

# ecomax™

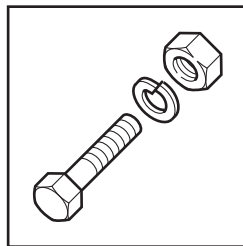
by **HOBART**



## ES20 MIXER

**ML-134499**

**ML-141009**

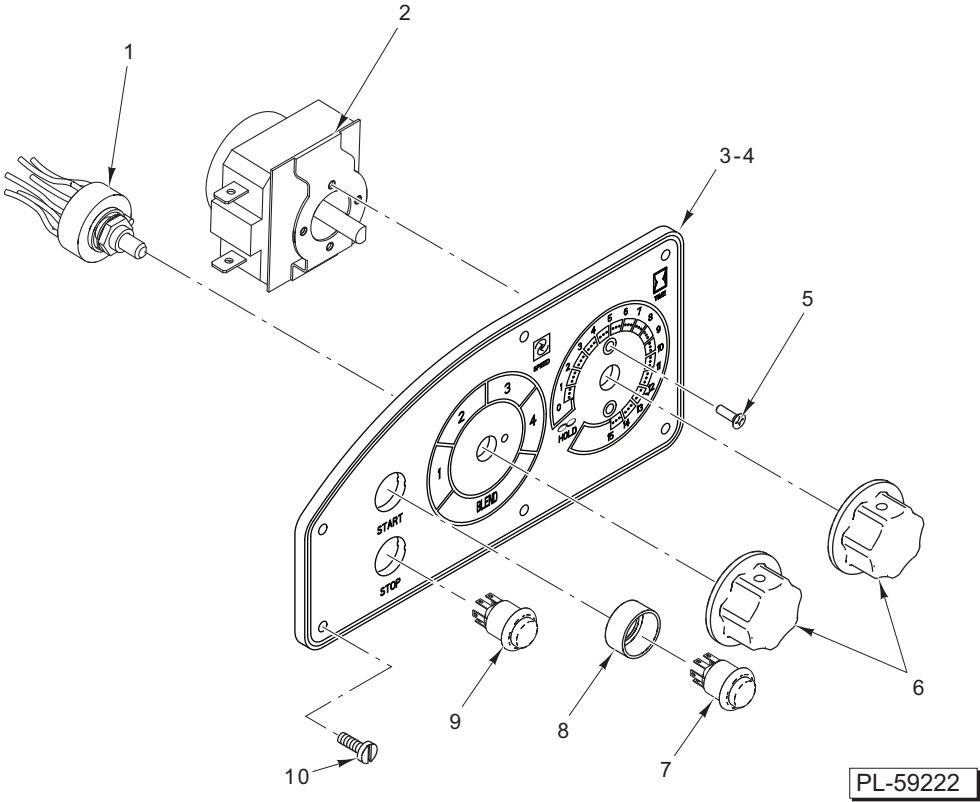


Spare Parts List

FORM 43208 (October 2009)

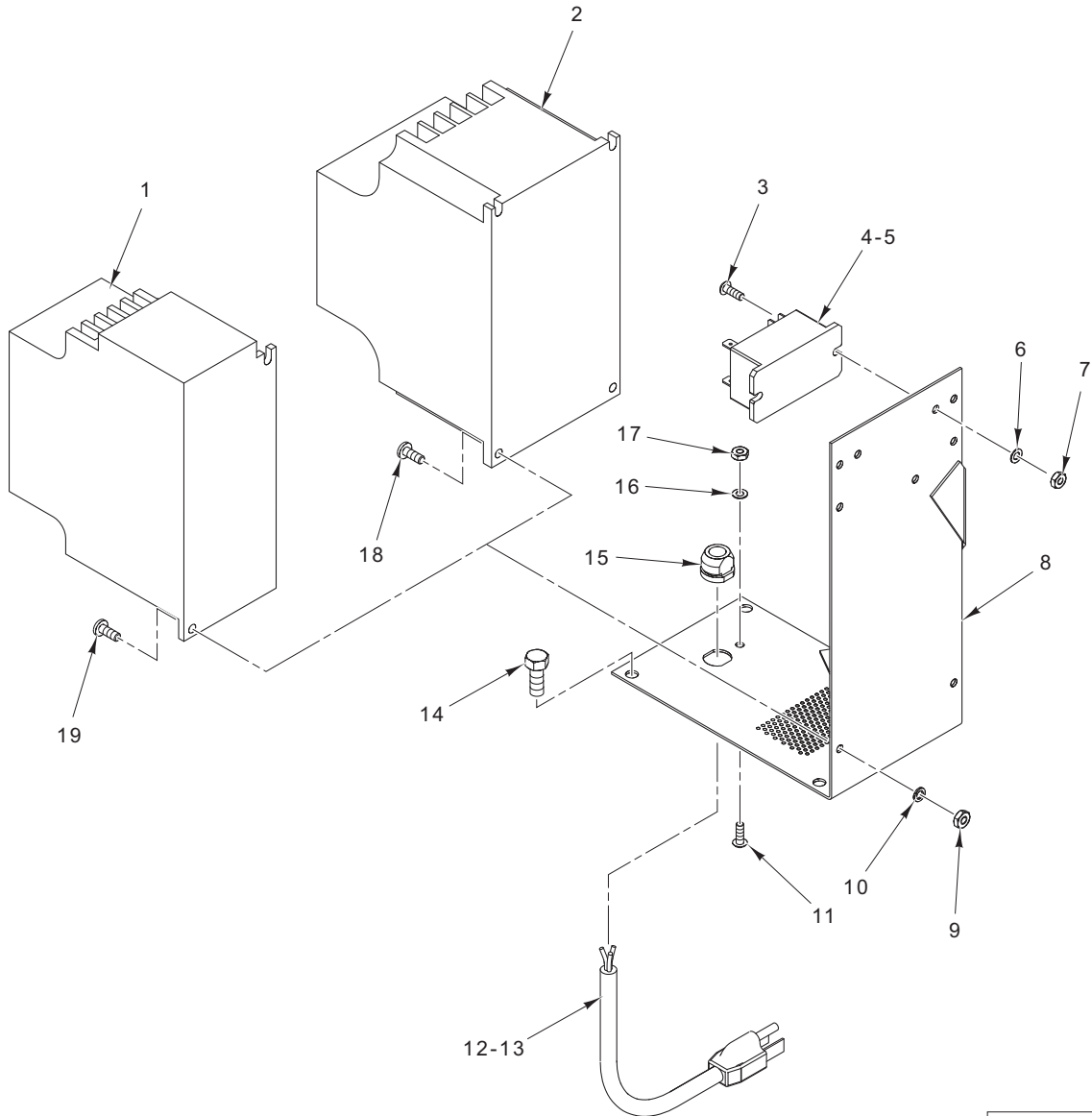
### Table of Contents

3	CONTROL PANEL
5	ELECTRICAL COMPONENTS
7	ATTACHMENT HUB
9	BASE AND PEDESTAL
11	BOWL SUPPORT
13	TRANSMISSION CASE AND MOTOR
15	TRANSMISSION
17	BOWL GUARD
19	AGITATORS AND ACCESSORIES
20	WIRING HARNESES



**CONTROL PANEL**

ILLUS.	PART NO.	NAME OF PART	AMT.
	PL-59222		
1	00-937137	Switch – Speed Select.....	1
2	00-916988-00007	Timer Assy. ....	1
3	00-937131	Plate – Operator Panel.....	1
4	00-937152	Overlay.....	1
5	SC-128-18	Mach. Screw M3 x 0.5 x 6mm Phil. Flat Hd.....	2
6	00-917141	Knob – Control.....	2
7	00-917447	Switch – Start.....	1
8	00-917446	Guard – Switch.....	1
9	00-917448	Switch Assy. – Stop.....	1
10	SC-019-34	Mach. Screw 8-32 x 1/2 Slotted Bndg. Hd.....	6

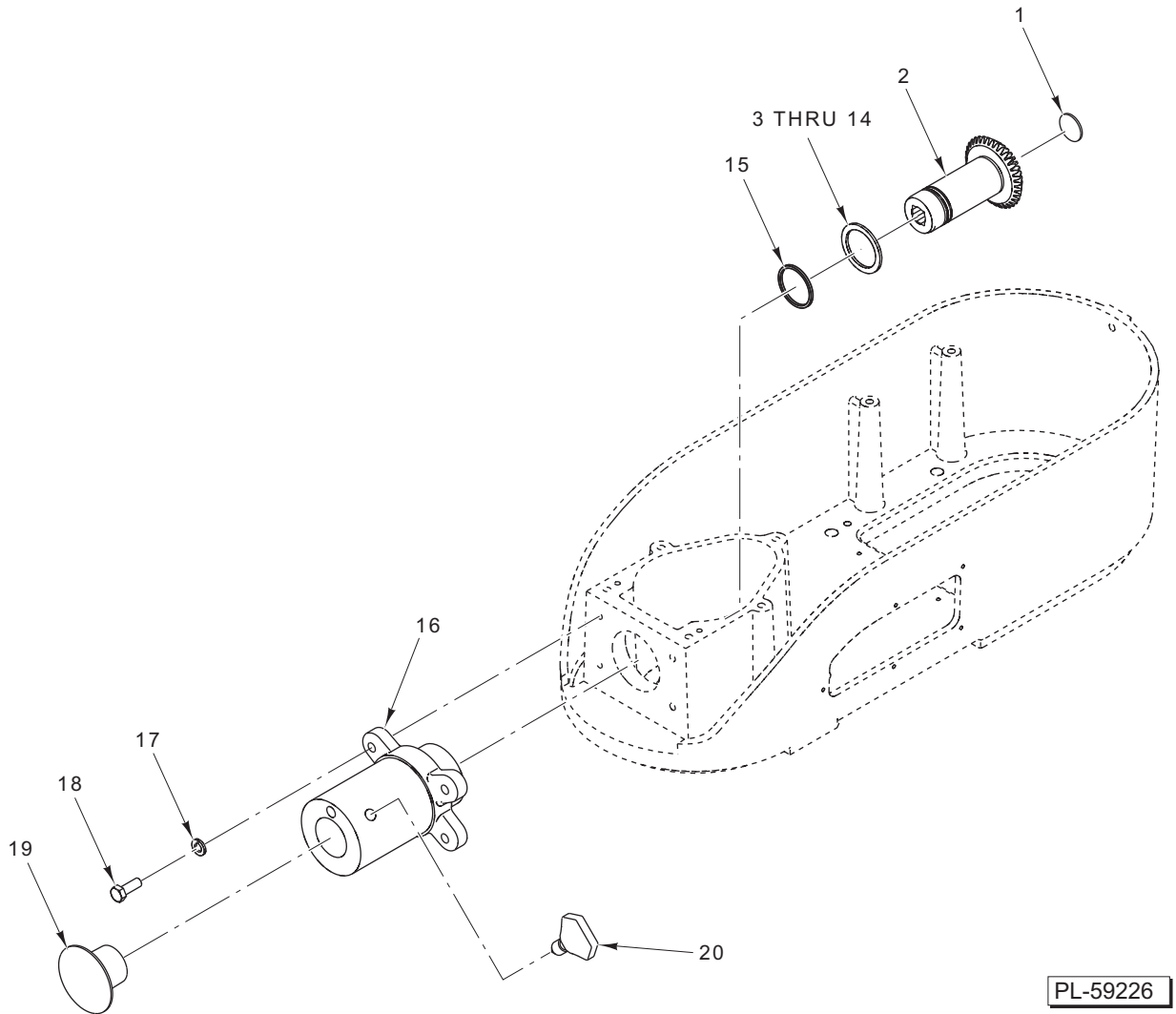


PL-59224

**ELECTRICAL COMPONENTS**

## ELECTRICAL COMPONENTS

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-59224			
1	00-937124-00002	Controller (Delta) (240 V.) (ML-141009) .....	1
2	00-937124-00001	Controller (Delta) (115 V.) (ML-134499).....	1
3	SC-021-15	Mach. Screw 8-32 x 1/2 Slotted Rd. Hd. (SST).....	2
4	00-087714-042-1	Relay (2-Pole) (120 VAC) (ML-134499).....	1
5	00-087714-042-3	Relay (2-Pole) (240 VAC) (ML-141009).....	1
6	WL-013-08	Lockwasher #8 Internal.....	2
7	NS-009-12	Nut 8-32 Hex.....	2
8	00-937151	Plate & Brace – Controller .....	1
9	NS-009-22	Nut 10-24 Hex.....	4
10	WL-003-20	Lockwasher #10 Helical.....	4
11	SC-021-15	Mach. Screw 8-32 x 1/2 Slotted Rd. Hd. (SST).....	1
12	00-916909-00019	Cord & Plug Strain Relief (120 V.) (Incls. Item 15) (ML-134499).....	1
13	00-916909-00020	Cord & Plug Strain Relief (240 V.) (Incls. Item 15) (ML-141009).....	1
14	SC-036-14	Cap Screw 1/4-20 x 1/2 Hex Hd.....	3
15	FE-017-41	Relief – Strain (Electrical) .....	1
16	WL-013-08	Lockwasher #8 Internal.....	1
17	NS-009-12	Nut 8-32 Hex.....	1
18	SC-018-22	Mach. Screw 10-24 x 1/2 Phil Pan Hd.....	4
19	SC-018-22	Mach. Screw 10-24 x 1/2 Phil Pan Hd.....	4
	00-916972-002-6	Tubing – Convuluted Slit.....	1

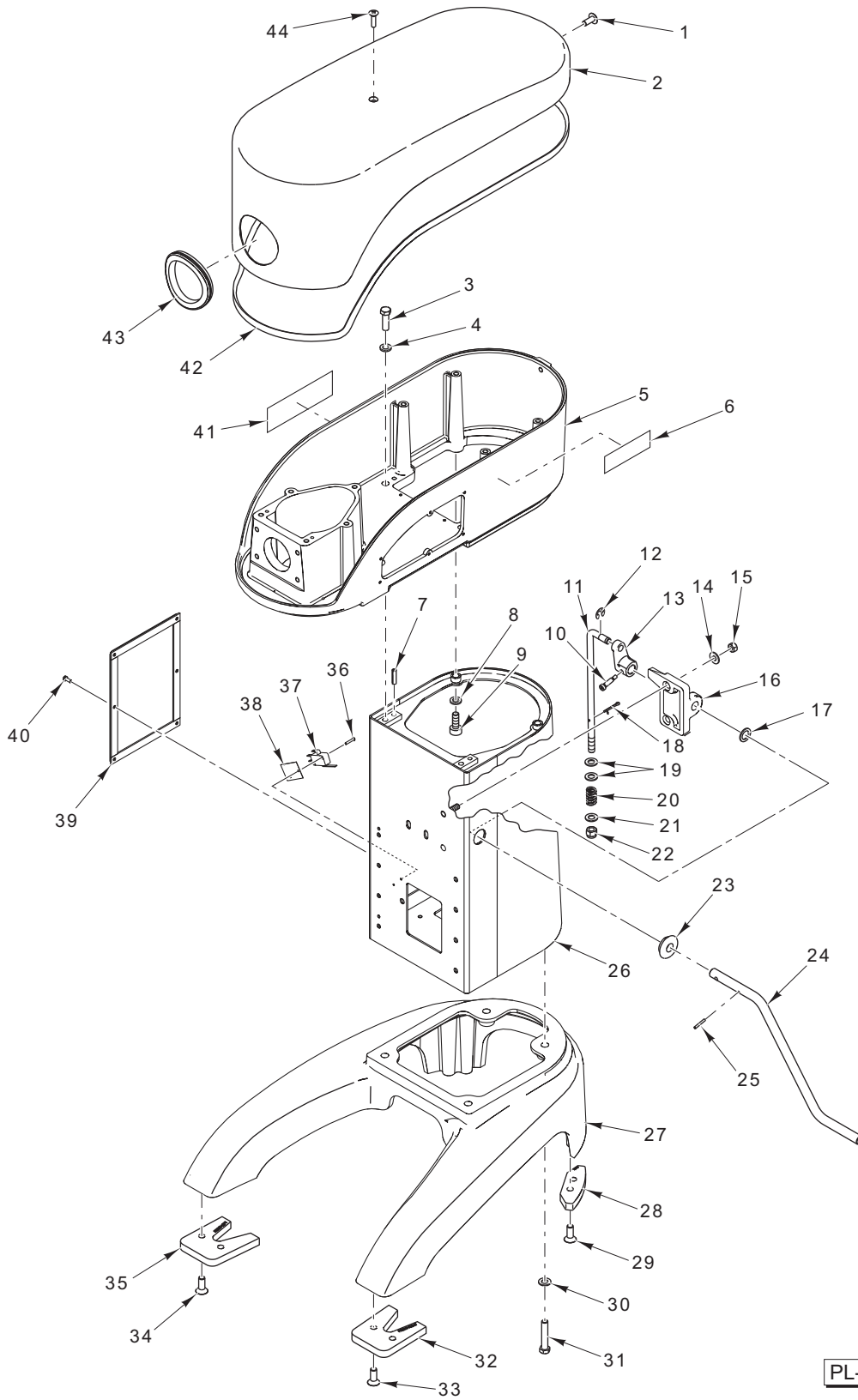


PL-59226

**ATTACHMENT HUB**

**ATTACHMENT HUB**

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-59226			
1	PL-003-17	Plug – Expansion .....	1
2	00-917174	Gear – Drive Attachment (Incls. Item 1).....	1
3	00-061920-00001	Washer (0.076) .....	AR
4	00-061920-00002	Washer (0.079) .....	AR
5	00-061920-00003	Washer (0.082) .....	AR
6	00-061920-00004	Washer (0.085) .....	AR
7	00-061920-00005	Washer (0.088) .....	AR
8	00-061920-00006	Washer (0.091) .....	AR
9	00-061920-00007	Washer (0.094) .....	AR
10	00-061920-00008	Washer (0.097) .....	AR
11	00-061920-00009	Washer (0.100) .....	AR
12	00-061920-00010	Washer (0.103) .....	AR
13	00-061920-00011	Washer (0.106) .....	AR
14	00-061920-00012	Washer (0.070) .....	AR
15	OR-001-03	O-Ring – Quad.....	1
16	00-917066-00002	Hub – Attachment .....	1
17	WL-003-47	Lockwasher <sup>5</sup> / <sub>16</sub> Helical .....	4
18	SC-037-85	Cap Screw <sup>5</sup> / <sub>16</sub> -18 x 1 Hex Hd.....	4
19	00-917322	Plug – Attachment (Black) .....	1
20	00-108197-00001	Screw – Thumb 1 <sup>1</sup> / <sub>4</sub> .....	1

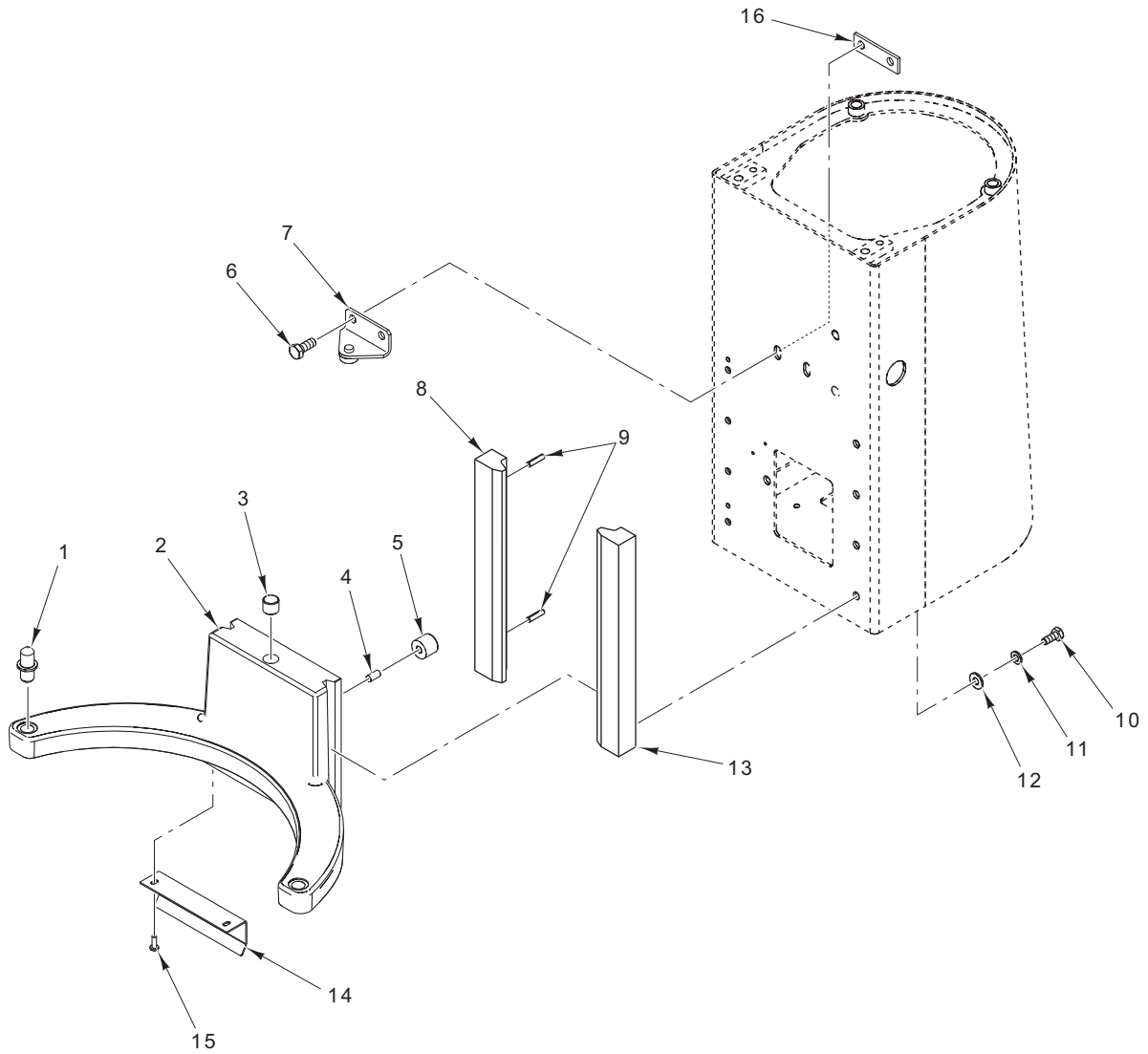


PL-59228

**BASE AND PEDESTAL**

## BASE AND PEDESTAL

ILLUS. PL-59228	PART NO.	NAME OF PART	AMT.
1	SC-130-16	Mach. Screw $\frac{5}{16}$ -24 x $\frac{3}{4}$ Phil. Truss Hd.....	1
2	00-917118	Cover – Top.....	1
3	SC-118-09	Cap Screw $\frac{3}{8}$ -16 x $1\frac{1}{4}$ Hex Hd.....	2
4	WL-004-06	Lockwasher $\frac{3}{8}$ Helical.....	2
5	00-937141-00002	Transmission.....	1
6	00-917343	Logo – Ecomax (Small).....	1
7	RP-006-37	Pin – Roll.....	2
8	WL-004-06	Lockwasher $\frac{3}{8}$ Helical.....	2
9	SC-087-36	Cap Screw $\frac{3}{8}$ -16 x 1 Hex Socket Hd.....	2
10	SC-086-49	Shoulder Screw 10-24 x 1 Hex Soc. Hd.....	1
11	00-917824	Rod – Bowl Lift.....	1
12	RR-012-42	Retaining Ring.....	2
13	00-917089-00003	Arm – Bowl Lift.....	1
14	WS-017-16	Washer.....	2
15	NS-013-14	Nut $\frac{5}{16}$ -18 Hex.....	2
16	00-917082-00003	Bearing – Bowl Lift.....	1
17	WS-020-01	Washer (SST).....	1
18	PC-003-55	Pin – Cotter.....	1
19	WS-006-26	Washer.....	2
20	00-012782	Spring.....	1
21	WS-006-26	Washer.....	1
22	NS-036-15	Stop Nut $\frac{3}{8}$ -24.....	1
23	00-439586	Grommet.....	1
24	00-917826	Handle – Bowl Lift.....	1
25	RP-002-25	Pin – Roll.....	1
26	00-917873	Pedestal – Weldment.....	1
27	00-937144-00002	Base.....	1
28	00-917166	Pad – Rear.....	2
29	SC-061-15	Cap Screw $\frac{3}{8}$ -16 x 1 Hex Flat Hd.....	4
30	WS-006-26	Washer.....	4
31	SC-118-09	Cap Screw $\frac{3}{8}$ -16 x $1\frac{1}{4}$ Hex Hd.....	4
32	00-917165-00002	Pad – Front (RH).....	1
33	SC-061-15	Cap Screw $\frac{3}{8}$ -16 x 1 Hex Flat Hd.....	2
34	SC-061-15	Cap Screw $\frac{3}{8}$ -16 x 1 Hex Flat Hd.....	2
35	00-917165-00001	Pad – Front (LH).....	1
36	SC-060-40	Mach. Screw 4-40 x $\frac{5}{8}$ Slotted Rd. Hd.....	2
37	00-916902-00007	Switch – Snap-Action.....	1
38	00-439892	Insulator – Switch.....	1
39	00-937139	Cover (Incls. Gasket).....	1
40	SC-120-61	Mach. Screw M4 x 0.7 x 10mm Slotted Cheese Hd.....	6
41	00-917277	Logo – Ecomax (Large).....	1
42	00-874925-00007	Seal – Neopreme.....	1
43	00-917128	Grommet – Attachment Hub.....	1
44	SC-120-29	Mach. Screw $\frac{1}{4}$ -20 x 1 Phil. Oval Hd.....	1

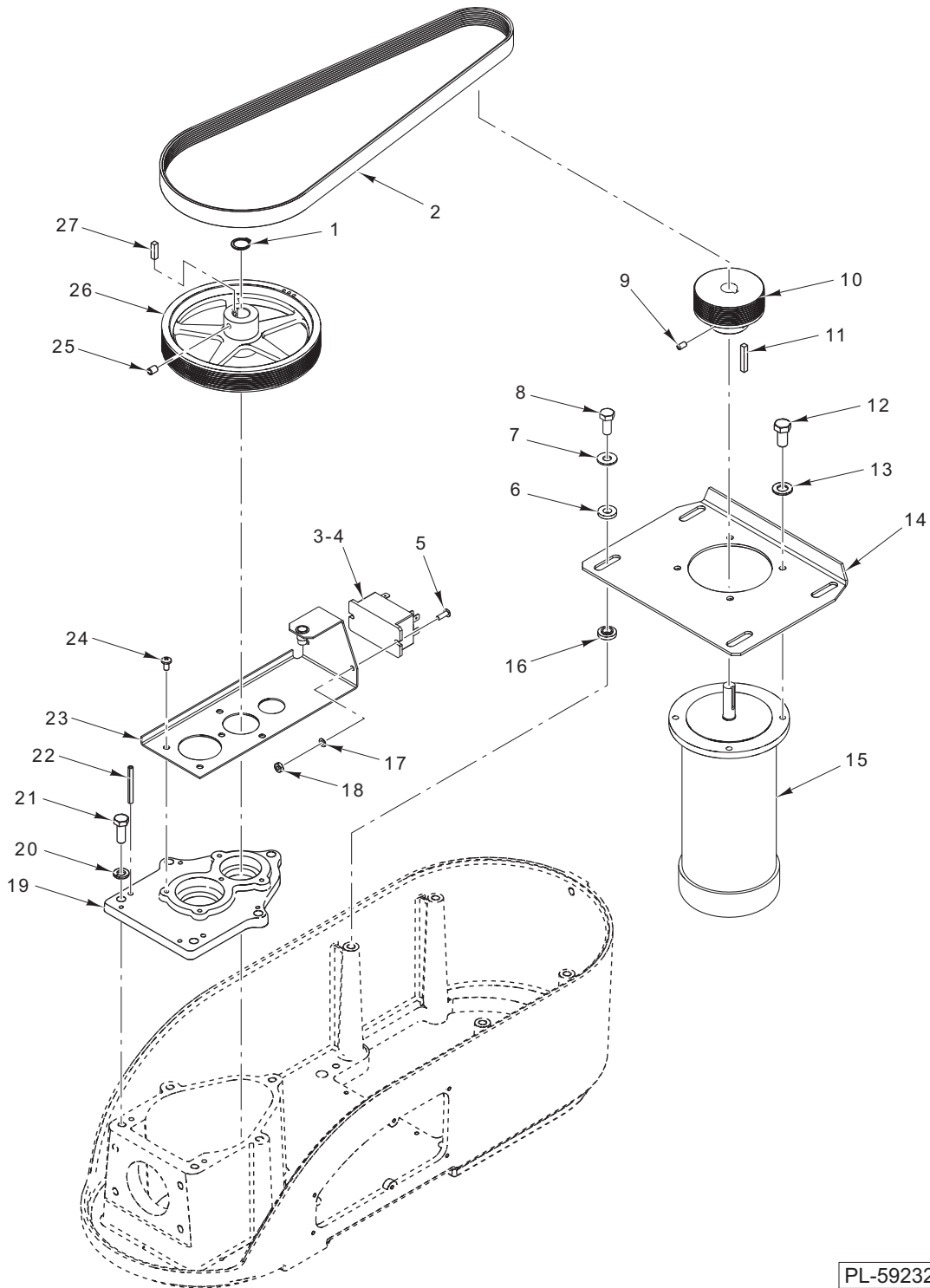


PL-59230

**BOWL SUPPORT**

**BOWL SUPPORT**

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-59230			
1	00-937076	Pin – Bowl Mounting .....	2
2	00-917872	Support – Bowl (Incls. Items 1, 3, 4, & 5) .....	1
3	00-917865	Isolator (Lower Bowl Stop).....	1
4	00-917185	Magnet.....	1
5	00-917186	Holder – Magnet .....	1
6	SC-120-59	Cap Screw M8 x 1.25 x 20mm Hex Hd.....	2
7	00-917863	Plate & Isolator (Bowl Lift) .....	1
8	00-937079-00001	Slideway (LH) .....	1
9	RP-005-09	Pin – Roll .....	2
10	SC-110-12	Cap Screw 1/4-20 x 5/8 Hex Hd.....	8
11	WL-003-38	Lockwasher 1/4 Helical.....	8
12	WS-017-25	Washer.....	4
13	00-937079-00002	Slideway (RH).....	1
14	00-937089	Apron – Lower .....	1
15	SC-018-34	Mach. Screw 8-32 x 1/2 Phil. Pan Hd.....	2
16	00-917654	Retainer .....	1

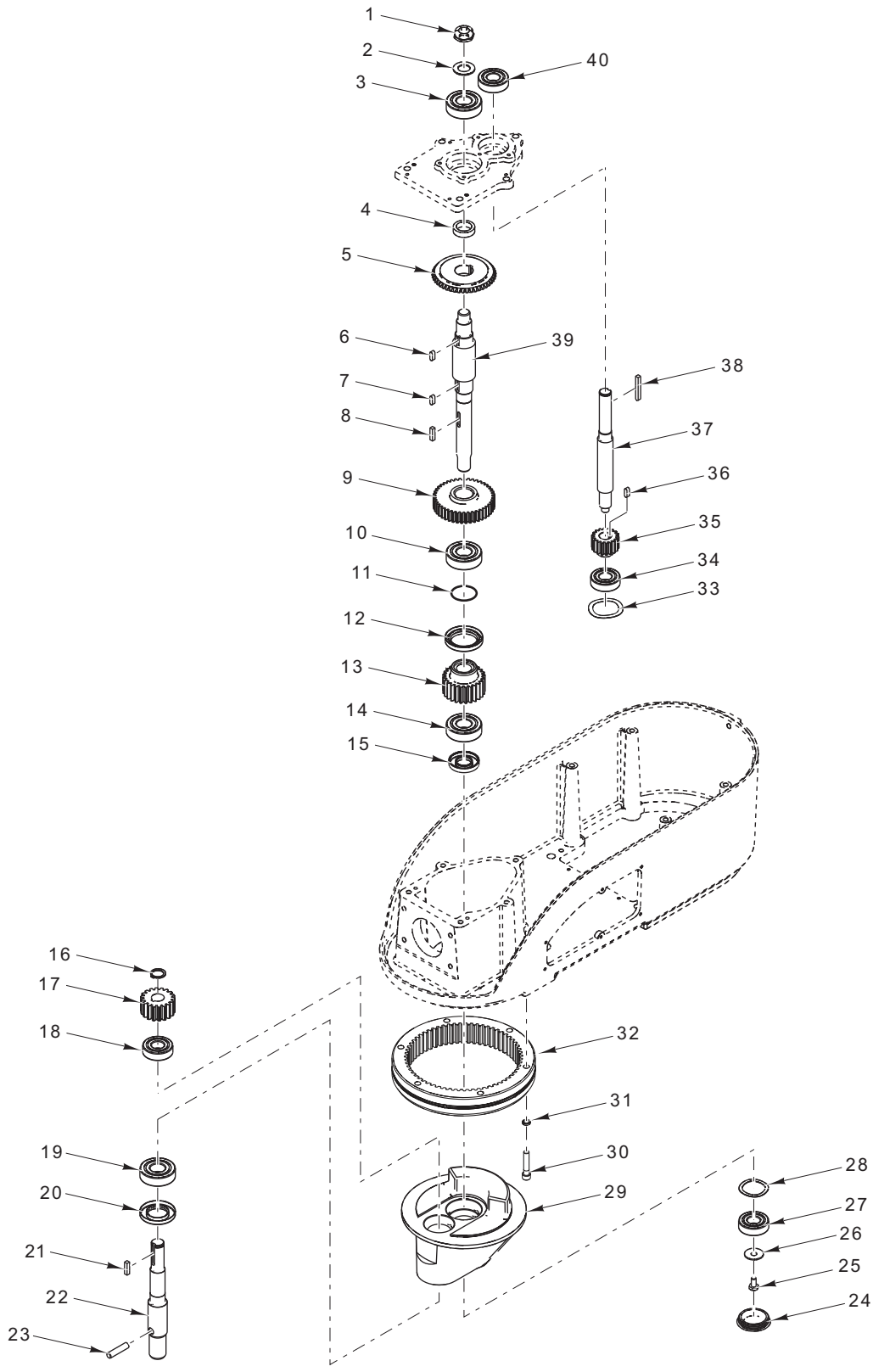


PL-59232

**TRANSMISSION CASE AND MOTOR**

## TRANSMISSION CASE AND MOTOR

ILLUS.	PART NO.	NAME OF PART	AMT.
	PL-59232		
1	RR-004-18	Ring – Retaining .....	1
2	00-917502-00002	Belt – V Ribbed .....	1
3	00-087714-042-1	Relay (2-Pole) (120 VAC) (ML-134499).....	1
4	00-087714-042-3	Relay (2-Pole) (240 VAC) (ML-141009).....	1
5	SC-021-15	Mach. Screw 8-32 x 1/2 Slotted Rd. Hd. ....	2
6	00-917410	Isolator .....	4
7	WS-030-44	Washer.....	4
8	SC-130-77	Cap Screw M8 x 1.25 x 30mm Hex Hd.....	4
9	SC-075-36	Set Screw 10-24 x 3/8 Hex Hdls., Cup Pt.....	2
10	00-937128	Pulley – Driver .....	1
11	00-917496-00018	Key 6mm x 6mm x 25mm .....	1
12	SC-125-09	Mach. Screw M6 x 1.0 x 12mm Hex Hd. ....	4
13	WL-019-97	Lockwasher M6 Helical.....	4
14	00-937140	Plate – Motor Mounting.....	1
15	00-937161	Motor Assy. ....	1
16	00-917410	Isolator .....	4
17	WL-013-08	Lockwasher #8 Internal.....	2
18	NS-009-12	Nut 8-32 Hex.....	2
19	00-917083-00002	Cover – Transmission Case.....	1
20	WL-003-47	Lockwasher 5/16 Helical .....	5
21	SC-062-81	Cap Screw 5/16 x 7/8 Hex Soc. Hd. ....	5
22	RP-005-09	Pin – Roll .....	2
23	00-937158	Retainer – Top Bearing .....	1
24	SC-018-62	Mach. Screw 5/16 -18 x 3/8 Phil. Pan Hd. ....	5
25	SC-047-12	Set Screw 1/4-20 x 3/8 Hex Hdls., Cup Pt. ....	2
26	00-917370	Pulley – Driven.....	1
27	00-917496-00012	Key 5mm x 5mm x 40mm .....	1
	00-916972-002-6	Tubing – Convoluted Slit.....	1

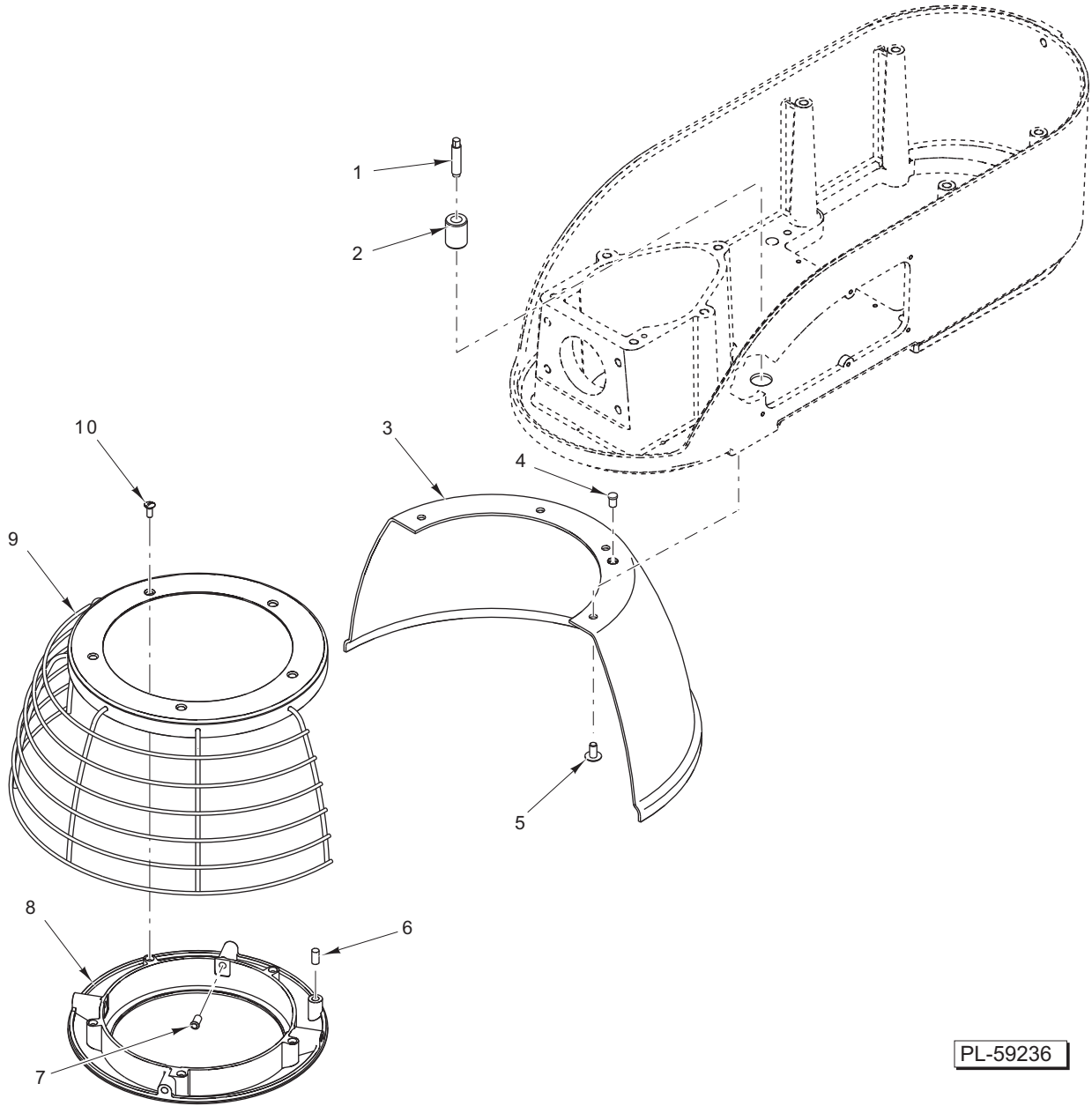


PL-59234

**TRANSMISSION**

## TRANSMISSION

ILLUS.	PART NO.	NAME OF PART	AMT.
	<b>PL-59234</b>		
1	NS-032-37	Lock Nut $\frac{5}{8}$ -18 (SST).....	1
2	WS-010-41	Washer.....	1
3	BB-005-34	Bearing – Ball .....	1
4	00-874793	Spacer – Planetary .....	1
5	00-124733-00002	Gear – Bevel (46T).....	1
6	00-012430-00046	Key $\frac{3}{16}$ X $\frac{3}{16}$ X $\frac{17}{32}$ .....	1
7	00-012430-00045	Key $\frac{3}{16}$ X $\frac{3}{16}$ X $\frac{9}{16}$ .....	1
8	00-012430-00048	Key $\frac{3}{16}$ X $\frac{3}{16}$ X $\frac{3}{4}$ .....	1
9	00-917109	Gear (43T) .....	1
10	BB-005-46	Bearing – Ball .....	1
11	00-067500-00009	O-Ring .....	1
12	00-917123	Seal – Center Shaft .....	1
13	00-917100	Gear – Sun .....	1
14	BB-005-46	Bearing – Ball .....	1
15	00-439588	Seal – Transmission Case.....	1
16	RR-011-02	Ring – Retaining .....	1
17	00-439548	Gear – Planetary.....	1
18	BB-020-18	Bearing – Ball .....	1
19	BB-005-46	Bearing – Ball .....	1
20	00-023482	Seal – Grease.....	1
21	00-012430-00048	Key $\frac{3}{16}$ X $\frac{3}{16}$ X $\frac{3}{4}$ .....	1
22	00-439577	Shaft – Planetary (Incls. Item 23) .....	1
23	00-065062-00001	Pin – Dowel.....	1
24	00-439632	Plug –Planetary .....	1
25	SC-090-19	Mach. Screw $\frac{1}{2}$ -13 x $\frac{3}{4}$ Slotted Rd. Hd.....	1
26	WS-030-04	Washer.....	1
27	BB-020-18	Bearing – Ball .....	1
28	SL-005-12	Spring – Loaded .....	1
29	00-439552-00002	Planetary.....	1
30	SC-040-09	Cap Screw $\frac{1}{4}$ -20 x $1\frac{1}{4}$ Hex Socket Hd.....	6
31	WL-003-35	Lockwasher $\frac{1}{4}$ Helical.....	6
32	00-917086-00002	Gear – Internal (63T).....	1
33	SL-005-19	Spring – Loading.....	1
34	BB-005-01	Bearing – Ball .....	1
35	00-874777	Gear (18T) .....	1
36	00-012430-00007	Key $\frac{1}{8}$ x $\frac{1}{8}$ x $\frac{11}{16}$ .....	1
37	00-917116	Shaft – Input .....	1
38	00-917496-00012	Key 5mm x 5mm x 40mm .....	1
39	00-917081	Shaft – Center.....	1
40	BB-005-23	Bearing – Ball .....	1
	00-917179	Center Shaft Assy. (Incls. Items 7, 9, 10, & 39) .....	1

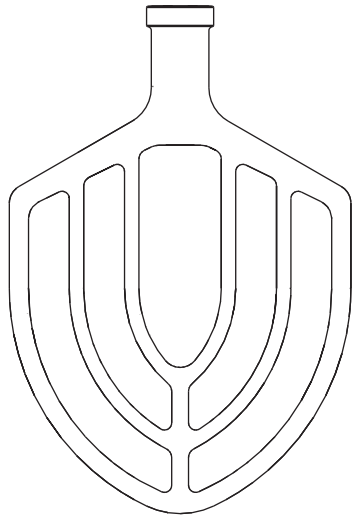


PL-59236

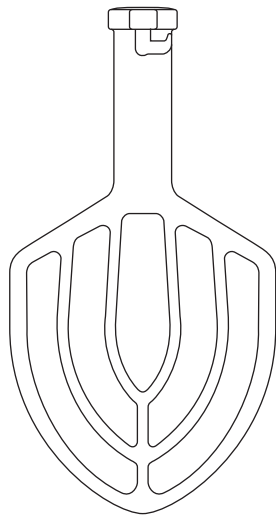
**BOWL GUARD**

**BOWL GUARD**

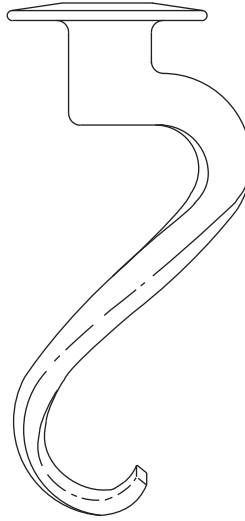
ILLUS.	PART NO.	NAME OF PART	AMT.
PL-59236			
1	00-916902-00003	Switch – Reed.....	1
2	00-917184	Holder – Reed Switch.....	1
3	00-917155	Guard – Rear Splash.....	1
4	00-917281	Pin – Magnet Bridge.....	1
5	SC-053-41	Mach. Screw 1/4-20 x 1/2 Slotted Truss Hd.....	4
6	00-917185	Magnet.....	1
7	00-917056	Plunger – Ball.....	4
8	00-917152	Ring – Drip.....	1
9	00-917151	Cage.....	1
10	SC-023-44	Mach. Screw 10-24 x 1/2 Slotted Oval Hd. (SST).....	5
	00-917150	Wire Cage Assy. (Incls. Items 6 thru 10).....	1



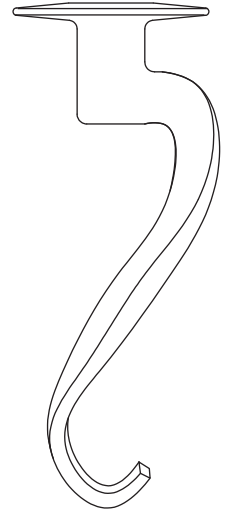
1



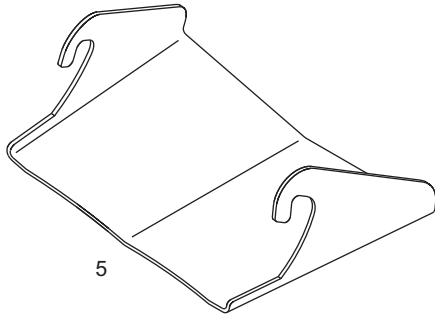
2



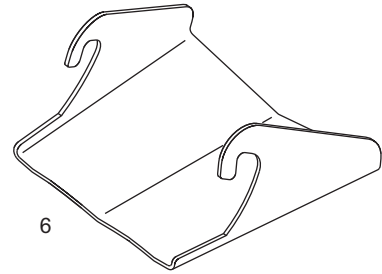
3



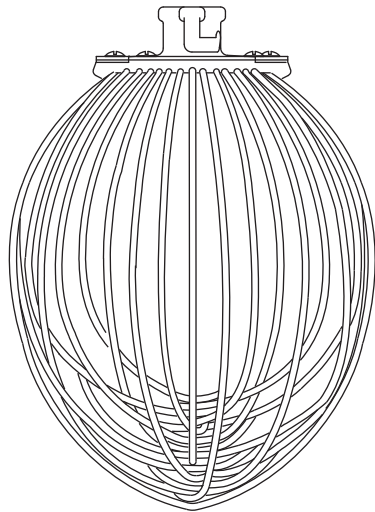
4



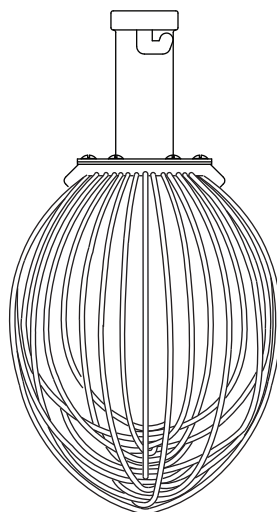
5



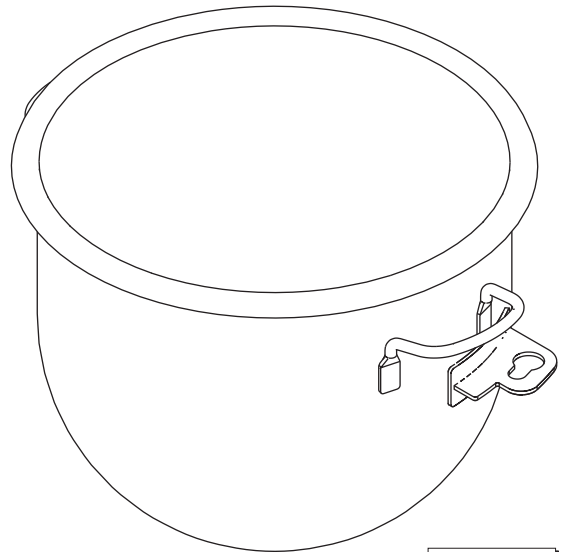
6



7



8



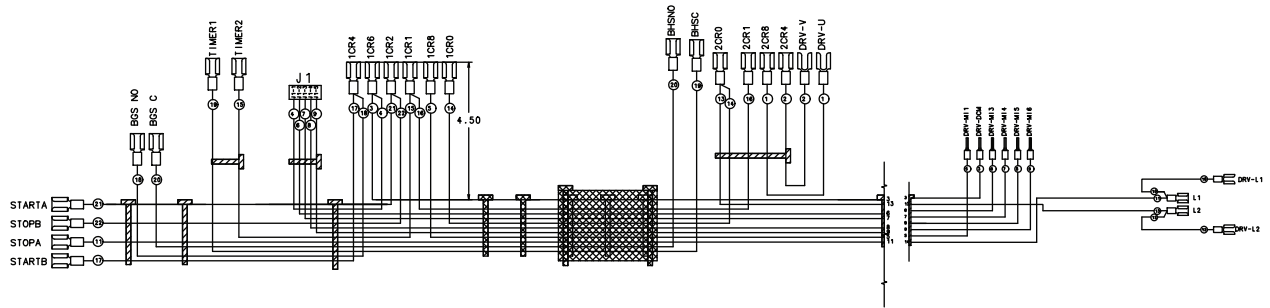
9-10

PL-59238

**AGITATORS AND ACCESSORIES**

**AGITATORS AND ACCESSORIES**

<b>ILLUS.</b>	<b>PART NO.</b>	<b>NAME OF PART</b>	<b>AMT.</b>
	<b>PL-59238</b>		
1	00-917746	"B" Beater (20 Qt.) (Packaged).....	1
2	00-917747	"B" Beater (12 Qt.) (Packaged).....	1
3	00-917750	"ED" Hook – Dough Arm (20 Qt.) (Packaged) .....	1
4	00-917751	"ED" Hook – Dough Arm (12 Qt.) (Packaged) .....	1
5	00-917752	Chute – Ingredient (20 Qt.) (Packaged).....	1
6	00-917753	Chute – Ingredient (12 Qt.) (Packaged).....	1
7	00-917748	"D" Wire Whip (20 Qt.) (Packaged).....	1
8	00-917749	"D" Wire Whip (12 Qt.) (Packaged).....	1
9	00-917744	Bowl (20 Qt.) (Packaged) .....	1
10	00-917745	Bowl (12 Qt.) (Packaged) .....	1
	00-917760	Guard – Splash (20 Qt.) (Packaged) .....	1



00-937154 Harness - Main Wiring

PL-59240

WIRING HARNESSSES