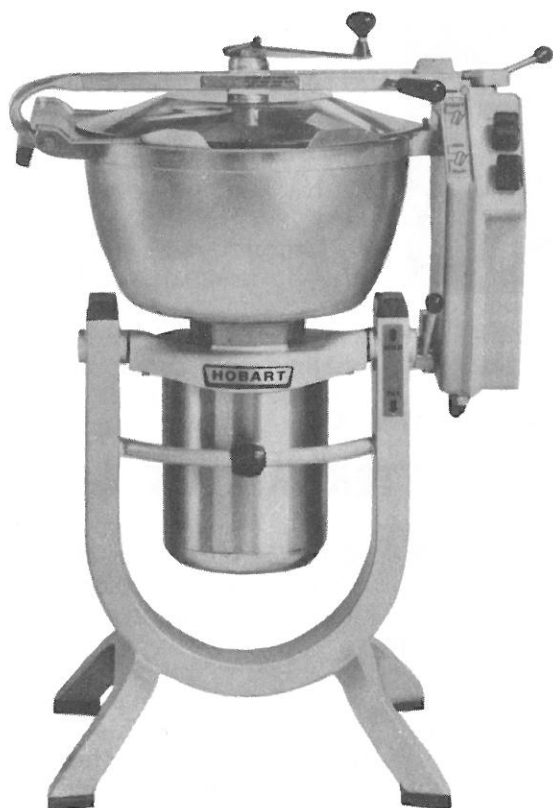




INSTRUCTION MANUAL

... with Replacement Parts



MODELS HCM-300 & HCM-450 CUTTER/MIXERS

ML-19519 HCM-300
ML-19520 HCM-450

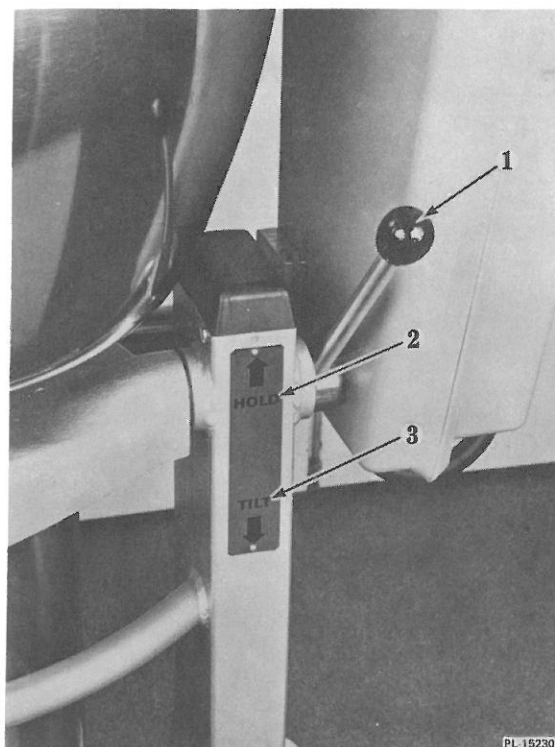


Fig. 1

Installation, Operation and Care of MODELS HCM-300 AND HCM-450 CUTTER/MIXERS

GENERAL

The HCM-300 and HCM-450 cutter/mixers are different only in capacity and motor specifications. Both models have a single speed, 1150 R.P.M., totally enclosed externally fan cooled motor. The models are available in dual voltage ratings of 200 Volts, 60 Hz., 3 Phase or 230/460 Volts, 60 Hz., 3 Phase. The motors have inherent solid state thermal overload protection.

All machines are equipped with a 6 foot, U.L. listed flexible rubber jacketed cable with plug. The plug is provided according to the rated voltage of the machine and must be coupled with a compatible receptacle. The receptacle is furnished as standard equipment.

The heavy duty motor supplies power directly to the cut/mix shaft assembly or the knead/mix shaft assembly in the bowl. The scimitar knives are at a fixed angle and rotate at motor speed. The knives pull the product down through the central portion of the bowl, slicing it in the process. The product is then returned up the sides of the bowl by

centrifugal force. A vortex is created inside the bowl, which keeps the entire load in motion. The cutting and mixing action begins the instant the machine is turned on.

When cutting certain products the action is supplemented by a hand operated baffle. This baffle turns the product over in rolling motion, moving the product into the knives. The bowl, knives and baffle are constructed of stainless steel.

The models HCM-300 and HCM-450 have a rectangular, tubular frame. The frame is finished in a durable epoxy paint. All models are equipped with non-marking rubber feet.

The bowl and motor are a single unit which is pivot mounted on the frame. The pivot point is displaced off center to provide a higher pour point when the bowl is tilted to the horizontal position for unloading. The tilt operation is assisted by a counterbalance spring system to provide the operator with control of the unit at all times.

A "hold-tilt" handle (1, Fig. 1) is provided to clamp the bowl in the upright position during

operation by placing it in the "HOLD" position (2, Fig. 1). When the handle is placed in the "TILT" position (3, Fig. 1) the unit can be easily pivoted. It will maintain any degree of tilt desired when the unit is released, WITHOUT resetting to "HOLD".

The knead/mix shaft assembly, which is used for general non-cutting applications, is stainless steel construction.

The cut/mix or knead/mix shaft assemblies are mounted directly on the motor shaft. The motor shaft extends through the bottom of the bowl. The cut/mix assembly or knead/mix assembly are fastened by inserting a non-threaded eccentric locking knob into the accessory, over the motor shaft and rotating locking knob in either direction.

Three separate seals are used to prevent fluids from leaking from the bowl into the motor. An easily removable face seal is in the bottom of the bowl. An "O" ring seal is under the combination flinger-brake cover under the bowl. An oil seal is pressed into the motor housing.

The cover of the HCM-300 and HCM-450 is clear polycarbonate. This high-impact resistant plastic permits the operator constant visual evaluation of the degree of cutting and mixing achieved during

operation. A wiper is provided on the mixing baffle which keeps the cover clear during the processing of any liquid. The wiper provides a method of scraping the cover BEFORE opening. This reduces product loss and spillage on the drip pan with the cover open.

Push button controls of magnetically operated start and stop switches and a jog selector switch are provided. These switches are located on the control box cover, have no moving seals and are watertight.

Two casters are available as optional equipment to replace two rubber feet. These casters permit moving the cutter/mixer easier from one location to another. Always install the casters (1, Fig. 2) on the right side under the control box.

SAFETY

An electro-mechanical interlock switch prevents the HCM-300 and HCM-450 from operating unless the cover is closed and latched. An interlock switch prevents the cutter/mixer from running if the bowl is tilted more than 20 degrees from a vertical position. A centrifugal brake stops the knives upon any power interruption.

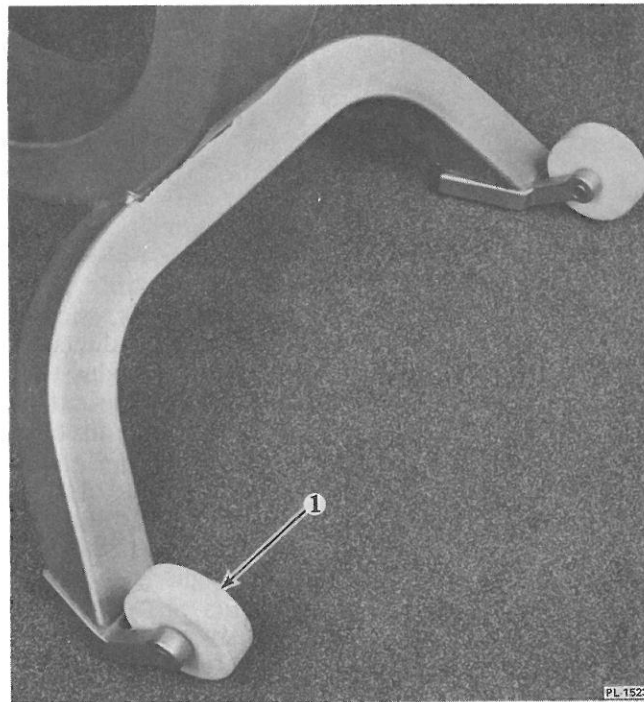


Fig. 2

INSTALLATION

After removing cutter/mixer from skid, install feet to prevent it from moving during operation. To install feet, first apply a bead of silastic sealer around the edge of each leg. Next, insert the feet in their proper location. Install bolts and washers, tighten bolts to hold the feet in place.

Place the cutter/mixer in the desired location. **Warning:** Check bowl to make sure it is empty and always remove cut/mix shaft assembly or knead/mix shaft assembly. Close and latch cover. Connect power supply cord to the receptacle.

Set selector switch (3, Fig. 4) to the "JOG" position. Press "START" switch (2, Fig. 4) and release. The motor will run only when the "START" switch is depressed. Check shaft rotation. Motor shaft should rotate in a clockwise direction as indicated by the arrow (1, Fig. 3). If rotation is incorrect, disassemble plug and reverse any two wires except the ground wires.

To run cutter/mixer continuously, set the selector switch to "RUN" and press the "START" switch. Press "STOP" switch (1, Fig. 4) to discontinue operation.

On 230/460 voltage models, an identification plate is mounted below the machine data plate. This plate contains electrical data on both sides. If the unit is rewired to change voltage, this plate must be reversed to indicate that voltage.

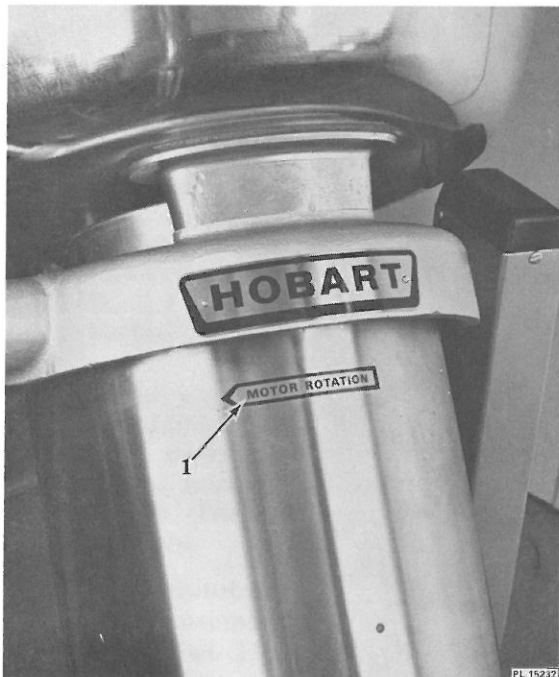


Fig. 3

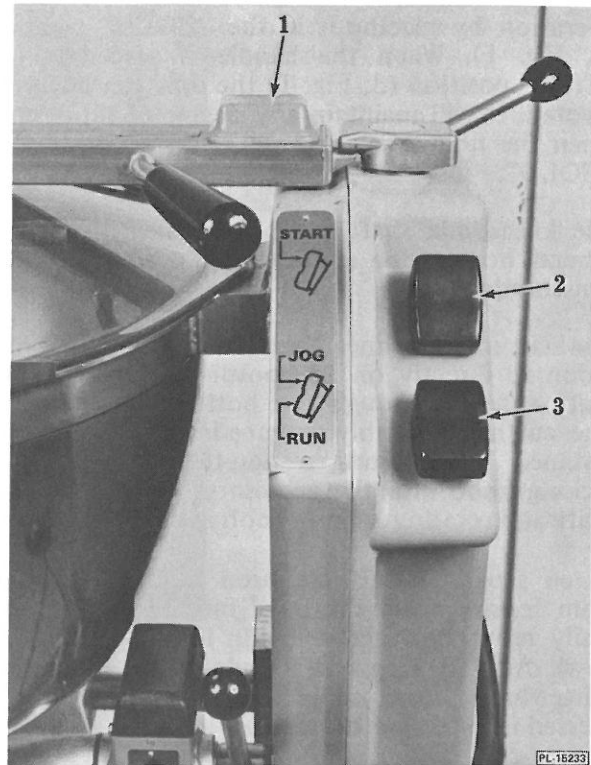


Fig. 4

OPERATION

Place bowl in the vertical position and set handle (1, Fig. 1) to the "HOLD" position. Move handle to align it with "HOLD" arrow. No extreme pressure is required to set handle.

Select the attachments needed for the desired application.

1. The cut/mix assembly is used for all cutting operations, such as meat products, vegetables, cheese products, pastry and cake products, and some doughs that require both cutting and mixing. The cut/mix assembly is also used for processing mixtures such as salad dressing.
2. The knead/mix shaft assembly is used for general non-cutting applications and specifically for bakery products, such as yeast doughs.
3. For information on using mixing baffle, see paragraph four in "GENERAL" section.
4. The strainer basket is used for processing vegetables and fruits which are normally cut

while suspended in water. The strainer basket permits the operator to remove the processed product from the bowl. The water is then drained from the vegetable back into the bowl and can be used in another operation.

Before installing attachments, check the following:

1. The electrical power supply has been disconnected.
2. Bowl Seal: Insert the black seal ring (1, Fig. 5) in the white seal retainer (2, Fig. 5) with the thin part extending from the end opposite the taper. With thin part down, install seal with retainer over the motor shaft. Seat seal (1, Fig. 6) securely against bottom of bowl.



Fig. 5

3. Strainer Basket: If strainer basket is to be used, insert it in the bowl over the motor shaft and seal. NOTE: Never use strainer basket and mixing baffle at the same time.
4. Cut/Mix Shaft Assembly: Place the cut/mix shaft assembly on the motor shaft. Seat the square drive at the base. Place the clear plastic knob into the cut/mix shaft and align slots (1, Fig. 7). Seat the knob on the top of the shaft and turn either direction until tight.

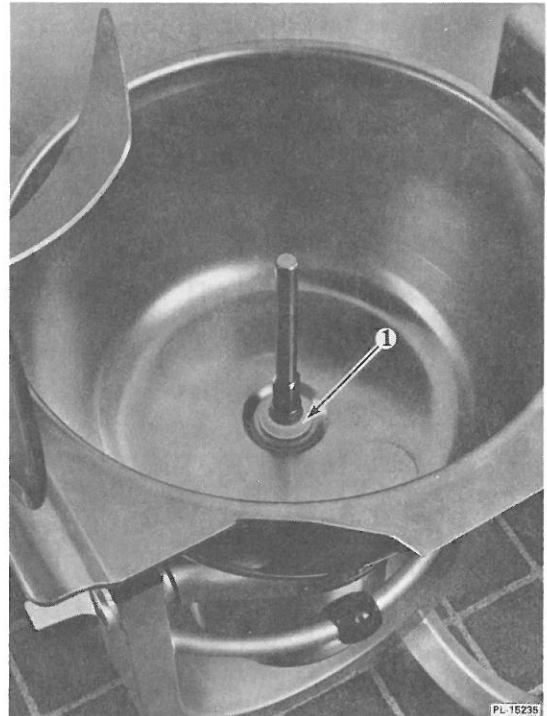


Fig. 6

5. Knead/Mix Shaft Assembly: Use the same procedure to attach the knead/mix shaft assembly as described in the above paragraph.

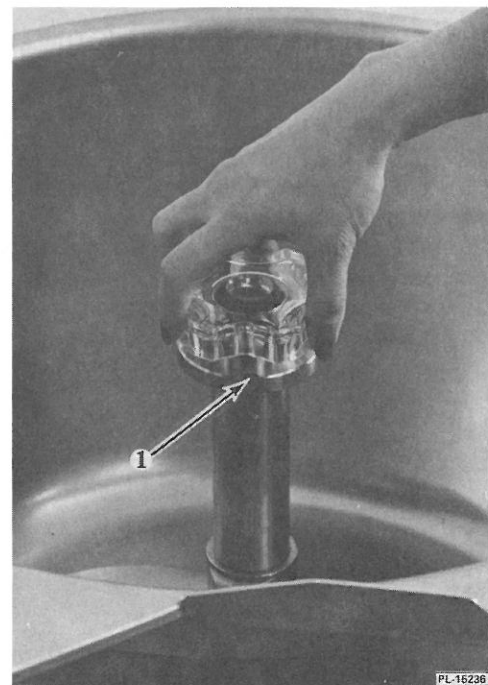


Fig. 7

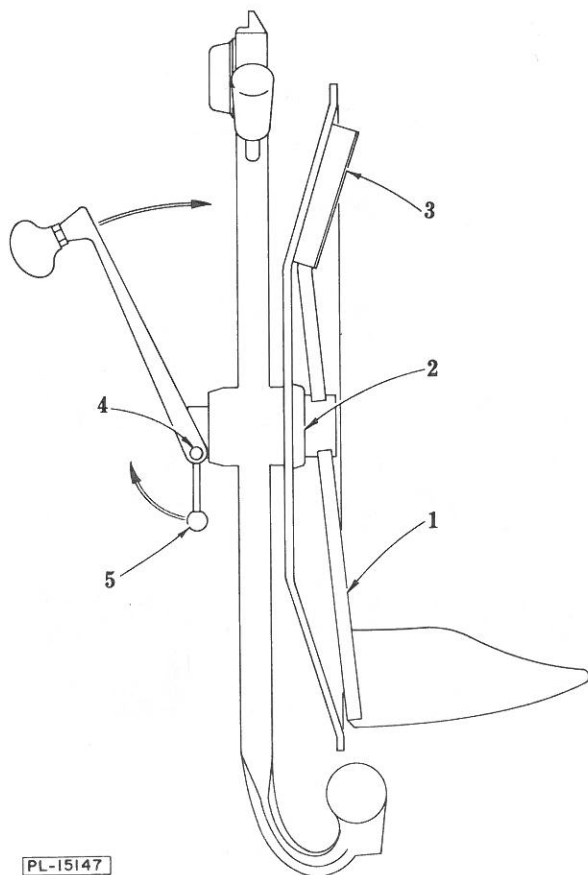


Fig. 8

6. **Mixing Baffle:** Hold the mixing baffle (1, Fig. 8) with right hand and insert center shaft through bearings in center of lid (2, Fig. 8). The mixing baffle handle retains the mixing baffle with a locking device (5, Fig. 8). Swing the locking device knob away from the body of the handle. Place the cross pin in the notch of the baffle shaft (4, Fig. 8). Move the locking device knob toward the mixing baffle knob until locking action is encountered. This supports and secures the baffle to the lid.

7. **Lid Scraper:** If lid scraper (3, Fig. 8) is used, slip it over the mixing baffle extension bar directly below the handle inside the lid.

Loading Machine:

1. Move "hold-tilt" handle to "HOLD" to lock bowl in vertical position.
2. Although in most cases all ingredients are placed in the bowl at one time, there are exceptions, and various methods are used for adding ingredients.

When products are to be cut and mixed together cut the harder products first, then add the softer products for final cutting and mixing. When cutting meat with high gristle and tendon content, remove them by hand before processing; or grind them through a Hobart grinder (using 1/8" grinder plate) after vertical cutter/mixer processing.

In processing finely cut (or emulsified) products from large or bulky items (such as loaves of bread, large chunks of meat, etc.) limit product length. Since the product must be free to drop into cutting blades, the distance must be less than from center shaft to side of bowl. Operate briefly to break down large chunks, then add balance of load to reach capacity. When adding large chunks, remove mixing baffle.

In baking applications, always add the shortening last. This prevents the shortening from smearing bottom of bowl. Dissolve sugar in liquid before adding other products.

When cutting vegetables in water (most vegetables cut better in water), first fill the bowl about one half full of cold water, add vegetables to suit (see strainer basket usage). Always distribute load evenly when cutting minimum amounts.

For more detailed information on processing various products, see separate use and care booklet.

3. Close and latch the cover by grasping the lid handle (1, Fig. 9) with the left hand. Press lid



Fig. 9

handle down while turning the latch (2, Fig. 9) counterclockwise until the lid lock is engaged.

4. Process the desired product.

Unloading Machine:

1. Push the "STOP" switch (1, Fig. 4) and then open cover. This stops the knives and power to the motor is cut off.
2. Remove cut/mix attachment before emptying bowl. The knead/mix shaft assembly does not have to be removed.
3. Scrape bowl cover (when required) before tipping bowl.
4. For products cut in water, lift out the strainer basket while the bowl is in the vertical position.
5. Move the "hold-tilt" handle to "TILT" (3, Fig. 9).
6. Always open cover before tilting bowl from the vertical position. The bowl may be tilted to any desired position depending upon the

type of load. Grasp the lid handle (1, Fig. 10) and cautiously tip bowl by pulling toward you, emptying contents into a container.

7. After product has been removed, return bowl to vertical position. Put "hold-tilt" handle in "HOLD" position and proceed to run another load or clean machine.

NOTE: Be careful opening lid when baffle is not in place. The lid could flip up since the lid counterbalance system is designed to work against the cover and baffle.

CLEANING

1. **DISCONNECT FROM ELECTRICAL POWER SUPPLY.**
2. Remove cut/mix or knead/mix attachment and mixing baffle. Do not leave the attachments on motor shaft for storage.
3. Fill bowl with one gallon of warm water and add a SMALL amount of a mild detergent.
4. Wash inside of bowl and underneath side of cover, using a soft cloth.
5. Wash the attachments and mixing baffle.
6. Remove wash water from the bowl.
7. Pour one gallon of cold rinse water into the bowl.
8. Rinse attachments and mixing baffle with water in bowl and remove them to dry.
9. Rinse the inside of bowl cover and bowl.
10. Remove rinse water from bowl.
11. Remove bowl seal by lifting seal up and off shaft. Separate seal from retainer and wash both parts. Reassemble seal and retainer (Fig. 5). Be sure bowl area is properly cleaned before reinstalling seal. Replace seal on shaft, push down firmly and twist to seal it against bottom of bowl. **NOTE:** When processing various types of products, it may be desirable to clean seal between loads.
12. Use a clean cloth to dry the bowl cover and bowl.

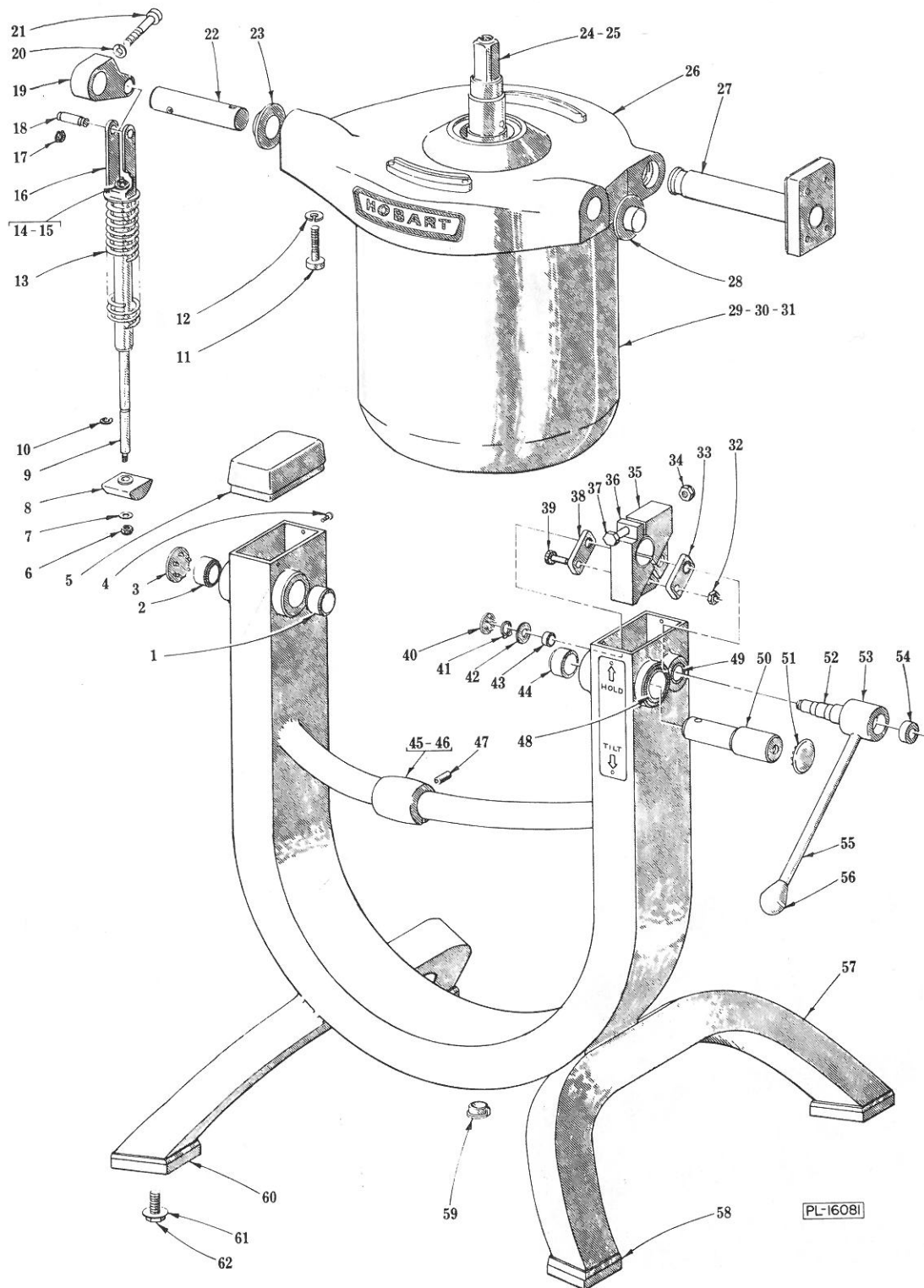


Fig. 10

LUBRICATION

The prelubricated motor bearings should be checked by a Hobart technician every three to four years under normal use. No other lubrication is required.

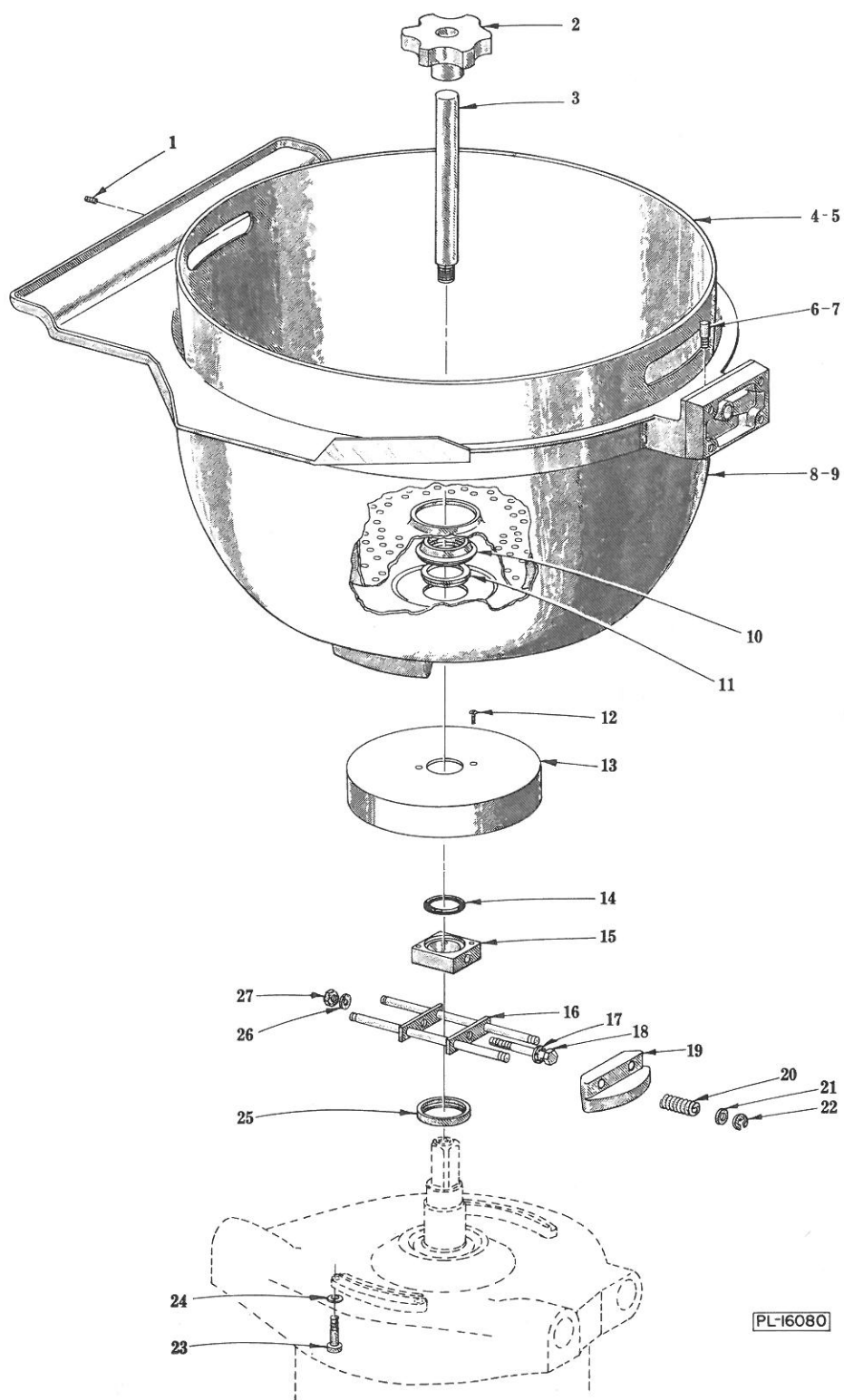
HCM-300/450 REPLACEMENT PARTS



MOTOR AND FRAME UNIT

MOTOR AND FRAME UNIT

ILLUS. PL-16081	PART NO.	NAME OF PART	AMT.
1	D-108394-41	Sleeve Bearing (1.25" O.D.)	1
2	D-108394-41	Sleeve Bearing (1.25" O.D.)	1
3	PB-4-4	Plug Button (1-1/4")	1
4	SD-33-4	Self-Tapping Screw - #10-16 x 3/8" Rd. Hd., Type 25	4
5	C-122167	Cap - Tube	2
6	NS-31-20	Stop Nut - 1/4"-20 "Elastic"	1
7	WS-3-49	Washer	1
8	B-122185	Pivot Pad & Bearing Assy.	1
9	C-122183	Rod - Spring Guide	1
10	RR-4-19	Retaining Ring	1
11	SC-92-62	Cap Screw - 3/8"-16 x 1-1/2" Soc. Fil. Hd.	2
12	WL-4-6	Lock Washer - 3/8" x .141" x .094"	2
13	C-122184-1	Spring - Compression	1
14	NS-31-20	Stop Nut - 1/4"-20 "Elastic"	1
15	WS-3-49	Washer	1
16	C-122179	Yoke & Spring Guide Assy.	1
17	RR-4-25	Retaining Ring	2
18	B-122189	Shaft - Yoke	1
19	C-122187	Crank & Bearing Assy.	1
20	WL-4-6	Lock Washer - 3/8" x .141" x .094"	1
21	SC-110-8	Cap Screw - 3/8"-16 x 1-3/4" Soc. Hd.	1
22	C-122177	Shaft - Left Pivot	1
23	B-122190	Spacer - Frame	1
24	ML-19370	Motor (HCM-300) (See Separate Motor Parts Sheet)	1
25	ML-19371	Motor (HCM-450) (See Separate Motor Parts Sheet)	1
26	A-123907	Bearing Bracket & Logo Assy.	1
27	D-122199	Tube & Plate Assy.	1
28	B-122190	Spacer - Frame	1
29	E-122175-2	Motor Cover Assy. (HCM-300)	1
30	E-122175-1	Motor Cover Assy. (HCM-450)	1
31	SC-21-91	Mach. Screw - #8-32 x 5/16" Rd. Hd.	3
32	NS-13-14	Full Nut - 5/16"-18 Hex Fin.	1
33	B-122299	Front Link & Bushing Assy.	1
34	NS-31-34	Stop Nut - 3/8"-16 "Elastic"	1
35	C-123560	Clamp Assy. (Right)	1
36	C-122297	Clamp Assy. (Left)	1
37	SC-110-9	Fin. Bolt - 3/8"-16 x 3" Hex Hd.	1
38	B-122298	Back Link & Bushing Assy.	1
39	B-122269	Screw - Special	1
40	PB-4-2	Plug Button (15/16")	1
41	RR-4-5	Retaining Ring	1
42	WS-29-19	Washer	1
43	D-108394-37	Sleeve Bearing (.628" O.D.)	1
44	D-108394-41	Sleeve Bearing (1.25" O.D.)	1
45	B-122161	Bumper - Stop (HCM-450)	1
46	B-122166	Bumper - Stop (HCM-300) (Not Shown)	1
47	RP-6-1	Rollpin - 3/8" Dia. x 3/4" Lg.	1
48	D-108394-43	Sleeve Bearing (1.502" O.D.)	1
49	D-108394-45	Sleeve Bearing (.878" O.D.)	1
50	B-122176	Shaft - Right Pivot	1
51	PB-4-5	Plug Button (1-1/2")	1
52	C-122195	Shaft - Lock	1
53	B-122196	Collar - Shaft	1
54	B-123812	Magnet - Ring	1
55	B-122197	Handle - Lock	1
56	B-123173	Knob	1
57	A-123908	Frame & Tilt Label Assy. (Incls. items #1, 2, 43, 44, 47, 48 & 49)	1
58	C-122164	Foot (#1)	2
59	B-123772	Plug - Vent	1
60	C-122165	Foot (#2)	2
61	WS-21-9	Washer	4
62	SC-90-79	Fin. Bolt - 1/2"-13 x 1" Hex Hd.	4

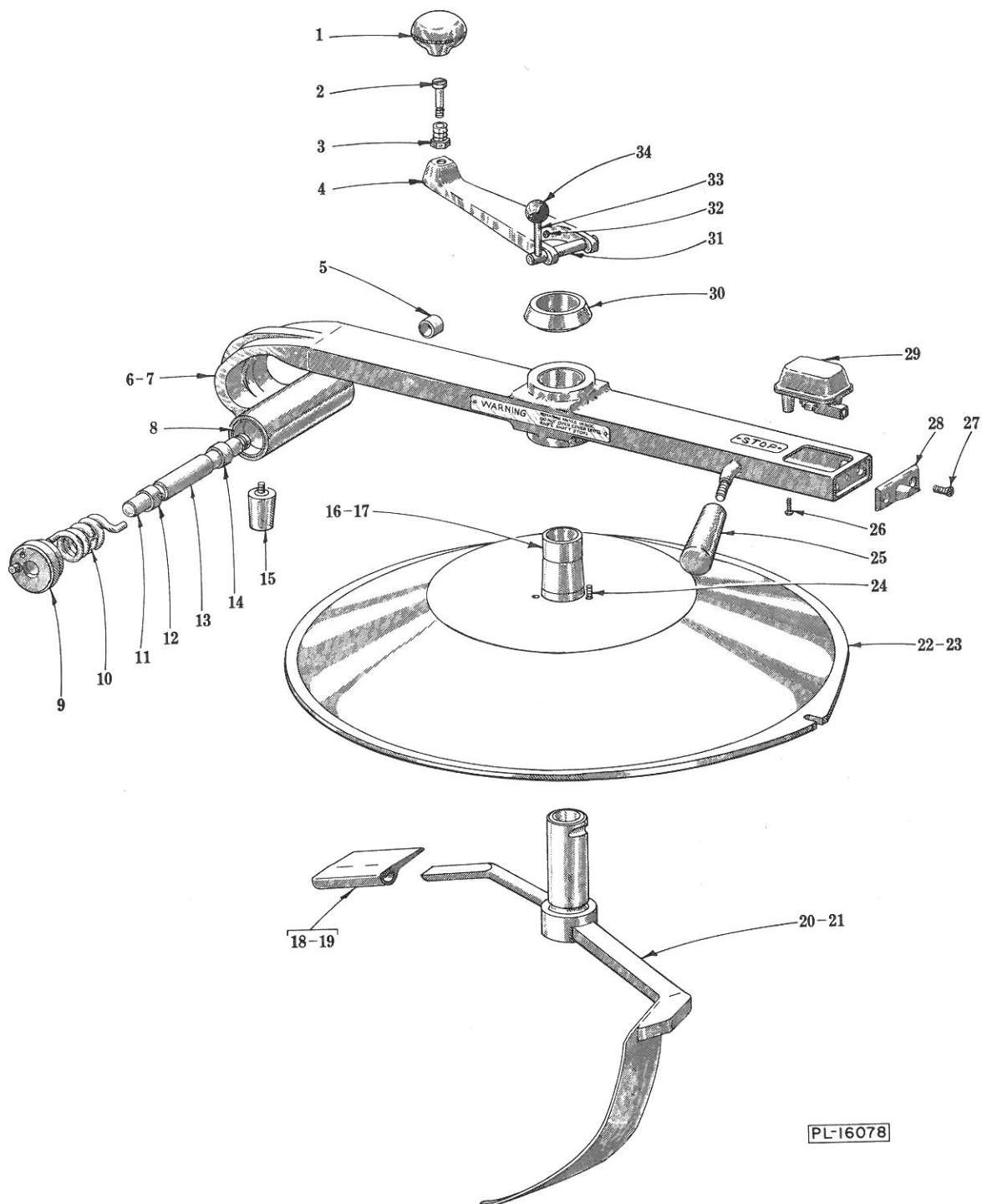


PL-16080

BRAKE AND BOWL UNIT

BRAKE AND BOWL UNIT

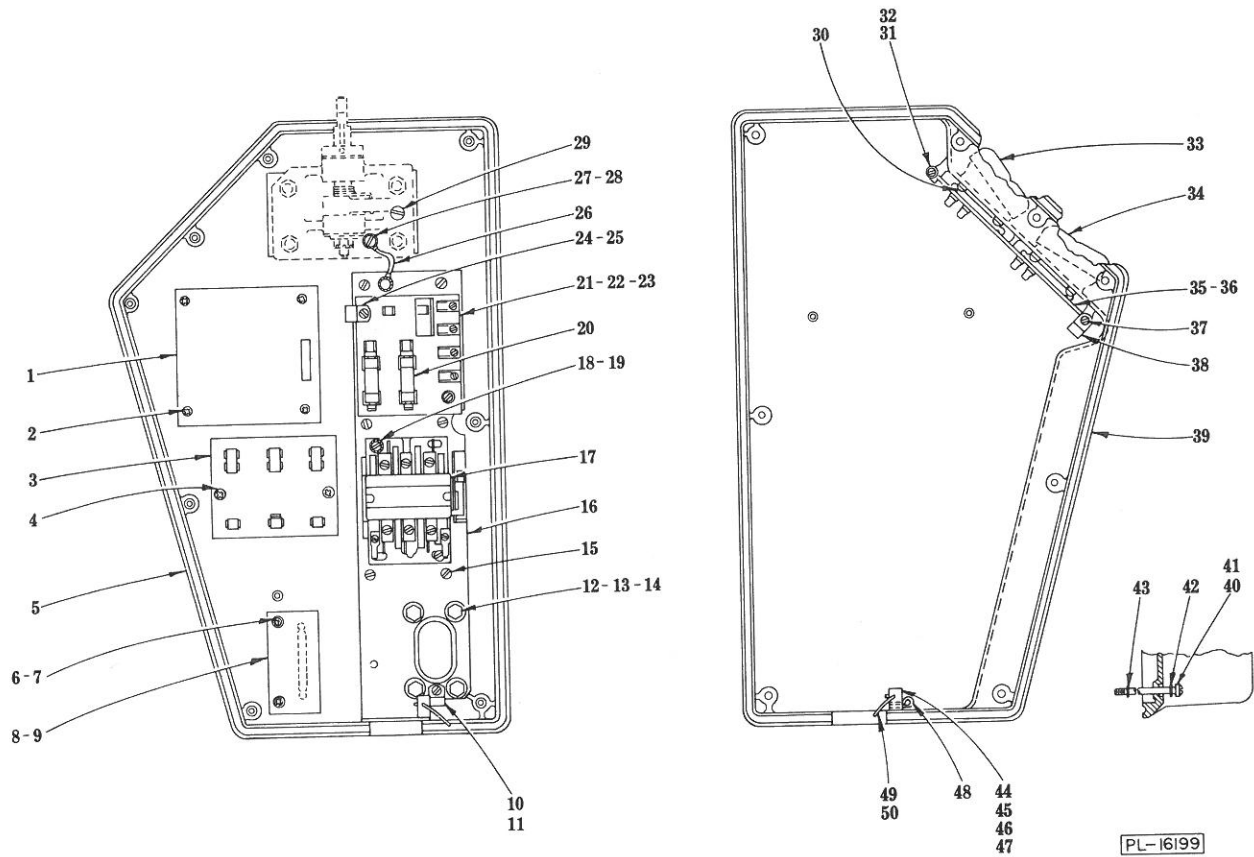
ILLUS. PL-16080	PART NO.	NAME OF PART	AMT.
1	SC-55-1	Set Screw - #10-24 x 1/4" Soc. Hdls., Cup Pt. -----	1
2	C-122296	Knob - Retainer -----	1
3	B-122293	Shaft - Extension -----	1
4	E-122271	Strainer Basket (HCM-300) -----	1
5	E-122272	Strainer Basket (HCM-450) -----	1
6	B-122281	Pin - Lid Guide -----	1
7	NS-18-1	Jam Nut - 1/4"-20 Hex Fin. -----	1
8	E-122237	Bowl Assy. (HCM-300) -----	1
9	E-122245	Bowl Assy. (HCM-450) -----	1
10	B-122313	Retainer - Seal -----	1
11	B-123074-4	Seal - "V" Ring -----	1
12	SC-18-11	Mach. Screw - #10-24 x 3/8" Pan Hd. -----	2
13	C-122208	Cover - Brake -----	1
14	D-67500-28	"O" Ring -----	1
15	B-122203	Block - Clamp -----	1
16	C-122202	Brake Clamp Assy. -----	1
17	WL-8-22	Lock Washer - 5/16" Int. Shakeproof -----	1
18	SC-109-75	Fin. Bolt - 15/16"-18 x 2-3/8" Hex Hd. -----	1
19	C-123571	Brake Shoe & Lining Assy. -----	2
20	B-123095	Spring - Compression -----	4
21	WS-18-30	Washer -----	4
22	RR-9-10	Retaining Ring -----	4
23	SC-89-35	Cap Screw - 3/8"-16 x 1-1/4" Soc. Fil. Hd. -----	4
24	WL-4-6	Lock Washer - 3/8" x .141" x .094" -----	4
25	B-122523	Seal - Shaft -----	1
26	WL-3-47	Lock Washer - 5/16" x .125" x .078" -----	1
27	NS-13-14	Full Nut - 5/16"-18 Hex Fin. -----	1



BOWL LID UNIT

BOWL LID UNIT

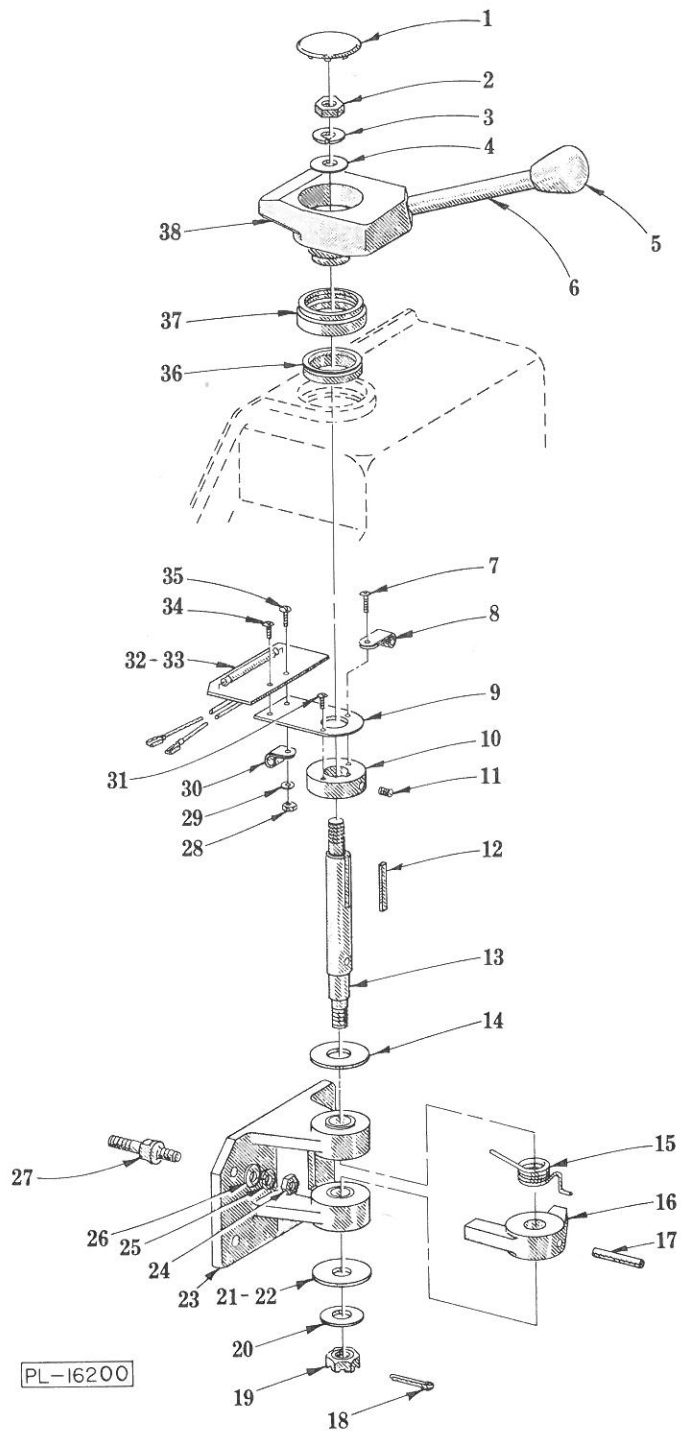
ILLUS. PL-16078	PART NO.	NAME OF PART	AMT.
1	B-123174	Knob -----	1
2	B-124356	Stud - Handle -----	1
3	B-124469	Insert - Handle -----	1
4	C-122280	Handle - Baffle -----	1
5	B-110544-7	Bushing (.718" O.D.) -----	1
6	A-123911-2	Lid Handle, Labels & Bushing Assy. (HCM-300) (Incls. items #5 & 8) -----	1
7	A-123911-1	Lid Handle, Labels & Bushing Assy. (HCM-450) (Incls. items #5 & 8) -----	1
8	B-110544-8	Bushing (1.656" O.D.) -----	1
9	B-123666	Spring Cap Assy. -----	1
10	C-122267	Spring - Torsion -----	1
11	B-122265	Shaft - Spring Pivot -----	1
12	D-108394-44	Sleeve Bearing (.878" O.D.) -----	1
13	B-122310	Sleeve -----	1
14	D-108394-44	Sleeve Bearing (.878" O.D.) -----	1
15	B-122264	Bumper - Lid -----	1
16	B-122262	Bearing - Baffle -----	1
17	B-123828	Gasket - Baffle Bearing -----	1
18	C-122209-2	Scraper (HCM-300) -----	1
19	C-122209-1	Scraper (HCM-450) -----	1
20	E-123757	Baffle Bar & Blade Assy. (HCM-300) -----	1
21	E-123033	Baffle Bar & Blade Assy. (HCM-450) -----	1
22	E-122253	Lid (HCM-300) -----	1
23	E-122254	Lid (HCM-450) -----	1
24	SC-25-28	Mach. Screw - #10-32 x 3/4" Bind. Hd. -----	3
25	B-123172	Handle -----	1
26	SC-53-2	Mach. Screw - #10-24 x 1/2" Truss Hd. -----	2
27	SC-22-32	Mach. Screw - 1/4"-20 x 1/2" Flat Hd. -----	2
28	C-122226	Plate - Lock -----	1
29	D-123580	Stop Switch Assy. -----	1
30	B-122587	Bushing - Cap -----	1
31	C-122315	Pin - Baffle Lock -----	1
32	SC-64-15	Set Screw - 1/4"-20 x 1/2" Hdls., Oval Pt. "Nylok" -----	1
33	B-122586	Handle - Baffle Lock -----	1
34	M-77401	Knob -----	1



CONTROL BOX UNIT

CONTROL BOX UNIT

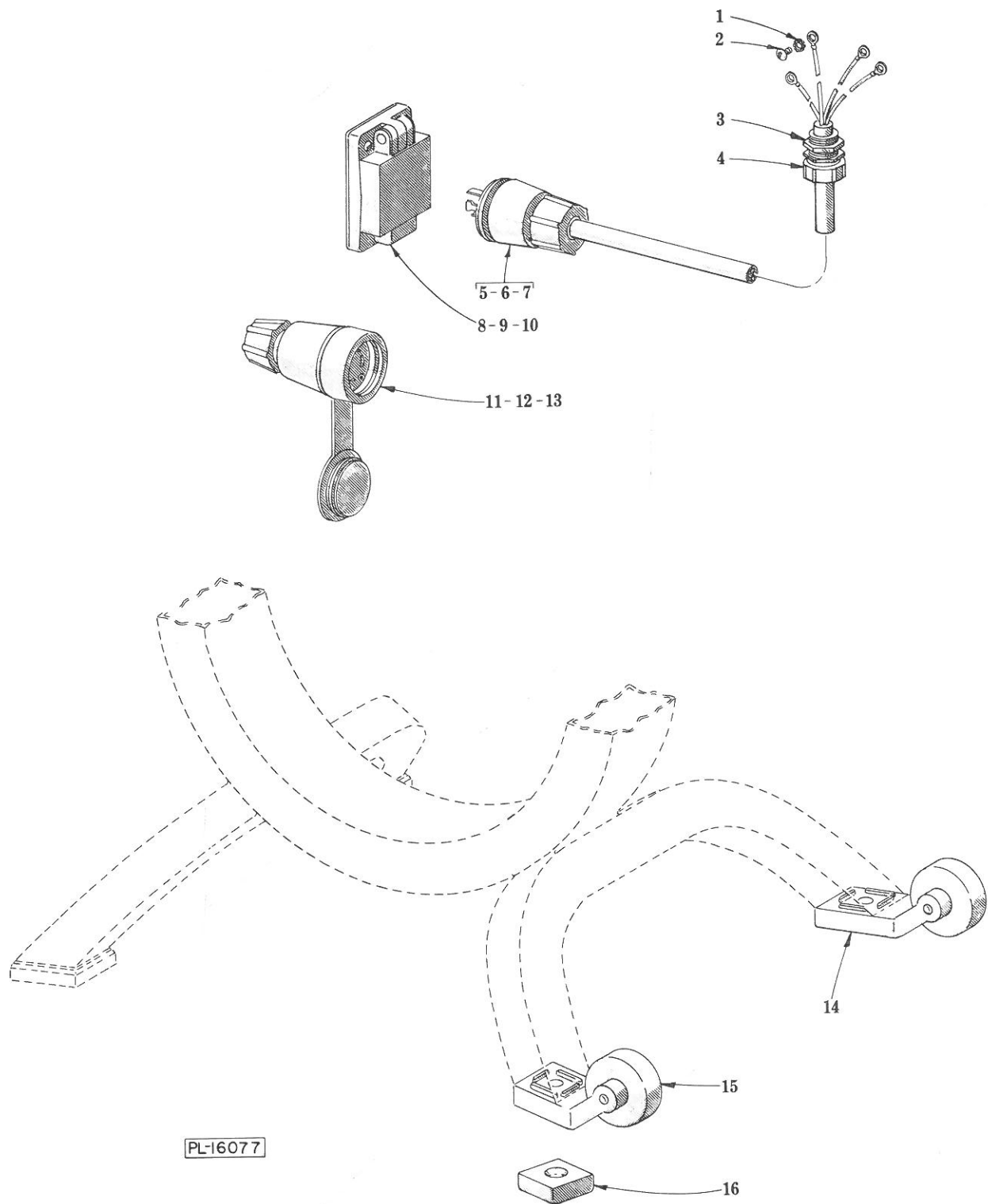
ILLUS. PL-16199	PART NO.	NAME OF PART	AMT.
1	E-119990	Motor Protection Board Assy. -----	1
2	SD-13-7	Self-Tapping Screw - #6-20 x 5/16" Phil. Pan Hd., Type 25 -----	4
3	C-121014	Board - Terminal -----	1
4	SD-33-5	Self-Tapping Screw - #10-16 x 1/2" Rd. Hd., Type 25 -----	2
5	A-123909	Control Box & Label Assy. -----	1
6	SD-13-7	Self-Tapping Screw - #6-20 x 5/16" Phil. Pan Hd., Type 25 -----	2
7	WS-28-1	Washer -----	2
8	C-122218	Reed Mounting Board Assy. (Incls. item #9) -----	1
9	C-111964	Switch - Reed -----	1
10	C-78752-6	Clamp -----	1
11	SC-9-49	Mach. Screw - #6-32 x 3/8" Rd. Hd. -----	1
12	SC-62-61	Fin. Bolt - 5/16"-18 x 1" Hex Hd. -----	4
13	WL-3-47	Lock Washer - 5/16" x .125" x .078" -----	4
14	WS-22-21	Washer -----	4
15	SD-33-4	Self-Tapping Screw - #10-16 x 3/8" Rd. Hd., Type 25 -----	6
16	D-124042	Control Mounting Bracket Assy. -----	1
17	B-121926-2	Contacto -----	1
18	SC-8-9	Mach. Screw - #10-24 x 3/8" Rd. Hd. -----	2
19	WL-7-12	Lock Washer - #10 Ext. Shakeproof -----	1
20	FE-19-48	Fuse - Fiber Tube (.8 Amp., BBS-8) -----	2
21	C-117034-1	Power Input Board Assy. -----	1
22	SC-8-9	Mach. Screw - #10-24 x 3/8" Rd. Hd. -----	2
23	WL-7-12	Lock Washer - #10 Ext. Shakeproof -----	1
24	C-78752-11	Clamp -----	1
25	SC-7-68	Mach. Screw - #8-32 x 5/8" Rd. Hd. -----	1
26	C-123648-6	Lead Wire Assy. (Ground) -----	1
27	SC-8-9	Mach. Screw - #10-24 x 3/8" Rd. Hd. -----	2
28	WL-7-12	Lock Washer - #10 Ext. Shakeproof -----	2
29	SD-33-5	Self-Tapping Screw - #10-16 x 1/2" Rd. Hd., Type 25 -----	1
30	SD-32-3	Self-Tapping Screw - #6-19 x 3/8" Phil. Pan Hd. "Plastite" -----	4
31	SD-32-35	Self-Tapping Screw - #6-20 x 1/4" Pan Hd., Type 25 -----	1
32	WS-28-1	Washer -----	1
33	D-120872-2	Switch Assy. (Start) -----	1
34	D-120872-3	Switch Assy. (Jog/Run) -----	1
35	D-122224	Reed Mounting Board Assy. (Incls. item #36) -----	1
36	C-111964	Switch - Reed -----	2
37	SD-33-3	Self-Tapping Screw - #6-20 x 1/2" Rd. Hd., Type 25 -----	1
38	C-78752-6	Clamp -----	1
39	A-123910	Control Box Lid & Logo Assy. -----	1
40	SC-110-6	Cap Screw - #10-24 x 1-3/4" Fil. Hd. -----	5
41	SC-110-33	Mach. Screw - #10-24 x 4-1/2" Fil. Hd. -----	3
42	WS-29-20	Washer -----	8
43	D-67500-38	"O" Ring -----	8
44	B-122268	Bracket - Cable -----	1
45	SC-21-10	Mach. Screw - #6-32 x 1/2" Rd. Hd. -----	1
46	WL-3-9	Lock Washer - #6 x .047" x .031" -----	1
47	NS-9-7	Mach. Nut - #6-32 Hex -----	1
48	C-78752-6	Clamp -----	1
49	B-118234-5	Cable (5.625" Lg.) -----	1
50	B-118233	Ferrule (Double) -----	2



HANDLE LOCK UNIT

HANDLE LOCK UNIT

ILLUS. PL-16200	PART NO.	NAME OF PART	AMT.
1	PB-4-3	Plug Botton (1-1/8")	1
2	NS-15-11	Full Nut - 5/16"-18 Hex Fin.	1
3	WL-6-23	Lock Washer - 5/16" x .125" x .078"	1
4	WS-29-17	Washer	1
5	B-123173	Knob	1
6	B-122228	Handle - Lid Lock	1
7	SC-9-49	Mach. Screw - #6-32 x 3/8" Rd. Hd.	1
8	C-78752-11	Clamp	1
9	B-122216	Bracket - Reed	1
10	B-122214	Collar	1
11	SC-47-76	Set Screw - #6-32 x 1/4" Soc. Hdls., Cup Pt.	1
12	R-12430-25	Key	1
13	C-122215	Shaft - Lock	1
14	B-122220	Washer	1
15	B-123097	Spring - Torsion	1
16	C-122213	Stop - Handle Lock	1
17	RP-2-7	Rollpin - 3/16" Dia. x 1-1/8" Lg.	1
18	PC-3-74	Cotter Pin - 3/32" x 3/4"	1
19	NS-46-6	Full Nut - 5/16"-18 Hex Fin.	1
20	WS-17-1	Washer	1
21	B-122220	Washer	1
22	B-122219	Washer	As Reqd.
23	C-123579	Lock Bracket & Bearing Assy.	1
24	NS-13-14	Full Nut - 5/16"-18 Hex Fin.	4
25	WL-3-47	Lock Washer - 5/16" x .125" x .078"	4
26	WS-22-21	Washer	4
27	B-122222	Stud	4
28	NS-9-7	Mach. Nut - #6-32 Hex	2
29	WL-8-2	Lock Washer - #6 Int. Shakeproof	2
30	C-78752-11	Clamp	1
31	SC-9-70	Mach. Screw - #6-32 x 1/4" Rd. Hd.	1
32	C-122217	Reed Mounting Board Assy. (Incls. item #33)	1
33	C-111964	Switch - Reed	1
34	SC-9-70	Mach. Screw - #6-32 x 1/4" Rd. Hd.	1
35	SC-9-49	Mach. Screw - #6-32 x 3/8" Rd. Hd.	1
36	B-123074-5	Seal - "V" Ring	1
37	B-123221	Insert - Cover	1
38	D-122227	Hub - Lock	1

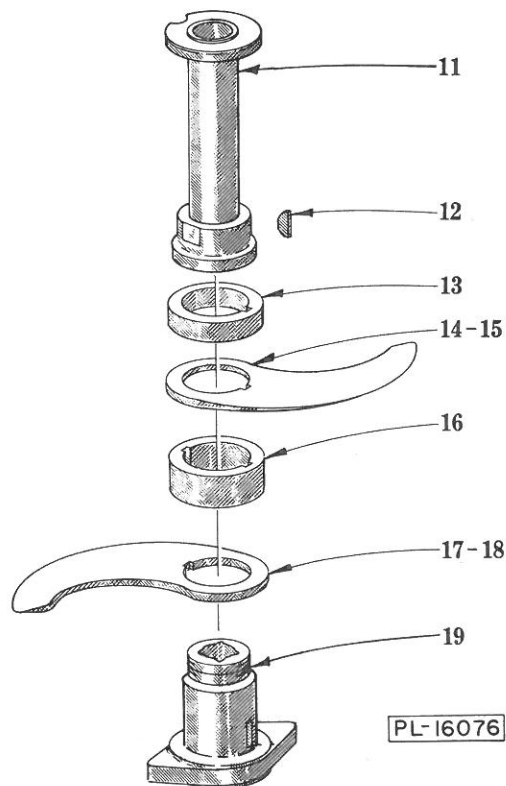
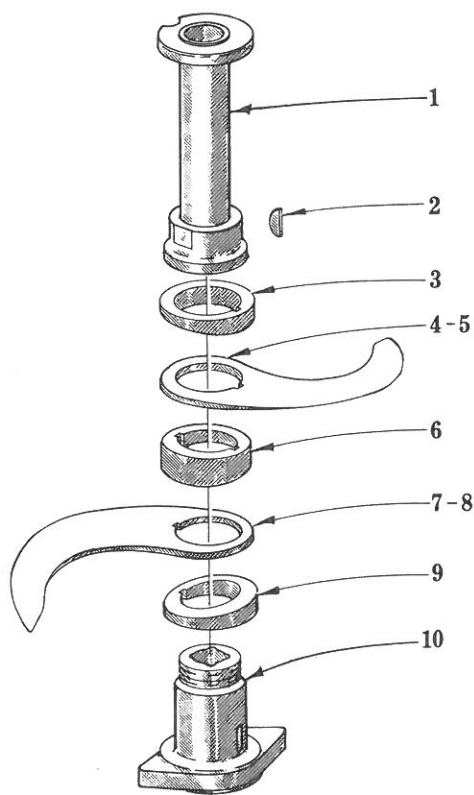


MISCELLANEOUS

MISCELLANEOUS

ILLUS. PL-16077	PART NO.	NAME OF PART	AMT.
1	WL-7-12	Lock Washer - #10 Ext. Shakeproof -----	1
2	SC-8-9	Mach. Screw - #10-24 x 3/8" Rd. Hd. -----	1
3	FE-7-12	Lock Nut - 3/4" Cnd. -----	1
4	FE-14-14	Strain Relief -----	1
5	C-117612-8	Cord & Plug Assy. (230 V.) -----	1
6	C-117612-9	Cord & Plug Assy. (460 V.) -----	1
7	C-122292-1	Cord & Plug Assy. (200 V.) (Not Shown) -----	1
8	C-117631-1	Receptacle (230 V.) -----	1
9	C-117631-2	Receptacle (460 V.) -----	1
10	A-123816	Receptacle & Cover Assy. (200 V.) (Not Shown) -----	1
11	C-117625-1	Connector (230 V.) -----	1
12	C-117625-2	Connector (460 V.) -----	1
13	A-123805	Connector & Cover Assy. (200 V.) (Not Shown) -----	1
14	C-123658-2	Caster Assy. (Right) -----	1
15	C-123658-1	Caster Assy. (Left) -----	1
16	B-123813	Pad - Caster -----	2

HCM-300/450 REPLACEMENT PARTS



PL-16076

KNIFE UNIT

ILLUS. PL-16076	PART NO.	NAME OF PART	AMT.
1	C-124476	Tube & Lock Nut Assy. -----	1
2	KW-4-1	Key - #1008 Woodruff -----	2
3	B-122290	Block - Single Angle -----	1
4	C-122294	Knife (HCM-300) -----	1
5	C-122295	Knife (HCM-450) -----	1
6	B-122291	Block - Double Angle -----	1
7	C-122294	Knife (HCM-300) -----	1
8	C-122295	Knife (HCM-450) -----	1
9	B-122290	Block - Single Angle -----	1
10	D-124265	Hub - Square Drive -----	1
11	C-124476	Tube & Lock Nut Assy. -----	1
12	KW-4-1	Key - #1008 Woodruff -----	2
13	B-123773	Spacer - Top -----	1
14	C-123827	Blade - Knead/Mix (HCM-300) -----	1
15	C-123826	Blade - Knead/Mix (HCM-450) -----	1
16	B-123774	Spacer - Middle -----	1
17	C-123827	Blade - Knead/Mix (HCM-300) -----	1
18	C-123826	Blade - Knead/Mix (HCM-450) -----	1
19	D-124265	Hub - Square Drive -----	1
	D-124408-2	Cut/Mix Shaft Assy. (HCM-300) (Incls. items #1 thru 4, 6, 7, 9 & 10) -----	1
	D-124408-1	Cut/Mix Shaft Assy. (HCM-450) (Incls. items #1, 2, 3, 5, 6, 8, 9 & 10) -----	1
	D-124407-2	Knead/Mix Shaft Assy (HCM-300) (Incls. items #11 thru 14, 16, 17 & 19) -----	1
	D-124407-1	Knead/Mix Shaft Assy. (HCM-450) (Incls. items #11, 12, 13, 15, 16, 18 & 19) -----	1