

Maintenance

Preventive maintenance schedule

Fill all oil cups with 10W non-detergent oil. **Daily**

Check anti-kickback fingers for wear, for stuck or bent fingers and to make sure that the fingers are all swinging freely and return to their starting position.

Walk around the machine to inspect for problem.

Overbeam should be cleaned and blown off (see page Operations - 31).

Completely blow *all the debris* off the machine down with compressed air.

Clean arbor shaft with solvent and apply a light film of 10W non-detergent oil.

Check oil level of the oil mist generator and fill as required.

Check oil mist nozzles for proper aim and output of oil. **Weekly**

Clean and oil the yoke connecting shafts. Inspect band covers on the movable saw actuators. (See pages Operations - 31 & 32.)

Check arbor shaft run-out and bearing integrity, run out should be $\leq .002''$. **Monthly**

Check arbor sleeves for damage and excessive wear.

Clean and flat file all aluminum spacers.

Check #3 rubber covered press roll and rubber feed slat inserts for wear.

Check press roll to bed plate relationship.

Check home proximity switch. (Operations - 31).

Maintenance (continued)

| | |
|--|------------------|
| Check and adjust all air pressures as needed. | Quarterly |
| Check Bijur mist oil units oil output quantity. | |
| Check feed drive chain sprocket condition. | |
| Check dip cams, feed sprockets, feed chains, and chainway for wear. | |
| Check and adjust press roll housing gib. | |
| Check and adjust arbor motor gibs. | |
| Check lube level in feed drive gear box. | |
| Check press roll housing adjust screws and brass nuts for wear. | |
| Check arbor motor hoist for wear. (Option) | |
| Tighten all electrical connections. Inspect all electrical components. | |

| | |
|---|------------------------|
| Grease the select hub bearings as shown on pages Lubrication - 1 & 2. | Every 400 hours |
|---|------------------------|

Grease entire machine. Do *not* over grease arbor bearings.

Grease and check dust boot on the arbor vertical adjust screw actuator.

| | |
|---|--------------------------|
| Grease the THK bearing blocks on all movable saw actuators. | Every 1,000 hours |
|---|--------------------------|

Maintenance (continued)

Check the gib screws:

Annually

1. Holding the set screw in place with an Allen wrench, loosen the jam nut. Tighten the set screws just enough to feel the screw touch the gib.
2. Holding the set screw in this position, tighten the jam nut.

This saw is equipped with a Variable Frequency Drive to control the speed of the feed bed. All parameters for the drive are factory set and should not require modification. For specific drive values refer to the electrical schematic. Prior to changing any drive parameters please contact the Mereen-Johnson Service Representative at 612-302-3323.

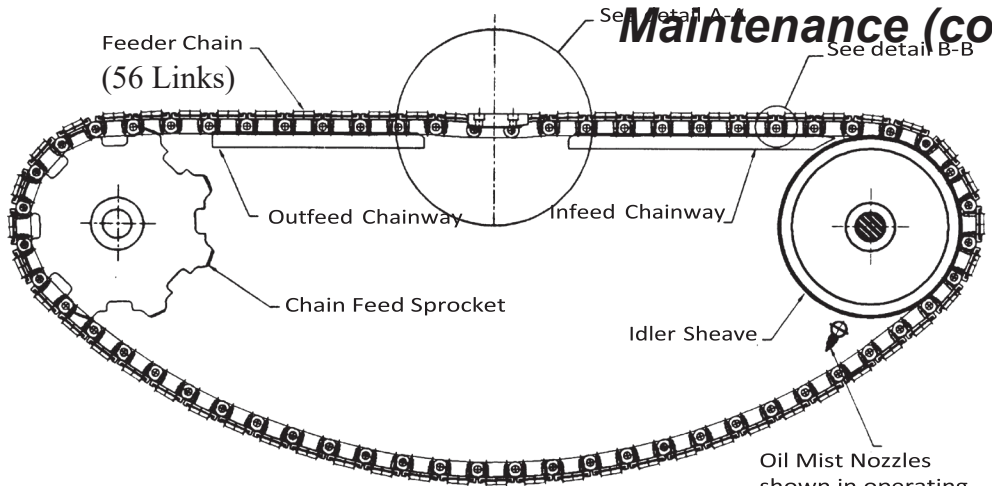
Feed Drive

Maintenance (continued)

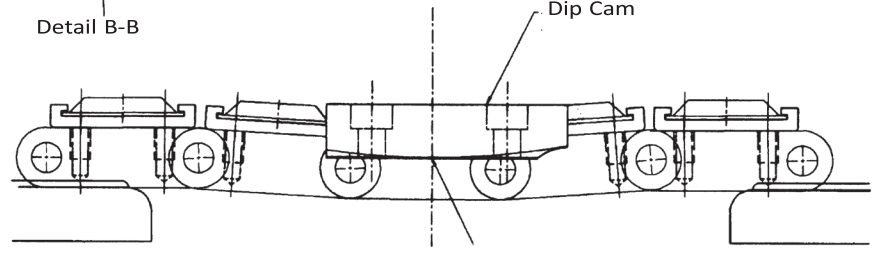
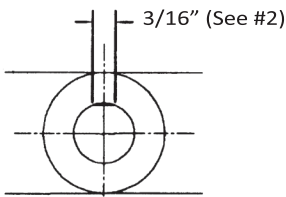
Dip chain adjustment

1. If the dip cams are worn on one side, switch the left hand cam with the right hand cam. Before starting, remove the outside tie bar, bed plates and the inside tie bar.
2. Over time the chain pins become worn on top of the chain. If the flat spot on the chain pin is 3/16" or greater, replace or rebuild the feed chain. (See detail B-B.)
3. Check the parts list at the end of this manual for individual part numbers.

Maintenance (continued)



Oil Mist Nozzles shown in operating position. Re-adjust after installation per instructions on cover.



Maintenance (continued)

1. The amount of yield by the press rolls and bed plate is factory set relative to the pointer and scale.

The pressure head scale and pointer must always read the same thickness as the material being ripped.

2. The relationship between the press rolls and bed plate has been factory preset. When the pressure head is set for the thickness of the material being ripped, as shown on the scale and pointer, the press rolls will yield (raise) 1/4". The bed plate will yield 1/8". The allowable thickness variation is minus 1/8", plus 3/8", including all cup, twist, warp, rough, over-thickness, etc.
3. The press roll relationship must be maintained as illustrated in the figure on the next page.
4. Roll pressure may be adjusted by turning the press roll air regulator pressure from 30 PSI, which is normal, to a maximum of 50 PSI.
5. The bed plate pressure may be adjusted by turning the bed plate air regulator knob. The bed plate pressure should be checked four (4) times a year.

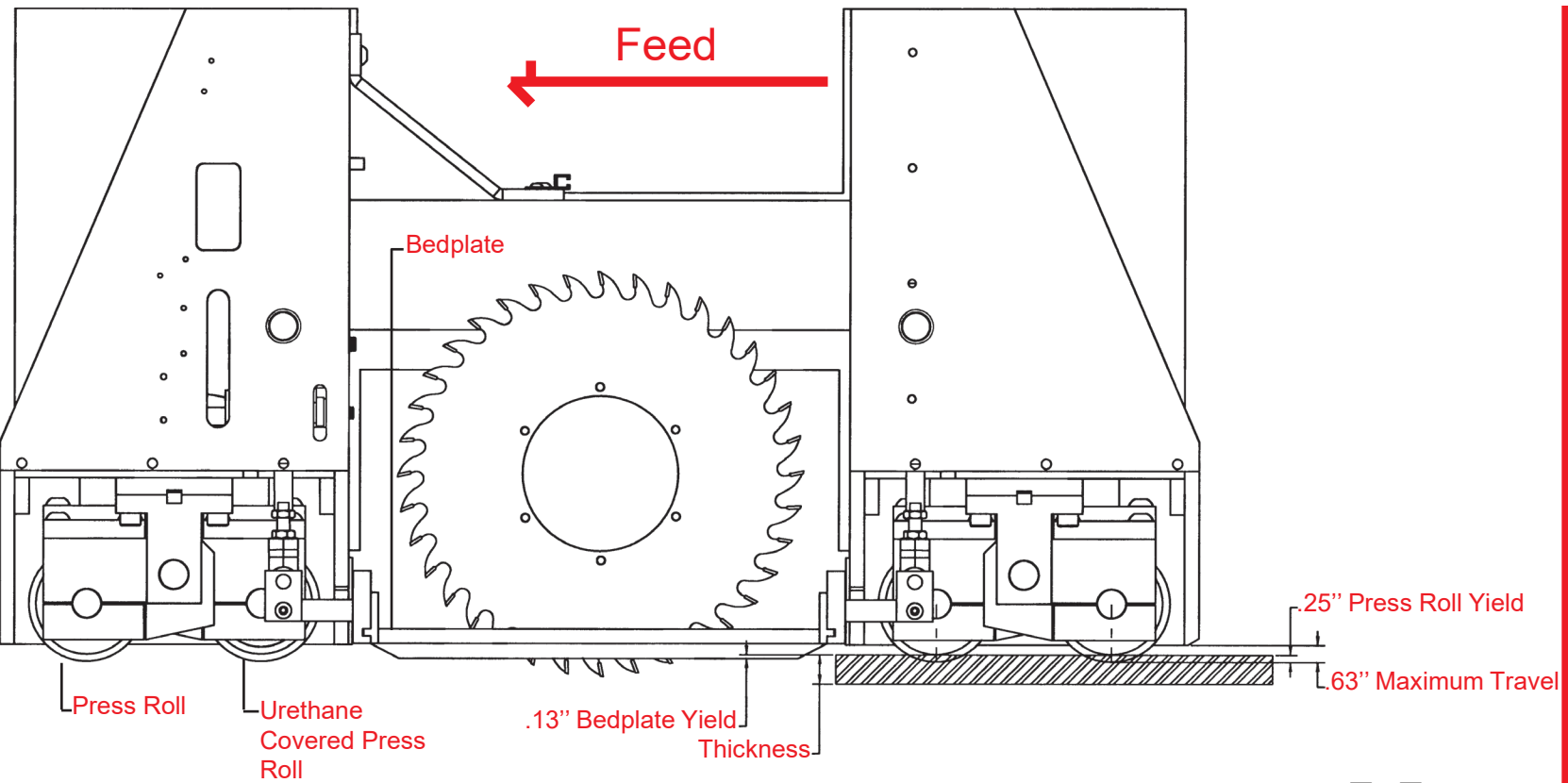
4" Diameter Air loaded press roll & bed plate adjust



⚠ CAUTION
Never attempt to achieve more hold down pressure by lowering the press roll assembly.

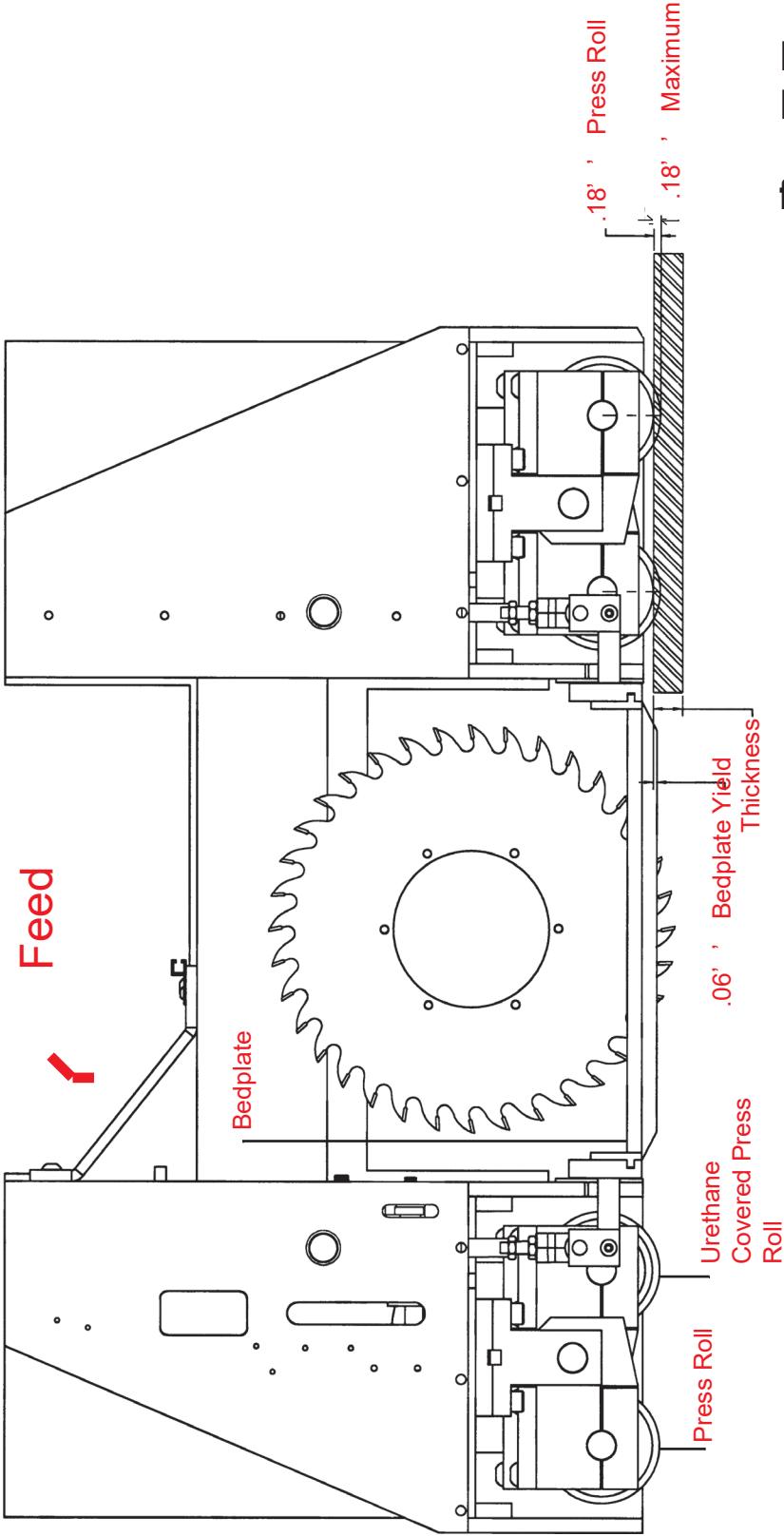
Maintenance (continued)

**4" Air
loaded press
roll & bedplate
relations**

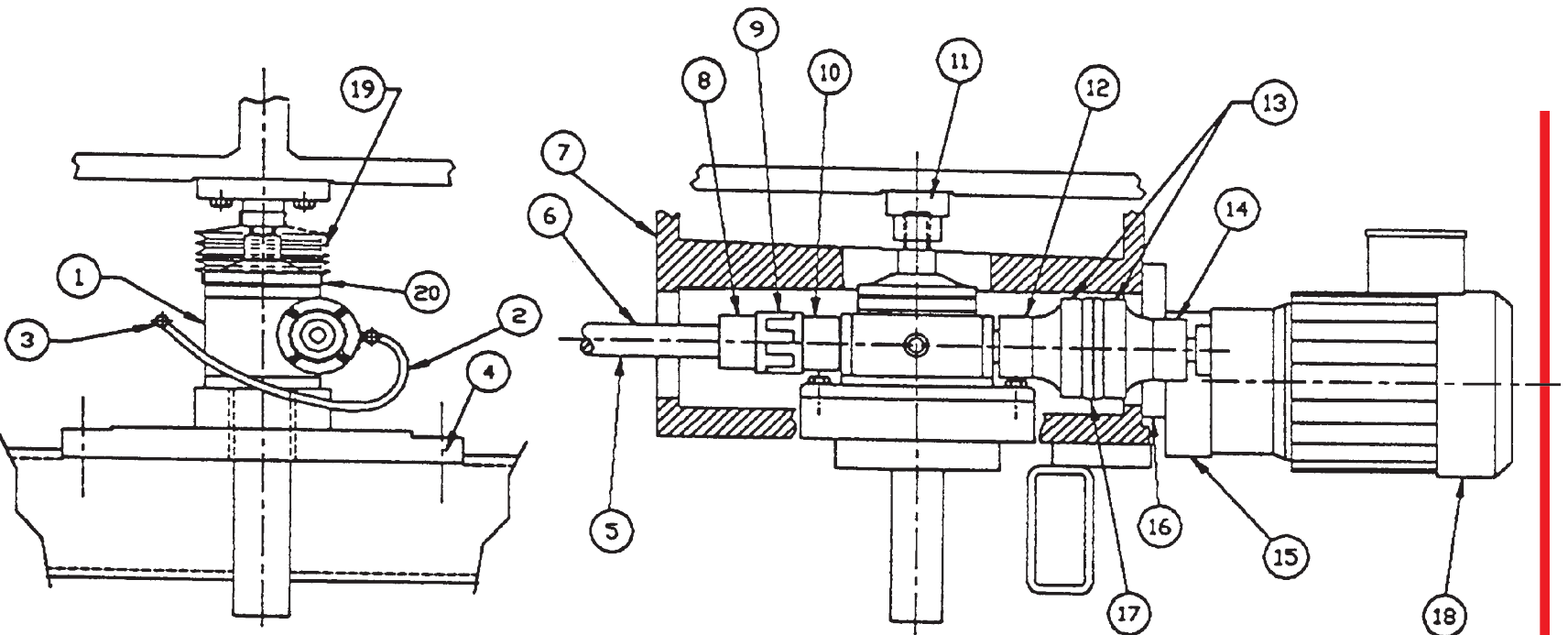


Maintenance (continued)

**4" Air loaded
press roll & bed
plate relations
-Smooth Stock
for glueline cut**



Arbor hoist assembly



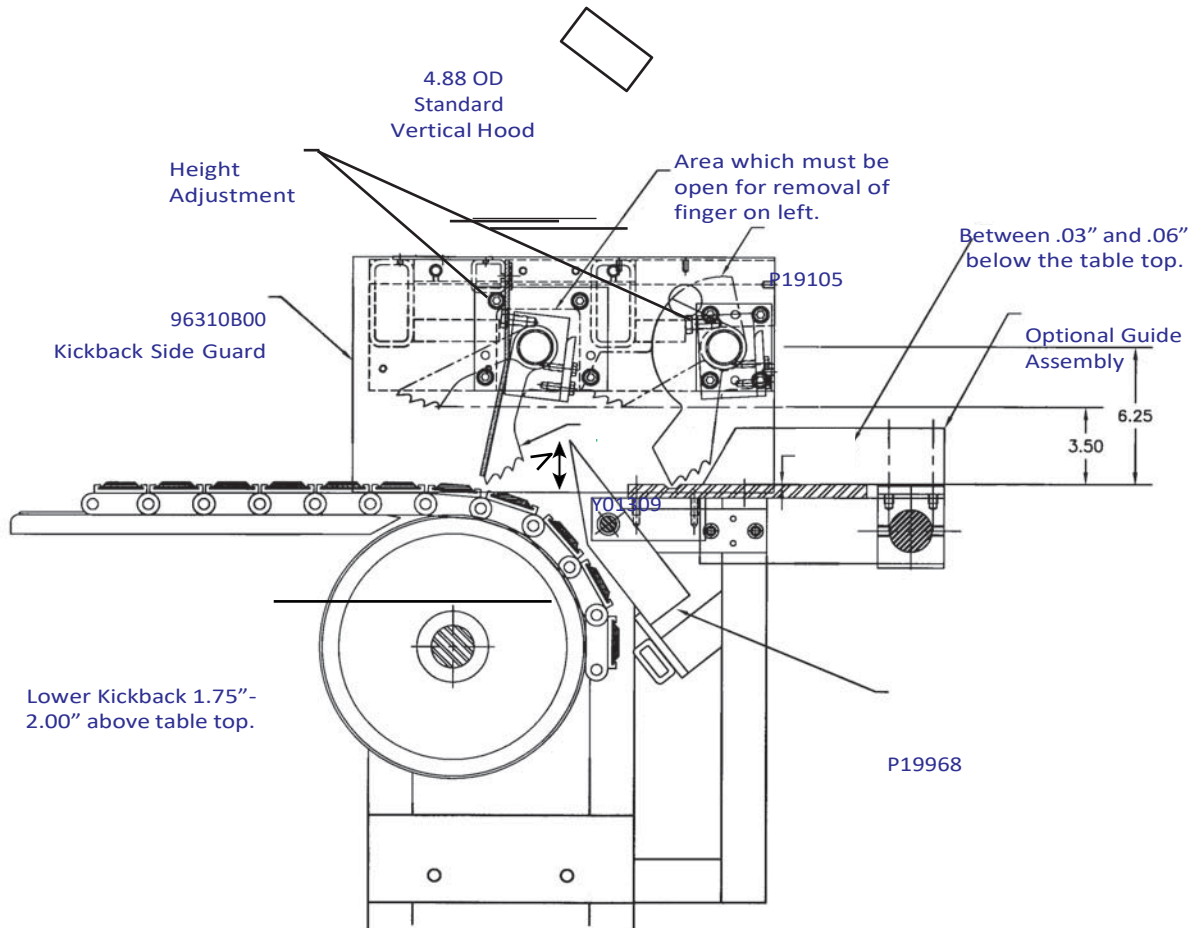
- 1. Actuator
- 2. Tubing
- 3. Grease Fitting
- 4. Actuator Support Bracket
- 5. Actuator Adjust Shaft
- 6. Actuator Adjust Shaft
- 7. Main Column
- 8. Coupling Half
- 9. Coupling Spider
- 10. Coupling Half
- 11. Arbor coupling

- 12. Coupling Hub
- 13. Coupling Flange
- 14. Coupling Hub
- 15. Motor Mounting Plate/Cover
- 16. Column Cover Plate
- 17. Sleeve Coupling
- 18. Gear Motor
- 19. Dust Boot
- 20. Geared Hose Clamp

Maintenance (continued)

Infeed kickback assembly

680 CFM
4" Water Gage
5000 FPM Velocity - Minimum



Notes:

- Clean anti-kickback fingers daily, with air only. Do not oil.
- Replace any worn kickback fingers. Test for sharpness using cardboard strip provided in the back of this manual.
- Anti-kickback fingers should always swing freely and return to their original position.

Maintenance (continued)

The oil mist generator system provides essential lubrication to the bottom chain vees and chain pins. If the system was not generating the oil mist there could be excessive wear to the feed chains, extended pins and cams. Check the location and position of the four (4) spray nozzles weekly to make sure that they are spraying on the chain vees and pins.

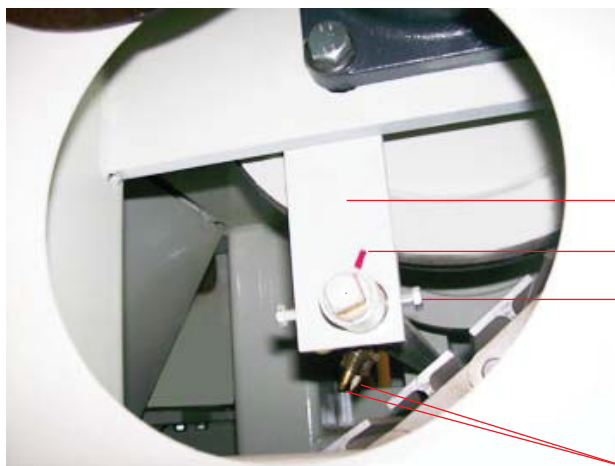
Oil mist generator system

To properly check the spray nozzles the feed chains must be running. The operator should use extreme caution and there should be someone standing by the main power switch.



1. While the feed chains are running, the operator should hold a piece of white paper in front of each nozzle for 30 to 40 seconds. After 40 seconds there should be a spot the size of a quarter.
2. If there is no stain on the paper the nozzles should be checked for obstructions. Dust will often collect at the nozzle discharge fitting and should be removed with a weekly cleaning.

Note: The tube is turned up for shipping purposes. On start-up turn the pipe so that the alignment marks are aligned.



Alignment point reference mark.

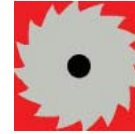
Locking bolt.

Mist nozzles for the pins and chains.

Maintenance (continued)

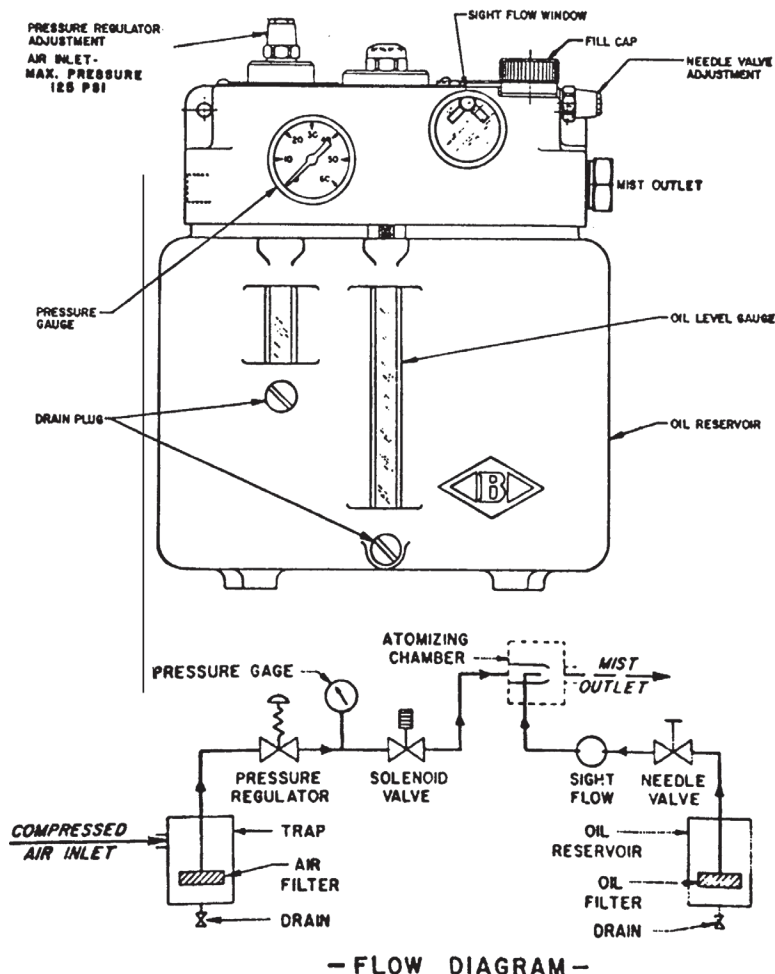
Maintenance (continued)

The Mist Lubricator, type Z, consists of an oil reservoir, air trap and filter, a solenoid operated air valve, an air pressure regulator and pressure gage, needle valve adjustment for oil flow and sight flow window.



System components

The oil mist generator system consists essentially of tubing and distribution fittings, using flexible tubing when necessary. Pressure and mist setting are as per machine manufacturer's specifications.



Use only a clean oil of type and viscosity recommended by machine manufacturer.

Never remove filler plug when unit is in operation.

Oil requirements



Maintenance (continued)

Fill the oil reservoir to, but never above, the top of the Liquid Sight Gage. Make sure the unit is connected to the shop air line and the solenoid valve is connected to the electrical system. The pressure regulator is factory set by the machine manufacturer to allow proper distribution of the mist with a minimum of air consumption. Check with Mereen-Johnson Machine Company or Bijur Lubrication Corporation before making adjustments to the pressure regulator or mist output needle valve. The rate of oil drops visible at the sight window is not a measure of mist output, however it provides a check that the lubricator is functioning and is proportional to mist output.

Operation

Check the oil level daily and refill the reservoir as required. Filters should be checked periodically and cleaned or replaced if necessary. Accumulated water and impurities in the air reservoir should be drained as necessary.

Maintenance

Replace filter group once a year.



Unit chatters when turned on - check the electrical supply for low voltage

Troubleshooting

No delivery of air or mist - check for burned out solenoid or loose wire connection.

Inability to regulate air pressure - check diaphragm for rip or puncture, also check pressure gage.

Maintenance (continued)

Use this section if your machine is equipped with an Alemite® brand oil mist unit.

The oil mist generator system provides essential lubrication to the bottom chain vees and chain pins. If the system was not generating the oil mist there could be excessive wear to the feed chains, extended pins and cams. Check the location and position of the four (4) spray nozzles weekly to make sure that they are spraying on the chain vees and pins.

To properly check the spray nozzles the feed chains must be running. The operator should use extreme caution and there should be someone standing by the main power switch.

1. While the feed chains are running, the operator should hold a piece of white paper in front of each nozzle for 30 to 40 seconds. After 40 seconds there should be a spot the size of a quarter.
2. If there is no stain on the paper the nozzles should be checked for obstructions. Dust will often collect at the nozzle discharge fitting and should be removed with a weekly cleaning.

The Mist Lubricator, ASSY11955, type 3942-BC, consists of an oil reservoir, air trap and filter, a solenoid operated air valve, an air pressure regulator and pressure gage and a needle valve adjustment for oil flow.

Oil mist generator system - Alemite® brand



Maintenance (continued)

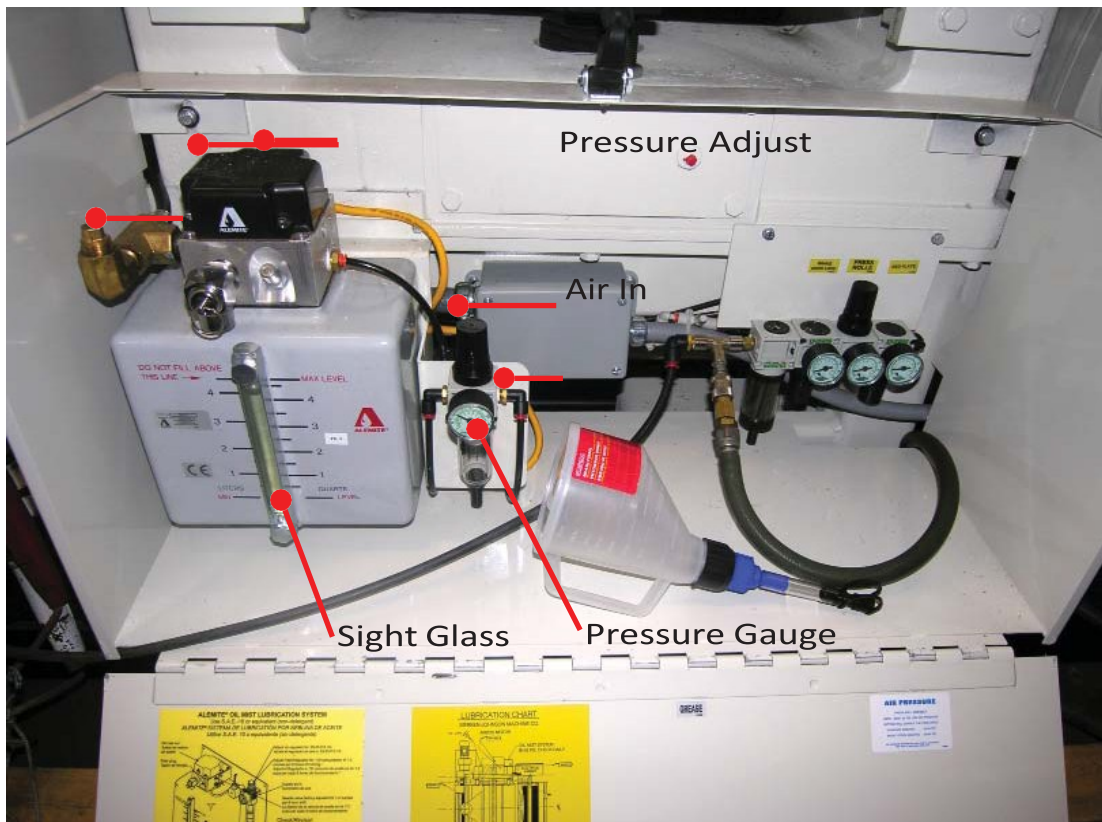
The oil mist generator system consists essentially of tubing and distribution fittings, using flexible tubing when necessary. Pressure and mist setting are as per machine manufacturer's specifications.

System components

Wiring diagram is under the cover.

Filler

Oil Mist Unit



Use only a clean oil of type and viscosity recommended by machine manufacturer.

Never remove filler plug when unit is in operation.

Oil requirements



Maintenance (continued)

Use the fill tool with the filtered funnel provided to fill to, but never above, the top of the Liquid Sight Gage. Make sure the unit is connected to the shop air line and the solenoid valve is connected to the electrical system. The pressure regulator is factory set by the machine manufacturer to allow proper distribution of the mist with a minimum of air consumption. Check with the machine manufacturer or Alemite[®] Lubrication Corporation before making adjustments to the pressure regulator or mist output needle valve.

Operation

Check the oil level daily and refill the reservoir as required. Filters should be checked periodically and cleaned or replaced if necessary. Accumulated water and impurities in the air reservoir should be drained as necessary.

Maintenance

Replace filter group once a year.
(Alemite part #387295.)



Unit chatters when turned on - check the electrical supply for low voltage

Troubleshooting

No delivery of air or mist - check for burned out solenoid or loose wire connection.

Inability to regulate air pressure - check diaphragm for rip or puncture, also check pressure gage.

Maintenance (continued)

Alemite Centralized Oil Lubricator



Service Guide

3942-B 3942-BB 3942-BC
 3942-C 3942-CB 3942-CC
 3943-B 3943-BB 3943-BC
 3943-C 3943-CB 3943-CC

Centralized Oil Lubricator

Description

CAUTION

These lubricators are to be used with mineral and synthetic oils. The use of alternate products may cause damage to components.

It is mandatory to ensure aerosol is delivered to the machine component prior to machine startup. Damage to component(s) can occur.

The lubricators in the 3942 and 3943 series are either basic models or plate mounted.

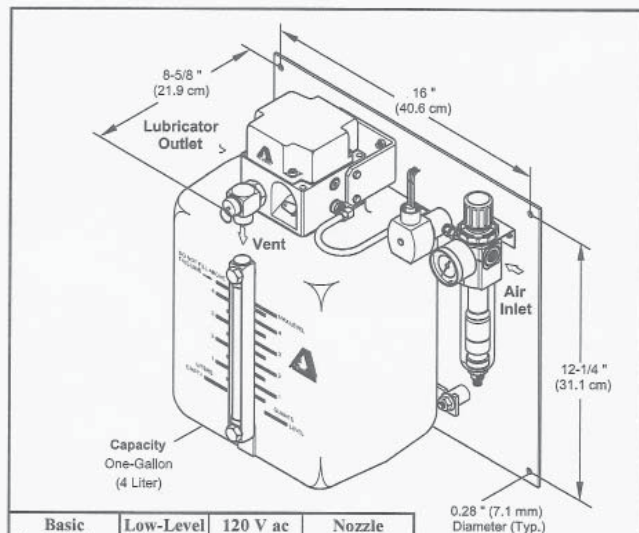
Basic Lubricator

The basic lubricator models require additional accessories prior to operation.

The lubricators in this series can contain either a 1.0 or a 2.3 cfm (28 or 65 l/m) nozzle assembly. Additional models are created by including a 120 V ac oil heater. See Figure 1.

Plate Mounted Lubricator

All of the basic models can be plate mounted. These models include a filter/regulator and can contain a 120 V ac solenoid valve. See Figure 1.



| Basic Lubricator | Low-Level Switch | 120 V ac Oil Heater | Nozzle Output | |
|--------------------------|------------------|---------------------|--------------------------|------------------|
| 3942-B | ● | | See Specifications Table | |
| 3942-C | ● | ● | | |
| 3943-B | ● | | | |
| 3943-C | ● | ● | | |
| Plate Mounted Lubricator | Basic Lubricator | | 120 V ac Solenoid Valve | Filter/Regulator |
| 3942-BB | 3942-B | | | |
| 3942-BC | 3942-B | | ● | |
| 3942-CB | 3942-C | | | |
| 3942-CC | 3942-C | | ● | |
| 3943-BB | 3943-B | | | |
| 3943-BC | 3943-B | | ● | ● |
| 3943-CB | 3943-C | | | |
| 3943-CC | 3943-C | | ● | |

Figure 1 Lubricator Model 3942 and 3943 Series Plate Mounted Shown with Solenoid Valve

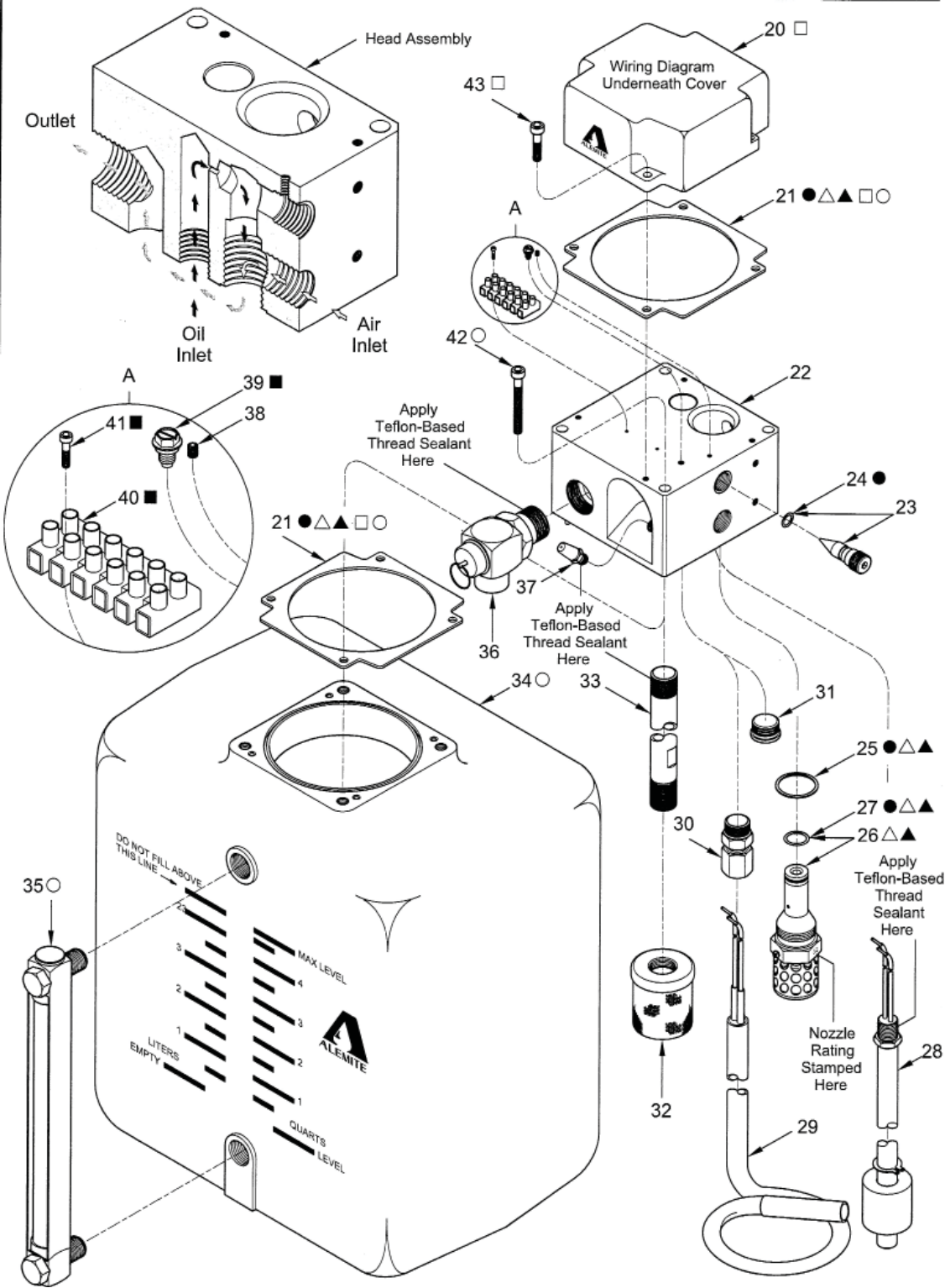
Specifications

| Lubricator Model | Lubricator Assembly | | | | | Filter/Regulator | | | | 120 V ac Solenoid Valve | | |
|------------------|---------------------|-------------------------|-----|-----------------------|-----|------------------------------|-------------|-----------|------------------------|-------------------------|--------------------|----------|
| | Outlet | Nozzle Output (Nominal) | | Pressure Relief Valve | | 120 V ac Oil Heater Amperage | Filter Size | Air Inlet | Maximum Inlet Pressure | | Conduit Connection | Amperage |
| | | cfm | l/m | psi | Bar | | | | psi | Bars | | |
| 3942 Series | 3/4" NPT | 1.0 | 28 | 10 | 0.7 | 0.9 A | 5-Micron | 1/4" NPT | 150 | 10.3 | 1/2" | 60 mA |
| 3943 Series | | 2.3 | 65 | | | | | | | | | |

Table 1 Lubricator Model 3942 and 3943 Series Specifications

Maintenance (continued)

Figure 2



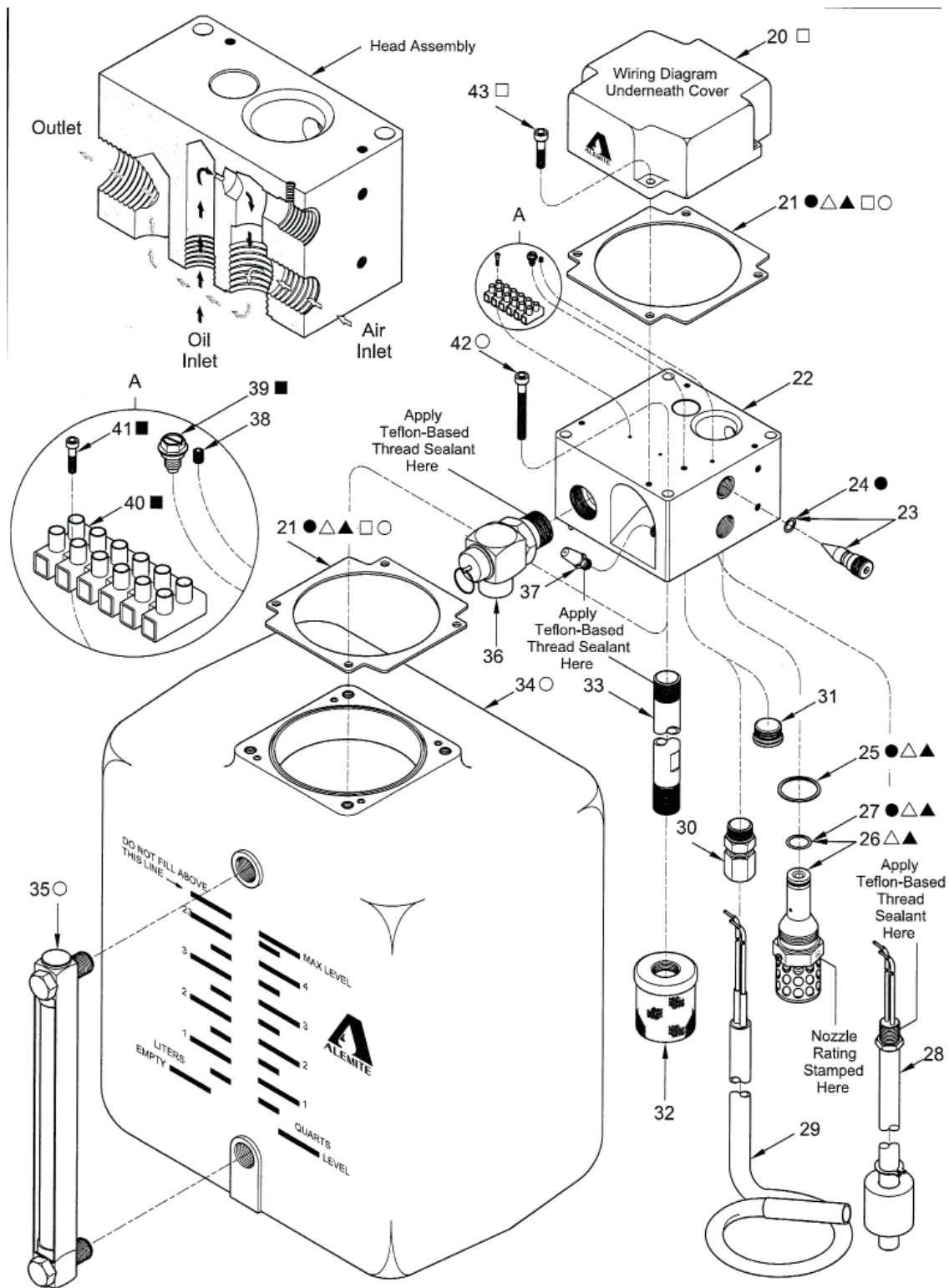
Maintenance (continued)

| Item No. | Part No. | Description | Qty | Plate-Mounted Model | | | | | | | Notes | Numeric Order Part # (Item #) | | |
|----------|----------|---|-----|---------------------|---------|---------|---------|---------|---------|---------|-------|-------------------------------|----------|------|
| | | | | 3942-BB | 3942-BC | 3942-CB | 3942-CC | 3943-BB | 3943-BC | 3943-CB | | | 3943-CC | |
| 1 | 3942-B | Lubricator (w/ low-level switch & 1.0 cfm nozzle) | 1 | • | | | | | | | | | 1000-44 | (6) |
| | 3942-C | Lubricator (w/ oil heater & 1.0 cfm nozzle) | 1 | | • | | | | | | | | 3942-B | (1) |
| | 3943-B | Lubricator (w/ low-level switch & 2.3 cfm nozzle) | 1 | | | | | • | | | | | 3942-C | (1) |
| | 3943-C | Lubricator (w/ oil heater & 2.3 cfm nozzle) | 1 | | | | | | | • | | | 3943-B | (1) |
| 2 | 387449-1 | Valve Assembly, Solenoid, 120 V ac | 1 | | | | | | | • | | | 3943-C | (1) |
| 3 | | Tube, 1/4 " OD x .035 " Wall | 1 | | | | | | | • | | | 12369 | (15) |
| 4 | | Tube, 1/4 " OD x .035 " Wall | 1 | • | | | | | | | | | 40996 | (12) |
| 5 | 327033 | Adapter, 1/4 " NPTF (m) x 1/4 " NPTF (m) | 1 | • | | | | | | | | | 327033 | (5) |
| 6 | 1000-44 | Adapter, Union, 1/4 " NPTF (m) x 1/4 " NPSM (f) | 1 | • | | | | | | | | | 387335 | (7) |
| 7 | 387335 | Filter/Regulator | 1 | | | | | | | | | | 387344 | (18) |
| 8 | 391421 | Gauge, Pressure (0-60 psi) [0-11 kg/cc] | 1 | | | | | | | | | | 387350 | (14) |
| 9 | | Washer, Flat, No. 6 | 2 | | | | | | | | | | 387351 | (10) |
| 10 | | Nut, 6 -32 | 2 | | | | | | | | | | 387352 | (9) |
| 11 | | Elbow, Compression, 1/4 " NPT (m) | 2 | | | | | | | | | | 387354 | (3) |
| 12 | 40996 | Bushing, 3/8 " NPTF (m) x 1/4 " NPTF (f) | 1 | | | | | | | | | | 387355 | (11) |
| 13 | | Bar, Mounting | 1 | | | | | | | | | | 387356 | (17) |
| 14 | | Screw, 1/4 " -20 x 1/2 " | 6 | | | | | | | | | | 387367 | (19) |
| 15 | | Washer, Lock, 1/4 " | 8 | | | | | | | | | | 387368 | (13) |
| 16 | | Nut, 5/16 " -18 | 2 | | | | | | | | | | 387370 | (16) |
| 17 | | Nut, 1/4 " -20 | 4 | | | | | | | | | | 387449-1 | (2) |
| 18 | 387344 | Bracket, Lubricator Mounting | 1 | | | | | | | | | | 391421 | (8) |
| 19 | | Plate Assembly, Mounting | 1 | | | | | | | | | | 387648 | (4) |

Legend:
Part numbers left blank (or in *italics*) are not available separately

Maintenance (continued)

Figure 3



Maintenance (continued)

| Item No. | Part No. | Description | Qty | Notes | Numeric Order Part # (Item #) |
|----------|-----------|---|-----|-----------|---------------------------------------|
| 20 | | Cover (w/o wiring diagram) | 1 | □ | 131266 (25) |
| 21 | | Gasket | 2 | ● ▲ △ □ ○ | Qty of 2 in ● Kit 171000-5 (24) |
| 22 | | Head Assembly (w/ locating pins) | 1 | | 171018-12 (27) |
| 23 | 387366 | Screw Assembly, Oil Adjustment | 1 | | 383831-4 (26) |
| 24 | 171000-5 | O-Ring, 1/4 " ID x 3/8 " OD | 1 | ● | 387291 (22) |
| 25 | 131266 | Gasket | 1 | ● ▲ △ | 387292 (34) |
| 26 | | Nozzle Assembly, 1.0 cfm (28 l/m) | 1 | △ | Model 3942-B, 3942-C 387294 (20) |
| | | Nozzle Assembly, 2.3 cfm (65 l/m) | 1 | ▲ | Model 3943-B, 3943-C 387295 (32) |
| 27 | 171018-12 | O-Ring, 3/8 " ID x 1/2 " OD | 1 | ● ▲ △ | 387297 (28) |
| 28 | 387297 | Switch Assembly, Low-Level, 120 V ac | 1 | | 387299 (21) |
| 29 | 387323 | Heater Assembly, Oil, 120 V ac | 1 | | Model 3942-C, 3943-C 387304 (33) |
| 30 | 387333 | Connector, 3/4 " -16 | 1 | | 387306 (38) |
| 31 | 387340 | Plug, 3/4 " -16 | 1 | | Model 3942-B, 3943-B 387309-7 (35) |
| 32 | 387295 | Screen, Inlet | 1 | | 387312 (40) |
| 33 | | Tube Assembly, Oil Pickup | 1 | | 387313 (41) |
| 34 | | Reservoir Assembly (1-gallon) [4 liter] | 1 | ○ | 387323 (29) |
| 35 | 387309-7 | Gauge Assembly, Level | 1 | ○ | 387333 (30) |
| 36 | 387345 | Valve Assembly, Safety Relief | 1 | | 387340 (31) |
| 37 | 387342 | Valve Assembly, Loader | 1 | | 387341 (43) |
| 38 | | Setscrew, 5 -40 x 1/4 " | 1 | | 387342 (37) |
| 39 | | Screw, Ground, 10 -32 (Green) | 1 | ■ | 387345 (36) |
| 40 | | Strip, Terminal | 1 | ■ | 387346 (39) |
| 41 | | Screw, 3 -48 x 7/16 " | 2 | ■ | 387348 (42) |
| 42 | | Screw, 1/4 " -20 x 2-1/4 " | 4 | ○ | 387360-1 (26) |
| 43 | | Screw, 10 -32 x 5/8 " | 4 | □ | 387366 (23) |

Legend:
Part numbers left blank (or in *italics*) are not available separately
● ▲ △ □ ○ designates a repair kit item

Repair Kits

| Part No. | Kit Symbol | Description | Part No. | Kit Symbol | Description |
|----------|------------|-----------------------------------|----------|------------|---------------------|
| 393685 | ● | Kit, Seal | 393688 | □ | Kit, Cover |
| 393686 | △ | Kit, Nozzle (for 1.0 cfm nozzles) | 393689 | ■ | Kit, Terminal Strip |
| 393687 | ▲ | Kit, Nozzle (for 2.3 cfm nozzles) | 393690 | ○ | Kit, Reservoir |

Maintenance (continued)

Basic Lubricator

The basic lubricator is comprised of the following components:

- head assembly
- oil adjustment screw
- loader fitting (for filling)
- pressure relief valve
- nozzle and baffle assembly
- oil inlet screen and pickup tube
- one-gallon (4 liter) reservoir
- low-level switch
- oil heater (optional)

Wiring and Installation

A wiring diagram mounts on the underneath side of Cover (20) for systems that include the low-level switch and/or the oil heater. See **Figure 3**.

Refer to Service Guide SER COLS for details on the installation of these lubricators.

Operation

These lubricators mix oil with compressed air to create a fine aerosol.

The amount of aerosol dispensed is dependent on the following. The:

- size of the nozzle
- setting of the adjustment screw
- air pressure setting

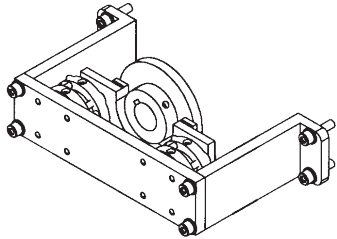
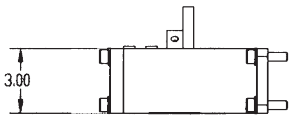
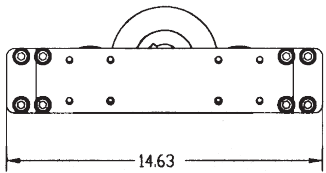
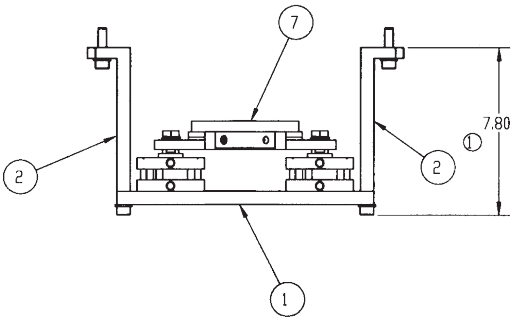
120 V ac Solenoid Valve

The 120 V ac solenoid valve on the plate mounted lubricator functions as an automatic on/off switch.

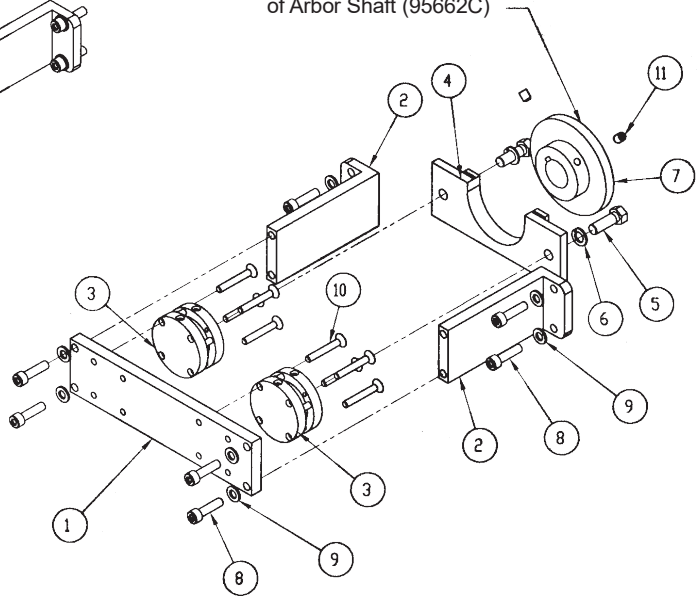
Refer to Service Guide SER COLS for further details on lubricator operation.

Overhaul

NOTE: Lubricate O-Rings 24 and 27 with clean oil prior to installation. See **Figure 3**.



Note: Brake Hub (95776B)
Mounts Flush on End
of Arbor Shaft (95662C)



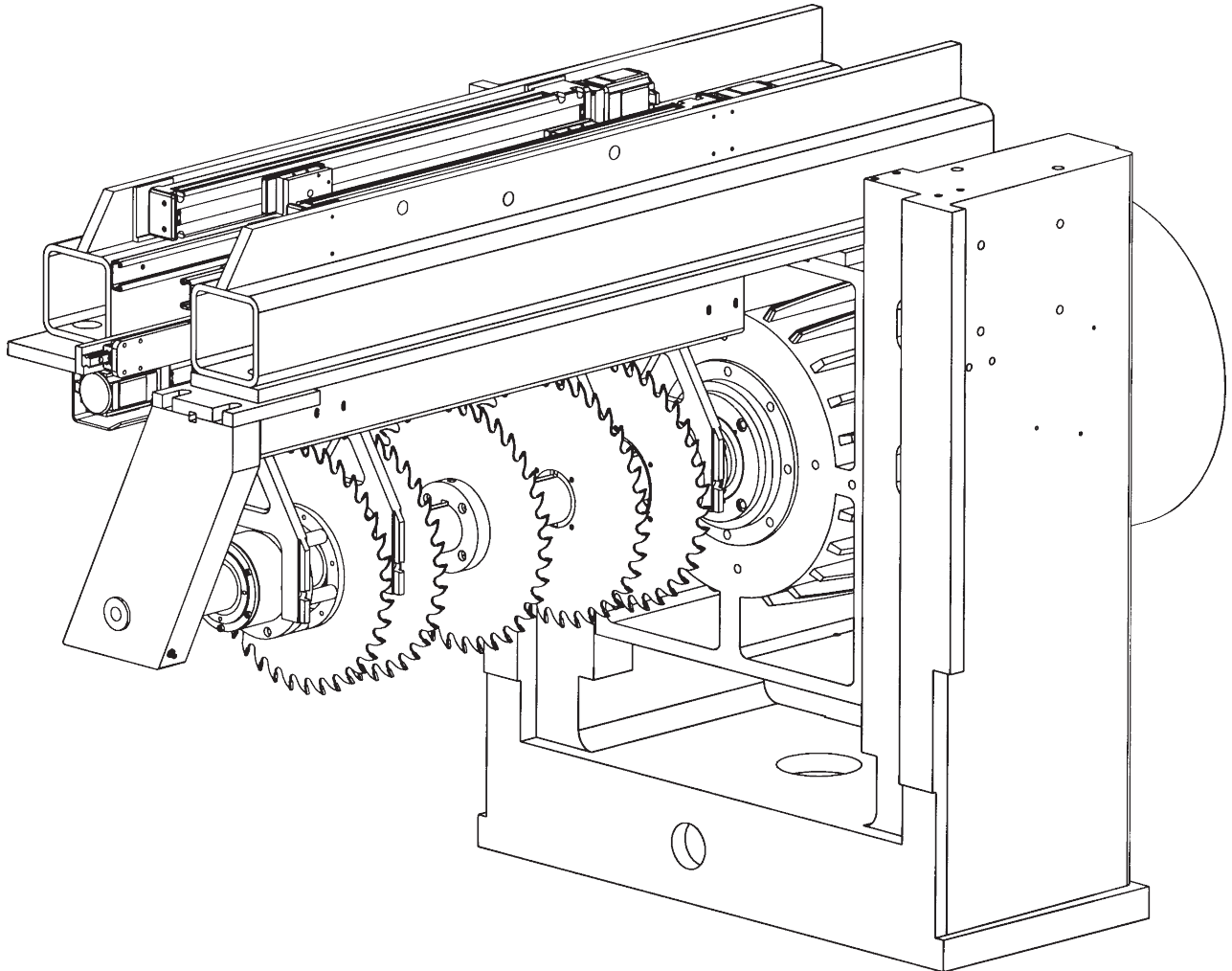
| # | MJ Number | Description | Qty |
|----|--------------|-------------------------------|-----|
| 1 | 95771B00 | Brake Cylinder Mounting Plate | 1 |
| 2 | 95772B00 | Brake Stand-off | 2 |
| 3 | P19965 | Bimba 612150, F0-31-A-4 | 2 |
| 4 | 88504B00 | Brake Shoe | 1 |
| 5 | HX513150 | Bolt, 1/2-20 Hex | 2 |
| 6 | .5 LKWSH | 1/2" Lock Washer | 2 |
| 7 | 95776B00 | Brake Hub Disc | 1 |
| 8 | M-10 SHCS | SHCS, M10x1.5 | 8 |
| 9 | M10 WSHR | M10 Washer | 8 |
| 10 | M-8 CntrSnkS | M8 x 1.25 Countersink Screw | 8 |
| 11 | M-10SET SC | M10 Set Screw | 2 |

**Ripsaw Arbor
Brake**

Maintenance (continued)

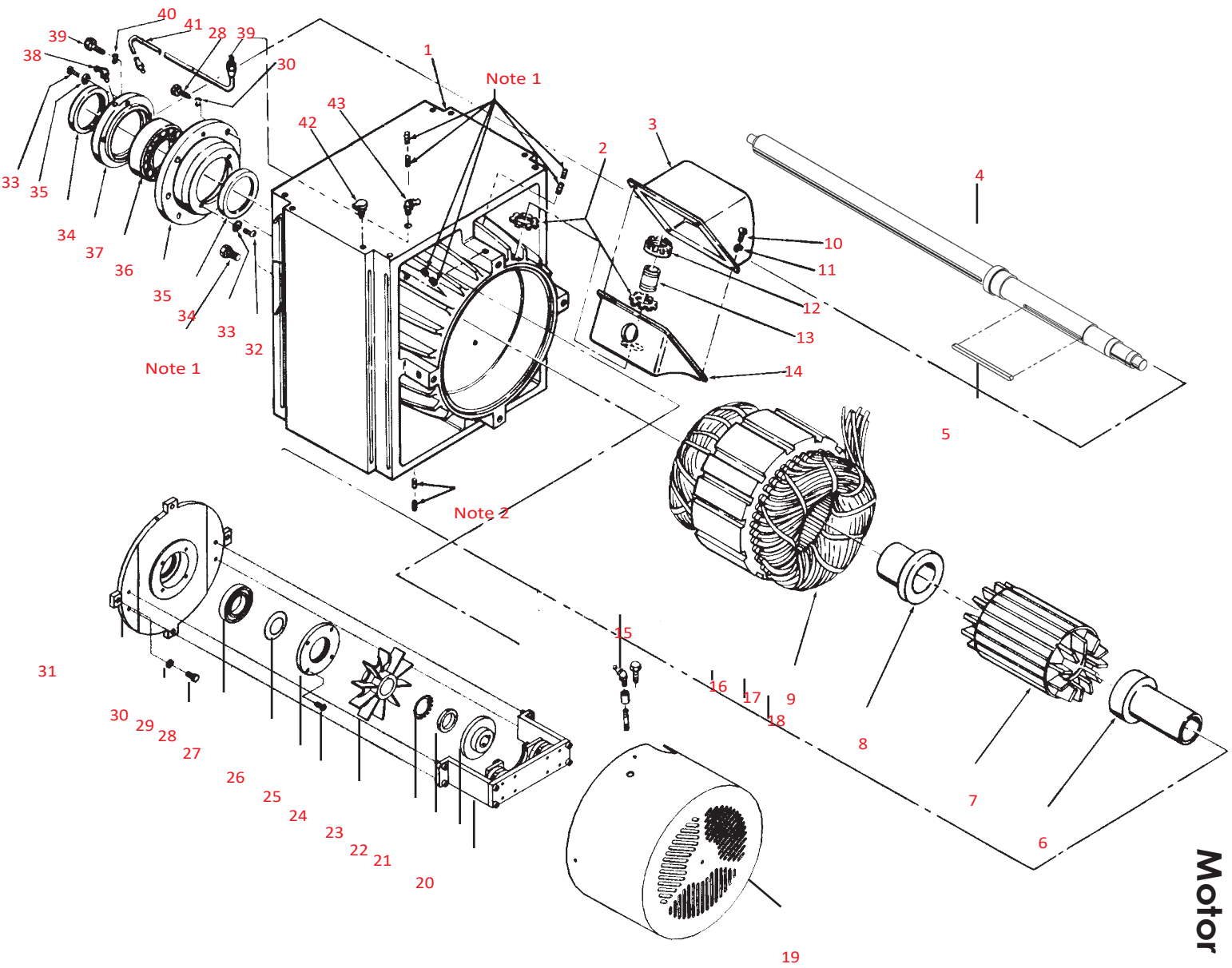
Maintenance (continued)

424-DC/SR Series Saw Arbor Motor



Maintenance (continued)

**424-DC/SR Series
Saw Arbor
Motor**



Maintenance (continued)

| Item Qty | Description | |
|----------|---|---|
| 1 | Arbor motor housing | 1 |
| 2 | Conduit nut | 2 |
| 3 | Electrical connection box cover | 1 |
| 4 | 312-DC/SR Model arbor motor shaft | 1 |
| 5 | Rotor key | 1 |
| 6 | Rear motor spacer | 1 |
| 7 | Rotor | 1 |
| 8 | Front motor spacer | 1 |
| 9 | Stator | 1 |
| 10 | Pan head screw (M6x20MM) | 4 |
| 11 | #10 Split head washer | 4 |
| 12 | 2" Plastic conduit bushing | 1 |
| 13 | Pipe nipple (2" NPTx2-1/2") | 1 |
| 14 | Electrical connection box | 1 |
| 15 | Rear bearing grease fitting | 1 |
| 16 | Hex head cap screw (M6x20MM) | 4 |
| 17 | Coupling - 1/8" NPT | 1 |
| 18 | Pipe coupling (1/8" NPTx2-1/2") | 1 |
| 19 | Fan housing | 1 |
| 20 | Arbor brake assembly (see separate page) | 1 |
| 21 | Arbor brake disc | 1 |
| 22 | #10 SKF nut | 1 |
| 23 | #10 SKF washer | 1 |
| 24 | Ventilating fan | 1 |
| 25 | Button head cap screw (M10x20MM) | 4 |
| 26 | Rear end bearing cap | 1 |
| 27 | Wavy spring washer | 1 |
| 28 | Hex head cap screw (M12x20MM) | 8 |
| | Hex head cap screw (M12x30MM) | 2 |
| 29 | Rear end bearing - 212K | 1 |
| 30 | Split lock washer - 1/2" | 8 |
| 31 | Rear end bell | 1 |
| 32 | Pan head screw (#10-24NFx3/8")(M5X6MM) | 4 |
| 33 | #10 Flat washer | 4 |
| 34 | Bearing seal | 2 |
| 35 | Bearing housing | 1 |
| 36 | Cartridge type front end bearing (No filling slot!) | 1 |
| 37 | Front end bearing cap | 1 |
| 38 | Compression fitting - 1/4" | 2 |
| 39 | Head head cap screw (M10x20MM) | 4 |
| 40 | Spring lock washer - 3/8" | 4 |
| 41 | Copper tubing | 1 |
| 42 | Gits oil cup | 8 |
| 43 | Front end grease fitting | 1 |

424-DC/SR Series Saw Arbor Motor Parts List

Note 1: Double set screws lock the stator into the motor housing. Location may vary on some machines.

Note 2: Hex head cap screws are used to plug the stator removal access holes.



**Do not operate
the motor with
these four
(4) screws
removed!**

Maintenance (continued)

The exploded drawings on the pages Maintenance - 14, 15 & 16 illustrate the arbor motor with all the internal parts numbered. These numbers will be referred to in the following procedures. This is a listing of the steps that must be taken to install, or to remove, the arbor shaft and motor bearings in your Mereen-Johnson Rip Saw machine.

Disassembly of the Arbor Motor

Special Equipment Needed: Dead-blow hammer

To disassemble the arbor shaft and motor rotor:

1. Remove the grease fitting, #15, and #18.
2. Remove the electrical cover, #3, to gain access to two (2) bolts that hold the electrical connection box, #14, to the fan housing. Remove the fan housing, #19.
 - a. Disconnect the air lines from the two brake cylinders, #3, on page 130.
 - b. Your machine is equipped with a rear arbor brake. You must remove the brake assembly from the machine before removing the arbor. Remember to mark the air lines for proper reassembly.
 - c. Remove the entire brake assembly as a unit by unbolting the two bolts, #8, on page 134, on each side that goes into the motor end bell.
 - c. Loosen the set screw, #11, and remove the brake disk, #7, both on



Maintenance (continued)

page Operations-15.

Maintenance (continued)

3. Remove the lock nut, #22, and the washer, #23.
4. Remove the ventilating fan, #24, and the key (not shown).
5. Remove the rear end bearing cap, #26.
6. Remove the wavy washer, #27.
7. Remove the rear end bell, #31.
8. Remove the rear bearing, #29. *Do not install new bearing in the housing.*
9. Remove the rear motor spacer, #6.
10. Remove the rotor, #7.
11. Remove the rotor key, #5, from the arbor shaft.

Leave the inner spacer, #8, on the arbor shaft as this will help to prevent damage to the inner seal when removing the arbor shaft, #4.



Place the arbor nut and the lock nut, #22, on the arbor shaft, #4, so as not to damage the threads during transit.



12. To remove the front bearing cartridge, #35, loosen the cap screws, #28. There are six (6) cap screws.
13. Remove the grease line, #41, from the front bearing cap, #37.

Maintenance (continued)

14. Pull the arbor motor shaft, #4, along with the front motor cartridge, #35, out of the motor housing from the arbor access door side.
15. Remove the front bearing cap, #37, by loosening the four (4) cap screws, #39.
16. Lightly tap the front bearing cartridge, #35, off of the bearing, #36.
17. Press the front bearing, #36, off of the arbor motor shaft, #4.

Maintenance (continued)

The exploded drawing on the pages Operations - 15 & 16 illustrate the arbor motor with all the internal parts numbered. These numbers will be referred to in the following procedures. This is a listing of the steps that must be taken to install, or remove, the arbor shaft and motor bearings in your Mereen-Johnson Rip Saw machine.

Reassembly of the arbor motor

Special Equipment Needed: Dead-blow hammer

Before reassembling the arbor motor take care to inspect and clean all the parts, so that the bearings are less likely to get contaminated during the assembly process.



Hand pack the bearings 1/3 full with “Molylube” 126-EP grease or an equivalent.



To reassemble the arbor shaft and motor rotor:

1. Slide the seal, #34, and the front bearing cap, #37, onto the arbor, #4.
2. Heat the front end bearing, #36, inner race, to approximately 120°F to 140° F using a bearing core heater, an oven, or a light bulb. This will allow the bearing, #36, to slide onto the bearing journal, with little resistance.

The front motor spacer, #8, can be used to *gently* tap the bearing, #36, onto the arbor shaft, #4.



3. Let the front end bearing, #36, cool, making sure that it fits the shaft properly.
4. Place a piece of wood on the floor to prevent damage to the arbor shaft, #4. Then place the shaft on the board with the snout, or tapered, end on the board.

Maintenance (continued)

5. Gently lower the bearing housing, #35, down onto the front bearing, #36, making sure that the cartridge sits squarely on the bearing.

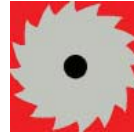
A light coating grease on the lip of each seal, #34, will ensure long seal life.



6. Slowly rotate the bearing housing, #35, while *gently* tapping on the cartridge with a hammer handle or other non-marring tool. Gradually tap the cartridge all the way onto the bearing, #36, making sure that the cartridge stays square on the bearing as you proceed.
7. Bolt the front end bearing cap, #37, to the bearing housing, #35, making sure that the cap to cartridge alignment will allow the grease line to be connected to the bearing cap in the proper alignment.
8. Slide the front motor spacer, #8, into place.
9. Slide the shaft/cartridge/spacer assembly into the motor housing, #1, make sure that the grease fitting is at the one o'clock position for making the connection to the grease line.
10. Connect the grease line, #41, and the arbor brake air lines (if so equipped).
11. Install the rotor key, #5, in the arbor.
12. Install the rotor, #7, in the arbor.

Maintenance (continued)

A light coating of commercially available anti-seize compound applied to the arbor shaft, #4, prior to final assembly will greatly ease disassembly in the future.



13. Install the rear motor spacer, #6.
14. Install the rear end bell, #31.
15. Using the dead-blow hammer, or a non-marring driver, press the rear bearing, #29, into the end bell, #31, and onto the arbor shaft, #4.
16. Install the wavy washer, #27.
17. Install the rear end bearing cap, #26.
18. Install the ventilating fan, #24, with the key on the arbor shaft, #4.
19. Install the lock washer, #23, and the nut, #22.
 - a. Tighten the nut, #22, hand tight.
 - b. Tap both the saw end and the end of the lock nut, #22, with the dead-blow hammer, as this will help seat the bearings.
 - c. Tighten the nut, #22, securely.
 - d. Bend the lock washer tabs, #23, to secure the lock nut in position.
 - e. Install the arbor brake.
 - f. Mount the disc, #7, on page 134. Push it up against the shoulder and tighten the set screw, #11.

Maintenance (continued)

- g. Re-mount the entire brake assembly (Drawing 95784C), on page 134, as a unit. Tighten the two bolts on each side, #8, on page 134.
 - h. Reconnect the air lines into the same fitting from which it was removed.
- 20. Install the fan housing, #19.
- 21. Install electrical cover, #3.
- 22. Install the grease fitting, #15 & #18, through the fan housing, #19, and into the end bell, #31.

Maintenance (continued)

Sew Eurodrive® oil recommendations

Ambient Air Temperature +5°F to +77°F.
Gulf Oil Company Gulf EP S60

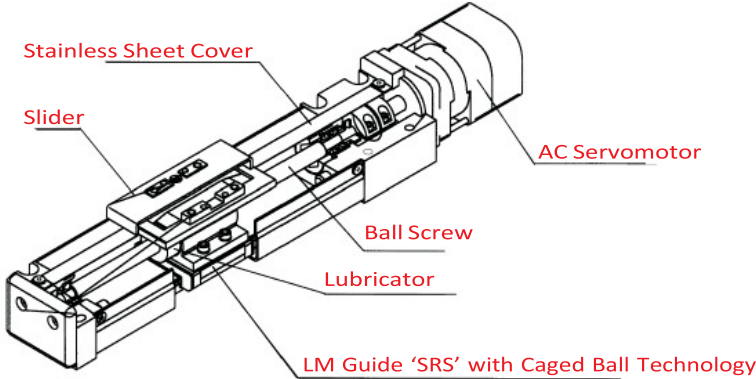
Chevron Oil Company..... Non-Leaded Gear Compound 150
American Oil Company..... Spartan EP 150
Mobil Oil Company..... Mobilgear 629
Shell Oil Company Omala Oil 100
Texaco Oil Company..... Meropa 150

Ambient Air Temperature +32°F to +104°F.
Gulf Oil Company Gulf EP S100
Chevron Oil CompanyNon-Leaded Gear Compound 220
American Oil Company..... Spartan EP 220
Mobil Oil Company..... Mobilgear 630
Shell Oil Company Omala Oil 220
Texaco Oil Company..... Meropa 220



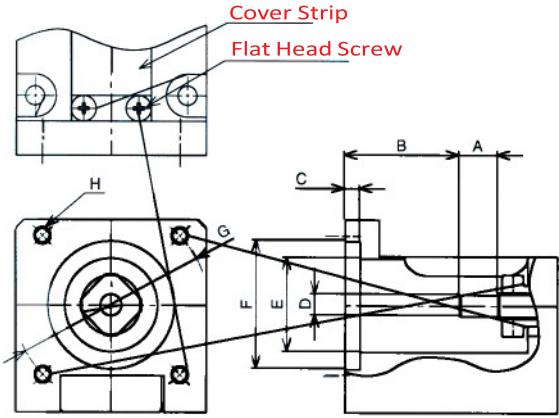
Maintenance (continued)

Moving Saw Actuator



Durability & Long Term Maintenance Free
 With THK's Caged Ball Technology, this actuator offers a robust design and long maintenance intervals.

Environmentally Friendly & Energy Efficient
 Replacing pneumatic cylinders with electro-mechanical components, offers cleaner, quieter & energy efficient operation. Contamination from lubricants, exhaust will be eliminated.



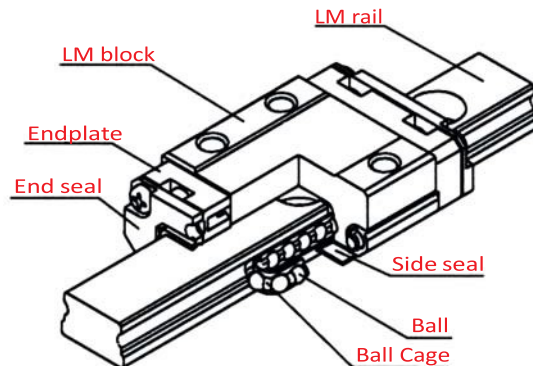
Information for removing servo motor

| | A | B | C | D | E | F | G | H |
|-------|---|----|-----|----|-----|-----|-------|---------------|
| ST-45 | 9 | 27 | 3.5 | ∅5 | ∅22 | ∅30 | PCD46 | 4-MM, Depth 8 |
| ST-60 | 9 | 30 | 3 | ∅6 | ∅28 | ∅30 | PCD46 | 4-MM, Depth 8 |

To mount a motor, remove the flat head screws, and remove the cover strip. Mount the cover strip when coupling installation is complete.

Maintenance (continued)

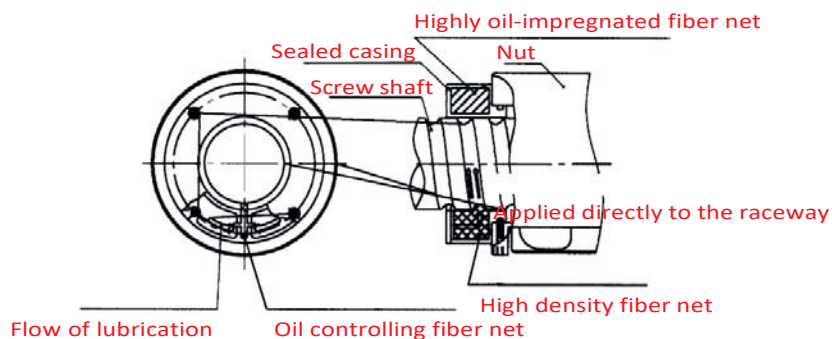
Caged Ball LM Guide Model SRS



With the model SRS, use of ball cages eliminates friction between balls and allows the following effects to be obtained.

1. Low noise, acceptable running sound.
2. Long-term maintenance-free operation.
3. High-speed response, long service life.
4. Excellent smoothness.
5. Low dust generation.

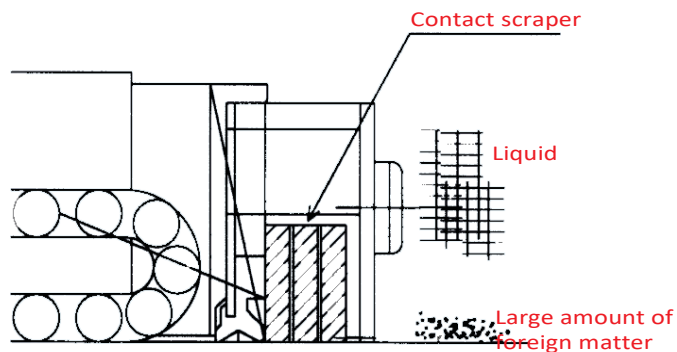
Lubrication



1. *Substantially extended maintenance interval.* With ordinary grease lubrication for a ball screw, a slight amount of oil is lost as the ball screw travels. Attaching an QZ Lubricator supplements oil loss over a long period and allows the maintenance intervals to be significantly extended.

Maintenance (continued)

2. *Eco-friendly lubrication system. QZ*
Lubricator feed the right amount of oil to the right location with a high density fiber net, making itself an eco-friendly lubrication system that does not waste oil.



Laminated Contact Scraper

With a laminated contact structure (2-layer scraper), the LaCS removes minute foreign matter adhering to the LH rail in multiple stages to prevent it from entering the LM block.

Low noise, acceptable running sound.

Since 2-layer scrapers are in full contact with the LM rail, LaCS is highly capable of removing minute foreign matter.

Use of oil-impregnated expanded synthetic rubber with self-lubrication capability achieves a low frictional resistance.

Maintenance (continued)

Infeed conveyors feeding a rip saw should:

- Be run at the same speed as the rip saw feed bed. Any difference in speed may affect the cut quality, jam the feed bed of the rip saw, double feed (stack the boards) or “kick” the board to one side.
- Must be parallel with the direction of feed
- Have at least the closest roller to the saw parallel to the saw arbor. For use with longer and heavier material two to four straight rolls may be required.

Simply align the fence as close as possible using your eyes.

- Send a straight board through the saw holding the board against the fence until the saw takes the board away.
- Inspect the resulting strip at the outfeed end of the saw.

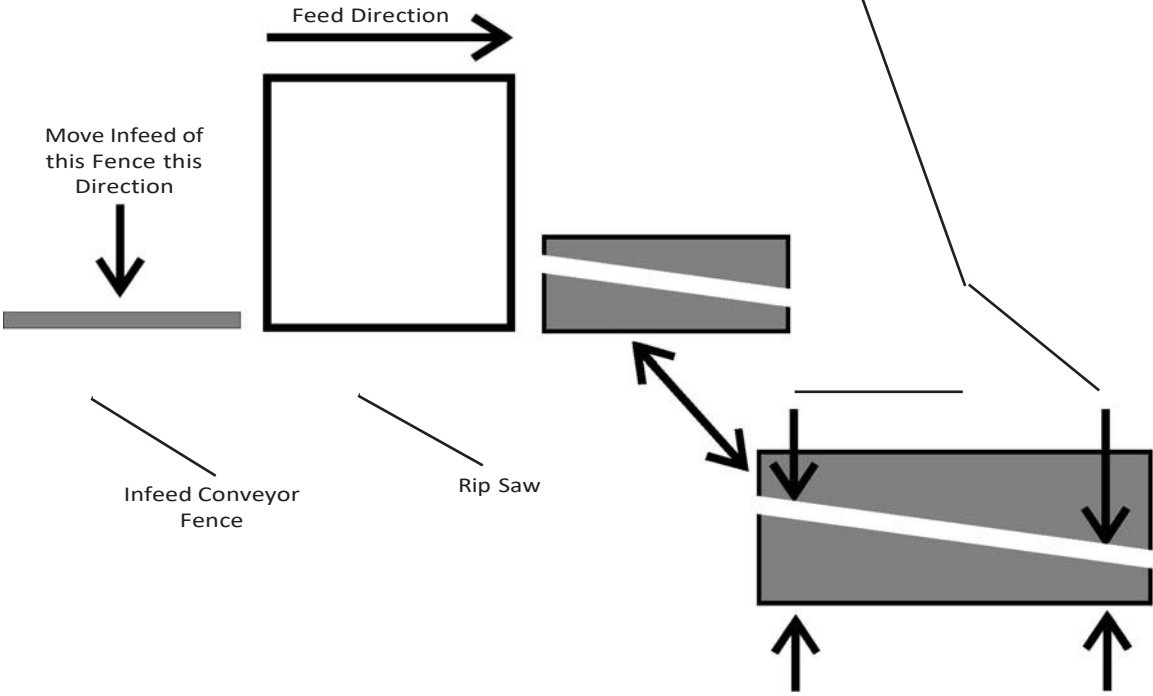
Infeed & outfeed system recommendations

Instructions for installing infeed conveyor

Maintenance (continued)

- Measure the strip at its infeed end and compare it to the outfeed end measurement.

Adjust the fence accordingly



Maintenance (continued)

Outfeed conveyors being fed by a Ripsaw should:

- Be running no more than 10% faster than the saw's feed bed.
- Accept material straight out of the saw.
- Be level with the saw's outfeed.

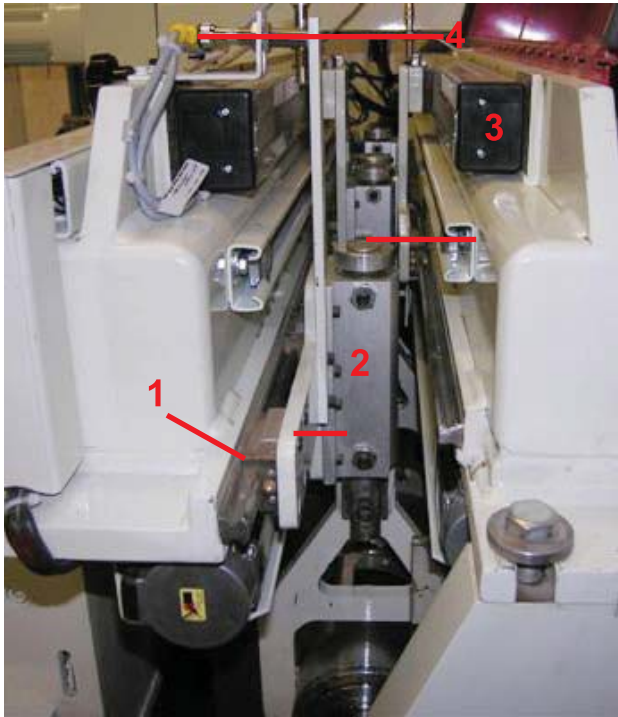
Infeed nip rolls feeding a Mereen-Johnson Ripsaw should:

- Jump down (lower) as the material passes under them.
- Remain down only long enough to allow the Rip Saw feed bed to contain the material.
- Raise off of the material by the time the 2nd press roll touches the material.
- Be running at the same speed as the Rip Saw feed bed to prevent jamming the saw's feed bed.
- Be positioned parallel to the arbor
- Be positioned level with the saw's infeed table.

Overrunning clutches work to some degree, but still may feed the board too fast into the Rip Saw before overrunning.

Maintenance (continued)

Overbeam Maintenance



The overbeam should be cleaned and blown-off daily.

Both the THK bearing blocks, #1, on each carriage, #2, should be greased every 1000 hours of travel under normal usage conditions. If the machine is run for eight hours a day, the greasing interval would be about six months.

See the information below for the THK grease requirements.

Lubricant: Grease

Classification: Lithium-based grease (JIS No.2)

Item: AFB-LK grease (THK)

Classification: Urea-based grease (JIS No. 2)

Item: Albania Grease No. 2 (Showa Shell Sekiyu)

Daphne Esponex Grease No. 2 (Idemitsu)

Kosan) or equivalent

Maintenance (continued)

The yoke connecting shafts, #3, should be cleaned and wiped with light oil every week.

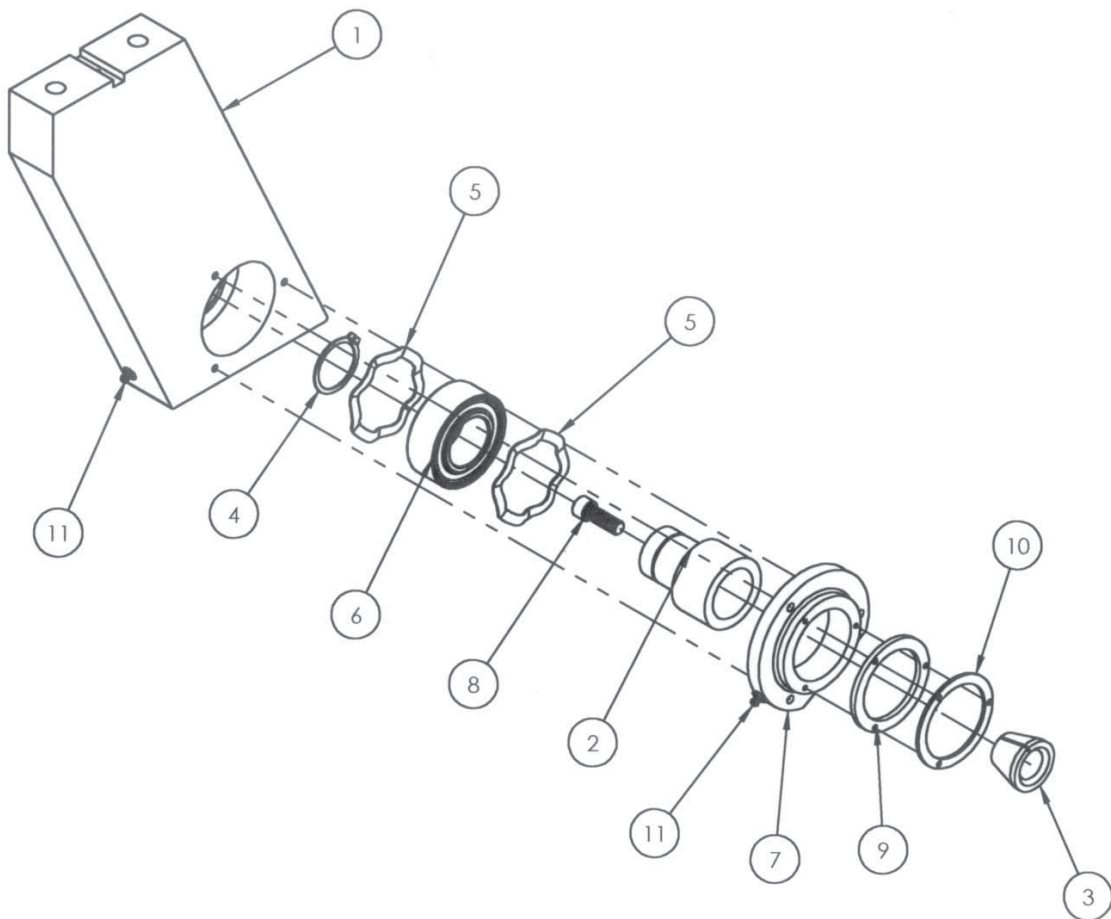
The actuator should be inspected weekly to make sure the band cover is sealing well. There is a low pressure (3PSI) inlet into each actuator which is factory set to help keep dust and contamination out.

The home proximity switch, #4, should be checked monthly.

Maintenance (continued)

Slip-off bearing detail

1. Slip-off bearing housing.
2. Slip-off bearing sleeve, tapered.
3. Tapered drive bushing.
4. Retaining ring.
5. Wavy washer.
6. Slip-off bearing.
7. Slip-off bearing housing cap.
8. Hex socket retaining bolt.
9. Felt seal.
10. Seal retainer
11. Grease fittings (2).



Maintenance (continued)

The number refer to the drawing on the previous page.

Slip-pff bearing housing/bearing replacement

1. Disassembly
 - a. Remove the clamp cap, #7.
 - b. Remove the wavy washer, #5.
 - c. Remove the retainer, #10, and the seal, #9.
 - d. Push or press out the sleeve, #2, as well as both the bearing, #6, and the retaining ring, #4, as a unit.
 - e. Remove the other wavy washer, #5.
 - f. Remove the retaining ring, #4, for the sleeve, #2.
 - g. Press off the bearing, #6.
2. Reassembly
 - a. Wash all the parts thoroughly with solvent.
 - b. Purge all the old grease from inside the grease fittings.
 - c. Lubricate the bearing, approximately 1/3 full.
 - d. Press the new bearing, #6, onto the sleeve, #2.

Maintenance (continued)

- e. Mount the retaining ring, #5, onto the sleeve, #2.
- f. Put the wavy washer, #5, onto the housing, #1.
- g. Press the assembled sleeve, #2, bearing, #6, and retaining ring, #5, into the housing, #1.
- h. Install the other wavy washer, #5.
- i. Install the clamp cap, #7.
- j. Install the seal, #9, and the seal retainer, #10.
- k. The sleeve assembly should turn freely.
- l. Install the lock bolt, #8.
- m. Rotate and check before using.