

[*SGML Version See Change Record* ]  
INSTRUCTION MANUAL with  
Replacement Parts

**MODEL L-800 SERIES  
MIXERS  
(INCLUDES MOTOR PARTS)**

ML-19315 L-800  
ML-19317 (W/POWER BOWL LIFT)  
ML-19316 L-800-D  
ML-19318 (W/POWER BOWL LIFT)

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**CHANGE RECORD**

<b>CHANGE NO.</b>	<b>DATE</b>	<b>TITLE AND/OR BRIEF DESCRIPTION/PREPARING ACTIVITY</b>

## NOTE

THIS TECHNICAL MANUAL (TM) HAS BEEN DEVELOPED FROM AN INTELLIGENT ELECTRONIC SOURCE KNOWN AS STANDARD GENERALIZED MARKUP LANGUAGE (SGML). THERE IS NO LOEP. ALL CHANGES, IF APPLICABLE, ARE INCLUDED. THE PAGINATION IN THIS TM WILL NOT MATCH THE PAGINATION OF THE ORIGINAL PAPER TM; HOWEVER, THE CONTENT IS EXACTLY THE SAME. ANY CHANGES RECEIVED AFTER RECEIPT OF THIS TM WILL ONLY FIT IN THIS PAGINATED VERSION.



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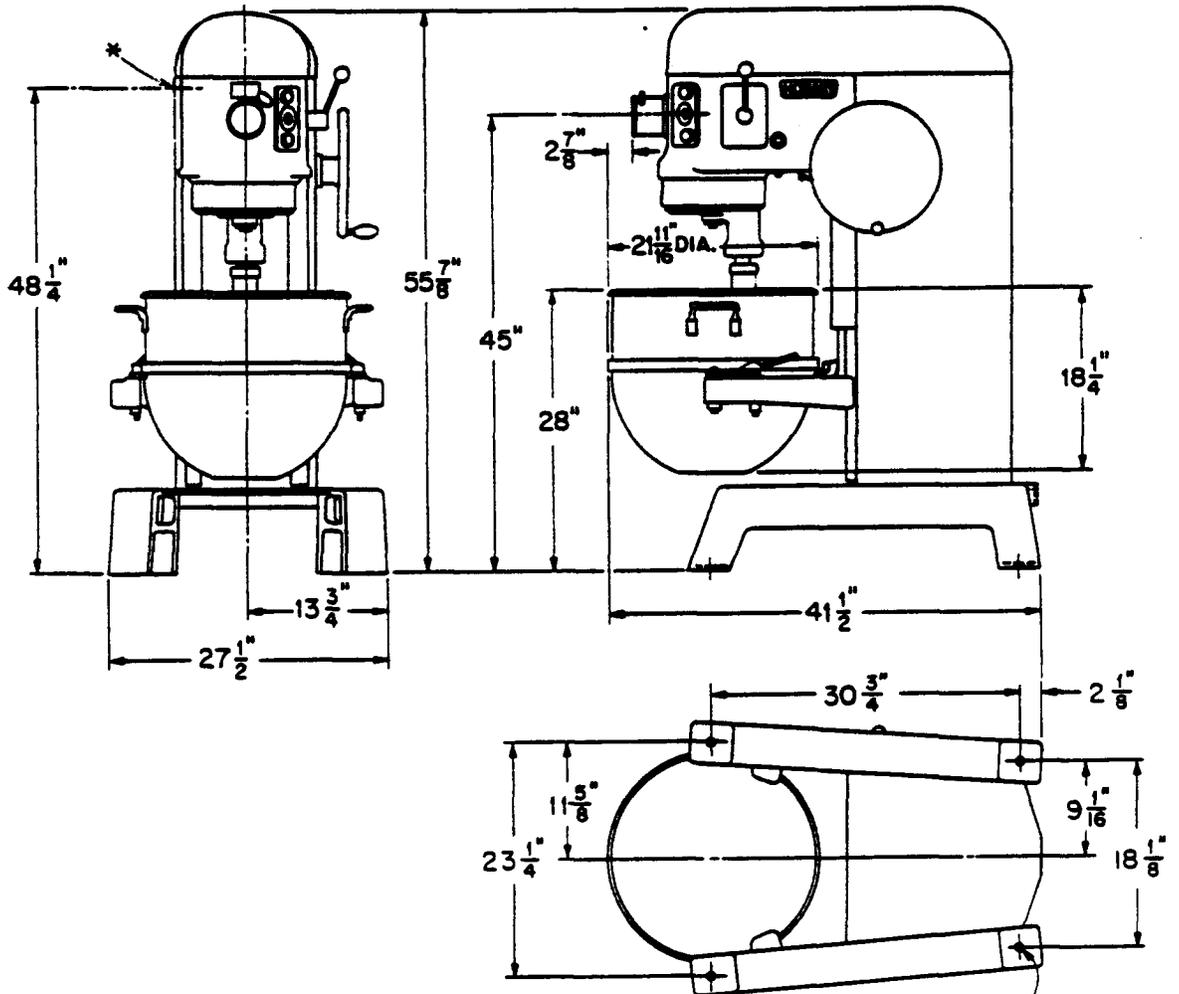
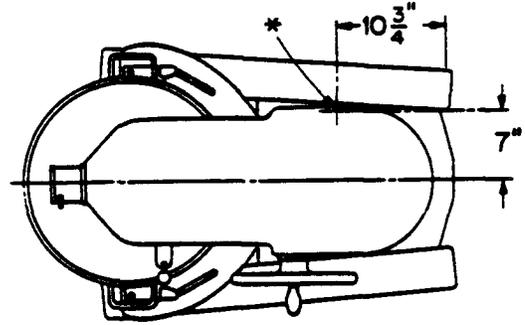
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**\* DENOTES 1-1/16" DIA. HOLE FOR ELECTRICAL CONNECTION**

**WARNING**  
**ELECTRICAL CONNECTIONS SHOULD BE**  
**IN ACCORDANCE WITH THE**  
**NATIONAL ELECTRICAL CODE OR**  
**SUCH CODES IN FORCE**



**NOTE: - BOLTING TO FLOOR**  
**UNNECESSARY**  
**EXCEPT ON SHIPBOARD**

**DECK PLATES AVAILABLE**  
**FOR PERMANENT MOUNTING**

PL-13718

D-109122

INSTALLATION DIAGRAM

CHAPTER 1

## INSTALLATION, OPERATION AND CARE OF MODELS L-800 SERIES MIXERS

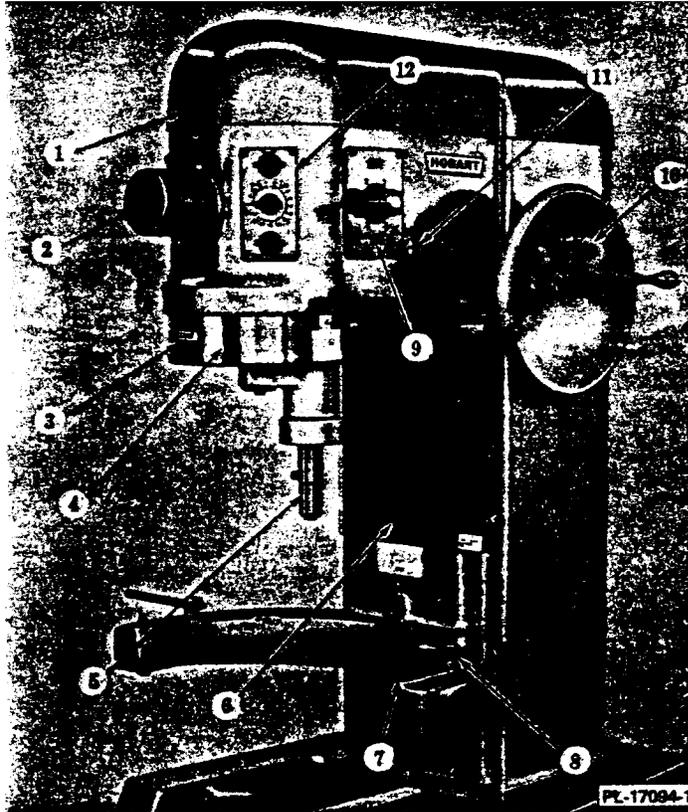


Figure 1

### GENERAL

The L-800 series mixers have a bowl capacity of 80 quarts. With the use of an adapter and special agitators, 30, 40 or 60 quart bowls may also be used. The mixer is powered by a 1-1/2 H.P. motor and is available for single or three phase electrical service.

The L-800 series mixer incorporates a #22 attachment hub (2, [Figure 1](#)) which will accept any #22 attachment. Various attachments and accessories available for this mixer include: Power dicer; vegetable slicer and shredder; meat and food chopper; soup strainer and colander; tray support; bowl jacket; bowl truck; bowl truck adapter; splash cover and bowl extension ring.

### INSTALLATION

#### CAUTION

**Electrical connections must be made by qualified workmen who will observe all applicable sanitary codes, safety codes and the National Electrical Code.**

### LOCATION

Mixer should be placed in a convenient location allowing adequate servicing space on the operational controls side, above and in front of the mixer. Holes are provided in the base for permanent bolting to the floor although this is not necessary in normal installations.

## LEVELING

The machine must be leveled once located. Remove the top cover screws and the top cover (1, [Figure 1](#)). Place a level on the machined surface of the transmission case (4, [Figure 2](#)). Slide shims under the legs of the base as necessary to level the mixer.

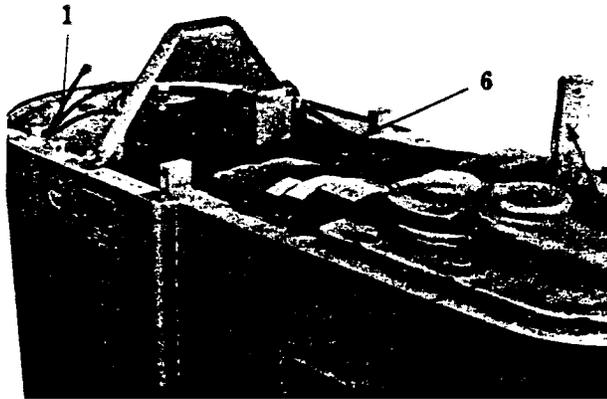


Figure 2

## LUBRICATION

All lubricating oils are drained from the machine before shipping and must be replaced before operating.

### CAUTION

**There are different lubricants for the transmission and planetary. Do not interchange the use of these oils as damage to the mixer may result.**

#### Transmission

The front support (5, [Figure 2](#)) for the top cover serves as the oil-fill plug. Remove the support and pour the contents of the bottle labeled "Transmission Oil", shipped with the machine, into the case. The oil level should be between the center and top of the oil level gauge (11, [Figure 1](#)). If the oil level falls below the gauge when the motor is running, more oil is required. When adding oil, add small amounts at a time and check during operation.

#### Planetary

The recommended oil capacity is 5 to 7 fluid ounces. Since approximately 1 ounce remains in the planetary after draining, 6 ounces are shipped with the machine. Use the oil in the bottle labeled Planetary Oil.

Remove the drip cup (4, [Figure 1](#)), which is held by two thumb screws. Check to assure the drain plug (2, [Figure 3](#)) is tight. Slip one end of the tubing (supplied) over the nozzle end of the container labeled Planetary Oil. Remove the fill plug (1, [Figure 3](#)) and place the other end of the plastic tube in the planetary. Pour entire contents into the machine. Replace the fill plug and drip cup.

**NOTE**

Additional information on routine lubrication may be found under MAINTENANCE.

**ELECTRICAL**

Volts		Max Dual Element Time Delay Fuse Size	Minimum Conduc- tor Ampacity	60° C CU Wire Size
200/60/1		25	25	#10
200/60/1	W/PBL	30	30	#10
230/60/1		30	30	#12
230/60/1	W/PBL	30	30	#10
200/60/3		15	15	#14
200/60/3	W/PBL	20	20	#12
230/60/3		10	15	#14
230/60/3	W/PBL	20	20	#12
460/60/3		6	15	#14
575/60/3		6	15	#14

Before making electrical connections, check the specifications on the data plate (3, [Figure 2](#)) to assure they agree with those of your electrical service.

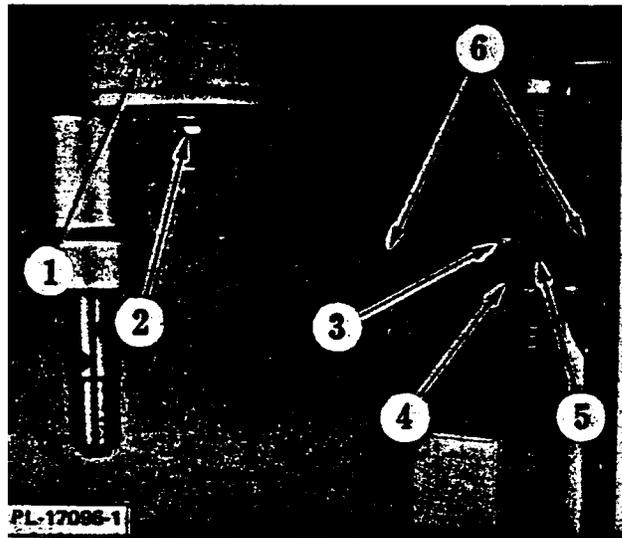


Figure 3

Electrical connections should be made by qualified workmen who will observe all applicable safety codes and the National Electrical Code.

**WARNING**

**DISCONNECT ELECTRICAL POWER SUPPLY AND PLACE A TAG AT THE FUSED DISCONNECT SWITCH INDICATING THE CIRCUIT IS BEING WORKED ON.**

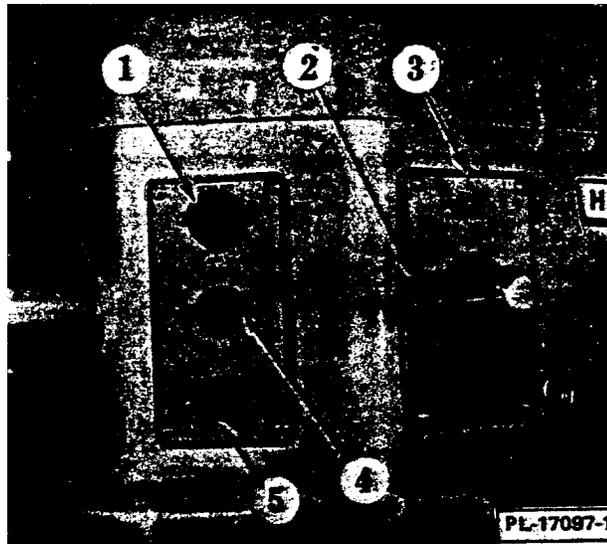


Figure 4

A hole for 3/4" conduit is located at the top of the pedestal (2, [Figure 2](#)). Connect the input power leads to the pigtail leads (1, [Figure 2](#)) from the motor controller. A solderless lug is provided for the service ground.

Three phase machines must be connected so the planetary turns in the direction of the arrow (3, [Figure 1](#)). To check the direction of rotation, turn the power disconnect switch ON. Place the speed selector (9, [Figure 1](#)) in #1. If machine is equipped with optional timer, place timer on HOLD. Energize machine momentarily by pushing START then STOP (12, [Figure 1](#)) and verify the direction of rotation.

If motor rotation is incorrect, DISCONNECT ELECTRICAL POWER SUPPLY AND interchange any two of the power supply leads (1, [Figure 2](#))

## OPERATION

### BOWL LIFT

The manual bowl lift is operated by the hand wheel (10, [Figure 1](#)). To raise the bowl, turn the wheel clockwise and counterclockwise to lower.

### POWER BOWL LIFT (Optional)

The bowl can be automatically raised or lowered to any height by moving the control handle from the center OFF position, clockwise to raise or counterclockwise to lower. An overload slip clutch will ratchet at the top and bottom stop positions to signal end of travel and protect the operating mechanism.

In case of power failure, the bowl can be raised or lowered manually. First remove the apron (6, [Figure 1](#)), held in place by four thumb screws, to expose the lift screw (5, [Figure 3](#)). Place a 1" open end wrench on the lift screw hex and turn the bowl lift screw in the direction desired.

### BOWL

## NOTE

Due to variations in bowls and agitators, it is **RECOMMENDED** that the agitator clearance be checked and adjusted if necessary with every bowl or agitator change. See **MAINTENANCE** for adjustment procedure.

Lower the bowl lift to its bottom stop. Position the bowl so the square alignment bracket is to the back and the alignment pins (7, [Figure 1](#)) in the bowl lift fit into the alignment holes of the bowl. Raise the bowl yoke until the bowl is seated. Lock the bowl in place by rotating the bowl clamps (8, [Figure 1](#)) over the ears of the bowl.

## AGITATORS

With the bowl in place and the lift at its bottom stop, push the agitator shank up on the shaft (5, [Figure 1](#)) and turn clockwise until the drive pin of the shaft latches in the L-shape slot of the agitator shank. Agitators which may be used with this mixer are identified on the last page of this manual.

## SPEEDS

Speed #1 (Low) is for heavy mixtures like dough, heavy batters and potatoes.

Speed #2 (Medium - Low) is for mixing cake batters, mashing potatoes and for developing dough.

Speed #3 (Medium High) is for maximum incorporation of air into light batches. The "D" whip is used for whipping cream, beating egg whites, mixing; light icings, meringues and whipping.

Speed #4 (High) is for accelerated and maximum incorporation into light batches.

## NOTE

For additional information on attachment operation speeds and mixing speeds for specific results, refer to the "Use and Applications Hand Book" included with this machine.

## L-800; L-800-D

For non-timed operation, set the speed selector handle (2, [Figure 4](#)) at the desired speed. Set the timer (4, [Figure 4](#)) on HOLD and depress the START button (1, [Figure 4](#)).

For timed operation, set the speed selector handle (2, [Figure 4](#)) at the desired speed. Set the timer (4, [Figure 4](#)) at the desired time (if less than 3 minutes turn past 3 and back to the desired time), and depress the START button (1, [Figure 4](#)).

With the timer (4, [Figure 4](#)) set at "0", the start button (1, [Figure 4](#)) becomes a JOG button and permits inching of the planetary. When the START button is depressed, power is supplied to the motor as long as the button is depressed.

A brake is provided to quickly stop the agitator shaft. The brake is actuated by the two position STOP button (5, [Figure 4](#)). When the STOP button is depressed to the first position, power is cut off to the mixer. When pushed all the way in, the brake is applied and remains on until the button is released.

To change speeds, turn the motor off and apply the brake by pushing the STOP button (5, [Figure 4](#)). When the agitator shaft has stopped, release the button. Move the speed selector handle (2, [Figure 4](#)) to the desired speed. Make certain the speed selector handle lines up with the number on the shift selector plate (3, [Figure 4](#)). Never position the handle between numbers. Restart the mixer.

## ATTACHMENTS

Install the attachment into the attachment hub of the mixer (2, [Figure 1](#)). Make certain the square shank of the attachment is in the square drive of the mixer. Secure the attachment by tightening the thumb screw. Place the speed selector handle (2, [Figure 4](#)) in the desired speed. Turn mixer ON (1, [Figure 4](#)) to operate attachment.

The meat and food chopper attachment should be operated in speed #3. If bone chips or other material in the cylinder stalls the mixer, stop the mixer at once. Remove the adjusting ring, knife, plate and worm and remove the obstruction. Do not attempt to restart the mixer in a lower speed.

## MAINTENANCE

### **WARNING**

**DISCONNECT ELECTRICAL POWER SUPPLY AT THE FUSED DISCONNECT SWITCH AND PLACE A TAG INDICATING THE CIRCUIT IS BEING WORKED ON. BEFORE BEGINNING ANY MAINTENANCE PROCEDURE.**

## CLEANING

A kit, including a brush and bowl scraper, is furnished to aid cleaning operations. The bowl scraper, with a cloth wrapped around it, provides a tool to reach the narrow opening between the bowl yoke and pedestal at the slideways (6, [Figure 3](#)). Other areas may be cleaned by using the brush.

The mixer should be thoroughly cleaned daily. Do not use a hose on the mixer. It should be washed with a clean damp cloth. The base allows ample room to clean under the mixer. The bowl support apron (6, [Figure 1](#)) may be easily removed by loosening the thumb screws.

The drip cup (4, [Figure 1](#)) should be removed periodically and wiped clean. The cup is removed by loosening the two thumb screws and pulling down.

## LUBRICATION

### Planetary

The oil in the planetary should be checked periodically. Remove the drip cup (4, [Figure 1](#)) by loosening the two thumb screws and pulling down. Remove the fill plug (1, [Figure 3](#)). Oil should be even with the bottom of the fill plug hole. If oil does not run out, slowly add "Gearep #85" until it begins to overflow. Replace the fill plug and the drip cup.

An oil drain is located at the bottom of the planetary (2, [Figure 3](#)). Should draining be necessary, remove the drip cup (4, [Figure 1](#)) and place a suitable catch pan under the planetary. Remove the drain plug. When completely drained, replace the drain plug. Remove the fill plug (1, [Figure 3](#)) and replenish with 6 ounces of "Gearep #85".

### Transmission

The oil level should be somewhere between the center and top of the oil gauge (11, [Figure 1](#)) for correct lubrication. If the oil falls below this, remove the top cover (1, [Figure 1](#)) and the front cover support (5, [Figure 2](#)), which acts as a fill plug. Pour "Gearep #140" into the transmission until oil returns to the gauge line. Replace the bracket and the top cover. Use caution not to overfill the transmission as leakage may result.

### Bowl Lift

The slideways (6, [Figure 3](#)) and the lift screw (5, [Figure 3](#)) should be lubricated about twice a year depending upon amount of use. To reach these areas, loosen the thumb screws and remove the apron (6, [Figure 1](#)). Wipe a thin coat of "Lubriplate 630AA" (supplied) on each slideway and on the lift screw. Replace the apron and tighten the thumb screws.

On manual lift units also lubricate the handwheel gearing. To do this, remove the top cover (1, [Figure 1](#)) and wipe some "Lubriplate 630AA" (supplied) on the gear teeth inside the pedestal. The handwheel shaft is oiled through an oiler (6, [Figure 2](#)) on the handwheel bracket.

## ADJUSTMENTS

### AGITATOR CLEARANCE

Remove the bowl support apron (6, [Figure 1](#)). Install the bowl and lock in place. Install the "B" beater. Slowly raise the bowl to the UP position using caution to stop before the agitator touches the bottom of the bowl.

### NOTE

On power bowl lift models turn the lift screw (5, [Figure 3](#)) with an open end wrench on the machined hex at the top of the screw.

Rotate the agitator around the inside of the bowl by hand to locate the point of least clearance.

The clearance between the agitator and the bottom of the bowl should be no more than 1/8". A match book may be used as a gauge for this measurement.

Loosen the lock nut (3, [Figure 3](#)) and turn the stop screw (4, [Figure 3](#)) clockwise to decrease the clearance and counterclockwise to increase the clearance. Tighten the lock nut while holding the stop screw.

Operate the bowl lift several times contacting both bottom and top stops. With the bowl lift against the top stop recheck the clearance to assure correct adjustment.

### BOWL CLAMP

The height of the bowl clamp (8, [Figure 1](#)) is controlled by a spring washer and lock nut. The adjustment is made from the under side of the bowl lift. Turning the lock nut clockwise will loosen the clamp and counterclockwise will tighten the clamp.

### NOTE

If repeated adjustments are required, additional service is indicated. Contact an authorized HOBART SERVICE REPRESENTATIVE.

## TROUBLESHOOTING

SYMPTOM - Mixer will not start.

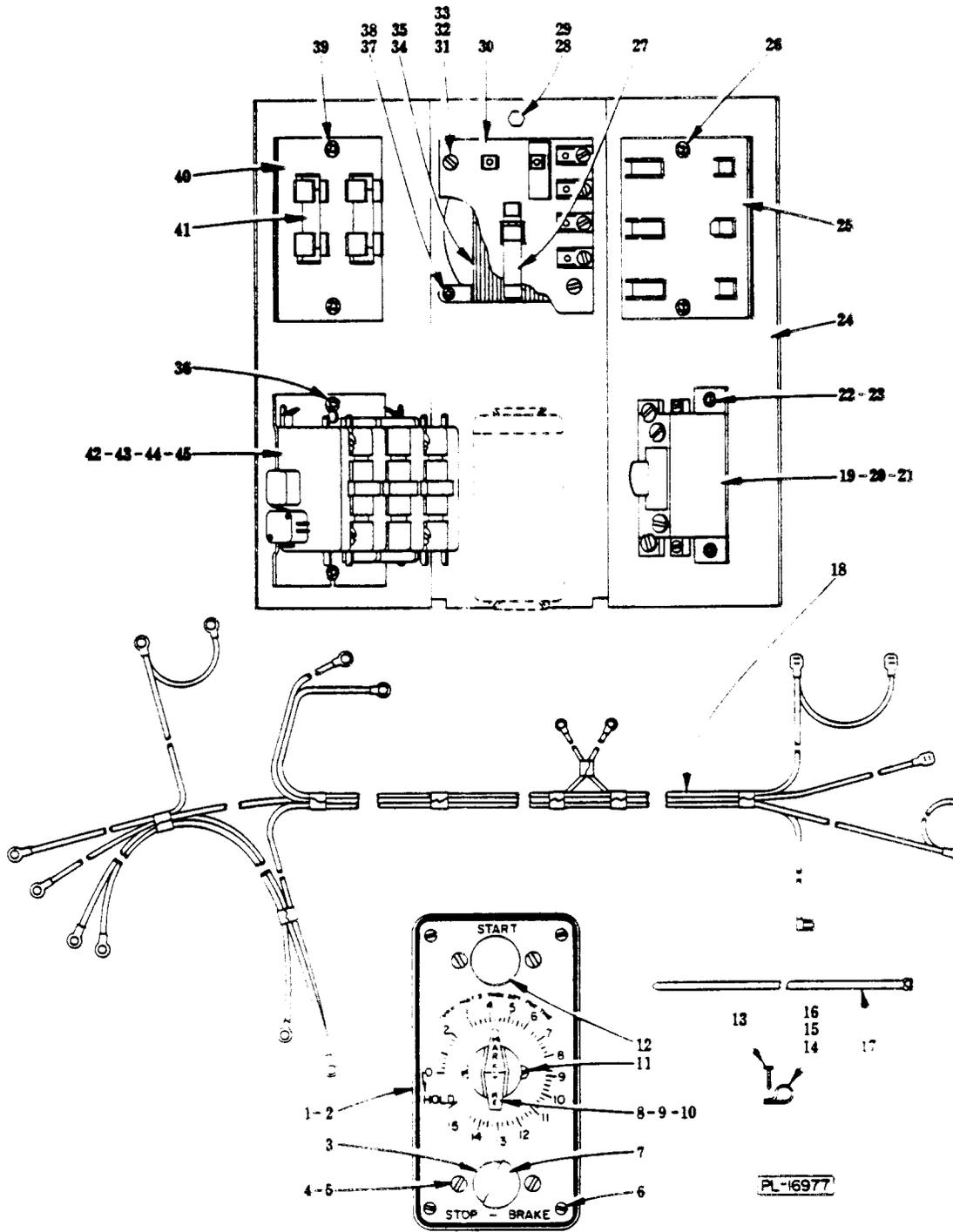
POSSIBLE CAUSE:

1. Electrical power supply fused disconnect switch in open position or fuse blown.
2. Mixer or attachment overloaded.

SYMPTOM - Agitator touching bowl.

POSSIBLE CAUSE:

1. Bowl clamp(s) not closed.
2. Bowl clamp(s) improperly adjusted.
3. Improper agitator clearance.



TIMER AND CONTROL UNIT  
 TIMER AND CONTROL UNIT

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-16977	1 C-117853	Plate - Timer (15 Min.)	1

## TIMER AND CONTROL UNIT - Continued

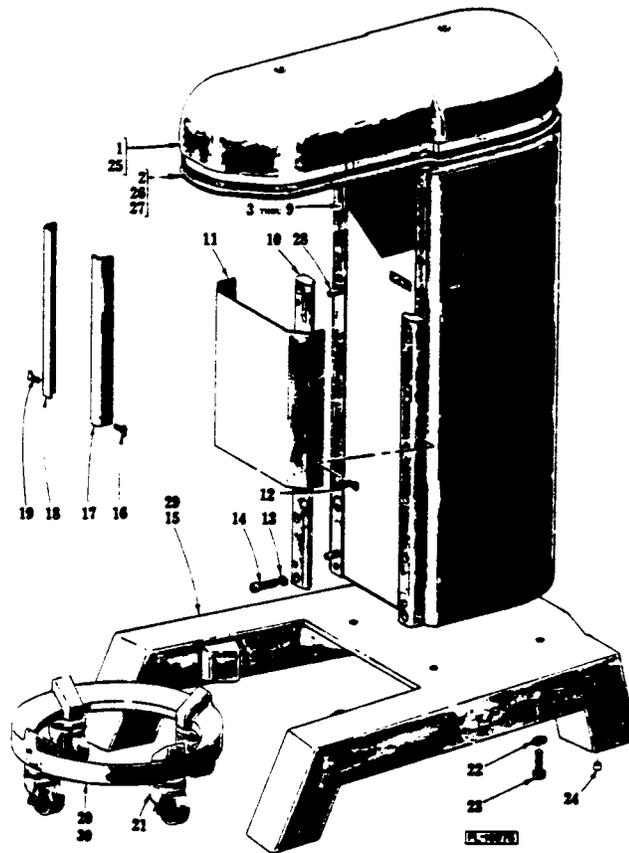
ILLUS. PL-16977	PART NO.	NAME OF PART	AMT.
	2 M-69918	Insulator - Push Button Station	1
	3 A-102229	Push Button Station Assy	2
	4 SC-15-26	Mach. Screw - #8-32 x 5/16" Oval Hd	4
	5 WS-2-18	Washer	4
	6 B-123131	Self-Tapping Screw - #8-32 x 3/8" Truss Hd. "Taptite"	4
	7 A-102467-2	Cap - Push Button (Stop)	1
	8 A-103228	Timer & Gasket Assy. (15 Min.) (Incls. item #11)	1
	9 A-103229	Timer, Dial & Gasket Assy. (30 Min.) (Incls. items #10 & 11)	1
	10 B-73540	Dial - timer (30 Min.)	1
	11 SC-13-7	Mach. Screw - #5-40 x 1/4" Flat Hd	2
	12 A-102467-1	Cap - Push Button (Start)	1
	13 SD-24-1	Self-Tapping Screw - #10-24 x 3/8" Pan Hd. "Taptite"	3
	14 M-78752-6	Clamp (50/60 Hz., 1 Ph.)	3
	15 M-78752-6	Clamp (50/60 Hz., 3 Ph.)	2
	16 M-78752-3	Clamp (50/60 Hz., 3 Ph.)	1
	17 B-113703	Tie - Cable	2
	18 E-121819	Harness - Wiring	1
	19 B-88196-6-1	Relay - Thermal Overload (1 Ph.)	1
	20 B-88196-5-1	Relay - Thermal Overload (3 Ph.)	1
	21 **	Heater Element	AR
	22 SD-15-20	Self-Tapping Screw - #10-32 x 3/8" Phil. Pan Hd. "Taptite" (Use with item #19)	2
	23 SD-15-20	Self-Tapping Screw - #10-32 x 3/8" Phil. Pan Hd. "Taptite" (Use with item #20)	4
	24 E-121823	Panel Control	1
	25 C-121014	Board - Terminal	1
	26 SD-15-20	Self-Tapping Screw - #10-32 x 3/8" Phil Pan Hd. "Taptite"	2
	27 FE-16-30	Fuse (2 Amp.) (Use with items #34 & 35)	2
	28 SC-36-14	Cap Screw - 1/4"-20 x 1/2" Hex Hd	1
	29 WL-3-38	Lock Washer - 1/4" Medium	1
	30 C-114707	Terminals & Mounting Board Assy	1
	31 SC-19-33	Mach. Screw - #8-32 x 1/2" Bind. Hd	2
	32 WL-7-7	Lock Washer - #8 Ext. Shakeproof	2
	33 NS-9-12	Mach. Nut - #8-32 Hex	2
	34 B-120907	Transformer (60 Hz.)	1
	35 B-120908	Transformer (50 Hz.)	1
	36 SD-15-20	Self-Tapping Screw - #10-32 x 3/8" Phil Pan Hd. "Taptite"	2
	37 SD-15-20	Self-Tapping Screw - #10-32 x 3/8" Phil. Pan Hd. "Taptite"	2
	38 WL-7-12	Lock Washer - #10 Ext. Shakeproof	2
	* 39 SD-12-20	Self-Tapping Screw - #8-32 x 1/2" Phil. Truss Hd., Type 23	2

## TIMER AND CONTROL UNIT - Continued

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-16977			
	* 40 C-120924	Terminal Board Assy	1
	* 41 FE-21-1	Fuse (3.5 Amp.)	2
	42 B-121925-2	Contactor (115 V., 50/60 Hz., 200/230 V., 60 Hz. W/Pilot Circuit; 220 V., 50 Hz W/Pilot Circuit) (1 Ph.)	1
	43 B-121925-1	Contactor (200/230 V., 60 Hz.; 220 V., 50 Hz.) (1 Ph.)	1
	44 B-121926-2	Contactor (460 V., 60 Hz.; 380/415 V., 50 Hz.; 200/ 230 V., 60 Hz W/Pilot Circuit; 220 V., 50 Hz. W/Pilot Circuit) (3 Ph.)	1
	45 B-121926-1	Contactor (200/230 V., 60 Hz.; 220 V., 50 Hz.) (3 Ph.)	1

\*\* Give Elec. Spec., Mach. Model & Motor Type.

\* Power Bowl Lift.



BASE AND PEDESTAL UNIT

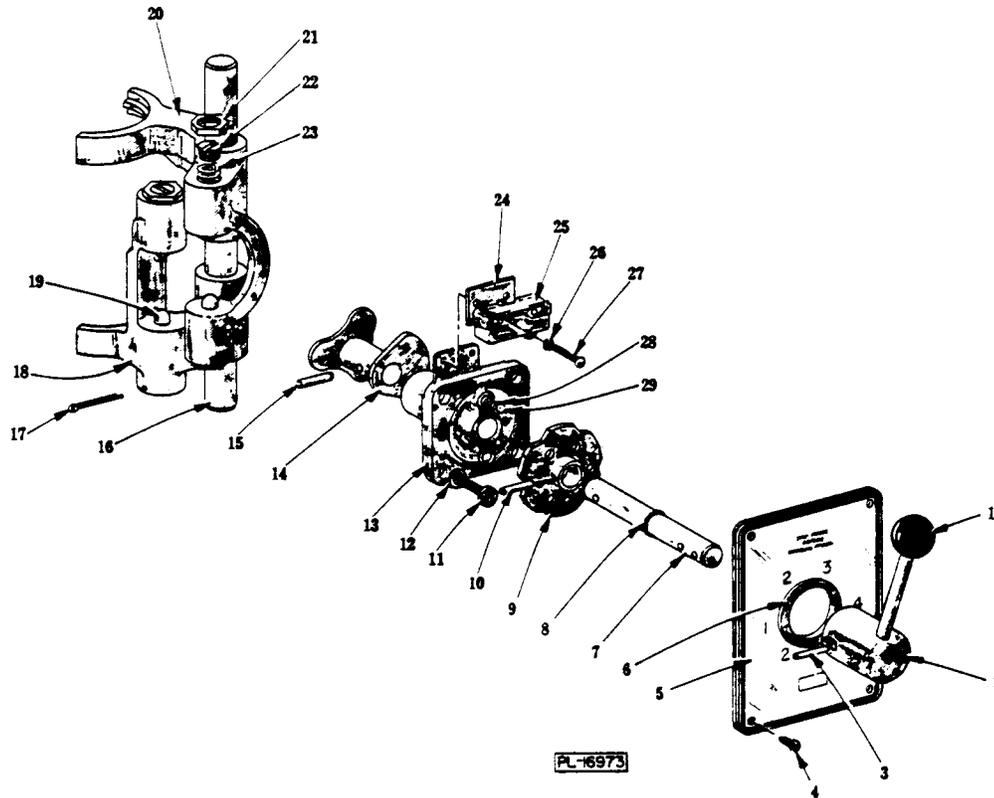
## BASE AND PEDESTAL UNIT

ILLUS. PL-16976	PART NO.	NAME OF PART	AMT.
***	1 S-24801-3	Top Cover Assy. (Incls. item #2)	1
***	2 M-24781-1	Seat - Top Cover	1
***	3 E-121821-2	Pedestal Assy. (Incls. item #28)	1
* , ***	4 E-121821-4	Pedestal Assy. (Incls. item #28)	1
	5 C-118544-1	Lug - Solderless	1
	6 SD-24-1	Self-Tapping Screw - #10-24 x 3/8" Pan Hd. "Taptite"	1
	7 WL-10-6	Lock Washer - #10 Ext. Shakeproof	1
**	8 E-121821-1	Pedestal Assy. (Incls. item #28)	1
* , **	9 E-121821-3	Pedestal Assy. (Incls. item #28)	1
	10 R-24189-3	Slideway - Pedestal	2
	11 S-24260	Apron - Pedestal	1
	12 P-70641-9	Thumb Screw	4
	13 WL-4-2	Lock Washer - 3/8" Light	12
	14 SD-15-12	Self-Tapping Screw - 3/8"-16 x 1-1/2" Soc. Fil. Hd. "Taptite"	12
***	15 E-110231	Base Assy	1
***	16 P-70641-9	Thumb Screw	2
***	17 P-68236	Cover - Right Slideway	1
***	18 P-68237	Cover - Left Slideway	1
***	19 P-70641-9	Thumb Screw	2
***	20 R-21922-3	Bowl Truck Assy. (Incls. item #21)	1
	21 B-87669-1	Caster	4
	22 WL-4-11	Lock Washer - 1/2" Medium	4
	23 SC-62-83	Cap Screw - 1/2" - 13 x 1-1/2" Hex Hd	4
	24 A-116395	Plug - Base	AR
**	25 E-124475-2	Top Cover Assy. (Incls. items #26 & 27)	1
**	26 B-123687-2	Gasket - (39-3/4")	1
**	27 B-123687-4	Gasket - (44-3/4")	1
	28 D-11800-143	Dowel	2
**	29 E-110222-2	Base Assy	1
**	30 R-21922-1	Bowl Truck Assy. (Incls. item #21)	1

\*\*\* L-800-D.

\* Power Bowl Lift.

\*\* L-800.



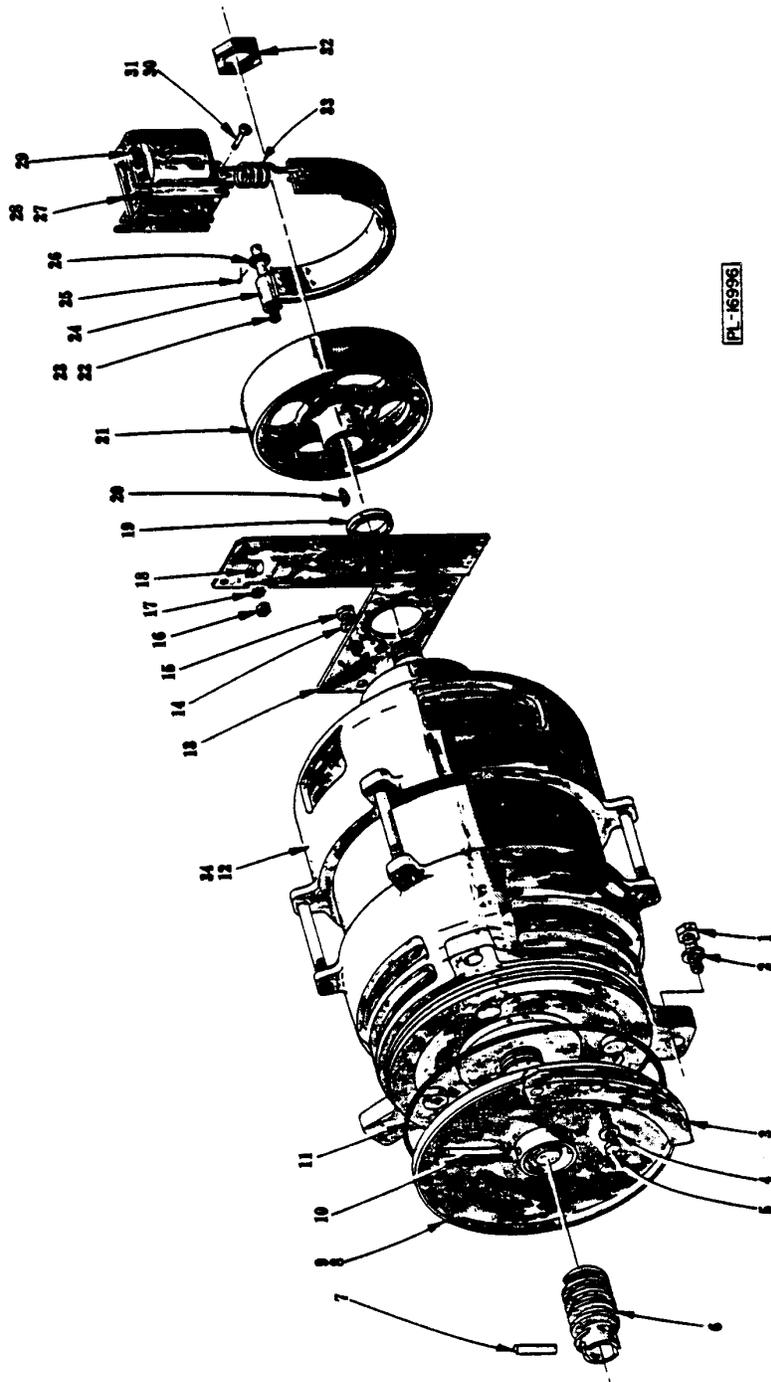
SHIFTING UNIT

SHIFTING UNIT

ILLUS. PL-16973	PART NO.	NAME OF PART	AMT.
	1 M-60468	Knob - Gear Shift	1
	2 M-60469	Handle & Hub Assy	1
	3 RP-2-3	Rollpin - 3/16" Dia. x 1-1/4" Lg	1
	4 B-123131	Self-Tapping Screw - #8-32 x 3/8" Truss Hd. "Taptite"	4
	5 C-117873-1	Plate - Shift Selector	1
	6 M-60395	Grommet - Gear Shift	1
	7 M-60400	Shaft - Gear Shift	1
	8 D-67500-6	"O" Ring	1
	9 M-60394	Hub & Cam Assy	1
	10 RP-2-10	Rollpin - 3/16" Dia. x 1" Lg	1
	11 SC-40-14	Cap Screw - 5/16"-18 x 3/4" Soc. Fil. Hd	4
	12 WL-3-44	Lock Washer - 5/16" Medium	4
	13 P-60359	Bracket - Gear Shift	1
	14 P-24249	Gear Shift Cam Assy	1
	15 RP-2-5	Rollpin - 1/4" Dia. x 7/8" Lg	1
	16 M-24227	Shaft - Shifter	1
	17 PC-3-24	Cotter Pin - 1/16" x 1-1/2"	1
	18 R-24228	Yoke - Lower Shifting	1
	19 M-24230	Plunger - Shifting Yoke	4

## SHIFTING UNIT - Continued

<b>ILLUS.</b>			
<b>PL-16973</b>	<b>PART NO.</b>	<b>NAME OF PART</b>	<b>AMT.</b>
	20 R-24229	Yoke - Upper Shifting	1
	21 M-24232	Nut - Plunger Screw	3
	22 M-60723	Screw - Shifting Plunger	4
	23 M-24233	Spring - Shifting Plunger	4
	24 M-60679	Insulator	1
	25 P-87711-71-1	Switch - Interlock	1
	26 WL-3-7	Lock Washer - #6 Light	2
	27 SC-9-45	Mach. Screw - #6-32 x 1" Rd. Hd	2
	28 V-7009	Spring	2
	29 BA-2-18	Ball - 3/8" Dia	2
	R-89676	Gear Shift Assy (Incls. items #2, 3, 7, 8, 9, 10, 13, 14, 15, 28 & 29)	1
	R-89670-1	Shifting Yoke Assy. (Incls. items #16 thru 23)	1

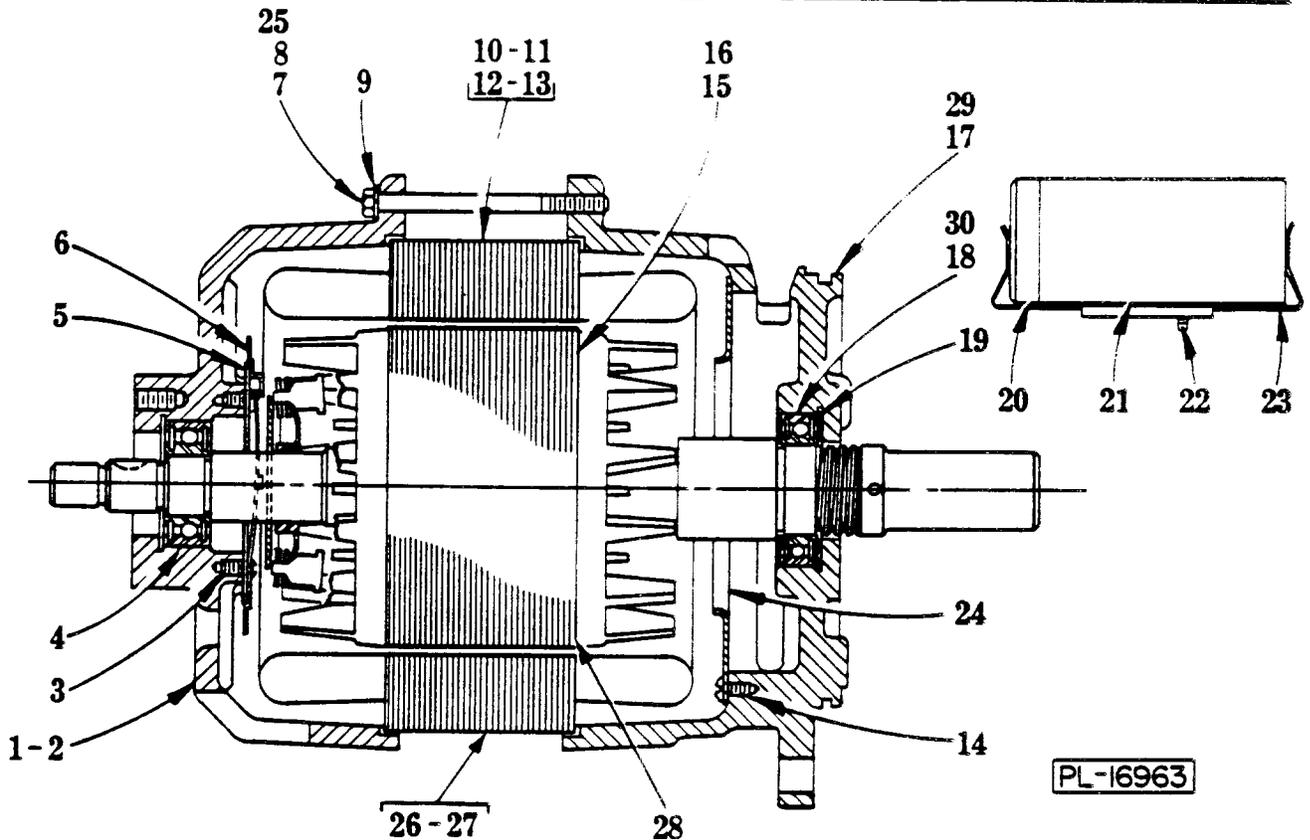


MOTOR AND BRAKE UNIT

MOTOR AND BRAKE UNIT

## MOTOR AND BRAKE UNIT

ILLUS. PL-16996	PART NO.	NAME OF PART	AMT.
	1 SC-36-98	Cap Screw - 1/2"-13 x 1-1/4" Hex Hd	3
	2 WL-4-12	Lock Washer - 1/2" Light	3
	3 P-24610	Guide - Oil Flinger	1
	4 WL-3-43	Lock Washer - 5/16" Light	2
	5 SC-36-28	Cap Screw - 5/16"-18 x 1-1/4" Hex Hd	2
	6 M-24298	Worm - Drive (5T) (50 Hz.)	1
	7 RP-2-6	Rollpin - 1/4" Dia. x 1" Lg. (50 Hz.)	1
	8 P-24257-1	Flinger and Hub Assy. (60 Hz.)	1
	9 P-24257-2	Flinger and Hub Assy. (50 Hz.)	1
	10 RP-2-4	Rollpin - 3/16" Dia. x 1-5/8" Lg	1
	11 D-67500-24	"O" Ring - Bearing Bracket	1
	12 ML-19330	Motor (60 Hz.) (Give Elec. Spec.)	1
	13 P-24771	Brake Mounting Bracket Assy	1
	14 WL-3-43	Lock Washer - 5/16" Light	4
	15 SC-37-75	Cap Screw - 5/16"-18 x 3/4" Hex Hd	4
	16 NS-9-12	Mach. Nut - #8-32 Hex	4
	17 WL-7-6	Lock Washer - *8 Ext. Shakeproof	4
	18 M-24167-1	Clamp - Lead Support	1
	19 B-120955	Spacer - Brake Drum	1
	20 KW-3-5	Key - #405 Woodruff	1
	21 R-60777	Drum - Motor Brake	1
	22 M-24774	Stud - Brake Band	1
	23 NS-32-7	Stop Nut - 1/4"-20 "Flexloc"	1
	24 P-24776	Brake Band Assy	1
	25 PC-3-32	Cotter Pin - 3/32" x 1/2"	1
	26 WS-3-20	Washer	1
	27 P-23936-1	Solenoid - Brake (200/230 V., 60 Hz., 1 & 3 Ph.; 220 V., 50 Hz., 1 & 3 Ph.)	1
	28 P-23926-7	Solenoid - Brake (460 V., 60 Hz., 3 Ph.; 380/415 V., 50 Hz., 3 Ph.) (200/230 V., 60 Hz., 1 & 3 Ph.; 220 V., 50 Hz., 1 & 3 Ph.; W/Pilot Circuit)	1
	29 SC-7-41	Mach. Screw - #8-32 x 3/8" Rd. Hd	4
	30 M-63201	Pin - Solenoid Clevis	1
	31 PC-3-23	Cotter Pin - 1/16" x 1/2"	1
	32 V-6566	Nut - Lock	2
	33 M-24775	Spring - Motor Brake	1
	34 ML-19168	Motor (50 Hz.) (Give Elec. Spec.)	1
	R-24770-1	Motor Brake Assy. (460 V., 60 Hz., 3 Ph.; 380/415 V., 50 Hz., 3 Ph.) (200/230 V., 60 Hz., 1 & 3 Ph.; 220 V., 50 Hz., 1 & 3 Ph.; W/Pilot Circuit) (Incls. items #13, 16, 17, 18, 22, 23, 24, 25, 26, 28, 29, 30, 31 & 33)	1
	R-24770-2	Motor Brake Assy. (200/230 V., 60 Hz., 1 & 3 Ph.; 220 V., 50 Hz., 1 & 3 Ph.) (Incls items #13, 16, 17, 18, 22, 23, 24, 25, 26, 27, 29, 30, 31 & 33)	1



MOTOR UNIT

MOTOR UNIT

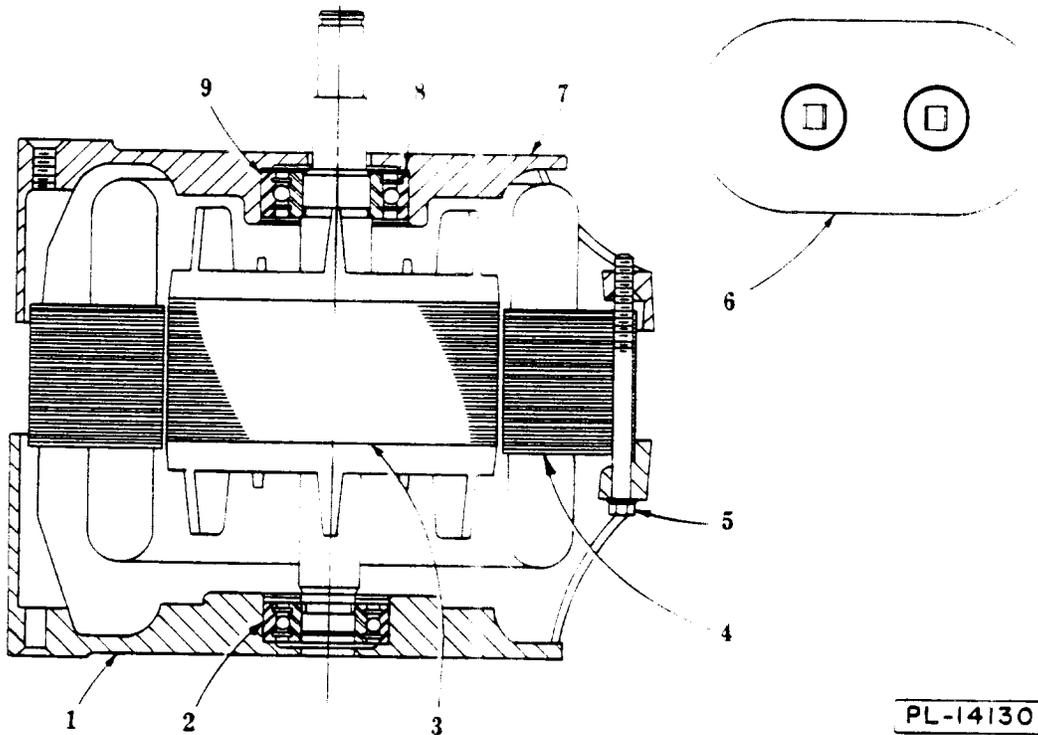
ILLUS. PL-16963	PART NO.	NAME OF PART	AMT.
*	1 E-119537-2	Bracket - Bearing (Switch End)	1
**	2 E-119537-1	Bracket - Bearing (Switch End)	1
*	3 SC-9-49	Mach. Screw - #6-32 x 3/8" Rd. Hd	2
	4 BB-16-23	Ball Bearing - Fafnir *W205PP	1
*	5 C-121111	Insulator - Switch	1
*	6 C-121110	Switch - Starting (Stationary Part)	1
*	7 SC-111-34	Cap Screw - 1/4"-20 x 4" Hex Hd. (60 Hz.)	4
**	8 SC-111-33	Cap Screw - 1/4"-20 x 3-1/2" Hex Hd. (50/60 Hz.)	4
	9 WL-3-38	Lock Washer - 1/4" Medium	4
	10 D-65477-136-2	Stator Assy. (230 V., 60 Hz., 1 Ph)	1
	11 D-65477-136-4	Stator Assy. (200 V., 60 Hz., 1 Ph)	1
	12 D-65478-130-3	Stator Assy. (200 V., 60 Hz., 3 Ph)	1
	13 D-65478-130-4	Stator Assy. (230/460 V., 60 Hz., 3 Ph.)	1
	14 SC-9-70	Mach. Screw - #6-32 x 1/4" Rd. Hd	3
*	15 C-22275-239	Rotor Assy. (60 Hz.)	1
**	16 C-15747-296	Rotor Assy. (60 Hz.)	1
	17 E-119538-2	Bracket - Bearing (Gear End) (60 Hz.)	1
	18 BB-15-36	Ball Bearing - N.D. *Z993L07	1
	19 SL-3-10	Loading Spring - N.D. #62	1
*	20 C-70486-3	End Cap - Capacitor	1

MOTOR UNIT - Continued

ILLUS. PL-16963	PART NO.	NAME OF PART	AMT.
* 21	D-70487-9	Capacitor	1
* 22	SC-14-57	Mach. Screw - #10-24 x 1/2" Flat Hd	2
* 23	P-66621-14	Bracket - Capacitor	1
24	C-120864	Baffle - Air	1
* 25	SC-111-2	Cap Screw - 1/4"-20 x 4-1/2" Hex Hd. (50 Hz.)	4
26	D-65477-136-6	Stator Assy. (220V., 50 Hz., 1 Ph.)	1
27	D-65478-131-2	Stator Assy. (220/380/415 V., 50 Hz., 3 Ph.)	1
* 28	C-22275-224	Rotor Assy. (50 Hz.)	1
29	E-119538-1	Bracket - Bearing (Gear End) (50 Hz.)	1
30	BB-17-26	Ball Bearing - N.D. #Z99506 (50 Hz.)	1
** 31	C-15747-294	Rotor Assy. (50 Hz.)	1

\* 1 Ph.

\*\* 3 Ph.



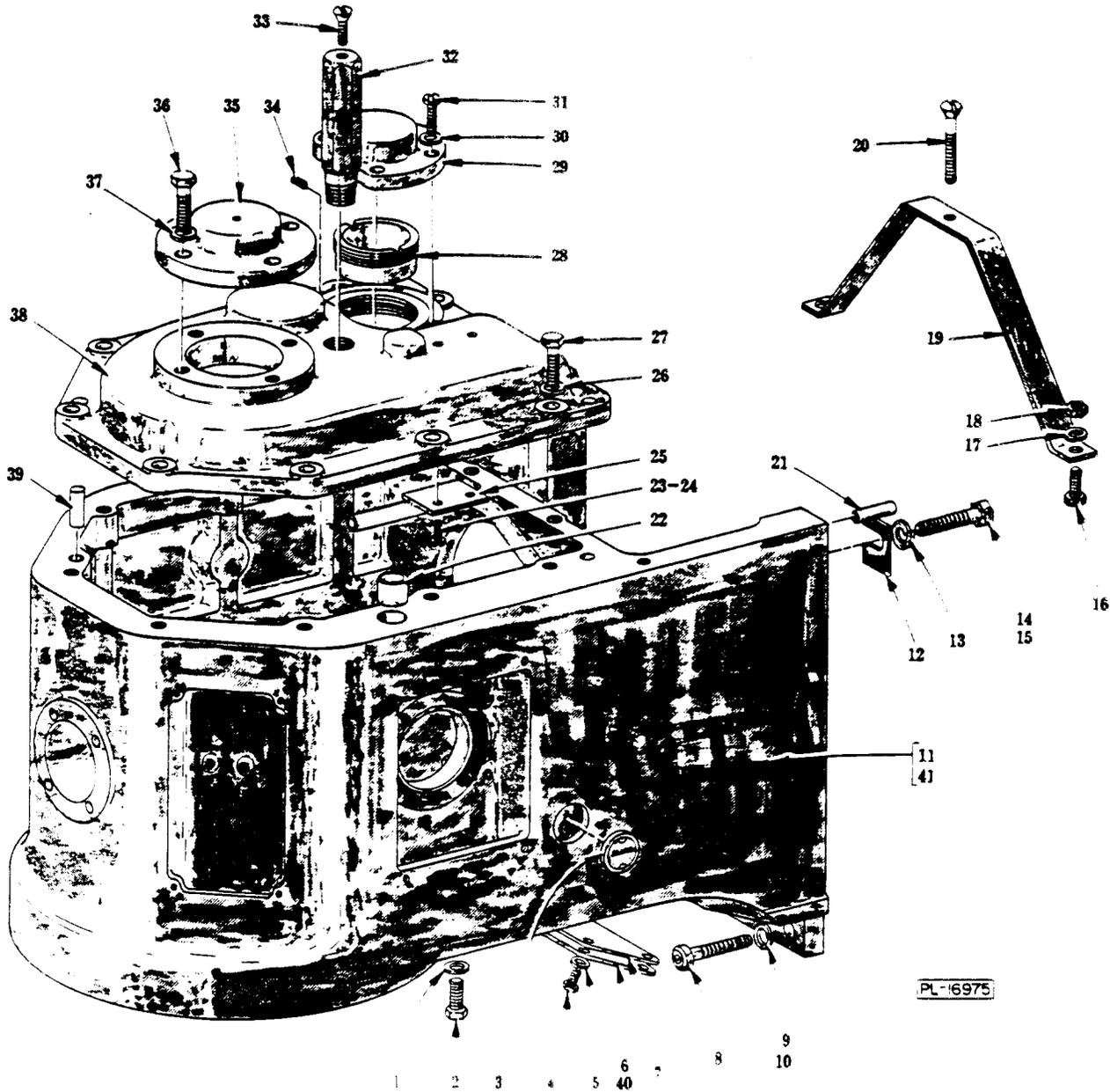
MOTOR UNIT (POWER BOWL LIFT)

MOTOR UNIT (POWER BOWL LIFT)

ILLUS. PL-14130	PART NO.	NAME OF PART	AMT.
1	E-111835-1	Bracket - Bearing	1

## MOTOR UNIT (POWER BOWL LIFT) - Continued

<b>ILLUS.</b>	<b>PART NO.</b>	<b>NAME OF PART</b>	<b>AMT.</b>
<b>PL-14130</b>			
	2 BB-18-12	Ball Bearing - Fafnir #P201KDD	1
	3 C-22275-218	Rotor Assy	1
	4 D-65477-130-1	Stator Assy	1
	5 M-101233-2	Bolt - Special	4
	6 C-120359-1	Capacitor	1
	7 D-118707	Bracket - Bearing (Drive End)	1
	8 SL-2-10	Loading Spring - N.D. #S-17-A	1
	9 BB-20-18	Ball Bearing - N.D. #77503	1



TRANSMISSION CASE UNIT

TRANSMISSION CASE UNIT

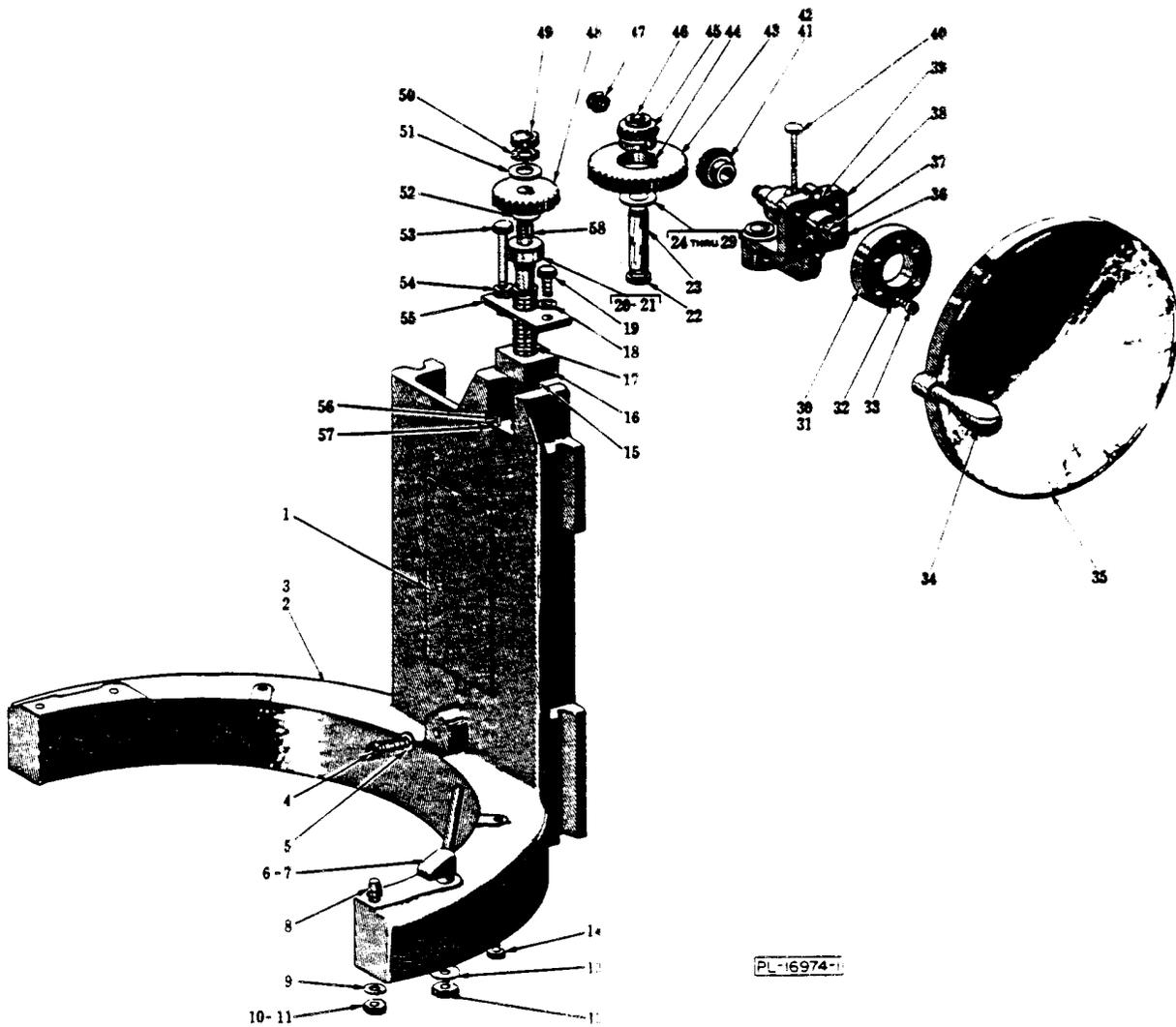
ILLUS. PL-16975	PART NO.	NAME OF PART	AMT.
	1 WS-21-21	Washer	1
	2 SC-62-60	Cap Screw - 1/2"-20 x 1" Hex Hd	1
	3 M-22793	Gauge - Oil Level	1
	4 SC-68-14	Mach. Screw - #8-32 x 3/8" Trimmed Hex Hd	4
	5 WL-3-15	Lock Washer - #8 Light	4

## TRANSMISSION CASE UNIT - Continued

ILLUS. PL-16975	PART NO.	NAME OF PART	AMT.
	* 6 M-24264-1	Plate - Transmission Case Cover	1
	7 M-24665	Gasket - Transmission Case Cover Plate	1
	8 SC-40-36	Cap Screw - 1/2"-13 x 1 - 3/4" Soc. Fil. Hd	2
	9 WL-4-13	Lock Washer - 1/2" Medium	1
	10 WL-4-14	Lock Washer - 1/2" High Collar	1
	* 11 E-120559-2	Case - Transmission	1
	12 M-68288	Shim (.0179" Thk.)	AR
	13 WL-4-13	Lock Washer - 1/2" Medium	4
	14 SC-62-66	Cap Screw - 1/2"-13 x 1-3/4" Hex Hd	2
	15 SC-62-67	Cap Screw - 1/2"-13 x 2-1/4" Hex Hd	2
	16 SC-36-4	Cap Screw - 1/4"-20 x 3/4" Hex Hd	2
	17 WL-3-37	Lock Washer - 1/4" Medium	2
	18 NS-13-1	Full Nut - 1/4"-20 Hex Fin	2
	19 P-62108-1	Strap - Top Anchoring	1
	20 SC-16-19	Mach. Screw - 1/4"-20 x 2" Oval Hd	1
	21 D-11800-221	Dowel	2
	22 V-24670	Insulator - Fiber	1
	23 SC-7-82	Mach. Screw - #10-24 x 3/4" Rd. Hd	2
	24 NS-32-1	Stop Nut - #10-24 "Flexloc"	2
	25 P-24253	Oil Delivery Tube & Plate Assy	1
	26 WL-4-2	Lock Washer - 3/8" Light	11
	27 SC-62-48	Cap Screw - 3/8"-16 x 1-1/8" Hex Hd	11
	28 P-24254	Sleeve - Worm Gear Adjusting	1
	29 P-24256	Retainer - Upper Worm Shaft Bearing	1
	30 WL-3-37	Lock Washer - 1/4" Medium	4
	31 SC-38-5	Cap Screw - 1/4"-20 x 1" Fil. Hd	4
	32 M-24782	Support - Top Cover Front	1
	33 SC-15-70	Mach. Screw - 1/4"-20 x 1" Oval Hd	1
	34 SC-47-70	Set Screw - #10-32 x 3/8" Soc. Hdls., Cup Pt	2
	35 P-24255	Retainer - Planetary Bearing	1
	36 SC-36-28	Cap Screw - 5/16"-18 x 1-1/4" Hex Hd	4
	37 WL-3-44	Lock Washer - 5/16" Medium	4
	38 T-24203	Cover - Transmission Case	1
	39 D-11800-224	Dowel	2
	** 40 M-24264-2	Plate - Transmission Case Cover	1
	** 41 E-120560-2	Case - Transmission	1

\*L-800.

\*\*L-800-D.



BOWL SUPPORT AND LIFT UNIT

BOWL SUPPORT AND LIFT UNIT

BOWL SUPPORT AND LIFT UNIT

ILLUS. PL-16974	PART NO.	NAME OF PART	AMT.
	1 C-104493	Cover - Access Opening	1
	* 2 E-122889-4	Support - Bowl	1
	** 3 E-122889-3	Support - Bowl	1
	4 M-24507-2	Special Screw - 1/2"-13 x 1-1/4" Soc. Hd	1
	5 WL-4-14	Lock Washer - 1/2" High Collar	1
	6 P-65922-14	Bowl Clamp Assy. (R.H.)	1
	7 P-65922-15	Bowl Clamp Assy. (L.H.) (Not Shown)	1

## BOWL SUPPORT AND LIFT UNIT - Continued

ILLUS. PL-16974	PART NO.	NAME OF PART	AMT.
	8 C-120350	Stud - Bowl Locating	2
	9 WL-4-12	Lock Washer - 1/2" Light	2
*	10 NS-17-27	Jam Nut - 1/2"-13 Hex Fin	2
**	11 NS-17-25	Jam Nut - 1/2"-13 Hex Fin	2
	12 NS-46-2	Lock Nut - 5/8"-11 Hex "Nylok"	2
	13 M-64636	Spring Washer - Bowl Clamp	2
	14 SC-37-74	Cap Screw - 3/8"-16 x 1-1/2" Hex Hd	1
	15 M-24618	Spring - Bowl Support Stop	1
	16 M-24198	Nut - Bowl Lift Screw	1
	17 C-290052-1	Screw - Bowl Lift	1
	18 WL-4-2	Lock Washer - 3/8" Light	1
	19 SC-36-53	Cap Screw - 3/8"-16 x 7/8" Hex Hd	1
	20 BB-5-30	Ball Bearing - N.D. #Z99503	1
	21 B-290053	Spacer	1
	22 RR-5-2	Retaining Ring (Spirolox)	1
	23 M-24194	Shaft - Miter Gear	1
	24 M-24614-1	Washer - Miter Gear Spacer (.096" Thk.)	AR
	25 M-24614-2	Washer - Miter Gear Spacer (.091" Thk.)	AR
	26 M-24614-3	Washer - Miter Gear Spacer (.086" Thk.)	AR
	27 M-24614-4	Washer - Miter Gear Spacer (.081" Thk.)	AR
	28 M-24614-5	Washer - Miter Gear Spacer (.076" Thk.)	AR
	29 M-24614-6	Washer - Miter Gear Spacer (.071" Thk.)	AR
*	30 M-24609-1	Ring - Hand Wheel Bracket Clamping	1
**	31 M-24609-2	Ring - Hand Wheel Bracket Clamping	1
	32 WL-3-48	Lock Washer - 5/16" High Collar	1
	33 SC-11-95	Mach. Screw - 5/16"-18 x 1" Fil. Hd	4
	34 P-24765	Handle - Bowl Lift Hand Wheel	1
	35 R-78182	Hand Wheel & Handle Assy. (Incls. item #34)	1
	36 M-24191	Shaft - Hand Wheel	1
	37 PG-7-19	Groov-Pin - Type E, 1/4" x 2-3/4"	1
	38 M-89684	Hand Wheel Bracket & Bearing Assy	1
	39 RR-2-6	Rollpin - 1/4" Dia. x 1" Lg	2
	40 OG-3-47	Oiler - Special	1
	41 M-24196	Pinion - Bowl Lift Miter (23T)	1
	42 R-12430-47	Key	1
	43 M-24192	Gear - Bowl Lift (41T)	1
	44 KW-3-3	Key - #404 Woodruff	1
	45 M-24195	Gear - Bowl Lift Miter (23T)	1
	46 RR-5-2	Retaining Ring (Spirolox)	1
	47 NS-32-29	Stop Nut - 1/2"-20 "Flexloc"	1
	48 M-24193	Gear - Bowl Lift Screw (31T)	1
	49 NS-34-4	Lock Nut - N.D. #N-03	1
	50 WL-12-4	Lock Washer - N.D. #W-03	1
	51 WS-10-17	Washer	1
	52 WS-10-17	Washer	2
	53 B-122925-2	Screw - Stop	1

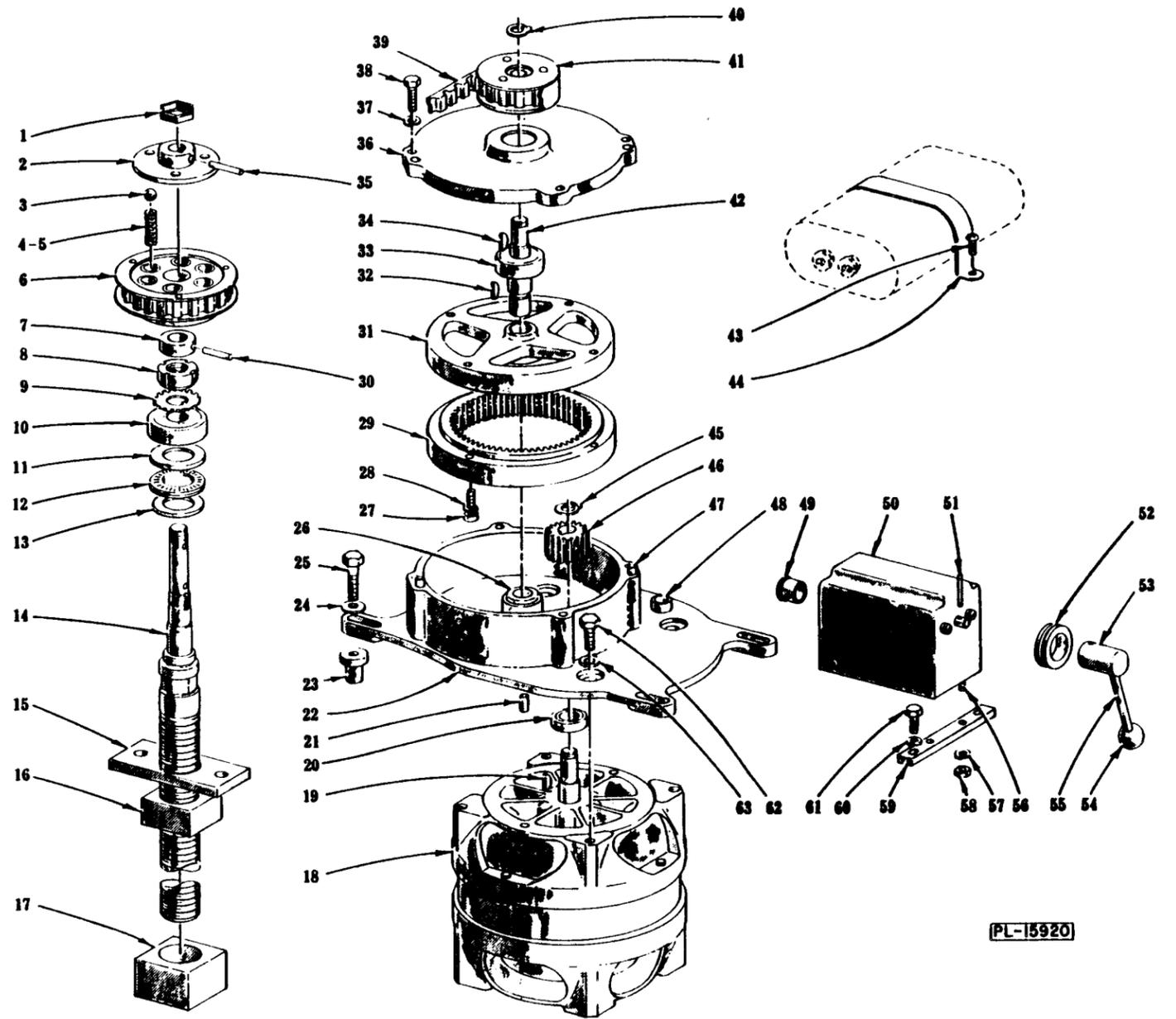
## BOWL SUPPORT AND LIFT UNIT - Continued

<b>ILLUS.</b>	<b>PART NO.</b>	<b>NAME OF PART</b>	<b>AMT.</b>
<b>PL-16974</b>			
	54 NS-17-14	Jam Nut - 3/8"-16 Hex Fin	1
	55 M-24201	Retainer - Bowl Lift Nut	1
	56 RP-2-11	Rollpin - 3/16" Dia. x 1/2" Lg	2
	57 M-24617	Seat - Bowl Support Stop Spring	1
	58 R-12430-43	Key	1

\*L-800.

\*\*L-800-D.

POWER BOWL LIFT UNIT



PL-15920

POWER BOWL LIFT UNIT

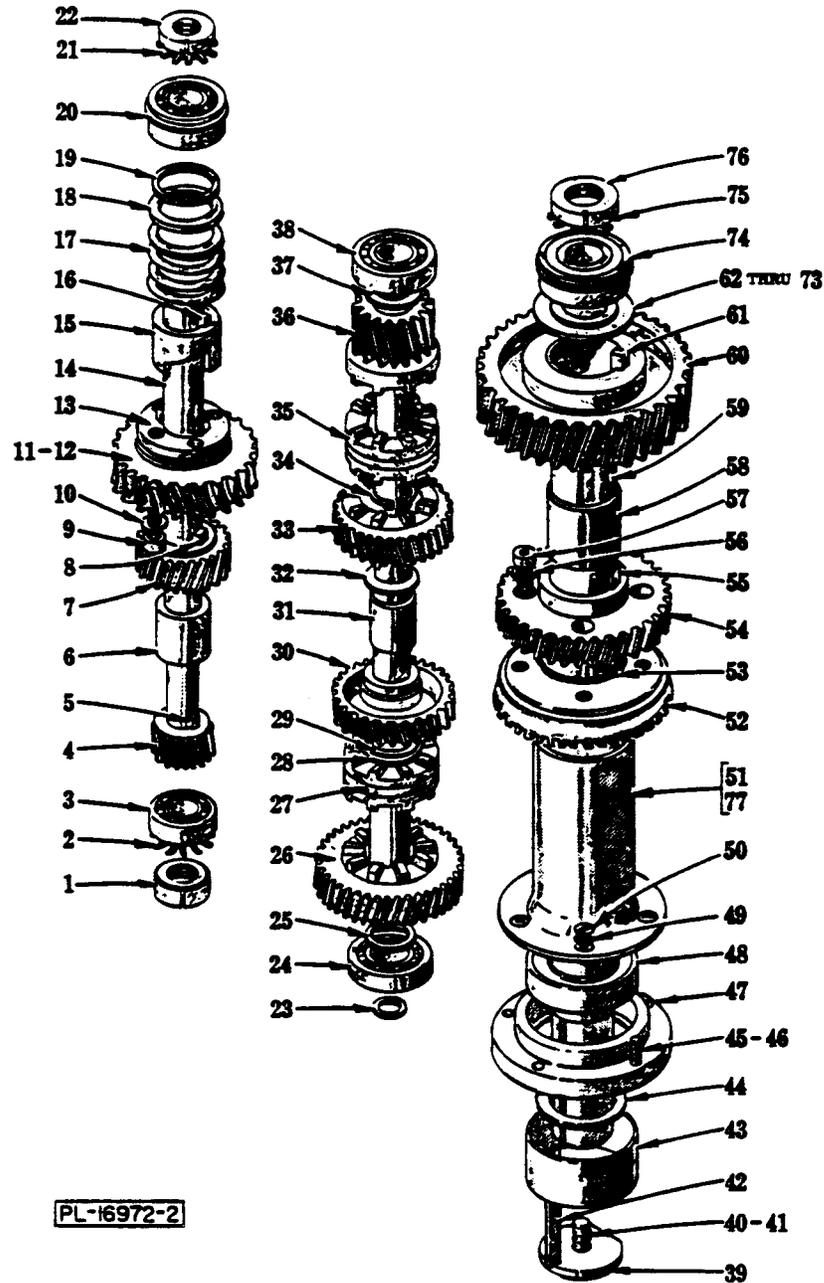


## POWER BOWL LIFT UNIT

ILLUS. PL-15920	PART NO.	NAME OF PART	AMT.
	1 NS-35-17	Special Nut - 9/16"-18 "Palnut"	1
	2 B-120098	Detent Plate & Hub Assy	1
	3 BA-2-18	Ball - 3/8" Dia	6
	4 M-64616	Spring - Detent (12 lb.) (Holes nearest drive screws)	3
	5 V-7009	Spring - Detent (6 lb.)	3
	6 C-120097	Pulley Assy. (20T)	1
	7 M-64405	Collar - Input Shaft	1
	8 NS-34-4	Lock Nut - N.D. #N-03	1
	9 WL-12-4	Lock Washer - N.D. #W-03	1
	10 BB-5-30	Ball Bearing - N.D. #Z99503	1
	11 M-64558	Washer - Thrust	1
	12 BN-2-18	Needle Bearing - Torrington #NTA-1423	1
	13 M-64558	Washer - Thrust	1
	14 D-120094	Screw - Lift	1
	15 B-120096	Retainer - Lift Nut	1
	16 B-120095	Nut - Bowl Lift Screw	1
	17 B-120173	Spacer - Nut	1
	18 ML-31439	Motor (Give Elec. Spec.)	1
	19 KW-3-1	Key - #304 Woodruff	1
	20 B-120053	Seal - Oil	1
	21 D-11800-283	Dowel	2
	22 D-120051	Gear Case Assy. (Incls. items #20, 21, 26, 47 & 48)	1
	23 B-120100	Nut - Vibration Mount	4
	24 WS-4-39	Washer	4
	25 SC-36-7	Cap Screw - 1/4"-20 x 1-1/8" Hex Hd	4
	26 M-64641	Bearing - Gear Box	1
	27 SC-40-4	Cap Screw - #10-32 x 3/4" Soc. Hd	4
	28 WL-3-22	Lock Washer - #10 Light	4
	29 C-120080	Gear - Internal (64T)	1
	30 RP-2-25	Rollpin - 1/8" Dia. x 7/8" Lg	1
	31 C-120079	Hub - Gear	1
	32 KW-3-3	Key - #404 Woodruff	1
	33 BB-5-19	Ball Bearing - Fafnir #H202PP	1
	34 KW-3-1	Key - #304 Woodruff	1
	35 PS-4-9	Spirol Pin - 3/16" Dia. x 1" Lg	1
	36 D-120084	Cover - Gear Case	1
	37 WL-3-36	Lock Washer - 1/4" Light	4
	38 SC-36-4	Cap Screw - 1/4"-20 x 3/4" Hex Hd	4
	39 C-116634	Belt - Timing	1
	40 RR-8-6	Retaining Ring	1
	41 B-120086	Drive Pulley Assy. (14T)	1
	42 C-120083	Shaft - Transmission	1

## POWER BOWL LIFT UNIT - Continued

<b>ILLUS.</b>	<b>PART NO.</b>	<b>NAME OF PART</b>	<b>AMT.</b>
<b>PL-15920</b>			
	43 SD-12-20	Self-Tapping Screw - #8-32 x 1/2" Phil. Truss Hd., Type 23	2
	44 B-120163	Bracket - Capacitor	1
	45 RR-4-17	Retaining Ring	1
	46 B-120081	Gear - Motor Pinion (16T)	1
	47 D-11800-91	Dowel	2
	48 V-24670	Insulator - Fiber	1
	49 FE-21-14	Bushing - Snap	1
	50 B-121319	Switch & Label Assy	1
	51 RP-2-33	Rollpin - .094" Dia. x 1" Lg	1
	52 B-120105	Grommet	1
	53 B-102108	Hub - Switch	1
	54 M-77401	Knob - Switch Control	1
	55 B-120107	Handle - Switch	1
	56 SC-40-7	Cap Screw - 1/4"-20 x 5/8" Soc. Hd	2
	57 WL-3-36	Lock Washer - 1/4" Light	2
	58 NS-13-1	Full Nut - 1/4"-20 Hex Fin	2
	59 B-120109	Plate - Switch Mounting	1
	60 WL-3-36	Lock Washer - 1/4" Light	2
	61 SC-36-2	Cap Screw - 1/4"-20 x 1/2" Hex Hd	2
	62 SC-36-25	Cap Screw - 5/16"-18 x 3/4" Hex Hd	4
	63 WL-3-43	Lock Washer - Light	4



TRANSMISSION UNIT

TRANSMISSION UNIT

ILLUS. PL-16972-2	PART NO.	NAME OF PART	AMT.
	1 NS-34-5	Lock Nut - N.D. #N-04	1
	2 WL-12-5	Lock Washer - N.D. #W-04	1
	3 BB-12-7	Ball Bearing - SKF #1204 Self-Aligning	1
	4 C-121382	Gear - Lower Worm Shaft (17T)	1
	5 R-12430-53	Key	1

## TRANSMISSION UNIT - Continued

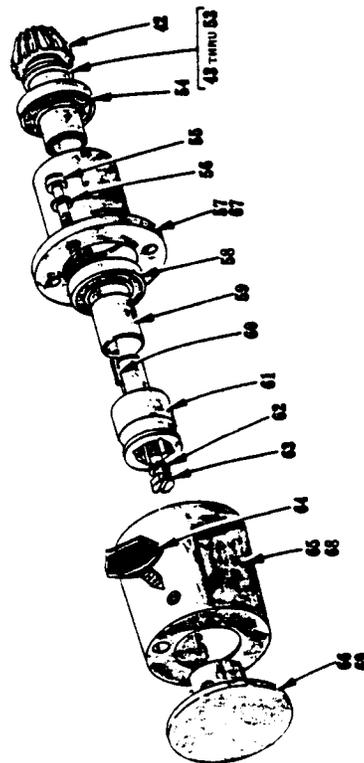
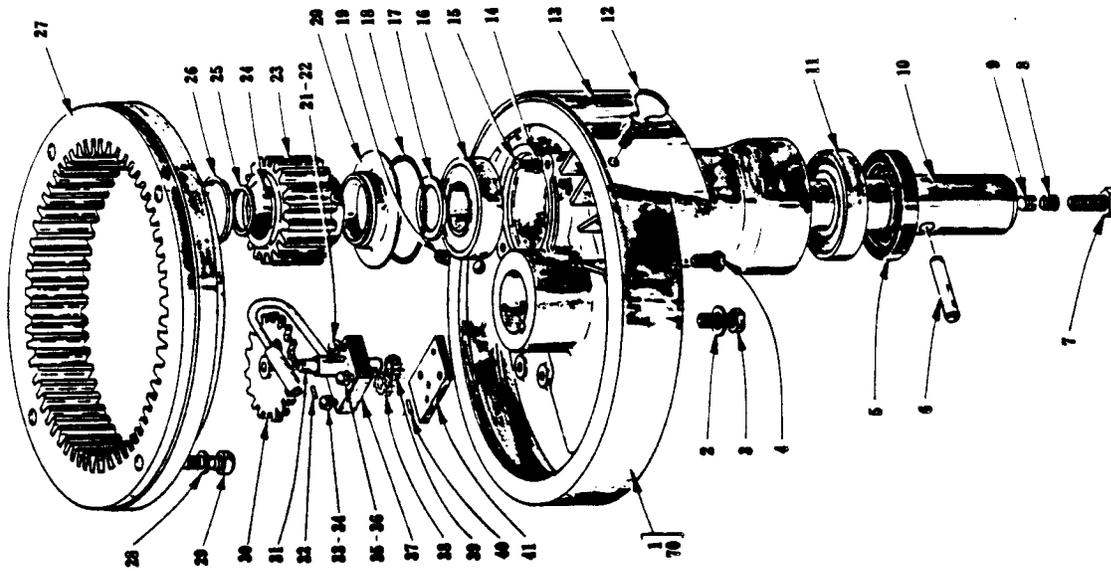
<b>ILLUS.</b>	<b>PART NO.</b>	<b>NAME OF PART</b>	<b>AMT.</b>
<b>PL-16972-2</b>			
	6 M-24206	Spacer - Worm Gear Shift	1
	7 M-24207	Gear - Upper Worm Shaft (25T)	1
	8 R-12430-51	Key	1
	9 SC-40-8	Cap Screw - 1/4"-20 x 1" Soc. Fil. Hd	4
	10 WL-3-37	Lock Washer - 1/4" Medium	4
	11 P-24208	Worm Gear (29T, 60 Hz.)	1
	12 P-24735	Worm Gear (31T, 50 Hz.)	1
	13 P-61497	Flange - Shock Absorber Drive	1
	14 R-24204	Shaft - Worm Gear	1
	15 P-61498	Compressor - Shock Absorber	1
	16 V-24546	Key - Compressor to Shaft	1
	17 M-9733	Spring - Worm Shaft	1
	18 M-24238	Washer - Shock Absorber	1
	19 RR-5-10	Retaining Ring (Spirolox)	1
	20 BB-9-37	Ball Bearing - N.D. #45504V	1
	21 WL-12-5	Lock Washer - N.D. #W-04	1
	22 NS-34-5	Lock Nut - N.D. #N-04	1
	23 RR-5-4	Retaining Ring (Spirolox)	1
	24 BB-8-31	Ball Bearing - Fafnir #7205W	1
	25 M-24210	Spacer - Clutch Shaft	1
	26 P-245 39	Lower Clutch and Lower Gear Assy. (49T)	1
	27 P-24213	Clutch - Shifting	1
	28 RR-4-13	Retaining Ring (Truarc)	1
	29 M-60767	Washer - Clutch Shaft	1
	30 P-245 38	Lower Clutch and Upper Gear Assy. (41T)	1
	31 R-24209	Shaft - Clutch	1
	32 M-24216	Washer - Clutch Shaft	1
	33 P-245 37	Upper Clutch and Lower Gear Assy. (33T)	1
	34 RR-4-13	Retaining Ring (Truarc)	1
	35 P-24213	Clutch - Shifting	1
	36 P-24545	Upper Clutch and Upper Gear Assy. (17T)	1
	37 M-24210	Spacer - Clutch Shaft	1
	38 BB-18-33	Ball Bearing - Fafnir #205K	1
	39 M-24266-1	Washer - Planetary	1
	40 SC-62-58	Cap Screw - 3/8"-24 x 1-1/4" Hex Hd	1
	41 WL-6-27	Lock Washer - 3/8" Light	1
	42 R-12430-195	Key	1
	43 M-60486	Shield - Planetary Oil	1
	44 M-24543	Washer - Planetary Spacer	1
**	45 SC-40-14	Cap Screw - 5/16"-18 x 3/4" Soc. Fil. Hd	5
**	46 WL-3-48	Lock Washer - 5/16" High Collar	5
**	47 P-68226	Carrier - Lower Bearing	1
	48 BB-15-26	Ball Bearing - Fafnir #P9109PP	1
	49 WL-9-9	Lock Washer - 1/4" Csk. Ext. Shakeproof	5
	50 SC-13-79	Mach. Screw - 1/4"-20 x 1/2" Flat Hd	5
**	51 C-121478-2	Chimney	1

## TRANSMISSION UNIT - Continued

<b>ILLUS.</b>	<b>PART NO.</b>	<b>NAME OF PART</b>	<b>AMT.</b>
<b>PL-16972-2</b>			
	52 P-61727	Gear - Spiral Bevel (41T)	1
	53 D-67500-19	"O" Ring - Bevel Gear	1
	54 P-24223	Gear - Planetary Shaft Lower (35T)	1
	55 R-12430-211	Key	1
	56 WL-3-48	Lock Washer - 5/16" High Collar	4
	57 SC-40-15	Cap Screw - 5/16"-18 x 1-1/4" Soc. Fil. Hd	4
	58 M-24224	Spacer - Planetary Shaft	1
	59 S-24222	Shaft - Planetary	1
	60 P-24225	Gear - Upper Planetary Shaft (53T)	1
	61 R-12430-210	Key	1
	62 M-24226-1	Shim - Planetary Shaft (.141" Thk.)	R
	63 M-24226-2	Shim - Planetary Shaft (.144" Thk.)	AR
	64 M-24226-3	Shim - Planetary Shaft (.147" Thk.)	AR
	65 M-24226-4	Shim - Planetary Shaft (.150" Thk.)	AR
	66 M-24226-5	Shim - Planetary Shaft (.153" Thk.)	AR
	67 M-24226-6	Shim - Planetary Shaft (.156" Thk.)	AR
	68 M-24226-7	Shim - Planetary Shaft (.159" Thk.)	AR
	69 M-24226-8	Shim - Planetary Shaft (.162" Thk.)	AR
	70 M-24226-9	Shim - Planetary Shaft (.165" Thk.)	AR
	71 M-24226-10	Shim - Planetary Shaft (.168" Thk.)	AR
	72 M-24226-11	Shim - Planetary Shaft (.171" Thk.)	AR
	73 M-24226-12	Shim - Planetary Shaft (.174" Thk.)	AR
	74 BB-9-48	Ball Bearing - MRC #5206KFFG	1
	75 WL-12-7	Lock Washer - N.D. #W-06	1
	76 NS-34-7	Lock Nut - N.D. #N-06	1
	* 77 C-121478-1	Chimney	1
	R-89673-1	Worm Gear Assy. (50 Hz.) (Incls. items #1 thru 10 & 12 thru 19)	1
	R-89673-3	Worm Gear Assy. (60 Hz.) (Incls. items 1 thru 11 & 13 thru 19)	1

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PLANETARY AND ATTACHMENT HUB UNIT  
 PLANETARY AND ATTACHMENT HUB UNIT

ILLUS. PL-16971	PART NO.	NAME OF PART	AMT.
	* 1 T-24265-1	Planetary	1
	2 WS-21-21	Washer	1
	3 SC-62-60	Cap Screw - 1/2"-20 x 1" Hex Hd	1

## PLANETARY AND ATTACHMENT HUB UNIT - Continued

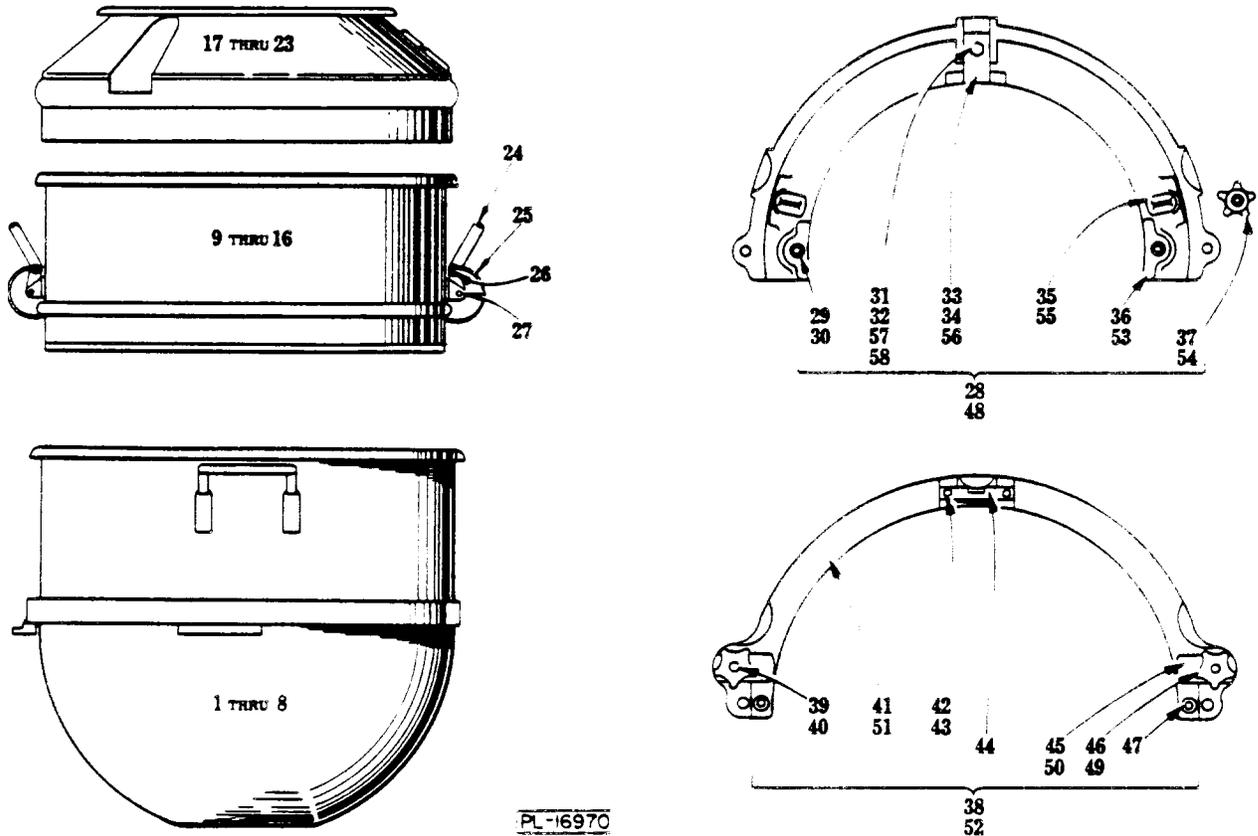
<b>ILLUS. PL-16971</b>	<b>PART NO.</b>	<b>NAME OF PART</b>	<b>AMT.</b>
	4 SC-62-80	Cap Screw - 3/8"-16 x 5/8" Hex Hd	2
	5 M-24651	Seal - Planetary	1
	6 V-111156	Pin - Agitator Shaft	1
	7 M-64723	Plug Screw - Agitator Shaft	1
	8 SC-47-41	Set Screw - 3/8"-16 x 3/8" Soc. Hdls., Cup Pt	1
	9 V-7744	Set Screw - Hdls., Cone Pt	1
	10 M-64137	Agitator Shaft Assy. (Incls. items #6 thru 9)	1
	11 BB-7-39	Ball Bearing - MRC #207-SZZ	1
	12 P-70641-11	Thumb Screw - #8-32	2
	13 R-60458	Cup - Drip	1
	14 WS-3-23	Washer	2
	15 SC-8-65	Mach. Screw - 1/4"-20 x 3/8" Rd. Hd	2
	16 BB-6-36	Ball Bearing - MRC #306-SZZ	1
	17 M-60768	Shim - Internal Pinion	AR
	18 D-67500-21	"O" Ring	1
	19 FP-28-38	Plug - 3/8" Hex Socket Pipe	1
	20 M-73010	Oil Baffle - Planetary	1
	21 SC-9-50	Mach. Screw - #10-32 x 3/4" Rd. Hd	1
	22 WL-3-22	Lock Washer - #10 Light	1
	23 P-24270	Pinion - Internal (18T)	1
	24 R-12430-154	Key	1
	25 RR-5-8	Retaining Ring (Spirolox)	1
	26 M-60071	Cap - Oil Retaining	1
	27 R-24267	Gear - Internal (59T)	1
	28 WL-4-1	Lock Washer - 3/8" High Collar	4
	29 SC-40-23	Cap Screw - 3/8"-16 x 1-1/4" Soc. Fil. Hd	4
	30 M-60467	Conveying Gear Assy. (18T)	1
	31 M-60444	Shaft - Oil Pump	1
	32 RP-2-8	Rollpin - 5/64" Dia, x 11/16" Lg	1
	33 SC-9-39	Mach. Screw - #8-32 x 3/4" Rd. Hd	1
	34 WL-3-15	Lock Washer - #8 Light	1
	35 SC-9-51	Mach. Screw - #10-32 x 7/8" Rd. Hd.	2
	36 WL-3-22	Lock Washer - #10 Light	2
	37 C-123679	Housing & Tube Assy	1
	38 C-290277	Gear - Oil Pump (15T)	1
	39 C-290276	Gear - Oil Pump (15T)	1
	40 RP-6-5	Rollpin - 1/16" Dia. x 3/8" Lg	1
	41 M-60443	Plate - Oil Pump Bottom	1
	42 P-61224	Bevel - Pinion (16T)	1
	43 M-61225-1	Shim - Bevel Pinion (.061" Thk)	AR
	44 M-61225-2	Shim - Bevel Pinion (.064" Thk)	AR
	45 M-61225-3	Shim - Bevel Pinion (.067" Thk)	AR
	46 M-61225-4	Shim - Bevel Pinion (.070" Thk)	AR
	47 M-61225-5	Shim - Bevel Pinion (.073" Thk)	AR
	48 M-61225-6	Shim - Bevel Pinion (.076" Thk)	AR
	49 M-61225-7	Shim - Bevel Pinion (.079" Thk)	AR

## PLANETARY AND ATTACHMENT HUB UNIT - Continued

ILLUS. PL-16971	PART NO.	NAME OF PART	AMT.
	50 M-61225-8	Shim - Bevel Pinion (.082" Thk)	AR
	51 M-61225-9	Shim - Bevel Pinion (.085" Thk)	AR
	52 M-61225-10	Shim - Bevel Pinion (.088" Thk)	AR
	53 M-61225-11	Shim - Bevel Pinion (.091" Thk)	AR
	54 BB-15-16	Ball Bearing - Fafnir #9106PP	1
	55 SC-40-67	Cap Screw - 5/16"-18 x 2-1/2" Soc. Fil. Hd	4
	56 WL-3-44	Lock Washer - 5/16" Medium	4
	57 P-61228-1	Carrier - Bearing	1
	58 BB-15-16	Ball Bearing - Fafnir #9106PP	1
	59 M-61227	Spacer - Bearing	1
	60 R-12430-60	Key	1
	61 P-61230	Sleeve - Square Drive	1
	62 WL-3-44	Lock Washer - 5/16" Medium	1
	63 M-61279	Screw - Special (L.H. Thread)	1
	64 C-108197-2	Thumb Screw Assy	1
	* 65 R-61226-3	Hub - Attachment	1
	* 66 P-24799-1	Plug - Attachment Hole	1
	** 67 P-61228-3	Carrier - Bearing	1
	** 68 R-61226-2	Hub - Attachment	1
	** 69 P-24799-2	Plug - Attachment Hole	1
	** 70 T-24265-2	Planetary	1
	P-290230	Planetary Oil Pump Assy. (Incls. items #21, 22, 30, 31, 32, 33, 34, 37, 38, 39, 40 & 41)	1
	* P-61236-2	Attachment Hub Assy. (Incls. items #42 thru 63 & 65)	1
	** P-61236-3	Attachment Hub Assy. (Incls. items #42 thru 56, 58 thru 63, 67 & 68)	1
	* P-89680-1	Planetary Assy. (Incls. items #1, 4, 5, 10, 11, 14 thru 20 23, 24, 25, 26, & M-60486)	1
	** P-89680-2	Planetary Assy. (Incls. items #4, 5, 10, 11, 14 thru 20 23, 24, 25, 26, 70 & M-60486)	1

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BOWLS AND EQUIPMENT

BOWLS AND EQUIPMENT

ILLUS. PL-16970	PART NO.	NAME OF PART	AMT
** 1	S-84920	Bowl - 80 Qt. (SST)	1
2	S-66465-1	Bowl - 80 Qt. (Tinned)	1
** 3	S-66462	Bowl - 60 Qt. (SST)	1
4	S-66461	Bowl - 60 Qt. (Tinned)	1
** 5	D-104433	Bowl - 40 Qt. (SST)	1
6	D-104432	Bowl - 40 Qt. (Tinned)	1
** 7	B-104416	Bowl - 30 Qt. (SST)	1
8	B-104415	Bowl - 30 Qt. (Tinned)	1
** 9	S-8569-4	Extension - 80 Qt. Bowl (SST) (Flange Top Bowl) (Incls. items #24, 25, 26 & 27)	1
10	S-8569-2	Extension - 80 Qt. Bowl (Tinned) (Flange Top Bowl) (Incls. items #24, 25, 26 & 27)	1
** 11	S-8569-8	Extension - 60 Qt. Bowl (SST) (Flange Top Bowl) (Incls. items #24, 25, 26, & 27)	1
12	S-8569-6	Extension - 60 Qt. Bowl (Tinned) (Flange Top Bowl) (Incls. items #24, 25, 26 & 27)	1
** 13	D-7985-2	Extension - 40 Qt. Bowl (SST) (Flange Top Bowl)	1

## BOWLS AND EQUIPMENT - Continued

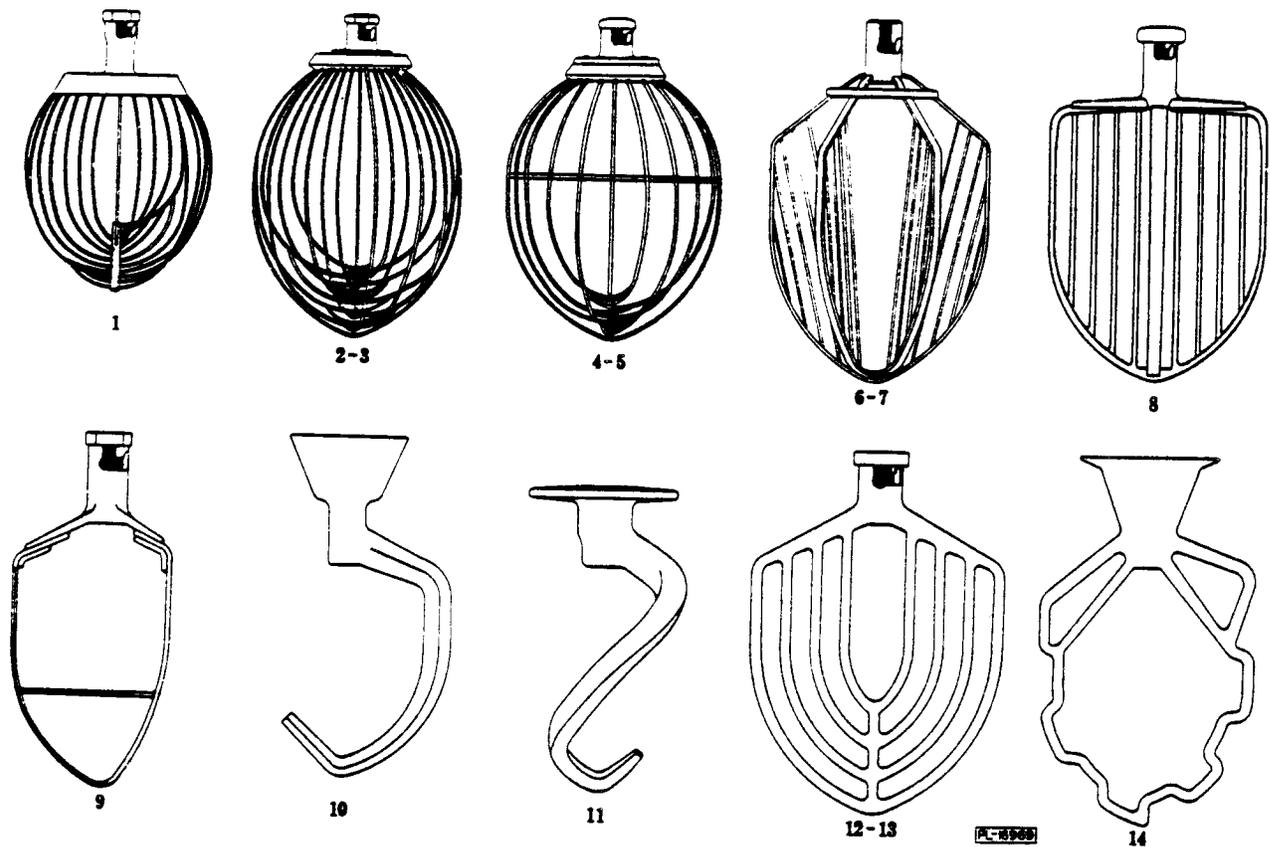
ILLUS. PL-16970	PART NO.	NAME OF PART	AMT
	14 D-7985-1	Extension - 40 Qt. Bowl (Tinned) (Flange Top Bowl)	1
**	15 D-6474-2	Extension - 30 Qt. Bowl (SST) (Flange Top Bowl)	1
	16 D-6474-1	Extension - 30 Qt. Bowl (Tinned) (Flange Top Bowl)	1
**	17 S-82443-8	Splash Cover Assy - 80 Qt. (SST)	1
	18 S-82443-7	Splash Cover Assy - 80 Qt. (Tinned)	1
	19 E-104681	Cover - Splash (60 Qt.) (Plastic)	1
**	20 S-82443-4	Splash Cover Assy. - 40 Qt. (SST)	1
	21 S-82443-3	Splash Cover Assy. - 40 Qt. (Tinned)	1
**	22 S-82443-2	Splash Cover Assy. - 30 Qt. (SST)	1
	23 S-82443-1	Splash Cover Assy. - 30 Qt. (Tinned)	1
	24 M-11881	Handle - Clamp (80 or 60 Qt.) (For items #9 thru 12)	2
	25 P-62234-2	Spring - Bowl Clamp (80 or 60 Qt.) (Flange Top Bowl) (For items #9 thru 12)	2
	26 RP-2-7	Rollpin - 3/16" Dia. x 1-1/8" Lg. (For items #9 thru 12)	2
	27 RP-2-35	Rollpin - 3/16" Dia. x 5/8" Lg. (For items #9 thru 12)	2
**	28 D-24653-2	Bowl Adapter Assy. (SST) (80-40 Qt. & 80-30 Qt.) (Incls. items #29 thru 37)	1
	29 WL-4-17	Lock Washer - 5/8" Light	2
	30 B-7629-2	Stud - Bowl Locating	2
**	31 SC-41-43	Cap Screw - 1/2"-13 x 1" Hex Hd	1
**	32 WL-6-35	Lock Washer - 1/2" Light	1
**	33 B-7624-2	Retainer - Bowl	1
	34 A-111671	Shim - .010" Thk.)	AR
**	35 M-8100-2	Stud - Clamp	2
**	36 R-111165-2	Adapter (80-40 Qt. & 80-30 Qt.)	1
**	37 M-111268-2	Knob - Clamp Stud	2
**	38 C-61033-2	Bowl Adapter Assy. (SST) (80-60 Qt.) (Incls. items #39 thru 47)	1
	39 M-22196	Bolt - Bowl Lock	2
	40 WL-4-11	Lock Washer - 1/2" Medium	2
**	41 S-65791-2	Adapter (80-60 Qt.)	1
	42 SC-37-88	Cap Screw - 5/16"-18 x 1-1/4" Hex Hd	2
	43 WL-3-47	Lock Washer - 5/16" Medium	2
	44 M-24289	Retainer - Bowl	1
**	45 M-65532-2	Clamp - Bowl Adapter	2
**	46 M-8101-2	Knob - Clamp Stud (Deluxe)	2
	47 M-24300	Pin - Bowl Locating	2
*	48 D-24653-1	Bowl Adapter Assy. (80-40 Qt. & 80-30 Qt.) (Incls. items #29, 30, 34 & 53 thru 58)	1
*	49 M-8101-1	Knob - Clamp Stud (Tinned)	2
*	50 M-65532-1	Clamp - Bowl Adapter	2
*	51 S-65791-1	Adapter (80-60 Qt.)	1

BOWLS AND EQUIPMENT - Continued

ILLUS. PL-16970	PART NO.	NAME OF PART	AMT
* 52	M-61033-1	Bowl Adapter Assy (60 Qt.) (Incls. items #39, 40, 42, 43, 44, 47, 49, 50 & 51)	1
* 53	R-111165-1	Adapter (80-40 Qt. & 80-30 Qt.)	1
* 54	M-111268-1	Knob - Clamp Stud	2
* 55	M-8100-1	Stud - Clamp	2
* 56	B-7624-1	Retainer - Bowl	1
* 57	WL-4-11	Lock Washer - 1/2" Medium	1
* 58	SC-62-37	Cap Screw - 1/2"-13 x 1" Hex Hd	1
	** D-107124	Bowl - 80 Qt. (Reinforced) (Not Shown)	1

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AGITATORS

## AGITATORS

ILLUS. PL-16969	PART NO.	PART No.	PART NO.	PART NO.	NAME OF PART	AMT.
	80 Qt.	60 Qt.	40 Qt.	30 Qt.		
1	R-16418-1	---	---	---	"K" Spiral Whip	1
2	S-23522-2	S-24900-2	S-23591-2	R-10327-2	"D" Wire Whip (SST)	1
3	---	---	---	R-10327-1	"D" Wire Whip (Tinned) (Not Shown)	1
4	---	---	S-60132-2	R-72871	"I" Wire Whip (SST) (Not Shown)	1
5	E-121036	R-60090	---	---	"I" Wire Whip (Tinned)	1
6	D-123489	D-123486	D-123682	---	"C" Six Wing Whip	1
7	---	---	---	D-123714	"C" Four Wing Whip (Not Shown)	1
8	R-15320	---	---	---	"J" Four Wing Beater	1
9	E-104229	S-68096	S-68095	R-68822	"P" Pastry Knife	1
10	---	---	S-80693	S-72858	"E" Dough Arm	1
11	T-86841	E-121071	---	---	"ED" Dough Arm (Spiral)	1
12	S-24860	S-24308-2	S-24847	S-60052-2	"B" Flat Beater (SST)	1
13	S-23490	S-24308-1	T-23620	S-60052-1	"B" Flat Beater (Alum.)	1
14	S-9875-1	S-60069	P-8400	R-10326	"S" Sweet Dough Arm	1



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