

INSTRUCTIONS



P660CE MIXER
single speed

P660 MIXERS

ML-134201 (single speed)
ML-134202 (two speed)





Model P660CE Mixer (two speed shown)

Shipping Weight: 399 kg (880 lb)

Net Weight: 387 kg (853 lb)

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Installation, Operation, and Care of P660CE MIXERS

SAVE THESE INSTRUCTIONS

GENERAL

The P660CE model mixer is a heavy duty 60-quart mixer which is designed primarily for preparing dough, batter, and pastry. It is available with a single-speed or two-speed transmission and features a 2½ horsepower Hobart-designed motor, a #12 Attachment Hub and an electromechanical timer as standard equipment.

A 60-quart, stainless steel mixer bowl and a 60-quart, burnished aluminum, ED style dough arm are furnished with each mixer.

Bowl Guard is standard equipment on all P660CE models.

The single-speed and the two-speed mixer have painted finishes.

INSTALLATION

UNPACKING

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

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

LOCATION

Place the mixer in its operating location. There should be adequate space around the mixer for the user to operate the controls and install and remove bowls. The area above the mixer should allow the top cover to be removed for routine maintenance and servicing.

Holes are provided in the base for permanent bolting to the floor; although this is not necessary in normal installations. Four plastic plugs are supplied with the mixer to plug these holes if they are not used.

Once located, the mixer must be leveled.

- Remove the top cover screws and the top cover.
- Place a level on the machined surface of the transmission case (Fig. 1) and slide shims under the legs (base) of the mixer as required to level it front-to-back and side-to-side.
- Do not replace the top cover until installation is completed.

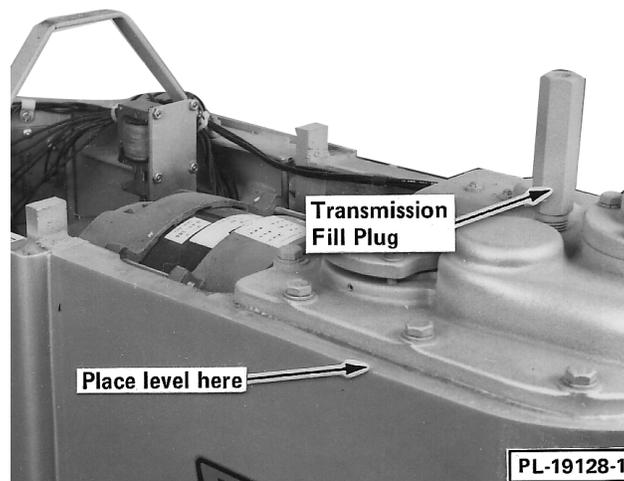


Fig. 1

CHECK LUBRICATION BEFORE USE

This mixer is shipped with oil in the transmission. Mixers produced prior to September 2002 will have oil in the planetary. Mixers produced after September 2002 will have grease in the planetary. Check oil levels before starting mixer. Refer to Lubrication, page 14, for applicable lubrication procedures.

INSTALLATION CODES AND STANDARDS

The installation of this mixer must be carried out by a licensed installer and in accordance with the applicable regulations, standards, codes of practice and related publications of the country of destination.

ELECTRICAL CONNECTIONS

WARNING: ELECTRICAL AND GROUNDING CONNECTIONS MUST COMPLY WITH THE APPLICABLE PORTIONS OF RELEVANT ELECTRICAL CODES.

WARNING: MODEL P660CE MIXER (SINGLE SPEED SHOWN) DISCONNECT ELECTRICAL POWER SUPPLY AND PLACE A TAG AT THE DISCONNECT SWITCH INDICATING THAT YOU ARE WORKING ON THE CIRCUIT.

ELECTRICAL DATA

MODEL	Volts / Hz / Ph	RATED AMPS
P660CE	400 / 50 / 3	4

A 26 mm hole for installation of the electrical conduit is located at the top of the pedestal. Make the electrical connections per the wiring diagram located on the inside of the Top Cover.

Check Rotation

Three-phase machines must be connected so the planetary rotates in the direction of the arrow on the Drip Cup. To check rotation:

- Set the gear shift lever on 1 (two speed model).
- Apply power to the mixer and set the Electromechanical Timer on HOLD. With the Bowl Support all the way up, momentarily run the machine by pushing the START and then STOP buttons.
- If rotation is incorrect, DISCONNECT ELECTRICAL POWER SUPPLY and interchange any two of the incoming power supply leads.

OPERATION

WARNING: MOVING BEATER IN BOWL, KEEP HANDS, CLOTHING, AND UTENSILS OUT WHILE IN OPERATION, DO NOT USE WITHOUT INTERLOCKED GUARD.

The P660CE mixer is equipped with an Electromechanical Timer Control (described at the bottom of this page). Also, become familiar with the other operating parts (Fig. 2) and their functions, which are referenced throughout the Operation section.

The Bowl Guard must be in position or the mixer will not operate. Refer to page 9.

If the Bowl Support is not all the way up, the mixer will not operate unless the START button is held in.

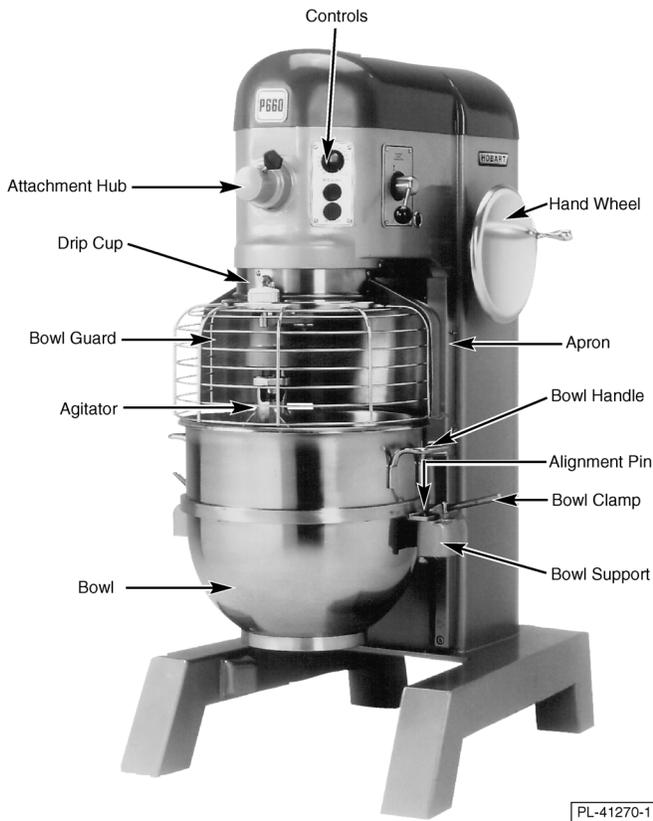


Fig. 2



Two-speed model only
Fig. 3

ELECTROMECHANICAL TIMER CONTROLS

The START button is used to start the mixer.

The STOP button is used to stop the mixer.

The TIMER is used in conjunction with the START button for timed mixing operations and will stop the mixer when a preset time has elapsed.

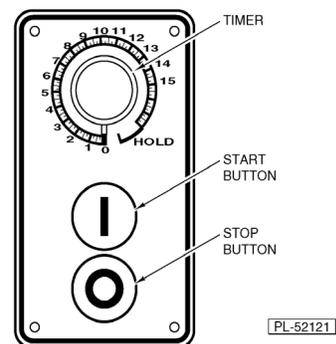


Fig. 4

CHANGING SPEEDS (TWO-SPEED MODEL)

Models with a two-speed selection use the Shift Lever to change speeds. Always stop the mixer before changing speeds.

To Change Speeds

1. Push the STOP button.
2. Move the Shift Lever to the desired speed.
3. Restart the mixer by pushing the START button.

NOTE: If you do not stop the mixer before changing speeds, the mixer will automatically shut itself off and will have to be restarted after changing speeds.



Fig. 5

PL-41266

BOWL LIFT

The Hand wheel is used to raise and lower the bowl on mixers with the standard bowl lift. Turn the Hand wheel clockwise to raise the bowl or counterclockwise to lower it.

MIXING

This section explains operation of the mixer and how to install bowls and agitators.

Bowl

New mixer bowls and agitators (beaters, whips, and dough arms) should be thoroughly washed with hot water and a mild soap solution, rinsed with either a mild soda or vinegar solution and thoroughly rinsed with clear water BEFORE being used.

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 under the retainer on the bowl support and the alignment pins on the front of the bowl support fit in the holes in the bowl. Lock the bowl in place by rotating the bowl clamps over the ears of the bowl.

If a bowl adapter is required, install it on the bowl support as you would the bowl and then install the bowl on the adapter.

Agitator

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

Raising the Bowl While Mixing

To raise the bowl while the agitator is mixing the product (when required by recipe): Load ingredients. Close Wire Cage assembly. To begin mixing, press and hold the Start button; then raise the bowl.

BOWL GUARD (BEFORE SEPTEMBER 2002 PRODUCTION FIG. 6)

The Wire Cage assembly on the Bowl Guard can be rotated out of the way to add ingredients or access the bowl and agitator. Some ingredients, such as liquids or powders, may be added through the Wire Cage assembly while the mixer is in operation. An ingredient chute accessory is available to assist in adding ingredients. Contact your local Hobart Sales representative for more information.

Rotating the Wire Cage assembly to the Rear

Push the Latch in to release the Centering Pin from the Centering Ramp. Note how the grooves on the nylon Retainers allow the Wire Cage to ride around the circular Ridge of the planetary Drip Cup. The Wire Cage can rotate 360° left or right. When the Wire Cage returns to the front and center position, the Centering Pin is captured and held by the Centering Ramp, restricting rotation of the Wire Cage until the Latch is pressed again.

The Wire Cage must be in the front-center position for the mixer to operate.

Removing the Wire Cage assembly for Cleaning

Lower the Bowl. Rotate the Wire Cage to the rear. Remove both Agitator and Bowl. Return the Wire Cage to the front.

While holding the Wire Cage securely with both hands, use your thumb to push down on the Black Release Knob. Lower and remove the Wire Cage. Wash it in a sink, rinse with clear water and dry with a clean cloth.

The stainless steel Splash Guard can be wiped-off or washed easily with a cloth or sponge and warm soapy water. Rinse with clear water. Dry with a clean cloth.

Reinstalling the Wire Cage Assembly

Hold the Wire Cage so its top ring is positioned around the planetary Drip Cup with the grooves in both nylon Rear Retainers straddling the Ridge on the Drip Cup. Push in the Front-Center Retainer until it stays in and so that its grooves also straddle the Ridge on the Drip Cup. The Wire Cage is properly assembled when all three Retainers straddle the Ridge on the Drip Cup in the three opposed locations.

Rotate the Wire Cage out-of-the-way to install or remove the Agitator and Bowl or to add ingredients.

Return the Wire Cage to its front and center position to operate the mixer.

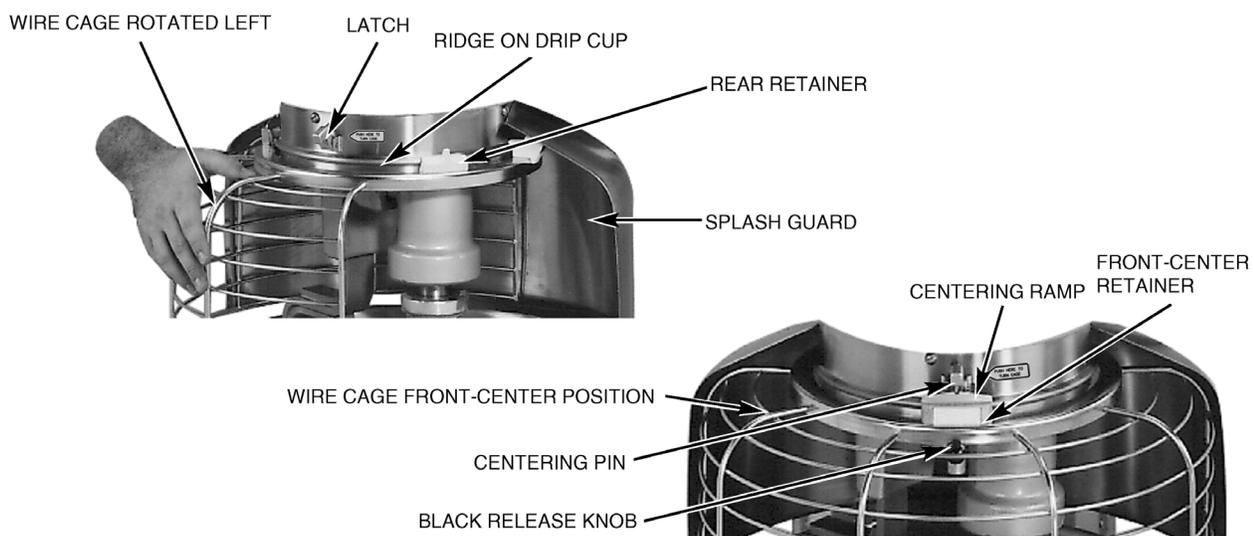


Fig. 6

WIRE CAGE ASSEMBLY (AFTER SEPTEMBER, 2002 PRODUCTION FIG. 7)

The Wire Cage assembly can be rotated out of the way to add ingredients or to access the bowl and agitator.

Note how the grooves on the nylon retainer shoes allow the wire cage to ride around the Circular Ridge of the Planetary Drip Cup.

- To open the Wire Cage assembly, rotate it to your left.
- To close the Wire Cage assembly, rotate it to your right until it stops in the Front-Center Position.

NOTE: The Wire Cage assembly must be returned to the Front-Center Position for the mixer to operate.

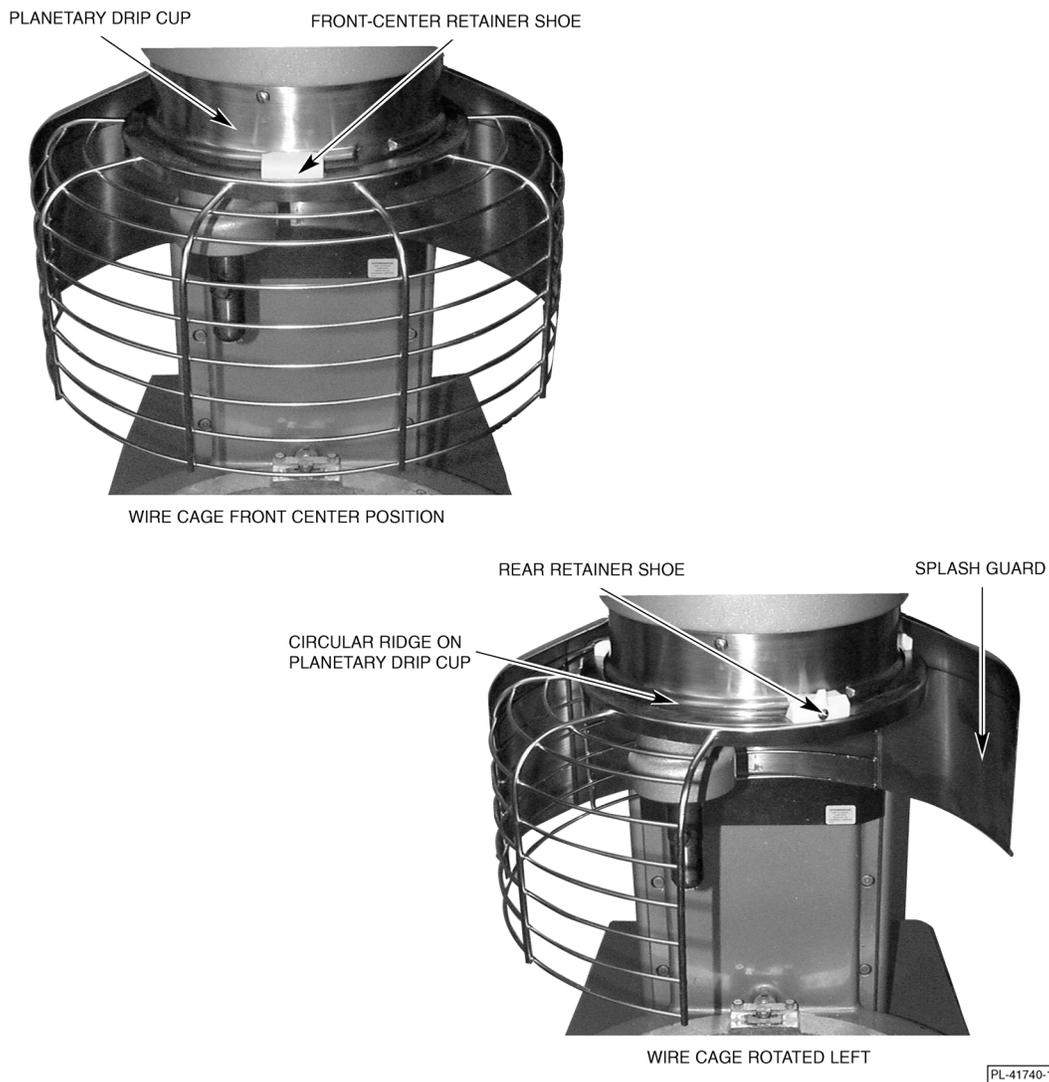


Fig. 7

Remove Wire Cage Assembly (Fig. 8)

1. Lower the bowl. Remove the accessory and bowl.
2. While holding the wire cage securely with both hands, rotate it to your left until the front-center retainer shoe reaches the gap in the circular ridge on the planetary drip cup.
3. Lower the front of the wire cage and move the wire cage assembly slightly to the rear so the rear retainer shoes clear the ridge of the drip cup. The Wire Cage assembly can now be removed.

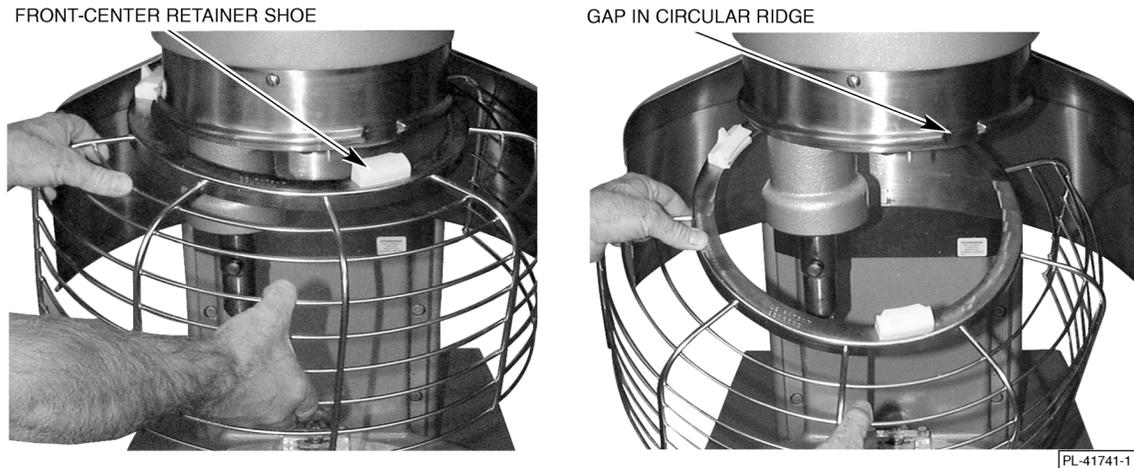


Fig. 8

4. Wash the Wire Cage assembly in a sink, rinse with clear water and dry with a clean cloth.
5. The stainless steel Splash Guard can be wiped off and/or washed with a cloth or sponge using warm, soapy water. Rinse with clear water and dry with a clean cloth.

Reinstall Wire Cage Assembly

1. Position the ring of the Wire Cage assembly so the Front-Center Retainer Shoe is lined up with the gap in the Circular Ridge on the Planetary Drip Cup.
2. Position the grooves so the rear retainer shoes straddle the Circular Ridge on the Planetary Drip Cup.
3. Lift the front of the Wire Cage assembly so the Front-Center Retainer Shoe passes up through the gap in the Circular Ridge on the Planetary Drip Cup.
4. Rotate the Wire Cage assembly to your right until all three retainer shoes straddle the ridge on the Drip Cup in the three opposed locations.
5. Continue rotating the Wire Cage assembly so the opening is to the front of the mixer (to install the accessory) or until it stops at the Front-Center Position (Fig 8).

ATTACHMENTS

To install an attachment, loosen the attachment hub thumb screw 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 thumb screw.

Move the Gear Shift Lever to the desired speed. With the Bowl Support all the way up and the wire cage in the Front-Center Position, start 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, push the STOP button at once. Do not attempt to restart the mixer in a lower speed — remove the adjusting ring, knife, plate and worm and clear any obstruction.

NOTE: This attachment must not be used to chop bread crumbs.

NOTE: Attachment Hub should not be used while mixing.

Bowl Scraper Attachment

The Mixer Bowl Scraper Attachment (when ordered) is provided with a separate instruction manual covering its installation, operation, use and care.

MIXER SPEEDS (WHEN EQUIPPED)

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

Speed 2 (Medium-low) — This speed is for mixing cake batters, mashing potatoes and developing bread dough.

Speed 3 (Medium-high) — This speed is for incorporating air into light batches, as well as finishing whipped items.

Speed 4 (High) — This speed is for maximum and accelerated air incorporation into light batches.

CLEANING

WARNING: DISCONNECT ELECTRICAL POWER SUPPLY AND PLACE A TAG AT THE DISCONNECT SWITCH INDICATING THAT YOU ARE WORKING ON THE CIRCUIT BEFORE BEGINNING ANY CLEANING PROCEDURE.

A flat scraper is furnished to aid in cleaning bowls and agitators.

The mixer should be thoroughly cleaned daily. DO NOT use a hose to clean the mixer — it should be washed with a clean damp cloth. The base allows ample room for cleaning under the mixer. The apron may be removed by loosening the thumb screws. Behind this apron is an access cover which may be removed for cleaning.

The Drip Cup-Splash Guard (which is secured by three screws) should be removed periodically and wiped clean.

For cleaning the Bowl Guard (including both Wire Cage assembly and Splash Guard), refer to page 9.

MAINTENANCE

WARNING: DISCONNECT ELECTRICAL POWER SUPPLY AND PLACE A TAG AT THE DISCONNECT SWITCH INDICATING THAT YOU ARE WORKING ON THE CIRCUIT BEFORE BEGINNING ANY MAINTENANCE PROCEDURE.

LUBRICATION

Planetary (Before September, 2002 Production)

The planetary oil should be checked periodically. To check, DISCONNECT ELECTRICAL POWER SUPPLY and remove the Drip Cup-Splash Guard, which is secured by three screws. Remove the fill plug (Fig. 9). Oil should be even with the bottom of the fill-plug hole. If it is not, slowly add the recommended planetary lubricant until it is. Replace the fill plug and the Drip Cup-Splash Guard.

A drain plug (Fig. 9) is located on the bottom of the planetary. Should draining become necessary, remove the Drip Cup-Splash Guard and place a suitable catch pan under the drain plug. Remove the drain plug, allow the oil to completely drain and replace the drain plug. Remove the fill plug and pour in 177 ml (6 fluid ounces) of the recommended planetary lubricant. Replace the Fill Plug and the Drip Cup-Splash Guard. Contact your local Hobart service office for the recommended planetary lubricant.

Planetary (After September, 2002 Production)

Mixers produced after September, 2002 have a grease-filled planetary and do not require routine lubrication maintenance.

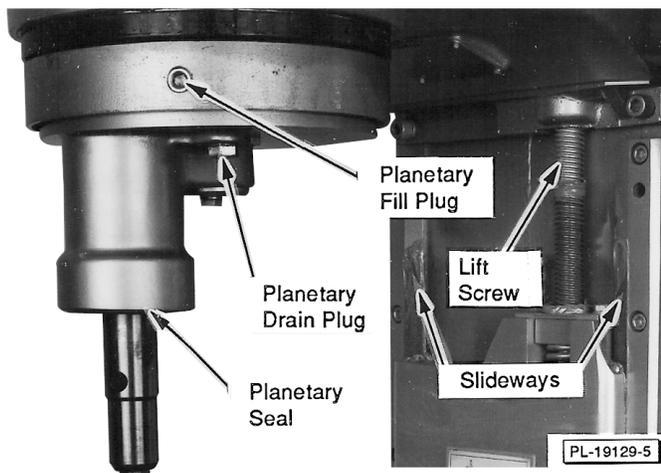


Fig. 9

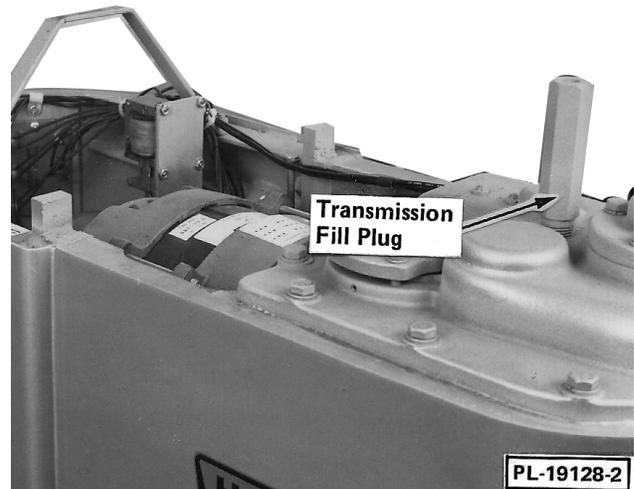


Fig. 10

Planetary Seal

Occasionally, the planetary seal (Fig. 9) may become dry and begin to squeak. To correct this, work a little lubrication under the lip of the seal.

Transmission

The transmission oil should be even with the line on the oil level gauge when the motor is NOT running. If the oil falls below this line, DISCONNECT ELECTRICAL POWER SUPPLY and remove the Top Cover, which is secured by two screws. Remove the Transmission Fill Plug (Fig.10) and add a small amount of the recommended transmission oil until it returns to the proper level. DO NOT overfill the transmission as leakage may result. Contact your local Hobart service office for the recommended transmission oil: Mobilgear 634 (quantity 3785 ml = 128 fluid ounces).

Bowl Lift

The slideways and lift screw (Fig. 9) should be lubricated approximately twice a year. To reach these areas, fully lower the bowl support and remove the apron, which is secured by four thumb screws. Wipe a thin coat of Lubriplate 630AA (supplied) on the bowl clamp area of the bowl supports, each slideway, and the lift screw. Replace the apron.

On units with a manual bowl lift, the Hand wheel gearing should be lubricated periodically. To do this, DISCONNECT ELECTRICAL POWER SUPPLY and remove the top cover, which is secured by two screws. Wipe a coat of Lubriplate 630AA on the gear teeth and replace the top cover.

ADJUSTMENTS

Agitator Clearance

The agitator clearance should be checked with each bowl change. The agitator must not touch the bowl and the maximum clearance between the bottom of the bowl and the E or ED Dough Arm is 8 mm ($\frac{5}{16}$ ").

Install a Bowl and Agitator. If the Bowl and Agitator come into contact before the Bowl Support reaches its stop, adjust the Stop Screw upwards following the procedure below.

Measuring the Clearance

Pour enough flour in the bowl to cover the bottom of the bowl where the agitator travels. With the bowl fully raised, briefly run the mixer.

Turn off the mixer, DISCONNECT ELECTRICAL POWER SUPPLY, and measure the depth of flour where the agitator has traced a path. This measurement should be taken at several points around the bowl to assure accuracy.

Adjusting the Bowl/Agitator Clearance

- Remove the Apron (which is secured by 4 thumbscrews).
- Loosen the bottom Locking Nut and turn the Stop Screw counterclockwise to increase the clearance or clockwise to decrease the clearance.
- Tighten the Locking Nut while holding the Stop Screw.

Bowl Clamps

The height of the bowl clamp is controlled by a spring washer and lock nut, which are located on the bottom of the bowl support. Turning the lock nut clockwise will loosen the clamp, turning counterclockwise will tighten it. If repeated adjustments are necessary, additional service is indicated. Contact your local Hobart service office.

TROUBLESHOOTING

SYMPTOMS	POSSIBLE CAUSES
Mixer will not start.	<ol style="list-style-type: none">1. Circuit protector in open position — check fuse or disconnect switch.2. Mixer or attachment overloaded.3. Bowl not all the way up.4. Wire Cage assembly is not in the Front-Center position.
Agitator touches bowl.	<ol style="list-style-type: none">1. Bowl Clamp(s) not closed.2. Improper agitator clearance — see MAINTENANCE for adjustment procedure.3. Bowl Clamp(s) improperly adjusted — see MAINTENANCE for adjustment procedure.
Planetary seal squeaks.	Seal requires occasional lubrication — see MAINTENANCE.

SERVICE

If service is needed on this equipment, contact your local Hobart service office.

Our Hobart trained service technicians strategically located at the many Hobart branches are prepared to give you fast, efficient and reliable service. Protect your investment by having a Hobart inspection contract which assures the continued, efficient operation of your Hobart machines, spares and accessories.

For further details, contact your local regional office:

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