

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 problems.

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

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

Check oil mist nozzles for proper aim and output of oil and check for any damage.

Weekly

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 bedplate relationship.

Maintenance (Con't)

Check and adjust all air pressures as needed.

Quarterly

Check Bijur mist oil units oil output quantity.

Check feed drive chain sprocket condition. Also check for any loose set screws.

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 entire machine. Do *not* overgrease arbor bearings.

Every 400 hours

Check the gib screws (if machine is so equipped):

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.

Maintenance (Con't)

Feed Drive

If this machine 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.

Maintenance (Con't)

Mereen-Johnson Machine Company is using a current sensor as an electronic shear pin for our rip saws. This sensor is monitoring normal current draw on the feed motor. If this current climbs above its set level it will trip out and shut off the feed drive.

**Electronic
Shear Pin**
Used in machines
prior to "J" Model

The trip delay potentiometer should be set full counterclockwise for no delay.

Adjust the trip point clockwise until the red LED light goes out. If this adjustment is turned up severe damage to the feed drive system may be the result.



If the current sensor happens to trip out it will reset itself automatically. Before restarting the feed, locate the reason why it tripped out and take corrective measures to ensure smooth operation.

If your machine has a variable frequency controlled feed drive the frequency controller has a built-in current sensor. This will be factory set. If you need to change the sensor settings see the manufacturer's setup parameters listed below.



Maintenance (Con't)

Used on older machines only!

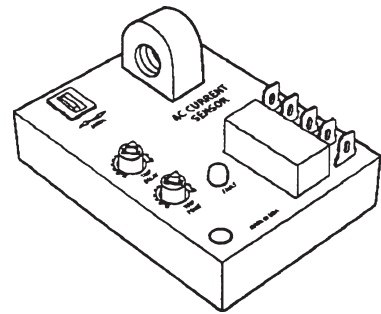


**Caution:
Disconnect all voltages
before making
connections.**

**Sensor
operation
instruction**

- Toroidal through hole wiring
- 0.5 to 50 amperes trip point (lower current with multiple turns)
- Adjustable or factory fixed trip delays
- Led fault indicator
- 10 amp SPDT isolated output contacts
- Encapsulated construction protects against shock, vibration and humidity
- 5% trip point hysteresis (dead band)

**Over or
undercurrent
sensing:**



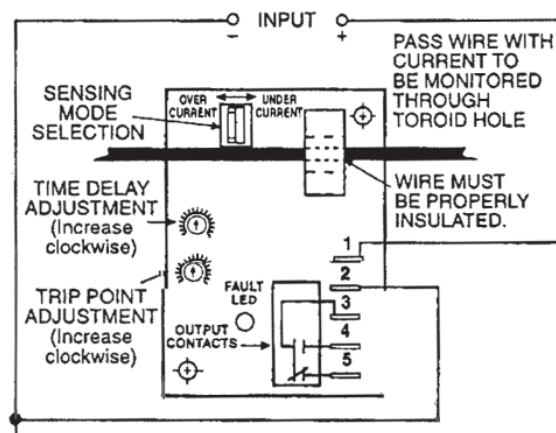
Maintenance (Con't)

Description of operation

Using the mode selection switch, set the desired function, *over* or *under* current sensing. Pass the wire carrying the current to be monitored, through the toroid sensor. Now set the *trip point* and *trip delay* to their approximate settings.

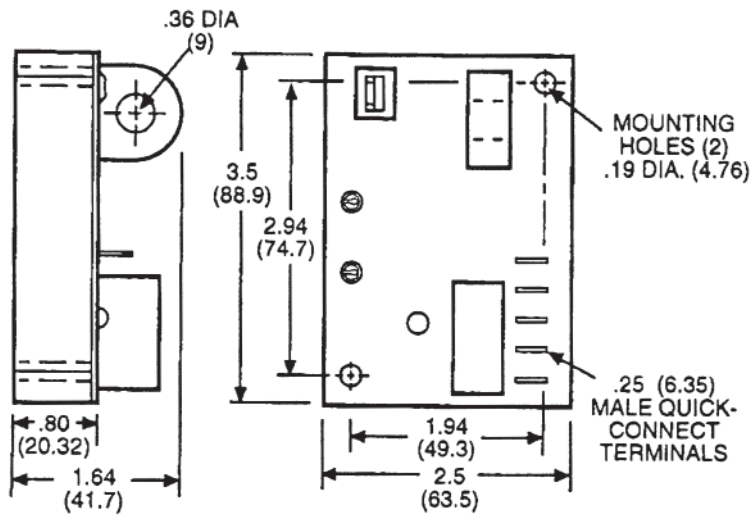
Prior to connecting the output to the control circuitry, apply power to the ECS and the monitored load. Fine-tune the *trip point* by turning the adjustment and watching the LED. The LED will light, indicating a fault. Turn slightly in opposite direction until the LED is off. This adjustment can be done while connecting to the control circuitry if the *trip delay* is set at maximum.

When a fault is sensed (LED on) throughout the *trip delay*, the output will energize after the delay is complete. When the current returns to normal run condition, the output and the delay are reset.

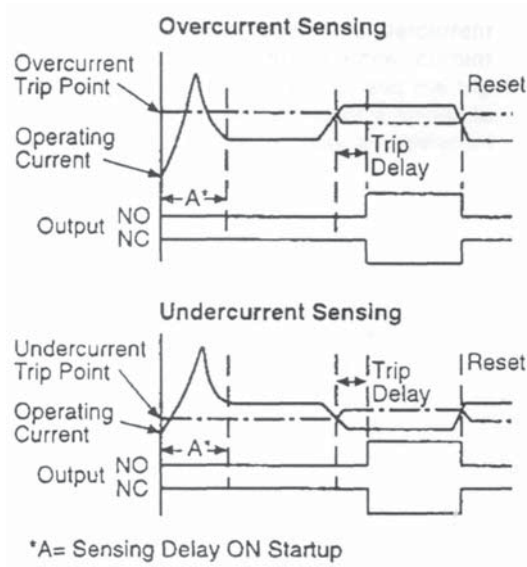


Maintenance (Con't)

Mechanical



All dimensions in inches (millimeters)



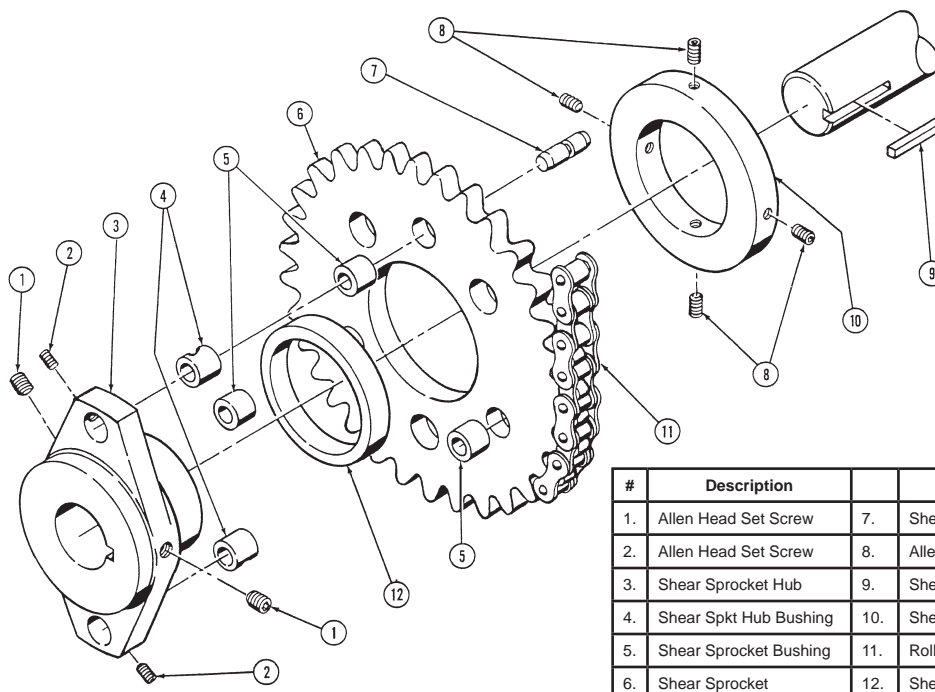
*A= Sensing Delay ON Startup

Time diagrams

The numbers mentioned in the instructions refer to the drawing at the bottom of the page.

Shear Pin Replacement - Very Old Machines Only

1. Loosen the set screw located over the shear pin, #2.
2. Push the broken shear pin out of the two bushings, #4 and #5.
3. Using a common point screwdriver rotate the screw that is located in the fan end of the feed drive motor. Rotate by hand, until the shear hub, #3, and shear hub bushing, #4, are in alignment with the shear sprocket bushing, #5.
4. Install the new shear pin, #7, flush with the bushing, and check for proper alignment of the relief in the center of the shear pin.
5. Tighten the set screw located over the shear pin.
6. Check all the set screws for tightness.



#	Description		Description
1.	Allen Head Set Screw	7.	Shear Pin
2.	Allen Head Set Screw	8.	Allen Head Set Screw
3.	Shear Sprocket Hub	9.	Shear Hub Key
4.	Shear Spkt Hub Bushing	10.	Shear Spkt. Set Collar
5.	Shear Sprocket Bushing	11.	Roller Chain
6.	Shear Sprocket	12.	Shear Spkt. Sleeve Bushing

Maintenance (Con't)

Sew Eurodrive® oil recommendations

Ambient Air Temperature +5°F to +77°F.

Gulf Oil Company.....Gulf EP S60

Chevron Oil CompanyNon-Leaded Gear Compound 150

American Oil CompanySpartan EP 150

Mobil Oil CompanyMobilgear 629

Shell Oil Company.....Omala Oil 100

Texaco Oil CompanyMeropa 150

Ambient Air Temperature +32°F to +104°F.

Gulf Oil Company.....Gulf EP S100

Chevron Oil CompanyNon-Leaded Gear Compound 220

American Oil CompanySpartan EP 220

Mobil Oil CompanyMobilgear 630

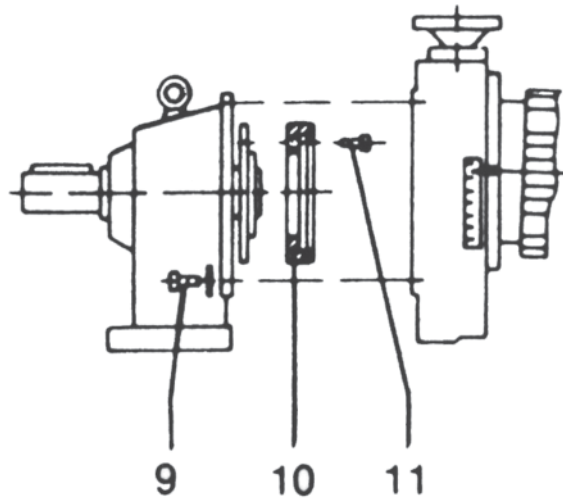
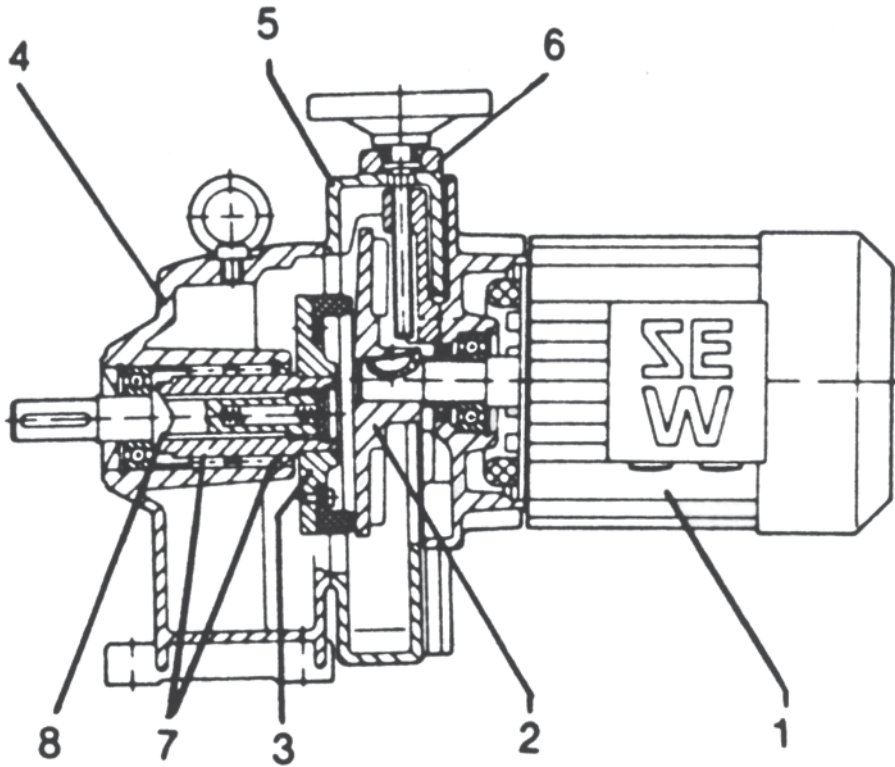
Shell Oil Company.....Omala Oil 220

Texaco Oil CompanyMeropa 220



Maintenance (Con't)

Varimot[®] Maintenance for Machines Prior to "J" Model



Maintenance (Con't)

This variable speed drive consists of the following components:

1. Motor with dovetail slide
2. Drive disc
3. Hollow shaft with friction ring and output shaft
4. Housing
5. Traction housing
6. Speed adjustment
7. Needle bearings
8. Torque compensator (lobe cams)

Varimot® service information

1. Remove the four (4) bolts, #9.
2. Split the traction housings.
3. Mark the friction disc/hollow shaft assembly so the lobe cams at the end of the shaft assembly can later be engaged at the same place.
4. Remove the friction ring screws, #11.
5. Replace the friction disc, #10.
6. Before assembling the housing, clean the driving disc face so it is completely free from oil and grease.

Replacing the friction disc

Maintenance (Con't)

When the friction disc is checked or replaced, perform the following regreasing of the bearings and the lobe cams.

1. Pull out the hollow shaft assembly, #3.
2. Regrease the needle bearing, #7. Use “Shell” Alvania R# or equivalent.
3. Grease the cam lobes, #8. (“Lubriplate” grease GR-132)

When regreasing do not overfill the cavity. Too much grease generates an excessive amount of heat.



If the lobe cams are worn excessively and can't function properly by sliding over each other, replace both shafts involved.



1. When assembling the unit, make sure the cams are engaging the same way as they came out.
2. The cams must be properly engaged. Push the shaft assembly “in” against the spring force.
3. Tighten the bolts, #9, diagonally, making sure that the cams are properly engaged.

Assembling the traction housing

Maintenance (Con't)

Upon completion of the assembly, under power, run the Varimot® through the whole speed range checking for noise or vibration. If the friction disc has stalled out and the disc is damaged or has become noisy due to operation problems (jamming of the driven machine):

1. Completely remove the hollow shaft assembly with the friction ring.
2. Face off the friction ring on a lathe.
3. Remove enough material to clean up the face.
4. Reinstall the shaft assembly.

The driving cone can be removed in two ways:

1. By using a wheel puller. When using this method make sure the fingers of the puller don't fracture the cast iron driving cone. The use of a spacer between the puller fingers and the driving cone will reduce the possibility of fractures.
2. By pressing the rotor out of the driving cone. This method requires the complete disassembly of the motor.
 - a. Remove the fan guard, end shield and the stator.
 - b. Remove the snap ring which holds the bearing behind the driving cone in it's place.
 - c. Press out the rotor shaft.

Removal of the Driving Cone

Maintenance (Con't)

For assembly of the unit:

Assembly of Drive Cone

1. Install rotor shaft with bearing.
2. Install the snap ring.
3. Press on the driving cone.
4. Assemble the stator, end shields and fan guard.

Ambient Air Temperature +5°F to +77°F.

Gulf Oil Company.....Gulf EP S60

Chevron Oil CompanyNon-Leaded Gear Compound 150

American Oil CompanySpartan EP 150

Mobil Oil CompanyMobilgear 629

Shell Oil Company.....Omala Oil 100

Texaco Oil CompanyMeropa 150

Varimot® Oil Recommendations

Ambient Air Temperature +32°F to +104°F.

Gulf Oil Company.....Gulf EP S100

Chevron Oil CompanyNon-Leaded Gear Compound 220

American Oil CompanySpartan EP 220

Mobil Oil CompanyMobilgear 630

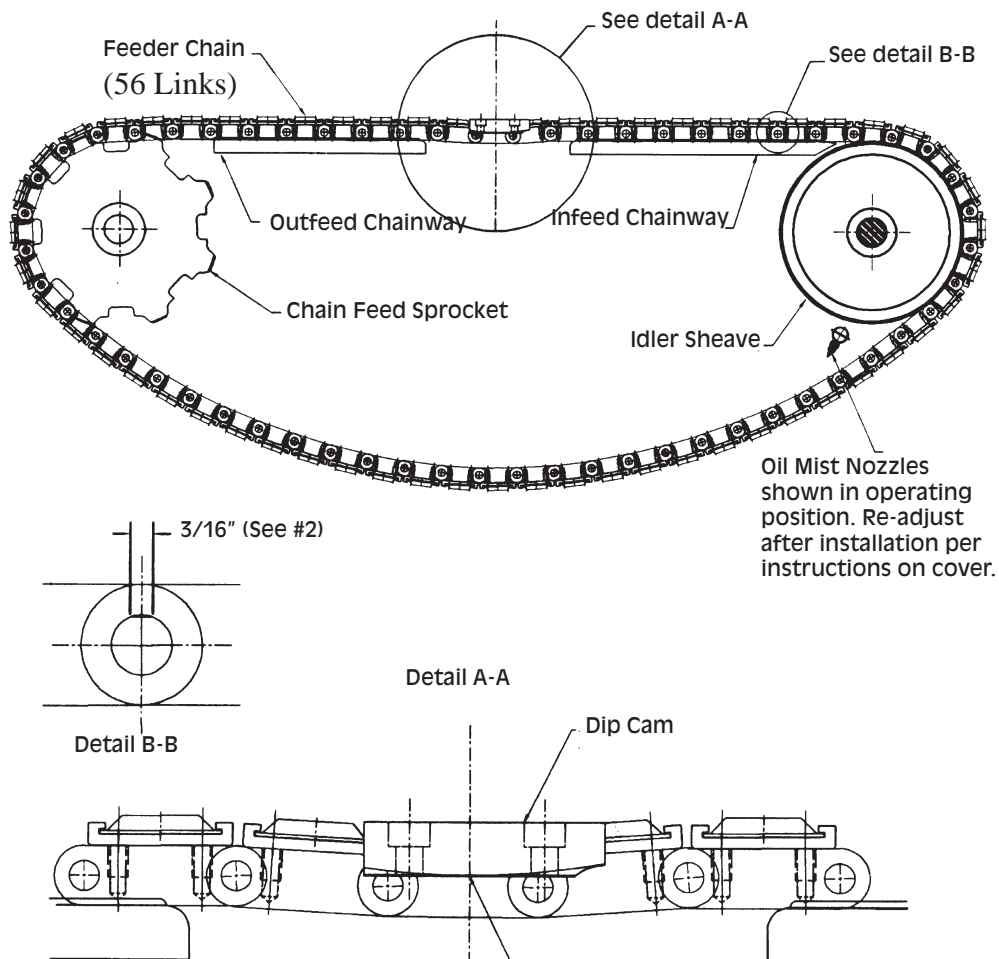
Shell Oil Company.....Omala Oil 220

Texaco Oil CompanyMeropa 220

Maintenance (Con't)

Dip chain adjustment

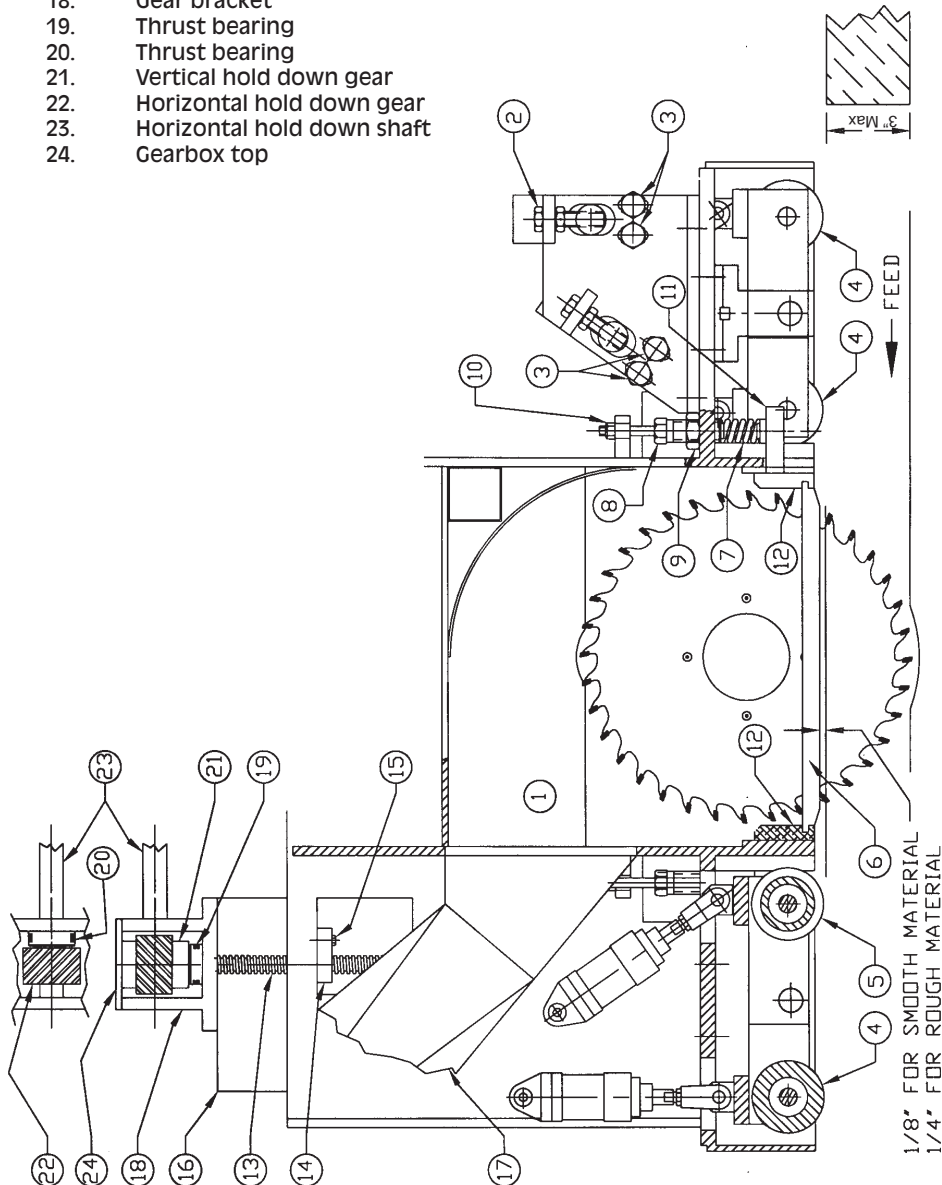
1. If the dip cams are worn on one side, switch the left hand cam with the right hand cam. Before starting, remove the outside tie bar, bedplates and the inside tie bar.
2. Over time the chain pins become worn on top of the chain. If the flat spot on the chain pin is $\frac{3}{16}$ " or greater, replace or rebuild the feed chain.
3. Check the parts list at the end of this manual for individual part numbers.



Maintenance (Con't)

3" Air loaded press roll & bedplate adjust

1. Press roll housing
2. Press roll height adjustment
3. Press roll height lock bolts
4. Steel press roll
5. Rubber covered press roll
6. Bedplate
7. Bedplate spring
8. Bedplate spring tension nut
9. Bedplate spring tension jam nut
10. Bedplate height adjustment
11. Bedplate rail mounting block
12. Bedplate rail
13. Vertical adjusting screw
14. Vertical adjusting brass nut
15. Mounting bolt
16. Column
17. Dust collection hood
18. Gear bracket
19. Thrust bearing
20. Thrust bearing
21. Vertical hold down gear
22. Horizontal hold down gear
23. Horizontal hold down shaft
24. Gearbox top



1/8" FOR SMOOTH MATERIAL
1/4" FOR ROUGH MATERIAL

Maintenance (Con't)

1. The amount of yield by the press rolls and bedplate 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.

3" Air loaded press roll & bedplate adjust



2. The relationship between the press rolls, #4 and #5, and bedplate, #6, has been factory preset for 1/8" smooth material. When the pressure head is set for the thickness of the material being ripped, as shown on the scale and pointer, the press rolls, #4 & #5, will yield (raise) 3/16". The bedplate, #6, will yield (raise) 1/16".
3. The press roll relationship must be maintained as illustrated on page Maintenance-16 and Maintenance-18. The press roll height adjustment bolts, #2, should also be used for resetting rolls from 1/8" yield (raise) for smooth material to 1/4" yield (raise) for rough material.
4. Roll pressure may be increased by turning the air regulator pressure up (25-35 PSI is normal with a maximum of 60 PSI). When the roll adjustment bolts are adjusted to reset the rolls from 1/8" to 1/4" to handle rough material the pressure should not be increased.
5. The bedplate pressure may be increased by turning tension nut, #8, counterclockwise. The bedplate pressure should be checked four (4) times a year to maintain .080" to .100" clearance between coils on spring (#7).

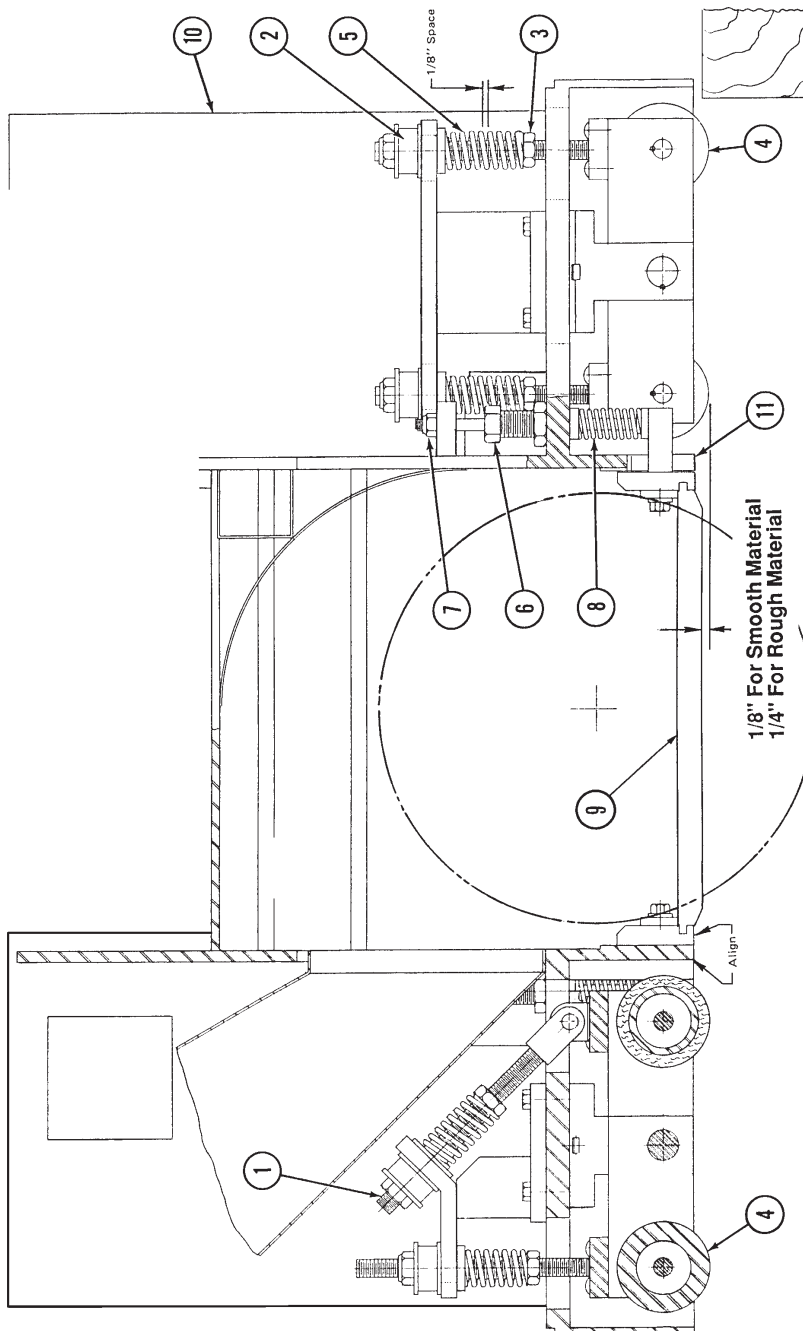
⚠ CAUTION

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

Maintenance (Con't)

1. Press roll height adjustment
 2. Press roll grommet
 3. Press roll spring tension nut
 4. Press roll
 5. Press roll spring
 6. Bedplate spring tension nut
 7. Bedplate height adjustment
 8. Bedplate spring
 9. Bedplate
 10. Press roll housing
 11. Bedplate frame
- Note: Bedplate tie bar is not shown.

**Spring loaded
press roll
& bedplate
adjustment.
Used on older
machines.**



Maintenance (Con't)

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

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



Spring loaded press roll & bedplate adjustment

2. The press roll and bedplate relationship has been factory preset for 1/8" smooth material. When the pressure head is set for the thickness of the material being ripped, as shown on the scale and pointer, the press rolls, #4, will yield (raise) 3/16". The bedplate will yield (raise) 1/16".
3. The press roll relationship must be maintained as illustrated on the opposite page. Compression of the shock absorbing urethane grommets, caused by normal wear and tear, will eventually necessitate the readjustment of the vertical height adjustment nuts, #1. The press roll adjustment nuts, #1, should also be used for resetting the rolls from 1/8" yield (raise) for smooth material to 1/4" yield (raise) for rough material.
4. Roll pressure may be increased by turning the tension nut, #3, up, compressing the spring, #5. When the roll adjustment nuts, #1, are adjusted to reset the rolls from 1/8" to 1/4" to handle rough material the pressure must be increased.

Maintenance (Con't)

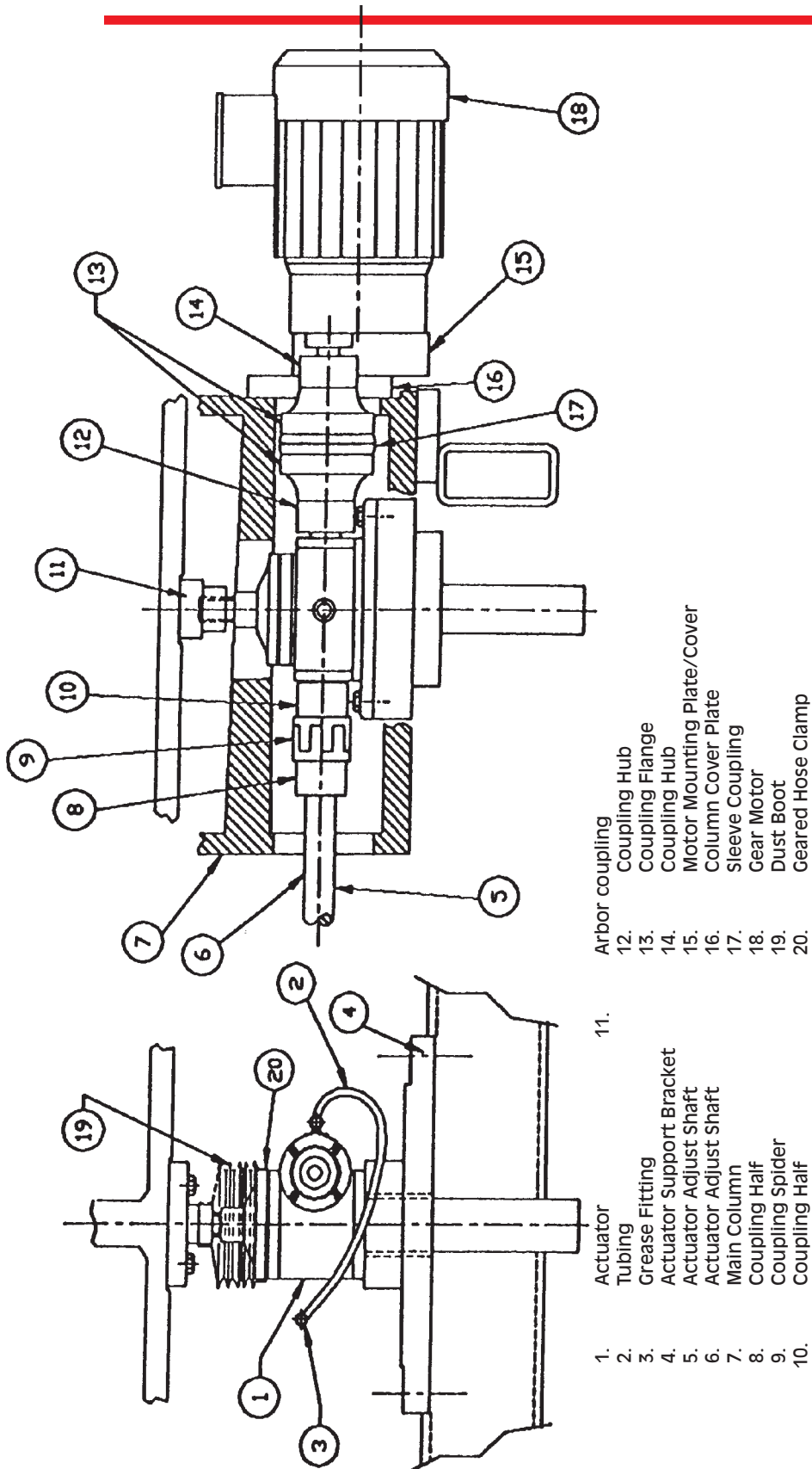
5. The bedplate pressure may be increased by turning tension nut, #6. Proper tension is achieved when there is .080" to .100" gap between the spring coils (#8).
6. *On spring loaded models only*, check the spring pressure on the press rolls every ninety (90) days. The gap between spring coils should maintain 1/8" of clearance.

CAUTION

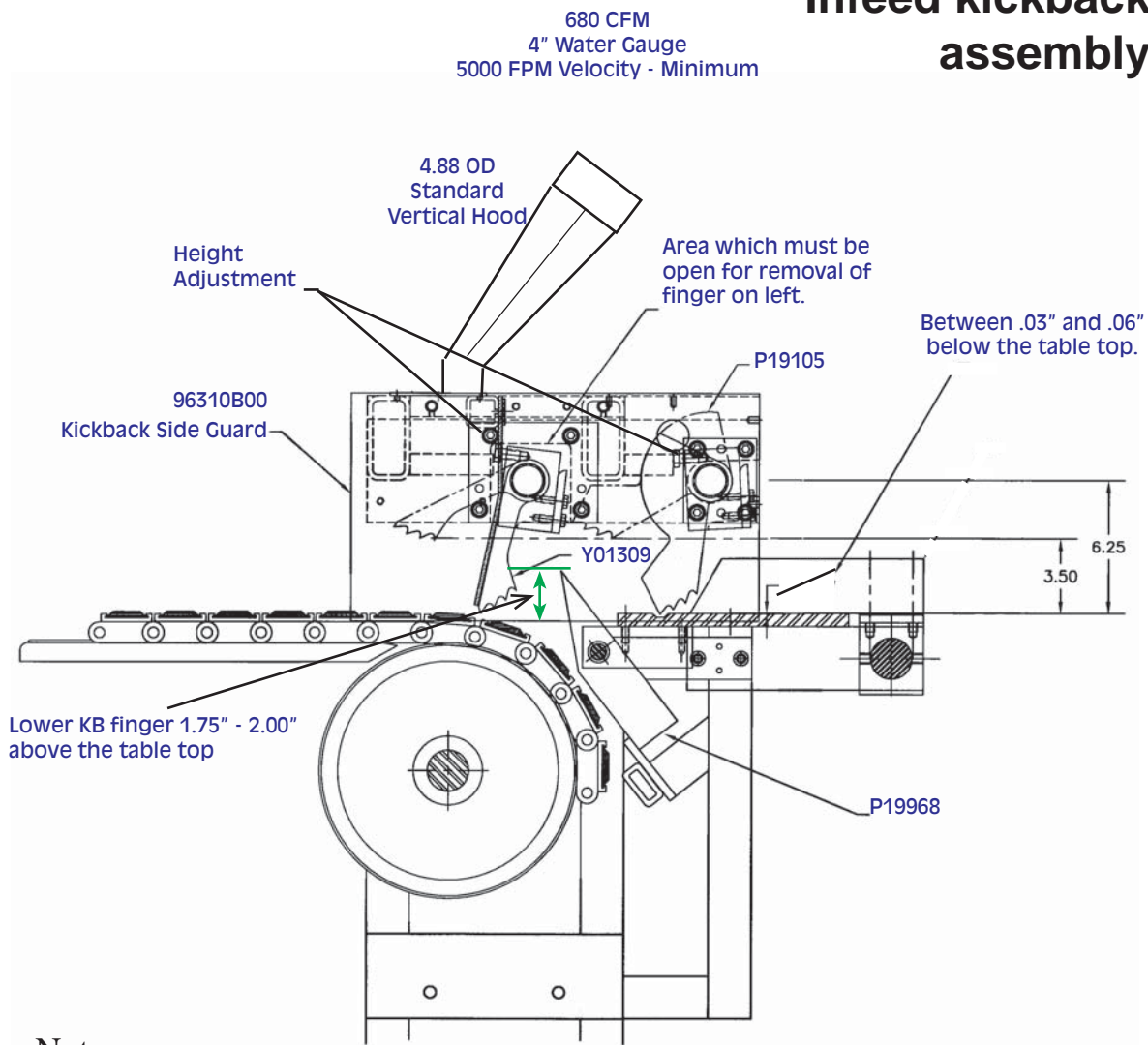
Never attempt to achieve more hold down pressure by lowering the press roll assembly.

Maintenance (Con't)

Arbor hoist assembly



Infeed kickback assembly



Notes:

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

Maintenance (Con't)

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 gauge and a needle valve adjustment for oil flow.

Oil mist generator system - Alemite® brand



Maintenance (Con't)

Use the fill tool with the filtered funnel provided to fill to, but never above, the top of the Liquid Sight Gauge. 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.

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.

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

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

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 gauge.

Operation

Maintenance



Troubleshooting

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**.

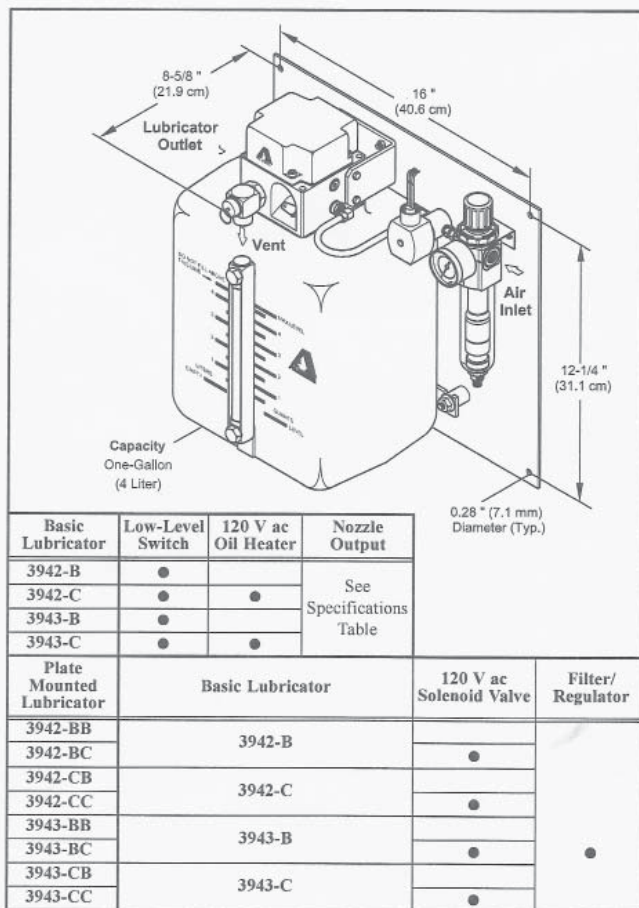


Figure 1 Lubricator Model 3942 and 3943 Series Plate Mounted Shown with Solenoid Valve

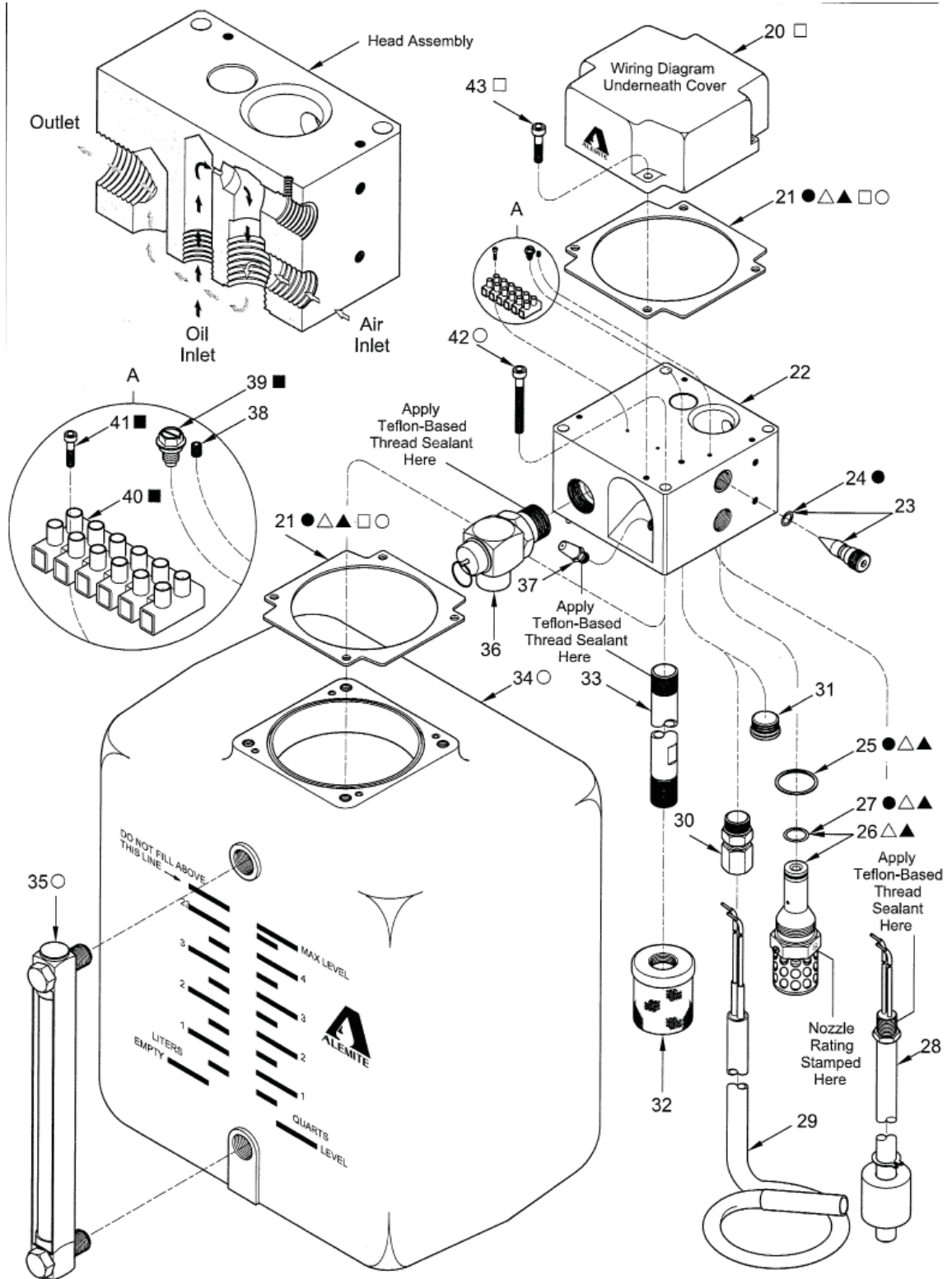
Specifications

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 (Con't)

Figure 2



Maintenance (Con't)

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 (Con't)

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		<i>383831-4</i> (26)
24	171000-5	O-Ring, 1/4 " ID x 3/8 " OD	1	●	<i>387291</i> (22)
25	131266	Gasket	1	● ▲ ▲	<i>387292</i> (34)
26		Nozzle Assembly, 1.0 cfm (28 l/m)	1	△	Model 3942-B, 3942-C <i>387294</i> (20)
		Nozzle Assembly, 2.3 cfm (65 l/m)	1	▲	Model 3943-B, 3943-C <i>387295</i> (32)
27	171018-12	O-Ring, 3/8 " ID x 1/2 " OD	1	● ▲ ▲	<i>387297</i> (28)
28	387297	Switch Assembly, Low-Level, 120 V ac	1		<i>387299</i> (21)
29	387323	Heater Assembly, Oil, 120 V ac	1		<i>387304</i> (33)
30	387333	Connector, 3/4 " -16	1		Model 3942-C, 3943-C <i>387306</i> (38)
31	387340	Plug, 3/4 " -16	1		Model 3942-B, 3943-B <i>387309-7</i> (35)
32	387295	Screen, Inlet	1		<i>387312</i> (40)
33		Tube Assembly, Oil Pickup	1		<i>387313</i> (41)
34		Reservoir Assembly (1-gallon) [4 liter]	1	○	<i>387323</i> (29)
35	387309-7	Gauge Assembly, Level	1	○	<i>387333</i> (30)
36	387345	Valve Assembly, Safety Relief	1		<i>387340</i> (31)
37	387342	Valve Assembly, Loader	1		<i>387341</i> (43)
38		Setscrew, 5 -40 x 1/4 "	1		<i>387342</i> (37)
39		Screw, Ground, 10 -32 (Green)	1	■	<i>387345</i> (36)
40		Strip, Terminal	1	■	<i>387346</i> (39)
41		Screw, 3 -48 x 7/16 "	2	■	<i>387348</i> (42)
42		Screw, 1/4 " -20 x 2-1/4 "	4	○	<i>387360-1</i> (26)
43		Screw, 10 -32 x 5/8 "	4	□	<i>387366</i> (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

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**.

Maintenance (Con't)

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 for machines built prior to mid 2011

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.



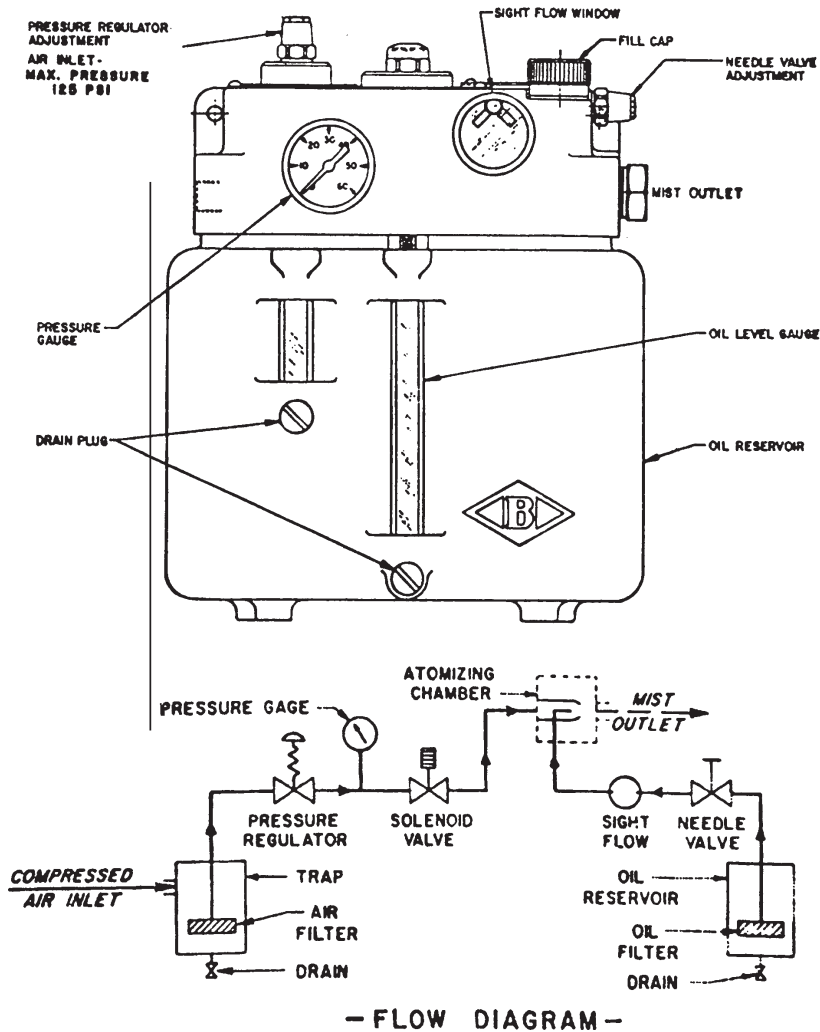
1. While the feed chains are running, the operator should hold a piece of white paper in front of each nozzle for 30 to 40 seconds. After 40 seconds there should be a spot the size of a quarter.
2. If there is no stain on the paper the nozzles should be checked for obstructions. Dust will often collect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

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



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



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

Never remove filler plug when unit is in operation.

Oil requirements



Operation

Fill the oil reservoir to, but never above, the top of the Liquid Sight Gauge. 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 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 functioning is and is proportional to mist output.

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.

Replace filter group once a year.



Troubleshooting

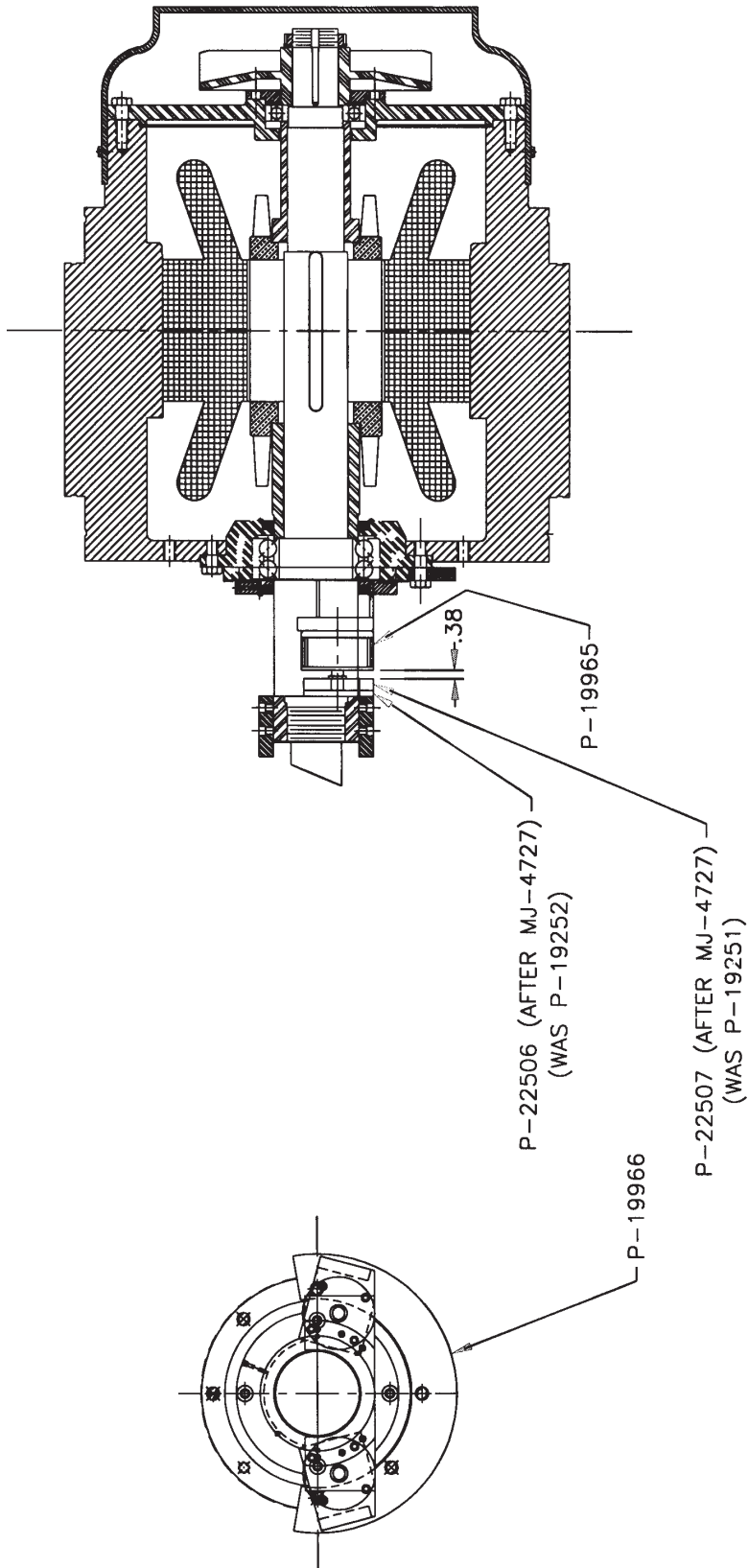
Unit chatters when turned on - check the electrical supply for low voltage

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 gauge.

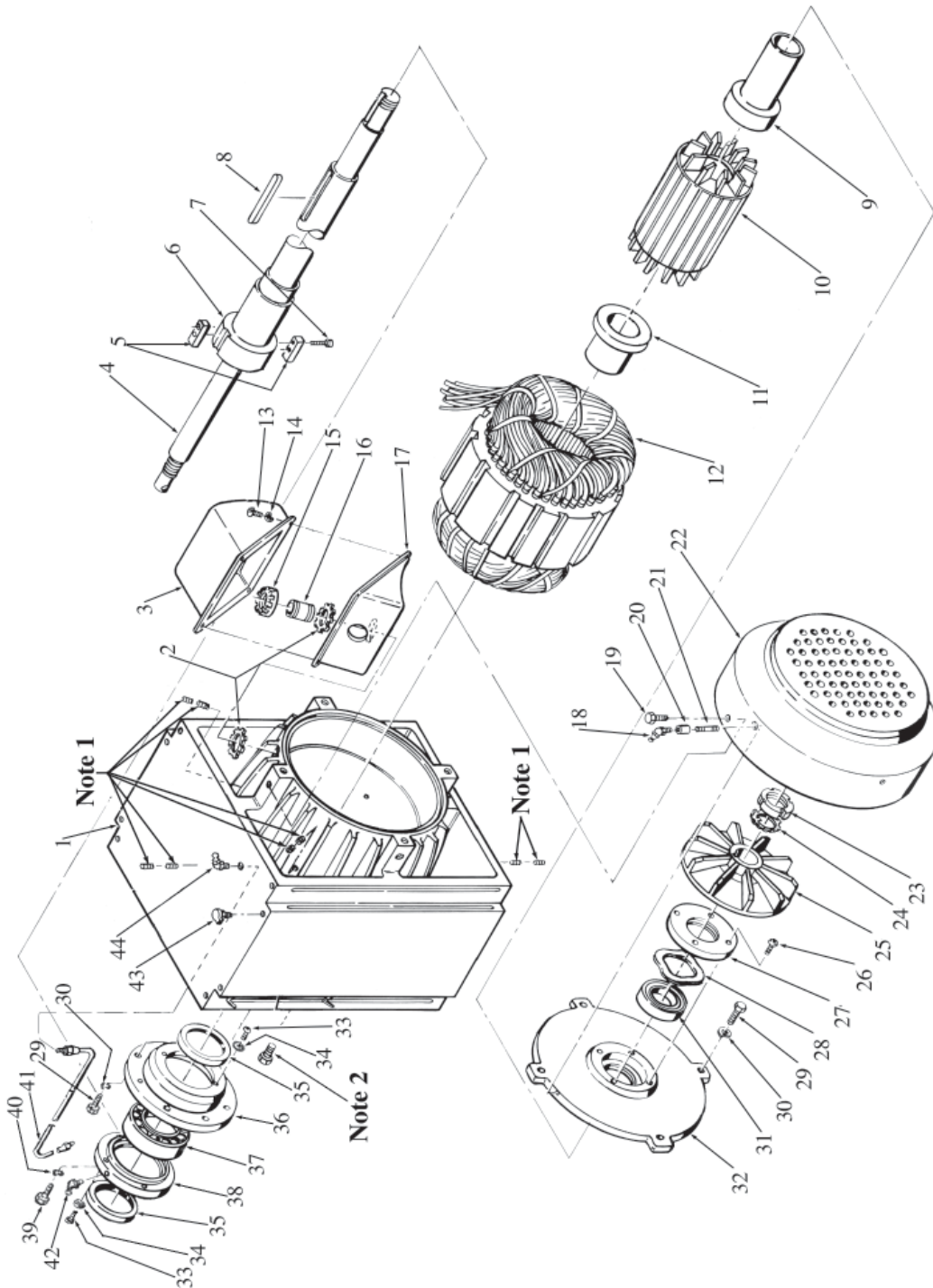
Maintenance (Con't)

Rip Saw Arbor Brake



Maintenance (Con't)

312-DC Series Saw Arbor Motor



Maintenance (Con't)

312-DC Series Saw Arbor Motor Parts List

Item	Description	Qty	Item	Description	Qty
1	Arbor motor housing	1	23	#10 Skf nut	1
2	Conduit nut	2	24	#10 SKF lock washer	1
3	Electric connection box cover	1	25	Ventilating fan	1
4	312-DC/SR Model arbor motor shaft	1	26	Button head cap screw (3/8"-16NMCX3/4")(M10X20MM)	4
5	Arbor collar keys	2	27	Rear end bearing cap	1
6	Arbor collar	1	28	Wavy spring washer	1
7	Allen head cap screw (1/4"-20NCX5/8")(M6X16MM).	4	29	Hex head cap screw (1/2"-13NCX1-1/4")(M12X20MM).	8
8	Rotor key	1	30	Hex head cap screw (1/2"-13NCX1-1/4")(M12X20MM).	2
9	Rear motor spacer	1	31	Split lock washer - 1/2"	8
10	Rotor	1	32	Rear end bearing - 5216	1
11	Front motor spacer	1	33	Rear end bell	1
12	Stator	1	34	Pan head screw (#10-24NFX3/8")(M5X6MM).	4
13	Pan head screw (#10-24NFX1/2")(M6X20MM).	4	35	#10 Flat washer	4
14	#10 Split lock washer	4	36	Bearing seal	2
15	2" Plastic conduit bushing	1	37	Bearing housing	1
16	Pipe nipple (2" NPTX2-1/2").	1	38	Cartridge type front end bearing	1
17	Electrical connection box	1	39	Front end bearing cap	4
18	Rear bearing grease fitting	1	40	Hex head cap screw (3/8"-16NCX1")(M10X20MM).	4
19	Hex head cap screw (1/4"-20NCX5/8")(M6X20MM).	4	41	Spring lock washer - 3/8"	4
20	Coupling - 1/8" NPT	1	42	Copper tubing - 1/4"	1
21	Pipe coupling (1/8" NPTX2-1/2").	1	43	Compression fittings - 1/4"	2
22	Fan housing	1	44	Gits oil cup	8
				Front bearing grease fitting	1

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
(4) screws
removed!**

Disassembly of the Arbor Motor

The exploded drawing on page Maintenance-35 illustrates 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.

Special Equipment Needed: Dead-blow hammer

To disassemble the arbor shaft and motor rotor:

1. Remove the grease fittings, #18, the coupling, #20 and the pipe coupling, #21.
2. Remove the electrical cover, #3, to gain access to two (2) bolts that hold the electrical connection box, #17, to the fan housing. Remove the fan housing, #22.
3. Remove the lock nut, #23, and the washer, #24.
4. Remove the ventilating fan, #25, and the key (not shown).
5. Remove the rear end bearing cap, #27.
6. Remove the wavy washer, #28.
7. Remove the rear end bell, #32.
8. Remove the rear end bearing, #31. *Do not install new bearing in the housing.*
9. Remove the rear motor spacer, #9.
10. Remove the rotor, #10.

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11. Remove the rotor key, #8, from the arbor shaft.

If your machine is equipped with an arbor brake, you must remove the brake assembly from the machine before removing the arbor. Remember to mark air lines for proper reassembly.



Leave the inner spacer, #11, 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, #23, on the arbor shaft, #4, so as not to damage the threads during transit.



12. To remove the front bearing cartridge, #36, loosen the cap screws, #29. There are six (6) cap screws.
13. Remove the grease line, #41, from the front bearing cap, #38.
14. Pull the arbor motor shaft, #4, along with the front bearing cartridge, #36, out of the motor housing from the arbor access door side.
15. Remove the front bearing cap, #38, by loosening the four (4) cap screws, #39.
16. Lightly tap the front bearing cartridge, #36, off of the bearing, #37.
17. Press the front bearing, #37, off of the arbor motor shaft, #4.

The exploded drawing on page Maintenance-35 illustrates 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, #35, and the front bearing cap, #38, onto the new arbor, #4.
2. Heat the front end bearing, #37, inner race, to approximately 120° to 140° F using a bearing core heater, an oven or a light bulb. This will allow the bearing, #37, to slide onto the bearing journal, with little resistance.

The front motor spacer, #11, can be used to *gently* tap the bearing, #37, onto the arbor shaft, #4.



3. Let the front end bearing, #37, 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 end on the board.

Maintenance (Con't)

5. Gently lower the bearing housing, #36, down onto the front bearing, #37, making sure that the cartridge sits squarely on the bearing.

A light coating of grease on the lip of each seal, #35, will ensure long seal life.



6. Slowly rotate the bearing housing, #36, 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, #37, making sure that the cartridge stays square on the bearing as you proceed.
7. Bolt the front end bearing cap, #38, to the bearing housing, #36, 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, #11, 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. Bolt on the arbor brake (if equipped with one) and the cartridge.
11. Connect the grease line, #41, and the arbor brake air lines (if so equipped).
12. Install the rotor key, #8, in the arbor.
13. Install the rotor, #10, in the arbor.

Maintenance (Con't)

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.



14. Install the rear motor spacer, #9.
15. Install the rear end bell, #32.
16. Using the dead-blow hammer, or a non-marring driver, press the rear bearing, #31, into the end bell, #32, and onto the arbor shaft, #4.
17. Install the wavy washer, #28.
18. Install the rear end bearing cap, #27.
19. Install the ventilating fan, #25, with the key on the arbor shaft, #4.
20. Install the lock washer, #24, and the nut, #23.
 - a. Tighten the nut, #23, hand tight.
 - b. Tap both the saw end and the end of the lock nut, #23, with the dead-blow hammer, as this will help seat the bearings.
 - c. Tighten the nut, #23, securely.
 - d. Bend the lock washer tabs, #24, to secure the lock nut in position.
21. Install the fan housing, #22.
22. Install the grease fitting, #18, and couplings, #20 & #21, through the fan housing, #22, and into the end bell, #32.

Maintenance (Con't)

Infeed conveyors feeding a rip saw should:

Infeed & Outfeed System Recommendations

- 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.

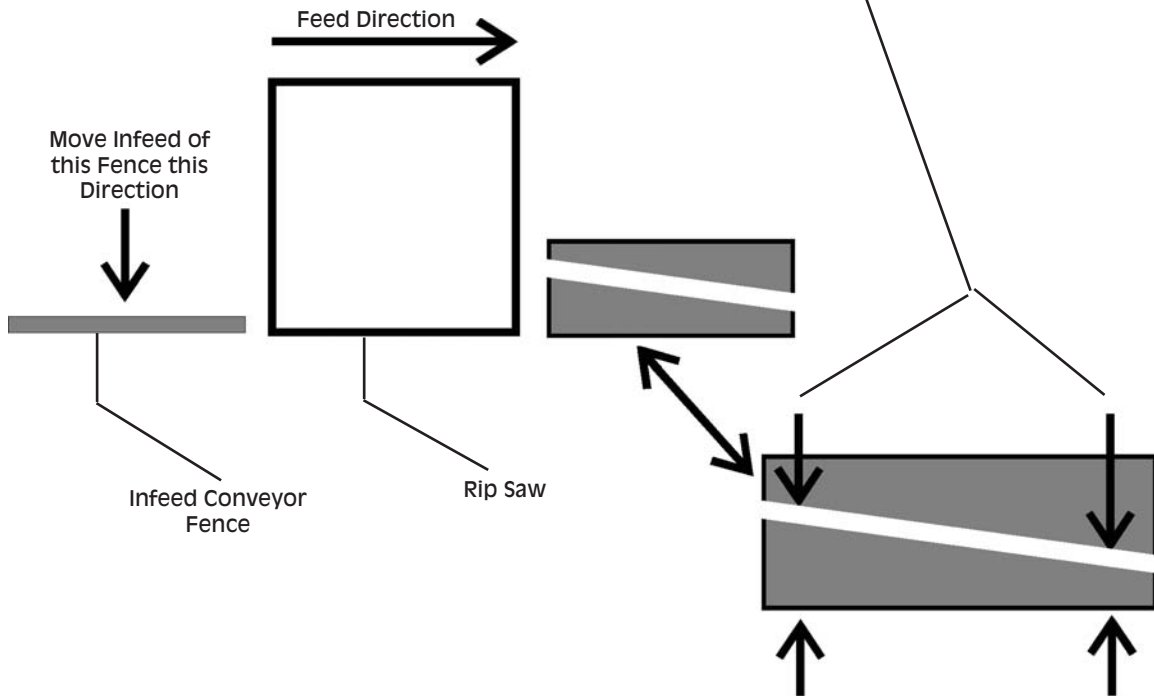
- Send a straight board through the saw holding the board against the fence until the saw takes the board away.
- Inspect the resulting strip at the outfeed end of the saw.

Instructions for Installing Infeed Conveyor

Maintenance (Con't)

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

**Adjust
the fence
accordingly**



Outfeed conveyors being fed by a Rip Saw 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 Rip Saw 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.