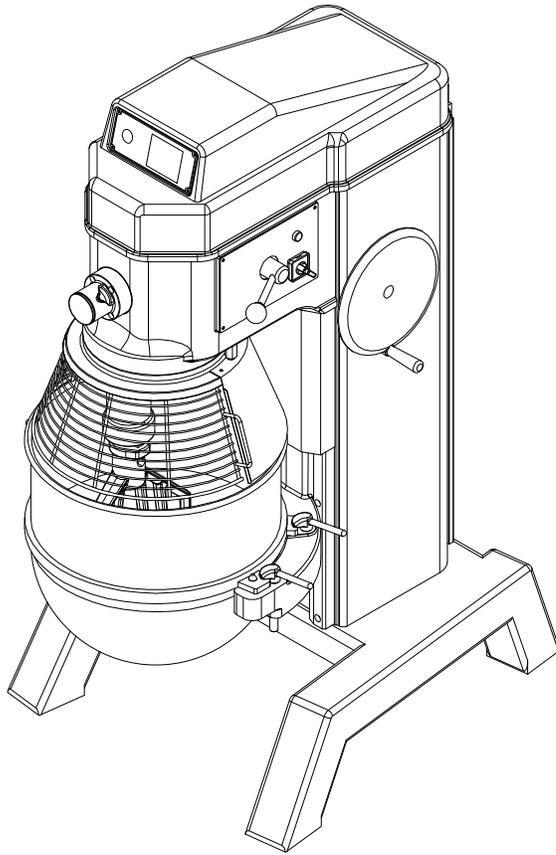




**AX-M60P**  
**60 QUART PIZZA MIXER**



| Model   | Capacity | Motor    | Amps | Speeds   | Electrical        |
|---------|----------|----------|------|----------|-------------------|
| AX-M60P | 60 Quart | 2 Speeds | 18   | 72 / 118 | 220v / 60hz / 1ph |
|         |          |          | 6.2  |          | 220v / 60hz / 3ph |

# TECHNICAL MANUAL



# INSTALLATION, OPERATION AND CARE OF MODEL AX-M60P

## 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 2 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.

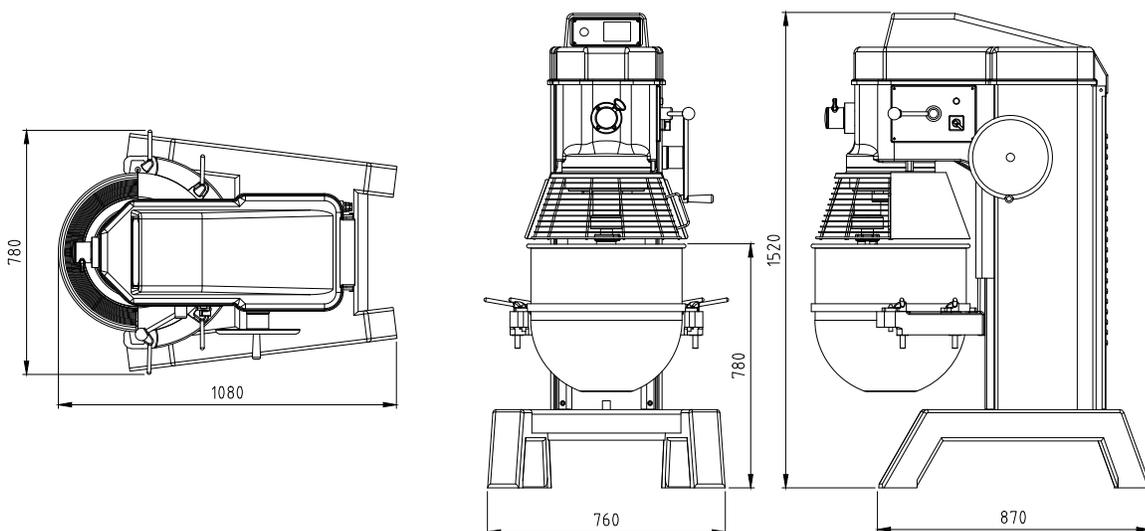
## INSTALLATION

### 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

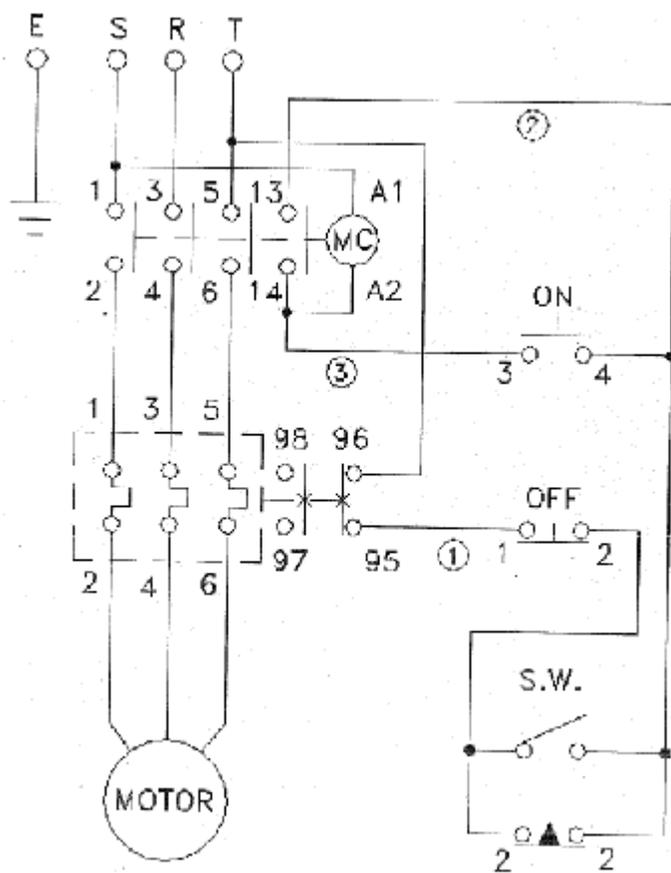
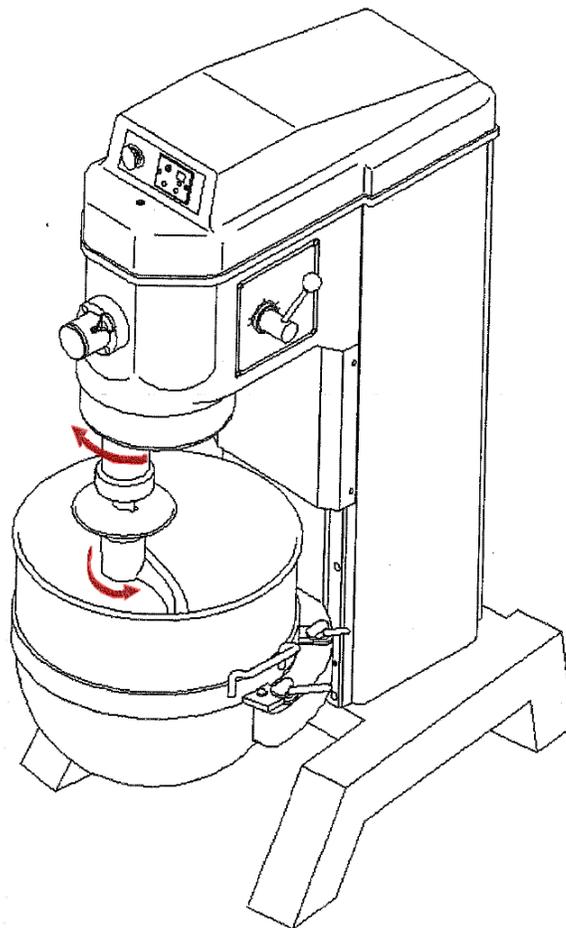
Place the Mixer in a convenient location, and allow working space on the hand-wheel or power bowl lift switch side. All maintenance can be handled from this side, the top and the front. Set the mixer level and use shims if the floor is uneven, the machined edge on the top of the transmission case makes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



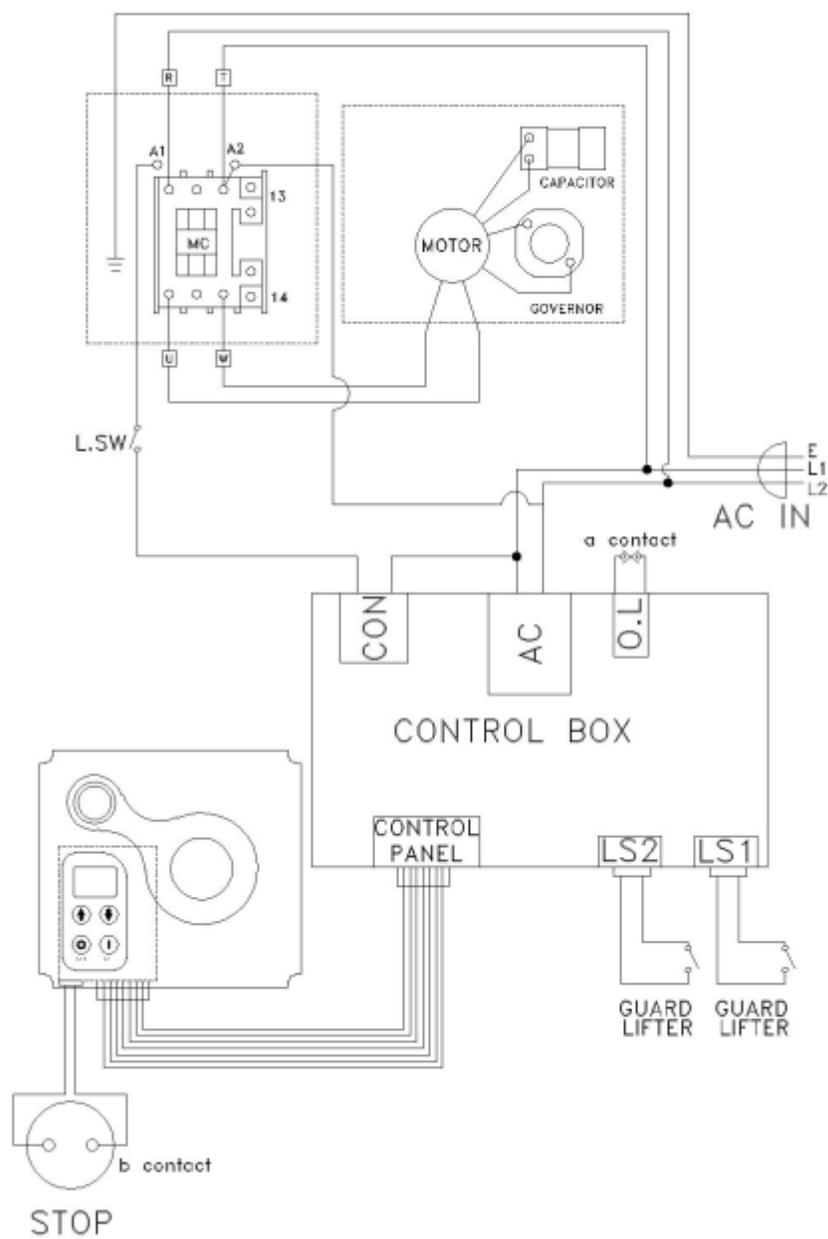
## Electrical Connections (Cord Connected Mixers)

- 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.**



Revision Date: AUT- 05, 2015  
 AXM60-P



## 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.

### 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.**

### 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.

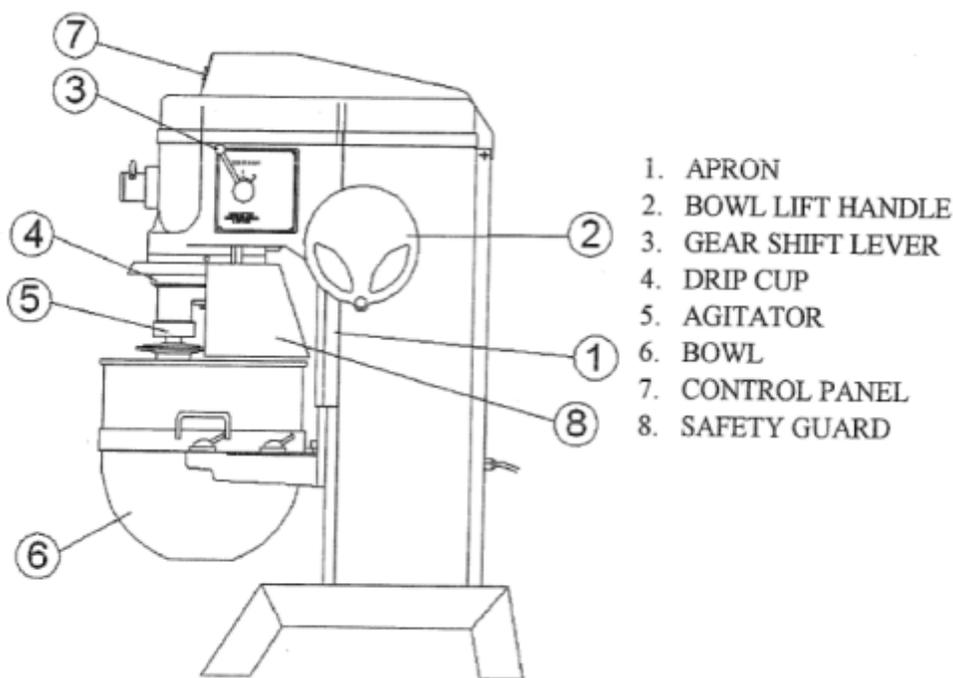
The bowl must be installed before the agitator. To install the bowl, fully lower the bowl support. Position the bowl so the alignment bracket on the back of the bowl is in the bowl retainer and the alignment pins on the front of the bowl support fit in the holes on the sides of the bowl.

### ATTACHMENTS

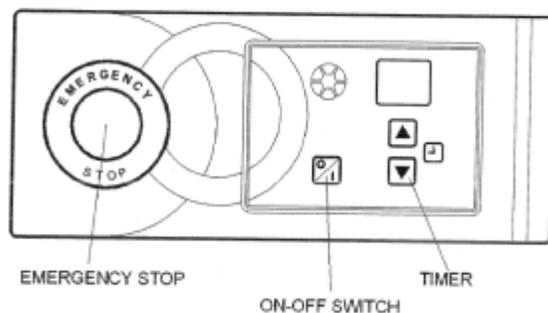
To install an attachment, loosen the thumbscrew on the attachment hub and remove the plug. Insert the attachment into the attachment hub making certain that the square shank of the attachment is in the square driver of the mixer. Secure the attachment by tightening the thumbscrew.

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.



CONTROL PANEL



EMERGENCY STOP

ON-OFF SWITCH

TIMER

## MAINTENANCE

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

## 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.

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. should it become necessary to repack the ball bearings; an authorized service technician or the manufacturer should be contacted. Use of unapproved grease or lubricants may lead to damage and void the unit's warranty.

The **bowl lift track** should be lubricated semi-annually, or more often under heavy usage. Disconnect the unit from power supply before removing the top housing or apron. The **drip cup** (Fig. 1)? should be inspected periodically for moisture or lubricant dripping. Remove the cup and wipe it with a soft cloth.

DO NOT use a hose to clean the mixer – it should be washed with a clean damp cloth.



## 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.

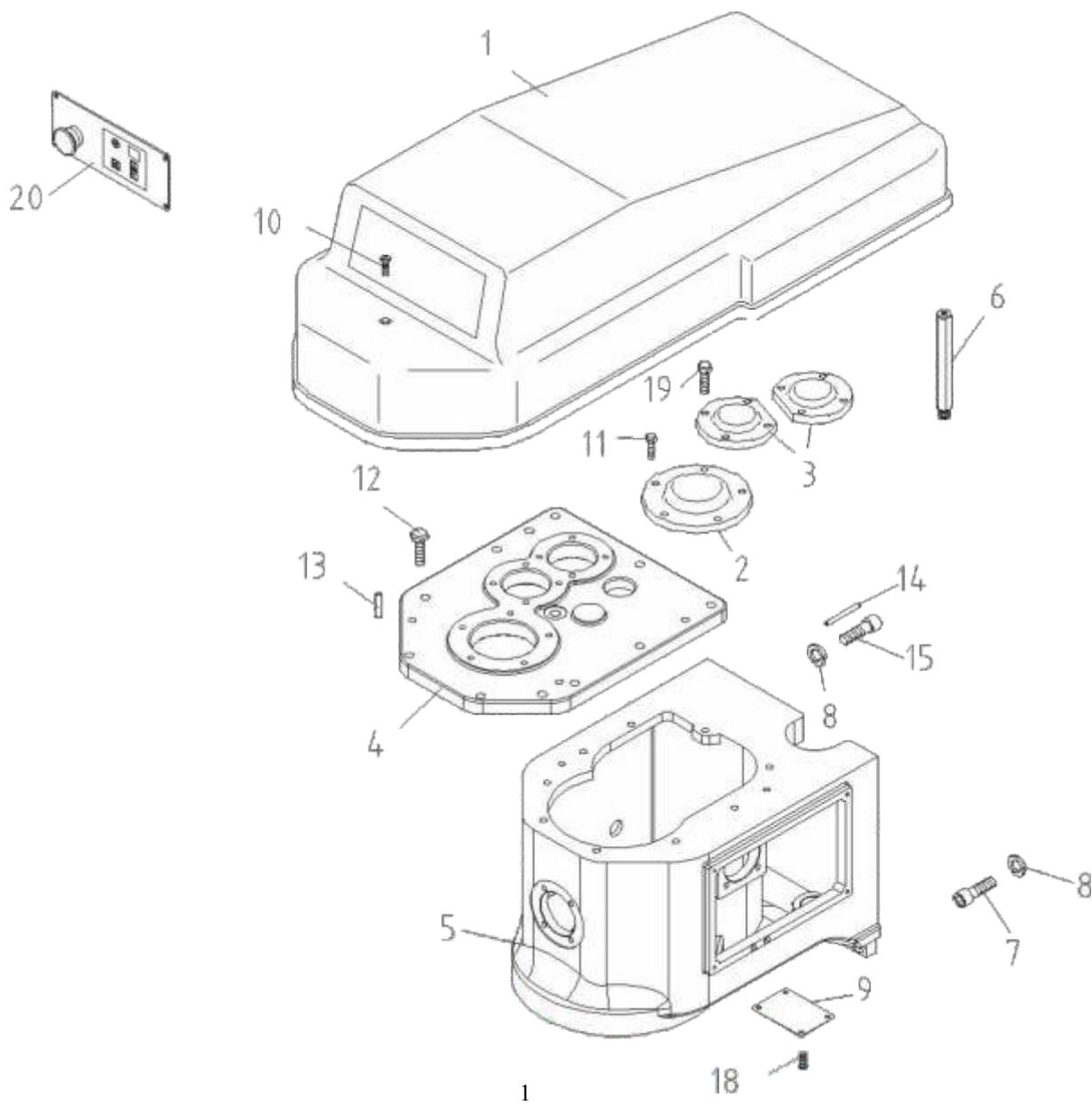
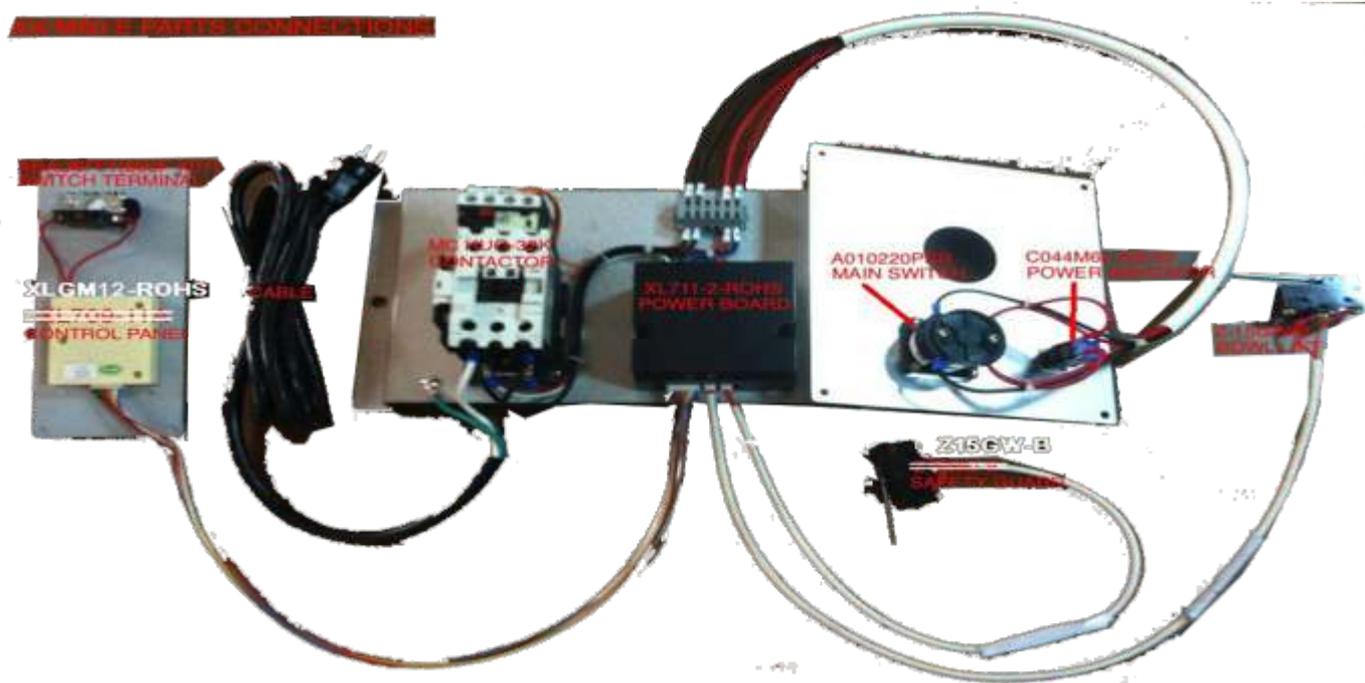
Example: Calculate the Absorption Ratio of a mixture containing 10 lbs. of flour and 5 lbs. of water.

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

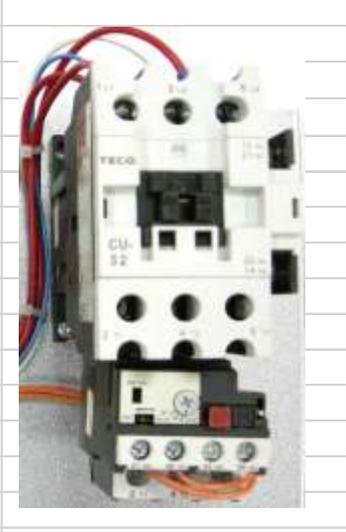
| CAPACITY (QTS. LIQUID)                            |             | 60 qt.    |
|---|-------------|-----------|
| Egg Whites  | Wire Whip   | 2 qt.     |
| Mashed Potatoes                                   | Flat Beater | 40 lbs.   |
| Mayonnaise (Qts. Oil)                             | Flat Beater | 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.*  |

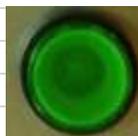
\* 1<sup>st</sup> speed \*\* 2<sup>nd</sup> Speed

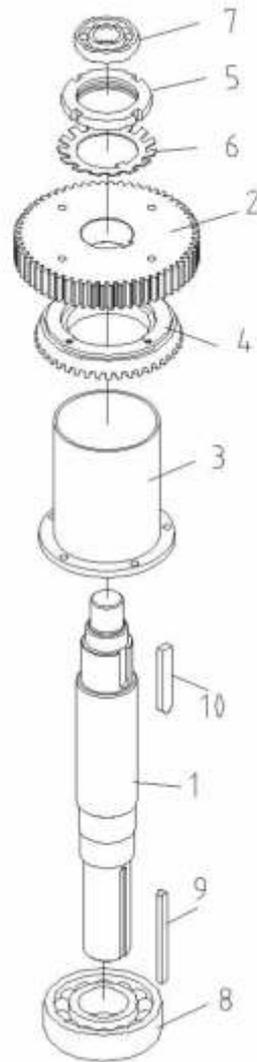
\* = If high gluten flour is used, reduce above dough batch size by



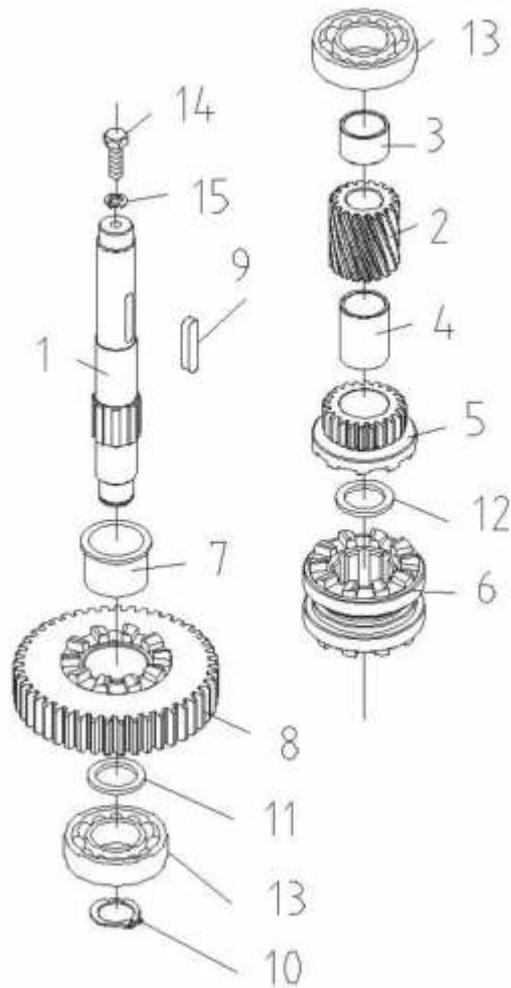
|    | Description or Name         | Parts No.     | Qty |
|----|-----------------------------|---------------|-----|
| 1  | TOP COVER                   | 11091-01-001A | 1   |
| 2  | RETAINER-MAIN SHAFT         | 1109S-01-002  | 1   |
| 3  | RETAINER-TRANSMISSION SHAFT | 1109S-01-003  | 2   |
| 4  | 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   |

| NO. | PICTURE   | PARTS NUMBER    | PARTS NAME             |
|-----|---|-----------------|------------------------|
| 1   |    | XL709-11A       | CONTROL PANEL W/BOX    |
| 2   |    | D11001R         | STICKER OF PANEL       |
| 3   |   | XL711-2-ROHS    | Power Board W/ BOX     |
| 4   |  | MC HUO-11AK/2HP | CONTACTOR-220V-3 PHASE |
| 5   |  | Z-15GQ-B        | LIMIT SWITCH FOR GUARD |

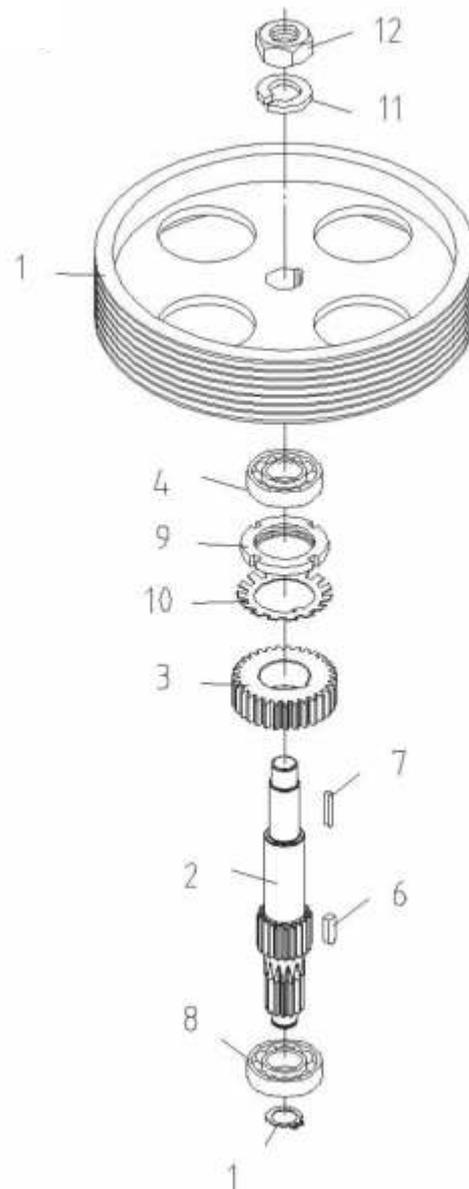
|    |   |                          |                             |
|----|---|--------------------------|-----------------------------|
| 6  |    | Z-15GW-B                 | LIMIT SWITCH FOR BOWL LIFT  |
| 7  |    | CABLE-12-3C-NEMA6-15P-UL | POWER CABLE W/PLUG          |
| 8  |    | ABESMT44                 | EMERGENCY STOP (RED BUTTON) |
| 9  |    | ABMS800M                 | LOCK NUT                    |
| 10 |  | ABAU8F01<br>(800F-X01)   | SWITCH TERMINAL             |
| 11 |  | C044M6L-AS-02            | POWER INDICATOR             |
| 12 |  | A010220PSR               | MAIN SWITCH                 |



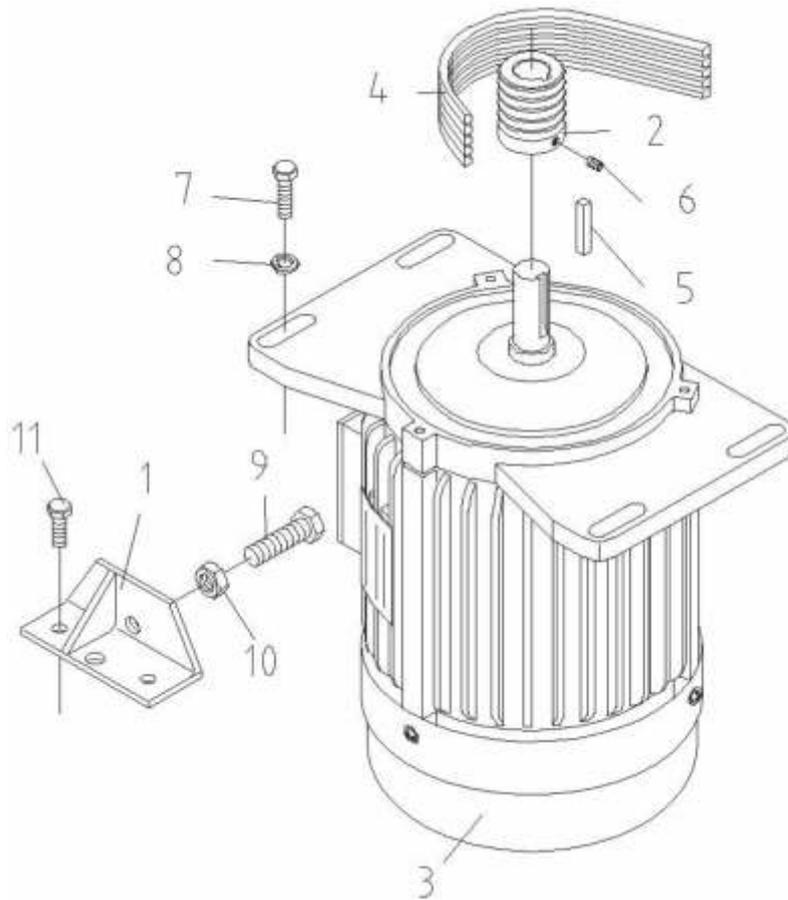
|    | Description or Name   | Part No.       | Qty |
|----|-----------------------|----------------|-----|
| 1  | AGITATING SHAFT       | 11100B-02-001B | 1   |
| 2  | GEAR(OT)              | 11100B-02-003  | 1   |
| 3  | Resistance oil casing | 11100B-02-004  | 1   |
| 4  | Bevel gear            | 11193-02-006   | 1   |
| 4  | WASHER                | 11193-02-006A  | 1   |
| 5  | LOCK WASHER           | M55            | 1   |
| 6  | LOCK NUT              | MN55           | 1   |
| 7  | BALL BEARING 6207Z    | BR-6207        | 1   |
| 8  | BALL BEARING 6010Z    | BR-6010        | 2   |
| 9  | KEY                   | KR-1/4*1/4*100 | 1   |
| 10 | KEY                   | KR-09*14*52    | 1   |



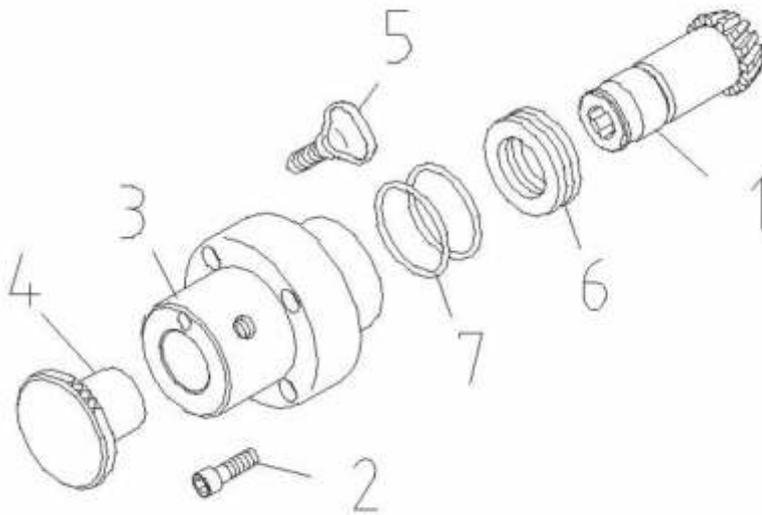
|    | Description or Name   | Part No.      | Qty |
|----|-----------------------|---------------|-----|
| 1  | GEAR SHAFT            | 11100B-03-001 | 1   |
| 2  | GEAR(6T)              | 11100B-03-002 | 1   |
| 3  | WASHER                | 11100B-03-003 | 1   |
| 4  | CLUTCH COPPER BUSHING | 11100B-03-004 | 1   |
| 5  | GEAR(9T)              | 11100B-03-005 | 1   |
| 6  | SHIFTING CLUTCH       | 11091-03-002  | 1   |
| 7  | CLUTCH COPPER BUSHING | 11100B-03-007 | 1   |
| 8  | GEAR(2T)              | 11100B-03-008 | 1   |
| 9  | KEY                   | KRR-08*08*43  | 1   |
| 10 | G TYPE SNAP RING S25  | STW-S25       | 1   |
| 11 | WASHER                | 1100B-03-011  | 1   |
| 12 | WASHER                | 11100B-03-012 | 1   |
| 13 | BALL BEARING 6205     | BR-6205       | 1   |
| 14 | BOLT 3/8*1/2          | S-3/8*1/2     | 1   |
| 15 | SPRING WASHER         | SW3/8         | 1   |



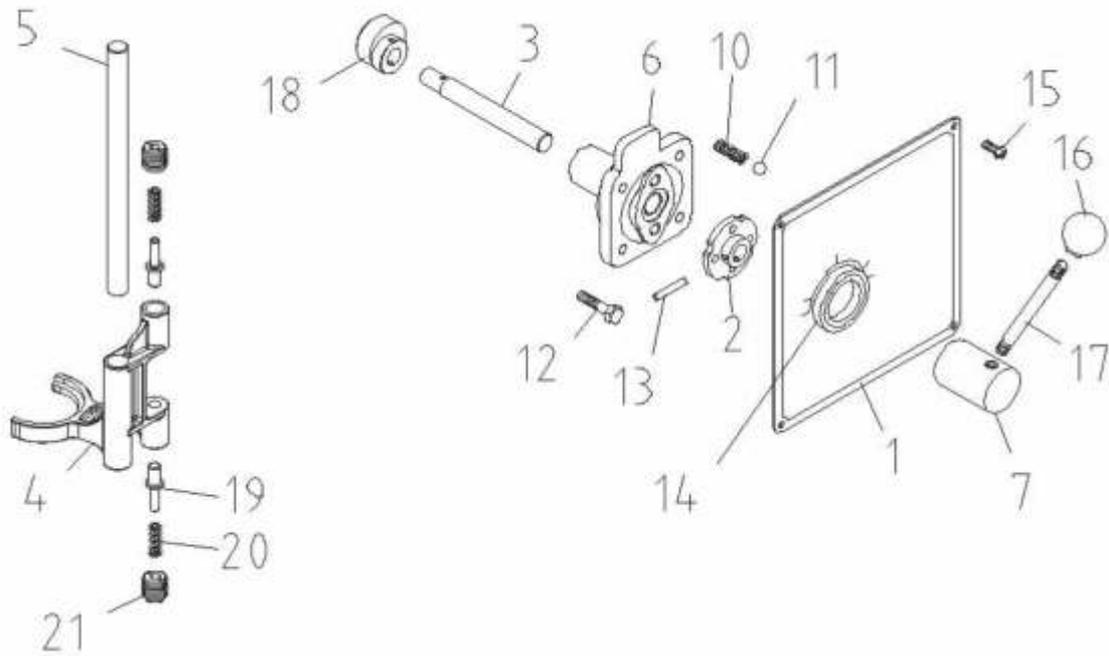
|    | Description or Name  | Part No.      | Qty |
|----|----------------------|---------------|-----|
| 1  | PULLEY               | 11092-03-001  | 1   |
| 2  | GEAR SHAFT           | 11100B-04-001 | 1   |
| 3  | GEAR(22T)            | 11100B-04-004 | 1   |
| 4  | BALL BEARING 6206    | BR-6206       | 1   |
| 5  | G-TYPE SNAP RING S25 | STW-S25       | 1   |
| 6  | KEY 1/4*1/4*50       | KR-1/4*1/4*50 | 1   |
| 7  | KEY                  | KRR-10*08*28  | 1   |
| 8  | BALL BEARING 6205    | BR-6205       | 1   |
| 9  | LOCK WASHER          | M40*1.5P      | 1   |
| 10 | LOCK NUT             | MN40          | 1   |
| 11 | SPRING WASHER        | SW-1/2        | 1   |
| 12 | NUT                  | W1*12NF       | 1   |



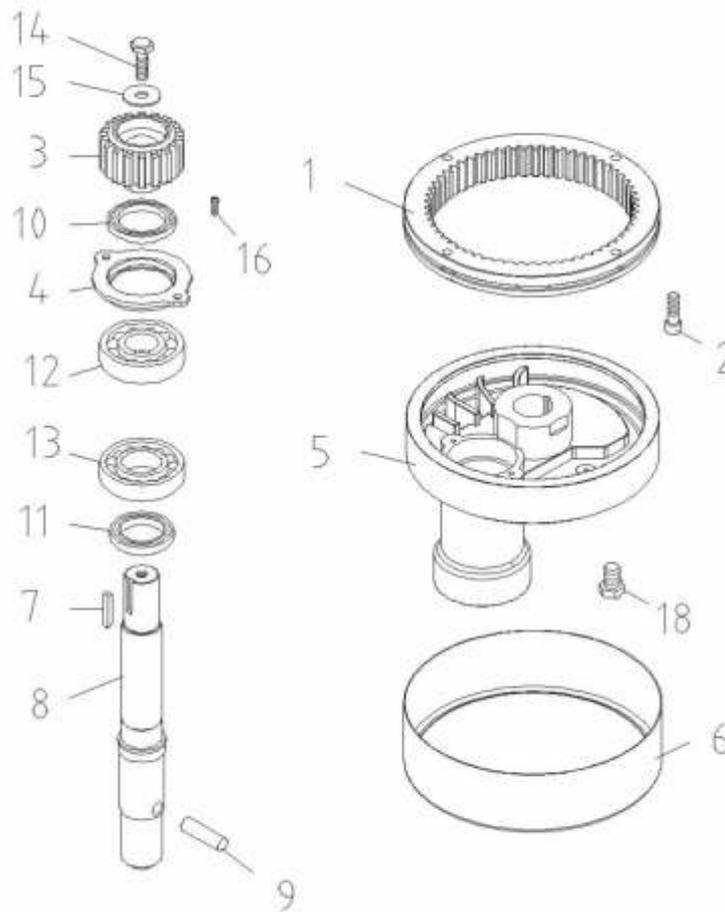
|    | Description or Name | Part No.       | Qty |
|----|---------------------|----------------|-----|
| 1  | Motor Fixed Seat    | 11092-05-006   | 1   |
| 2  | MOTOR PULLEY        | 11092-05-003   | 1   |
| 3  | MOTOR               | 11092-05-005   | 1   |
| 4  | BELT                | M7*1320        | 8   |
| 5  | KEY 7*7*40          | KR-7*7*40      | 1   |
| 6  | SET SCREW 1/4*5/8   | S-S1/4*5/16    | 1   |
| 7  | BOLT 3/8*3/4        | S-3/8*3/4      | 4   |
| 8  | WASHER 3/8"         | W-3/8          | 4   |
| 9  | BOLT 1/2*4          | S-1/2*4        | 1   |
| 10 | NUT                 | NUT-W1/2"*12NC | 1   |
| 11 | BOLT 3/8*3/4        | S-3/8*3/4      | 2   |



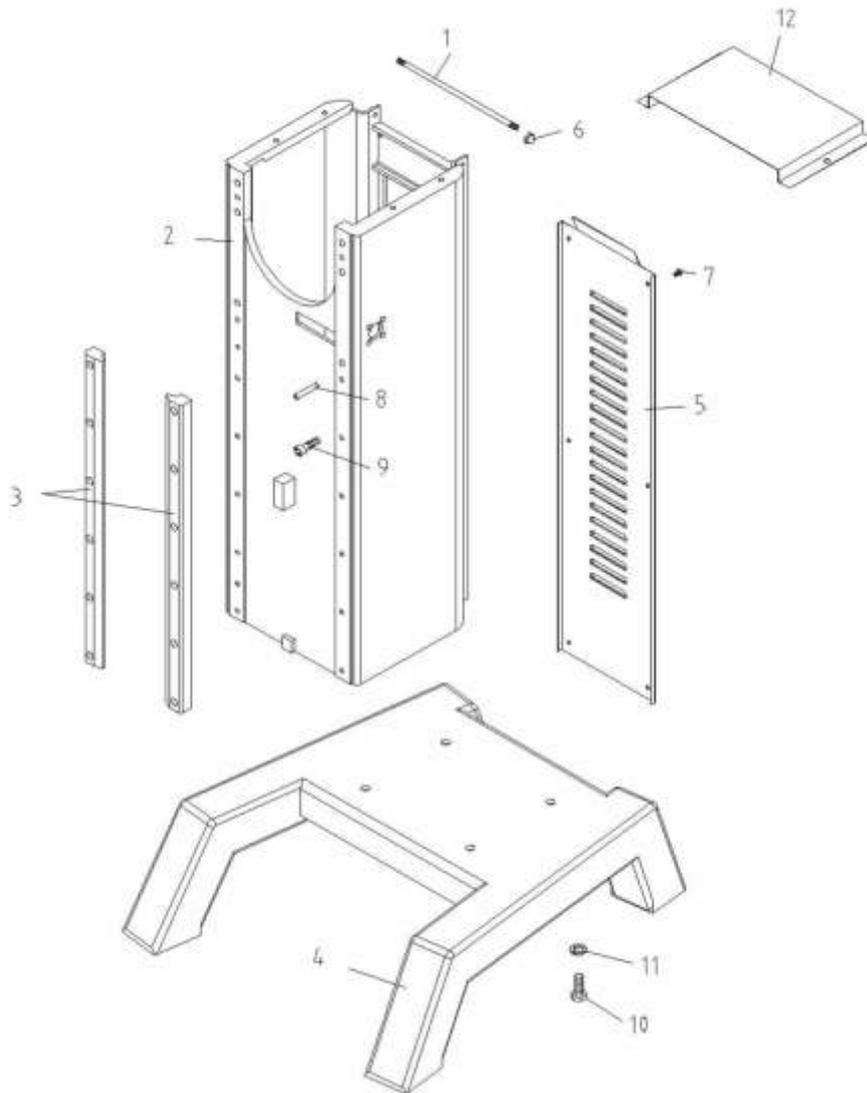
|   | Description or Name  | Part No.       | Qty |
|---|----------------------|----------------|-----|
| 1 | GEAR(14T)            | 11093-06-001   | 1   |
| 2 | CAP SCREW 5/16*1/4   | S-C-5/16*1-1/4 | 4   |
| 3 | HUB ATTACHMENT       | 11093-06-002   | 1   |
| 4 | ATTACHMENT HOLE PLUG | 11091-06-004   | 1   |
| 5 | THUMB SCREW          | 11031-06-005   | 1   |
| 6 | BALL BEARING 2907    | BR-2907        | 1   |
| 7 | O SNAP RING P35      | OR-P35         | 2   |



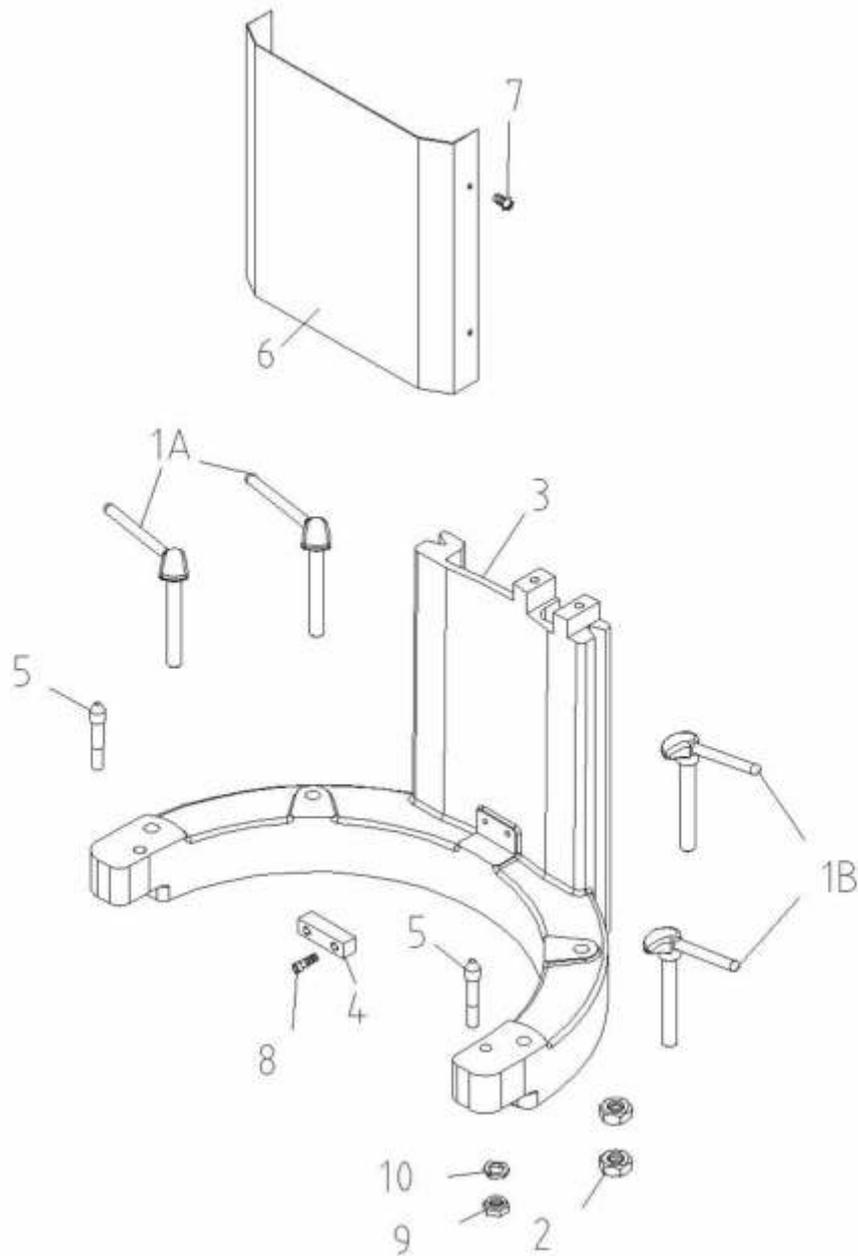
|    | Description or Name         | Part No.       | Qty |
|----|-----------------------------|----------------|-----|
| 1  | CONTROL PANEL               | 1109S-01-006D  | 1   |
| 2  | HUB & CAM ASSY.             | 1109S-07-013B  | 1   |
| 3  | ECCENTRIC SHIFT SHAFT       | 1109S-07-003B  | 1   |
| 4  | SHAFT FORK                  | 11091S-07-004B | 1   |
| 5  | SHIFTER FIXED SHAFT         | 11091S-07-005B | 1   |
| 6  | BRACKET GEAR SHIFT          | 11091-07-006   | 1   |
| 7  | HANDLE SEAT                 | 11092-07-007   | 1   |
| 8  | NUT 1/2*12NC                | NUT-1/2*12NC   | 1   |
| 10 | COMPRESSION SPRING          | 11091-07-018   | 2   |
| 11 | STEEL BALL 6                | SB-6           | 2   |
| 12 | SCREW                       | S-C5/16*5/8    | 4   |
| 13 | SPRING PIN 5*28             | SPP-5*28       | 1   |
| 14 | OIL SEAL TC38*50*07         | OS-TC38*50*07  | 1   |
| 15 | MACH SCREW 3/16*3/8         | S+R3/16*3/8    | 4   |
| 16 | SHIFT HANDLE <del>KIB</del> | 11091-07-012   | 1   |
| 17 | SHIFT HANDLE                | 11091-07-001   | 1   |
| 18 | SHIFTING CAM                | 11091S-07-008B | 1   |
| 19 | PLUNGER                     | 11091S-07-009B | 1   |
| 20 | COMPRESSION SPRING          | 11091-07-010   | 2   |
| 21 | SETSCREW                    | 11091-07-011   | 2   |



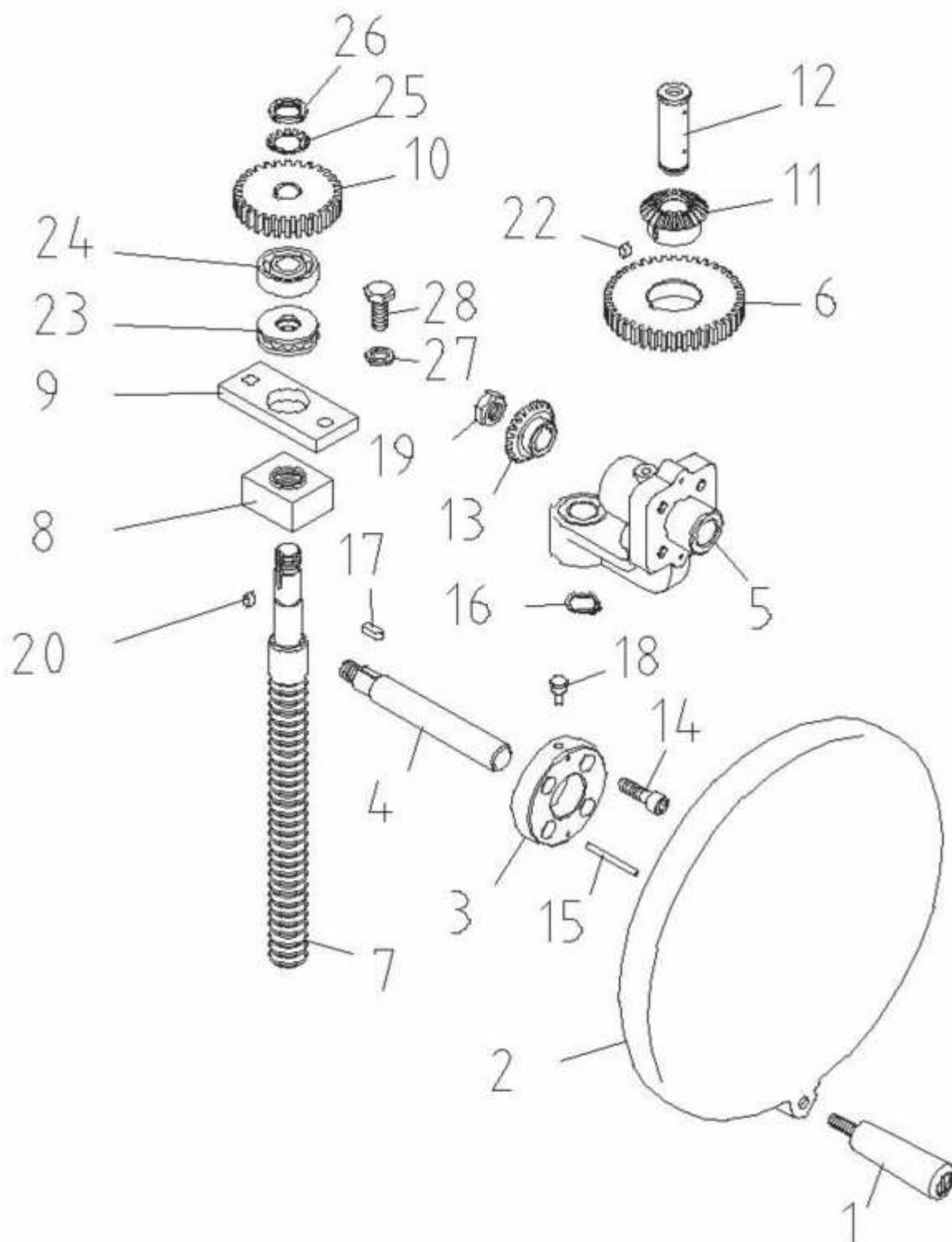
|    | Description or Name      | Part No.      | Qty |
|----|--------------------------|---------------|-----|
| 1  | INTERNAL DRIVE GEAR(59T) | 11091-08-001  | 1   |
| 2  | CAP SCREW 3/8*1/4        | S-C-3/8*1-1/4 | 4   |
| 3  | INTERNAL PINION (18T)    | 11091-08-003  | 1   |
| 4  | RETAINER                 | 11091-08-004  | 1   |
| 5  | PLANETARY HEAD           | 11091-08-005  | 1   |
| 6  | HEAD RING                | 11091-08-006  | 1   |
| 7  | KEY 6*6*35               | KR-6*6*35     | 1   |
| 8  | AGITATING SHAFT          | 11091-08-008  | 1   |
| 9  | TAPERED PIN              | 11091-08-009  | 1   |
| 10 | OIL SEAL TC43*58*08      | OS-TC43*58*08 | 1   |
| 11 | OIL SEAL TC40*72*10      | OS-TC40*72*10 | 1   |
| 12 | BALL BEARING 6306Z       | BR-6306Z      | 1   |
| 13 | BALL BEARING 6207Z       | BR-6207Z      | 1   |
| 14 | CAP SCREW 3/8*1          | S-C-3/8*1     | 1   |
| 15 | WASHER 3/8"              | WB-3/8        | 1   |
| 16 | MACH SCREW 1/4*5/8       | S+R1/4*5/8    | 2   |
| 18 | BOLT 12*3/4              | S-1/2*3/4     | 1   |



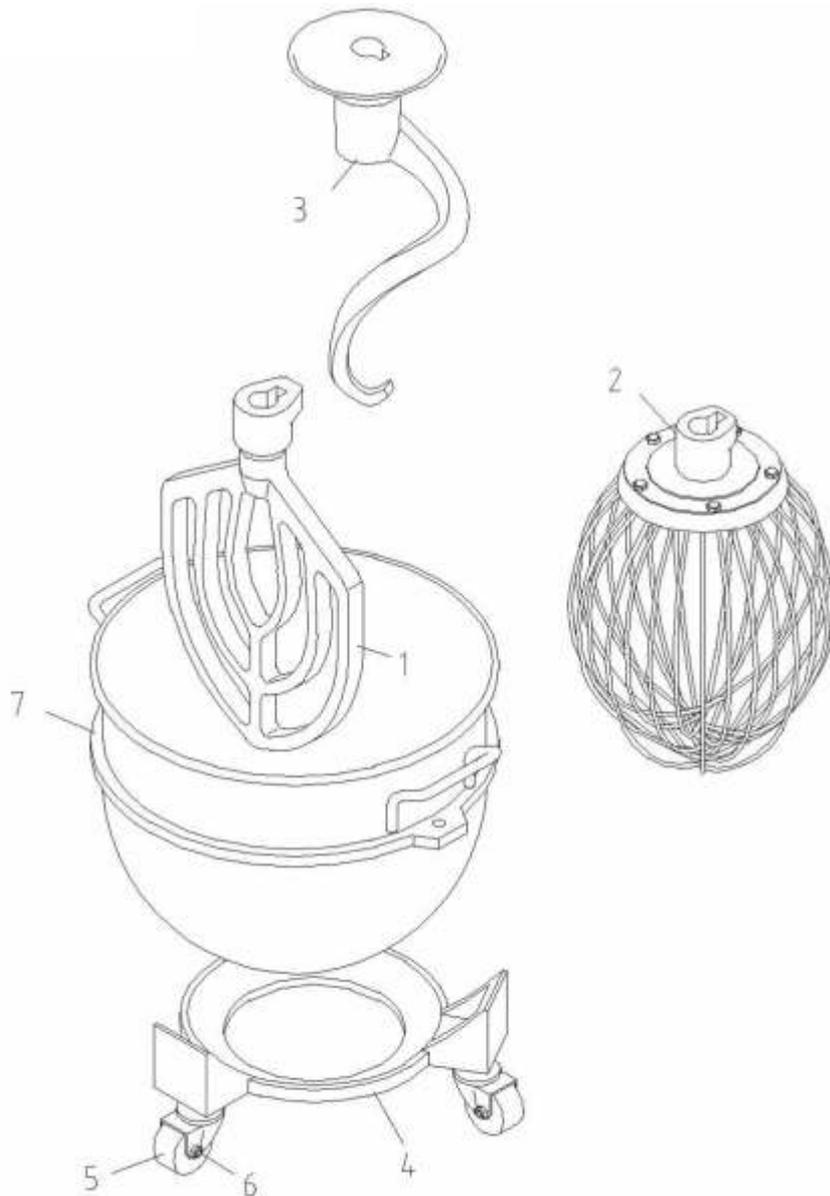
|    | Description or Name | Part No.       | Qty |
|----|---------------------|----------------|-----|
| 1  | HINGE SCREW         | 11091-09-001   | 1   |
| 2  | COLUMN              | BM60-09-002    | 1   |
| 3  | SLIDEWAY            | 11091-09-003   | 2   |
| 4  | BASE                | 11091S-09-004C | 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   |



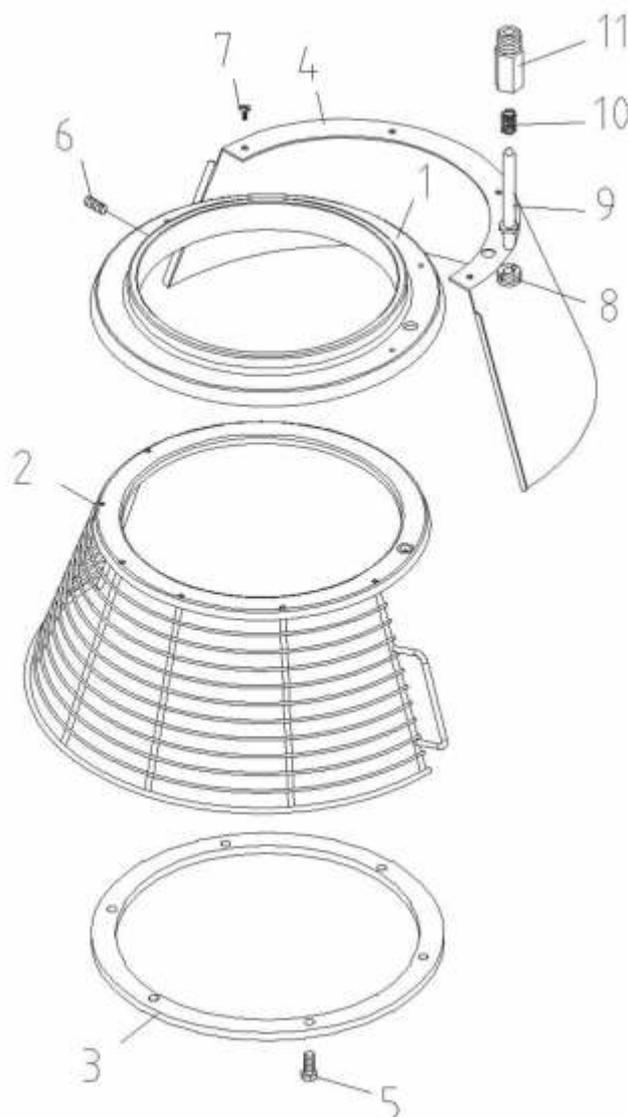
|    | Description or Name | Part No.      | Qty |
|----|---------------------|---------------|-----|
| 1  | BOWL CLAMP(LEFT)    | 11091-10-001A | 2   |
| 1  | BOWL CLAMP(RIGHT)   | 11091-10-001B | 2   |
| 2  | NUT 5/8*11NC        | NUT-5/8*11NC  | 4   |
| 3  | BOWL SUPPORT        | 11091-10-003  | 1   |
| 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   |



|    | 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   |



|   | Description or Name | Part No.     | Qty |
|---|---------------------|--------------|-----|
| 1 | BEATER              | 11091-12-001 | 1   |
| 2 | SS WHIP             | 11091-12-002 | 1   |
| 3 | HOO                 | 11091-12-003 | 1   |
| 4 | TROLLEY BASE        | 11091-12-011 | 1   |
| 5 | WHEEL 2.5"          | WHEEL-001    | 3   |
| 6 | NUT 1/2*12NC        | NUT-1/2*12NC | 3   |
| 7 | BOWL                | 11091-12-008 | 1   |



|    | Description or Name | Part No.      | Qty |
|----|---------------------|---------------|-----|
| 1  | BACK COVER          | GM60-13-001A  | 1 只 |
| 2  | FRONT COVER (WIRE)  | GM60-13-002B  | 1 只 |
| 3  | FIXED RING          | 11091-13-003A | 1 只 |
| 4  | FIXED SHEET         | 11091-13-004  | 1 只 |
| 5  | BOLT 3/16*1/2       | S-3/16*1/2    | 6 支 |
| 6  | SET SCREW 5/16*3/8  | S-S5/16*3/8   | 3 只 |
| 7  | SCREW               | S+BR-3/16*1/4 | 4 支 |
| 8  | SCREW               | 1109P-13-008  | 1 只 |
| 9  | CONTROL SHAFT       | 11091-13-007  | 1 只 |
| 10 | COMPRESSING SPRING  | 11091-13-012  | 1 只 |
| 11 | CONTROL SHAFT SEAT  | 1109P-13-006  | 1 只 |

## GREASE AND OIL

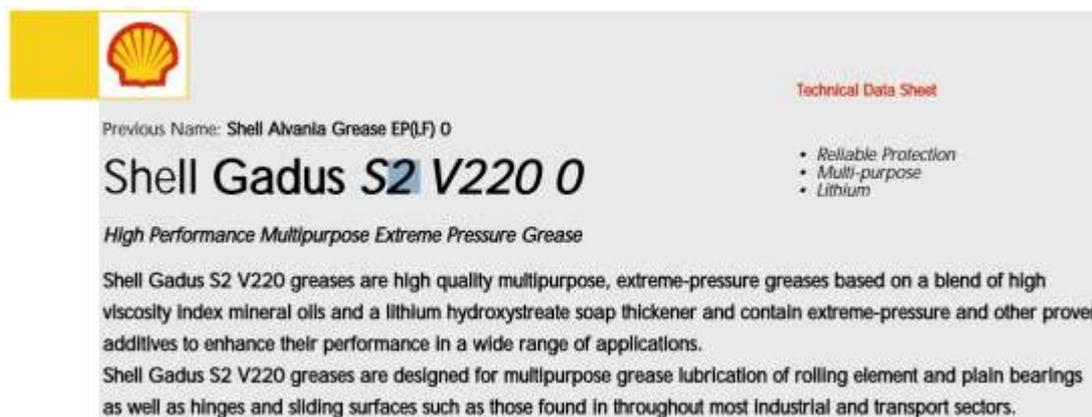
for AX-M60 (AXIS M-60 s/n: 07040051 the machine is made before May 30, 2008).

And the AXIS M-60 s/n: 07040051 is use grease in the transmission & planetary head.

But since May 30, 2008, the AXIS M-60 is 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



## 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.

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



## 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:

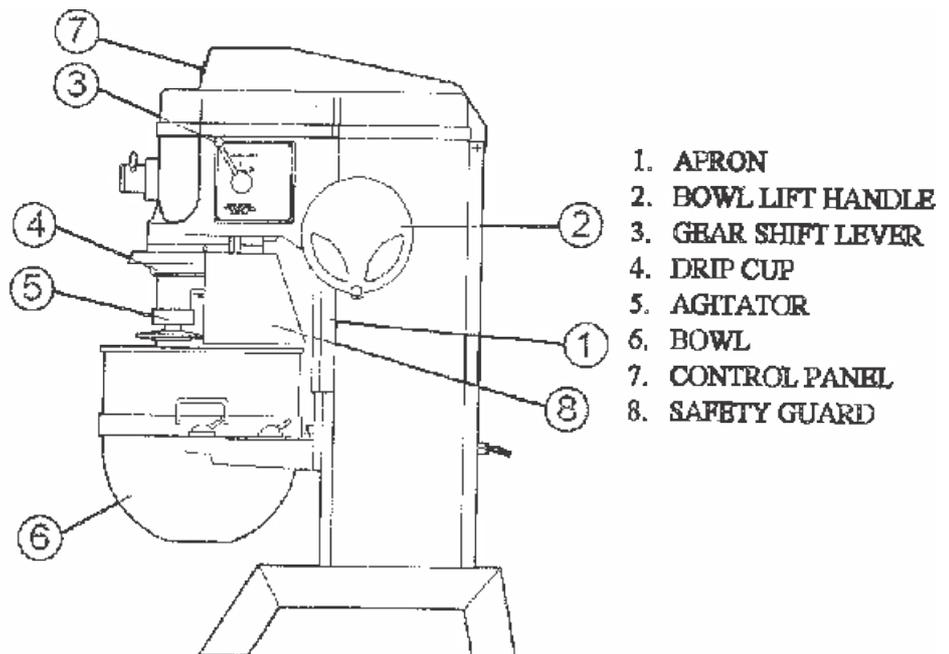
The mixer should be cleaned daily. Bowl and agitators should be removed from the mixer and cleaned in a sink with soapy warm water.

### 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<br>AGITATORS<br>MIXER                                    |       |        |         |
|             | VISUAL INSPECTION   |       |        |         |
|             | PLANETARY<br>BOWL LIFT<br>BOWL GUARD<br>TOUCH PAD<br>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 |
| <b>7 QT.</b>  | 0.25 lit.                  | 8.45 us fl oz   | S2 V220 0   | 0.055 lit.                       | 1.86 us fl oz  | JX-3-5G     |
| <b>12 QT</b>  | 0.5 lit.                   | 16.90 us fl oz  | S2 V220 0   | 0.06 lit.                        | 2.03 us fl oz  | JX-3-5G     |
| <b>20 QT.</b> | 1 lit.                     | 33.81 us fl oz  | S2 V220 0   | 0.065 lit.                       | 2.20 us fl oz  | JX-3-5G     |
| <b>30 QT.</b> | 1.2 lit.                   | 40.57 us fl oz  | S2 V220 0   | 0.08 lit.                        | 2.70 us fl oz  | JX-3-5G     |
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| <b>60 QT.</b> | 4 lit.                     | 135.25 us fl oz | HD85W/140   | 0.3 lit.                         | 10.14 us fl oz | HD85W/140   |
| <b>80 QT.</b> | 4 lit.                     | 135.25 us fl oz | HD85W/140   | 0.3 lit.                         | 10.14 us fl oz | HD85W/140   |



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