

Grote Equipment Manual

Peppamatic

Model 2-1311-2



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PEPPAMATIC
TANDEM TWO WIDE INDEX

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. I. INSTALLATION CHECKPOINTS

A. ELECTRICAL CONNECTION

The slicer is shipped pre-wired for 110/120 VAC supply. Terminals are provided within the control box for customer tie in. If remote operation of the conveyor is desired, an additional relay is provided and pre-wired to the conveyor "automatic" mode. Tie in points are provided on the terminal strip for acuation of the relay coil for this purpose. Refer to the electrical schematic in this manual.

B. HYDRAULIC PRESSURE

An adjustable pressure reducing valve is located inside the cabinet. After connection to house power, adjust the valve until pressure equals 450 psig. A pressure gauge is provided on the reduced pressure side of the valve.

II. METHOD OF OPERATION

To help aid in better understanding of the functions of the Pepp-A-Matic before attempting adjustment procedures, the proper operational sequence of the machine during production is explained below.

As the target product is conveyed through the Pepp-A-Matic, the infrared beam from the eye scanner is blocked. The signal is received by the eye controller where it is amplified. The signal can be delayed for a period of time necessary for the target product to position itself beneath the cluster. After this delay, the signal activates the solenoid on the slice cylinder pilot valve which allows the pilot pressure to shift the pilot operated directional valve, causing oil flow to be directed to the slice cylinder. The slice cylinder now extends, sliding the cluster across the blade. The signal from the eye controller can be activated for a period of time necessary for all links of the loaded product to be sliced and deposited on the target product below. When the signal is terminated, the solenoid on the pilot valve is deactivated, causing pilot pressure to shift the pilot operated directional valve into its' alternate position, change the oil flow to the cylinder and causing it to retract.

III. OPERATING INSTRUCTIONS/ADJUSTMENTS

A. START UP

1. Once proper adjustment procedures are completed (see following sections), slicer is ready for production. Pull out emergency stop switch on top of control box.
2. Turn conveyor switch to "on" position and adjust flow control to achieve desired belt speed.
3. Press blade switch to "start" position. If water spray system is supplied, selector switch must be turned on to initiate spray cycles. Adjustments are provided by time delay relays located on the enclosure sub panel to regulate the water pulse & delay. This is not an operator adjustment. It should be made before production commences by plant maintenance personnel.
4. By turning Head #1 & 2 selector switches to "on" position, Scanners are activated and slicing heads will stroke when a product is sensed on the conveyor belt.
5. The emergency stop switch will deactivate all circuits when it is depressed. Each function, excepting the conveyor circuit, must be individually reactivated after releasing the stop button.
6. The top assembly can be raised or lowered by depressing the designated switches in the control box. Front hold down blocks must be securely tightened to the conveyor rails before running production. Be sure to release them before attempting to raise the top assembly.

B. CUTTING BLADE

1. Changing Blade

- a. Raise top assembly. A safety limit switch will render the blade motor inoperative at any time the top assembly is elevated.
- b. Turn off conveyor using selector switch located in control panel.

B. CUTTING BLADE (Con't)

- c. Loosen the blade tension adjustment knob.
- d. Slide blade off of both pulleys and out of blade guide slot.
- e. Tilt the blade as necessary to allow it to slip up between the conveyor gap.
- f. Wash, sanitize, and dry the new blade before installation. This will remove the oil coating on the blade that could create excess grease build up during operation.
- h. Wrap blade around both pulleys and feed blade in slot of black guide. If positioned correctly, the cutting edge of the blade will be exposed from the blade guide. If knife edge or saw tooth type blade is used, the ground taper should be on the outside of the circumference of the blade.
- i. Blade can now be tightened. Once proper tracking procedures are followed (see tracking section) the top assembly can be lowered and the blade motor activated.

2. Blade Tension Adjustment

The blade tension is controlled by a large hand knob located at the end of the idle side bearing block on the control box side of the machine. The proper tension is achieved by turning tension knob until the blue line on the round plastic insert in front of tension knob is even with the end of the bearing block.

3. Blade Tracking

The blade must track against the back lip of both pulleys to insure proper position of blade in the blade guide. To adjust tracking, turn the pivot adjusting screw located on the back of the idle side bearing block assembly. This will cause the pulley to pivot and change the tracking of the blade. Adjust so the blade just slightly touches the back lip of the pulleys. Too much pressure against the back lip will cause excessive wear on the pulleys and create unnecessary heat from friction.

B. CUTTING BLADE (Con't)

Tracking should especially be checked after installing a new blade. Pulleys can be manually rotated in the proper direction (i.e. the same direction as the motor) while adjusting the pivot screw to achieve proper tracking. "Fine tuning" can be performed after the top assembly is lowered and the blade motor activated.

4. Blade Guide Adjustment

- a. To check blade guide alignment, the blade must first be adjusted, if necessary, for proper tracking. Follow instructions in tracking action.
- b. With top assembly elevated and blade stationary, gently push on the blade at each end of the blade guide to determine how much clearance is between the back of the blade and the bottom of the blade guide slot. (Note: If the welded seam of the blade is located within the blade guide slot, manually rotate the pulleys in the proper direction to move the seam around the pulleys and out of the area where clearance is being checked.) Proper clearance is at a point where the blade is as deep as possible in the guide slot without actually touching the back of the slot. If it is determined that blade is rubbing the back of the guide, or if excessive clearance is found, the steps below will outline the necessary adjustments.
- c. Loosen the four hex head bolts (two on each end of the guide) that secure the blade guide to the blade guide blocks.
- d. Slide the guide toward or away from the blade as necessary to achieve proper alignment across entire length of guide.
- e. Secure blade guide and recheck clearance. If satisfactory, manually rotate pulleys to enable the blade to make two or three rotations, then double check clearance remembering to keep the welded seam out of blade guide slot while checking. Readjust if necessary.
- f. After adjustments are complete, the top assembly can be partially lowered, carefully observing the clearance between the front tray on the top assembly and the blade guide. If the blade guide was moved away from the blade during adjustment

B. CUTTING BLADE (Con't)

the front tray may have to be moved back to allow it to clear the guide before the top assembly is lowered completely. Loosen the six hex bolts that fasten the tray to the top arms and slide the tray away from the guide. Lower top assembly the remaining distance and slide front tray to the blade guide, leaving only enough clearance to allow the top assembly to raise and lower without contacting the blade guide. Resecure the front tray once proper position is achieved.

- g. If, during blade guide adjustments, (step c and d,) the guide was moved toward the blade, clearance between the top assembly front tray and blade guide will have increased and the top assembly can be lowered completely. If excessive clearance is noted between the front tray and blade guide, loosen tray and slide toward the guide to achieve least possible clearance that still allows top assembly to raise and lower without contacting the blade guide.

C. CONVEYOR HEIGHT ADJUSTMENT

Conveyor heights are individually adjustable at the center of the machine beneath the blade guide. Proper conveyor heights contribute to correct placement of the sliced product and should be adjusted as needed to compensate for the individual heights of the different types of target products that are used. Heights should be adjusted to allow the target product to pass beneath the blade guide as close as possible without any ingredients scraping the bottom of the guide. Conveyor heights can be lowered for thicker and raised for thinner target products by turning the conveyor height adjustment knobs located on the adjustment blocks in front and back of the idle side bearing block assembly.

GROTE EYE CONTROL MODULE

D. EYE MODULE ADJUSTMENT

This module will sense a target, hold the signal for a preset period of time (DELAY TIME), then activate the cluster for a preset period of time (OUTPUT TIME).

- 1) a. Eye Sensitivity
This will control the distance the eye will sense. The red light (LED) above the Eye Sensitivity control will light whenever the eye is sensing a target. For initial adjustment, turn the adjusting knob higher (clockwise) until the red light comes on. Then turn lower (counter clockwise) until the light just goes out. When running production, if the eye sensitivity is adjusted too high it will sense the chain and double trips. Adjusted too low it will result in missed targets.
- b. Delay Time
This knob will adjust the time span between when the eye has sensed a target to when the cluster is activated. Adjustment range of Delay time control is .01 seconds to 4 seconds.
- c. Output Time
This knob will adjust the amount of time the cluster is being activated (slicing stroke only). Output time should be adjusted so the cluster travels just far enough to slice all of the links held in the cluster then return to the original position. The red light (LED) above the output time control will light whenever the cluster is activated. (Slicing stroke only). Adjustment range of Output control is .01 seconds to 2.5 seconds.

INITIAL SETUP

- 1) Adjust the conveyor speed using the flow control mounted to the hydraulic motor. See section F Pattern Placement for proper speed.
- 2) Run one target through the machine to see what adjustments are needed. Repeat running one target through the machine until all adjustments are complete. See section F Pattern Placement.
 - a. Adjust the speed of the cluster on the slicing stroke using the flow control mounted to the hydraulic cylinder. Speed of the cluster should be the same speed as the conveyor.
 - b. Adjust Output Time so the cluster travel will slice all of the links held in the cluster.
 - c. Adjust Delay Time so the front edge of the target is covered with the front edge of the deposited product.

E. PATTERN TEMPLATES

Templates will be supplied to match the predetermined pattern of each target product. The templates allow the product to be loaded into the cluster at the same location as desired on the target product. When loading the product into the cluster, it is necessary that every link fall freely into the holes of the cluster since the weight of each link is the determining factor in feeding the product to be sliced through the cluster.

F. PATTERN PLACEMENT

1. Conveyor Speed

For ideal operation, the space between target products being fed to the machine should be at least equal to the length of the product to enable the cluster to complete the over and back slice cycle. If this spacing is not practical on the production line, the speed of the Pepp-A-Matic conveyor can be adjusted to travel faster than incoming production line to create the necessary separation between target products. A flow control valve is located on the hydraulic conveyor motor for this adjustment.

2. Cluster speed

- a. The speeds of both the forward and return stroke of the cluster are individually controlled by adjusting the flow control valves located on the slice cylinder. Follow the guidelines below to determine correct speeds.
- b. The forward stroke of the cluster should be equal to the speed of the Pepp-A-Matic conveyor to obtain exact pattern of the template on the target product.
- c. The cluster must return fast enough to be at its' original starting position before the next target product reactivates the slice cycle. Adjust as needed to meet this requirement without using speeds that are unnecessary for your individual production rates.
- d. A socket head screw is located in each end of the slice cylinder that can be adjusted to "cushion" the forward and return stroke. If necessary to relieve the noise caused by a high speed slice cycle, a "choke" is provided to soften the change in direction of the cluster. This control is mounted on the valve stack controlling the cycle, located on the manifold block in the cabinet.

3. Crust Alignment

The target product must be positioned on machine conveyor to align the width of the target product directly under the width of the product to be sliced. Adjustable crust guide(s) are provided at the entrance end of the machine to direct the target product properly.

4. Centering

- a. Once the conveyor speeds are synchronized and a target product passes through the machine, the product will be sliced in the exact pattern of the template. If the

4. Centering (Con't)

pattern is not centered on the target product, adjusting the delay on the photo system as explained below will correct the alignment.

- b. If the slice cycle reacts too soon, some of the sliced product. Adjust proper reaction time of the slice cycle by increasing delay time as necessary to center the pattern on the target product.
- c. If the slice cycle is not reacting soon enough, the leading edge of the target product will not be covered and some of the sliced product will be dropped behind the trailing edge. Decreasing delay time will achieve proper centering on the target product.
- d. The cluster should not travel further than is necessary to slice all links of the individual product pattern. Adjust "hold" control so that cluster will return as soon as possible after slicing the last link of the pattern used.
- e. For more detailed information on the actual functions of the "delay" and "hold" controls, refer to "Eye Adjustment" section, part 2.

5. Variations

- a. The above guidelines are basic procedures for initial adjustments. Some variations may be desirable due to individual applications and can be determined as more familiarity is gained with machine adjustments. Brief explanations of some common variations are described below.
- b. The length of the applied pattern can be spread out further than the pattern template by adjusting the cluster speed to travel slower than the conveyor speed.
- c. The applied pattern length can be reduced and the slices can be shingled on the target product by adjusting the cluster speed to travel faster than the conveyor speed.
- d. The space between the target products that allows the cluster to complete the slice cycle can be reduced by speeding up the return stroke of the cluster.
- e. Although the variations to standard adjustments listed above are available, they should not be used if not necessary to the individual application. The rate of target products covered per minute is determined by the forward and return speed of the cluster. It is not necessary to adjust the speeds to a rate that is faster than needed to match the production rate. Longest possible life of all components is achieved when the machine is adjusted to speeds that satisfactorily handle the rate of the target products that are being fed to the machine without using speeds that are excessive.

G. THICKNESS ADJUSTMENT

1. Slice Thickness

- a. With cluster loaded and front hold down blocks securely tightened to the conveyor rails, run target product through the machine as many times as necessary until ends of all links are sliced even and whole slices are produced.
- b. Turn thickness adjustment knob to adjust slice to desired thickness.

2. Equal Thickness

- a. Check a slice from each side of the target product and examine to see if slices are of equal thickness. If slice thickness is not the same on both sides, loosen the front hold down blocks and raise top assembly.
- b. A lifter pin is located on each rear conveyor channel. Each side of the thickness tray is supported by these pins when the top assembly is lowered. Thickness can be changed individually on either side by pulling the lifter pin out of the conveyor rail and adjusting the lifter pin cap to the necessary height. Cap should be turned clockwise to increase thickness of slice, or counter clockwise to thin the slice.
- c. Reinsert the lifter pin into the conveyor rail when adjustment is complete, being certain to tighten the lifter pin locknut against the cap. Lower top assembly and secure front hold down blocks to the conveyor rails.

H. UNLOADING AND CLEANING

1. To unload machine, raise top assembly. While supporting thickness tray, release by turning the L shaped thickness adjustment tray levers. Slowly allow the thickness tray to pivot away from the top assembly while removing product from bottom of cluster.
2. The cluster can be disassembled by loosening the cluster tightening handle and removing each slat. Remove the side covers guarding the blade pulleys and latch the control box cover. The machine can now be sprayed and cleaned.

IV. MAINTENANCE INFORMATION

A. PREVENTIVE MAINTENANCE

1. Greasing

- a. All bearings should be greased daily. Fittings are provided on the blade pulley drive & idle side bearing blocks & all conveyor rollers, including the transfer rollers in the center of the conveyor bed beneath the blade guide. Food grade grease, such as FML lubriplate, should be used.
- b. Slice thickness & conveyor height adjusting block assemblies should be greased weekly.

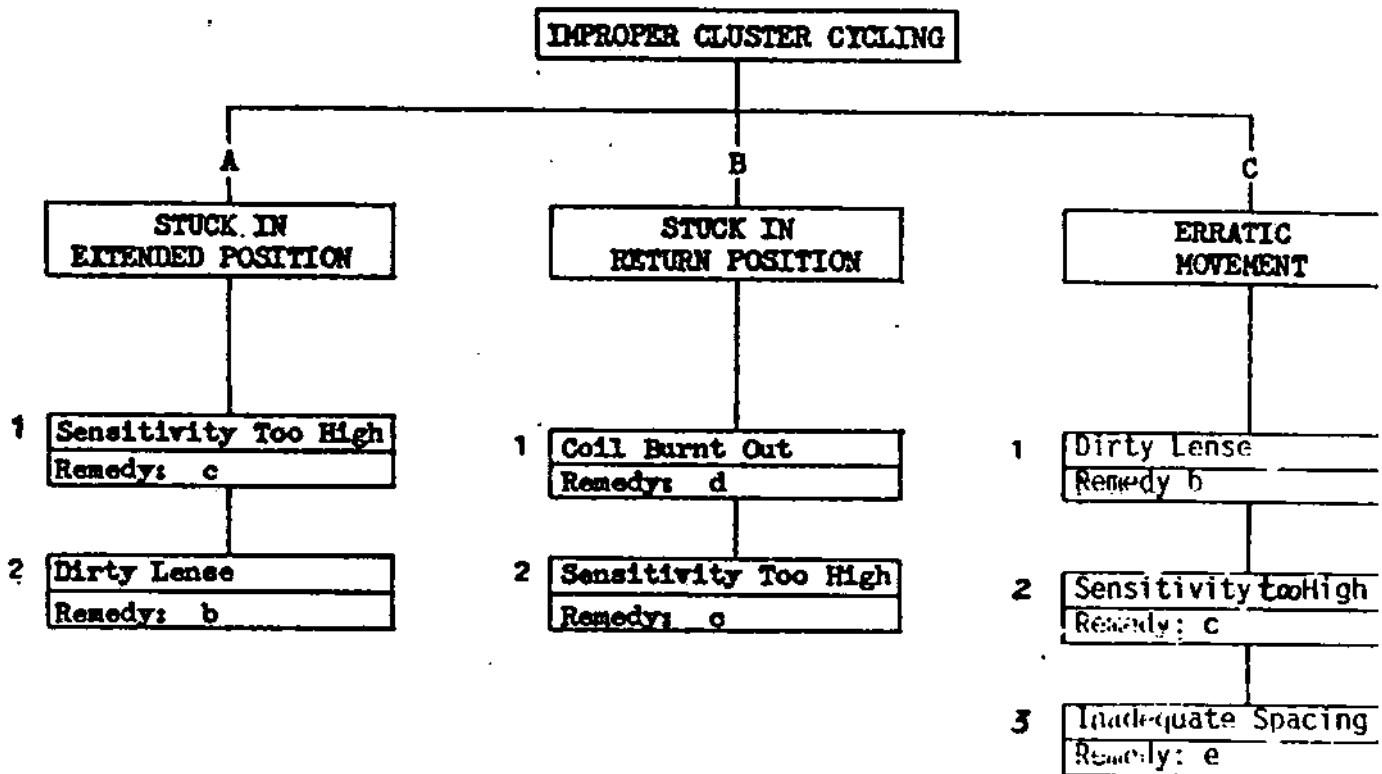
2. Hydraulic System

- a. Medium weight hydraulic fluid should be used.
- b. Reduced system pressure should be maintained at 450 psig.
- c. To obtain optimum life from both the oil and components in the system, maximum operating temperature should not exceed 150° F.
- d. Continuous full flow filtration of the system fluid to 35 micron absolute, or less, is essential.

B. TROUBLESHOOTING CHARTS

The following charts are arranged in three main categories to help pinpoint causes of improper performance of the Peppamatic. For example, if the cluster extends and does not return, refer to chart 1 titled "Improper Cluster Cycling." One of the columns under the main heading is labeled "Stuck in Forward Posiiton" and beneath it are listed probable causes for this condition. The causes are sequenced according to the likelihood of happening. Proper remedies are found by matching the reference letter below each cause to the remedy list following each chart.

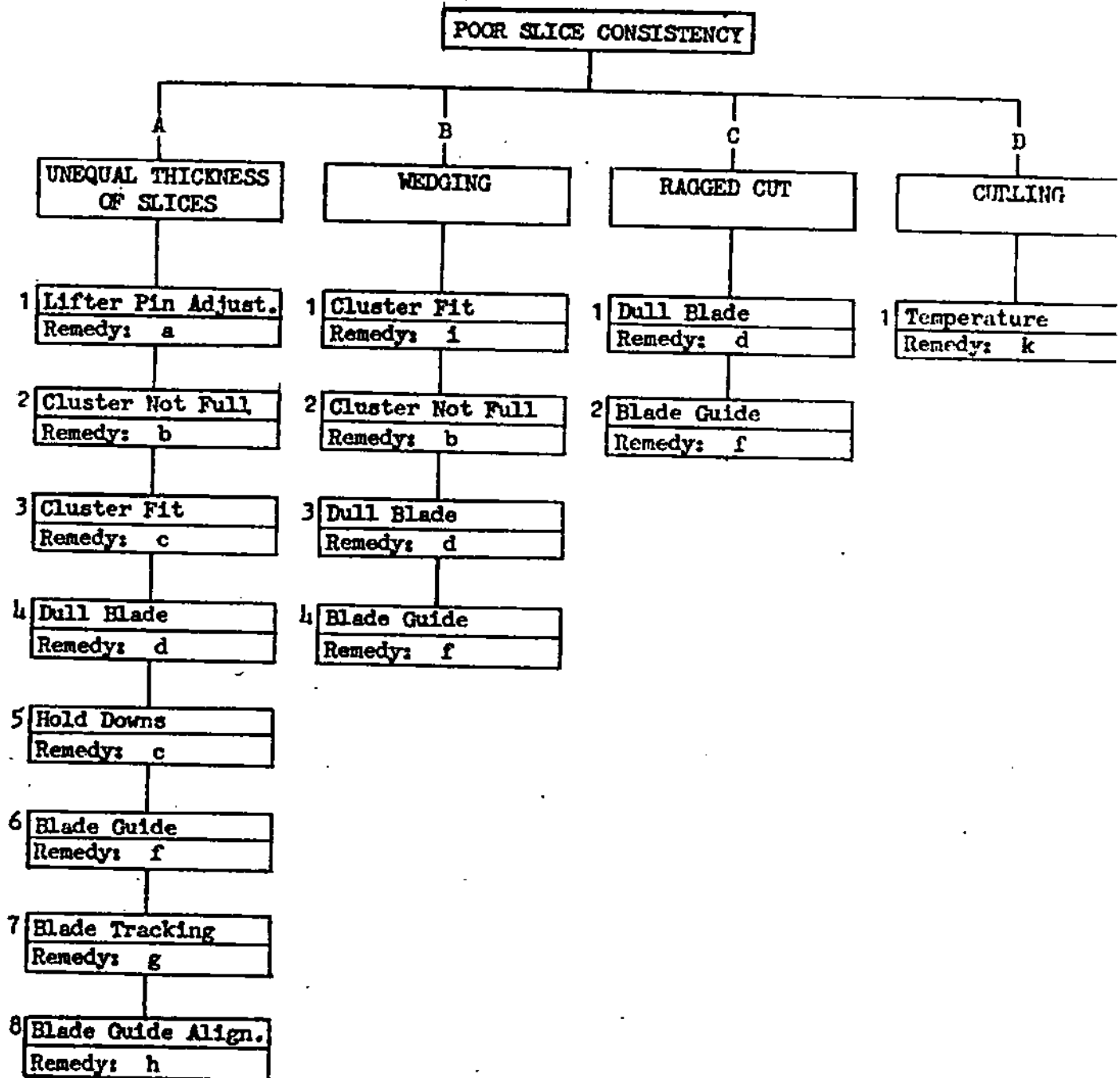
CHART 1



REMEDIES:

- b. Thoroughly clean scanner lens.
- c. Adjust sensitivity dial on control panel as needed.
- d. Replace coil on over and back pilot valve.
- e. See section F, part 1.

CHART 2

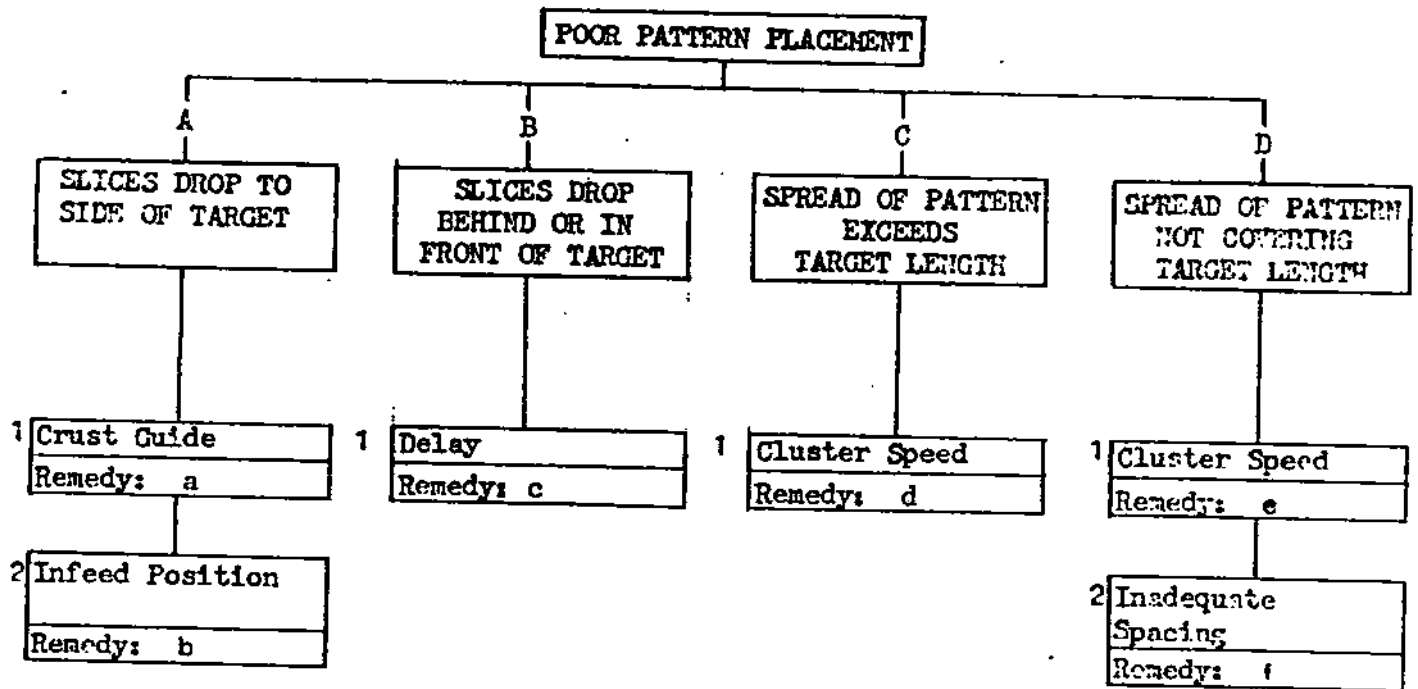


POOR SLICE CONSISTENCY REMEDIES

REMEDIES:

- a. Adjust lifter pins to obtain equal thickness of slice on each side of target. See section G, part 2.
- b. Add links as necessary to keep available holes in cluster full.
- c. Assure that product links are not binding up within the holes of the cluster. See section E.
- d. Replace cutting blade. Section B, part 1.
- e. Tighten front hold downs securely to conveyor rails.
- f. Remove cutting blade and examine guide slot. If excessive chipping is noted or if width of slot has worn beyond .040" clearance, replacement of the guide may be necessary.
- g. Turn pivot adjusting screw as necessary to track blade properly. See section B, part 3. If proper tracking cannot be achieved by this method, the drive side bearing block assembly can be adjusted by loosening for four bolts securing the assembly to the bearing bar and pivoting the drive side pulley as necessary to make the blade track within a range that can be adjusted by the pivot adjusting screw on the side bearing block.
- h. Align blade guide properly. See section B, part 4.
- i. Assure that holes in cluster are not too large for the diameter of the product being sliced. If product links are more than one-eighth inch smaller diameter than the cluster holes, the cutting blade can cause the links to spin within the cluster, causing wedges.
- j. Allow product longer retention time at room temperature before loading cluster. Temporary correction of curling due to product temperature being too cold can be achieved by increasing slice thickness.

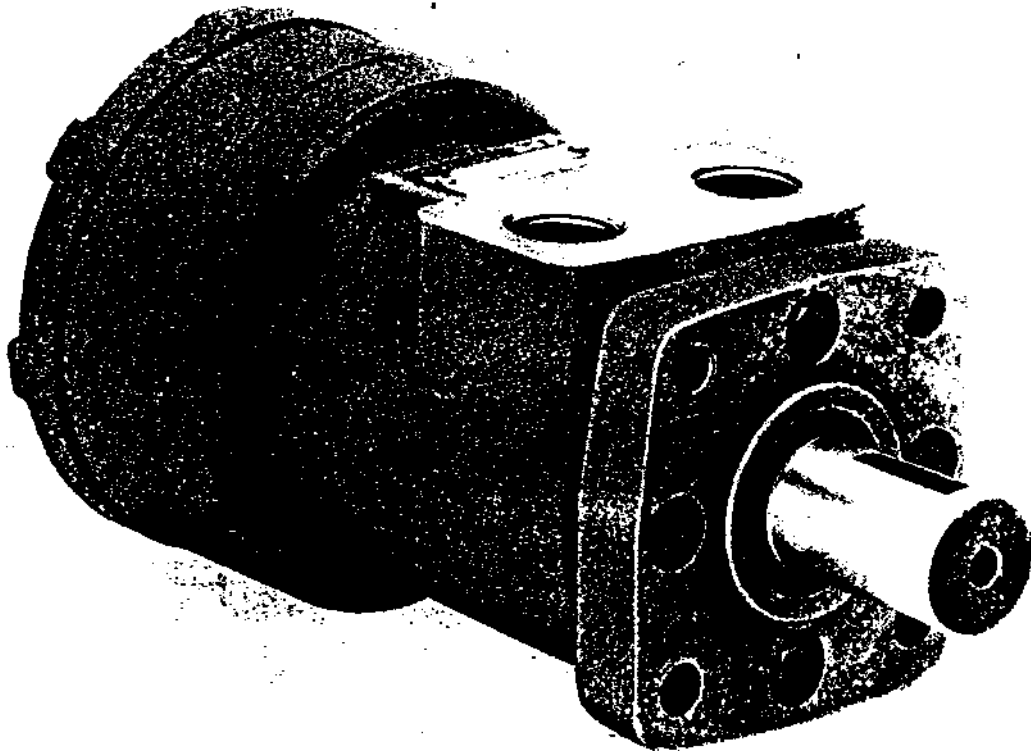
CHART 3



REMEDIES:

- a. Adjust to align target with pattern. See section F, part 2.
- b. Infeeding targets must enter the machine in a position that allows the crust guide to align them beneath the pattern. If targets are missing the guide completely, the purpose of the guide is being defeated. Targets should be directed more toward the crust guide side of the machine.
- c. Adjust photo system delay to achieve proper reaction time. See section F, part 4.
- d. Increase cluster speed. See section F, part 2.
- e. Decrease cluster speed. See section F, part 2.
- f. See Section F, part 1.

Char-Lynn Parts Information S Series Motors



PARTS LIST

Ref. No.	Part No.	Description	Quantity Per Unit		Recommended Spare Parts Per 100 Units
			Motors With Standard Radial Bearing	Motors with Heavy Duty Radial Bearing	
1	5777	Screw, Cap (12 pt. Dr. 5/16-24 NF x 7/8)	11	11	1 Kit # 60517
X 2	9055-1	Seal, Dust	1	1	
3	7464	Flange, Mounting (4 bolt)	1	1	
4	7463	Flange, Mounting (2 bolt)	1	1	
X 5	9057-1	Seal, Shaft Pressure	1	1	
X 6	15048	Seal, O-ring	1	1	
7	7462	Race, Thrust Bearing	1	1	
8	7537	Bearing, Thrust, Needle	1		
9	14193	Key, Woodruff	1		5
10	7360-1	Shaft, Straight	1		3
11	7360-2	Shaft, Splined	1		3
12	7359-1 7359-2 7359-3	Housing 7/8-Str. Thd. SAE O-ring Boss Ports 1/2-NPTF Ports Manifold Mount	1		2 1 2
13	7593	Race, Thrust, Bearing		1	5
14	60024 NSS 18029	Bearing & Ball Kit Radial Bearing Ball		1	5
15	14326	Ring, Snap		1	5
16	60043 7666-1 14193 60024	Shaft & Bearing Kit (Keyed) Shaft Key, Woodruff Bearing & Ball Kit		1 1 1 1	3
17	60044 7666-2 60024	Shaft & Bearing Kit (Splined) Shaft Bearing & Ball Kit		1 1 1	3
18	7592-1 7592-2 7592-3	Housing 7/8-Str. Thd. SAE O-ring Boss Ports 1/2-NPTF Ports Manifold Mount		1	2 1 2
X 19	5776	Seal, O-ring	1	1	1 Kit # 60515
20	.	Drive	1	1	
21	7458	Plate, Spacer	1	1	
22	5417	Washer, Lock	7	7	
X 23	15062	Seal, O-ring	2	2	
24	.	Gerotor	1	1	
25	.	Spacer	1	1	
26	6787	Cap, End	1	1	
27	9072-3 NSS	Plug Assembly (replaces & is interchangeable with 6833) Plug	1	1	
X	250003-904	O-ring	1	1	
X 28	.	Washer Seal	1	1	
29	.	Screw, Cap	7	7	
30	123-1007 123-1008	Base Block Kit-(1/2 NPTF Ports). (Optional on motors with manifold mount only). Base Block Kit-(7/8-14 Str. Thd. Ports)(Optional on motors with manifold mount only).			1 Kit ea. displ. size
31	NSS	Base Block	1	1	
32	21046-2	Screw, Cap 5/16-18NC x 1-1/2	4	4	1 Kit #60528
X 33	15058	Seal, O-ring	2	2	1 Kit #60522
X 34	15097	O-ring	1	1	
35	20817	Plug	1	1	
X	60026	Seal Kit-For all motors Contains parts indicated by X	1	1	10

X- Seal Kit (see 60026)

* - See chart 1 for part numbers of specific models.

NSS- Not Sold Separately

60030	Seal Kit-Ethylene Propylene, -Optional. Formerly Butyl.	Available only as kits for installation by user.
60034	Seal Kit-Viton, -Optional. -Usually preferred for use in systems with higher operating temperatures. For more information contact Service Dept. For use with certain fire resistant synthetic fluids. CAUTION: Check for compatibility with fluids before using.	

VICKERS

Service Parts Information

Solenoid
Operated
Directional
Valve

DG4V-3-*C-M(P**)---*-40 Spring Centered



Vickers, Incorporated

1401 Crooks Road
Troy, Michigan 48064

RELEASED 12-1-84

I-3863-S

A Libbey-Owens-Ford Company

TV-10 1

SCREW (METRIC)	
◆ STD (4 REQ'D)	DIN 43650 (2 REQ'D)
422004	468641
TORQUE 0.7-0.9 N. m (6.2 - 7.9 lb. in.)	

635067 CARRIER (STD MODELS)
989585 CARRIER (DIN 43650)

NAMEPLATE LABEL
(STD MODEL REFER TO DWG. J-682451)
(DIN 43650 REFER TO DWG. J-989584)

■▲ 633749 GASKET/
RETAINER

◆ 473714 SCREW (2 REQ'D)
(TORQUE 2.3 - 2.8 N. m)
(20.3 - 24.8 lb. in.)
(METRIC)

◆ 576915 SCREW

■▲ 262336 "O" RING (2 REQ'D)

453531 'AC' PUSH PIN (2 REQ'D) *

635076 'DC' PUSH PIN (2 REQ'D) *

* 627789 WASHER (2 REQ'D) *

472553 ROLL PIN *

RESTRICTOR PLUG
(OPTIONAL) (SEE TABLE)

■▲ 262332 "O" RING
(4 REQ'D)

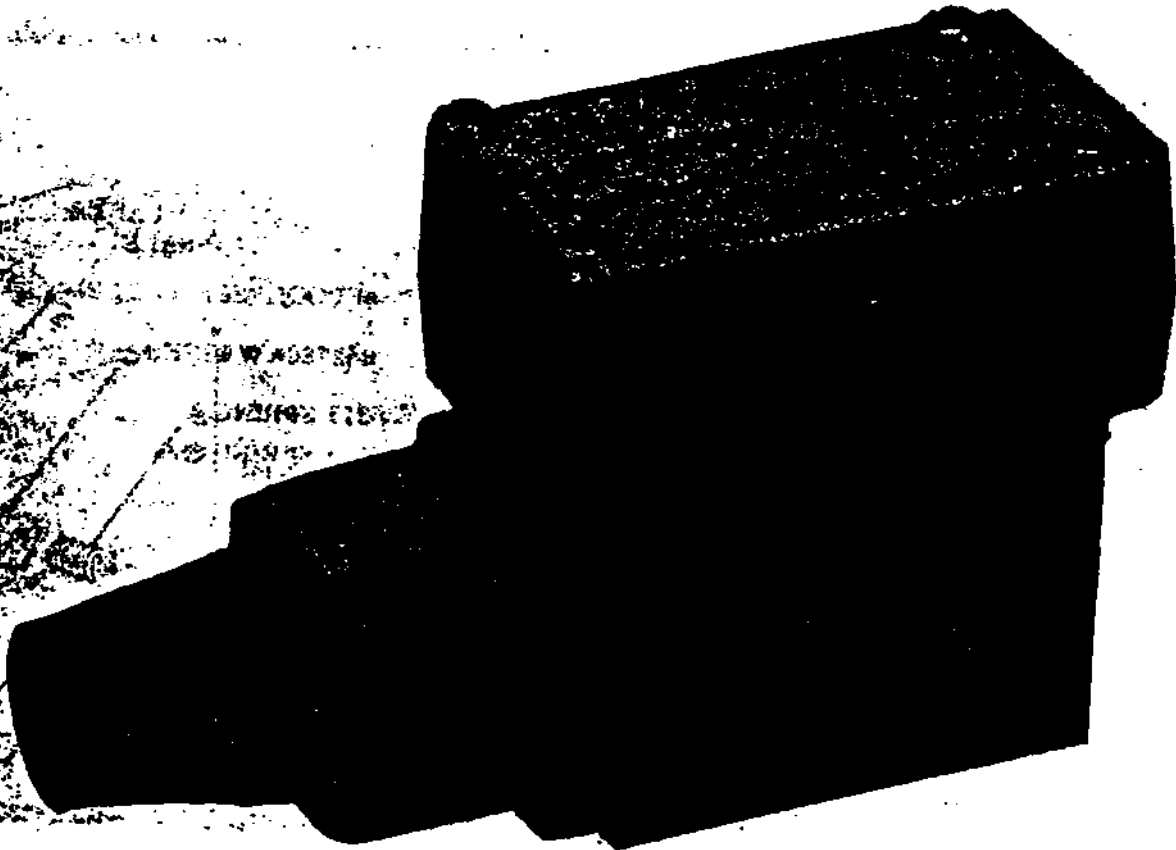
RESTRICTOR PLUG		
PART	ORIFICE DIA.	
	mm	inches
631892	0.8	.032
628733	1.0	.040
632937	1.3	.052
635281	1.5	.060
631931	2.3	.092
632936	BLANK	
USE IN EITHER A, B, P, OR T PORT		

VICKERS

Service Parts Information

**Solenoid
Operated
Directional
Valve**

DG4V-3-*A-M(P**)-**-*-40 Spring Offset



Vickers, Incorporated

1401 Crooks Road
Troy, Michigan 48084

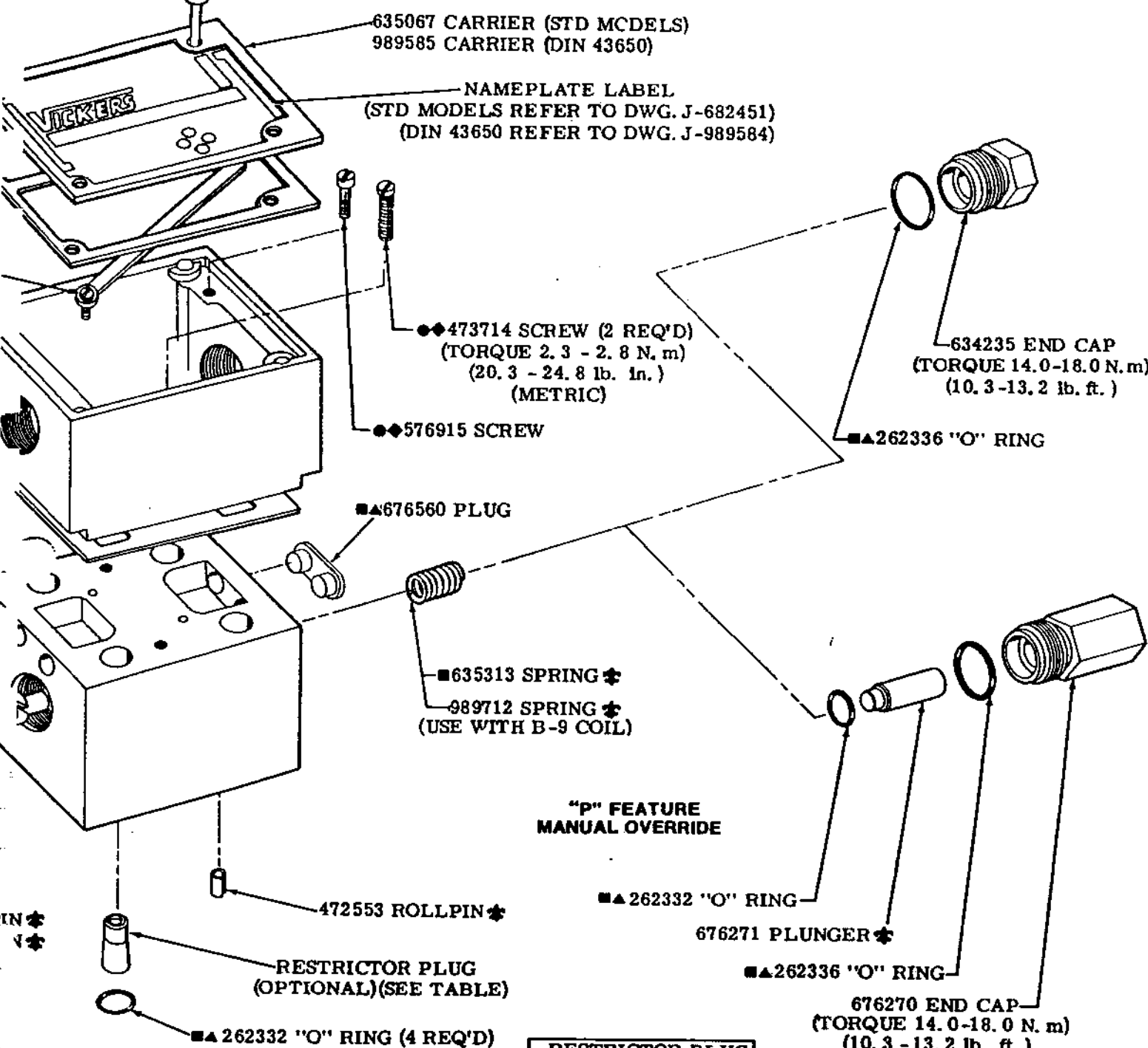
RELEASED 12-1-84

I-3861-S

A Libbey-Owens-Ford Company

IV-11.1

SCREW (METRIC)	
◆ STD (4 REQ'D)	DIN 43650 (2 REQ'D)
422004	468641
TORQUE 0.7-0.9 N.m (6.2 - 7.9 lb. in.)	



RESTRICTOR PLUG		
PART	ORIFICE DIA.	
	mm	Inches
631892	0.8	.032
628733	1.0	.040
632937	1.3	.052
635281	1.5	.060
631931	2.3	.092
632936	BLANK	
USE IN EITHER A, B, P, OR T PORT		

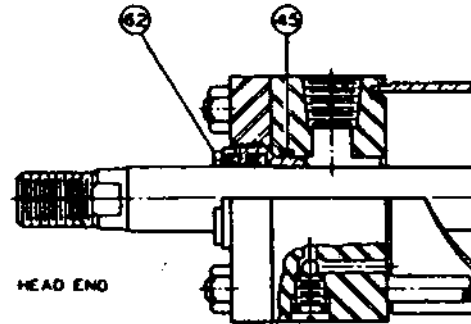
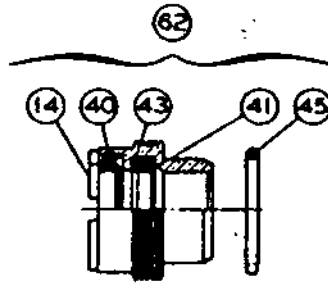
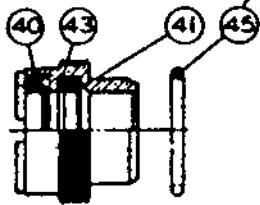
RIGHT HAND ASSEMBLY SHOWN,
EXCEPT 28A(P) FOR LEFT HAND
ASSEMBLY, ALL PARTS ARE
REVERSED, EXCEPT BODY AND
TERMINAL BOX.

GLAND SEAL KITS

(Gland Cartridges & Rod Seals)

FOR SERIES A, 2A, H, 2H, L, 2L & 3L
AIR & HYDRAULIC CYLINDERS

INSTALLS IN ROD END
HEAD GROOVE



ROD SEAL KIT

RK kit contains 1 each of the following:
symbol 40, rod Wiperseal
symbol 43, back-up washer for rod gland Lipséal
symbol 41, rod Lipséal
symbol 45, O-ring, gland to head seal.

Service kits of expendable parts for fluid power cylinders are stocked in principal industrial locations across the U.S.A. and other countries. For prompt delivery and complete information, contact your nearest Parker Hannifin distributor or office.

Service kits of expendable parts for fluid power cylinders are available for either Class 1 or Class 5 fluid service.

Standard Seals—Class 1 Service Kits are standard, and contain seals of Nitrile (Buna-N) elastomers for standard fluid service. These seals are suitable for use when air, hydraulic (mineral-type) oil, water-glycol fluid or water-in-oil emulsions are the operating medium.

The recommended operating temperature range for Class 1 seals is -10° F. to +165° F. These seals will function at temperatures up to 200° F. with reduced life.

▲ Registered trademark of E. I. duPont de Nemours & Co., Inc.

ROD DIA.	RG GLAND CARTRIDGE KIT NOS. *	RK ROD SEAL KIT NO. *
	INCLUDES RK KIT	CONTAINS ROD SEALS
1/2"	RG2AHL 0051	RK2AHL 0051
5/8"	RG2AHL 0061	RK2AHL 0061
1"	RG2AHL 0101	RK2AHL 0101
1-3/8"	RG2AHL 0131	RK2AHL 0131
1-3/4"	RG2AHL 0171	RK2AHL 0171
2"	RG2AHL 0201	RK2AHL 0201
2-1/2"	RG2AHL 0251	RK2AHL 0251
3"	RG2AHL 0301	RK2AHL 0301
3-1/2"	RG2AHL 0351	RK2AHL 0351
4"	RG2AHL 0401	RK2AHL 0401
4-1/2"	RG2AHL 0451	RK2AHL 0451
5"	RG2AHL 0501	RK2AHL 0501
5-1/2"	RG2AHL 0551	RK2AHL 0551

GLAND CARTRIDGE KIT

RG (symbol 62) contains 1 each of the following:
symbol 14, gland, threaded cartridge type
symbol 40, rod Wiperseal
symbol 43, back-up washer for rod gland Lipséal
symbol 41, rod Lipséal
symbol 45, O-ring gland to head seal.

Special Seals—Class 5 Service Kits contain seals of fluorocarbon elastomers (Viton ▲) for special fluid service. These seals are especially suitable for most straight synthetic phosphate ester and phosphate ester base (fire-resistant) fluids. They can also be used when air, hydraulic oil, water glycol or water-in-oil emulsions are the operating medium.

The recommended operating temperature range for Class 5 seals is -10° F. to +350° F. These seals will function at temperatures up to +400° F. with reduced life.

To order Class 1 or 5, specify operating medium and use kit numbers listed in the table below.

BORE SIZE	TIE ROD NUT TORQUE - FT. LB.				
	SERIES A-1A-2A			SERIES L-2L-3L	SERIES H-2H
	CYLINDER BODY				
	BRASS	STEEL	FIBER-GLASS		
1"	1	2	-	2	-
1 1/2"	3	5	-	5	18
2"	6	11	-	11	45
2 1/2"	6	11	-	11	45
3 1/4"	18	25	-	25	120
4"	18	25	-	25	130
5"	45	60	-	60	310
6"	45	60	-	L-2L-244 3L-60	525
7"	-	-	-	-	790
8"	80	110	-	L-2L-513 3L-110	1160
10"	115	150	80	-	2500
12"	150	175	80	-	H-1900 2H-525
14"	230	-	120	-	-

NOTE: RG and RK kits listed above are not applicable to 10" and 12" bore Series H & 2H Hydraulic Cylinders. See Bulletin 0995-M4.

* Kit numbers listed above identify Class 1 seals only. To order Class 5 service kits, substitute "5" in place of "1" as last digit of kit number.

SPARE PARTS LIST

The Spare Parts List lists parts used on the machine identified by the Serial Number on the front cover of this manual. These parts may need replacement during the life of this machine. Grote Company recommends the advanced purchase of these parts for future maintenance and repair.

Items with indented descriptions on the spare parts list are repair parts associated with the immediately preceding primary item. For some of these items, customers may wish to stock only the repair item listed in the indented description.

GROTE PART RETURN POLICY

Before returning anything, please call for a **Return Materials Authorization** number at **1-888-534-7683**.

NOTE: Return Material Authorization numbers are valid for only 60 days. If a customer returns an item without prior authorization, Grote either ships it back to the customer freight collect or refuses the shipment.

To assure fast, accurate processing of a return, have the information below at hand when calling:

- The original invoice number
- The customer purchase order number
- Serial number of the equipment from which these parts come
- Grote part number for returned item/items (customer must receive authorization for all items returned)
- Blade lot #
- Quantity to be returned

Return the item/items properly packaged to avoid damage. Damage incurred due to improper packaging is the responsibility of the shipper. Use the original packaging if possible. Reference the Return Materials Authorization number on the outside of the box. After Grote receives and inspects the items, we determine credit.

NOTE: The customer is responsible for the cost to ship the item(s) to Grote. Credit will not include freight.

Reasons for Return

Defective

A description of the defect is required. Include as much detail as possible. Did the unit fail while in operation? What were the symptoms when the component failed? If the item is covered within the warranty period and free from defects in material and workmanship, credit may be considered. If the item is repairable under warranty, Grote may return it to the customer in lieu of credit.

Replacement Request

A descriptive reason is required for the replacement request. Grote ships a chargeable replacement item to the customer via the customer's preferred method of shipment. Grote issues credit upon return of the item and inspection.

Credit or Replacement

Grote issues credit against the original purchase order/invoice number and sends a credit memo. Customers may apply credit memos to replacement invoices. The customer must notify Grote to apply credit memos to invoices.

Customers may order replacement parts at the time the RMA is issued. Grote sends the **priced** item via the customer's preferred method of shipment.

SPARE PARTS LIST
PEPPAMATIC, MOD# 2-1311-2 LH
SERIAL # 1029236

<u>PART NUMBER</u>	<u>DESCRIPTION</u>
1000032	PHOTOELECTRIC SCANNER, PROX MODE
1000034	BEARING, BALL, SGL ROW, 1.000" ID
1000046	BEARING, BALL, SGL ROW, 20 MM ID
1000047	BEARING, BALL, DBL ROW, 20 MM ID
1000048	SWITCH, LIMIT
1000055	VALVE, HYD DIR, 4 WAY, 3 POS PILOT
1000056	VALVE, HYD FLOW CONTROL, NEEDLE
1000083	VALVE, HYD FLOW CONTROL, ADJ
1000084	VALVE, HYD FLOW CONT, CHOKE
1000093	CYL, HYD, 2.25" STROKE
1047330	SEAL KIT, COMPLETE, C&V CYL
1000141	SPRING, COMP, SS
1000211	CONTROL MODULE, SKIP, 120 V, AC OUT
1000310	VALVE, HYD FLOW DIVIDER, 3 SECT
1000429	VALVE, HYD CHECK, DUAL PILOT OPR
1000489	GAUGE, PRES, 0-2000 PSI, REAR MOUNT
1000708	RESISTOR, 10K, 1/4 W, 5%
1000778	SPRING, COMP, SS
1000867	VALVE, WATER, 1/4 NPT MALE & 3/8TUBE
1001007	IDLE SIDE BRG SIDE SLIDE PADS
1001027	IDLE SIDE BRG TOP&BOTTOM SLIDE PADS
1001028	BUSHING, CLUSTER SLIDE, DRIVE,FRONT
1001029	BUSHING, CLUSTER SLIDE, DRIVE REAR
1001224	WASHER, DELRIN, 1.00, .625, .190
1001322	BUSHING, CLUSTER SLIDE, IDLE SIDE
1002101	WASHER, DELRIN, .75, .377, .062
1003656	BLADE PULLEY
1005638	TACH, RED LIONS DITAK V
1005863	ROLL PIN, 1/8 DIA X .625 LG
1008113	TERMINAL BLOCK
1008294	HEATER, STRIP, TYPE 1, 240 V, 100 W
1008903	VALVE, SOLENOID, WATER SPRAY, 120V
1010592	RELAY, TIME DELAY, 120VAC, ON DELAY
1011920	VALVE, HYD FLOW CONTROL, P&T COMP
1012197	BLADE WIPER, TOP, PEPP-A-MATIC
1014500	WASHER, DELRIN, 1.50, 1.005, .270
1014534	PROX SENSOR, MAGNETIC PU, 1200 OHM
1015225	RELAY, GP, DPDT, 120 VAC
1015251	FUSE, 2 A, FNM, 13/32 X 1 1/2
1015252	FUSE, 3.5 A, FNM, 13/32 X 1 1/2
1015253	FUSE, 8 A, FNM, 13/32 X 1 1/2
1015272	FUSE, 0.25 A, FNM, 13/32 X 1 1/2
1015382	VALVE, HYD PRES REDUCING, 0-40 GPM
1015622	BELT, EAGLE, .25" DIA X 106.00"
1015623	BELT, EAGLE, .25" DIA X 82.00"
1015624	BELT, EAGLE, .25" DIA X 52.50"
1015715	BUSHING, DELRIN, .752, .635, .75
1016977	RELAY, SOLID STATE, DC/AC
1018003	VALVE, HYD SHUT OFF, BALL
1022546	BAND BLADE, MVS8, 8"-10 5/16"
1075849	GLOVES, STN STL CORD, KNIT-SEE DESC
1023033	TRANSFORMER, E275, 240/480:120 V
1024385	PLUNGER, SPRING SS, 1/2-13 X 1 1/4
1025553	BUSHING, NOSE ROLLER, UHMWP
1026713	BLADE GUIDE, 1311-2/3,SCB,SMO
1028659	SCRAPER, BLADE GUIDE SLOT
1028660	WIDTH GAUGE, BLADE GUIDE SLOT
1028661	DEPTH GAUGE, BLADE GUIDE SLOT
1028170	MOTOR, HYD, PLATED, 4.5 CU IN
1000079	SEAL KIT, COMPLETE, S SERIES
1028659	SCRAPER, BLADE GUIDE SLOT
1028660	WIDTH GAUGE, BLADE GUIDE SLOT
1028661	DEPTH GAUGE, BLADE GUIDE SLOT
1029727	REPLACED BY 1099772
1043383	VALVE, HYD DIR, 4 WAY, 3 POS, 115V
1047083	CYL, HYD, 16" STROKE, 1" BORE
1000062	SEAL KIT, PISTON, 1" BORE CYL
1000064	SEAL KIT, ROD; 1"BORE/ 5/8 ROD CYL
1000065	SEAL KIT, GLAND CARTRIDGE; 1" CYL