
TECHNICAL MANUAL

FOR

VOLUME BAGGING ICE DISPENSERS

MODELS

SD-1400, SD-2000, SD-2500
SD-3000, SD-5000 & LP-3000

MGR EQUIPMENT CORP.
22 GATES AVENUE
INWOOD NY 11096
(516) 239-3030

TABLE OF CONTENTS

CHAPTER 1 - INTRODUCTION.....	PAGE 1-1
CHAPTER 2 - INSTALLATION.....	2-1
CHAPTER 3 - OPERATION AND MAINTENANCE.....	3-1
CHAPTER 4 - TROUBLE SHOOTING.....	4-1
CHAPTER 5 - COMPONENTS PARTS LIST.....	5-1

CHAPTER 1. INTRODUCTION

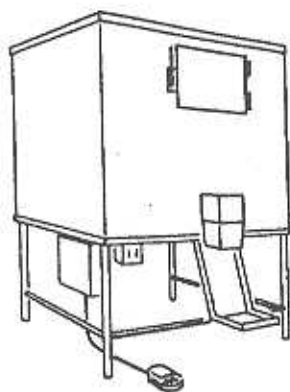
It is important that the initial installation of the dispenser be accomplished in a proper manner. To obtain the maximum use and satisfaction from its many outstanding features, this volume bagging dispenser should be installed and operated properly. Taking a few minutes to read this manual is time well spent in learning about the dispenser.

DATA

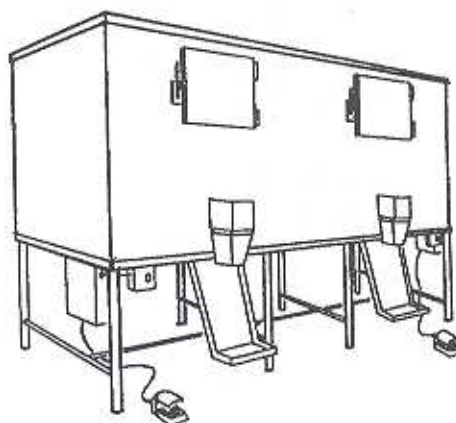
MODEL NO.	LENGTH	DEPTH	HEIGHT	APPROX. STORAGE CAPACITY	POWER SUPPLY REQ'D.	FULL LOAD AMPS	FUSE SIZE
SD-1400	60-1/4"	54-1/4"*	46"	1400 LBS.	208/60/1 230/60/1	11.0	30A
SD-2000	72-1/4"	56-1/4"*	48"	2000 LBS.	208/60/1 230/60/1	11.0	30A
SD-2500	72-1/4"	56-1/4"*	58"	2500 LBS.	208/60/1 230/60/1	11.0	30A
SD-3000	86-1/4"	56-1/4"*	60"	2800 LBS.	208/60/1 230/60/1	16.5	30A
SD-5000	139-1/4"	56-1/4"*	58"	5000 LBS.	208/60/1 230/60/1	22.0	30A
LP-3000	84-1/4"***	56-1/4"	72"	2800 LBS.	208/60/1 230/60/1	16.5	30A

*Allow 12" behind unit for servicing.

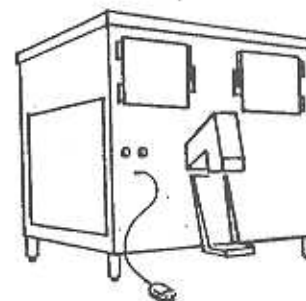
**Allow 12" each side for servicing.



SD-1400, SD-2000,
SD-2500, SD-3000



SD-5000



LP-3000

CHAPTER 2. INSTALLATION

UNCRATING

MGR dispensers are strongly crated to insure delivery in good condition under ordinary handling by common carriers. However it is important that inspection for possible damage, in transit, be made immediately upon receipt of the dispenser. Any visible damage to the crate or to the dispenser should be specifically noted by the person receiving the dispenser on the carrier delivery receipt and a claim filed with the carrier.

Carefully uncrate the dispenser. If available, a forklift should be used to move the dispenser. The easiest way to lift the unit off the skid is to lift it off with the forklift (or jacks). For best results, on SD dispensers, use long 4 x4's under the leg cross bracing. The unit can be picked up from either side. Do not drag unit across the floor; such action can result in damage to the legs.

LOCATION

Set the unit in the desired location. (Allow a minimum of 12" rear clearance for all SD dispensers and 12" clearance on both sides for the LP dispenser.) On SD dispensers side clearance is unimportant. If necessary the rear area can be reached from under the unit.

Once the dispenser is set in the desired location, use a level to even the top of the unit. Adjust the bullet feet as necessary to assure best operation of the ice-making machine and to direct ice meltage into the drain system.

DRAINS

The dispenser is provided with a 1" MPT drain located under the center of the unit. This line should be connected to an indirect waste line as necessary to comply with local codes. Alongside of unit drain, on all SD units is a safety overflow drain. The top of this drain is located 1" above the unit drain. This should not be connected. When it overflows, it indicates that the main drain is clogged and should be checked and cleared of obstructions.

Dispensers equipped with bag holders require a $\frac{3}{4}$ " MPT drain line to an indirect waste line.

Dispensers specified with Vogt pans are supplied with $\frac{3}{4}$ " FPT drain lines located on the top rear of the dispenser.

Clean and flush the inside of the dispenser with plain water and check all drain lines to make sure there is no stoppage or leaks.

POWER REQUIREMENTS

CAUTION

THE DISPENSER IS SET TO OPERATE ON
208/230 V., 60 HZ., 1 PH. ALTERNATING CURRENT.
DO NOT CONNECT TO ANY OTHER SOURCE OF
POWER AS PERMANENT DAMAGE MAY RESULT.

Supply a 208/230 V., 60 HZ., 1 PH. , 30 AMP power supply to the main junction box on the dispenser. Make sure the dispenser is properly grounded in addition to the required neutral.

Motor size is as follows for various units:

SD-1400.....	(2) $\frac{3}{4}$ H.P.
SD-2000.....	(2) $\frac{3}{4}$ H.P.
SD-2500.....	(2) $\frac{3}{4}$ H.P.
SD-3000.....	(3) $\frac{3}{4}$ H.P.
SD-5000.....	(4) $\frac{3}{4}$ H.P.
LP-3000.....	(3) $\frac{3}{4}$ H.P.
Optional.....	(1) $\frac{1}{10}$ H.P. Blower Motor

Be sure to provide a power supply disconnect. This should be located within sight of the dispenser. When unit is being serviced, the unit should be disconnected from the power source for safety reasons. Never enter the dispenser unless power is off, a notice is posted on the disconnect switch, and a "LOCK-OUT" is used.

ICE MACHINE INSTALLATION

Follow manufacturer's directions for installing the ice machines. If necessary, seal the ice machine to the dispenser with silicone caulking. Secure ice machine to bin to avoid toppling.

Dispenser is now ready to operate. If ice maker is equipped with a bin thermostat, it is recommended that the bin thermostat initially be set about one-third down from the top. Initially fill the bin $\frac{1}{3}$ full and then remove the ice. Repeat this process until the unit is filled to the bin thermostat level. This procedure is recommended when the dispenser is installed in high ambient rooms. It permits the unit to cool down and reach equilibrium conditions without excess melting and refreezing.

CHAPTER 3. OPERATION AND MAINTENANCE

OPERATION

These units are designed to function by means of foot pedal operation or an automatic timer system. For dispensers having the automatic bagger, there is a selector switch mounted on the front of the unit. Other dispensers are provided with an on-off switch.

Models SD-1400, SD-2000, SD-2500 and SD-5000 are provided with a single agitator pushbutton located on the front of the unit. Models SD-3000 and LP-3000 are provided with dual agitator pushbuttons located on the front of the unit. The agitators are driven by two (2) separate gear motors. When agitation is necessary use lower agitator first then use upper agitator. We recommend using a minimum of agitation (two to three second burst) to avoid crushing the ice with results in bridging.

Allow the dispenser to fill with ice. To dispense ice, place the bag wicket (if so ordered) into two mounting holes located about 2" below the ice spout. Automatic bag dispenser system will now blow bag open and ice will fill automatically. Timer has an adjustment to increase or decrease fill time. Adjust timer until desired level of ice in bag is obtained.

If dispenser is to be foot pedal operated, set on-off switch to the "on" position. Upon demand ice will be dispensed. This system is recommended for filling 50 pound bags and carts.

NOTE

If the ice has been standing in the dispenser for a period of 12 hours or more, and depending on the ice conditions, bridging may occur. The tendency is for the ice to be removed from the lower area because of the action of the feed screw and the lower agitator. After a quantity of ice is removed, if the flow diminishes, it may be necessary to utilize the agitator pushbutton to cause the ice to un-bridge and fall down. As previously stated, short pushes on the pushbutton (two to three second burst) are all that is necessary to bring the ice down.

Continued churning of the ice, particularly when the dispenser is full, will cause broken ice cubes and, more often than not lead to the build up of big ice balls. Ultimately, this can result in serious damage to the dispenser. When ice balls become excessive, it is recommended that the dispenser be shut down and ice removed. It is best to adjust the level of the ice in the unit to correspond to the daily requirements of the consumer.

This way the amount of ice remaining in the bin will be kept to a minimum and your dispenser will operate more efficiently. In cases where the ice maker is not equipped with a bin thermostat, the use of a seven day timer clock can be beneficial. If daily demand varies with the day of the week, ice production can be increased or decreased to compensate for its use.

For operational data concerning the ice maker, see ice maker manual.

MAINTENANCE

We have had units out in the field for periods of 5 to 10 years without any maintenance. We do recommend periodic preventative maintenance to assure continued trouble free operation. Scheduled maintenance will depend on the amount of activity of the dispenser. Units at such installations as airlines operate 24 hours per day, seven days a week. Under these conditions, once a year servicing is recommended.

WARNING

DISCONNECT POWER TO DISPENSER BEFORE PERFORMING ANY MAINTENANCE

1. Interior – Periodically clean and flush with plain water only.
2. Exterior – For aluminum exterior use only a soft cloth moistened with warm water and mild soap. Be sure to rinse and wipe dry. Do not use strong soaps, abrasives, or steel wool.
-For stainless steel exterior use any recognized stainless steel cleaner, polish or scotch-brite to clean the bin.
3. Drive Mechanism:
 - a. Periodically check drive mechanism for alignment of chains and sprockets. Roller chain should track smoothly. Chain jumping is indicative of sprocket misalignment. If teeth of sprockets are worn (sharp points) these should be replaced to avoid jumping.
 - b. Keep chain lightly lubricated.
 - c. Grease all bearings at front, rear or sides of dispenser.

4. Gear Reducer and Electric Motors

The gear reducer and electric motor are capable of operating for long periods with minimal maintenance. Periodically clean dirt accumulations; especially in and around vent openings, preferable by vacuuming. At the same time check that electrical connections are tight.

Once a year or after 2,000 hours of operation drain and re-fill gear reducers with AGMA #4 gear oil. If AGMA #4 gear oil is not available, use multi-purpose gear oil SAE #90.

WARNING

POWER SWITCH SHOULD BE DISCONNECTED WHEN SERVICING OR CLEANING INTERNAL COMPONENTS

5. Electrical Components
 - a. Check that all electrical connections are tight.
 - b. Check electrical contacts for pitting. These should normally be replaced. However, a good mechanic can clean and adjust the contacts.

CHAPTER 4. TROUBLE SHOOTING

SYMPTOM	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
UNIT FAILS TO OPERATE.	1. Check line voltage. Be sure voltage is 208-230/60/1. 2. If line voltage O.K. If steps 1 & 2 fail to correct problem: Be sure to <u>disconnect normal power source</u> .	1. Replace fuse or reset circuit breaker. 2. Check 15A fuse located in junction box on dispenser. Check feed screw to be sure it is free to operate. Put a 230V. Test line across motor leads directly in the junction box. If motor operates, problem is then in the actuator circuit. Trace electrical circuit to locate problem. If motor fails to operate, check motor further with the possibility of replacement.
MOTOR OPERATES BUT UNIT DOES NOT DISPENSE ICE.	1. Check drive system, be sure feed screw and agitators are free to turn.	1. Check chain drives and gear reducers for damage. Be sure shaft and sprocket keys are in place.
FUSES BLOWN	1. Overload in system. 2. Foreign object wedged in bin.	1. Clean out and start again. 2. Clean out and start again.
RELAYS CHATTER	1. Low voltage. 2. Points on relays are pitted. 3. Unit overloaded with ice.	1. Check voltage supply or for inadequate wiring. 2. Clean points with file or emery cloth. 3. Lower ice in bin.
EXCESSIVE NOISE FROM GEAR MOTOR.	1. Insufficient lubrication. 2. Bearings worn.	1. Check oil level. 2. Replace gear motor.

SYMPTOM	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
DRIVE CHAIN SKIPS AND JUMPS	<ol style="list-style-type: none"> 1. Foreign objects blocking mechanism. 2. If there are no foreign objects, verify that chain drives are tight. 	<ol style="list-style-type: none"> 1. Free operation of feed screw and agitators. 2. If necessary, tighten the chains. <p>After long periods of idleness, ice may have re-frozen and chain-jumping will occur until ice is broken loose.</p> <p>To compensate for frequent occurrences, it is suggested the bin thermostat be lowered to balance ice storage with ice usage.</p>
WATER LEAKING ON FLOOR	<ol style="list-style-type: none"> 1. Main drain and /or overflow clogged. 2. Inadequate drain line. 	<ol style="list-style-type: none"> 1. Blow out or clean with wire. 2. Replace.
WATER DRIPPING OUT OF SPOUT	<ol style="list-style-type: none"> 1. Unit not level. 2. Excessive water discharge from cuber. 	<ol style="list-style-type: none"> 1. Level unit. 2. Adjust cuber.
BAG DISPENSER OPENING MORE THAN ONE BAG AT A TIME	<ol style="list-style-type: none"> 1. Wire wicket not inserted properly. 2. Bags defective. 	<ol style="list-style-type: none"> 1. Bend (spring) wicket and re-install so bags are tight to bag holder. 2. Replace.
INSUFFICIENT ICE PER BAG	Time cycle too short.	Adjust timer.
BAGS DON'T OPEN	<ol style="list-style-type: none"> 1. Bags fused together. 2. Blower fan not working. 	<ol style="list-style-type: none"> 1. Change bags 2. Check for clogging or replace.

CHAPTER 5. COMPONENTS PARTS LIST

DESCRIPTION	PART NO.	QUANTITY — MODEL					
		SD-1400	SD-2000	SD-2500	SD-3000	SD-5000	LP-3000
ELECTRIC MOTOR	M400349	2	2	2	3	4	3
GEAR REDUCER	M400490	2	2	2	3	4	3
BEARING (2 HOLE PILLOW)	M300259	7	7	7	7	14	6
BEARING (2 HOLE FLANGE)	M300260						2
BEARING (4 HOLE FLANGE)	M300261	1	1	1	1	2	2
SPROCKETS	50BS	SEE PAGE 5-2 FOR SPROCKET PARTS LIST					
ROLLER CHAIN #50	50RC	A/R	A/R	A/R	A/R	A/R	A/R
UPPER AGITATOR	SK-223-101	2					
UPPER AGITATOR	SK-101		2	2	2	4	
UPPER AGITATOR	SK-98-101						2
LOWER AGITATOR	SK-223-102	1					
LOWER AGITATOR	SK-102		1	1	1	2	
LOWER AGITATOR	SK-98-102						1
FEED SCREW	SK-223-103	1					
FEED SCREW	SK-103		1	1	1	2	
FEED SCREW	SK-98-103						1
WIPER SHAFT	SK-98-104						1
RELAY	M200346	2	2	2	3	4	3
FOOT PEDAL	M400345	1	1	1	1	2	1
PUSHBUTTON	M400486	1	1	1		2	
P.B. CONTACT BLOCK	M400487	1	1	1		2	
PUSHBUTTON	M400491				2		2
P.B. CONTACT BLOCK	M400492				2		2
ON-OFF SWITCH	M400493	1	1	1	1	2	1
FUSEHOLDER	M400268	1	1	1	1	2	1
FUSE (30A)	M400069	2	2	2	2	4	2
DOOR LATCH	M600281	1	1	1	1	2	2
DOOR HINGE	M600280	2	2	2	2	4	4
<u>OPTIONAL EQUIPMENT</u>							
BAG HOLDER	M200322	1	1	1	1	2	
BAG HOLDER	M200323						1
SELECTOR SWITCH	M400494	1	1	1	1	2	1
TIMER	M400495	1	1	1	1	2	1
BLOWER MOTOR	M400496	1	1	1	1	2	1

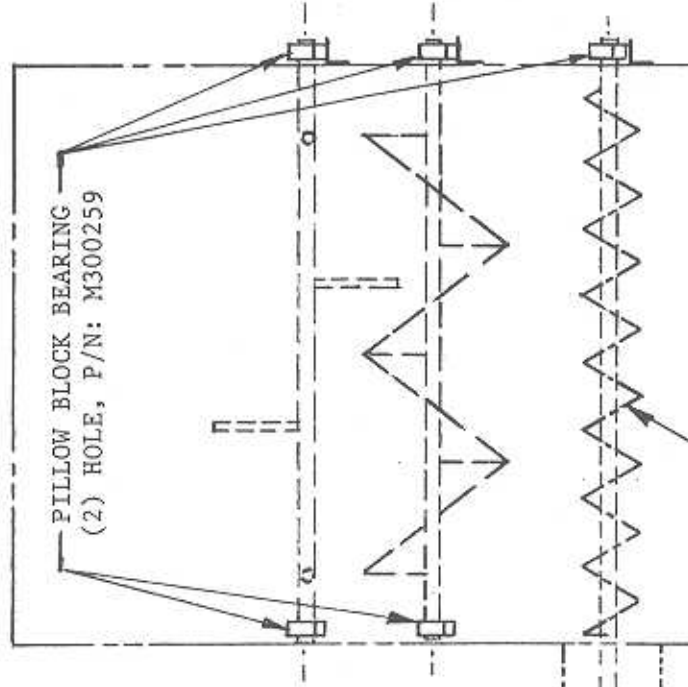
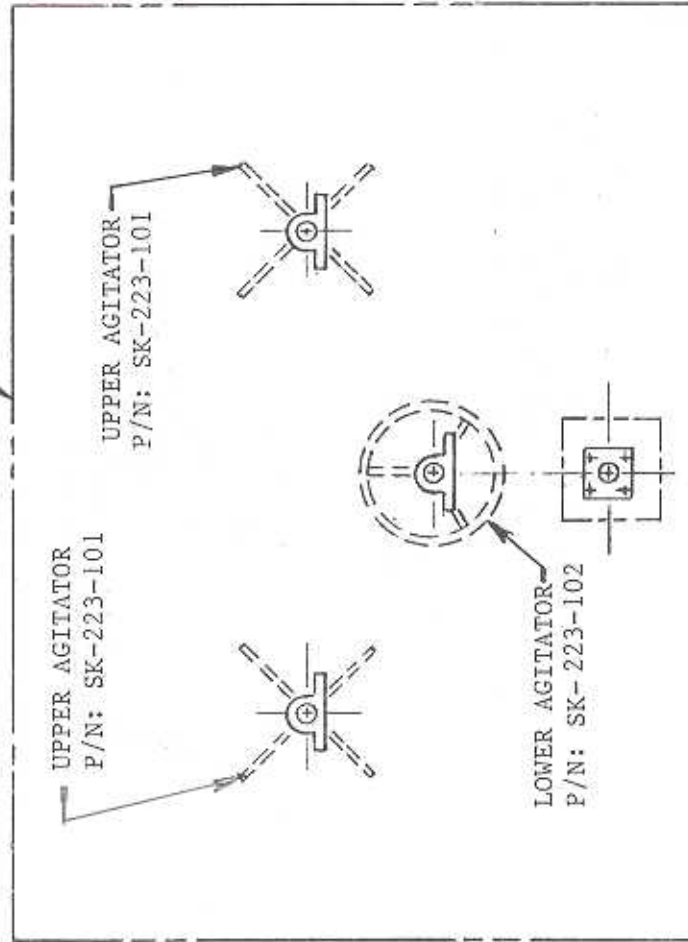
CHAPTER 5. SPROCKET PARTS LIST

SPROCKET DESCRIPTION	MFR. PART NO.	MGR PART NO.	QUANTITY — MODEL					
			SD-1400	SD-2000	SD-2500	SD-3000	SD-5000	LP-3000
UPPER AGITATOR (SMALL)	50BS24x1	M300278	2	2	2	2	4	2
UPPER AGITATOR (LARGE)	50BS42x1	M300279				1		1
LOWER AGITATOR (SMALL)	50BS24x1	M300278	1	1	1	1	2	1**
LOWER AGITATOR (SMALL)	50BS16x1	M300277						OR 1*
LOWER AGITATOR (LARGE)	50BS42x1	M300279	1	1	1	1	2	1
AGITATOR GEAR MOTOR	50BS11x1	M300275	1	1	1	2	2	2
AUGER	50BS16x1	M300277	1	1	1	1	2	1
AUGER GEAR MOTOR	50BS16x1	M300277	1	1	1	1	2	1* OR
AUGER GEAR MOTOR	50BS24x1	M300278						1**

*FOR NORMAL AGITATION USE 50BS16x1;

**FOR FASTER AGITATION USE 50BS24x1

TANK OUTLINE



- FRONT VIEW -

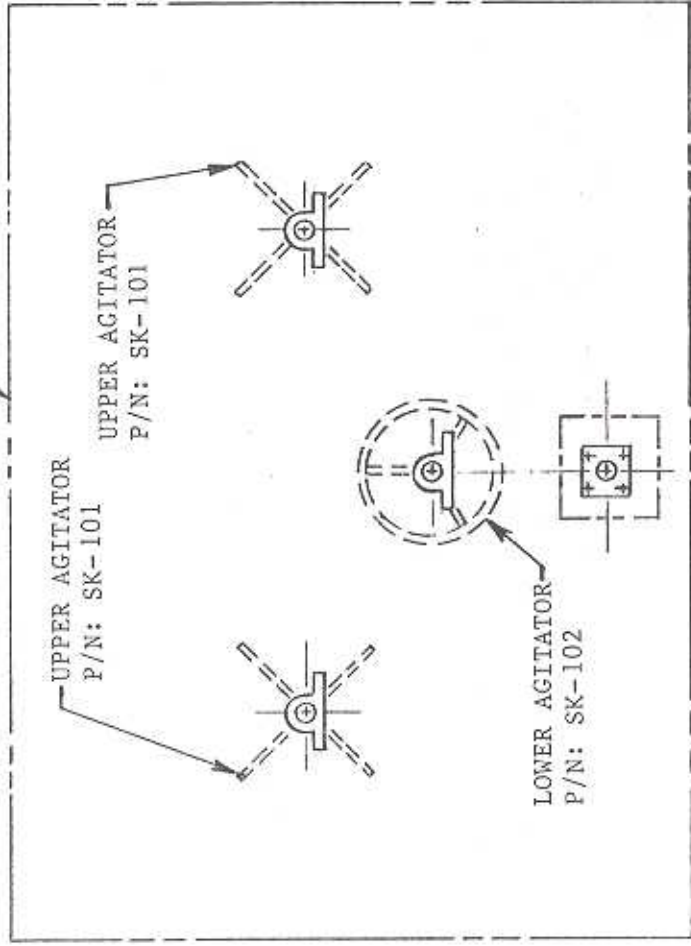
- RIGHT SIDE VIEW -

SD-1400

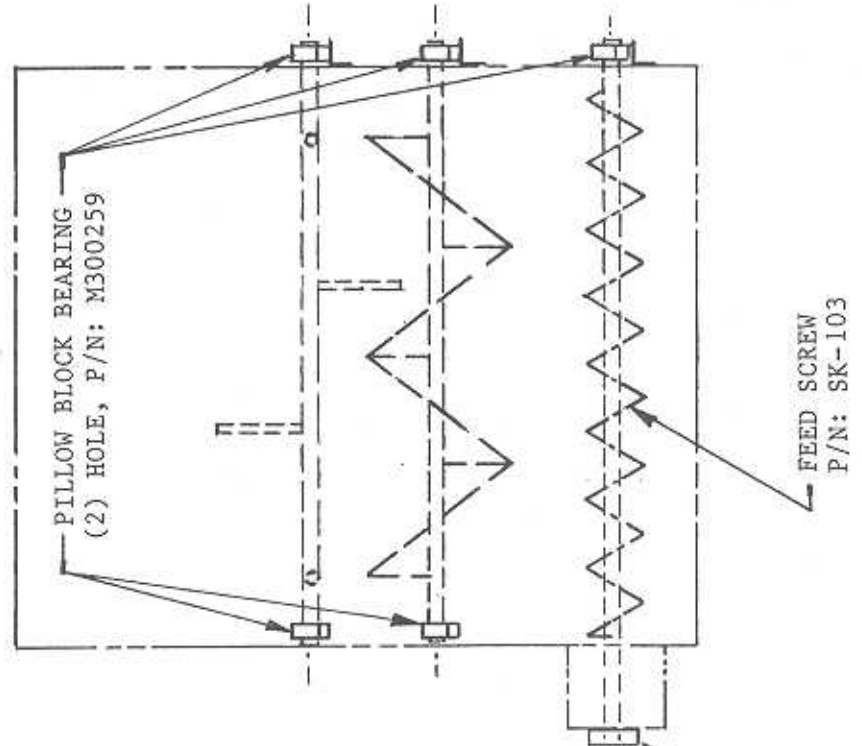
SHAFTS & BEARINGS

SHEET 1 OF 1

TANK OUTLINE



- FRONT VIEW -

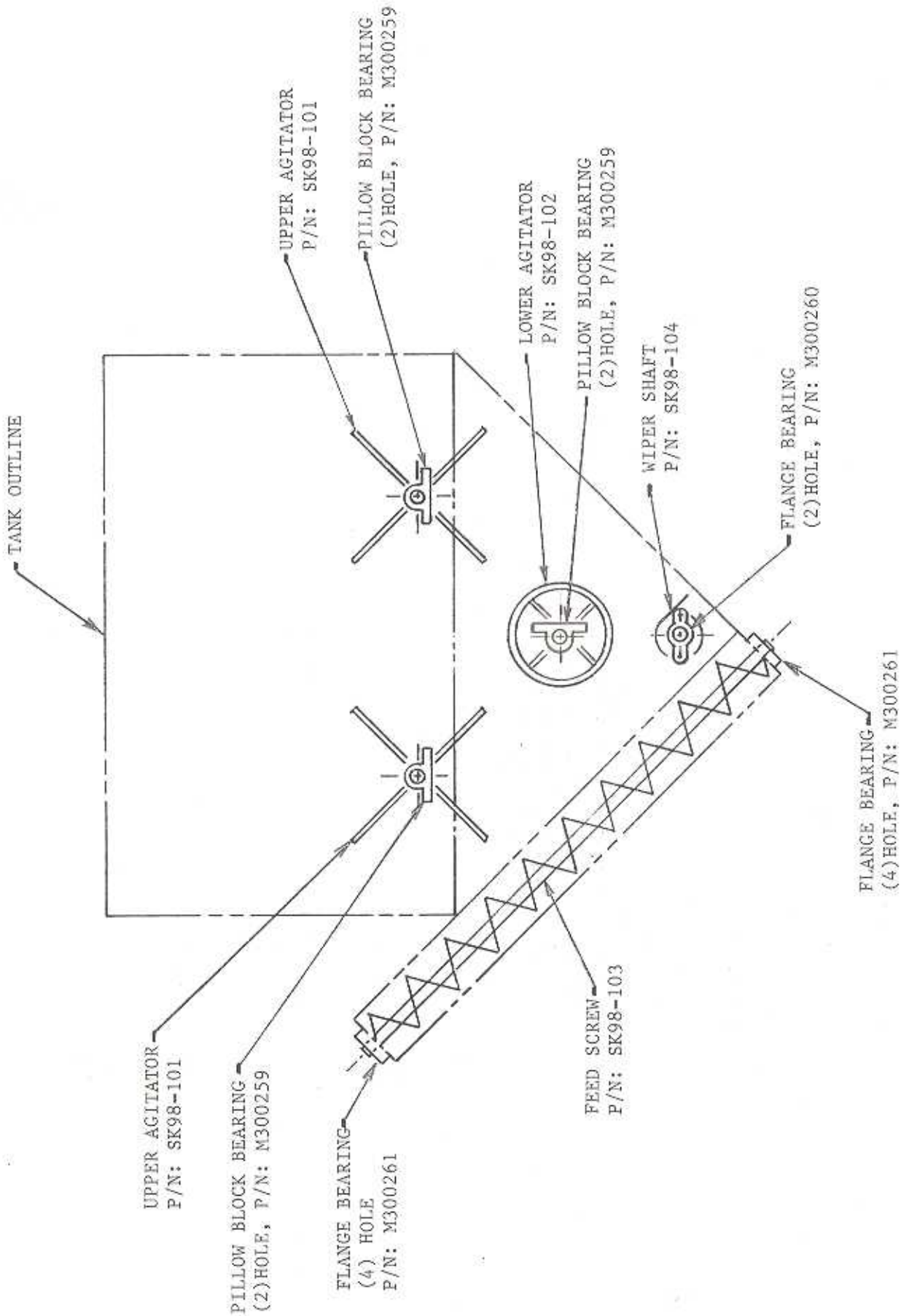


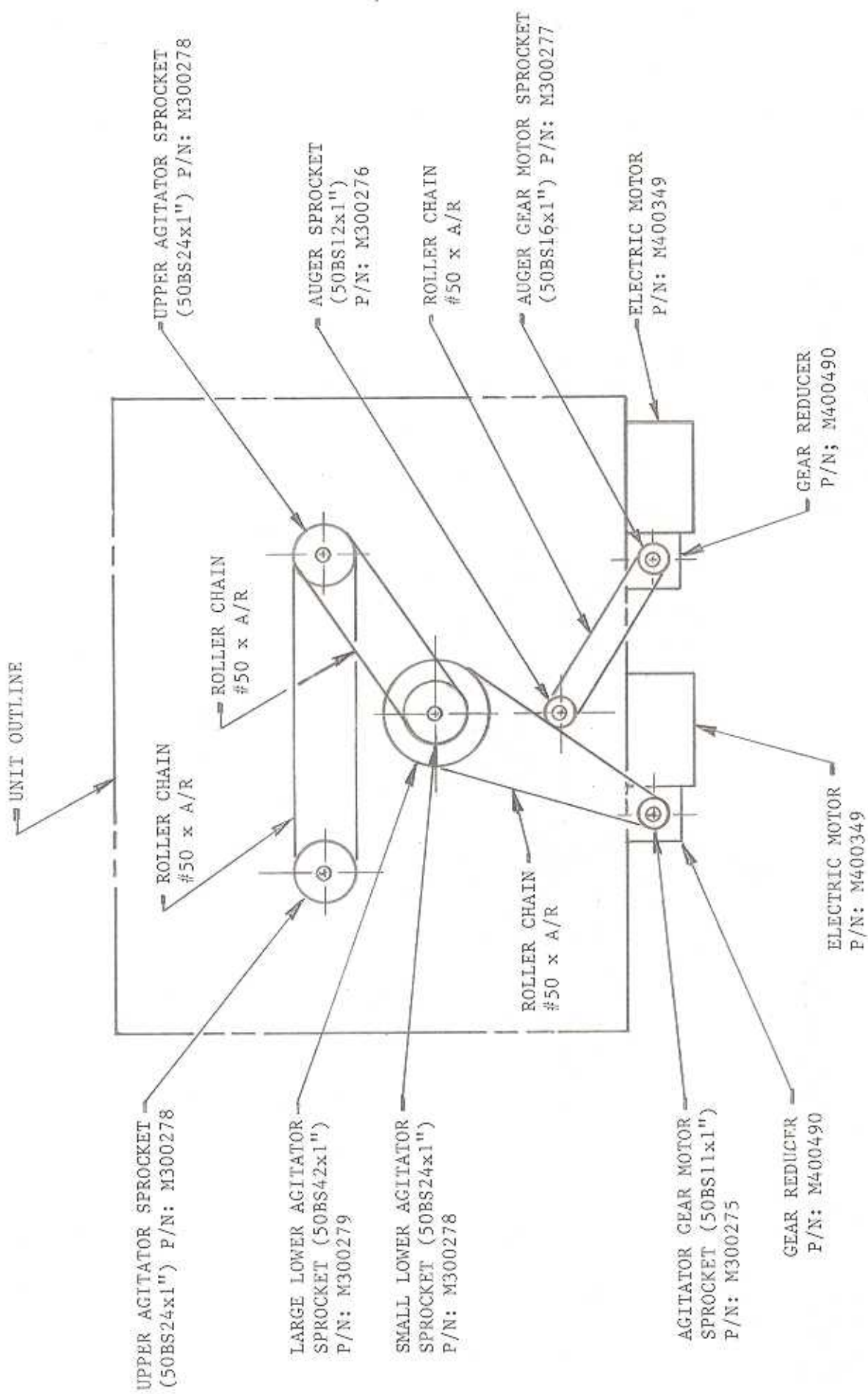
- RIGHT SIDE VIEW -

SD-2000, 2500,
3000 & 5000

SHAFTS & BEARINGS

SHEET 1 OF 1



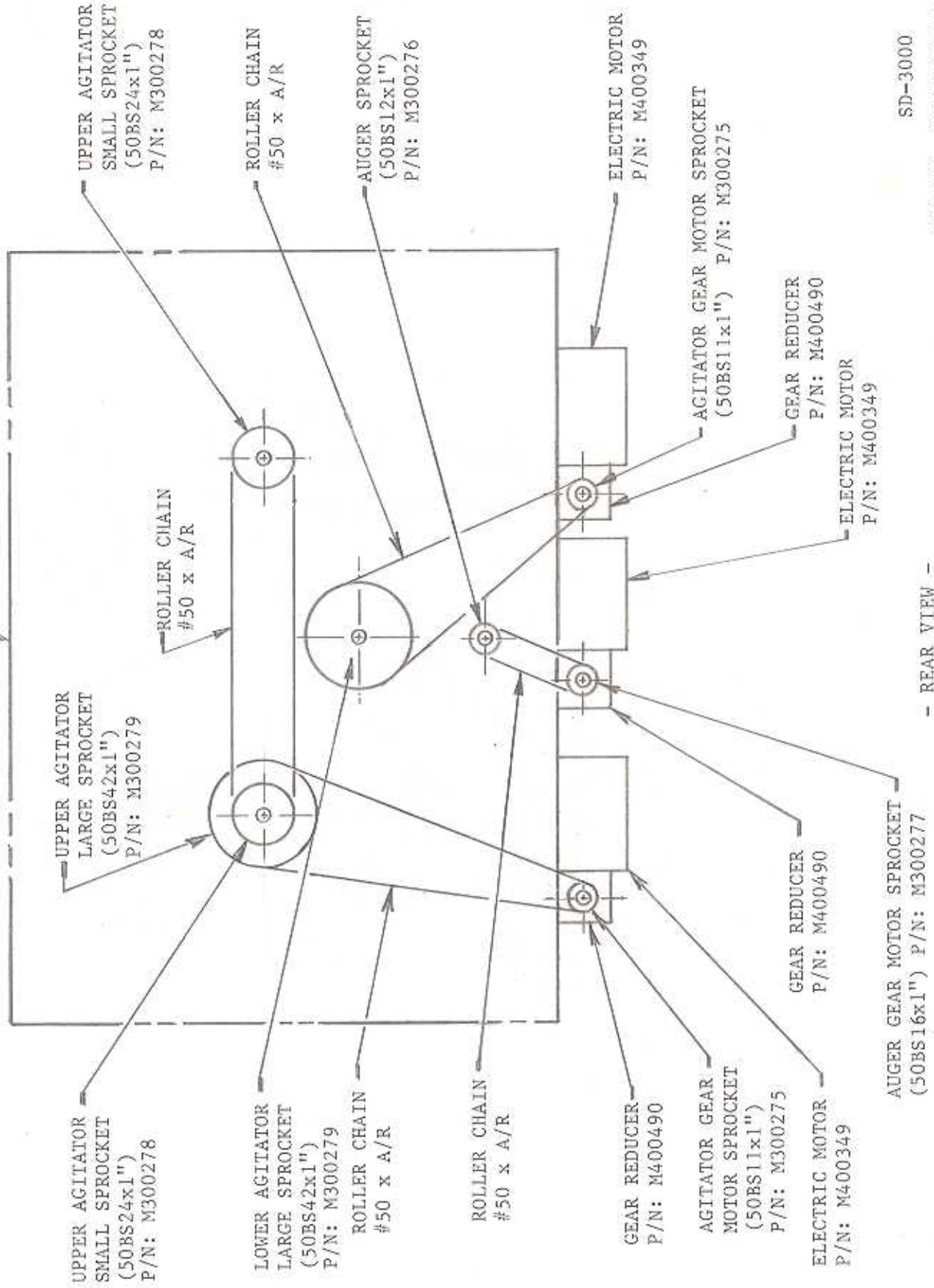


- REAR VIEW -

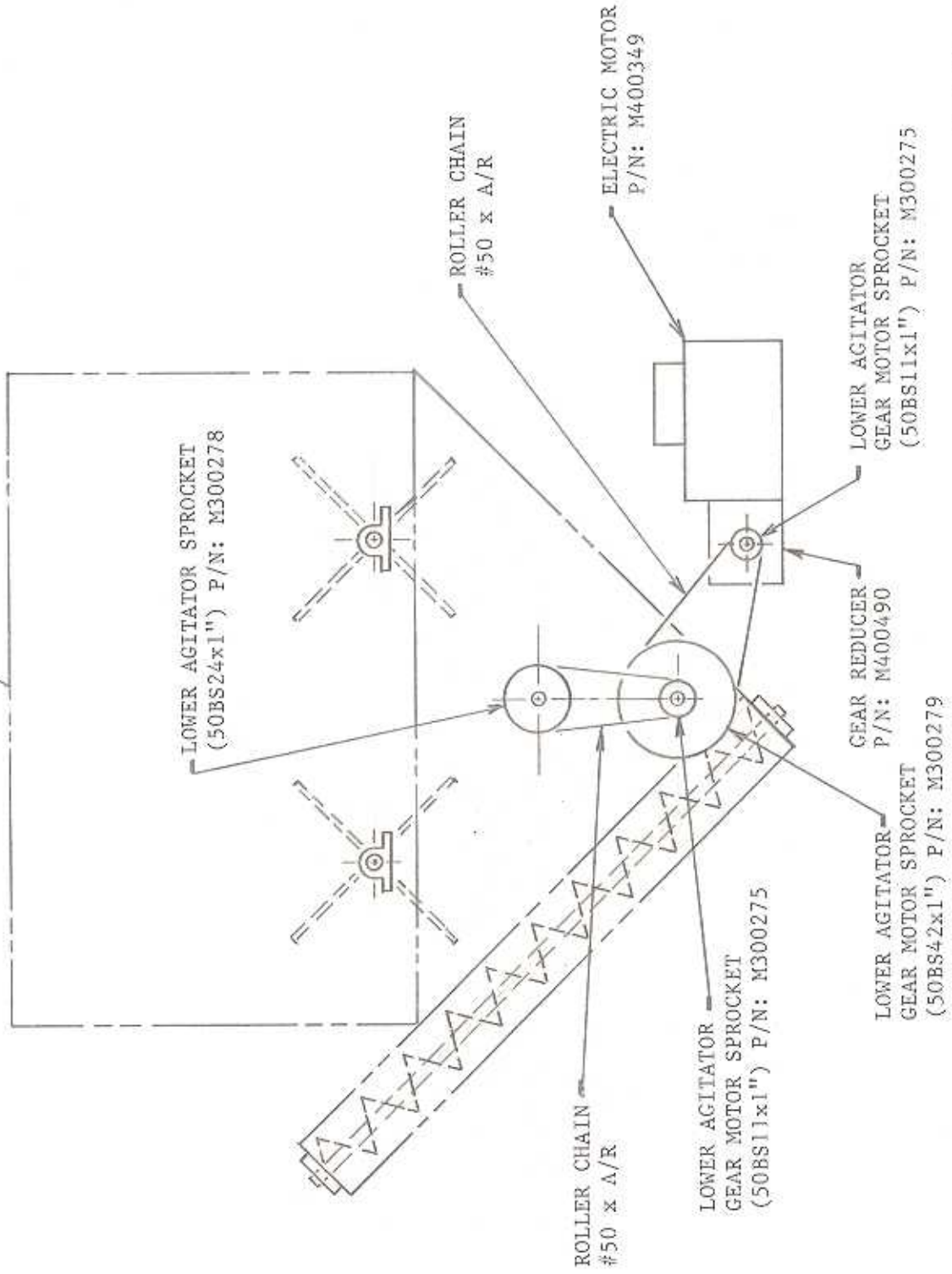
SD-1400, 2000,
2500 & 5000

MOTORS, SPROCKETS & CHAINS

UNIT OUTLINE

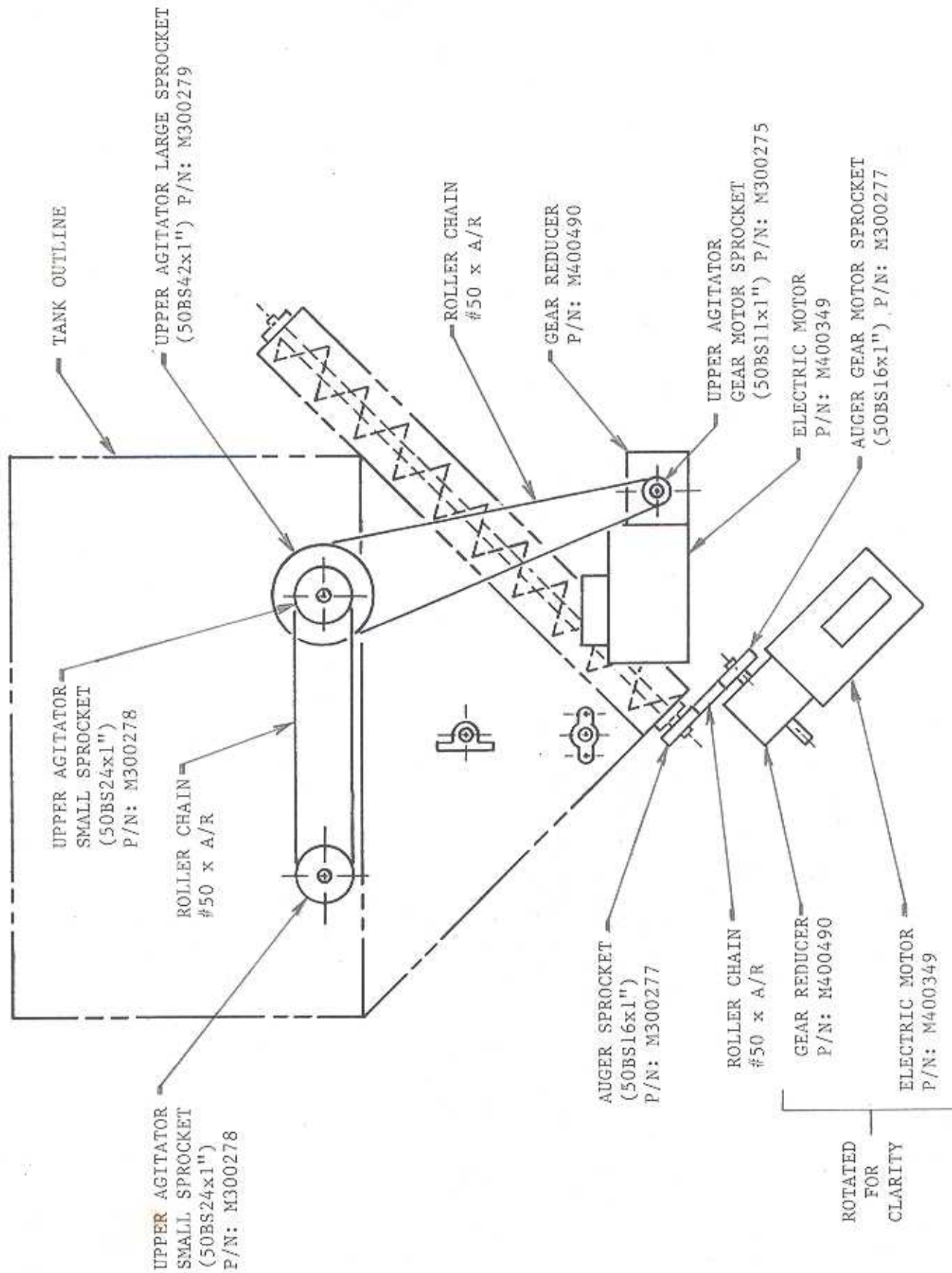


TANK OUTLINE



- RIGHT SIDE VIEW -

LP-3000
MOTORS, SPROCKETS & CHAINS



- LEFT SIDE VIEW -