



SMALL CAPACITY MIXERS CUSTOMER MAINTENANCE MANUAL

**SPECIFICATION SHEETS
EQUIPMENT INFORMATION
TOOLS
INSTRUCTION MANUALS
ADDITIONAL RESOURCES
MIXER CAPACITY CHART
DIAGNOSTIC ALARM CODES
TROUBLESHOOTING INSTRUCTIONS
WIRING DIAGRAMS / SCHEMATICS
HOBART SERVICE PARTS STORE
PART CATALOGS**

HOBART701 S Ridge Avenue, Troy, OH 45374
1-888-4HOBART • www.hobartcorp.com**N50
MIXER****HOBART****STANDARD FEATURES**

- ½ H.P. Hobart Designed Fixed Speed Motor
- Gear-Driven Transmission
- Three Fixed Speeds
- Hybrid Powder Coat finish available in Hobart Gray
- Large, Easy-To-Reach Controls
- #10 Taper Attachment Hub
- Manual Bowl Lift
- 5-Quart Stainless Steel Bowl, “B” Flat Beater, “D” Wire Whip, “ED” Dough Hook, Cord and Plug

ACCESSORIES

- Stainless Steel Bowl
- “B” Flat Beater
- Stainless Steel “B” Flat Beater
- “D” Wire Whip
- “ED” Dough Hook

MODEL

- N50 – 5-Quart All Purpose Mixer with Bowl, Beater, Whip and Hook
- N50A – 5-Quart All Purpose Mixer with Bowl and Stainless Steel Beater (ASTM Standard C305)

Specifications, Details and Dimensions on Inside and Back.

**N50 MIXER**

N50 MIXER



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SOLUTIONS/BENEFITS

1/6 H.P. Hobart Designed Motor

Durability

- Heavy-duty to meet the most demanding operations

Gear-Driven Transmission

Durability, Reliability

- Ensures consistent performance and minimum downtime with positive drive under heavy loads

Three Fixed Speeds

Flexibility, Reliability, Consistency

- For incorporating, blending, mixing ingredients
- Supports consistent results and thorough mixing

Hobart Agitators

Durability, Flexibility

- Hobart manufactured agitators are designed for long-term usage under heavy-duty conditions
- Large array of agitators provide multiple uses for recipe and product processing

N50 MIXER CAPACITY CHART

Recommended Maximum Capacities - dough capacities based on 70°F. water and 12% flour moisture.

PRODUCT	AGITATORS SUITABLE FOR OPERATION	N50
CAPACITY OF BOWL (QTS. LIQUID)		5
Egg Whites	D	1/2 pts.
Mashed Potatoes	B & C	3 lbs.
Mayonnaise (Qts. of Oil)	B or C or D	1 1/2 qts.
Meringue (Qts. of Water)	D	1/4 pts.
Waffle or Hot Cake Batter	B	2 qts.
Whipped Cream	D or C	3 pts.
Cake, Angel Food (8-10 oz. cake)	C or I	2
Cake, Box or Slab	B or C	4 lbs.
Cake, Cup	B or C	3 lbs.
Cake, Layer	B or C	3 lbs.
Cake, Pound	B	3 lbs.
Cake, Short (Sponge)	C or I	3 lbs.
Cake, Sponge	C or I	2 lbs.
Cookies, Sugar	B	3 lbs.
Dough, Bread or Roll (Lt.-Med.) 60% AR §	ED	4 lbs.
Dough, Heavy Bread 55% AR §	ED	—
Dough Pie	B & P	3 lbs.
Dough, Thin Pizza 40% AR (max. mix time 5 min.) §‡	ED	—
Dough, Med. Pizza 50% AR §‡	ED	—
Dough, Thick Pizza 60% AR §‡	ED	—
Dough, Raised Donut 65% AR	ED	—
Dough, Whole Wheat 70% AR	ED	—
Eggs & Sugar for Sponge Cake	B & C or I	2 lbs.
Icing, Fondant	B	2 lbs.
Icing, Marshmallow	C or I	1/2 lbs.
Shortening & Sugar, Creamed	B	3 lbs.
Pasta, Basic Egg Noodle (max. mix time 5 min.)	ED	—

NOTE: % AR (% Absorption Ratio) - Water weight divided by flour weight. Capacity depends on moisture content of dough. Above capacities based on 12% flour moisture at 70°F water temperature.

§ If high gluten flour is used, reduce above dough batch size by 10%.

‡ The N50 requires a 50% reduction in batch size to mix in Speed 2 with 50% or less AR doughs.

USE OF ICE REQUIRES A 10% REDUCTION IN BATCH SIZE.

1 gallon of water weighs 8.33 lbs.

NOTE: Attachment hub should not be used while mixing.



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N50 MIXER

SPECIFICATIONS

MOTOR:

1/6 H.P., Hobart designed, ventilated, sleeve bearing, drip-proof enclosure.

Single Phase	100-120V	2.9 Amps
	230V	1.4 Amps

ELECTRICAL:

100-120/60/1 - U L Listed for residential and commercial use. Also available in 100/50/1, 230/50/1, 220/60/1 and 230/60/1 - not submitted for U L Listing.

CONTROLS:

Single pole, toggle-type, mechanically interlocked with transmission shift handle. Includes automatic circuit breaker with manual reset switch.

TRANSMISSION:

Three speed selection transmission. Convenient shift handle mounted near "OFF" and "ON" switch.

SPEEDS:

Three positive speeds - Low, Intermediate, and High.

	Agitator (RPM)	Attachment (RPM)
Low	136	60
Intermediate	281	124
High	580	255

BOWL AND BEATERS:

Bowl is 5-quart capacity stainless steel. Locks at top and bottom of lift travel, which is controlled by convenient hand lever. A stainless steel beater is also available.

FINISH:

Hybrid Powder Coat finish available in Hobart Gray.

STANDARD EQUIPMENT:

Consists of the mixer unit with one (1) 5-quart stainless steel bowl, one (1) "B" flat beater, one (1) "D" wire whip, one (1) "ED" dough hook, cord and plug.

ATTACHMENT HUB:

Equipped with front-mounted Hobart standard #10 taper attachment hub, and any #10 size attachments may be used.

ATTACHMENTS AND ACCESSORIES:

The following are available at extra cost:

- Stainless Steel Bowl
- "B" Flat Beater
- Stainless Steel "B" Flat Beater
- "D" Wire Whip
- "ED" Dough Hook

LISTED BY: Underwriters Laboratories, Inc. and NSF International.

N50 MIXER



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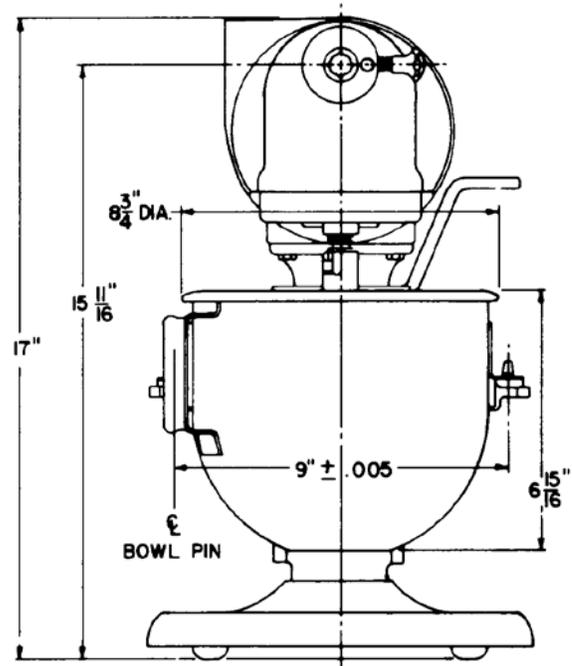
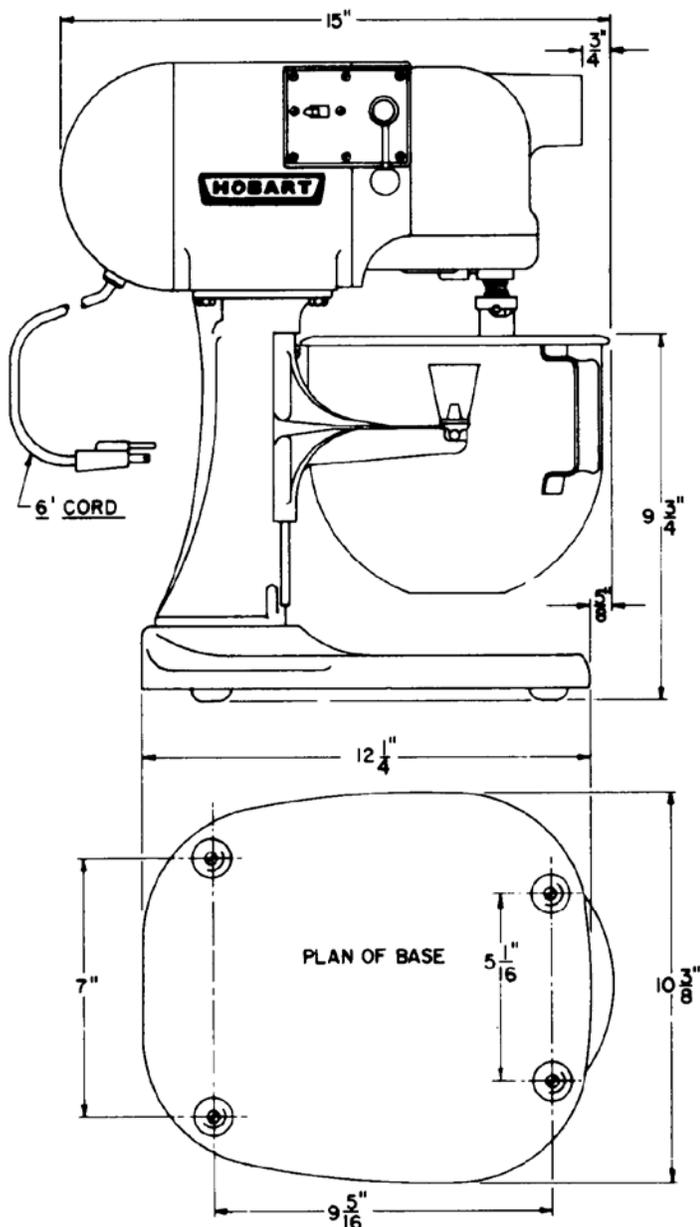
SPECIFICATIONS

ELECTRICAL SPECIFICATIONS: 100-120/60/1 - U L Listed for residential and commercial use. Also available in 100/50/1, 230/50/1, 220/60/1 and 230/60/1 - not submitted for UL Listing.

WEIGHT: 44½ lbs. net; 55 lbs. domestic shipping.

WARRANTY: Unit has full one-year warranty on parts and labor against manufacturer's defects. Carry-in warranty to local authorized Hobart service office.

DETAILS AND DIMENSIONS



WARNING
ELECTRICAL AND GROUNDING CONNECTIONS MUST COMPLY WITH THE APPLICABLE PORTIONS OF THE NATIONAL ELECTRICAL CODE AND/OR OTHER LOCAL ELECTRICAL CODES IN FORCE.

As continued product improvement is a policy of Hobart, specifications are subject to change without notice.

HOBART701 S Ridge Avenue, Troy, OH 45374
1-888-4HOBART • www.hobartcorp.com**LEGACY®
HL120 MIXER****HOBART****STANDARD FEATURES**

- Heavy-Duty ½ H.P. Motor
- Gear Transmission
- Three Fixed Speeds Plus Stir Speed
- Shift-on-the-Fly™ Controls
- Patented soft start Agitation Technology
- 15-Minute SmartTimer™
- Automatic Time Recall
- Large, Easy-To-Reach Controls
- Single Point Bowl Installation
- Ergonomic Swing-Out Bowl
- #12 Taper Attachment Hub
- Open Base
- Stainless Steel Bowl Guard
- Metallic Gray Hybrid Powder Coat Finish

**ACCESSORY PACKAGE - featuring
Hobart Quick Release™ Agitators**

- **Standard Accessory Package Includes:**
 - 12 Quart Stainless Steel Bowl
 - 12 Quart “B” Beater
 - 12 Quart “D” Wire Whip

MODEL

- HL120 – 12-Quart All Purpose Mixer

Specifications, Details and Dimensions on Inside and Back.

**LEGACY® HL120 MIXER**

LEGACY® HL120 MIXER



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SOLUTIONS/BENEFITS

½ H.P. Motor

Durability

- Heavy-duty to meet the most demanding operations

Gear Transmission

Durability, Reliability

- Ensures consistent performance and minimum downtime under heavy loads

Three Fixed Speeds plus Stir Speed

Flexibility, Reliability, Consistency

- For incorporating, blending, mixing ingredients
- Supports consistent results and thorough mixing

Shift-on-the-Fly™ Controls

Flexibility

- Allows operator to change speeds while mixer is running

Patented soft start Agitation Technology

Sanitation

- Each speed has a soft transition into a higher speed to reduce the chances of product splash-out

15-Minute SmartTimer™

Convenience, Ease of Use, Consistency

- Supports recipe mixing times
- Provides accurate results and eliminates overmixing

Automatic Time Recall

Productivity, Consistency

- Remembers the last time set for each speed
- Great for multiple batches

Ergonomic Swing-Out Bowl

Ease of Use, Convenience

- Easy loading and unloading of products
- Single Point Bowl Installation allows for simple mounting and removal of bowl
- Bowl Interlock ensures mixer bowl is properly in place for mixer to operate

Stainless Steel Bowl Guard

Protection

- Safety interlock prevents operation when front portion of guard is out of position

Hobart Accessories

Durability, Flexibility, Simplicity

- Hobart Quick Release™ agitators allow for simple installation and removal from agitator shaft
- Hobart accessories are designed for long-term usage under heavy-duty conditions
- Large array of accessories provide multiple uses for recipe and product processing

HL120 MIXER CAPACITY CHART

Recommended Maximum Capacities - dough capacities based on 70°F. water and 12% flour moisture.

PRODUCT	AGITATORS SUITABLE FOR OPERATION	HL120
CAPACITY OF BOWL (QTS. LIQUID)		12
Egg Whites	D	1¼ pts.
Mashed Potatoes	B & C	10 lbs.
Mayonnaise (Qts. of Oil)	B or C or D	4½ qts.
Meringue (Qts. of Water)	D	¾ pts.
Waffle or Hot Cake Batter	B	5 qts.
Whipped Cream	D or C	2½ qts.
Cake, Angel Food (8-10 oz. cake)	C or I	7
Cake, Box or Slab	B or C	12 lbs.
Cake, Cup	B or C	12 lbs.
Cake, Layer	B or C	12 lbs.
Cake, Pound	B	12 lbs.
Cake, Short (Sponge)	C or I	8 lbs.
Cake, Sponge	C or I	6½ lbs.
Cookies, Sugar	B	10 lbs.
Dough, Bread or Roll (Lt.-Med.) 60% AR	§ ED	13 lbs.□
Dough, Heavy Bread 55% AR	§ ED	8 lbs.□
Dough Pie	B & P	11 lbs.
Dough, Thin Pizza 40% AR (max. mix time 5 min.)	§‡ ED	5 lbs.□
Dough, Med. Pizza 50% AR	§‡ ED	6 lbs.□
Dough, Thick Pizza 60% AR	§‡ ED	11 lbs.□
Dough, Raised Donut 65% AR	ED	4 lbs.*
Dough, Whole Wheat 70% AR	ED	11 lbs.□
Eggs & Sugar for Sponge Cake	B & C or I	5 lbs.
Icing, Fondant	B	7 lbs.
Icing, Marshmallow	C or I	1¼ lbs.
Shortening & Sugar, Creamed	B	9½ lbs.
Pasta, Basic Egg Noodle (max. mix time 5 min.)	ED	—

NOTE: % AR (% Absorption Ratio) - Water weight divided by flour weight. Capacity depends on moisture content of dough. Above capacities based on 12% flour moisture at 70°F water temperature.

□ 1st Speed

* 2nd Speed

† 3rd Speed

§ If high gluten flour is used, reduce above dough batch size by 10%.

‡ 2nd Speed should never be used on 50% AR or lower products.

USE OF ICE REQUIRES A 10% REDUCTION IN BATCH SIZE.

1 gallon of water weighs 8.33 lbs.

NOTE: Attachment hub should not be used while mixing.



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LEGACY® HL120 MIXER

SPECIFICATIONS

MOTOR:

½ H.P. high torque motor.

100-120/50/60/1 8.0 Amps
200-240/50/60/1 5.0 Amps

ELECTRICAL:

100-120/50/60/1, 200-240/50/60/1 – UL Listed.

CONTROLS:

Magnetic contactor with thermal overload protection. Internally sealed “Start-Stop” push buttons. A 15-minute SmartTimer™ is standard. SmartTimer™ includes **Automatic Time Recall**, which remembers the last time set for each speed.

TRANSMISSION:

Gear-driven. Gears are constant mesh heat-treated hardened alloy steel along with anti-friction ball bearings. Grease lubricants furnished to all gears and shafts.

SPEEDS:

	Agitator (RPM)	Attachment (RPM)
Stir	59	33
First (Low)	107	61
Second (Intermediate)	198	113
Third (High)	365	207

BOWL GUARD:

Heavy-duty stainless steel wire front and solid rear portion. Front portion of guard rotates easily to add ingredients and install or remove agitator. It detaches in seconds for cleaning in dishwasher or sink. Rear portion of guard can be quickly cleaned in position. Guard must be in closed position before mixer will operate. Bowl support interlock provides further protection.

BOWL LIFT:

Ergonomic style, hand crank operated, self-locking in top and bottom position.

FINISH:

Metallic Gray Hybrid Powder Coat finish.

ATTACHMENT HUB:

Comes with front-mounted Hobart standard #12 taper attachment hub for use with #12 size attachments.

ATTACHMENTS AND ACCESSORIES:

The following are available at extra cost:

- Stainless Steel Bowl
- “B” Flat Beater
- “C” Wing Whip
- “D” Wire Whip
- “ED” Dough Hook
- “P” Pastry Knife
- Bowl Splash Cover
- Bowl Scraper
- Ingredient Chute
- 9" Vegetable Slicer
- Meat Chopper Attachment
- Rubber Foot Pads
- Attachment Tray Support



Hobart Bowl Scraper

Hobart Ingredient Chute



Listed by Underwriters Laboratories Inc. and certified by NSF International.

LEGACY® HL120 MIXER



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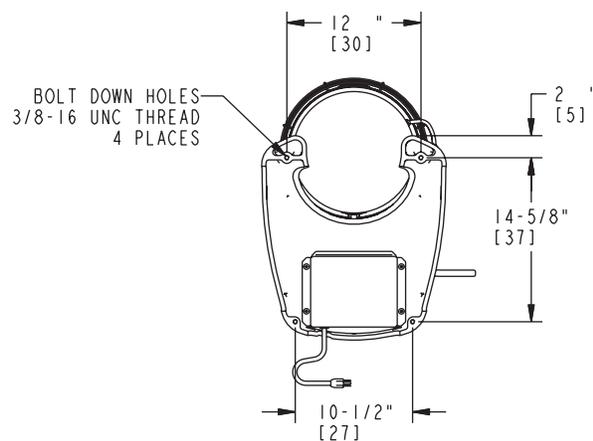
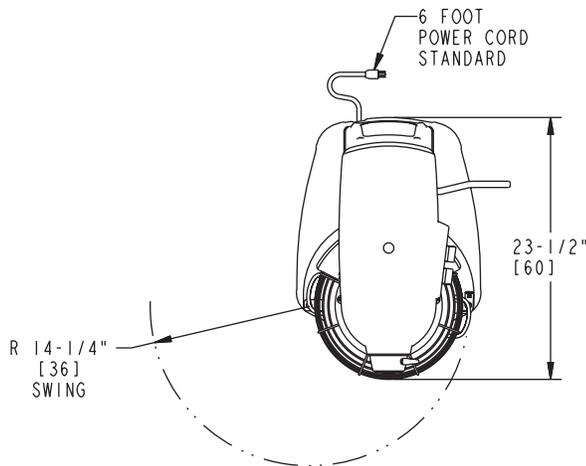
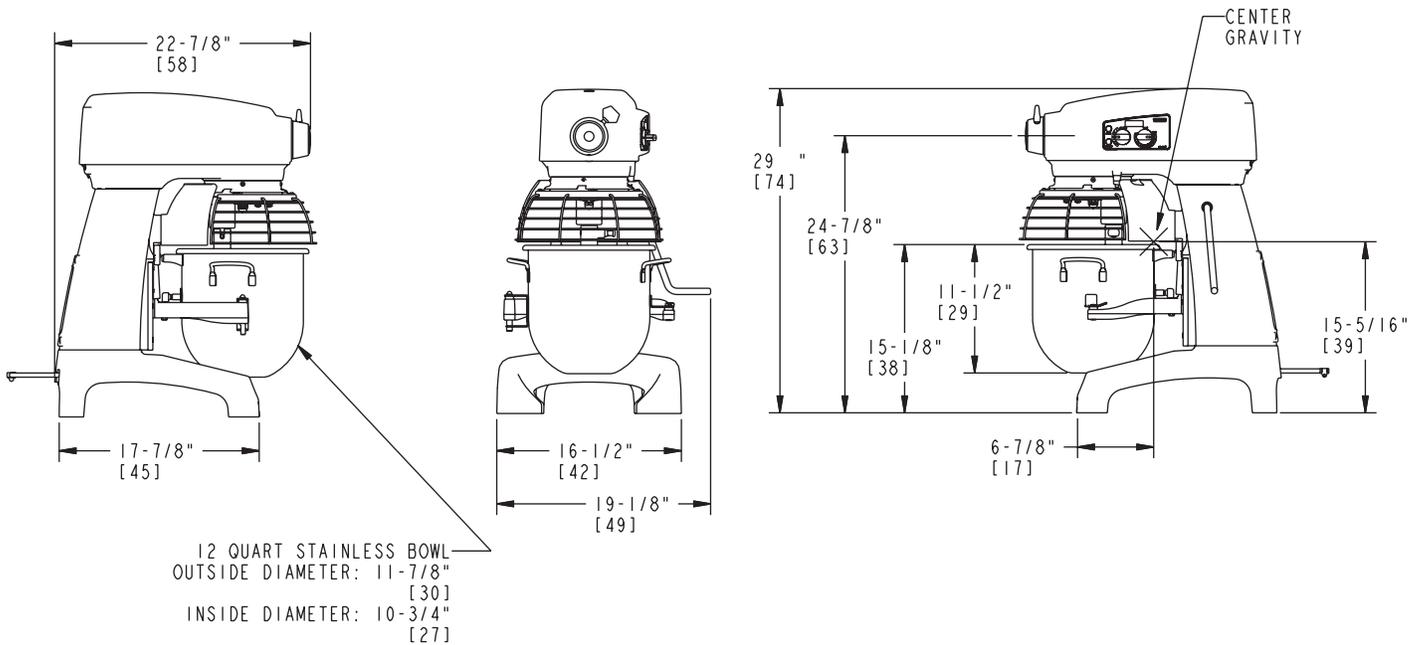
SPECIFICATIONS

ELECTRICAL SPECIFICATIONS: 100-120/50/60/1,
200-240/50/60/1 – UL Listed.

WEIGHT: 189 lbs. net; 204 lbs. domestic shipping.

WARRANTY: Unit has full one-year warranty on parts, labor and mileage against manufacturer's defects. Service contracts are available.

DETAILS AND DIMENSIONS



WARNING

ELECTRICAL AND GROUNDING CONNECTIONS MUST COMPLY WITH THE APPLICABLE PORTIONS OF THE NATIONAL ELECTRICAL CODE AND/OR OTHER CODES IN FORCE

NOTE

MACHINE WEIGHT (LESS BOWL)-----187 LBS
SHIPPING WEIGHT-----202 LBS
BOWL WEIGHT-----7-1/2 LBS

As continued product improvement is a policy of Hobart, specifications are subject to change without notice.

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1-888-4HOBART • www.hobartcorp.com**LEGACY®
HL200 MIXER****HOBART****STANDARD FEATURES**

- Heavy-Duty ½ H.P. Motor
- Gear Transmission
- Three Fixed Speeds Plus Stir Speed
- Shift-on-the-Fly™ Controls
- Patented soft start Agitation Technology
- 15-Minute SmartTimer™
- Automatic Time Recall
- Large, Easy-To-Reach Controls
- Single Point Bowl Installation
- Ergonomic Swing-Out Bowl
- #12 Taper Attachment Hub
- Open Base
- Stainless Steel Bowl Guard
- Metallic Gray Hybrid Powder Coat Finish

ACCESSORY PACKAGE - featuring Hobart Quick Release™ Agitators

- HL200-1STD Standard Accessory Package**
Includes:
 - 20 Quart Stainless Steel Bowl
 - 20 Quart “B” Beater
 - 20 Quart “D” Whip
 - 20 Quart “ED” Dough Hook

MODELS

- HL200 – 20-Quart All Purpose Mixer
- HL200C – 20-Quart All Purpose Mixer with Maximum Security Correctional Package

Specifications, Details and Dimensions on Inside and Back.

**LEGACY® HL200 MIXER**

LEGACY® HL200 MIXER



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SOLUTIONS/BENEFITS

½ H.P. Motor

Durability

- Heavy-duty to meet the most demanding operations

Gear Transmission

Durability, Reliability

- Ensures consistent performance and minimum downtime under heavy loads

Three Fixed Speeds plus Stir Speed

Flexibility, Reliability, Consistency

- For incorporating, blending, mixing ingredients
- Supports consistent results and thorough mixing

Shift-on-the-Fly™ Controls

Flexibility

- Allows operator to change speeds while mixer is running

Patented soft start Agitation Technology

Sanitation

- Each speed has a soft transition into a higher speed to reduce the chances of product splash-out

15-Minute SmartTimer™

Convenience, Ease of Use, Consistency

- Supports recipe mixing times
- Provides accurate results and eliminates overmixing

Automatic Time Recall

Productivity, Consistency

- Remembers the last time set for each speed
- Great for multiple batches

Ergonomic Swing-Out Bowl

Ease of Use, Convenience

- Easy loading and unloading of products
- Single Point Bowl Installation allows for simple mounting and removal of bowl
- Bowl Interlock ensures mixer bowl is properly in place for mixer to operate

Stainless Steel Bowl Guard

Protection

- Safety interlock prevents operation when front portion of guard is out of position

Hobart Accessories

Durability, Flexibility, Simplicity

- Hobart Quick Release™ agitators allow for simple installation and removal from agitator shaft
- Hobart accessories are designed for long-term usage under heavy-duty conditions
- Large array of accessories provide multiple uses for recipe and product processing

HL200 MIXER CAPACITY CHART

Recommended Maximum Capacities - dough capacities based on 70°F. water and 12% flour moisture.

PRODUCT	AGITATORS SUITABLE FOR OPERATION	HL200
CAPACITY OF BOWL (QTS. LIQUID)		20
Egg Whites	D	1 qt.
Mashed Potatoes	B & C	15 lbs.
Mayonnaise (Qts. of Oil)	B or C or D	10 qts.
Meringue (Qts. of Water)	D	1½ pts.
Waffle or Hot Cake Batter	B	8 qts.
Whipped Cream	D or C	4 qts.
Cake, Angel Food (8-10 oz. cake)	C or I	15
Cake, Box or Slab	B or C	20 lbs.
Cake, Cup	B or C	20 lbs.
Cake, Layer	B or C	20 lbs.
Cake, Pound	B	21 lbs.
Cake, Short (Sponge)	C or I	15 lbs.
Cake, Sponge	C or I	12 lbs.
Cookies, Sugar	B	15 lbs.
Dough, Bread or Roll (Lt.-Med.) 60% AR	§ ED	25 lbs.□
Dough, Heavy Bread 55% AR	§ ED	15 lbs.□
Dough Pie	B & P	18 lbs.
Dough, Thin Pizza 40% AR (max. mix time 5 min.)	§‡ ED	9 lbs.□
Dough, Med. Pizza 50% AR	§‡ ED	10 lbs.□
Dough, Thick Pizza 60% AR	§‡ ED	20 lbs.□
Dough, Raised Donut 65% AR	ED	9 lbs.*
Dough, Whole Wheat 70% AR	ED	20 lbs.□
Eggs & Sugar for Sponge Cake	B & C or I	8 lbs.
Icing, Fondant	B	12 lbs.
Icing, Marshmallow	C or I	2 lbs.
Shortening & Sugar, Creamed	B	16 lbs.
Pasta, Basic Egg Noodle (max. mix time 5 min.)	ED	5 lbs.

NOTE: % AR (% Absorption Ratio) - Water weight divided by flour weight. Capacity depends on moisture content of dough. Above capacities based on 12% flour moisture at 70°F water temperature.

□ 1st Speed

* 2nd Speed

† 3rd Speed

§ If high gluten flour is used, reduce above dough batch size by 10%.

‡ 2nd Speed should never be used on 50% AR or lower products.

USE OF ICE REQUIRES A 10% REDUCTION IN BATCH SIZE.

1 gallon of water weighs 8.33 lbs.

NOTE: Attachment hub should not be used while mixing.



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LEGACY® HL200 MIXER

SPECIFICATIONS

MOTOR:

½ H.P. high torque motor.

100-120/50/60/1 8.0 Amps
200-240/50/60/1 5.0 Amps

ELECTRICAL:

100-120/50/60/1, 200-240/50/60/1 – UL Listed.

CONTROLS:

Magnetic contactor with thermal overload protection. Internally sealed “Start-Stop” push buttons. A 15-minute SmartTimer™ is standard. SmartTimer™ includes **Automatic Time Recall**, which remembers the last time set for each speed.

TRANSMISSION:

Gear-driven. Gears are constant mesh heat-treated hardened alloy steel along with anti-friction ball bearings. Grease lubricants furnished to all gears and shafts.

SPEEDS:

	Agitator (RPM)	Attachment (RPM)
Stir	59	33
First (Low)	107	61
Second (Intermediate)	198	113
Third (High)	365	207

BOWL GUARD:

Heavy-duty stainless steel wire front and solid rear portion. Front portion of guard rotates easily to add ingredients and install or remove agitator. It detaches in seconds for cleaning in dishwasher or sink. Rear portion of guard can be quickly cleaned in position. Guard must be in closed position before mixer will operate. Bowl support interlock provides further protection.

BOWL LIFT:

Ergonomic style, hand crank operated, self-locking in top and bottom position.

FINISH:

Metallic Gray Hybrid Powder Coat finish.

ATTACHMENT HUB:

Comes with front-mounted Hobart standard #12 taper attachment hub for use with Hobart #12 size attachments.

ATTACHMENTS AND ACCESSORIES:

The following are available at extra cost:

- Stainless Steel Bowl
- “B” Flat Beater
- “C” Wing Whip
- “D” Wire Whip
- “E” Dough Hook
- “ED” Dough Hook
- “P” Pastry Knife
- Bowl Splash Cover
- Bowl Scraper
- Ingredient Chute
- 12 Quart Accessories
- 9" Vegetable Slicer
- Meat Chopper Attachment
- Attachment Tray Support



Hobart Bowl Scraper

Hobart Ingredient Chute



Listed by Underwriters Laboratories Inc. and certified by NSF International.

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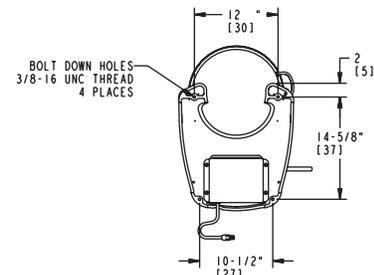
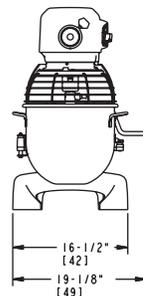
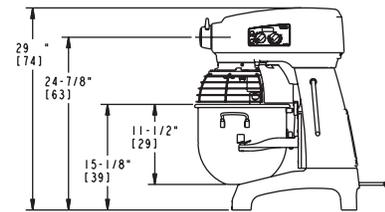
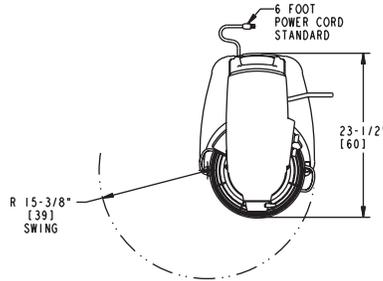
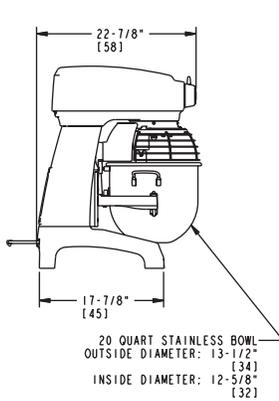
SPECIFICATIONS

ELECTRICAL SPECIFICATIONS: 100-120/50/60/1,
200-240/50/60/1 – UL Listed.

WEIGHT: 189 lbs. net; 204 lbs. domestic shipping.

WARRANTY: Unit has full one-year warranty on parts, labor and mileage against manufacturer's defects. Service contracts are available.

DETAILS AND DIMENSIONS

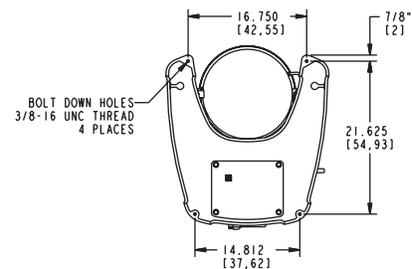
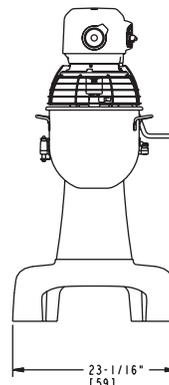
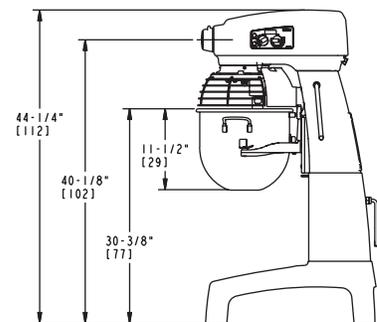
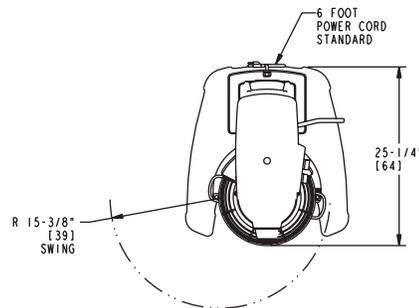
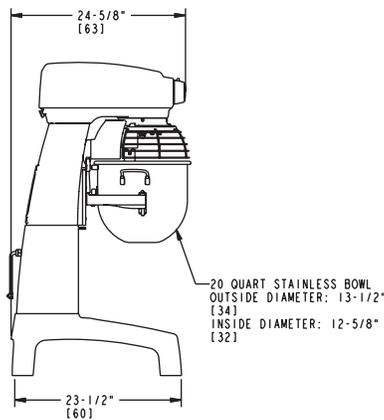


WARNING

ELECTRICAL AND GROUNDING CONNECTIONS MUST COMPLY WITH THE APPLICABLE PORTIONS OF THE NATIONAL ELECTRICAL CODE AND/OR OTHER CODES IN FORCE

NOTE

MACHINE WEIGHT (LESS BOWL)----- 189 LBS
SHIPPING WEIGHT----- 204 LBS
BOWL WEIGHT----- 9 LBS



WARNING

ELECTRICAL AND GROUNDING CONNECTIONS MUST COMPLY WITH THE APPLICABLE PORTIONS OF THE NATIONAL ELECTRICAL CODE AND/OR OTHER CODES IN FORCE

NOTE

MACHINE WEIGHT (LESS BOWL)----- 265 LBS
SHIPPING WEIGHT----- 280 LBS
BOWL WEIGHT----- 9 LBS

As continued product improvement is a policy of Hobart, specifications are subject to change without notice.

EQUIPMENT INFORMATION - N50

The Hobart N-50 mixer is adaptable for laboratory, developmental testing and small kitchen requirements. It has the same planetary action used on larger Hobart commercial mixers.

One 5 quart stainless steel bowl, "B" flat beater and "D" wire whip are standard equipment. The "E" dough arm is also available. Agitators are designed to suit the class of work to be performed.

1. "B" flat beater is for mixing batters, mashing potatoes and general purpose creaming.
2. "D" wire whip is for beating eggs, whipping cream and all light, fast work.
3. "E" dough hook is for kneading coffee cake, roll dough and the heavier yeast raised work, use on number one speed.

The Model N-50 mixer is equipped with a No. 10 Taper Attachment Hub permitting use of the Meat and Food Chopper and Ice Jacket. For more information see the "Use and Applications Handbook for Hobart Mixer Agitators, Attachments and Accessories" Form 19128.

EQUIPMENT INFORMATION - HL120,200

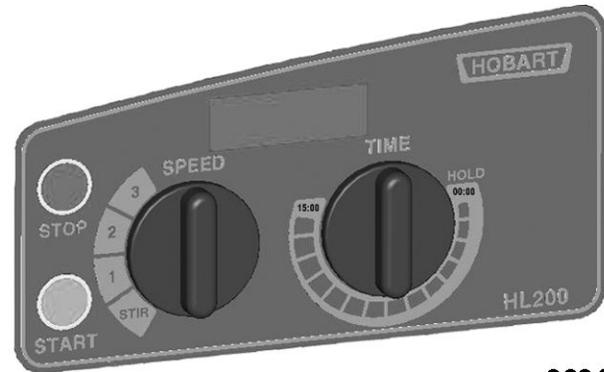
The HL120 and HL200 mixers utilize a timer board with digital display for the operator interface; and electronic motor drive to control the operation of the mixer.

The timer board allows the operator to select the desired mix time and mix speed for the product. The electronic motor drive stores the last selected mix time for each speed setting. Continuous mixing with count up timing is also available when the Hold Mode is selected.

The HL200 models are available with a programmable recipe timer board. A mixer with the recipe timer board allows for the same operation but includes a programming option for the operator to store and retrieve up to four recipes with five steps each (various mix speeds & times).

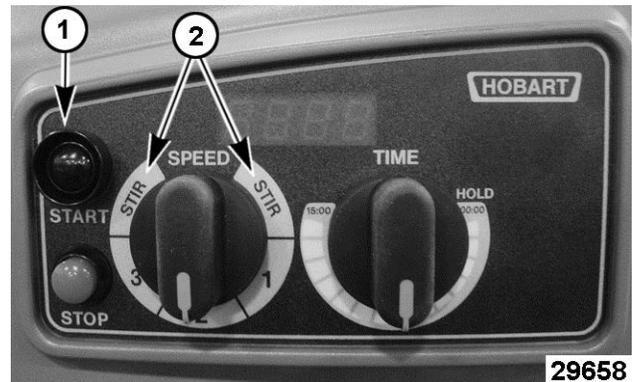
The electronic motor drive provides high torque variable speed output from the motor to fixed ratio drive gears. By utilizing the motor drive technology, agitator speed is controlled electronically which permits changing mixing speeds anytime during mixer operation.

TIMER OPTIONS



9691

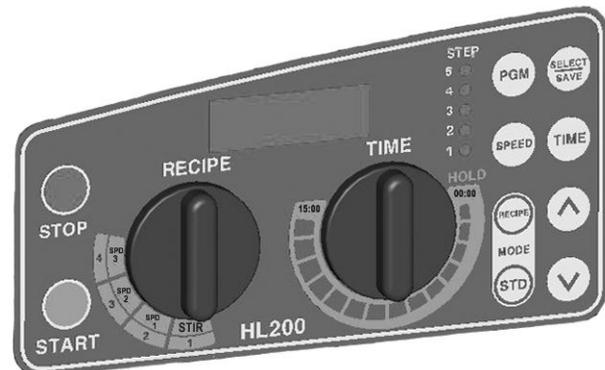
PREVIOUS PRODUCTION STANDARD TIMER BOARD



29658

CURRENT PRODUCTION 2-STIR POSITION TIMER BOARD

1. Non-integrated Stop and Start Buttons
2. 2 Stir Position



9692

RECIPE TIMER BOARD

TOOLS - HL120, 200

Standard

- Standard set of hand tools.
- Digital Multi-meter (DMM) with sensitivity of at least 20,000 ohms per volt.
- Clamp-on ammeter

Special

- Loctite 7471 primer Part No. 544434-2. Used to accelerate the cure of Loctite 242.
- Loctite 242 Part No. 520228. Used to secure acorn nut to planetary shaft threads.
- Permatex #2 Part No. 508462. Used to seal cover to transmission case.
- Puller set Part No. 528347 or equivalent. Used to remove bearings from shafts.
- 1/4-20 x 2.0" long bolts (2) required (full thread, hardened preferred). Used as jack screws to lift transmission cover.
- Torque wrench capable of measuring up to 470 in*lb.
- Thin 3/4" wrench (2) required Part No. TL-17229-1 or equivalent. Used on planetary shaft nut and acorn nut.

N 5 0 M I X E R

I N S T R U C T I O N A L M A N U A L



Model N50



ML-134262
ML-134268

HOBART

IMPORTANT SAFEGUARDS

When using electrical appliances, basic safety precautions should always be followed, including the following:

1. Read all instructions.
2. To protect against the risk of electrical shock, do not put mixer in water or other liquid.
3. Close supervision is necessary when this or any appliance is used by or near children.
4. Unplug mixer from outlet when not in use, before putting on or taking off agitator and before cleaning.
5. Avoid contact with moving parts. Keep hands, hair and clothing, as well as spatulas and other utensils away from the agitator during operation to reduce the risk of injury to persons and/or damage to the mixer.
6. Do not operate the mixer with a damaged cord or plug, after the mixer malfunctions, or is dropped or damaged in any manner. Return appliance to the nearest authorized service center for examination, repair, electrical or mechanical adjustment.
7. Hobart does not recommend the use of hub attachments with this machine.
8. Do not use the mixer outdoors.
9. Do not let the cord hang over edge of table or counter.
10. Remove agitator (flat beater, wire whip or dough hook) from the mixer before washing.

SAVE THESE INSTRUCTIONS

FOR SERVICE AND PARTS, CALL 1-888-4HOBART

INSTALLATION, OPERATION AND CARE OF N50 MIXER

{ SAVE THESE INSTRUCTIONS }

GENERAL

The model N50 mixer is a 5-quart countertop mixer equipped with a 1/6 H.P. motor, cord and plug as standard equipment.

INSTALLATION

UNPACKING

Immediately after unpacking the mixer, check for possible shipping damage. If this machine is found to be damaged after unpacking, save the packaging material and contact the carrier within 15 days of delivery.

LOCATION

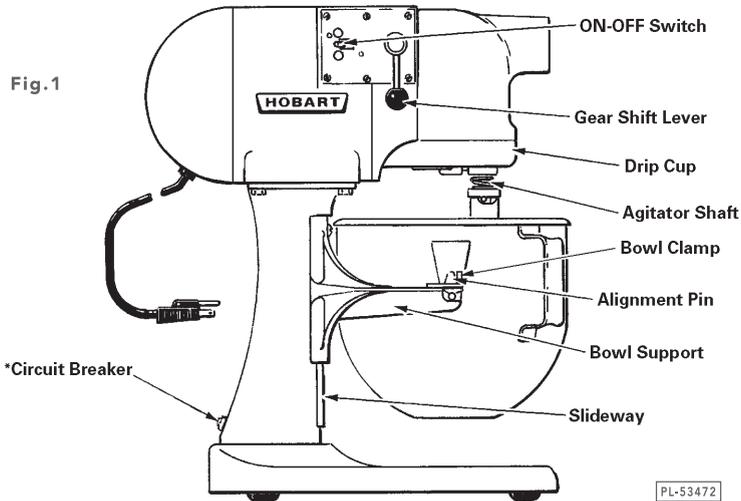
Before installation, test the electrical service to make sure that it agrees with the specifications on the machine data plate. Place the mixer on a suitable sturdy level surface. There should be adequate space around the mixer for the user to operate the controls and install and remove bowls.

ELECTRICAL CONNECTIONS

WARNING: THE ELECTRICAL CORD ON THIS MACHINE IS EQUIPPED WITH A THREE-PRONGED GROUNDING PLUG WHICH MUST BE CONNECTED TO A PROPERLY GROUNDED RECEPTACLE. IF THE RECEPTACLE IS NOT THE PROPER GROUNDING TYPE, CONTACT AN ELECTRICIAN. DO NOT REMOVE THE GROUNDING PRONG FROM THE PLUG.

OPERATION

WARNING: MOVING AGITATOR IN BOWL, KEEP HANDS, CLOTHING AND UTENSILS OUT WHILE IN OPERATION.



CONTROLS

The ON-OFF switch (Fig. 1) is used to start and stop the mixer. The gear shift lever (Fig. 1) is used to change speeds. Always stop the mixer before changing speeds.

To change speeds, turn the switch OFF, move the gear shift lever to the desired speed and turn the switch back ON.

NOTE: There is a mechanism which prevents the gear shift lever from being moved with the switch in the ON position and also prevents the switch from being turned ON if the gear shift lever is between gears.



N 5 0 M I X E R

OPERATION CONTINUED

SPEED 1 (Low) — This speed is for heavy mixtures such as bread dough, heavy batters and potatoes.

Speed 2 (Medium) — This speed is for light dough which must rise quickly, cake batters and some whipping operations.

SPEED 3 (High) — This is a fast speed for light work such as whipping cream, beating eggs and mixing thin batters.

The bowl lift handle is used to raise and lower the bowl. To raise the bowl, rotate the handle upward; rotating the handle downward lowers the bowl.

*Circuit breaker provided only on 115/60/1 units. (Not provided on ASTM units)

BOWL

New mixer bowls and agitators (beaters, whips and dough hooks) should be thoroughly washed with hot water and a mild soap solution, rinsed with either a mild soda or vinegar solution and thoroughly rinsed with clear water BEFORE being put into service. This cleaning procedure should also be followed for bowls and agitators before whipping egg whites or whole eggs. The bowl must be installed before the agitator. To install the bowl, fully lower the bowl support (Fig. 1). Position the bowl so the alignment bracket on the back of the bowl is in the bowl retainer and the alignment pins (Fig. 1) on the front of the bowl support fit in the holes on the sides of the bowl. Lock the bowl in place by rotating the bowl clamps (Fig. 1) over the ears of the bowl.

AGITATOR

To install an agitator, the bowl must be installed and fully lowered. Place the agitator in the bowl, push it up on the agitator shaft (Fig. 1) and turn it clockwise to seat the shaft pin in the slot of the agitator shank.

MIXING

This section explains operation of the mixer. A Compact Disk with the (Use and Applications Handbook) is provided with the mixer which contains information on mixing procedures and outlines specific uses for agitators.

CIRCUIT BREAKER

The 115/60/1 units are equipped with a circuit breaker to prevent overloading the mixer. The circuit breaker will trip if mixer is overloaded. Ensure mixer is shut-off and unplug unit prior to removing the overloading condition and resetting the circuit breaker. Follow Troubleshooting guide if unit will not start.

MAINTENANCE

WARNING: UNPLUG MACHINE POWER CORD BEFORE BEGINNING ANY MAINTENANCE PROCEDURE.

BOWL LIFT SLIDEWAYS

The slideways (Fig. 1) should be lubricated twice a year. Apply a light coat of Lubriplate 630AA to all three surfaces of both slideways.

SERVICE

If service is required on this equipment, return it to your local Hobart Service Center. For an authorized Hobart Service Center, call 1-888-4HOBART.

TROUBLESHOOTING

PROBLEM

Mixer will not start.

POSSIBLE CAUSE

1. Check incoming power source and make sure unit is plugged in.
2. Check circuit breaker on mixer. Verify that circuit breaker is reset by pressing in on the black button (Fig.1).
3. Take mixer to your local Hobart Service Center.



INSTRUCTION MANUAL

**MODELS
HL120 & HL200**



*701 S. RIDGE AVENUE
TROY, OHIO 45374-0001*

937-332-3000

www.hobartcorp.com

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INSTALLATION, OPERATION AND CARE OF LEGACY™ 12 & 20-QUART MIXERS

SAVE THESE INSTRUCTIONS

GENERAL

The legacy 12-quart mixer is a bench-type mixer which features a SmartTimer™, a manual bowl lift and a #12 attachment hub as standard equipment.

The Legacy 20-quart mixer is a bench-type mixer which features a SmartTimer™, a manual bowl lift and a #12 attachment hub as standard equipment. With the use of special agitators, a 12-quart bowl may be used on the HL200 mixer.

A variety of attachments, agitators and accessories are available. These are described in a separate *Use and Applications Handbook*, which is furnished on the Legacy Mixer Operator Training CD provided with each mixer.

INSTALLATION

UNPACKING

The mixer was inspected before leaving the factory. The carrier assumes full responsibility for safe delivery upon acceptance of the shipment. Check for possible shipping damage immediately after receipt.

If the mixer is found to be damaged, complete the following steps:

1. Carrier must be notified within five business days of receipt.
2. Carrier's local terminal must be notified immediately upon discovery (note the time, date, and who was spoken to), and follow up and confirm with written or electronic communication.
3. All original packing materials must be kept for inspection purposes.
4. The mixer cannot have been moved, installed, or modified.
5. Notify Hobart customer care at (800) 333-7447.

LOCATION

Prior to installation, test the electrical service to assure that it agrees with the specifications on the machine data plate.

Place the mixer on a suitable sturdy level surface. There should be adequate space around the mixer for the user to operate the controls and to install and remove bowls. Holes are located in the base to permanently secure the mixer, although this is not necessary in normal installations.

ELECTRICAL CONNECTIONS (Cord Connected Mixers)

⚠ WARNING The electrical cord on this machine is equipped with a three-pronged grounding plug which must be connected to a properly grounded receptacle. If the receptacle is not the proper grounding type, contact an electrician. **DO NOT** remove the grounding prong from the plug.

⚠ WARNING Electrical and grounding connections must comply with the applicable portion of the National Electrical Code and/or other local electrical codes.

Check Initial Operation

1. Apply power to the mixer by inserting the cord plug into a properly grounded outlet.
2. Install the bowl and raise into the mix position, with the bowl support up and bowl guard wire cage closed.
3. Turn the SPEED dial pointer to STIR.
4. Moderately run the machine by pushing the START and then STOP buttons.

OPERATION

⚠ WARNING Moving agitator in bowl. Keep hands, clothing and utensils out of bowl while in operation. Do not use without interlocked guard.

The Legacy mixer is equipped with SmartTimer™ controls. Refer to Figure 1 for operating parts and OPERATION section for their functions.

The bowl guard wire cage must be in closed position or the mixer will not operate.

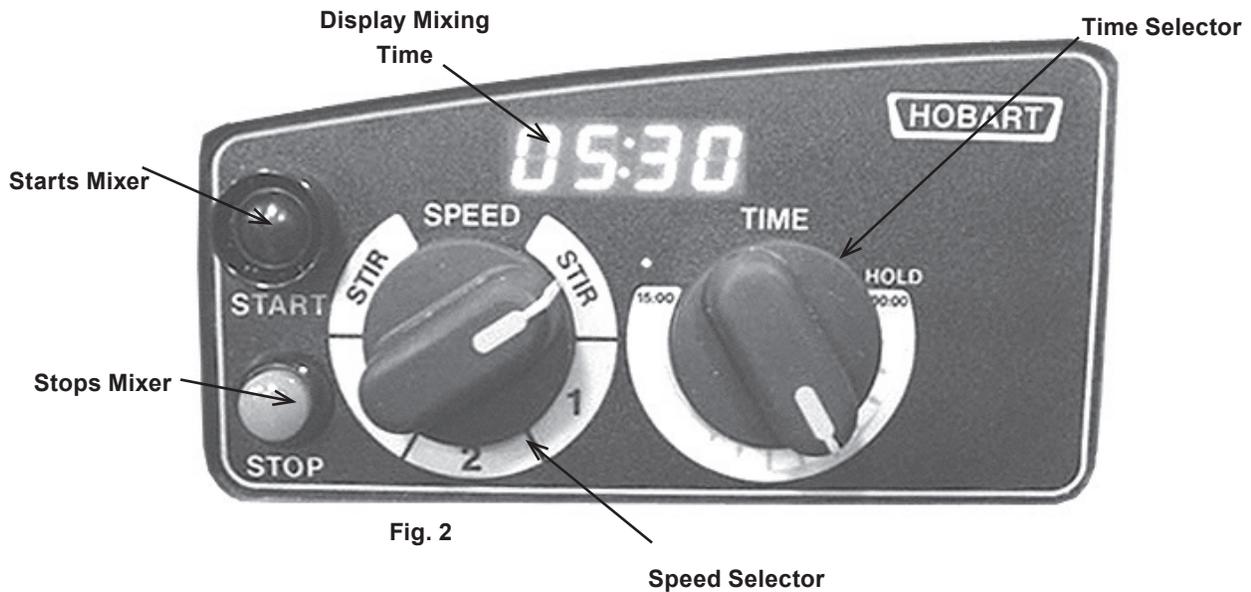
The bowl must remain in mix position on bowl support and the bowl support must be raised (mix position) or the mixer will not operate.



Fig. 1

STANDARD CONTROLS

Models HL120/HL200 (With Three Mix Speeds Plus Stir Speed)



HL120/HL200 MIXER SPEEDS

STIR (Slow) The lowest speed is for incorporating ingredients.

SPEED 1 (Low) This speed is for heavy mixtures such as pizza dough, heavy batters and potatoes.

SPEED 2 (Medium) This speed is for mixing cake batters, mashing potatoes and developing bread dough.

SPEED 3 (High) This speed is for incorporating air into light batches, as well as finishing whipped items.

BOWL PLACEMENT

The bowl must be installed before the agitator is installed.

To install the bowl, lower the bowl support and position bowl so the alignment pins on the left side of the bowl support fit in the holes in the bowl tab (Fig. 3). Place the slotted tab on bowl into the lower part of the pin. Swing the bowl into the mix position on bowl support (Fig. 4).

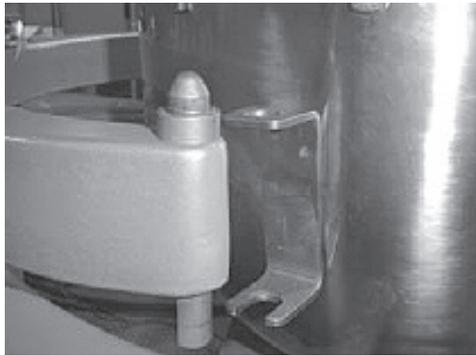


Fig. 3



Fig. 4

AGITATOR

To install an agitator, the bowl must be on the bowl support.

To Install

1. Lower the bowl.
2. Open the bowl guard wire cage.
3. Place the agitator inside the bowl and align the horizontal slot on the agitator with the agitator shaft pin.
4. Slide the agitator up the agitator shaft until it stops and latches. An audible click should be heard when the agitator locks in position.

To Remove

1. Open the bowl guard wire cage.
2. Lower the bowl.
3. Hold the agitator and pull the plunger of the agitator out (Fig. 5). Slide agitator down off the agitator shaft.

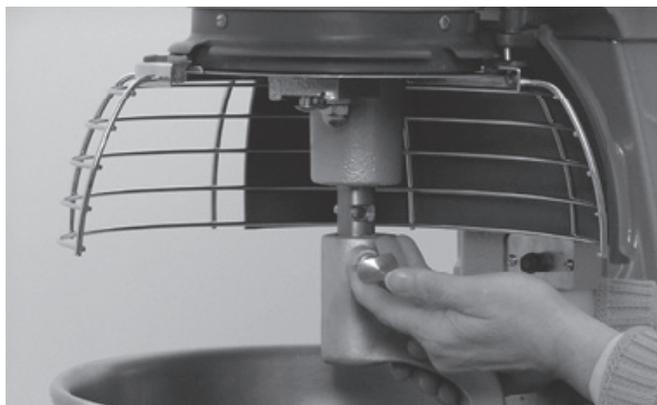


Fig. 5

PREPARE FOR MIXING

1. Place the mixing bowl on the bowl support.
2. Pour ingredients into the bowl.
3. Swing the bowl back to the mix position.
4. Place the agitator inside the bowl, and then attach it to the agitator shaft (Fig. 6).
5. Lift bowl support.
6. Correctly close the bowl guard wire cage.
7. The mixer is now ready for mixing. (See TIMER OPERATION) STANDARD TIMER OPERATION.



Fig. 6

Using the Count-Up Mode (Continuous Mixing)

1. Turn the SPEED dial (Fig. 7) to select a mix speed (the SPEED setting can be changed at any time during the mixing operation).

NOTE: STIR is to be used for incorporating ingredients. Do not use to develop dough products.

2. Set the timer on hold by turning the TIME selector counterclockwise until HOLD appears in the time window.
3. Press the START button to begin mixing. The timer starts counting forward from 00:00.

NOTE: If the wire cage is opened at any time, the mixing operation will stop. To resume the mixing operation, close the wire cage and press the START button.

4. Press the STOP button to stop the mixer, the mixing time is displayed in the TIME window.
5. Press the START button to resume mixing if needed.

NOTE: When the timer reaches 15:00 minutes, the beeper will sound momentarily and timer will rollover to 00:01 and continue counting until the STOP button is pressed.



Fig. 7

Using the Count-Down Mode (Timed Mixing)

1. Turn the SPEED dial (Fig. 7, pg. 8) to select a mix speed.
 - a. If the count-up mode was used for the previous batch, the desired time needs to be entered.
 - b. If the count-down mode was used for the previous batch, the previous time will be displayed. If a different time is needed, turn the TIME selector to the desired time in 10 second increments.
2. Press the START button to begin mixing; the timer starts counting down from the set time.
 - a. To stop the mixer at any time, press the STOP button. To resume mixing, press the START button. For example: The mixer is started at SPEED 1 for 30 seconds and is stopped after 10 seconds. Pressing the START button will resume the mixing operation.
 - b. If the mixer is stopped and a new time setting is entered, pressing the START button saves the new time setting on the current speed selection. For example: The mixer is started at SPEED 1 for 30 seconds and is stopped after 10 seconds. A new time is entered by turning the TIME selector. The new time will replace the initial 30 seconds for SPEED 1 after the START button is pressed.
 - c. If the time is changed while mixing, the mixer will change to the previous time for the selected speed and count down.
 - d. If speed is changed while mixing, the time will change to the previous time for the select speed and count down.

NOTE: If the wire cage is opened at any time, the mixing operation will stop. To resume the mixing operation, close the wire cage and press the START button.

3. When the timer reaches 00:00, the mixer stops; a beeper sounds for 1 second. The count-down timer then displays the last stored time.

OPERATING NOTES

- STIR is to be used for incorporating ingredients. Do not use it to develop dough products.
- If the mixer is stopped during a mixing operation, the timer also stops. The timer starts again (with the time remaining) when the START button is pressed (Fig. 8).
- Turn the TIME selector clockwise to take the mixer out of the hold mode.



Fig. 8

UNLOADING

1. Open the bowl guard wire cage assembly.
2. Lower bowl support.
3. Remove the agitator from the agitator shaft.
4. Slightly lift the bowl off the pin (right side), pull bowl to the front and remove from the bowl support (left side).

WIRE CAGE

The bowl guard wire cage can be rotated out of the way to add ingredients or to access the bowl and agitator.

Note how the plastic carriers allow the wire cage to ride around the circumference of the planetary drip cup.

- Open the bowl guard wire cage: rotate it to your left (Fig. 9).
- Close the bowl guard wire cage: rotate it to your right until it stops, closed position (Fig. 10).

NOTE: The bowl guard wire cage must be returned to the closed position for the mixer to operate.



Fig. 9



Fig. 10

Remove and Clean Bowl Guard Wire Cage (Fig. 11)

1. Rotate wire cage to your left until the three carriers align with the carrier escape slots in the circular ridge of the planetary drip cup.
2. Lift the wire cage straight up so the carriers escape from the slots on the drip cup. The bowl guard wire cage can now be removed by pulling toward you.



Fig. 11

3. Wash the bowl guard wire cage in a sink, rinse with clear water, and dry with a clean cloth.
4. The splash guard can be wiped off and/or washed with a cloth or sponge using warm, soapy water. Rinse with clear water and dry with a clean cloth.

Reinstall Bowl Guard Wire Cage

1. Position the ring of the bowl guard wire cage so the carriers are positioned above the slots in the planetary drip cup.
2. Lower the bowl guard wire cage so the carriers pass through the slots.
3. Rotate the bowl guard wire cage to your right until it contacts the stop, closed position.

AGITATORS AND ATTACHMENTS

Attachments for attachment hub and agitators are covered in a separate Hobart Legacy Mixer Use and Application Handbook on the Mixer Operator Information CD. Follow the instructions accordingly.

Available Agitators and Attachments



12 & 20 Qt. B Flat Beater



12 & 20 Qt. D Wire Whip



12 & 20 Qt. ED Dough Hook



12 & 20 Qt. E Dough Hook



12 & 20 Qt. SST Bowl



12 & 20 Qt. Scraper



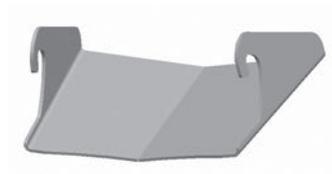
12 & 20 Qt. Splash Cover



12 & 20 Qt. C Wing whip



12 & 20 Qt. P Pastry Knife



12 & 20 Qt. Ingredient Chute



12 & 20 Qt. Table

CLEANING

⚠ WARNING Unplug machine power cord before beginning any cleaning procedure.

The mixer should be thoroughly cleaned daily. DO NOT use a hose to clean the mixer; it should be washed with a clean, damp cloth. The base allows ample room for cleaning under the mixer. The apron (Fig. 1, pg. 5) may be removed for cleaning by loosening the screws. The drip cup (Fig. 1, pg. 5) should be removed (which is secured with 3 screws) periodically and wiped clean. For cleaning the bowl guard wire cage refer to page 11.

MAINTENANCE

⚠ WARNING Unplug machine power cord before beginning any maintenance procedure.

LUBRICATION

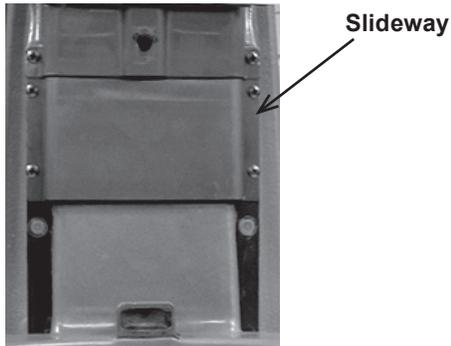


Fig. 12



Fig. 13

Slideways

The slideways (Fig. 12) should be lubricated approximately twice a year. To reach these areas, fully lower the bowl support and remove the apron, which is secured by slotted screws. Wipe a thin coat of Lubriplate 630AA on the bowl pad area of the bowl supports and on each slideway. Install the apron.

Planetary Seal

Occasionally, the planetary seal (Fig. 13) may become dry and begin to squeak. To correct this, work a little lubrication (mineral oil) under the lip of the seal.

ADJUSTMENTS

Agitator Clearance

The agitator clearance should be checked periodically. The agitator must not touch the bowl, and the maximum clearance between the bottom of the bowl and the B flat beater is 1/8" (3mm); the maximum clearance between the bottom of the bowl and the ED dough arm is 5/16" (8 mm).

Install a bowl and agitator (e.g., beater). If the bowl and beater come into contact before the bowl support reaches its stop, adjust the stop screws. Refer to Adjust the Bowl/Agitator Clearance.

Measure Clearance

Pour enough flour in the bowl to cover the bottom of the bowl where the beater travels. With the bowl fully raised (beater should not touch the bottom of the bowl), briefly run the mixer at the lowest speed.

Turn off the mixer, disconnect the electrical power supply, and measure the depth of flour where the beater has traced a path. This measurement should be taken at several points around the bowl to assure accuracy.

Adjust the Bowl/Agitator Clearance

- Remove the apron (which is secured by screws).
- Adjust the clearance by moving the stop screws
- (Fig. 14) counterclockwise to increase the clearance or clockwise to decrease the clearance.
- After the adjustments are made, replace the apron and secure it with the screws.
- Carefully operate the bowl lift several times to check the adjustment.

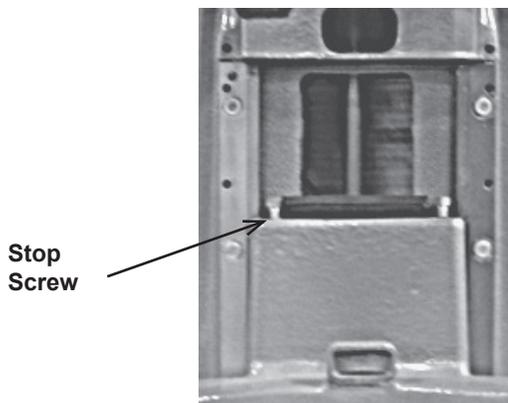


Fig. 14

TROUBLESHOOTING

Symptoms	Possible Causes
Mixer will not start	Flashing Time Display – See Below Branch circuit protector is in open position - check fuse or disconnect switch. Mixer is overloaded. Wire cage is not in the closed position. Bowl is not in closed (mix) position or if Bowl is not in up position.
Agitator touches bowl	Bowl is not in closed (mix) position. Improper agitator clearance - see Maintenance for adjustment procedure. Agitator is not installed properly
Planetary seal squeaks	Seal requires occasional lubrication - see Maintenance
Timer displays flashing alarm code (Ex. “OL1” – Motor overload)	If the error code is flashing – unplug machine until display is blank then plug back in. If symptoms still exist, contact your local Hobart Service office.

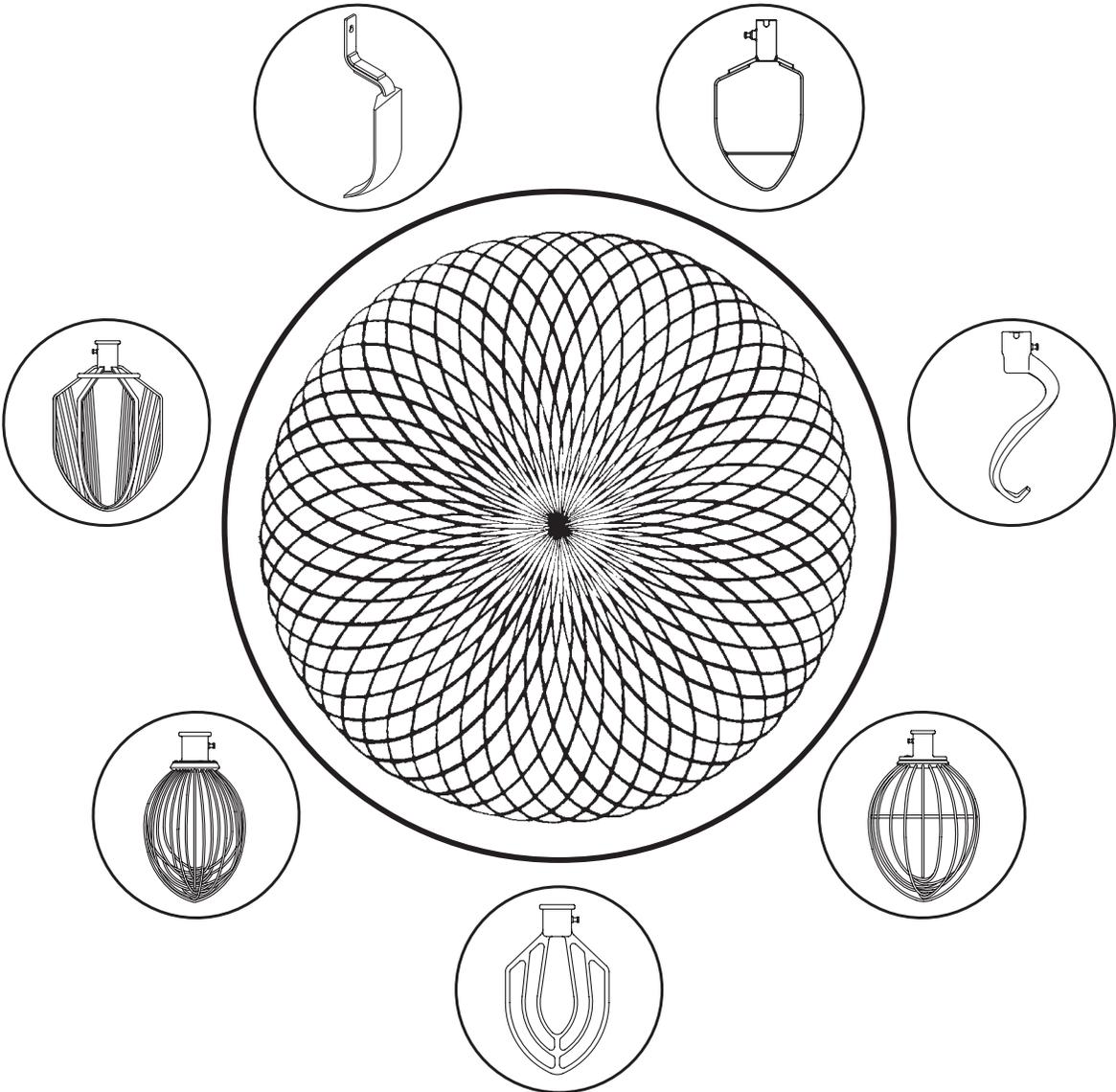
SERVICE

If service is needed on this equipment, contact your local Hobart Service office at 1-888-4HOBART.

USE AND APPLICATIONS HANDBOOK

For **HOBART** Mixer
LEGACY

Attachments and Accessories



Economical, Dependable, Versatile . . . Your Hobart Mixer

The Hobart Mixer brings profit to your operation every time you use it. Uniform and consistent mixing reduces waste and improves process control. Smooth surfaces and durable construction make cleanup fast and easy. This all means economical operation for you.

Because of its reliability, your Hobart Mixer will give years of dependable, low cost service.

The Hobart Mixer's planetary action assures uniform mixing. The mix arm reaches every part of the batch. It rotates on its axis opposite to the direction that it moves around the bowl. Thorough mixing, blending and aerating of ingredients yields consistent, predictable results every time. You can depend on it.

Hobart Mixers are flexible in the kitchen. They quickly accept attachments to do many different jobs. They are also designed to optimize attachment operating speeds for various operations such as shredding, grinding and slicing. The Hobart Legacy allows for more than one size bowl, and several agitator styles are available to handle your specific mixing tasks. Your Hobart Mixer is adaptable to your needs.

We build them that way for you. Our reputation depends on it.



Beaters, Whips, Dough Hooks, Pastry Knives . . . and How to Use Them

This section illustrates and names the various mixer agitators and discusses their applications. General information on how to get the best results from your Hobart mixer is also provided. As is always the case with the art of cooking, your best creations are achieved by carefully proving your methods and formulas and evaluating the results.

The discussions on mixer performance and agitator uses are similar for planetary action mixers regardless of size. That is not to say that the same mix times will apply. This handbook offers suggestions and guidelines only. The cooking is up to you.

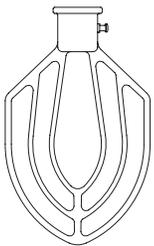
Attachments and accessories and their uses are discussed in the last section of the handbook.

CLEANING NEW MIXER BOWLS AND ACCESSORIES

Before using the first time, thoroughly wash new mixer bowls and agitators (beaters, whips, dough hooks and pastry knives). Wash in hot water and a mild detergent solution, rinse with either a mild soda or vinegar solution, and thoroughly rinse with clear water. Also follow this cleaning procedure for bowls and agitators before whipping egg whites or whole eggs.

AGITATORS AND THEIR USES

Hobart Quick Release™ agitators are available for the Legacy™ mixers and for the type of product that is being mixed.



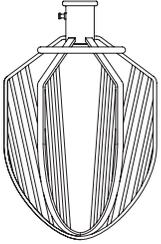
The **B Flat Beater** is a multi-purpose agitator used for mashing potatoes and mixing cakes, batters or icings. It is also used in applications requiring a creaming or rubbing action and uniform dispersion of ingredients. Use first speed for starting most operations; medium speed for finishing.



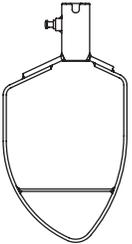
The **D Wire Whip** is designed for maximum blending of air into light products. Uses include: whipping cream, beating egg whites, mixing very light icings, meringues and all similar applications. The D Wire Whip is most commonly used in third and fourth speed.



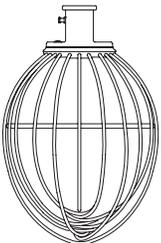
The **ED Dough Hook** is used for mixing most bread, roll and pizza doughs which require folding and stretching action for best development. These agitators are suitable for use on all yeast raised doughs and should be operated in first, second or third speed.



The **C Wing Whip** is used for whipping material that is too heavy for the D Wire Whip. The heavy frame permits its use for light creaming and beating. It is often used for whipping or blending potatoes, butter, mayonnaise or icings. It is generally used in first and second speed for whipping heavy products like potatoes or in third or fourth speed for lighter products like mayonnaise or icings.



The **P Pastry Knife** combines shortening with flour, and is ideal for light pastry shells (patty shells), flaky pie doughs and similar mixes. The cutting action of the knife practically eliminates rubbing and allows delicate ingredients to be combined without overdevelopment. The P Pastry Knife is suitable for stirring operations in low speeds and for fast cutting operations in medium speeds. You should not use the P Pastry Knife at high speed if you want the pastry to have a flaky texture.



The **I Wire Whip** makes sponge cakes and mixes marshmallow icing for heavy whipping.

FORMULAS AND METHODS

Use your own formula for any products you wish to make in your Hobart mixer. Then evaluate the finished product for texture, conformity, lightness, flakiness, etc. You will find that any method of blending ingredients can be duplicated or improved with your machine. Be careful and do not overmix. Overmixing can adversely affect the texture of your product. You will also discover there is often a saving in time for each mixing operation. Even delicate products usually mixed by hand can be mixed in your Hobart mixer.

Your Hobart mixer mixes your products in the most efficient and quickest way possible. There is no need for you to sacrifice individual characteristics when using your Hobart mixer. When results are exactly to your liking, note carefully the time of operation and the speed setting. Under the same conditions, your Hobart mixer will perform exactly the same, day after day, providing uniformity in your products.

MIXER CAPACITY

The Mixer Capacity Chart is a guide for controlling the batch sizes in your formulations. The capacities listed take into account the amount of product which can be contained in the various sized bowls. The listed capacities are the maximum recommended batch sizes. Whenever batch size exceeds 50 pounds, use a bowl truck to load and unload the bowl from the mixer. Recipes for doughs used to establish the batch sizes in the Mixer Capacity Chart are listed below:

Ingredient	Heavy Bread Dough	Medium Pizza Dough	Raised Donut Dough
Flour	100.0%	100.0%	100.0%
Water	55.0%	50.0%	65.0%
Yeast	2.0%	1.0%	5.0%
Salt	2.5%	1.5%	2.5%
Sugar	5.0%	0.0%	15.0%
Shortening	5.0%	0.0%	15.0%
Oil	0.0%	2.0%	0.0%
Non-Fat Dry Milk	6.0%	0.0%	8.0%
Total	175.5%	154.5%	210.5%

The ingredient percentages are based on a flour content of 100 percent to simplify using the recipes to make various sized batches and compute the moisture absorption ratio. The heavy bread dough recipe above is a criterion listed in Section 4.4.2 of Federal Specification 00-M-0038K, Standard for Electric Food Mixing Machines.

The flour used in the recipes is hard wheat flour, enriched and bleached. It contains 11 to 12 percent protein content and a 12 percent moisture content. Flour which has a lower moisture content will decrease the moisture absorption, cause difficulty in proper gluten hydration, and make a heavier load on your mixer. Flours containing high quality protein, such as high gluten flour, result in a dough which can be very difficult to mix. If high gluten flour is used, reduce the batch quantity noted on the Mixer Capacity Chart by 10 percent to prevent overloading of the mixer.

The temperature of the water used in the recipes is 65°F to 75°F. Colder water temperature will cause the dough to be harder to mix. If you plan to mix doughs using cold water, the batch size may need to be reduced by 15 to 20%.

Also considered and noted on the Mixer Capacity Chart is the moisture absorption ratio (AR). This is the ratio of the weight of water to the weight of flour expressed as a percentage.

$$\text{AR} = \text{weight of water} \div \text{weight of flour} \leftrightarrow 100\%$$

The absorption ratio gives an indication of the relative "heaviness" or "wetness" of a batch. In fact, the capacities listed on the Mixer Capacity Chart for the products listed below are based on the following absorption ratios:

Product	Absorption Ratio
Heavy Bread Dough	55%
Medium Bread Dough	60%
Light Bread Dough	65%
Thin Pizza Dough	40%
Medium Pizza Dough	50%
Thick Pizza Dough	60%
Raised Donut Dough	65%
Whole Wheat Dough	70%

When mixing any of the above products with an absorption ratio lower than listed, decrease the batch size proportionately to assure efficient mixing of the product and thus eliminate the possibility of overloading your mixer. For example: An HL600 mixer has a thin pizza dough capacity of 40 pounds at first speed based on an AR of 40% according to the Mixer Capacity Chart. If the batch has an AR of 30%, reduce the batch size to compensate for the difference. Compute the size of the reduction as follows:

1. Divide the AR of the batch to be mixed by the AR listed on the Mixer Capacity Chart.

$$\frac{30\% \text{ Actual AR}}{40\% \text{ Rated AR}} = 75\%$$
2. Multiply the rated batch size by the percentage obtained in step 1. The result is the maximum batch size of the HL600 mixer for pizza dough with 30% AR.

$$\begin{array}{r} 40 \text{ lbs. Rated Batch Size} \\ \times 75\% \\ \hline 30 \text{ lbs. Maximum Capacity} \\ \text{for 30\% AR Dough} \end{array}$$

Another factor often overlooked is the ability of your mixer to operate at a different speed. To prevent overloading, use the recommended mix speed from the Mixer Capacity Chart. Because of the toughness of a 40% AR thin pizza dough, a maximum mix time of 5 minutes on first speed is recommended. Second speed should never be used on 50% AR or lower products except on model HL662.

The speed of the mixer, length of mix time, room temperature and ingredient temperatures all affect dough temperature. To achieve the desired final dough temperature, you may need to adjust the water temperature.

For batch size capacities on other bread doughs not mentioned on the Mixer Capacity Chart, follow the batch size recommendation for a listed bread dough with a similar absorption ratio.

Mixer Capacity Chart – HL120 & HL200

Recommended Maximum Capacities – dough capacities based on 70°F water and 12% flour moisture.

PRODUCT	AGITATORS SUITABLE FOR OPERATION	HL120	HL200
CAPACITY OF BOWL (QTS. LIQUID)		12	20
Egg Whites	D	1¼ pts.	1 qt.
Mashed Potatoes	B & C	10 lbs.	15 lbs.
Mayonnaise (Qts. of Oil)	B or C or D	4½ qts.	10 qts.
Meringue (Qty. of Water)	D	¾ pts.	1½ pts.
Waffle or Hot Cake Batter	B	5 qts.	8 qts.
Whipped Cream	D or C	2½ qts.	4 qts.
Cake, Angel Food (8-10 oz. cake)	C	7	15
Cake, Box or Slab	B or C	12 lbs.	20 lbs.
Cake, Cup	B or C	12 lbs.	20 lbs.
Cake, Layer	B or C	12 lbs.	20 lbs.
Cake, Pound	B	12 lbs.	21 lbs.
Cake, Short (Sponge)	C	8 lbs.	15 lbs.
Cake, Sponge	C	6½ lbs.	12 lbs.
Cookies, Sugar	B	10 lbs.	15 lbs.
Dough, Bread or Roll (Lt.-Med.) 60% AR§	ED	13 lbs.*	25 lbs.*
Dough, Heavy Bread 55% AR§	ED	8 lbs.*	15 lbs.*
Dough, Pie	B & P	11 lbs.	18 lbs.
Dough, Thin Pizza 40% AR § † (maximum mix time 5 minutes)	ED	5 lbs.*	9 lbs.*
Dough, Medium Pizza 50% AR § †	ED	6 lbs.*	10 lbs.*
Dough, Thick Pizza 60% AR § †	ED	11 lbs.*	20 lbs.*
Dough, Raised Donut 65% AR	ED	4 lbs.**	9 lbs.**
Dough, Whole Wheat 70% AR	ED	11 lbs.*	20 lbs.*
Eggs & Sugar for Sponge Cake	B & C	5 lbs.	8 lbs.
Icing, Fondant	B	7 lbs.	12 lbs.
Icing, Marshmallow	C	1¼ lbs.	2 lbs.
Shortening & Sugar, Creamed	B	9½ lbs.	16 lbs.
Pasta, Basic Egg Noodle (maximum mix time 5 minutes)	ED	—	5 lbs.*

ABBREVIATIONS – AGITATORS SUITABLE FOR OPERATION

- B - Flat Beater
- C - Wing Whip
- D - Wire Whip
- ED - Dough Hook
- P - Pastry Knife

- * 1st Speed
- ** 2nd Speed
- *** 3rd Speed

NOTE: %AR (% Absorption Ratio) = Water weight divided by flour weight. Capacity depends on moisture content of dough. Above capacities based on 12% flour moisture at 70°F water temperature.

§ If high gluten flour is used, reduce above dough batch size by 10%.

† 2nd speed should never be used on 50% AR or lower products.

Use of ice requires a 10% reduction in batch size.

1 gallon of water weighs 8.33 lbs.

NOTE: Attachment hub should not be used while mixing.

Mixer Capacity Chart – HL300 & HL400

Recommended Maximum Capacities – dough capacities based on 70°F water and 12% flour moisture.

PRODUCT	AGITATORS SUITABLE FOR OPERATION	HL300	HL400
CAPACITY OF BOWL (QTS. LIQUID)		30	40
Egg Whites	D	1½ qts.	1¾ qts.
Mashed Potatoes	B & C	23 lbs.	30 lbs.
Mayonnaise (Qts. of Oil)	B or C or D	12 qts.	13 qts.
Meringue (Qty. of Water)	D	1 qt.	1½ qts.
Waffle or Hot Cake Batter	B	12 qts.	16 qts.
Whipped Cream	D or C	6 qts.	9 qts.
Cake, Angel Food (8-10 oz. cake)	C or I	22	30
Cake, Box or Slab	B or C	30 lbs.	40 lbs.
Cake, Cup	B or C	30 lbs.	45 lbs.
Cake, Layer	B or C	30 lbs.	45 lbs.
Cake, Pound	B	30 lbs.	40 lbs.
Cake, Short (Sponge)	C or I	23 lbs.	25 lbs.
Cake, Sponge	C or I	18 lbs.	40 lbs.
Cookies, Sugar	B	23 lbs.	30 lbs.
Dough, Bread or Roll (Lt.-Med.) 60% AR§	ED	45 lbs.*	45 lbs.*
Dough, Heavy Bread 55% AR§	ED	30 lbs.*	35 lbs.*
Dough, Pie	B & P	27 lbs.	35 lbs.
Dough, Thin Pizza 40% AR § † (maximum mix time 5 minutes)	ED	14 lbs.*	25 lbs.*
Dough, Medium Pizza 50% AR § †	ED	20 lbs.*	32 lbs.*
Dough, Thick Pizza 60% AR § †	ED	40 lbs.*	45 lbs.*
Dough, Raised Donut 65% AR	ED	15 lbs.**	25 lbs.**
Dough, Whole Wheat 70% AR	ED	40 lbs.*	45 lbs.*
Eggs & Sugar for Sponge Cake	B & C or I	12 lbs.	18 lbs.
Icing, Fondant	B	18 lbs.	25 lbs.
Icing, Marshmallow	C or I	3 lbs.	4½ lbs.
Shortening & Sugar, Creamed	B	24 lbs.	35 lbs.
Pasta, Basic Egg Noodle (maximum mix time 5 minutes)	ED	8 lbs.*	15 lbs.*

ABBREVIATIONS – AGITATORS SUITABLE FOR OPERATION

B - Flat Beater
 C - Wing Whip
 D - Wire Whip
 ED - Dough Hook
 I - Wire Whip
 P - Pastry Knife

* 1st Speed
 ** 2nd Speed
 *** 3rd Speed

NOTE: %AR (% Absorption Ratio) = Water weight divided by flour weight. Capacity depends on moisture content of dough. Above capacities based on 12% flour moisture at 70°F water temperature.

§ If high gluten flour is used, reduce above dough batch size by 10%.

† 2nd speed should never be used on 50% AR or lower products.

Use of ice requires a 10% reduction in batch size.

1 gallon of water weighs 8.33 lbs.

NOTE: Attachment hub should not be used while mixing.

Mixer Capacity Chart – HL600 & HL662

Recommended Maximum Capacities – dough capacities based on 70°F water and 12% flour moisture.

PRODUCT	AGITATORS SUITABLE FOR OPERATION	HL600	HL662
CAPACITY OF BOWL (QTS. LIQUID)		60	60
Egg Whites	D	2 qts.	—
Mashed Potatoes	B & C	40 lbs.	—
Mayonnaise (Qts. of Oil)	B or C or D	18 qts.	—
Meringue (Qty. of Water)	D	1½ qts.	—
Waffle or Hot Cake Batter	B	24 qts.	—
Whipped Cream	D or C	12 qts.	—
Cake, Angel Food (8-10 oz. cake)	C or I	45	—
Cake, Box or Slab	B or C	50 lbs.	75 lbs.
Cake, Cup	B or C	60 lbs.	70 lbs.
Cake, Layer	B or C	60 lbs.	70 lbs.
Cake, Pound	B	55 lbs.	75 lbs.
Cake, Short (Sponge)	C or I	45 lbs.	—
Cake, Sponge	C or I	36 lbs.	—
Cookies, Sugar	B	40 lbs.	50 lbs.
Dough, Bread or Roll (Lt.-Med.) 60% AR§	ED	80 lbs.**	90 lbs.**
Dough, Heavy Bread 55% AR§	ED	60 lbs.**	85 lbs.**
Dough, Pie	B & P	50 lbs.	60 lbs.
Dough, Thin Pizza 40% AR § † (maximum mix time 5 minutes)	ED	40 lbs.*	60*/40 lbs.**
Dough, Medium Pizza 50% AR § †	ED	70 lbs.*	90*/70 lbs.**
Dough, Thick Pizza 60% AR § †	ED	70 lbs.**	90 lbs.**
Dough, Raised Donut 65% AR	ED	30 lbs.***	75 lbs.**
Dough, Whole Wheat 70% AR	ED	70 lbs.**	90 lbs.**
Eggs & Sugar for Sponge Cake	B & C or I	24 lbs.	—
Icing, Fondant	B	36 lbs.	—
Icing, Marshmallow	C or I	5 lbs.	—
Shortening & Sugar, Creamed	B	48 lbs.	50 lbs.
Pasta, Basic Egg Noodle (maximum mix time 5 minutes)	ED	30 lbs.*	40 lbs.*

ABBREVIATIONS – AGITATORS SUITABLE FOR OPERATION

- B - Flat Beater
- C - Wing Whip
- D - Wire Whip
- ED - Dough Hook
- I - Wire Whip
- P - Pastry Knife

- * 1st Speed
- ** 2nd Speed
- *** 3rd Speed

NOTE: %AR (% Absorption Ratio) = Water weight divided by flour weight. Capacity depends on moisture content of dough. Above capacities based on 12% flour moisture at 70°F water temperature.

§ If high gluten flour is used, reduce above dough batch size by 10%.

† 2nd speed should never be used on 50% AR or lower products with the exception of the HL662.

Use of ice requires a 10% reduction in batch size.

1 gallon of water weighs 8.33 lbs.

NOTE: Attachment hub should not be used while mixing.

Mixer Capacity Chart – HL800 & HL1400

Recommended Maximum Capacities – dough capacities based on 70°F water and 12% flour moisture.

PRODUCT	AGITATORS SUITABLE FOR OPERATION	HL800	HL1400
CAPACITY OF BOWL (QTS. LIQUID)		80	140
Egg Whites	D	2 qts.	4 qts.
Mashed Potatoes	B & C	60 lbs.	100 lbs.
Mayonnaise (Qts. of Oil)	B or C or D	30 qts.	50 qts.
Meringue (Qty. of Water)	D	3 qts.	5 qts.
Waffle or Hot Cake Batter	B	32 qts.	—
Whipped Cream	D or C	15 qts.	30 qts.
Cake, Angel Food (8-10 oz. cake)	C or I	60	120
Cake, Box or Slab	B or C	100 lbs.	185 lbs.
Cake, Cup	B or C	90 lbs.	165 lbs.
Cake, Layer	B or C	90 lbs.	165 lbs.
Cake, Pound	B	100 lbs.	185 lbs.
Cake, Short (Sponge)	C or I	80 lbs.	150 lbs.
Cake, Sponge	C or I	65 lbs.	140 lbs.
Cookies, Sugar	B	60 lbs.	100 lbs.
Dough, Bread or Roll (Lt.-Med.) 60% AR§	ED	170 lbs.**	210 lbs.**
Dough, Heavy Bread 55% AR§	ED	140 lbs.**	175 lbs.**
Dough, Pie	B & P	75 lbs.	125 lbs.
Dough, Thin Pizza 40% AR § † (maximum mix time 5 minutes)	ED	85 lbs.*	135 lbs.*
Dough, Medium Pizza 50% AR § †	ED	155 lbs.*	190 lbs.*
Dough, Thick Pizza 60% AR § †	ED	155 lbs.**	190 lbs.**
Dough, Raised Donut 65% AR	ED	60 lbs.***	100 lbs.***
Dough, Whole Wheat 70% AR	ED	150 lbs.**	185 lbs.**
Eggs & Sugar for Sponge Cake	B & C or I	40 lbs.	75 lbs.
Icing, Fondant	B	65 lbs.	100 lbs.
Icing, Marshmallow	C or I	10 lbs.	20 lbs.
Shortening & Sugar, Creamed	B	65 lbs.	120 lbs.
Pasta, Basic Egg Noodle (maximum mix time 5 minutes)	ED	65 lbs.*	100 lbs.*

ABBREVIATIONS – AGITATORS SUITABLE FOR OPERATION

- B - Flat Beater
- C - Wing Whip
- D - Wire Whip
- ED - Dough Hook
- I - Wire Whip
- P - Pastry Knife

- * 1st Speed
- ** 2nd Speed
- *** 3rd Speed

NOTE: %AR (% Absorption Ratio) = Water weight divided by flour weight. Capacity depends on moisture content of dough. Above capacities based on 12% flour moisture at 70°F water temperature.

§ If high gluten flour is used, reduce above dough batch size by 10%.

† Requires a 20% reduction in batch size to mix in Speed 2 with 50% or less AR doughs.

Use of ice requires a 10% reduction in batch size.

1 gallon of water weighs 8.33 lbs.

NOTE: Attachment hub should not be used while mixing.

CREAMING OR RUBBING WITH THE B FLAT BEATER

When making cakes or similar products, the first step is normally rubbing or creaming the shortening. Start this work on first speed and complete it on second speed. If a very light consistency is desired, it may be beaten on third speed before adding more ingredients.

In most formulas, the second step is adding sugar. Most operators prefer to add sugar slowly while the mixer is operating in second or third speed. If you wish to add the sugar all at one time, complete the creaming of the shortening and then stop the machine. When adding the sugar, place it toward the center of the bowl. Start the machine in first speed for the first few turns around the bowl, then increase the speed to complete the operation. After all the sugar has been added, you may want to scrape down the bowl, if you don't have the optional bowl scraper. To scrape the bowl, first stop the mixer. After the beater has stopped, scrape down the sides of the bowl with a bowl scraper or spatula. This returns to the mixture any material which may have accumulated on the bowl sides above the beater shoulder. After scraping down the material, restart the mixer. Beat until smooth using a three speed. Be careful and do not overmix.

CAKES WITH A HIGH SUGAR CONTENT

Do not add the total amount of whole eggs to the batch at one time.

Darkening of the butter and sugar mix can also result if:

- You add the sugar before the shortening is creamed,
- You add the sugar too quickly to the creamed shortening, or
- You add more sugar than the creamed base can absorb.

When mixing whole eggs, it is unnecessary to separate the whites from the yolks. Add the eggs slowly and allow them to become thoroughly incorporated into the shortening base.

Flour and any leavening agent, such as baking powder, soda or special combinations of dry ingredients, may be sifted together. When incorporating dry ingredients, stop the mixer (wait for the beater to stop), scrape down the bowl if necessary, if you don't have the optional bowl scraper, and then add about $\frac{1}{3}$ of the flour and a portion of the milk or added moisture in any form. Resume mixing in first speed. When the flour is incorporated, add half of the remaining liquid and flour. When this is blended, add the remaining liquid and flour. Use only Stir or first speed while adding flour. If necessary, use the Stir speed during incorporation of the flour. This prevents raw flour from being thrown out of the mixer and avoids toughening of the mix by overmixing.

Exercise caution not to overmix the batch during or after the addition of the flour. Usually, by the time the flour is thoroughly incorporated, the mix is completed. Further beating is of no benefit and may cause toughening of the product. The time for beating and creaming is before adding the flour. After the flour and final moisture is added, do as little mixing as possible.

WHIPPING

Use either the D Wire Whip or the C Wing Whip for whipping operations. Although some special operations require other adaptations of the same general type of agitator, our discussion centers on the D Wire Whip and the C Wing Whip.

The D Wire Whip (sometimes called balloon or cage whip) is recommended for whipping cream. With today's marketing conditions, most raw or fresh cream whips well. All cream should be at least 36 to 48 hours old, and should be sufficiently high in butterfat to allow the air to be introduced by whipping. Cream should be cold, but not so cold that ice crystals are formed. When cream is too warm, it turns to butter when whipped. Start the mixer in first speed and gradually increase the speed finishing in third or fourth. The amount of total whipping will depend on the condition, temperature and butterfat content of the cream and the type of product being prepared. An experienced operator will recognize the point of greatest firmness or stiffness in the whipped product. Use care, the small diameter wires that produce

good whipping can break if used to mix heavy product or if the whip is rapped on the side of the bowl to remove excess product.

The C Wing Whip may be used for cream whipping, but it is somewhat slower in operation. One of its principal uses in the kitchen is for whipping potatoes. Of course, whipped potatoes are cooked and then whipped while hot. The potatoes must be soft enough to break up easily by the action of the C Wing Whip in low speed. It is not advisable to whip potatoes in fourth speed without using a splash cover. If other ingredients (hot milk, butter or other enriching material) are added, use Stir speed. The C Wing Whip is excellent for whipping butter.

The C Wing Whip may also be used for mixing salad dressing and light mayonnaise. Since it is an aerating type whip, it reaches its greatest efficiency at the higher speeds.

The D Wire Whip is generally used for eggs. When you whip only egg whites, begin in first speed. When the material begins to expand, progress to second speed. Due to the expansion of the product from the incorporation of air, bowl capacity is limited by the volume of the final product, not by the amount of liquid ingredients at the beginning.

When egg whites are whipped, they are generally finished in high speed. When adding sugar to make a meringue, add the sugar at slow speed and then whip briefly in third speed.

Over-whipping will result in a refining action which liberates air. Stop the mixer as soon as a dry-appearing peak is reached.

When whipping eggs, either whites or whole eggs, it is important to have the bowl and the agitator completely free of any trace of shortening or other oily material. The slightest amount of fat will prevent proper incorporation of air. See CLEANING NEW MIXER BOWLS AND ACCESSORIES. In some kitchens and bakeries, it has become general practice to keep certain bowls only for this purpose.

You may also use the C Wing Whip for whipping eggs or egg whites. However, the results are somewhat slower than produced by the D Wire Whip.

MAYONNAISE

The C Wing Whip, because of its strength, high efficiency and durability when used on larger mixers, is most commonly used for making mayonnaise. However, the D Wire Whip may be preferred when making very light batches or when using step-down bowls.

When you do not need a high emulsion, you may use the B Flat Beater. The B Flat Beater may be used for French or other thin types of salad dressings. The C Wing Whip can also provide satisfactory results by operating the machine at a slow speed.

Because of the great variation in types of mayonnaise and a still wider range of salad dressings known under other names, we will not supply a specific mayonnaise formula. All formulas, however, require the introduction of liquid ingredients, the most important of which is vegetable oil. This may be corn oil, peanut oil, soybean oil, palm oil, safflower oil or several others. You must add the oil slowly, and the operator must pay close attention.

When making mayonnaise, eggs are first thoroughly whipped, then spices, flavoring or other ingredients are added at slow speed. These may have been previously mixed together, perhaps with a portion of vinegar or other mild acid. After blending these ingredients, the mixer may be operated in third speed (or fourth). Add the oil very slowly over an interval of 10 to 20 minutes. Add vinegar or vinegar and water toward the end of the interval when oil can be added. You may wish to stop the mixer (wait for the beater to stop), then scrape the sides of the bowl to return any splashed materials to the batch, if you don't have the optional bowl scraper. Start the mixer on slow speed, then advance to medium for a short period of mixing.

The times given are approximate and not based on any particular formula. However, do not continue beating or mixing after adding the last of the vinegar.

Attachments and Accessories

Several valuable time and labor saving attachments and accessories are available for use with Hobart mixers. These tools will extend your usage of the mixer and enhance your operation by efficiently producing additional consistent, uniform products. Thoroughly clean all parts which come in contact with food both before and after use.

9" VEGETABLE SLICER

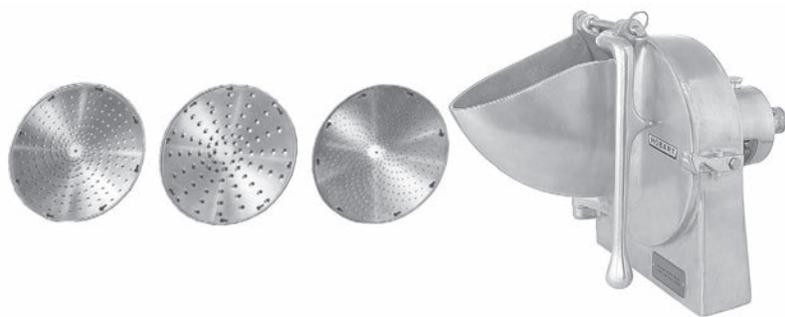
The 9" Vegetable Slicer attachment allows you to prepare many additional foods with your Hobart mixer. The standard knife and shaft is adjustable to provide variation in slice thickness from a maximum of about $\frac{5}{8}$ " to wafer thin. Thicker settings are used for slicing vegetables for salads or cole slaw, slicing potatoes for German (cottage fries) or American fried potatoes, slicing cucumbers, bananas, nuts, apples, etc.

The 9" VS is easily adapted for grating or shredding processes by removing the knife and shaft and using the shaft with the wheel, called a plate holder. One grater plate and four shredder plates (with hole sizes of $\frac{3}{32}$, $\frac{3}{16}$, $\frac{5}{16}$ and $\frac{1}{2}$ ") are used for fine grating or fine to coarse shredding. The most coarse shredder plate ($\frac{1}{2}$ ") is used for slaw, cutting soup stock, salad blends or hash brown potatoes. Experience with the unit will suggest many other products to the operator. The medium and fine shredder plates are for finer cuts on carrots, mushrooms or cabbage hearts for salad or quick cooking uses. Medium shredder plates are also used for shredding processed cheese for a topping when desired. The grater plate is used for natural hard cheeses for pizza, grating hard vegetables, spices, and crumbling dried bread.

Many different products can be prepared with the 9" Vegetable Slicer - in kitchens, bakeries or delicatessen operations. As a mixer attachment, the vegetable slicer should operate at second or third speed on the HL120, HL200, HL300 and HL400, third or fourth speed on the HL600 and dedicated speeds on the HL662 mixer.

Never use the highest speed setting when shredding cheese.

The 9" VS easily disassembles for cleaning.



SHREDDER AND GRATER PLATES 9" VS

9" VEGETABLE SLICER

MEAT CHOPPER ATTACHMENT

The Meat Chopper Attachment allows you to prepare many additional foods with your Hobart mixer. A plate having $\frac{1}{8}$ " holes comes with the Meat Chopper Attachment when shipped from the factory. Other plates are available with hole sizes $\frac{5}{64}$, $\frac{3}{16}$, $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{5}{8}$ and $1\frac{1}{16}$ " for fine to coarse chopping. The results are the same as produced by Hobart commercial meat choppers. Operate Meat Chopper Attachments in slower speeds.

The feed pan should be kept in place in the cylinder for ease of feeding. Cut meat into strips and feed it into the chopper using the feed stomper only as needed. Substances that could become packed tight in the chopper like bread crumbs are not recommended. If material in the cylinder stalls the mixer, push the STOP button at once. DO NOT attempt to restart at a slower speed. Remove the adjusting ring, knife, plate and worm and clear the obstruction.

Always keep the drain hole on both the Attachment Hub and Meat Chopper clean, clear and free of obstruction.



MEAT CHOPPER ATTACHMENT

SPLASH COVER AND BOWL EXTENSION RING

Splash Covers and Bowl Extension Rings provide a means for reducing splashing for certain mixes at higher speeds. Splash covers fit under the Bowl Guard. The stainless steel Bowl Extension Ring is also available.

Splash Covers and Bowl Extensions, while convenient accessories, should not be used to increase the mixing capacity beyond the recommended maximum. The best functioning of Hobart mixers requires room at the top of the bowl for aeration and manipulation. Follow the Hobart Mixer Capacity Chart of the best quality of mix.

Splash Covers on larger mixers have a smaller diameter opening at the top due to their inverted cone shape. Overloading the mixer while a splash cover is in use reduces aeration because of restriction in the area where air enters the batch.



SPLASH COVER



BOWL EXTENSION RING

INGREDIENT CHUTE

The Ingredient Chute can be attached to the Wire Cage on the Bowl Guard. The Ingredient Chute allows ingredients to be added to the bowl while the mixer is mixing.

BOWL SCRAPER ATTACHMENT

The mixer Bowl Scraper Attachment is available to scrape the sides of the bowl as the agitator rotates to re-introduce material into the mixture.



INGREDIENT CHUTE



BOWL SCRAPER ATTACHMENT

BOWL TRUCK

Bowl Trucks or dollies provide convenience, save time, and reduce effort in handling large batches. Use a Bowl Truck for any batches over 50 pounds. Remove heavy batches of dough or batter from the mixer by unlocking the bowl and lowering the bowl to the Bowl Truck. Then, carefully roll the truck away to make room for the next batch. Move the material to another location where it is to be used, or refrigerate between mixing and further processing. Bowl Trucks save time, reduce handling, and improve work flow. They are valuable tools in a work place.



BOWL TRUCK

Backing Up Your Purchase

Dependable Hobart Service

Should your Hobart mixer, attachments or accessories ever require service, it's good to know that more than 1600 factory trained technicians in more than 200 Hobart service facilities nationwide, can keep your mixer working like new.

For ready reference, write down your mixer model and serial numbers here. Should a question or problem arise that this booklet or the instructions you received with the machine cannot answer, expert Hobart assistance is as close as your telephone.

Or, contact Hobart on the internet . . .

www.hobartcorp.com



Model No. _____

Serial No. _____

Hobart Service Location _____

Telephone Number: _____

HOBART LEGACY® MIXER ACCESSORIES

Mixer Model	Capacity (Quarts)	Bowl Stainless Steel	"B" Flat Beater Aluminum	"C" Wing Whip	"D" Wire Whip Stainless Steel	"T" Heavy Duty Wire Whip	"ED" Dough Hook	"EDA" Dough Hook	"E" Dough Hook	"P" Pastry Knife	Bowl Ext. Ring Stainless Steel	Splash Cover (Lexan)	Splash Cover (SST)	Bowl Truck or Dolly Aluminum	Bowl Truck Adapter	Bowl Scrapers	Ingredient Chute	Deck Plate Kits or Foot Pads	Attachment Tray Support	Mixer Table	Bowl Adapters
HL600 HL62 HL600C	60	BOWL-HL60 00-875603	BBEATER-HL60 00-874172	CWHIP-HL60 00-874278	DWHIP-HL60 00-874190	IWIRE-HL60 00-874271	EDDOUGH-HL60 00-874285	---	EDOUGH-HL60 00-874284	PPASTRY-HL60 00-874286	EXTEND-SST80G 00-438104-00004	SPLASH-LEX060 00-438082	---	TRUCK-HL1486 ML-141087-Z	---	SCRAPER-HL60 00-874267	CHUTE-HL 00-917909	DECK-LEG60 00-937056	---	---	---
HL120	40	BOWL-HL640 00-875604	BBEATER-HL640 00-874248	---	DWHIP-HL640 00-874249	IWIRE-HL640 00-874250	EDDOUGH-HL640 00-874292	---	---	---	---	SPLASH-LEX040 00-438081	---	---	---	SCRAPER-HL640 00-874268	---	---	---	---	---
HL200 HL200C	12	BOWL-HL12 00-937226	BBEATER-HL12 00-874828	CWHIP-HL12 00-875893	DWHIP-HL12 00-873360	---	EDDOUGH-HL12 00-873343	---	---	PPASTRY-HL12 00-873370	---	SPLASH-LEX012 00-438078	---	---	---	SCRAPER-HL12 00-873373	CHUTE-HL12 00-874885	PAD-HL2012 00-874930	TRAY-HL2012 00-874899	TABLEHW-HL2012 ML-141060-Z	---
HL300 HL300C	20	BOWL-HL20P 00-917720	BBEATER-HL20 00-874790	CWHIP-HL20 00-873331	DWHIP-HL20 00-874792	---	EDDOUGH-HL20 00-874791	EDDOUGH-HL20P 00-873313	EDOUGH-HL20 00-873335	PPASTRY-HL20 00-873294	---	SPLASH-LEX020 00-438079	SPLASH-SST020 00-875677	---	---	SCRAPER-HL20 00-874836	CHUTE-HL20 00-916684	PAD-HL2012 00-874930	TRAY-HL2012 00-874899	TABLEHW-HL2012 ML-141060-Z	---
HL400 HL400C	12	BOWL-HL12 00-937226	BBEATER-HL12 00-874828	CWHIP-HL12 00-875893	DWHIP-HL12 00-873360	---	EDDOUGH-HL12 00-873343	---	---	PPASTRY-HL12 00-873370	---	SPLASH-LEX012 00-438078	---	---	---	SCRAPER-HL12 00-873373	CHUTE-HL12 00-874885	PAD-HL2012 00-874930	TRAY-HL2012 00-874899	TABLEHW-HL2012 ML-141060-Z	---
HL800 HL800C	30	BOWL-HL30 00-916616	BBEATER-HL4030 00-916372	CWHIP-HL4030 00-916573	DWHIP-HL4030 00-916421	IWIRE-HL4030 00-916520	EDDOUGH-HL30AL 00-916618-1	---	---	PPASTRY-HL4030 00-916481	---	SPLASH-LEX030 00-438080	---	TRUCK-HL4030 00-916883	---	SCRAPER-HL30 00-916838	CHUTE-HL4030 00-917928	PADSST-HL4320 00-917426	---	---	---
HL1400 HL1400C	20	BOWL-HL4320 00-916617	BBEATER-HL4320 00-916582	---	DWHIP-HL4320 00-916598	---	EDDOUGH-HL4320 00-916827	---	---	---	---	SPLASH-LEX020 00-438079	SPLASH-SST020 00-875677	---	---	---	CHUTE-HL20 00-916684	PADSST-HL4320 00-917426	---	---	---
HL1400N	40	BOWL-HL40 00-916615	BBEATER-HL4030 00-916372	CWHIP-HL4030 00-916573	DWHIP-HL4030 00-916421	IWIRE-HL4030 00-916520	EDDOUGH-HL40SS 00-916618-2	---	---	PPASTRY-HL4030 00-916481	---	SPLASH-HL40 00-916897	---	TRUCK-HL4030 00-916883	---	SCRAPER-HL40 00-916839	CHUTE-HL4030 00-917928	PADSST-HL4320 00-917426	---	---	---
HL1400N	30	BOWL-HL30 00-916616	BBEATER-HL4030 00-916372	CWHIP-HL4030 00-916573	DWHIP-HL4030 00-916421	IWIRE-HL4030 00-916520	EDDOUGH-HL30AL 00-916618-1	---	---	PPASTRY-HL4030 00-916481	---	SPLASH-LEX030 00-438080	---	TRUCK-HL4030 00-916883	---	SCRAPER-HL30 00-916838	CHUTE-HL4030 00-917928	PADSST-HL4320 00-917426	---	---	---
HL1400N	20	BOWL-HL4320 00-916617	BBEATER-HL4320 00-916582	---	DWHIP-HL4320 00-916598	---	EDDOUGH-HL4320 00-916827	---	---	---	---	SPLASH-LEX020 00-438079	SPLASH-SST020 00-875677	---	---	---	CHUTE-HL20 00-916684	PADSST-HL4320 00-917426	---	---	---
HL1400N	80	BOWL-HL80 00-875846	BBEATER-HL80 00-874654	CWHIP-HL80 00-875946	DWHIP-HL80 00-875866	IWIRE-HL80 00-875931	EDDOUGH-HL80 00-874647	---	---	PPASTRY-HL80 00-875914	EXTEND-SST80G 438104-2	SPLASH-LEX080 00-438083	---	TRUCK-HL1486 ML-141087-Z	---	SCRAPER-HL80 00-874700	CHUTE-LMV 00-438047	---	---	---	---
HL1400N	60	BOWL-HL1486 00-916174	BBEATER-HL1486 916257	---	DWHIP-HL1486 916258	IWIRE-HL1486 916258	EDDOUGH-HL1486 916260	---	---	---	EXTEND-SST60G 438104-4	SPLASH-LEX060 438082	---	TRUCK-HL1486 ML-141087-Z	TRKADPT-HL8640 00-916493	SCRAPER-HL60 00-874267	CHUTE-LMV 00-438047	---	---	---	---
HL1400N	40	BOWL-HL1484 00-916175	BBEATER-HL1484 916313	---	DWHIP-HL1484 916319	IWIRE-HL1484 916321	EDDOUGH-HL1484 916316	---	---	---	---	SPLASH-LEX040 438081	---	TRUCK-HL1486 ML-141087-Z	TRKADPT-HL8640 00-916493	SCRAPER-HL640 00-874268	---	---	---	---	---
HL1400N	140	BOWL-HL140 00-875845	BBEATER-HL140 00-874409	CWHIP-HL140 00-875938	DWHIP-HL140 00-875863	IWIRE-HL140 00-875929	EDDOUGH-HL140 00-875847	---	---	PPASTRY-HL140 00-875906	---	SPLASH-LEX140 00-438084	---	TRUCK-HL1486 ML-141087-Z	---	SCRAPER-HL140 00-874699	CHUTE-LMV 00-438047	---	---	---	---
HL1400N	80	BOWL-HL80 00-875846	BBEATER-HL80 00-874654	CWHIP-HL80 00-875946	DWHIP-HL80 00-875866	IWIRE-HL80 00-875931	EDDOUGH-HL80 00-874647	---	---	PPASTRY-HL80 00-875914	EXTEND-SST80G 438104-2	SPLASH-LEX080 00-438083	---	TRUCK-HL1486 ML-141087-Z	TRKADPT-HL8640 00-916493	SCRAPER-HL80 00-874700	CHUTE-LMV 00-438047	---	---	---	---
HL1400N	60	BOWL-HL1486 00-916174	BBEATER-HL1486 916257	---	DWHIP-HL1486 916258	IWIRE-HL1486 916258	EDDOUGH-HL1486 916260	---	---	---	EXTEND-SST60G 438104-4	SPLASH-LEX060 438082	---	TRUCK-HL1486 ML-141087-Z	TRKADPT-HL1464 00-916495	SCRAPER-HL60 00-874267	CHUTE-LMV 00-438047	---	---	---	---
HL1400N	40	BOWL-HL1484 00-916175	BBEATER-HL1484 916313	---	DWHIP-HL1484 916319	IWIRE-HL1484 916321	EDDOUGH-HL1484 916316	---	---	---	---	SPLASH-LEX040 438081	---	TRUCK-HL1486 ML-141087-Z	TRKADPT-HL1464 00-916495	SCRAPER-HL640 00-874268	---	---	---	---	---
HL1400N	140	BOWL-HV140 00-917142	BBEATER-HL140 00-874409	CWHIP-HL140 00-875938	DWHIP-HL140 00-875863	IWIRE-HL140 00-875929	EDDOUGH-HL140 00-875847	---	---	PPASTRY-HL140 00-875906	---	---	---	TRUCK-HL140N 00-937389	---	SCRAPER-HL140 00-874699	CHUTE-LMV 00-438047	---	---	---	---
HL1400N	80	BOWL-148N 00-937930	BBEATER-HL80 00-874654	CWHIP-HL80 00-875946	DWHIP-HL80 00-875866	IWIRE-HL80 00-875931	EDDOUGH-HL80 00-874647	---	---	PPASTRY-HL80 00-875914	EXTEND-SST80G 438104-2	---	---	TRUCK-HL140N 00-937389	---	SCRAPER-HL80 00-874700	CHUTE-LMV 00-438047	---	---	---	BWLADPT-HL80N 00-917344
HL1400N	60	---	BBEATER-HL1486 916257	---	DWHIP-HL1486 916258	IWIRE-HL1486 916258	---	---	---	---	EXTEND-SST60G 438104-4	SPLASH-LEX060 438082	---	TRUCK-HL140N 00-937389	---	SCRAPER-HL60 00-874267	CHUTE-LMV 00-438047	---	---	---	(2)BWLADPT-HL4486 00-917345
HL1400N	40	BOWL-1484N 00-937934	BBEATER-HL1484 916313	---	DWHIP-HL1484 916319	IWIRE-HL1484 916321	---	---	---	---	---	---	---	---	---	SCRAPER-HL640 00-874268	---	---	---	---	(2)BWLADPT-HL4484 00-917346

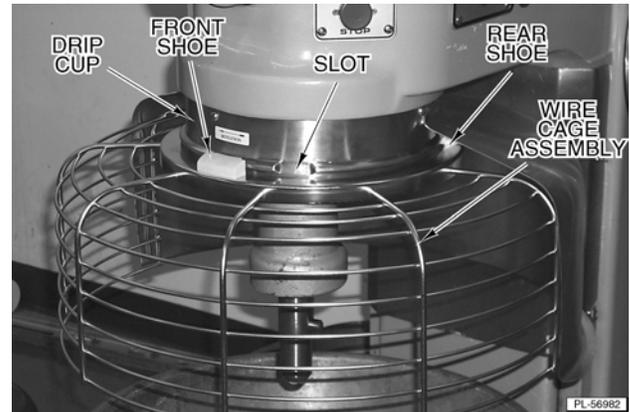
(2) MUST HAVE ORDERED BWLADPT-HL80N
(3) FOR HL200 FLOOR UNITS

Operation and Care of HOBART MIXER BOWL GUARD

SAVE THESE INSTRUCTIONS

INSTALLING THE WIRE CAGE ASSEMBLY

1. Lift the wire cage assembly and position the grooves of the two rear shoes on the ridge of the drip cup.
2. Insert the front shoe through the slot in the front of the drip cup and position on the ridge of the drip cup.
3. Rotate the wire cage assembly in a counterclockwise direction.
4. Install agitator and raise mixing bowl.



MODEL L800 SHOWN

OPERATION

The mixer will not operate until the wire cage assembly is in the center position with the front shoe in contact with the mechanical stop.

To add ingredients to the bowl, stop the mixer and rotate the wire cage assembly 180 degrees. After adding ingredients, rotate the wire cage assembly back to center, until the front shoe contacts the mechanical stop, and start the mixer. Some ingredients, such as liquids or powders, may be added through the wire cage assembly while the mixer is in operation. An ingredient chute accessory is available to assist in adding ingredients. Contact your local Hobart sales representative for more information. If the bowl support is not in the full up position, the mixer will not operate, unless the START button is held in.

CLEANING

The wire cage assembly may be removed and cleaned in a sink. Remove the wire cage assembly for cleaning as follows:

1. Lower the mixing bowl, open the wire cage and remove the agitator and bowl.
2. Rotate the wire cage assembly clockwise until the front shoe is aligned with the slot on the drip cup.
3. Carefully lower the front shoe through the slot in the drip cup.
4. With the front shoe below the drip cup, gently push the wire cage assembly toward the rear of the mixer to disengage the two rear shoes from the drip cup.
5. Remove the wire cage assembly from the mixer.

After cleaning, replace the wire cage assembly as described in INSTALLING THE WIRE CAGE ASSEMBLY.

INSTRUCTIONS

HL 120/HL200/HL300/HL400 LEGACY™ MIXER BOWL SCRAPER ATTACHMENT



701 S. RIDGE AVENUE
TROY, OHIO 45374-0001
937-332-3000

Installation, Operation, Use and Care of Mixer Bowl Scraper Attachment For HL120/HL200/HL300/HL400 Legacy™ Mixer

SAVE THESE INSTRUCTIONS

GENERAL

The mixer bowl scraper attachment continually scrapes the sides of the bowl as the agitator turns. Material around the side and bottom of the bowl is constantly reintroduced into the mixture. Manual scraping is not needed when using the bowl scraper. The bowl scraper is used when mixing batters or creaming. **The bowl scraper is not used when mixing dough products. The bowl scraper is used only with stainless steel bowls.**

INSTALLATION

UNPACKING

Immediately after unpacking, check for possible shipping damage. If any parts are found to be damaged, save the packaging material and contact the carrier within 15 days of delivery.

ASSEMBLY OF BOWL SCRAPER ONTO ARM (Figures 1 through 3)

1. Slide urethane scraper onto arm; use a little water as a lubricant to make the scraper slide on easier. Leading edge of scraper will turn clockwise as you look down into bowl (Fig. 1).
2. If necessary, tap the end of the urethane scraper on a flat surface to push scraper firmly onto the arm (Fig. 2). Make sure sleeve is positioned on arm as shown in Fig. 3.



Fig. 1



Fig. 2

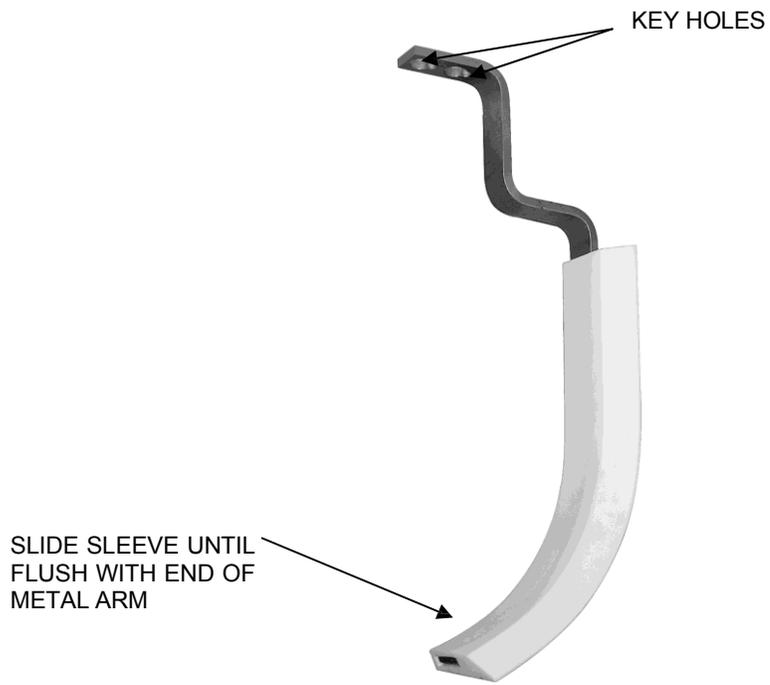


Fig. 3

NOTE: Always use proper size sleeve with scraper arms. Be careful not to mix sleeves and arms if you have multiple sizes of scrapers.

OPERATION

WARNING: MOVING BEATER AND SCRAPER IN BOWL. KEEP HANDS, CLOTHING AND UTENSILS OUT WHILE IN OPERATION.

Lubricate bowl surface with vegetable oil or shortening if needed, especially in the area above the product where the sleeve might rub against the bare surface of the bowl. The bowl scraper rotates clockwise as you look down into the bowl. Use speeds one and two only. Do not use Bowl Scraper with splash cover or extension ring.

Products which can be mixed while using the bowl scraper are: Mashed Potatoes, Waffle/Hot Cake Batter, Cake Batter, Sugar Cookies, Icing, Creaming Shortening/Sugar, Creaming Eggs/Sugar and Mayonnaise.

Bowl scraper must be used with wire whip or flat beater agitators only. Stainless steel bowls must be used.

TO INSTALL BOWL SCRAPER

1. Place bowl in the locked position and close the Wire Cage.
2. Run the mixer to bring the Planetary in position as shown in Fig. 4.
3. Lower the bowl.
4. Rotate Wire Cage to rear.
5. Unseat bowl from pin and pivot bowl out (Fig. 5).

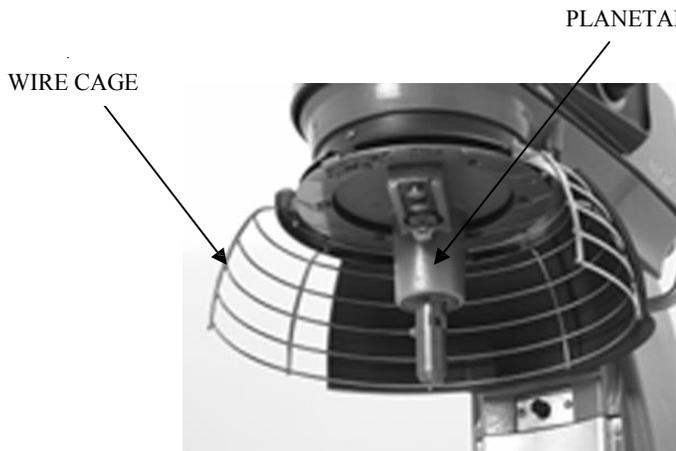


Fig. 4

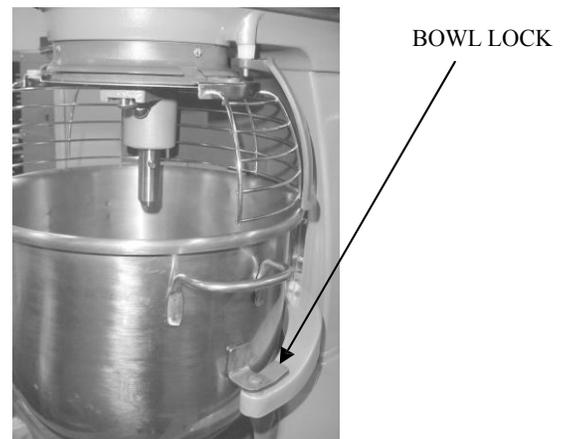


Fig. 5

6. Raise scraper arm vertically to bottom of Planetary aligning the key hole slots over the round head screws on the Planetary (Fig. 6). Slide scraper arm toward the center of the bowl. (Fig. 7)

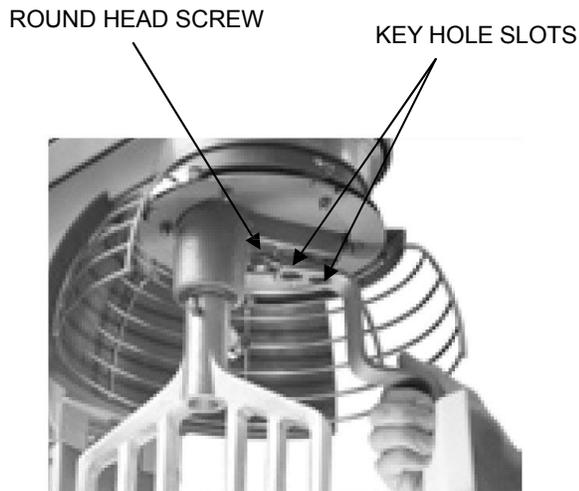


Fig. 6



Fig. 7

7. Pivot bowl back to the locked position.
8. Return Wire Cage to front-center position.
9. Raise bowl to operating position. Run mixer normally.

NOTICE: The agitator cannot be run until bowl is in full up position. Therefore, stiff products will need to be added AFTER bowl scraper is in position and bowl is in up position. (Fig 8.)

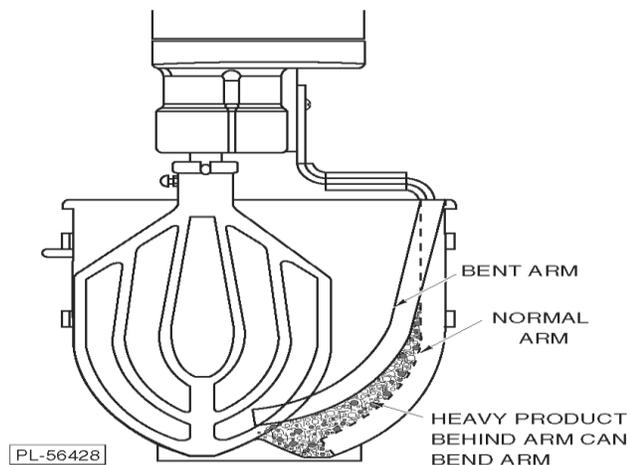


Fig.8

TO REMOVE BOWL SCRAPER

1. Run the mixer to bring the Planetary in position as shown in Fig. 4.
2. Lower the bowl.
3. Open the Wire Cage.
4. Remove beater (if attached) by pulling the plunger as shown in Fig. 9.
5. Disengage bowl lock and pivot bowl out slightly (Fig. 5).
6. Slide the scraper arm away from the center of the bowl, then lift it off the round head screws.



Fig. 9

CLEANING

- Remove the urethane sleeve from the arm; tapping the sleeve against a table will aid removal (Fig. 10).
- Clean both parts in a sink with warm water and detergent solution.
- Do not wash urethane sleeve in a dishwasher or use water above 110°F (43°C). Rinse with clear water and air dry.
- DO NOT use harsh chemicals (i.e., bleach) to clean the sleeve, as this will degrade the urethane.
- Slide sleeve onto arm so bevel is the leading edge; use a little water as a lubricant. Refer to Fig. 3 for proper sleeve position. Be sure top of arm is clean before reassembly onto Planetary.



Fig. 10

MAINTENANCE

To maintain ease of installing and removing scraper arm, clean area around planetary where scraper arm mounts.

TROUBLESHOOTING

Symptom	Remedy
Scraper grabbing bowl.	Lubricate bowl surface with vegetable oil or shortening.
Bevel edge not leading.	Remove arm and reinstall urethane scraper.
Beater/Bowl clearance excessive.	Hobart Service can adjust the Beater/Bowl clearance so the scraper fits the side of the bowl.

SERVICE AND PART INFORMATION

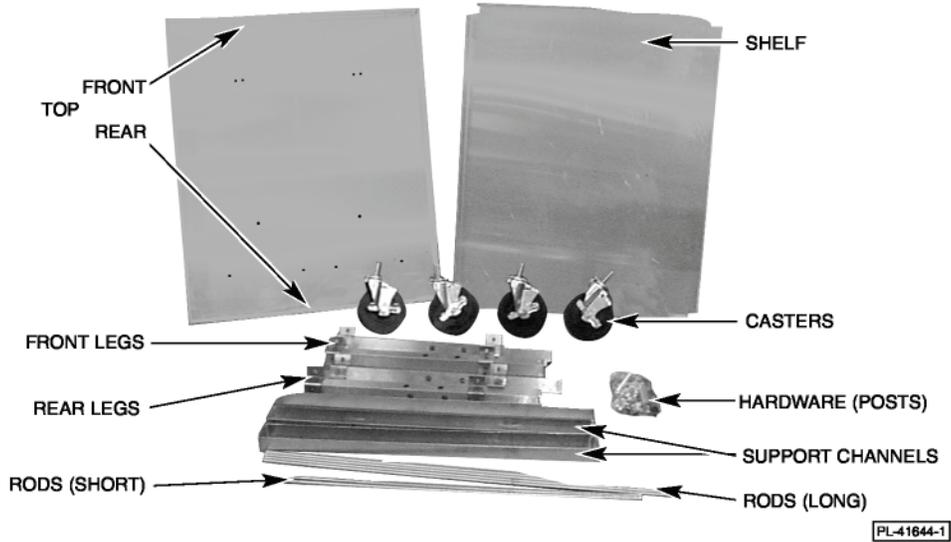
Contact your local authorized Hobart Service agency.

ASSEMBLY INSTRUCTIONS

MIXER TABLE ML-141060

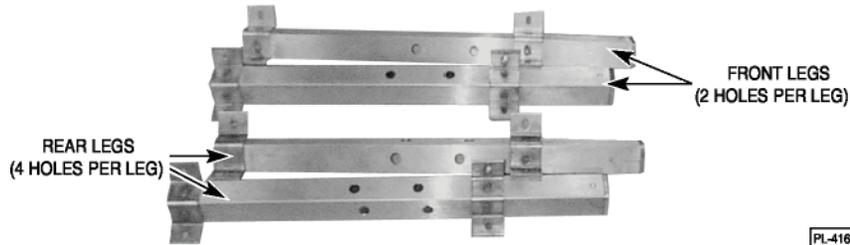
FOR HL120 or HL200 MIXERS

These instructions describe the assembly of the mixer table and list the parts needed.



Description	Qty.	Description	Qty.	Description	Qty.
Top	1	Washer	22	Shelf	1
Support Channel	3	Nut	22	Caster	4
Leg, Rear	2	Grommet	12	Post	4
Leg, Front	2	Rod (short)	2	Screw	8
Screw	22	Rod (long)	4	Lockwasher	8
Shoulder Bolt	2	Nut (3/8)	2	Washer (3/8)	4

1. Remove all protective film from top and shelf.
2. Lay top on flat surface with underside up. Install the three support channels; match up holes in support channels to holes in underside of top, with six 1/4-20 x 1/2 screws, washers and nuts.



3. Loosely attach three legs, two rear and one front, to the underside of top with six 1/4-20 x 1/2 screws, washers and nuts.



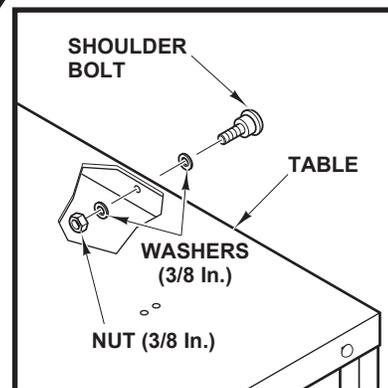
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MIXER TABLE ML-141060 (cont.)

4. Install casters into bottom of legs.
5. Install 12 grommets into holes in legs.
6. Install rods (longer on sides, shorter on rear) into loosely installed legs. Lubricate rod ends with dish soap to make installation easier. Tighten all screws.
7. Install shelf onto three leg brackets with (6) $\frac{1}{4}$ -20 x $\frac{1}{2}$ screws, washers and nuts.
8. Install rods into remaining leg.
9. Attach leg onto shelf and underside of top using (4) $\frac{1}{4}$ -20 x $\frac{1}{2}$ screws, washers and nuts.
10. Place table on its side and install four posts to top at rear of top with (4) $\frac{3}{8}$ -16 x $\frac{3}{4}$ screws and lockwashers.
11. Turn table upright.
12. Use $\frac{3}{8}$ -16 x $\frac{3}{4}$ screws and $\frac{3}{8}$ lockwashers to bolt mixer to the table.
13. If tray support is purchased, assemble shoulder bolts into $\frac{3}{8}$ holes on right side. Attach with $\frac{3}{8}$ washers and $\frac{3}{8}$ nuts. Hang tray sideways by the corners.



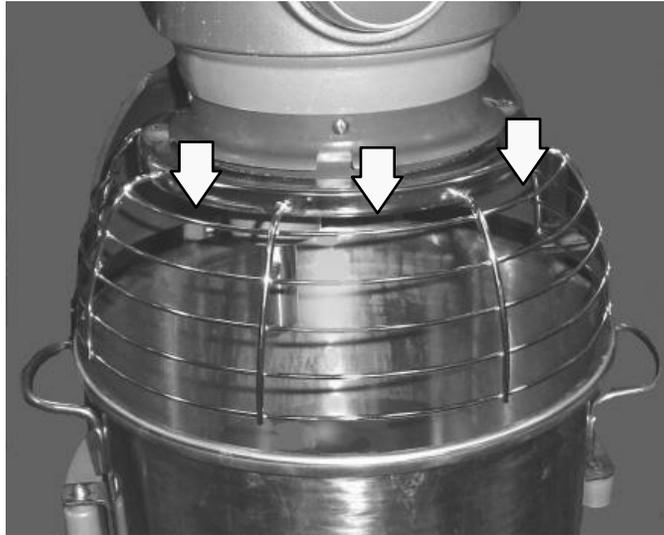
NOTICE All components must be assembled prior to use.



HL200 CHUTE KIT PART #916684 INSTALLATION INSTRUCTIONS

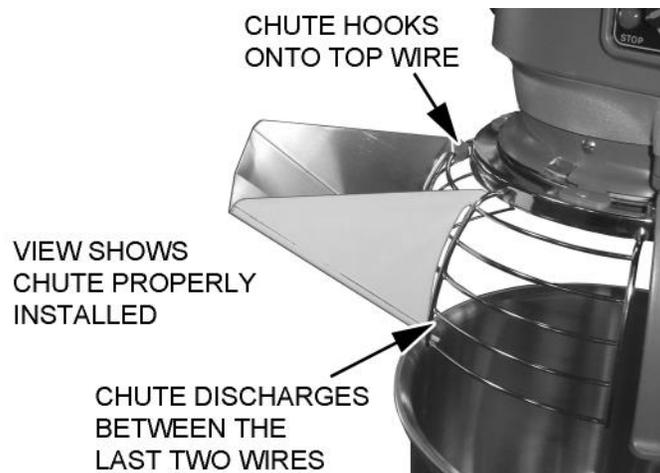
⚠ WARNING Disconnect electrical power supply and follow lockout / tagout procedures.

1. Select a mounting position for the ingredient chute as indicated by the arrows. The chute must be placed between the vertical wires of the bowl guard.



2. Insert the chute between the last two wires being sure to engage chute hooks on top wire.

NOTE: Chute can be removed by reversing this procedure.



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TROY, OHIO 45374-0001
937-332-3000
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DIAGNOSTIC ALARM CODES - HL120, HL200

Alarm Code	Fault Description	Possible Causes	Suggested Actions
OC1 OC2 OC3	Over current (Protects motor drive)	<ol style="list-style-type: none"> 1. Low supply voltage. 2. Momentary power interruption. 3. Batch size too large. 4. Motor drive terminals short-circuited or grounded. 	<ol style="list-style-type: none"> 1. Check supply voltage to mixer. 2. Cycle power to mixer. Wait till display goes out then reconnect power. 3. Reduce batch size. 4. Check motor lead wire connections.
OU1 OU2 OU3	Over voltage	<ol style="list-style-type: none"> 1. High supply voltage. 2. Motor drive malfunction. 	<ol style="list-style-type: none"> 1. Cycle power to mixer. Wait till display goes out then reconnect power.
LU	Under voltage	<ol style="list-style-type: none"> 1. Low supply voltage. 2. Momentary power interruption. 3. Motor drive malfunction. 	<ol style="list-style-type: none"> 1. Cycle power to mixer. Wait till display goes out then reconnect power.

Alarm Code	Fault Description	Possible Causes	Suggested Actions
OPL	Output phase loss to motor.	<ol style="list-style-type: none"> 1. Lead wire or connection malfunction to motor. 2. Open circuit in motor windings. 3. Single phase motor installed; or motor not wired for 3 phase. 4. 1CR control relay malfunction. 5. Motor drive malfunction (no output voltage; or output voltage phase lost). 	<ol style="list-style-type: none"> 1. Check motor lead wire connections for tightness and continuity. If connections are loose then tighten. If a problem is found with the lead wires from motor drive to motor, replace the malfunctioning component (wiring harness; or motor). 3. Motor drive requires a 3 phase AC motor. Verify this type of motor is installed and is wired for 3 phase. 4. Replace motor drive.
OH1	Over heating at heat sink. (Protects motor drive)	<ol style="list-style-type: none"> 1. Motor drive heat sink temperature above 194°F. 2. Motor drive malfunction. 	<ol style="list-style-type: none"> 1. Disconnect power to mixer and allow motor drive to cool. 2. Check bottom cover vent for clogging. Check motor drive heat sink fins for clogging. Remove debris. 3. Reduce room ambient temperature; or move mixer to a cooler location (away from heat sources). 4. If over heating occurs repeatedly, replace motor drive.
OL1	Electronic thermal overload relay tripped. (Protects motor)	<ol style="list-style-type: none"> 1. Mixing in Stir speed. 2. Batch size too large. 3. Low supply voltage causing low motor torque. 4. Motor malfunction. 5. Motor drive malfunction. 	<ol style="list-style-type: none"> 1. Select Speed 1 or Speed 2 for mixing. 2. Reduce batch size. 3. Check supply voltage to mixer. 4. Replace motor drive.

Alarm Code	Fault Description	Possible Causes	Suggested Actions
OLU	Motor drive over loaded. (Protects motor drive)	<ol style="list-style-type: none"> 1. Batch size too large. 2. Motor drive ambient temperature above 122°F. 	<ol style="list-style-type: none"> 1. Reduce batch size. 2. Check bottom vent cover for clogging. Check motor drive heat sink fins for clogging. Remove debris. 3. Reduce room ambient temperature; or move mixer to a cooler location (away from heat sources).
Er1	Memory error.	<ol style="list-style-type: none"> 1. Momentary power interruption or power loss while motor drive was storing data. 	<ol style="list-style-type: none"> 1. Cycle power to mixer. Wait till display goes out then reconnect power. If this does not clear the alarm code, replace motor drive.
Er2	Timer board communication error.	<ol style="list-style-type: none"> 1. Wiring connections loose, disconnected or malfunctioning. 2. Timer board malfunction. 3. Motor drive malfunction. 	<ol style="list-style-type: none"> 1. Check plugs for proper insertion into sockets. 2. Replace timer board (if harness ok). 3. Replace motor drive (if timer board and harness ok).
Er3	CPU error.	<ol style="list-style-type: none"> 1. Motor drive malfunction. 	<ol style="list-style-type: none"> 1. Cycle power to mixer. Wait till display goes out then reconnect power. If this does not clear the alarm code, replace motor drive.
ErF	Data save error during undervoltage.	<ol style="list-style-type: none"> 1. Momentary power interruption or power loss while motor drive was storing data. 	<ol style="list-style-type: none"> 1. Cycle power to mixer. Wait till display goes out then reconnect power. If this does not clear the alarm code, replace motor drive.

TROUBLESHOOTING INSTRUCTIONS - HL120, HL200

NOTE: If ALARM code is displayed on timer board, refer to ALARM CODES for complete description.

SYMPTOM	POSSIBLE CAUSE
Timer displays only dashes.	<ol style="list-style-type: none"> 1. Loose, corroded, or damaged harness. 2. Loose communication board (if applicable). 3. Faulty drive.
Mixer will not run (no timer board display).	<ol style="list-style-type: none"> 1. No voltage to machine. 2. Timer board malfunction. 3. Wiring harness connections loose or malfunction. 4. Motor drive malfunction.
Mixer will not run (timer board display on).	<ol style="list-style-type: none"> 1. 1LS bowl guard switch open or malfunction. Verify magnet in place on bowl guard and bowl guard switch operation. 2. 2LS bowl switch open or malfunction. Verify magnet in place on bowl (rear) and bowl switch operation. 3. Timer board malfunction. 1PB start switch or 2PB stop switch malfunction. 4. 1CR control relay malfunction. 5. Motor drive malfunction. 6. Motor malfunction. 7. Wiring harness connections loose or malfunction.
Mixer will not run, but timer board counts up/down when start button is pushed.	<ol style="list-style-type: none"> 1. 1CR control relay malfunction. 2. Wiring harness connections loose or malfunction. 3. Timer board malfunction. 4. Motor drive malfunction. 5. Motor malfunction.
Mixer runs, but stops when 1PB start switch is released.	<ol style="list-style-type: none"> 1. Timer board malfunction.
Mixer runs continuously, but will stop when 2PB stop switch is held IN, or bowl guard is opened, or bowl is lowered.	<ol style="list-style-type: none"> 1. Timer board malfunction (1PB start switch momentary contacts not opening).

SYMPTOM	POSSIBLE CAUSE
Mixer motor hums and does not run.	<ol style="list-style-type: none"> 1. Supply voltage out of tolerance. 2. 1CR control relay malfunction. 3. Motor drive malfunction. 4. Motor malfunction. 5. Transmission malfunction. 6. Batch size too large.
Mixer shuts off during operation.	<ol style="list-style-type: none"> 1. Supply voltage out of tolerance. 2. Batch size too large. 3. Wiring incorrect from motor drive to motor. 4. Motor overheated or malfunction. 5. Motor drive overheated or malfunction. 6. Timer board malfunction. 7. 2LS bowl switch open or malfunction. 8. 1LS bowl guard switch open or malfunction.
Mixer lacks power.	<ol style="list-style-type: none"> 1. Supply voltage out of tolerance. 2. Batch size too large. 3. Wiring incorrect from motor drive to motor. 4. Motor drive malfunction. 5. Motor malfunction. 6. Transmission malfunction.
Mixer motor runs backwards.	<ol style="list-style-type: none"> 1. Wiring incorrect from motor drive to motor. 2. Motor drive malfunction.
Mixer noisy.	<ol style="list-style-type: none"> 1. Motor malfunction. 2. Transmission gears worn (improperly meshing), low on grease or damaged. 3. Bevel gear assembly or planetary shaft bevel gear worn (improperly meshing) or damaged. 4. Internal gear and beater pinion of planetary are worn (improperly meshing) or low on grease. 5. Worn bearings (agitator shaft, planetary shaft or worm wheel shaft). 6. Wiring incorrect from motor drive to motor. 7. Motor drive malfunction.
Mixer motor runs, but planetary does not rotate.	<ol style="list-style-type: none"> 1. Key sheared at: <ol style="list-style-type: none"> A. Worm on motor shaft. B. Worm wheel shaft. C. Middle key on planetary shaft. D. Lower key on planetary shaft. 2. Planetary or worm wheel shaft broken.

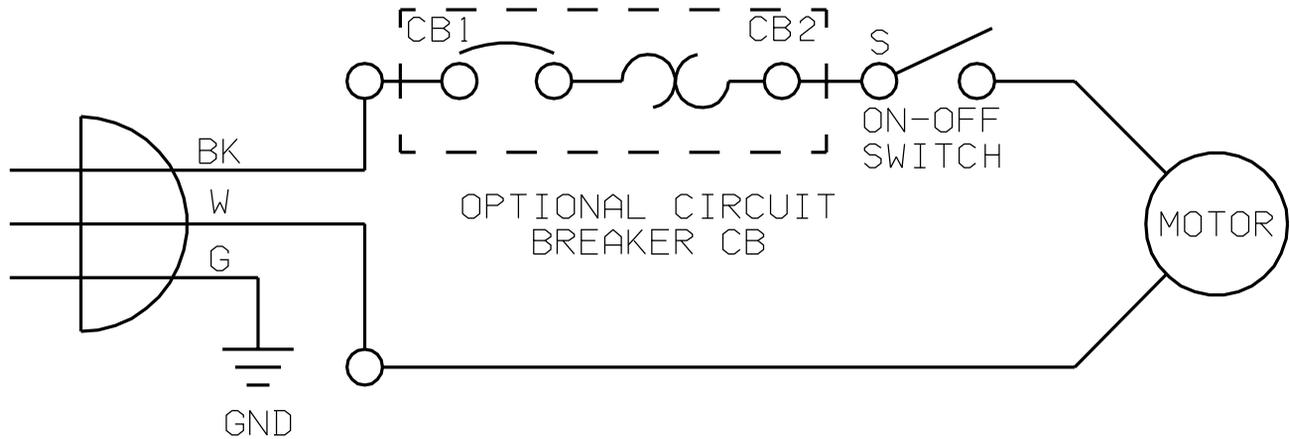
SYMPTOM	POSSIBLE CAUSE
Mixer planetary operates, but attachment hub does not rotate.	<ol style="list-style-type: none"> 1. Upper key sheared on planetary shaft. 2. Bevel gear assembly or planetary shaft bevel gear worn (improperly meshing) or damaged.
Agitator will not turn.	<ol style="list-style-type: none"> 1. Key sheared at beater pinion on agitator shaft.
Not mixing ingredients at bottom of bowl.	<ol style="list-style-type: none"> 1. Speed selector switch malfunction. 2. Motor drive terminal connections loose, wired incorrectly or wiring harness malfunction. 3. Motor drive malfunction. 4. Motor malfunction.
Mixer runs in one speed only. (Changing speed selector switch has no affect)	<ol style="list-style-type: none"> 1. Speed selector switch malfunction. 2. Motor drive terminal connections loose, wired incorrectly or wiring harness malfunction. 3. Motor drive malfunction. 4. Motor malfunction.
<p>Timer board problems:</p> <ul style="list-style-type: none"> Can not adjust time. Can not select Hold Mode (continuous mixing with count up timing). Timer display does not count up. Timer display does not count down. Timer display blank. Segment missing from timer display. Mixer will not shut off at end of timed cycle. 	<ol style="list-style-type: none"> 1. Timer board malfunction (time adjustment potentiometer; or other problems with the board). 2. Wiring harness connections from motor drive to timer board are disconnected or malfunctioning. 3. Motor drive malfunction.
Grease leaking from planetary.	<ol style="list-style-type: none"> 1. Spacer o-ring on planetary shaft.
Grease leaking from attachment hub.	<ol style="list-style-type: none"> 1. Quad ring in attachment hub.

NOTE: The motor drive constantly monitors its operation while the mixer is running. If an alarm occurs during mixer operation, the motor drive recognizes a fault condition and immediately tries to reset the fault twice within 0.5 second intervals. If mixer operation continues, the automatic reset was successful. If the alarm was not reset, the motor drive enters Alarm Mode and displays a 3-digit alarm code that corresponds to the fault. The mixer will not operate until the alarm is cleared. To manually reset, cycle power to mixer. Wait till display goes out then reconnect power.

WIRING DIAGRAM - N50

WARNING

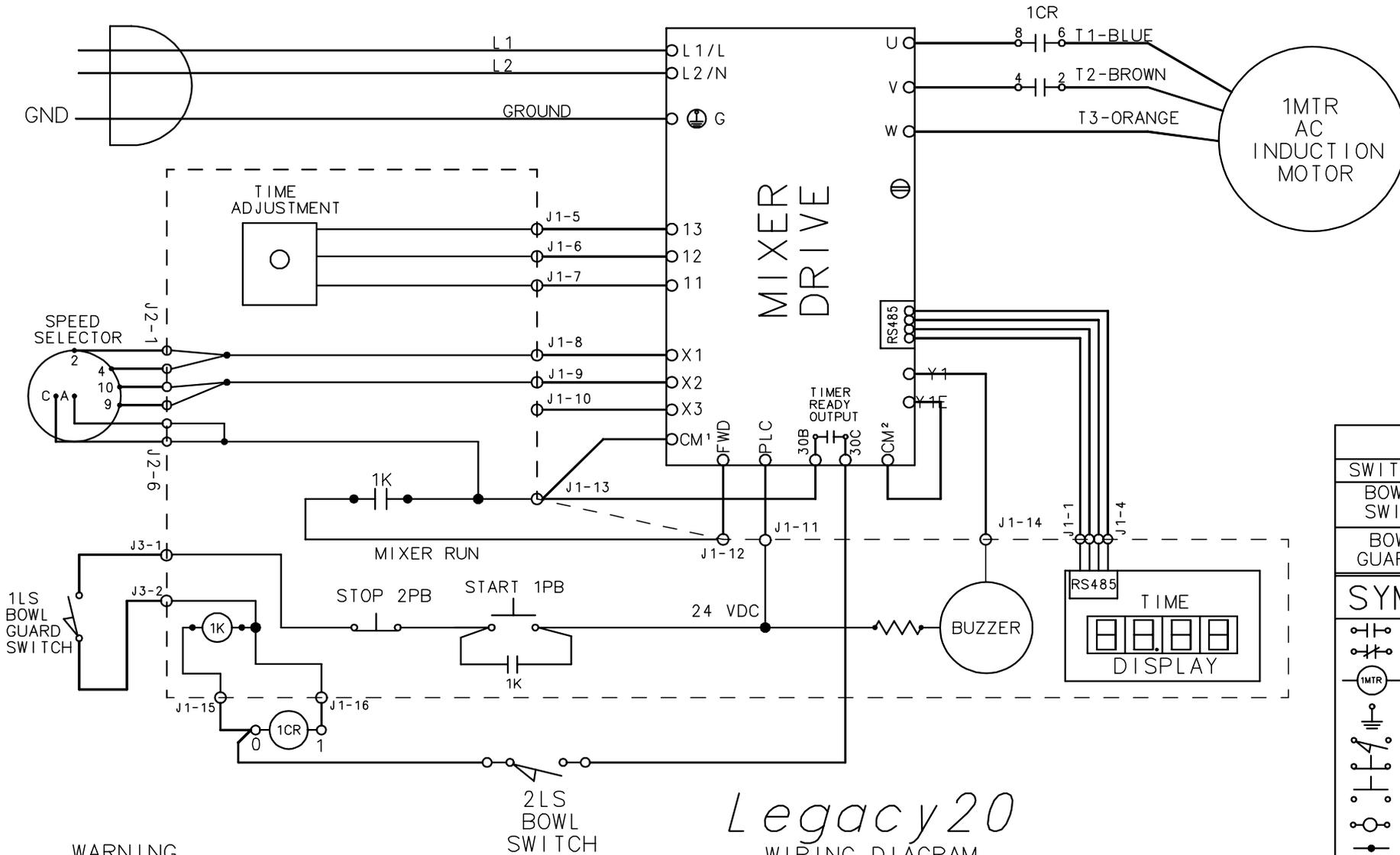
ELECTRICAL AND GROUNDING CONNECTIONS
MUST COMPLY WITH THE APPLICABLE PORTIONS
OF THE NATIONAL ELECTRICAL CODE AND/OR
OTHER LOCAL ELECTRICAL CODES.



HOBART
TROY, OHIO 45374

WIRING DIAGRAM
N-50
MIXERS
PRINTED IN U. S. A.

WIRING DIAGRAM - HL120/HL200 (STANDARD TIMER)



SWITCH STATE TABLE		
SWITCH	CONDITION	RESULT
BOWL SWITCH	OPEN	BOWL OUT MIX POSITION
	CLOSED	BOWL IN MIX POSITION
BOWL GUARD	OPEN	CAGE OPEN
	CLOSED	CAGE IN MIX POSITION

SYMBOL DEFINITIONS

- CONTACT-NORMALLY OPEN (N.O.)
- CONTACT-NORMALLY CLOSED (N.C.)
- MOTOR
- GND GROUND
- LS LIMIT SWITCH - N.O.
- PB PUSH BUTTON-STOP (N.C.)
- PB PUSH BUTTON-START (N.O.)
- CR CONTROL RELAY COIL
- INSEPARABLE CONNECTION
- SEPARABLE CONNECTION
- HEAVY LINE DENOTES EXTERNAL WIRING
- LIGHT LINE DENOTES FIXED PREWIRING (PRINTED CIRCUIT WIRING OR OTHER).
- DASHED LINE DENOTES BOUNDARY OF PRINTED WIRING BOARD

Legacy 20
 WIRING DIAGRAM
 100-120/50/60/1
 200-230/50/60/1

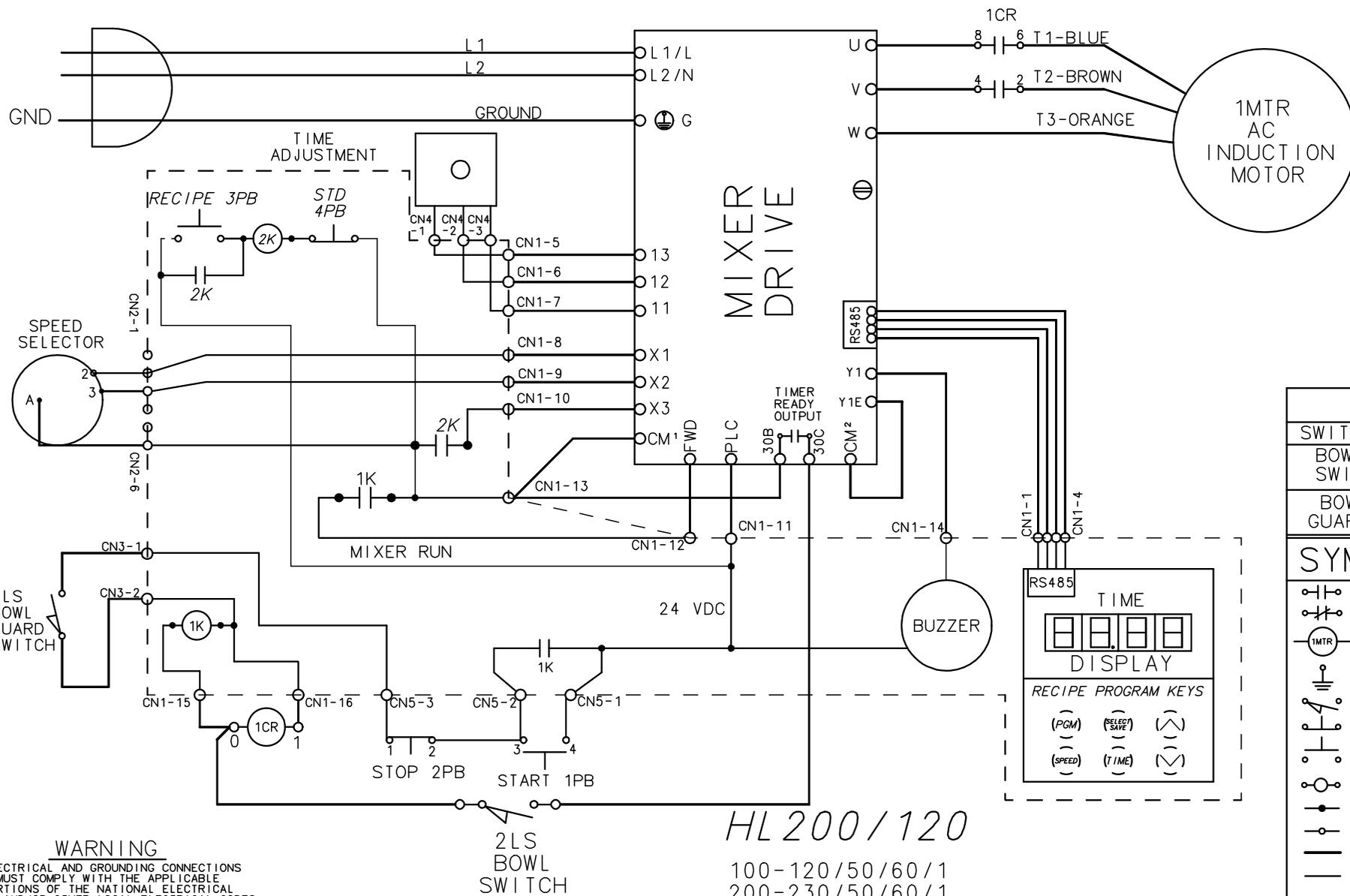


TROY, OHIO 45374

WARNING

ELECTRICAL AND GROUNDING CONNECTIONS MUST COMPLY WITH THE APPLICABLE PORTIONS OF THE NATIONAL ELECTRICAL CODE AND/OR OTHER LOCAL ELECTRICAL CODES.

WIRING DIAGRAM - HL120/HL200 (RECIPE TIMER)



SWITCH STATE TABLE		
SWITCH	CONDITION	RESULT
BOWL SWITCH	OPEN	BOWL OUT MIX POSITION
	CLOSED	BOWL IN MIX POSITION
BOWL GUARD	OPEN	CAGE OPEN
	CLOSED	CAGE IN MIX POSITION

SYMBOL DEFINITIONS

- CONTACT-NORMALLY OPEN (N.O.)
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- PB PUSH BUTTON-START (N.O.)
- CR CONTROL RELAY COIL
- INSEPARABLE CONNECTION
- SEPARABLE CONNECTION
- HEAVY LINE DENOTES EXTERNAL WIRING
- LIGHT LINE DENOTES FIXED PREWIRING (PRINTED CIRCUIT WIRING OR OTHER).
- DASHED LINE DENOTES BOUNDARY OF PRINTED WIRING BOARD
- STD* SYMBOLS AND LABELS IN ITALICS
- 4PB* USED ON RECIPE TIMER ONLY

WARNING

ELECTRICAL AND GROUNDING CONNECTIONS MUST COMPLY WITH THE APPLICABLE PORTIONS OF THE NATIONAL ELECTRICAL CODE AND/OR OTHER LOCAL ELECTRICAL CODES.

HL200/120

100-120/50/60/1
200-230/50/60/1



TROY, OHIO 45374

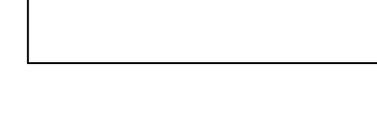
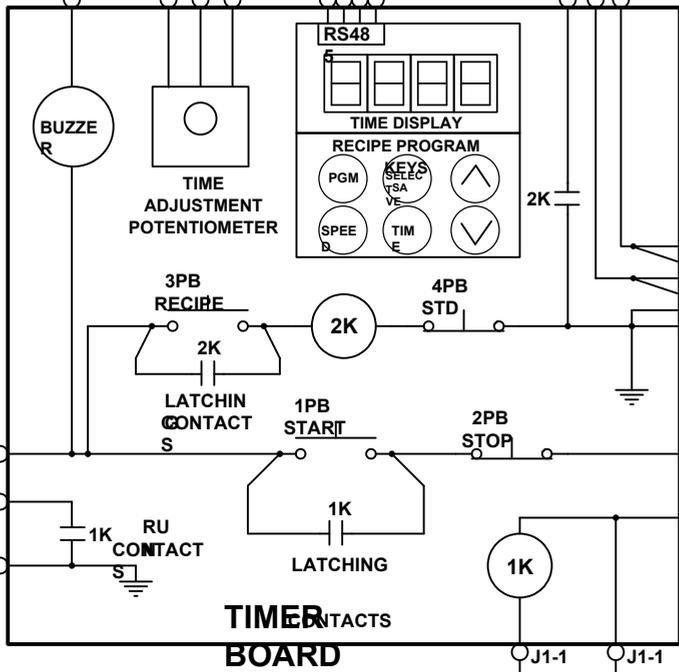
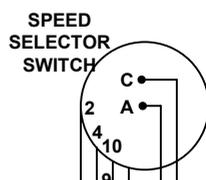
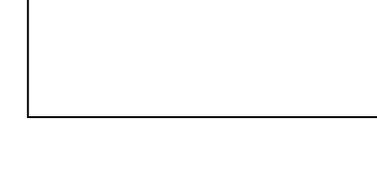
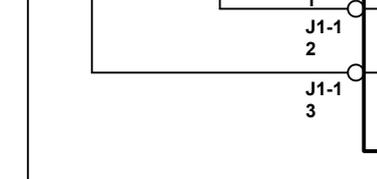
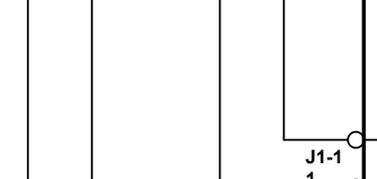
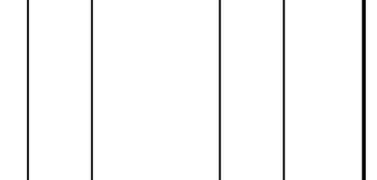
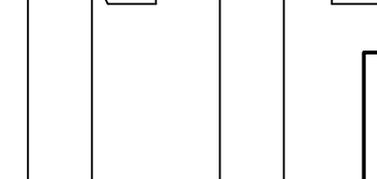
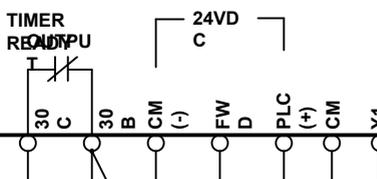
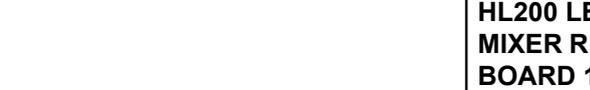
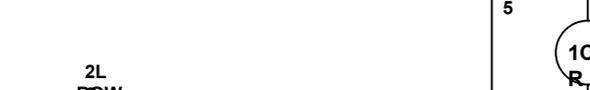
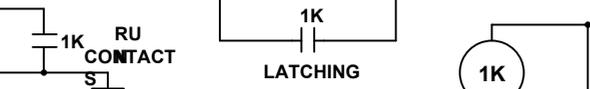
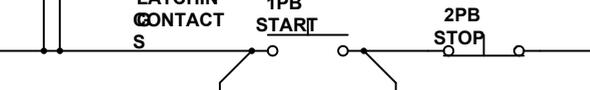
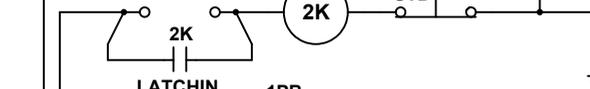
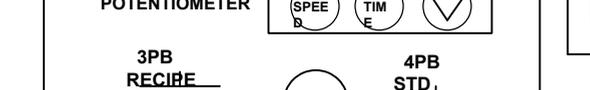
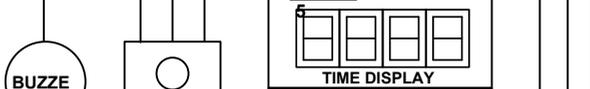
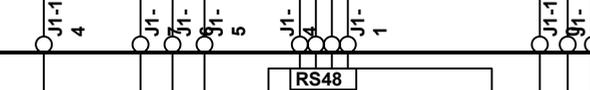
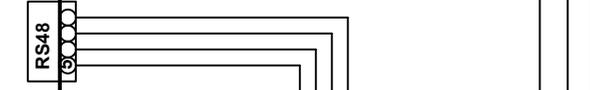
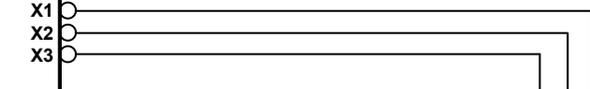
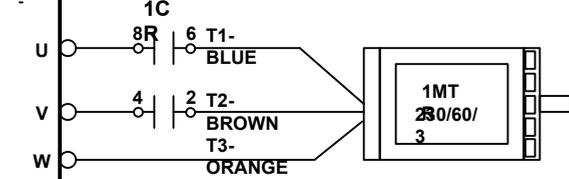
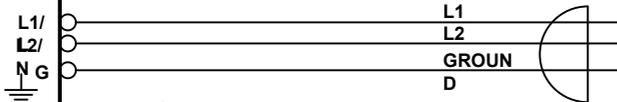
F-34936A

SCHEMATIC - HL120/HL200 (RECIPE TIMER)

MOTOR DRIVE

NOTES

1. CONTACTS 30B/C OPEN FOR 1 SECONDS WHEN TIME EXPIRES. IF ALARM OCCURS, CONTACTS 30B/C OPEN UNTIL FAULT IS CLEARED.
2. 1K RUN CONTACTS PROVIDE MIXER SIGNAL TO FWD TERMINAL (0VDC).



**HL200 LEGACY
MIXER RECIPE TIMER
BOARD 120/60/1
240/60/1**

A11676

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CATALOG OF REPLACEMENT PARTS



**N50 MIXER ML-134268,
ML-134262, ML-134272,
ML-134225 & ML-033777**

(INCLUDES MOTOR PARTS)

**ML-134268
ML-134262
ML-134272**

**PRIOR MLS COVERED IN THIS
CATALOG**

**ML-134225
ML-033777**

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5	COVER-F43056
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9	VARIOUS PAINTED PARTS
11	COLUMN AND BASE UNIT
13	PLANETARY
15	TRANSMISSION
17	MOTOR PARTS
19	BOWL AND AGITATOR UNIT



CATALOG OF REPLACEMENT PARTS



N50 MIXER

(INCLUDES MOTOR PARTS)

ML-134268
ML-134262
ML-134272

PRIOR MLS COVERED IN THIS
CATALOG

ML-134225
ML-033777

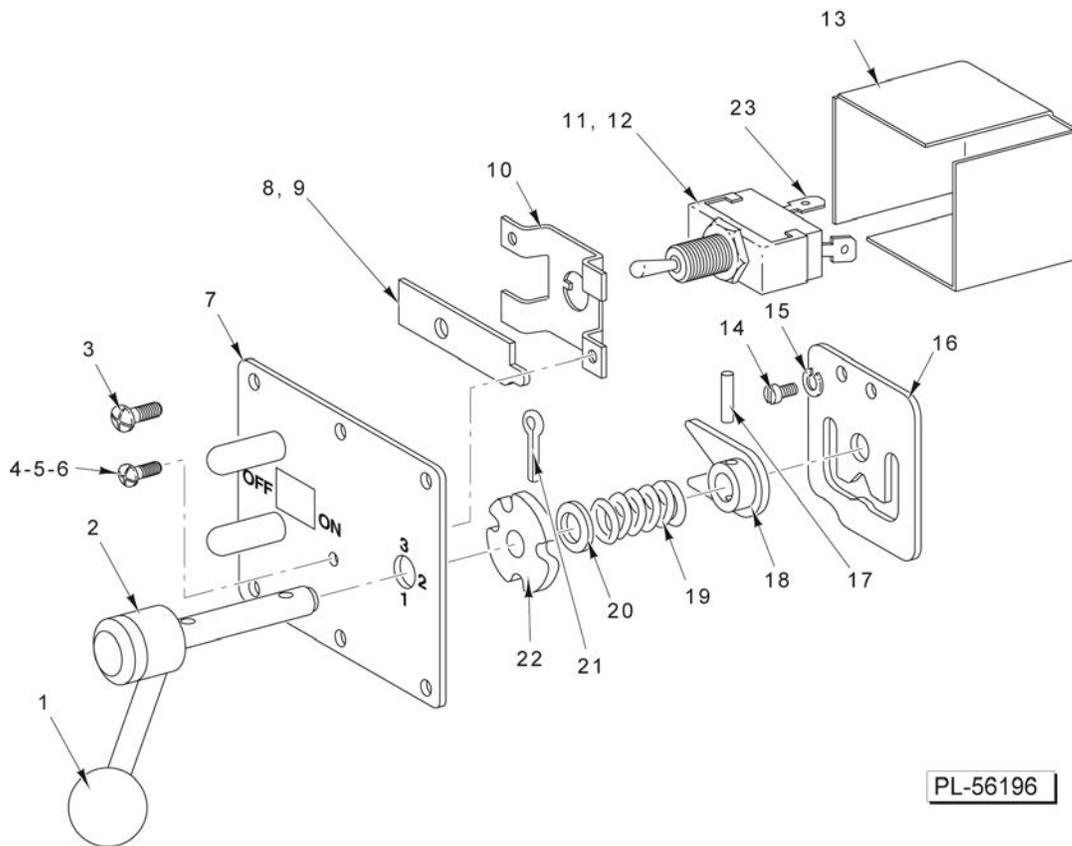
A product of HOBART 701 S. RIDGE AVENUE TROY, OHIO 45374-0001

FORM 43056 Rev. B (September 2016)

COVER-F43056

COVER-F43056

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-F43056B	COVER	ML-143268.....	AR

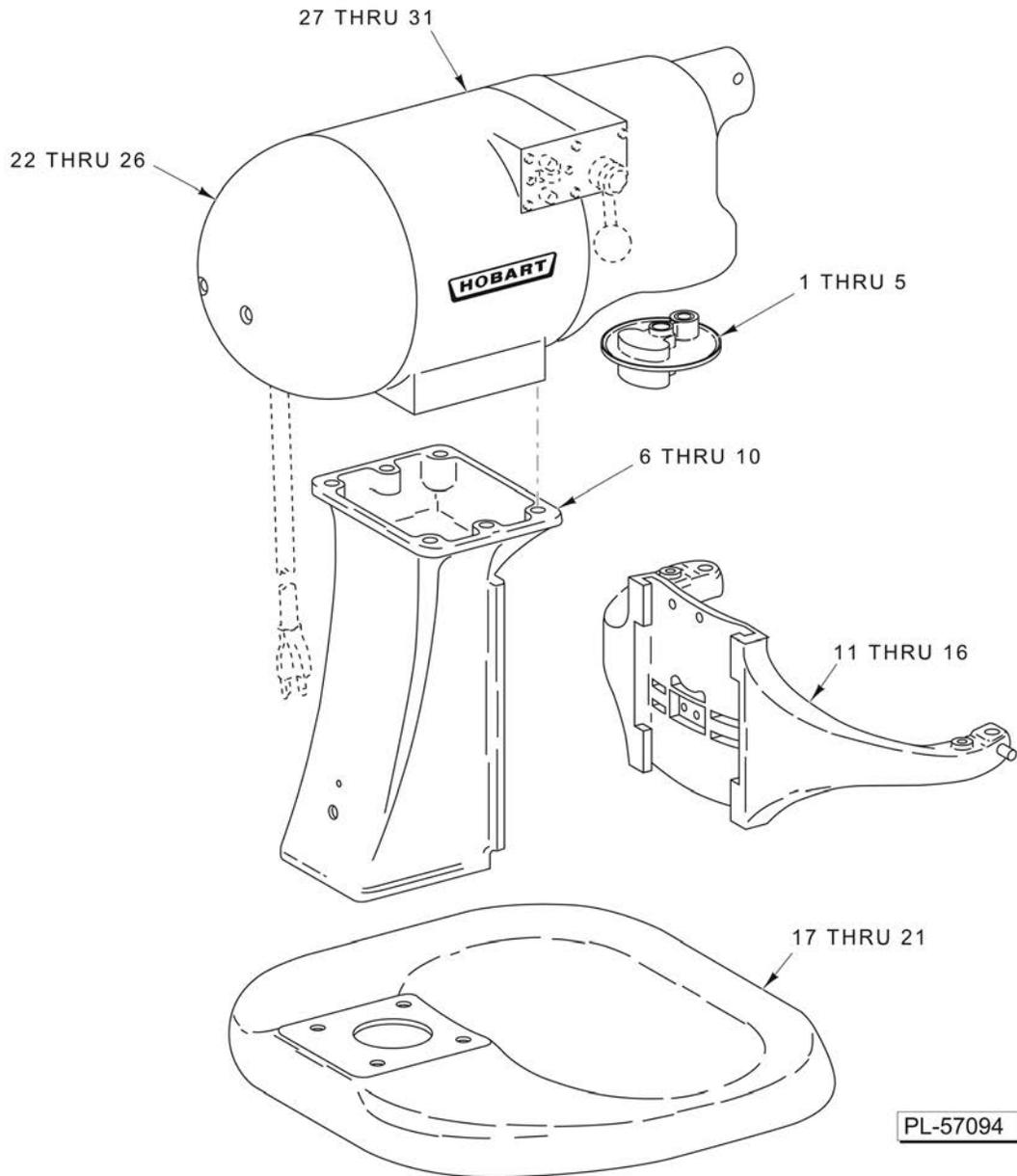


PL-56196

SWITCH UNIT

SWITCH UNIT

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-56196			
1	00-077401	Knob.....	1
2	00-290196-00003	Shift Handle Assy. (Incls. Item 1).....	1
3	00-123109	Screw 6-32 x 3/8 Serrated Hd.....	6
4	SC-111-76	Mach. Screw 4-40 x 5/16 Phil. Pan Hd.....	2
5	WL-003-03	Lockwasher #4 Helical.....	2
6	NS-009-02	Nut 4-40 Hex.....	2
7	00-291980-00001	Control Box Plate Assy.....	1
8	00-291982	Plunger - Interlock (For Use W/Units SN 311450652 & Above).....	1
9	00-937458	Plunger - Interlock (For Use W/Units Below SN 311450652).....	1
10	00-291981	Bracket - Switch.....	1
11	00-087711-184-1	Switch (Incls. Nut & Washer) (NLA - Obsolete) Use Item 12.....	1
12	00-916902-00009	Switch - Toggle (Units Under SN 31140652 Must Also Order Item 8).....	1
13	00-291985	Insulator - Switch.....	1
14	00-009091	Screw - Cam Plate Retaining.....	2
15	WL-019-79	Lockwasher #12 Light.....	2
16	00-009062	Plate - Cam.....	1
17	RP-005-03	Rollpin 1/8 Dia. x 5/8 Lg.....	1
18	00-479548	Fork - Shifter.....	1
19	00-007433-00001	Spring.....	1
20	WS-004-47	Washer.....	1
21	PC-006-34	Cotter Pin 7/64 x 1.....	1
22	00-009059	Disc - Interlock.....	1
23	WL-011-20	Lockwasher #6 Internal Shakeproof (Used to Attach Leads to Switch).....	2

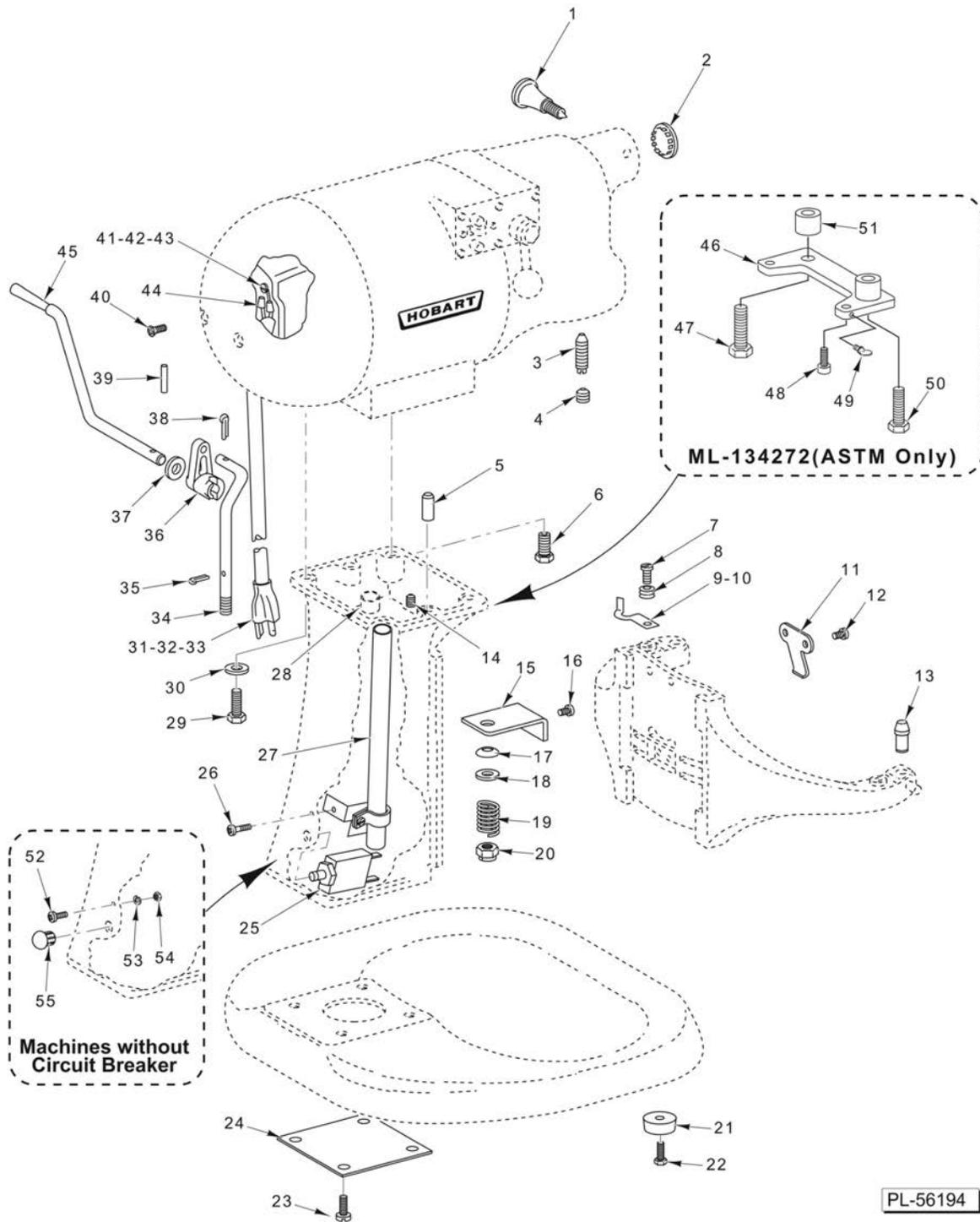


VARIOUS PAINTED PARTS

VARIOUS PAINTED PARTS

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-57094			
1	00-477123-00002	Planetary Subassy. (Hobart Gray) (Commercial, Residential, & ASTM) (ML-33777, ML-134225, ML-134262, ML-134268, & ML-134272).....	1
2	00-477123-00003	Planetary Subassy. (Cherry Red) (Commercial & Residential).....	1
3	00-477123-00004	Planetary Subassy. (Berry Blue) (Commercial & Residential).....	1
4	00-477123-00005	Planetary Subassy. (Plum Black) (Commercial & Residential).....	1
5	00-477123-00006	Planetary Subassy. (Creamy White) (Commercial & Residential).....	1
*6	00-290357	Column (Hobart Gray) (Commercial, Residential, & ASTM) (ML-33777, ML-134225, ML-134262, ML-134268, & ML-134272).....	1
7	00-290357-00002	Column (Cherry Red) (Commercial & Residential).....	1
8	00-290357-00003	Column (Berry Blue) (Commercial & Residential).....	1
9	00-290357-00004	Column (Plum Black) (Commercial & Residential).....	1
10	00-290357-00005	Column (Creamy White) (Commercial & Residential).....	1
11	00-271551	Bowl Support (Hobart Gray) (Commercial & Residential) (ML-33777, ML-134225, ML-134262, & ML-134268).....	1
12	00-435299	Bowl Support (Hobart Gray) (ASTM) (ML-134272).....	1
13	00-271551-00002	Bowl Support (Cherry Red) (Commercial & Residential).....	1
14	00-271551-00003	Bowl Support (Berry Blue) (Commercial & Residential).....	1
15	00-271551-00004	Bowl Support (Plum Black) (Commercial & Residential).....	1
16	00-271551-00005	Bowl Support (Creamy White) (Commercial & Residential).....	1
17	00-477061	Base & Foot Support Assy. (Hobart Gray) (Commercial, Residential, & ASTM) (ML-33777, ML-134225, ML-134262, ML-134268, & ML-134272).....	1
18	00-477061-00002	Base & Foot Support Assy. (Cherry Red) (Commercial & Residential).....	1
19	00-477061-00003	Base & Foot Support Assy. (Berry Blue) (Commercial & Residential).....	1
20	00-477061-00004	Base & Foot Support Assy. (Plum Black) (Commercial & Residential).....	1
21	00-477061-00005	Base & Foot Support Assy. (Creamy White) (Commercial & Residential).....	1
22	00-120433-00001	End Cover (Hobart Gray) (Commercial, Residential, & ASTM) (ML-33777, ML-134225, ML-134262, ML-134268, & ML-134272).....	1
23	00-120433-00006	End Cover (Cherry Red) (Commercial & Residential).....	1
24	00-120433-00007	End Cover (Berry Blue) (Commercial & Residential).....	1
25	00-120433-00008	End Cover (Plum Black) (Commercial & Residential).....	1
26	00-120433-00009	End Cover (Creamy White) (Commercial & Residential).....	1
27	00-439956-00002	NLA - Obsolete--Housing Assy. (Hobart Gray) (Commercial, Residential, & ASTM) (ML-33777, ML-134225, ML-134262, ML-134268, & ML-134272).....	1
28	00-439956-00004	Housing Assy. (Cherry Red) (Commercial & Residential).....	1
29	00-439956-00005	Housing Assy. (Berry Blue) (Commercial & Residential).....	1
30	00-439956-00006	Housing Assy. (Plum Black) (Commercial & Residential).....	1
31	00-439956-00007	Housing Assy. (Creamy White) (Commercial & Residential).....	1
	SC-128-96	Mach. Screw 8-32 x 3/8 Phil. Truss Hd. (SST).....	1
	WL-003-12	Lockwasher #8 Helical.....	1
	NS-009-12	Nut 8-32 Hex.....	1
	PB-005-21	Plug - Button.....	1

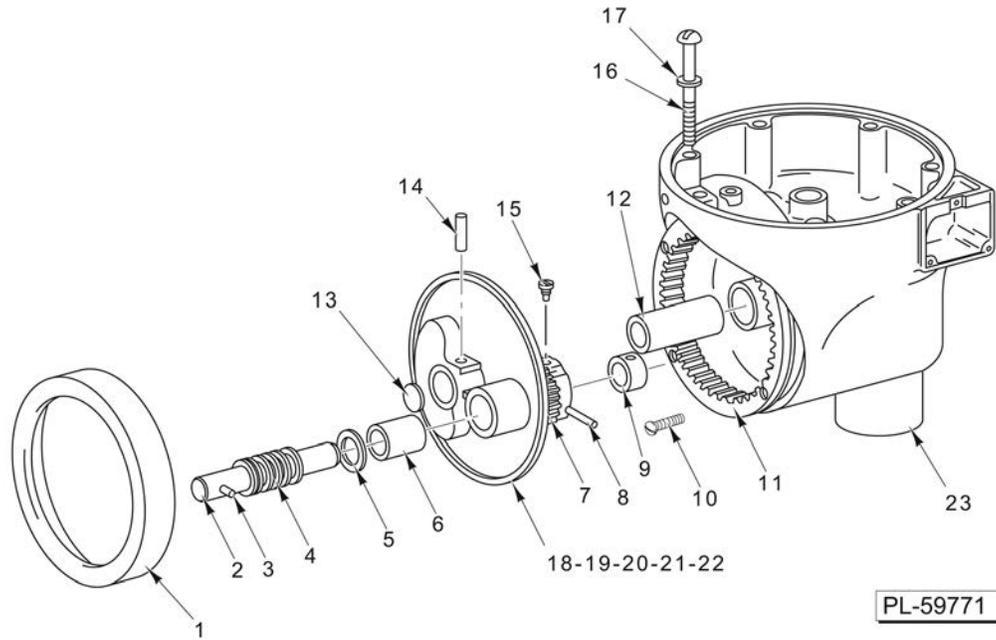
* For units without reset switch, use SC-128-96, WL-003-12, NS-009-12, & PB-005-21 to cover the holes.



COLUMN AND BASE UNIT

COLUMN AND BASE UNIT

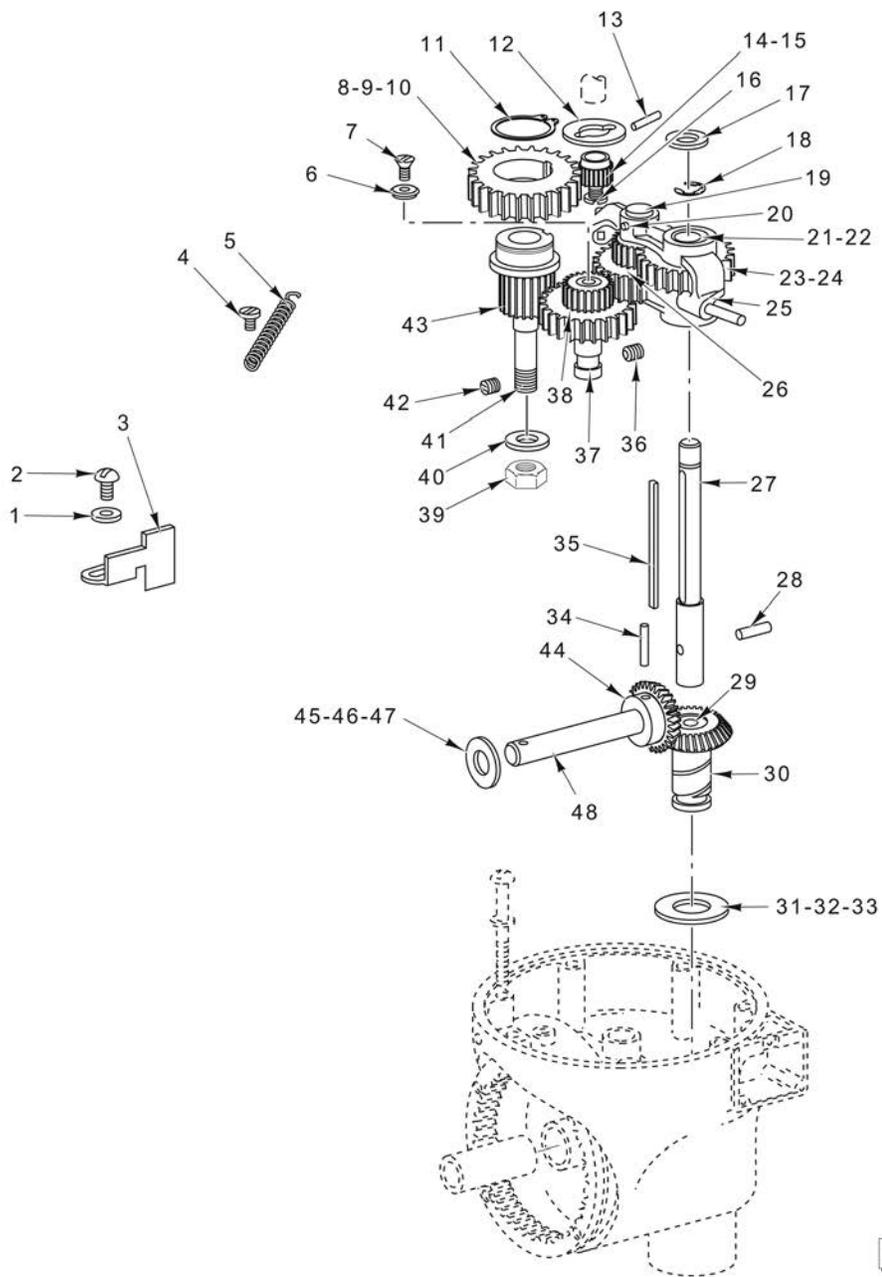
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PL-56194			
1	00-016951-00004	Thumb Screw Assy.....	1
2	PB-004-02	Plug Button (15/16).....	1
3	00-009094	Screw - Adjusting.....	1
4	SC-046-59	Set Screw 5/16-18 x 1/2 Slotted Hdls., Cup Pt.....	1
5	00-011800-00215	Dowel.....	2
6	00-477880-00002	Bolt - Special.....	1
7	00-274614	Screw - Pivot.....	2
8	00-291263	Washer - Belleville.....	6
9	00-291444-00002	Clamp - Bowl (RH, Shown).....	1
10	00-291444-00001	Clamp - Bowl (LH).....	1
11	00-437161	Latch - Bowl Spring.....	1
12	SC-128-95	Mach. Screw 10-24 x 1/4 Phil. Rd. Hd.....	2
13	00-271552	Pin - Bowl Retaining.....	2
14	SC-123-22	Screw - Set 1/4-28 x 1/2.....	1
15	00-271663	Bracket - Bowl Lift.....	1
16	SC-128-97	Mach. Screw 10-24 x 1/2 Phil. Flat Hd.....	2
17	00-271662	V-Washer.....	1
18	WS-003-23	Washer.....	1
19	00-271667	Spring.....	1
20	NS-048-25	Stop Nut 1/4-28 Elastic.....	1
21	00-271650	Foot - Rubber.....	4
22	SD-008-43	Self-Tapping Screw 8-18 x 3/8 Phil. Rd. Hd., Type B.....	4
23	SC-100-12	Mach. Screw 5/16-18 x 3/4 Hex Washer Hd.....	4
24	00-078815	Screen - Air.....	1
25	00-101491-29-01	Circuit Breaker (ML-134225 & ML-134262).....	1
26	SD-012-20	Self-Tapping Screw 8-32 x 1/2 Phil. Truss Hd., Type T (ML-134225 & ML-134262)	1
27	00-124936	Bracket & Insulator Assy (ML-134225 & ML-134262).....	1
28	00-024670	Insulator - Fiber (ML-134225 & ML-134262).....	1
29	SC-037-75	Cap Screw 5/16-18 x 3/4 Hex Hd.....	3
30	WS-017-09	Washer (SST).....	3
31	00-117542-00026	Cord & Plug Assy. (3 Cond., 115 V.).....	1
32	00-117542-00027	Cord & Plug Assy. (3 Cond., 220/230 V.).....	1
33	FE-017-41	Relief - Strain (Electrical) (Use with 31 & 32).....	1
34	00-271665	Rod - Bowl Lift.....	1
35	PC-006-33	Cotter Pin 3/32 x 1/2.....	1
36	00-937432	Arm - Bowl Lift.....	1
37	00-875825	Spacer.....	1
38	PC-006-33	Cotter Pin 3/32 x 1/2.....	1
39	RP-002-10	Roll Pin 3/16 Dia. x 1 Lg.....	1
40	SC-128-93	Mach. Screw 8-32 x 1/2 Phil. Oval Hd.....	2
41	SC-018-50	Mach. Screw 6-32 x 1/4 Slotted Pan Hd.....	1
42	WL-011-20	Lockwasher #6 Internal Shakeproof.....	1
43	00-278367-00002	Motor Housing Assy. (ML-33777).....	1
44	FE-006-17	Wire Nut (16-22 Ga.).....	2
45	00-437310	Handle - Bowl Lift.....	1
46	00-479505	Bracket - Adjustment (ML-134272).....	1
47	SC-036-84	Cap Screw 7/16-14 x 1-1/4 Hex Hd. (ML-134272).....	1
48	00-875151	Screw - Adjusting (ML-134272).....	2
49	00-070641-00012	Thumb Screw 6-32 (ML-134272).....	2
50	SC-062-21	Cap Screw 5/16-18 x 1 1/4 Hex Hd. (ML-134272).....	1
51	00-479506	Spacer.....	1
52	SC-128-96	Mach. Screw 8-32 x 3/8 Phil. Truss Hd. (SST).....	1
53	WL-003-12	Lockwasher #8 Helical.....	1
54	NS-009-12	Nut 8-32 Hex.....	1
55	PB-005-21	Plug - Button.....	1



PLANETARY

PLANETARY

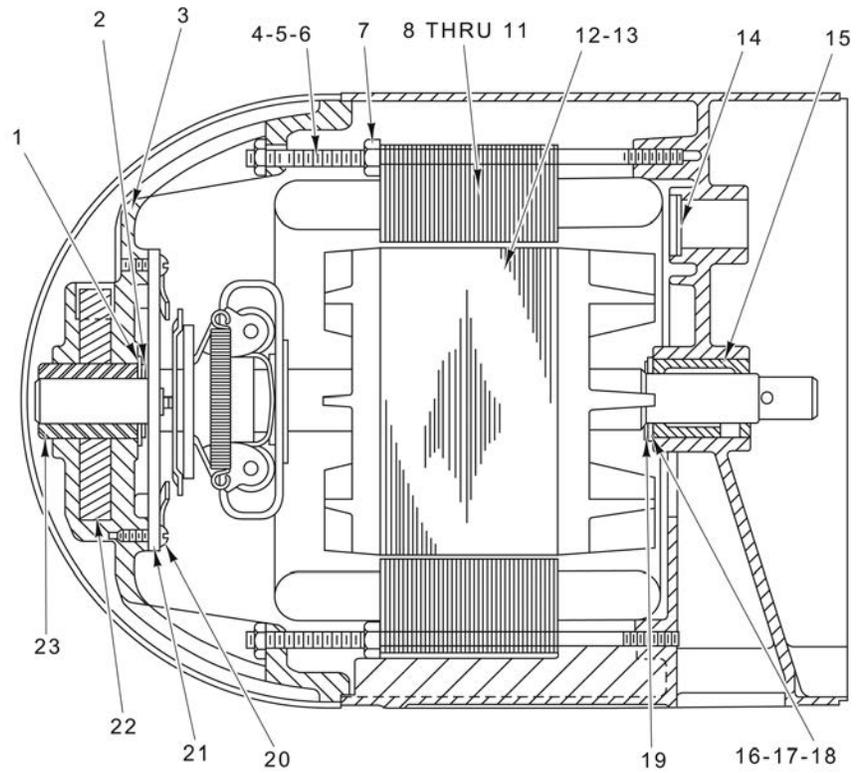
ILLUS.	PART NO.	NAME OF PART	AMT.
PL-59771			
1	00-021625-00003	Cup - Drip.....	1
2	00-061473	Agitator Shaft Assy. (Incls. Item 3).....	1
3	PG-006-11	Pin - Groove 1/4 x 5/8, Type D.....	1
4	00-270718	Spring - Agitator Shaft.....	1
5	WS-008-02	Washer.....	1
6	00-009038	Bearing - Planetary (Lower).....	1
7	00-274427	Pinion - Agitator Shaft (18T).....	1
8	00-274444-00001	Pin - Agitator Shaft.....	1
9	00-007595	Bearing - Planetary (Upper).....	1
10	SC-129-20	Mach. Screw 10-24 x 5/8 Hex Button Hd.....	4
11	00-005428	Gear - Internal (59T).....	1
12	00-009039	Bearing - Planetary Shaft.....	1
13	00-004378	Washer - Cupped.....	1
14	PT-003-29	Taper Pin - #1 x 1 In. Lg.....	1
15	00-007602	Screw - Bearing Retaining.....	1
16	SC-008-58	Mach. Screw 12-24 x 2-3/4 Slotted Rd. Hd.....	7
17	WS-002-30	Washer, Fiber.....	7
18	00-274602	Planetary Assy. (Hobart Gray) (Incls. Items 2 thru 9, 13, & 15).....	1
19	00-274602-00002	Planetary Assy. (Cherry Red) (Incls. Items 2 thru 9, 13, & 15).....	1
20	00-274602-00003	Planetary Assy. (Berry Blue) (Incls. Items 2 thru 9, 13, & 15).....	1
21	00-274602-00004	Planetary Assy. (Plum Black) (Incls. Items 2 thru 9, 13, & 15).....	1
22	00-274602-00005	Planetary Assy. (Creamy White) (Incls. Items 2 thru 9, 13, & 15).....	1
23	00-290257	Trans. Case & Brg. Assy. (Incls. Items 10, 11, & 12) (ML-33777 & ML-134225).....	1



TRANSMISSION

TRANSMISSION

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-56195			
1	WS-003-07	Washer.....	1
2	SC-060-07	Mach. Screw 12-24 x 3/4 Rd. Hd.....	1
3	00-009090	Stop - Tumbler Yoke.....	1
4	SC-013-26	Mach. Screw 8-32 x 3/8 Slotted Flat Hd.....	1
5	00-010973	Spring - Tumbler Yoke.....	1
6	00-009042	Washer - Retaining.....	1
7	SC-128-97	Mach. Screw 10-24 x 1/2 Phil. Flat Hd.....	1
8	00-875769	Gear - Main Drive (49T) (60 Hz.).....	1
9	00-875794	Gear - Main Drive (47T) (50 Hz.).....	1
10	00-012430-00083	Key.....	1
11	RR-007-02	Retaining Ring.....	1
12	00-016747	Washer - Motor Pinion.....	1
13	00-016777	Pin.....	1
14	00-016759	Pinion - Motor (17T) (50 Hz.).....	1
15	00-009421	Pinion - Motor (15T) (60 Hz.).....	1
16	00-005247-00002	Screw - Pinion Retaining.....	1
17	WS-008-04	Washer.....	1
18	RR-004-25	Retaining Ring.....	1
19	00-009052	Shaft - Tumbler.....	1
20	PC-003-36	Cotter Pin 3/32 x 1 Lg.....	1
21	00-009050	Sleeve - Shifter.....	1
22	00-009051	Retainer - Shifter Sleeve.....	1
23	00-009048	Gear - Transmission (31T).....	1
24	00-012430-00022	Key.....	1
25	00-107342	Tumbler Yoke & Shifter Pin Assy.....	1
26	00-009047	Transmission Gear Assy. (15T & 31T).....	1
27	00-115148	Shaft - Transmission (Upper).....	1
28	00-011800-00187	Dowel.....	1
29	00-005465	Washer, Plug.....	1
30	00-104040-00002	Zerol Bevel Gear Assy. (23T) (Incls. Item 29).....	1
31	WS-012-12	Washer (0.008 Thk.).....	AR
32	WS-012-13	Washer (1/64 Thk.).....	AR
33	WS-012-14	Washer (1/32 Thk.).....	AR
34	PT-003-40	Taper Pin - #2 x 1 In. Lg.....	1
35	00-012430-00023	Key - Transmission Shaft (Upper).....	1
36	SC-046-27	Set Screw 1/4-20 x 1/4 Slotted Hdls., Cup Pt.....	1
37	00-009043	Shaft - Transmission (Lower).....	1
38	00-009047	Transmission Gear Assy. (15T & 31T).....	1
39	NS-013-22	Nut 3/8-16 Hex.....	1
40	00-006021	Washer (Copper).....	1
41	00-009088	Shaft - Eccentric.....	1
42	SC-046-27	Set Screw 1/4-20 x 1/4 Slotted Hdls., Cup Pt.....	1
43	00-017864	Flange Ring & Hub Assy.....	1
44	00-020661-00002	Gear - Zerol Bevel (23T).....	1
45	00-124945	Washer (0.010 Thk.).....	AR
46	00-124946	Washer (1/32 Thk.).....	AR
47	00-124947	Washer (1/16 Thk.).....	AR
48	00-009040	Shaft - Planetary.....	1
	00-074676	Tumbler Yoke & Gear Assy. (Incls. Items 19 thru 26).....	1

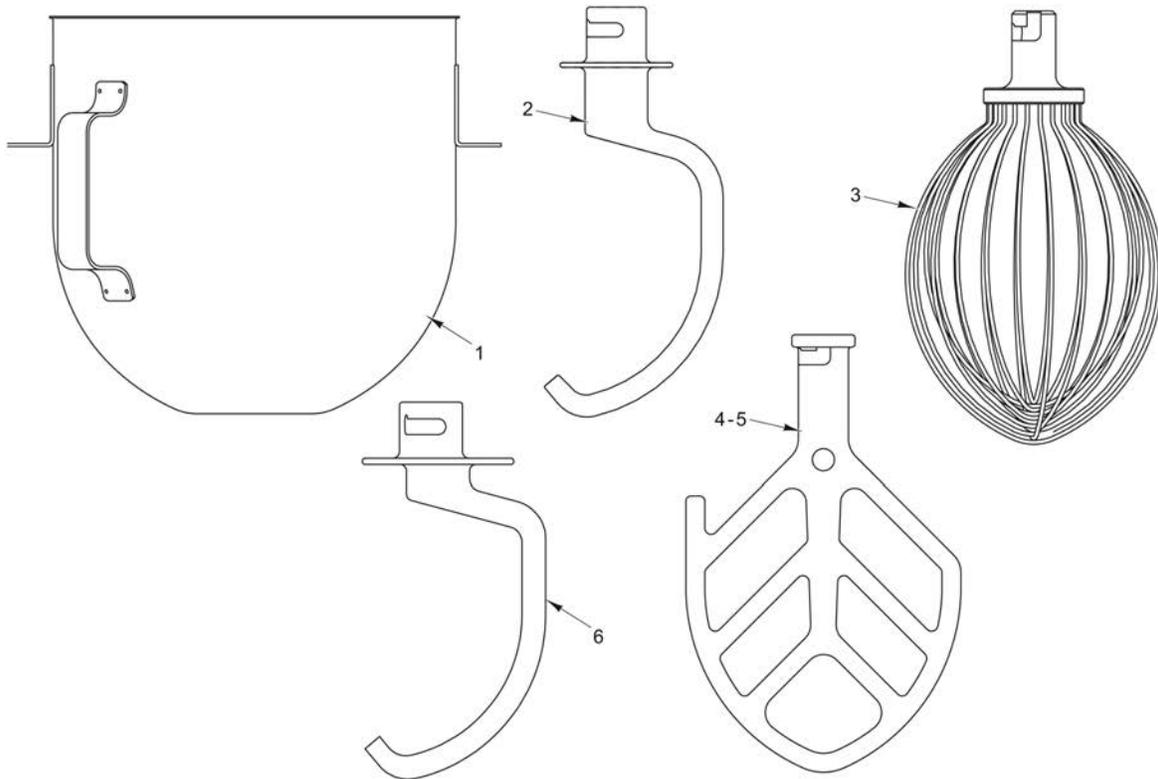


PL-56193

MOTOR PARTS

MOTOR PARTS

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-56193			
1	WS-007-21	Washer (0.031 Thk.).....	AR
2	WS-007-19	Washer (Fiber).....	AR
3	00-812450	Bracket - Motor Bearing.....	1
4	00-022216-00002	Stud.....	4
5	00-023383-00014	Sleeve (Elec. Leads Protection) (60 Hz.).....	4
6	00-023383-00018	Sleeve (Elec. Leads Protection) (50 Hz.).....	4
7	NS-009-12	Nut 8-32 Hex.....	8
8	00-065477-008-1	Stator Assy. (115 V., 60 Hz., 1 Ph.).....	1
9	00-065477-008-2	Stator Assy. (230 V., 60 Hz., 1 Ph.).....	1
10	00-065477-028-1	Stator Assy. (115 V., 50 Hz., 1 Ph.).....	1
11	00-065477-028-4	Stator Assy. (230 V., 50 Hz., 1 Ph.).....	1
12	00-022275-00149	Rotor Assy. (60 Hz.).....	1
13	00-022275-00148	Rotor Assy. (50 Hz.).....	1
14	00-004378	Washer - Cupped.....	1
15	00-290659	Bearing - Sleeve (Pulley End).....	1
16	WS-007-21	Washer (0.031 Thk.).....	AR
17	WS-031-50	Washer (0.015 Thk.).....	AR
18	SL-005-10	Spring - Loading.....	1
19	WS-007-19	Washer (Fiber).....	AR
20	SC-018-28	Mach. Screw 6-32 x 1/4 Phil. Pan Hd.....	2
21	00-066085	Switch - Starting (Stationary Part).....	1
22	00-511813	Wicking 5/16 Dia. x 1/2 In. Lg.....	AR
23	00-290659	Bearing - Sleeve.....	1



PL-56197

BOWL AND AGITATOR UNIT

BOWL AND AGITATOR UNIT

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-56197			
1	00-295576	Bowl - 5 Qt. (SST).....	1
2	00-315966	"E" Dough Arm.....	1
3	00-295580	"D" Wire Whip.....	1
4	00-295578	"B" Flat Beater (Aluminum).....	1
5	00-295579	"B" Flat Beater (SST).....	1
6	00-875822	"ED" Dough Arm.....	1



CATALOG OF REPLACEMENT PARTS



N50CE MIXER

(INCLUDES MOTOR PARTS)

ML-134269	(Canada)
ML-134270	(Korean)
ML-134271	(CE)
ML-134273	(Japan)

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19 PLANETARY
21 TRANSMISSION
23 MOTOR PARTS
25 BOWL AND AGITATOR UNIT



CATALOG OF REPLACEMENT PARTS



N50CE MIXER

(INCLUDES MOTOR PARTS)

ML-134269	(Canada)
ML-134270	(Korea)
ML-134271	(CE)
ML-134273	(Japan)

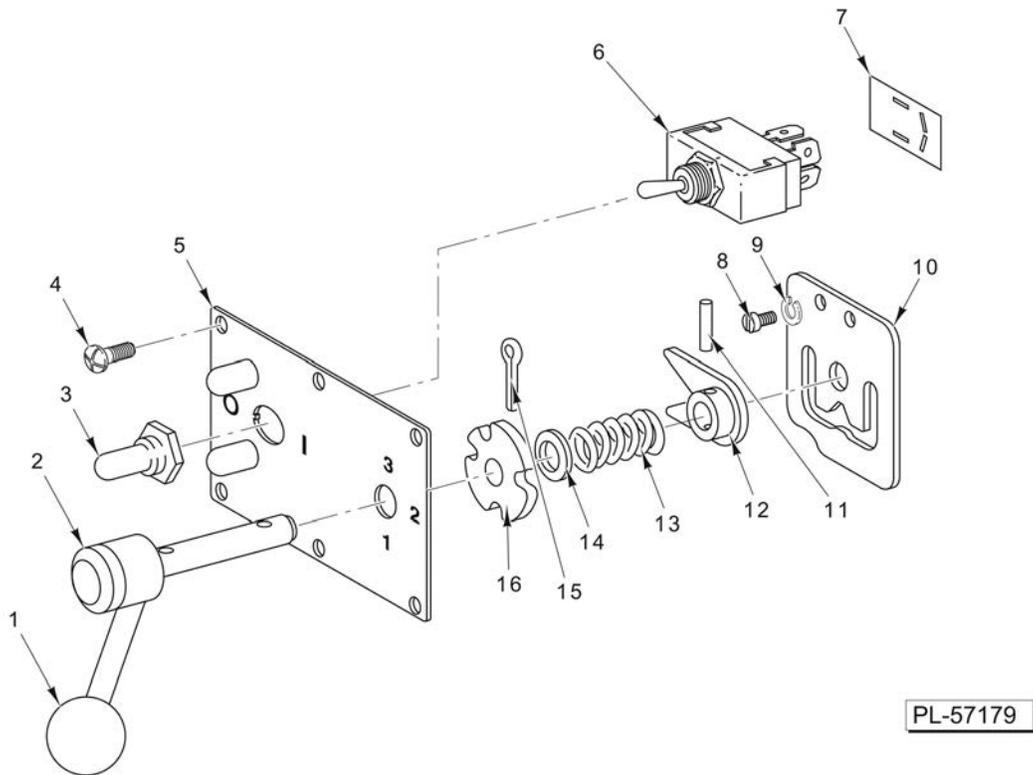
A product of HOBART 701 S. RIDGE AVENUE TROY, OHIO 45374-0001

FORM 43088

F43088 TIS COVER

F43088 TIS COVER

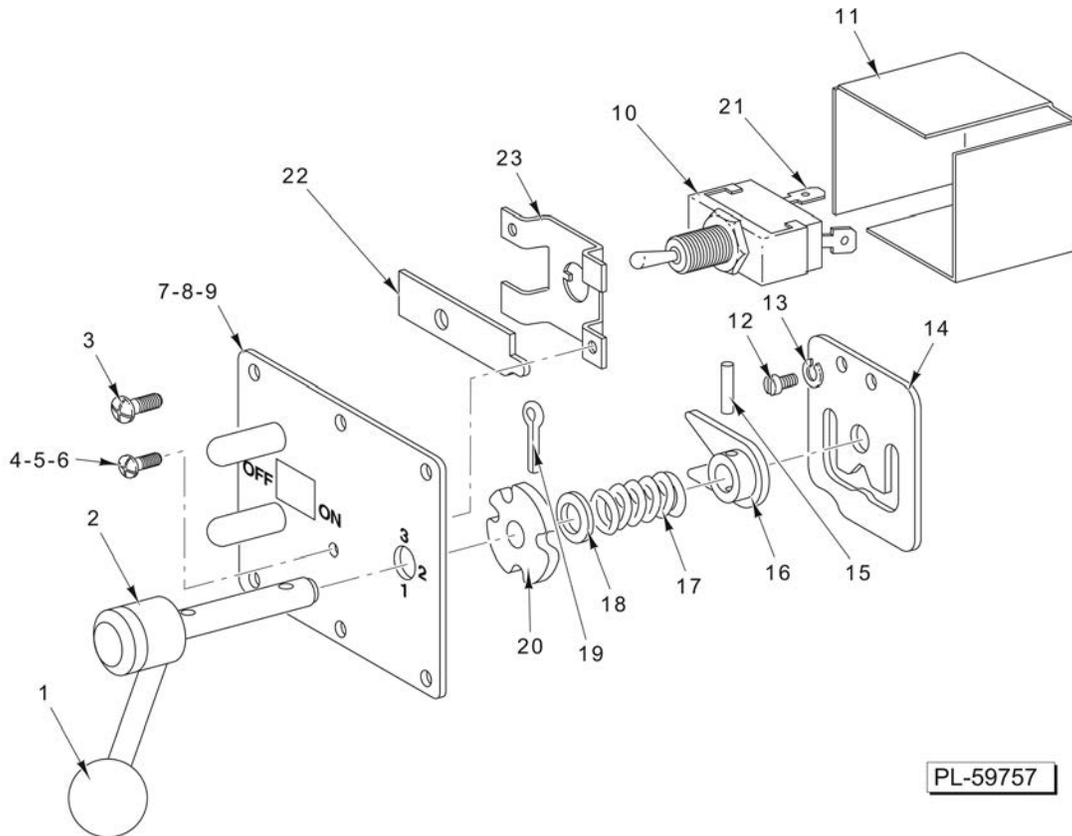
ILLUS.	PART NO.	NAME OF PART	AMT.
	PL-F43088 TIS COVER		
		ML-134269.....	AR
		ML-134270.....	AR
		ML-134721.....	AR
		ML-134273.....	AR



SWITCH UNIT (ML-134271)

SWITCH UNIT (ML-134271)

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-57179			
1	00-077401	Knob.....	1
2	00-290196-00003	Shift Handle Assy. (Incls. Item 1).....	1
3	00-479528-00001	Boot - Switch.....	1
4	00-123109	Screw 6-32 x 3/8 Serrated Hd.....	6
5	00-477918	Control Box Plate Assy.....	1
6	00-875567	Switch Assy.....	1
7	00-477916	Insulator - Switch.....	1
8	00-009091	Screw - Cam Plate Retaining.....	2
9	WL-019-79	Lockwasher #12 Light.....	2
10	00-009062	Plate - Cam.....	1
11	RP-005-03	Rollpin 1/8 Dia. x 5/8 Lg.....	1
12	00-479548	Fork - Shifter.....	1
13	00-007433-00001	Spring.....	1
14	WS-004-47	Washer.....	1
15	PC-006-34	Cotter Pin 7/64 x 1.....	1
16	00-009059	Disc - Interlock.....	1

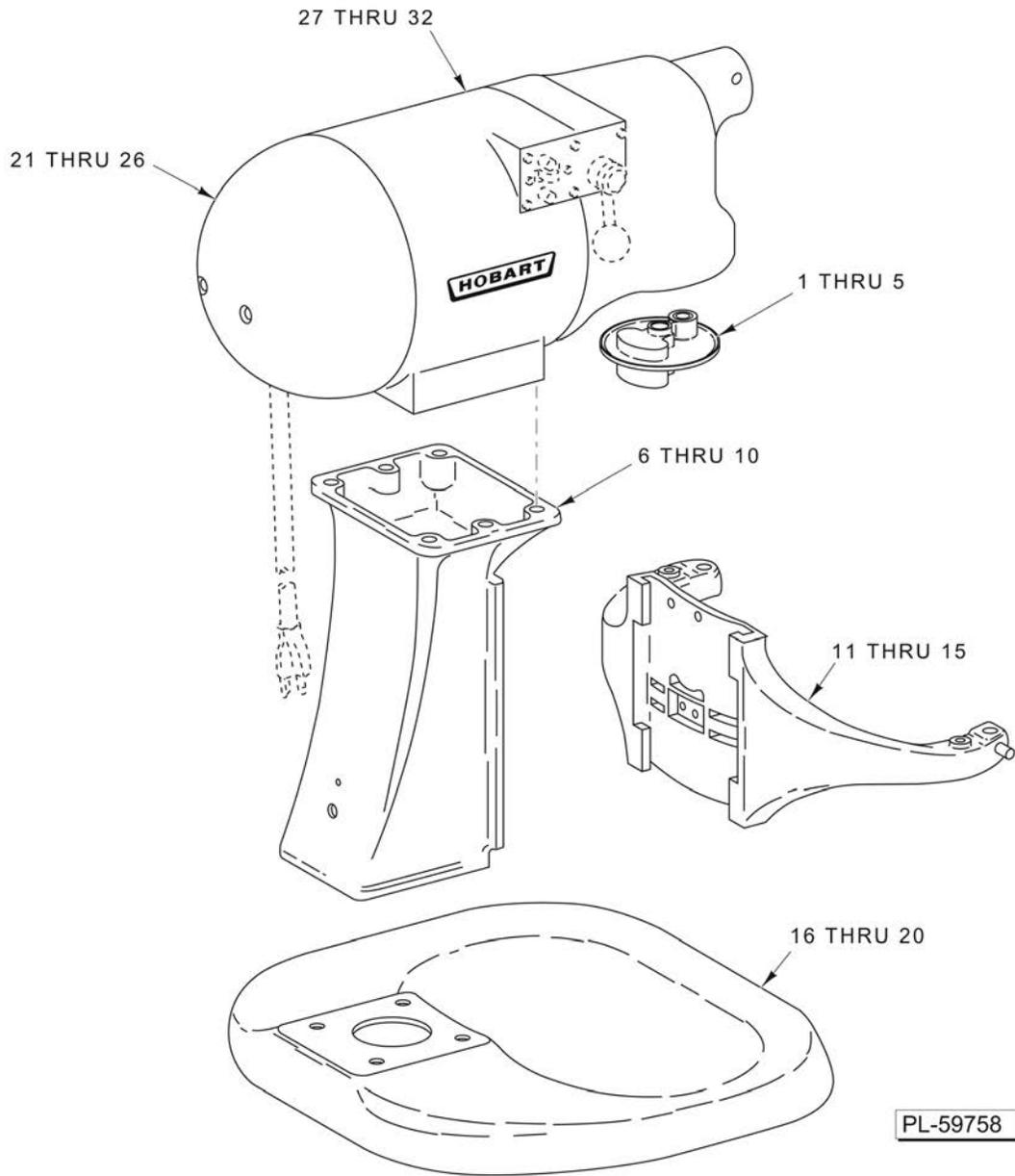


PL-59757

**SWITCH UNIT
(ML-134269, ML-134270, AND ML-134273)**

SWITCH UNIT
(ML-134269, ML-134270, AND ML-134273)

ILLUS. PL-59757	PART NO.	NAME OF PART	AMT.
1	00-077401	Knob.....	1
2	00-290196-00003	Shift Handle Assy. (Incls. Item 1).....	1
3	00-123109	Screw 6-32 x 3/8 Serrated Hd.....	6
4	SC-111-76	Mach. Screw 4-40 x 5/16 Phil. Pan Hd.....	2
5	WL-003-03	Lockwasher #4 Helical.....	2
6	NS-009-02	Nut 4-40 Hex.....	2
7	00-291980-00001	Control Box Plate Assy. (ML-134273).....	1
8	00-291980-00002	Control Box Plate Assy. (ML-134269).....	1
9	00-291980-00003	Control Box Plate Assy. (ML-134270).....	1
10	00-087711-184-1	Switch (Incls. Nut & Washer).....	1
11	00-291985	Insulator - Switch.....	1
12	00-009091	Screw - Cam Plate Retaining.....	2
13	WL-019-79	Lockwasher #12 Light.....	2
14	00-009062	Plate - Cam.....	1
15	RP-005-03	Rollpin 1/8 Dia. x 5/8 Lg.....	1
16	00-479548	Fork - Shifter.....	1
17	00-007433-00001	Spring.....	1
18	WS-004-47	Washer.....	1
19	PC-006-34	Cotter Pin 7/64 x 1.....	1
20	00-009059	Disc - Interlock.....	1
21	WL-011-20	Lockwasher #6 Internal Shakeproof (Used to Attach Leads to Switch).....	2
22	00-291982	Plunger - Interlock.....	1
23	00-291981	Bracket - Switch.....	1

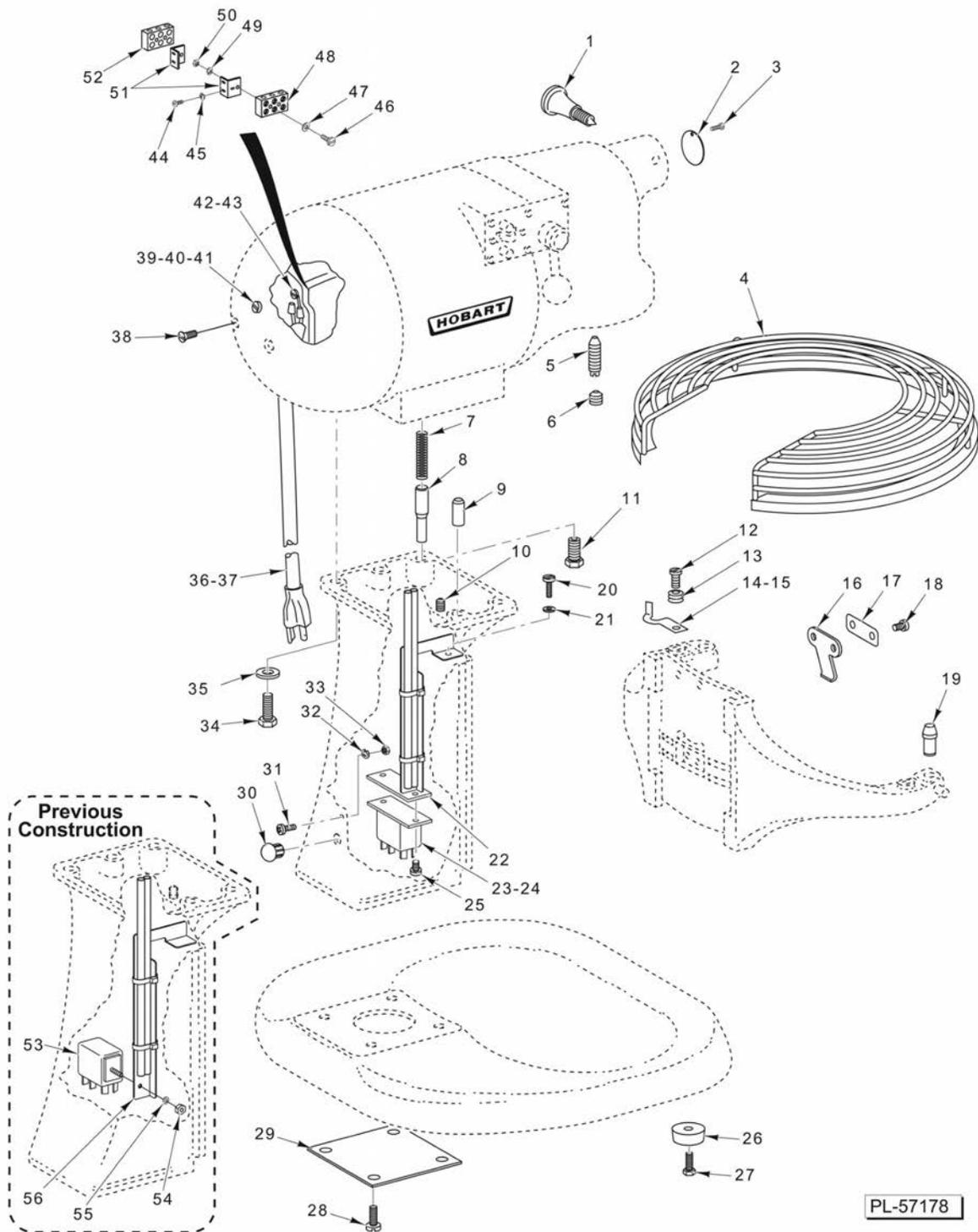


VARIOUS PAINTED PARTS

VARIOUS PAINTED PARTS

ILLUS. PL-59758	PART NO.	NAME OF PART	AMT.
1	00-477123-00002	Planetary Subassy. (Hobart Gray) (ML-134269, ML-134270, ML-134271, & ML-134273).....	1
2	00-477123-00003	Planetary Subassy. (Cherry Red).....	1
3	00-477123-00004	Planetary Subassy. (Berry Blue).....	1
4	00-477123-00005	Planetary Subassy. (Plum Black).....	1
5	00-477123-00006	Planetary Subassy. (Creamy White).....	1
*6	00-290357	Column (Hobart Gray) (ML-134269, ML-134270, ML-134271, & ML-134273).....	1
7	00-290357-00002	Column (Cherry Red).....	1
8	00-290357-00003	Column (Berry Blue).....	1
9	00-290357-00004	Column (Plum Black).....	1
10	00-290357-00005	Column (Creamy White).....	1
11	00-271551	Bowl Support (Hobart Gray) (ML-134269, ML-134270, ML-134271, & ML-134273).....	1
12	00-271551-00002	Bowl Support (Cherry Red).....	1
13	00-271551-00003	Bowl Support (Berry Blue).....	1
14	00-271551-00004	Bowl Support (Plum Black).....	1
15	00-271551-00005	Bowl Support (Creamy White).....	1
16	00-477061	Base & Foot Support Assy. (Hobart Gray) (ML-134269, ML-134270, ML-134271, & ML-134273).....	1
17	00-477061-00002	Base & Foot Support Assy. (Cherry Red).....	1
18	00-477061-00003	Base & Foot Support Assy. (Berry Blue).....	1
19	00-477061-00004	Base & Foot Support Assy. (Plum Black).....	1
20	00-477061-00005	Base & Foot Support Assy. (Creamy White).....	1
21	00-120433-00001	End Cover (Hobart Gray) (ML-134269, ML-134270, & ML-134273).....	1
22	00-120433-00005	End Cover (Hobart Gray) (ML-134271).....	1
23	00-120433-00006	End Cover (Cherry Red).....	1
24	00-120433-00007	End Cover (Berry Blue).....	1
25	00-120433-00008	End Cover (Plum Black).....	1
26	00-120433-00009	End Cover (Creamy White).....	1
27	00-439956-00002	NLA - Obsolete--Housing Assy. (Hobart Gray) (ML-134269, ML-134270, & ML-134273).....	1
28	00-439956-00003	NLA - Obsolete--Housing Assy. (Hobart Gray) (ML-134271).....	1
29	00-439956-00004	Housing Assy. (Cherry Red).....	1
30	00-439956-00005	Housing Assy. (Berry Blue).....	1
31	00-439956-00006	Housing Assy. (Plum Black).....	1
32	00-439956-00007	Housing Assy. (Creamy White).....	1
	SC-128-96	Mach. Screw 8-32 x 3/8 Phil. Truss Hd. (SST).....	1
	WL-003-12	Lockwasher #8 Helical.....	1
	NS-009-12	Nut 8-32 Hex.....	1
	PB-005-21	Plug - Button.....	1

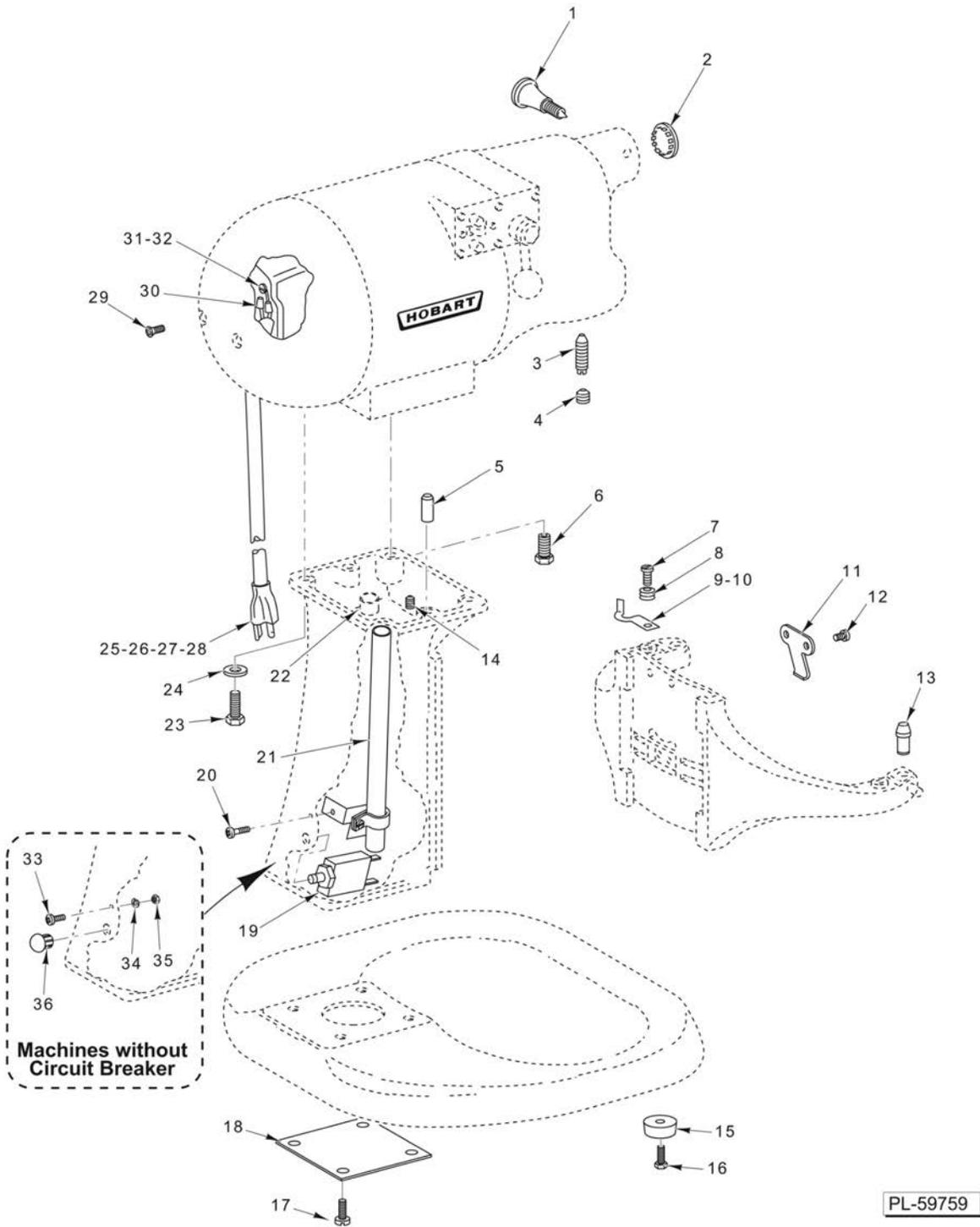
* For units without reset switch, use SC-128-96, WL-003-12, NS-009-12, & PB-005-21 to cover the holes.



COLUMN AND BASE UNIT (ML-134271)

COLUMN AND BASE UNIT (ML-134271)

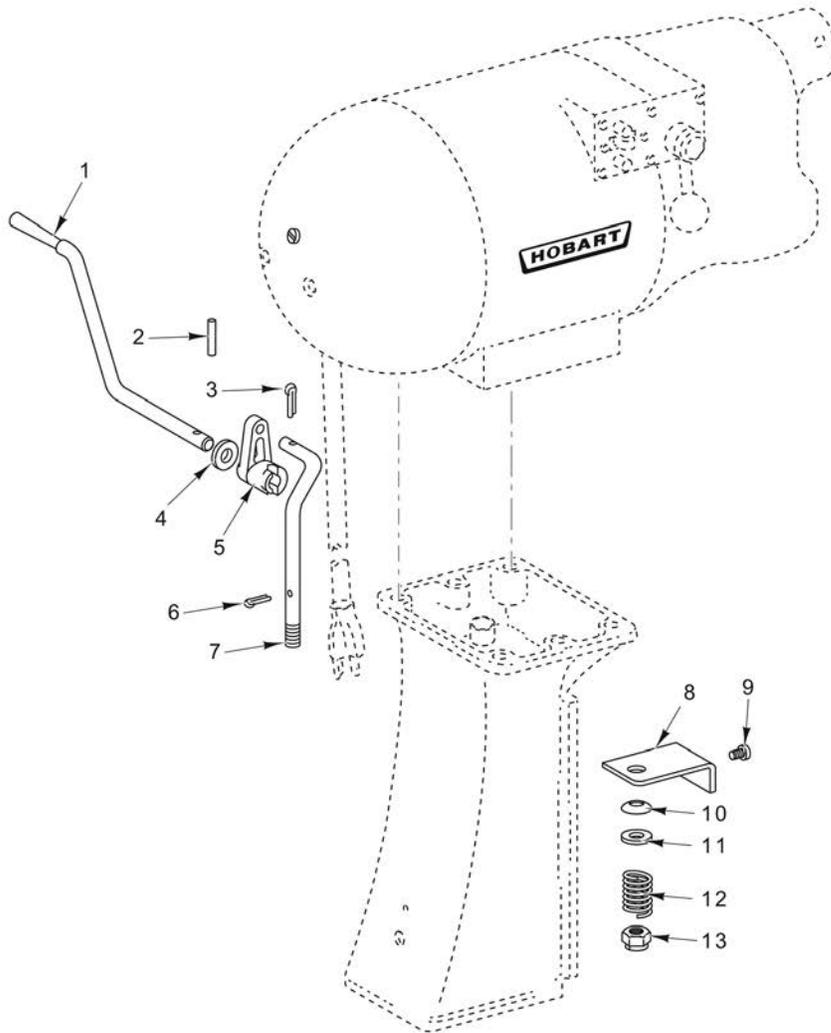
ILLUS. PL-57178	PART NO.	NAME OF PART	AMT.
1	00-016951-00004	Thumb Screw Assy.....	1
2	00-479059	Cover - Attachment Hub.....	1
3	00-479060-00002	NLA - Obsolete--Screw 8-32 x 3/8 Special Shoulder.....	1
4	00-478114	Bowl Guard.....	1
5	00-009094	Screw - Adjusting.....	1
6	SC-046-59	Set Screw 5/16-18 x 1/2 Slotted Hdls., Cup Pt.....	1
7	00-477884	Spring - Interlock Plunger.....	1
8	00-477879	Plunger - Interlock.....	1
9	00-011800-00215	Dowel.....	2
10	SC-123-22	Screw - Set 1/4-28 x 1/2.....	1
11	00-477880	Bolt - Special.....	1
12	00-274614	Screw - Pivot.....	2
13	00-291263	Washer - Belleville.....	6
14	00-291444-00002	Clamp - Bowl (RH, Shown).....	1
15	00-291444-00001	Clamp - Bowl (LH).....	1
16	00-437161	Latch - Bowl Spring.....	1
17	00-477877	Key - Bowl Guard.....	1
18	SC-066-06	Mach. Screw 10-24 x 1/2 Phil. Truss Hd. (SST).....	2
19	00-271663	Bracket - Bowl Lift.....	1
20	SC-018-13	Mach. Screw 8-32 x 1/4 Slotted Pan Hd.....	1
21	WL-003-14	Lockwasher #8 Helical.....	1
22	00-937379	Relay - Bracket Assy. (Incls. Items 23, 24, & 25).....	1
23	00-087714-063-2	Relay.....	1
24	00-065890-00119	Terminal - Insulated (Used to Cover Unused Relay Terminals).....	2
25	SD-009-34	Self-Tapping Screw 6-32 x 3/8 Phil. Pan Hd., Type F.....	2
26	00-271650	Foot - Rubber.....	4
27	SD-008-43	Self-Tapping Screw 8-18 x 3/8 Phil. Rd. Hd., Type B.....	4
28	SC-100-12	Mach. Screw 5/16-18 x 3/4 Hex Washer Hd.....	4
29	00-078815	Screen - Air.....	1
30	PB-005-21	Plug - Button.....	1
31	SC-128-96	Mach. Screw 8-32 x 3/8 Phil. Truss Hd. (SST).....	1
32	WL-003-12	Lockwasher #8 Helical.....	1
33	NS-009-12	Nut 8-32 Hex.....	1
34	SC-037-75	Cap Screw 5/16-18 x 3/4 Hex Hd.....	3
35	WS-017-09	Washer (SST).....	3
36	00-117542-00071	NLA - Obsolete--Cord & Plug Assy. (3 Cond., 115 V.).....	1
37	FE-024-78	Strain Relief (Use with Item 36).....	1
38	SC-128-93	Mach. Screw 8-32 x 1/2 Phil. Oval Hd.....	2
39	SC-018-29	Mach. Screw 6-32 x 3/8 Phil. Pan Hd.....	1
40	WL-014-03	Lockwasher #6 External (SST).....	2
41	NS-011-07	Nut 6-32 Hex (SST).....	2
42	SC-018-50	Mach. Screw 6-32 x 1/4 Slotted Pan Hd.....	1
43	WL-011-20	Lockwasher #6 Internal Shakeproof.....	1
44	SC-009-65	Mach. Screw 8-32 x 1/4 Slotted Rd. Hd.....	4
45	WL-003-12	Lockwasher #8 Helical.....	4
46	SC-018-51	Mach. Screw 4-40 x 5/8 Slotted Pan Hd.....	4
47	WS-029-24	Washer.....	4
48	00-478317-00003	NLA - Obsolete--Block - Terminal (4-5-6).....	1
49	WL-003-03	Lockwasher #4 Helical.....	4
50	NS-009-02	Nut 4-40 Hex.....	4
51	00-812449	NLA - Obsolete--Bracket - Terminal Mounting.....	2
52	00-478317-00002	NLA - Obsolete--Block - Terminal (1-2-3).....	1
53	00-087714-051-1	Relay (15 Amp.) (Previous Construction).....	1
54	NS-009-07	Nut 6-32 Hex (Previous Construction).....	1
55	WL-003-09	Lockwasher #6 Helical (Previous Construction).....	1
56	00-477883	Barrier - Wire (Previous Construction).....	1



**COLUMN AND BASE UNIT
(ML-134269, ML-134270, AND ML-134273)**

**COLUMN AND BASE UNIT
(ML-134269, ML-134270, AND ML-134273)**

ILLUS. PL-59759	PART NO.	NAME OF PART	AMT.
1	00-016951-00004	Thumb Screw Assy.....	1
2	PB-004-02	Plug Button (15/16).....	1
3	00-009094	Screw - Adjusting.....	1
4	SC-046-59	Set Screw 5/16-18 x 1/2 Slotted Hdls., Cup Pt.....	1
5	00-011800-00215	Dowel.....	2
6	00-477880-00002	Bolt - Special.....	1
7	00-274614	Screw - Pivot.....	2
8	00-291263	Washer - Belleville.....	6
9	00-291444-00002	Clamp - Bowl (RH, Shown).....	1
10	00-291444-00001	Clamp - Bowl (LH).....	1
11	00-437161	Latch - Bowl Spring.....	1
12	SC-128-95	Mach. Screw 10-24 x 1/4 Phil. Rd. Hd.....	2
13	00-271552	Pin - Bowl Retaining.....	2
14	SC-123-22	Screw - Set 1/4-28 x 1/2.....	1
15	00-271650	Foot - Rubber.....	4
16	SD-008-43	Self-Tapping Screw 8-18 x 3/8 Phil. Rd. Hd., Type B.....	4
17	SC-100-12	Mach. Screw 5/16-18 x 3/4 Hex Washer Hd.....	4
18	00-078815	Screen - Air.....	1
19	00-101491-29-01	Circuit Breaker (ML-134269).....	1
20	SD-012-20	Self-Tapping Screw 8-32 x 1/2 Phil. Truss Hd., Type T (ML-134269).....	1
21	00-124936	Bracket & Insulator Assy (ML-134269).....	1
22	00-024670	Insulator - Fiber (ML-134269).....	1
23	SC-037-75	Cap Screw 5/16-18 x 3/4 Hex Hd.....	3
24	WS-017-09	Washer (SST).....	3
25	00-117542-00026	Cord & Plug Assy. (3 Cond., 115 V.) (ML-134269).....	1
26	00-117542-00090	NLA - Obsolete--Cord & Plug Assy. (ML-134270).....	1
27	00-916909-00017	NLA - Obsolete--Cord & Plug Assy. (ML-134273).....	1
28	FE-017-41	Relief - Strain (Electrical) (Use with Items 25, 26, & 27).....	1
29	SC-128-93	Mach. Screw 8-32 x 1/2 Phil. Oval Hd.....	2
30	FE-006-17	Wire Nut (16-22 Ga.).....	2
31	SC-018-50	Mach. Screw 6-32 x 1/4 Slotted Pan Hd.....	1
32	WL-011-20	Lockwasher #6 Internal Shakeproof.....	1
33	SC-128-96	Mach. Screw 8-32 x 3/8 Phil. Truss Hd. (SST).....	1
34	WL-003-12	Lockwasher #8 Helical.....	1
35	NS-009-12	Nut 8-32 Hex.....	1
36	PB-005-21	Plug - Button.....	1

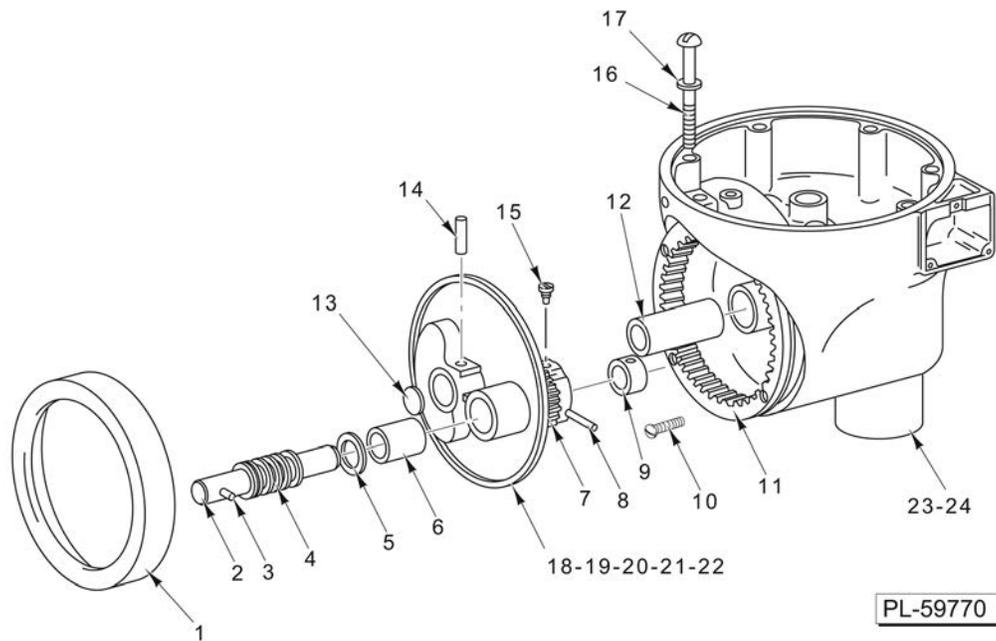


PL-59769

BOWL LIFT ARM AND BRACKET

BOWL LIFT ARM AND BRACKET

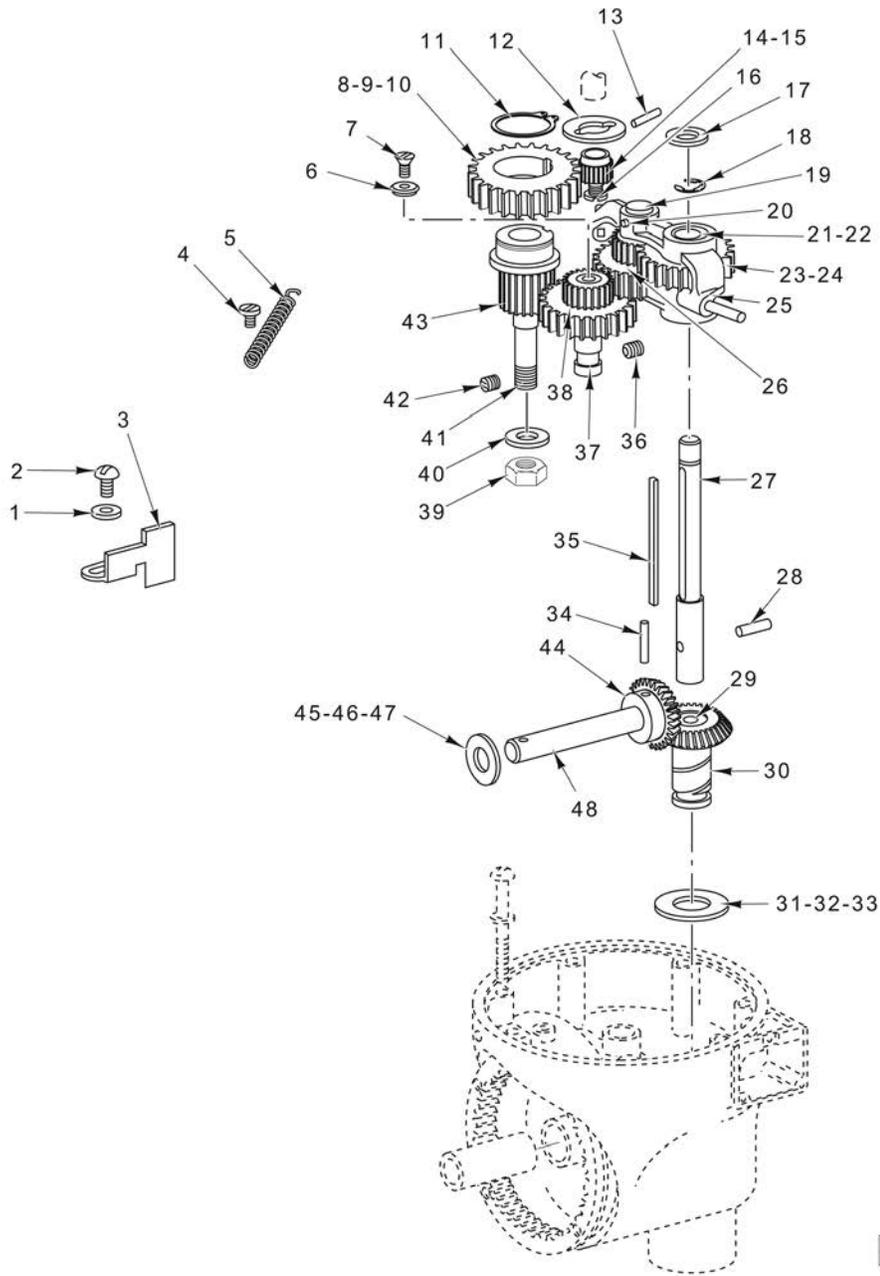
ILLUS.	PART NO.	NAME OF PART	AMT.
PL-59769			
1	00-437310	Handle - Bowl Lift.....	1
2	RP-002-10	Roll Pin 3/16 Dia. x 1 Lg.....	1
3	PC-006-33	Cotter Pin 3/32 x 1/2.....	1
4	00-875825	Spacer.....	1
5	00-937432	Arm - Bowl Lift.....	1
6	PC-006-33	Cotter Pin 3/32 x 1/2.....	1
7	00-271665	Rod - Bowl Lift.....	1
8	00-271663	Bracket - Bowl Lift.....	1
9	SC-128-97	Mach. Screw 10-24 x 1/2 Phil. Flat Hd.....	2
10	00-271662	V-Washer.....	1
11	WS-003-23	Washer.....	1
12	00-271667	Spring.....	1
13	NS-048-25	Stop Nut 1/4-28 Elastic.....	1



PLANETARY

PLANETARY

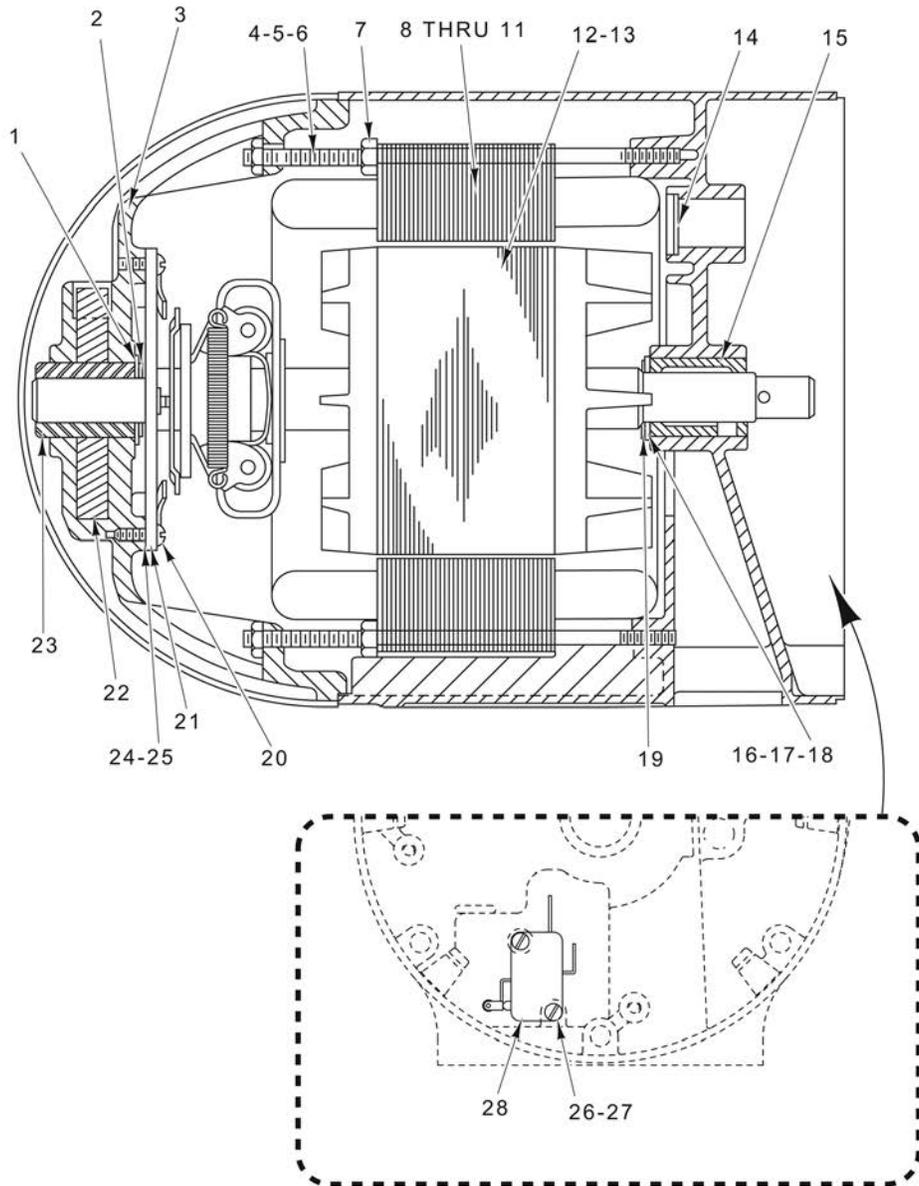
ILLUS.	PART NO.	NAME OF PART	AMT.
PL-59770			
1	00-021625-00003	Cup - Drip.....	1
2	00-061473	Agitator Shaft Assy. (Incls. Item 3).....	1
3	PG-006-11	Pin - Groove 1/4 x 5/8, Type D.....	1
4	00-270718	Spring - Agitator Shaft.....	1
5	WS-008-02	Washer.....	1
6	00-009038	Bearing - Planetary (Lower).....	1
7	00-274427	Pinion - Agitator Shaft (18T).....	1
8	00-274444-00001	Pin - Agitator Shaft.....	1
9	00-007595	Bearing - Planetary (Upper).....	1
10	SC-129-20	Mach. Screw 10-24 x 5/8 Hex Button Hd.....	4
11	00-005428	Gear - Internal (59T).....	1
12	00-009039	Bearing - Planetary Shaft.....	1
13	00-004378	Washer - Cupped.....	1
14	PT-003-29	Taper Pin - #1 x 1 In. Lg.....	1
15	00-007602	Screw - Bearing Retaining.....	1
16	SC-008-58	Mach. Screw 12-24 x 2-3/4 Slotted Rd. Hd.....	7
17	WS-002-30	Washer, Fiber.....	7
18	00-274602	Planetary Assy. (Hobart Gray) (Incls. Items 2 thru 9, 13, & 15).....	1
19	00-274602-00002	Planetary Assy. (Cherry Red) (Incls. Items 2 thru 9, 13, & 15).....	1
20	00-274602-00003	Planetary Assy. (Berry Blue) (Incls. Items 2 thru 9, 13, & 15).....	1
21	00-274602-00004	Planetary Assy. (Plum Black) (Incls. Items 2 thru 9, 13, & 15).....	1
22	00-274602-00005	Planetary Assy. (Creamy White) (Incls. Items 2 thru 9, 13, & 15).....	1
23	00-290257	Trans. Case & Brg. Assy. (Incls. Items 10, 11, & 12) (All Except ML-134271).....	1
24	00-290257-00002	NLA - Obsolete--Trans. Case & Brg. Assy. (Incls. Items 10, 11, & 12) (ML-134271)	1



TRANSMISSION

TRANSMISSION

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-57176			
1	WS-003-07	Washer.....	1
2	SC-060-07	Mach. Screw 12-24 x 3/4 Rd. Hd.....	1
3	00-009090	Stop - Tumbler Yoke.....	1
4	SC-013-26	Mach. Screw 8-32 x 3/8 Slotted Flat Hd.....	1
5	00-010973	Spring - Tumbler Yoke.....	1
6	00-009042	Washer - Retaining.....	1
7	SC-128-97	Mach. Screw 10-24 x 1/2 Phil. Flat Hd.....	1
8	00-875769	Gear - Main Drive (49T) (60 Hz.).....	1
9	00-875794	Gear - Main Drive (47T) (50 Hz.).....	1
10	00-012430-00083	Key.....	1
11	RR-007-02	Retaining Ring.....	1
12	00-016747	Washer - Motor Pinion.....	1
13	00-016777	Pin.....	1
14	00-016759	Pinion - Motor (17T) (50 Hz.).....	1
15	00-009421	Pinion - Motor (15T) (60 Hz.).....	1
16	00-005247-00002	Screw - Pinion Retaining.....	1
17	WS-008-04	Washer.....	1
18	RR-004-25	Retaining Ring.....	1
19	00-009052	Shaft - Tumbler.....	1
20	PC-003-36	Cotter Pin 3/32 x 1 Lg.....	1
21	00-009050	Sleeve - Shifter.....	1
22	00-009051	Retainer - Shifter Sleeve.....	1
23	00-009048	Gear - Transmission (31T).....	1
24	00-012430-00022	Key.....	1
25	00-107342	Tumbler Yoke & Shifter Pin Assy.....	1
26	00-009047	Transmission Gear Assy. (15T & 31T).....	1
27	00-115148	Shaft - Transmission (Upper).....	1
28	00-011800-00187	Dowel.....	1
29	00-005462	Washer - Plug.....	1
30	00-104040-00002	Zerol Bevel Gear Assy. (23T) (Incls. Item 29).....	1
31	WS-012-12	Washer (0.008 Thk.).....	AR
32	WS-012-13	Washer (1/64 Thk.).....	AR
33	WS-012-14	Washer (1/32 Thk.).....	AR
34	PT-003-40	Taper Pin - #2 x 1 In. Lg.....	1
35	00-012430-00023	Key - Transmission Shaft (Upper).....	1
36	SC-046-27	Set Screw 1/4-20 x 1/4 Slotted Hdls., Cup Pt.....	1
37	00-009043	Shaft - Transmission (Lower).....	1
38	00-009047	Transmission Gear Assy. (15T & 31T).....	1
39	NS-013-22	Nut 3/8-16 Hex.....	1
40	00-006021	Washer (Copper).....	1
41	00-009088	Shaft - Eccentric.....	1
42	SC-046-27	Set Screw 1/4-20 x 1/4 Slotted Hdls., Cup Pt.....	1
43	00-017864	Flange Ring & Hub Assy.....	1
44	00-020661-00002	Gear - Zerol Bevel (23T).....	1
45	00-124945	Washer (0.010 Thk.).....	AR
46	00-124946	Washer (1/32 Thk.).....	AR
47	00-124947	Washer (1/16 Thk.).....	AR
48	00-009040	Shaft - Planetary.....	1
	00-074676	Tumbler Yoke & Gear Assy. (Incls. Items 19 thru 26).....	1

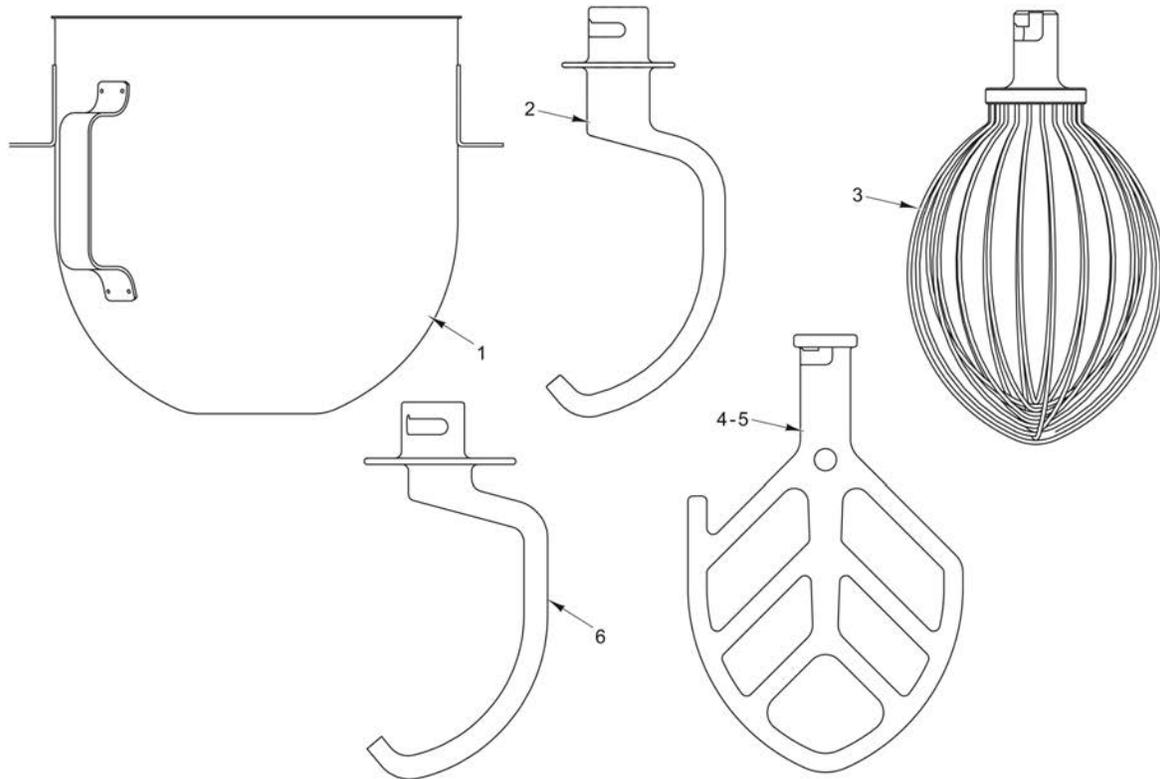


PL-57177

MOTOR PARTS

MOTOR PARTS

ILLUS. PL-57177	PART NO.	NAME OF PART	AMT.
1	WS-007-21	Washer (0.031 Thk.).....	AR
2	WS-007-19	Washer (Fiber).....	AR
3	00-812450	Bracket - Motor Bearing.....	1
4	00-022216-00002	Stud.....	4
5	00-023383-00014	Sleeve (Elec. Leads Protection) (60 Hz.).....	4
6	00-023383-00018	Sleeve (Elec. Leads Protection) (50 Hz.).....	4
7	NS-009-12	Nut 8-32 Hex.....	8
8	00-065477-008-1	Stator Assy. (115 V., 60 Hz., 1 Ph.).....	1
9	00-065477-008-2	Stator Assy. (230 V., 60 Hz., 1 Ph.).....	1
10	00-065477-028-1	Stator Assy. (115 V., 50 Hz., 1 Ph.).....	1
11	00-065477-028-4	Stator Assy. (230 V., 50 Hz., 1 Ph.).....	1
12	00-022275-00149	Rotor Assy. (60 Hz.).....	1
13	00-022275-00148	Rotor Assy. (50 Hz.).....	1
14	00-004378	Washer - Cupped.....	1
15	00-290659	Bearing - Sleeve (Pulley End).....	1
16	WS-007-21	Washer (0.031 Thk.).....	AR
17	WS-031-50	Washer (0.015 Thk.).....	AR
18	SL-005-10	Spring - Loading.....	1
19	WS-007-19	Washer (Fiber).....	AR
20	SC-018-28	Mach. Screw 6-32 x 1/4 Phil. Pan Hd.....	2
21	00-066085	Switch - Starting (Stationary Part).....	1
22	00-511813	Wicking 5/16 Dia. x 1/2 In. Lg.....	AR
23	00-290659	Bearing - Sleeve.....	1
24	00-069563	Insulator - Back Plate (ML-134271).....	1
25	00-477881	NLA - Obsolete--Insulator - Switch (ML-134271).....	1
26	SD-033-01	NLA - Obsolete--Self-Tapping Screw 4-40 x 1/4 Phil. Pan Hd., Type T (ML-134271)	2
27	SD-038-46	Self-Tapping Screw 4-40 x 5/8 Phil. Pan Hd., Type T (ML-134271).....	2
28	00-087711-201-2	Switch (ML-134271).....	1



PL-59760

BOWL AND AGITATOR UNIT

BOWL AND AGITATOR UNIT

ILLUS.	PART NO.	NAME OF PART	AMT.
1	00-295576	Bowl - 5 Qt. (SST).....	1
2	00-315966	"E" Dough Arm.....	1
3	00-295580	"D" Wire Whip.....	1
4	00-295578	"B" Flat Beater (Aluminum).....	1
5	00-295579	"B" Flat Beater (SST).....	1
6	00-875822	"ED" Dough Arm.....	1



CATALOG OF REPLACEMENT PARTS

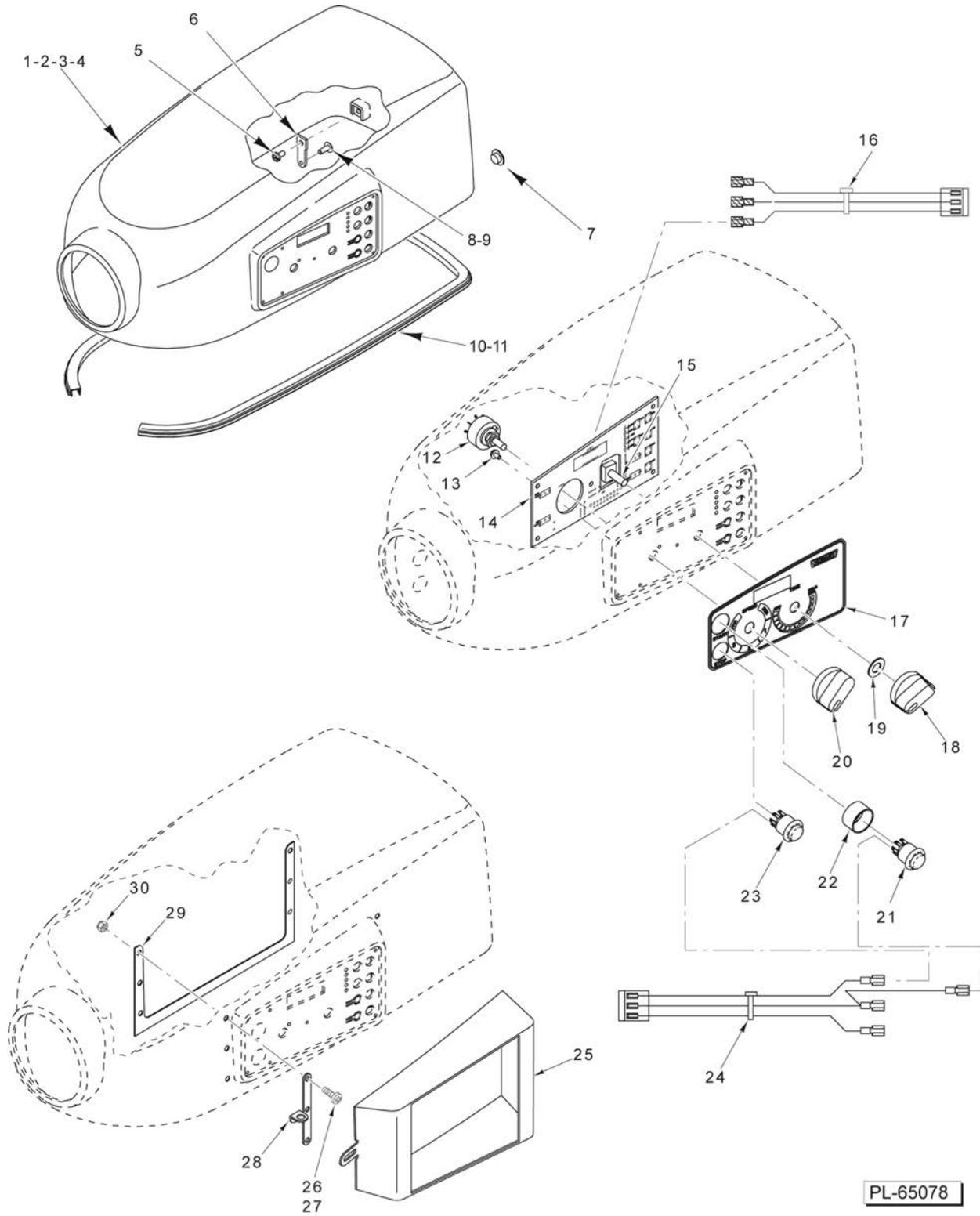


A.) HL120/200 LEGACY MIXER

ML-141119	HL120
ML-141123	HL120
ML-141124	HL120 (Canada)
ML-141125	HL200
ML-141127	HL200 (Floor)
ML-141131	HL200 (Pretzel)
ML-141132	HL200
ML-141133	HL200 (Floor)
ML-141135	HL200 (Canada - Floor)
ML-141136	HL200 (Canada)
ML-141137	HL200
ML-141138	HL200 (Pretzel - Blue)
ML-141139	HL200 (Red)
ML-141140	HL200C
ML-141147	HL200 (Canada - Metro)

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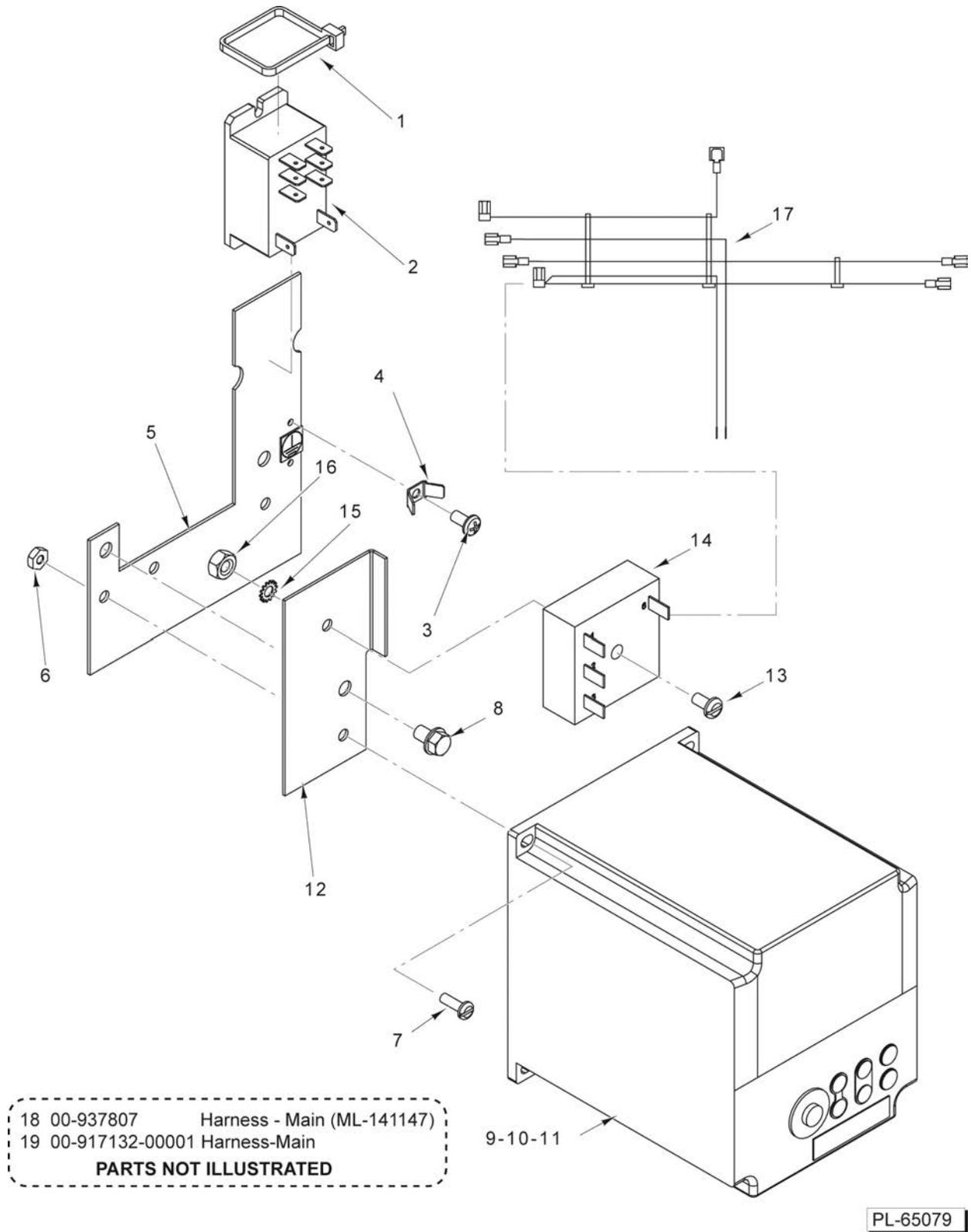
5	CONTROL PANEL
7	ELECTRICAL COMPONENTS
9	ATTACHMENT HUB
11	BASE AND PEDESTAL
13	FLOOR BASE AND PEDESTAL (ML-141127, ML-141133, & ML-141135)
15	BOWL SUPPORT
17	TRANSMISSION CASE AND MOTOR
19	TRANSMISSION
21	PLANETARY
23	BOWL AND BOWL GUARD
25	AGITATORS AND ACCESSORIES
27	MIXER TABLE



CONTROL PANEL

CONTROL PANEL

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-65078			
1	00-937698-00001	Top Cover Assy. (Gray) Incls. Top Cover & Items 5-8 and 12-24.....	1
2	00-937698-00002	Top Cover Assy. (CE) Incls. Top Cover & Items 5-8 and 12-24.....	1
3	00-937698-00003	Top Cover Assy. (Blue) Incls. Top Cover & Items 5-8 and 12-24.....	1
4	00-937698-00004	Top Cover Assy. (Red) Incls. Top Cover & Items 5-8 and 12-24.....	1
5	SD-024-38	Self-Tapping Screw 10-24 x 3/8 Phil. Pan Hd., Type TT.....	2
6	00-874829	Tab - Cover Mounting.....	1
7	00-874857	Plug.....	1
8	SC-066-20	Mach. Screw 10-32 x 1/2 Phil. Truss Hd. (SST).....	2
9	SC-128-81	Mach. Screw 10-32 x 1/2 Tx. Button Hd. (Correctional).....	2
10	00-937329-00001	Seal - Neoprene.....	1
11	00-937329-00002	Seal - Neoprene.....	1
12	00-937061	Switch - Speed Selector Assy. (6-Position).....	1
13	SD-039-23	Self-Tapping Screw 6-32 x 1/4 Hex Washer Hd., Type RL.....	5
14	00-937693	PCB Assy.....	1
15	00-937694	Potentiometer Assy.....	1
16	00-937695	Harness - Timer.....	1
17	00-937071	Overlay (6-Position Speed Selector Switch).....	1
18	00-874809	Knob.....	1
19	WS-031-55	Washer (Rubber).....	1
20	00-874809	Knob.....	1
21	00-916593	Switch - Sealed Dome (Start).....	1
22	00-916958-00002	Guard - Switch.....	1
23	00-916592	Switch - Sealed Dome (Stop).....	1
24	00-916566-00001	Harness - Switch.....	1
25	00-874921	Cover - Weldment (Correctional).....	1
26	SC-128-62	Mach. Screw 10-24 x 1/2 Tx. Button Hd. (SST) (Correctional).....	6
27	00-042648	Insert - Threaded.....	6
28	00-874923	Latch (Correctional).....	1
29	00-874931	Plate - Backer (Correctional).....	1
30	NS-038-13	Lock Nut 10-24 Hex (Correctional).....	6

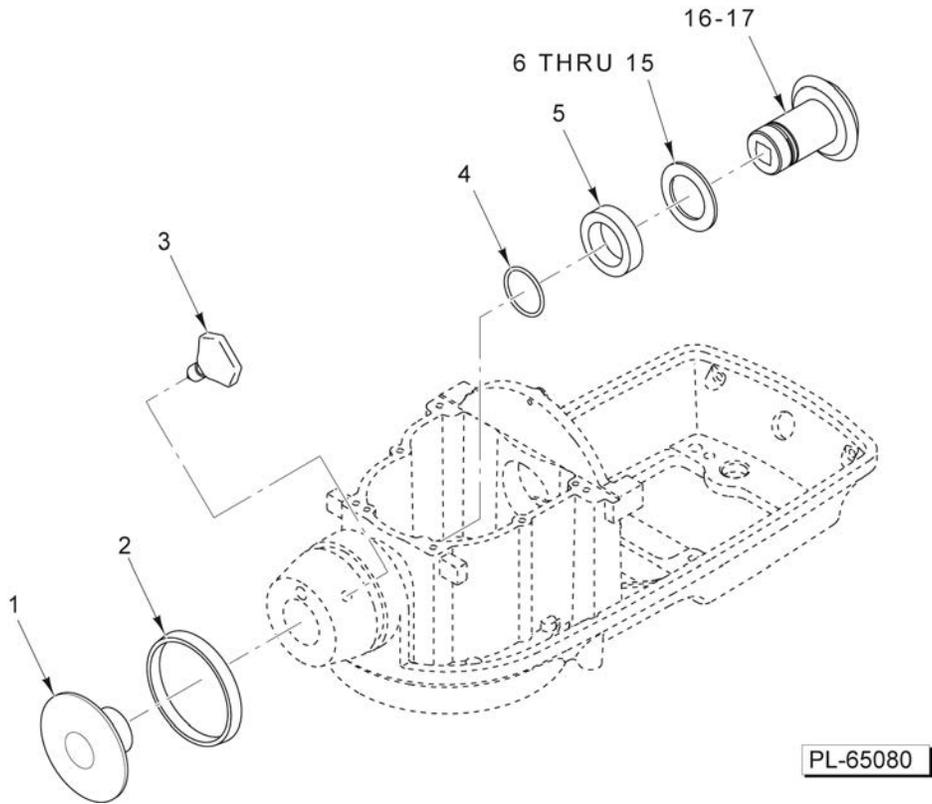


ELECTRICAL COMPONENTS

ELECTRICAL COMPONENTS

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-65079			
1	00-113703	Cable Tie.....	1
2	00-087714-042-5	Relay (2-Pole, 30 Amp.).....	1
3	SD-015-37	Self-Tapping Screw 6-32 x 1/4 Phil. Pan Hd., Type TT.....	1
4	00-065890-00090	Terminal (2-Tab).....	1
5	00-874763	Bracket - Controller.....	1
6	NS-009-12	Nut 8-32 Hex.....	2
7	SC-114-80	Mach. Screw 1/4-20 x 3/8 Phil. Pan Hd.....	2
8	SC-100-08	Mach. Screw 1/4-20 x 3/8 Hex Washer Hd.....	1
9	00-916893	Controller - Low Voltage (100-120 V., 50-60 Hz., 1Ph.).....	1
10	00-916894	Controller - High Voltage (200-240 V., 50-60 Hz., 1Ph.).....	1
*11	00-937808	Controller.....	1
*12	00-937799	Bracket - Time Delay Relay.....	1
*13	SC-119-43	Mach. Screw 10-24 x 1.25.....	1
*14	00-937810	Relay - Time Delay.....	1
*15	WL-007-11	Washer - Lock Ext. 10.....	1
*16	NS-048-12	Nut - Hex 10-24.....	1
*17	00-937805	Harness - Time Delay Relay.....	1
*18	00-937807	Harness - Main.....	1
19	00-917132-00001	Harness - Main.....	1

* ML-141147 Only

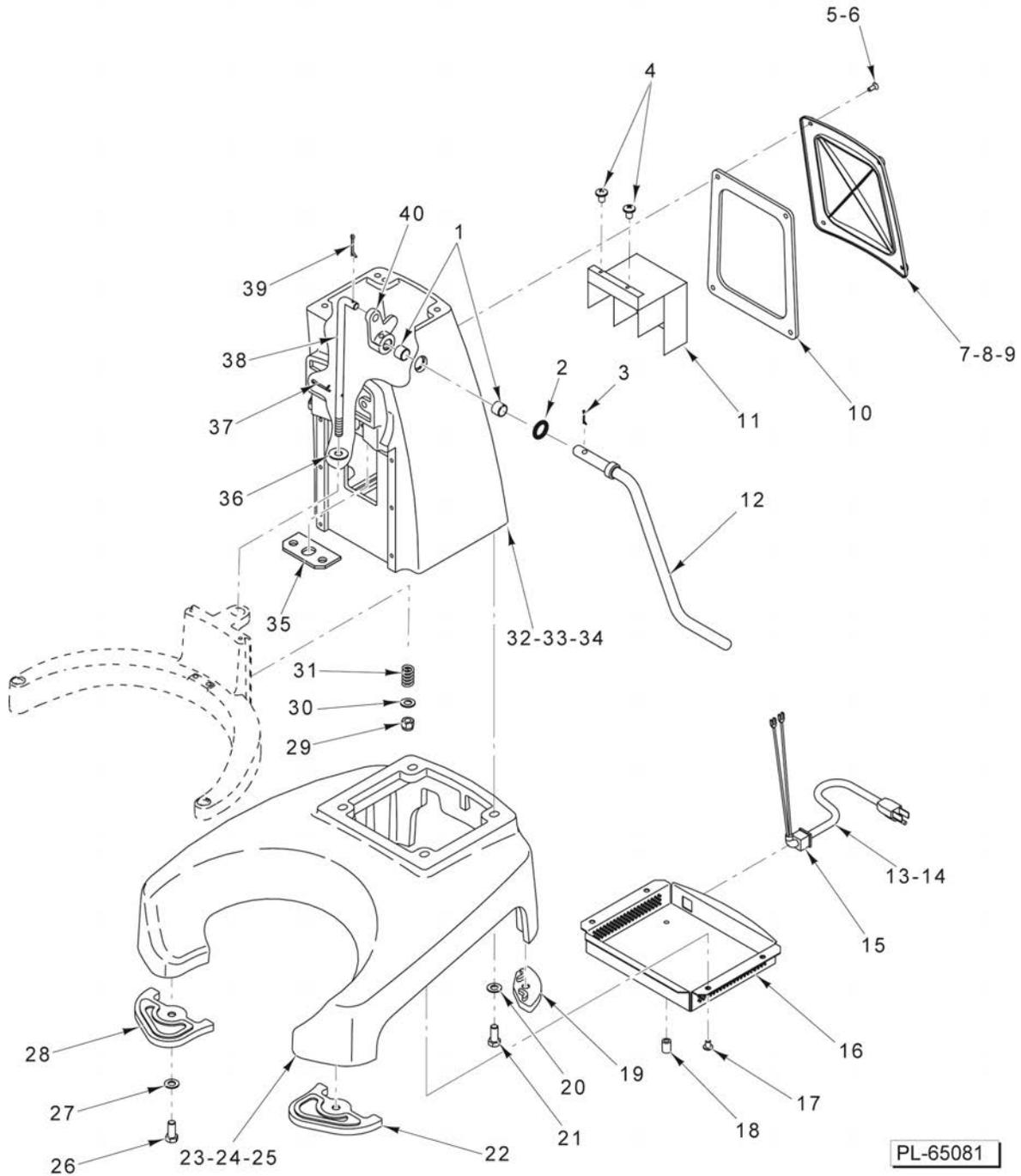


ATTACHMENT HUB

ATTACHMENT HUB

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-65080			
1	00-917221	Plug - Attachment.....	1
2	00-937329-00003	Seal - Neoprene.....	1
3	00-108197-00001	Thumb Screw 1-1/4 (1/2-12 Sharp V).....	1
4	OR-001-03	O-Ring - Quad.....	1
5	00-874837	Spacer.....	1
6	00-012746-00005	Washer - Thrust (0.080).....	AR
7	00-012746-00006	Washer - Thrust (0.106).....	AR
8	00-012746-00007	Washer - Thrust (0.092).....	AR
9	00-012746-00008	Washer - Thrust (0.086).....	AR
10	00-012746-00009	Washer - Thrust (0.098).....	AR
11	00-012746-00010	Washer - Thrust (0.112).....	AR
12	00-012746-00012	Washer - Thrust (0.119).....	AR
13	00-012746-00013	Washer - Thrust (0.121).....	AR
14	00-012746-00016	Washer - Thrust (0.129).....	AR
15	00-012746-00019	Washer - Thrust (0.115).....	AR
16	00-435065-00002	Bevel Drive Gear & Seal Assy. (Incls. Item 17).....	1
17	PL-003-17	Plug - Expansion.....	1

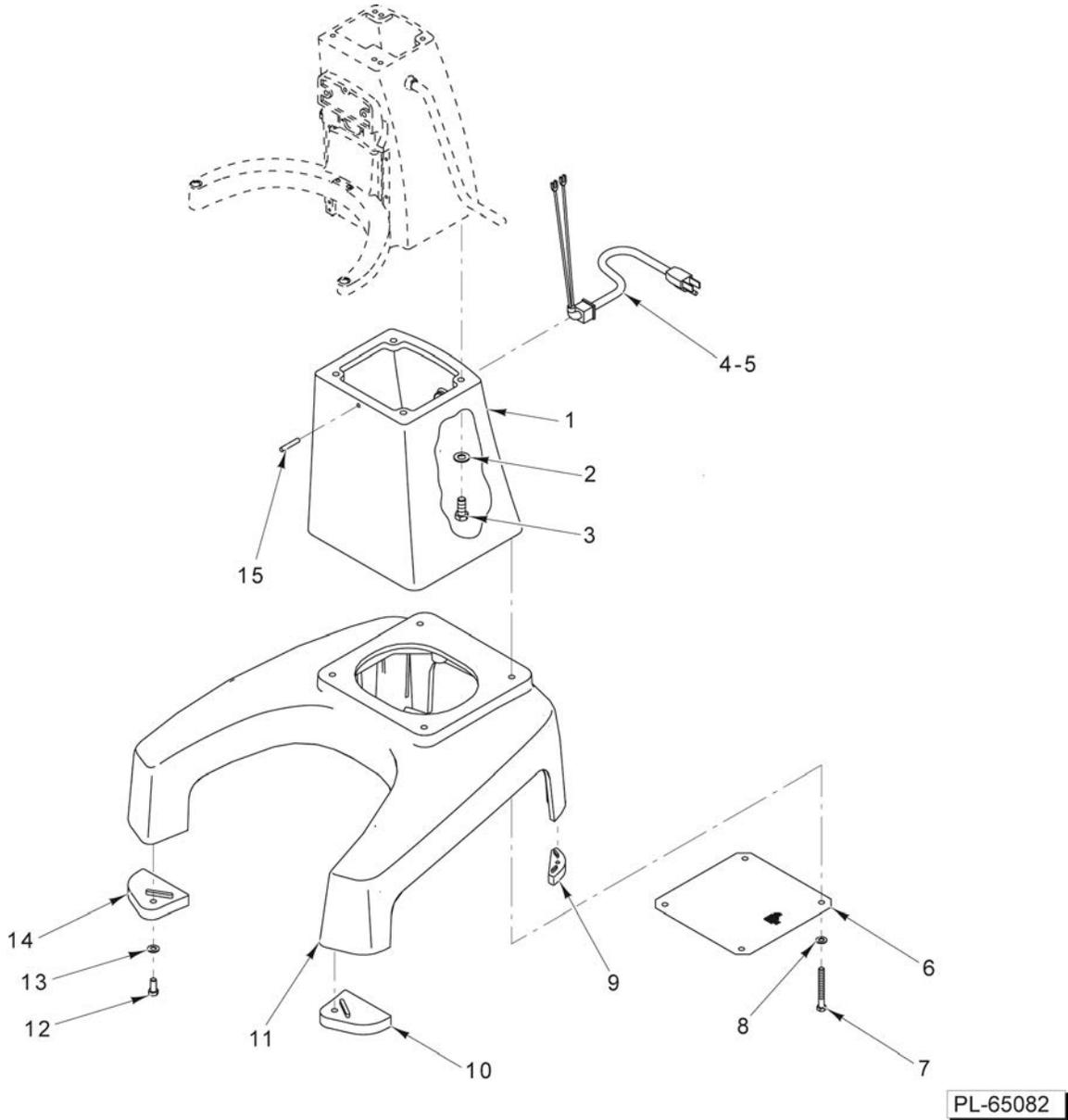
41 00-917167 Barrier - Steam
 42 00-539847 Tie - Cable
PARTS NOT ILLUSTRATED



BASE AND PEDESTAL

BASE AND PEDESTAL

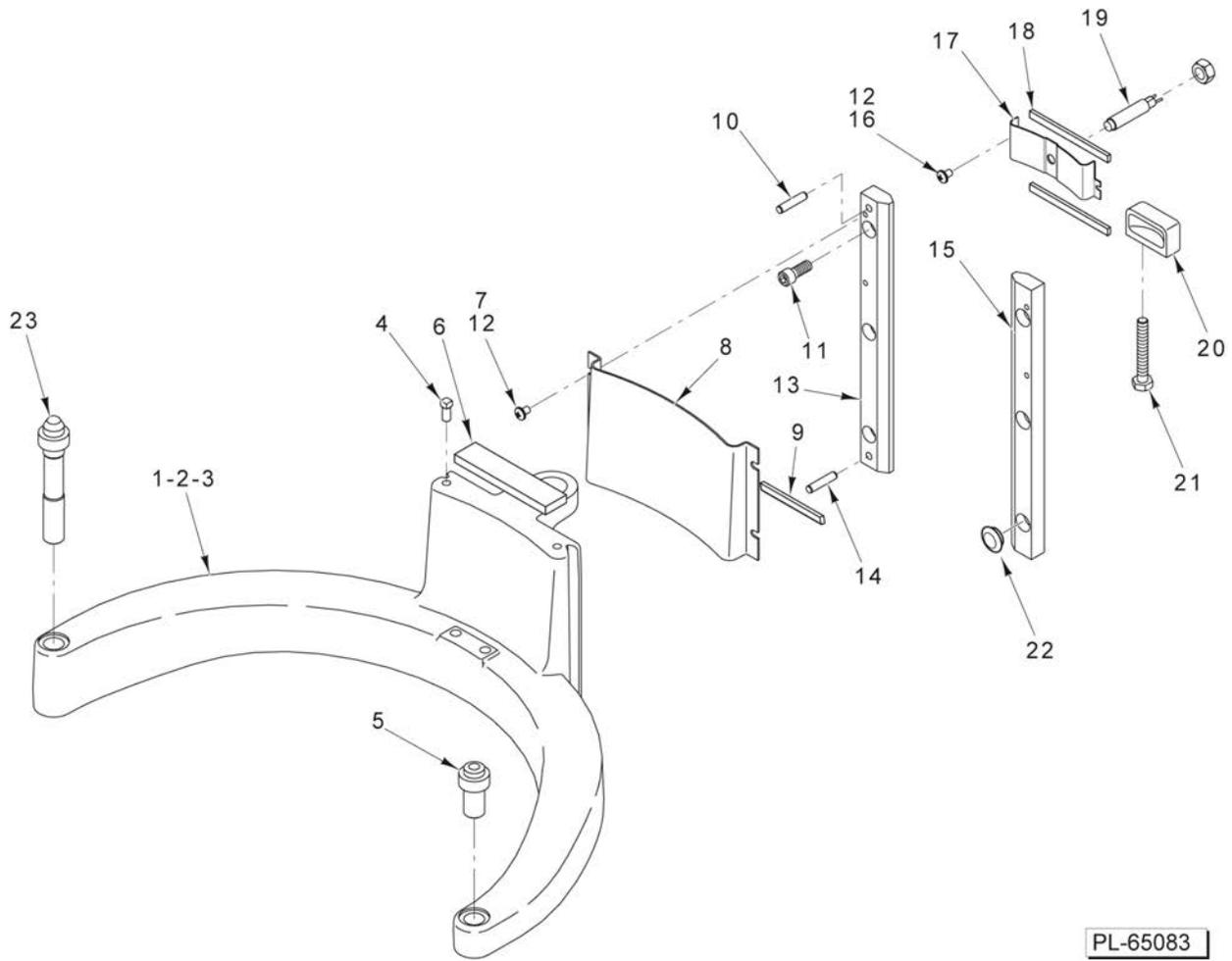
ILLUS.	PART NO.	NAME OF PART	AMT.
PL-65081			
1	00-479510	Bushing - Bowl Lift.....	2
2	00-917649	Grommet - Handle.....	1
3	PS-004-15	Spiral Pin 1/4 Dia. x 1-1/8 Lg.....	1
4	SC-123-98	Mach. Screw M4 x 0.7 x 6mm Phil. Pan Hd.....	2
5	SC-023-10	Mach. Screw 10-24 x 3/4 Slotted Oval Hd. (SST).....	4
6	SC-131-27	Mach. Screw 10-24 x 3/4 Tx. Flat. Hd. (SST) (Correctional).....	4
7	00-917231	Cover - Pedestal (Back).....	1
8	00-937412	Cover - Pedestal (Back) (Blue).....	1
9	00-937412-00002	Cover - Pedestal (Back) (Red).....	1
10	00-937202-00001	Seal - Neoprene Pedestal Cover.....	1
11	00-937204	Barrier - Drive Shield.....	1
12	00-874745-00002	Handle & Bushing - Bowl Lift.....	1
13	00-874833-00001	Cord & Plug Assy. (120 V.).....	1
14	00-874833-00002	Cord & Plug Assy. (220 V.).....	1
15	FE-026-34	Strain Relief - Electrical.....	1
16	00-874760	Cover - Controller.....	1
17	SC-114-80	Mach. Screw 1/4-20 x 3/8 Phil. Pan Hd.....	4
18	FE-026-43	Plug - Button.....	1
19	00-874879	Pad - Rear.....	2
20	WS-018-24	Washer.....	4
21	SC-118-11	Cap Screw 3/8-16 x 7/8 Hex Hd.....	4
22	00-874896	Pad - Front (RH).....	1
23	00-874720-00002	Base (Gray).....	1
24	00-874720-00003	Base (Blue).....	1
25	00-874720-00004	Base (Red).....	1
26	SC-118-12	Cap Screw 3/8-16 x 3/4 Hex Hd.....	4
27	WS-018-34	Washer - Shim .010 THK. (SST).....	4
28	00-874878	Pad - Front (LH).....	1
29	NS-036-15	Stop Nut 3/8-24 Hex Special.....	1
30	WS-006-26	Washer.....	1
31	00-012782	Spring.....	1
32	00-874723-00002	Pedestal (Gray).....	1
33	00-874723-00003	Pedestal (Blue).....	1
34	00-874723-00004	Pedestal (Red).....	1
35	00-874870	Plate - Spring Bowl Yoke.....	1
36	WS-006-26	Washer.....	1
37	PC-003-55	Cotter Pin 1/8 x 3/4.....	1
38	00-874748	Rod - Bowl Lift.....	1
39	PC-003-55	Cotter Pin 1/8 x 3/4.....	1
40	00-874756	Arm - Bowl Lift.....	1
41	00-917167	Barrier - Steam.....	1
42	00-539847	Tie - Cable.....	AR



**FLOOR BASE AND PEDESTAL
(ML-141127, ML-141133, & ML-141135)**

**FLOOR BASE AND PEDESTAL
(ML-141127, ML-141133, & ML-141135)**

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-65082			
1	00-916548-00002	NLA - Obsolete--Block - Riser.....	1
2	WS-018-24	Washer.....	4
3	SC-118-10	Cap Screw 3/8-16 x 1 Hex Hd.....	4
4	00-874833-00001	Cord & Plug Assy. (120 V.).....	1
5	00-874833-00002	Cord & Plug Assy. (220 V.).....	1
6	00-916549	Screen - Air Floor.....	1
7	SC-124-91	Cap Screw 3/8-16 x 2-1/2 Hex Hd.....	4
8	WS-018-24	Washer.....	4
9	00-916309	Pad - Rear.....	2
10	00-916308	Pad - Front (RH).....	1
11	00-916213-00004	Base.....	1
12	SC-118-12	Cap Screw 3/8-16 x 3/4 Hex Hd.....	4
13	WS-018-34	Washer - Shim .010 THK. (SST).....	4
14	00-916307	Pad - Front (LH).....	1
15	PG-005-25	Pin - Grooved.....	1



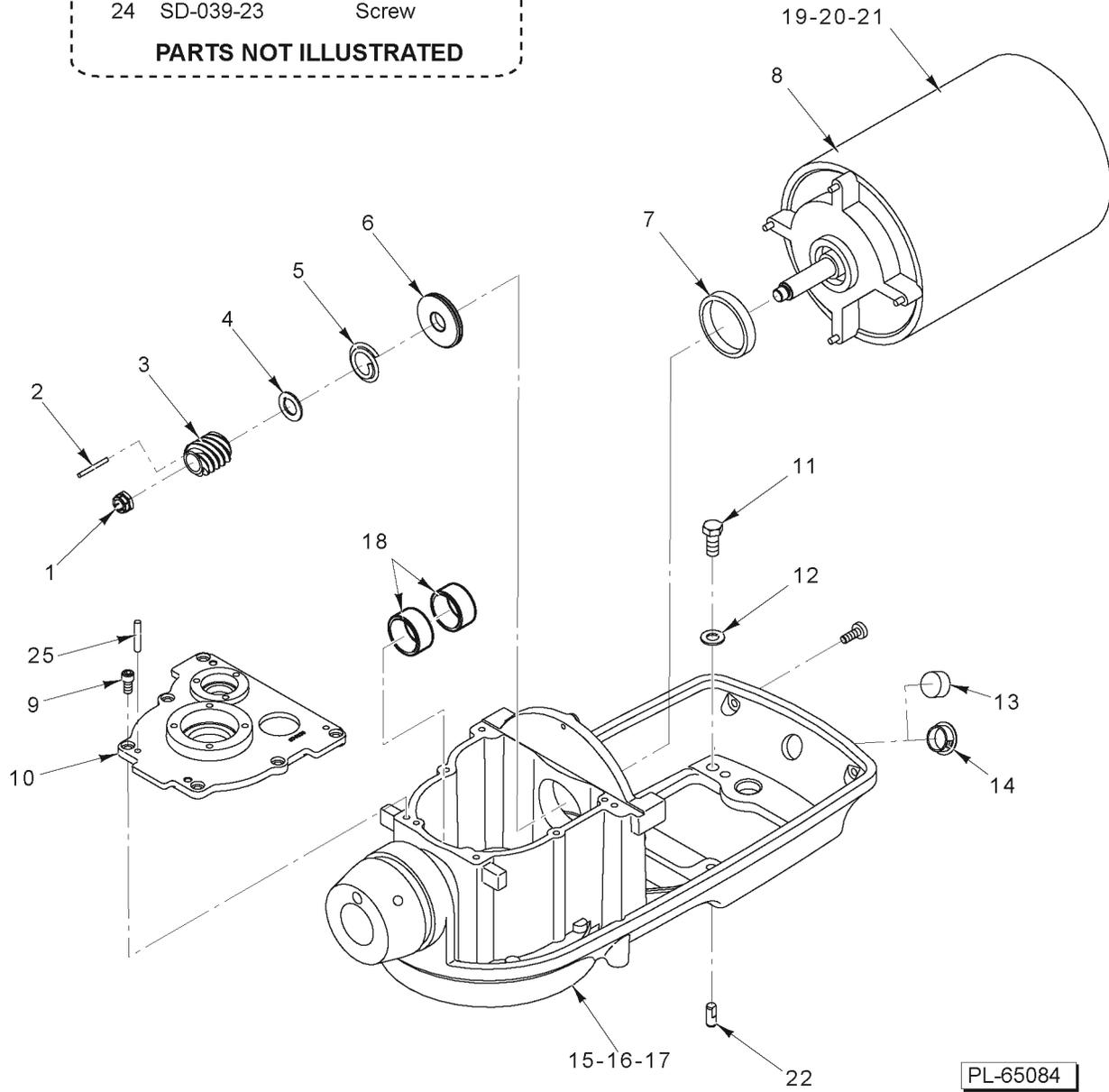
PL-65083

BOWL SUPPORT

BOWL SUPPORT

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-65083			
1	00-874841-00002	Support - Bowl (Gray).....	1
2	00-874841-00003	Support - Bowl (Blue).....	1
3	00-874841-00004	Support - Bowl (Red).....	1
4	SC-129-22	Set Screw 1/4-20 x 1/4 Sq. Hd. Cup Pt.....	2
5	00-874727	Pin - Bowl (RH).....	1
6	00-937203	Seal - Neoprene.....	1
7	SC-122-59	Mach. Screw 8-32 x 1/4 Phil. Pan Hd. (SST).....	4
8	00-874742	Apron.....	1
9	00-937202-00003	Seal - Neoprene Apron.....	1
10	00-011800-00187	Dowel.....	2
11	SC-089-02	Cap Screw 1/4-20 x 3/4 Hex Socket Hd.....	6
12	SC-128-73	Mach. Screw 8-32 x 1/4 Tx. Button Hd. (SST) (Correctional).....	6
13	00-874738-00001	Slideway - Bowl Lift (LH).....	1
14	00-011800-00187	Dowel.....	1
15	00-874738-00002	Slideway - Bowl Lift (RH).....	1
16	SC-122-59	Mach. Screw 8-32 x 1/4 Phil. Pan Hd. (SST).....	2
17	00-937323	Cover - Bowl Interlock.....	1
18	00-937202-00002	Seal - Neoprene Control Cover.....	2
19	00-087711-00352	Switch - Reed.....	1
20	00-874842	Hold Down - Bowl (Rear).....	1
21	SC-062-69	Cap Screw 1/4-20 x 1-3/4 Hex Hd.....	2
22	PB-004-97	Cap.....	4
23	00-874726	Pin - Bowl (LH).....	1

23	00-917983	Shield - Mylar
24	SD-039-23	Screw
PARTS NOT ILLUSTRATED		



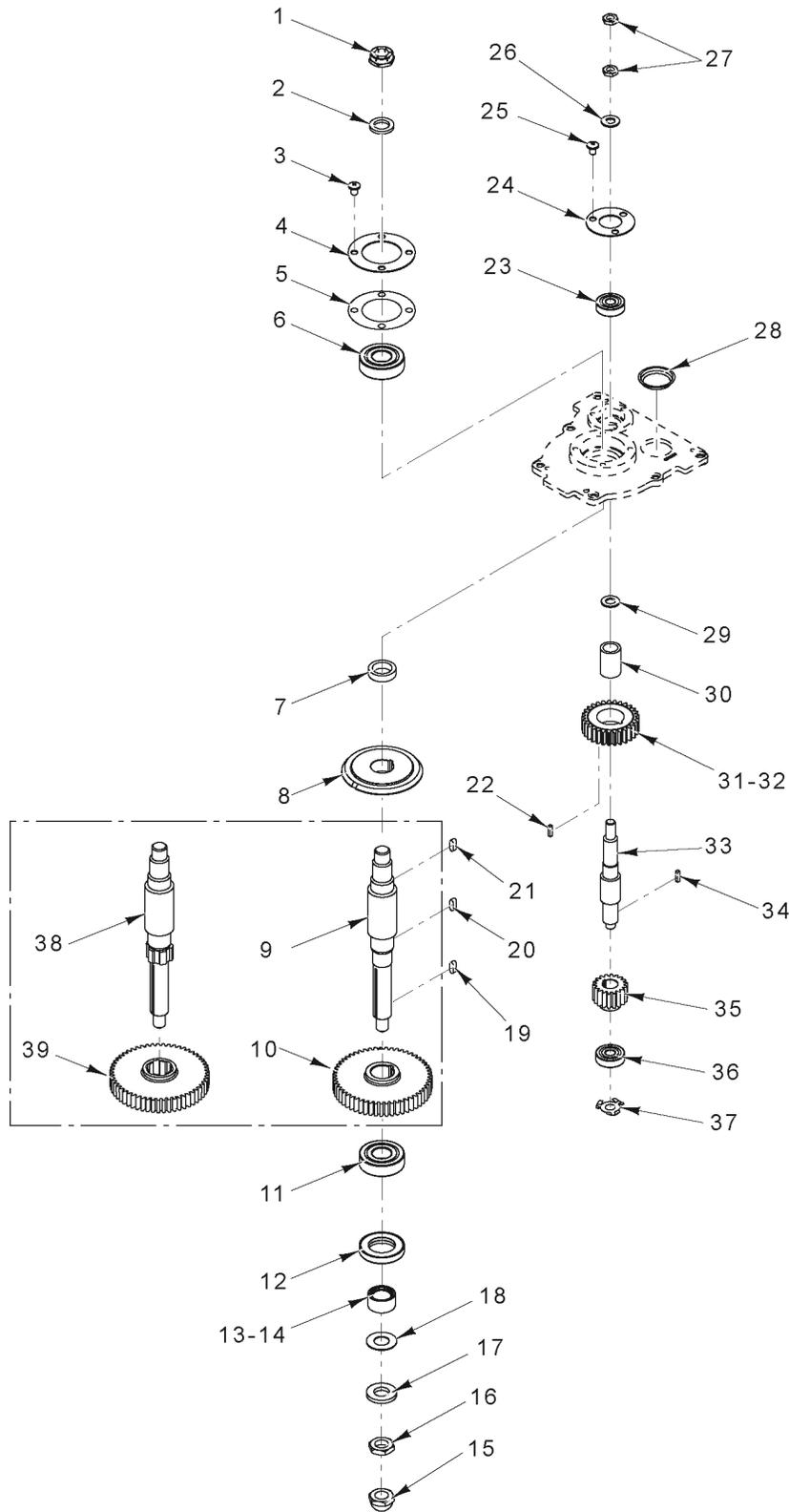
PL-65084

TRANSMISSION CASE AND MOTOR

TRANSMISSION CASE AND MOTOR

ILLUS. PL-65084	PART NO.	NAME OF PART	AMT.
1	NS-032-23	Lock Nut 7/16-20 Special.....	1
2	00-012430-00004	Key 1/8 x 1/8 x 1-1/4.....	1
3	00-291221	Gear - Worm (60 Cycle).....	1
4	00-012754	Washer.....	1
5	00-012757	Spring - Shock Absorber.....	1
6	00-874820	Deflector - Grease (LH).....	1
7	00-916445	Bushing - Motor.....	1
8	00-917810	Motor (All Voltages - For Insulated Mixers Only).....	1
9	SC-089-01	Cap Screw 1/4-20 x 1/2 Hex Socket Hd.....	6
10	00-874755	Cover - Transmission.....	1
11	SC-118-11	Cap Screw 3/8-16 x 7/8 Hex Hd.....	4
12	WS-018-24	Washer.....	4
13	00-874876	Plug - Cupped Expansion (Brass).....	1
14	00-874857	Plug.....	1
*15	00-937437-00003	Transmission Case - Lower (Blue).....	1
*16	00-937437-00002	Transmission Case - Lower (Gray).....	1
*17	00-937437-00004	Transmission Case - Lower (Red).....	1
18	BN-002-06	Bearing - Needle.....	2
19	00-917938	Bearing - Flange (Front).....	4
20	00-917839	Tubing - Shrink (36" length).....	1
21	00-557982	Bearing - Flange (Rear).....	4
22	00-270776	Dowel.....	2
23	00-917983	Shield - Mylar	1
24	SD-039-23	Self-Tapping Screw 6-32 x 1/4 Hex Washer Hd., Type RL.....	2
25	00-011800-00187	Dowel.....	2

* (Order items 7, 20 (qty of 2) & 00-435065-00002)

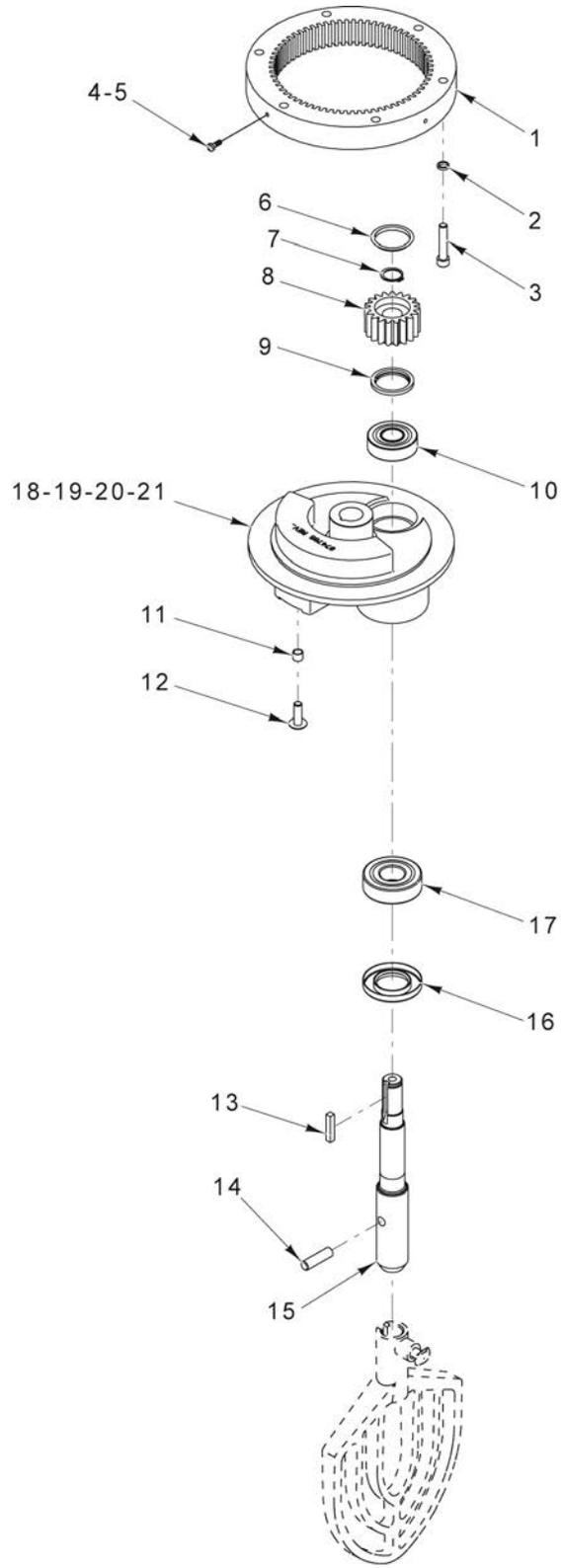


PL-65085

TRANSMISSION

TRANSMISSION

ILLUS. PL-65085	PART NO.	NAME OF PART	AMT.
1	NS-032-37	Lock Nut 5/8-18 Special.....	1
2	WS-031-41	Washer.....	1
3	SC-089-01	Cap Screw 1/4-20 x 1/2 Hex Socket Hd.....	4
4	00-874787	Retainer - Planetary Bearing.....	1
5	00-874795	Gasket - Bearing.....	1
6	BB-005-34	Ball Bearing.....	1
7	00-874793	Spacer - Planetary.....	1
8	00-124733-00002	Gear - Bevel (46T).....	1
9	00-874635	Shaft - Planetary (Use Only W/Item 10).....	1
10	00-874778	Gear (55T, 14P) (Use Only W/Item 9).....	1
11	BB-020-06	Ball Bearing (Fafnir 204KDFA51580).....	1
12	00-114695	Seal - Oil.....	1
13	00-437342	Spacer - Bearing.....	1
14	00-067500-00078	O-Ring.....	1
15	00-024715-00003	Acorn Nut 1/2-20.....	1
16	00-010928-00002	Nut - Special.....	1
17	WS-030-83	Washer - Retaining (STL).....	1
18	00-124946	Washer (1/32 Thk.).....	1
19	00-012430-00017	Key 1/8 x 1/8 x 2-7/16.....	1
20	00-874873-00002	Key.....	1
21	00-874873-00001	Key.....	1
22	00-012430-00024	Key 1/8 x 1/8 x 1/2.....	1
23	BB-005-02	Ball Bearing - N.D. #7500.....	1
24	00-874788	Retainer - Bearing.....	1
25	SC-089-01	Cap Screw 1/4-20 x 1/2 Hex Socket Hd.....	3
26	WS-006-36	Washer.....	1
27	00-012710	Nut - Retaining.....	2
28	00-064871	Plug - Friction.....	1
29	00-968075	Spacer, Worm Wheel.....	1
30	00-916962	Spacer - Gear.....	1
31	00-917797	Gear - Worm.....	1
32	00-917797-00002	Gear - Insulated Worm (Above S/N 311569659 or Pretzel Mixers).....	1
33	00-916961	Shaft - Worm Wheel.....	1
34	00-012430-00024	Key 1/8 x 1/8 x 1/2.....	1
35	00-874777	Gear (18T, 14P).....	1
36	BB-021-62	Ball Bearing.....	1
37	SL-002-08	Spring - Loading.....	1
38	00-937980	Shaft Planetary (Use Only W/Item 38) (Repls Item 9).....	1
39	00-937981	Gear (55T-14P) (Use Only W/Item 37) (Repls Item 10).....	1

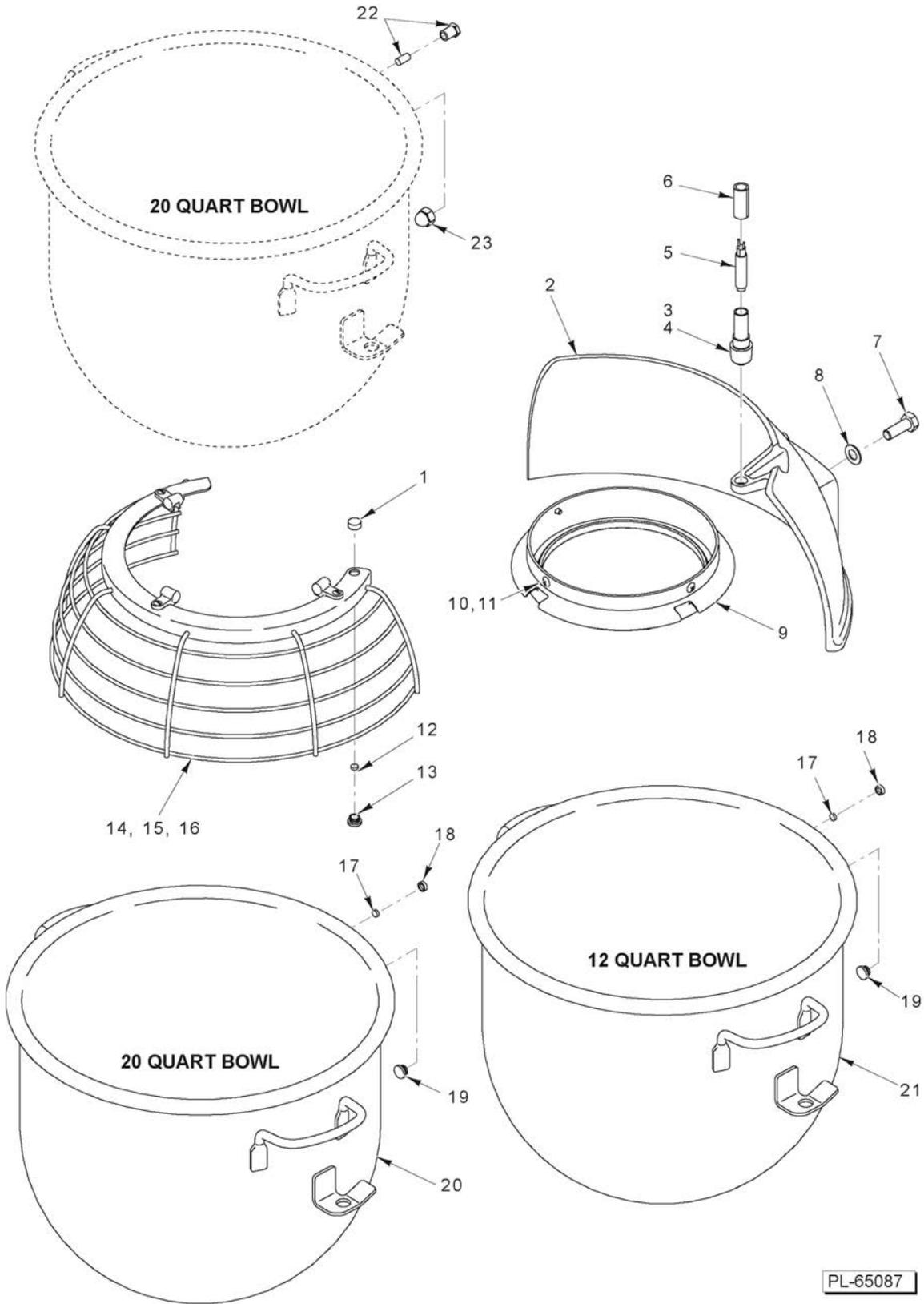


PL-65086

PLANETARY

PLANETARY

ILLUS. PL-65086	PART NO.	NAME OF PART	AMT.
1	00-438524-00002	Gear - Internal (63T).....	1
2	WL-003-35	Lockwasher 1/4 Helical.....	6
3	SC-040-09	Cap Screw 1/4-20 x 1-1/4 Hex Socket Hd.....	6
4	SC-066-13	Mach. Screw 8-32 x 1/4 Phil. Truss Hd. (SST).....	3
5	SC-128-73	Mach. Screw 8-32 x 1/4 Tx. Button Hd. (SST) (Correctional).....	3
6	00-916336	Plug - Friction (1 In. Dia.).....	1
7	RR-004-18	Retaining Ring.....	1
8	00-916335	Pinion - Beater Shaft.....	1
9	00-916512	Seal - Upper Agitator Shaft.....	1
10	BB-018-17	Bearing - Ball Hoover.....	1
11	00-874770	Spacer - Bowl Scraper.....	2
12	SC-053-46	Mach. Screw 1/4-20 x 3/4 Slotted Truss Hd. (SST).....	2
13	00-012430-00055	Key 3/16 x 3/16 x 1.....	1
14	00-065062-00001	Pin - Dowel.....	1
15	00-937706	Shaft - Agitator & Pin Assy.....	1
16	00-023482	Seal - Oil (1 In. I.D.).....	1
17	BB-005-34	Ball Bearing.....	1
18	00-916333-00001	Planetary (Gray).....	1
19	00-916333-00003	Planetary (Blue).....	1
20	00-916333-00004	Planetary (Red).....	1
21	00-916332	Planetary Subassy. (Gray) (Incls. Items 6 thru 18).....	1

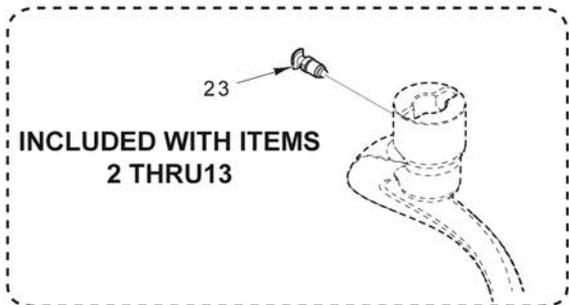
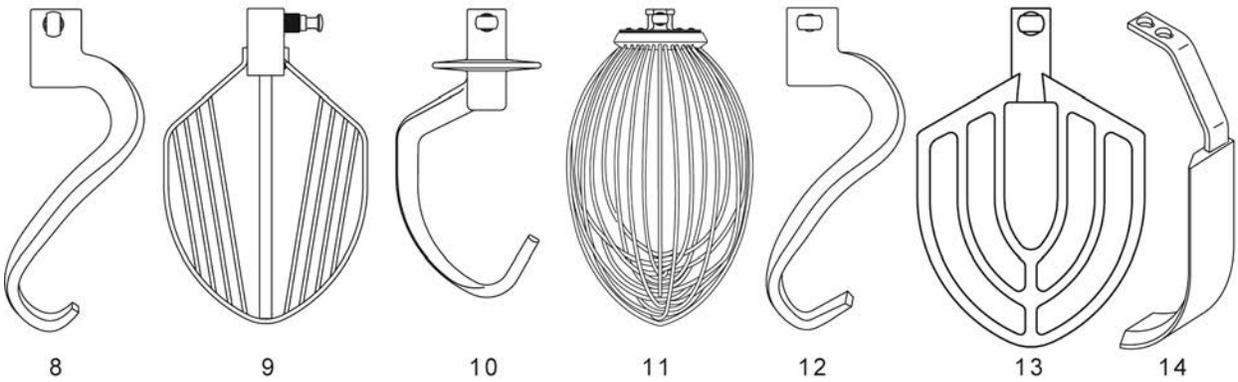
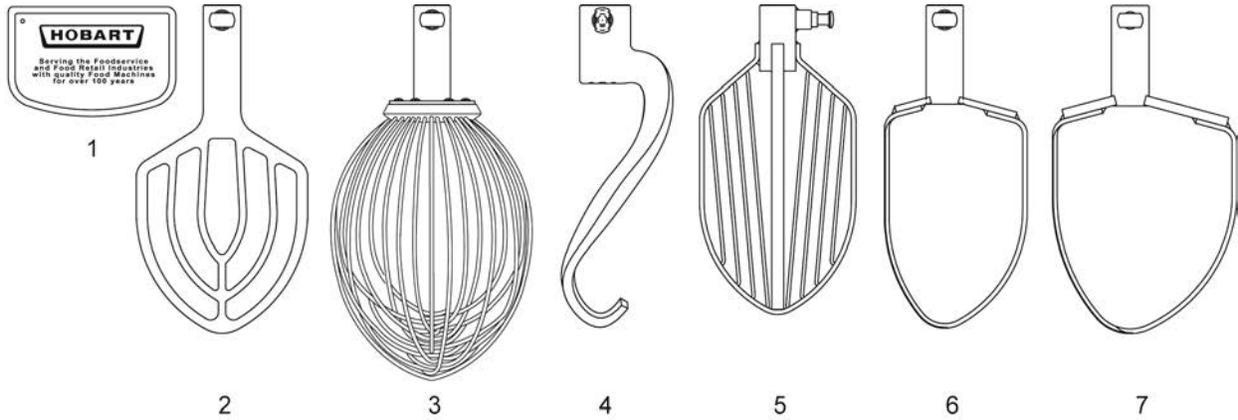


BOWL AND BOWL GUARD

BOWL AND BOWL GUARD

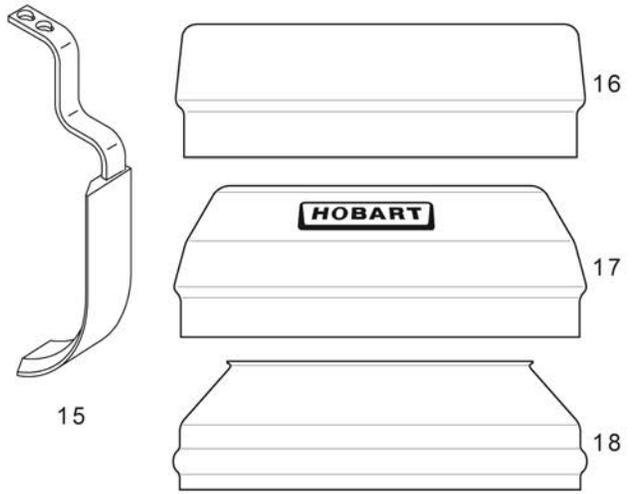
ILLUS.	PART NO.	NAME OF PART	AMT.
PL-65087			
1	00-917357	Holder - Magnet (Upper).....	1
2	00-917234	Guard - Splash.....	1
3	00-917232	Holder - Switch Reed (1/2 - 20 UNF-2B).....	1
4	00-874839	Pin - Sensor.....	1
5	00-087711-00352	Switch - Reed.....	1
6	00-937354	Tube - Split.....	1
7	SC-118-18	Cap Screw 1/4-20 x 7/8 Hex Hd.....	2
8	WS-003-19	Washer.....	2
9	00-917272	Cup - Drip & Flange.....	1
10	SC-066-13	Mach. Screw 8-32 x 1/4 Phil. Truss Hd. (SST).....	3
11	SC-128-73	Mach. Screw 8-32 x 1/4 Tx. Button Hd. (SST) (Correctional).....	3
12	00-937623	Magnet - Disc.....	1
13	00-917358	Holder - Magnet (Lower).....	1
14	00-937163-00001	Wire Cage Assy. (Incls. Items 1, 12, & 13).....	1
15	00-937163-00002	Wire Cage Assy. (Incls. Items 1, 12, & 13) (Correctional).....	1
*16	00-937163-00004	Wire Cage Assy. (Incls. Items 1, 12, & 13).....	1
17	00-937623	Magnet - Disc.....	AR
18	00-917357	Holder - Magnet (Upper).....	1
19	00-917358	Holder - Magnet (Lower).....	1
20	00-917720	Bowl Assy. (20 Qt.) (SST) (Packaged) (Incls. Items 17, 18, 19, & 20).....	1
21	00-874864	Bowl Assy. (12 Qt.) (SST) (Packaged) (Incls. Items 17, 18, 19, & 21).....	1
22	00-917527	Housing - Magnet.....	1
23	NS-025-11	Crown Nut 3/8-24.....	1

* ML-141147 Only



19	00-874885	Ingredient Chute (12 Qt.)
20	00-916684	Ingredient Chute (20 Qt.)
21	00-874899	Tray - Support
22	00-435636-00001	Scraper - Bowl

PARTS NOT ILLUSTRATED

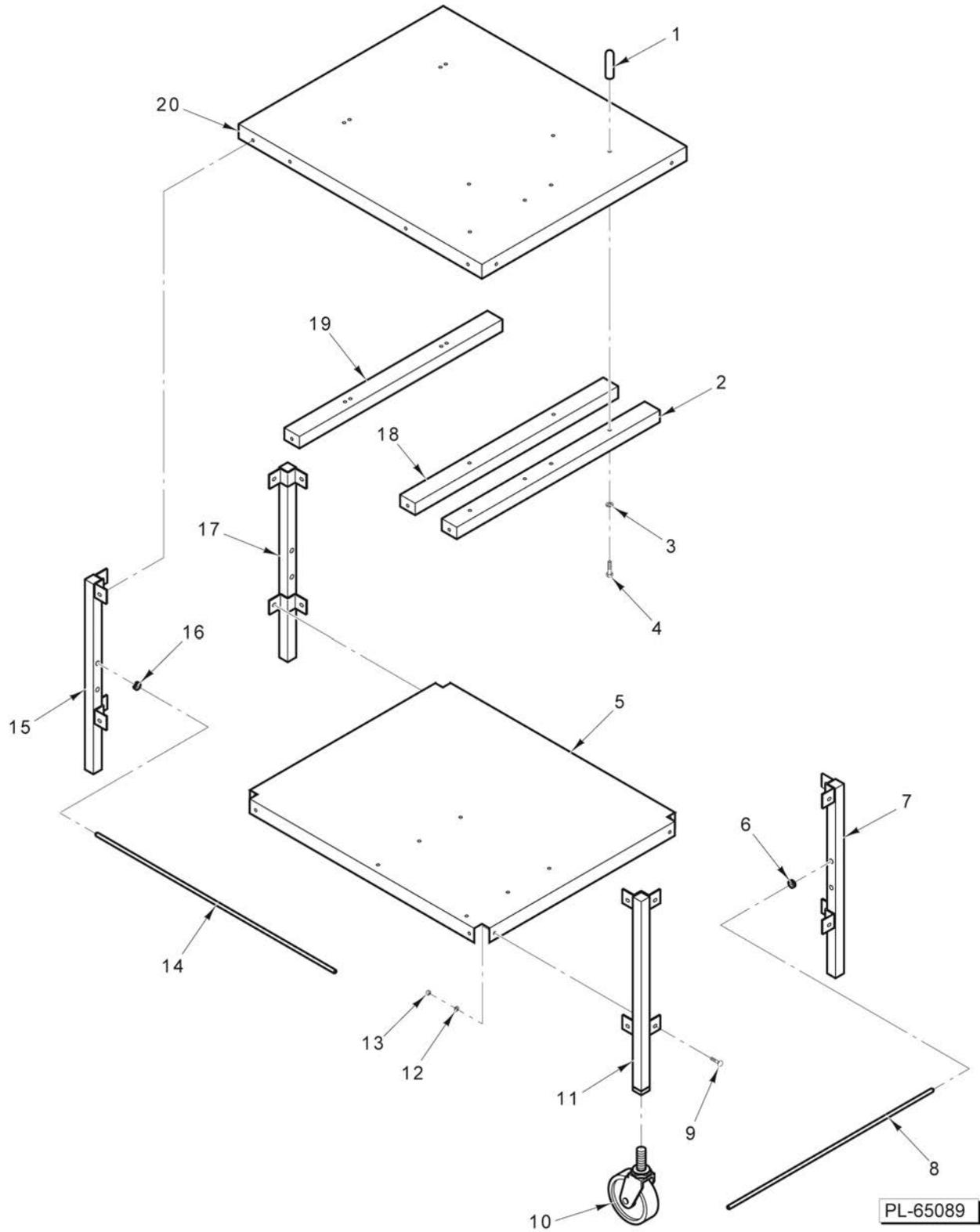


PL-65088

AGITATORS AND ACCESSORIES

AGITATORS AND ACCESSORIES

ILLUS. PL-65088	PART NO.	NAME OF PART	AMT.
1	00-118801	Scraper - Bowl (Handheld).....	1
2	00-874828	"B" Beater (12 Qt.) (Packaged) (Incls. Item 1).....	1
3	00-873360	"D" Wire Whip (12 Qt.) (Packaged) (Incls. Item 1).....	1
4	00-873343	ED Dough Arm (12 Qt.) (Packaged) (Incls. Item 1).....	1
5	00-875893	"C" Whip (12 Qt.) (Packaged) (Incls. Item 1).....	1
6	00-873370	Pastry Knife (12 Qt.) (Packaged) (Incls. Item 1).....	1
7	00-873294	Pastry Knife (20 Qt.) (Packaged) (Incls. Item 1).....	1
8	00-873313	"EDA" Dough Arm (20 Qt.) (Packaged) (Incls. Item 1) (Auntie Anne's).....	1
9	00-873331	"C" Whip (20 Qt.) (Packaged) (Incls. Item 1).....	1
10	00-873335	"E" Dough Arm (20 Qt.) (Packaged) (Incls. Item 1).....	1
11	00-874792	D Wire Whip (20 Qt.) (Packaged) (Incls. Item 1).....	1
12	00-874791	"ED" Dough Arm (20 Qt.) (Packaged) (Incls. Item 1).....	1
13	00-874790	"B" Beater (20 Qt.) (Packaged) (Incls. Item 1).....	1
14	00-873373	Scraper (12 Qt.) (Packaged).....	1
15	00-874836	Scraper (20 Qt.) (Packaged).....	1
16	00-438078	Splash Cover & Bowl Extension (12 Qt.) (Packaged).....	1
17	00-438079	Splash Cover & Bowl Extension (20 Qt.) (Packaged).....	1
18	00-875677	Splash Cover (20 Qt.) (Packaged) (SST).....	1
19	00-874885	Ingredient Chute (12 Qt.) (Packaged).....	1
20	00-916684	Ingredient Chute (20 Qt.) (Packaged).....	1
21	00-874899	Tray - Support (Packaged).....	1
22	00-435636-00001	Scraper - Bowl.....	1
23	00-874753	Plunger Assy.....	AR



MIXER TABLE

MIXER TABLE

ILLUS. PL-65089	PART NO.	NAME OF PART	AMT.
1	00-124075	NLA - Obsolete--Post.....	4
2	00-124067	NLA - Obsolete--Support - Cross Top.....	1
3	WL-004-06	Lockwasher 3/8 Helical.....	8
4	SC-037-71	Cap Screw 3/8-16 x 3/4 Hex Hd.....	8
5	00-123427	Shelf - Table.....	1
6	00-124076	Grommet.....	4
7	00-124073	Leg - Rear (LH).....	1
8	00-124074-00002	Rod (Short).....	2
9	SC-094-26	Bolt - Carriage 1/4-20 x 1/2.....	22
10	00-205003	Caster - Locking.....	4
11	00-124070	Leg - Rear (RH).....	1
12	WS-005-01	Washer.....	22
13	NS-013-02	Nut 1/4-20 Hex.....	22
14	00-124074-00001	NLA - Obsolete--Rod (Long).....	4
15	00-124071	NLA - Obsolete--Leg - Front (RH).....	1
16	00-124076	Grommet.....	8
17	00-124072	Leg - Front (LH).....	1
18	00-875983	Support - Cross Top.....	1
19	00-124069	NLA - Obsolete--Support - Cross Top.....	1
20	00-875982	Top.....	1



CATALOG OF REPLACEMENT PARTS



HL120/200 LEGACY MIXER

ML-134296	HL120
ML-134459	HL120
ML-141092	HL120 (Canada)
ML-134289	HL200
ML-134331	HL200
ML-134455	HL200
ML-134456	HL200C
ML-134457	HL200
ML-134458	HL200
ML-141094	HL200 (Canada)
ML-141095	HL200 (Canada)
ML-141108	HL200
ML-141110	HL200
ML-141115	HL200

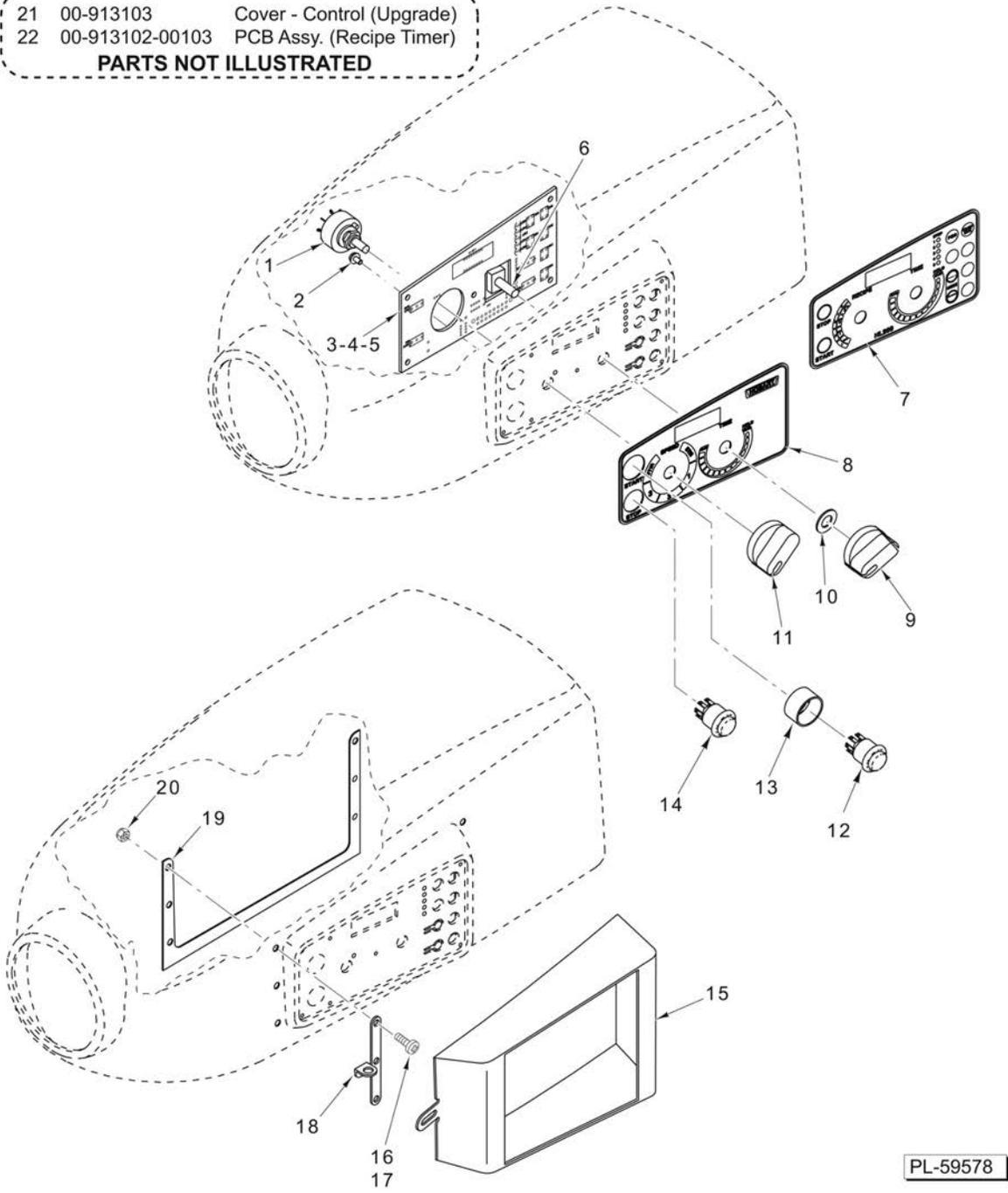
PRIOR MLS COVERED IN THIS MANUAL

ML-134308	HL200
ML-134312	HL200C

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17	TRANSMISSION CASE AND MOTOR
19	TRANSMISSION
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31	WIRING HARNESS
33	WIRING HARNESS (CONTINUED)

- 21 00-913103 Cover - Control (Upgrade)
 - 22 00-913102-00103 PCB Assy. (Recipe Timer)
- PARTS NOT ILLUSTRATED**



PL-59578

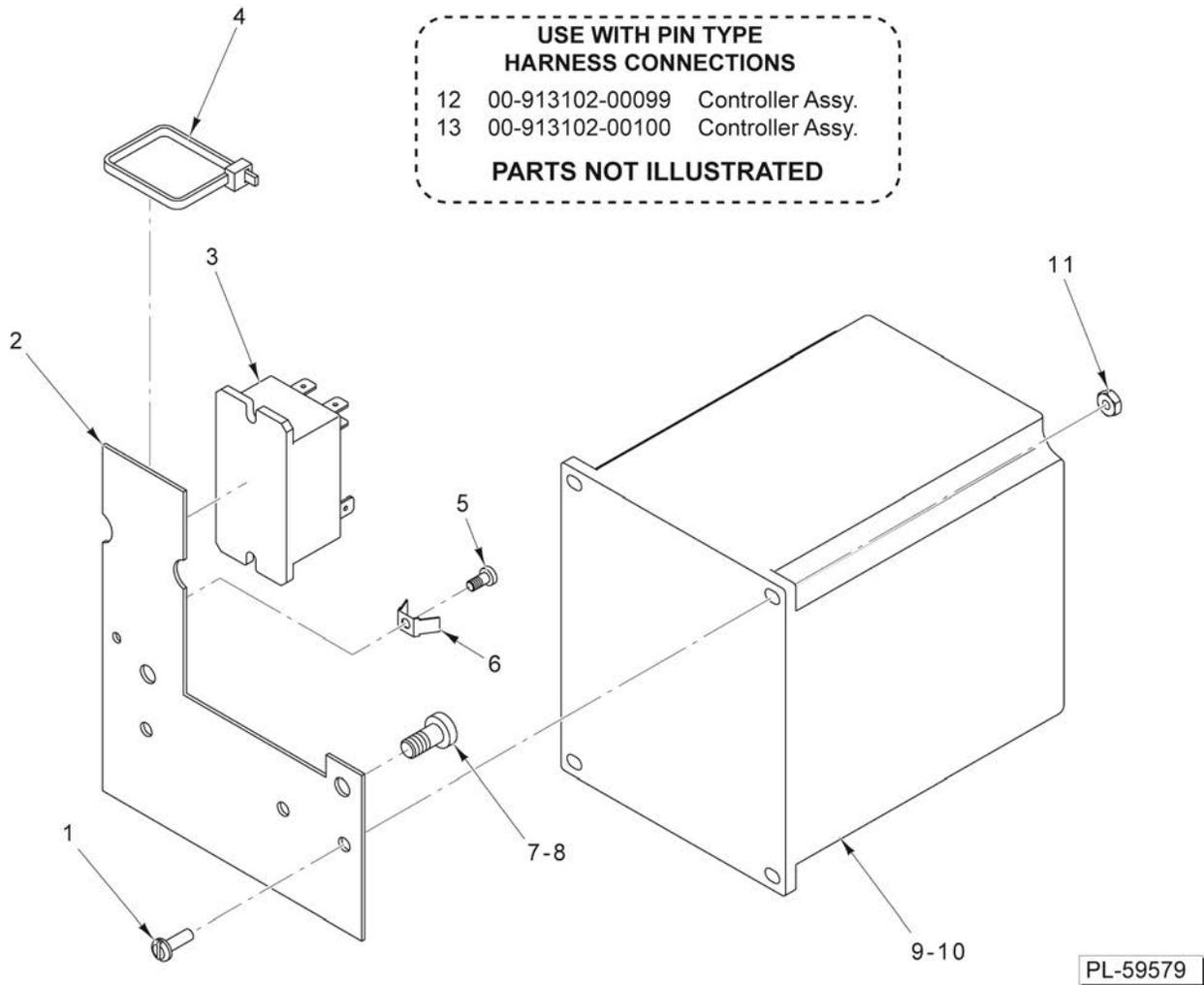
CONTROL PANEL

CONTROL PANEL

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-59578			
*1	00-937061	Switch - Speed Selector Assy. (6-Position).....	1
2	SD-039-23	Self-Tapping Screw 6-32 x 1/4 Hex Washer Hd., Type RL.....	5
*3	00-917212	PCB Assy. (Standard Timer With 1 Stir Position & integral start and stop switches)	1
**4	00-917213	PCB Assy. (Recipe Timer).....	1
5	00-937135	PCB Assy. (Standard Timer With 2 Stir Positions & Replaceable Start and Stop Switch).....	1
6	00-916594	Potentiometer Assy. (Off Board Units Starting S/N 311398234).....	1
7	00-874811	Overlay (HL200) (Recipe Timer Using 4-Position Speed Selector).....	1
*8	00-937071	Overlay (6-Position Speed Selector Switch).....	1
9	00-874809	Knob.....	1
10	WS-031-55	Washer (Rubber).....	1
11	00-874809	Knob.....	1
12	00-916593	Switch - Sealed Dome (Start).....	1
13	00-916958-00002	Guard - Switch.....	1
14	00-916592	Switch - Sealed Dome (Stop).....	1
15	00-874921	Cover - Weldment (Correctional).....	1
16	SC-128-62	Mach. Screw 10-24 x 1/2 Tx. Button Hd. (SST) (Correctional).....	6
17	00-042648	Insert - Threaded.....	6
18	00-874923	Latch (Correctional).....	1
19	00-874931	Plate - Backer (Correctional).....	1
20	NS-038-13	Lock Nut 10-24 Hex (Correctional).....	6
21	00-913103	Cover - Control (Upgrade).....	1
22	00-913102-00103	PCB Assy. (Recipe Timer).....	1

* Order cover control upgrade 00-913103 when replacing 4-position speed selector switch, standard timer with on board potentiometer, or standard timer overlay with 4-position speed selector. All used on HL120 units built before S/ N 311398203, and HL200 units built before S/N 311422459.

** Order recipe timer assembly 00-913102-00103 when replacing recipe timer with on board potentiometer.



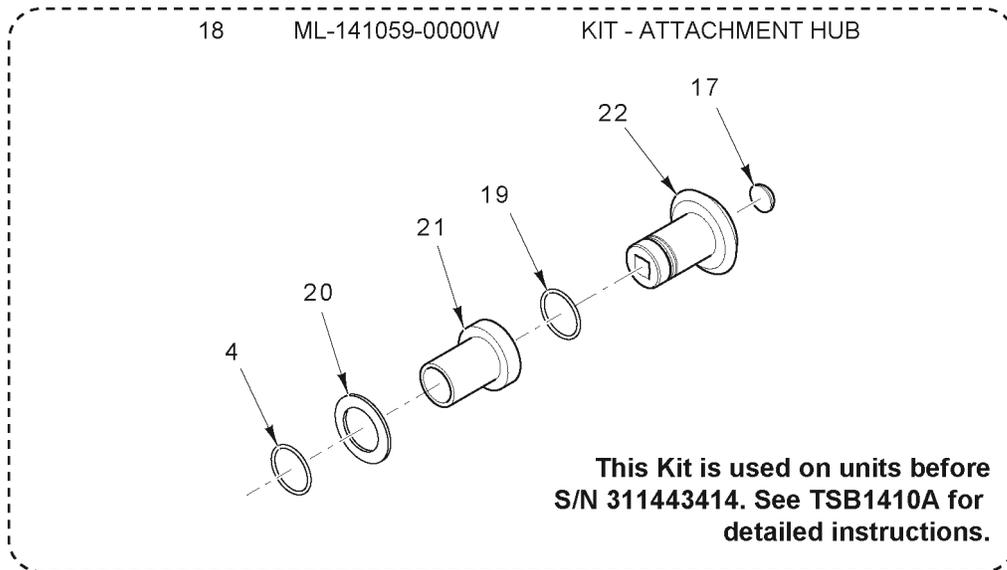
ELECTRICAL COMPONENTS

ELECTRICAL COMPONENTS

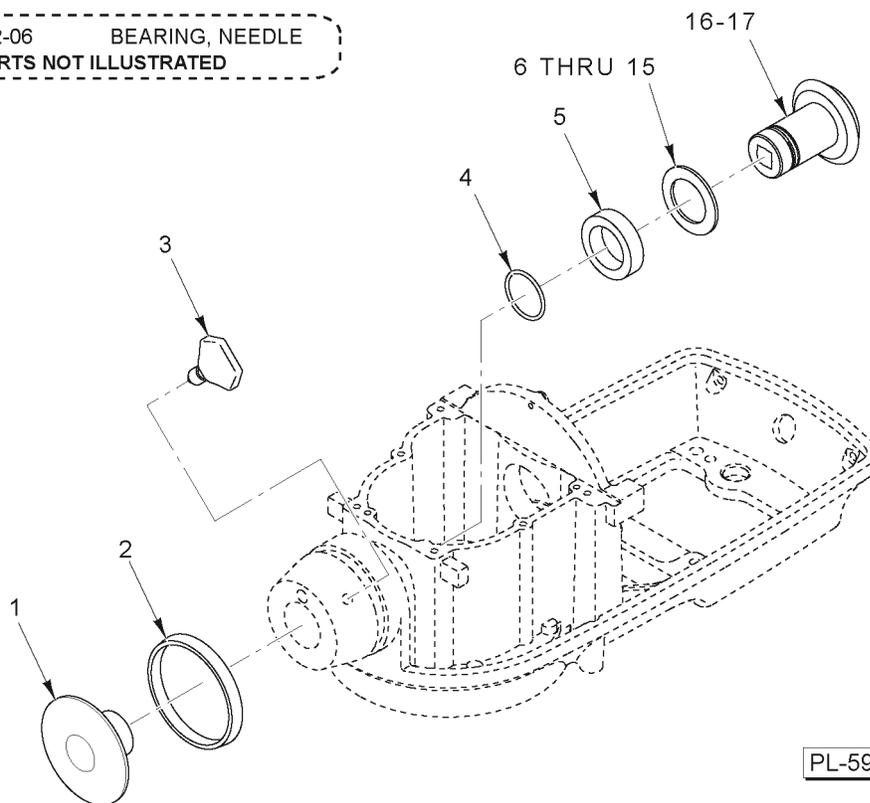
ILLUS.	PART NO.	NAME OF PART	AMT.
PL-59579			
1	SC-018-38	Mach. Screw 8-32 x 1/2 Slotted Pan Hd.....	2
2	00-874763	Bracket - Controller.....	1
3	00-087714-042-5	Relay (2-Pole, 30 Amp.).....	1
4	00-113703	Cable Tie (8 In.).....	1
5	SD-015-37	Self-Tapping Screw 6-32 x 1/4 Phil. Pan Hd., Type TT.....	1
6	00-065890-00090	Terminal (2-Tab).....	1
7	SC-114-80	Mach. Screw 1/4-20 x 3/8 Phil. Pan Hd.....	2
8	SC-100-08	Mach. Screw 1/4-20 x 3/8 Hex Washer Hd.....	2
*9	00-916893	Controller - Low Voltage (100-120 V., 50-60 Hz., 1Ph.).....	1
**10	00-916894	Controller - High Voltage (200-240 V., 50-60 Hz., 1Ph.).....	1
11	NS-009-12	Nut 8-32 Hex.....	1
12	00-913102-00099	Controller Assy. (Used with pin type harness connections).....	1
13	00-913102-00100	Controller Assy. (Used with pin type harness connections).....	1

* (For Pin-style harness, order controller assembly 00-913102-00099)

** (For Pin-style harness, order controller assembly 00-913102-00100)



23 BN-002-06 BEARING, NEEDLE
PARTS NOT ILLUSTRATED

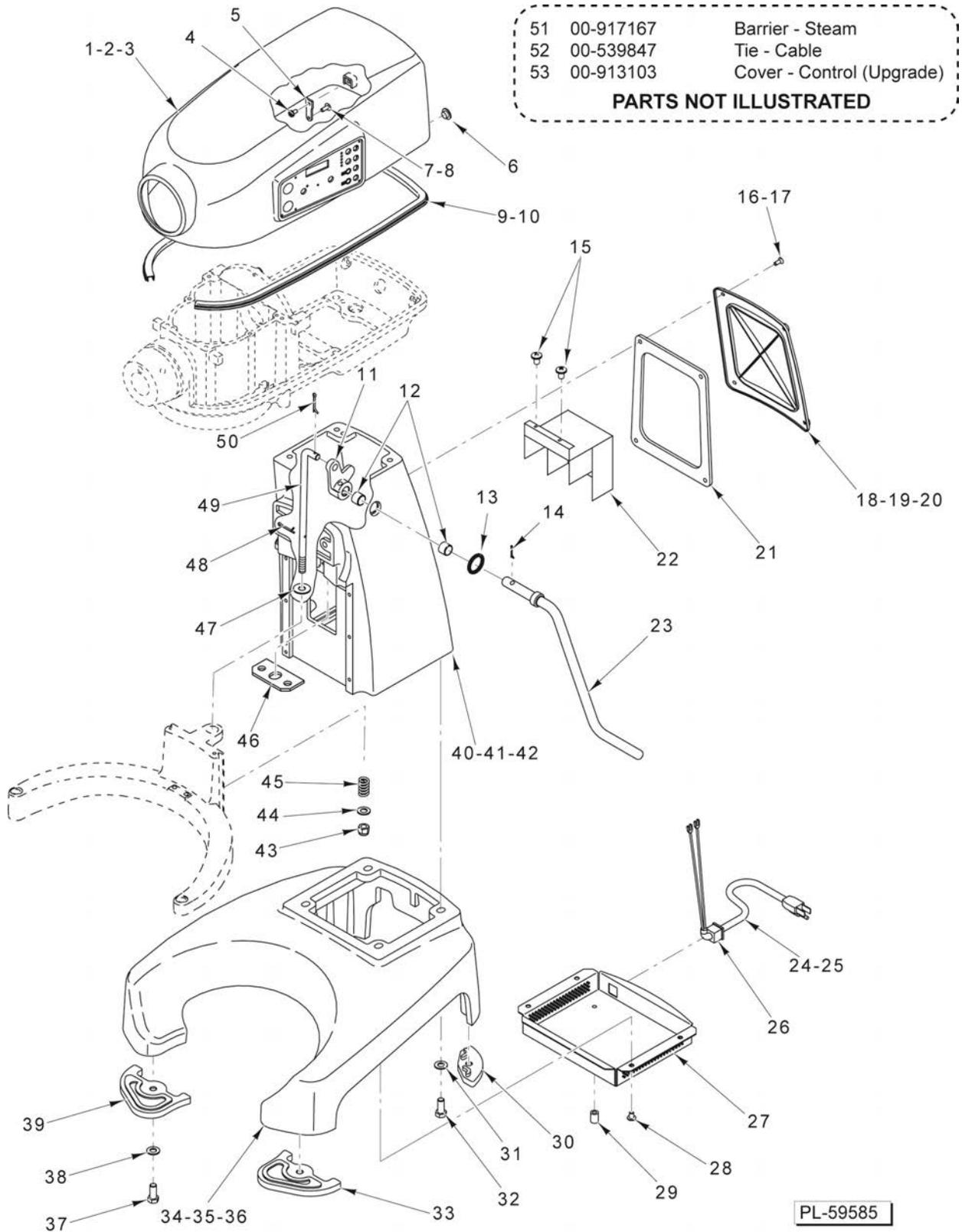


PL-59580

ATTACHMENT HUB

ATTACHMENT HUB

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-59580			
1	00-917221	Plug - Attachment.....	1
2	00-937329-00003	Seal - Neoprene.....	1
3	00-108197-00001	Thumb Screw 1-1/4.....	1
4	OR-001-03	O-Ring - Quad.....	1
5	00-874837	Spacer.....	1
6	00-012746-00005	Washer - Thrust (0.080).....	AR
7	00-012746-00006	Washer - Thrust (0.106).....	AR
8	00-012746-00007	Washer - Thrust (0.092).....	AR
9	00-012746-00008	Washer - Thrust (0.086).....	AR
10	00-012746-00009	Washer - Thrust (0.098).....	AR
11	00-012746-00010	Washer - Thrust (0.112).....	AR
12	00-012746-00012	Washer - Thrust (0.119).....	AR
13	00-012746-00013	Washer - Thrust (0.121).....	AR
14	00-012746-00016	Washer - Thrust (0.129).....	AR
15	00-012746-00019	Washer - Thrust (0.115).....	AR
16	00-435065-00002	Bevel Drive Gear & Seal Assy. (Incls. Item 17).....	1
17	PL-003-17	Plug - Expansion.....	1
18	ML-141059-0000W	Kit - Attachment Hub (Used on machines built before S/N 311443414).....	1
19	OR-001-13	O-Ring.....	1
20	00-012746-00003	Washer - Thrust.....	AR
21	00-937407	Attachment Hub Sleeve.....	1
22	00-435051-00003	Bevel Gear.....	1
23	BN-002-06	Bearing - Needle.....	2

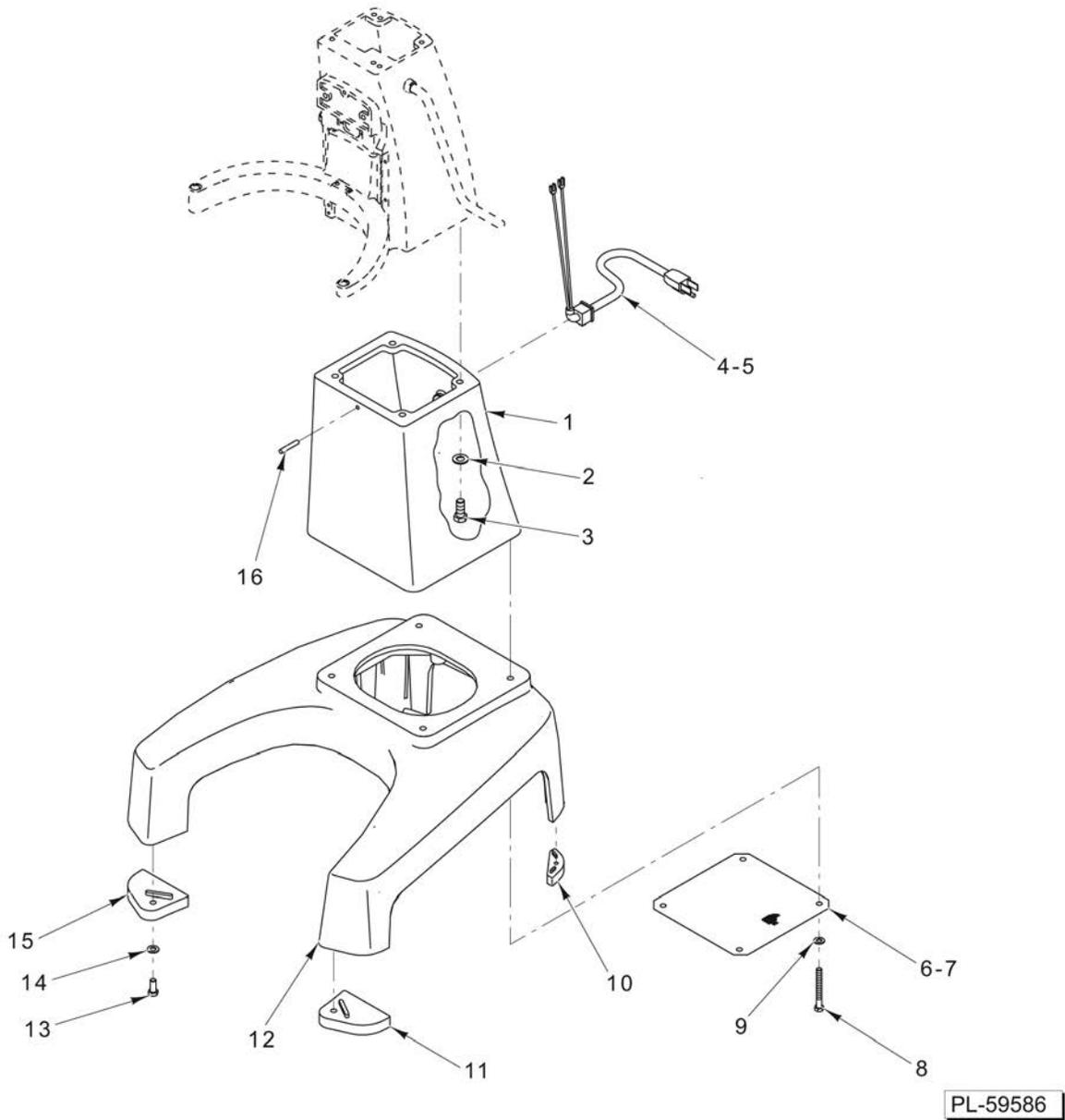


BASE AND PEDESTAL

BASE AND PEDESTAL

ILLUS. PL-59585	PART NO.	NAME OF PART	AMT.
*1	00-913103-00002	Cover Assy. (Gray).....	1
2	00-937411	Cover Assy. (Blue) (ML-141110).....	1
3	00-874860-00007	Cover Assy. (Red) (ML-141115).....	1
4	SD-024-38	Self-Tapping Screw 10-24 x 3/8 Phil. Pan Hd., Type TT.....	2
5	00-874829	Tab - Cover Mounting.....	2
6	00-874857	Plug.....	1
7	SC-066-20	Mach. Screw 10-32 x 1/2 Phil. Truss Hd. (SST).....	2
8	SC-128-81	Mach. Screw 10-32 x 1/2 Tx. Button Hd. (Correctional).....	2
9	00-937329-00001	Seal - Neoprene.....	1
10	00-937329-00002	Seal - Neoprene.....	1
11	00-874756	Arm - Bowl Lift.....	1
12	00-479510	Bushing - Bowl Lift.....	2
13	00-917649	Grommet - Handle.....	1
14	PS-004-15	Spiral Pin 1/4 Dia. x 1-1/8 Lg.....	1
15	SC-123-98	Mach. Screw M4 x 0.7 x 6mm Phil. Pan Hd.....	2
16	SC-023-10	Mach. Screw 10-24 x 3/4 Slotted Oval Hd. (SST).....	4
17	SC-131-27	Mach. Screw 10-24 x 3/4 Tx. Flat. Hd. (SST) (Correctional).....	4
18	00-917231	Cover - Pedestal (Back) (Gray).....	1
19	00-937412	Cover - Pedestal (Back) (Blue) (ML-141110).....	1
20	00-937412-00002	Cover - Pedestal (Back) (Red) Cover - Pedestal (Back) (Red) (ML-141115).....	1
21	00-937202-00001	Seal - Neoprene Pedestal Cover.....	1
22	00-937204	Barrier - Drive Shield.....	1
23	00-874745-00002	Handle & Bushing - Bowl Lift.....	1
24	00-874833-00001	Cord & Plug Assy. (120 V.).....	1
25	00-874833-00002	Cord & Plug Assy. (220 V.).....	1
26	FE-026-34	Strain Relief - Electrical.....	1
27	00-874760	Cover - Controller.....	1
28	SC-114-80	Mach. Screw 1/4-20 x 3/8 Phil. Pan Hd.....	4
29	FE-026-43	Plug - Button.....	1
30	00-874879	Pad - Rear.....	2
31	WS-018-24	Washer.....	4
32	SC-118-11	Cap Screw 3/8-16 x 7/8 Hex Hd.....	4
33	00-874896	Pad - Front (RH).....	1
34	00-874720-00002	Base (Gray).....	1
35	00-874720-00003	Base (Blue) (ML-141110).....	1
36	00-874720-00004	Base (Red) (ML-141115).....	1
37	SC-118-12	Cap Screw 3/8-16 x 3/4 Hex Hd.....	4
38	WS-018-34	Washer - Shim .010 THK. (SST).....	4
39	00-874878	Pad - Front (LH).....	1
40	00-874723-00002	Pedestal (Gray).....	1
41	00-874723-00003	Pedestal (Blue) (ML-141110).....	1
42	00-874723-00004	Pedestal (Red) (ML-141115).....	1
43	NS-036-15	Stop Nut 3/8-24 Hex Special.....	1
44	WS-006-26	Washer.....	1
45	00-012782	Spring.....	1
46	00-874870	Plate - Spring Bowl Yoke.....	1
47	WS-006-26	Washer.....	1
48	PC-003-55	Cotter Pin 1/8 x 3/4.....	1
49	00-874748	Rod - Bowl Lift.....	1
50	PC-003-55	Cotter Pin 1/8 x 3/4.....	1
51	00-917167	Barrier - Steam (Foam Type Obsolete).....	1
52	00-539847	Tie - Cable.....	AR
53	00-913103	Cover - Control (Upgrade).....	1

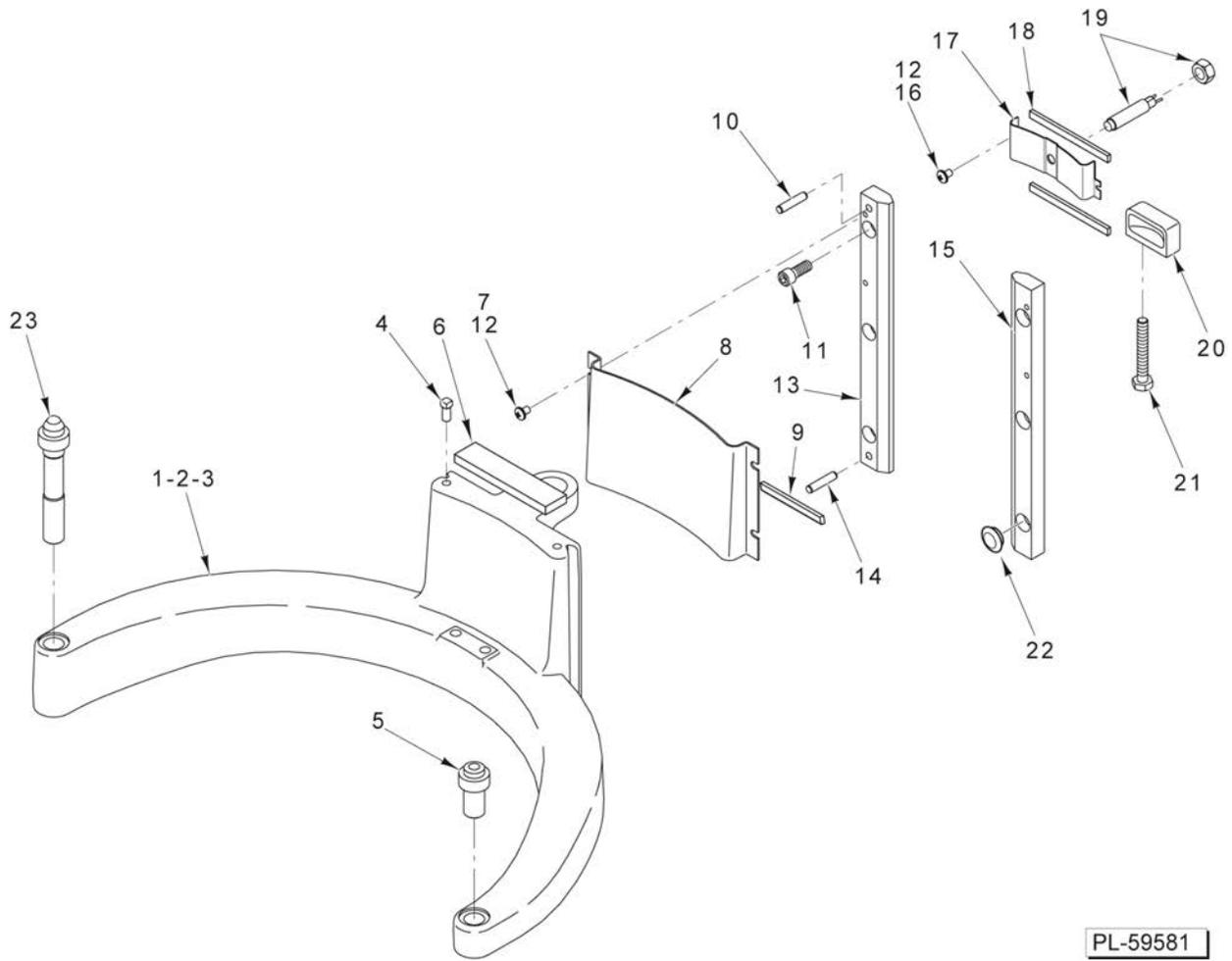
* Order cover control upgrade 00-913103 when replacing a cover on any machine that has 4-position speed selector switch. This upgrade will convert machines with recipe timers to a standard timer. Recipe timer option is no longer available.



FLOOR BASE AND PEDESTAL
(ML-134308, ML-134331, ML-134458, & ML-141094)

**FLOOR BASE AND PEDESTAL
(ML-134308, ML-134331, ML-134458, & ML-141094)**

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-59586			
1	00-916548-00002	NLA - Obsolete--Block - Riser.....	1
2	WS-018-24	Washer.....	4
3	SC-118-10	Cap Screw 3/8-16 x 1 Hex Hd.....	4
4	00-874833-00001	Cord & Plug Assy. (120 V.).....	1
5	00-874833-00002	Cord & Plug Assy. (220 V.).....	1
6	00-916330	Screen - Air Floor (Previous Construction).....	1
7	00-916549	Screen - Air Floor (Current Construction).....	1
8	SC-124-91	Cap Screw 3/8-16 x 2-1/2 Hex Hd.....	4
9	WS-018-24	Washer.....	4
10	00-916309	Pad - Rear.....	2
11	00-916308	Pad - Front (RH).....	1
12	00-916213-00004	Base.....	1
13	SC-118-12	Cap Screw 3/8-16 x 3/4 Hex Hd.....	4
14	WS-018-34	Washer - Shim .010 THK. (SST).....	4
15	00-916307	Pad - Front (LH).....	1
16	PG-005-25	Pin - Grooved.....	1



PL-59581

BOWL SUPPORT

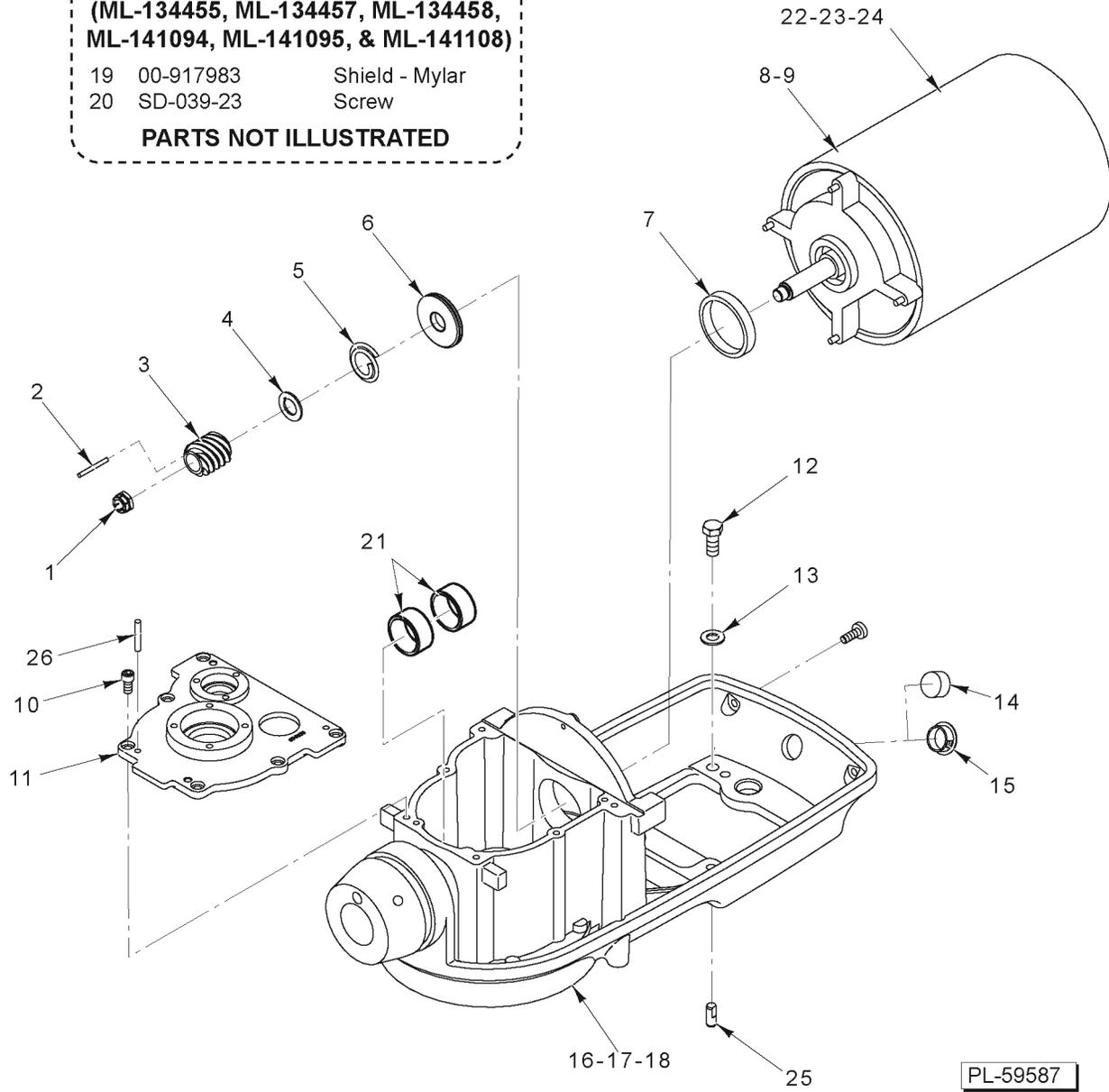
BOWL SUPPORT

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-59581			
1	00-874841-00002	Support - Bowl (Gray).....	1
2	00-874841-00003	Support - Bowl (Blue) (ML-141110).....	1
3	00-874841-00004	Support - Bowl (Red) (ML-141115).....	1
4	SC-129-22	Set Screw 1/4-20 x 1/4 Sq. Hd. Cup Pt.....	2
5	00-874727	Pin - Bowl (RH).....	1
6	00-937203	Seal - Neoprene.....	1
7	SC-122-59	Mach. Screw 8-32 x 1/4 Phil. Pan Hd. (SST).....	4
8	00-874742	Apron.....	1
9	00-937202-00003	Seal - Neoprene Apron.....	1
10	00-011800-00187	Dowel.....	2
11	SC-089-02	Cap Screw 1/4-20 x 3/4 Hex Socket Hd.....	6
12	SC-128-73	Mach. Screw 8-32 x 1/4 Tx. Button Hd. (SST) (Correctional).....	6
13	00-874738-00001	Slideway - Bowl Lift (LH).....	1
14	00-011800-00187	Dowel.....	1
15	00-874738-00002	Slideway - Bowl Lift (RH).....	1
16	SC-122-59	Mach. Screw 8-32 x 1/4 Phil. Pan Hd. (SST).....	2
17	00-937323	Cover - Bowl Interlock.....	1
18	00-937202-00002	Seal - Neoprene Control Cover.....	2
19	00-087711-00352	Switch - Reed.....	1
20	00-874842	Hold Down - Bowl (Rear).....	1
21	SC-062-69	Cap Screw 1/4-20 x 1-3/4 Hex Hd.....	2
22	PB-004-97	Cap.....	4
23	00-874726	Pin - Bowl (LH).....	1

Low Voltage Only
(ML-134455, ML-134457, ML-134458,
ML-141094, ML-141095, & ML-141108)

19	00-917983	Shield - Mylar
20	SD-039-23	Screw

PARTS NOT ILLUSTRATED



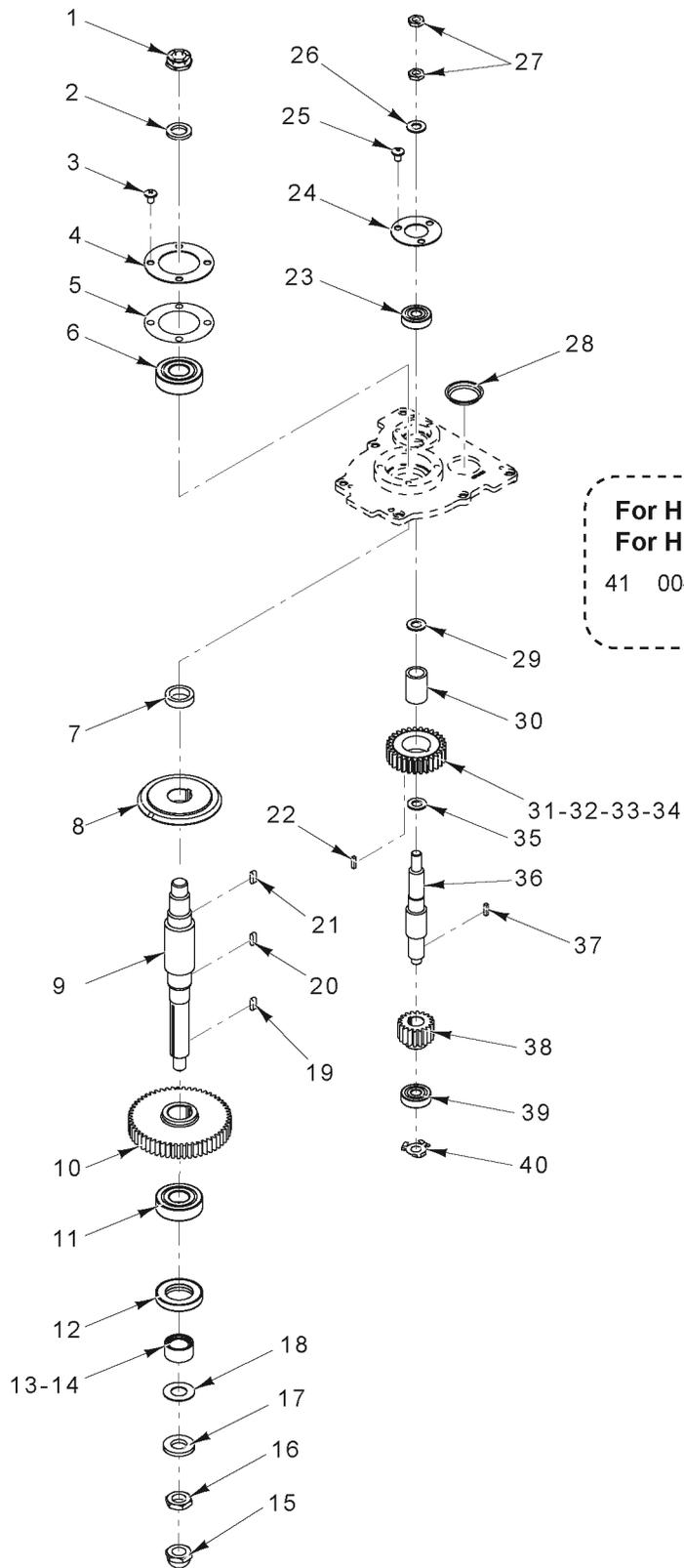
PL-59587

TRANSMISSION CASE AND MOTOR

TRANSMISSION CASE AND MOTOR

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-59587			
1	NS-032-23	Lock Nut 7/16-20 Special.....	1
2	00-012430-00004	Key 1/8 x 1/8 x 1-1/4.....	1
3	00-291221	Gear - Worm (60 Cycle).....	1
4	00-012754	Washer.....	1
5	00-012757	Spring - Shock Absorber.....	1
6	00-874820	Deflector - Grease (LH).....	1
7	00-916445	Bushing - Motor.....	1
8	00-917810	Motor (All Voltages - For Insulated Mixers Only).....	1
9	00-874634	Motor.....	1
10	SC-089-01	Cap Screw 1/4-20 x 1/2 Hex Socket Hd.....	6
11	00-874755	Cover - Transmission.....	1
12	SC-118-11	Cap Screw 3/8-16 x 7/8 Hex Hd.....	4
13	WS-018-24	Washer.....	4
14	00-874876	Plug - Cupped Expansion (Brass).....	1
15	00-874857	Plug.....	1
*16	00-937437-00003	Transmission Case - Lower (Blue) (ML-141110).....	1
*17	00-937437-00002	Transmission Case - Lower (Gray).....	1
*18	00-937437-00004	Transmission Case - Lower (Red) (ML-141115).....	1
**19	00-917983	Shield - Mylar (ML-134455, ML-134457, ML-134458, ML-141094, ML-141095, & ML-141108).....	1
**20	SD-039-23	Self-Tapping Screw 6-32 x 1/4 Hex Washer Hd., Type RL (ML-134455, ML-134457, ML-134458, ML-141094, ML-141095, & ML-141108).....	2
21	BN-002-06	Bearing - Needle.....	2
22	00-917938	Bearing - Flange (Front) (ML-134455, ML-134457, ML-134458, ML-141094, ML-141095, & ML-141108).....	4
23	00-917839	Tubing - Shrink (36" length) (ML-134455, ML-134457, ML-134458, ML-141094, ML-141095, & ML-141108).....	1
24	00-557982	Bearing - Flange (Rear) (ML-134455, ML-134457, ML-134458, ML-141094, ML-141095, & ML-141108).....	4
25	00-270776	Dowel.....	2
26	00-011800-00187	Dowel.....	2

* (Order items 7, 21 (qty of 2), & 00-435065-00002)
 ** (Low Voltage Only 100-120 V., 50-60 Hz., 1 Ph.)



For HL120 Units Built Before S/N 311371184
 For HL200 Units Built Before S/N 311370192
 41 00-913102-00101 Shaft Assy.
PARTS NOT ILLUSTRATED

PL-59588

TRANSMISSION

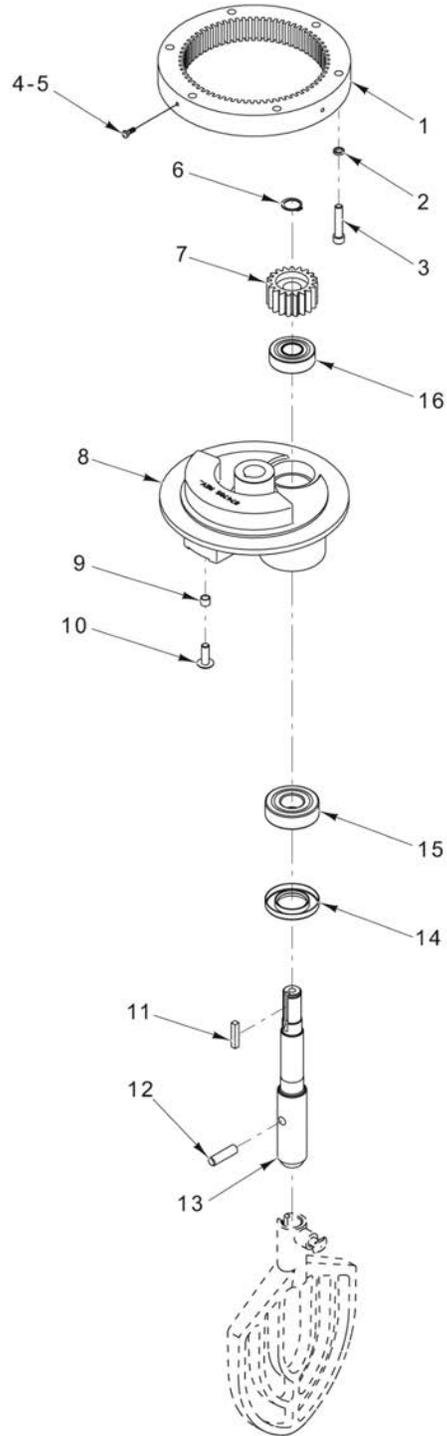
TRANSMISSION

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-59588			
1	NS-032-37	Lock Nut 5/8-18 Special.....	1
2	WS-031-41	Washer.....	1
3	SC-089-01	Cap Screw 1/4-20 x 1/2 Hex Socket Hd.....	4
4	00-874787	Retainer - Planetary Bearing.....	1
5	00-874795	Gasket - Bearing.....	1
6	BB-005-34	Ball Bearing.....	1
7	00-874793	Spacer - Planetary.....	1
8	00-124733-00002	Gear - Bevel (46T).....	1
9	00-874635	Shaft - Planetary.....	1
10	00-874778	Gear (55T, 14P).....	1
11	BB-020-06	Ball Bearing (Fafnir 204K DFA51580).....	1
12	00-114695	Seal - Oil.....	1
13	00-437342	Spacer - Bearing.....	1
14	00-067500-00078	O-Ring.....	1
15	00-024715-00003	Acorn Nut 1/2-20.....	1
16	00-010928-00002	Nut - Special.....	1
17	WS-030-83	Washer - Retaining (STL).....	1
18	00-124946	Washer (1/32 Thk.).....	1
19	00-012430-00017	Key 1/8 x 1/8 x 2-7/16.....	1
20	00-874873-00002	Key.....	1
21	00-874873-00001	Key.....	1
22	00-012430-00024	Key 1/8 x 1/8 x 1/2.....	1
23	BB-005-02	Ball Bearing - N.D. #7500.....	1
24	00-874788	Retainer - Bearing.....	1
25	SC-089-01	Cap Screw 1/4-20 x 1/2 Hex Socket Hd.....	3
26	WS-006-36	Washer.....	1
27	00-012710	Nut - Retaining.....	2
28	00-064871	Plug - Friction.....	1
29	00-968075	Spacer, Worm Wheel.....	1
*30	00-916962	Spacer - Gear.....	1
31	00-917797	Gear - Worm (Low Voltage Only 100-120 V, 50-60 Hz., 1 Ph.) (ML-134455, ML-134457, ML-134458, ML-141094, ML-141095, & ML-141108).....	1
32	00-917797-00002	Gear - Insulated Worm (Above S/N 311569659 or Pretzel Mixers).....	1
33	00-874934	Gear - Worm (29T).....	1
**34	00-124751-00003	Worm Wheel & Bushing Assy. (60 Hz.).....	1
**35	WS-010-36	Washer.....	1
*36	00-916961	Shaft - Worm Wheel.....	1
37	00-012430-00024	Key 1/8 x 1/8 x 1/2.....	1
38	00-874777	Gear (18T, 14P).....	1
39	BB-021-62	Ball Bearing.....	1
40	SL-002-08	Spring - Loading.....	1
***41	00-913102-00101	Shaft Assy.....	1

* (Order Item 40 when replacing these parts on HL120 units built before S/N 311371184, and HL200 units built before S/N 311370192.)

** (HL120 Units Built Before S/N 311371184 and HL200 Units Built Before S/N 311370192)

*** (Used when replacing Items 30 & 35 on HL120 units built before S/N 311371184, and HL200 units built before S/N 311370192.)



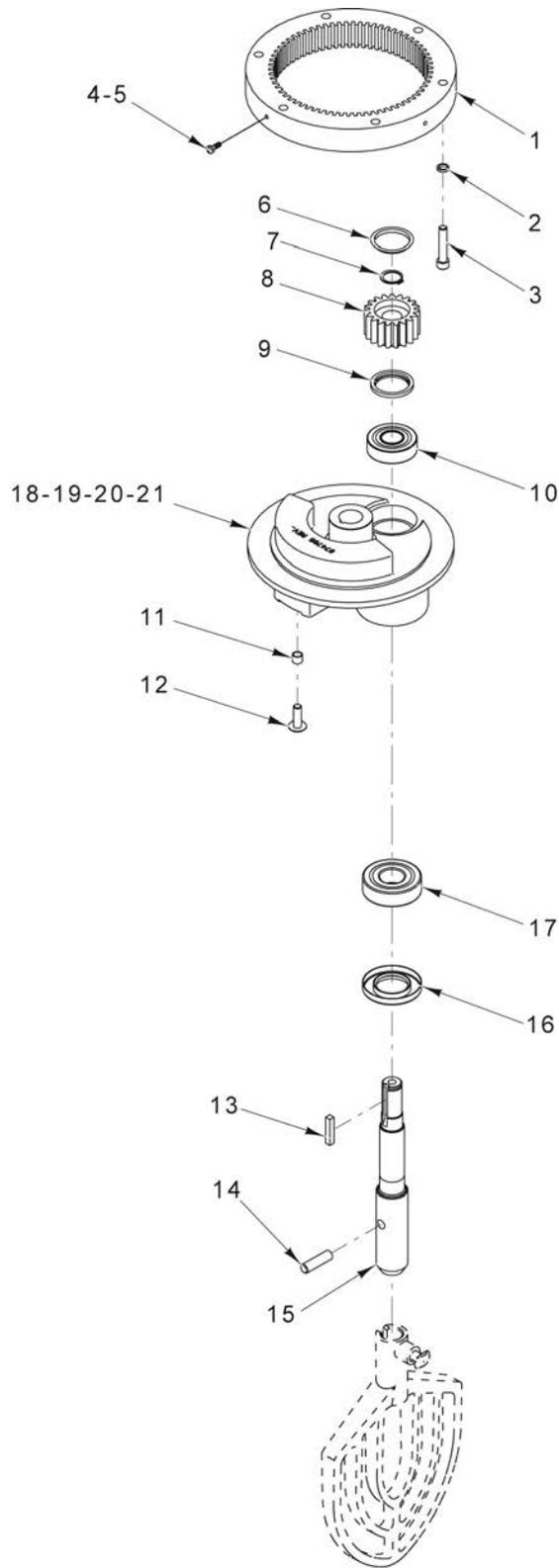
PL-59621

**PLANETARY
(PREVIOUS CONSTRUCTION)**

**PLANETARY
(PREVIOUS CONSTRUCTION)**

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-59621			
1	00-438524-00002	Gear - Internal (63T).....	1
2	WL-003-35	Lockwasher 1/4 Helical.....	6
3	SC-040-09	Cap Screw 1/4-20 x 1-1/4 Hex Socket Hd.....	6
4	SC-066-13	Mach. Screw 8-32 x 1/4 Phil. Truss Hd. (SST).....	3
5	SC-128-73	Mach. Screw 8-32 x 1/4 Tx. Button Hd. (SST) (Correctional).....	3
6	RR-004-18	Retaining Ring.....	1
7	00-015217	Pinion - Beater (19T).....	1
*8		Planetary.....	1
9	00-874770	Spacer - Bowl Scraper.....	2
10	SC-053-46	Mach. Screw 1/4-20 x 3/4 Slotted Truss Hd. (SST).....	2
11	00-012430-00055	Key 3/16 x 3/16 x 1.....	1
12	00-065062-00001	Pin - Dowel.....	1
13	00-874739	Shaft - Agitator.....	1
14	00-023482	Seal - Oil (1 In. I.D.).....	1
15	BB-005-34	Ball Bearing.....	1
16	BB-018-17	Bearing - Ball Hoover.....	1

* For service order part number 00-916332.

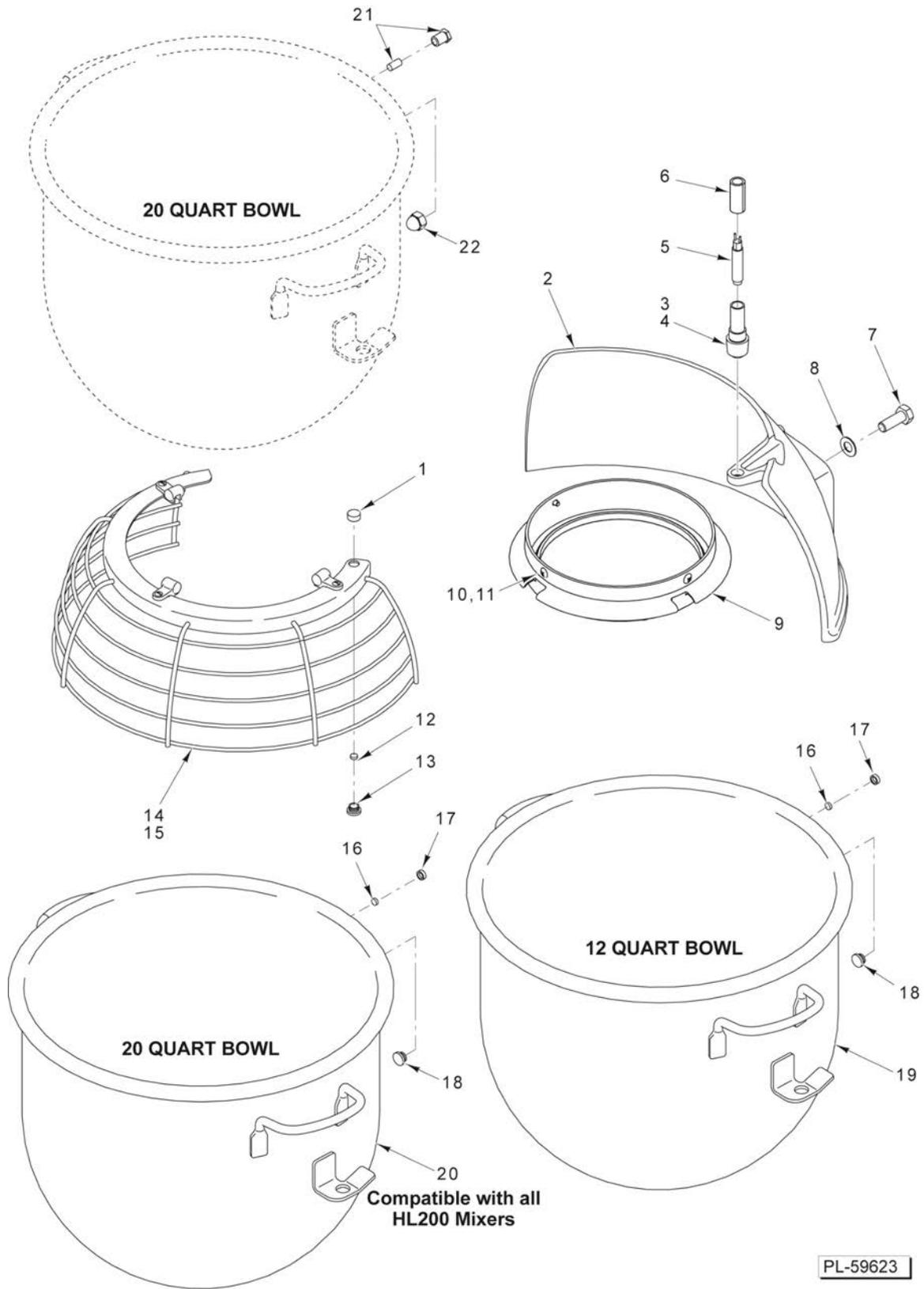


PL-59582

**PLANETARY
(CURRENT CONSTRUCTION)
(STARTING S/N 311386989)**

**PLANETARY
(CURRENT CONSTRUCTION)
(STARTING S/N 311386989)**

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-59582			
1	00-438524-00002	Gear - Internal (63T).....	1
2	WL-003-35	Lockwasher 1/4 Helical.....	6
3	SC-040-09	Cap Screw 1/4-20 x 1-1/4 Hex Socket Hd.....	6
4	SC-066-13	Mach. Screw 8-32 x 1/4 Phil. Truss Hd. (SST).....	3
5	SC-128-73	Mach. Screw 8-32 x 1/4 Tx. Button Hd. (SST) (Correctional).....	3
6	00-916336	Plug - Friction (1 In. Dia.).....	1
7	RR-004-18	Retaining Ring.....	1
8	00-916335	Pinion - Beater Shaft.....	1
9	00-916512	Seal - Upper Agitator Shaft.....	1
10	BB-018-17	Bearing - Ball Hoover.....	1
11	00-874770	Spacer - Bowl Scraper.....	2
12	SC-053-46	Mach. Screw 1/4-20 x 3/4 Slotted Truss Hd. (SST).....	2
13	00-012430-00055	Key 3/16 x 3/16 x 1.....	1
14	00-065062-00001	Pin - Dowel.....	1
15	00-937706	Shaft - Agitator & Pin Assy.....	1
16	00-023482	Seal - Oil (1 In. I.D.).....	1
17	BB-005-34	Ball Bearing.....	1
18	00-916333-00001	Planetary (Gray).....	1
19	00-916333-00003	Planetary (Blue) (ML-141110).....	1
20	00-916333-00004	Planetary (Red) (ML-141115).....	1
21	00-916332	Planetary Subassy. (Gray) (Incls. Items 6 thru 18).....	1

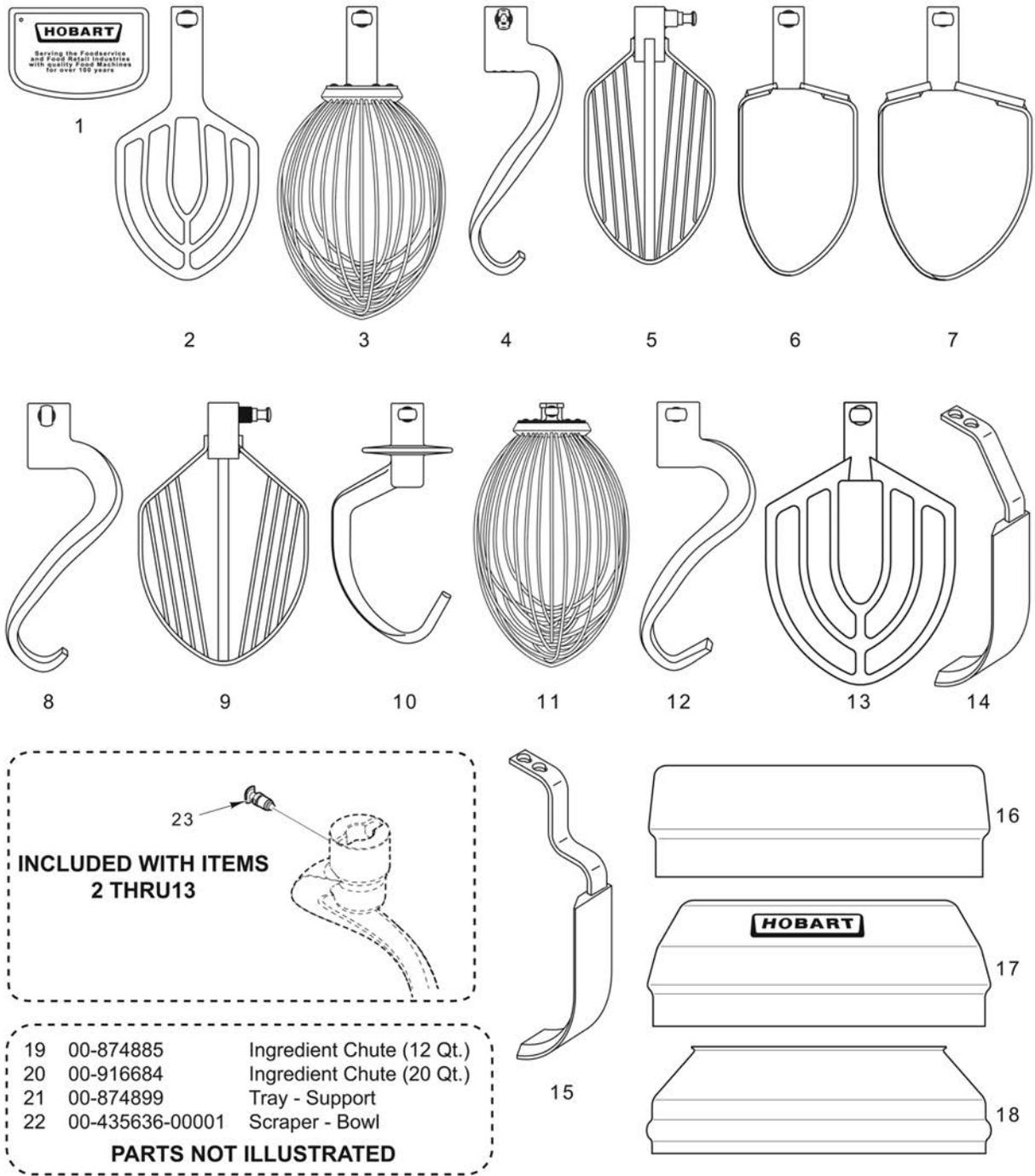


BOWL AND BOWL GUARD

BOWL AND BOWL GUARD

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-59623			
1	00-917357	Holder - Magnet (Upper).....	1
2	00-917234	Guard - Splash.....	1
3	00-917232	Holder - Switch Reed (1/2 - 20 UNF-2B).....	1
4	00-874839	Pin - Sensor.....	1
5	00-087711-00352	Switch - Reed.....	1
6	00-937354	Tube - Split.....	1
7	SC-118-18	Cap Screw 1/4-20 x 7/8 Hex Hd.....	2
8	WS-003-19	Washer.....	2
9	00-917272	Cup - Drip & Flange.....	1
10	SC-066-13	Mach. Screw 8-32 x 1/4 Phil. Truss Hd. (SST).....	3
11	SC-128-73	Mach. Screw 8-32 x 1/4 Tx. Button Hd. (SST) (Correctional).....	3
12	00-874875	Magnet - Disc.....	1
13	00-917358	Holder - Magnet (Lower).....	1
14	00-937163-00001	Wire Cage Assy. (Incls. Items 1, 12, & 13).....	1
15	00-937163-00002	Wire Cage Assy. (Incls. Items 1, 12, & 13) (Correctional).....	1
16	00-874875	Magnet - Disc.....	1
17	00-917357	Holder - Magnet (Upper).....	1
18	00-917358	Holder - Magnet (Lower).....	1
19	00-874864	Bowl Assy. (12 Qt.) (SST) (Packaged) (Incls. Items 16, 17, & 18).....	1
*20	00-917720	Bowl Assy. (20 Qt.) (SST) (Packaged) (Incls. Items 16, 17, & 18).....	1
21	00-917527	Housing - Magnet.....	1
22	NS-025-11	Crown Nut 3/8-24.....	1

* (Compatible with all HL200 Mixers)

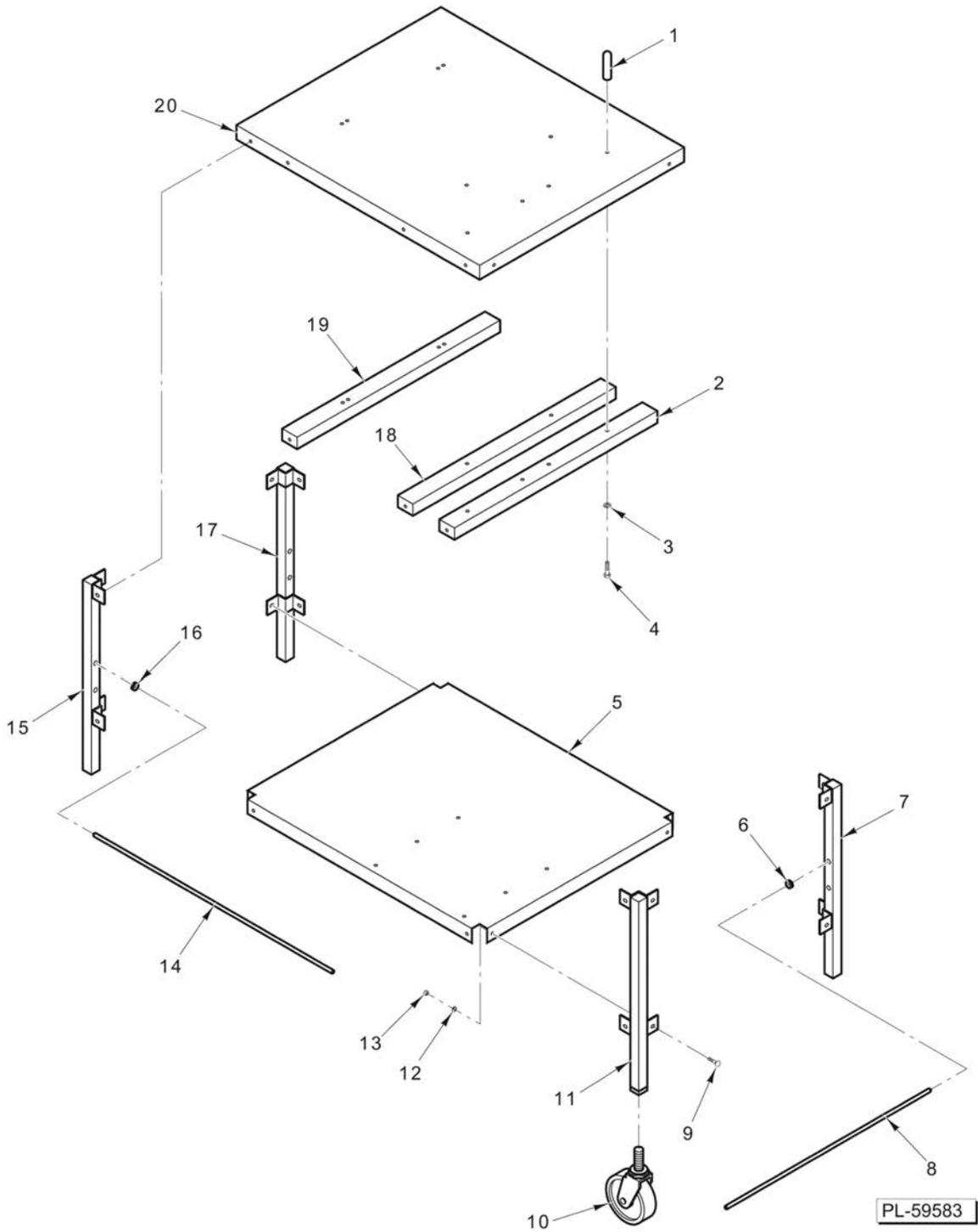


PL-59590

AGITATORS AND ACCESSORIES

AGITATORS AND ACCESSORIES

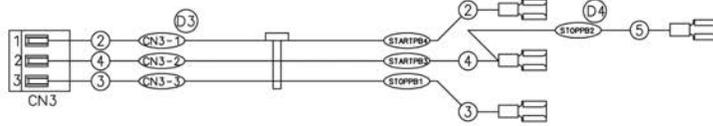
ILLUS.	PART NO.	NAME OF PART	AMT.
PL-59590			
1	00-118801	Scraper - Bowl (Handheld).....	1
2	00-874828	"B" Beater (12 Qt.) (Packaged) (Incls. Item 1).....	1
3	00-873360	"D" Wire Whip (12 Qt.) (Packaged) (Incls. Item 1).....	1
4	00-873343	ED Dough Arm (12 Qt.) (Packaged) (Incls. Item 1).....	1
5	00-875893	"C" Whip (12 Qt.) (Packaged) (Incls. Item 1).....	1
6	00-873370	Pastry Knife (12 Qt.) (Packaged) (Incls. Item 1).....	1
7	00-873294	Pastry Knife (20 Qt.) (Packaged) (Incls. Item 1).....	1
8	00-873313	"EDA" Dough Arm (20 Qt.) (Packaged) (Incls. Item 1) (Auntie Anne's).....	1
9	00-873331	"C" Whip (20 Qt.) (Packaged) (Incls. Item 1).....	1
10	00-873335	"E" Dough Arm (20 Qt.) (Packaged) (Incls. Item 1).....	1
11	00-874792	D Wire Whip (20 Qt.) (Packaged) (Incls. Item 1).....	1
12	00-874791	"ED" Dough Arm (20 Qt.) (Packaged) (Incls. Item 1).....	1
13	00-874790	"B" Beater (20 Qt.) (Packaged) (Incls. Item 1).....	1
14	00-873373	Scraper (12 Qt.) (Packaged).....	1
15	00-874836	Scraper (20 Qt.) (Packaged).....	1
16	00-438078	Splash Cover & Bowl Extension (12 Qt.) (Packaged).....	1
17	00-438079	Splash Cover & Bowl Extension (20 Qt.) (Packaged).....	1
18	00-875677	Splash Cover (20 Qt.) (Packaged) (SST).....	1
19	00-874885	Ingredient Chute (12 Qt.) (Packaged).....	1
20	00-916684	Ingredient Chute (20 Qt.) (Packaged).....	1
21	00-874899	Tray - Support (Packaged).....	1
22	00-435636-00001	Scraper - Bowl.....	1
23	00-874753	Plunger Assy.....	AR



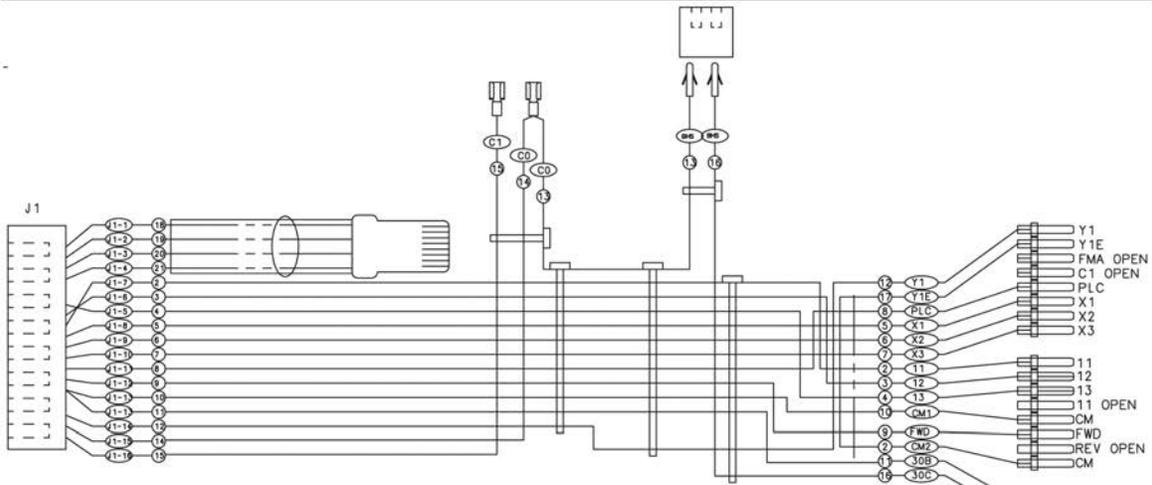
MIXER TABLE (ML-134299)

MIXER TABLE (ML-134299)

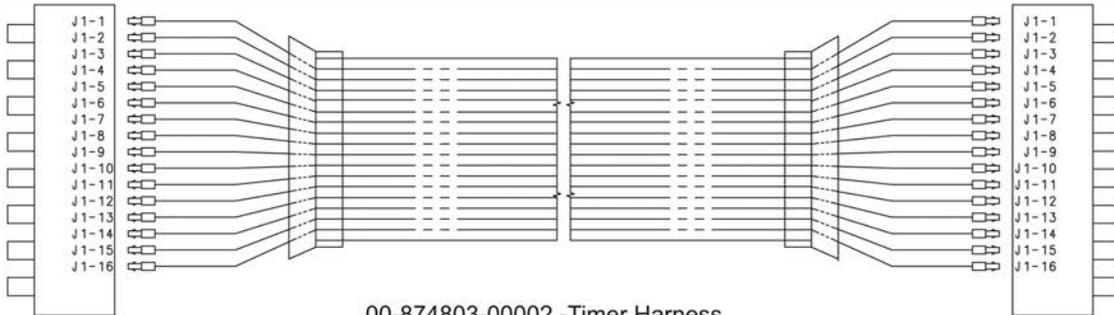
ILLUS.	PART NO.	NAME OF PART	AMT.
PL-59583			
1	00-124075	NLA - Obsolete--Post.....	4
2	00-124067	NLA - Obsolete--Support - Cross Top.....	1
3	WL-004-06	Lockwasher 3/8 Helical.....	8
4	SC-037-71	Cap Screw 3/8-16 x 3/4 Hex Hd.....	8
5	00-123427	Shelf - Table.....	1
6	00-124076	Grommet.....	4
7	00-124073	Leg - Rear (LH).....	1
8	00-124074-00002	Rod (Short).....	2
9	SC-094-26	Bolt - Carriage 1/4-20 x 1/2.....	22
10	00-205003	Caster - Locking.....	4
11	00-124070	Leg - Rear (RH).....	1
12	WS-005-01	Washer.....	22
13	NS-013-02	Nut 1/4-20 Hex.....	22
14	00-124074-00001	NLA - Obsolete--Rod (Long).....	4
15	00-124071	NLA - Obsolete--Leg - Front (RH).....	1
16	00-124076	Grommet.....	8
17	00-124072	Leg - Front (LH).....	1
18	00-875983	Support - Cross Top.....	1
19	00-124069	NLA - Obsolete--Support - Cross Top.....	1
20	00-875982	Top.....	1



00-916566-00001 - Switch Harness



00-874888-00001 - Controller Harness
(Pin Type Harness Connector, Dual Harness Construction) (Previous Construction)



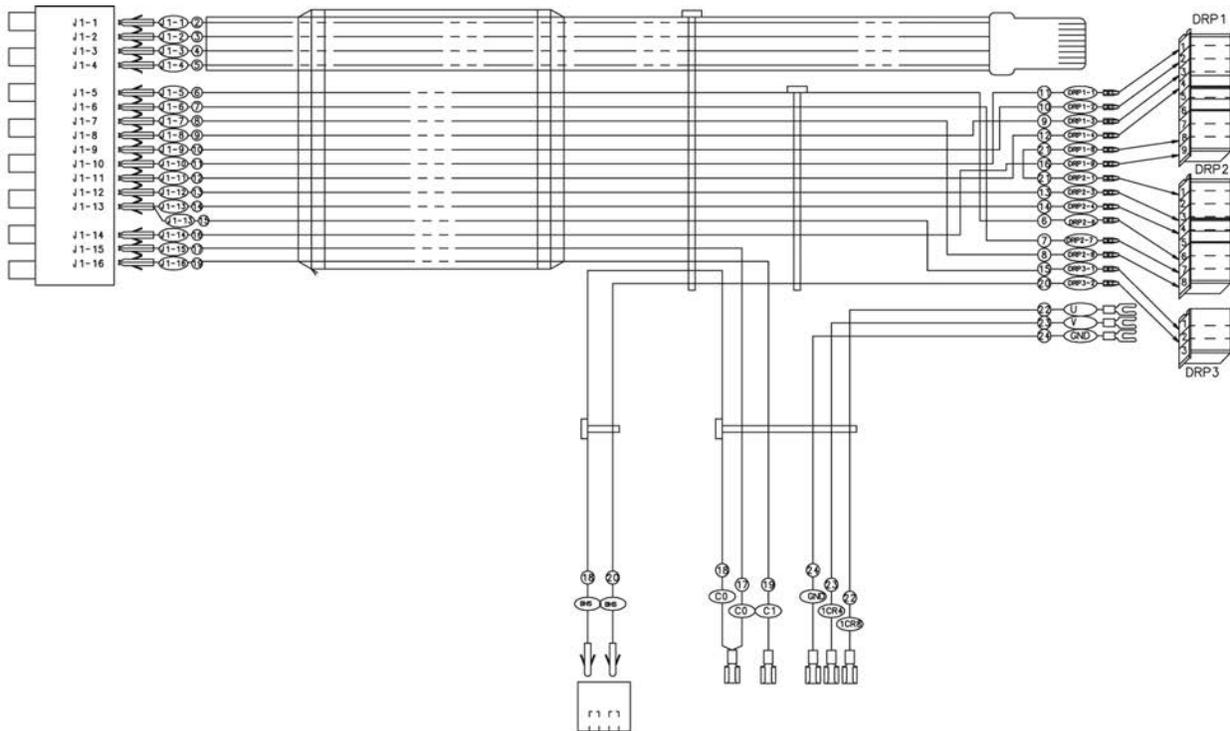
PL-59624

00-874803-00002 -Timer Harness
(Dual Harness Construction) (Previous Construction)

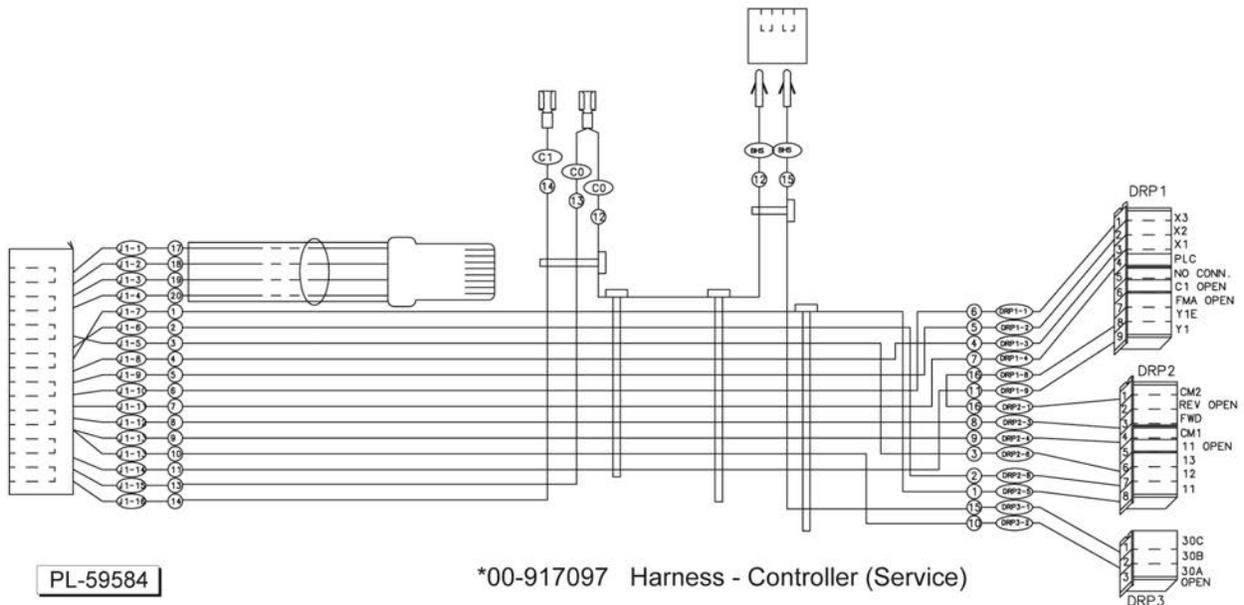
WIRING HARNESS

WIRING HARNESS

ILLUS. PL-59624	PART NO.	NAME OF PART	AMT.
1	00-916566-00001	Switch Harness.....1	1
2	00-874888-00001	Controller Harness.....1	1
3	00-874803-00002	Timer Harness.....1	1



00-917132-00001 Harness - Main Wiring
(Single Harness Construction) (Current Construction)



PL-59584

*00-917097 Harness - Controller (Service)

WIRING HARNESS (CONTINUED)

WIRING HARNESS (CONTINUED)

ILLUS. PL-59584	PART NO.	NAME OF PART	AMT.
1	00-917132-00001	Harness - Main Wiring.....	1
*2	00-917097	Harness - Drive Service.....	1

* Use when replacing controller with pin type connections with controller with controller with plug-in style harness connectors (Dual Harness Construction).



CATALOG OF REPLACEMENT PARTS



LEGACY MIXER

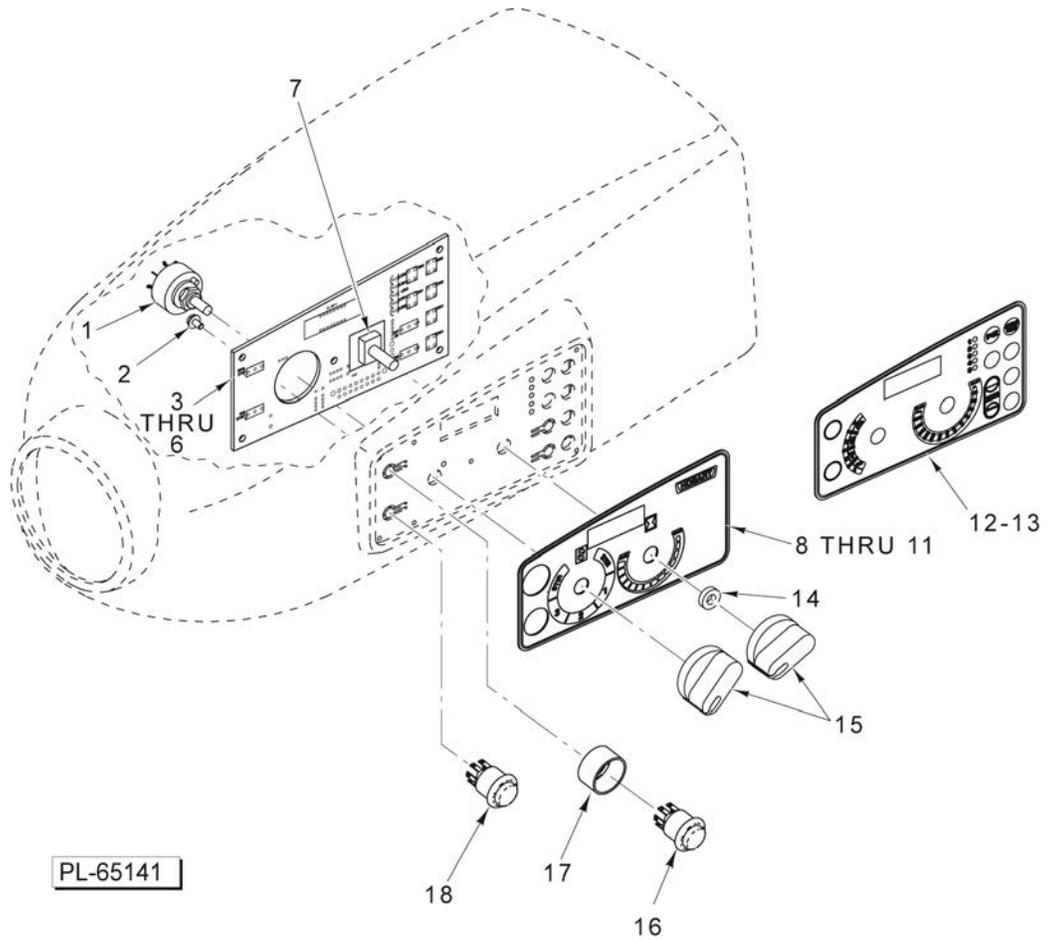
ML-134400	HL120AUS
ML-141032	HL120CE
ML-141033	HL120CE
ML-134295	HL200 (KOREA)
ML-134315	HL200AUS
ML-134460	HL200 (JAPAN)
ML-141034	HL200CE
ML-141035	HL200CE

PRIOR MLS COVERED IN THIS CATALOG

ML-134352	HL120CE
ML-134378	HL120CE
ML-134311	HL200CE
ML-134346	HL200CE

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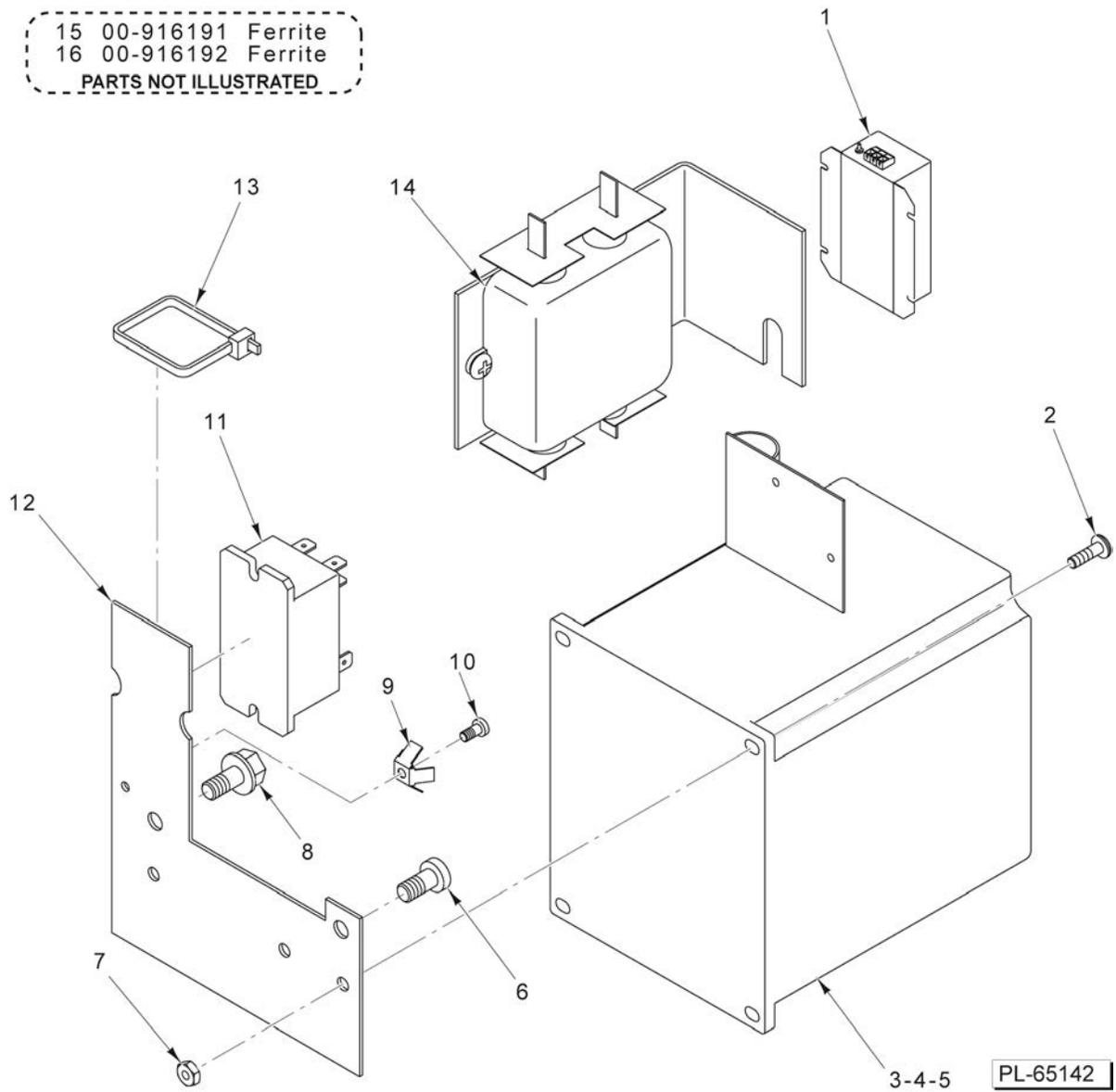
CONTROL PANEL

CONTROL PANEL

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-65141			
*1	00-937061	Switch - Spd. Selector Assy. (6-Pos.) (HL120 - Starting SN 311398203; HL200 - Starting SN 311422459; HL200CE - Starting SN 311424810).....	1
2	SD-039-23	Self-Tapping Screw 6-32 x 1/4 Hex Washer Hd., Type RL.....	5
*3	00-917212	PCB Assy. (Stnd. Timer W/Off-Board Pot. & 4-Pos. Spd. Selector).....	1
4	00-937135	PCB Assy. (Stnd. Timer W/6-Pos. Spd. Selector) (HL120 - Starting SN 311398203; HL200 - Starting SN 311422459; HL200CE - Starting 311424810).....	1
5	00-917213	PCB Assy. (Recipe Timer W/Off-Board Pot. & 4-Pos. Spd. Selector).....	1
6	00-937136	PCB Assy. (Recipe Timer) (6-Pos. Spd. Selector).....	1
*7	00-916594	Potentiometer Assy. (Starting SN 311398203).....	1
8	00-937075	Overlay (CE With Recipe Timer) (6-Pos. Spd. Selector) (ML-134311 & ML-141034).....	1
9	00-937073	Overlay (CE With Standard Timer) (6-Pos. Spd. Selector) (Starting SN 311424810) (ML-134311, ML-134346, ML-134352, ML-134378, ML-141032, ML-141033, ML-141034, & ML-141035).....	1
*10	00-937071	Overlay (6-Pos. Spd. Selector Switch) (Stnd. Timer) (HL120 - Starting SN 311398203; HL200 - Starting SN 311422459) (ML-134295, ML-134315, ML-134400, & ML-134460).....	1
11	00-937072	Overlay (With Recipe Timer) (6-Pos. Spd. Selector) (ML-134315).....	1
12	00-916179	Overlay (CE W/Recipe Timer & 4-Pos. Spd. Selector) (ML-134311).....	1
13	00-874811	Overlay (W/Recipe Timer & 4-Pos. Spd. Selector) (ML-134315).....	1
14	WS-031-55	Washer (Rubber).....	1
15	00-874809	Knob.....	2
16	00-916593	Switch - Sealed Dome (Start).....	1
17	00-916958-00002	Guard - Switch.....	1
18	00-916592	Switch - Sealed Dome (Stop).....	1

* Order cover control upgrade 00-913103-00005 when replacing 4-pos. spd. selector switch, stnd. timer w/on-board pot., or stnd. timer overlay w/4-pos. spd. selector switch. All used on units built before SN 311424810.

15 00-916191 Ferrite
16 00-916192 Ferrite
PARTS NOT ILLUSTRATED



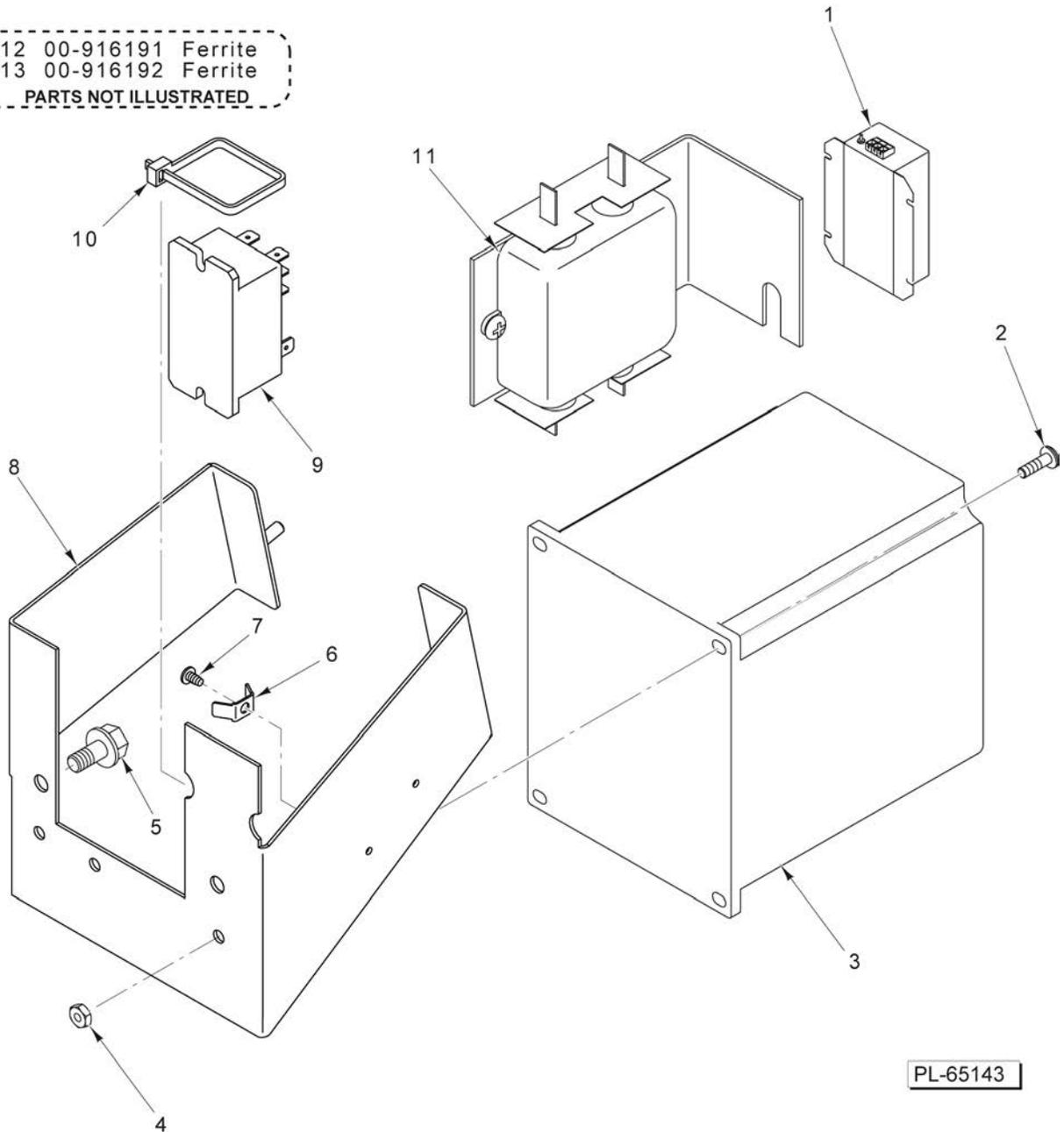
**ELECTRICAL COMPONENTS
(SINGLE-PHASE MACHINES)**

**ELECTRICAL COMPONENTS
(SINGLE-PHASE MACHINES)**

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-65142			
1	00-917183	Filter - Power Line.....	1
2	SC-018-38	Mach. Screw 8-32 x 1/2 Slotted Pan Hd.....	2
*3	00-916894	Controller (200-240 V.) (ML-134295).....	1
**4	00-916893	Controller (100-120 V.) (ML-134460).....	1
***5	00-937327	Controller (200-240 V.) (All Except ML-134295 & ML-134460).....	1
6	SC-018-38	Mach. Screw 8-32 x 1/2 Slotted Pan Hd.....	2
7	NS-009-12	Nut 8-32 Hex.....	2
8	SC-100-08	Mach. Screw 1/4-20 x 3/8 Hex Washer Hd.....	2
9	00-065890-00090	Terminal (2-Tab).....	2
10	SD-015-37	Self-Tapping Screw 6-32 x 1/4 Phil. Pan Hd., Type TT.....	2
11	00-087714-042-5	Relay (2-Pole, 30 Amp.).....	1
12	00-874763	Bracket - Controller.....	1
13	00-113703	Cable Tie.....	1
14	00-916194	Filter & Bracket With Mylar Insulator.....	1
15	00-916191	Ferrite.....	2
16	00-916192	Ferrite.....	1

- * Order controller assembly 00-916894 and harness 00-917091 when replacing a controller with pin type harness
- ** Order controller assembly 00-916893 and harness 00-917091 when replacing a controller with pin type harness
- *** Order controller assembly 00-937327 and harness 00-917091 when replacing a controller with pin type harness

12 00-916191 Ferrite
13 00-916192 Ferrite
PARTS NOT ILLUSTRATED



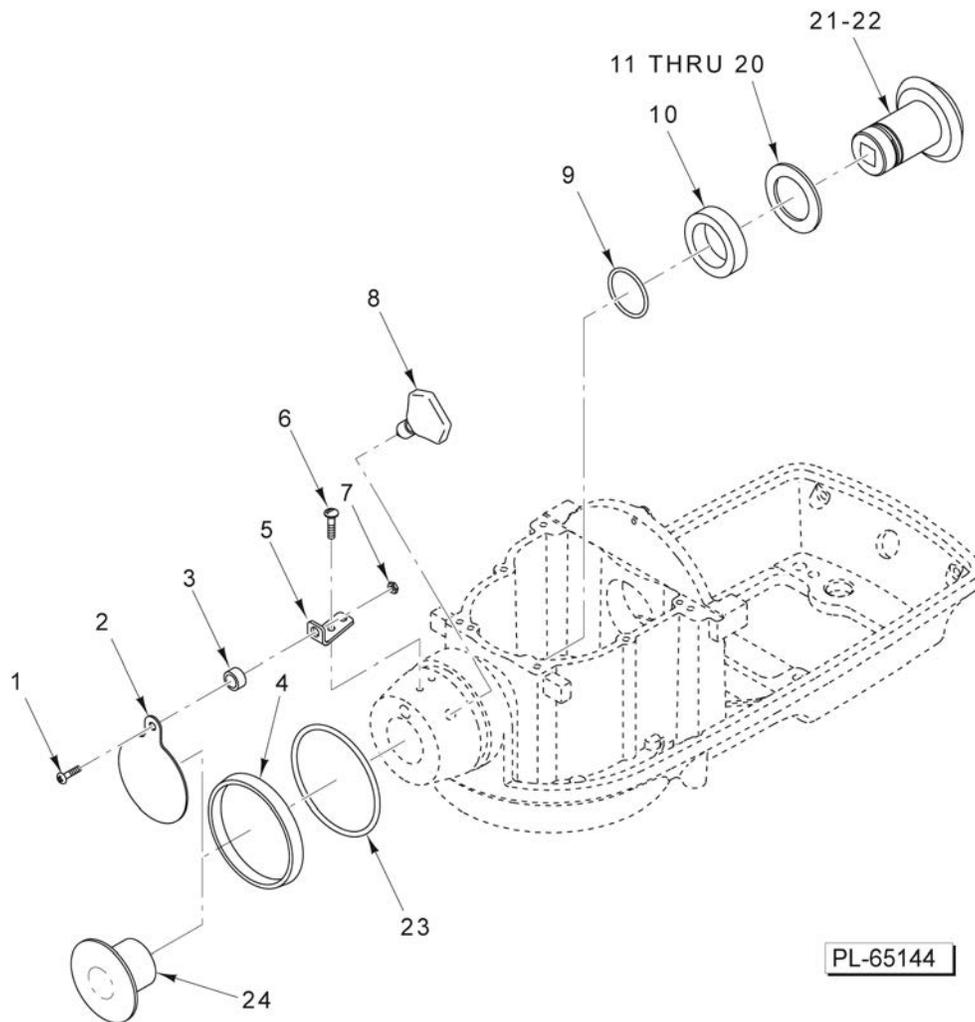
PL-65143

**ELECTRICAL COMPONENTS
(THREE-PHASE MACHINES)**

**ELECTRICAL COMPONENTS
(THREE-PHASE MACHINES)**

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-65143			
1	00-917183	Filter - Power Line.....	1
2	SC-018-38	Mach. Screw 8-32 x 1/2 Slotted Pan Hd.....	2
*3	00-917348	Controller (380-480 V.) (ML-134311, ML-134346, ML-134352, ML-141032, ML-141034, & ML-141035).....	1
4	NS-009-12	Nut 8-32 Hex.....	2
5	SC-100-08	Mach. Screw 1/4-20 x 3/8 Hex Washer Hd.....	2
6	00-065890-00090	Terminal (2-Tab).....	2
7	SD-015-37	Self-Tapping Screw 6-32 x 1/4 Phil. Pan Hd., Type TT.....	2
8	00-917505	Bracket - Controller (ML-134311, ML-134346, ML-134352, ML-141032, ML-141034, & ML-141035).....	1
9	00-087714-042-5	Relay (2-Pole, 30 Amp.).....	1
10	00-113703	Cable Tie.....	1
11	00-916194	Filter & Bracket With Mylar Insulator.....	1
12	00-916191	Ferrite.....	2
13	00-916192	Ferrite.....	1

* Order controller assembly 00-917348 and harness 00-917091 when replacing a controller with pin-type harness connectors.

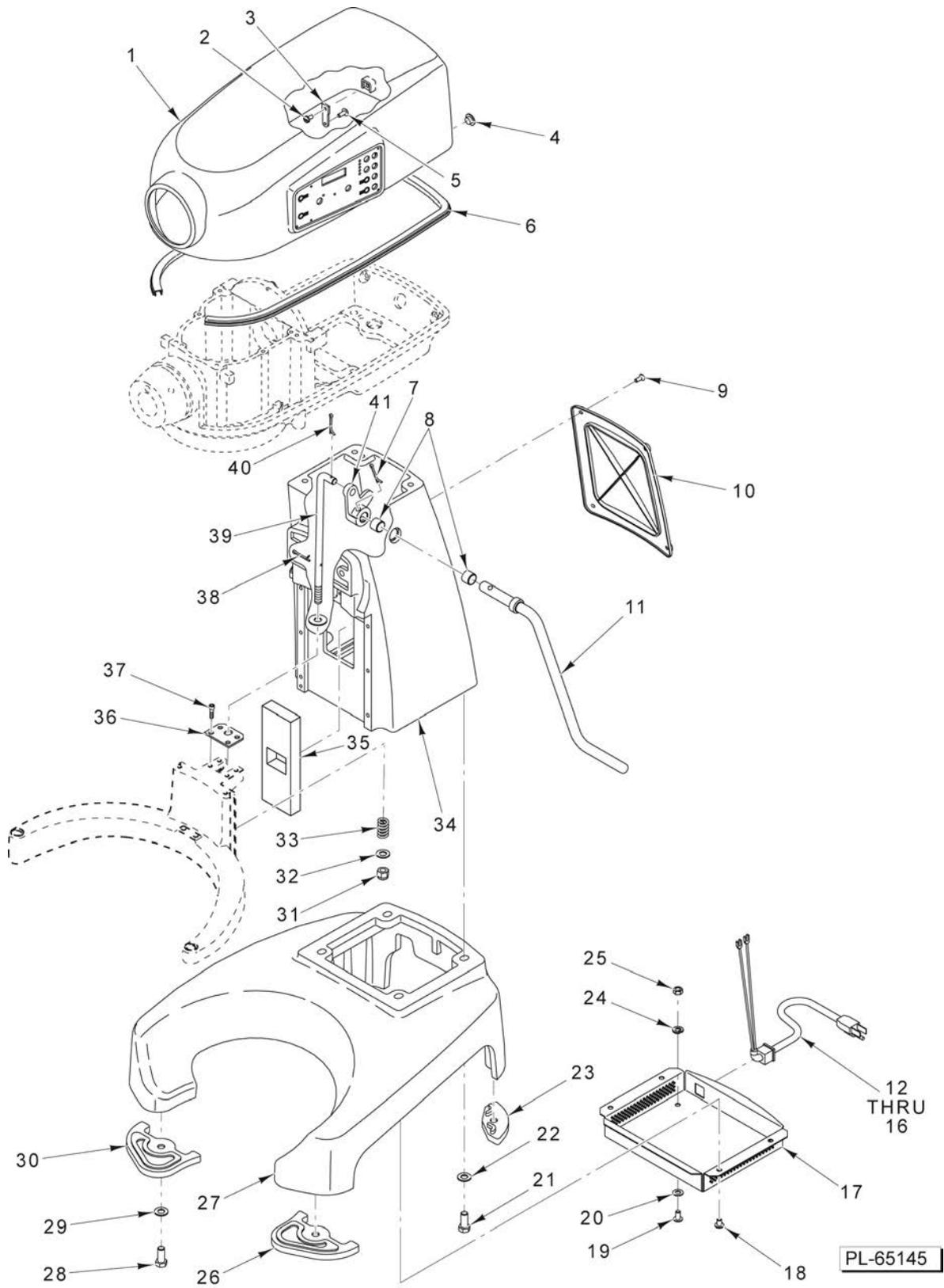


ATTACHMENT HUB

ATTACHMENT HUB

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-65144			
1	SC-093-23	Mach. Screw 10-24 x 3/8 Phil. Pan Hd.....	1
*2	00-875989	Cover - Attachment Hub.....	1
*3	00-875991	Bushing - Cover Mounting.....	1
4	00-874925-00004	Attachment - Hub Seal.....	1
*5	00-874941	Bracket - Attachment Hub Cover.....	1
*6	SC-093-23	Mach. Screw 10-24 x 3/8 Phil. Pan Hd.....	2
*7	NS-025-01	Crown Nut 10-24 (SST).....	1
8	00-108197-00001	Thumb Screw.....	1
9	OR-001-03	O-Ring - Quad.....	1
10	00-874837	Spacer.....	1
11	00-012746-00005	Washer - Thrust (0.080).....	AR
12	00-012746-00006	Washer - Thrust (0.106).....	AR
13	00-012746-00007	Washer - Thrust (0.092).....	AR
14	00-012746-00008	Washer - Thrust (0.086).....	AR
15	00-012746-00009	Washer - Thrust (0.098).....	AR
16	00-012746-00010	Washer - Thrust (0.112).....	AR
17	00-012746-00012	Washer - Thrust (0.119).....	AR
18	00-012746-00013	Washer - Thrust (0.121).....	AR
19	00-012746-00016	Washer - Thrust (0.129).....	AR
20	00-012746-00019	Washer - Thrust (0.115).....	AR
21	00-435065-00002	Bevel Gear Assy. (Incls. Item 22).....	1
22	PL-003-17	Plug - Expansion.....	1
23	00-937329-00003	Seal - Neoprene.....	1
24	00-917221	Plug - Attachment.....	1

* (ML-134311, ML-134315, ML-134346, ML-134352, ML-134400, & ML-134378)

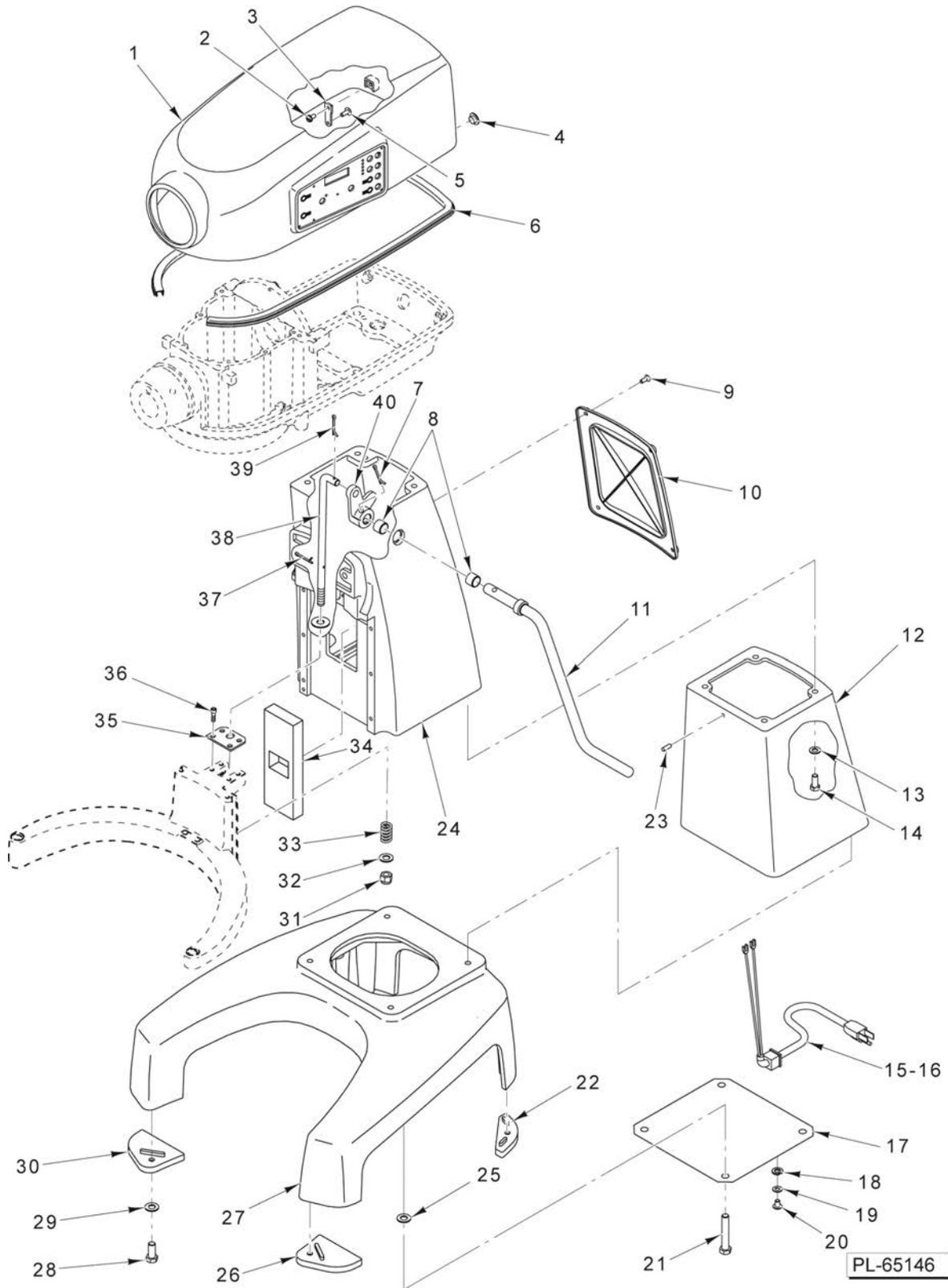


BASE AND PEDESTAL
(ML-134295, 311, 315, 352, 400, 460; ML-141032, 034)

BASE AND PEDESTAL
(ML-134295, 311, 315, 352, 400, 460; ML-141032, 034)

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-65145			
*1	00-913103-00006	Cover Assy. (Starting SN 311424810).....	1
2	SD-024-38	Self-Tapping Screw 10-24 x 3/8 Phil. Pan Hd., Type TT (ML-134352 & ML-134400)	2
3	00-874829	Tab - Cover Mounting.....	2
4	00-874857	Plug.....	1
5	SC-066-20	Mach. Screw 10-32 x 1/2 Phil. Truss Hd. (SST).....	2
6	00-937329-00001	Seal - Neoprene (44 In.).....	1
7	PC-003-55	Cotter Pin 1/8 x 3/4.....	1
8	00-479510	Bushing - Bowl Lift.....	2
9	SC-015-34	Mach. Screw 10-24 x 1/2 Slotted Oval Hd.....	4
10	00-916195	NLA - Obsolete--Cover - Pedestal (Back).....	1
11	00-874745-00002	Handle & Bushing - Bowl Lift.....	1
12	00-874833-00004	Cord & Plug Assy. (200-240 V., 50-60 Hz., 1 Ph.).....	1
13	00-874833-00005	Cord & Plug Assy. (200-240 V., 50-60 Hz., 1 Ph.) (ML-134315 & ML-134400) (Australia).....	1
14	00-874833-00001	Cord & Plug Assy. (100-120 V., 50-60 Hz., 1 Ph.) (ML-134460) (Japan).....	1
15	00-874833-00003	Cord & Plug Assy. (200-240 V., 50-60 Hz., 1 Ph.) (ML-134295) (Korea).....	1
16	00-874833-00006	Cord & Plug Assy. (380-480 V., 50-60 Hz., 3 Ph.).....	1
17	00-874760	Cover - Controller.....	1
18	SC-114-80	Mach. Screw 1/4-20 x 3/8 Phil. Pan Hd.....	4
19	SC-128-15	Mach. Screw M5 x 0.8 x 12mm Phil. Pan Hd.....	1
20	WS-002-51	Washer.....	1
21	SC-118-11	Cap Screw 3/8-16 x 7/8 Hex Hd.....	4
22	WS-018-24	Washer.....	4
23	00-874879	Pad - Rear.....	2
24	WL-003-38	Lockwasher 1/4 Helical.....	1
25	NS-047-49	Nut M5 Hex.....	1
26	00-874896	Pad - Front (RH).....	1
27	00-874720-00002	Base.....	1
28	SC-118-12	Cap Screw 3/8-16 x 3/4 Hex Hd.....	4
29	WS-018-34	Washer.....	4
30	00-874878	Pad - Front (LH).....	1
31	NS-036-15	Stop Nut 3/8-24 Hex Special.....	1
32	WS-006-26	Washer.....	1
33	00-012782	Spring.....	1
34	00-874723-00002	Pedestal.....	1
35	00-917167	Barrier - Steam.....	1
36	00-874870	Plate - Spring Bowl.....	1
37	SC-089-01	Cap Screw 1/4-20 x 1/2 Hex Socket Hd.....	4
38	PC-003-55	Cotter Pin 1/8 x 3/4.....	1
39	00-874748	Rod - Bowl Lift.....	1
40	PC-003-55	Cotter Pin 1/8 x 3/4.....	1
41	00-874756	Arm - Bowl Lift.....	1

* Order cover control upgrade 00-913103-00005 when replacing a cover on any machine that has a 4-pos. spd. selector switch.

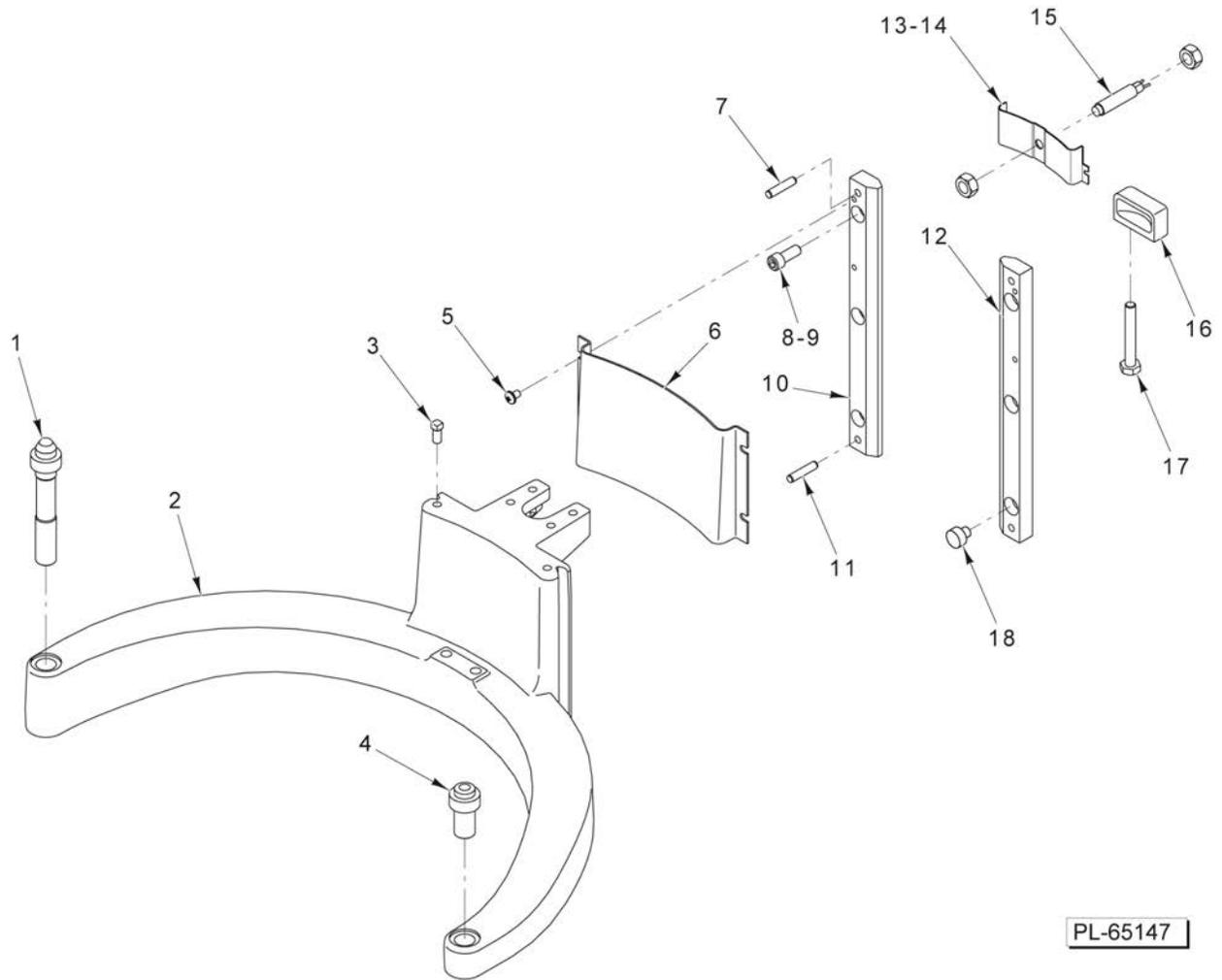


**BASE AND PEDESTAL
(ML-134346, 378; ML-141033, 035)**

**BASE AND PEDESTAL
(ML-134346, 378; ML-141033, 035)**

ILLUS. PL-65146	PART NO.	NAME OF PART	AMT.
*1	00-913103-00006	Cover Assy. (Starting SN 311424810).....	1
2	SD-024-38	Self-Tapping Screw 10-24 x 3/8 Phil. Pan Hd., Type TT.....	2
3	00-874829	Tab - Cover Mounting.....	2
4	00-874857	Plug - Hole.....	2
5	SC-066-20	Mach. Screw 10-32 x 1/2 Phil. Truss Hd. (SST).....	2
6	00-937329-00001	Seal - Neoprene (44 In.).....	1
7	PC-003-55	Cotter Pin 1/8 x 3/4.....	1
8	00-479510	Bushing - Bowl Lift.....	2
9	SC-015-34	Mach. Screw 10-24 x 1/2 Slotted Oval Hd.....	4
10	00-916195	NLA - Obsolete--Cover - Pedestal (Back).....	1
11	00-874745-00002	Handle & Bushing - Bowl Lift.....	1
12	00-916548-00002	NLA - Obsolete--Block - Riser.....	1
13	WS-018-24	Washer.....	4
14	SC-118-10	Cap Screw 3/8-16 x 1 Hex Hd.....	4
15	00-874833-00004	Cord & Plug Assy. (200-240 V., 50-60 Hz., 1 Ph.).....	1
16	00-874833-00006	Cord & Plug Assy. (380-480 V., 50-60 Hz., 3 Ph.).....	1
17	00-916549	Screen - Air Floor.....	1
18	WS-003-38	Washer.....	1
19	WS-002-51	Washer Lockwasher.....	1
20	SC-128-15	Mach. Screw M5 x 0.8 x 12mm Phil. Pan Hd.....	1
21	SC-124-91	Cap Screw 3/8-16 x 2-1/2 Hex Hd.....	4
22	00-916309	Pad - Rear.....	2
23	PG-005-25	Pin - Grooved.....	1
24	00-874723-00002	Pedestal.....	1
25	WS-018-24	Washer.....	4
26	00-916307	Pad - Front (LH).....	1
27	00-916213-00004	Base.....	1
28	SC-118-12	Cap Screw 3/8-16 x 3/4 Hex Hd.....	4
29	WS-018-34	Washer - Shim .010 THK. (SST).....	4
30	00-916308	Pad - Front (RH).....	1
31	NS-036-15	Stop Nut 3/8-24 Hex Special.....	1
32	WS-006-26	Washer.....	1
33	00-012782	Spring.....	1
34	00-917167	Barrier - Steam.....	1
35	00-874870	Plate - Spring Bowl.....	1
36	SC-089-01	Cap Screw 1/4-20 x 1/2 Hex Socket Hd.....	4
37	PC-003-55	Cotter Pin 1/8 x 3/4.....	1
38	00-874748	Rod - Bowl Lift.....	1
39	PC-003-55	Cotter Pin 1/8 x 3/4.....	1
40	00-874756	Arm - Bowl Lift.....	1

* Order cover control upgrade 00-913103-00005 when replacing a cover on any machine that has a 4-pos. spd. selector switch.



PL-65147

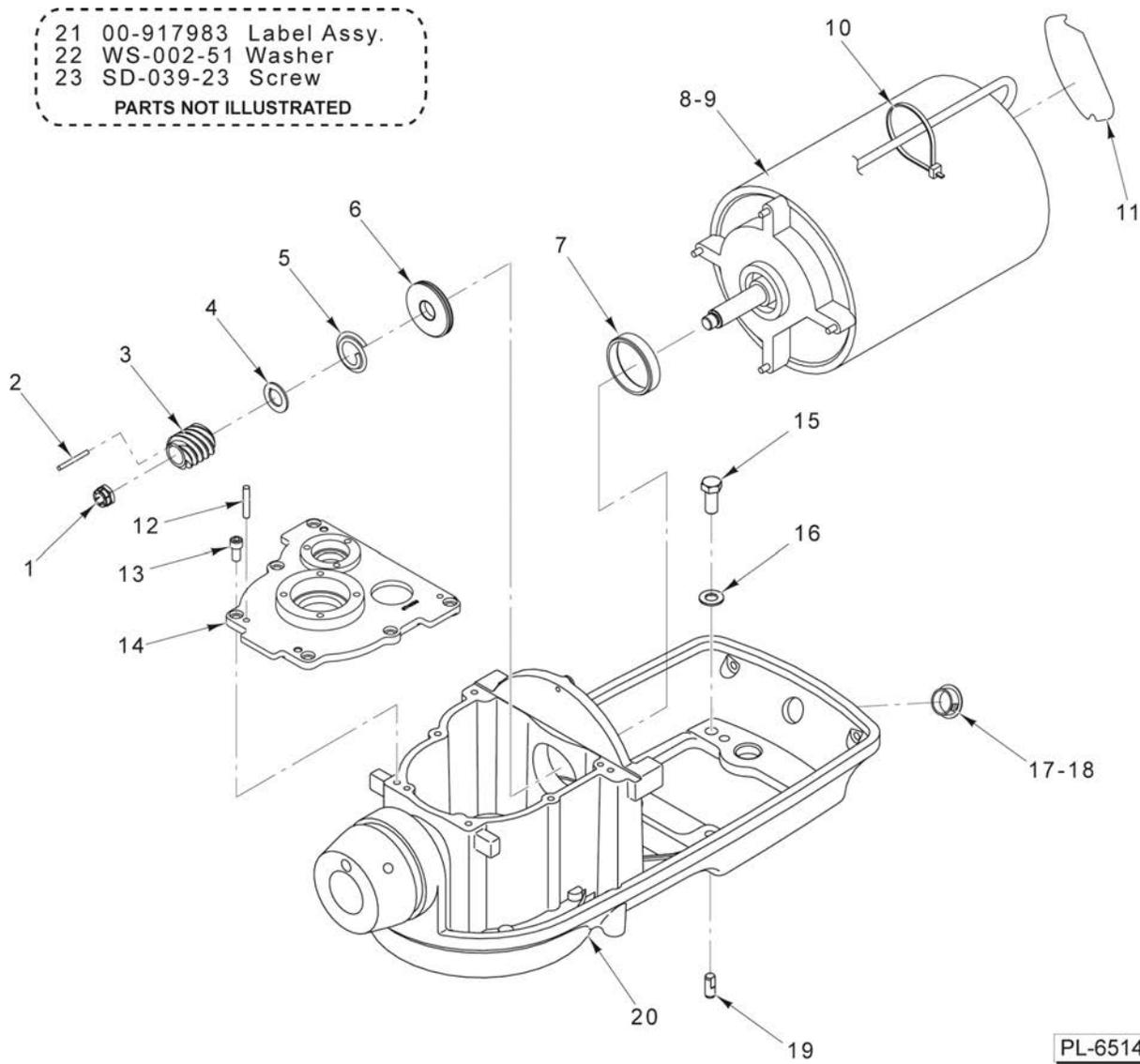
BOWL SUPPORT

BOWL SUPPORT

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-65147			
1	00-874726	Pin - Bowl (LH).....	1
2	00-874841-00002	Support - Bowl.....	1
3	SC-129-22	Set Screw 1/4-20 x 1/4 Sq. Hd. Cup Pt.....	2
4	00-874727	Pin - Bowl (RH).....	1
5	SC-122-59	Mach. Screw 8-32 x 1/4 Phil. Pan Hd. (SST).....	4
6	00-874742	Apron.....	1
7	00-011800-00187	Dowel.....	2
*8	SC-089-01	Cap Screw 1/4-20 x 1/2 Hex Socket Hd.....	4
**9	SC-089-02	Cap Screw 1/4-20 x 3/4 Hex Socket Hd.....	4
10	00-874738-00001	Slideway - Bowl Lift (LH).....	1
11	00-011800-00187	Dowel.....	2
12	00-874738-00002	Slideway - Bowl Lift (RH).....	1
13	00-937323	Cover - Bowl Interlock.....	1
14	00-874925-00003	Seal - Neoprene (4.875 In.).....	1
15	00-874929	Switch - Reed.....	1
16	00-874842	Hold Down - Bowl (Rear).....	1
17	SC-062-69	Cap Screw 1/4-20 x 1-3/4 Hex Hd.....	2
18	PB-004-97	Cap.....	4

* (ML-134311, ML-134346, ML-134352, ML-134378, ML-141033, & ML-141035)

** (ML-134295, ML-134315, ML-134400, ML-141034, & ML-141032)



TRANSMISSION CASE AND MOTOR

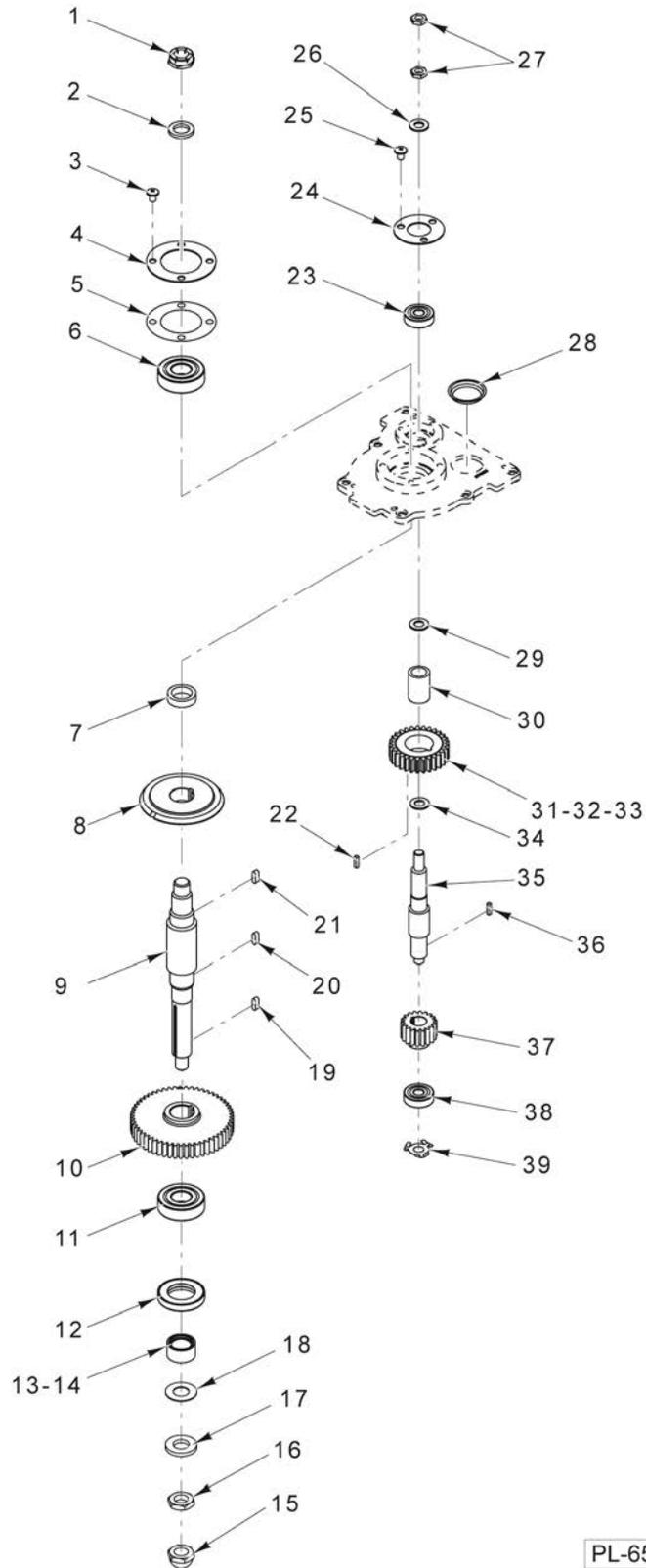
TRANSMISSION CASE AND MOTOR

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-65148			
1	NS-032-23	Lock Nut 7/16-20 Special.....	1
2	00-012430-00004	Key 1/8 x 1/8 x 1-1/4.....	1
3	00-291221	Gear - Worm (60 Cycle).....	1
4	00-012754	Washer.....	1
5	00-012757	Spring - Shock Absorber.....	1
6	00-874820	Deflector - Grease (LH).....	1
7	00-916445	Bushing - Motor.....	1
8	00-874634	Motor (208-230 V., 60 Hz., 3 Ph.) (All Models Except ML-134460).....	1
9	00-917810	Motor (208-230/460 V., 60 Hz., 3 Ph.) (ML-134460).....	1
10	00-113703	Cable Tie.....	2
11	00-916220	Plate - Motor Access.....	1
12	00-011800-00187	Dowel.....	2
13	SC-089-01	Cap Screw 1/4-20 x 1/2 Hex Socket Hd.....	6
14	00-874755	Cover - Transmission.....	1
15	SC-118-11	Cap Screw 3/8-16 x 7/8 Hex Hd.....	4
16	WS-018-24	Washer.....	4
*17	00-874857	Plug.....	1
**18	00-874876	Plug - Cupped Expansion (Brass).....	1
19	00-270776	Dowel.....	2
***20	00-917805-00002	Transmission Case - Lower	1
21	00-917983	Shield & Warning Label Assy. (ML-134460).....	1
22	WS-002-51	Washer (ML-134460).....	2
23	SD-039-23	Self-Tapping Screw 6-32 x 1/4 Hex Washer Hd., Type RL (ML-134460).....	2

* (ML-134295, ML-134311, ML-134315, ML134352, ML-134378, ML-134400, & ML-134460)

** (ML-134295, ML-134346, ML-134352, ML-134378, ML-134400, & ML-134460)

*** Order transmission case 00-917805-00002 and bushing 00-916445 when replacing transmission case.



PL-65149

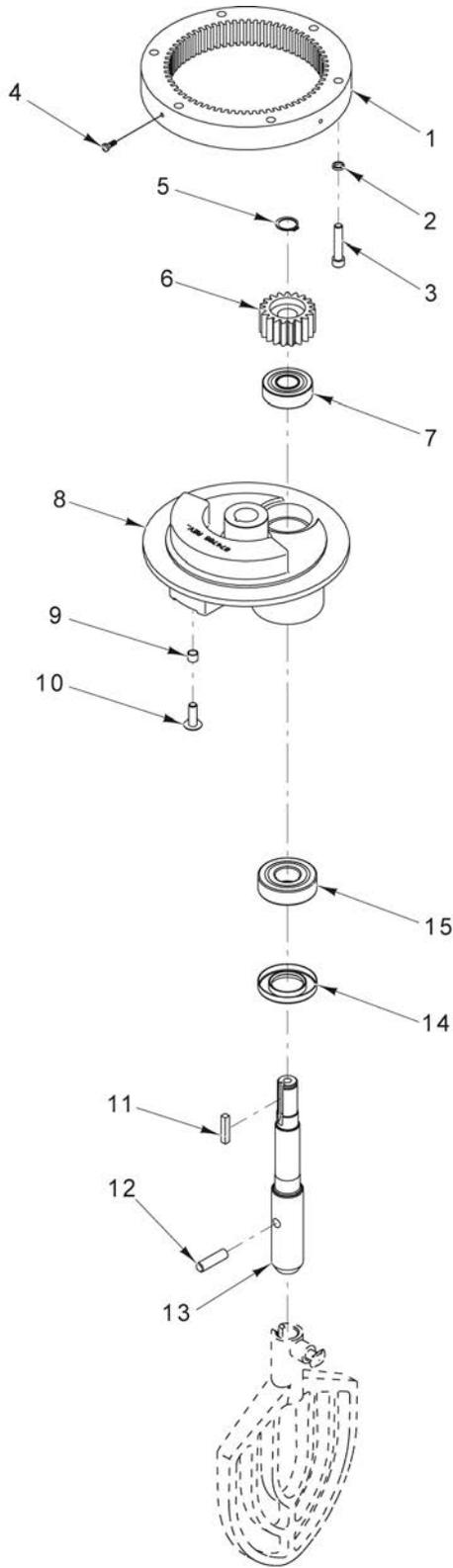
TRANSMISSION

TRANSMISSION

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-65149			
1	NS-032-37	Lock Nut 5/8-18 Special.....	1
2	WS-031-41	Washer.....	1
3	SC-089-01	Cap Screw 1/4-20 x 1/2 Hex Socket Hd.....	4
4	00-874787	Retainer - Planetary Bearing.....	1
5	00-874795	Gasket - Bearing.....	1
6	BB-005-34	Ball Bearing.....	1
7	00-874793	Spacer - Planetary.....	1
8	00-124733-00002	Gear - Bevel (46T) (14P).....	1
9	00-874635	Shaft - Planetary.....	1
10	00-874778	Gear (55T, 14P).....	1
11	BB-020-06	Bearing - Ball Fafnir 204K.....	1
12	00-114695	Seal - Oil.....	1
13	00-437342	Spacer - Bearing.....	1
14	00-067500-00078	O-Ring.....	1
15	00-024715-00003	Acorn Nut 1/2-20.....	1
16	00-010928-00002	Nut - Special.....	1
17	WS-030-83	Washer.....	1
18	00-124946	Washer (1/32 Thk.).....	1
19	00-012430-00017	Key 1/8 x 1/8 x 2-7/16.....	1
20	00-874873-00002	Key.....	1
21	00-874873-00001	Key.....	1
22	00-012430-00024	Key 1/8 x 1/8 x 1/2.....	1
23	BB-005-02	Bearing - Ball.....	1
24	00-874788	Retainer - Bearing.....	1
25	SC-089-01	Cap Screw 1/4-20 x 1/2 Hex Socket Hd.....	3
26	WS-006-36	Washer.....	1
27	00-012710	Nut - Retaining.....	2
28	00-064871	Plug - Friction.....	1
29	00-968075	Spacer, Worm Wheel.....	1
*30	00-916962	Spacer - Gear.....	1
31	00-917797	Gear - Worm (ML-134460).....	1
32	00-874934	Gear - Worm (All Units Except ML-134460).....	1
**33	00-124751-00003	Worm Wheel & Bushing Assy.	1
**34	WS-010-36	Washer.....	1
*35	00-916961	Shaft - Worm Wheel.....	1
36	00-012430-00024	Key 1/8 x 1/8 x 1/2.....	1
37	00-874777	Gear (18T, 14P).....	1
38	BB-005-01	Ball Bearing.....	1
39	SL-002-08	Spring - Loading.....	1

* Order shaft & worm wheel assembly 00-913102-00101 when replacing these parts on HL120 before SN 311371184 and HL200 before SN 311370192.

** (HL120 - Before SN 311371184; HL200 - Before SN 311370192)

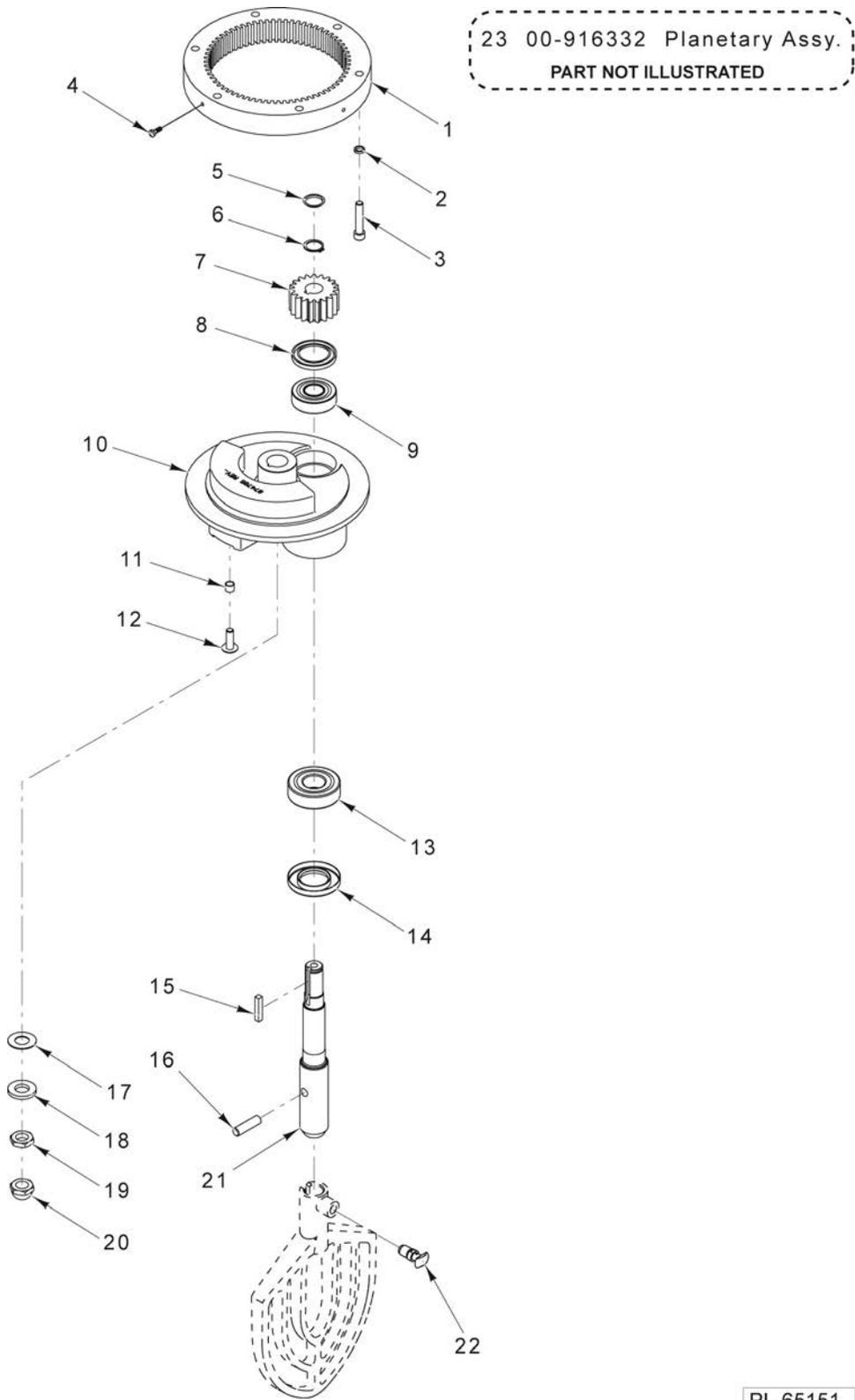


PL-65150

**PLANETARY
(PREVIOUS CONSTRUCTION - BEFORE SN 311386989)**

**PLANETARY
(PREVIOUS CONSTRUCTION - BEFORE SN 311386989)**

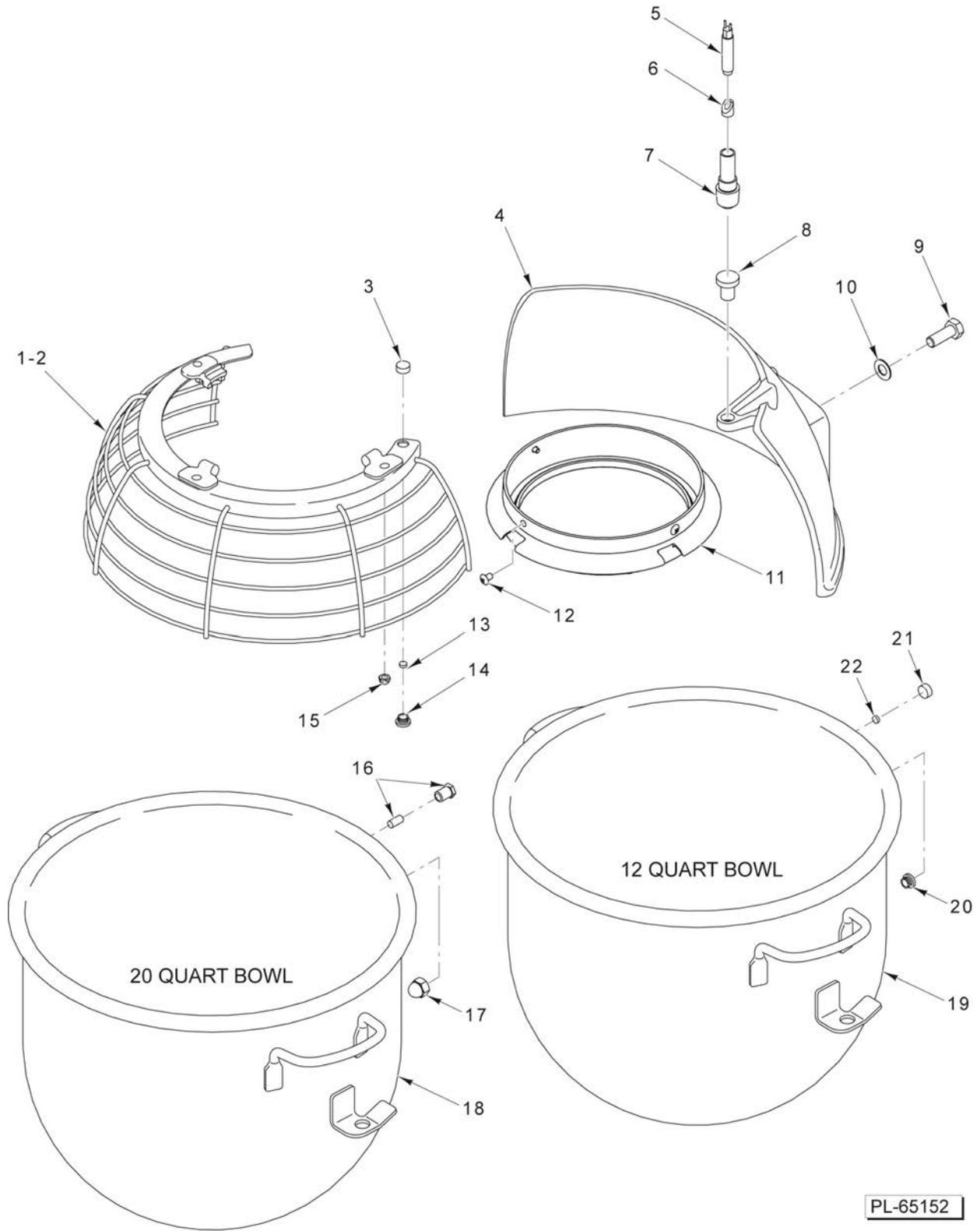
ILLUS.	PART NO.	NAME OF PART	AMT.
PL-65150			
1	00-438524-00002	Gear - Internal.....	1
2	WL-003-35	Lockwasher 1/4 Helical.....	6
3	SC-040-09	Cap Screw 1/4-20 x 1-1/4 Hex Socket Hd.....	6
4	SC-066-13	Mach. Screw 8-32 x 1/4 Phil. Truss Hd. (SST).....	3
5	RR-004-18	Retaining Ring.....	1
6	00-015217	Pinion - Beater (19T).....	1
7	BB-018-17	Bearing - Ball Hoover.....	1
8	00-916332	Planetary Subassy.....	1
9	00-874770	Spacer - Bowl Scraper.....	2
10	SC-053-46	Mach. Screw 1/4-20 x 3/4 Slotted Truss Hd. (SST).....	2
11	00-012430-00055	Key 3/16 x 3/16 x 1.....	1
12	00-065062-00001	Pin - Dowel.....	1
13	00-874739	Shaft - Agitator.....	1
14	00-023482	Seal - Oil (1 In. I.D.).....	1
15	BB-005-34	Ball Bearing Hoover/NSK 6204 DDU.....	1



**PLANETARY
(CURRENT CONSTRUCTION - STARTING SN 311386989)**

**PLANETARY
(CURRENT CONSTRUCTION - STARTING SN 311386989)**

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-65151			
1	00-438524-00002	Gear - Internal.....	1
2	WL-003-35	Lockwasher 1/4 Helical.....	6
3	SC-040-09	Cap Screw 1/4-20 x 1-1/4 Hex Socket Hd.....	6
4	SC-066-13	Mach. Screw 8-32 x 1/4 Phil. Truss Hd. (SST).....	3
5	00-916336	Plug - Friction.....	1
6	RR-004-18	Retaining Ring.....	1
7	00-916335	Pinion - Beater (19T).....	1
8	00-916512	Seal - Upper Agitator Shaft.....	1
9	BB-018-17	Bearing - Ball Hoover.....	1
10	00-916333-00001	Planetary.....	1
11	00-874770	Spacer - Bowl Scraper.....	2
12	SC-053-46	Mach. Screw 1/4-20 x 3/4 Slotted Truss Hd. (SST).....	2
13	BB-005-34	Ball Bearing Hoover/NSK 6204 DDU.....	1
14	00-023482	Seal - Oil (1 In. I.D.).....	1
15	00-012430-00055	Key 3/16 x 3/16 x 1.....	1
16	00-065062-00001	Pin - Dowel.....	1
17	00-124946	Washer (1/32 Thk.).....	1
18	WS-030-83	Washer.....	1
19	00-010928-00002	Nut.....	1
20	00-024715-00003	Acorn Nut 1/2-20.....	1
21	00-937706	Shaft - Agitator & Pin Assy.....	1
22	00-874753	Plunger Assy.....	1
23	00-916332	Planetary Subassy. (Incls. Items 5 thru 16 & 21).....	1



PL-65152

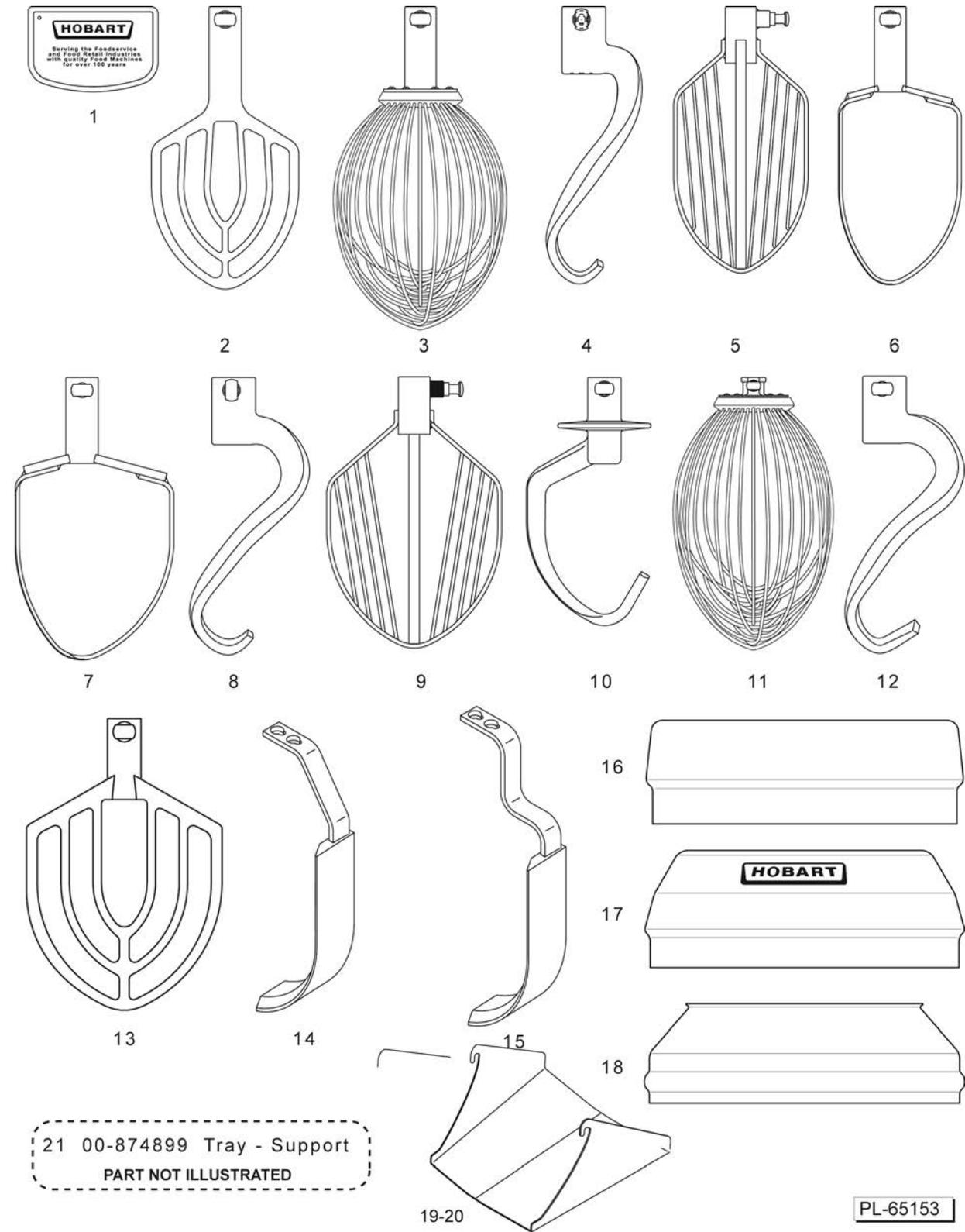
BOWL AND BOWL GUARD

BOWL AND BOWL GUARD

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-65152			
*1	00-937163-00001	Wire Cage Assy. (Incls. Items 3, 13, & 20)	1
**2	00-937163-00003	Wire Cage Assy. (Incls. Items 3, 13, & 20)	1
3	00-917357	Holder - Magnet (Upper).....	1
4	00-917234	Guard - Splash.....	1
5	00-874929	Switch - Reed.....	1
6	00-874940	Ring - Reed Switch.....	1
7	00-917232	Holder - Switch Reed (1/2 - 20 UNF-2B).....	1
8	00-874839	Pin - Sensor.....	1
9	SC-118-18	Cap Screw 1/4-20 x 7/8 Hex Hd.....	2
10	WS-003-19	Washer.....	2
11	00-917272	Cup - Drip & Flange.....	1
12	SC-066-13	Mach. Screw 8-32 x 1/4 Phil. Truss Hd. (SST).....	3
13	00-874875	Magnet - Disc.....	1
14	00-917358	Holder - Magnet (Lower).....	1
15	NS-048-96	Crown Nut 6-32 (SST).....	1
16	00-917527	Housing - Magnet (Incls. Magnet).....	1
17	NS-025-11	Crown Nut 3/8-24.....	1
18	00-917720	Bowl Assy. (20 Qt.) (SST) (Packaged) (Incls. Items 16 & 17).....	1
19	00-874864	Bowl Assy. (12 Qt.) (SST) (Packaged) (Incls. Items 20, 21, & 22).....	1
20	00-917358	Holder - Magnet (Lower).....	1
21	00-917357	Holder - Magnet (Upper).....	1
22	00-874875	Magnet - Disc.....	1

* (ML-134295, ML-134311, ML-134346, ML-134352, ML-134378, ML-134460,
ML-141032, ML-141033, ML-141034, & ML-141035)

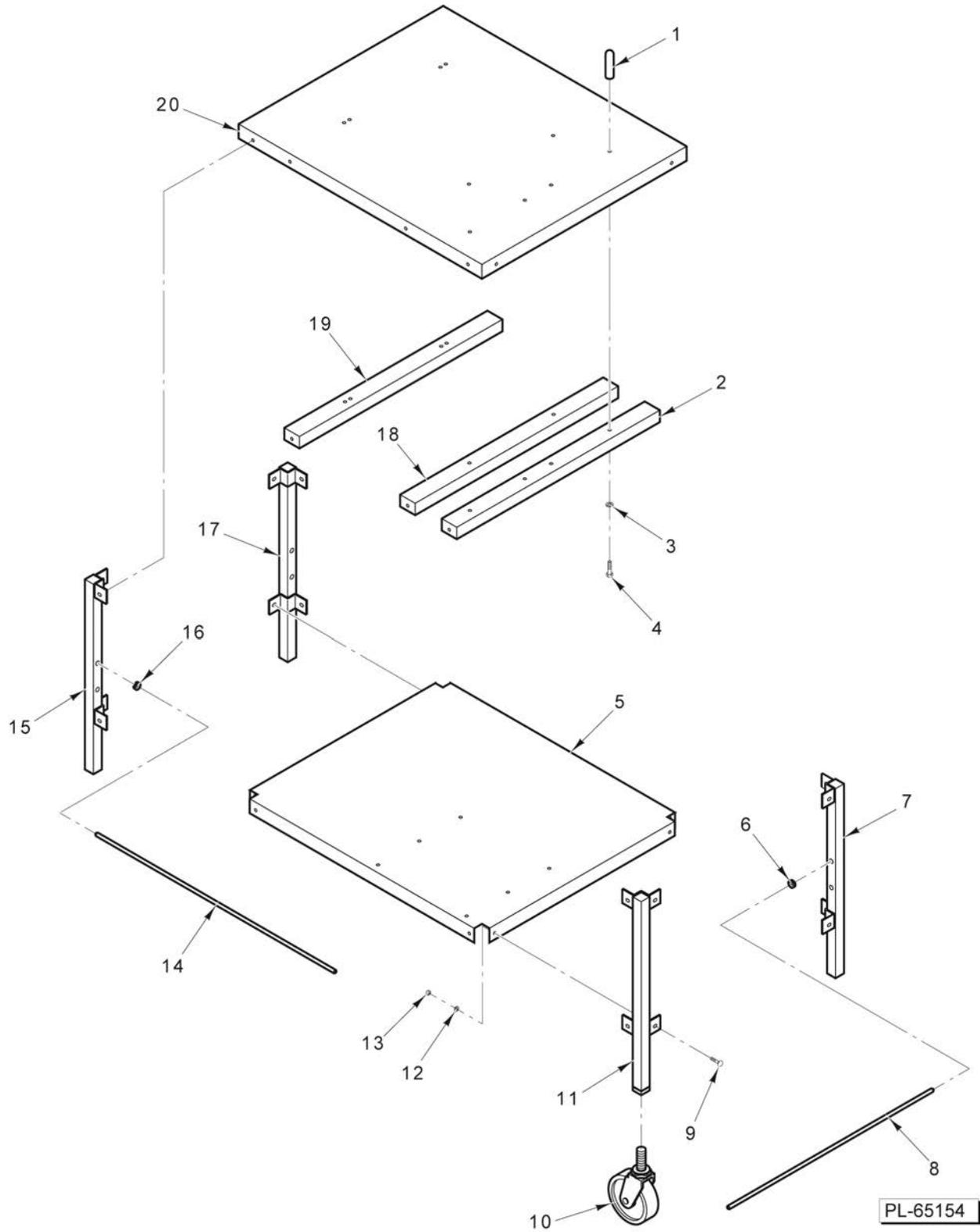
** (ML-134315 & ML-134400)



AGITATORS AND ACCESSORIES

AGITATORS AND ACCESSORIES

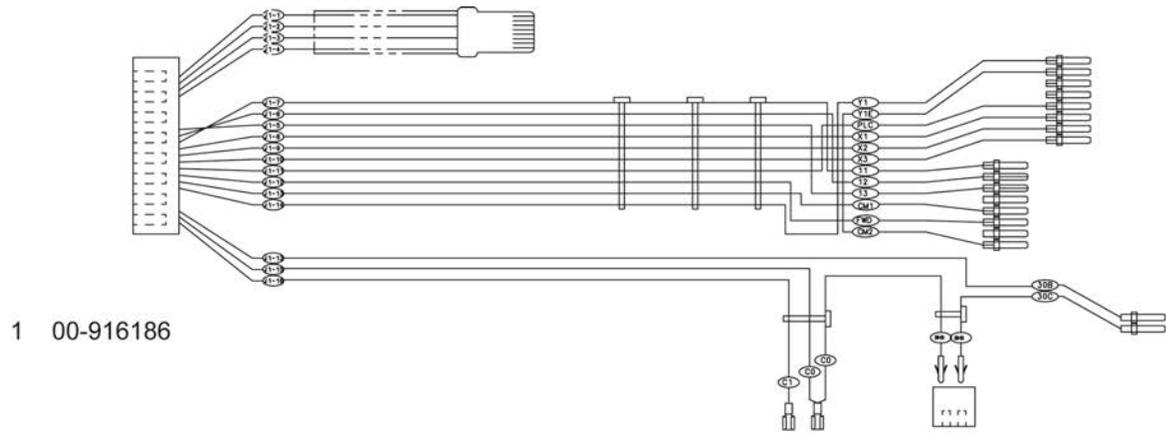
ILLUS.	PART NO.	NAME OF PART	AMT.
PL-65153			
1	00-118801	Scraper - Bowl.....	1
2	00-874828	"B" Beater (12 Qt.) (Packaged) (Incls. Item 1).....	1
3	00-873360	"D" Wire Whip (12 Qt.) (Packaged) (Incls. Item 1).....	1
4	00-873343	ED Dough Arm (12 Qt.) (Packaged) (Incls. Item 1).....	1
5	00-875893	"C" Whip (12 Qt.) (Packaged) (Incls. Item 1).....	1
6	00-873370	Pastry Knife (12 Qt.) (Packaged) (Incls. Item 1).....	1
7	00-873294	Pastry Knife (20 Qt.) (Packaged) (Incls. Item 1).....	1
8	00-873313	"ED" Dough Arm (20 Qt.) (Packaged).....	1
9	00-873331	"C" Whip (20 Qt.) (Packaged) (Incls. Item 1).....	1
10	00-873335	"E" Dough Arm (20 Qt.) (Packaged) (Incls. Item 1).....	1
11	00-874792	D Wire Whip (20 Qt.) (Packaged) (Incls. Item 1).....	1
12	00-874791	"ED" Dough Arm (20 Qt.) (Packaged) (Incls. Item 1).....	1
13	00-874790	"B" Beater (20 Qt.) (Packaged) (Incls. Item 1).....	1
14	00-873373	Scraper (12 Qt.) (Packaged).....	1
15	00-874836	Scraper (20 Qt.) (Packaged).....	1
16	00-438078	Splash Cover & Bowl Extension (12 Qt.).....	1
17	00-438079	Splash Cover & Bowl Extension (20 Qt.).....	1
18	00-875677	Splash Cover (20 Qt.) (Packaged) (SST).....	1
19	00-916684	Ingredient Chute (20 Qt.) (Packaged).....	1
20	00-874885	Ingredient Chute (12 Qt.) (Packaged).....	1
21	00-874899	Tray - Support (Packaged).....	1



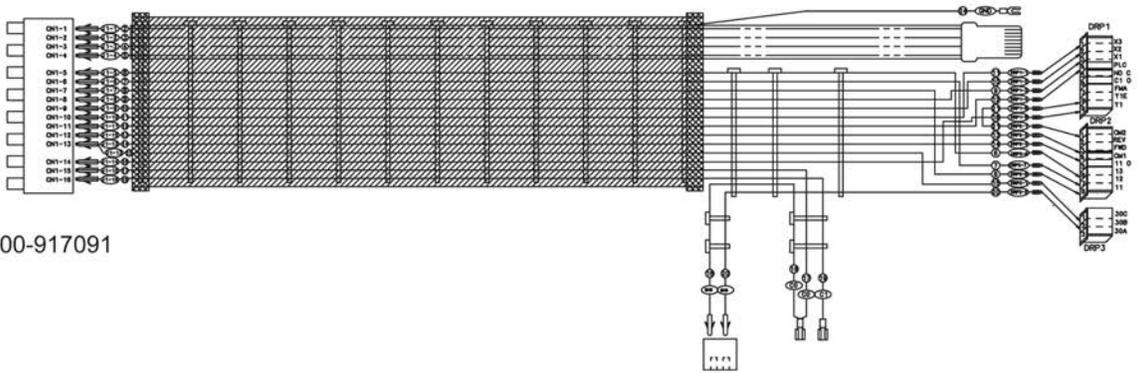
MIXER TABLE

MIXER TABLE

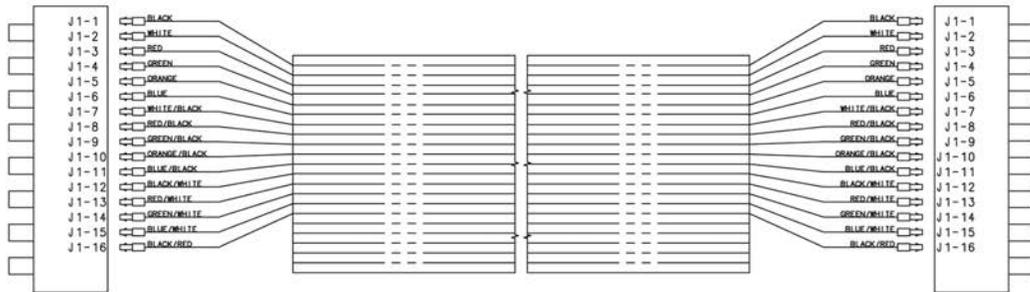
ILLUS.	PART NO.	NAME OF PART	AMT.
PL-65154			
1	00-124075	NLA - Obsolete--Post.....	4
2	00-124067	NLA - Obsolete--Support - Cross Top.....	1
3	WL-004-06	Lockwasher 3/8 Helical.....	8
4	SC-037-71	Cap Screw 3/8-16 x 3/4 Hex Hd.....	8
5	00-123427	Shelf - Table.....	1
6	00-124076	Grommet.....	4
7	00-124073	Leg - Rear (LH).....	1
8	00-124074-00002	Rod (Short).....	2
9	SC-094-26	Bolt - Carriage 1/4-20 x 1/2.....	22
10	00-205003	Caster - Locking.....	4
11	00-124070	Leg - Rear (RH).....	1
12	WS-005-01	Washer.....	22
13	NS-013-02	Nut 1/4-20 Hex.....	22
14	00-124074-00001	NLA - Obsolete--Rod (Long).....	4
15	00-124071	NLA - Obsolete--Leg - Front (RH).....	1
16	00-124076	Grommet.....	8
17	00-124072	Leg - Front (LH).....	1
18	00-875983	Support - Cross Top.....	1
19	00-124069	NLA - Obsolete--Support - Cross Top.....	1
20	00-875982	Top.....	1



1 00-916186



2 00-917091



3 00-916187

PL-65155

WIRING HARNESSES

WIRING HARNESSES

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-65155			
1	00-916186	Harness - Controller (Pin Type Harness Connector, Dual Harness Construction) (Previous Construction).....	1
2	00-917091	Harness - Main (Single Harness Construction) (Plug Type Controller Connector).....	1
3	00-916187	Harness - Timer (Dual Harness Construction).....	1



CATALOG OF REPLACEMENT PARTS

HL200CE PRETZEL MIXER

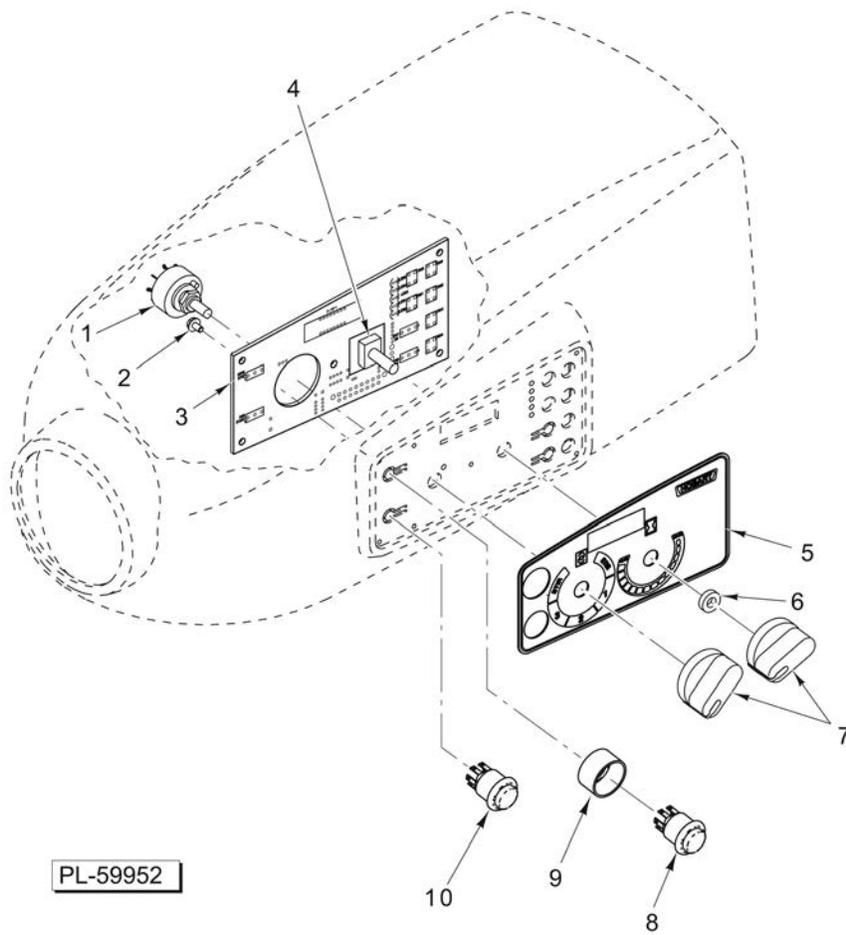


ML-141072

HL200CE

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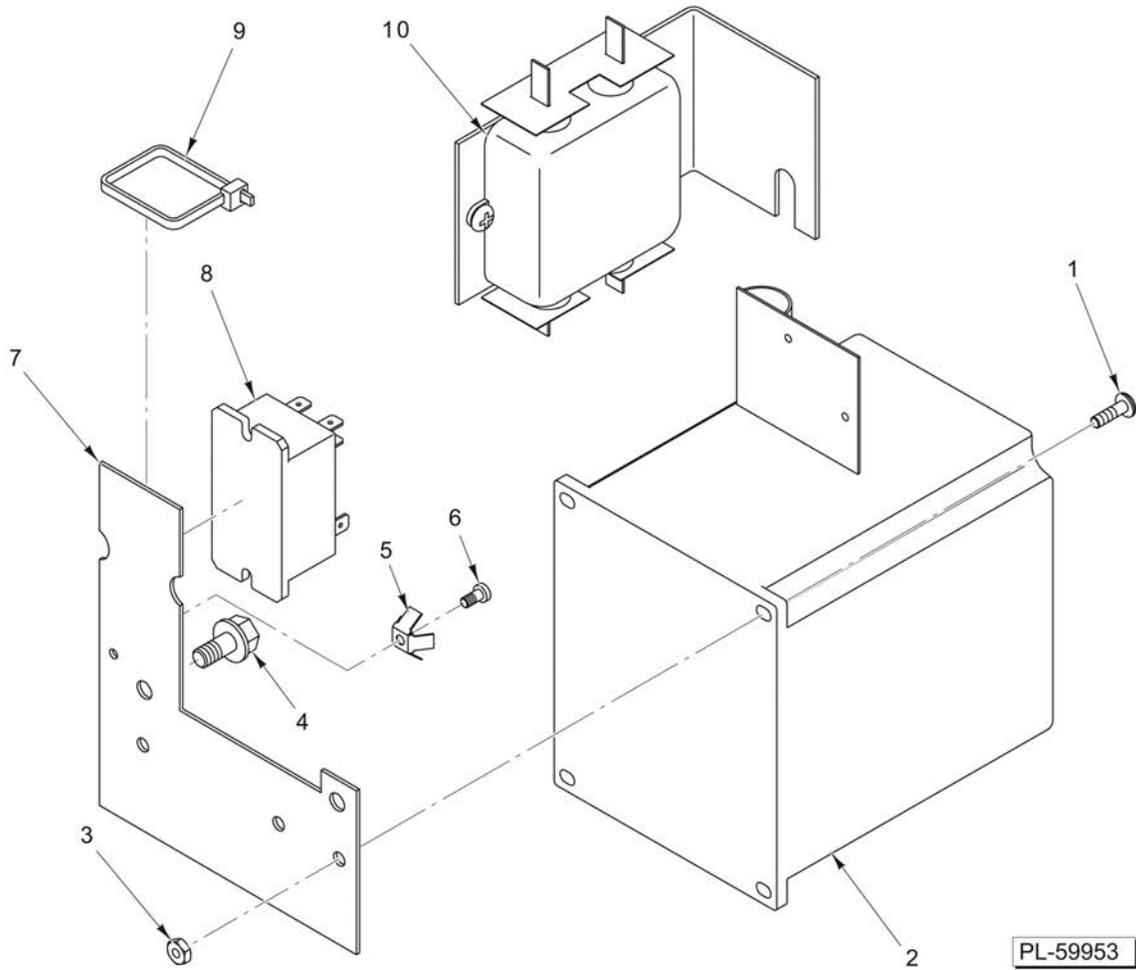
5	CONTROL PANEL
7	ELECTRICAL COMPONENTS
9	ATTACHMENT HUB
11	BASE AND PEDESTAL
13	BOWL SUPPORT
15	TRANSMISSION CASE AND MOTOR
17	TRANSMISSION
19	PLANETARY
21	BOWL AND BOWL GUARD



CONTROL PANEL

CONTROL PANEL

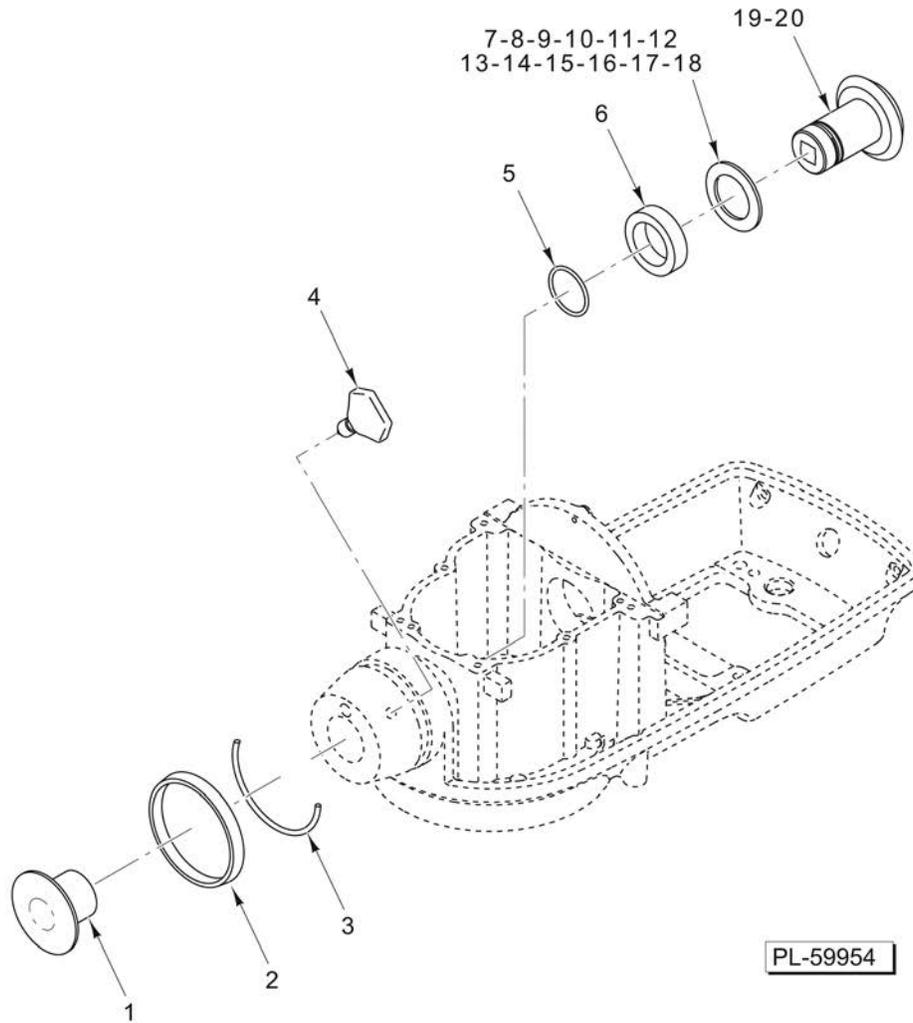
ILLUS.	PART NO.	NAME OF PART	AMT.
PL-59952			
1	00-937061	Switch - Speed Selector Assy. (6-Position) (For Use With 2-Stir Position PCB Assy.)	1
2	SD-039-23	Self-Tapping Screw 6-32 x 1/4 Hex Washer Hd., Type RL	5
3	00-937135	PCB Assy. (Standard Timer With 2 Stir Positions & Replaceable Start and Stop Switch)	1
4	00-916594	Potentiometer Assy.	1
5	00-937073	Overlay (CE With Standard Timer)	1
6	WS-031-55	Washer (Rubber)	1
7	00-874809	Knob	2
8	00-916593	Switch - Sealed Dome (Start)	1
9	00-916958-00002	Guard - Switch	1
10	00-916592	Switch - Sealed Dome (Stop)	1



ELECTRICAL COMPONENTS

ELECTRICAL COMPONENTS

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-59953			
1	SC-018-38	Mach. Screw 8-32 x 1/2 Slotted Pan Hd.....	2
2	00-937327	Controller (200-240 V.).....	1
3	NS-009-12	Nut 8-32 Hex.....	2
4	SC-100-08	Mach. Screw 1/4-20 x 3/8 Hex Washer Hd.....	2
5	00-065890-00090	Terminal (2-Tab).....	2
6	SD-015-37	Self-Tapping Screw 6-32 x 1/4 Phil. Pan Hd., Type TT.....	2
7	00-874763	Bracket - Controller.....	1
8	00-087714-067-1	Relay (2-Pole).....	1
9	00-113703	Cable Tie.....	1
10	00-916194	Filter & Bracket With Mylar Insulator.....	1
	00-916191	Ferrite.....	2
	00-916192	Ferrite.....	1
	00-917091	Harness - Main.....	1

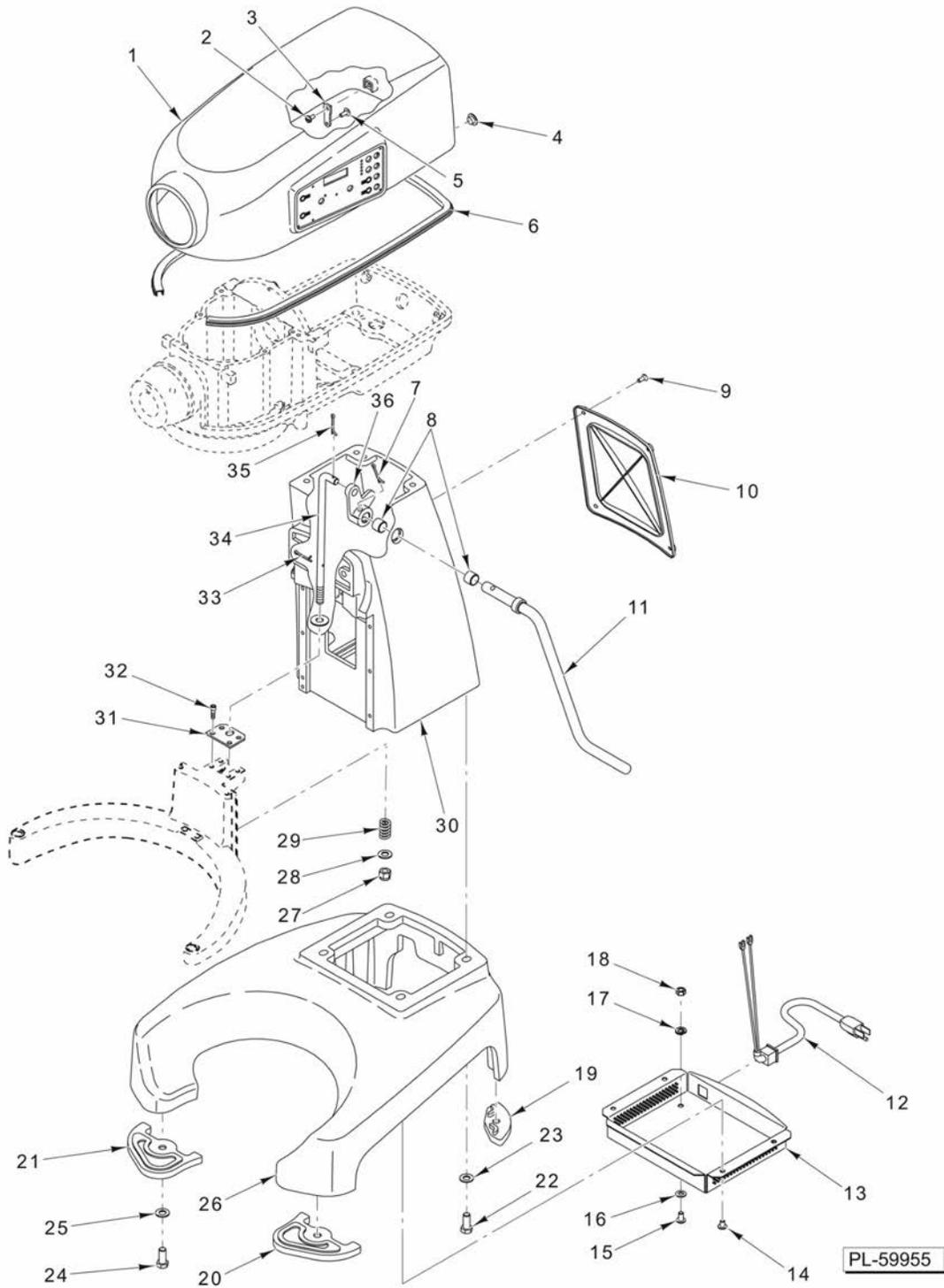


PL-59954

ATTACHMENT HUB

ATTACHMENT HUB

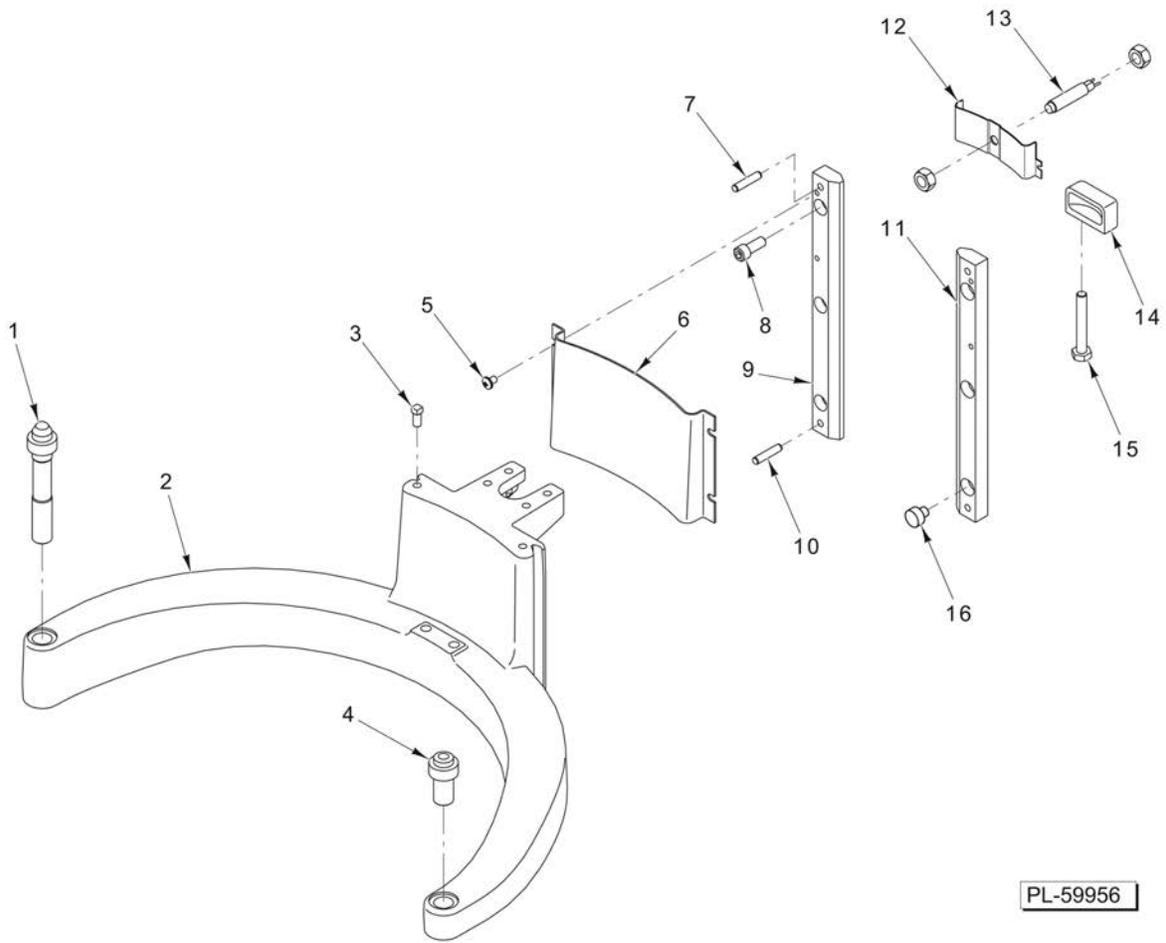
ILLUS.	PART NO.	NAME OF PART	AMT.
PL-59954			
1	00-917221	Plug - Attachment.....	1
2	00-937329-00003	Seal - Neoprene.....	1
3	00-937329-00002	Seal - Neoprene.....	1
4	00-108197-00001	Thumb Screw 1-1/4.....	1
5	OR-001-03	O-Ring - Quad.....	1
6	BN-002-06	Bearing - Needle.....	2
7	00-061920-00001	Washer - Thrust (0.076 Thk.).....	AR
8	00-061920-00002	Washer - Thrust (0.079 Thk.).....	AR
9	00-061920-00003	Washer - Thrust (0.082 Thk.).....	AR
10	00-061920-00004	Washer - Thrust (0.085 Thk.).....	AR
11	00-061920-00005	Washer - Thrust (0.088 Thk.).....	AR
12	00-061920-00006	Washer - Thrust (0.091 Thk.).....	AR
13	00-061920-00007	Washer - Thrust (0.094 Thk.).....	AR
14	00-061920-00008	Washer - Thrust (0.097 Thk.).....	AR
15	00-061920-00009	Washer - Thrust (0.100 Thk.).....	AR
16	00-061920-00010	Washer - Thrust (0.103 Thk.).....	AR
17	00-061920-00011	Washer - Thrust (0.106 Thk.).....	AR
18	00-061920-00012	Washer - Thrust (0.070 Thk.).....	AR
19	00-435065-00002	Bevel Drive Gear & Seal Assy. (Incls. Item 20).....	1
20	PL-003-17	Plug - Expansion.....	1



BASE AND PEDESTAL

BASE AND PEDESTAL

ILLUS. PL-59955	PART NO.	NAME OF PART	AMT.
1	00-913103-00006	Cover Assy.....	1
2	SD-024-38	Self-Tapping Screw 10-24 x 3/8 Phil. Pan Hd., Type TT.....	2
3	00-874829	Tab - Cover Mounting.....	2
4	00-874857	Plug.....	1
5	SC-110-97	Mach. Screw 10-32 x 1/2 Slotted Truss Hd. (SST).....	2
6	00-937329-00001	Seal - Neoprene.....	1
7	PS-004-15	Spiral Pin 1/4 Dia. x 1-1/8 Lg.....	1
8	00-479510	Bushing - Bowl Lift.....	2
9	SC-023-10	Mach. Screw 10-24 x 3/4 Slotted Oval Hd. (SST).....	4
10	00-916195	NLA - Obsolete--Cover - Pedestal (Back).....	1
11	00-874745-00002	Handle & Bushing - Bowl Lift.....	1
12	00-874833-00004	Cord & Plug Assy. (200-240 V., 50-60 Hz., 1 Ph.).....	1
13	00-874760	Cover - Controller.....	1
14	SC-114-80	Mach. Screw 1/4-20 x 3/8 Phil. Pan Hd.....	4
15	SC-128-15	Mach. Screw M5 x 0.8 x 12mm Phil. Pan Hd.....	1
16	WS-002-51	Washer.....	1
17	WL-003-38	Lockwasher 1/4 Helical.....	1
18	NS-047-49	Nut M5 Hex.....	1
19	00-874930	Kit - Foot Pad (Packaged) (Incls. Items 20, 21, 24, & 25).....	1
20	00-874930	Kit - Foot Pad (Packaged) (Incls. Items 19, 21, 24, & 25).....	1
21	00-874930	Kit - Foot Pad (Packaged) (Incls. Items 19, 20, 24, & 25).....	1
22	SC-118-11	Cap Screw 3/8-16 x 7/8 Hex Hd.....	4
23	WS-018-24	Washer.....	4
24	SC-118-12	Cap Screw 3/8-16 x 3/4 Hex Hd.....	4
25	WS-018-34	Washer - Shim .010 THK. (SST).....	4
26	00-874720-00002	Base.....	1
27	NS-036-15	Stop Nut 3/8-24 Hex Special.....	1
28	WS-006-26	Washer.....	1
29	00-012782	Spring.....	1
30	00-874723-00002	Pedestal.....	1
31	00-874870	Plate - Spring Bowl Yoke.....	1
32	SC-089-01	Cap Screw 1/4-20 x 1/2 Hex Socket Hd.....	4
33	PC-003-55	Cotter Pin 1/8 x 3/4.....	1
34	00-874748	Rod - Bowl Lift.....	1
35	PC-003-55	Cotter Pin 1/8 x 3/4.....	1
36	00-874756	Arm - Bowl Lift.....	1

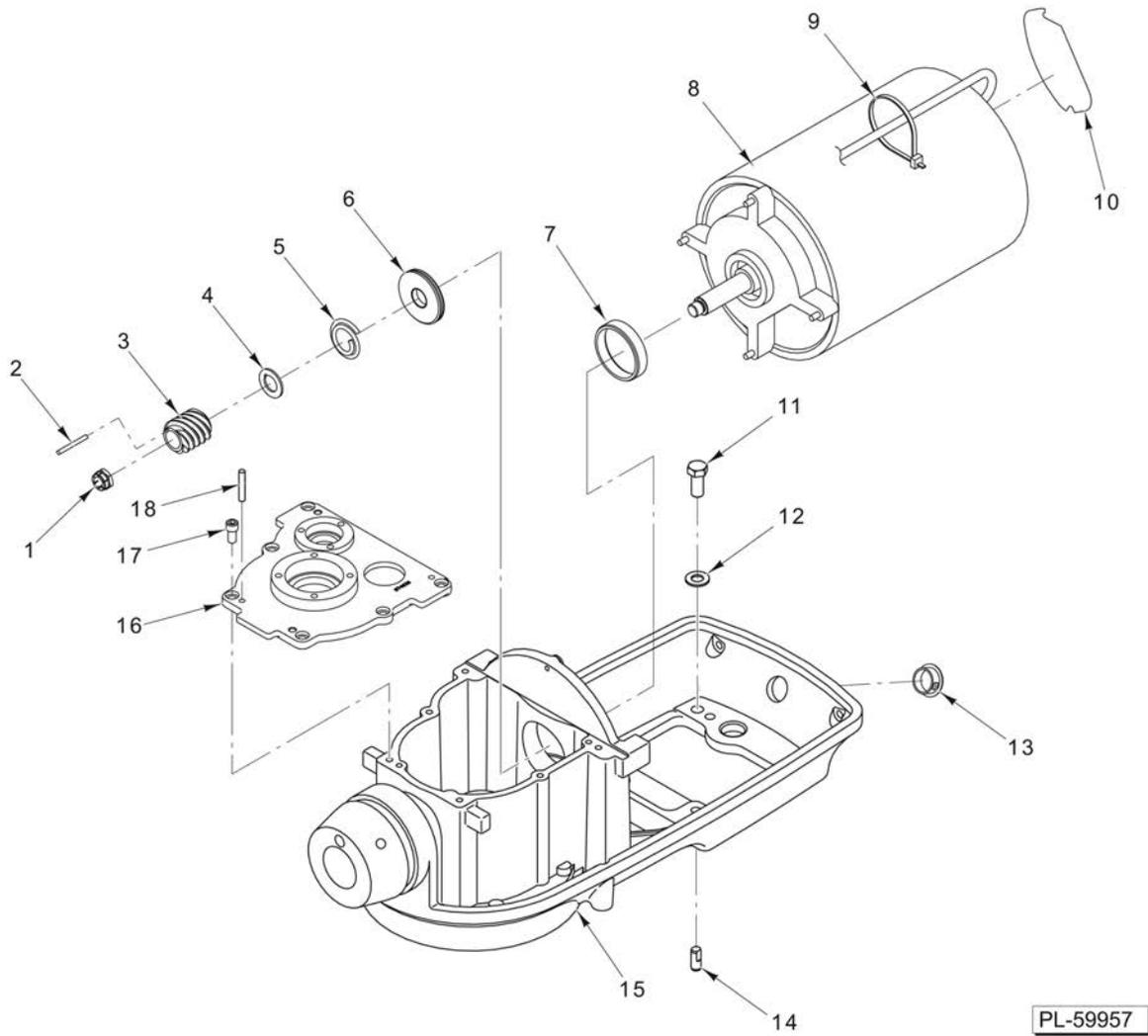


PL-59956

BOWL SUPPORT

BOWL SUPPORT

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-59956			
1	00-874726	Pin - Bowl (LH).....	1
2	00-874841-00002	Support - Bowl.....	1
3	SC-129-22	Set Screw 1/4-20 x 1/4 Sq. Hd. Cup Pt.....	2
4	00-874727	Pin - Bowl (RH).....	1
5	SC-118-23	Mach. Screw 8-32 x 1/4 Slotted Pan Hd. (SST).....	4
6	00-874742	Apron.....	1
7	00-011800-00187	Dowel.....	2
8	SC-089-02	Cap Screw 1/4-20 x 3/4 Hex Socket Hd.....	4
9	00-874738-00001	Slideway - Bowl Lift (LH).....	1
10	00-011800-00187	Dowel.....	2
11	00-874738-00002	Slideway - Bowl Lift (RH).....	1
12	00-937323	Cover - Bowl Interlock.....	1
13	00-874929	Switch - Reed.....	1
14	00-874842	Hold Down - Bowl (Rear).....	1
15	SC-062-69	Cap Screw 1/4-20 x 1-3/4 Hex Hd.....	2
16	PB-004-97	Cap.....	4

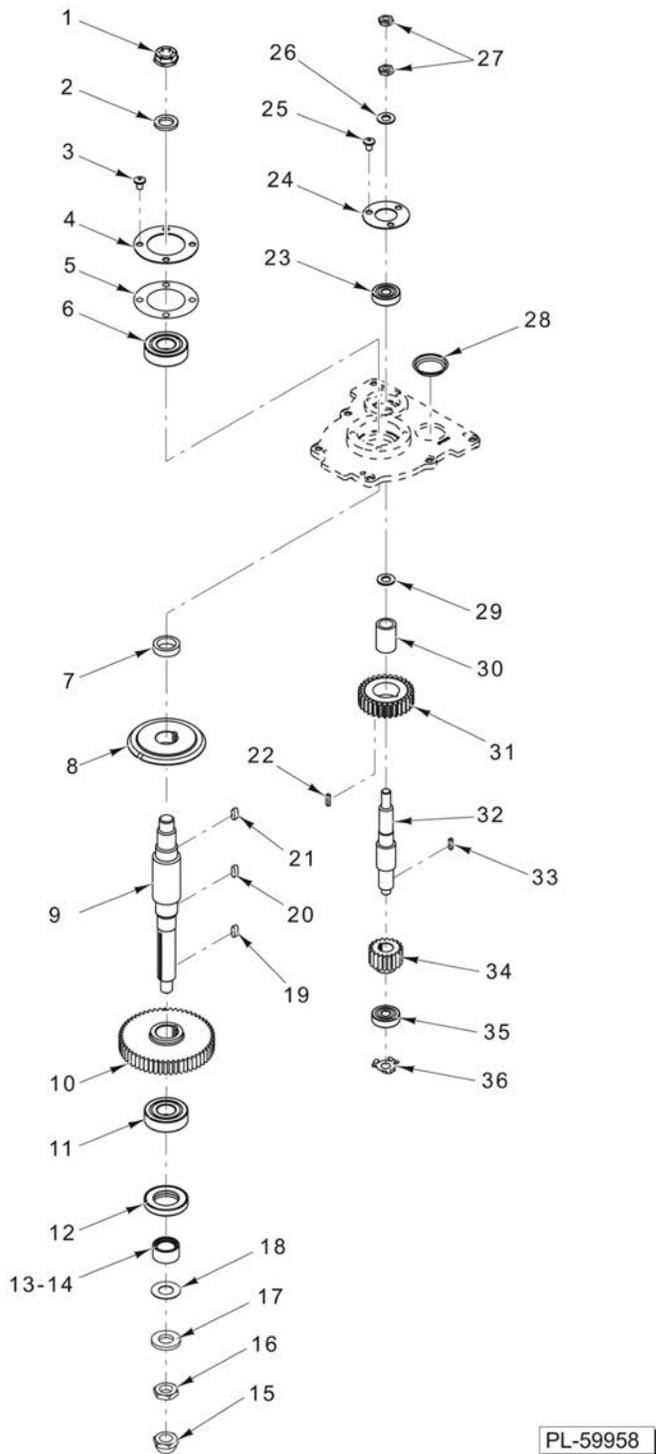


PL-59957

TRANSMISSION CASE AND MOTOR

TRANSMISSION CASE AND MOTOR

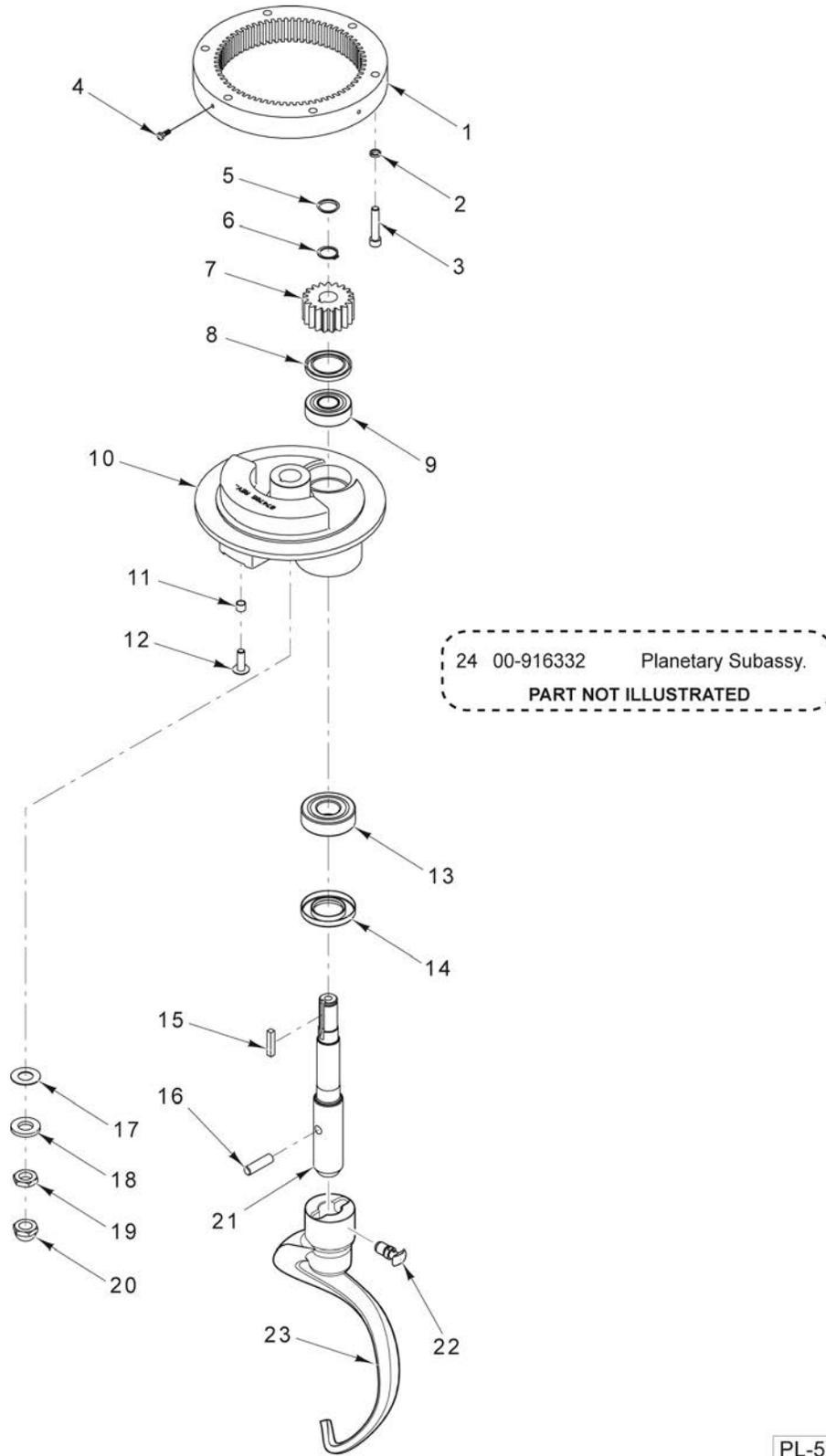
ILLUS.	PART NO.	NAME OF PART	AMT.
PL-59957			
1	NS-032-23	Lock Nut 7/16-20 Special.....	1
2	00-012430-00004	Key 1/8 x 1/8 x 1-1/4.....	1
3	00-291221	Gear - Worm (60 Cycle).....	1
4	00-012754	Washer.....	1
5	00-012757	Spring - Shock Absorber.....	1
6	00-874820	Deflector - Grease (LH).....	1
7	00-916445	Bushing - Motor.....	1
8	00-874634	Motor.....	1
9	00-113703	Cable Tie.....	2
10	00-916220	Plate - Motor Access.....	1
11	SC-118-11	Cap Screw 3/8-16 x 7/8 Hex Hd.....	4
12	WS-018-24	Washer.....	4
13	00-874876	Plug - Cupped Expansion (Brass).....	1
14	00-270776	Dowel.....	2
15	00-937437-00002	Transmission Case - Lower.....	1
16	00-874755	Cover - Transmission.....	1
17	SC-089-01	Cap Screw 1/4-20 x 1/2 Hex Socket Hd.....	6
18	00-011800-00187	Dowel.....	2



TRANSMISSION

TRANSMISSION

ILLUS.	PART NO.	NAME OF PART	AMT.
1	NS-032-37	Lock Nut 5/8-18 Special.....	1
2	WS-031-41	Washer.....	1
3	SC-089-01	Cap Screw 1/4-20 x 1/2 Hex Socket Hd.....	4
4	00-874787	Retainer - Planetary Bearing.....	1
5	00-874795	Gasket - Bearing.....	1
6	BB-005-34	Ball Bearing.....	1
7	00-874793	Spacer - Planetary.....	1
8	00-124733-00002	Gear - Bevel (46T).....	1
9	00-874635	Shaft - Planetary.....	1
10	00-874778	Gear (55T, 14P).....	1
11	BB-020-06	Ball Bearing (Fafnir 204KDFA51580).....	1
12	00-114695	Seal - Oil.....	1
13	00-437342	Spacer - Bearing.....	1
14	00-067500-00078	O-Ring.....	1
15	00-024715-00003	Acorn Nut 1/2-20.....	1
16	00-010928-00002	Nut - Special.....	1
17	WS-030-83	Washer - Retaining (STL).....	1
18	00-124946	Washer (1/32 Thk.).....	1
19	00-012430-00017	Key 1/8 x 1/8 x 2-7/16.....	1
20	00-874873-00002	Key.....	1
21	00-874873-00001	Key.....	1
22	00-012430-00024	Key 1/8 x 1/8 x 1/2.....	1
23	BB-005-02	Ball Bearing - N.D. #7500.....	1
24	00-874788	Retainer - Bearing.....	1
25	SC-089-01	Cap Screw 1/4-20 x 1/2 Hex Socket Hd.....	3
26	WS-006-36	Washer.....	1
27	00-012710	Nut - Retaining.....	2
28	00-064871	Plug - Friction.....	1
29	00-968075	Spacer, Worm Wheel.....	1
30	00-916962	Spacer - Gear.....	1
31	00-874934	Gear - Worm (29T).....	1
32	00-916961	Shaft - Worm Wheel.....	1
33	00-012430-00024	Key 1/8 x 1/8 x 1/2.....	1
34	00-874777	Gear (18T, 14P).....	1
35	BB-021-62	Ball Bearing.....	1
36	SL-002-08	Spring - Loading.....	1

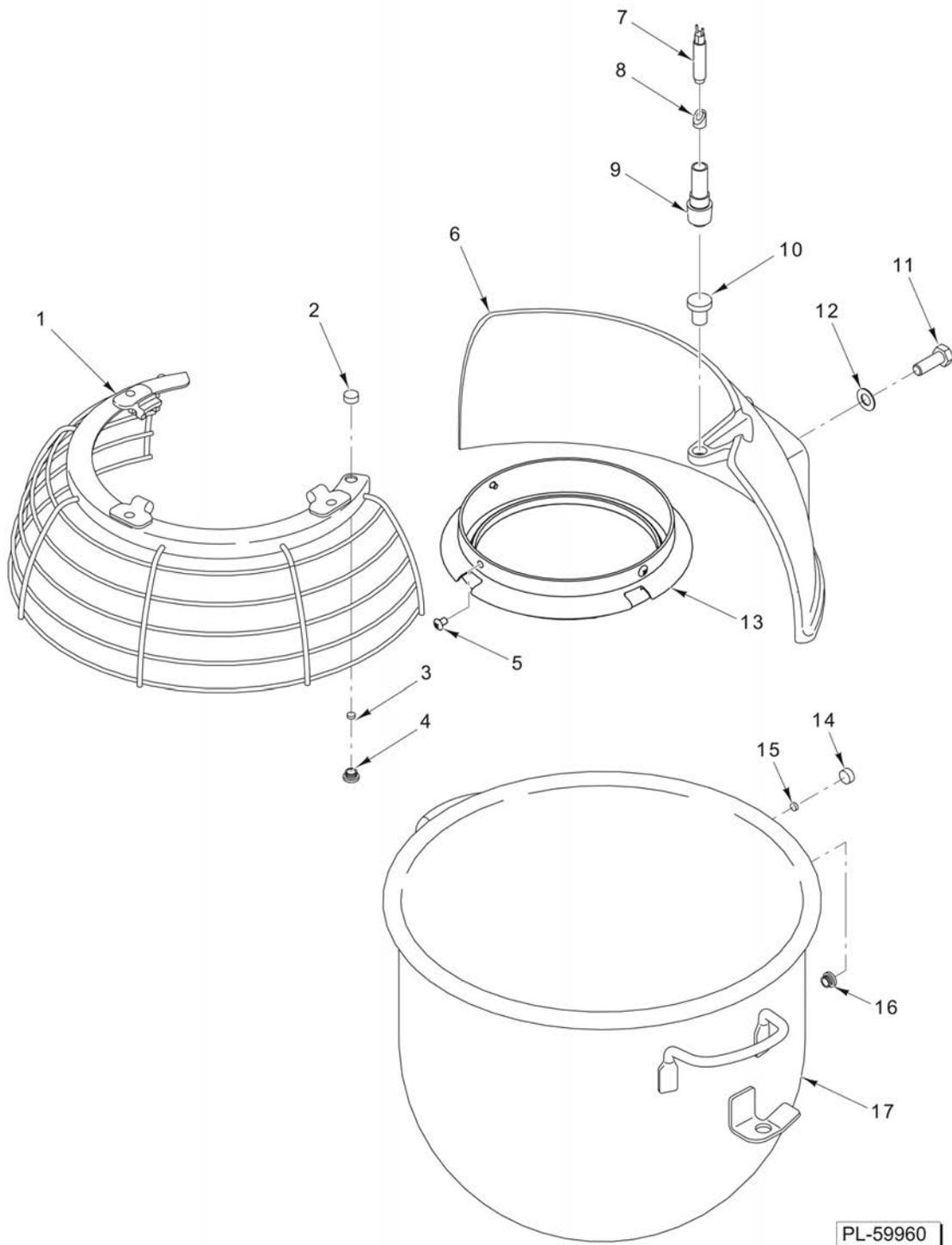


PL-59959

PLANETARY

PLANETARY

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-59959			
1	00-438524-00002	Gear - Internal (63T).....	1
2	WL-003-35	Lockwasher 1/4 Helical.....	6
3	SC-040-09	Cap Screw 1/4-20 x 1-1/4 Hex Socket Hd.....	6
4	SC-066-13	Mach. Screw 8-32 x 1/4 Phil. Truss Hd. (SST).....	3
5	00-916336	Plug - Friction (1 In. Dia.).....	1
6	RR-004-18	Retaining Ring.....	1
7	00-916335	Pinion - Beater Shaft.....	1
8	00-916512	Seal - Upper Agitator Shaft.....	1
9	BB-018-17	Bearing - Ball Hoover.....	1
10	00-916333-00001	Planetary.....	1
11	00-874770	Spacer - Bowl Scraper.....	2
12	SC-053-46	Mach. Screw 1/4-20 x 3/4 Slotted Truss Hd. (SST).....	2
13	BB-005-34	Ball Bearing.....	1
14	00-023482	Seal - Oil (1 In. I.D.).....	1
15	00-012430-00055	Key 3/16 x 3/16 x 1.....	1
16	00-065062-00001	Pin - Dowel.....	1
17	00-124946	Washer (1/32 Thk.).....	1
18	WS-030-83	Washer - Retaining (STL).....	1
19	00-010928-00002	Nut - Special.....	1
20	00-024715-00003	Acorn Nut 1/2-20.....	1
21	00-937706	Shaft - Agitator & Pin Assy.....	1
22	00-874753	Plunger Assy.....	1
23	00-873313	"ED" Dough Arm (20 Qt.) (Packaged).....	1
24	00-916332	Planetary Subassy. (Incls. Items 5 thru 16 & 21).....	1



BOWL AND BOWL GUARD

BOWL AND BOWL GUARD

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-59960			
1	00-937163-00001	Wire Cage Assy. (Incls. Items 2, 3, & 4).....	1
2	00-917357	Holder - Magnet (Upper).....	1
3	00-874875	Magnet - Disc.....	1
4	00-917358	Holder - Magnet (Lower).....	1
5	SC-066-13	Mach. Screw 8-32 x 1/4 Phil. Truss Hd. (SST).....	3
6	00-917234	Guard - Splash.....	1
7	00-874929	Switch - Reed.....	1
8	00-874940	Ring - Reed Switch.....	1
9	00-917232	Holder - Switch Reed (1/2 - 20 UNF-2B).....	1
10	00-874839	Pin - Sensor.....	1
11	SC-118-18	Cap Screw 1/4-20 x 7/8 Hex Hd.....	2
12	WS-003-19	Washer.....	2
13	00-917272	Cup - Drip & Flange.....	1
14	00-917357	Holder - Magnet (Upper).....	1
15	00-874875	Magnet - Disc.....	1
16	00-917358	Holder - Magnet (Lower).....	1
17	00-917720	Bowl Assy. (20 Qt.) (SST) (Packaged) (Incls. Items 14, 15, & 16).....	1

