 PM Released

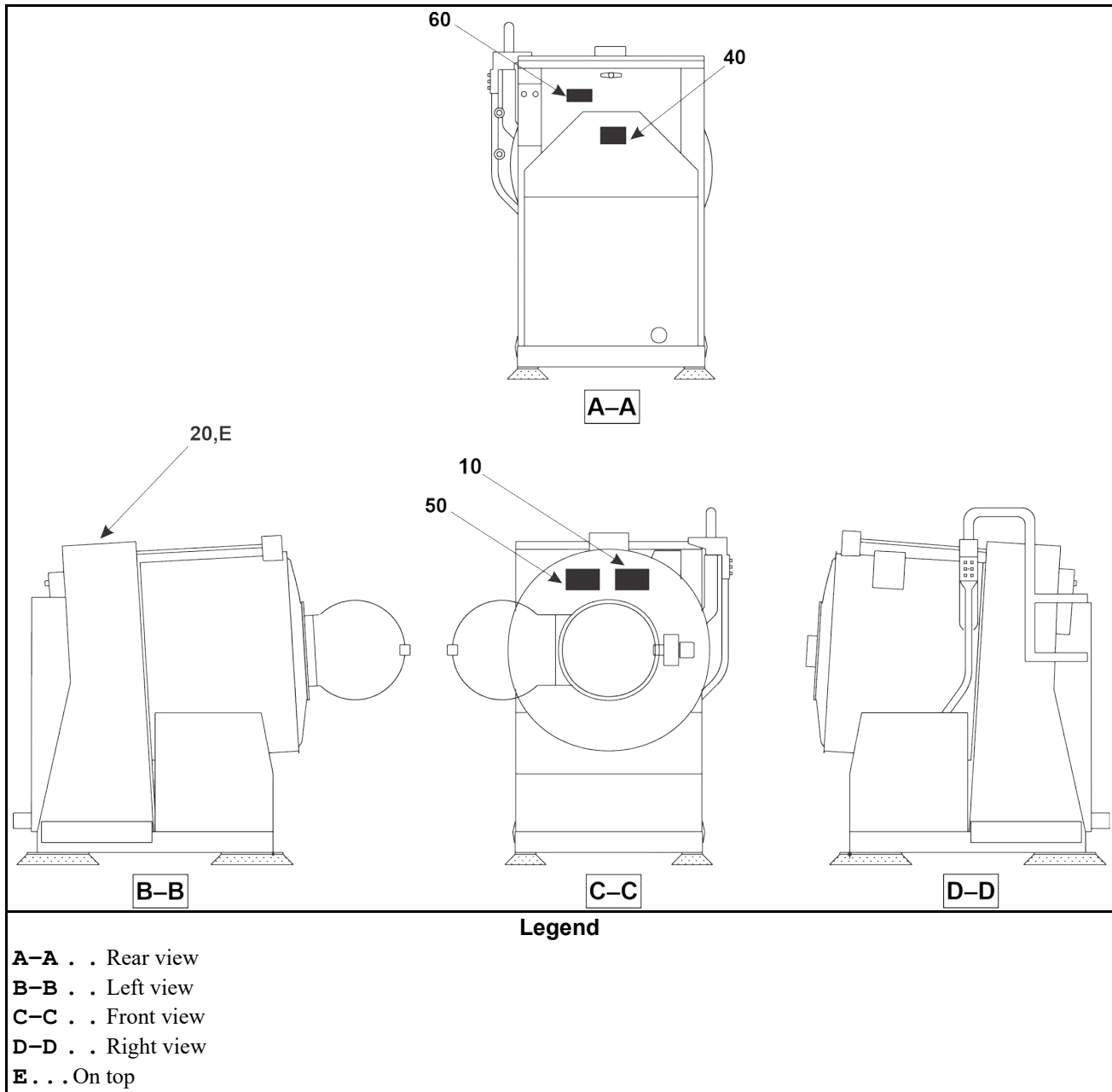
Safety Placard Use and Placement

2 Sheets

36021CPE, NSP, V5J, V5Z and 36026V5J, V5Z



NOTICE: Replace placard immediately, if removed or unreadable. Approximate locations of placards are shown. If aluminum placard, mounting holes are provided on machine. Use #8 self-tapping screws.



Safety Placard Use and Placement

2 Sheets

36021CPE, NSP, V5J, V5Z and 36026V5J, V5Z

Table 2. Parts List—Safety Placard Use and Placement

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	10	01 10635A	NPLT:SHELL FRONT RIDGID-TCATA	
all	20	01 10375B	NPLT:ELEC HAZARD SMALL-TCATA	
all	40	01 10689A	NPLT:BELT HAZARD SM TCATA	
all	50	01 10699A	NPLT:SERV HZRD-PLYEST-TCATA	
all	60	01 10377A	NPLT:ELEC HAZARD LG-TCATA	

Safety Placard Use and Placement—ISO

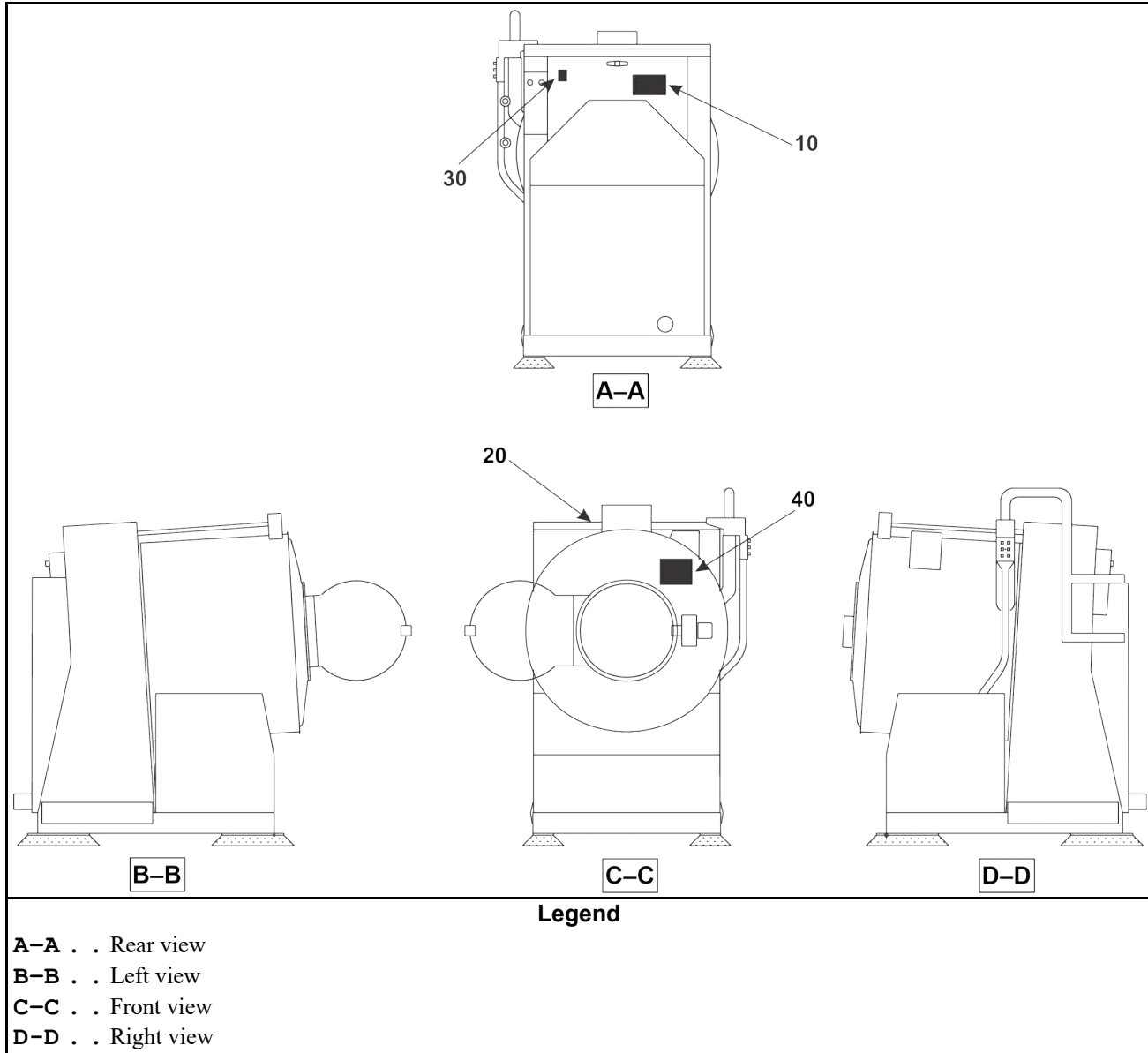
2 Sheets

36021CPE, NSP, V5J, V5Z and 36026V5J, V5Z

ISO Placards are shown on this page.



NOTICE: Replace placard immediately, if removed or unreadable. Approximate locations of placards are shown. If aluminum placard, mounting holes are provided on machine. Use #8 self-tapping screws.



Safety Placard Use and Placement—ISO

2 Sheets

36021CPE, NSP, V5J, V5Z and 36026V5J, V5Z

Table 3. Parts List—Safety Placard Use and Placement—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
Reference Assemblies				
none				
Components				
all	10	01 10632X	NPLT:WE1 RIGID WARNINGS FR	
all	20	01 10375	NPLTE:"WARNING" 2X2	
all	30	01 10377	NPLTE:"WARNING" 4X4	
all	40	01 10632Y	NPLT:WE1 RIGID WARNINGS POLY	

BPWOCM03 / 2023172A

BPWOCM03.1 0000257932 D.3 I.2 4/26/23, 3:53 PM Released

Safety Placard Use and Placement

2 Sheet

36021V7J, V7Z; 36026V7J/W, V7Z; 42026V5J; 42026V6J/W, V7Z; 42030V6J, V6Z



NOTICE: Replace placard immediately, if removed or unreadable. Approximate locations of placards are shown. If aluminum placard, mounting holes are provided on machine. Use #8 self-tapping screws.

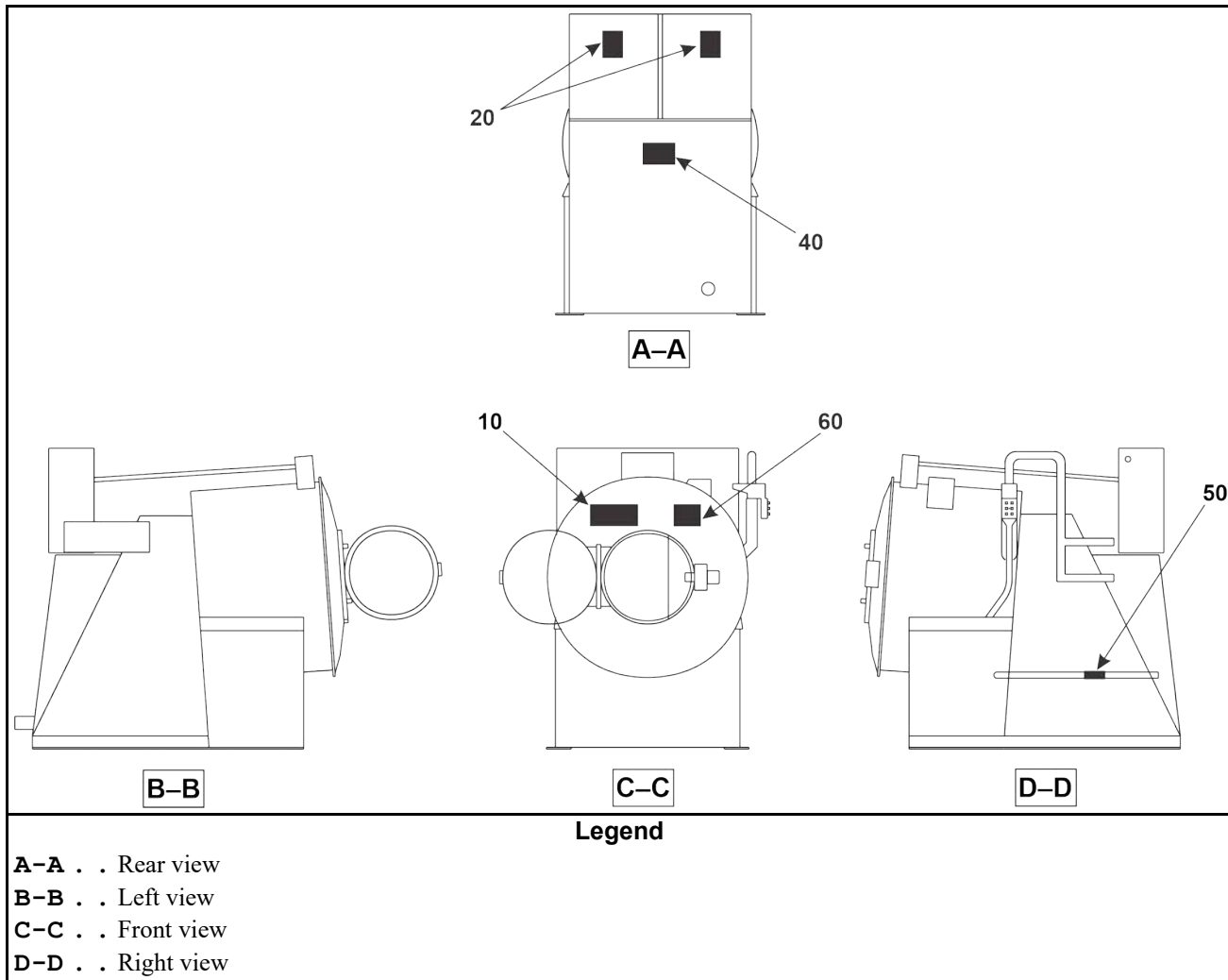


Table 4. Parts List—Safety Placard Use and Placement

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
Reference Assemblies				
none				
Components				
all	10	01 10635A	NPLT:SHELL FRONT RIDGID-TCATA	
all	20	01 10377A	NPLT:ELEC HAZARD LG-TCATA	

Safety Placard Use and Placement

2 Sheet

36021V7J, V7Z; 36026V7J/W, V7Z; 42026V5J; 42026V6J/W, V7Z; 42030V6J, V6Z

Table 4 Parts List—Safety Placard Use and Placement (cont'd.)

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	40	01 10689A	NPLT:BELT HAZARD SM TCATA	
all	50	01 10685A	NPLT:BURN HAZARD WARN-TCATA	
all	60	01 10699A	NPLT:SERV HZRD-PLYEST-TCATA	

BPWOCM04 / 2023172A

BPWOCM04.1 0000261527 D.2 I.2 4/26/23, 4:11 PM Released

Safety Placard Use and Placement—ISO

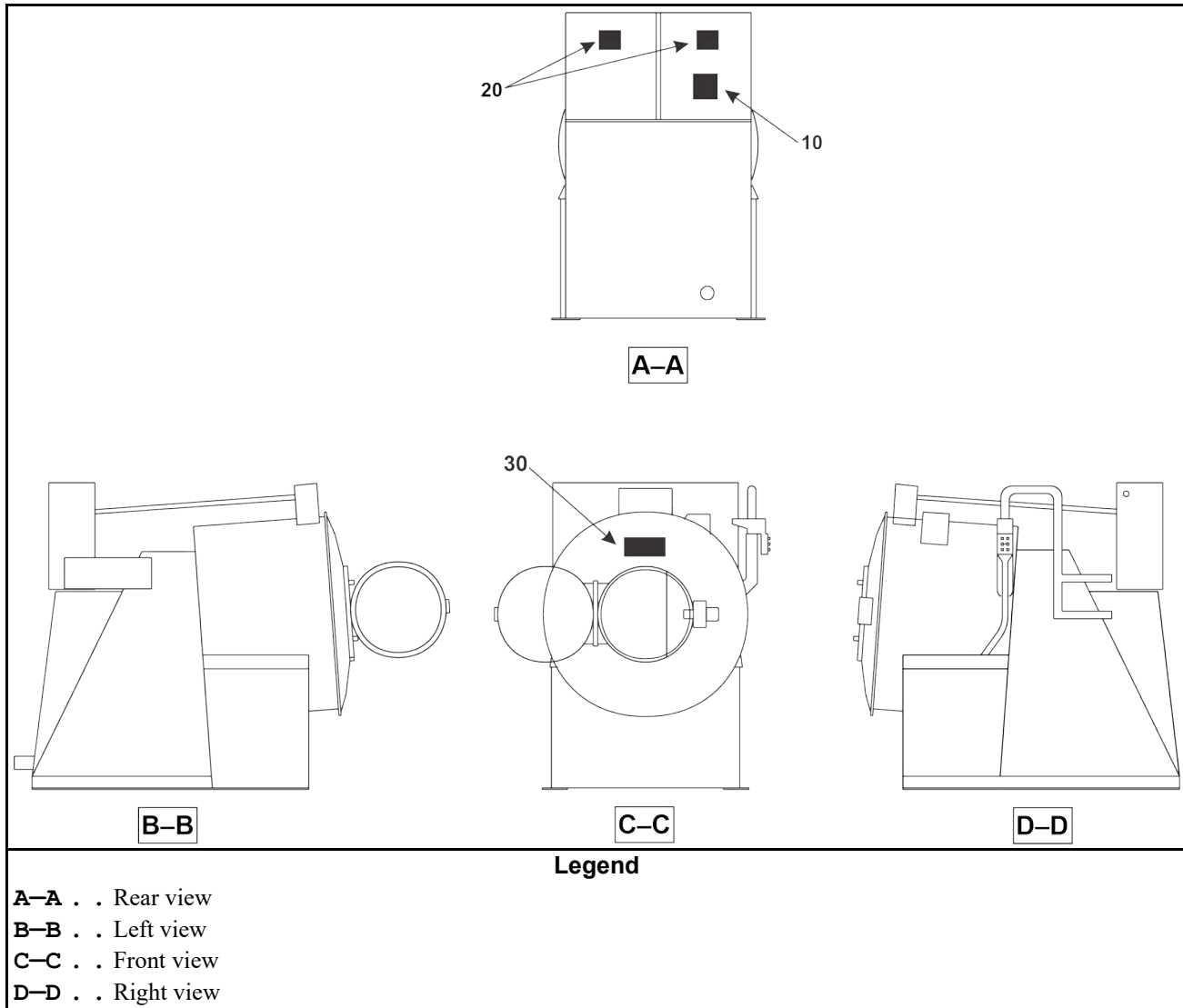
2 Sheets

36021V7J, V7Z; 36026V7J/W, V7Z; 42026V5J; 42026V6J/W, V6Z; 42030V6J, V6Z

ISO Placards shown on this page



NOTICE: Replace placards immediately, if removed or unreadable. Approximate locations of placards are shown. If aluminum placard, mounting holes are provided on machine. Use #8 self-tapping screws.



Safety Placard Use and Placement—ISO

2 Sheets

36021V7J, V7Z; 36026V7J/W, V7Z; 42026V5J; 42026V6J/W, V6Z; 42030V6J, V6Z

Table 5. Parts List—Safety Placard Use and Placement—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
Reference Assemblies				
none				
Components				
all	10	01 10632X	NPLT:WE1 RIGID WARNINGS FR	
all	20	01 10377	NPLTE:"WARNING" 4X4	
all	30	01 10734X	NPLT:WARN FRT 36/42V 20" DR-ISO	

BPWOCM02 / 2021382

BPWOCM02.1 0000238963 B.2.1.2 9/13/21, 11:34 AM Released

Guards & Covers 36V5Z

2 Sheet

36021V5Z, 36026V5Z



Guards & Covers

2 Sheet

36021V5Z, 36026V5Z

Table 6. Parts List—Guards & 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
Reference Assemblies				
	A	GG514811	INST=GUARD+COVER 36V5 LARGE DOOR	
Components				
all	1	AGS14811	ASSY=FRONT COVER 36V5 LARGE DOOR	
all	2	AGS14807A	TOP COVER ASSY 36' STARPLATE	
all	3	02 14815B	COVER=SHELL ADJ BRKT	
all	4	03 11082	BELTGRD-UPPER 3021/26 V5J	
all	5	03 11083	BELTGRD-LOWER 3021/26 V5J	
all	5	03 11083D	BELTGUARD-LOWER DUAL	
all	6	15P200	TRDCUT-F HXWASHD 3/8-16X3/4NIK	

BPWOCM01 / 2023172A

BPWOCM01.1 0000233920 B.4 I.2 4/25/23, 1:24 PM Released

Guards & Covers

2 Sheet

36021V7Z, 36026V7Z, 42026V5J, 42026V6Z, 42030V6Z

Figure 1. Front Covers

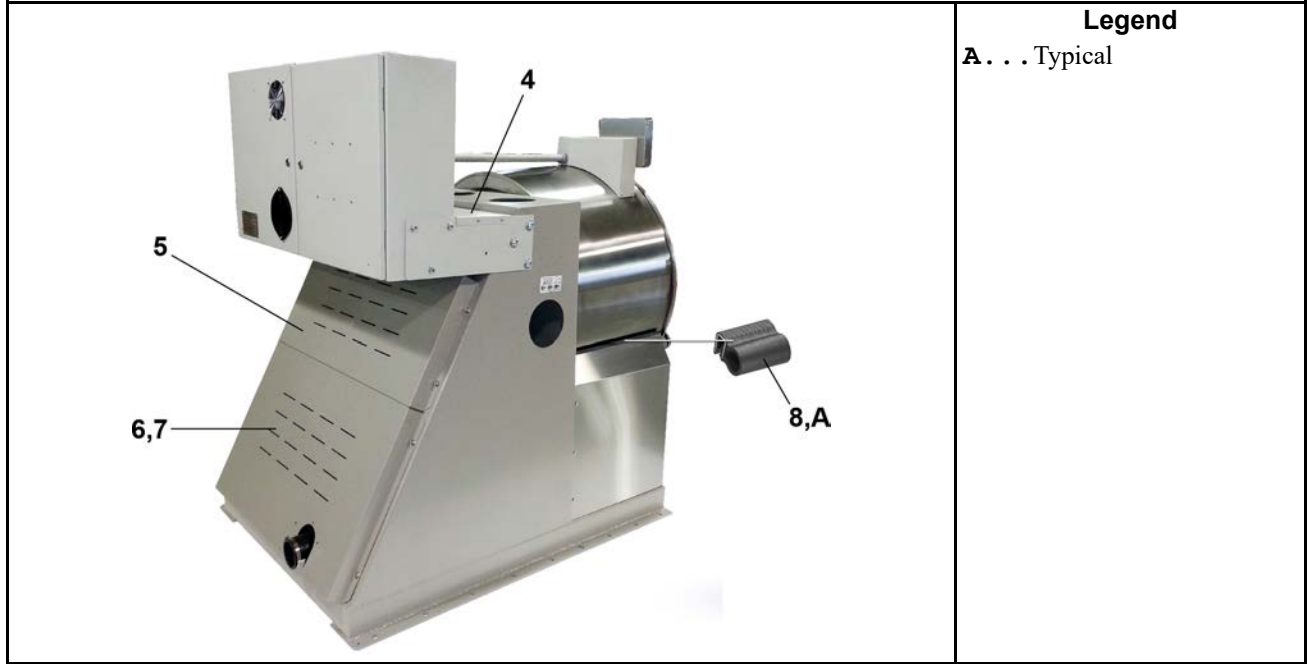


Guards & Covers

2 Sheet

36021V7Z, 36026V7Z, 42026V5J, 42026V6Z, 42030V6Z

Figure 2. Rear Covers and Side Gasket



Legend
A . . . Typical

Table 7. Parts List—Guards & Covers

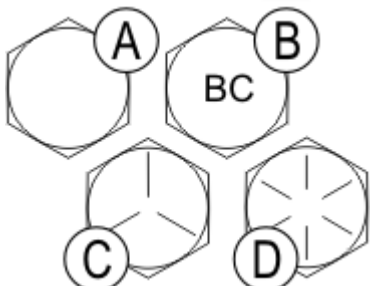
Find the assembly for your machine and the letter shown in the "Item" column. The components for your machine will show this letter or the word "all" in the "Used In" column. The numbers shown in the "Item" column are those shown in the illustrations.				
Used In	Item	Part Number	Description/Nomenclature	Comments
Reference Assemblies				
	A	GG514812	INST=GUARDS+COVERS 36V7 LARGE DOOR	36021V7Z, 36026V7Z
	B	GG5119008	INST=GUARD+COVERS 42V LARGE DOOR	42026V5J, 42026V6Z, 42030V6Z
Components				
A	1	AGS14812	ASSY=FRONT COVER ASSY 36V7 LARGE DOOR	
B	1	AGS119008	FRONT COVER ASSY 42V LARGE DOOR	
all	2	02 14815B	COVER=SHELL ADJ BRKT	
all	3	12P015B	TRW BLK NYL PUSH FAST	
all	4	03 11069	COVUPREAR CNTLBOX 36V7/42V6	
all	5	03 11071	REAR COVER UP 36V7/42V6	
A	6	03 11070	REAR COVER LOW 36V7/42V6	
B	6	03 11070B	REAR COVER LOW 4230V	
A	7	03 11070A	REARCOV LOW DUAL 36V/42V MK2	
B	7	03 11070C	REAR COVER LOW DUAL 4230V	
all	8	60A115	SELF-GRIP GASKET EMKA 1011-12	

1.4 Torque Requirements for Fasteners

BNUUUN02.C01 0000222451 A.3 B.3 I.2 1/2/20, 2:14 PM Released

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 3. The Bolts in Milnor® Equipment

The Marks on Bolt Heads	Legend
	<p>A . . . SAE Grades 1 and 2, ASTM A307, and stainless steel</p> <p>B . . . Grade BC, ASTM A354</p> <p>C . . . SAE Grade 5, ASTM A449</p> <p>D . . . SAE Grade 8 and ASTM A354 BD</p>

1.4.1 Torque Values

BNUUUN02.C02 0000222449 A.3 B.3 I.2 1/2/20, 2:14 PM Released

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



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

1.4.1.1 Fasteners Made of Carbon Steel

BNUUUN02.C03 0000222448 A.3 B.3 I.2 1/2/20, 2:14 PM Released

1.4.1.1.1 Without a Threadlocker

BNUUUN02.C04 0000222447 A.3 B.3 I.2 1/2/20, 2:14 PM Released

Table 8. Torque Values for Standard Fasteners with Maximum 5/16-inch Diameters and No Lubricant

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	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 9. Torque Values for Standard Fasteners Larger Than 5/16-inch Diameters and No Lubricant

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
3/8 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 10. Torque Values for Plated Fasteners with Maximum 5/16-inch Diameters and No Lubricant

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	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 11. Torque Values for Plated Fasteners Larger Than 5/16-inch Diameters and No Lubricant

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
3/8 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
3/4 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	–	–

1.4.1.1.2 With a Threadlocker

BNUUUN02.C05 0000222446 A.3 B.3 I.2 1/2/20, 2:14 PM Released

Table 12. Threadlocker by the Diameter of the Bolt (see below Note)

LocTite Product	Dimension			
	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: 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 13. 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 14. 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 15. 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 16. Torque Values if You Apply LocTite 272 (High-Temperature)

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
1 x 8	350	475	901	1222	1272	1725	1114	1510
1 x 12	383	519	986	1337	1392	1887	–	–

Table 16 Torque Values if You Apply LocTite 272 (High-Temperature) (cont'd.)

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
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 17. Torque Values if You Apply LocTite 277

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
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	–	–

1.4.1.2 Stainless Steel Fasteners

BNUUUN02.C06 0000222445 A.3 B.3 I.2 1/2/20, 2:14 PM Released

Table 18. Torque Values for Stainless Steel Fasteners 5/16-inch and Smaller

Dimension	316 Stainless		18-8 Stainless		18-8 Stainless with Loctite 767	
	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 19. Torque Values for Stainless Steel Fasteners Larger Than 5/16-inch

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

1.4.2 Preparation

BNUUUN02.T01 0000222511 B.2 B.3.1.2 4/20/23, 9:05 AM Released



WARNING: 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.

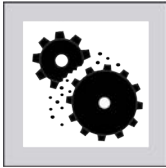


NOTE: LocTite 7649 Primer™ or standard solvents will remove grease from parts.

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.

1.4.3 How to Apply a Threadlocker

BNUUUN02.T02 0000222508 B.2 B.3 I.2 4/20/23, 9:09 AM Released

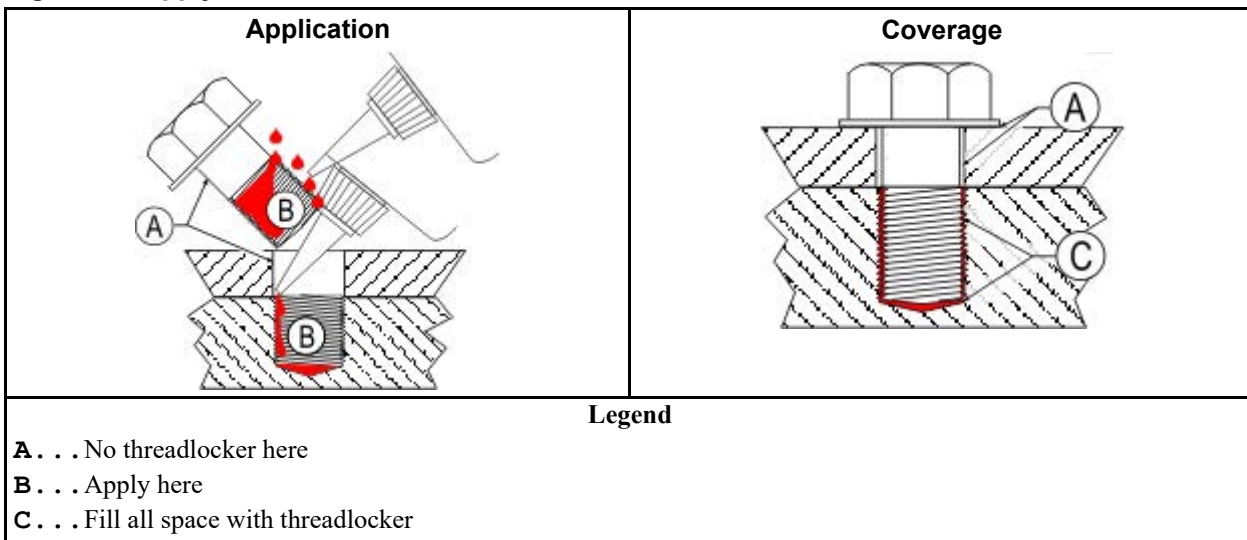


CAUTION: Malfunction Hazard — Heat, vibration, or mechanical shocks can let the fasteners loosen if you do not apply the threadlocker correctly. Loose fasteners can cause malfunctions of the equipment.

- ▶ 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 4. Apply Threadlocker in a Blind Hole



1.4.3.1 Blind Holes

BNUUUN02.T03 0000222507 A.3 B.3 I.2 1/2/20, 2:14 PM Released

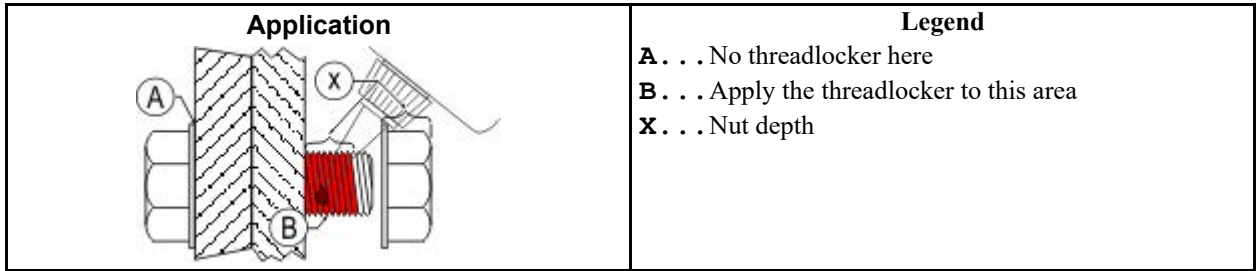
1. Apply the threadlocker down the threads to the bottom of the hole.
2. Apply the threadlocker to the bolt.
3. Tighten the bolt to the value shown in the correct table ([Table 12: Threadlocker by the Diameter of the Bolt \(see below Note \), page 28](#) to [Table 18: Torque Values for Stainless Steel Fasteners 5/16-inch and Smaller, page 30](#)).

1.4.3.2 Through Holes

BNUUUN02.T04 0000222506 A.3 B.3 I.2 11/26/19, 2:51 PM Released

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 12: Threadlocker by the Diameter of the Bolt \(see below Note \), page 28](#) to [Table 18: Torque Values for Stainless Steel Fasteners 5/16-inch and Smaller, page 30](#)).

Figure 5. Apply Threadlocker in a Through Hole



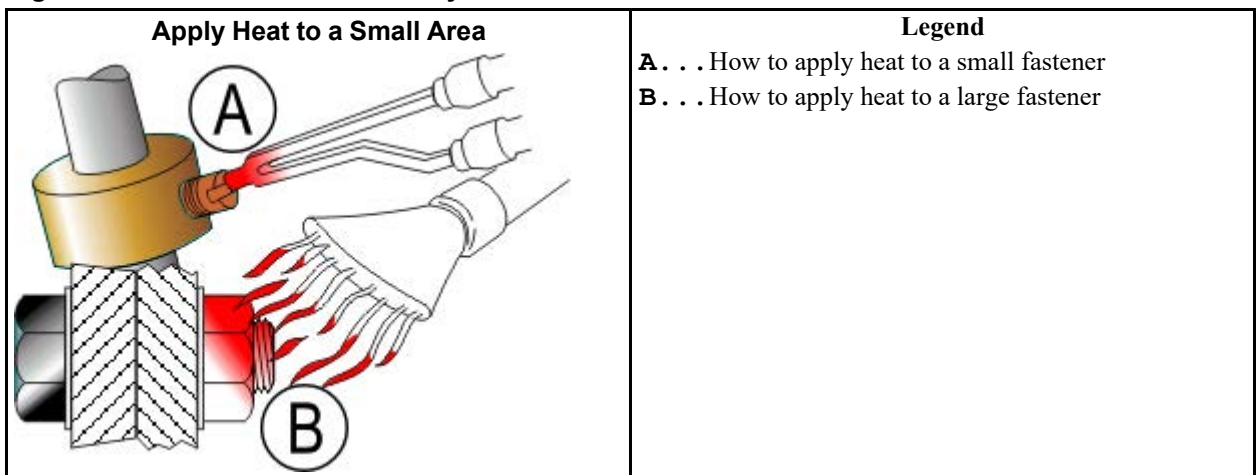
1.4.3.3 Disassembly

BNUUUN02.C07 0000222444 A.3.B.3 I.2 11/26/19, 2:59 PM Released

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 6. Use heat for disassembly of fasteners with threadlocker.



2 Drive Assemblies

This page intentionally blank

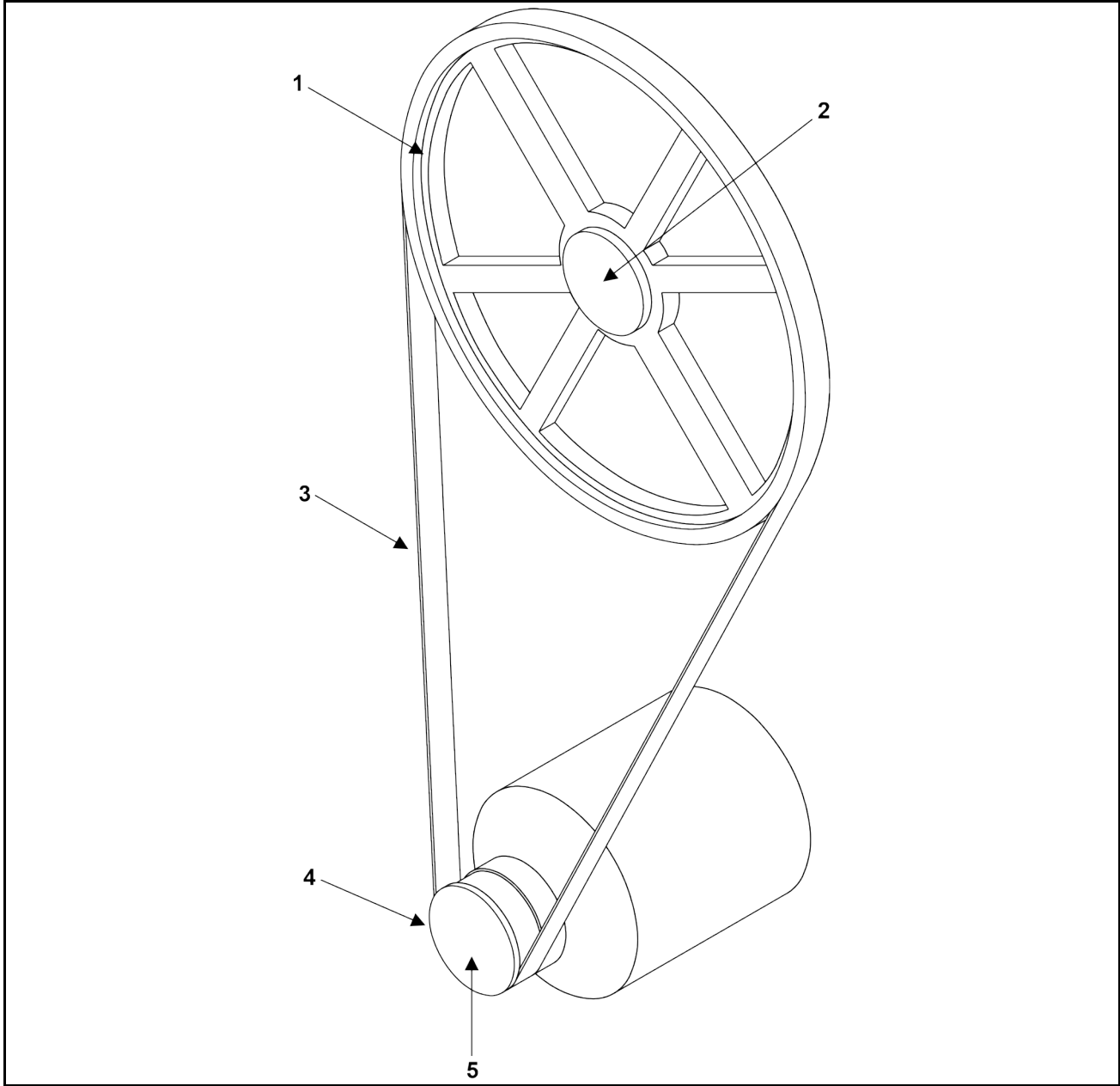
BPWOBI01 / 2019424

BPWOBI01.1 0000261614 A.4 I.2 1/2/20, 2:25 PM Released

Drive Chart

2 Sheets

36021V5J, 36021V5Z, 36026V5J, 36021V5Z



Drive Chart

2 Sheets

36021V5J, 36021V5Z, 36026V5J, 36021V5Z

Table 20. Parts List—Drive Chart

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
Reference Assemblies				
	A	D13 00949	*DRIVECHART=3621V5 5HP 6POLE	3621V5J, 3621V5Z STARPLATE
	B	D13 00959	DRIVE=3626V5 50/60HZ 5HP6POLE	3626V5J, 3626V5Z STARPLATE
Components				
A	1	56250B2SF	VPUL 2B25.0 (SF) TYPE QD	
B	1	56250B3SF	VPUL 3B25.0 (SF) TYPE QD	
all	2	56Q1KSF	1+1/2" BUSH VPUL QD TYPE SF	
all	3	56VB095X	VBELT BX95 RAWEDGE COG	
A	4	56038B2SH	V-PUL 2B3.8/A3.4 (SH) TYPE QD	
B	4	56038B3SH	V-PUL 3A3.4/B3.8 (SH) TYPE QD	
all	5	56Q1GSH	1+3/8" BUSH VPUL QD TYPE SH	

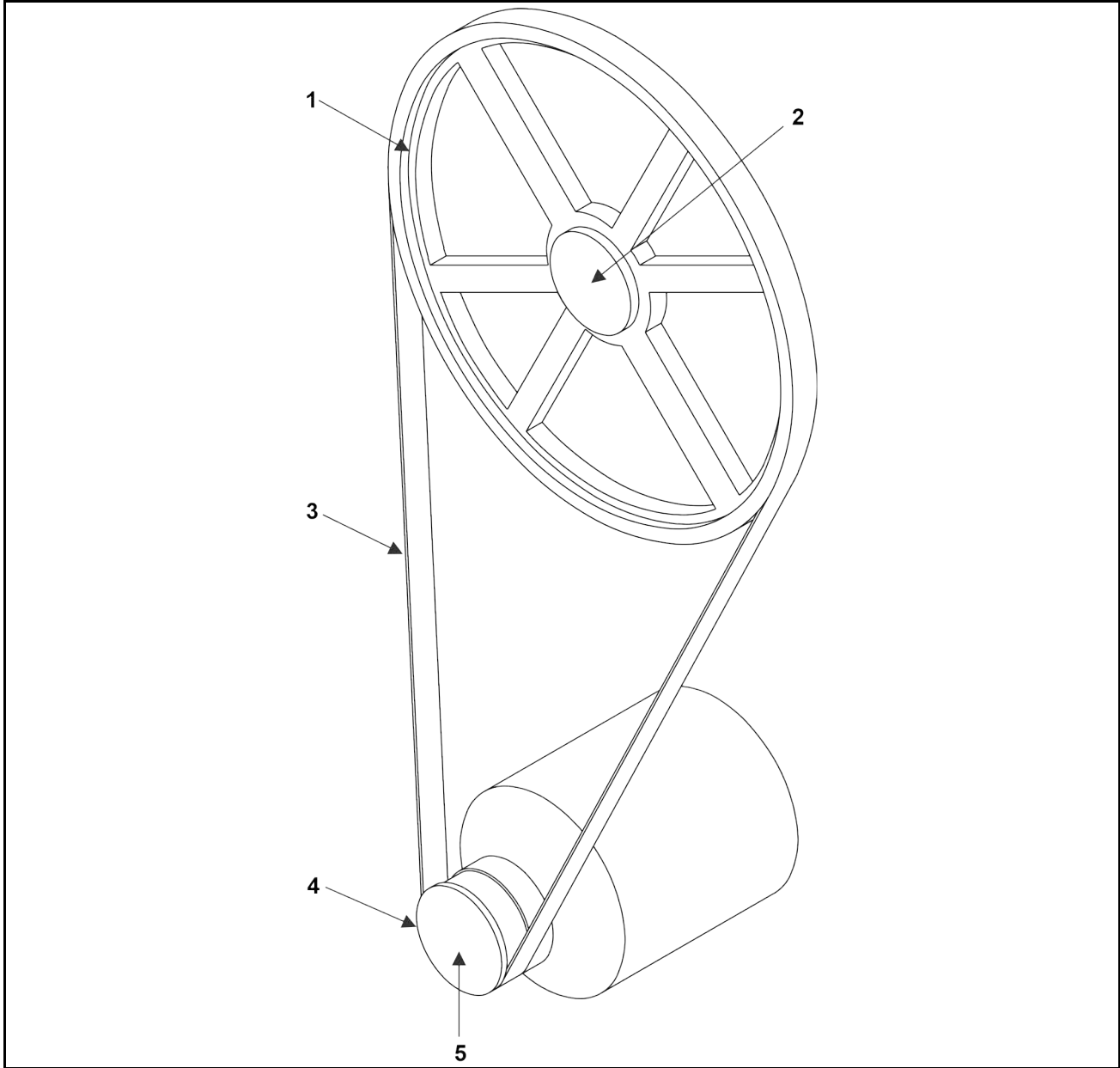
BPWOCI01 / 2021353A

BPWOCI01.1 0000261703 C.2 I.2 8/24/21, 3:33 PM Released

Drive Chart

2 Sheets

36021V7J, 36021V7Z, 36026V7J, 36026V7Z



Drive Chart

2 Sheets

36021V7J, 36021V7Z, 36026V7J, 36026V7Z

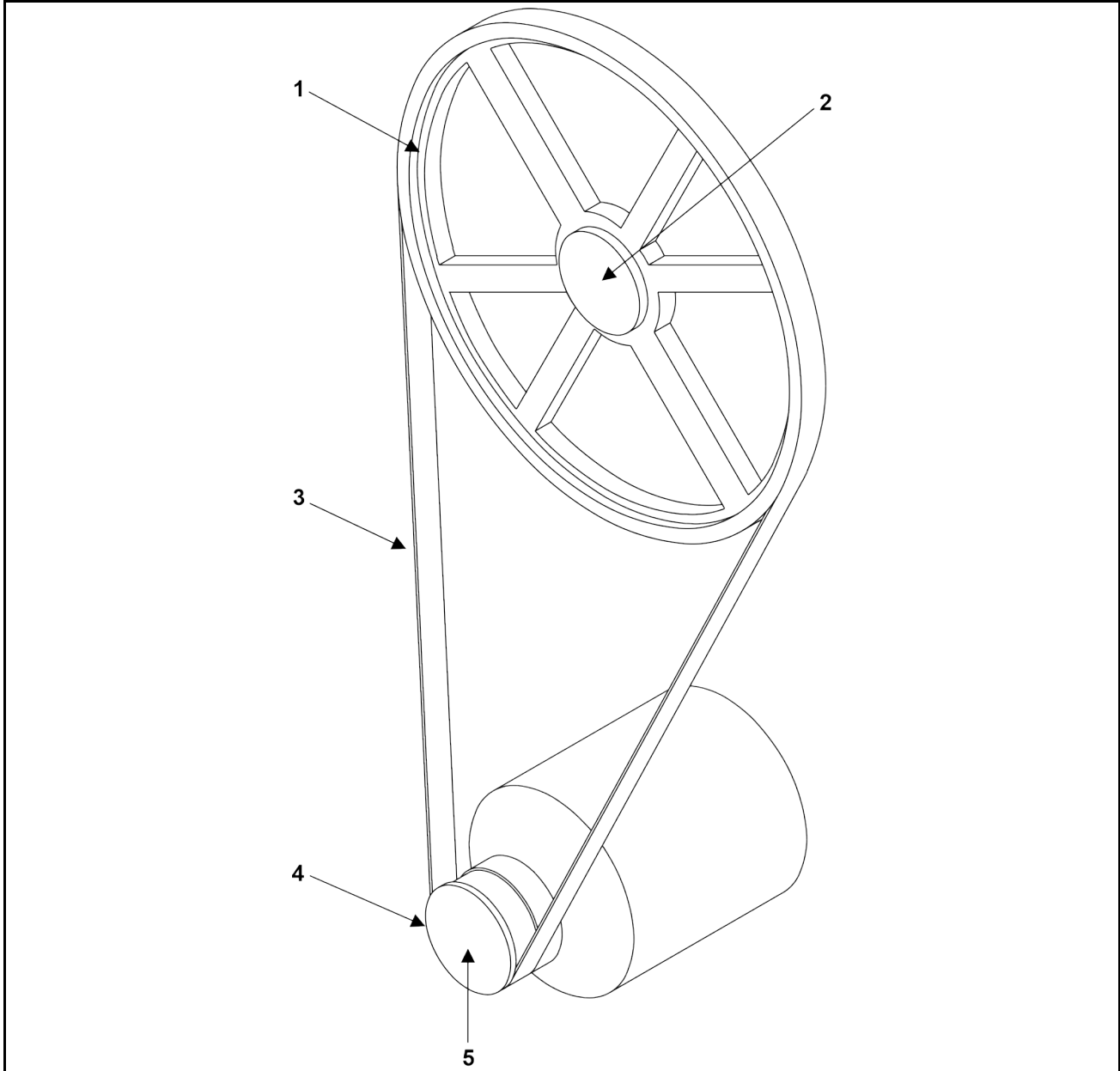
Table 21. Parts List—Drive Chart

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
Reference Assemblies				
	A	D13 02960	*DRIVECHART=3626V7 50/60HZ	36026V7J, 36026V7Z
	B	D13 02970	*DRIVECHART=3621V7 50/60HZ	36021Z7J, 36021V7Z
Components				
all	1	56250B3SF	VPUL 3B25.0 (SF) TYPE QD	
all	2	56Q1PSF	1+3/4" BUSH VPUL QD TYPE SF	
all	3	56VB093X	VBELT BX93 RAWEDGE COG	
all	4	56030B3SH	VPUL 3B3.0/A2.6 3BK32SH (MTO)	Used on models produced before 8/24/2021
all	4	56030B2H	VPUL 2B3.0/A2.6 2BK32H OR EQUAL	Used on models produced after 8/24/2021, 36021/36026V7_.AAF and later
all	5	56Q1GSH	1+3/8" BUSH VPUL QD TYPE SH	

Drive Chart

2 Sheets

42026V5J, 42026V6J, 42026V6Z, 42030V6J, 42030V6Z



Drive Chart

2 Sheets

42026V5J, 42026V6J, 42026V6Z, 42030V6J, 42030V6Z

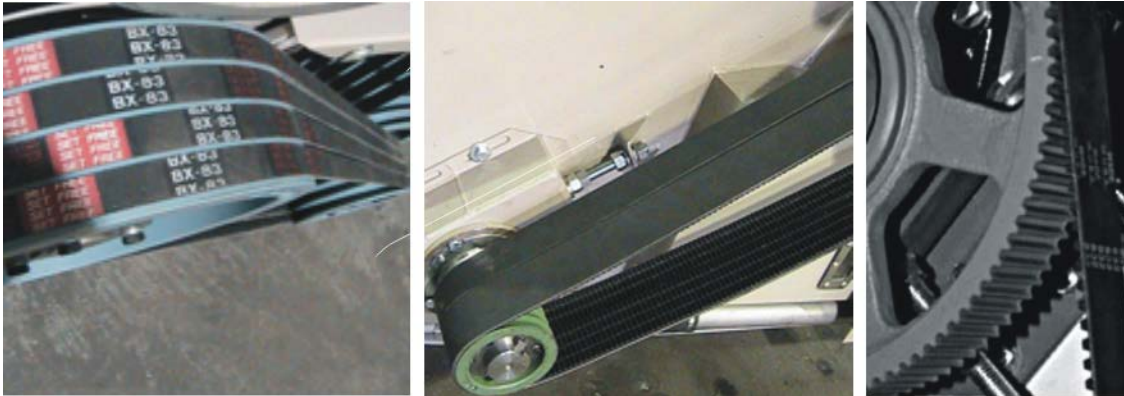
Table 22. Parts List—Drive Chart


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
Reference Assemblies				
	A	D13 01960	95000 DRIVECHART=4226V6 60CYC	42026V5J, 42026V6J/Z
	B	D13 03960	DRIVECHART=4230V6 60CYC	42026V6J/Z
Components				
A	1	56250B3SF	VPUL 3B25.0 (SF) TYPE QD	3 GROOVE PULLY
B	1	56250B4E	VPUL 4B25.0 (E) TYPE QD	4 GROOVE PULLY
A	2	56Q1PSF	1+3/4" BUSH VPUL QD TYPE SF	
B	2	56Q1PE	1+3/4" BUSH VPUL QD TYPE E	
A	3	56VB093X	VBELT BX93 RAWEDGE COG	3 REQUIRED
B	3	56VB091XB4	VBAND 4RBX91 EACH=1 (WT.=4.5 LBS.)	4 BANDED BELTS
A	4	56030B3SH	VPUL 3B3.0/A2.6 3BK32SH (MTO)	
B	4	56034B4SD	VPUL 4B3.4 (SD) TYPE QD	
A	5	56Q1GSH	1+3/8" BUSH VPUL QD TYPE SH	
B	5	56Q1MSD	1+5/8" BUSH VPUL QD TYPE SD	

2.1 Drive Pulley and Belt Maintenance


BNUUUM02.C01 0000274598 A.2 B.2 I.2 2/4/20, 8:08 AM Released

Figure 7. Examples of drives this instruction applies to: one or more V-belts, attached V-belts and tooth belts




 **NOTICE:** "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.



 **WARNING: Risk of Injury or death** — A machine in operation without safety guards is dangerous. Drive belts can pull in your body or clothing.

- ▶ Remove power from the machine when you do work on the mechanisms.
- ▶ Stay out of the machine frame when you do a test on the machine.
- ▶ Replace all covers before you put the machine into operation.

 **TIP:** Read these documents from the Gates Corporation (www.gates.com) to know more about pulley and belt maintenance: "Belt Drive Preventive Maintenance & Safety Manual" and "Preserve your investment - Check Engine Belts Often."

2.1.1 Pulley Requirements

BNUUUM02.C02 0000274597 A.2 B.2 I.2 2/4/20, 8:08 AM Released

- Keep pulleys free of dirt, oil and other contamination.
- Replace pulleys with groove damage.
- Align pulleys and shafts.
- Keep run-out in tolerance.

2.1.1.1 Condition of Grooves on Pulleys

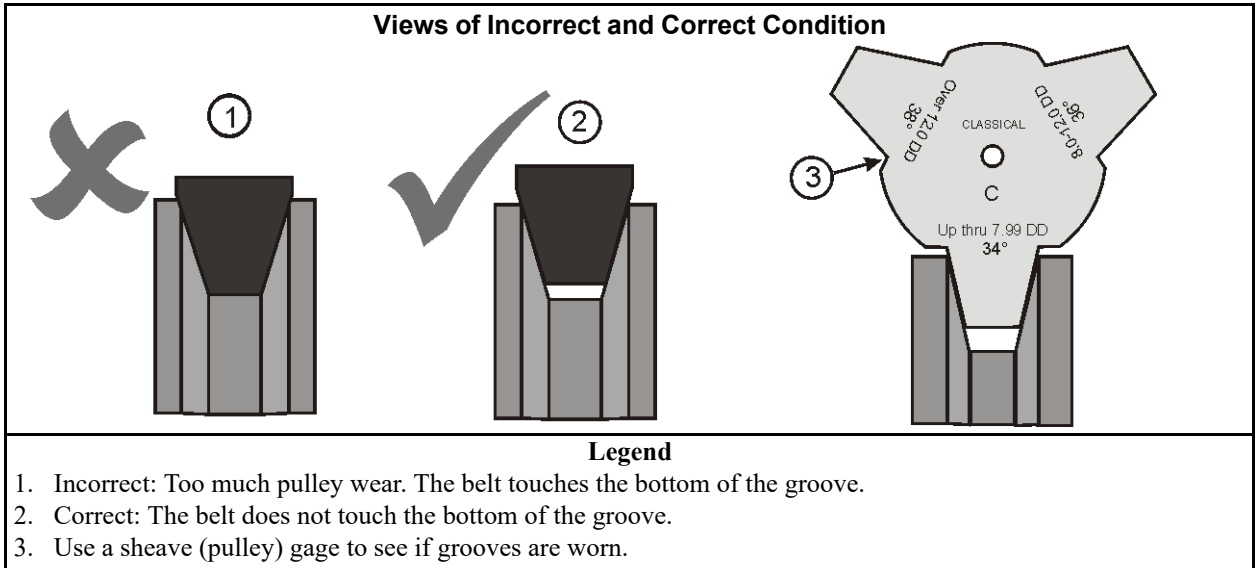
BNUUUM02.C03 0000274611 A.2 B.2 I.2 2/4/20, 8:08 AM Released

Replace a pulley if:

- the grooves have burrs, cracks, or worn areas that can cause damage to the belts.

- the belts touch the bottom of the groove at any point (Figure 8, page 43).

Figure 8. Pulley Groove Condition



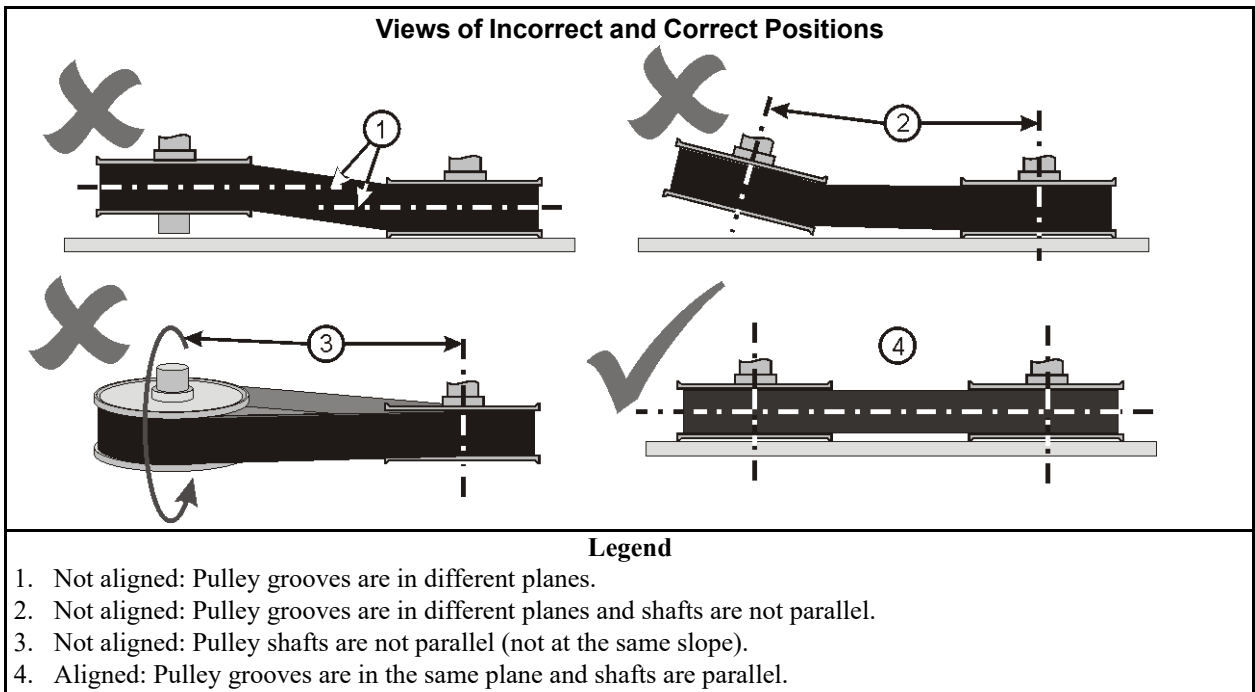
2.1.1.2 Pulley and Shaft Position

BNUUUM02.C04 0000274609 A.2.B.2.1.2 2/4/20, 8:08 AM Released

Align To adjust parts until they are in a correct position to other parts.

- Always align components when you replace a motor, bearing housing, pulley, or belt.
- The belts must not twist or make unusual noises or show vibration.

Figure 9. Pulley and Shaft Position



2.1.1.3 Keep Run-Out in Tolerance

BNUUUM02.C05 0000274606 A.2 B.2.1.2 2/4/20, 8:08 AM Released

Axial run-out The difference between the minimum and maximum distance between the face of a pulley and a plane perpendicular to the pulley shaft (Figure 10, page 44, item 1). Incorrect installation or damage can cause a pulley to be not at a 90 degree angle to the shaft.

Radial run-out The difference between the minimum and maximum diameter in one turn (Figure 10, page 44, item 2). If a force causes damage to a pulley, it can bend. It will not have a circular shape.

Figure 10. Run-out

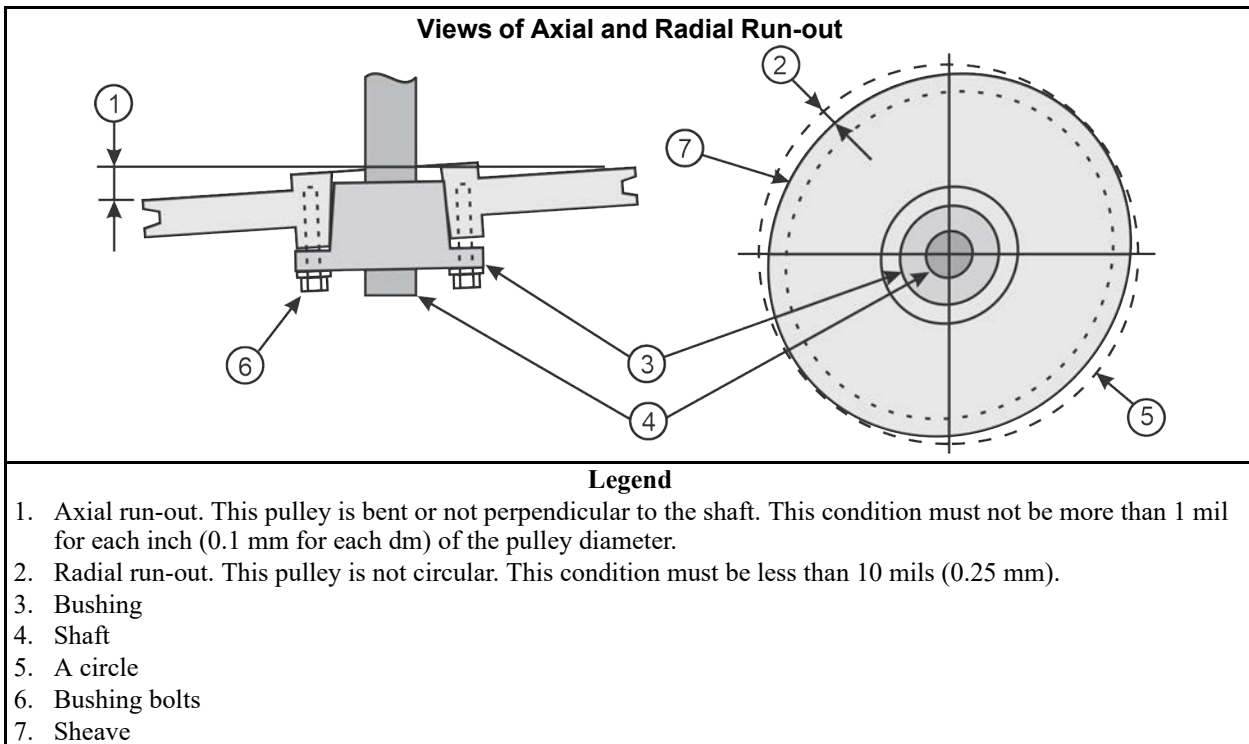
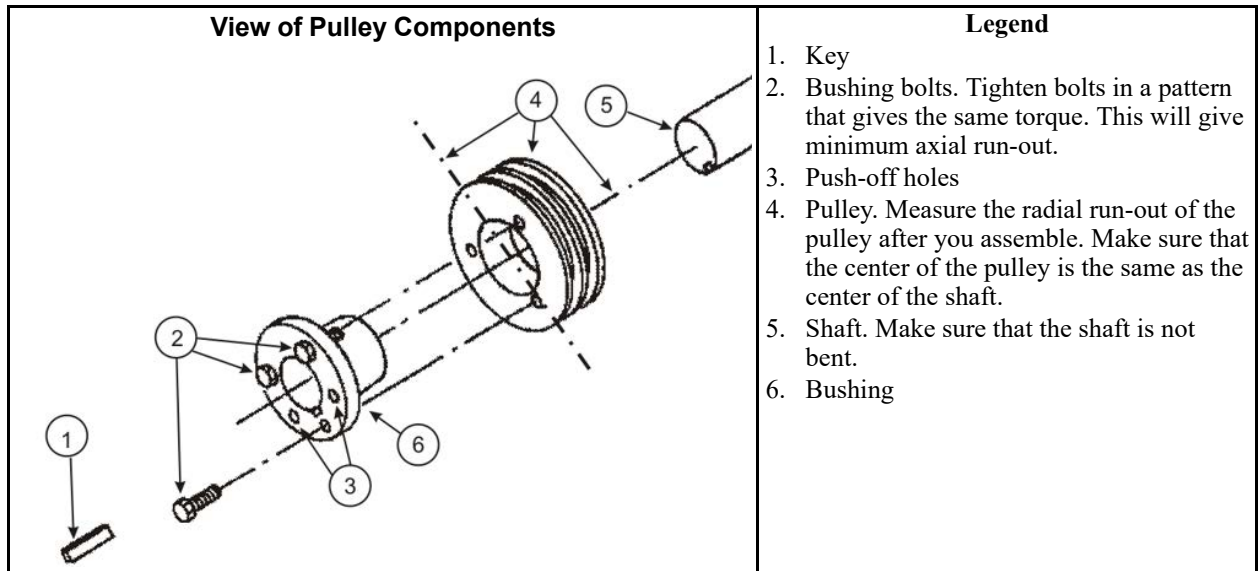


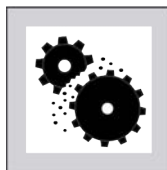
Figure 11. Typical Pulley Assembly



2.1.2 Belt Requirements

BNUUUM02.C06 0000274605 A.2 B.2 I.2 2/4/20, 8:08 AM Released

- Replace damaged belts.
- The pulleys must stay aligned when you adjust the belt tension.
- Do not use belts made from cut belts.
- For a drive with more than one belt:
 - Replace all of the belts together.
 - Do not mix new and used belts.
 - Do not mix belts from more than one manufacturer.



CAUTION: Risk of damage — A screwdriver or metal tool can cause damage to the belt.

- ▶ Do not push the belt on with a tool.

2.1.2.1 Condition of Belts

BNUUUM02.C07 0000274604 A.2 B.2 I.2 2/4/20, 8:08 AM Released

Slippage when the pulley turns more quickly than the belt can move

Slippage occurs if belts are not aligned (see [Section 2.1.1.2](#), page 43) or by incorrect tension explained in [Section 2.1.1.2](#), page 43. Slippage can cause belts to become too hot. Belts must not have a temperature more than than 140F (60° C).

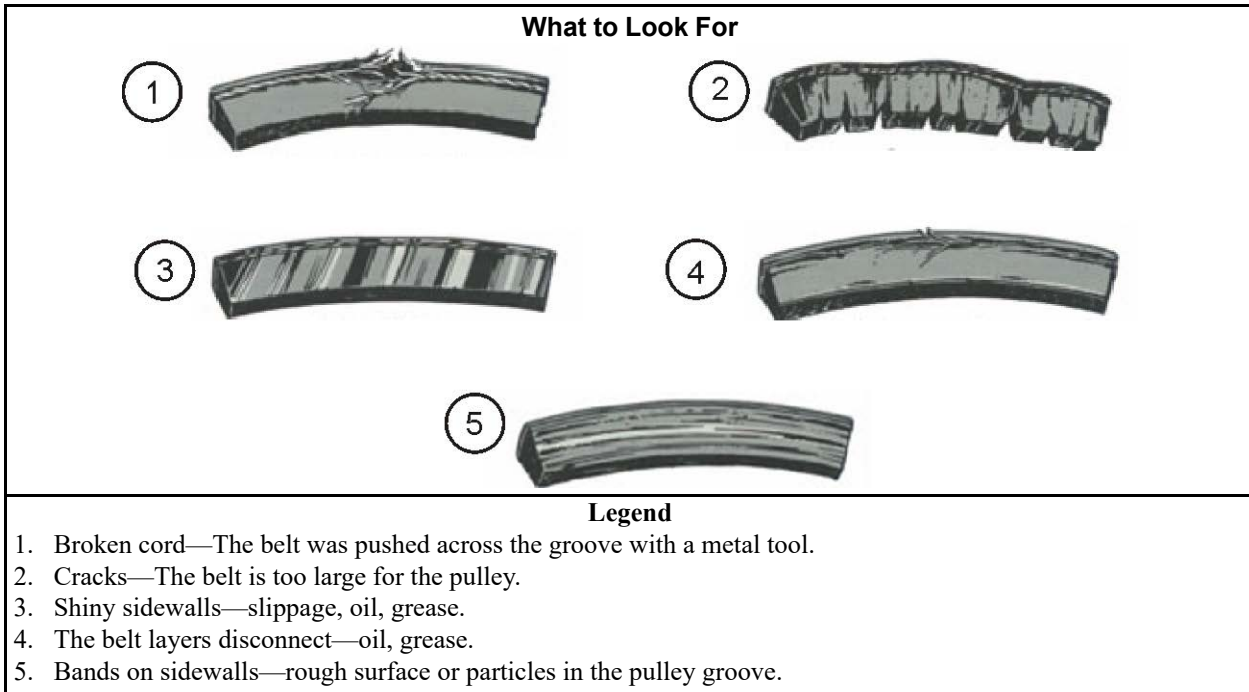


TIP: The belt storage area must be cool and dry with no sun light.



TIP: New and used belts can look the same. These belts will have different strength properties and a small difference in length.

Figure 12. Types of Belt Damage



2.1.2.2 Tension of Belts

BNUUUM02.C08 0000274657 A.2 B.2.1.2 2/4/20, 8:08 AM Released

This data does not apply to belts where a spring holds the correct belt tension. Manual tension adjustment is not necessary for this type of drive.

The correct belt tension is the lowest tension that prevents belt slippage with a full load condition. If the belt is too tight, this can cause damage to the belt, the pulleys, bearings, and other drive components. If the belt is too loose, this can cause belt slippage. Incorrect belt tension or belt slippage can cause components to make an unusual noise.

When you install a new belt, use these rules to get the correct belt tension:

- Set the tension of the belt when you replace a motor, bearing housing, pulley, or belt.
- Replace all belts on a pair of pulleys when you replace one of them.
- After adjustment, operate the machine in all of its standard conditions to make sure that the belt operates correctly. For example, operate a washer-extractor in its full speed range with a full load of wet goods.
- Adjust the tension when you first install a belt. Do the adjustment again after 24 and 48 hours of operation. All belts will become longer after a short time. A V-belt will move down in the grooves of the pulleys. These conditions will cause the tension to decrease.

When you do scheduled maintenance, examine the belts for correct tension. With operation, belts become longer.

2.1.3 The pulleys must stay aligned when you adjust the belt tension

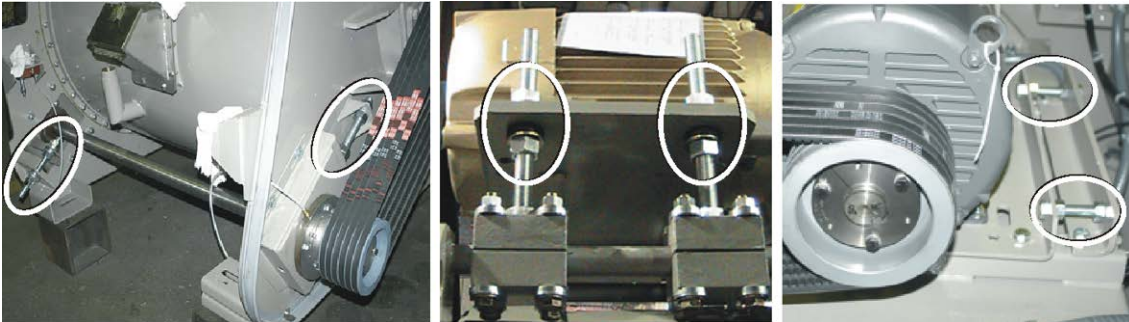
BNUUUM02.C09 0000274654 A.2.B.2.1.2 2/4/20, 8:08 AM Released

Some tension mechanisms do not have an effect on pulley and shaft requirements. Pulleys will stay aligned when you adjust them. [Figure 13, page 47](#) is an example of these. Where tension mechanisms are a pair of threaded rods, you must adjust the nut, on each rod carefully. If not, the pulleys will not stay aligned. Examples of this type are shown in [Figure 14, page 47](#).

Figure 13. A Tension Mechanism that will not Change the Angle of the Pulleys



Figure 14. Some Pairs of Tension Mechanisms that Can Change the Angle of the Pulleys



2.1.4 How to Do Maintenance on Pulleys and Belts

BNUUUM02.C10 0000274653 B.2.1.2 8/23/23, 9:45 AM Released

Table 23. Typical Tools for Pulley and Belt Maintenance

Tool	Function	Related Data
Torque wrench	Make the bushing bolts the same torque to get the minimum axial run-out.	Figure 11, page 45, item 2
Laser, straight edge, or string	Align pulleys	Tools are listed in order of preference. Section 2.1.1.2 , page 43 and Figure 15, page 49
Bubble level	Align shafts	Section 2.1.1.2 , page 43 and Figure 16, page 50
Dial indicator	Measure run-out	Section 2.1.1.3 , page 44 and Figure 17, page 50
Sheave (pulley) gage	Examine pulley wear	Figure 8, page 43.
Infrared thermometer	Examine belt temperature	Section 2.1.2.1 , page 45.

2.1.4.1 Typical Steps to Replace Pulleys and Belts

BNUUUM02.C11 0000274652 A.2 B.2.1.2 2/4/20, 8:08 AM Released

Preparation Remove power from the machine.

Belt removal Use the belt tension mechanism to decrease the distance between the pulleys until you have sufficient clearance. Figure 13, page 47 and Figure 14, page 47 show typical belt tension mechanisms.

Pulley removal On the typical type of pulley and bushing shown in Figure 11, page 45, use the push-off holes to remove the pulley easily. On special types of pulleys (example: large drive pulley and cone), look at the parts document in the maintenance manual for more data. Some pulleys are too heavy for only one person to hold.

Pulley installation Figure 11, page 45 shows the typical pulley and bushing components. Make sure that you keep run-out tolerances when you assemble and tighten the components.

Belt installation Decrease the distance between the pulleys to put the belt on easily. Assemble the components carefully. Make sure that the components are aligned. Adjust the belt tension so the belt is tight.

Test Before you connect power again, make sure that you remove all tools. Operate the machine with a full load. If the belts slip, increase belt tension with the machine shut down and power removed. Then test again. Make sure that the machine is safe before you put it into regular operation.

2.1.4.2 Examples of Procedures Used at the Milnor® Factory to Align Pulleys

BNUUUM02.C12 0000274686 A.3 B.2 I.2 3/6/20, 4:49 PM Released

Figure 15. Use a straight edge, a string, or a laser to make sure that all pulleys are in the same plane.

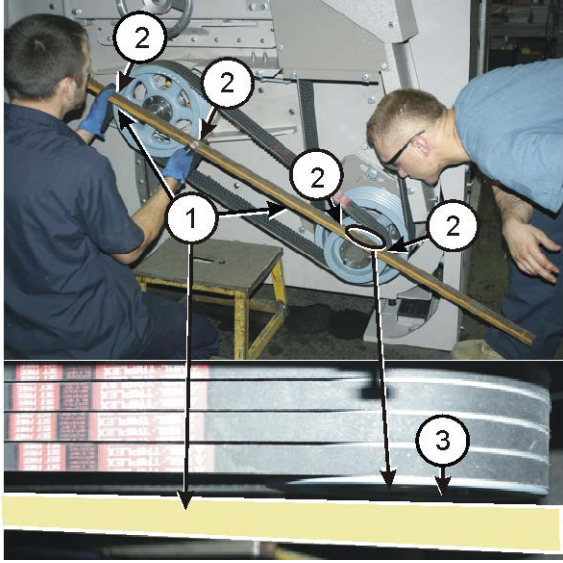
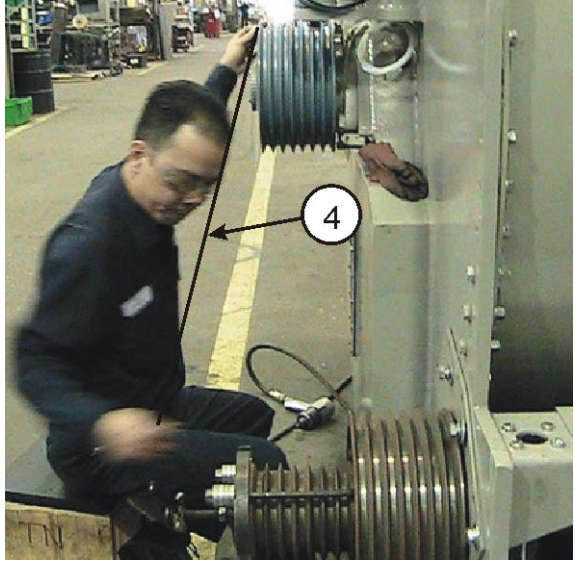
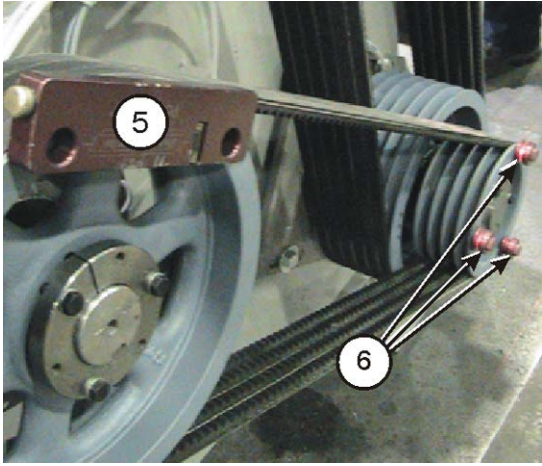
<p style="text-align: center;">Straight edge</p> 	<p style="text-align: center;">String</p> 
<p style="text-align: center;">Legend</p> <ol style="list-style-type: none"> 1. Straight edge. 2. Four points where the straight edge must touch the pulleys. 3. Space between the straight edge and the pulley. This shows that the pulleys are not in the same plane. 4. You can use a string as a straight edge if you hold it tight. 5. Magnet-mounted laser 6. Three targets to point the laser at. 	<p style="text-align: center;">Laser</p> 

Figure 16. Use a level to make sure that the pulleys are at the same slope.

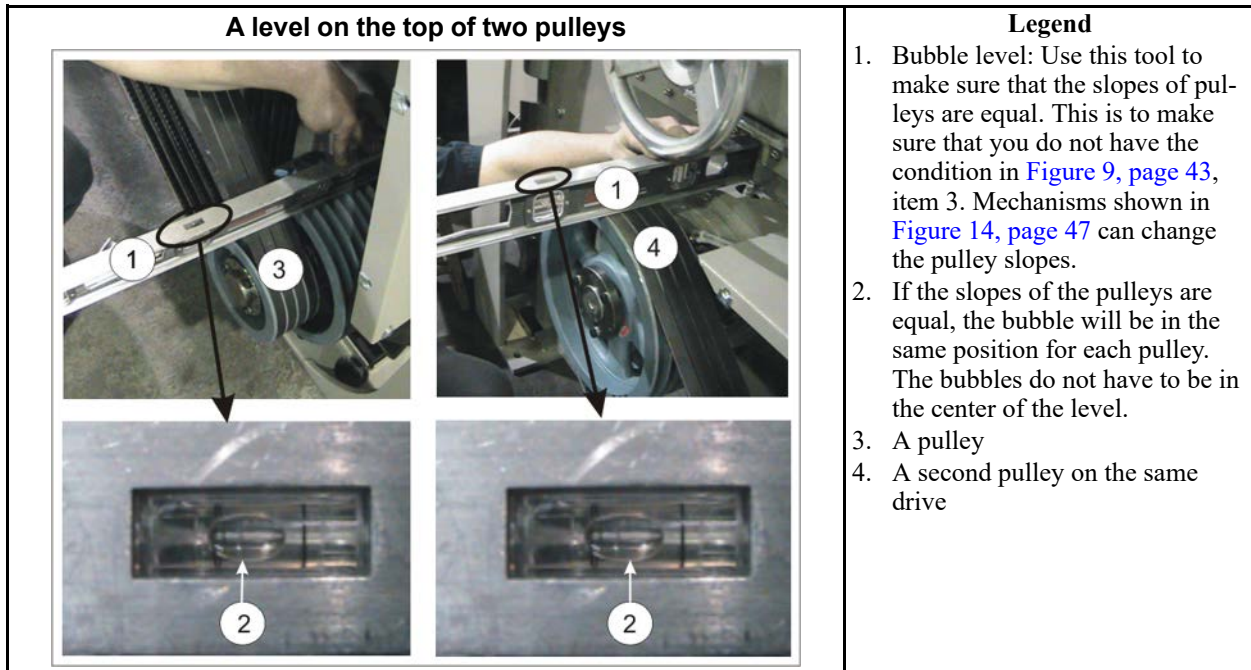
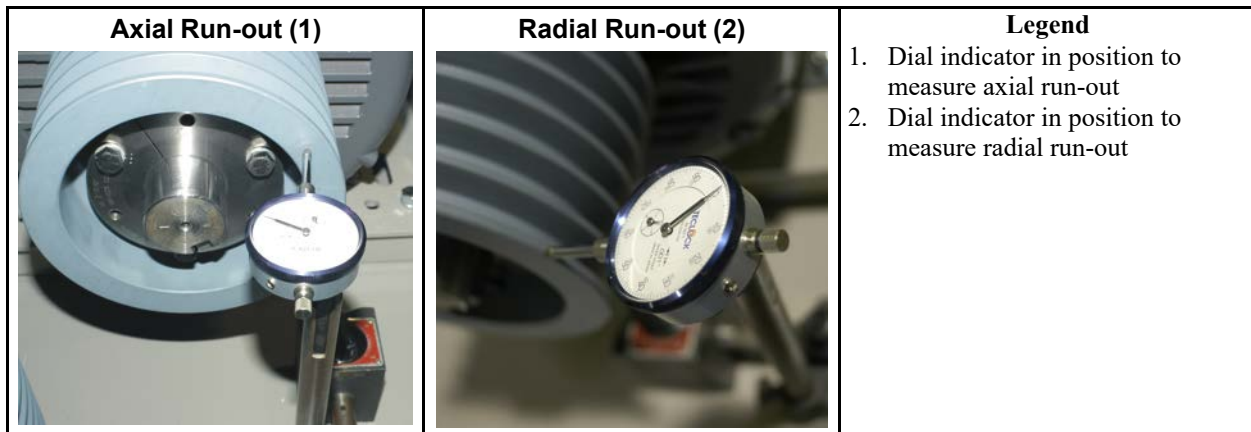


Figure 17. Dial indicator used to find the axial and radial run-out of a pulley.



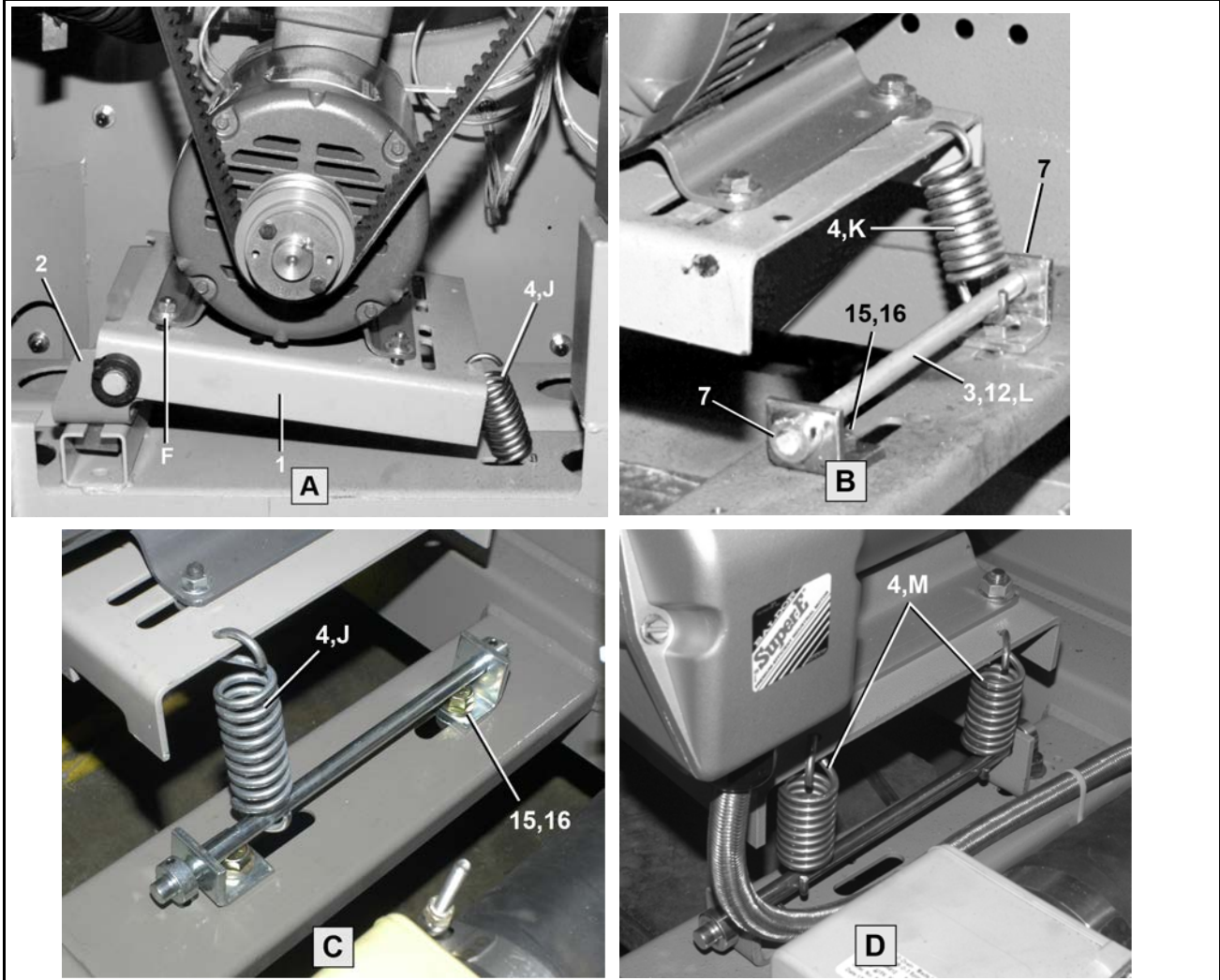
BPWOAI04 / 2023172A

BPWOAI04.1 0000261906 B.2 I.2 4/24/23, 2:36 PM Released

Motor Mount

3 Sheets

30015, 30022, 36021, 36026, 42026, & 42030Vxx,Txx



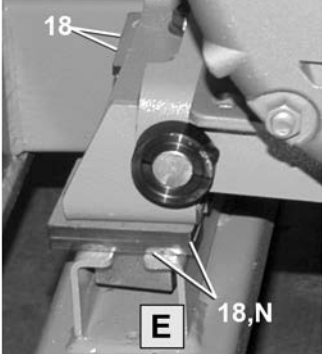
Legend

- A . . . 30015V7J, 30015V7Z & 30022V6J, 30022V6Z spring
- B . . . 36026V7J, 36026V7Z & 42026V6J, 42026V6Z spring
- C . . . 36021V5J, 36021V5Z, 36026V5J, 36026V5Z, & 42026V5J spring
- D . . . 42030V6J, 42030V6Z springs
- F . . . Detail, typical hardware
- J . . . One spring on pulley or outside end
- K . . . One spring on inside end
- L . . . Item 12, tube, slides over the shaft to tighten the belt.
- M . . . Two springs

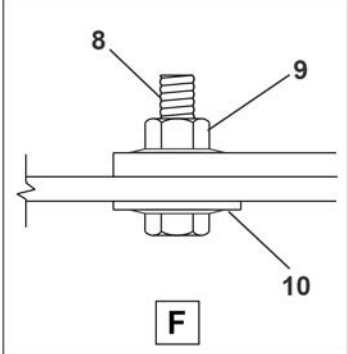
Motor Mount

3 Sheets

30015, 30022, 36021, 36026, 42026, & 42030Vxx,Txx



E 18, N



F 8, 9, 10

Legend

E . . . 42026V6J, 42026V6Z

F . . . Detail, typical hardware

G . . . 30015 & 30022T5E, 30022T5X motor mount and spring

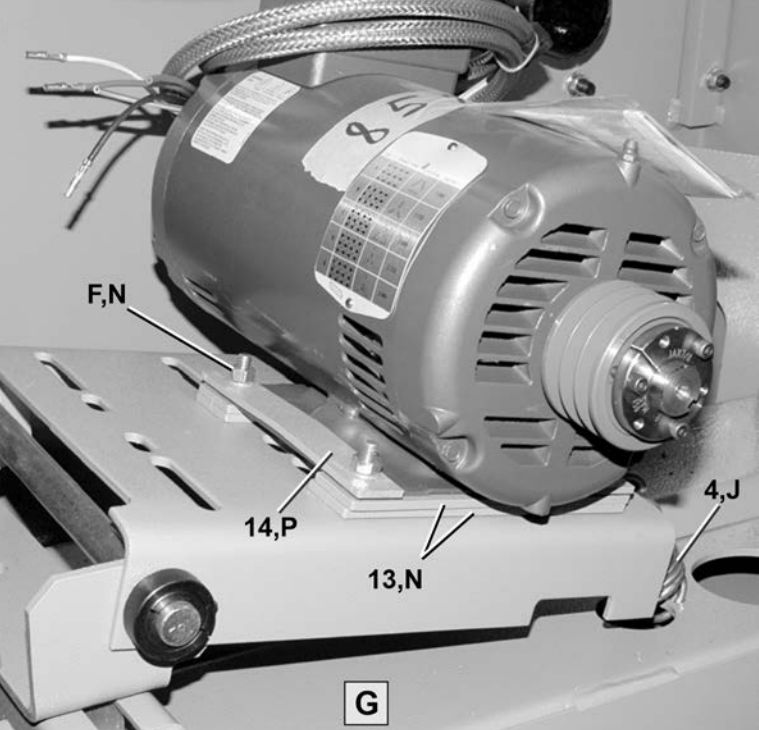
H . . . All models

J . . . One spring on pulley or outside end

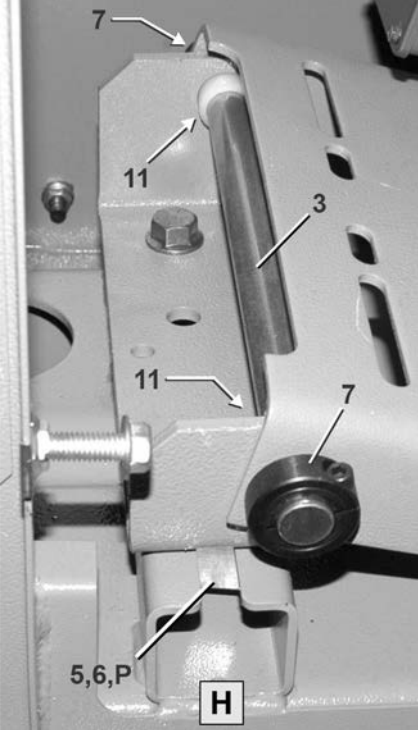
M . . . Two springs

N . . . 4 instances

P . . . 2 instances



G F, N, 14, P, 13, N, 4, J



H 7, 11, 3, 7, 5, 6, P

Motor Mount

3 Sheets

30015, 30022, 36021, 36026, 42026, & 42030Vxx,Txx

Table 24. Parts List—Motor Mount

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
Reference Assemblies				
	A	ADB30001	30" DRIVE BASE SINGL MTR ASSY	30015 & 30022T5E/T5X
	B	ADB30007	ASSY=3015/22V DRIVE BASE	3015V7_, 30022V6
	C	ADB3621V5	ASSY=DRIVE BASE 3621V5	3621V5_ WITH STARPLATE
	D	ADB3626V5	ASSY=DRIVE BASE 36V5	3626V5_ WITH STARPLATE
	E	ADB3022T5	ASSY=DRIVE 36V7/42V6	3621V7_, 3626V7_, 4226V5J, 4226V6_
	F	ADB12001	DRIVE ASSY 4230V	4230V6_
Components				
ABCDE	1	02 04256	PLATE=MOTOR MNT, 3022S4	
F	1	02 04256D	MOTOR MOUNT PLATE 4230V	
AB	2	02 04257A	BRKT=MOTOR MOUNT 30V	
CD	2	02 04257B	BRKT=MOTOR MOUNT 36V5	
EF	2	02 04257	BRKT=MOTOR MOUNT, 36V7/42V6	
all	3	02 04258	SHAFT=MOTOR MOUNT, 3022S4	
all	4	02 04259	SPRNG/MOT MOUNT/3022S4#SPC2690	
all	5	02 19283	NUT=1/2-13UNCX1+1/2SQ SPEC	
ABE	6	15K154H	INDHEXFLGSCR 1/2-13X1+3/4GR8ZN W/LOCTITE	
EF	6	15K162	HXCAPSCR 1/2-13UNC2AX1.5 GR5 P	
all	7	54JH10750C	SHFTCOLLAR 3/4"CLPTYP(SGLSPLT)	
all	8	15K092Z	HEXFLGSCR 3/8-16X1 GR5 ZINC	
all	9	15G198	HXFLGNUT 3/8-16 ZINC	
all	10	15U241	FLATWASHER 13/32IDX1+3/4ODX14G	
CDEF	11	54E226	FLBRNYL 3/4"X1"X1";EA=1 FLGBRG	
CDEF	12	02 04258B	TUBE=MOTOR MOUNT SPRING ADJ	
A	13	02 03839B	PLATE=MTR MNT REINFORCEMENT	
A	14	02 04256A	DOUBLER=MOTOR	
CDEF	15	15K153H	INDHEXFLGSCR1/2-13X1+1/4GR8ZN W/LOCTITE	
CDEF	16	15G222B	HEXFLGNUT 1/2-13 ZINC SERRATED	
CDEF	17	15U280	FL+WASHER(USS STD)1/2 ZNC PL+D	
F	18	02 02822C	SPACER=MOTOR MT 36V5	4230V6J/Z ONLY

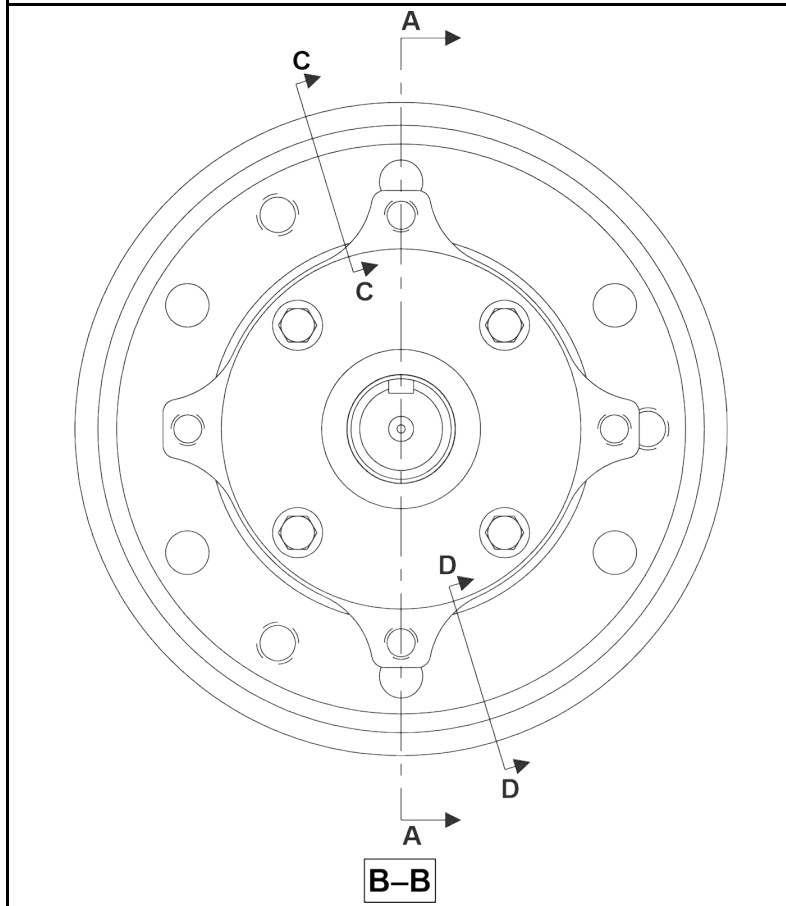
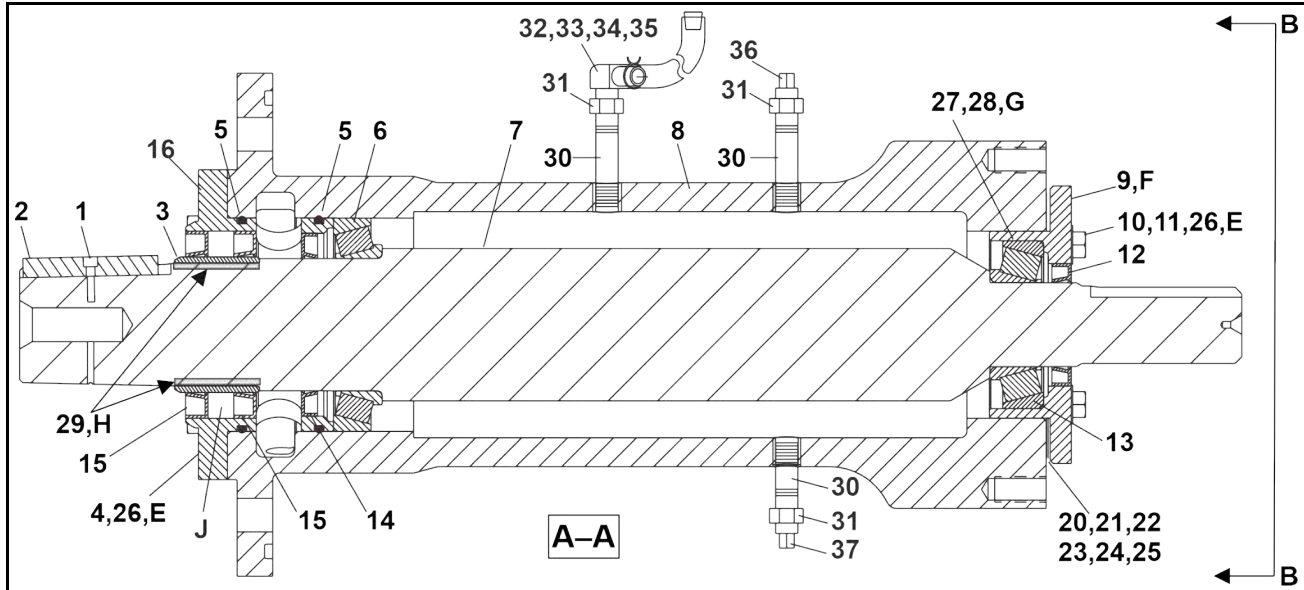
BPWOBB02 / 2019446

BPWOBB02.1 0000262326 A.4 I.2 11/1/19, 11:02 AM Released

Bearing Assembly

3 Sheets

36021V5J, 36021V5Z, 36026V5J, 36026V5Z with Starplate



Legend

- A-A** . . Cross section view of bearing.
- B-B** . . Rear view of bearing.
- E** . . . Apply adhesive to the bolt.
- F** . . . The seal holder must be fully down before you tighten the fasteners.
- G** . . . Apply the primer and adhesive to the rear bearing cup and holder housing.
- H** . . . Clean the shaft and inner sleeve. Make sure that they are clean and free from oil. Apply adhesive to the shaft, then apply the sleeve, make sure a bond on a minimum of 75% of the surface.
- J** . . . Pack the grease between these two seals during assembly.
- K** . . . Item 17 is not shown. These plugs are used temporarily to prevent dirt from entering unfilled holes.

Bearing Assembly

3 Sheets

36021V5J, 36021V5Z, 36026V5J, 36026V5Z with Starplate

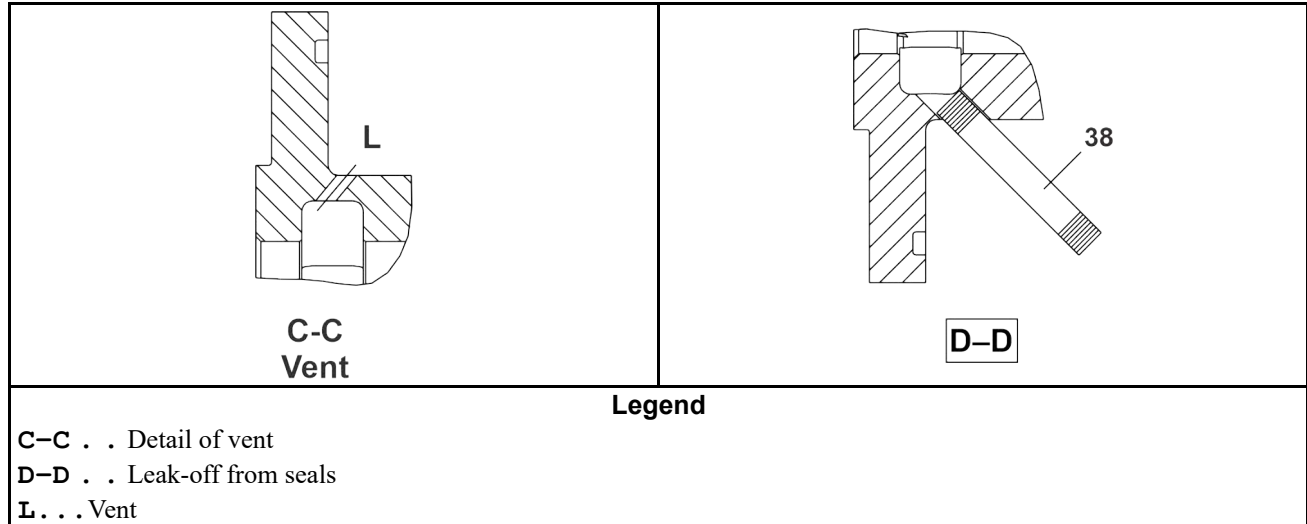


Table 25. Parts List—Bearing Assembly

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
Reference Assemblies				
	A	A33 09906	BRNG ASSY MAIN 3621/26 W/STARPLATE	36021V5J, 36021V5Z 36026V5J, 36026V5Z
Components				
all	1	15H089S	SPRINGPIN 1/8"DIA X 5/8" LONG	
all	2	02 02294A	SHAFT KEY 3/8 X 3/8	
all	3	02 13143	SEALSLEEVE=SWE-1/SWE	
all	4	15B080	HEXCAPSCR 5/16 X1+1/4 SS-18-8	
all	5	60C151	ORING 3+7/8ID1/8CS BUNA70#241	
all	6	54A915916	TIM#JLM710949C/JLM710910-2.5"BORE	
all	7	X2 13107	MACH=MAIN SHAFT, 3621/26	
all	8	X2 03573T	MACH=BEARING HOUSING 3022 V6	
all	9	X2 03659S	HOUSE=SEAL+BRG 30M,V7 W/STARPLATE	
all	10	15K092B	HEXFLGSCR 3/8-16X1 GR8 ZN WITH 242 PATCH	
all	11	15U152A	FLTWSHR .680OD,.375ID,.0625T	
all	12	24S048AAA	SEAL 1.625X2.375X.375 CS/BUNA	
all	13	54A307308	TIM M802011 2-24/M802048=1.625	
all	14	24S052A	SEAL 2.559X3.55X.315 CR#25430	
all	15	24S053	SEAL 2.625X3.625X.437#10051L5	
all	16	X2 13144T	HOLDER=SHAFT SEAL 3022V6	
all	17	27A253	PLUG FOR 1/2BOLTHOLE CAPLUG #4	

Bearing Assembly

3 Sheets

36021V5J, 36021V5Z, 36026V5J, 36026V5Z with Starplate

Table 25 Parts List—Bearing Assembly (cont'd.)

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	20	02 03323	SHIM=.003 CRS GREEN	
all	21	02 03323A	SHIM=.005 CRS BLUE	
all	22	02 03323B	SHIM=.010 CRS RED	
all	23	02 03323C	SHIM=.0075 CRS BLACK	
all	24	02 03323D	SHIM=.020 CRS WHITE	
all	25	02 03323E	SHIM=.050 CRS CLEAR	
all	26	20C007H	THDLK REMVBL-#24221	
all	27	20C011B	RETAIN CMPD ADH LCT#60905 .5CC	
all	28	20C006P	PRIMER-N #7649 LCT#21348-4	
all	29	20C009	THRDLKSEAL LCT#27731 50CC	
all	30	5N0E02KG42	NPT NIP 1/4X2.5 TBEGALSTL SK40	
all	31	5SCC0EBE	NPT COUP 1/4 BRASS 125#PSI W/HEX	
all	32	5SL0EBEC	NPTELB 90DEG STRT 1/4 BRASS125	
all	33	27A043A	HOSECLAMP.562"DIA.SPRG#HC9STZD	
all	34	60E005P	PVC TUBING 1/2"ID X 5/8"OD	
all	35	27A106	CORK SIZE 4 XXX E=1	
all	36	51P013	PLUG HXCNTRSUNK 1/4"BRASS	
all	37	5SP0EFFSSM	NPT PLUG 1/4 SQSLDMAGNET BLKST	
all	38	5N0E05AG42	NPT NIP 1/4X5 TBE GALSTL SK40	

BPWOCB01 / 2023172A

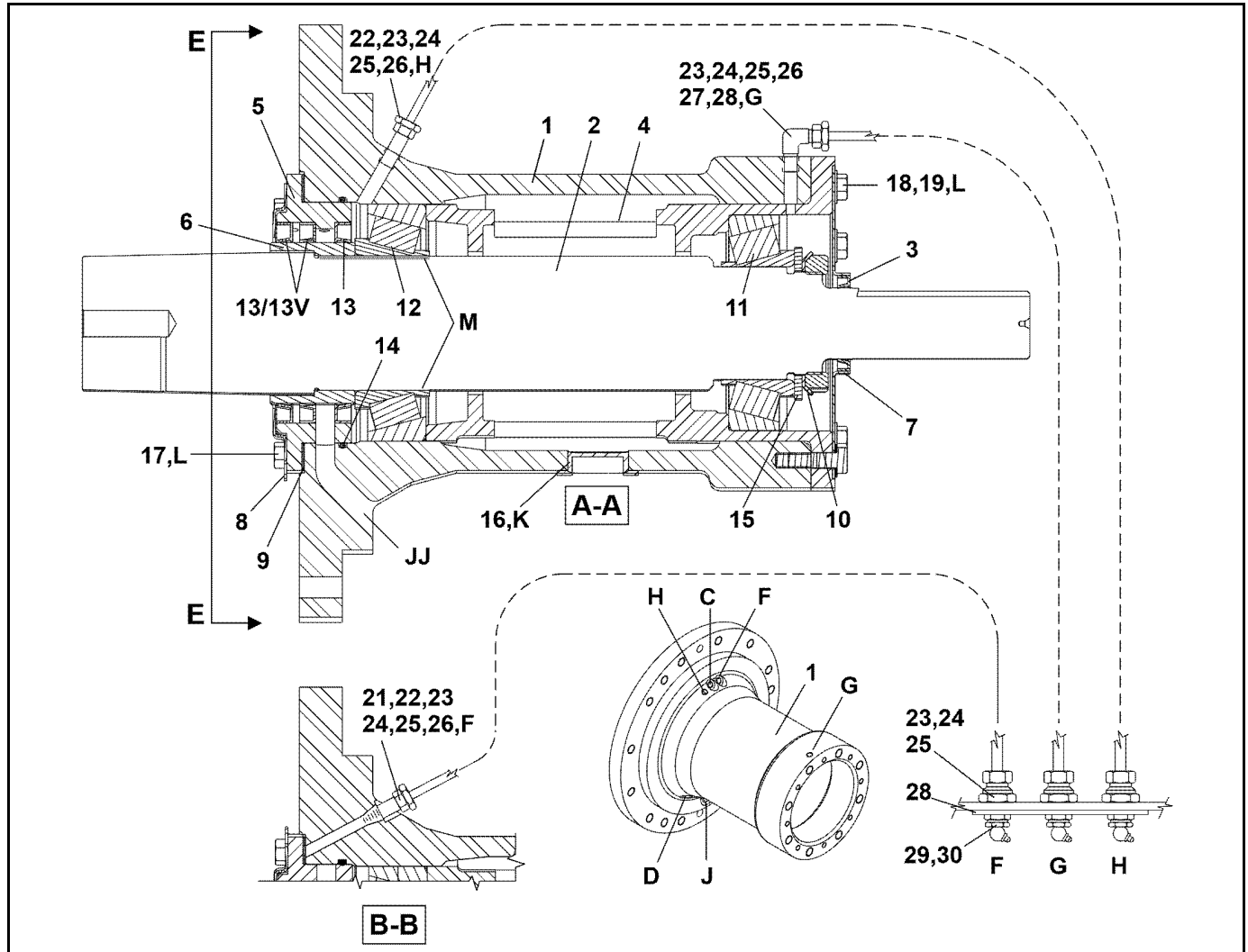
BPWOCB01.1 0000235282 C.2 I.2 4/27/23, 10:54 AM Released

Main Bearing Assembly

3 Sheet

36021V7Z, 36026V7Z, 42026V5J, 42026V6Z, 42030V6Z

Figure 18. Main Bearing Cross Section



Legend

- A-A** . . . Cross Section of Bearing
- B-B** . . . Section View, Grease Inlet to Front Seal
- C** . . . Inlet for Flushing
- D** . . . Front Seal Leak-Off
- F** . . . Grease Inlet to Front Seals
- G** . . . Grease Inlet for Main Bearing Rear
- H** . . . Grease Inlet for Main Bearing Front
- J** . . . Leak-Off for Flushing
- K** . . . Remove at Installation
- L** . . . 8 Instances
- M** . . . Use Grade "A" Loctite between shaft and sleeve. Remove all excessive Loctite after sleeve has been pressed on and before installing shaft. Check seal surfaces for traces of Loctite before installing.

Bearing Assembly

36021V7Z, 36026V7Z, 42026V5J, 42026V6Z, 42030V6Z

Figure 19. Bearing Ports and View Reference

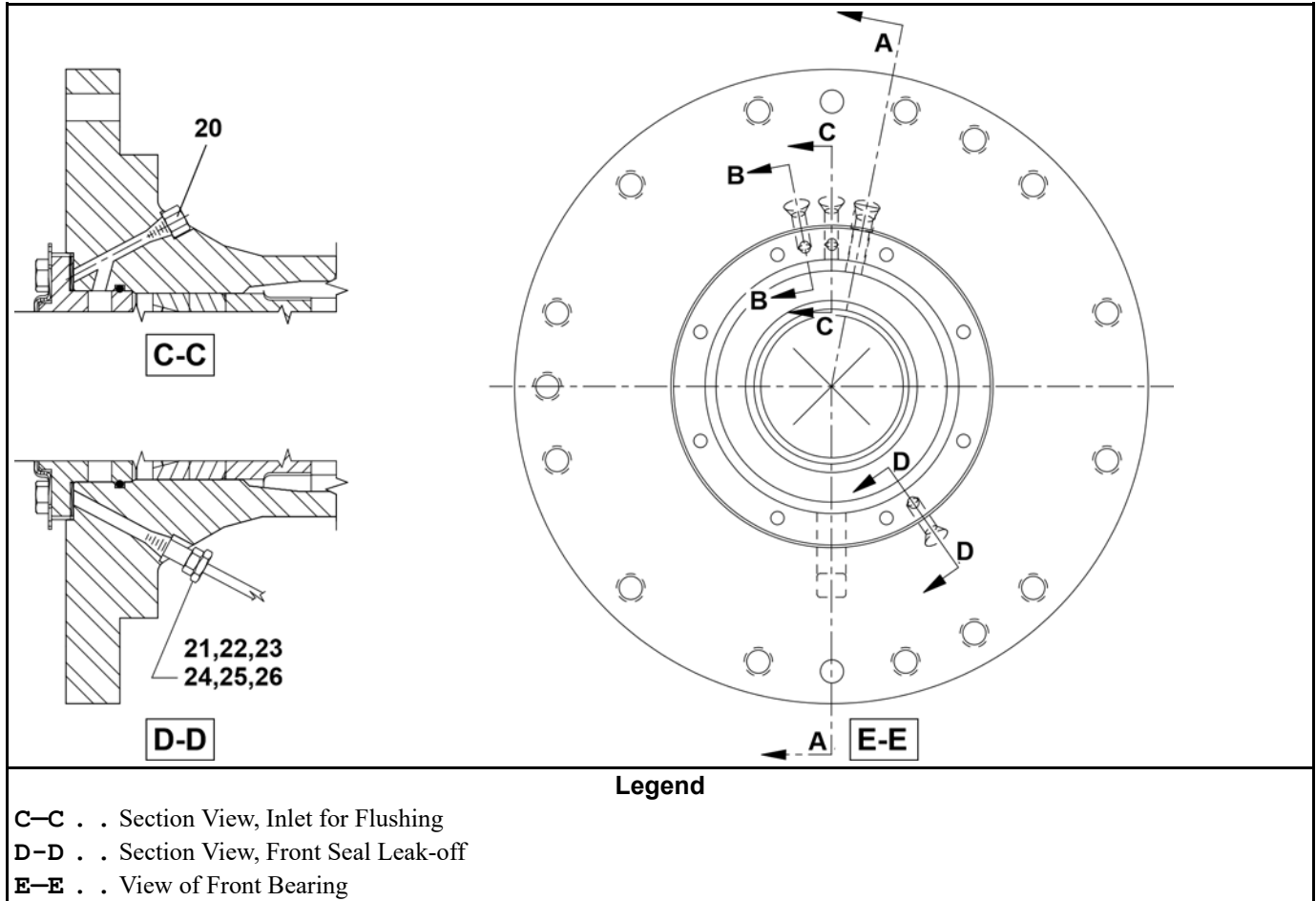


Table 26. Parts List—Bearing Assembly 36V7Z, 42V5J, 42V6Z

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
Reference Assemblies				
	A	KYABK00100	3621/3626V7Z Kit includes: Shaft, Bearing & Seals(C), and Installation Hardware(D)	
	B	KYABK00200	4226/4230V6Z Kit includes: Shaft, Bearing & Seals, and Hardware	
	C	KYABK0010B	3621/3626V7Z, 4226/4230V6Z Kit: Bearing & Seals	
	D	KYABK001ST	3621/3626V7Z, 4226/4230V6Z Kit: Installation Hardware	Not shown here
	E	ABM14801	REFERENCE ASSEMBLY	3621/3626V7Z Bearing Assembly

Bearing Assembly

3 Sheet

36021V7Z, 36026V7Z, 42026V5J, 42026V6Z, 42030V6Z

Table 26 Parts List—Bearing Assembly 36V7Z, 42V5J, 42V6Z (cont'd.)

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
	F	ABM14802V	REFERENCE ASSEMBLY-VITON	3621/3626V7Z Bearing Assembly with Viton Seals
	G	ABM119001A	REFERENCE ASSEMBLY	4226V5J, 4226/4230V6Z Bearing Assembly
	H	ABM119002V	REFERENCE ASSEMBLY-VITON	4226V5J, 4226/4230V6Z Bearing Assembly with Viton Seals
Components				
ABC	1	X2 14220L	MAIN BRG HOUSE 4226RWP	
A	2	X2 14560	MAINSHAFT 3621-26 RWP	
B	2	X2 11185B	MAIN SHAFT=4226RWP	
ABC	3	24S104	SEAL 1.75X2.378X.312 CS/BUNA	
ABC	4	X2 14227A	CARRIER=REAR BRG,FINISH,3621	
ABC	5	X2 14229L	MACH=SEAL HOLDER 4226RWP	
ABC	6	02 14228A	SEALSLEEVE+SPACER=2.90LG	
ABC	7	X2 11158	SEALHOLDER-REAR=SUPPORT MOD	
ABC	8	02 14214L	WASHER=SEAL RETAIN	
ABC	9	02 14216L	GASKET=SEAL HOLDER 1/16 THK	
ABC	10	56AHW113	TW113 BEARING LOCKWASHER	
ABC	11	54A335465	TIM H414210/H414249=2.8125"BORE	
ABC	12	54A325426	TIMK CUP742/CONE749=3.25"BORE	
ABC	13	24S125	SEAL 4X5X.4 JM#19583 NITRILE	
FH	13V	24S125V	SEAL 4X5X.4 JM#19583 VITON	Viton Seals
ABC	14	60C160E	ORING 6.0ID 1/8CS BUNA70-258	
ABC	15	56ATW13S	TONGUEWASHER SPECIAL FOR N13	
ABC	16	51P046	PLUGCAPTAPERED NOTHD #17S	
ABC	17	15K096	HEXCAPSCR 3/8-16UNC2X1SS18-8	
ABC	18	15K095C	HXCAPSCR 3/8-16X1.25 GR.8 ZN.	
ABC	19	15U240L9	FLTWASH 3/8 HARD ASTM F436	
all	20	5SP0CFESSV	NPTPLUG1/8SQLDBLKSTL LVENT125	
all	21	54M029	RELIEFFIT 1/8STR ALEMITE 47200	
all	22	53A005B	BODYMALCON1/4X1/8COMP #B68A-4A	
all	23	53A501	TUBE INSERT .163"OD #63PT-4-40	
all	24	53A500	SLEEVE DELRIN 1/4"OD#60PT-4	
all	25	53A059A	NUT 1/4"BR.HOLYOKE AND #61A-4	

Bearing Assembly

3 Sheet

36021V7Z, 36026V7Z, 42026V5J, 42026V6Z, 42030V6Z

Table 26 Parts List—Bearing Assembly 36V7Z, 42V5J, 42V6Z (cont'd.)

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	26	60E004TC	TUBING NYL(NAT)1/4"ODX.17ID	
all	27	53A031B	BODY-EL90MALE.25X1/8 #269C-42B	
all	28	01 10025Z	NPLT:BEARING LUB-42"& 36"	
all	29	5SB0E0CBEO	NPTHEXBUSH 1/4X1/8 BRASS 125#	
all	30	54M020	GREASEFIT 30DEG 1611-B ALEMITE	

3 Cylinder & Shell

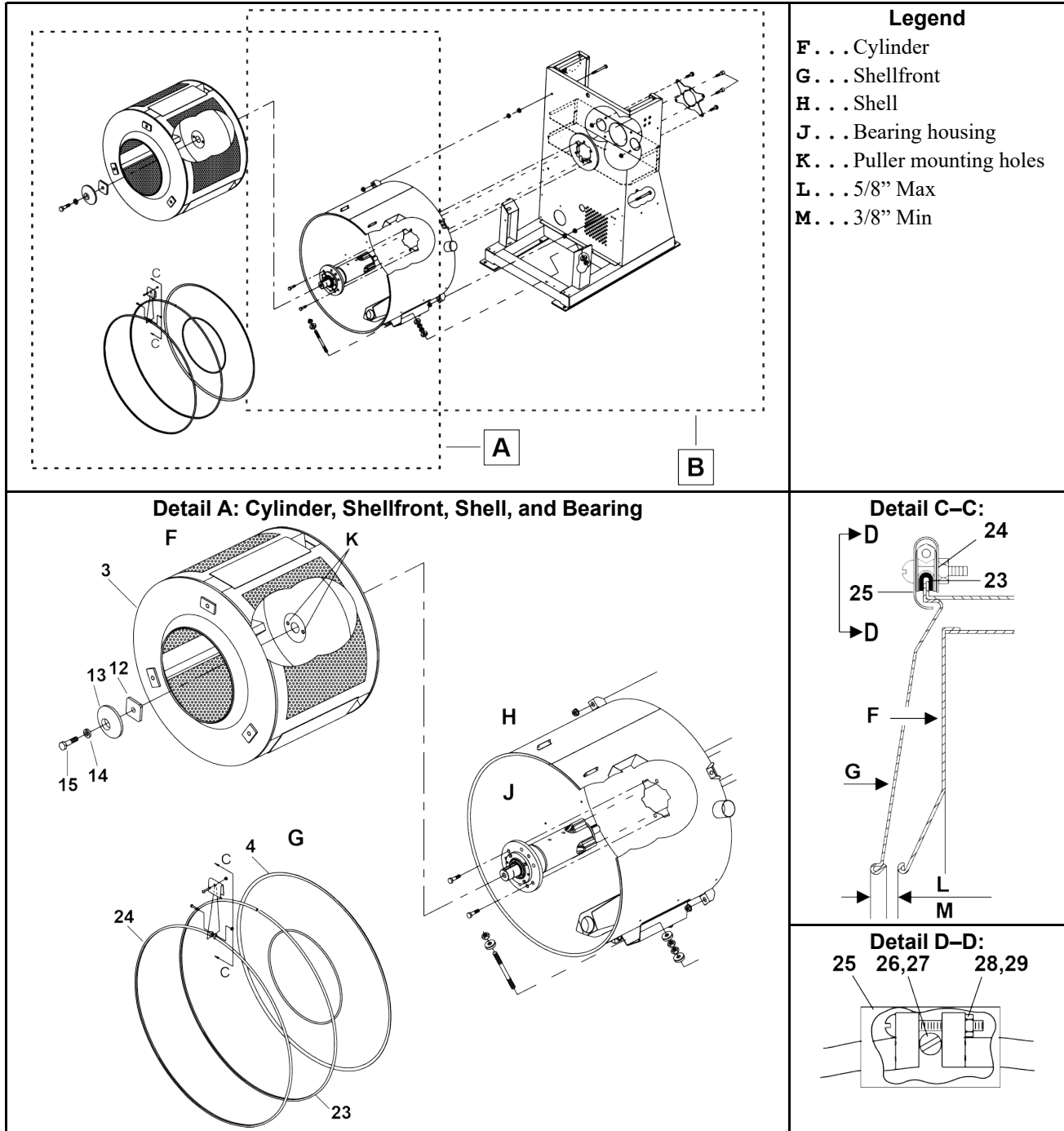
BPWOBB01 / 2023486A

BPWOBB01.1 0000262289 D.2.1.2 12/1/23, 10:54 AM Released

Main Bearing, Shell, Cylinder Installation

5 Sheets

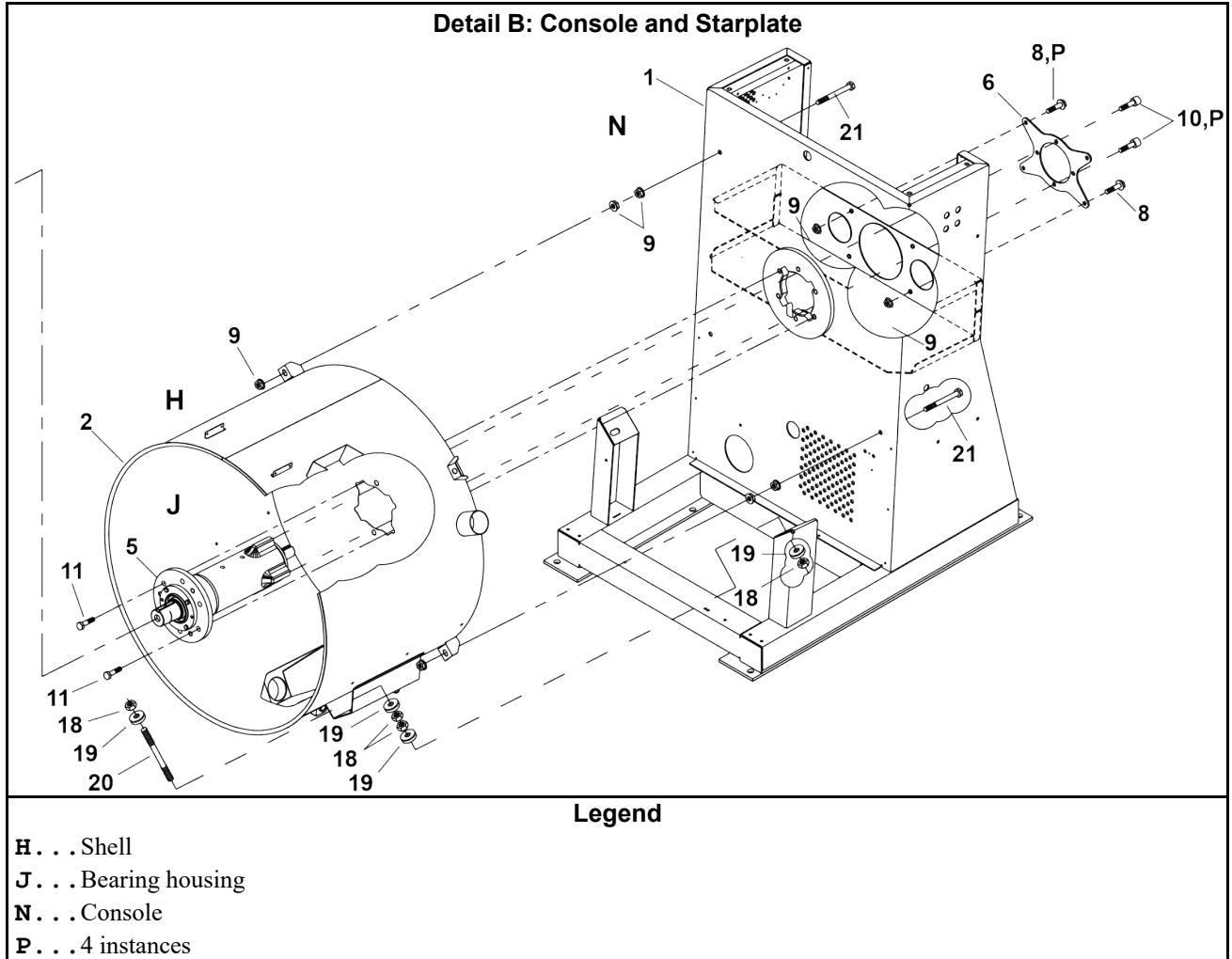
36021V5J, 36021V5Z, 36026V5J, 36026V5Z with Starplate



Main Bearing, Shell, Cylinder Installation

5 Sheets

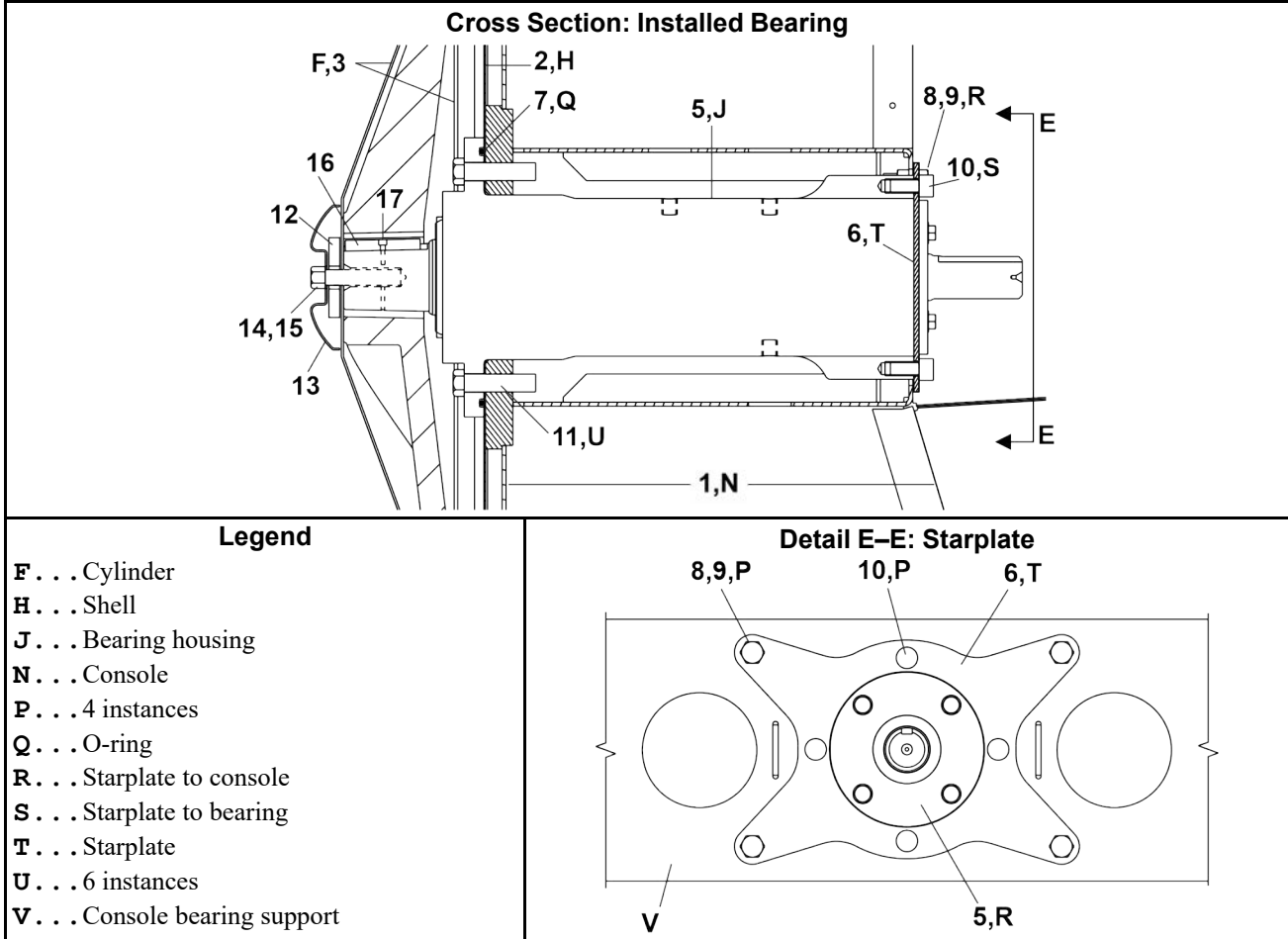
36021V5J, 36021V5Z, 36026V5J, 36026V5Z with Starplate



Main Bearing, Shell, Cylinder Installation

5 Sheets

36021V5J, 36021V5Z, 36026V5J, 36026V5Z with Starplate



Main Bearing, Shell, Cylinder Installation

5 Sheets

36021V5J, 36021V5Z, 36026V5J, 36026V5Z with Starplate

Table 27. Parts List—Main Bearing, Shell, Cylinder 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
Reference Assemblies				
	A	GBM30010	3621/26V5J BRNG HOUSING W/STARPLATE	REFERNCE
	B	GCA3621Q4	CYL INSTL 3621 Q4	3621V5J,V5Z
	C	GCA3626Q4	CYLINDER INSTALL 3626Q4	3626V5J,V5Z
	D	GSF14809	INST=SHELL+BASE+FRM STRPL 3621V5J	3621V5J, V5Z
	E	ASE14809	SHELL+BASE+FRAME STRPLT 3621V5	3621V5J, V5Z
	F	GSF14810	INST=SHELL+BASE+FRM STRPL 3626V5J	3626V5J, V5Z
	G	ASE14810	ASSY=SHELL+BASE+FRAME 3626V5J	3621V5J, V5Z; 3626V5J, V5Z
Components				
all	1	W3 11002J	FRAME-BASE WLMT-36V W/STARPLATE	VITON
all	2	W3 11060J	SHELL WLMT 3626V5J W/STARPLATE	
B	3	ACA3621V5	CYL ASSY=3621V5 20" DOOR	
C	3	ACA3626V5	CYL ASSY=3626V5 20" DOOR	
G	4	ASF14803	36V 20" SHELLFRONT DOOR ASSY	
all	5	A33 09906	BRNG ASSY MAIN 3621/26 W/STARPLATE	
all	5	A33 09906V	BRNG ASSY MAIN VITON 3621/26 W/STARPLATE	
all	6	02 11340	3022 BEARING SPT STARPLATE	
all	7	60C171	ORING 8.5"IDX 3/16CS BUNA70 #371	
all	8	15K154H	INDHEXFLGSCR 1/2-13X1+3/4GR8ZN W/LOCTITE	
all	9	15G222B	HEXFLGNUT 1/2-13 ZINC SERRATED	
all	10	15K147C	SKCPSC 1/2-13X1 BLK	
all	11	15K224C	HEXCAPSCR 5/8-11X2-1/2 S/S 18-	
all	12	02 14359	SPACER SHT RETNR-LG OUR MATL	
all	13	02 11196	COVER=SHAFT RETAINER=304S/S	
all	14	15U350	LOCKWASHER 3/4 MED SS18-8	
all	15	15B200	HEXCAPSCR 3/4-10X1+3/4 SS18-8	
all	16	02 09126	SHAFTKEY-SS303=OEWS 2+5/8"L	
all	17	15N082	FILMACSCR 8-32UNC2X3/8SS18-8	
all	18	15G238	HXNUT 5/8-11UNC2B SAE ZINC GR2	
all	19	17W030	SPHERICAL WASHER SET 5/8 M/F	
all	20	17R024A07A	THREADED ROD 5/8-11X7" ZNPL GR	
all	21	15D119	HXTAPSCR 1/2-13X4 GR5 ZNC FTL	
all	23	02 02087A	EXTRUSION-SHELL=36"MACHINES	
all	24	Y2 09031	*SHELL CLAMP RING=36" MACHINE	

Main Bearing, Shell, Cylinder Installation

5 Sheets

36021V5J, 36021V5Z, 36026V5J, 36026V5Z with Starplate

Table 27 Parts List—Main Bearing, Shell, Cylinder Installation (cont'd.)

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	25	02 02181	GUARD=SHELL MOUNT RING CLIP	
all	26	15N146	RDMACHSCR 10-24UNC2X1 SS18-8	
all	27	15G130	HEXMACHSCRNUT 10-24UNC2 SS18-8	
all	28	15K046S	HEXCAPSCR 1/4-20UNC2A X 2.25 S	
all	29	15G170	HEXNUT 1/4-20UNC2 SS18-8	
all	30	20C013C	GSKT ELIM SEAL LCT#50441 250CC	

BPWOCB02 / 2023172A

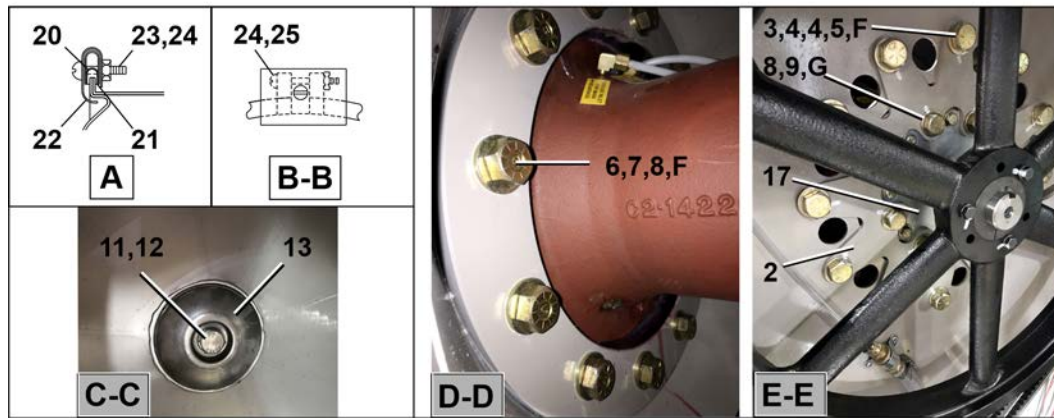
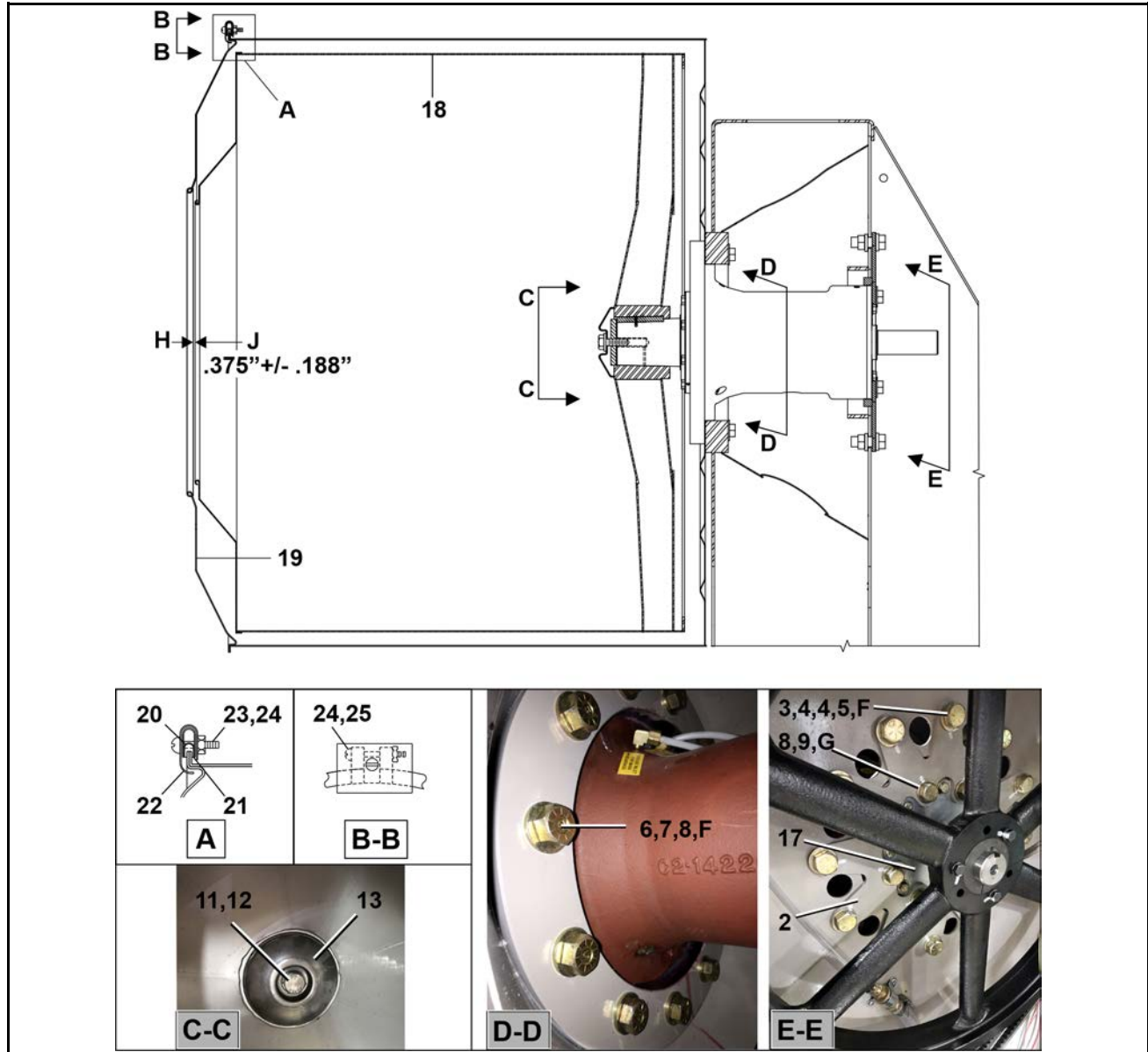
BPWOCB02.1 0000239582 E.4 I.2 4/26/23, 8:36 AM Released

Main Bearing, Shell, and Cylinder

3 Sheet

36021V7Z, 36026V7Z, 42026V5J, 42026V6Z, 42030V6Z

Figure 20. Cross Section of Shell, Cylinder, Bearing, and Frame



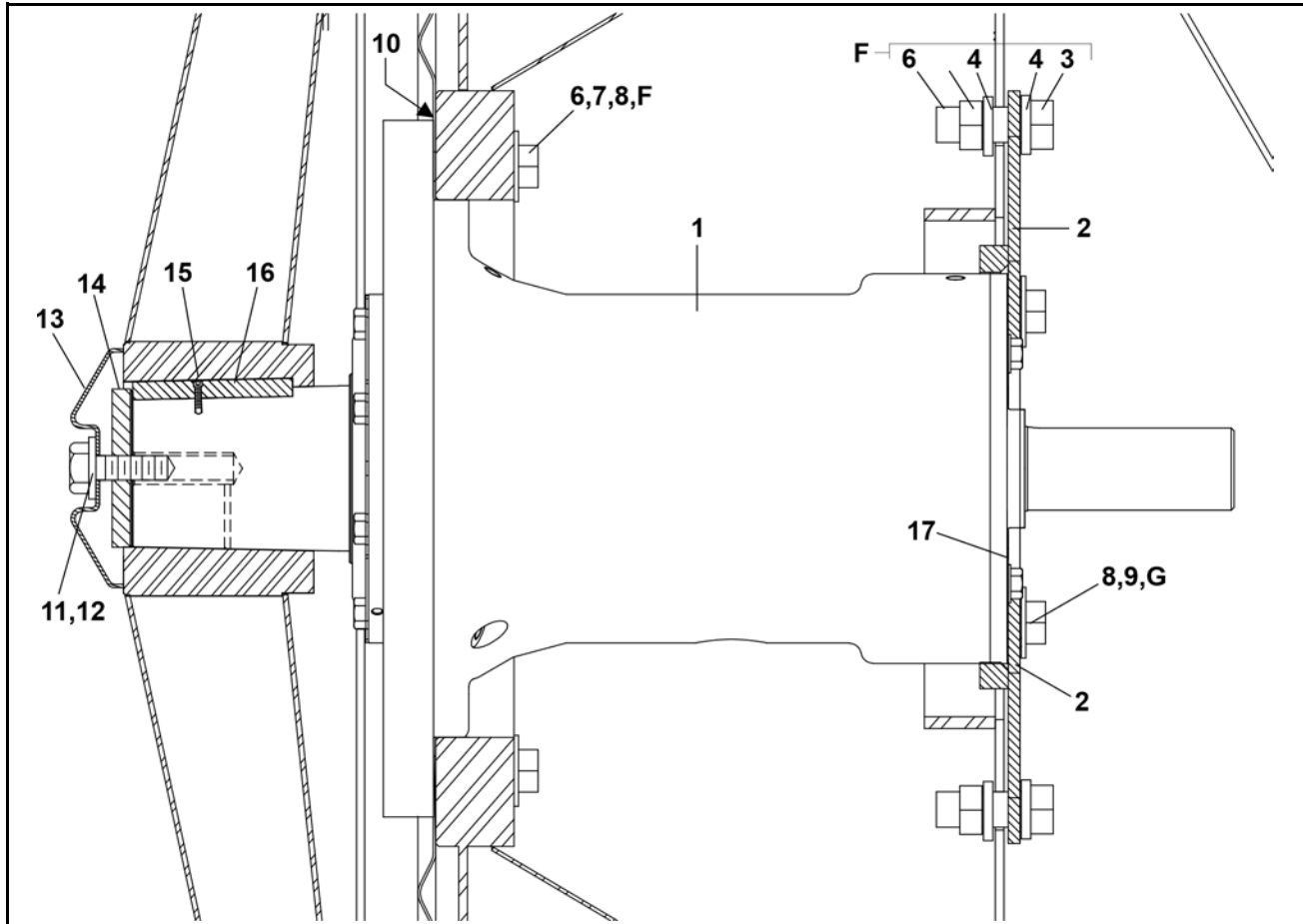
Legend

- A . . . See detail A.
- B-B . . View of Shell Clamp Ring
- C-C . . View of Cylinder to Shaft Connection
- D-D . . Inside View of Front Bearing and Hardware
- E-E . . View of Rear Bearing Installed, Shim, Spider, and Hardware
- F . . . 12 instances
- G . . . 8 instances
- H . . . Shellfront
- J . . . Cylinder

Main Bearing, Shell, and Cylinder Installation

36021V7Z, 36026V7Z, 42026V5J, 42026V6Z, 42030V6Z

Figure 21. Bearing Installation



Legend

F . . . 12 instances

G . . . 8 instances

Table 28. Parts List—Main Bearing, Shell, & Cylinder 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
Reference Assemblies				
	A	GBM14803	BEARING INSTAL 36 3626V7J	36021V7Z, 36026V7Z
	B	GBM119001A	MAIN BRG INSTALL 4226Q6P	42026V5J, 42026V6Z, 42030V6Z
	C	GCA3621Q6	CYLINDER INSTALL 3621Q6	36021V7Z
	D	GCA3626Q6	CYLINDER INSTALL 3626Q6	36026V7Z
	E	GCA119002	CYL INSTL 4226QU	42026V5J, 42026V6Z
	F	GCA12200	CYL INSTL 4230V	42030V6Z

Main Bearing, Shell, and Cylinder Installation

3 Sheet

36021V7Z, 36026V7Z, 42026V5J, 42026V6Z, 42030V6Z

Table 28 Parts List—Main Bearing, Shell, & Cylinder Installation (cont'd.)

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
	G	GSF14808D	FRONT+SHELL+BASE 3621V7 MK2	36021V7Z
	H	GSF14802D	FRONT+SHELL+BASE 36V7 MK2	36026V7Z
	J	GSF119005	FRONT+SHELL+BASE 4226V LARGE DOOR	42026V5J, 42026V6Z
	K	GSF12002	4230V6 FRONT+SHELL+BASE LARGE DOOR	42030V6Z
Components				
A	1	ABM14801	MAINBRG ASSY 3621/26RWP/E	
B	1	ABN119002A	MAIN BEARING ASSY 4226V6P/G	
all	2	Y2 11320	SPIDER WLDMT=MACHINED 42QHE (CS)	
all	3	15K232A	HEXCAPSCR 3/4-10X2 GR8 ZINC	
all	4	15U321H	FLTWASH 3/4 HARD ASTM F436	
all	5	15G240A	HEXNUT 3/4-10UNC2B SAE GR8 ZIN	
all	6	20C007	THDLOCKSEAL LCT#22221 CMPD10CC	
all	7	15K226M	HEXHEAD CAPSCREW 5/8-11X3" GR9 ZINC	
all	8	15U316	FLTWASH 5/8 HARD ASTM F436	
all	9	15K219	HEXCAPSCR 5/8-11X1+3/4 GR9 ZINC PRECOTE 85 PATCH	
all	10	20C040B	SUPERFLEX CLR RTV SIL 10.1OZ	
A	11	15B200	HEXCAPSCR 3/4-10X1+3/4 SS18-8	
B	11	15B208	HEXCAPSCR 3/4-10X2+1/4 SS18-8	
all	12	15U350	LOCKWASHER 3/4 MED SS18-8	
all	13	02 11196	COVER=SHAFT RETAINER=304S/S	
all	14	02 11186	RETAINER+SPACER-SHAFT=4226	
all	15	15N082	FILMACSCR 8-32UNC2X3/8SS18-8	
all	16	02 09126	SHAFTKEY-SS303=OEWS 2+5/8"L	
all	17	X2 11158C	SHIM=BRGHOUSE MTG REAR 24GA	
C	18	ACA3621V7	CYL ASSY=3621V7 20" DOOR	
D	18	ACA3626V7	CYL ASSY=3626V7 20" DOOR	
E	18	ACA4226V6	CYL ASSY=4226V6 20" DOOR	
F	18	ACA12201	CYL ASSY 4230V FLATFRONT 20" DOOR	
GH	19	ASF14803	36V 20" SHELLFRONT DOOR ASSY	
JK	19	ASF119005	42V-20" SHELLFRONT/DOOR ASSY	
all	20	Y2 12053	*SHELLCLAMP RING=42" MACHINE	
all	21	02 02087B	EXTRUSION-SHELL=42"OEWS (12.5	
all	22	02 02181	GUARD=SHELL MOUNT RING CLIP	

Main Bearing, Shell, and Cylinder Installation

3 Sheet

36021V7Z, 36026V7Z, 42026V5J, 42026V6Z, 42030V6Z

Table 28 Parts List—Main Bearing, Shell, & Cylinder Installation (cont'd.)

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	23	15N146	RDMACHSCR 10-24UNC2X1 SS18-8	
all	24	15G130	HEXMACHSCRNUT 10-24UNC2 SS18-8	
all	25	15K046S	HEXCAPSCR 1/4-20UNC2A X 2.25 S	
all	26	15G170	HEXNUT 1/4-20UNC2 SS18-8	

4 20 Inch Door Assemblies after 8/2016

BPWOBD01 / 2023316

BPWOBD01.1 0000262726 C.2 I.2 8/7/23, 9:21 AM Released

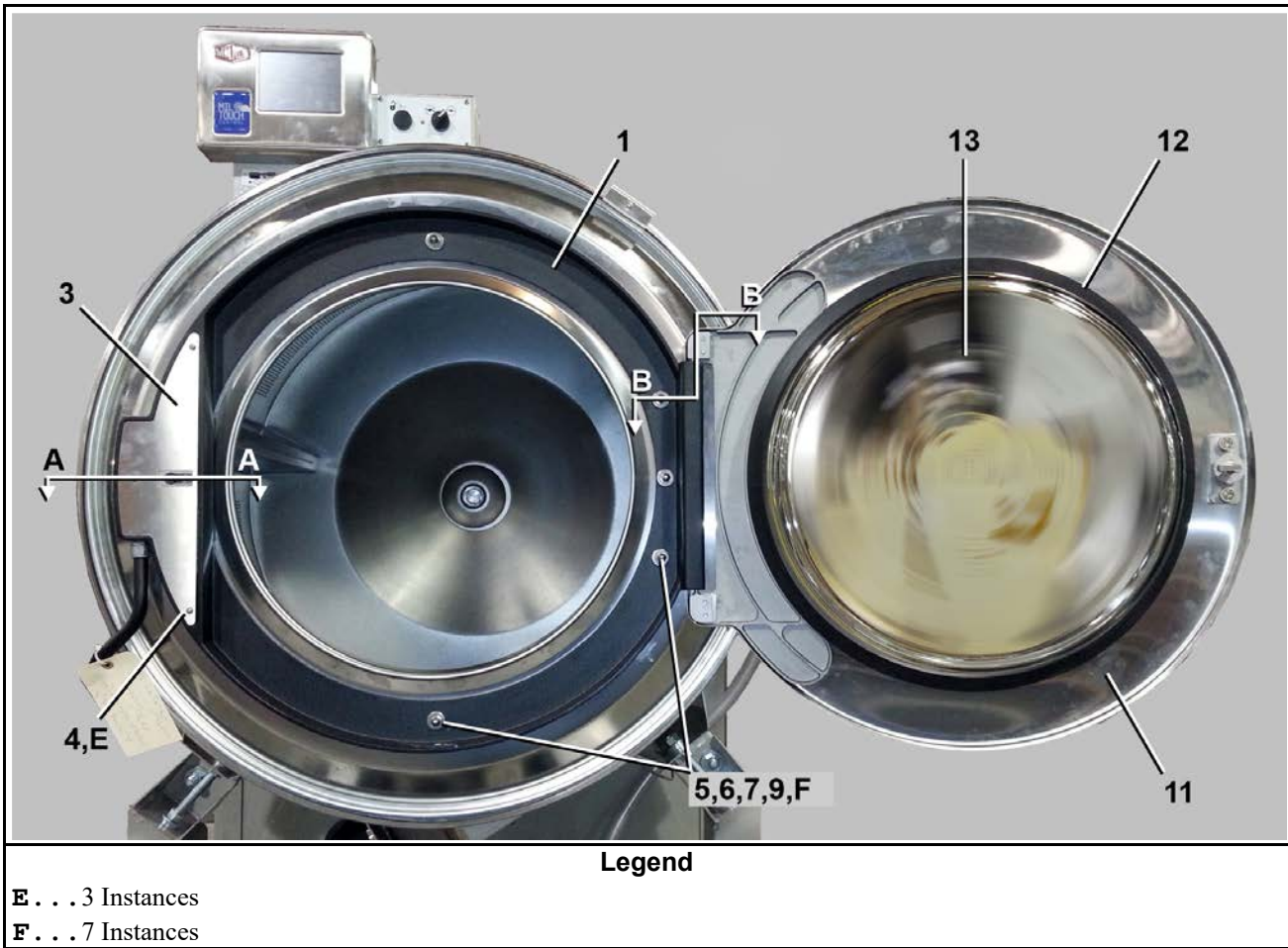
20" Flat Front Door

4 Sheets

36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z



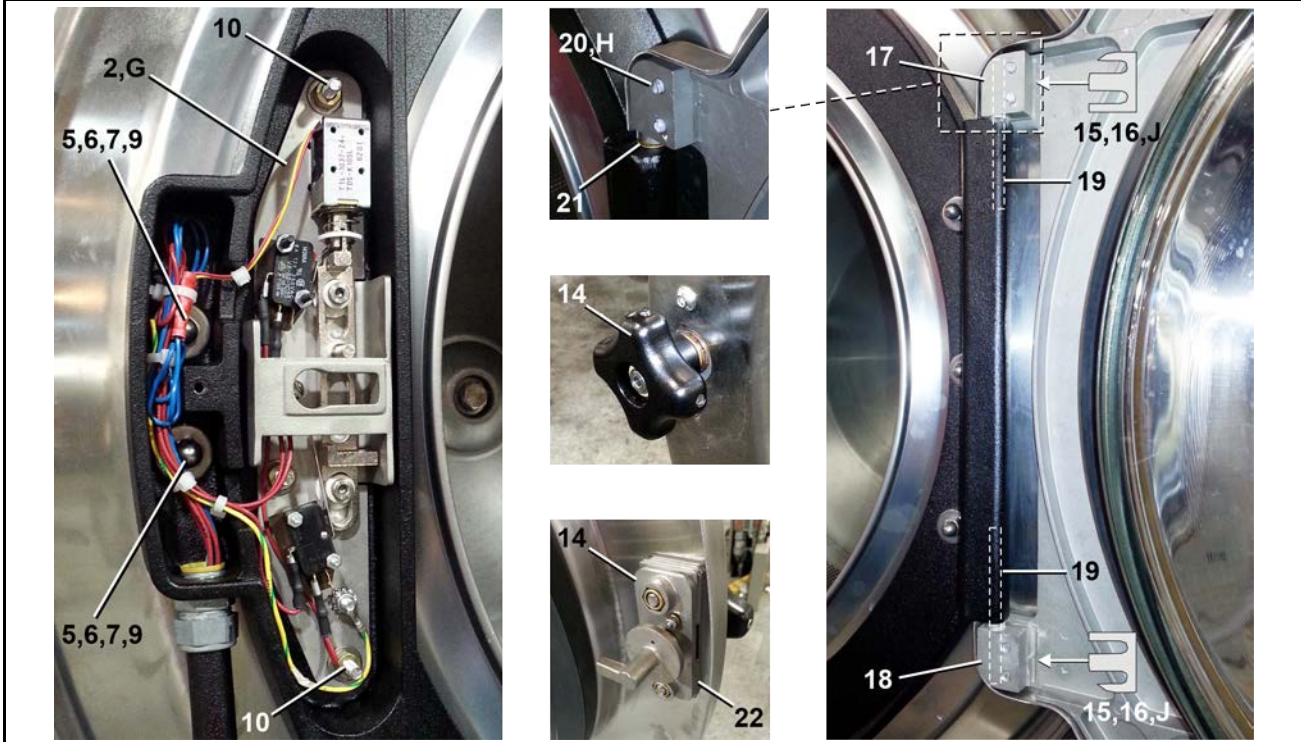
NOTE: This drawing is for the 20 inch door used since August 2016. For the 18 inch door used prior to August 2016, see BMP110053.



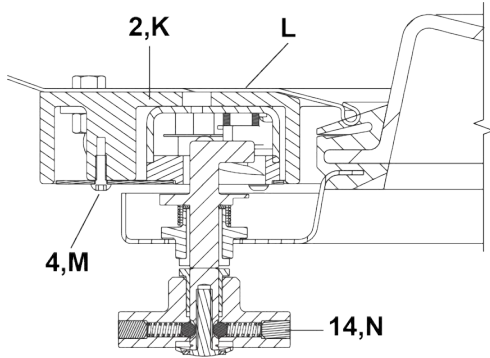
20" Flat Front Door

4 Sheets

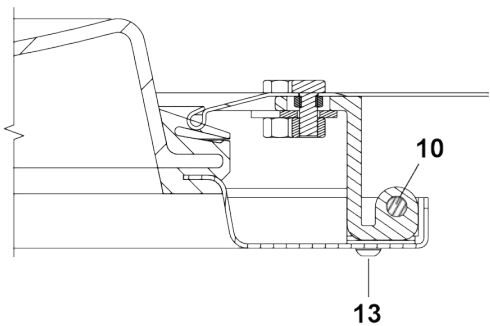
36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z



Section A-A: Door Lock



Section B-B: Door Hinge



Legend

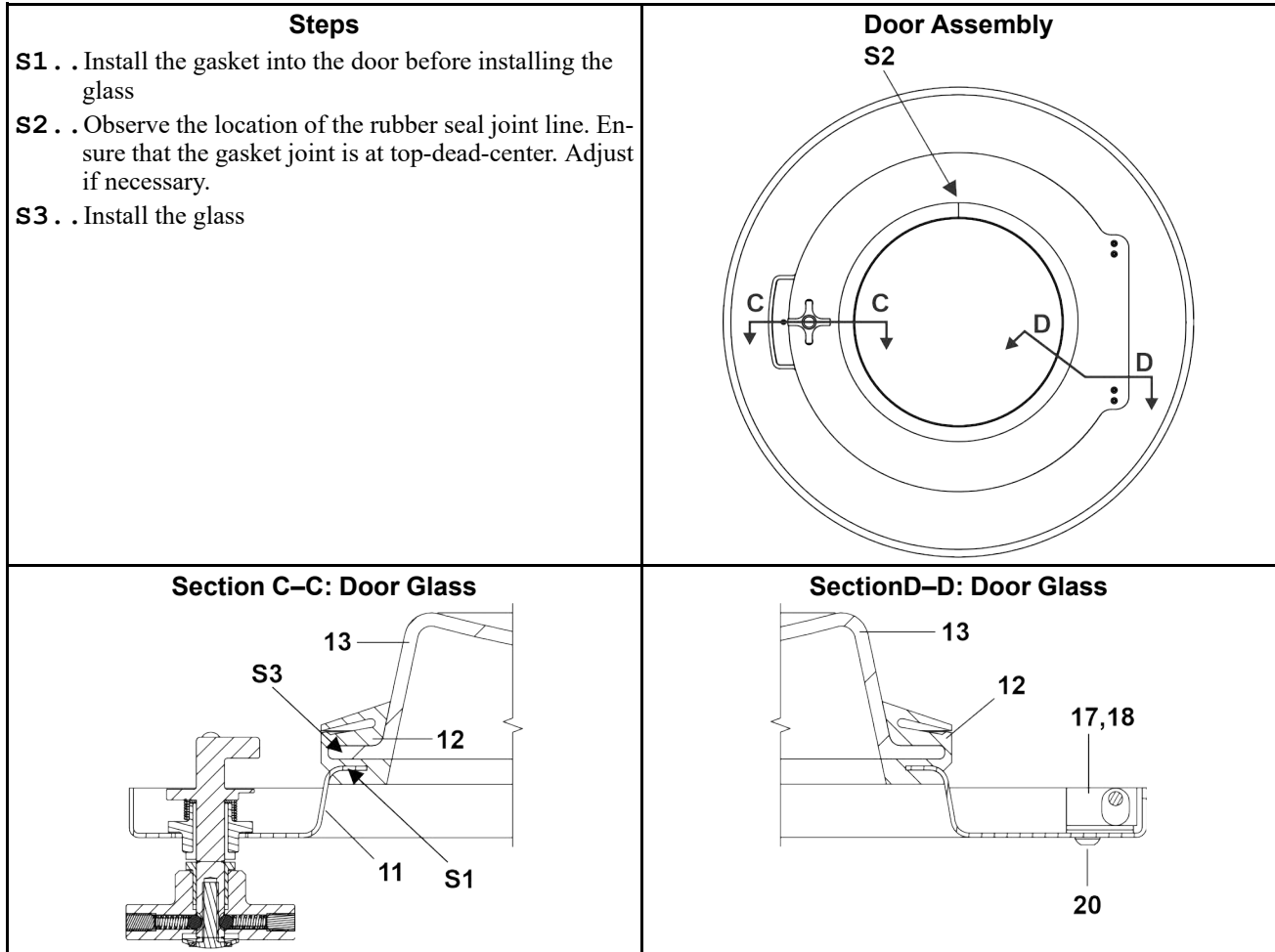
- G** . . . See BPWOAD03
- H** . . . 4 Instances
- J** . . . Add or remove shims to the lower hinges until the door locks properly and seals
- K** . . . See BPWOAD03
- L** . . . Shellfront
- M** . . . 6 Instances
- N** . . . See BPWOAD01

20" Flat Front Door

4 Sheets

36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z

Figure 22. Door Glass Installation Steps



20" Flat Front Door

4 Sheets

36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z

Table 29. Parts List—20" Flat Front Door

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
Reference Assemblies				
	A	ASF14803	36V 20" SHELLFRONT DOOR ASSY	REFERENCE 36021/36026V_
	B	ASF119005	42V-20" SHELLFRONT/DOOR ASSY	42026/42030V_
	C	ASD119004	ASSY DOOR=20" FLAT FRONT	DOOR ASSEMBLY
Components				
all	1	02 11992	20" DOOR FRAME FLATFRONT MACHINED	
all	2	98CMCR0971	DOOR INTERLOCK ASSY V8Z VRJ MILNOR ASSY A33 03226B	
all	3	02 11996	DOOR LOCK BOX COVER 20" DOOR	
all	4	15K017	BUTSOKCAPSCR 10-24X1/2 SS	
all	5	15K052	HXCAPSCR 5/16-18UNC2AX3/4 SS18	
all	6	24G027N	ROLLED WASH.312ID NYLTITE 31W	
all	7	15U246	FLATWASHER 1"ODX25/64IDX1/8"30	
all	8	15G192	HXCPNUT 5/16-18UNC2SS18-8 9/16	
all	9	15G184	HXCPNUT HI 5/16-18 BRASS NIK PL	
all	10	17S2500A	DOUBLE END 1/4-20X1-1/8 STUD 1/4 ONE END AND 3/4 ONE END CS	
all	11	02 11991	20" SHELL DOOR FLAT FRONT	
all	12	02 11993	20" DOOR GASKET FLAT FRONT	
all	13	02 11994	20" DOOR GLASS FLAT FRONT	
all	14	98CMCR0925	ASSY=DR HNDL MECH	
all	15	02 03297A	30" DOOR HINGE SPACER 16GA	
all	16	02 03297	30" DOOR HINGE SPACER 14GA	
all	17	02 03262	20" FLAT FRONT DOOR HINGE RIGHT	
all	18	02 03262A	20" FLAT FRONT DOOR HINGE LEFT	
all	19	X2 03296B	HING PIN 3022V8	
all	20	15K042	BUTSOKCAPSCR 1/4-20NCX1 SS18-8	
all	21	15U186	FLATWASHER (USS STD) 1/4" BRASS	
all	22	02 04192A	.015 SHIM=DOOR MNT PL,3022H7	

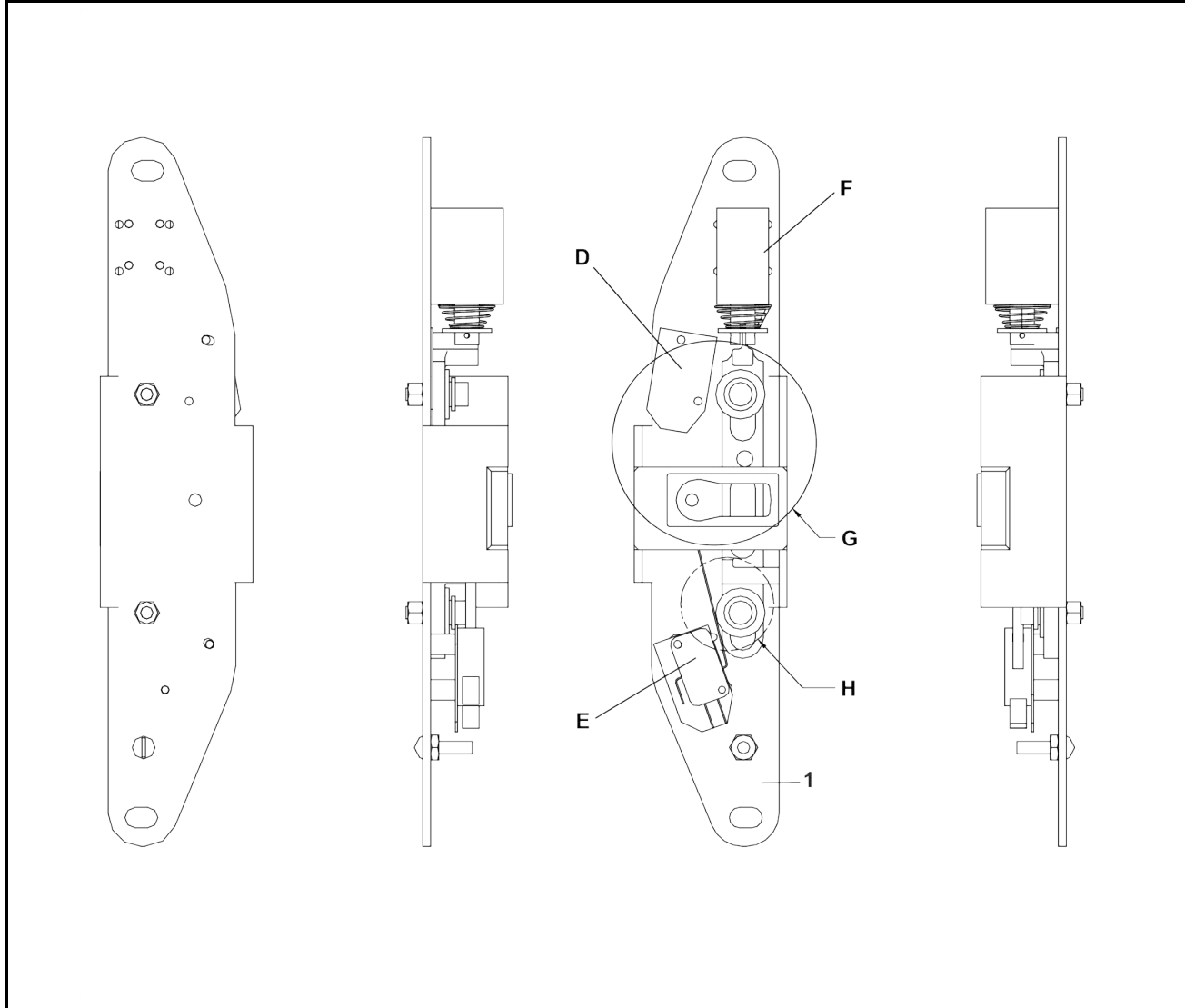
BPW0AD03 / 2023316

BPW0AD03.1 0000255709 L.2 I.2 8/7/23, 8:45 AM Released

Door Lock Mechanism

3Sheets

MCR12; MCT16/18/27; MWF18/27; MWR27/36; MWT12/16/18/27; 3015/3022T6X, VRJ, V8Z, VZZ;
 3022X8R; 36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z. 42030V6Z



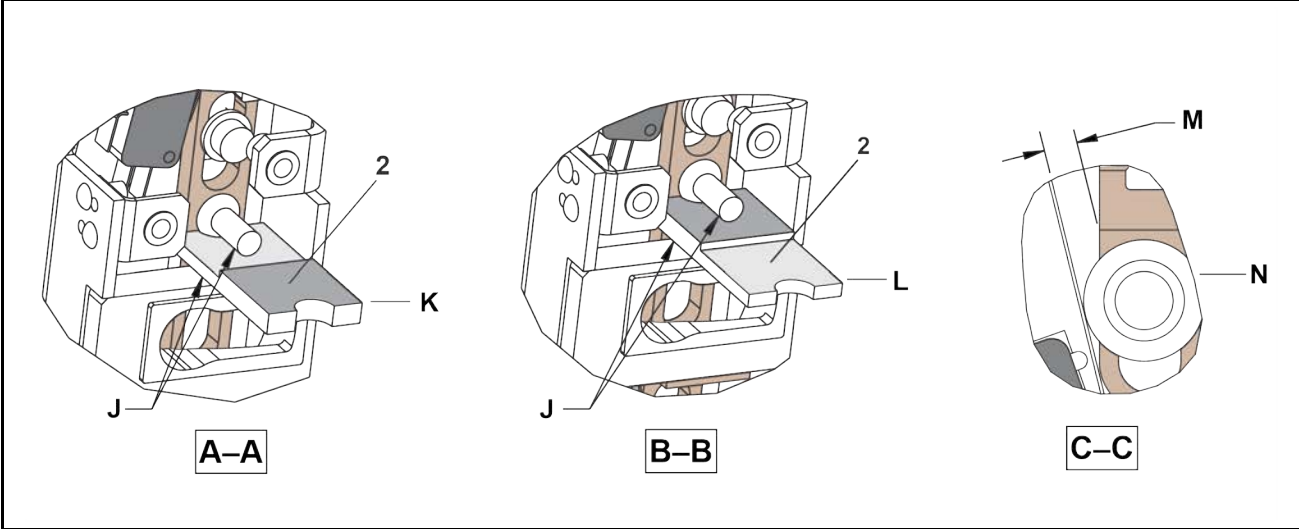
Legend

- D . . . Door lock switch
- E . . . Door closed switch
- F . . . Door lock solenoid
- G . . . See details A & B
- H . . . See detail C

Door Lock Mechanisms

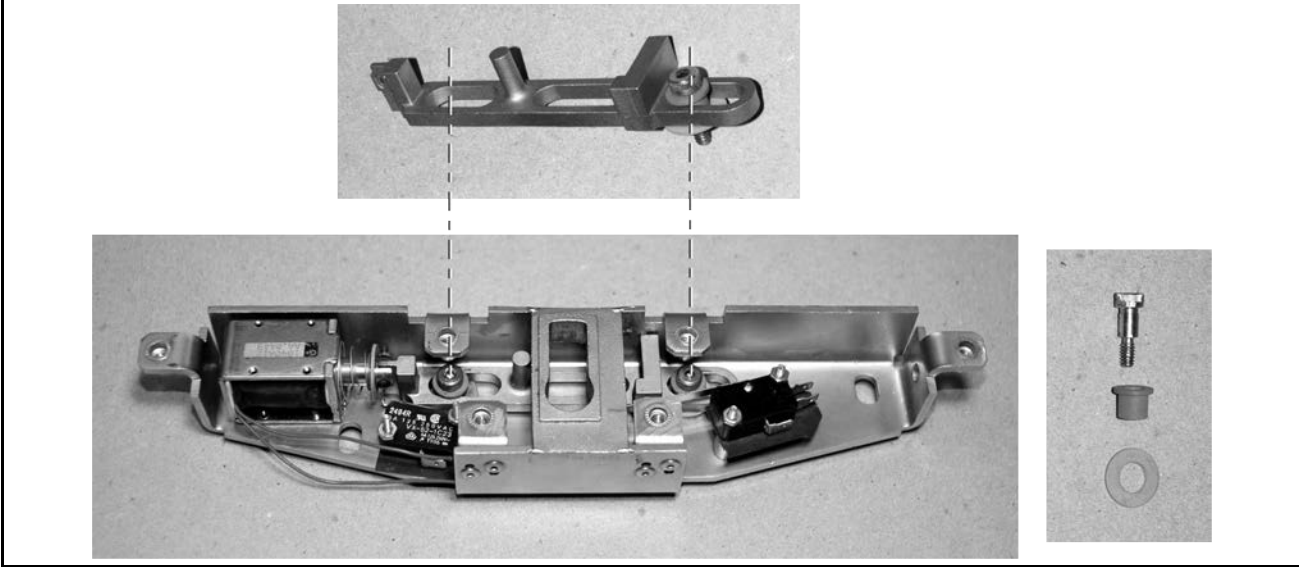
3Sheets

MCR12; MCT16/18/27; MWF18/27; MWR27/36; MWT12/16/18/27; 3015/3022T6X, VRJ, V8Z, VZZ; 3022X8R; 36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z. 42030V6Z



Legend

- A-A** . . Door lock switch “OFF”
- B-B** . . Door lock switch “ON”
- C-C** . . Door closed switch
- J** . . No air gap
- K** . . Insert item 2, thin side. Adjust the switch to “OFF.”
- L** . . Insert item 2, thick side. Adjust the switch to be “ON.”
- M** . . 3/16” minimum clearance
- N** . . Measure this while the slider is down.



Door Lock Mechanisms

3Sheets

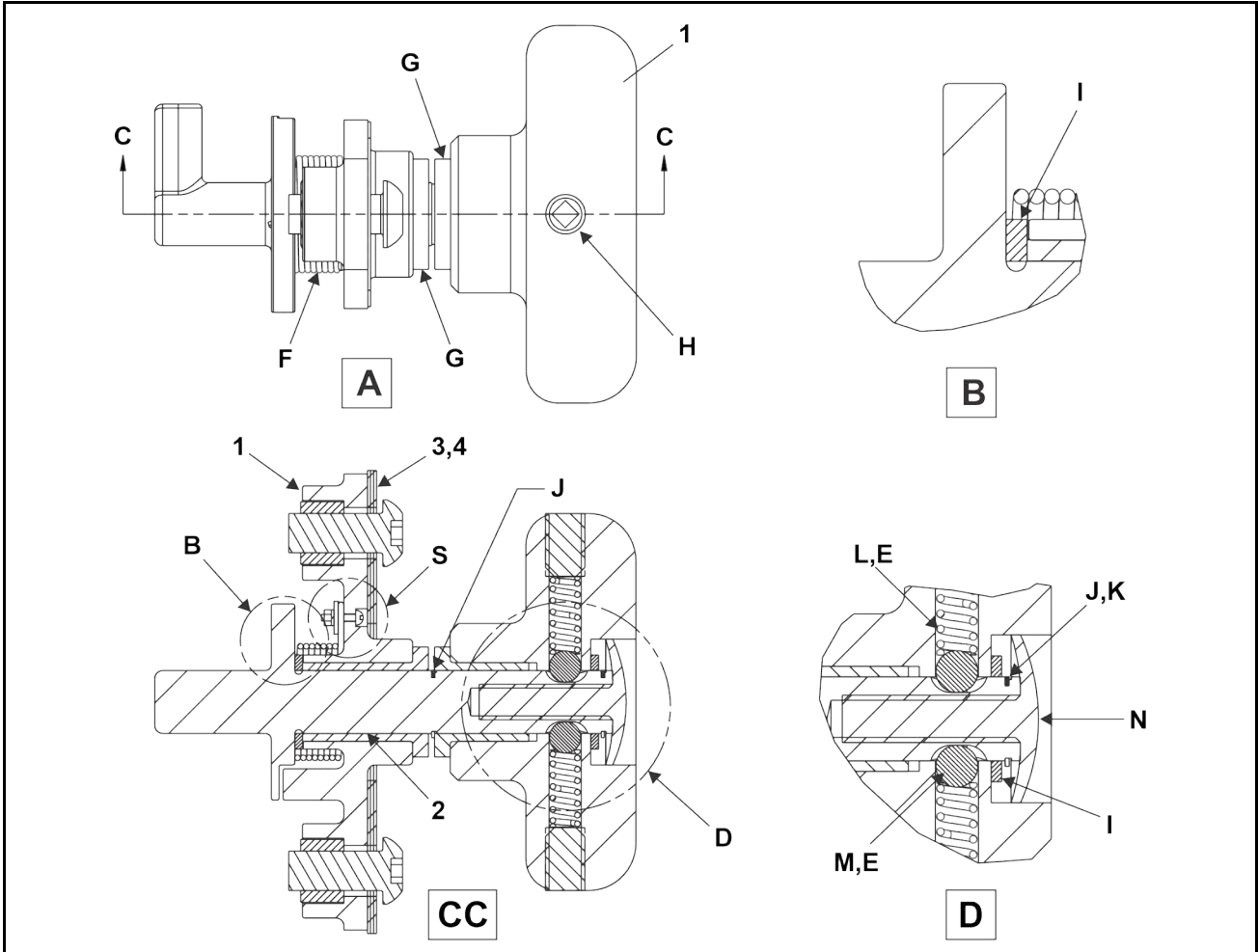
MCR12; MCT16/18/27; MWF18/27; MWR27/36; MWT12/16/18/27; 3015/3022T6X, VRJ, V8Z, VZZ;
 3022X8R; 36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z. 42030V6Z

Table 30. Parts List—Door Lock Mechanisms

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				
	1	98CMCR1206	DOOR INTERLOCK ASSY MCT12	MCR12, MCT16,
	1	98CMCR1205	DOOR INTERLOCK ASSY MWT12	MWT12, MWT16
	1	98CMCR0978	DOOR INTERLOCK ASSY MCT18	MCT18, MCT27
	1	98CMCR0971	DOOR INTERLOCK ASSY V8Z VRJ MILNOR ASSY A33 03226B	MWF18, MWF27, MWT18, MWT27, MCR36E4, MWR36J4, 30015/22T6X, VRJ, V8Z, VZZ, 36021V_, 36026V_, 42026V_, 42030V_
all	2	X2 03306A	MACH=GAGE DR LOCK SWITH, MCR	

Door Handle and Lock Actuator

Figure 23. Door Handle and Lock Actuator



Legend

- A . . . Top
- B . . . Detailed view
- CC . . Cross Section
- D . . . Detailed view
- E . . . 4 instances
- F . . . Torsion spring
- G . . . Flange bearing
- H . . . Bolt
- I . . . Thrust washer
- J . . . Retainer ring
- K . . . Do not open the ring more than necessary to get it on the shaft.
- L . . . Spring
- M . . . Roller ball
- N . . . Retainer

Door Handle and Lock Actuator

3 Sheets

Figure 24. Shim Adjustment Steps

Steps

S1 . . Add shims to make the latch looser. Remove shims to make latch tighter. To add shims, add a notch to the shims as shown. Then you will not have to remove the handle assembly. When you remove or add shims, always start with the thinnest shim.

S2 . . Make a notch as shown.

S3 . . Put in the machine screw. Put the eye of the torsion spring on the screw then put the flat washer, lock washer, and nut on the screw to hold the eye. Tighten the nut.

S4 . . Put the free end of the spring into this hole.

Legend

P . . . The shim with the added notch

Q . . . Rear view

R . . . Inside view

S . . . Detailed view

T . . . Torsion spring

U . . . The shim thickness is (.230 inches)

V . . . The shim thickness is (.015)

Door Handle and Lock Actuator

3 Sheets

Table 31. Parts List—Door Handle and Lock Actuator

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				
	1	98CMCR0925	Assembly	
all	2	20C007	Adhesive	
all	3	02 04192	Shim, .023	
all	4	02 04192A	Shim, .015	

5 Chemical Supply Devices

BPWOBC01 / 2023316

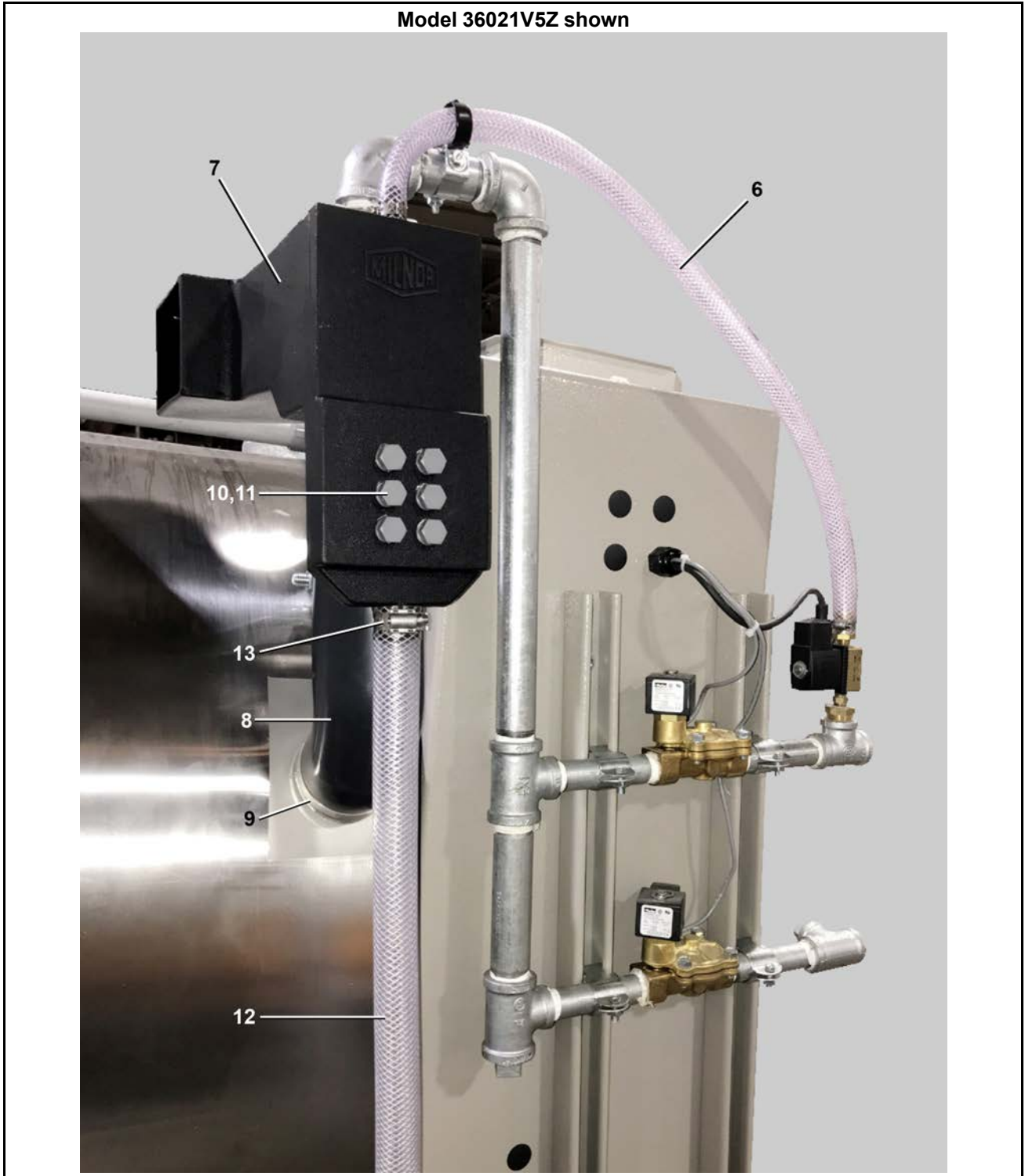
BPWOBC01.1 0000262909 C.2.1.2 8/7/23, 9:11 AM Released

Peristaltic Supply Assembly

3 Sheets

36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z

Model 36021V5Z shown



Peristaltic Supply Assembly

3 Sheets

36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z



Peristaltic Supply Assembly

3 Sheets

36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z

Table 32. Parts List—Peristaltic Supply Assembly

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
Reference Assemblies				
	A	AVW14822E	36V5 H+C H2O VALVE ASSY 304 S/S	36021/36026V5J, V5Z
	B	AVW14822D	36V7 H+C H2O VALVE ASSY 304 S/S	36021/36026V5J, V7Z
	C	AVW11912W	42V 26/30 H+C H2O VALVE ASSY 304 S/S	42026V5J, 42026/42030V6Z
Components				
all	1	5SB0P0ESE0	HEXBUSH 3/4X1/4" 304 S/S	
all	2	5N0ECLSS42	NPT NIP 1/4XCLS TBE 304SS SK40	
all	3	96P058A37	1/4"NPT X 1/8"ORIFICE 120V 5/6- #6013	
all	4	51E507D	HOSESTEM BRASS 1/4MPX5/8HOSEID	
all	5	27A040	HOSECLAMP 7/16-25/32SS W/SCREW	
all	6	60E007C	TUBING NYL.REINF.5/8"IDX.8750D	
AB	7	SA 33 059C	ASSY=PERISTALIC/WATER 90 DEG ASTM	
C	7	02 03588J	PERISTALTIC/WATER INLET 3022H	
all	8	02 03588C	3642 INLET HOSE	
all	9	27A082S	HOSECLAMP 2+9/16-3.5SS305SCR	
all	10	51PB0GN	PLUG PIPE 3/8"NPT P-38 HD POLY	
all	11	20C040	SUPERFLEX SILICONE ADH 85GR	
all	12	60E010	TUBINGPOLYBRAID 1"X1.312	
all	13	27A090S	HOSECLAMP 13/16-1.5"SS#64016B	
all	14	12P019A	CABLE CLAMP 1.25DIPPD #NE-20	
all	15	15U160	LOCKWASHER MEDIUM #10 SS18-8	
all	16	15G130	HEXMACHSCRNUT 10-24UNC2 SS18-8	
all	17	15N130	RDMACSCR 10-24UNC2A X 1/2 SS18	
all	18	15N135	RDMACSCR 10-24UNC2AX5/8 ZINC G	
all	19	12C053H	1" CONDUIT HANGER	
all	20	12K105	1" STRAP CONDUIT 2-HOLE	
all	21	02 03588L	36/42V PERISTALTIC BOX BRKT	
all	22	15K038B	1/4-20X 1/2 HEXFLANGE SCREW	
all	23	15G178	1/4"-20 HEXFLANGE NUT ZINC	

Soap Chute

36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z

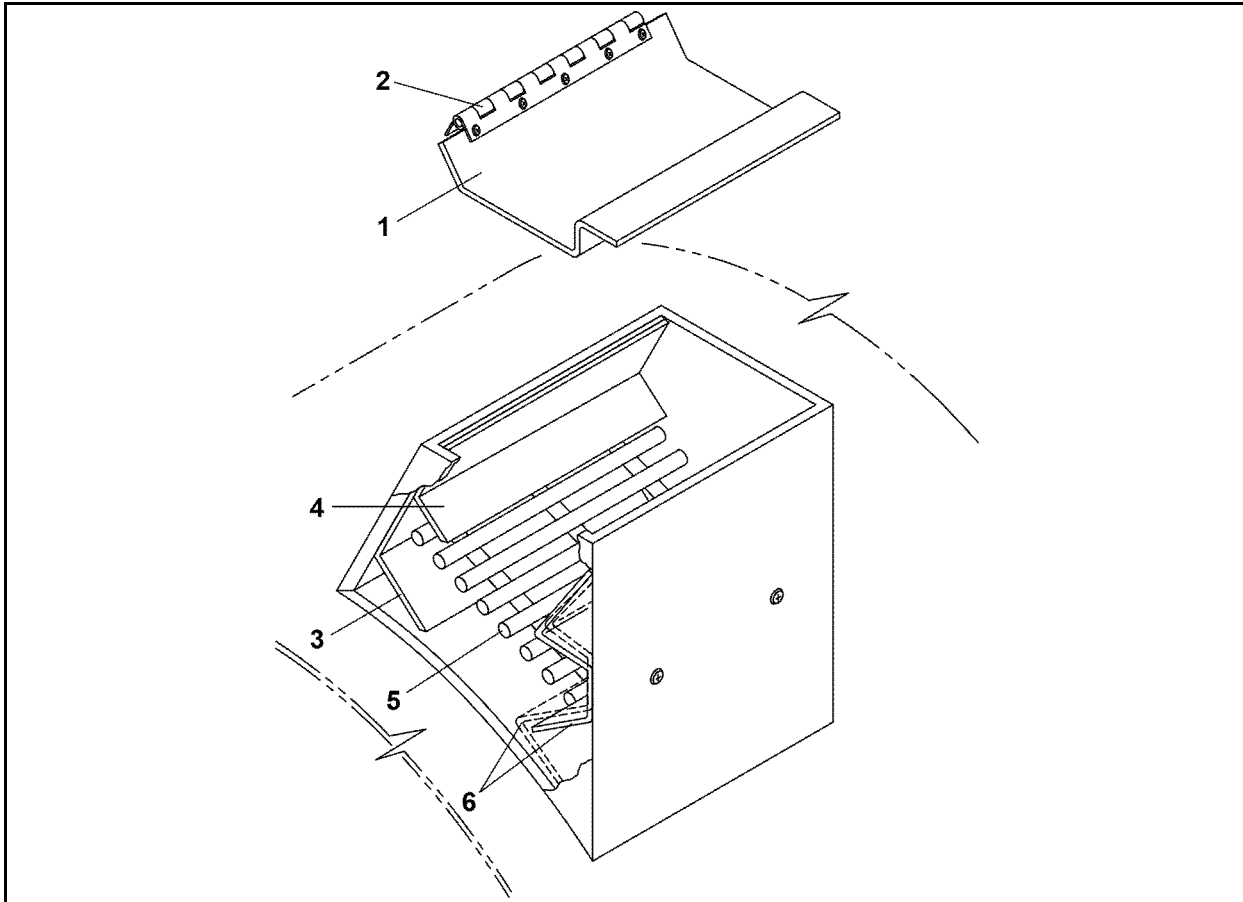


Table 33. Parts List—Soap Chute

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
Reference Assemblies				
	A	GG514804	*SOAP CHUTE INSTL 36 RWP	36021/36026V5J, V5Z; 36021/ 36026V7Z
	B	GG5119002	SOAP CHUTE INSTL 42 RWP	42026V5J, 42026/42030V6Z
	C	SA 02 065	*COVER ASSY=SOAP CHUTE	
Components				
all	1	02 02739	SOAP CHUTE COVER YOUR MATL	
all	2	02 02706	HINGE=SOAP CHUTE	
all	3	02 10262A	SPLASHPLATE,REAR=42Q SOAPCHT	
all	4	02 11932	PLATE-ANTI SPLASH 42 RWP	
A	5	02 02326A	GUARD-BALCOM SOAP CHUTE	
B	5	02 02326B	GUARD-RWP SOAP CHUTE SPCL	

Soap Chute

1 Sheet

36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z

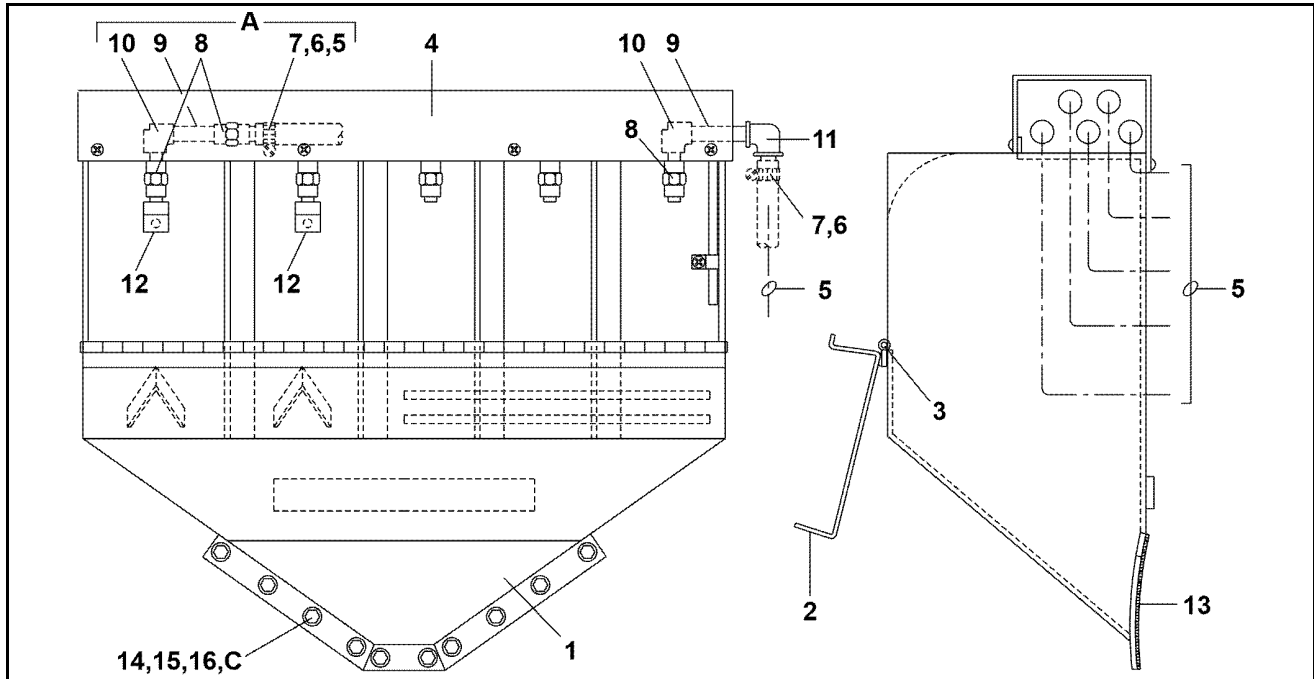
Table 33 Parts List—Soap Chute (cont'd.)

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
A	6	02 11936	PLATE=ANTISPLASH RWP	
B	6	02 11936A	ANTI-SPLASH PLATE RWP SPCL	

5 Compartment Supply

36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z

Figure 25. Supply Chute



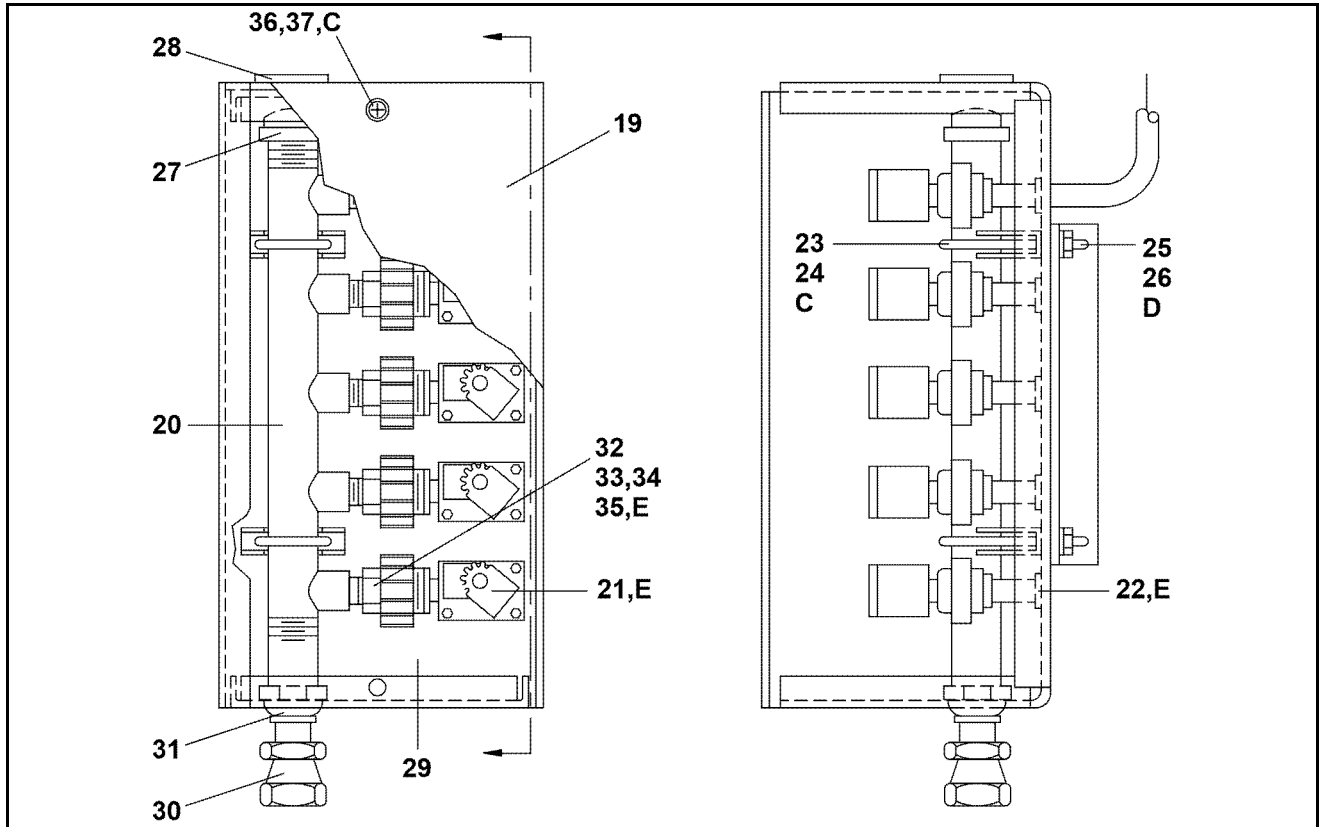
Legend

- A . . . 4 Instances
- B . . . Hot water for supply. See Water Schematic.

5 Compartment Supply

36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z

Figure 26. Valve Manifold



Legend

- C . . . 2 Instances
- D . . . 4 Instances
- E . . . 5 Instances

Table 34. Parts List—5 Compartment Supply

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
Reference Assemblies				
	A	GWS3621V5	INST=5-COMP SUPPLY 3621V5	36021/36026V5J, V5Z; 36021/ 36026V7Z 42026V5J, 42026/42030V6Z
	B	GWS119002	INSTAL=SUPPLY INV ASSY RWP	
A	C	AWS3621V5	ASSY=3621V5 5-COMP SUPPLY	
B	D	AWS119001A	SUPPLY INJ ASSY 3621Q	
A	E	AWI3621V5	ASSY=3621V5 FLUSH MANIFOLD	
B	F	AWI11007A	MANIFOLD=5 FLUSH 36/42Q'S	

5 Compartment Supply

36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z

Table 34 Parts List—5 Compartment Supply (cont'd.)

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				
A	1	Y2 02636	* SUP-CHUTE 5-FLUSH=30BWE+ (SS)	
B	1	Y2 09096R	* SUP-CHUTE 5-FLUSH RWP+ (SS)	
A	2	SA 02 066	*COVER ASSY=SUPPINJ	
B	2	SA 09 047	COVER=SUPPLY INJECTOR	
A	3	02 02649	HINGE=VALVE ENCLOSURE-16.25"	
B	3	02 09105	HINGE=VALVE ENCLOSURE STNSTL	
A	4	02 03996	LID=3022F8 5COMP. SUPPLY	
B	4	W2 11953	*WLDMT=INJECTOR TUBE ENCL RWP	
all	5	60E006B	PVC TUBING (BRAID)3/8IDX.60D	
all	6	51E505	HOSESTEM BRASS 3/8H XMPT	
all	7	27A040	HOSECLAMP 7/16-25/32SS W/SCREW	
all	8	5SCC0GBE	NPT COUP 3/8 BRASS 125# 103A-C	
all	9	5N0G04KBE2	NPT NIP 3/8X4.5 TBE BRASS STD	
all	10	5SL0GBEC	NPTELB 90DEG STRT 3/8 BRASS125	
all	11	5SL0GBEA	NPTELB 90DEG 3/8 BRASS 125#	
all	12	5SL0GBEL	NPTELB 45DEG STRT 3/8 BRASS125	
all	13	02 09113	SUPPLY CHUTE SHELL GASKET	
all	14	15N158	HEXCAPSCR 1/4-20NCX1/2SS18-8	
all	15	15U188	FLTWASH 1/4 STD COMM SS18-8	
all	16	24G020N	ROLLED WASH.252ID NYLTITE 25W	
A	17	60E085C18K	HOSE ASSY=1/2"X18.5"LG+ENDS	
B	17	60E085C23A	HOSE ASSY=1/2"X23"LG+ENDS	
A	18	02 10266C	BRACE-SUPPLY INJECTOR 36RWPE	
B	18	02 10266B	BRACE SUPPLY INJECTOR 42RWPE	
all	19	02 11952	HOUSING-SUPPLY VALVES	
all	20	W2 11950S	*WLDMT=MAINFOLD-SUPPLY INJ SS	
all	21	96P013G37	3/4" 2WAYPLASTCVAL 120V60C (EA =0.4 LBS)	
all	22	12P11CSB	SNAPBUSH 1.093"MH X .94"ID HEYCO#2166	
all	23	27A030B	UBOLT 3/4PIPE 1/4-20 THD ZINC	
all	24	02 11954	BKT-3/4" PIPE SUPPORT	
all	25	15U185	FLATWASHER(USS STD) 1/4" ZNC P	
all	26	15G184	HXCPNUT HI 5/16-18 BRASS NIK PL	
all	27	5SCA0PBE	NPT CAP 3/4 BRASS 125#	

5 Compartment Supply

3 Sheet

36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z

Table 34 Parts List—5 Compartment Supply (cont'd.)

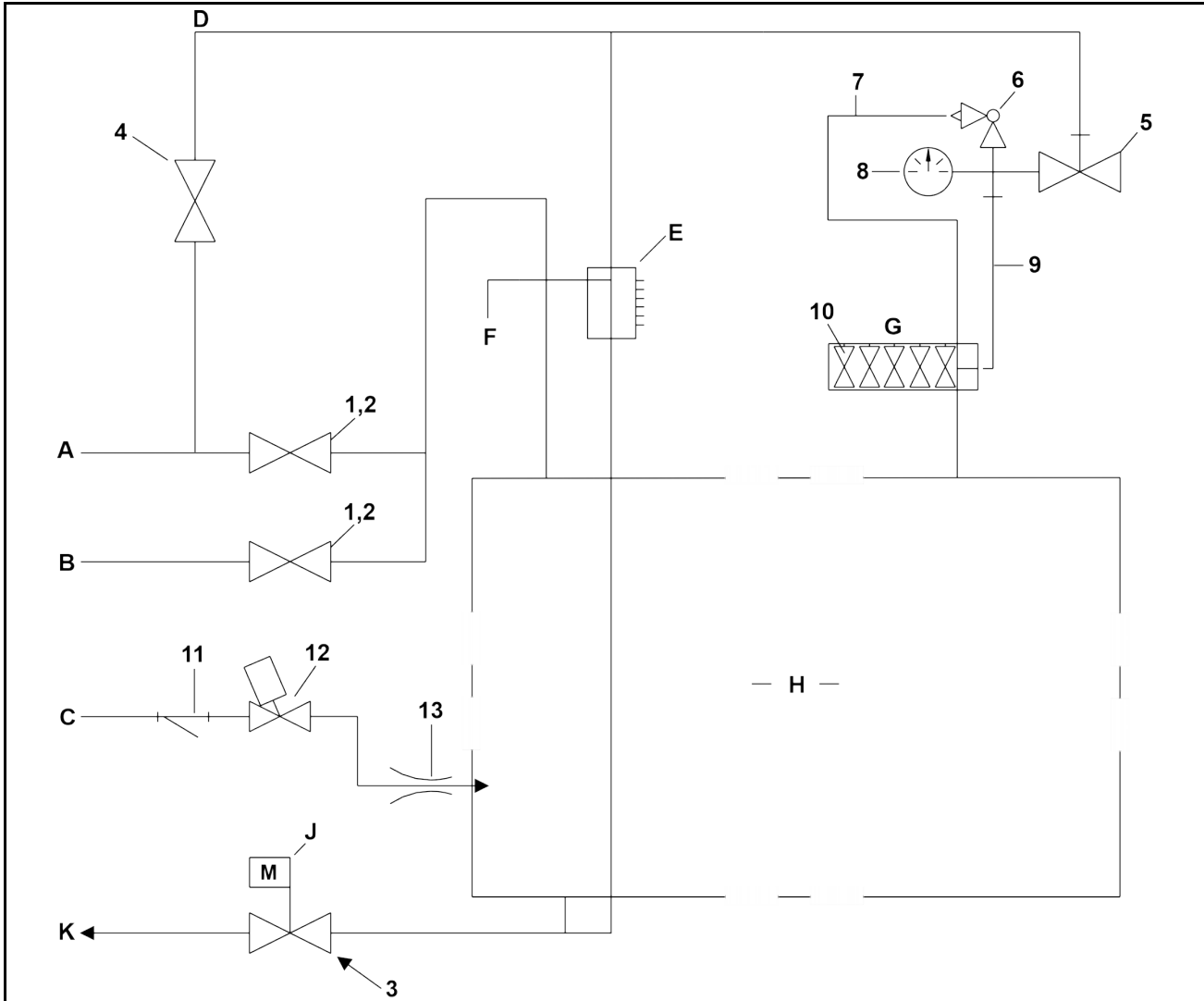
Find the assembly for your machine and the letter shown in the "Item" column. The components for your machine will show this letter or the word "all" in the "Used In" column. The numbers shown in the "Item" column are those shown in the illustrations.				
Used In	Item	Part Number	Description/Nomenclature	Comments
all	28	12P11PHP	HOLEPLUG 1+3/4" BLK HEYCO#2773	
all	29	02 11955	REAR PL.-SUPPLY VALVE HSNG	
all	30	51X017	UNIONSTRADT 1/2"#1404-8-8	
all	31	5SR0P0KNF	NPT RED 3/4X1/2 GALMAL 150#	
all	32	53A060H	KNURLHOSE NUT 3/4"PW#94GH-12	
all	33	53A060HA	WASHER=HOSE #901GH-12	
all	34	02 03732Z	ADAPTER HOSE THD 3/4"X1/4 NPT	
all	35	53A026A	HEXPIP NIP.25X.25 AND#122A-B	
all	36	15P100	#8 X 3/8 PHILPANHD TYPE B SMS	
all	37	15U135	FLATWASH#10 .4370DX.203IDX.04T	

6 Water & Steam

This page intentionally blank

Water Schematic

36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z



Legend

- A . . . Hot water
- B . . . Cold water
- C . . . Optional steam
- D . . . Flushing water
- E . . . Peristaltic supply, see BPWOBC01
- F . . . Overflow
- G . . . Optional supply injector, see BPWOCC02
- H . . . Cylinder
- J . . . Drain, see BPWOAW07
- K . . . Sewer
- M . . . Electrically operated drain valve

Water Schematic

2 Sheets

36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z

Table 35. Parts List—Water 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
Reference Assemblies				
	A	AVW14822E	36V5 H+C H2O VALVE ASSY 304 S/S	36021/36026V5J, V5Z
	B	AVW14822D	36V7 H+C H2O VALVE ASSY 304 S/S	36021/36026V7Z
	C	AVW11912W	42V 26/30 H+C H2O VALVE ASSY 304 S/S	42026V5J, 42026/42030V6Z
	D	GWS14802	INSTAL=SUPPLY INJ ASSY 36RWP	
	E	GWS119002	INSTAL=SUPPLY INV ASSY RWP	
Components				
AB	1	96P056C37	3/4"NC 110V PARKER #12F24C2248AAFPH05	Not used 42026 & 42030
C	1	96P152A37	1+1/4"NC 110V W/LEADS BURKERT #US10360	
AB	2	96P042VA37	DIN CONNECTOR W/CABLE BURK	
all	3	96D350A37C	DRNVAL 3"N/O 120V50/60C W/COVER	
all	4	96P058A37	1/4"NPT X 1/8"ORIFICE 120V 5/6	
all	5	96J030FF	1/2"PRESSREG SET 28# FEMXFEM	
all	6	96M001	1/2X3/8" RELIEF VALVE SET31#	
all	7	60E004TE	1/4"OD X.170"ID NYL(BLK)TUBING	
all	8	30N100	PRESSGAUGE 1/8"BACKCN.0-30PSI	
all	9	60E085C18K	HOSE ASSY=1/2"X18.5"LG+ENDS	
all	10	96P013G37	3/4" 2WAYPLASTCVAL 120V60C	
all	11	51T030	Y-STRAINER 3/4" CAST IRON	
all	12	96P040A37	3/4"STEAMVAL120V50/60C 150PSI	
A	13	AVS14806	36V5J STEAM NOZZLE ASSY 3/4"	
BC	13	AVS14805	*STEAM NOZZLE ASSY 3/4"	

Water Inlet Assemblies

4 Sheets

36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z



Water Inlet Assemblies

4 Sheets

36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z



Legend

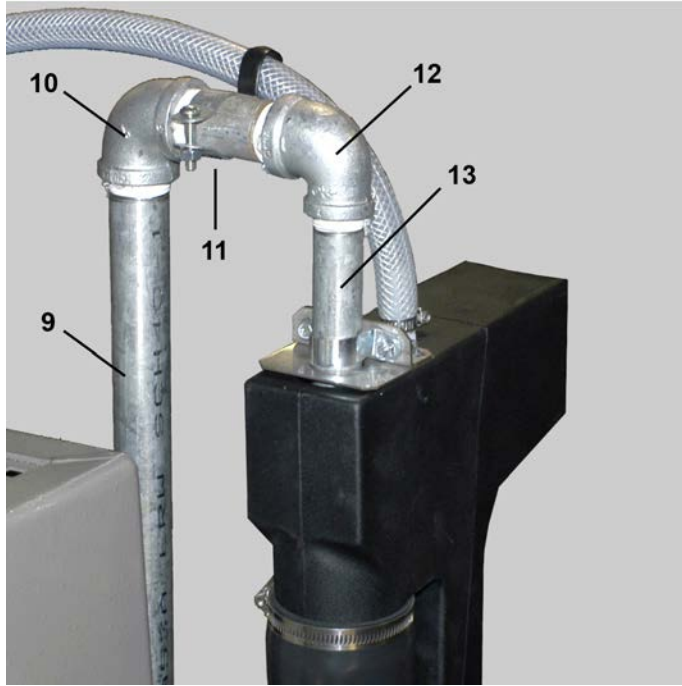
B . . . For peristaltic inlet assembly, see BPWOBC01

Water Inlet Assemblies

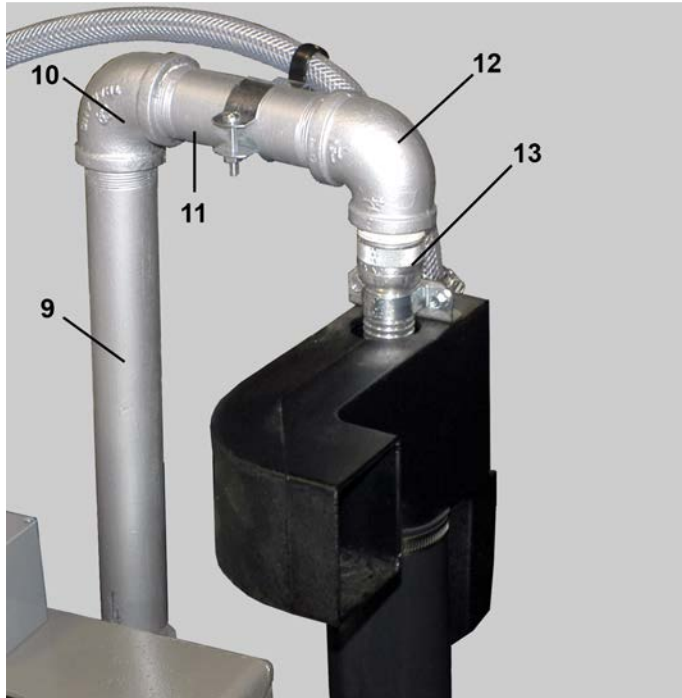
4 Sheets

36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z

36021V_, 36026V_



42026V_, 42030V_



Water Inlet Assemblies

4 Sheets

36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z

Table 36. Parts List—Water Inlet Assemblies

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
Reference Assemblies				
	A	AVW14822E	36V5 H+C H2O VALVE ASSY 304 S/S	36021/36026V5J, V5Z
	B	AVW14822D	36V7 H+C H2O VALVE ASSY 304 S/S	36021/36026V7Z
	C	AVW11912W	42V 26/30 H+C H2O VALVE ASSY 304 S/S	42026V5J; 42026/ 42030V6Z
Components				
all	1	5SP0PSFHC	NPT PLUG 3/4 HEX 304SS 150#	
AB	2	5S0PSFA	NPT TEE 3/4" 304SS 150#	
C	2	5S1KNFASE1	1-1/4"X1-1/4X3/4" TEE 304 S/S	
AB	3	5N0P05AS42	NPT NIP 3/4X5 TBE 304SS SK40	
C	3	5N1E05AS42	NPT NIP 1.25X5 TBE 304SS SK40	
AB	4	96P056C37	3/4"NC 110V PARKER #12F24C2248AAFPH05	
C	4	96P152A37	1+1/4"NC 110V W/LEADS BURKERT	
all	5	96P042VA37	DIN CONNECTOR W/CABLE BURK US61610 W/6FT CABLE	
AB	6	5SP1ASFSS	NPT PLUG 1" HEXSOLID 304SS	
C	6	5SP1KUFSS	PLUG PIPE SQHD 1+1/2 304SS	
AB	7	5S1ANFASP1	NPT TEE 1X1X3/4" 304 S/S	
C	7	5S1KSFA	NPT TEE 1.5" 304SS 150#	
AB	8	5N1A06KS42	NPT NIP 1X6.5 TBE 304SS SCH40	
C	8	5N1K07AS42	NPT NIP 1.5X7 TBE 304SS SK40	
A	9	5N1A17RS42	NPT NIP 1X17.875TBE 304SS SCH40	
B	9	5N1A16AS42	1"X16" PIPE TBE 304 S/S	
C	9	5N1K16AS42	NPTNIP 1.5X16 304SS SK40	
AB	10	5SL1ASFA	NPT ELBOW 90DEG 1" 304SS 150#	
C	10	5SL1KSFA	NPT ELB 90DEG 1.5 304SS 150#	
A	11	5N1A03KS42	NPT NIP 1X3.5 TBE 304SS SK40	
B	11	5N1A08AS42NPT	NIPPLE 1X8 TBE 304SS SK40	
C	11	5N1K06AS42	NPT NIP 1.5X6 TBE 304SS SK40	
all	12	5SL1KSFA1E	NPT ELBOW 90DEG1.5X1.25 304SS	
AB	13	51E099SS	DIXON 1"KINGCOMBNIP S.S.#RST10	
C	13	51E099STS	DIXON 1.25 KINGNIP NPTEND P#RST15	
all	14	5SB0P0KSEO	3/4"X1/4" HEX BUSH 304 S/S	
all	15	5N0ECLSS42	NPT NIP 1/4XCLS TBE 304SS SK40	
all	16	96P058A37	1/4"NPT X 1/8"ORIFICE 120V 5/6- #6013	
all	17	51E507D	HOSESTEM BRASS 1/4MPX5/8HOSEID	

Water Inlet Assemblies

4 Sheets

36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z

Table 36 Parts List—Water Inlet Assemblies (cont'd.)

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	18	27A040	HOSECLAMP 7/16-25/32SS W/SCREW	
all	19	60E007C	TUBING NYL.REINF.5/8"IDX.8750D	
C	20	5SB1K1ESFO	NPTHEXBUSH 1.5X1.25 SS304 150#	

This page intentionally blank

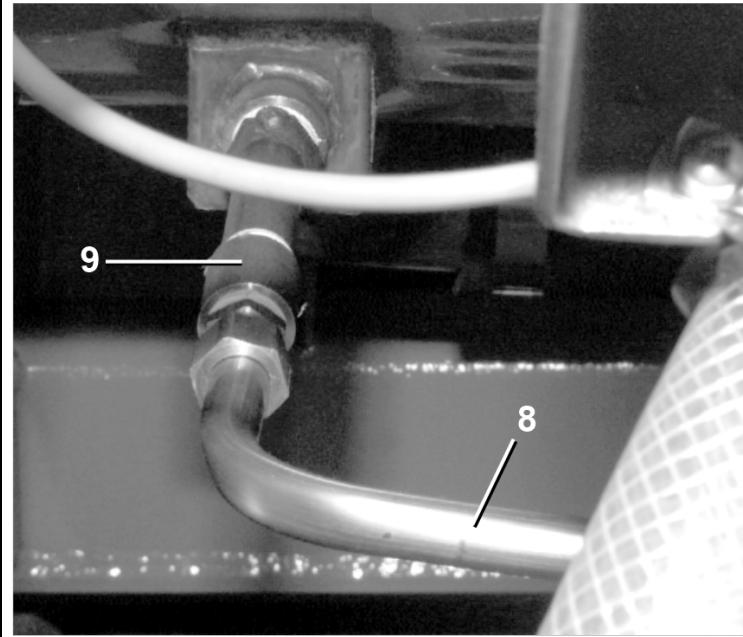
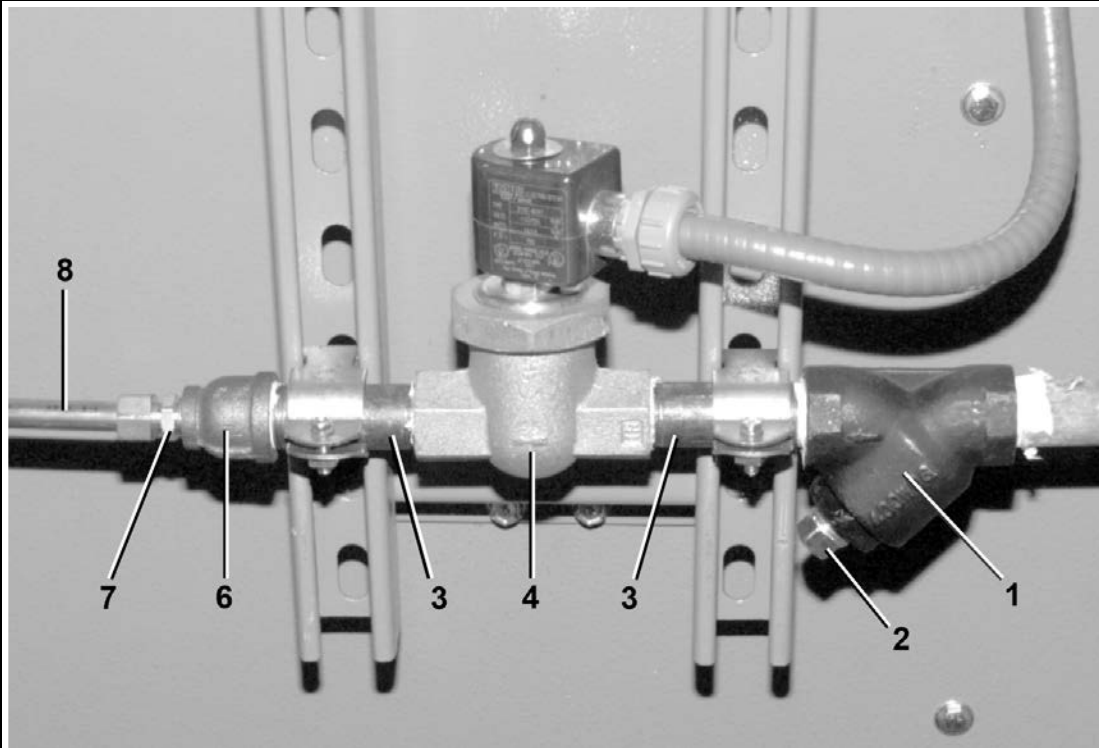
BPWOBW03 / 2023316

BPWOBW03.1 0000264403 C.2.I.2 8/7/23, 11:34 AM Released

Steam Inlet

2 Sheets

36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z



Steam Inlet

2 Sheets

36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z

Table 37. Parts List—Steam Inlet

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
Reference Assemblies				
	A		REFERENCE MODEL	36021/36026V5J, V5Z
	B		REFERENCE MODEL	36021/36026V7Z; 42026V5J; 42026/42030V6Z
Components				
all	1	51T030	Y-STRAINER 3/4" CAST IRON	
all	2	5SP0KGFSS	NPT PLUG 1/2 SQSOLID GALSTL	
all	3	5N0P03KF42	NPT NIP 3/4X3.5 TBE BLKSTLSK40	
all	4	96P040A37	3/4"STEAMVAL120V50/60C 150PSI = HAYS#6-2192-120	
all	6	5SR0P0GMF	NPT RED 3/4"X3/8" BLK 150#	
all	7	53A025	MALECON.5X3/8COMP PH#68C-8-6	
A	8	02 14896	TUBE=STEAM PIPE 36V5	
B	8	02 11967	TUBING=STEAM INLET 36QU	
A	9	AVS14806	36V5J STEAM NOZZLE ASSY 3/4"	
B	9	AVS14805	*STEAM NOZZLE ASSY 3/4"	

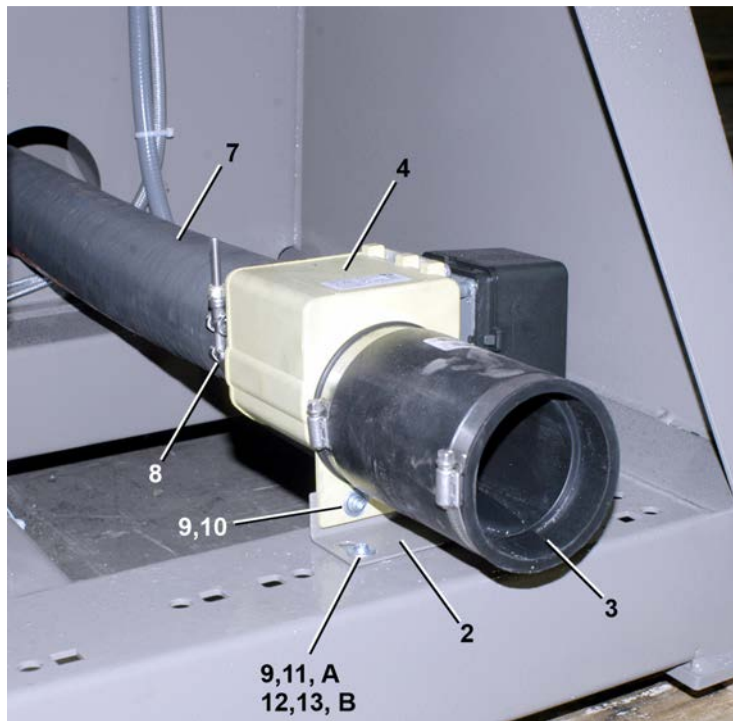
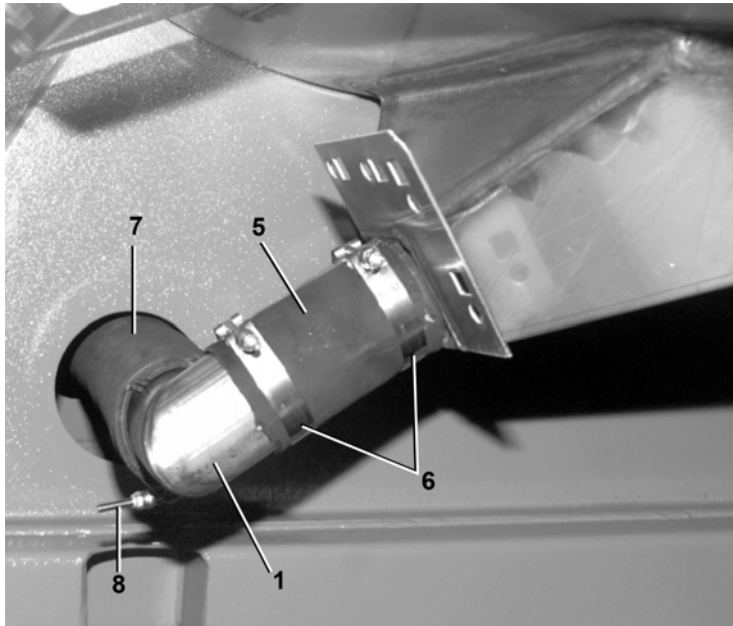
BPWOBW04 / 2023316

BPWOBW04.1 0000264517 C.2.I.2 8/7/23, 11:53 AM Released

Drain Valve

2 Sheets

36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z



Legend

- A. . . 36V7,42V6
- B. . . 36V5

Drain Valve

2 Sheets

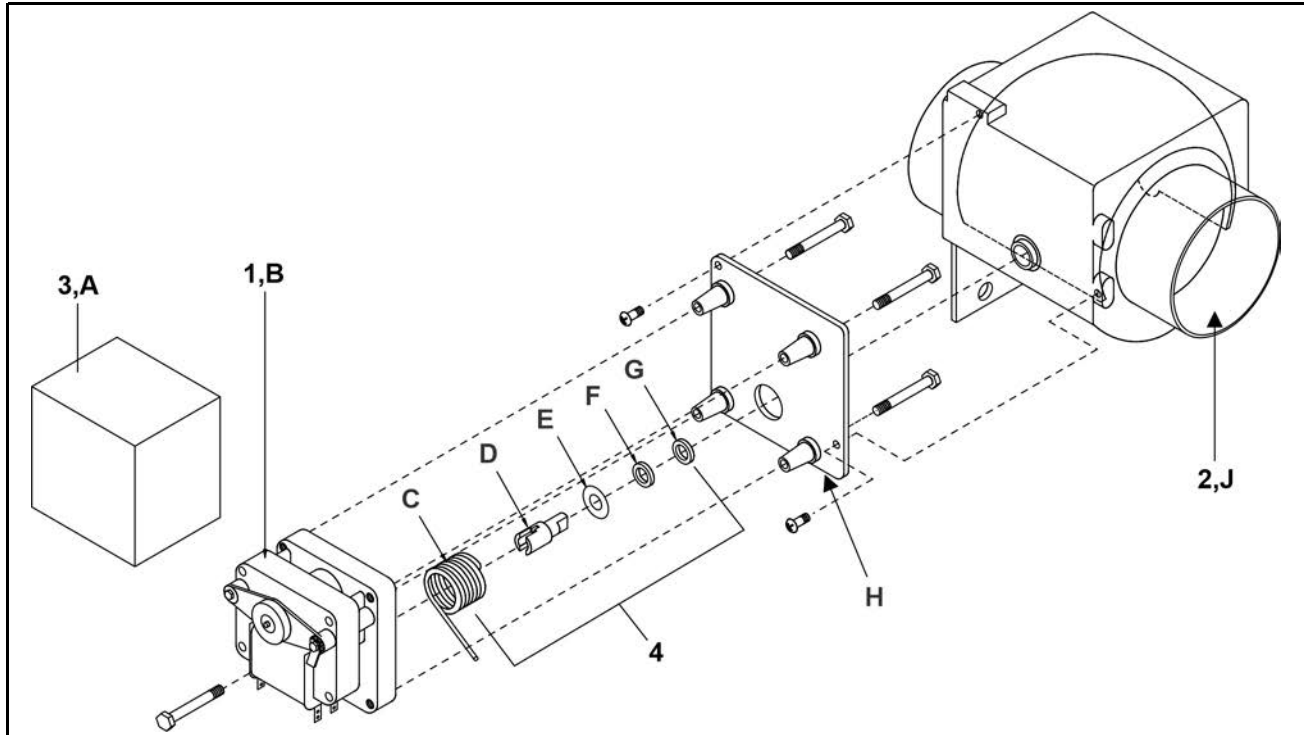
36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z

Table 38. Parts List—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
Reference Assemblies				
	A		REFERENCE	36021/36026V5J, V5Z
	B		REFERENCE	36021/36026V7Z; 42026V5J; 42026/42030V6Z
Components				
all	1	W2 03974A	*WLMT=3022F8 RIGID DRAIN PIPE	
all	2	02 04197A	DUMP VALVE MT BKT	
all	3	60B075	DFW56-33PMSP RUBB CONN.	
all	4	96D350A37C	DRNVAL 3"N/O 120V50/60C W/COVER	
A	5	60E303A03K	HOSE=3"ID X 3+1/2"LG	
B	5	60E303A05A	HOSE=3"ID X 5"LG	
all	6	27A075A	T-BOLT HOSECLAMP 3.03-3.34"	
A	7	60E303A26A	HOSE=3" ID X 26 LG	
B	7	60E303A41K	HOSE=3" I.D. X 41.5 LG	
all	8	27A077A	T-BOLT HOSECLAMP 3.37-3.68"SS	
all	9	15N110H	RDWASHHD TORXBOLT M6-1X25MM ZN	
all	10	15G004HB	EXTRUNUT M6-1 GRIP 0.8-4MM	
all	11	15G004HC	EXTRUNUT M6-1 GRIP 3.5-6.5MM	
all	12	15P201	TRDCUT-F HXWASHD 3/8-16X1N1K	
all	13	15G205	HXNUT 3/8-16UNC2B ZINC GR2	

3 Inch Electrical Drain Valve

2 Sheets



Legend

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

3 Inch Electrical Drain Valve

2 Sheets

Table 39. 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
Reference Assemblies				
	A	96D350A37C	DRNVAL 3"N/O 120V50/60C W/COVER (WT=4LBS)	
	B	96D350A37	DRINVAL 3"N/O MTRDR120V 50/60C NO COV/DEPENDO	
	C	96D350A71	DRINVAL 3"N/O MTRDR240V 50/60C W/COVER DEPENDO	
	D	96D350B71	DRINVAL 3"N/C MTRDR240V 50/60 W/COVER	
Components				
AB	1	96D35MTR37	120V 50/60CMTR FOR 3"DRAINVAL	
CD	1	96D35MTR71	240V 50/60CMTR FOR 3"DRAINVAL	
B	2	96D35B0D	BODY & BALL FOR 3" DRAIN VALVE (VLV HOUSING ONLY)	
all	3	96D35C0V	MTRCOVER 2-PCFOR 3"DRAINVAL-DEPENDO #90016105	
all	4	96D35PIN	DRIVE PIN KIT FOR 3" DRAIN VAL	

7 Control & Sensing

BPWOBZ03 / 2023316

BPWOBZ03.1 0000264281 C.2 I.2 8/7/23, 2:20 PM Released

Temperature Probe

1 Sheet

36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z

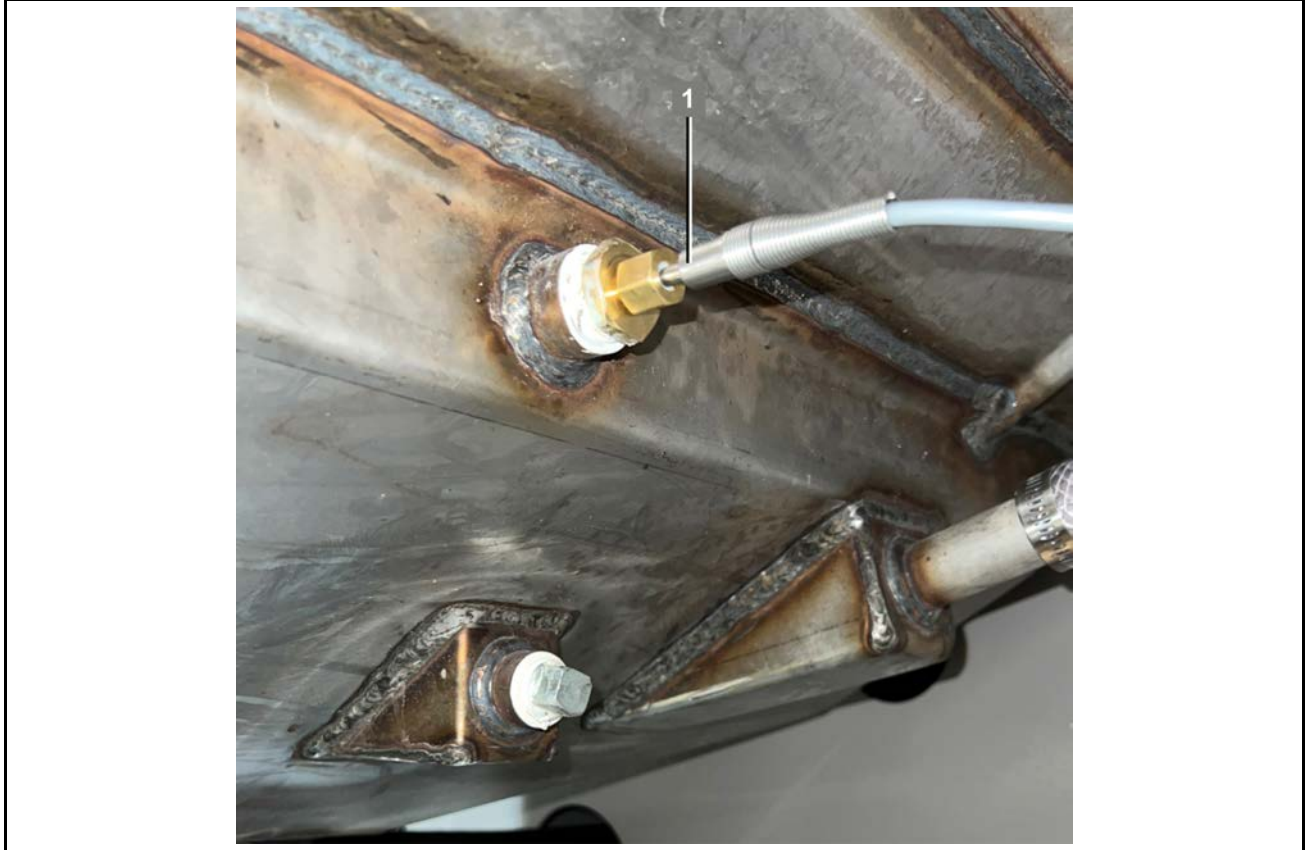


Table 40. Parts List—Temperature Probe

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	30R0043P	TEMP PROBE:THERMISTOR 30K OHMS	

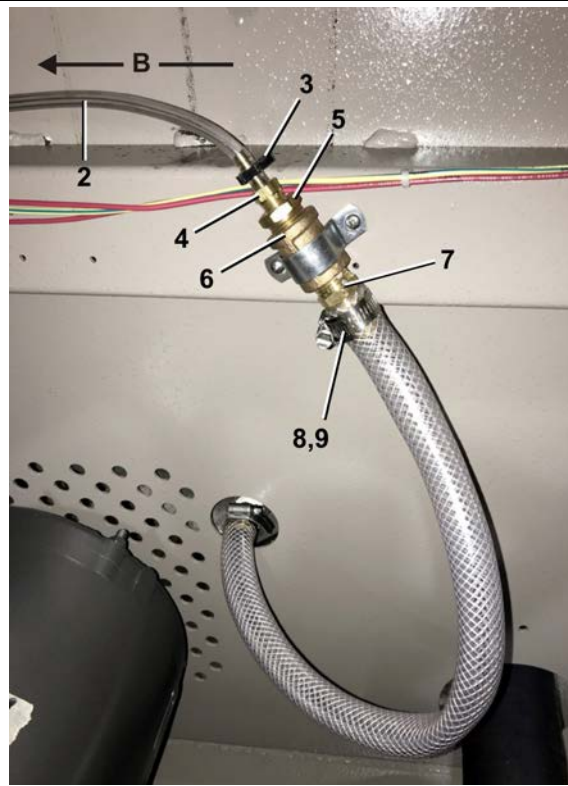
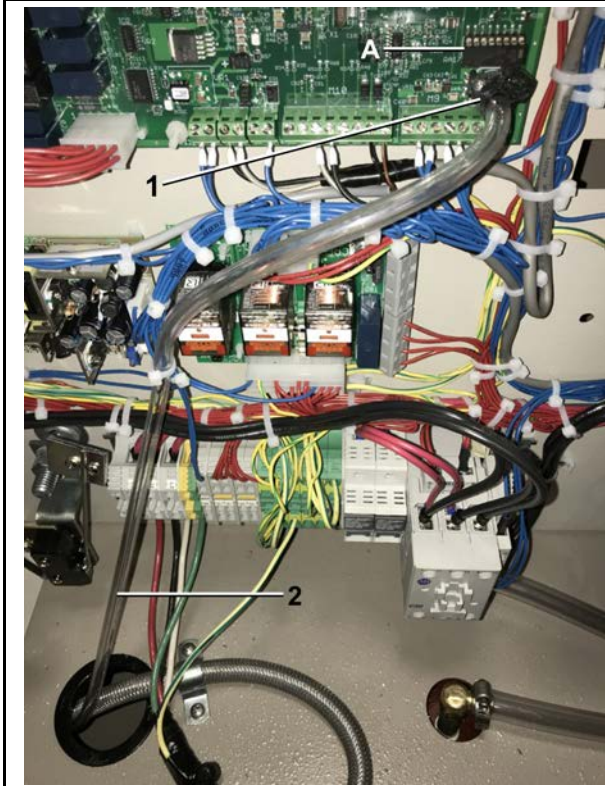
BPWOBZ01 / 2023316

BPWOBZ01.1 0000221124 C.2 I.2 8/7/23, 3:20 PM Released

Level Sensing

2 Sheets

36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z



Legend

- A . . . Transducer
- B . . . To transducer

Level Sensing

2 Sheets

36021V5J, V5Z, V7Z; 36026V5J, V5Z, V7Z; 42026V5J, V6Z; 42030V6Z

Table 41. Parts List—Level Sensing

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
Reference Assemblies				
	A	GPS42001	INST=42/36V WATER LEVEL TUBE	
Components				
all	1	27A047	HOSECLMP 1/8HOSEID CLIP#5000-2	
all	2	60E004NA	TUBING CLEAR PVC 3/16"IDX5/16"OD	
all	3	12P016	CABLE CLMP-BLACK UL APPROVED	
all	4	51E502D	HOSESTEM BRASS 1/4"MPX X 3/16"HOSE	
all	5	5SB0K0EBEO	NPTHEXBUSH 1/2X1/4 BRASS 125#	
all	6	5SCC0KBE	NPT COUP 1/2 BRASS 125#	
all	7	51E510	HOSESTEM BRASS 1/2MPX3/4HOSEID	
all	8	27A044S	HOSECLAMP 11/16-1.25SSCR#64012	
all	9	60E008A	TUBINGNYLREINF.75"IDX1.025"OD	

7.1 Vibration Safety Switch Adjustments

BNWUUM01.C01 0000250243 A.3 C.2 I.2 1/2/20, 2:19 PM Released

7.1.1 What the Vibration Safety Switch Does

BNWUUM01.C02 0000250242 A.3 C.2 I.2 1/2/20, 2:19 PM Released

The **vibration safety switch** in [Figure 27: Vibration Switch, page 113](#) is an important safety feature. If properly adjusted, the switch will momentarily actuate as a result of repeated machine movement caused by an out-of-balance condition. [Table 42, page 112](#) below illustrates the effect of the **vibration safety switch** actuation.

Table 42. Effect of Tripping Vibration Safety Switch

Machine Model	Function of Vibration Safety Switch
30015, 30020, and 30022	Disables high speed extract
All microprocessor-controlled washer-extractors not listed above, and all dye machines	De-energizes three-wire relay, effectively terminating machine operation

7.1.2 Adjustments

BNWUUM01.C03 0000250240 B.2 C.2 I.2 11/7/19, 10:43 AM Released

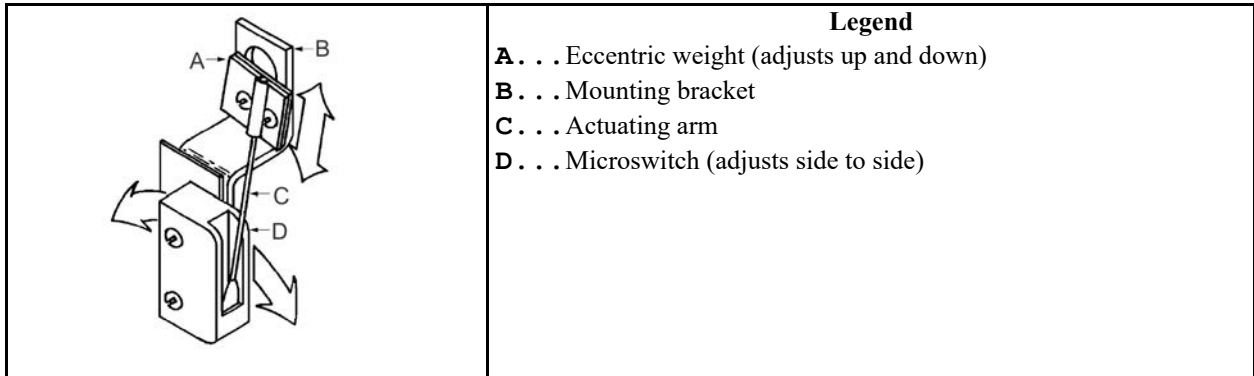
When the machine leaves Milnor®, the actuator arm is tie-wrapped to prevent damage (except on 30015, 30020, and 30022 models). **This tie wrap must be removed after the machine is set into position but before the machine is operated.**

Adjustment of this switch from the factory setting is not recommended; however, it should be checked for proper functioning and adjusted if its proper setting is lost.

As shown in [Figure 27: Vibration Switch, page 113](#), the unit consists of a **sensitive micro-switch** with an extended actuating arm supporting an eccentric weight. The weight may be adjusted by moving it up and down on the arm and by rotating it on the arm. In addition, the **micro-switch** itself may be tilted from side to side.

The sensitivity of the switch increases as the eccentric weight is raised on the actuating arm and decreases as the weight is lowered.

The unit should be adjusted so that the actuating arm will always reset by itself, this being accomplished by rotating either the switch or the weight to give just enough bias to cause the switch to reset. Check the adjustment by moving the arm to the left then slowly releasing it. Make sure the micro-switch clicks when the arm is **slowly** released, thus indicating that it has reset. In the released position, the arm should rest **lightly** but definitely against the stop on the **micro-switch** case that prevents any further arm movement to the left.

Figure 27. Vibration Switch

For machines with rigid mounted shells, where the machine is bolted to a very substantial foundation, very little machine movement will occur for a given degree of out-of-balance. Under such conditions it may be better to adjust the switch to be very sensitive. With less substantial foundations (e.g., ones where the sub-soil is mushy or springy or otherwise not as desirable), considerably greater machine movement will occur for a given degree of out-of-balance, in which case a less sensitive **vibration switch** setting may be indicated.

Vibration Safety Switch

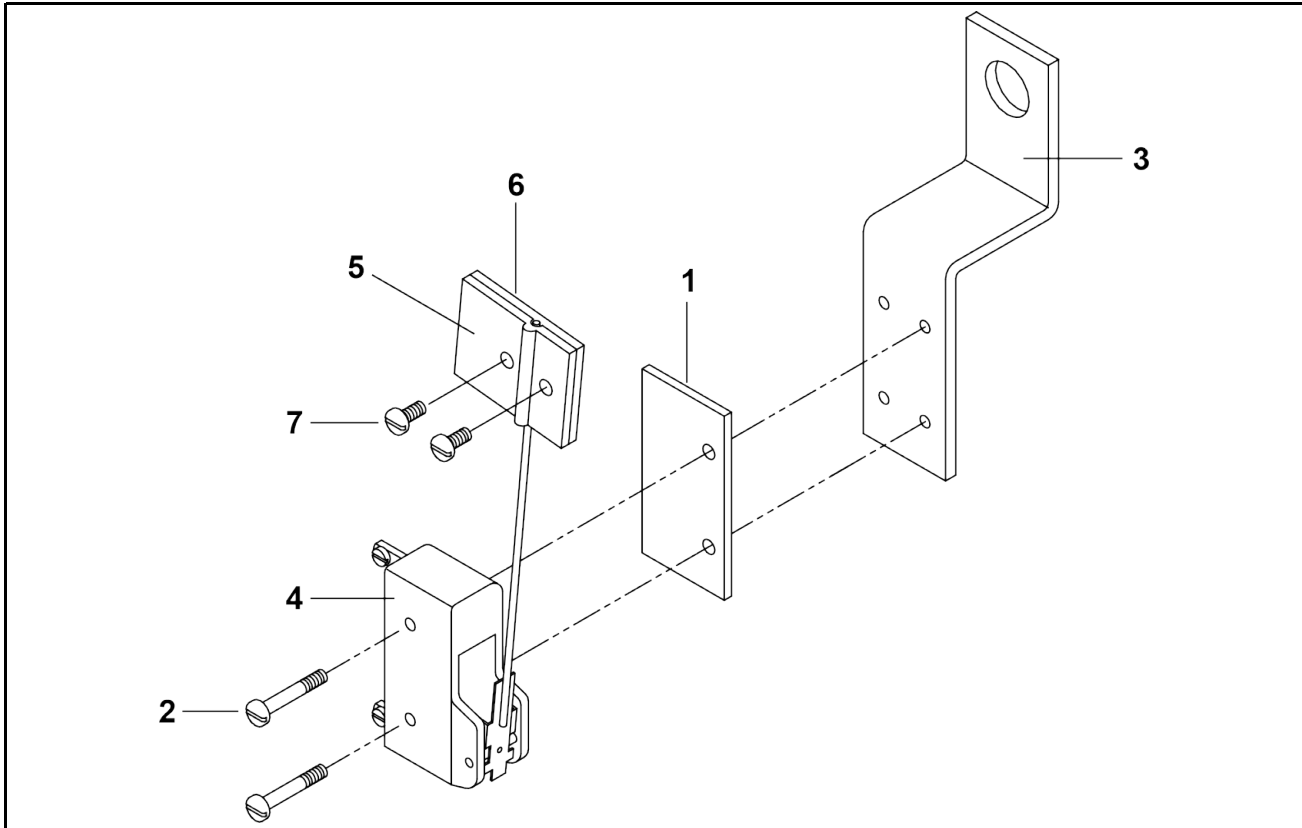


Table 43. Parts List—Vibration Safety Switch

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
Reference Assemblies				
	A	SAE03 151	* ASSY-VIBRATION SWT=LG CONTR	
Components				
all	1	02 02038	PLATE INSULATING SMALL 9NOV51	
all	2	15P008	TRDCUT PANHD 6-32X1 NIKSTL +WA	
all	3	02 15119	BRACKET=VIBSW CAD	
all	4	09R020	SWITCH NC VIBR#WZ-2RW84429-P52	
all	5	03 01059	VIBSWITCH CLAMP CADSTL	
all	6	03 01058	VIBSWITCH WEIGHT-CADSTL	
all	7	15P101	TRDCUT-F PANHD 8-32X3/8 NIKSTL	