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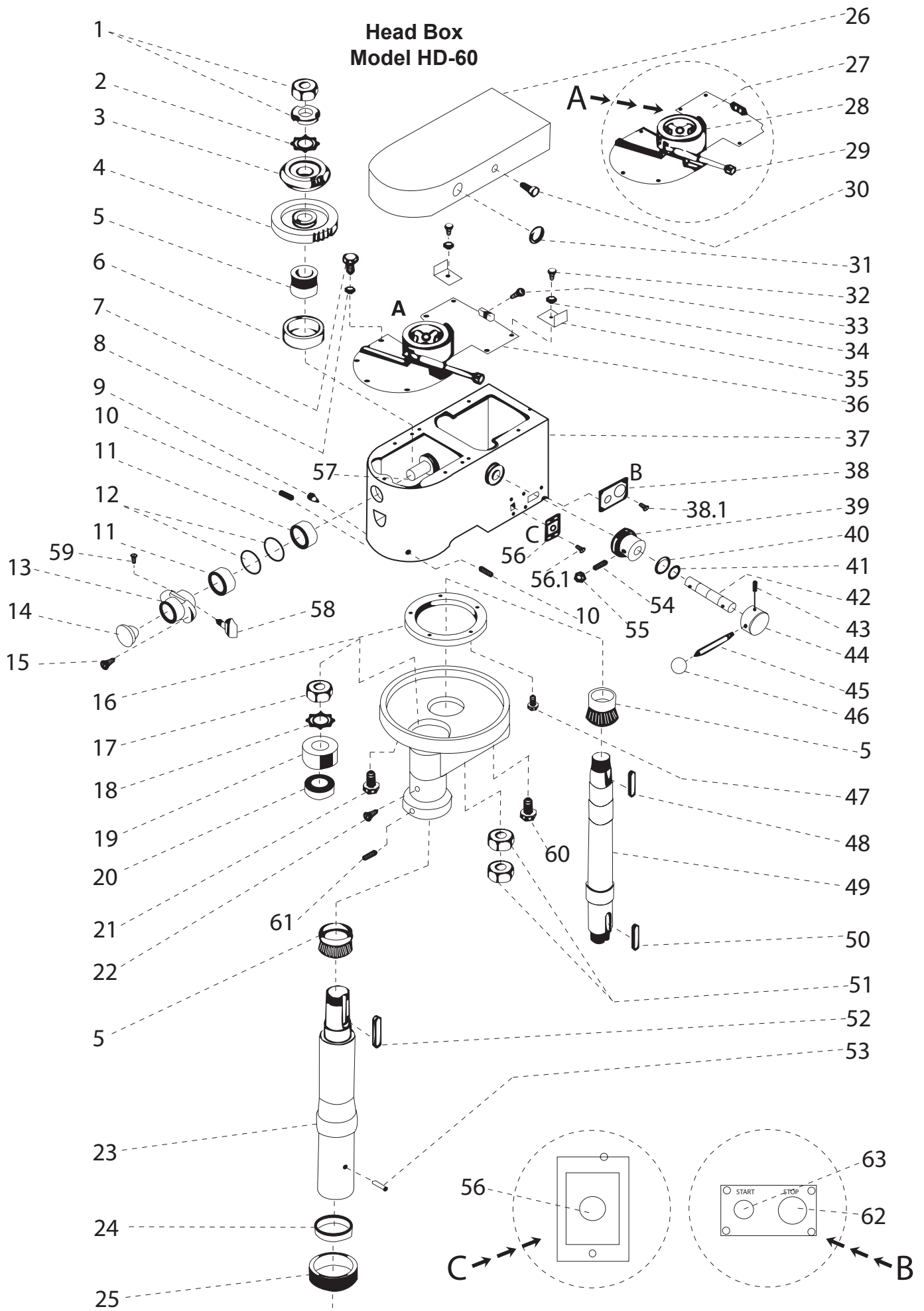
**Precision
Mixers**

BUILT TO LAST BUILT TO LAST BUILT TO LAST BUILT TO LAST BUILT TO LAST BUILT TO LAST

Parts Breakdown Instructions & Warranty HD-60

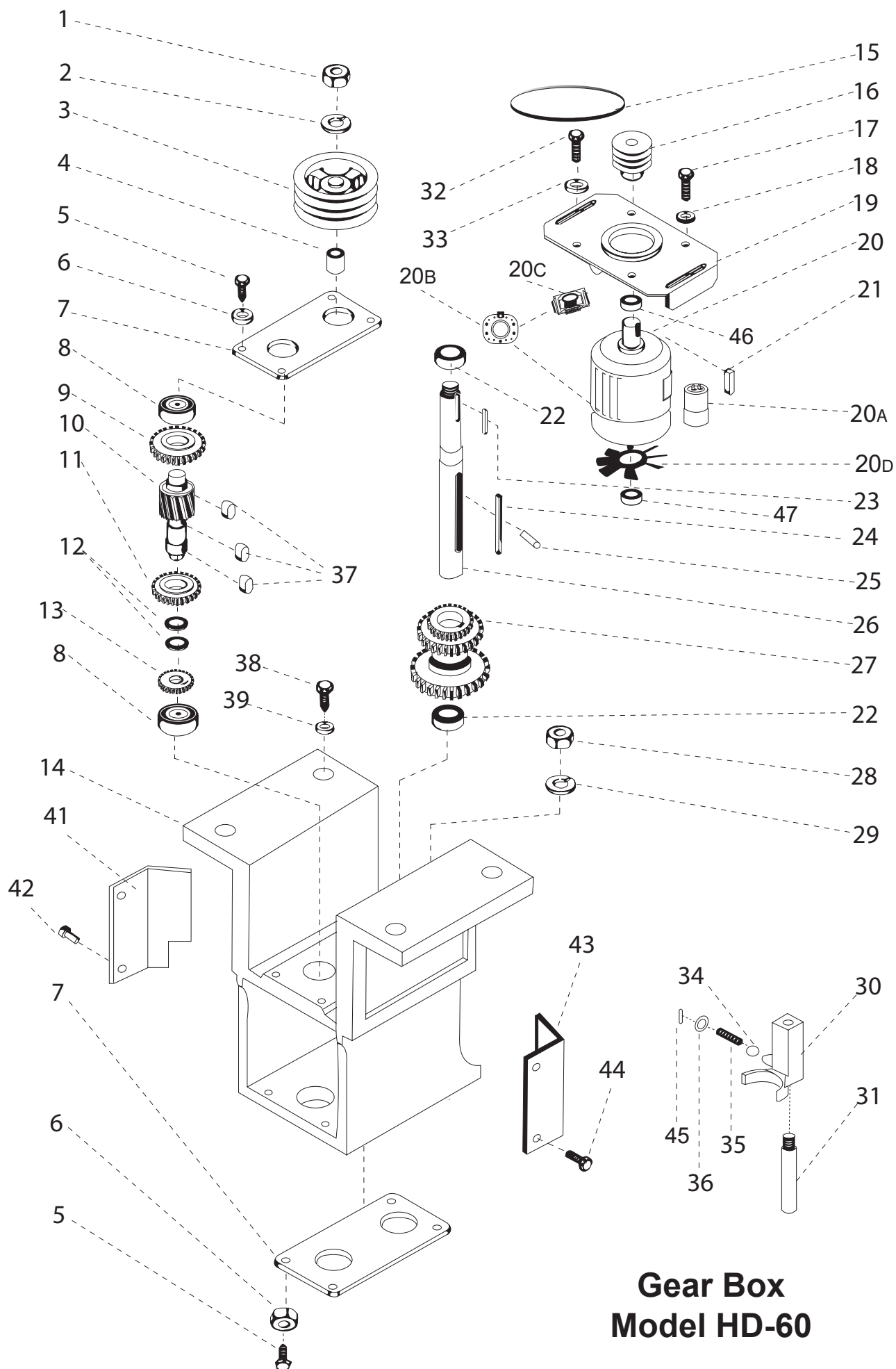
**Precision North America Food Machinery LLC.
60 Commerce Ave.
Albany, New York 12206
Phone: 518-462-3387 Fax: 518-462-3389
1-877-R-MIXERS (1-877-764-9377)
www.precisionmixers.com**

Head Box Model HD-60



Head Box, Precision Mixer, Model HD-60

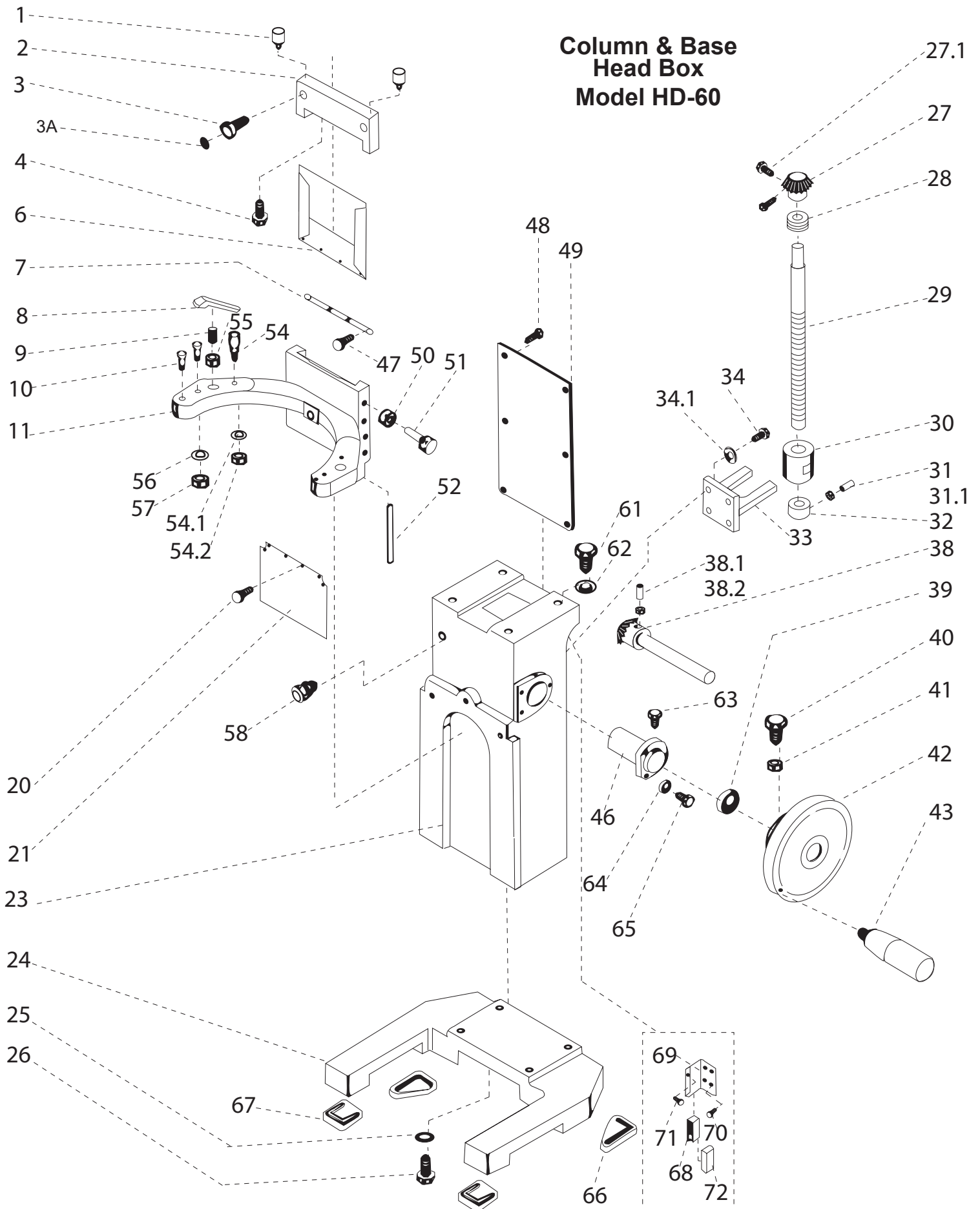
<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Item</u>	<u>Part Number</u>	<u>Description</u>
1	HB-H60-001	Nut	33	HB-H60-033	Tension Bolt
2	HB-H60-002	Washer	34	HB-H60-034	Washer
3	HB-H60-003	Bevel Gear	35	HB-H60-035	Mounting Bracket
4	HB-H60-004	Main Gear	36	HB-H60-036	Transmission Cover
5	HB-H60-005	Bearing	37	HB-H60-037	Head Box Casting
6	HB-H60-006	Oil Seal	38	HB-H60-038	Plate
7	HB-H60-007	Bolt	38-1	HB-H60-038-1	Screw
8	HB-H60-008	Washer	39	HB-H60-039	Shifter Gear
9	HB-H60-009	Grease Fitting	40	HB-H60-040	"O" Ring
10	HB-H60-010	Screw	41	HB-H60-041	"E" Clip
11	HB-H60-011	Bearing	42	HB-H60-042	Shift-Shaft
12	HB-H60-012	Rings	43	HB-H60-043	Screw
13	HB-H60-013	Hub Attachment Base	44	HB-H60-044	Shift Speed Head
14	HB-H60-014	Hub Attachment Cover	45	HB-H60-045	Shift Speed Handle
15	HB-H60-015	Screw	46	HB-H60-046	Shift Knob
16	HB-H60-016	Planetary Ring Gear	47	HB-H60-047	Screw
17	HB-H60-017	Nut	48	HB-H60-048	Key
18	HB-H60-018	Washer	49	HB-H60-049	Main Shaft
19	HB-H60-019	Planetary Gear, Inner	50	HB-H60-050	Key
20	HB-H60-020	Bearing	51	HB-H60-051	Nut
21	HB-H60-021	Grease Fitting	52	HB-H60-052	Key
22	HB-H60-022	Planetary (Cast)	53	HB-H60-053	Pin
23	HB-H60-023	Eccentric/Planetary Shaft	54	HB-H60-054	Screw
24	HB-H60-024	Oil Seal	55	HB-H60-055	Nut
25	HB-H60-025	Seal Cup	56	HB-H60-056	Timer
26	HB-H60-026	Head Box Cover	56-1	HB-H60-056-1	Screw, Timer
27	HB-H60-027	Shift Assist Base (Diagram A)	57	HB-H60-057	Hub Gear
28	HB-H60-028	Belt Wheel for Shift Assist	58	HB-H60-058	Screw, Thumb
29	HB-H60-029	Push Bar for Shift Assist	59	HB-H60-059	Oiler
30	HB-H60-030	Bolt	60	HB-H60-060	Bolt
31	HB-H60-031	Grommet for Shift Assist Bar	61	HB-H60-061	Screw, set
32	HB-H60-032	Bolt	62	HB-H60-062	Stop Switch
			63	HB-H60-063	Start Switch



**Gear Box
Model HD-60**

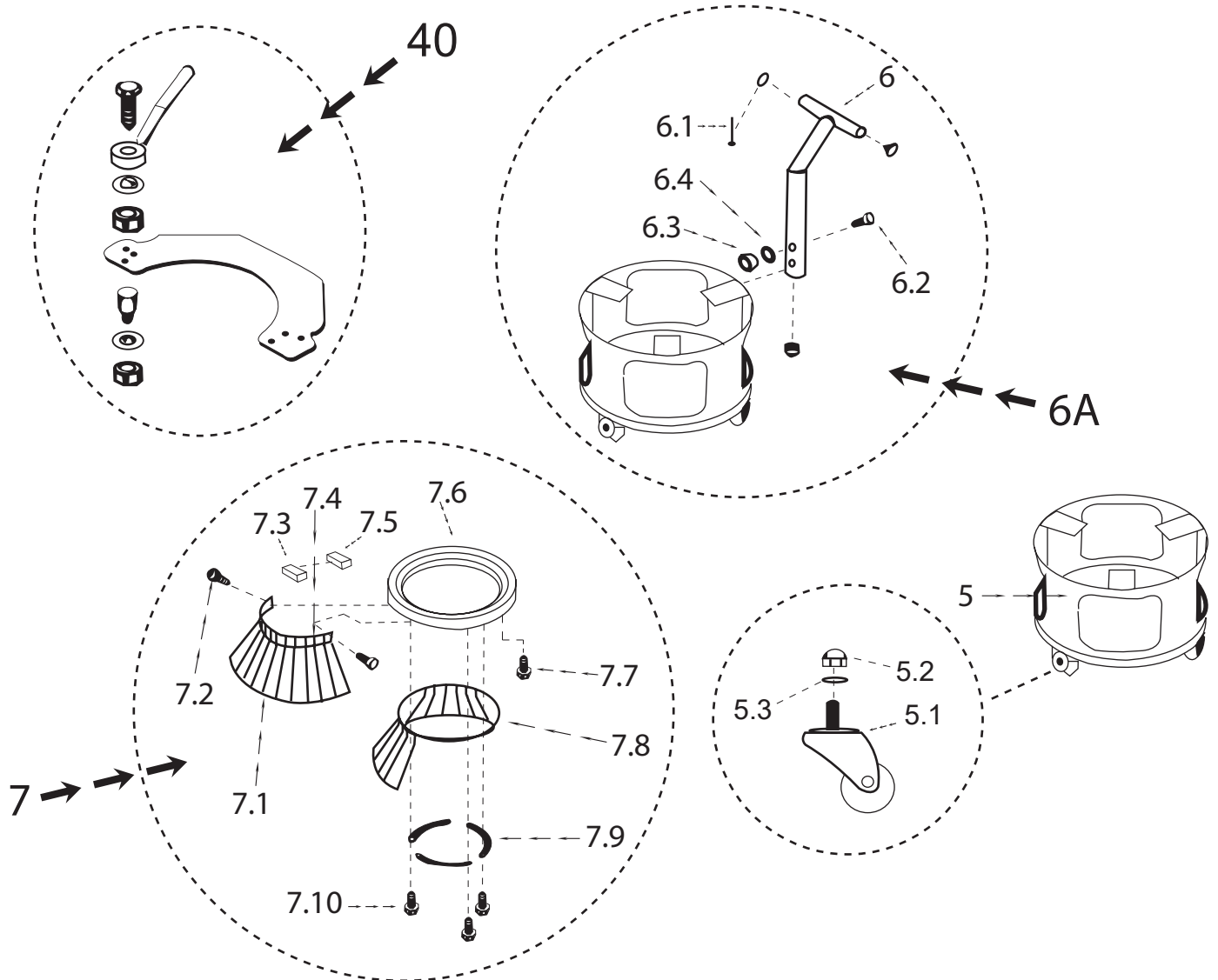
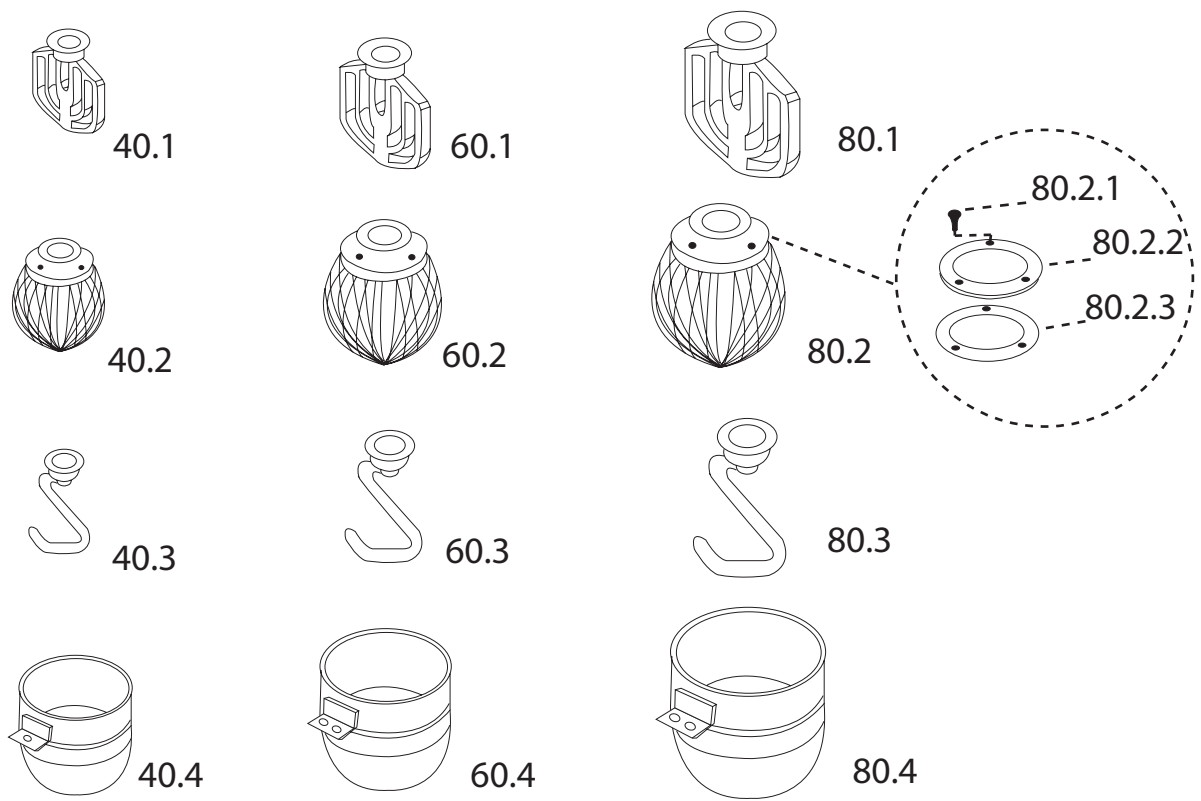
Gear Box HD-60 Precision Mixer					
<u>Item</u>	<u>Part Number</u>	<u>Description</u>			
1	GB-H60-001	Nut	41	GB-H60-041	Plate
2	GB-H60-002	Washer	42	GB-H60-042	Screw
3	GB-H60-003	Drive Pulley	43	GB-H60-043	Plate
4	GB-H60-004	Bushing	44	GB-H60-044	Screw
5	GB-H60-005	Bolt	45	GB-H60-045	Cotler Pin
6	GB-H60-006	Washer	46	54031A	Motor Bearing
7	GB-H60-007	Bearing Cover	47	54031B	Motor Beaing
8	GB-H60-008	Bearing			
9	GB-H60-009	Gear (1st Speed)			
10	GB-H60-010	Bevel Gear & Shaft			
11	GB-H60-011	Gear (2nd speed)			
12	GB-H60-012	Snap Ring			
13	GB-H60-013	Gear (3rd Speed)			
14	GB-H60-014	Transmission Housing			
15	GB-H60-015	V-Belt			
16	GB-H60-016	Main Drive Pulley			
17	GB-H60-017	Bolt			
18	GB-H60-018	Washer			
19	GB-H60-019	Motor Bracket			
20	GB-H60-020	Motor			
20A	GB-H60-020A	Capacitor (Single Phase Only)			
20B	GB-H60-020B	Cent Switch Staionary			
20C	GB-H60-020C	Cent Switch Rotary			
20D	GB-H60-20D	Fan Blade			
21	GB-H60-021	Key			
22	GB-H60-022	Bearing			
23	GB-H60-023	Key			
24	GB-H60-024	Key			
25	GB-H60-025	Pin			
26	GB-H60-026	Transmission Shaft			
27	GB-H60-027	Gear Train			
28	GB-H60-028	Nut			
29	GB-H60-029	Washer			
30	GB-H60-030	Shift Gear (Brass)			
31	GB-H60-031	Shift Yoke Slide			
32	GB-H60-032	Bolt			
33	GB-H60-033	Washer			
34	GB-H60-034	Steel Ball			
35	GB-H60-035	Spring			
36	GB-H60-036	Washer			
37	GB-H60-037	Keys			
38	GB-H60-038	Bolt			
39	GB-H60-039	Washer			

Column & Base Head Box Model HD-60



Column & Base, Precision Mixer, Model HD-60

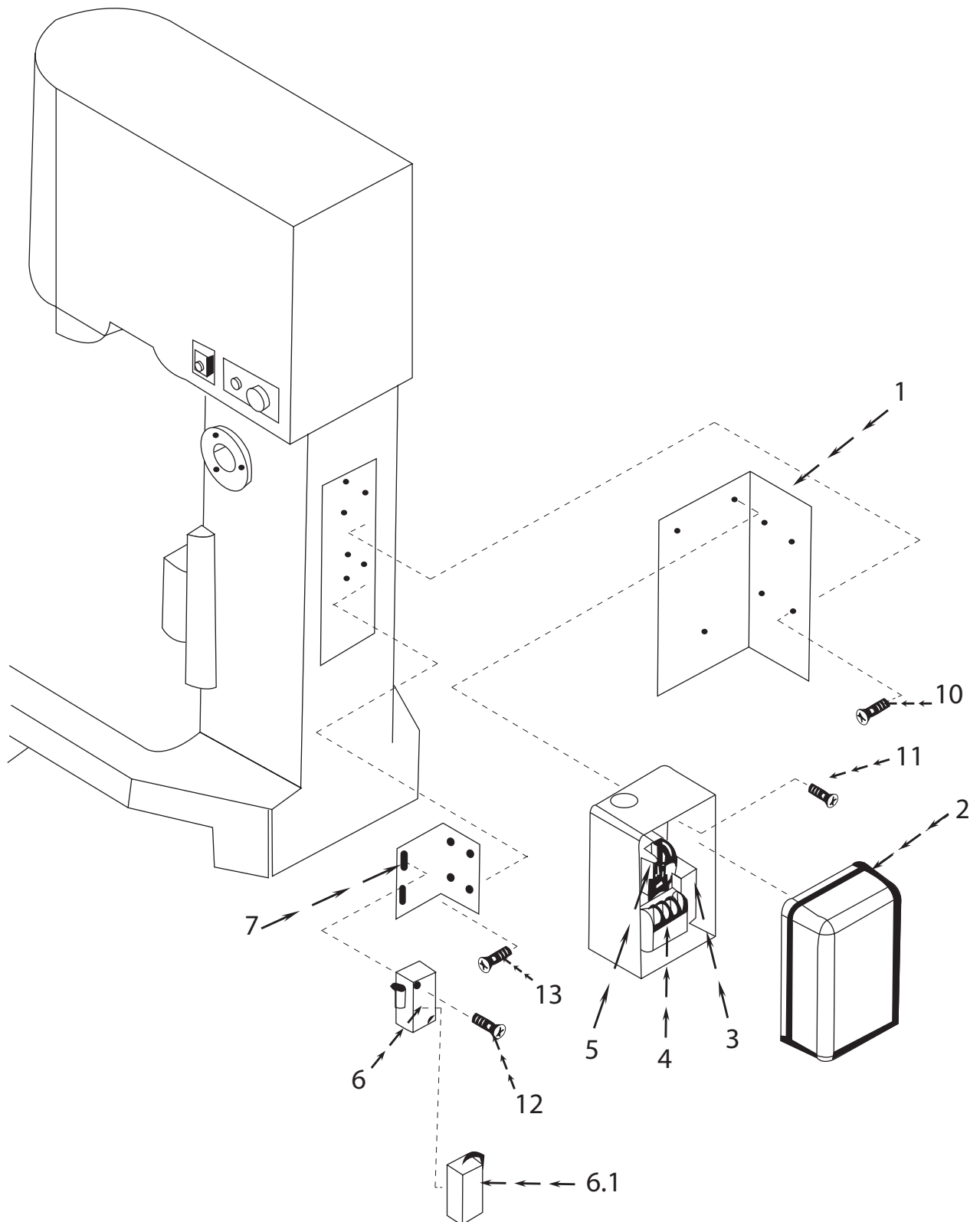
<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Item</u>	<u>Part Number</u>	<u>Description</u>
1	CB-HD60-001	Oil Cup	42	CB-HD60-042	Crank Wheel
2	CB-HD60-002	Dust Proof Cover	43	CB-HD60-043	Crank Handle
3	CB-HD60-003	Bolt	46	CB-HD60-046	Lifting Hub
3A	CB-HD60-003A	Plastic Bolt Cap	47	CB-HD60-047	Bolt
4	CB-HD60-004	Stop Bolt	48	CB-HD60-048	Screw
6	CB-HD60-006	Stainless Steel Plate	49	CB-HD60-049	Column Cover
7	CB-HD60-007	Stainless Steel Pd	50	CB-HD60-050	Nut
8	CB-HD60-008	Bowl Lock	51	CB-HD60-051	Screw
9	CB-HD60-009	Screw	52	CB-HD60-052	Slide Plate
10	CB-HD60-010	Bowl Pin	53	CB-HD60-053	Screw
11	CB-HD60-011	Bowl Rest	54	CB-HD60-054	Bowl Lock Stop
20	CB-HD60-020	Screw	55	CB-HD60-055	Nut
21	CB-HD60-021	Lift Slide Cover	56	CB-HD60-056	Washer
23	CB-HD60-023	Column	57	CB-HD60-057	Nut
24	CB-HD60-024	Base	58	CB-HD60-058	Strain Relief
25	CB-HD60-025	Washer	59	CB-HD60-059	Nut
26	CB-HD60-026	Bolt	60	CB-HD60-060	Washer
27	CB-HD60-027	Lift Gear	61	CB-HD60-061	Bolt
27-1	CB-HD60-027-1	Screw, set	62	CB-HD60-062	Washer
28	CB-HD60-028	Bearing	63	CB-HD60-063	Oil Cup
29	CB-HD60-029	Lift Screw	64	CB-HD60-064	Washer
30	CB-HD60-030	Lift Nut	65	CB-HD60-065	Bolt
31	CB-HD60-031	Screw, set	66	CB-HD60-066	Rubber Feet, Rear Set
32	CB-HD60-032	Collar	67	CB-HD60-067	Rubber Feet, Front Set
34	CB-HD60-034	Bolt	68	CB-HD60-068	Micro-Switch
34-1	CB-HD60-034-1	Washer	69	CB-HD60-069	Microw-Switch Bracket
38	CB-HD60-038	Gear	70	CB-HD60-070	Screw
38-1	CB-HD60-038-1	Screw	71	CB-HD60-071	Screw
38-2	CB-HD60-038-2	Nut	72	CB-HD60-072	Micro-Switch Cover
39	CB-HD60-039	Bearing			
40	CB-HD60-040	Bolt			
41	CB-HD60-041	Nut			



Safety Guard HD-60 Precision Mixer				
<u>Item</u>	<u>Part Number</u>	<u>Description</u>		
7	80-7	Complete Safety Guard		
7-1	80-7-1	Fixed Guard		
7-2	80-7-2	Screw		
7-3	80-7-3	Micro-Switch		
7-4	80-7-4	Screw		
7-5	80-7-5	Switch Cover		
7-6	80-7-6	Mounting Ring		
7-7	80-7-7	Screw		
7-8	80-7-8	Front Cage		
7-9	80-7-9	Retainer		
7-10	80-7-10	Screw		
Dolley Parts Breakdown				
5	80-5	Trolley, without handle		
5-1	80-5-1	Wheels		
5-2	80-5-2	Nut		
5-3	80-5-3	Washer		
6	80-6	Handle		
6-1	80-6-1	Plastic Sleeve		
6-2	80-6-2	Screw		
6-3	80-6-3	Nut		
6-4	80-6-4	Washer		
Attachments HD-60 Precision Mixer				
<u>Item</u>	<u>Part Number</u>	<u>Description</u>		
40	8040LKP	Knockdown Plate		
40-1	8040LP	Paddle		
40-2	8040LW	Whip		
40-3	8040LH	Dough Hook		
40-4	8040LB	Bowl		
60-1	60-1	Paddle		
60-2	60-2	Whip		
60-3	60-3	Dough Hook		
60-4	60-4	Bowl		
80-1	80-1	Paddle		
80-2	80-2	Whip		
80-3	80-3	Dough Hook		
80-4	80-4	Bowl		

Electrical Box

Models V-80, V-60, HD-60



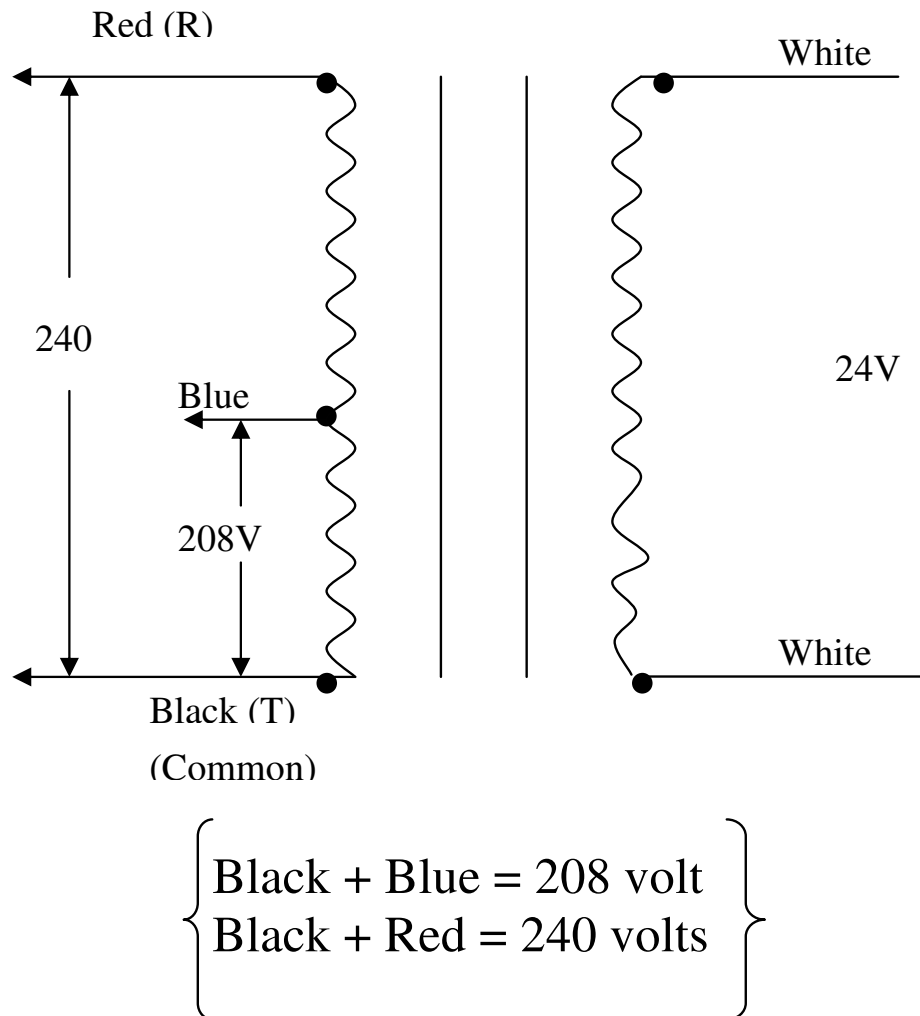
	Electric Controls HD-60 Precision Mixer				
<u>Item</u>	<u>Part Number</u>	<u>Description</u>			
1	EC-HD60-001	Control Box Mounting Plate			
2	EC-HD60-002	Control Box & Cover			
3	EC-HD60-003	Transformer			
4	EC-HD60-004	Contactor			
5	EC-HD60-005	Manual Reset Overload			
6	EC-HD60-006	Micro-switch			
6-1	EC-HD60-006-1	Micro-switch Cover			
7	EC-HD60-007	Micro-switch Mounting Plate			
10	EC-HD60-010	Screw			
11	EC-HD60-011	Screw			
12	EC-HD60-012	Screw			
13	EC-HD60-013	Screw			



**Precision
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Transformer Wiring Diagram for V-60, HD-60, and V-80 Mixers



Conversion to 208 Volts

Step 1: Disconnect Red Wire from transformer and cap.

Step 2: Terminate Blue Wire (currently not being used) from the transformer into terminal where Red Wire was removed. The Red Wire is now terminated and the Blue Wire becomes (R).



WARRANTY

EXTENDED WARRANTY ON PRECISION MODEL #HD-60

Precision North America, LLC. warrants to the original purchaser of every new Precision HD-60 an extended 6-year warranty on all gears and shafts in the planetary and transmission, parts only. Warranty applies to said parts if breakage is due to manufacturer's defect or customer error. Shipping and labor charges are not covered under this extended warranty.

Customers Obligation

Completed warranty card, along with original purchase receipt, must be on file with Precision N. America, LLC. To file your registration, simply complete warranty card and mail together with your invoice to Precision N. America, LLC., 60 Commerce Ave., Albany, NY 12206

Strong Recommendation

To avoid labor costs and down time for your mixer, we recommend that the customer perform scheduled maintenance on the HD-60. Maintenance includes planetary being greased a minimum of once every 12-months, and transmission oil changed a minimum of once every 5-years.

WARRANTY CLAIMS

All claims for parts must be authorized through Precision North America, LLC. All claims should include: model number, serial number, proof of purchase, date of installation, and all pertinent information supporting the existence of the alleged defect. All warranty parts are to be returned to Precision N. America, LLC. Precision N. America, LLC. will supply all warranted parts. No refunds or payments will be sent for parts purchased by customer or customers Service Company.

PERFORMANCE GUARANTEE

From the date of delivery, for 30-days, if your Precision HD-60 does not perform to your satisfaction, Precision will replace it with a new mixer brand of customer's choice. Customer is responsible for the difference in average retail cost between the mixers. Customer is responsible for all freight charges. Precision must be notified of any lack of performance and be able to view it at the customer's location.

WHAT IS NOT COVERED BY THIS WARRANTY

Precision N. America's sole obligation under this warranty is limited to either repair or replacement of parts, subject to the additional limitations below. This warranty neither assumes nor authorizes any person to assume obligations other than those expressly covered by this warranty.

NO CONSEQUENT DAMAGES. PRECISION N. AMERICA, LLC. IS NOT RESPONSIBLE FOR ECONOMIC LOSS; OR SPECIAL, INDIRECT, OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION, LOSSES OR DAMAGES ARISING FROM FOOD OR PRODUCT SPOILAGE CLAIMS WHETHER OR NOT ON ACCOUNT OF MACHINE MALFUNCTION.

WARRANTY IS NOT TRANSFERABLE. This warranty is not assignable and applies only in favor of the original purchaser/user to whom delivered. ANY SUCH ASSIGNMENT OR TRANSFER SHALL VOID THE WARRANTIES HEREIN MADE AND SHALL VOID ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

IMPROPER USAGE. PRECISION N. AMERICA, LLC. ASSUMES NO LIABILITY FOR THE PARTS OR LABOR COVERAGE FOR COMPONENT FAILURE OR OTHER DAMAGES RESULTING FROM IMPROPER USAGE OR INSTALLATION OR FAILURE TO CLEAN AND/OR MAINTAIN PRODUCT AS SET FORTH IN THE WARRANTY PACKET PROVIDED WITH THE MACHINE.

NO IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THERE ARE NO OTHER WARRANTIES, EXPRESSED, IMPLIED OR STATUTORY, EXCEPT THE (1) YEAR LABOR & (3) THREE YEAR PARTS WARRANTY AS DESCRIBED ABOVE. THESE WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, INCLUDING IMPLIED WARRANTY AND MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF.

OUTSIDE U.S. This warranty does not apply to, and Precision N. America, LLC. is not responsible for, any warranty claims made on products sold or used outside the United States.

EXTENDED WARRANTY Registration Card

**Precision N. America, LLC.
Mail Card Immediately**

**This Card must be mailed
immediately after installation
date for warranty to be in effect.**

**Please Mail to:
Precision North America, LLC.
60 Commerce Ave.
Albany, NY 12206**

Name _____ Mixer Model # **HD-60** Serial# _____

Type of Business _____ Business phone # _____

Address _____ City _____ State _____ Zip _____

Name of Power Company _____

This is to inform Precision N. America, LLC. that I, (owners name) _____

have had the above mixer installed in my place of business on (date) _____

The above warranties are in effect from this installation date, or 90 days after shipment from Precision,
whichever comes first.

Customer Signature _____

Precision North America, LLC. phone: 518-462-3387 fax: 518-462-3389 www.precisionmixers.com

IMPORTANT: Copy of sales receipt must accompany this warranty card for warranty to be valid

Instructions for the Care and Operation of the Models HD-60, V-60, and V-80 Precision Mixers

INSTALLATION:

Remove all packing material and bowl attachments. Install in a designated 20 amp breaker for 3-phase, 30 amp breaker for single-phase power. With 3-phase installation, check voltage and phase power before starting machine.

START/STOP:

Set the shifter handle (3) at the desired speed and set the timer (6) for the desired mix time.

Bowl must be in the upright position, the guard must be closed, and the timer must be set in order for the motor to run.

Push green start button (5) to start the motor. Push Red Stop button (4) to STOP the motor.

SHIFT ASSIST:

Never use this feature while the machine is running. If machine will not shift smoothly from one gear to another with left hand push in Shift assist knob (2) and shift the desired gear (3) with right hand on the shifting lever, then release the shift assist knob.

3-PHASE INSTALLATION:

Check voltage and phase power before starting machine.

For 3-phase mixer, remove all attachments; check rotation with arrow in front of planetary (6). If rotation is wrong, consult electrician to reverse wire at breaker.

SPEED CONTROL:

To change speeds, first turn off the motor, and then move the shifter handle (3) to the desired speed.

Use 3rd speed for fast, light work as whipping cream, beating eggs, and mixing thin batters.

Use 1st speed, or slow speed, for heavy mixtures, like bread dough etc. Also use this speed for the food chopper attachment.

In many mixing operations, it is customary to begin in 1st speed, then change to a higher speed as the work progresses.

Never mix dough in 3rd speed.

BOWL LIFT:

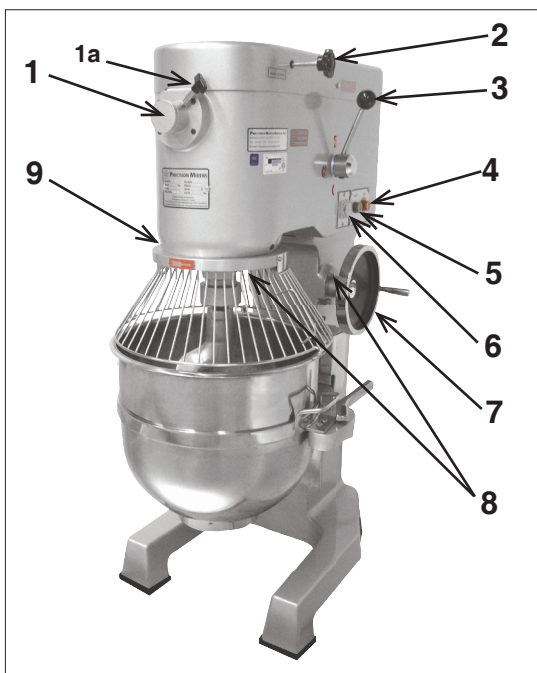
Turn wheel (7) counter-clockwise to lower the bowl. It is necessary to lower the bowl to change agitators, this also makes the bowl more accessible for filling. When raising the bowl turn wheel clockwise until it easily stops.

AGITATORS:

When assembling an agitator the bowl must be in the down position. Slip the agitator up the shaft and turn it until the driving pin in the shaft reaches the L-shaped slot in the attachment shank. The style "B" beater (10) is commonly used for thin batters, cakes, and mashing potatoes. The style "D" whip (11) is best for whipping cream and beating eggs. The other style used is the dough hook (12) used for heavy bread dough.

ATTACHMENTS:

Various attachments and accessories are available for this machine, such as Vegetable Slicer and Food Chopper. The attachment hub is standard #12. Before putting an attachment into the hub, stop the motor, then insert with a slight twist toward the left so the stop stud in the attachment is tight against the side of the hole that receives it. When in place tighten the thumb-screw (1a) and put a drop of oil in the oiler (1). The attachment drive has three speeds governed by the shifter handle (3) of the mixer. For most attachments, set the handle at 1st speed. THE GRINDER ATTACHMENT MUST NEVER RUN FASTER THAN first SPEED when grinding meat. When cutting vegetables, it may run at 2nd. Use the motor switch to start and stop attachments, and always stop the motor before changing the speed of an attachment. Never use the Hook on 4th speed. Clean with a mild soap and water. NEVER IMMERSE MACHINE, OR HOSE DOWN, WITH WATER.



LUBRICATION:

The transmission gearing is packed with food safe **grease** that will last for several years. The smaller oiler (1) is for lubricating attachments Oil only when an attachment is in place and never use more than a drop or two. Lubricate the bowl slide-way and crank wheel (8) by filling cups with mineral oil once a month. **Grease** fitting (9) to be filled with food grade lithium after every 40 hours of use.

BELT MAINTENANCE:

The Pulley Belt may be extended slightly and become loose after the mixer has been used a few weeks. Open the top cover and adjust the belts to make them tight again, if necessary, with the following steps:

1. Remove the adjustable thumb-screw against the Plate of Mounted Motor.
2. Loosen the motor mount in bolt and pull the motor away from the big pulley to tighten the belt. Re-attach the mounted screw.
3. Belts should Never be tightened completely. Leave one-half inch of play when you push on the side of the belt (10)

Belt Maintenance Diagram:

