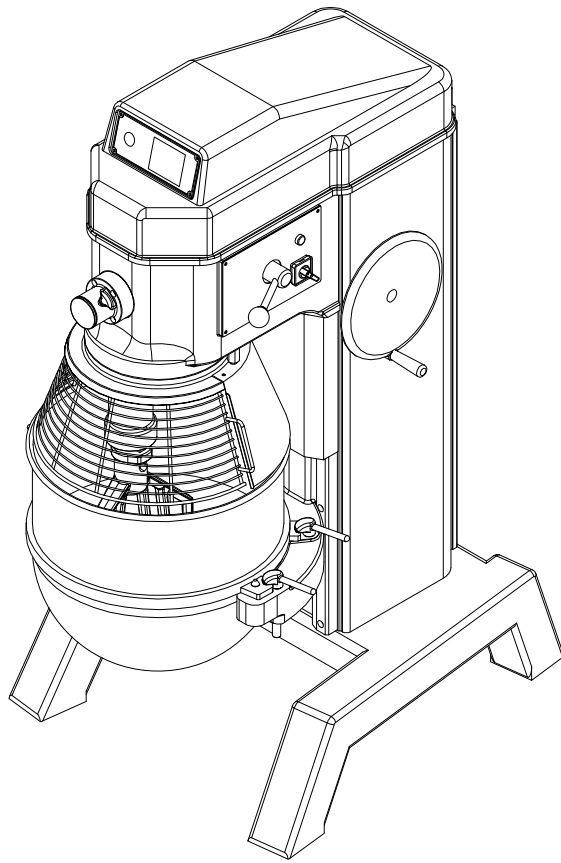




AX-M60  
60 Quart Mixer



<b>M odel</b>	<b>Capacity</b>	<b>Motor</b>	<b>A mps</b>	<b>S peeds</b>	<b>E lectrical</b>
<b>AX-M60</b>	<b>60 Quart</b>	<b>3 Speeds</b>	<b>18</b>	<b>96 / 172 / 330</b>	<b>220v / 60hz / 1ph</b>

## TECHNICAL MANUAL

REV:201511.01

# INSTALLATION, OPERATION AND CARE OF MODEL AX-M60

## GENERAL

The AX-M60 planetary mixer is an advance design, highly reliable professional food processing tool, and is ideal for mixing all types of dough as well as eggs, cream, mayonnaise, etc.

There are 3 speeds and various style attachments which can be selected. They are made of alloy aluminum to meet with hygiene standard.

This model mixers is equipped with powerful 3 HP motors and strong gear drive design. The gears are made of heat-treated alloy steel and a harnessed steel worm wheel.

If your operation and maintenance are correct, then it will give you years of service, and obtain the best using result.

## INSTALLATION

### UNPACKING

Immediately before unpacking mixer, check it for possible shipping damage. If you find the packaging material or the machine is damaged before unpacking, contact the carrier within 3 days of delivery. Prior to installation, test the electrical service to assure it agrees with the specifications on the machine data place located on the backside of the pedestal.

### LOCATION

Place the Mixer in a convenient location, and allow working space on the hand-wheel or power bowl lift switch side. All maintenance can be handled from this side, the top and the front. Set the mixer level and use shims if the floor is uneven, the machined edge on the top of the transmission case makes an excellent surface for leveling.

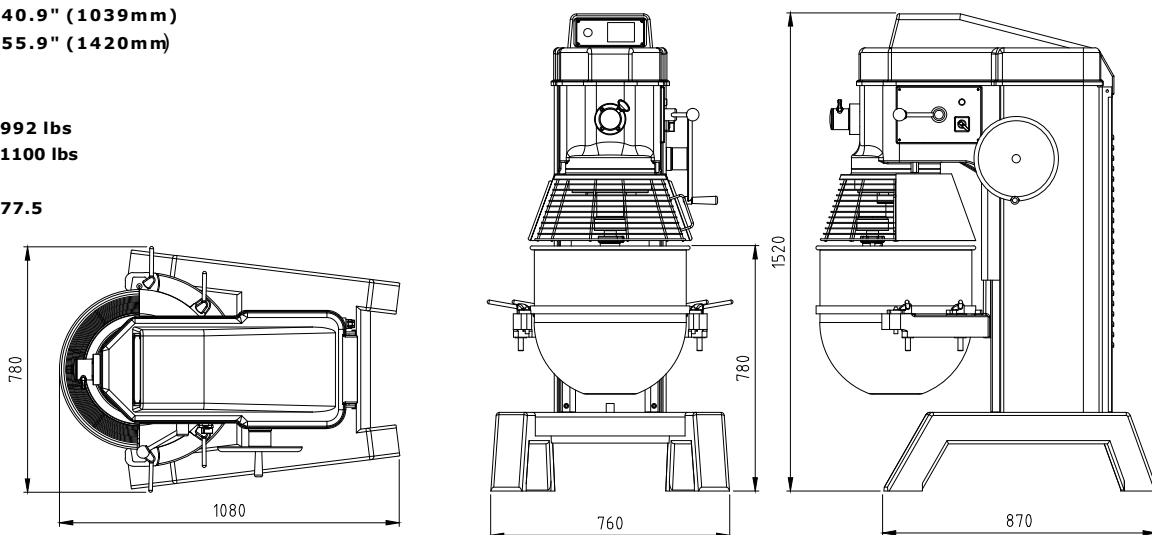
#### DIMENSIONS

**Overall Width** = 26.5" (675mm)  
**Overall Depth** = 40.9" (1039mm)  
**Overall Height** = 55.9" (1420mm)

#### WEIGHT

**NET** = 992 lbs  
**SHIP** = 1100 lbs

**FREIGHT CLASS** = 77.5



# Tools

Some of the tools you will need to repair and service the Mixer.

- Volt Meter
- Temperature meter
- Allen Keys (Metric)
- Phillips screw driver
- Nut drivers (Metric)
- Wrenches (Metric)
- Hammer
- Gear puller
- Punch



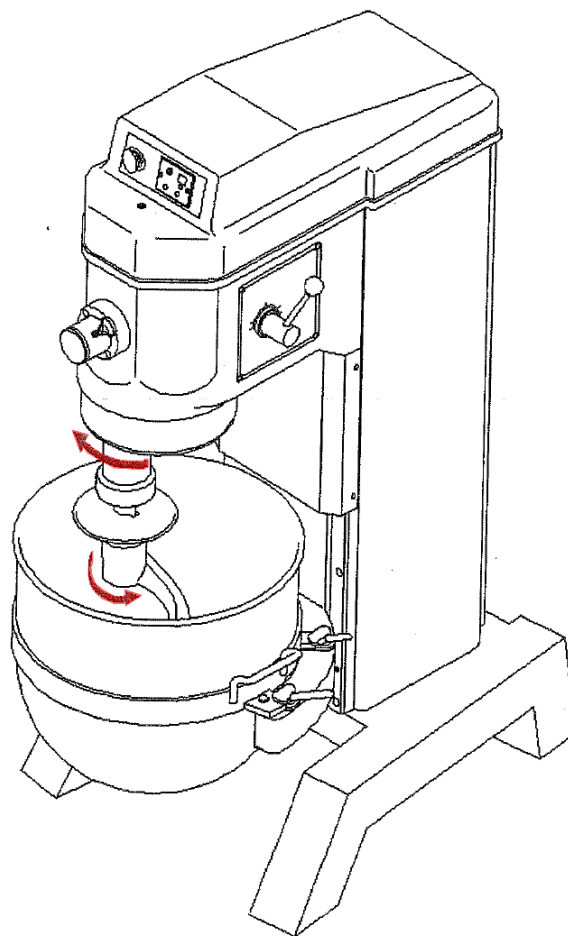
Reference chart

US (inches)	Metric (mm)
1/8	3.18
5/32	3.97
	4
3/16	4.76
	5
13/64	5.16
7/32	5.56
15/64	6.05
	6
1/4	6.35
17/64	6.75
	7
9/32	7.14
5/16	7.94
	8
11/32	8.73
	9
3/8	9.53
	10
	11
7/16	11.11
15/32	11.91
	12
1/2	12.7
	13
17/32	13.49
	14

## Electrical Connections (Cord Connected Mixers)

- Before making the electrical connections, read the specifications on the nameplate to make sure that they agree with those of your electric service.
- Electrical connections should be made by qualified technician or electrician, who will observe all applicable Safety Codes and the National Electrical Code.
- Be sure the planetary runs in the direction shown by the arrow in the planetary head. Reverse direction is forbidden.
- To start motor, push ON button. The speed selector handle must be at one of the numbers indicating a speed, not at an intermediate position.

**On a 3 Phase Mixer, the installer must check the mixing rotation of the planetary when the power is connected.**



Verify motor Rotation

## OPERATION

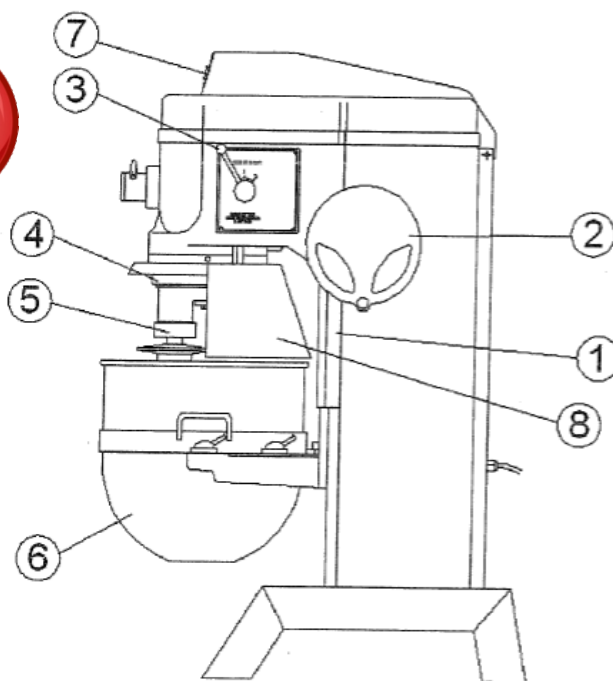
**WARNING: MOVING PARTS, BEATER OR HOOK IN BOWL; KEEP HANDS, CLOTHING, AND UTENSILS OUT WHILE IN OPERATION.**



All models are furnished with two button-switches, which control power to the mixer.

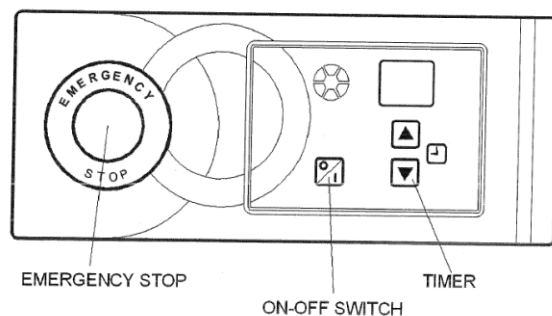
The GEAR SHIFT LEVER (No.3) is used to change speed. Always stop the mixer before changing speeds. To change speeds, turn the switch OFF, move the gearshift lever to the desired speed, and turn the switch back ON.

- 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, heavy batters, and some whipping operations.
- Speed 3 (High) - This speed is very fast for light work such as whipping cream, beating eggs, and mixing batters.



1. APRON
2. BOWL LIFT HANDLE
3. GEAR SHIFT LEVER
4. DRIP CUP
5. AGITATOR
6. BOWL
7. CONTROL PANEL
8. SAFETY GUARD

CONTROL PANEL



EMERGENCY STOP

ON-OFF SWITCH

TIMER

## DOUGH HOOK:

To install the dough hook (No 5), the bowl must be installed and fully lowered. Place the hook in the bowl, push it up on agitator shaft, and turn it clockwise to seat the shaft pin in the slot of the agitator shank.

It is frequently used for heavy bread dough, and preferable to be use at low speed.

**The moisture content of heavy dough is a critical when selecting proper mixing speed. You should never use 2<sup>nd</sup> speed when mixing heavy dough with an Absorption Ratio (AR) of 50% or less.**

## BEATER:

It is commonly used for thin batters, cake and mashed potatoes, like stuffing. It is preferable to be used at medium speed.

## WHIP:

It is best for whipping cream and beating eggs. Normally used at high speed.

## BOWL – CAPACITY: 60 QUART

New mixers bowls and dough hook should be removed and thoroughly washed with hot water and mild soap solution, rinsed with either a mild soda or vinegar solution, and thoroughly rinsed with clean water BEFORE being put into service. This cleaning procedure should also be done daily or after each use.

The bowl must be installed before the agitator. To install the bowl, fully lower the bowl support. Position the bowl so the alignment bracket on the back of the bowl is in the bowl retainer and the alignment pins on the front of the bowl support fit in the holes on the sides of the bowl.

## ATTACHMENTS

To install an attachment, loosen the thumbscrew on the attachment hub and remove the plug. Insert the attachment into the attachment hub making certain that the square shank of the attachment is in the square driver of the mixer. Secure the attachment by tightening the thumbscrew.

Move the gearshift lever to the desired speed and star the mixer to operate the attachment. The meat and food chopper attachment should be operated in second or third speed. If material in the cylinder stalls the mixer, stop the mixer at once. DO NOT attempt to restart the mixer in a lower speed – remove the adjusting ring, knife, plate, and worm and clear the obstruction.



## MAINTENANCE

**NOTE: All maintenance work should be done only after unit has been disconnected from electrical power and grounding. Refer to page 26**

## MIXING HEAVY DOUGH

The moisture content of heavy dough is a critical factor when selecting proper mixing speed. You should never use 2<sup>nd</sup> speed when mixing heavy dough with an Absorption Ratio (AR) of 50% or less.

To determine the Absorption Ratio (AR) of a product, divide the water weight by the flour weight.

Example: Calculate the Absorption Ratio of a mixture containing 10 lbs. of flour and 5 lbs. of water.

$$10 \div 5 = 0.50 = 50\% = \text{AR}$$

CAPACITY (QTS. LIQUID)		60 qt.
Egg Whites	Wire Whip	2 qt.
Mashed Potatoes	Flat Beater	40 lbs.
Mayonnaise (Qts. Oil)	Flat Beater	18 qt.
Meringue (Qts. Water)	Wire Whip	1.5 qt.
Waffle/Pancake Batter	Flat Beater	24 qts.
Whipped Cream	Wire Whip	12 qts.
Sheet Cake Batter	Flat Beater	45 lbs.
Cup Cake	Flat Beater	50 dz.
Layer Cake	Flat Beater	70 lbs.
Pound Cake	Flat Beater	55 lbs.
Sugar Cookie	Flat Beater	100 dz.
Bread or Roll Dough (Light/Medium, 60% AR, =)	Dough Hook	80 bs.**
Bread or Roll Dough (Heavy, 55% AR, =)	Dough Hook	60 lbs.**
Pie Dough	Flat Beater	50 lbs.
Thin Pizza Dough (40% AR, =, 5 min.max. mix time)	Dough Hook	40 lbs.**
Medium Pizza Dough (50% AR, =)	Dough Hook	70 lbs.*
Thick Pizza Dough (60% AR, =)	Dough Hook	70 lbs.**
Raised Donut Dough (65% AR)	Dough Hook	30 lbs.*
Whole Wheat Bread Dough (70% AR)	Dough Hook	70 lbs.**
Egg & Sugar for Sponge Cake	Flat Beater	24 lbs.*

\* 1<sup>st</sup> speed \*\* 2<sup>nd</sup> Speed

\* = If high gluten flour is used, reduce above dough batch size by

# AXIS MIXER WARRANTY

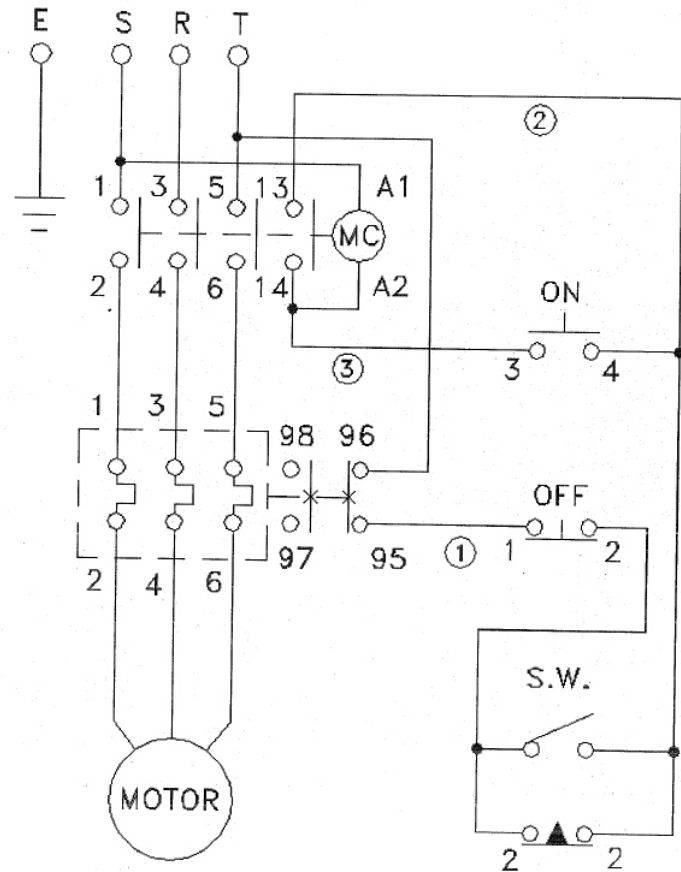
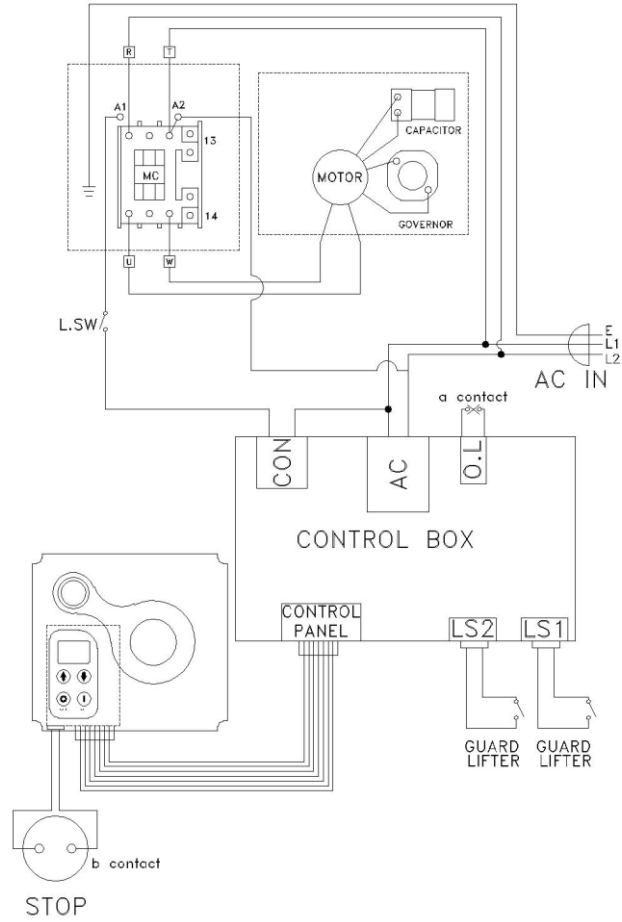
## MIXER LIMITED WARRANTY

MVP GROUP CORP. ("AXIS") warrants to the original purchaser of new equipment that said equipment, when installed in accordance with our instructions within North America and subjected to normal use, is free from defects in material or workmanship for a period of 2 years on parts (excludes wear/expendable parts). The labor warranty is 1 year on labor from original installation, or 18 months from actual shipment date, whichever date occurs first.

Mixer attachments have a 1 year replacement warranty from invoice date. There is no labor warranty for mixer attachments. The vegetable slicing assembly, shredder/grater assembly, and meat grinder are considered mixer attachments. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED. AXIS EXPRESSLY DISCLAIMS ANY IMPLIED WARRANTY OF MERCHANTABILITY OR EXPRESS OR IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. AXIS'S OBLIGATION AND LIABILITY UNDER THIS WARRANTY IS EXPRESSLY LIMITED TO REPAIRING AND REPLACING EQUIPMENT WHICH PROVES TO BE DEFECTIVE IN MATERIAL OR WORKMANSHIP WITHIN THE APPLICABLE WARRANTY PERIOD.

All repairs pursuant to this Warranty will be performed by an Authorized Designated AXIS Service Location during normal working hours. IN NO EVENT SHALL AXIS BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES TO BUYER OR ANY THIRD PARTY, INCLUDING, WITHOUT LIMITATION, LOSS OF PROPERTY, PERSONAL INJURY, LOSS OF BUSINESS OR PROFITS OR OTHER ECONOMIC LOSSES, OR STATUTORY OR EXEMPLARY DAMAGES, WHETHER IN NEGLIGENCE, WARRANTY, STRICT LIABILITY, OR OTHERWISE.

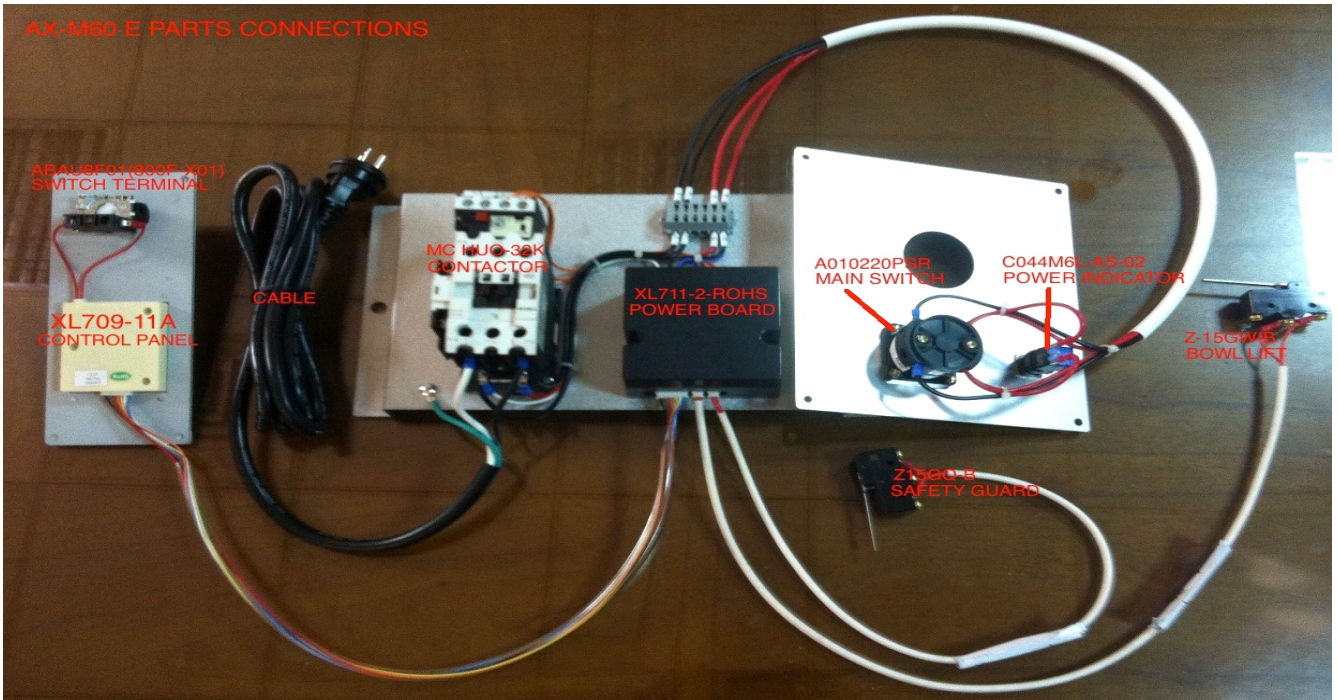
This warranty is given only to the first purchaser from a retail dealer. No warranty is given to subsequent transferees. This warranty does not cover product failures caused by: failure to maintain, neglect, abuse, damage due to excess water, fire, normal wear, improper set up and use. Periodic maintenance is not covered. This warranty is not in force until such time as a properly completed and signed installation/warranty registration or an online registration form has been received by AXIS within 30 days from the date of installation. Register online at [www. http://mvpgroupcorp.com/warranty.asp](http://mvpgroupcorp.com/warranty.asp). THE FOREGOING WARRANTY PROVISIONS ARE A COMPLETE AND EXCLUSIVE STATEMENT BETWEEN THE BUYER AND SELLER. AXIS NEITHER ASSUMES NOR AUTHORIZES ANY PERSONS TO ASSUME FOR IT ANY OTHER OBLIGATION OR LIABILITY IN CONNECTION WITH SAID EQUIPMENT. Example of items not covered under warranty, but not limited to just these items: 1. Acts of God, fire, water damage, vandalism, accident, theft. 2. Freight damage. 3. Improper installation or alteration of equipment. 4. Use of generic or aftermarket parts. 5. Repairs made by anyone other than an AXIS designated servicer. 6. Lubrication. 7. Expendable wear parts. (This includes the bowl, fl at beater, wire whip, spiral dough hook, and the pastry knife.) 8. Cleaning of equipment. 9. Misuse or abuse.







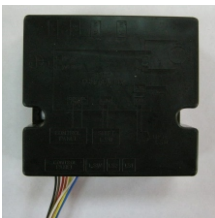
# ELECTRICAL SECTION



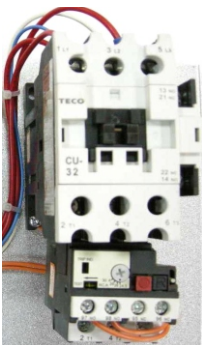
**XL709-11A**  
 Part Number: XL709-11A  
 Description: RELAY CONTROL BOX  
 MVP Number: 733109



**D11001R**  
 Part Number: D11001R  
 Description: STICKER FOR 73-2160  
 MVP Number: 730331



**XL711-2-ROHS**  
 Part Number: XL711-2  
 Description: ROHS POWER BOARD W/BOX 220V  
 MVP Number: 736212



**MC HUO-16K 5HP(16K)4A 220V.**  
 Description: HUO-16AK CONTACTOR 220V/5HP/16KB FOR AX M80  
 Accpac Number: 732181



**Z-15GQ-B**

Part Number: Z15GQ2B  
Description: LIMIT SWITCH FOR BOWL GUARD M40  
Accpac Number: 730572



**Z-15GW-B**

Part Number: Z15GQWB  
Description: LIMIT SWITCH (SAFETY GARD) FOR AX M80  
Accpac Number: 732190



**CABLE-12-3C-NEMA6-15P-UL**

Part Number: CABLE12-3C-NEMA6  
Description: POWER CABLE FOR AX-M60-15P-UL  
Accpac Number: 732192



**ABESMT44**

Part Number: ABESTMT44  
Description: EMERGENCY STOP FOR M80  
Accpac Number: 732170



**ABMS800M**

Part Number: ABMS800M  
Description: SWITCH RING FOR AX M80  
Accpac Number: 732179



**ABAU8F01 (800F-X01)**

Part Number: ABAU8F01  
Description: SWITCH TERMINAL FOR AX M80  
Accpac Number: 732180

Part Number: ABESMT44+ABMS800M+ABAU8F01  
Description: STOP SWITCH - COMPLETE  
Accpac Number: 73B092



S-9 power indicator



C044M6L-AS-02  
power indicator



48\*48 OFF-ON 2A/1 25A  
Part Number: 48\*48  
Description: OFF-ON 2A SWITCH  
Accpac Number: 730549



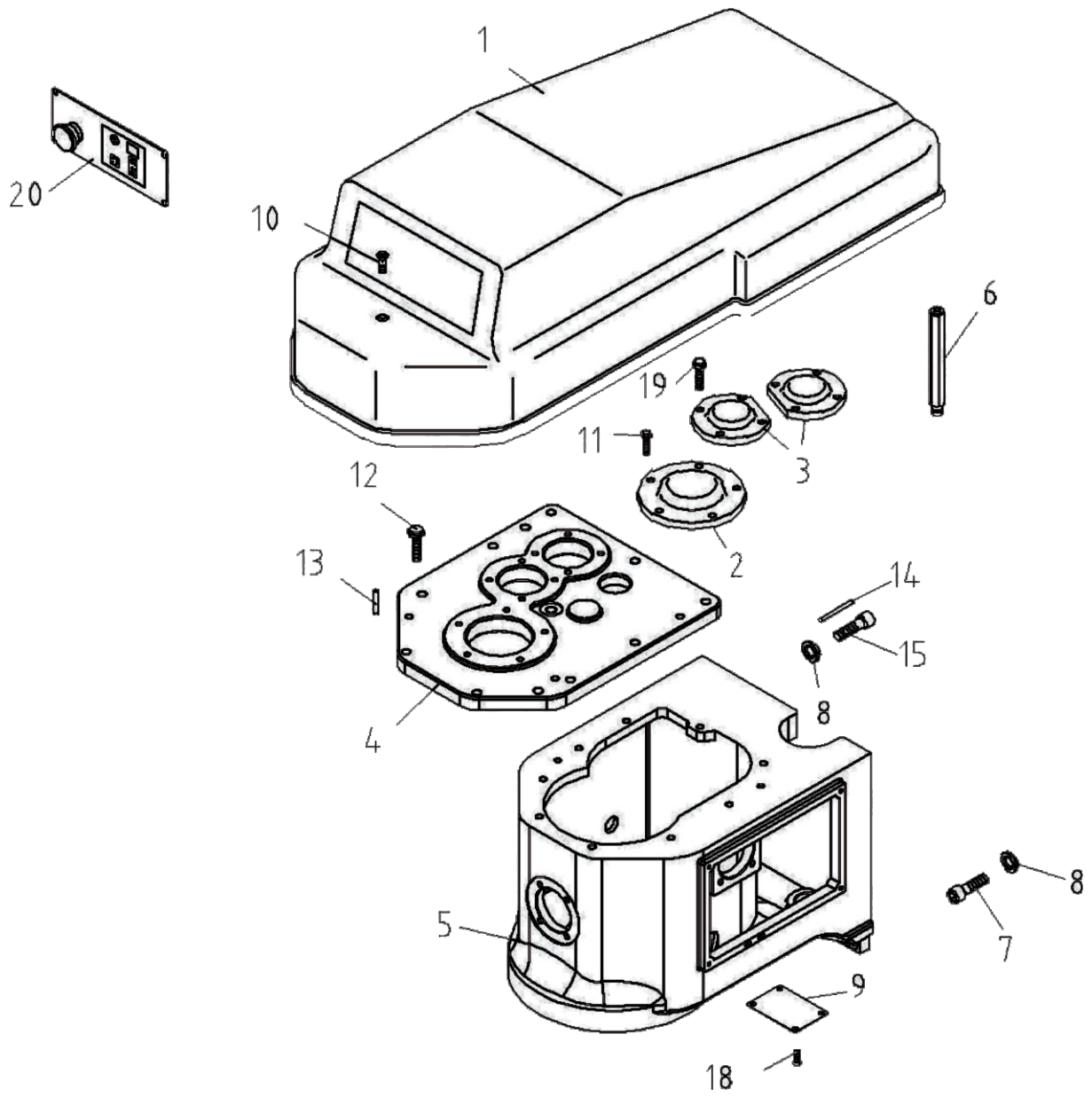
A010220PSR  
MAIN SWITCH



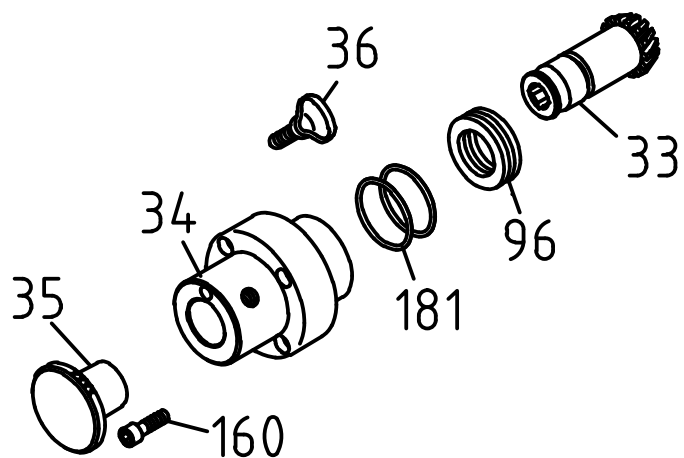
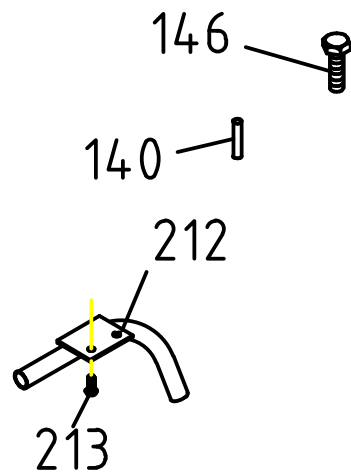
Part Number: 11091-05-004CO  
Description: START CAPACITOR  
Accpac Number: 736STA



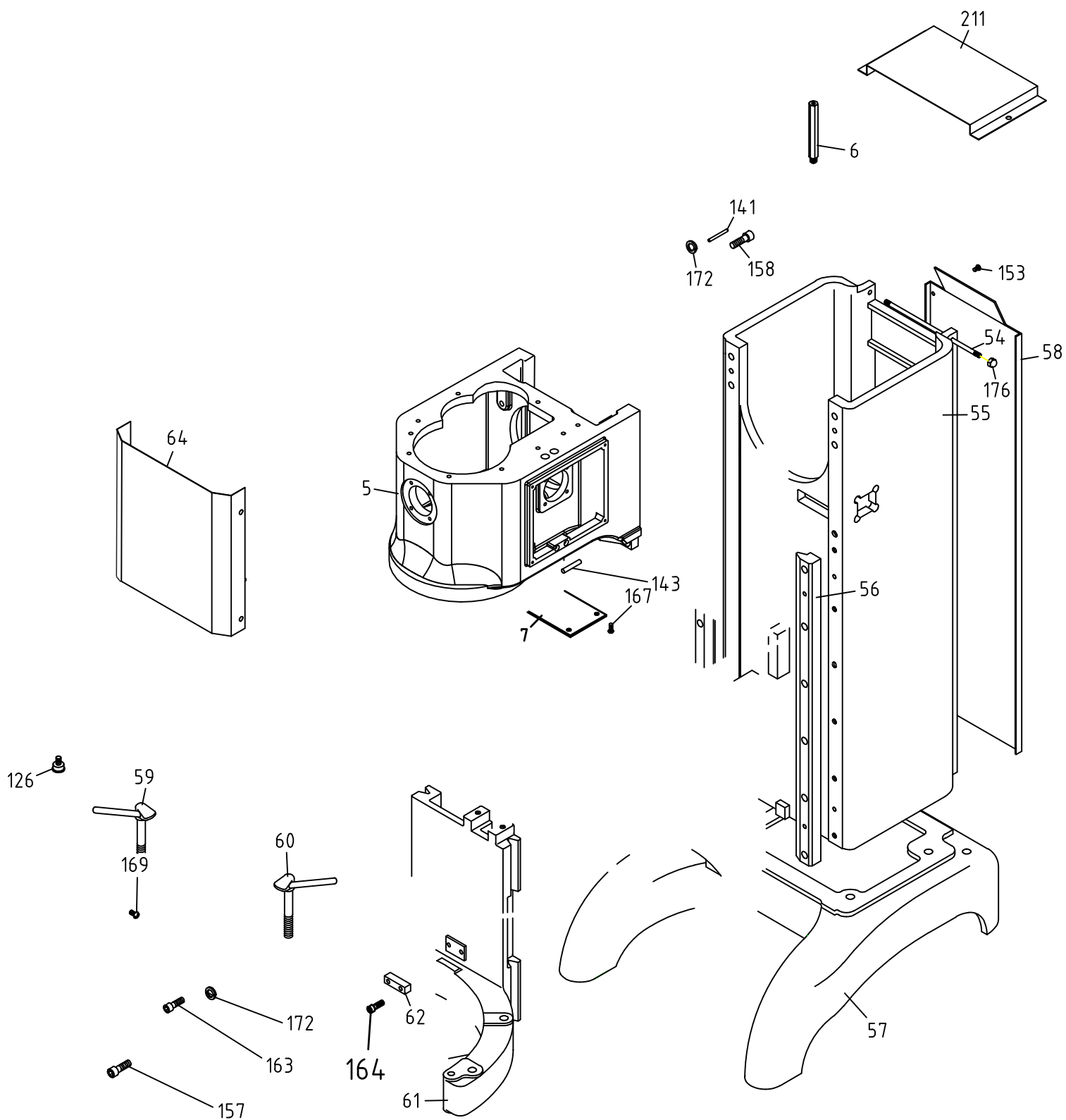
Part Number: 11091-05-004COUN  
Description: RUN CAPACITOR  
Accpac Number: 736RUN



	Description or Name	Parts No.	Qty
1	TOP COVER	11091-01-001A	1
2	CAP MAIN SHAFT	1109S-01-002	1
3	CAP TRANSMISSION SHAFT	1109S-01-003	2
4	GEAR HOUSE COVER	1109S-01-004	1
5	TRANSMISSION CASE	11100B-01-005	1
6	SUPPORT TO TOP COVER	1109S-01-006	1
7	SCREW	S-C-1/2*1-1/4	2
8	SPRING WASHER 1/2"	SW-1/2	6
9	COVER PLATE	BM10-01-006	1
10	SCREW	S+BR-1/4*3/8	1
11	BOLT 5/16*3/4	S-5/16*3/4	5
12	BOLT 3/8*1- 1/4	S-3/8*1-1/4	8
13	SPRING PIN 6*28	SPP-6*28	4
14	SPRING PIN 10*50	SPP-10*50	2
15	SCREW	S-C-1/2*2-1/4	4
16	MACH SCREW 3/16*3/8	S+R3/16*3/8	4
17	OIL COCK	712-050	1
18	MACH SCREW 3/16*3/8	S+R3/16*3/8	4
19	BOLT 5/16*1/2	S-5/16*1/2	8
20	CONTROL PANEL	11091-01-011B	1

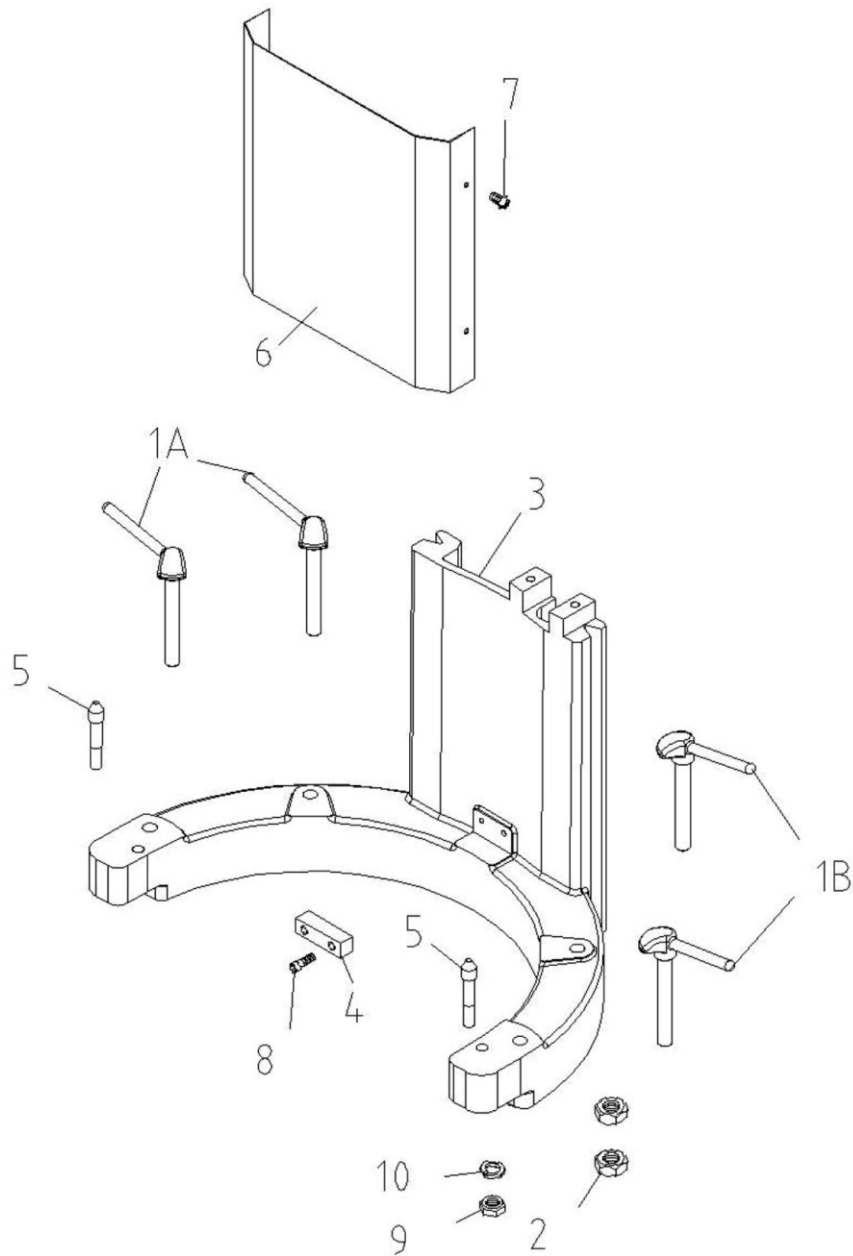


Pic #	Part #	Description
146	S-3/8*1-1/4	Bolt
140	SPP-6*28	Spring Pin
212	11091-01-010	OIL TUBE
213	N/A	Screw
35	11091-06-004	Attachment Hole Plug
34	11093-06-002	Hub Attachment
36	11031-06-005	Thumb Screw
160	S-C-5/16*1-1/4	Cap Screw
181	OR-P35	O RING
96	BR-2907	BEARING
33	11093-06-001	Bevel Pinion (14T)

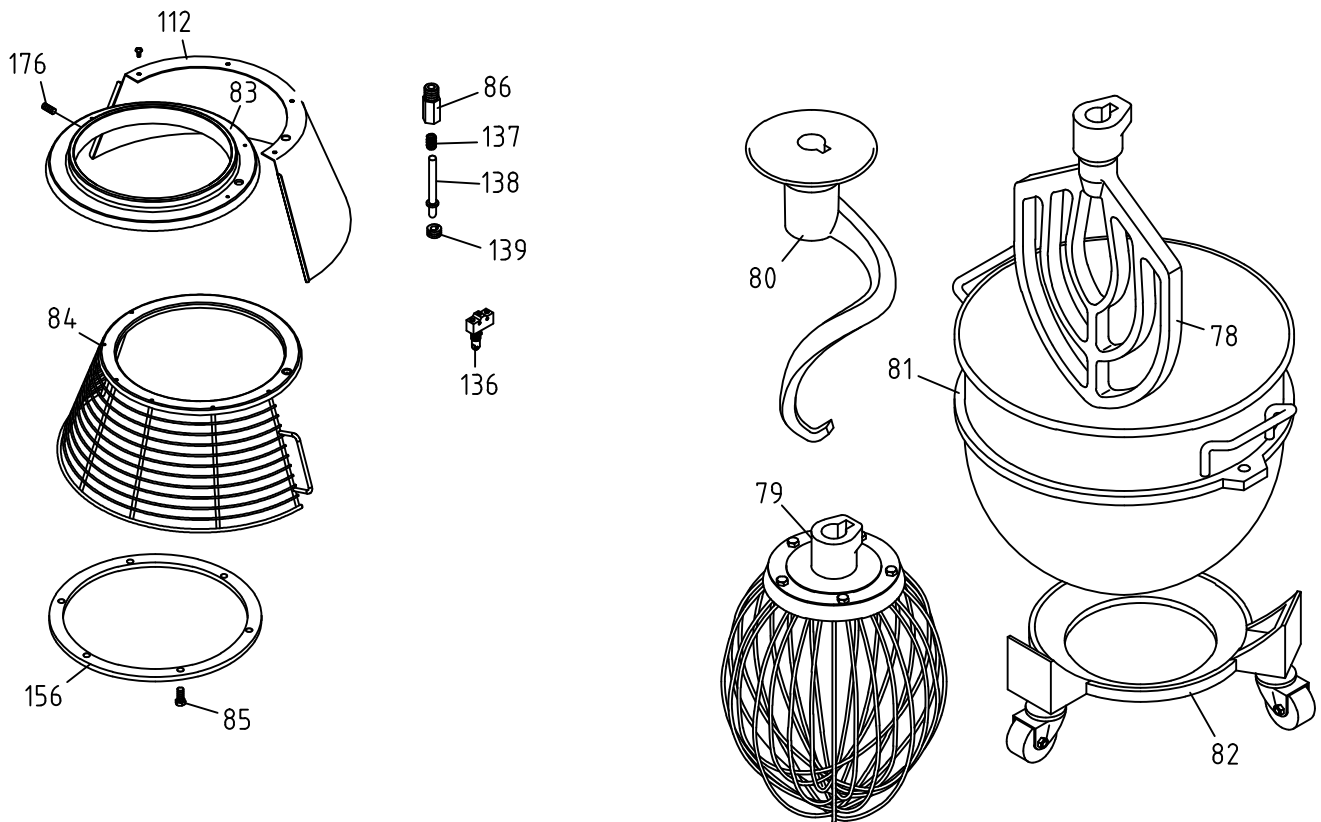


Pic #	Part #	Description
5	11091S-01-004B	GEAR HOUSE COVER
6	11091S-01-006	Support of Top Cover
55	BM60-09-002	Column
56	11091-09-003	Slideway
57	11091-09-004	Base
58	11091-09-005	REAR COVER-COLUMN
59	11091-10-001A	Bowl Clamp-LEFT
60	11091-10-001B	Bowl Clamp-RIGHT
61	11091-10-003	BOWL SUPPORT
62	11091-10-004	Bowl Retainer
64	11091-10-006	Apron
126	712-050	Screw Plug
141	SPP-10*50	Spring Pin
143	SPP-8*50	Spring Pin
153	S-1/4*3/8	Bolt
157	S-C-1/2*1-1/4	Cap Screw
158	S-C-1/2*2-1/4	Cap Screw
163	S-C-3/8*1-1/2	Cap Screw
164	S-C-1/4*3/4	Cap Screw
167	S+R3/16*3/8	Mac. Screw
169	S+R3/16*1/4	Mac. Screw
172	SW-1/2	Spring Washer
172	SW-1/2	Spring Washer
176	NUT-5/16*18NC	Nut
211	AXM60-09-016	SEAT OF CONTACTOR

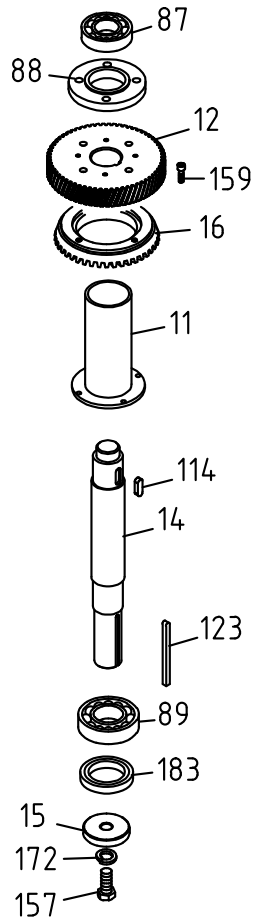




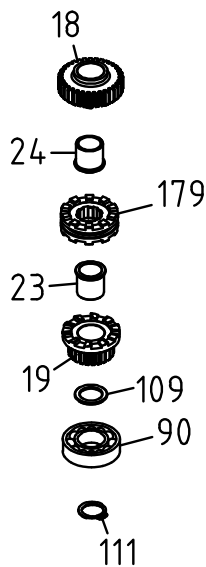
	Description or Name	Part No.	Qty
1	BOWL CLAMP(LEFT)	11091-10-001A	2
1	BOWL CLAMP(RIGHT)	11091-10-001B	2
2	NUT 5/8*11NC	NUT-5/8*11NC	4
3	BOWL SUPPORT	11091-10-003	1
4	BOWL RETAINER	11091-10-004	1
5	BOWL LOCATING PIN	11091-10-005	2
6	APRON	11091-10-006	1
7	MACH SCREW 3/16*1/4	S+R3/16*1/4	4
8	CAP SCREW 1/4*3/4	S-C-1/4*3/4	2
9	NUT 1/2*12NC	NUT-1/2*12NC	2
10	SPRING WASHER 1/2"	SW-1/2	2



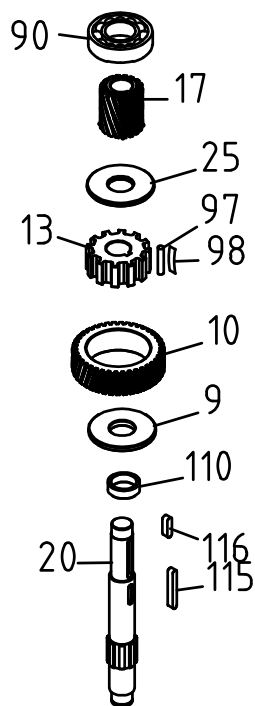
Pic #	Part #	Description
78	11091-12-001	AL Flat Beater
79	11091-12-002	AL Wire Whip
80	11091-12-003	AL Dough Hook
81	11091-12-008	BOWL
82	11091-12-011	BOWL TRUCK
83	GM60-13-001A	HEAD RING-SAFETY GUARD
84	GM60-13-002A-01A	MOVING COVER-WIRE
85	11091-13-003A	FIXED RING
86	1109P-13-006	Shaft Seat-Mirco Switch
112	GM60-13-004	Fixed Sheet
136	GM07-07-003A	Control Panel with Box
137	11091-13-012	Compression Spring
138	1109P-13-007	Control Shaft-Micro Switch
139	1109P-13-008	Screw-Shaft Set
156	11091-13-003ASUS	Fixed Ring
176	NUT-5/16*18NC	Nut



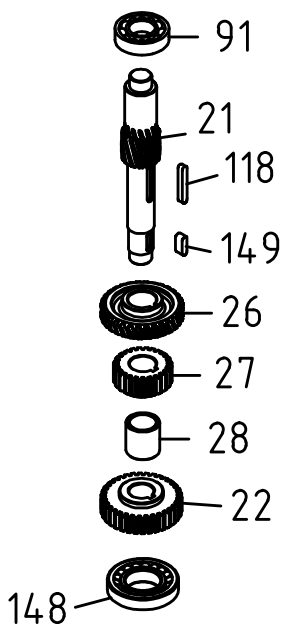
Pic #	Part #	Description
11	11091S-02-004B	CHIMNEY
12	11091S-02-003B	Gear (64T)
14	11091S-02-001B	Planetary Shaft
15	11091-02-008	Flat Washer
16	11093-02-006	Gear (43T)
87	BR-6207Z	BALL BEARING
88	BM60B-02-002B	Spacer Cover
89	BR-6209Z	BALL BEARING
114	KRR-08*10*30	Key
123	KR-1/4*1/4*95	Key
157	S-C-1/2*1-1/4	Cap Screw
159	S-C-1/4*1	Cap Screw
172	SW-1/2	Spring Washer
183	OS-TC45*65*10	Oil Seal



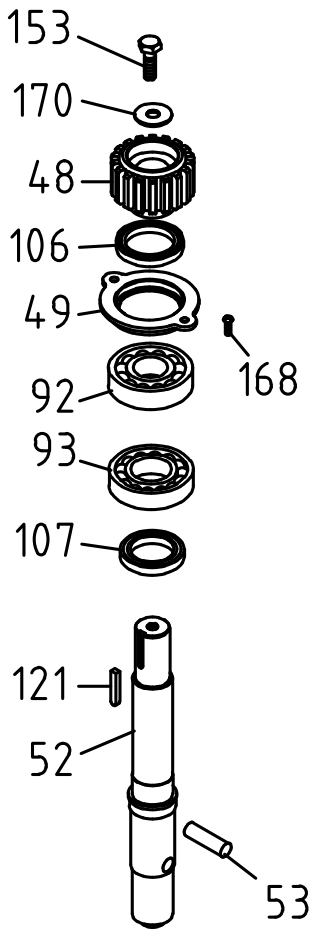
Pic #	Part #	Description
18	11091S-03-008B	Gear(32T)
19	11091S-03-009B	Gear (22T)
23	11091S-03-012B	Cooper Spacer for 1109S-03-009B
24	11091S-03-007B	Cooper Spacer for 1109S-03-008B
90	BR-6205Z	BALL BEARING
109	1109S-03-012B	Spacer
111	CR-S25	O-ring
179	11091-03-002	Clutch



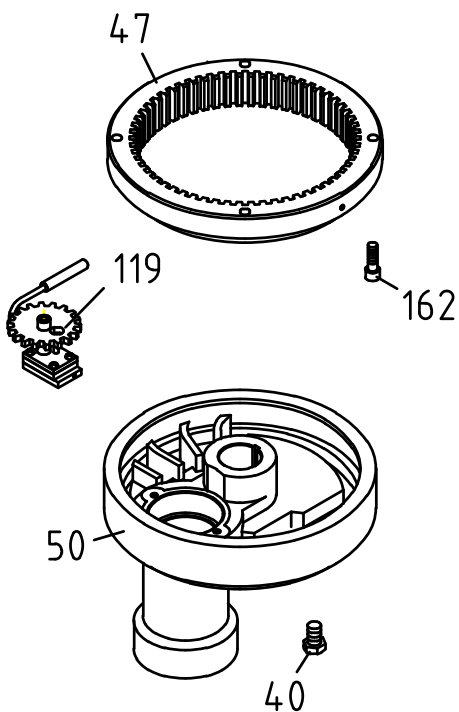
Pic #	Part #	Description
9	11091S-03-004B	SPACER
10	11091S-03-005B	Gear (39T)
13	11091S-03-014B	Sleeve Drive
17	11091S-03-002B	Gear (17T)
20	11091S-03-001B	Shaft
25	11091S-03-003B	SPACER
90	BR-6205Z	BALL BEARING
97	11031-02-013	Pin
98	11031-02-012	Spring Pin
110	1109S-03-006B	Spacer
115	KRR-7*7*55	Key
116	KRR-8*8*28	Key



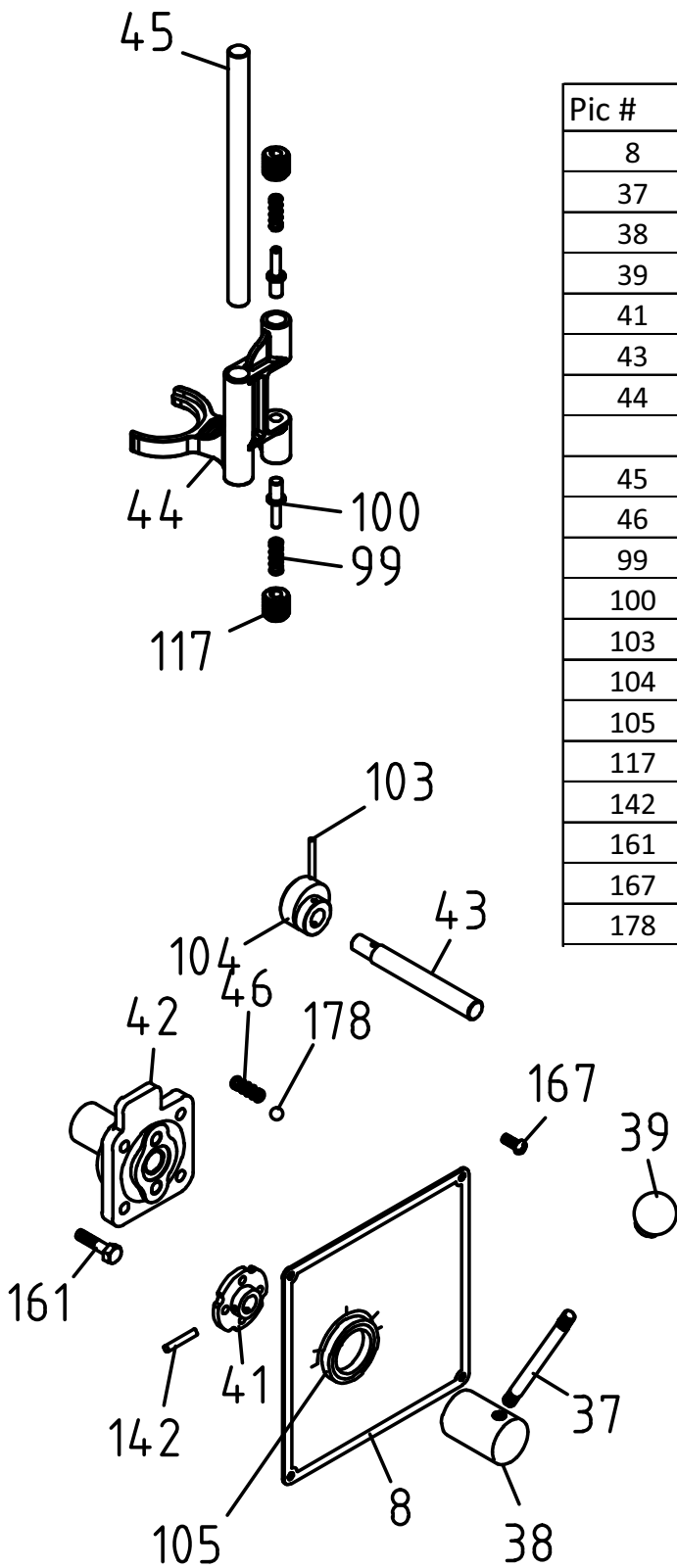
Pic #	Part #	Description
21	11091S-04-001B	Worm Gear Shaft
22	11091S-04-004B	Gear (34T)
26	11091S-04-006B	Worm Gear
27	11091S-04-002B	Gear (24 T)
28	11091S-04-003B	Spacer
91	BR-6205Z	BALL BEARING
118	KRR-8*8*50	Key
148	BR-30205	Roller Bearing
149	KRR-8*8*25	Key



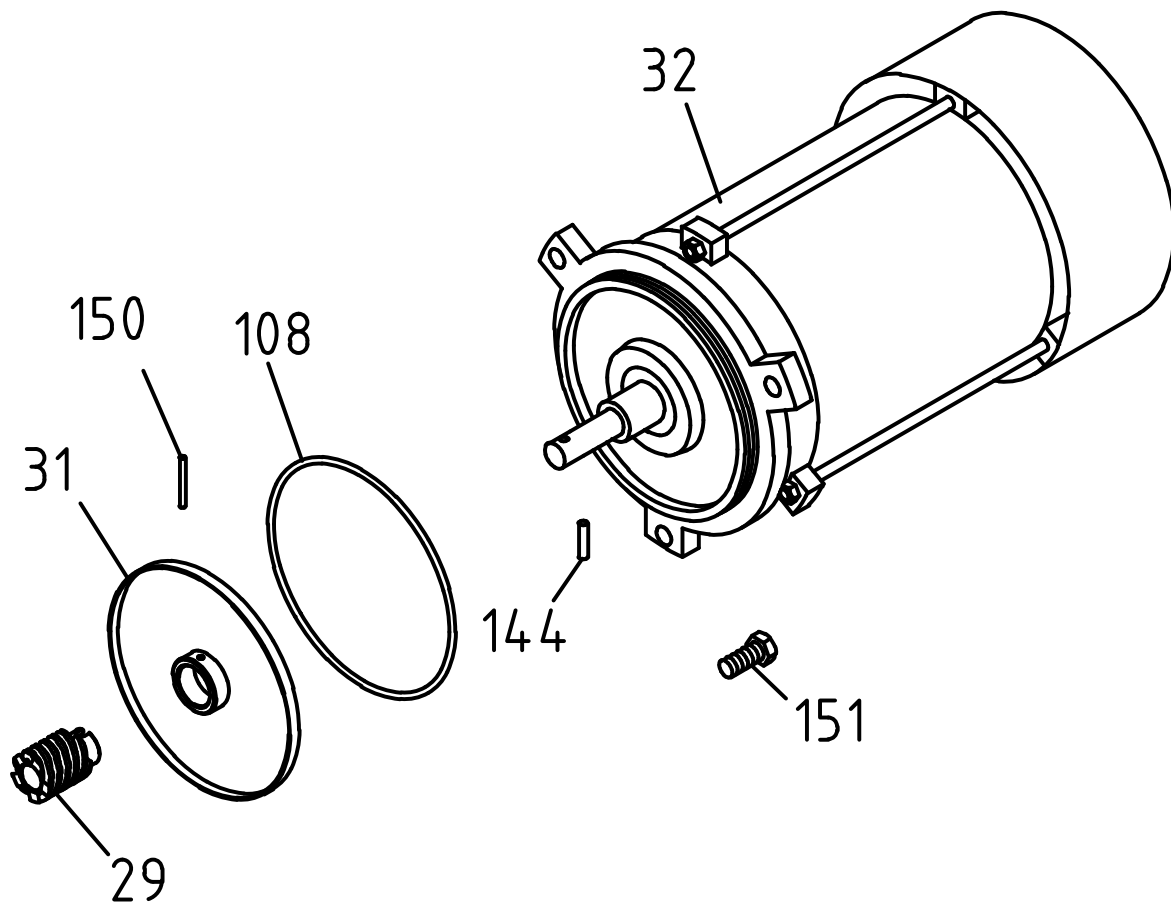
Pic #	Part #	Description
48	11091S-08-003	PINION GEAR
49	11091-08-004	Oil Seal Seat
52	11091-08-008	AGITATOR SHAFT
53	11091-08-009	TAPERED PIN
92	BR-6306Z	BALL BEARING
93	BR-6207Z	BALL BEARING
106	OS-TC43*58*08	Oil Seal
107	OS-TC40*72*10	Oil Seal
121	KR-6*6*35	Key
153	S-1/4*3/8	Bolt
170	WB-3/8	Flat Washer



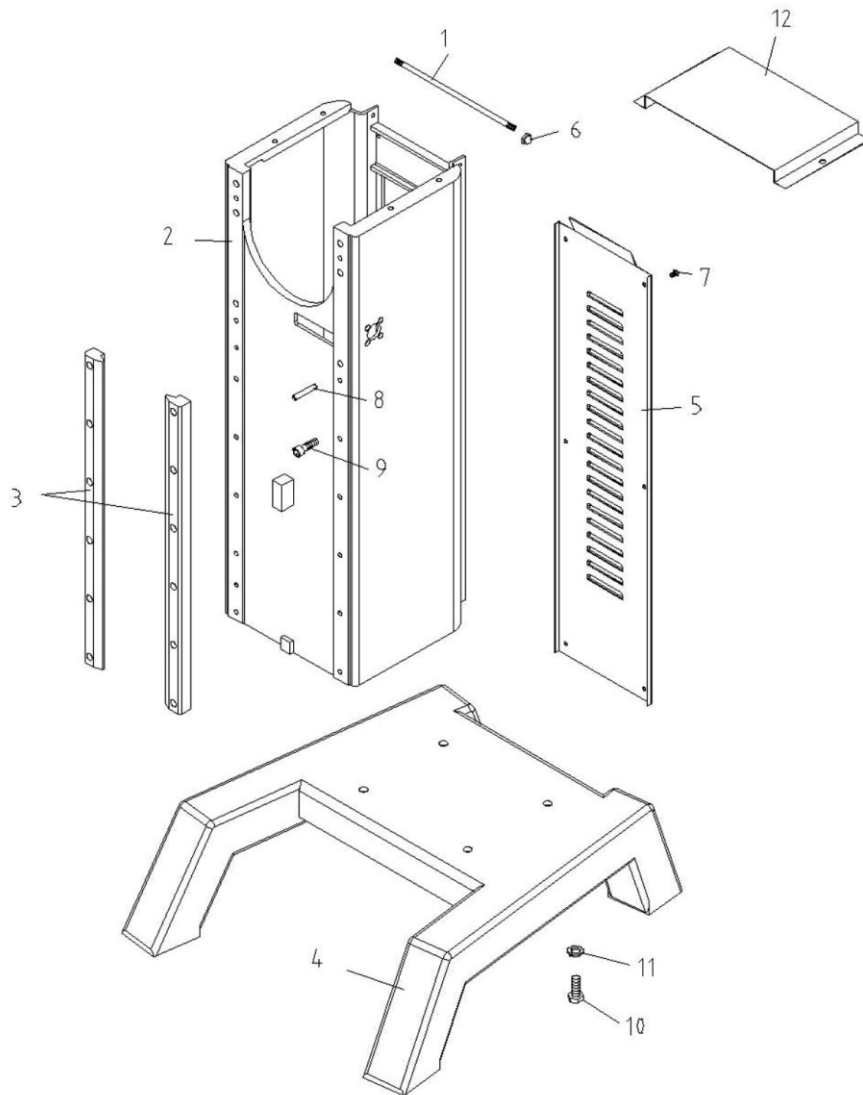
Pic #	Part #	Description
40	S-1/2*3/4	BOLT
47	11091S-08-001	INTERNAL GEAR
50	11091-08-005	PLANETARY HEAD
119	BM60-08-000A	Oil Pump
162	S-C-3/8*1-1/4	Cap Screw



Pic #	Part #	Description
8	11091S-01-00E	Control Panel Shifting
37	11091-07-001	Handle
38	11092-07-007	Handle Seat
39	11091-07-012	Handle Knob
41	11092-07-002	Shifter Hub
43	11091S-07-003B	SHIFTING SHAFT GEAR
44	11091S-07-004B	SHIFTING FORK
45	11091S-07-005B	FORK SHAFT
46	11031-07-011	Compression Spring
99	11091S-07-010B	Spring of Shift Fork
100	11091S-07-009B	Plug of Shift Fork
103	SPP-4*16	Spring Pin
104	11091S-07-008B	SHIFTING CAM
105	OS-TC38*50*07	Oil Seal
117	11091-07-011	Set Screw
142	SPP-5*28	Spring Pin
161	S-C-5/16*5/8	Cap Screw
167	S+R3/16*3/8	Mac. Screw
178	SB-8	Steel Ball

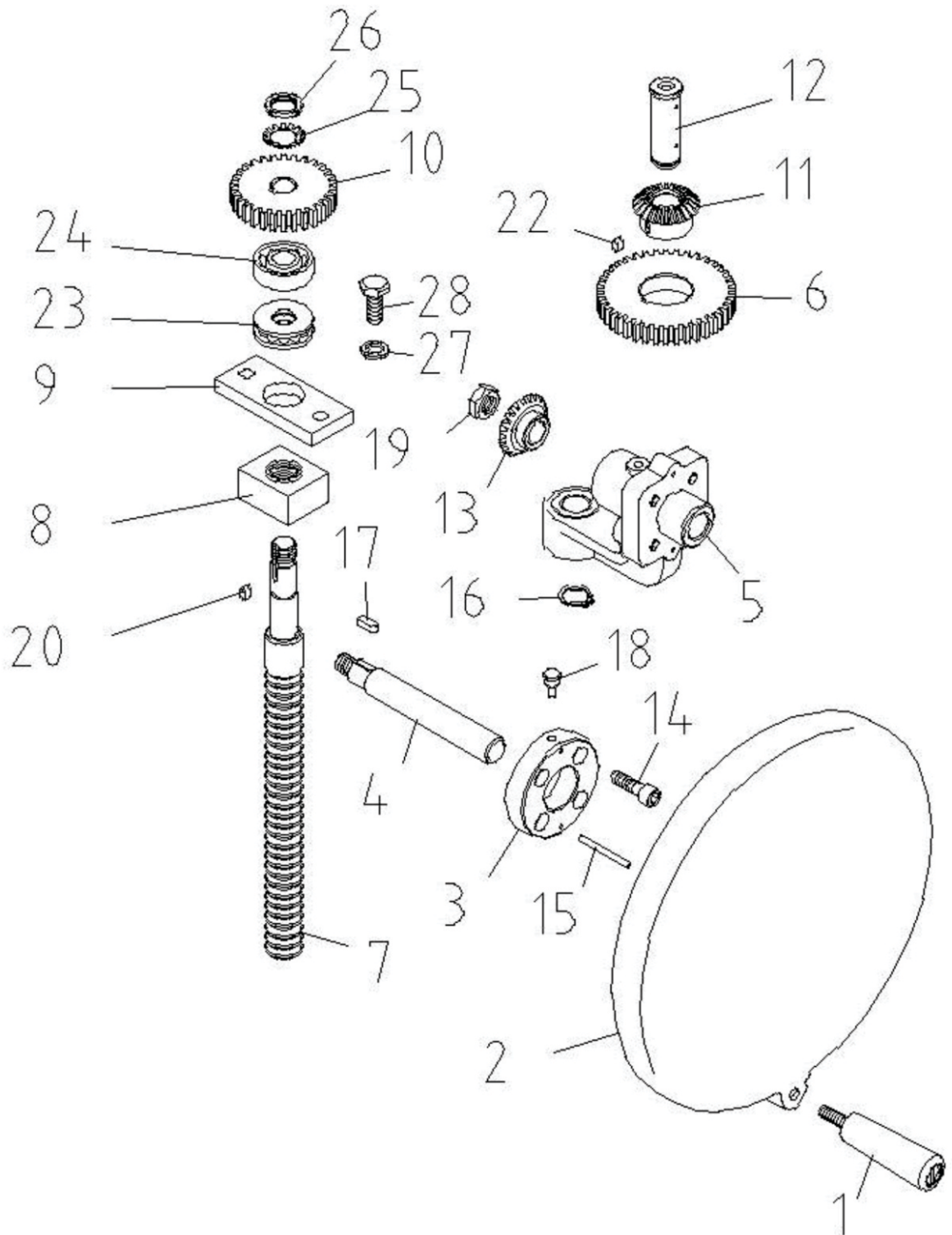


Pic #	Part #	Description
31	11091-05-003	Flinger & Hub
29	11091-05-001	WORM
150	TP-4*45	TAPERED PIN
151	S-1/2*1-1/2	Bolt
108	OR-P175	O-ring
144	SPP-6*25	Spring Pin
32	11091-05-004/220/60V	Motor 220V/60HZ/1PH
32-3	11091-05-004	Motor 220V/60HZ/3PH
	11091-05-004coun	run capacitor
	11091-05-004co	Start Capacitor



	Description or Name	Part No.	Qty
1	HINGE SCREW	11091-09-001	1
2	COLUMN	BM60-09-002	1
3	SLIDEWAY	11091-09-003	2
4	BASE	11091S-09-004C	1
5	COLUMN COVER	11091-09-005	1
6	NUT 5/16*18NC	NUT-5/16*18NC	2
7	BOLT 1/4*3/8	S-1/4*3/8	8
8	SPRING PIN 8*50	SPP-8*50	4
9	CAP SCREW 3/8*1/2	S-C-3/8*1-1/2	12
10	BOLT 5/8*3	S-5/8*3	4
11	SPRING WASHER 5/8"	SW-5/8	4
12	APRON	AXM60-09-016	1





	Description or Name	Part No.	Qty
1	WHEEL HANDLE	11091-11-001	1
2	LIFTING WHEEL	11091-11-002	1
3	CLAMPING ARM	11091-11-003	1
4	WHEEL HANDLE	11091-11-004	1
5	WHEEL BRACKET	11091-11-005	1
6	LIFTING GEAR (41T)	11091-11-006	1
7	LIFTING SCREW	BM60-11-007	1
8	LIFTING NUT	11091-11-008	1
9	RETAINER	11091-11-009	1
10	GEAR (31T)	11091-11-010	1
11	BEVEL GEAR (23T) LIFTING	11091-11-011	1
12	SHAFT	11091-11-012	1
13	BEVEL GEAR (23T) WHEEL	11091-11-013	1
14	CAP SCREW 5/16*1/2	S-C-5/16*1-1/2	4
15	TAPERED PIN 4*32	TP-4*32	2
16	G-TYPE SNAP RING S19	STW-S19	1
17	KEY 5*5*15	KR-5*5*15	1
18	OIL CUP	( 丑 ) OIL-BELL-1/8*3/4	1
19	NUT 1/2*12NC	NUT-1/2*12NC	1
20	KEY 5*5*10	KRR-5*5*10	1
21	FLAT WASHER	WB-3/4	1
22	KEY 5*5*13	KRR-5*5*13	1
23	BALL BEARING 2903	BR-2903	1
24	BALL BEARING 6203	BR-6203	1
25	LOCK WASHER 17	M17	1
26	LOCK NUT	MN17	1
27	SPRING WASHER 3/8"	SW-3/8	2
28	BOLT 3/8*1	S-3/8*1	2



## Scheduled maintenance

**NOTE:** All maintenance work should be done only after unit has been disconnected from electrical power and grounding.

Never use a metal or stiff brush to clean the mixer. Never clean the mixer with water hose or any fluid under pressure.

Do not run the mixer for any extended period of time.

### Daily:

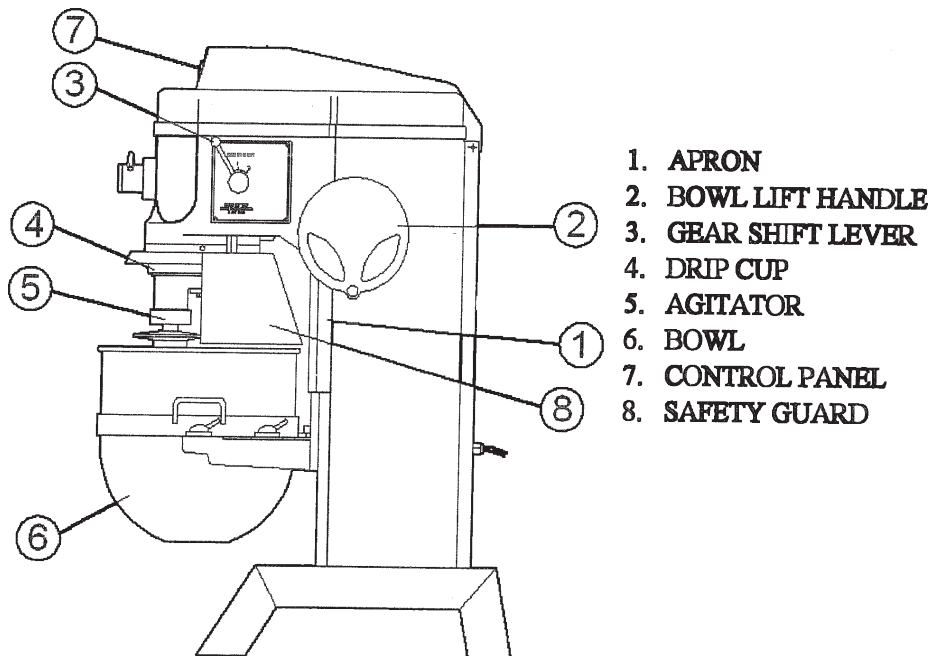
The mixer should be cleaned daily. Bowl and agitators should be removed from the mixer and cleaned in a sink with soapy warm water.

### Weekly:

The transmission case and planetary mechanism should be inspected weekly for leak and damages. Should it become necessary to repack the ball bearings, an authorized service technician or the manufacturer should be contacted. Use of unproven grease or oil (lubricant) may lead to damage and void the warranty.

### Monthly:

Verify bowl lift track and mechanism. The bowl lift track should be lubricated semiannually, or more often under heavy usage. Disconnect the unit from power supply before removing the top housing or apron. The drip cup should be inspected periodically for moisture or lubricant dripping. Remove the cup and wipe it with a soft cloth. Verify oil level inside the gear box.



## Lubrication

The mixer comes with grease-packed ball bearing that do not require regular lubrication. When it becomes necessary to repack them, contact your local service company or MVP group Corp.

The polished drip cup protects against lubricant seeping out of the planetary into the bowl. The drip cup should be wiped clean monthly and inspected for excessive leakage. The drip cup may be removed by pulling it down.

The bowl lift track and mechanism requires periodic lubrication with a small quantity of high-quality mineral oil. This lubricant can be applied with a cotton swab or by fingertip.

## CLEANING

Never use a metal or stiff brush to clean mixer. Never clean the mixer with a water hose or any fluid under pressure.

The mixer should be thoroughly cleaned daily. It should be washed with a clean damp cloth.

Bowl and agitators should be removed from the mixer and cleaned in a sink.

The transmission case and planetary mechanism should be inspected weekly for leaks, damage, etc.



MAINTENANCE

		DAILY	WEEKLY	MONTHLY
CLEANING	BOWL			
	AGITATORS			
	MIXER			
VISUAL INSPECTION	PLANETARY			
	BOWL LIFT			
	BOWL GUARD			
	TOUCH PAD			
	GEAR BOX			
LUBRICATING	BOWL LIFT TRACK			

**WHAT LUBRICANT TO USE**

Never use vegetable oil. Vegetable oil may look like a lubricant but it does not work as a lubricant. It will congeal, gum up and solidify, acting as a glue. If vegetable oil has been used, the entire track system must be cleaned and grease with proper lubricant. A mineral oil will do. There are no specific brands. It is easily found at the hardware store or pharmacy. See below for lubricants used inside the unit.

**GREASE AND OIL**

For AX-M60 (AXIS M-60 s/n: 07040051, machine made before May 30, 2008) use grease in the transmission & planetary head.

But since May 30, 2008, the AXIS M-60 all use oil.

SHELL DARINA Ep0 (GADUS) should be applied to the gear-box of mixers ranging from 7QT to

40QT, while SHELL SPIRAX S2 A is for either gear-box or planetary head for only 60QT and 80QT.

	Grease and Oil in Gear-box			Grease and Oil in planetary head		
			Grease type			Grease type
7 QT.	0.25 lit.	8.45 us fl oz	S2 V220 0	0.055 lit.	1.86 us fl oz	JX-3-5G
12 QT	0.5 lit.	16.90 us fl oz	S2 V220 0	0.06 lit.	2.03 us fl oz	JX-3-5G
20 QT.	1 lit.	33.81 us fl oz	S2 V220 0	0.065 lit.	2.20 us fl oz	JX-3-5G
30 QT.	1.2 lit.	40.57 us fl oz	S2 V220 0	0.08 lit.	2.70 us fl oz	JX-3-5G
40 QT.	2.4 lit.	81.15 us fl oz	S2 V220 0	0.1 lit.	3.38 us fl oz	JX-3-5G
60 QT.	4 lit.	135.25 us fl oz	HD85W/140	0.3 lit.	10.14 us fl oz	HD85W/140
80 QT.	4 lit.	135.25 us fl oz	HD85W/140	0.3 lit.	10.14 us fl oz	HD85W/140

## GREASE AND OIL


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## GREASE



Technical Data Sheet

Previous Name: Shell Alvania Grease EP(LF) 0

### Shell Gadus S2 V220 0

*High Performance Multipurpose Extreme Pressure Grease*

Shell Gadus S2 V220 greases are high quality multipurpose, extreme-pressure greases based on a blend of high viscosity index mineral oils and a lithium hydroxystreate soap thickener and contain extreme-pressure and other proven additives to enhance their performance in a wide range of applications.

Shell Gadus S2 V220 greases are designed for multipurpose grease lubrication of rolling element and plain bearings as well as hinges and sliding surfaces such as those found in throughout most industrial and transport sectors.

- *Reliable Protection*
- *Multi-purpose*
- *Lithium*

## OIL

### SHELL SPIRAX® HD

Heavy-duty gear oil for automotive differentials and manual transmissions

Product Description

Shell Spirax®

HD oils are high performance multigrade extreme-pressure, multipurpose gear lubricants. They are suitable for heavy-duty truck and automotive differentials, manual transmissions and oil lubricated wheel bearings. drive-train gears of heavy-duty automotive, trucking and off-road equipment operated under high-speed/shock load, high-speed/low torque and low-speed/high torque conditions. They meet the requirements of API GL-5 and MIL-PRF-2105E and are available in two SAE viscosity grades: 80W-90 and 85W-140.



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