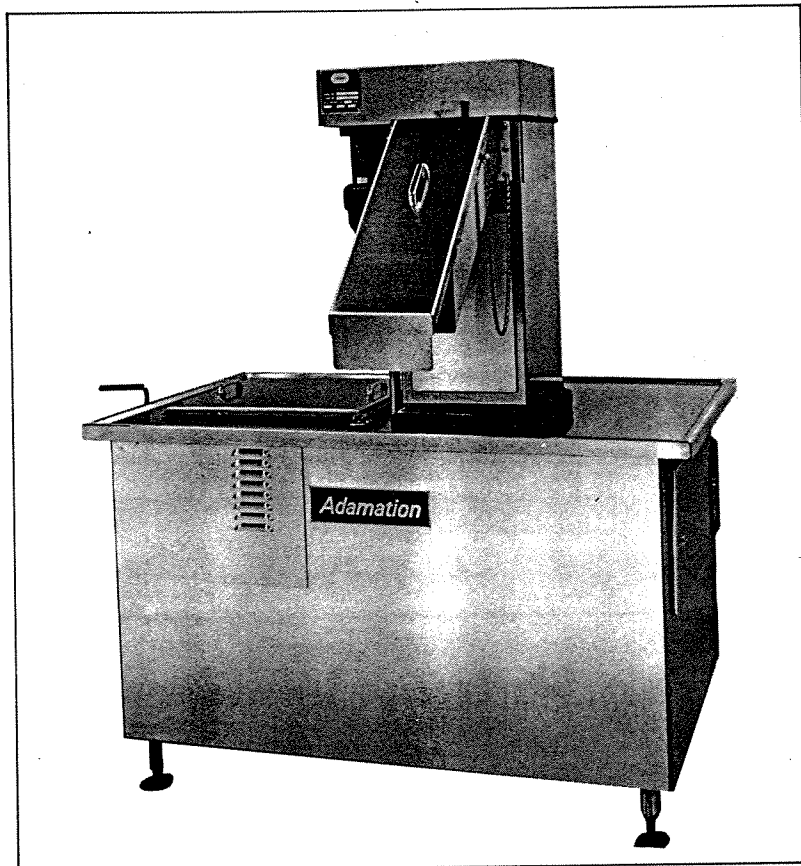


Adamation

Creative design and engineering of food service systems and equipment

FOOD WASTE PULPER



ADAMATION, INC.
87 Adams Street
P.O. Box 95037
Newton, MA 02195-0037
PRINTED IN U.S.A.

FOOD WASTE PULPER
Operation,
Maintenance
And
Repair Instructions

PART NUMBER: 99-9000-023
Price: \$ 20.00
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MANUFACTURER'S PULPER WARRANTY AND LIMITATION OF LIABILITY

Adamation, Inc. warrants each Adamation Food Waste Pulper to be free from defects in material and workmanship under "normal use and service". Within a period of 12 months from date of installation or 2000 operating hours of the pulper, or eighteen (18) months from date of shipment from factory, whichever comes first, Adamation, Inc. will repair or replace any parts which in Adamation, Inc.'s sole judgement, are defective in material or workmanship and will furnish or pay for the necessary pre-approved labor to accomplish same.

Warranty service can only be obtained by contacting the National Service Department, P.O. Box 95037, 87 Adams Street, Newton, MA 02195-0037 - Toll Free Number - 1-800-225-3075

The Adamation Service "Hot Line" is available to discuss any service problem at 1-800-225-3075 from 8:30 A.M. to 5:00 P.M. E.S.T. After working hours, service is available by calling 617-244-7500 which will connect you with an answering service and "beeper" network.

Adamation shall have a reasonable time to make such repairs and/or replacements and all labor is to be performed during regular working hours. All overtime premiums will be billed to the customer. Warranty parts are normally shipped prepaid via next day air service. Request for shipment before 4:00 P.M. E.S.T. will normally be received by you the following morning. The warranty parts and labor required is an integral part of the sale of the system and as such will not apply if the system is not operated and maintained in strict accordance with the instructions in the proper Adamation manual.

At Adamation's sole discretion, any and/or all terms of the warranty can be cancelled if payment for this system has not been received within agreed upon terms.

This warranty specifically does not cover:

- A. Improper plumbing connections by others.
- B. Improper electrical connections by others.
- C. Malfunction caused by improper cleaning.
- D. Damage caused by unreasonable neglect and carelessness in operation.
- E. Damage to bearings caused by failure to grease every 20 hours of actual use.
- F. Damage, malfunction or jamming caused by trying to process glass bottles and utensils, flatware, beverage cans, chinaware, steel or other metal articles or pieces, and/or similar unsuitable articles are not covered under the warranty. However, the pulper processes food waste including paper, disposable styrofoam and plastics.
- G. Rotation of anvil and hammer bars to extend their life
- H. Cleaning of pumps, screens, and dewatering worm.
- I. Resetting of circuit breakers

Replacement parts are guaranteed for ninety days or the remainder of the basic Food Waste Pulper warranty, whichever is longer.

This warranty does not apply if the system is started up without an Adamation representative present.

2.

This warranty is applicable only for the initial place of installation. Any change of this original installation terminates this warranty.

Adamation's warranty obligation with respect to pulpers located outside contiguous United States or located in the States of Alaska and Hawaii is limited to the furnishing of replacement parts only.

This warranty is in lieu of all other warranties, express or implied warranty of merchantability or fitness for a particular purpose or any other obligation or liability on the part of Adamation whether in contract, strict liability, tort or otherwise.

In no event will Adamation be liable for loss of use of facilities or other property and such things as-but not limited to-additional labor costs, loss of revenue or anticipated profits and other damages of any kind whether direct, indirect, incidental or consequential.

SECTION 1 - INTRODUCTION

MACHINE OPERATION

The Adamation Food Waste Pulper is designed to process tray borne soil including plastic, paper and foil but not flatware, bottles, china and similar articles.

Figure 1 Page 3 is a schematic diagram of the system. Food refuse and associated material is dumped into the garbage trough. A recirculated stream of approximately 220 to 250 gallons per minute of "carrier water" takes the refuse into the shredding chamber where it is shredded by rotating hammers acting against stationary anvils.

The shredded mass of refuse in the carrier water is directed into the dewatering tower. Here a spiral extractor screw lifts the solids to the top of the tower where they are discharged as dewatered solids. The carrier water is forced through the perforated screen surrounding the extractor screw into the dewatering tower where it is recirculated by a pump to a garbage trough for recycling.

To insure against a gradual solids buildup, at least eight gallons of hot detergent water per minute is added to the system from the overflow of an associated dish-machine. (For a "stand alone" Pulper, fresh hot water is used.)

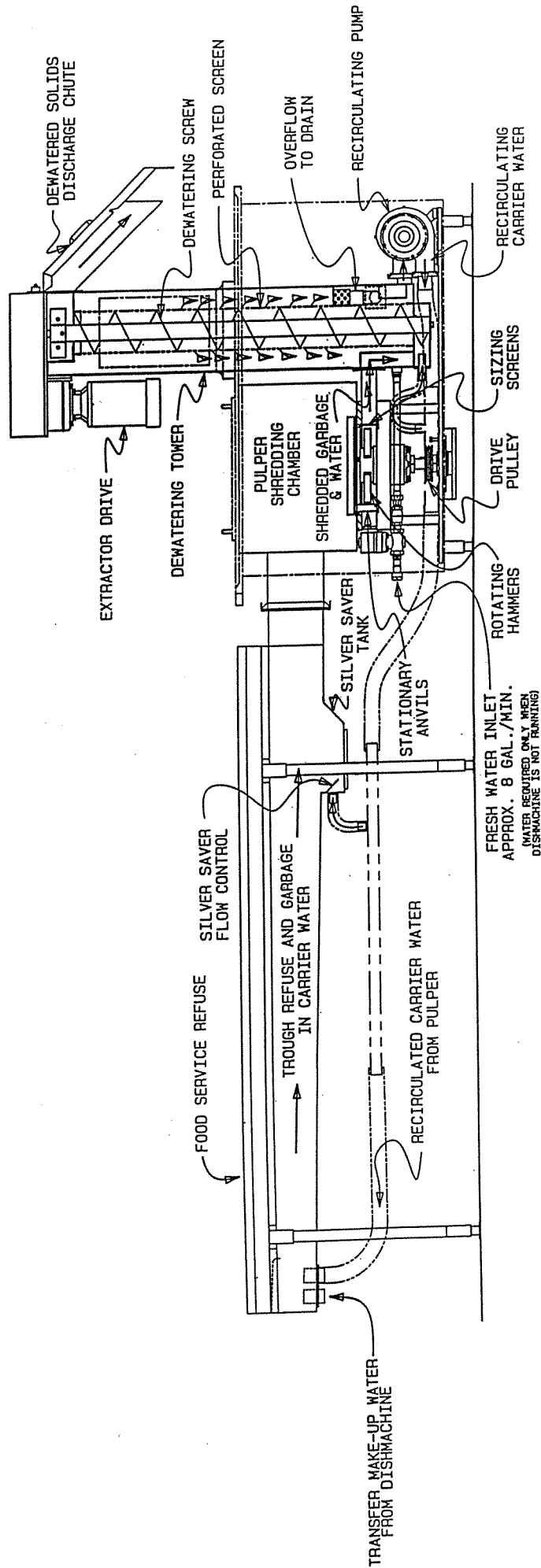
To maintain the proper quantity of carrier water, an amount equivalent to the added water overflows - via an interceptor tank or grease trap (if equipped), to the drain from the Dewatering Tower.

The Adamation Pulper is available in nine different configurations to adapt most easily to your dishmachine, floor layout and traffic flow. Figure 2 page 4 shows these configurations. These configurations are usually assembled at the factory at the time of ordering, however they are field changeable.

SECTION 2 - INSTALLATION

PACKAGING INFORMATION

The Adamation Pulper is shipped prewired and essentially assembled. (The chute is disconnected and packed in the Pulper Body together with the leg pads, etc.). Delivery is generally made via Moving Van and the unit is blanket wrapped but uncrated.



SCHEMATIC DIAGRAM OF ADAMATION PULPER
FIGURE #1

4.

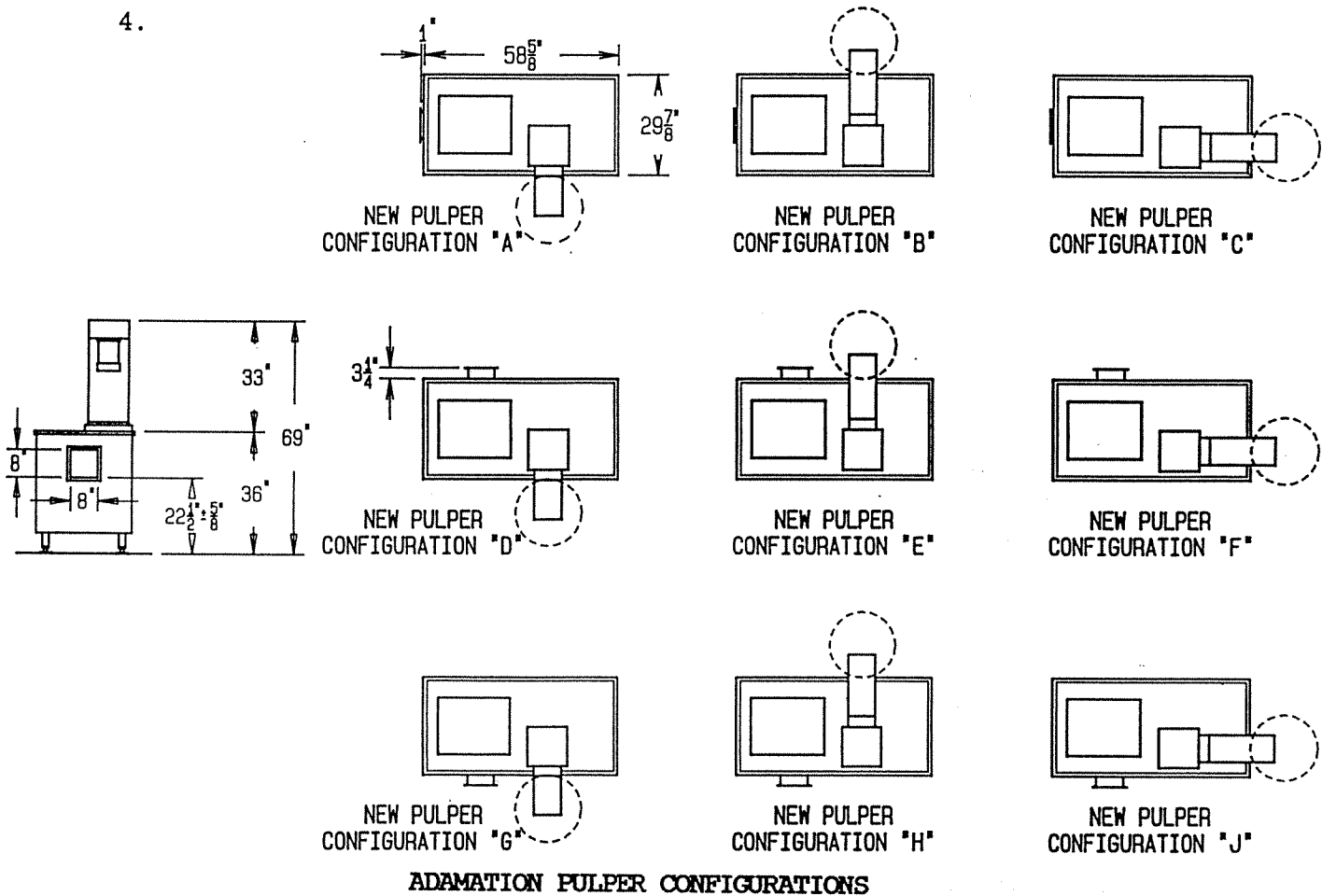


FIGURE 2

ASSEMBLY AND PULPER CONNECTION

Adamation Pulpers are only sold for factory performed and/or factory supervised installation, start up and training.

ELECTRICAL CONNECTIONS

The electric control panel cabinet is prewired, and is an integral part of the unit.

For attachment to a new or existing Adamation machine, the panel is prewired with provisions made for connecting the panel to both the machine and the pulper.

For a "stand alone" Pulper unit, the customer is responsible for supplying the electric source and disconnect, and for all local "code required" connections or special requirements or materials different from those furnished.

UTILITY REQUIREMENTS

When the pulper was ordered, the buyer was provided with an Adamation survey report describing the exact utility requirements (electricity, hot water, etc.). Before the installation supervisor arrives, all utility ratings must be checked and verified. The pulper can be assembled and installed in a very short time (if necessary), but it cannot be operated unless the incoming utilities meet the requirements of the pulper.

DAMAGE INSPECTION

Immediately upon arrival, all shipping containers received should be checked against the bill of lading. Report any missing containers to the carrier and also to the Adamation production control group (immediately by phone). At this time, all containers received should also be inspected visually for external evidence of damage in transit. If any container shows such evidence, notify the carrier and have his representative present when the container is opened. Transit damage claims must be made to the carrier, not to Adamation. Notify the Adamation production control group at 1-800-225-3075 of any damaged equipment received.

If any of the cartons arrive damaged to the extent that parts may be missing, immediately request a complete listing of all parts shipped in that container from the Adamation production control group. Notify Adamation and the carrier of any missing parts.

UNPACKING

Except in the case of cartons or containers damaged in transit, as described above, do not open or uncrate any of the shipping containers prior to the arrival of the Adamation installation supervisor at the site. He will inspect all parts as they are unpacked and check the shipment for completeness. If containers are opened before the installation supervisor arrives, Adamation cannot accept responsibility for missing parts.

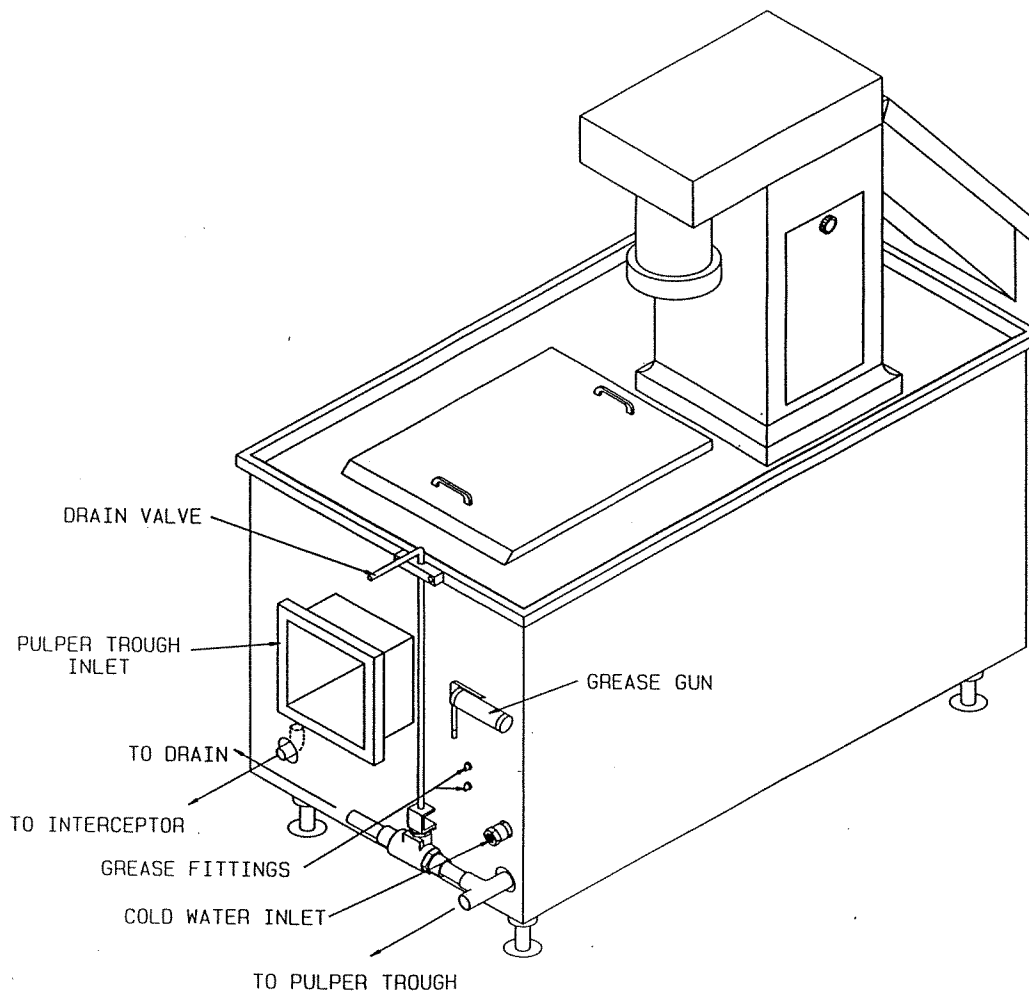
ASSEMBLY

Prior to shipment, each Adamation pulper is completely assembled and tested at the factory. It is then disassembled to the extent necessary for shipment and delivered to the installation site. Unpacking and reassembly of the pulper is always done under the supervision of an Adamation representative. He will check the contents of the shipping containers against the packing list (in the service information envelope) and immediately report any deficiencies to the home office. Detailed procedures for the assembly of each pulper are provided to all Adamation service personnel; the user must never attempt to assemble the pulper prior to the arrival of the Adamation service representative. (See Warranty).

PLUMBING CONNECTIONS

The Adamation Pulper is internally plumbed at the factory (See Figure 3 Page 6) for drain details. There are three 1-1/2" diameter copper tubing stubs from the end of the Pulper. One for connection to the drain, one for connection to an Interceptor, and one is for connection to the Pulper Trough. A 3/4" copper stub is for connection to a cold water line.

An Adamation Interceptor (See Figure 4A & 4B Page 7 & 8) is a stainless steel tank approximately 36" wide x 18" deep x 13" high with sliding top cover mounted on legs to keep it 2 inches off the floor and located in the vicinity of the Pulper. Overflow water being discarded from the tower is routed to the drain via the Interceptor. The Interceptor works similar to a grease trap and its purpose is to separate pulp and/or grease resulting from the shredding of paper napkins, etc. from the effluent to the drain. An Interceptor is recommended for use with all Adamation Pulpers.



DRAIN CONNECTIONS

FIGURE 3

It is highly recommended and specified that all drain line connections between pulper, interceptor and house drain be made with reinforced rubber tubing attached to supplied stubs with S/S clamps to facilitate cleaning.

A "stand alone" Pulper has similar drain and plumbing connections however the 3/4 inch copper stub is connected to a mixing valve into which is fed both hot and cold water. A "stand alone" Pulper should be operated with tempered warm water.

For internal preplumbing information, refer to Figure 5 Page 9.

PREPARING FOR OPERATION

Once the plumbing and electrical connections have been completed, the pulper is ready for operation.

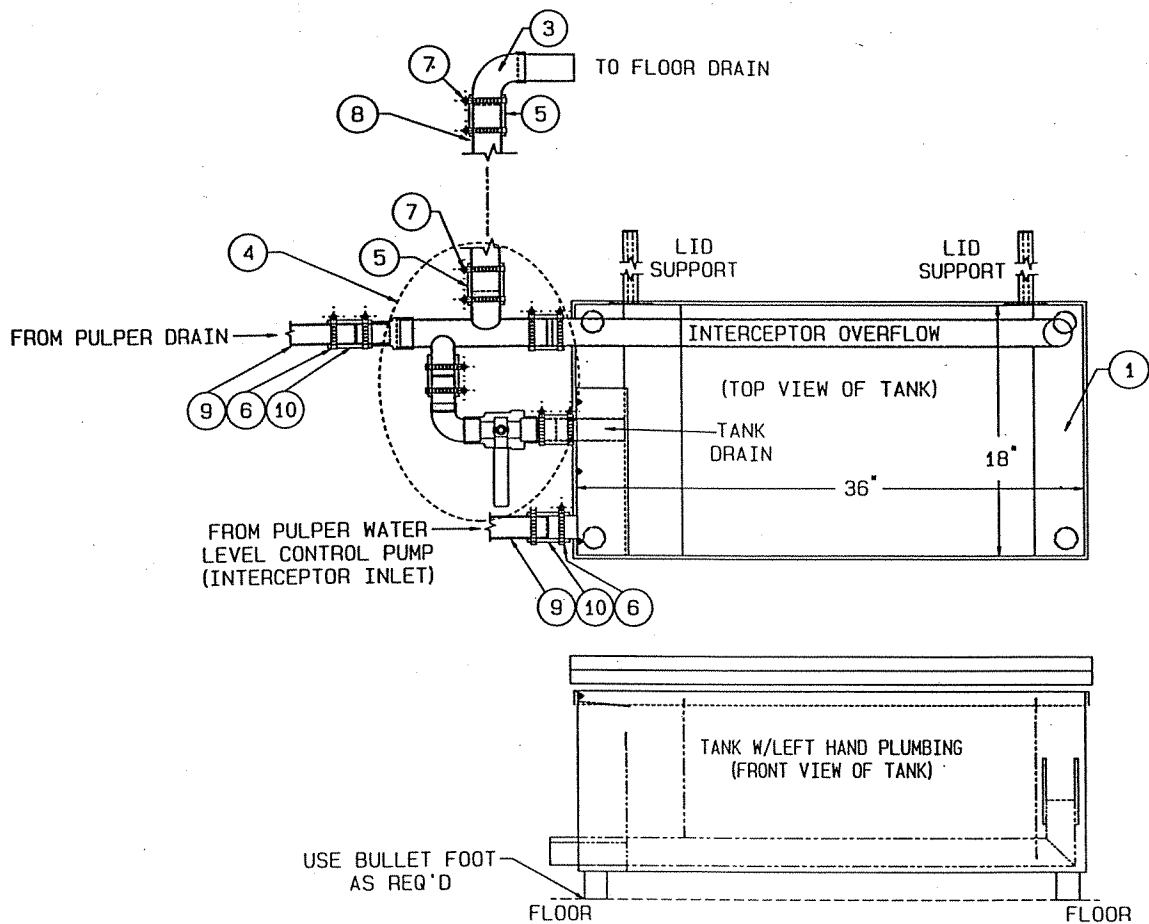
PRE-OPERATION CHECK

The following items should be checked in the order listed below before operating the Pulper.

1. With the front panel removed, check to be sure that all packing material has been removed from the inside of the Pulper.
2. Check all hose connections to be sure that they are tight.
3. Check all electrical connections to be sure that they are correct.
4. Check the Pulper body to be sure that no materials are inside.
5. Replace the front panel.

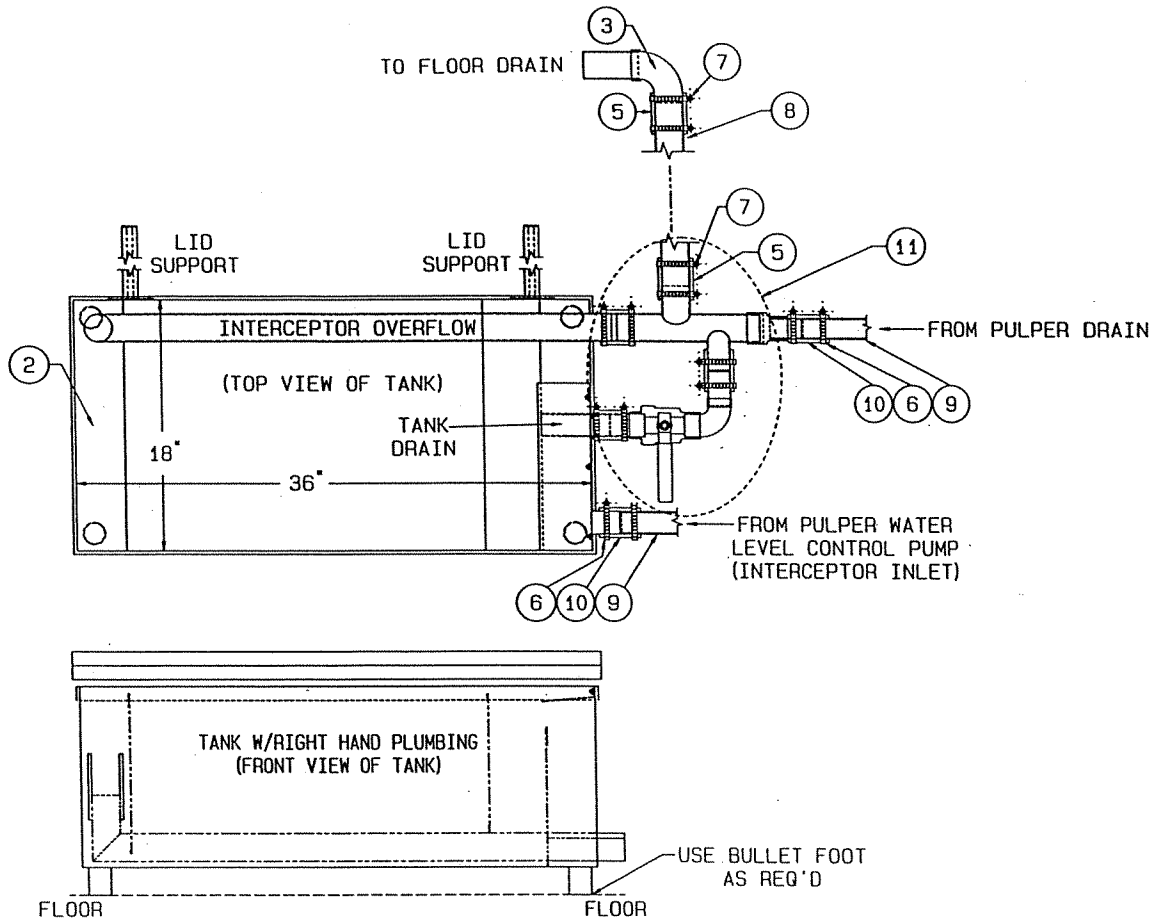
CAUTION:

Read operating instructions before running the pulper. Serious damage to the pulper and the operating personnel may occur if the instructions are not followed carefully.



INTERCEPTOR TANK W/LEFT HAND PLUMBING

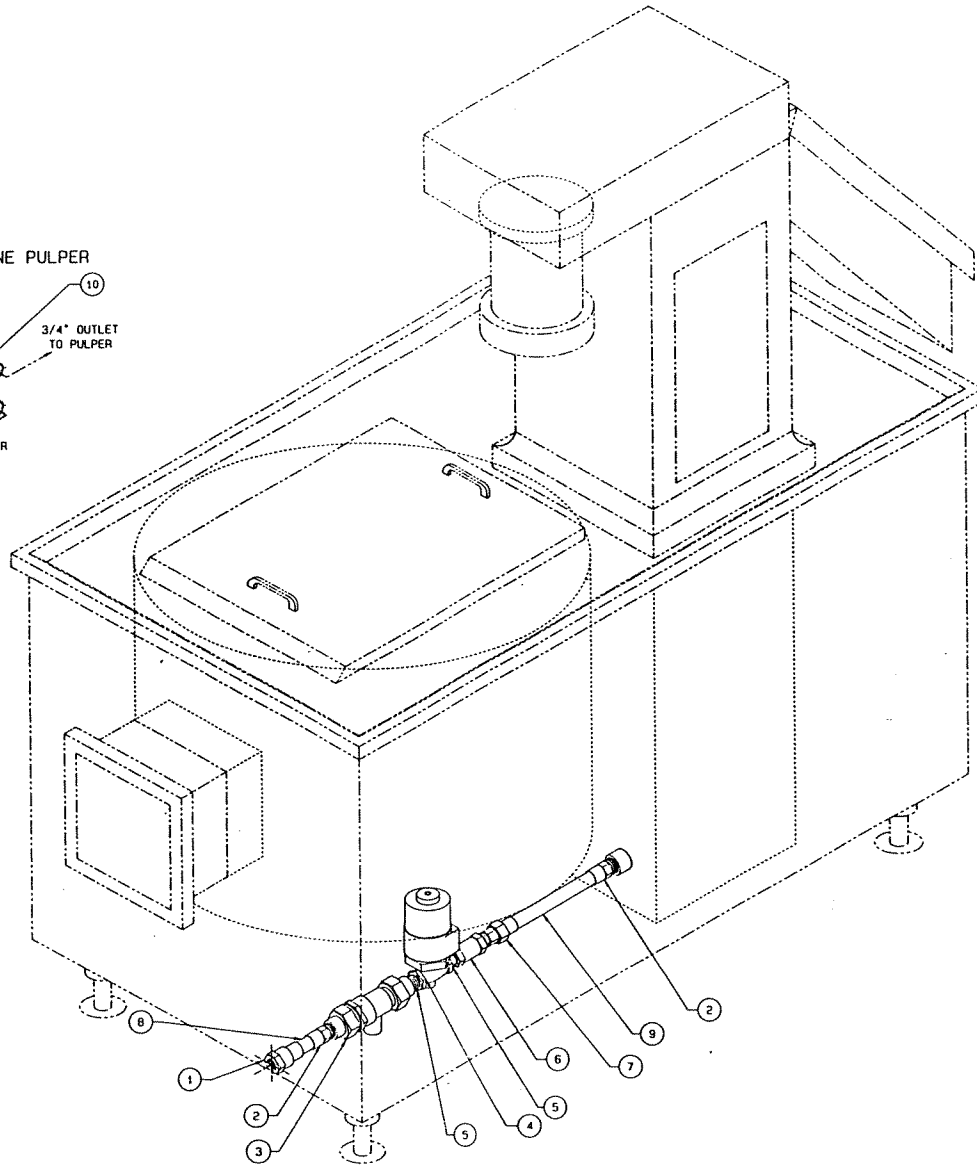
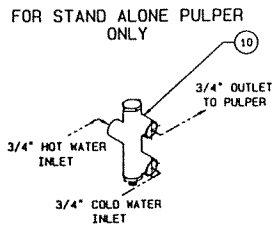
FIGURE 4A



INTERCEPTOR TANK W/RIGHT HAND PLUMBING

FIGURE 4B

INDEX NO.	PART NUMBER	PARTS LIST-----PULPER INTERCEPTOR TANK WITH PLUMBING	QNTY PER ASSMLY
1	42-1615-800	INTERCEPTOR TANK - LEFT HAND	1
2	42-1616-000	INTERCEPTOR TANK - RIGHT HAND	1
3	42-1616-303	CONNECTOR FOR FLOOR DRAIN	1
4	42-0659-600	DRAIN MANIFOLD ASSEMBLY, LEFT HAND PLUMBING	1
5	42-0655-603	HOSE, FLEXIBLE REINFORCED RUBBER 2" ID X 3" LONG	2
6	70-1000-528	CLAMP, HOSE, S/S, 1-1/16" TO 2"	10
7	70-1000-530	CLAMP, HOSE, S/S, 1-9/16" TO 2-1/2"	4
8	65-5112-812	TUBING, 2" OD S/S, CUT TO LENGTH	-
9	65-4922-411	TUBING, 1-5/8" OD S/S, CUT TO LENGTH	-
10	42-0655-604	HOSE, FLEXIBLE REINFORCED RUBBER 1-5/8" ID X 3" LONG	5
11	42-0659-500	DRAIN MANIFOLD ASSEMBLY, RIGHT HAND PLUMBING	1



INTERNAL PLUMBING

FIGURE 5

INDEX NO.	PART NUMBER	PARTS LIST-----INTERNAL PLUMBING	QNTY PER ASSMLY
1	75-0026-040	ADAPTOR, 3/4"C X 3/4"F	1
2	75-0026-041	ADAPTOR, 3/4"C X 3/4"M	2
3	75-7550-251	BACKFLOW PREVENTER, 3/4"F	1
4	55-7300-454	SOLENOID VALVE, MAGNATROL, 3/4"F	1
5	75-5131-006	NIPPLE, CLOSE, 3/4"	2
6	75-8506-003	FLOW VALVE, 8 GPM, 3/4"F	1
7	75-8201-100	UNION, 3/4"C X M	1
8	65-4922-006	COPPER TUBING, 3/4" X 2-1/2"	1
9	65-4922-006	COPPER TUBING, 3/4" X 13-1/2"	1
10	75-8530-115	BEACON TEMPERING VALVE, 3/4"	1

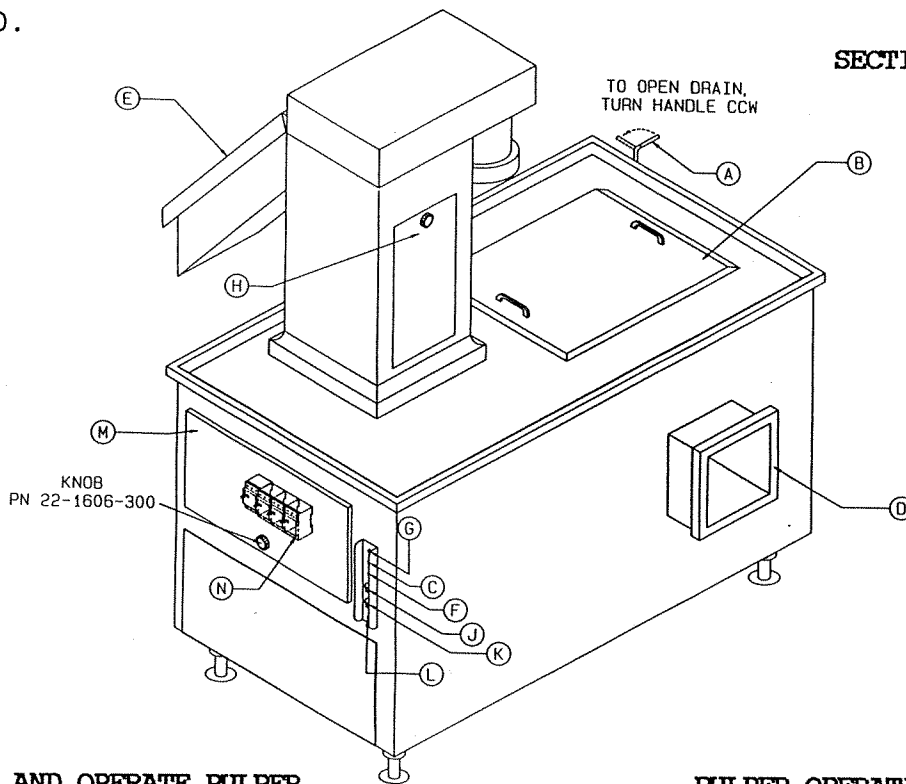
TO FILL AND OPERATE PULPERPULPER OPERATING CONTROLS

FIGURE 6

1. Close drain valve "A" positioning as shown
2. Open tank cover "B" for observation
3. Hold fill valve switch "G" down to fill
4. Fill to 1 inch below level of bottom of chute "D" then release
5. Be sure tank and chute covers "B" and "E" are in place
6. Set switch "F" to "Automatic" position
7. Push reset switch "C" down

Red light "K" indicates Pulper is on
 "L" is circuit breaker for control circuit--push to reset

TO DRAIN AND CLEAN PULPER

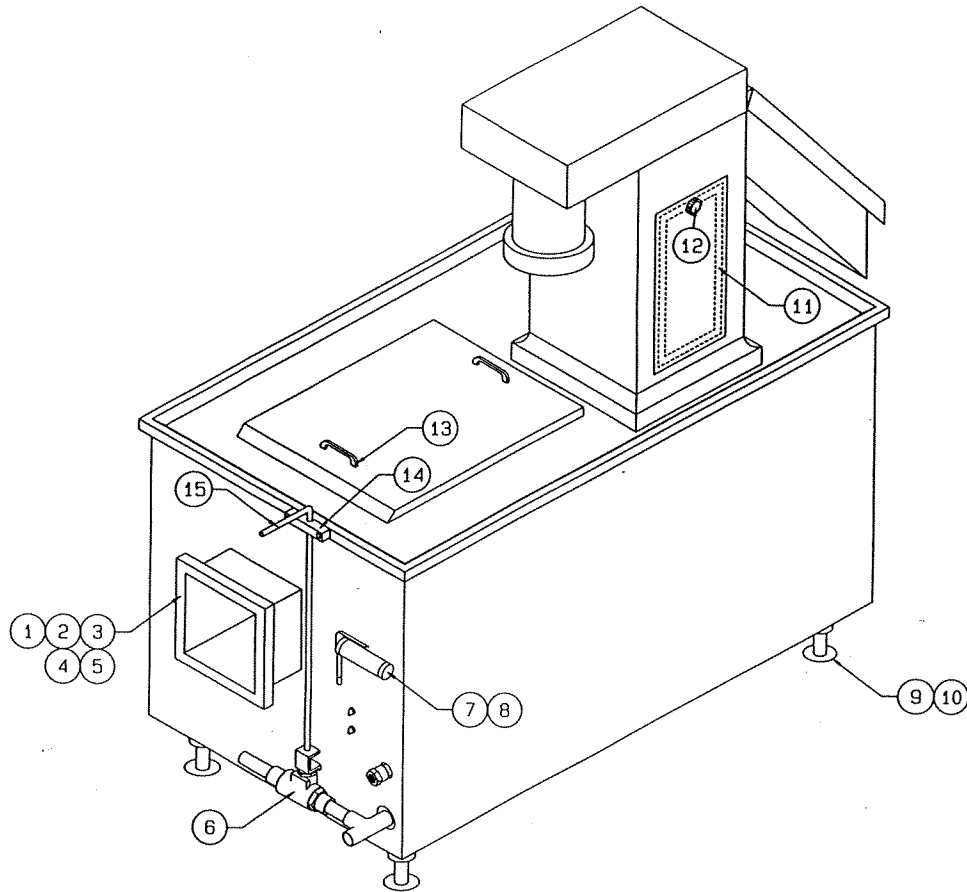
1. Set switch "F" to "Manual"
2. Open clean out door "H" and hose screen and tower as necessary
3. Be sure covers "B" and "E" are in place
4. Push reset switch "G" down
5. Let pulper run for approximately five minutes
6. Set switch "F" to "Off" position
7. Open drain valve "A" to "Dotted Line" position
8. Clean the inside and outside of Pulper as required

DEWATERING TOWER EXTRACTOR SCREEN MALFUNCTION (JAMMING)

1. If "Tower Dewatering Worm" jams-the pulper automatically shuts down
2. "Unjam" by (a)-removing electrical panel cover "M". (b)-Pressing and holding down "Worm Reversal" switch "J" while at the same time resetting the "Overload Switch" "N". Repeat until jam clears.

NOTE:

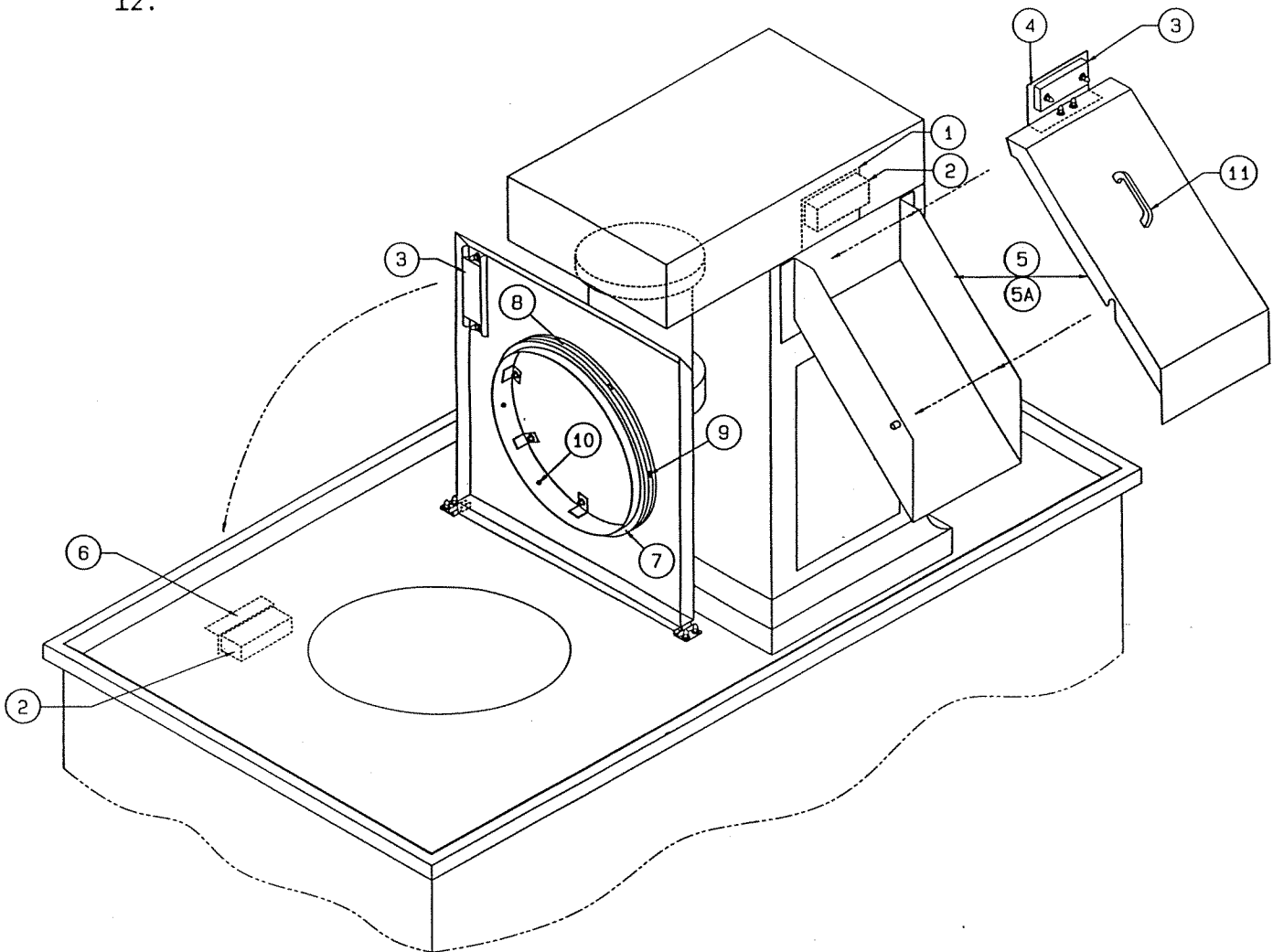
ADAMATION service to a Pulper that has been jammed by a foreign object is NOT COVERED BY WARRANTY AT ANY TIME. Supervise the feed to the Pulper!!!



PULPER MISCELLANEOUS PARTS

FIGURE 7

INDEX NO.	PART NUMBER	PARTS LIST-----PULPER MISCELLANEOUS PARTS	QNTY PER ASSMLY
1	19-4204-700	GASKET, PULPER INLET (8" X 8" INSIDE DIMENSION)	1
2	10-1106-420	SCREW, HEX HEAD, 1/4-20 X 3/4"	16
3	10-1800-420	WASHER, FLAT, 1/4", S/S	16
4	10-1801-420	WASHER, LOCK, 1/4", S/S	16
5	10-1900-420	NUT, HEX, 1/4-20, S/S	16
6	75-8515-005	VALVE, BALL, WATTS, 1-1/2" C X C	1
7	99-7600-002	GUN, GREASE, WITH ONE #30-127 CARTRIDGE	1
8	99-7600-003	GREASE, 3 CARTRIDGES, #30-127	-
9	70-2300-503	FEET, FLANGED, ADJUSTABLE, 1-5/8", S/S	4
10	11-1610-000	PAD, ISAMODE, 3-1/2" DIAMETER	4
11	65-7109-006	GASKET, W/ADHESIVE, PULPER DOOR, 3/4" X 1/4"/ft (FOR EACH DOOR)	4
12	22-1606-300	KNOB, ASSEMBLY, PULPER DOOR (FOR EACH DOOR)	1
13	70-2850-050	HANDLE, DOOR, KLEIN, W/SCREWS	2
14	32-1604-902	GUIDE, 1-1/2" DRAIN VALVE HANDLE	1
15	32-1604-901	HANDLE EXTENSION, 1-1/2" DRAIN	1



MAGNETIC COVER AND CHUTE

FIGURE 8

INDEX NO.	PART NUMBER	PARTS LIST-----PULPER MAGNETIC COVER AND CHUTE	QNTY PER ASSMLY
1	32-1601-303	BRACKET, FOR MOUNTING PULPER TOWER "GO" SWITCH	1
2	55-7400-175	SWITCH, 24 VOLTS MAGNETIC "GO"	2
3	19-1808-200	MAGNET, COATED, FOR PULPER DOOR OR CHUTE SWITCH	2
4	N.P.N.	BRACKET, FOR MOUNTING PULPER CHUTE COVER MAGNET	1
5	42-1616-900	CHUTE, SHORT, FOR PULPER CONFIGURATIONS A, D, AND G	-
5A	42-1616-800	CHUTE, LONG, FOR PULPER CONFIGURATIONS B, C, E, F, H, AND J	-
6	14-0404-700	BRACKET, FOR MOUNTING PULPER MASTICATOR CHAMBER "GO" SWITCH	1
7	22-1606-501	GASKET, NEOPRENE STRIP, 3/4" X 1-1/4" X 50-5/8" LONG FOR PLPR CVR	1
8	22-1606-502	BAND, 20 GAUGE S/S, FOR PULPER COVER GASKET	1
9	10-1012-832	SCREW, S/S, PAN HEAD, 8-32 X 1-1/2" LONG	6
10	10-1903-832	NUT, S/S, ELASTIC STOP, 8-32	6
11	70-2850-050	HANDLE, CHROME, FOR PULPER CHUTE COVER, WITH SCREWS	1

SECTION 4 - MAINTENANCE

GENERAL

This section contains both preventive and corrective maintenance information. Cleaning by the operator and regular greasing of the main bearing are the only preventive maintenance required. Corrective maintenance often does not require an outside serviceman. However, if in-house maintenance services cannot solve a problem, an Adamation Service Facility should be consulted. Call Adamation's National Service toll free number 1-800-225-3075.

PREVENTIVE MAINTENANCE

CLEANING THE PULPER

Thorough cleaning of the entire Pulper should be completed after each period of operation. The exterior of the Pulper can be cleaned by wiping it with a mild soap and water solution. It should be thoroughly rinsed after washing. Lemon oil or a good commercial stainless steel cleaner can be used to polish the stainless steel parts.

GARBAGE TROUGH

If your Pulper is equipped with an Adamation Garbage Trough, it should also be cleaned when the Pulper is being cleaned.

Heavy objects such as silverware should be removed from the "silver saver tank" which is located in front of the entry chute to the Pulper, then "Section 3" Drain and Clean Procedure, should be followed.

REMOVING FRONT AND REAR CABINET PANELS

There are two readily removeable panels for servicing on an Adamation Pulper. For purposes of identification, the long panel located relative to the Tower as shown on Figure 6 Page 10 is known as the front panel. Its opposite is the rear panel. The right and left end panels are used for support purposes and are never removed for service functions.

To remove either and/or both panels, remove the screws securing them to the right and left end panels, grasp the panel from the bottom, lift up approximately 3/4 inch and pull out to remove. Reverse the procedure to replace.

GREASING THE SHAFT BEARINGS

The shaft bearings (1) should be greased through the grease fittings every week or every 20 hours of use, whichever comes first. Operating time can be obtained from the "Hour Timer" which is mounted in the Electric Control Cabinet. To insure regularity, a "Greasing Maintenance Log" should be maintained. Pump 3 to 4 "squirts" into the grease fittings with grease gun (Figure 3 Page 6). The grease fittings are mounted on the end panel for easy access and are connected to the bearings by tubing. (Use Plews Heavy Duty Grease #30-127.)

CORRECTIVE MAINTENANCE

This section is arranged according to the Pulper's systems. Under each system, most of the problems that can arise are listed with their solutions or explanations.

MACHINE DOES NOT START - SEE FIGURE 6 PAGE 10

1. Check to be sure that the shredder chamber cover (B) is closed securely in place.
2. Check to be sure that the discharge chute cover (E) is closed securely in place.
3. Check to make sure that the set switch (F) is "ON" and in the desired position. ("Manual" if the pulper is to run without the dishmachine, "Automatic" if the pulper is to run with the dishmachine.
4. Check to make sure Control Circuit Breaker (L) is pushed in.
5. Check to make sure that the machine reset button (C) has been activated.
6. Remove Electrical Panel Cover (M) and make sure that all Overload Switches are in the "on" position.

LITTLE OR NO WATER FLOWS DOWN THE TROUGH

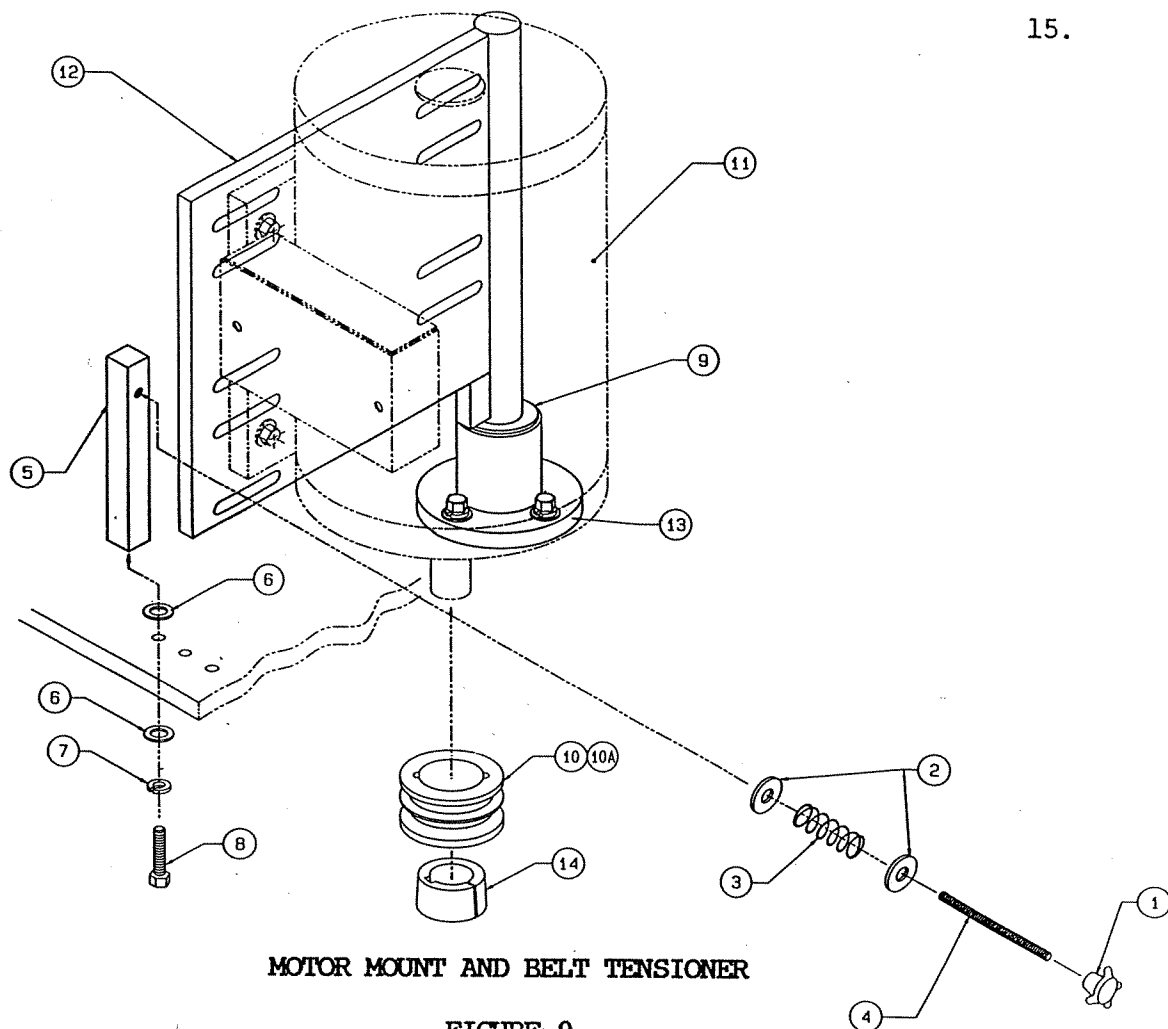
1. Check to make sure that the drain valve (A) Figure 6 Page 10 is closed.
2. Check the drain in the circulating prewash tank of the dishmachine to make sure that it is closed and the transfer pump is operating.
3. Check to make sure that the 3 H.P. recirculating pump (Figure 1 Page 3) is working. If not, check the electrical breaker in the Electrical Control Panel.

HIGH WATER LEVEL IN SHREDDING TANK

This problem is closely allied with the problem of low water flow down the trough. If the steps listed as solutions to the above problem check out, shut down the Pulper and drain the machine. The cause is probably one of the following:

1. The Hub and attached hammers have come off the shaft. In this unlikely event, reattach same.
2. The "Hammers" are not rotating. Check the circuit breaker in the Electrical Control Panel. If OK, remove the rear panel and check the V-Belt drive for integrity and tightness. Tighten the Belt by screwing in knob (1) Figure 9 Page 15 against the belt tensioning spring. If the belt is broken, replace as described in the following section. Replace or repair the motor if it is not rotating.
3. The Tower "Water Level Control" Pump is either not operating or is plugged with garbage. Remove Front Panel to inspect. (See Figure 10 on Page 16). If the motor is not turning, check the circuit breaker in the Electrical Control Panel. If the Pump motor is operating, turn the Pulper off by setting switch F (See Figure 6 Page 10) to the "Off" position. Loosen the hose clamps and remove the hose from the Pump Head. Remove the head and examine the rotor and pump outlet. Clean as required and replace Head and Hose.

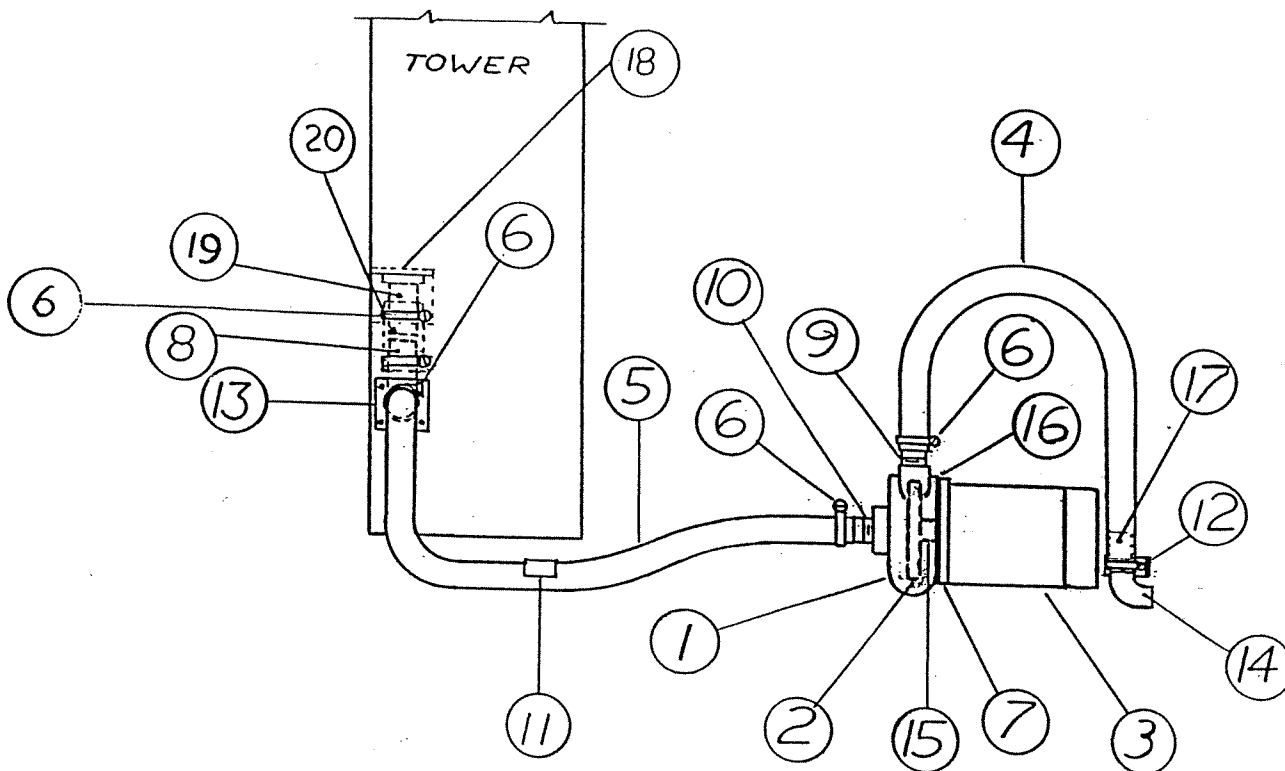
Note: When the Pump is operating correctly, the Tower water lever remains constantly low.



MOTOR MOUNT AND BELT TENSIONER

FIGURE 9

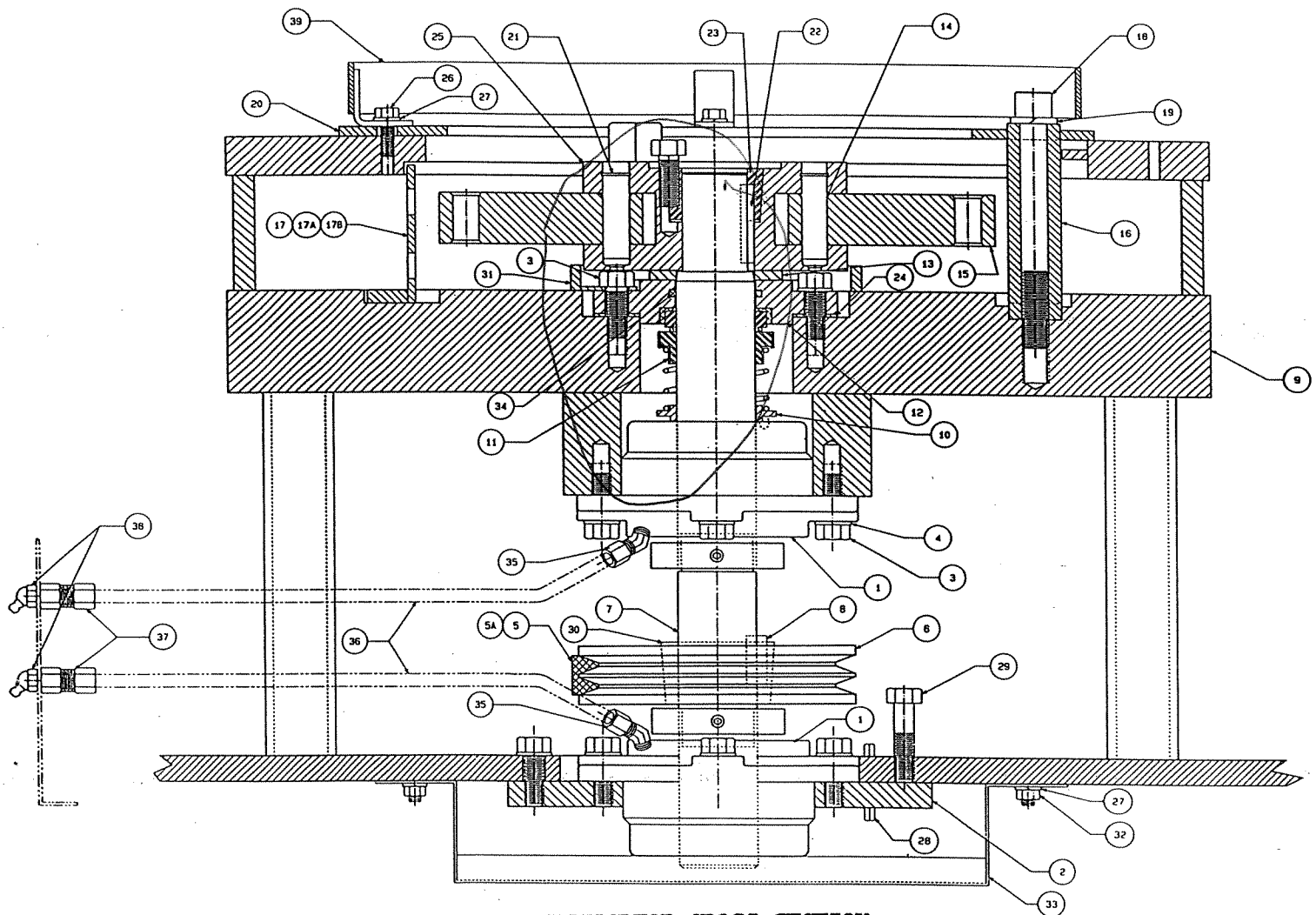
INDEX NO.	PART NUMBER	PARTS LIST-----MOTOR MOUNT AND BELT TENSIONER * MEASURE SHEAVE DIAMETER BEFORE REORDERING	QNTY PER ASSMLY
1	70-2850-120	KNOB, ADJUSTING, 5/16-18	1
2	60-8850-410	WASHER, COUNTER SUNK, 5/16"	2
3	70-7400-021	SPRING, DIE, #MHC-3, PULPER MOTOR ADJUSTMENT	1
4	19-1100-100	ROD, THREAD, 5/16-18 X 4" LONG	1
5	22-1604-001	ADJUSTING POST, PULPER MOTOR, 6" HIGH	1
6	10-1800-316	WASHERS, S/S, FLATWASHERS, 3/8"	1
7	10-1801-316	WASHERS, S/S, LOCKWASHERS, 3/8"	1
8	10-1110-316	SCREW, HEX HEAD, 3/8-16 X 1-1/4" LONG	1
9	31-1608-011	SPACER, 1-1/2" INSIDE DIMENSION	1
10	70-6306-501	SHEAVE, DODGE, DYNA V, TYPE C, 3.25 OUTSIDE DIAMETER, LOW SPEED *	1
10A	70-6306-502	SHEAVE, DODGE, DYNA V, TYPE C, 5.3 OUTSIDE DIAMETER, HI SPEED *	1
11	55-5016-081	MOTOR, 10 H.P., 1800 RPM, 208/230/460V, 60HZ, 3PH	1
12	42-1610-202	MOTOR MOUNT PLATE WITH S/S POST	1
13	70-0465-036	BEARING, FLANGE, PLATE TYPE FOR 1-1/2" SHAFT	1
14	70-0750-003	BUSHING - DODGE TAP LOCK, 1-3/8" BORE, #1610 - 10 H.P.	1
15	70-0525-503	BELT, NO.500, DOUBLE "V", LOW SPEED (NOT SHOWN)	1
15A	70-0525-502	BELT, NO.530, DOUBLE "V", HI SPEED (NOT SHOWN)	1



TOWER WATER LEVEL CONTROL

FIGURE 10

INDEX NO.	PART NUMBER	PARTS LIST-----TOWER WATER LEVEL CONTROL	QNTY PER ASSMLY
1	19-4302-000	PRICE PUMP VOLUTE (MODIFIED FOR PULPER)	1
2	42-0505-800	PRICE PUMP IMPELLER (MODIFIED FOR PULPER)	1
3	55-5010-015	3/4 hp TOTALLY ENCLOSED FAN COOLED MOTOR	1
4	65-7112-080	1-5/8" SUPERFLEX WIRE REINFORCED HOSE - 24" LONG	1
5	65-7112-080	1-5/8" SUPERFLEX WIRE REINFORCED HOSE - 37" LONG	1
6	70-1000-527	S/S HOSE CLAMPS, #16, S/S, 13/16" TO 1-1/2"D	4
7	55-6302-001	PRICE PUMP HOUSING W/SEAL, SHAFT, GASKET, SLING RING, PRICE	1
8	32-1612-501	ELBOW, 90deg, FLANGED	1
9	12-0982-100	PUMP DISCHARGE FITTING, 1"P X 1-5/8" HOSE	1
10	19-4301-900	PUMP INLET FITTING, 1-1/4"P X 2" HOSE	1
11	11-0918-800	CLAMP, SEALTITE, 1-1/4", S/S	1
12	42-0659-203	BRACKET, PLUMBING STAND OFF, S/S	1
13	19-4201-500	GASKET, 3" X 3" X 1/8", RED RUBBER	1
14	75-1602-112	ELBOW, 90deg, 1-1/2", COPPER	1
15	55-6301-305	SEAL, PRICE PUMP (INCLUDED IN ITEM #7)	1
16	55-6301-605	GASKET, PRICE (INCLUDED IN ITEM #7)	1
17	65-4922-411	TUBING, COPPER, 1-1/2" X 4-1/2" LONG	1
18	42-0660-100	ANTI-SWIRL PLATE	1
19	65-5112-010	TUBING, S/S, 1-5/8" OD X 2" LONG	1
20	42-0655-604	HOSE, FLEX, 1-5/8" ID X 3" LONG	1



MASTICATOR CROSS SECTION

FIGURE 11

TURNING HAMMERS AND ANVILS TO EXPOSE A NEW CUTTING EDGE

After a given period of operation, the shredding edges of the hammers and anvils get dull and less effective (normal wear of parts). The design of the Adamation Pulper is such that the cutting edges of the anvils can be renewed 3 times and the Hammers 3 times by simply reversing them. To accomplish this, look at Figure 11 Page 17 and perform the following steps.

ANVILS:

1. Remove the Top Plate Ring (20) by removing 12 stainless steel 1/4-20 x 3/4 inch hex head screws (26) and 12 stainless steel 1/4 inch lock washers (27).
2. Remove each of four anvils (16)-one at a time-by removing the 1/2-13 x 4 1/2 inch stainless steel socket head screw (18). Turn the anvil 90 degrees to expose a fresh cutting edge and refasten with the socket head screw. Tighten until the 1/2 inch lock washer (19) is forced closed. Repeat this operation for each of the three remaining anvils. Replace the Top Plate Ring (20). This operation can be performed 3 times before replacing the anvils.

INDEX NO.	PART NUMBER	PARTS LIST-----MASTICATOR CROSS SECTION	QNTY PER ASSMLY
1	70-0455-051	BEARING, FLANGED, "LINK BELT", 1-1/2" SHAFT	2
2	22-1602-400	BOTTOM BEARING PLATE ASSY	1
3	10-1108-316	SCREW-HEX HEAD, S/S, 3/8-16 X 1"	20
4	10-1801-316	WASHERS, S/S, LOCKWASHERS, 3/8"	15
5	70-0525-503	BELT NO. 500 DOUBLE "V", LOW SPEED	1
5A	70-0525-502	BELT NO. 530 DOUBLE "V", HI SPEED	1
6	70-6306-502	PULLEY, DYNA TYPE, 2 GROOVE 5.3" O.D.	1
7	21-1605-000	SHAFT, 1-1/2" DIA. X 13-5/8" LONG	1
8	19-2100-702	KEY 3/8" SQ. X 1" LG.	1
9	N.P.N.	MASTICATOR BODY	1
10	22-1605-202	SPACER, BEARING TO SEAL	1
11	55-6301-364	SEAL, PULPER, US#758 COMPLETE KIT (REPAIR SEAL KIT: 55-6301-952)	1
12	22-1605-201	HOUSING, PULPER SHAFT ENCLOSURE SEAL COVER, PLATED	1
13	31-1608-010	SPACER, PACTINE, PULPER SHAFT, 3/16" X 1-1/2" ID X 2-3/4" OD	1
14	60-6150-001	DOWEL PIN, 1/2"D X 1-3/4" LONG	4
15	21-1604-001	HAMMER, STRAIGHT, PULPER	4
16	21-1612-002	IMPACT BARS, ANVILS (ROUND TOP AND BOTTOM)	4
17	42-1606-000	SIZING RINGS, 1-1/2" X 3/8" VERT SLOTS	4
17A	42-1615-900	SIZING RINGS, 1/2" X 3/8" SQAURE HOLES	4
17B	42-1618-400	SIZING RINGS, 3/8" ROUND HOLES	4
18	10-1520-114	SCREW, S/S, SOCKET HEAD, 1/2-13 X 4-1/2"	4
19	10-1801-113	WASHERS, S/S LOCKWASHERS, 1/2"	4
20	22-1614-900	TOP PLATE, ANVIL HOLDING RING	1
21	60-8000-004	SNAP RING, 1/2"	4
22	19-2100-104	KEY 1/4" SQ. X 1-1/2" LONG	1
23	70-0750-004	BUSHING, TAPER LOCK, DODGE #1210 X 1-1/4"	1
24	19-4205-000	GASKET, PULPER SEAL HOUSING	1
25	21-1601-800	HUB, HAMMER BAR-PULPER-ROUND	1
26	10-1106-420	SCREW-HEX HEAD, S/S, 1/4-20 X 3/4	12
27	10-1801-420	WASHERS, S/S, LOCKWASHERS, 1/4"	16
28	10-7110-316	ROLL PIN, 3/16" DIA. X 1-1/2" LONG	2
29	10-1112-316	SCREW, HEX HEAD, S/S, 3/8-16 X 1-1/2"	2
30	70-0750-002	BUSHING, TAPER LOCK, 1610 WITH 1-1/2" BORE	1
31	42-1619-200	RING, TRASH GUARD, S/S	1
32	10-1900-420	NUTS, S/S, HEXNUTS, 1/4-20	4
33	32-1601-301	PAN, GREASE, BOTTOM BEARING	1
34	75-7050-526	"O" RING, ARP-222. BUNA-N	1
35	75-1075-011	FITTING, COMP. 1/8"M X 1/4" O.D. TUBE, 45 DEGREES	2
36	65-4922-902	TUBING, COPPER, 1/4" O.D.	2FT
37	75-1075-026	FITTING, COMPRESSION, 1/8"F X 1/4" O.D., TUBE	2
38	70-2380-050	GREASE FITTING, STRAIGHT	2
39	42-1615-100	RING, SILVER SAVER	1

HAMMERS:

1. Remove the Hammer Bar Hub (25) by removing the two hold down screws from the "Taper Lock Bushing" (23). Use one of them in the forcing hole of the bushing to aid in removal of the Hub.
2. Now remove the four internal retainer rings (21) and using a punch press, force out the four dowels holding the hammers in the hub. They must be removed by pressing from the bottom of the Hub.
3. Rotate each hammer (15) 180 degrees and replace for the first new cutting edge exposure. For the third exposure, reverse the hammer end for end. For the fourth exposure rotate 180 degrees once more.
4. Use a press to replace the Dowels.
5. Replace the Hub (25) and the internal retainer rings (21). This operation corrects normal wear and is NOT COVERED BY WARRANTY FOR LABOR.

REPLACING PACTINE FILLER WASHER

There is a Pactine Washer (13) Figure 11 Page 17 between the Hammer Bar Hub Assembly (25) and the top of the Seal Housing Cover (12). The main purpose of this washer is to minimize the effect of string, plastic strips etc. that tend to wrap around the shaft. Its presence is not vital, just convenient. To replace this washer remove the Hub Assembly as just described above.

REPLACEMENT AND/OR TIGHTENING THE DRIVE V-BELT

After prolonged use, the V-Belt that drives the Hammers can stretch and become loose. This is indicated by a "squeaking" noise when the Pulper starts. To tighten the V-Belt, remove the front panel and screw in the Adjustment Knob (1) (Figure 9 Page 15) against the belt tensioning spring. If the belt breaks or needs replacing, perform only the following steps in the following order; (See Figure 11 Page 17.)

1. Remove both the front and rear panels.
2. Remove the Bottom Bearing Grease Pan (33) by unscrewing the washers (27) and nuts (32).
3. Loosen the two set screws in the collar of the Bottom Bearing "Link Belt" Shaft (1).
4. Remove the four screws (3) holding the Bottom Bearing Plate (2) in place.
5. Force the Bearing Plate, to which the Bearing is bolted, from the shaft (7) by alternately screwing in the Forcing Screws-two each-(29). This will slip the unit from the shaft leaving an annular hole between the shaft and the Pulper Base.
6. Slip one end of the belt through this annular hole and bring it up around the shaft and the pulley (6).
7. Reverse the above procedure to replace the Bearing Plate and Bearing.

NOTE:

The Bearing Plate (2) has to be replaced in the exact position from which it was removed. There are two roll pins (28) which assure this. The plate can only go on one way. Be sure to replace roll pins.

8. Remove the Adjustment Knob-(1) Figure 9 Page 15-thus allowing the Motor Mount Plate (12) to move freely.
9. Slip the other end of the belt over the Motor Pulley (10), raise motor (11) as required to allow for belt clearance, replace the Adjustment Knob (1) and adjust the tension on the belt.
10. Replace the Front and Rear Panels.

REPLACING THE SHAFT BEARING

In the event that the bearings need replacing, they must be replaced with Adamation Bearings No. 70-0455-051. These bearings are especially assembled for Adamation by the Link Belt Company to our specifications for extended life over their "Off the Shelf" bearings. (This is one of the few cases where Adamation deviates from its policy of using "Off the Shelf" parts that are readily obtainable from either Adamation or your local supplier.

Referring to Figure 11 Page 17 perform the following operations in the following order.

1. Remove the Lower "Link Belt" Bearing (1) from the shaft as described on the previous page in replacing a V-Belt.
2. Remove the Pulley (6) from the Shaft (7) by removing the two set screws from the top of the Pulley-Hub. (The pulley is held on the shaft with a "Dodge Taper Lock" Bushing.) Use one of them to screw in the third hole to force the Pulley and the Hub apart.
3. Slide the Hub then the Pulley through the annular hole left by removing the Bottom Bearing Plate. Also remove the Key (8) from the Shaft (7).
4. Completely loosen the two set screws in the collar of the Upper Shaft Bearing (1).
5. Remove the Hammer Bar Hub (25) as described in the section entitled "Turning Hammers and Anvils to Expose a New Cutting Edge" - Page 17.
6. Next, remove the seal housing cover (12) by unscrewing the hex head screws (3). The seal top can be forced out by screwing two of the removed screws (3) into the threaded holes of the Seal Plate and alternately screwing them in until the Plate comes out.
7. Carefully remove the ceramic and the graphite ring to prevent breakage. Remove the balance of the Seal assembly.
8. The Shaft (7) should now slide through the upper bearing and be removed through the shredding chamber.
9. Unscrew the four hex screws (3) holding the bearing in place. Remove the Upper Bearing (1). If necessary, tap the bearing from the seal hole to facilitate removal.
10. Remove the lower bearing (1) from the Bottom Bearing Plate (2).
11. Now bolt both the new upper and lower bearings in place. Don't forget to replace the lock washers (4). Attach the Bottom Bearing Grease Pan (33).
12. Clean the shaft thoroughly. Use steel wool or Scotch Brite if necessary. Rub a light coat of oil on the shaft to facilitate assembly.
13. Slide the shaft (7) from the seal hole through the Top Bearing (1). Slide the Pulley Hub and Pulley (6) on the shaft before extending it into and through the lower Bearing (1). The top of the Shaft should extend a distance of 2 5/16 inches above the bottom of the shredding chamber. Use a straight edge across the bottom of the shredding chamber for accuracy.
14. Now tighten the double set screws in the collars of both bearings to secure the shaft. These screws are all that hold the shaft in place so tighten them securely.
15. Next, insert the Key (8) into the Pulley Hub and the Pulley (6) over the Hub. Line up the Pulley-Hub with the Pulley on the drive Motor and insert the two set screws that expand and secure the Hub on the Shaft. The Shaft is now mounted and should spin freely.

16. The Seal is a "bearing seal" and thus rotates with the bearing. In this case however we are mounting the seal on the rear of the bearing and a spacer is required. Be sure a stainless steel Spacer (10) is on the shaft before the Seal is put in.
17. The Seal protects the upper Bearing (1) from leaks that could greatly shorten its life. Examine the Seal parts carefully to assure that they are in "like new" condition. If not, replace them with a Seal Kit (Part Number 55-6301-952) Figure 12 Page 22 to protect your newly replaced Bearing. Clean the stationary face of the Seal with fine steel wool if necessary.
18. Now replace the seal-rotating part-(11) on the shaft. This must be precisely done. Read the instructions in the following section on REPLACING THE SHAFT SEAL for complete instructions.
19. Slip the seal housing cover (12) over the Shaft and bolt firmly in place.
20. Replace the Pactine washer (13) and the Hammer Bar Hub (25). Replace and tension the V-Belt then replace the front and rear panels.
21. The Pulper is ready to use.

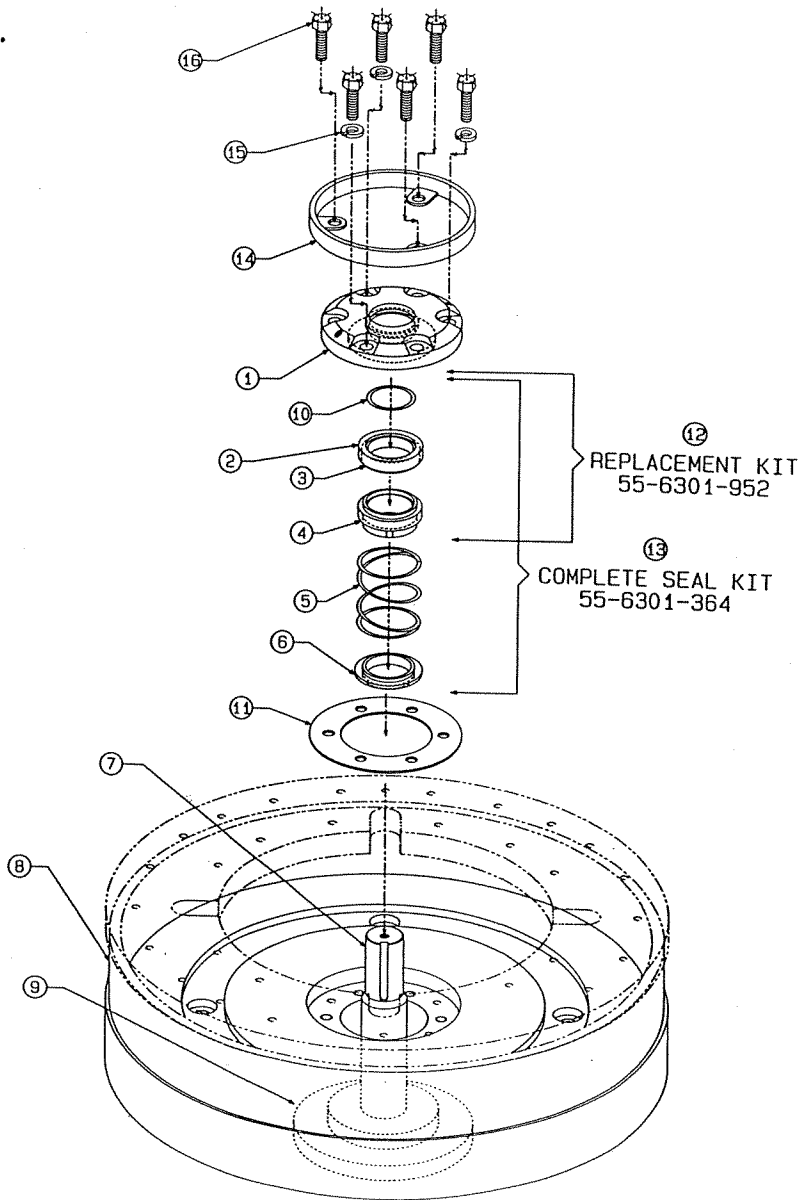
NOTE:

New Bearings do not need greasing immediately. However see Preventive Maintenance for regular greasing instructions.

REPLACING THE SHAFT SEAL

1. The Seal Replacement Kit consists of items shown in Figure 12 Page 22. Unpack them carefully from the container. Be particularly careful with both the Carbon Ring (4) and the Stationary Ceramic Ring (3). Both are very fragile when handled apart from the assembled unit.
2. Remove the six screws and washers from the seal housing cover (1).
3. Remove trash guard ring (14).
4. Remove the Cover (1) by inserting two of the screws in the threaded holes of the cover and alternately turn the two screws in until the cover comes out.
5. Remove all the rotating parts of the seal. All these parts will be replaced with the new parts in the Seal Replacement Kit. Note the placement of each part. It is very important that the parts are replaced in the identical order. Take the new parts and proceed as follows:
6. Place the gasket (11) over the shaft (7) onto the inside of the shredder chamber (8).
7. Place the 12 gauge Stainless Steel Spacer (6) over the Shaft (7) onto the Upper Bearing (9).
8. Place the Spring (5) over the Shaft (7) and securely on top of the Spacer (6).
9. Place the Rotating Carbon Ring (4)-narrow edge up-on top of the Spring (5). (The stainless steel sides of the Carbon Ring (4) should now be inserted into the Spring (5).)
10. Lubricate the top of the Neoprene Housing (2) with a light oil or grease.
11. Press the Neoprene Housing (2) firmly into the counterbore located on the underside of the Stationary Shaft Enclosure Cover (1) to be sure it is bottom square.
12. Replace "O" ring (10).
13. Examine the seal housing cover (1) to be sure it is free of any dirt or grit.
14. Replace the seal housing cover (1) and the job is done.

22.

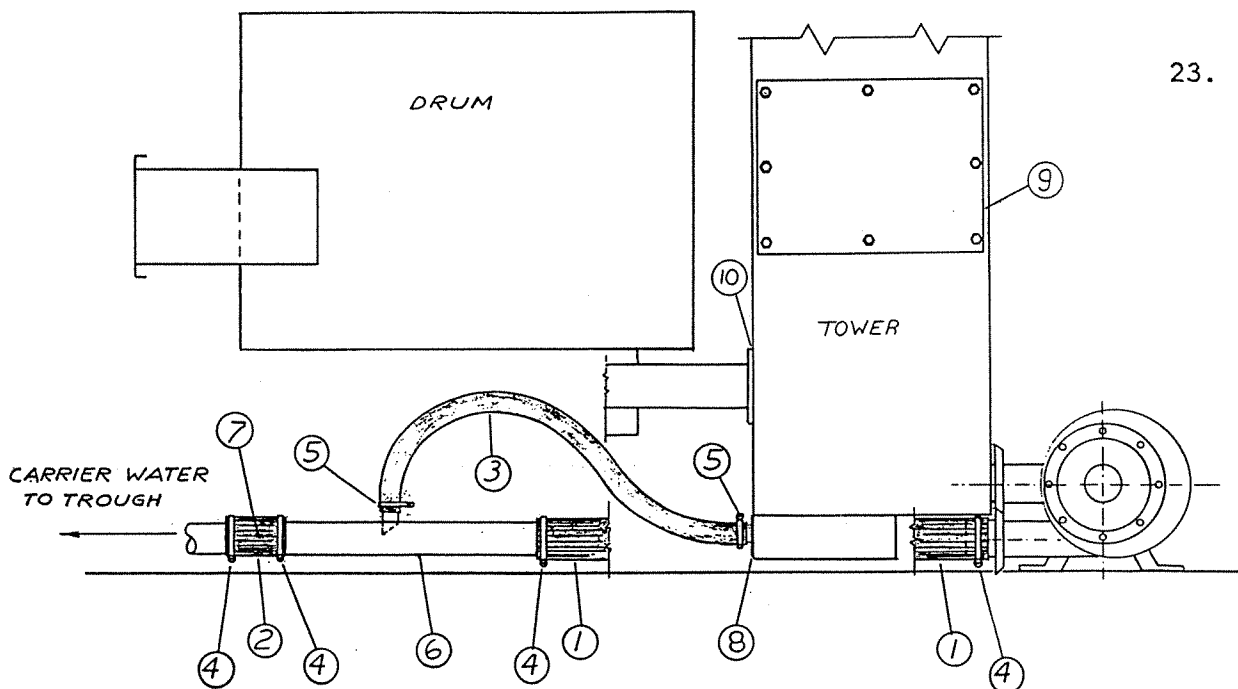


SHAFT SEAL DIAGRAM

FIGURE 12

INDEX NO.	PART NUMBER	PARTS LIST-----SHAFT SEAL REPLACEMENT	QNTY PER ASSMLY
1	22-1605-201	HOUSING, PULPER SHAFT ENCLOSURE SEAL COVER, PLATED	1
2	PARTofKIT	NEOPRENE HOUSING	1
3	PARTofKIT	STATIONARY CERAMIC RING	1
4	PARTofKIT	ROTATING CARBON RING	1
5	PARTofKIT	SPRING	1
6	22-1605-202	SPACER, SEAL HOUSING - NEW STYLE	5
7	21-1605-000	SHAFT, DRIVE, PULPER, 1-1/2" DIAMETER	1
8	N.P.N.	SHREDDER CHAMBER	1
9	70-0455-051	BEARING, LINK BELT, 1-1/2"	1
10	75-7050-526	"O" RING, ARP222-BUNA-N	2
11	19-4205-000	GASKET, PULPER SEAL HOUSING	1
12	55-6301-952	KIT, REPLACEMENT SEAL KIT, #758	1
13	55-6301-364	KIT, COMPLETE SEAL KIT, #758	1
14	42-1619-200	RING, TRASH GUARD	1
15	10-1801-316	LOCKWASHER, 3/8"	1
16	10-1108-316	SCREW, HEX HD, 3/8-16 X 1" LONG	6
			3

NOTE: THESE PARTS CAN ONLY BE ORDERED THRU A KIT (SEE ITEM 12 AND 13 BELOW)



INTERNAL DRAIN SYSTEM

FIGURE 13

INDEX NO.	PART NUMBER	PARTS LIST-----INTERNAL DRAIN SYSTEM	QNTY PER ASSMLY
1	65-7112-083	2" I.D. SUPERFLEX HOSE, 19" LONG	1
2	65-7112-083	2" I.D. SUPERFLEX HOSE, 4-1/2" LONG	1
3	65-7112-070	1" O.D. HOSE WITH WIRE, 12" LONG	1
4	70-1000-530	CLAMP HOSE, S/S, #32, 1-9/16" TO 2-1/2"	4
5	70-1000-526	CLAMP HOSE, S/S, #12, 11/16" TO 1-1/4"	2
6	42-1608-501	S/S MANIFOLD	1
7	12-1606-103	FLOW RESTRICTOR, 1" X 2"	1
8	19-4205-200	GASKET, PULPER JET AND INLET	1
9	19-4204-800	GASKET, PULPER INSPECTION PLATE, 11"x8"x3/16", RED RUBBER	1
10	19-4204-900	GASKET, PULPER DEWATERING, 8-1/4"x4-3/4"x1/4", NEOPRENE	1

REPLACING THE INTERNAL HOSE AND HOSE CONNECTIONS

Stainless tubing coupled with heavy duty 2 inch wire reinforced radiator hose is used for the internal drain system of the Pulper. This allows quick dismantling in case of pluggage and dampens noise and vibration. The hose is affixed with stainless steel clamps. In case of leakage, just tighten the clamps.

Stainless tubing connected with heavy duty 1 inch reinforced hose is used for the "Dewatering Screw Jet" connections.

Figure 13 Page 23 shows and identifies the various hoses used together with their part numbers.

If you buy replacement hose locally, be sure the hose is wire reinforced. Otherwise, the hose will rupture during use.

Hose used to connect the carrier water from the Pulper to the Garbage Trough varies in length with each installation. To reorder, measure the length used on your trough. The hose used is standard heavy duty wire reinforced 1 5/8 inch radiator hose.

REMOVING THE DEWATERING SCREW AND PERFORATED SCREEN (See Figure 14 on Page 25)

1. Remove Drive Cover (11).
2. Loosen Drive Tension Idler (23) and remove Roller Drive Chain (20).
3. Now remove the two "half dog point" set screws (17) from the Worm Sprocket (19) and remove from shaft.
4. Back off the two set screws (44) from Pilot Bearing (15) so that Bearing Plate (14) can be removed.
5. Remove bolts (6) (5) and detach diverter (4).
6. The "Bearing Support" (29) is bolted and pinned to Bearing Plate (14) and should not be removed.
7. Detach the Magnetic Safety Switch from the Bearing Plate and without detaching the wiring, lay it by the motor while removing the Bearing Plate and Top Housing.
8. Remove the four 3/8"-16 Hex Nuts (13) that hold the Bearing Plate (14) and the Top Housing (3) to the top of the Tower. Lift the Bearing Plate from the Tower. Now gently pry off the Top Housing.
9. The Dewatering Screw (2) and the perforated Screen (1) are now exposed and can be removed by lifting them out.

If the screw is jammed with an object near the bottom, the screw can sometime be removed by hammering it from the top.

NOTE:

Never hammer directly on the screw shaft with anything other than a lead hammer. Insert a piece of hardwood between the screw shaft and an ordinary hammer. Improper hammering can cause serious and expensive damage that IS NOT COVERED BY WARRANTY.

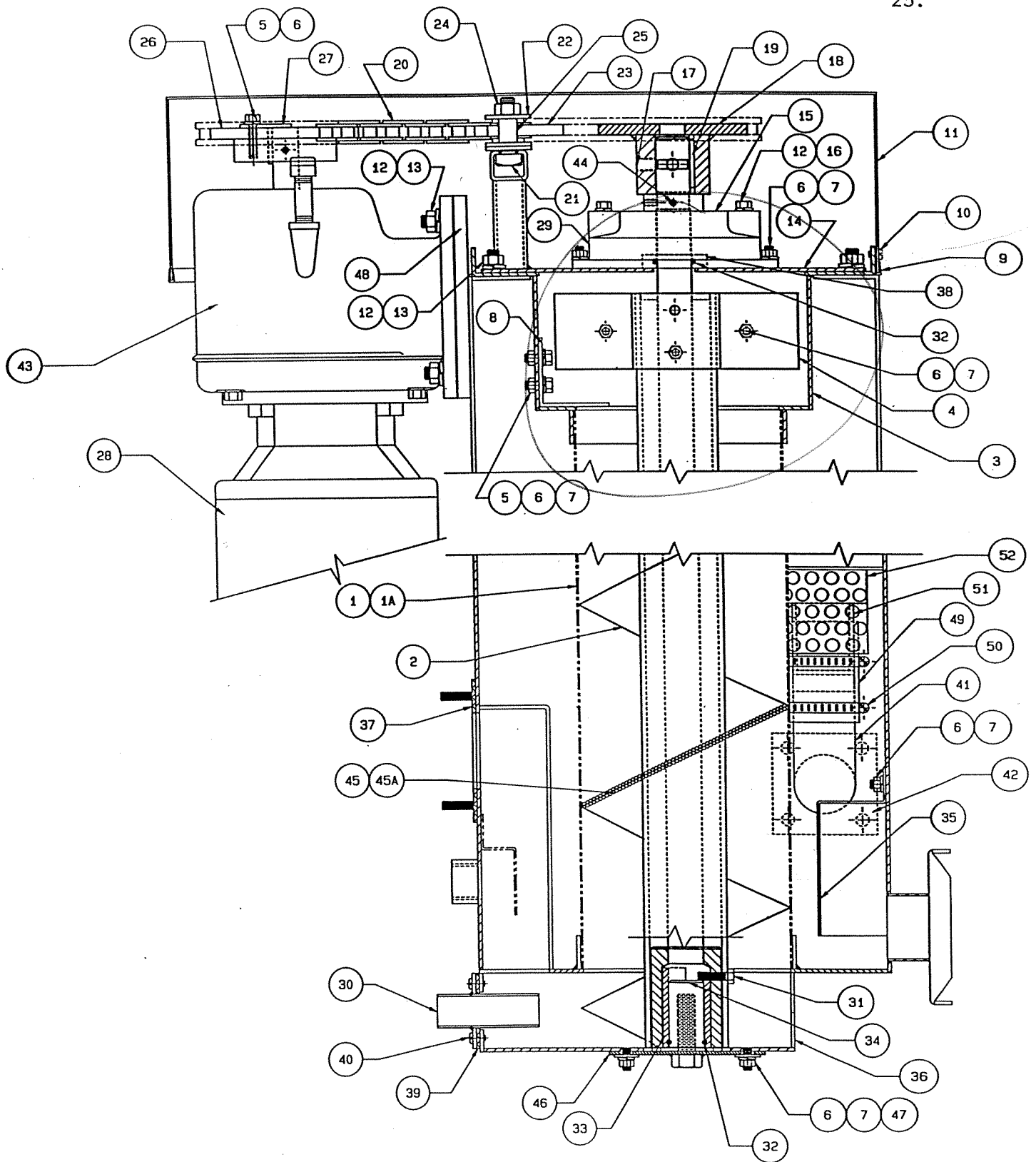
If the blocking object cannot be dislodged in the field, the jammed screw and screen may be shipped to the factory for possible correction and/or repair. Alternatively the unit may be replaced with a new screw and screen the old set being factory overhauled to used as a spare.

To reassemble the unit, reverse the described procedure. Do not forget to replace the diverter retaining washers. Be sure all screws are tight and all lock washers are reused. Be sure the magnetic safety switch is returned to the correct position.

10. A "jammed" screw is NOT COVERED BY WARRANTY FOR LABOR OR MATERIAL.

IMPORTANT:

1. The Dewatering Worm is positioned by the two "half dog" set screws being positioned and tightened into a groove at the top of the shaft. Be sure they are positioned before tightening. The worm generally has to be raised approximately 1/8" to align the screws. This is easily accomplished by lifting the worm via the Diverter (4).
2. Before reusing an old Worm or replacing it with a new Worm, check the condition of the Teflon Bearing Bushing (33) and its "O" Ring (32).



DEWATERING WORM AND WORM DRIVE

FIGURE 14

INDEX NO.	PART NUMBER	PARTS LIST-----DEWATERING WORM AND DRIVE	QNTY PER ASSMLY
1A	32-1610-101	SCREEN ASSEMBLY, 1/8" HOLES - 49 5/8" LONG	1
1B	32-1610-102	SCREEN ASSEMBLY, 1/16" HOLES - 49 5/8" LONG	1
2	42-1612-000	WORM ASSEMBLY, WITH LOWER HALF BRUSH	1
3	SHEET METAL KIT	TOP HOUSING	1
4	21-1602-800	DIVERter PADDLE, S/S	1
5	10-1106-420	HEX HEAD SCREW 1/4-20 X 3/4" LONG	3
6	10-1801-420	LOCK WASHER, 1/4", S/S	24
7	10-1900-420	HEX NUT, 1/4-20, S/S	23
8	SHEET METAL KIT	SCORER, S/S	1
9	65-7109-010	GASKET, U CHANNEL - PER FOOT	3
10	10-1003-832	PAN HEAD SCREW, 8/32 X 3/8"	4
11	SHEET METAL KIT	DRIVE COVER, S/S	1
12	10-1801-316	LOCK WASHER 3/8", S/S	12
13	10-1900-316	HEX NUT, 3/8-16, S/S	8
14	SHEET METAL KIT	BEARING PLATE	1
15	70-0455-301	PILOT BEARING, MFC X 1"	1
16	10-1112-316	HEX HEAD SCREW, 3/8-16 X 1-1/2" LONG, S/S	4
17	10-2106-316	SQUARE HEAD HALF DOG SCREW, 3/8-16 X 3/4" LONG	2
18	19-2100-104	KEY 1/4" X 1/4" X 1-1/2"	1
19	42-1612-101	PULPER WORM SPROCKET, #50 (MODIFIED)	1
20	70-0900-050	ROLLER CHAIN, #50, BLACK (28-1/2 LINKS - 35")	1
21	HARDWARE KIT	SQUARE HEAD BOLT 1/2-13 X 1-1/2" LONG	1
22	HARDWARE KIT	WASHER, 1/2", S/S	4
23	70-7438-416	IDLER SPROCKET, #50	1
24	HARDWARE KIT	HEX NUT, 1/2-13, S/S	1
25	HARDWARE KIT	BUSHING	1
26	42-1612-105	MOTOR SPROCKET, #50, PULPER MTR/REDUCER, 1" BORE	1
27	31-1608-018	SPROCKET RETAINER	1
28	55-5010-021	DRIVE MOTOR, 3/4 hp. "C" FACE (WAS 1/2hp 55-5008-019)	1
29	22-1602-400	BEARING SUPPORT	1
30	SHEET METAL KIT	DEWATERING SCREW JET	1
31	10-1111-420	SET SCREW, HEX HEAD, 1/4-20 X 3/8" LONG	1
32	75-7050-520	"O" RING, PUMP SEAL	2
33	42-1613-301	BUSHING, BOTTOM WORM BEARING, 1" X 1-3/8"	1
34	22-1602-601	SHAFT, BOTTOM WORM BEARING, PULPER	1
35	SHEET METAL KIT	PUMP INTAKE DIVERter	1
36	SHEET METAL KIT	TOWER ASSEMBLY	1
37	19-4204-900	INLET GASKET, PULPER DEWATERING, 8-1/4" X 4-3/4"	1
38	31-1608-015	BUSHING, TOP WORM BEARING, PULPER	1
39	19-4205-200	GASKET, PUMP INTAKE, 2-1/4" X 6"	1
40	10-1004-032	10/32 X 1/2" MACHINE SCREW, PAN HEAD	4
41	32-1612-501	ADAPTER, TRANSFER PUMP DISCHARGE, 90deg FLANGED	1
42	19-4201-500	GASKET DISCHARGE, 3" X 3"	1
43	70-6900-041	GEAR REDUCER-99 RPM (USE KEYSTONE 110, SAE90 LUBRICANT OR EQUIV.)	1
44	N.P.N.	SET SCREW, ALLEN HEAD, 1/4-28 X 1/4"	2
45	41-1603-102	BRUSH, WORM, UPPER (OPTION WITH LONG WORM ONLY)	1
45A	41-1603-101	BRUSH, WORM, LOWER (ALL UNITS)	1
46	32-1616-500	REMOVABLE BOTTOM PLATE FOR WORM (SPECIAL ORDER ONLY)	1
47	10-1800-420	WASHER, 1/4", FLAT, S/S	8
48	42-1612-102	SUPPORT PLATE, WORM DRIVE MOTOR, S/S	1
49	42-0655-604	HOSE COUPLING 1-5/8" X 3"	1
50	70-1000-527	#16 HOSE CLAMPS 13/16" TO 1-1/2"	2
51	65-5112-010	TUBING, S/S, 1-5/8" X 2" LONG	1
52	42-0660-100	ANTI SWIRL PLATE	1

{#21, 22, 24 &
25 ARE A KIT.}
P/N 70-0903-001

RECIRCULATING PUMP ASSEMBLY SYSTEM

An exploded view of the Recirculating pump system is shown in Figure 15 Page 28, along with its associated Parts List, Page 29. All pump parts are replaceable and it can be disassembled as shown in the exploded view.

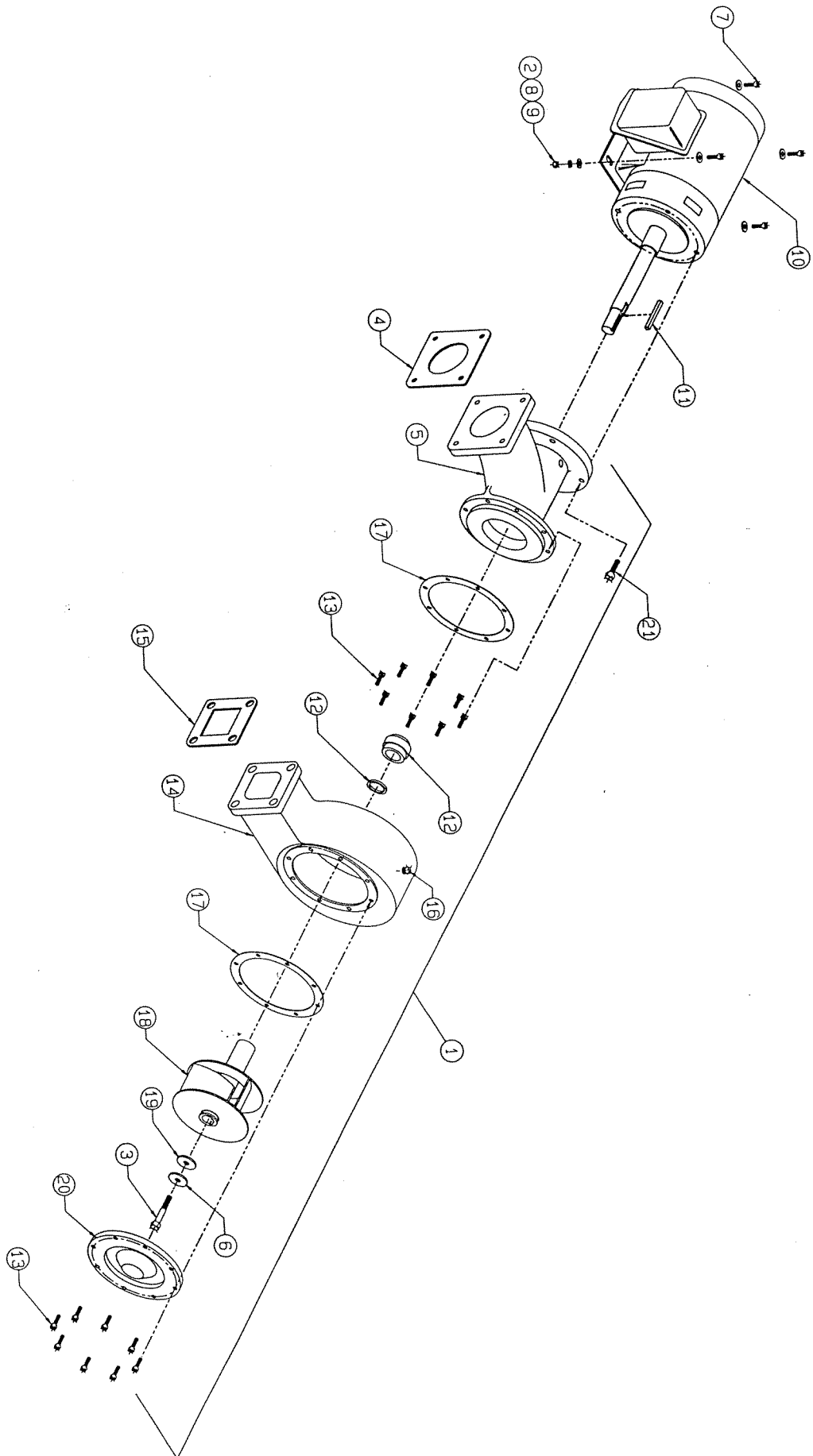
The part most likely to require replacement in this system is the shaft seal with "O" Ring (12) which can be replaced without removing the pump and motor assembly from the machine or breaking any plumbing connections. Drain the power wash tank and the pump casing and proceed as follows:

1. Remove the eight hex head screws (13) and remove the pump impeller cover (20) from the pump housing (14).
2. Remove the hex head screw (3), the stainless steel impeller screw washer (6) and the impeller gasket (19) from the end of the impeller shaft.
3. Pull the impeller (18) off of the impeller shaft. The key (11) may come off the shaft with the impeller. If it does not, remove it.

NOTE:

If the impeller does not pull off easily, use a wheel puller. In this case, replace the hex head screw (3) in the impeller shaft (without replacing the washers) (6 and 19) to protect the internal screw threads in the impeller shaft. Remove the impeller (18).

4. Slide the "O" Ring (12) off of the shaft and discard it.
5. Lubricate the shaft with light machine oil.
6. Using the pump seal extractor (Adamation Part No. 17-1300-500), pull the shaft seal (12) off of the shaft. Place the end of the extractor legs against the seal, squeeze the legs together so that the ends are inside the lips of the metal seal casing, push inward to depress the seal and then let the extractor arms spring outward to engage the lips of the seal casing. Withdraw the seal.
7. Clean the shaft, inspect it and thoroughly clean the shaft seal cavity. Oil the shaft and the shaft seal cavity with a light machine oil.
8. Lubricate the new shaft seal and the rubber base inside and out with a light machine oil.
9. Slide the new shaft seal on the shaft so that the internal rubber ring is toward the impeller (18). Slide the shaft seal all the way in. Be sure that the bottom of the seal goes all the way into the pump cavity and is seated properly. Tap the seal lightly around the perimeter of its metal casing to insure proper seating. This is best done with a special piece of plastic tubing. (Adamation Part No. 17-1301-400). Do not use metal! Observe the proper seating of the seal through the pump inlet.
10. Install the new "O" Ring.
11. Replace the key (11) on the impeller shaft, cover the motor shaft with never seize. Replace the impeller (18), the impeller gasket (19), the stainless steel impeller screw washer (6) and the hex head screw (3), in that order.
12. Check the impeller (18) for freedom of rotation. The impeller sleeve is designed so that when the shaft seal is properly seated and the impeller is fully tightened, the seal will be collapsed to the proper position and the impeller will rotate freely. If it does not rotate freely, recheck the seal for proper seating.
13. Replace the end plate (20).



RECIPROCATING PUMP ASSEMBLY SYSTEM

FIGURE 15

INDEX NO.	PART NUMBER	PARTS LIST-----RECIRCULATING PUMP ASSEMBLY SYSTEM	QNTY PER ASSMLY
1	32-0506-000	PUMP ASSEMBLY, WASH, 3hp, CLOCKWISE	1
2	10-1801-518	WASHERS, S/S, LOCK, 5/16"	4
3	10-5116-316	SCREW, HEX HEAD, 3/8-16 X 2" LONG (NYLOC)	1
4	19-4200-100	GASKET, PUMP INTAKE, RED RUBBER	1
5	31-0500-200	HOUSING, PUMP INTAKE, 3 hp (SEAL HOUSING)	1
6	19-1500-300	WASHER, IMPELLER	1
7	10-1110-518	SCREW, HEX HEAD, S/S, 5/16-18 X 1-1/4" LONG	4
8	10-1800-518	WASHERS, S/S, FLAT, 5/16"	8
9	10-1900-518	NUTS, S/S, HEXNUTS, 5/16-18	4
10	55-5016-035	MOTOR, WASH PUMP, 3hp, 208V/230V/460V, 60hz, 3PH.	1
11	19-2100-208	KEY, 3/16" X 3/16" X 2-1/2" LONG, S/S	1
12	75-7050-020	SEAL, 1" DIA, WASH PUMP W/"O" RING	1
13	10-1106-420	SCREW, HEX HEAD, S/S, 1/4-20 X 3/4" LONG	16
14	31-0500-100	HOUSING, PUMP, DISCHARGE, 3hp (IMPELLER)	1
15	19-4200-900	GASKET, PUMP, OUTLET	1
16	75-6200-002	PLUG, DRAIN PLUG, 1/4" N.P.T.	3
17	19-4204-100	GASKET, INSPECTION PLATE, 3 hp PUMP	2
18	42-0506-400	IMPELLER, WASH PUMP, 3 hp, S/S, WITH BLACK PLATE	1
19	19-4201-100	GASKET, 3/8" ID X 1-3/8" OD (IMPELLER)	1
20	21-0501-000	COVER, 3 hp, PUMP IMPELLER	1
21	10-1108-316	SCREW, HEX HD, 3/8-16 X 1"	4

RECIRCULATING PUMP MOTOR

The recirculating pump motor bearings are replaceable. Otherwise, a faulty motor should be replaced as a unit.

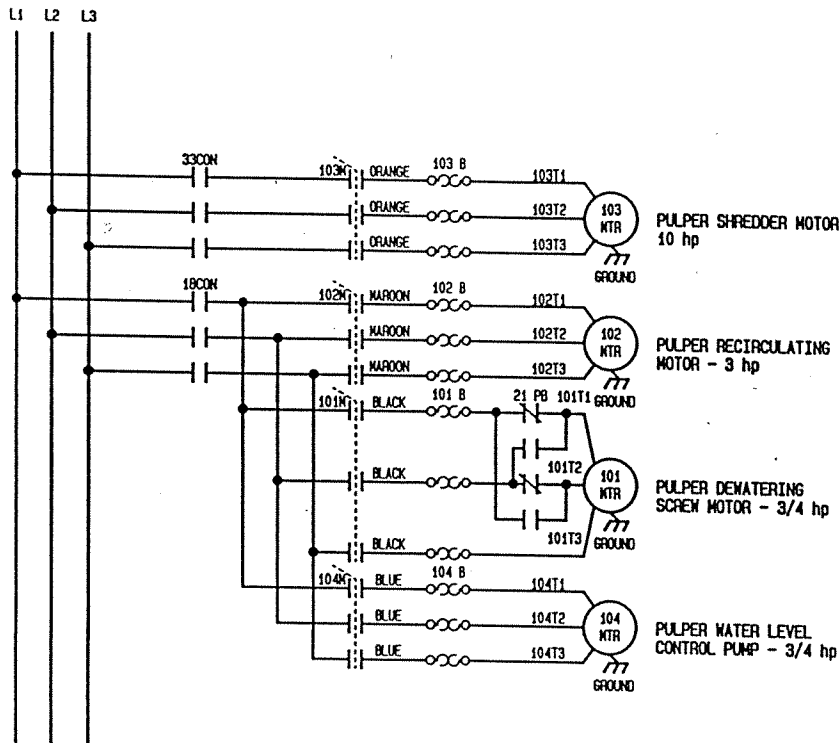
To remove the motor, disassemble the recirculating pump as shown in Figure 15. (It may be necessary to break the pump plumbing connection.) Then remove the motor from the pump intake housing (5) and from the mounting plate. To replace the bearings, disassemble the motor as shown in Figure 15 Page 28. When reassembling the pump and motor assembly, a new shaft seal with "O" ring (12) should be installed.

SECTION 5 - ELECTRICAL

LADDER WIRING DIAGRAMS

An Adamation Pulper comes with its Control Cabinet prewired. When used in connection with an associated dishmachine, the pulper Control Cabinet receives its power from the Dishmachine Control Cabinet and is interconnected to operate automatically with the dishmachine.

On a "Stand Alone" Pulper, the Control Cabinet is "Stub Wired". In this instance, the customer furnishes the proper "Disconnect" to the Control Cabinet.



LADDER DIAGRAM OF MOTORS FOR ALL PULPERS

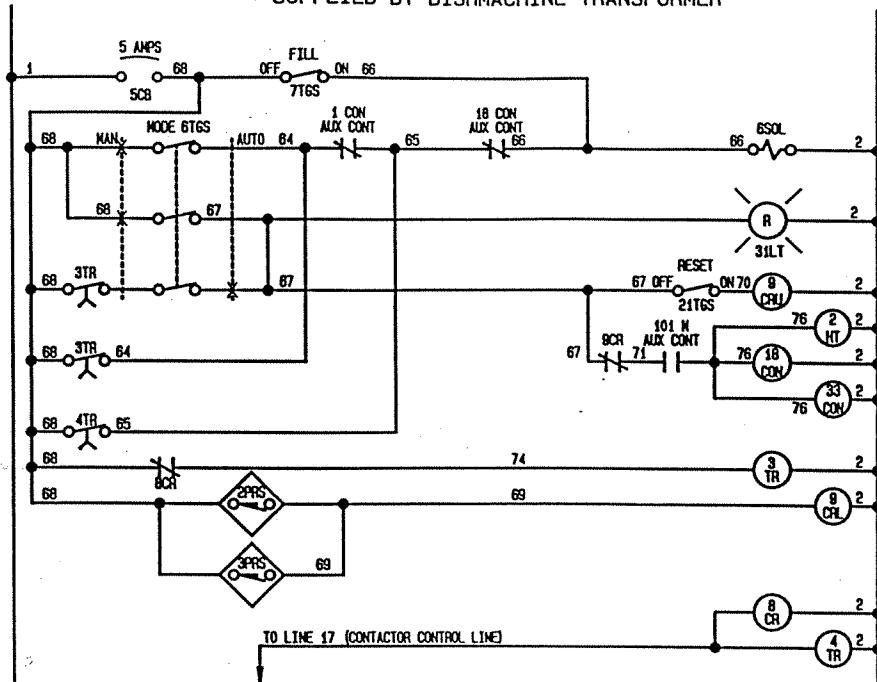
FIGURE 16

Figure 16 Page 30 is a ladder wiring diagram of all the motors included in the pulper.

Figure 17 Page 31 is a ladder wiring diagram of the Pulper Control Circuit used in conjunction with an Adamation Dishmachine.

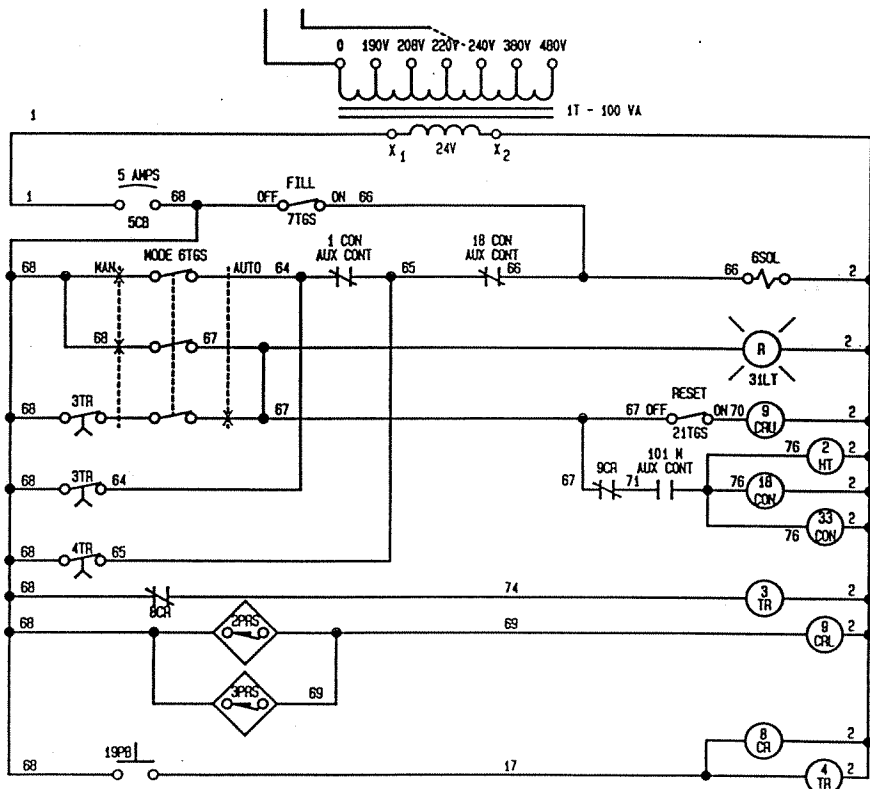
Figure 17A Page 31 is a ladder wiring diagram of the Pulper Control Circuit of a "Stand Alone" Pulper. This Cabinet contains its own transformer for the 24 volt control circuit.

NOTE: 24V BETWEEN LINES #1 AND #2 TO BE SUPPLIED BY DISHMACHINE TRANSFORMER



LADDER DIAGRAM OF PULPER CONTROL CIRCUIT FOR USE WITH AN ADAMATION DISHMACHINE

FIGURE 17



LADDER DIAGRAM OF PULPER CONTROL CIRCUIT FOR USE WITH A "STAND ALONE" PULPER

FIGURE 17A

ELECTRICAL TROUBLE SHOOTING PROCEDURES

All electrical trouble shooting procedures which follow require access to components and terminals within the electrical control cabinet. Before starting any trouble shooting procedures, remove the cabinet front (1) and the overload breaker molding (2) from the cabinet. (Refer to Figure 18, Page 33.)

WARNING

Use extreme care when working on components inside the electrical control cabinet. When power is supplied to the pulper, all exposed terminals in the cabinet carry either 208/230/480 volts.

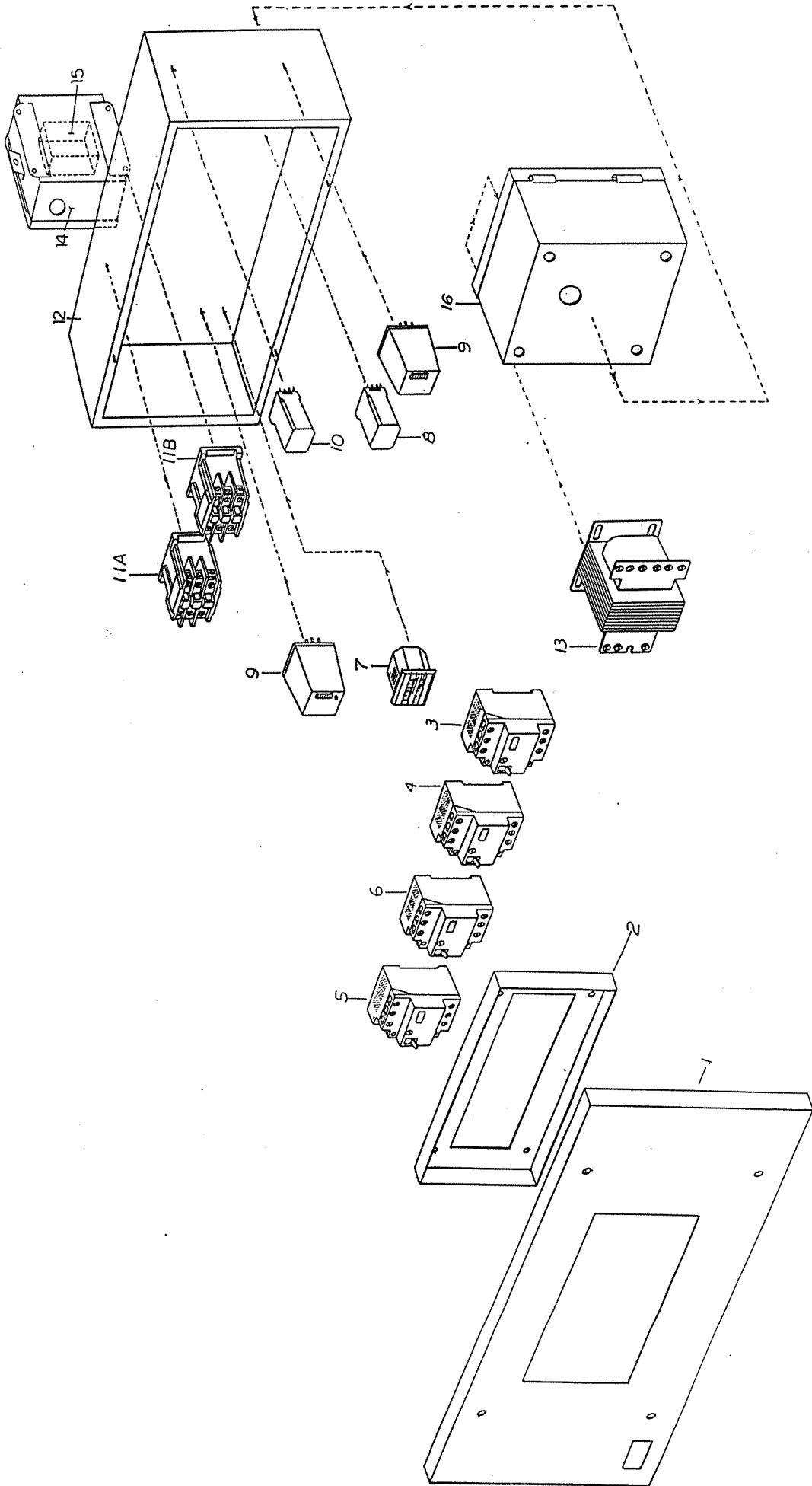
Before performing the trouble shooting procedures in this section, the serviceman must be completely familiar with the location of all controls as described in Section 3 (See Figure 6 on Page 10) and their function as outlined on Page 10 and wiring assembly drawings on Pages 36 through 39.

Before checking connections and wiring, be absolutely sure that input power to pulper is turned off and that all manual overload breakers are in the off position.

INCOMING POWER

Before trouble shooting any of the electrical parts or assemblies of the dishwashing machine, always verify that power is being supplied to the machine and that the power input is at the correct rating for the machine. This is normally 60-cycle, 3 phase, 3 wire, at 208/230/480 volts.

1. Turn off all manual overload breakers in the electrical control cabinet.
2. Turn on the building's power to the machine.
3. Using an A-C voltmeter, measure the phase-to-phase voltage across all three line terminals of the magnetic contactor. Each line should read the machine specified voltage. If not, the wiring between the building's power source and the magnetic contactor is defective. If the voltage at the line terminals of the magnetic contactor is correct and the pulper will not operate, the fault lies within the electrical circuits of the Pulper.



FULPER ELECTRICAL CONTROL PANEL

FIGURE 18

INDEX NO.	PART NUMBER	PARTS LIST-----PULPER ELECTRICAL CONTROL PANEL	QNTY PER ASSMLY
1	SHEET METAL KIT	ELECTRICAL CONTROL BOX FRONT PANEL	1
2	SHEET METAL KIT	CIRCUIT BREAKER CONTAINER	1
3	55-7381-794	3/4 HP DEWATERING SCREW MOTOR STARTER, W/AUX, 1MJ00 (208/230V)	1
	55-7382-451	ADAPTER FOR 3VU SERIES S/A MOTOR STARTER-BASE (208/230/460/480V)	1
	55-7381-792	3/4 HP DEWATERING SCREW MOTOR STARTER, W/AUX, 1MG00 (460/480V)	1
4	55-7381-757	3 HP. RECIRCULATING MOTOR STARTER, OMM00, (208/230V)	1
	55-7382-451	ADAPTER FOR 3VU SERIES S/A MOTOR STARTER-BASE (208/230/460/480V)	1
	55-7381-755	3 HP. RECIRCULATING MOTOR STARTER, OMK00, (460/480V)	1
5	55-7381-754	3/4 HP TOWER WATER LEVEL CONTROL MOTOR STARTER, OMJ00 (208/230V)	1
	55-7382-451	ADAPTER FOR 3VU SERIES S/A MOTOR STARTER-BASE (208/230/460/480V)	1
	55-7381-752	3/4 HP TOWER WATER LEVEL CONTROL MOTOR STARTER, OMG00 (460/480V)	1
6	55-7381-672	10 H.P. SHREDDER MOTOR STARTER, 3VE3000-2PA00 (208/230V)	1
	55-7382-352	ADAPTER FOR 3VE SERIES S/A MOTOR STARTER-BASE (208/230V)	1
	55-7381-757	10 H.P. SHREDDER MOTOR STARTER, OMM00 (460/480V)	1
	55-7382-451	ADAPTER FOR 3VU SERIES S/A MOTOR STARTER-BASE (460/480V)	1
7	55-7901-101	24V-A.C. HOUR METER TIMER (REPLACED BY PN.55-7901-102)	1
8	55-6850-602	PULPER CONTROL RELAY, PLUG IN, 24V (START/STOP)	1
	55-7000-006	PULPER CONTROL RELAY, SOCKET, 8 PIN OCTAGONAL (START/STOP)	1
9	55-7900-156	PULPER DELAY TIMER, SSAC, 24 VAC, 1 TO 1023 SECONDS	2
	55-7000-006	BASE, SOCKET, 8 PIN OCTAGONAL	2
10	55-6850-604	LATCH CONTROL RELAY FOR CHUTE AND COVER SWITCH, 24V, PLUG IN	1
	55-7000-007	BASE, SOCKET, 11 PIN	1
11A	55-1050-323	CONTACTOR, 40 AMPS, 24V	1
11B	55-1050-324	CONTACTOR W/AUX., 40 AMPS, 24V	1
12	SHEET METAL KIT	ELECTRICAL CONTROL PANEL HOUSING	1
13	55-7950-321	TRANSFORMER, ACME, 24V, 100VA (STAND ALONE PULPER ONLY)	1
14	55-0600-806	BOX, ELECTRICAL, 6"X 6"X 4", WATER TITE (DISCONNECT)	1
15	55-7400-041	SWITCH, 60amp, 3-P NON FUSED TOGGLE (HIGH VOLTAGE DISCONNECT)	1
16	19-1802-300	BOX, ELECTRICAL, 6"X 8"X 4", WATER TITE (STAND ALONE PULPER ONLY)	1

ELECTRICAL INSPECTION

The first step in any electrical trouble shooting procedure is thorough physical inspection of all wiring connections.

Check all wiring connections by hand to assure that both ends of all connection points are firmly and tightly secured. Use a screwdriver to tighten the connection points if necessary. Visually inspect all the connection points for evidence of rust, corrosion or other high interference material. If there appears to be the slightest evidence of this condition, separate the leads from the connection points and clean them both with fine sandpaper (0000 is recommended). Be sure that all the terminal connections are clean (shiny), that they fit together tightly and securely and that no contaminating material (food particles, moisture, dirt or dust, etc.) is present around or between the terminal connections. If after a thorough inspection the electrical problem has not been solved, continue reading until you find the correct heading for your particular problem.

SCHEMATIC WIRING DIAGRAMS

Figure 19 Page 36 is a schematic diagram of the 24 volt control circuit in the Adamation Control Panel for a single Pulper used in conjunction with an Adamation Dishmachine.

Figure 19A Page 37 is a schematic diagram of the 24 volt control circuit in the Adamation Control Panel used with a "Stand Alone" Pulper. This cabinet has an attached transformer for supplying power to the 24 volt control circuit.

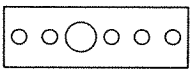
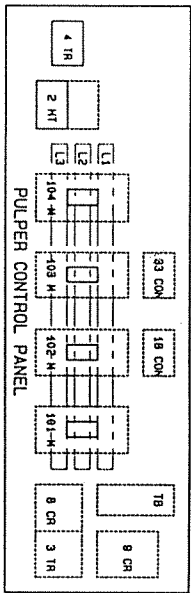
Figure 20 Page 38 is a schematic diagram of the line voltage control circuit in the Adamation Control Panel for a single Pulper used in conjunction with an Adamation Dishmachine.

Figure 20A Page 39 is a schematic diagram of the line voltage control circuit in the Adamation Control Panel used with a "Stand Alone" Pulper. This cabinet has an attached transformer for supplying power to the 24 volt control circuit.

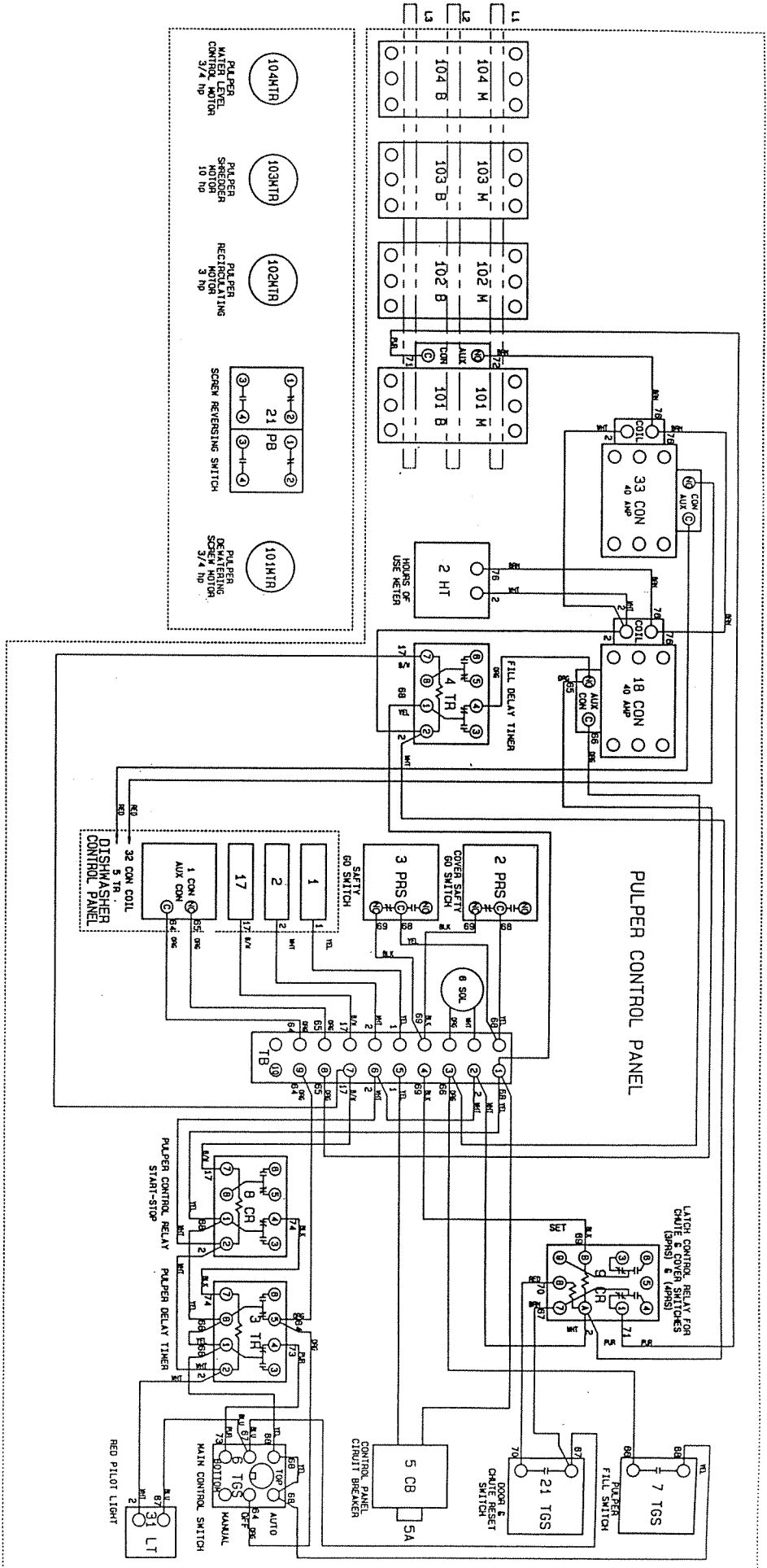
SCHEMATIC DIAGRAM OF CONTROL CIRCUIT FOR USE WITH AN ADAMATION DISMACHINE

FIGURE 19

NOTE: DRAWING SHOWS ALL SWITCHES BEFORE THE SYSTEM HAS BEEN ACTUATED.



- FILL SWITCH (7TS)
- RESET SWITCH (21 TGS)
- MODE SWITCH - AUTO/OFF/MANUAL (16 TGS)
- DEMATERING SCREEN REVERSING SWITCH (21 PB)
- RED PILOT LIGHT (31 LT)
- 24V CONTROL CIRCUIT BREAKER (5 CB)



104MTR
PULPER MAIN LEVEL SWITCHER 3/4 hp

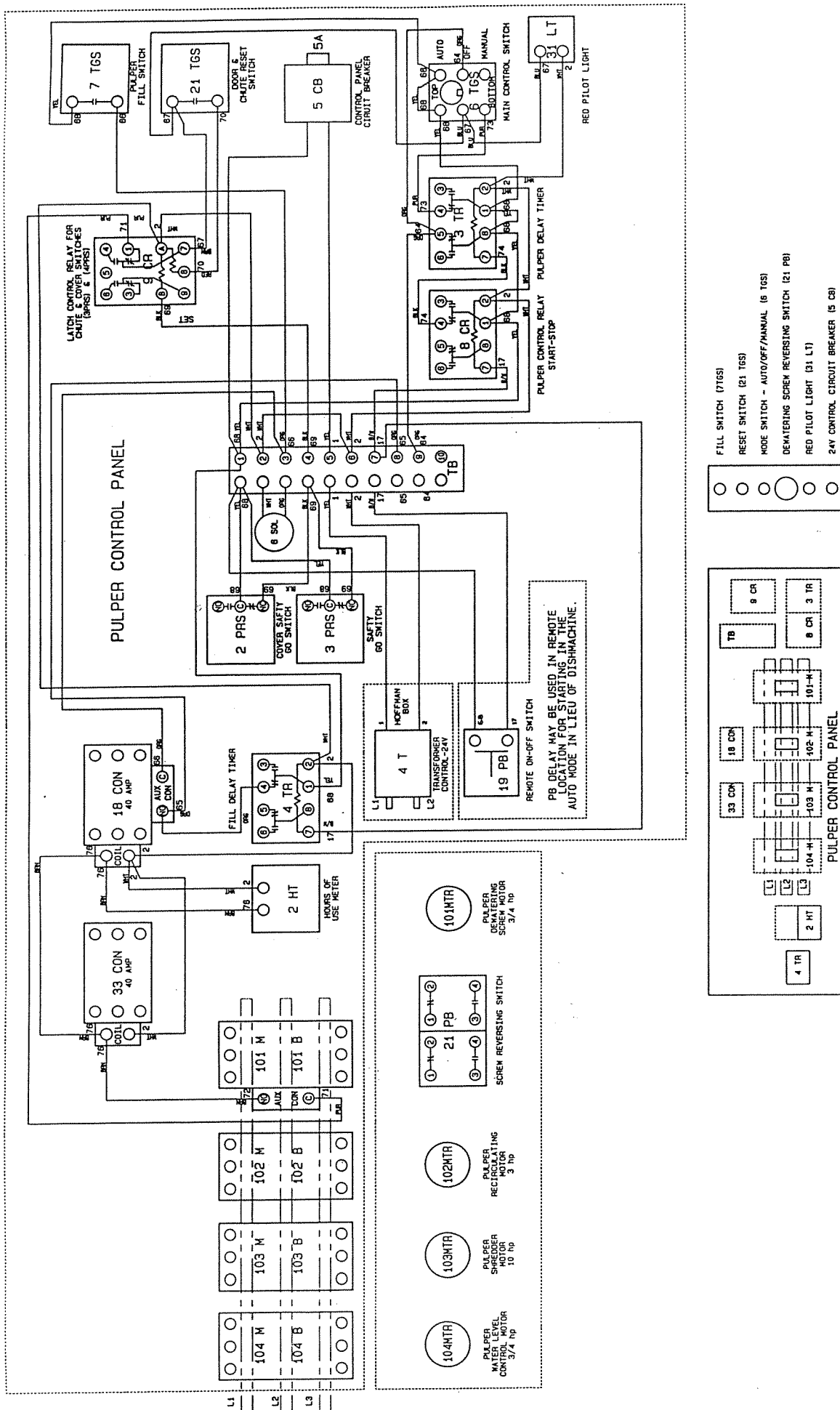
103MTR
PULPER SCREENER SWITCHER 10 hp

102MTR
PULPER RECHARGE MOTOR 3 hp

21 PB
SCREEN REVERSING SWITCH

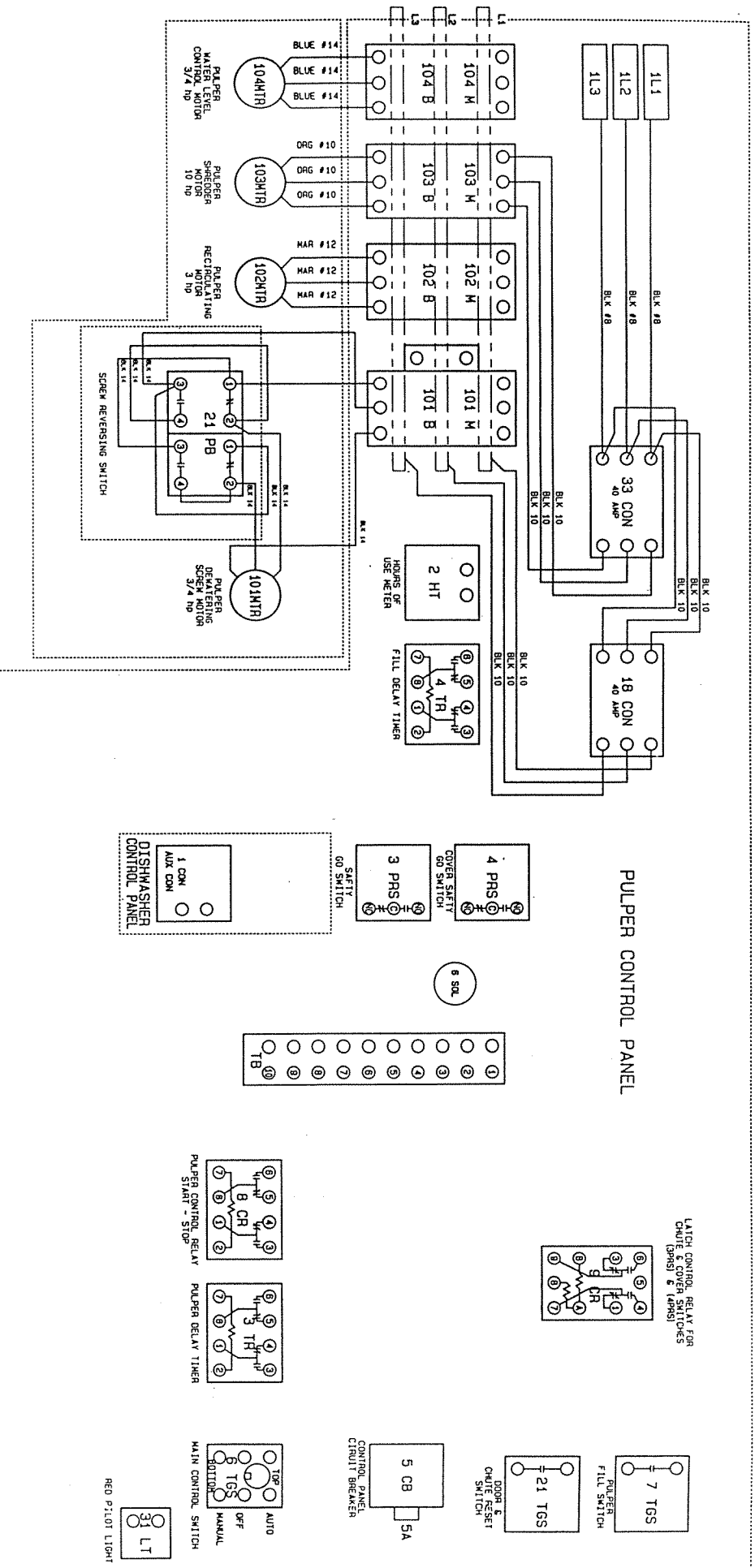
101MTR
PULPER DEMATERING SWITCHER 3/4 hp

- FILL SWITCH (7TS)
- RESET SWITCH (21 TGS)
- MODE SWITCH - AUTO/OFF/MANUAL (16 TGS)
- DEMATERING SCREEN REVERSING SWITCH (21 PB)
- RED PILOT LIGHT (31 LT)
- 24V CONTROL CIRCUIT BREAKER (5 CB)



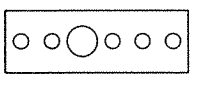
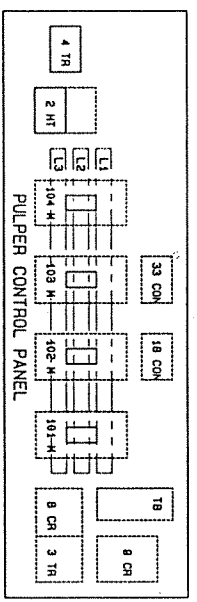
SCHEMATIC DIAGRAM OF CONTROL CIRCUIT FOR USE WITH A "STAND ALONE" PULPER

FIGURE 19A



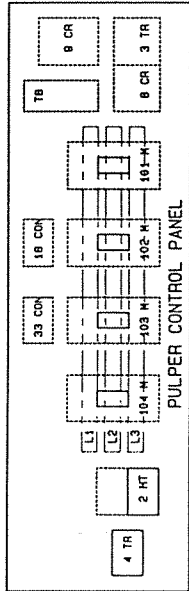
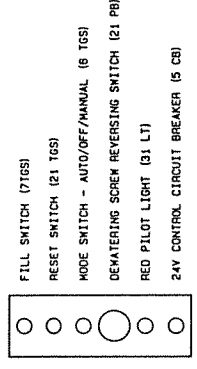
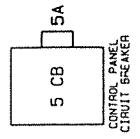
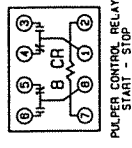
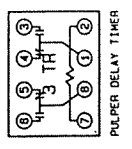
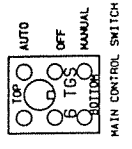
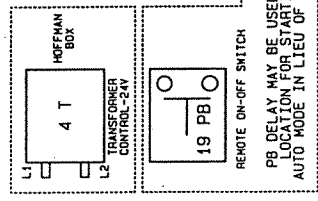
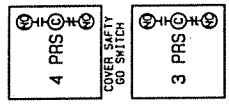
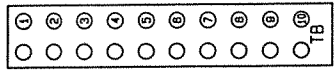
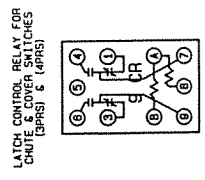
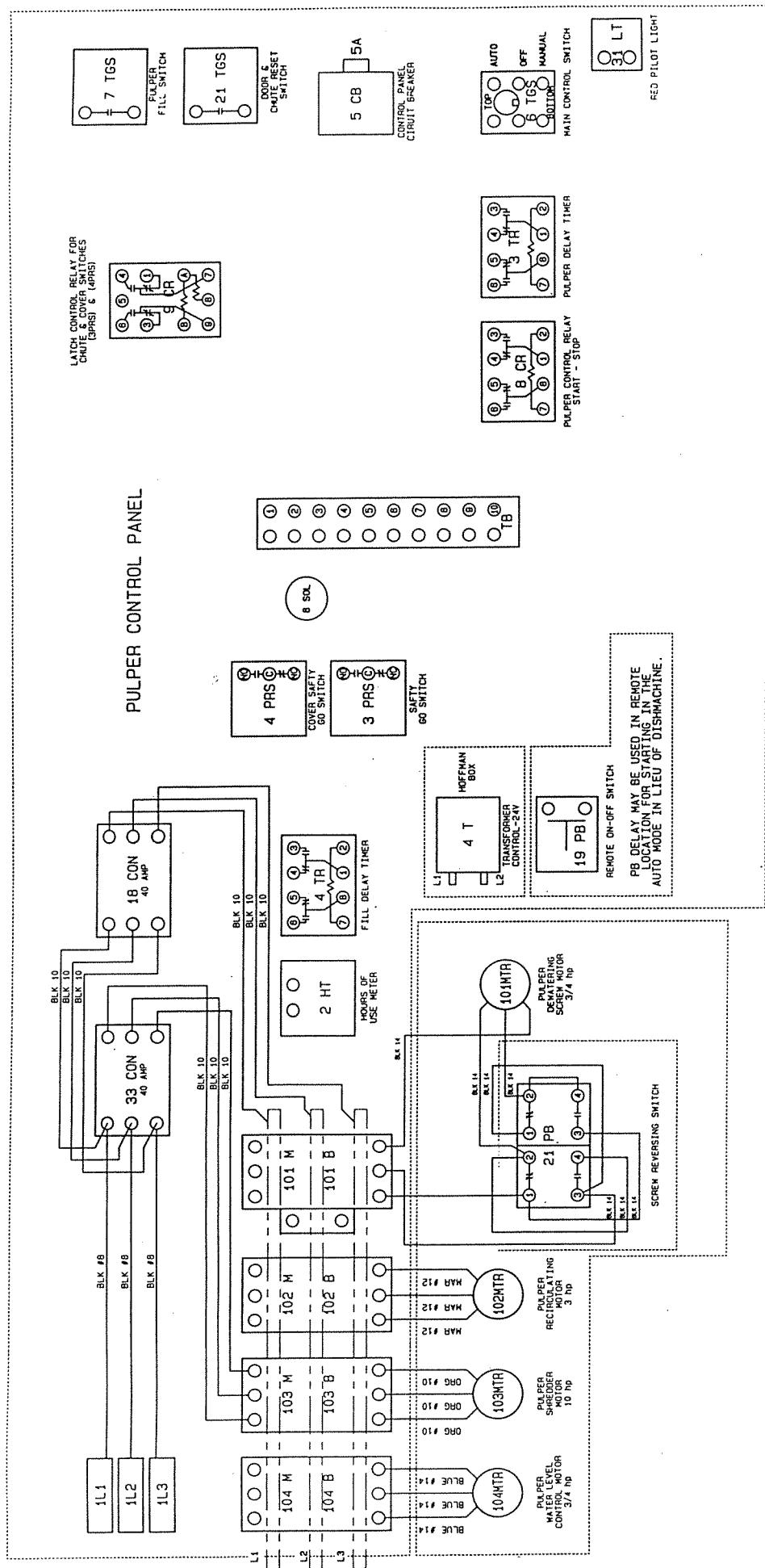
**SCHEMATIC DIAGRAM OF LINE VOLTAGE
FOR USE WITH AN ADAPTION DISMACHINE**

NOTE: DRAWING SHOWS ALL SWITCHES BEFORE THE SYSTEM HAS BEEN ACTUATED.



- FILL SWITCH (7 TGS)
- RESET SWITCH (21 TGS)
- MODE SWITCH - AUTO/OFF/MANUAL (6 TGS)
- DEENERGISING SCHEM REVERSING SWITCH (21 PB)
- RED PILOT LIGHT (31 LT)
- 24V CONTROL CIRCUIT BREAKER (5 CB)

FIGURE 20



NOTE: DRAWING SHOWS ALL SWITCHES BEFORE THE SYSTEM HAS BEEN ACTUATED!

SCHEMATIC DIAGRAM OF LINE VOLTAGE FOR USE WITH A "STAND ALONE" PULPER

FIGURE 20A

OPERATING CONTROLS IN THE PULPER CONTROL PANEL FOR A SINGLE PULPER USED IN CONJUNCTION WITH AN ADAMATION DISHMACHINE (FIGURE 19 PAGE 36)

1. Pulper Fill Switch (7 TGS) is a spring loaded toggle switch that must be continuously held in a down position to operate. This switch must be held down approximately one and one-half minutes to fill the Pulper with cold water prior to Pulper "Start Up".
2. Safety Reset Switch (21 TGS) is a spring loaded Toggle Switch. If either the Chute or the Shredder Chamber Cover has been opened, this switch must be momentarily pushed down to reset the Latch Control Relay For Chute and Cover Switch (9 CR). Otherwise the Pulper cannot be turned on. This switch must be momentarily pushed down to start the Pulper every time one of the doors is opened.
3. The Main Control Switch (6 TGS) is the third switch down on the right end of the Pulper Panel. It is a three position toggle switch. Positioned "Up" causes the Pulper to operate "Automatically" with the Dishmachine. Positioned "Down" causes the Pulper to operate continuously or in the "Manual" mode. The "Middle" position turns the Pulper "Off".
4. Screw Reversing Switch (21 PB) is a push button switch that in its normal position causes the Dewatering Screw to turn in its normal clockwise direction. When it is pushed in, the Dewatering Screw motor is reversed but only so long as the switch is "held in".
5. Red Pilot Light (31 LT) to show Pulper is on.
6. Circuit Breaker (5 CB) protects 24 volt control circuit. Push in to reset.

OPERATING UNITS IN THE ELECTRICAL CONTROL PANEL

1. To the right of the Control Panel beneath the panel cover is the Motor On-Off Overload Switch for the Pulper Dewatering Screw Motor (101 M).
2. To the left of the 101 M switch is the Pulper Recirculating Motor On-Off Overload Switch (102 M).
3. To the left of the 102 M switch is the Pulper Shredder Motor On-Off Overload Switch (103 M).
4. To the left of the 103 M Switch is the pulper water level control motor on-off Overload Switch (104M).
5. To the right of 101M switch is the Hour of Use Meter. From this timer, the accumulated hours of use can be obtained.

Within the panel there are two more "variable set" controls. These are Timers 3 TR and 4 TR. They are located beneath the face of the Control Panel and are not accessible to the Pulper Operator. They are set by a service man and perform as follows:

6. Pulper Delay Timer (3 TR) can be set from 0 to 17 minutes. When the Pulper is operating "Automatically" with the Dishmachine, this timer keeps the Pulper running for a preset time after the Dishmachine goes off. The purpose of this delay is to clear the Pulper Trough and Shredder Chamber preparatory to receiving another load of refuse when the Dishmachine is being operated in the "Full Rack Loading" timed mode. The normal setting for this timer is 45 seconds.
7. Timer Delay Pulper Fill Solenoid (4 TR) can also be set from 0 to 17 minutes. When the Pulper is operating "Automatically" with the dishmachine this timer operates the Pulper Cold Water Fill Solenoid (6 SOL) when the Dishmachine goes on. The purpose of this operation is to assure a plentiful supply of water to the Pulper until the "Prewash Pump" begins supplying waste water from the Dishmachine. Depending upon the refuse to the Pulper, the setting for this timer is 30 seconds to 3 minutes. Heavy plastic and paper loading to the Pulper requires more water than does normal garbage loading hence a longer setting time.

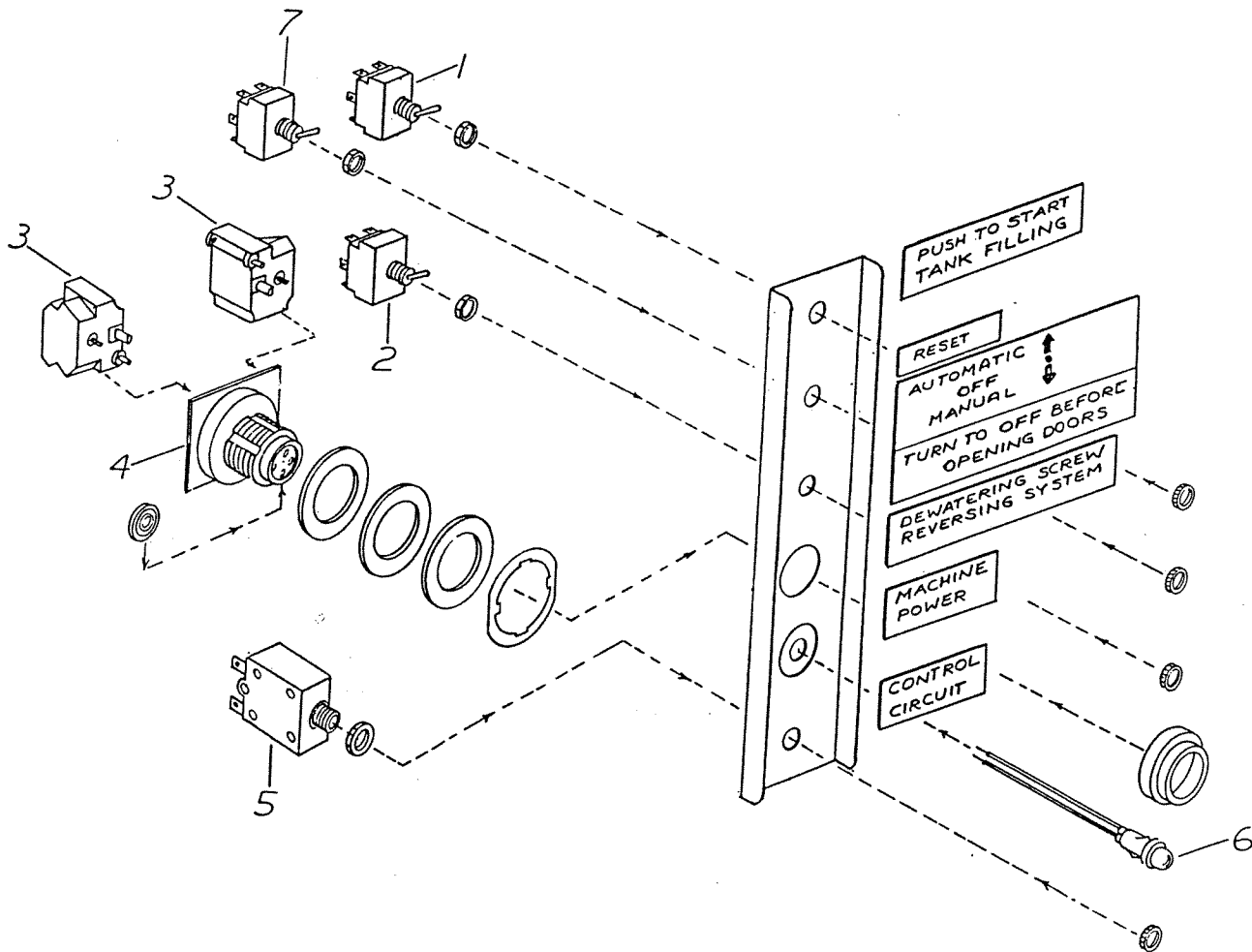
At the beginning of the washing period, the Pulper "Main Control Switch" (6TGS) is generally switched to "Automatic" and left there until the end of the washing period. It is switched to "Manual" for clean-up and then to "OFF" until the next washing period. The only controls required by the "Operator" during normal operation are located to the right of the Control Panel.

The Operating Controls for a "Stand Alone" Pulper (See Figure 19A Page 37) are essentially the same as just described with the following exceptions:

1. The 24 volt power comes from a contained Transformer (4T) instead of the Dishmachine Control Panel.
2. Instead of being turned "On or Off" by the Dishmachine Control Panel when the Pulper Mode Switch is in the "Automatic" position, the Pulper is turned "On or Off" by the Operator from the Remote "On-Off" Switch (PBL9). This switch can be located in any convenient place.
3. Since there is no "Transfer Pump" from the Dishmachine, the red wires from the Auxillary switch on (33 Con) that intercept 5TR and 32CON in the Dishmachine Panel are removed.

Figure 20 on Page 38 and Figure 20A on Page 39 are Schematic Diagrams of the Line Voltage circuits in the Control Panel corresponding to the two previously described Pulper Combinations.

An exploded view of the Electrical Control Switches is shown in Figure 21 along with its associated Parts List are on page 42.



ELECTRICAL CONTROL SWITCHES

FIGURE 21

INDEX NO.	PART NUMBER	PARTS LIST-----ELECTRICAL CONTROL SWITCHES	QNTY PER ASSMLY
1	55-7400-311	SWITCH, OFF (MOMENTARY ON), SPST, SPRING LOADED (TANK FILLING)	1
2	55-7400-304	SWITCH, DPDT, 2 X 469, (AUTO/OFF/MANUAL)	1
3	55-7400-506	CONTACT BLOCK, BACK, 2 PARTS (DEWATERING REVERSING SCREW)	1
4	55-7400-471	SWITCH, SQUARE "D" (DEWATERING REVERSING SCREW)	1
5	55-0970-002	CIRCUIT BREAKER, 5 AMP	1
6	55-2860-802	PILOT LIGHT, RED, 24 VOLT	1
7	55-7400-311	SWITCH, OFF (MOMENTARY ON), SPST, SPRING LOADED (RESET)	1