INSTRUCTIONS

MODEL 4352 MIXER-GRINDER

MODEL		
4352	ML-104650	R.H. Standard Hopper (Without Side Feed Opening)
	ML-104651	L.H. Standard Hopper (Without Side Feed Opening)
	ML-104654	R.H. Optional Hopper (With Side Feed Opening)
	ML-104655	L.H. Optional Hopper (With Side Feed Opening)

HOBART
CORPORATION

WORLD HEADQUARTERS
701 RIDGE AVENUE
TROY, OHIO 45374-0001

FORM 33737 (10-96)

Installation, Operation, and Care of MODEL 4352 MIXER-GRINDER

SAVE THESE INSTRUCTIONS

GENERAL

The Model 4352 Mixer-Grinder is equipped with a 10 HP motor which rotates the mixing arm at 29 RPM and the worm at 222 RPM. The 4352 is designed to use a #52 size knife and plate (knives and plates are available at extra cost but not included with grinder). Do not use a plate with hole size smaller than 3/32".

The hopper can hold up to 275 pounds for first grind, depending on type of product; up to 300 pounds for second grind. The machine can grind at a rate of 80 to 100 pounds of fresh boneless beef per minute, first or second cut through a 1/8" plate. Frozen meat must be tempered to 24°F or higher before grinding and can be in flake or stick form. Pork can be ground first cut through a 3/4" breaker plate at up to 80 pounds per minute; and second cut through a 3/16" plate at 40 to 80 pounds per minute.

Optional equipment, available at extra cost, includes the following:

1) Flexible power supply cord and plug. Either a receptacle or a pendant type connector is available. The receptacle requires a type FD electrical box (not supplied).
2) Legs with casters (4 lengths are available). **NOTE**: Machines with casters are equipped with flexible power supply cord and plug. Either a receptacle or a pendant type connector is available. The receptacle requires a type FD electrical box (not supplied).
3) Legs without casters (4 lengths are available).
4) Pneumatic foot switch (accessory).
5) A side feed inlet can be ordered (and factory installed) for either the right- or left-hand side of the hopper to allow product from a companion first cut grinder to feed directly into the hopper. A plug assembly is available for use when the side inlet hole is not in use.
6) #52 size knives and plates.

NOTE: With the proper adapter ring, the mixer-grinder can be connected to other grinders having either a #32 (42/46), #52, or #56 chopper end, assuming the height of the side feed inlet can be met.

INSTALLATION

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

Prior to installation, test the electrical service to make sure it agrees with the specifications on the machine data plate (Fig. 3).

PNEUMATIC FOOT SWITCH

Remove the cap from the barbed fitting adjacent to the electrical supply junction compartment (Fig. 1) and connect the tube from the pneumatic foot switch onto the barbed fitting using the clamp provided. A pliers will be needed to squeeze the clamp open during installation. Avoid kinking the tube.

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LEGS OR CASTERS

With the mixer-grinder securely elevated using the base frame for support, bolt the leg or caster assemblies through the corner holes using 5/8" bolts and lockwashers, provided.

LEVELING

Adjust the feet (or caster legs) so the mixer-grinder is level, both front-to-back and side-to-side.

CHECK GEAR CASE LUBRICANT

Oil is installed in the gear case at the factory. Make sure oil is at the proper level by checking the oil level sight gauge (Fig. 1). If it is necessary to add oil, unscrew the retaining screws and remove the rear panel (Fig. 1). Remove the oil fill plug (Fig. 1) and add Mobil DTE HM oil until the oil level is brought to the center of the oil level sight gauge.

CHECK CHAIN LUBRICANT RESERVOIR

Oil is added to the chain reservoir at the factory and sealed at the bottom of the splash shield with a silicone rubber sealant for shipping purposes. With the rear panel removed, remove the sealant from around the chain reservoir (Fig. 1) and inspect the oil level. Replenish as necessary with MPO-30 Multi-Purpose Oil.

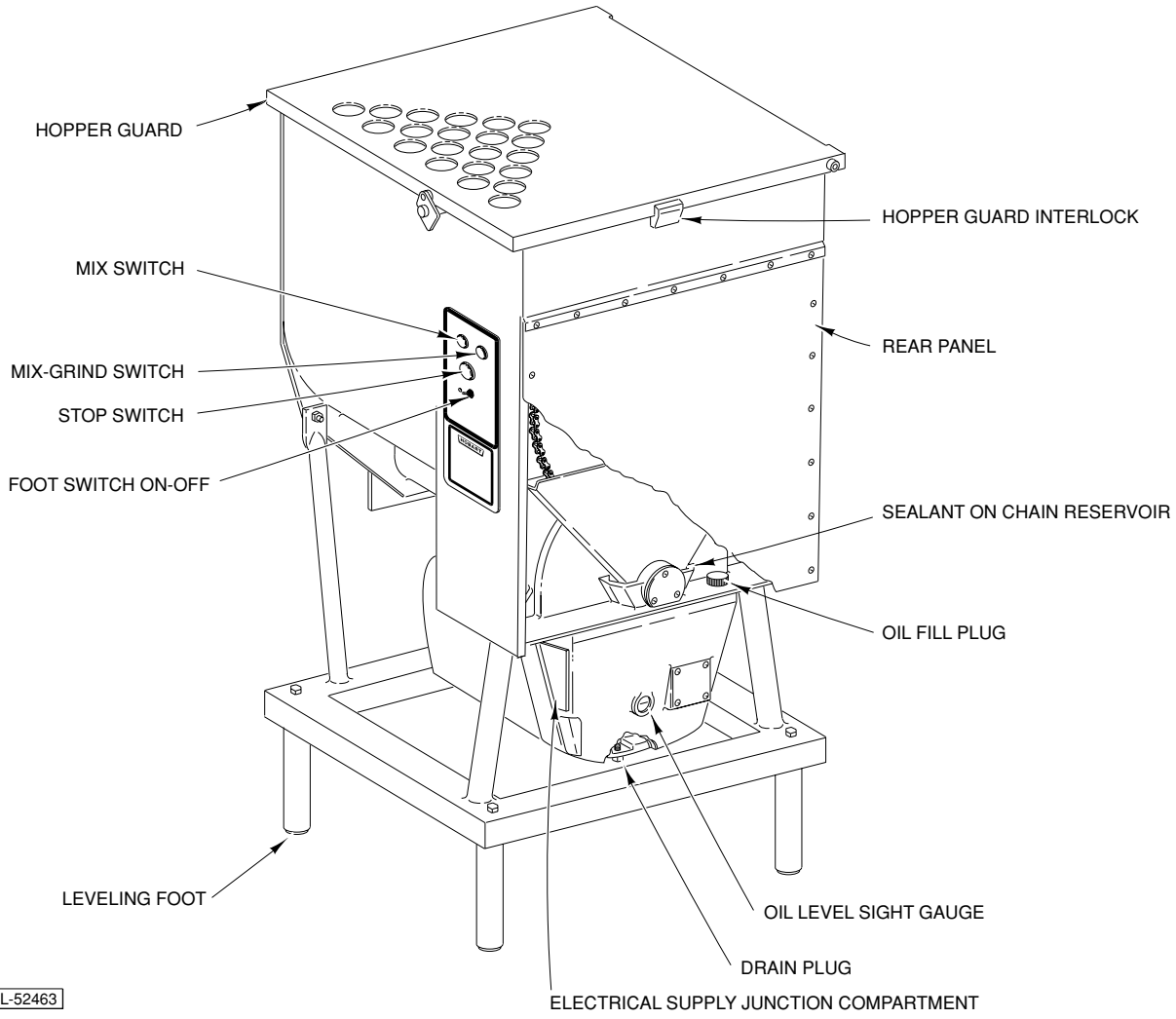


Fig. 1

ELECTRICAL CONNECTION

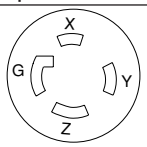
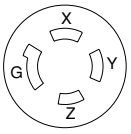
WARNING: ELECTRICAL AND GROUNDING CONNECTIONS MUST COMPLY WITH APPLICABLE PORTIONS OF THE NATIONAL ELECTRICAL CODE AND/OR OTHER LOCAL ELECTRICAL CODES.

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

When no power cord and plug is provided on the machine, connect the electrical power supply to the leads in the junction compartment (Fig. 1). The compartment is provided with a tapped hole for 1" trade size conduit. Refer to the machine data plate (Fig. 3).

Machines ordered with casters are provided with a cord and plug and only require connection to an appropriately sized, grounding-type receptacle. Refer to the machine data plate (Fig. 3) and Electrical Data, below.

ELECTRICAL DATA

Model	Volts / Hertz / Phase	Receptacle, Circuit and Plug Size	Receptacle and Plug Type	Reference
4352	200 / 60 / 3	30 Amps	 Receptacle Shown	NEMA Receptacle: L21-30R Plug: L21-30P
	230 / 60 / 3	30 Amps	 Receptacle Shown	NEMA Receptacle: L15-30R Plug: L15-30P
	460 / 60 / 3	20 Amps	 Receptacle Shown	NEMA Receptacle: L16-20R Plug: L16-20P

Compiled in accordance with the National Electrical Code, ANSI / NFPA 70, 1993 Edition.

CHECK MOTOR ROTATION

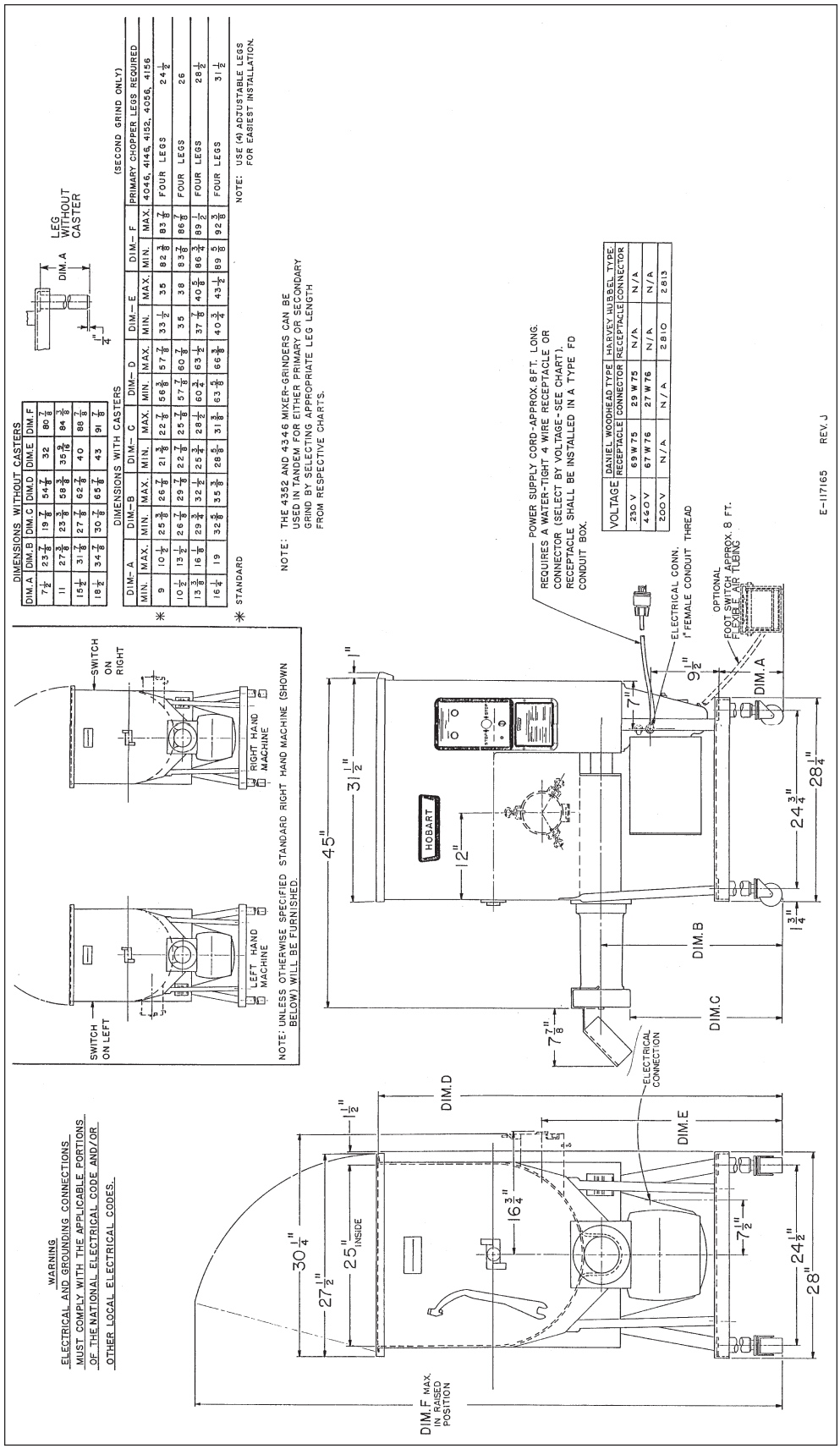
With the grinder attachment in place and the hopper guard closed, check worm rotation before making a permanent electrical connection by first pushing the MIX-GRIND switch and then pushing the STOP switch (Fig. 2).

If there is no worm rotation but the mixer arm turns, correct the rotation using the following procedure:

DISCONNECT THE ELECTRICAL POWER SUPPLY and interchange any two of the incoming power supply leads. Reconnect the power supply and push the MIX-GRIND switch to verify that both the worm and the mixer arm rotate.

CONTROL BOX HEATER

The Mixer-Grinder has a heater in the control box to keep the controls dry. It is automatically ON when the machine is electrically connected. The Mixer-Grinder should always be connected EXCEPT when performing assembly, disassembly, cleaning, or maintenance of the machine. After cleaning, reconnect the electrical power supply.



INSTALLATION DIAGRAM

OPERATION

CONTROLS (Fig. 2)

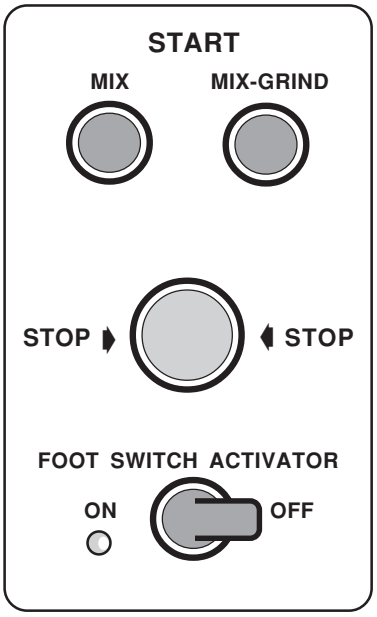


Fig. 2

START BUTTONS

MIX — Starts rotating the mix arm. Use the Stop Button to stop mixing.

MIX-GRIND — Starts rotating both mix arm and worm. Use the Stop Button to stop mixing and grinding.

STOP BUTTON — Turns the mixer-grinder off.

FOOT SWITCH ACTIVATOR ON-OFF — When in the On position, the Mix and Mix-Grind Start Buttons are inoperable and the accessory Foot Switch can be used to Mix-Grind ONLY. The indicator light shows when the Foot Switch is On.

HOPPER GUARD INTERLOCK — The mixer-grinder has a magnetic actuated interlock in the hopper. The hopper guard (lid) must be closed before the machine can operate. Raising the hopper guard opens the electrical circuit and makes the machine inoperative.

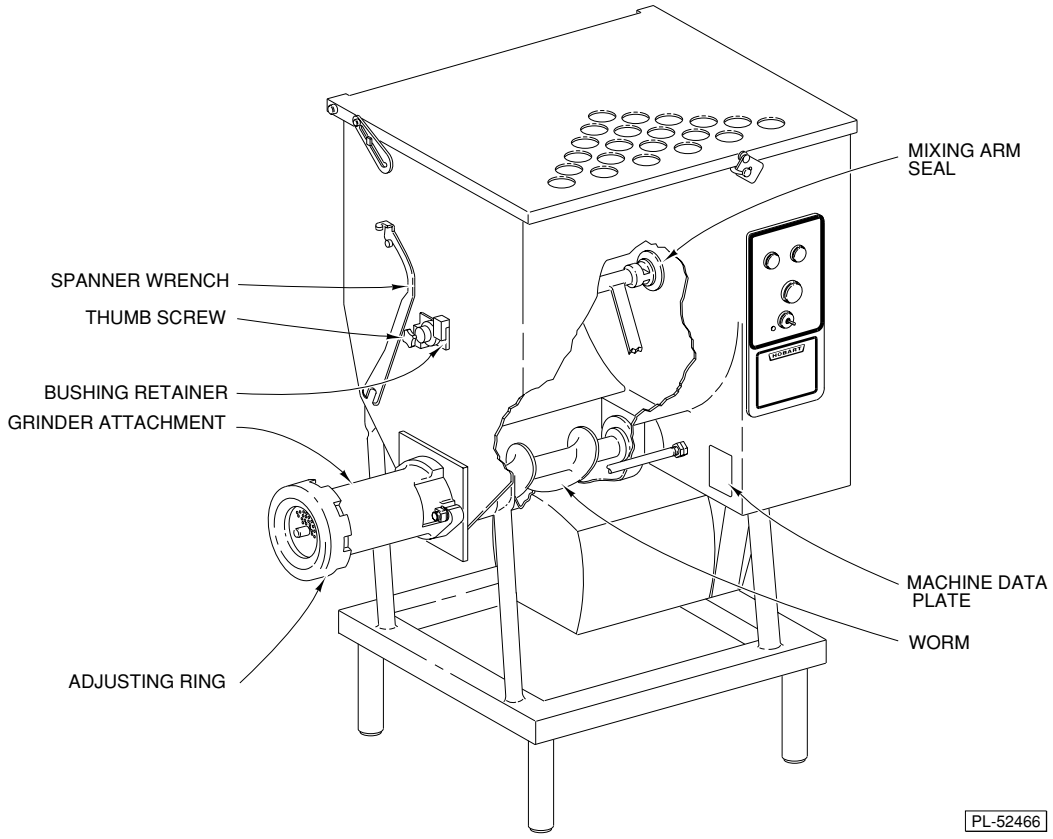


Fig. 3

GRINDER ATTACHMENT

The grinder attachment can easily be removed for cleaning (see Cleaning, page 8). Use the spanner wrench to loosen the adjusting ring and remove the adjusting ring, plate, knife, and worm (Fig. 3). Next loosen, but do not remove the two flange nuts, using the spanner wrench. Rotate the cylinder clockwise and remove the cylinder. At reassembly, make sure the cylinder's flange nuts are tight before assembling the worm and adjusting ring. Use only the flange nuts provided.

A heavy duty tapered roller bearing, which is lubricated by transmission oil, takes the worm thrust. A rubber seal at the drive end of the worm prevents loss of lubricant or entrance of moisture.

Before using the grinder attachment, take it apart and thoroughly wash it. The knife and plate need some preliminary lubrication: Rub tallow or food grade mineral oil over the cutting faces of these parts. When assembling the knife, be sure to turn the cutting side towards the perforated plate. The notch on the circumference of the plate must fit over the pin in the cylinder. Knives and plates must be sharp and true for proper cutting action. Keep the grinder attachment in a clean and sanitary condition.

MIXING ARM

Loosen the thumb screw and rotate the bushing retainer (Fig. 3). Raise the hopper guard, pull the mixing arm from the drive slot, and lift the mixing arm from the hopper.

MIXING AND GRINDING

The model 4352 has a normal capacity of 230 pounds when using 80% fresh and 20% frozen chips; 275 pounds using 100% trimmings; or a maximum of 300 pounds of second grind through a 1/8" plate.

Second cut meat may be mixed in the hopper for any desired length of time. During the MIX operation, the mixing arm rotates in reverse direction from MIX-GRIND operation and the grinder worm does not rotate. Continuous mixing occurs along with grinding in the MIX-GRIND operation. Mixing of uncut or unground meat is not recommended.

Grinding Procedure

First Grind . . .

Fill the hopper and close the hopper guard. Overfilling will bend the hopper guard and may cause the interlock to open the electrical circuit.

Push the MIX-GRIND Button to start grinding. Press the STOP Button to stop grinding.

Second Grind . . .

Fill the hopper and close the hopper guard. Press the MIX Button. After desired mixing, press the STOP Button. Then, press the MIX-GRIND Button to start grinding; press the STOP Button to stop grinding; or activate and use the optional accessory Foot Switch.

CLEANING

WARNING: DISCONNECT THE ELECTRICAL POWER SUPPLY BEFORE CLEANING OR SERVICING THIS MACHINE.

In any cleaning operation after disconnecting the electrical power supply, seal the receptacle to prevent entrance of moisture. To make this seal on Hobart supplied receptacles and pendant connectors, place the cover cap into position and turn the screw type sealing ring clockwise.

Remove the following components when cleaning: Mixing arm, adjusting ring, knife, plate, worm and cylinder (also the side feed hopper plug, when used). The method for removing these components has already been described (refer to Grinder Attachment, page 7). The mixing arm seal (Fig. 3) at the drive end of the mixing arm should be removed by hand for cleaning. Grasp the outer flange or use a dull screwdriver tip and pull the seal out. Also, an accessory tool is available to assist in removal and reassembly of the mixing arm seal.

The machine can be washed down with hot water or steam as is customary in meat processing operations. When using detergents and sanitizers, follow the manufacturer's instructions. Rinse with clear water. Allow to air dry. After cleaning the machine, reassemble the mixing arm seal, mixing arm, and bushing retainer.

After cleaning, a light coat of food grade mineral oil is recommended for the cylinder, adjusting ring, knife, plate, and worm — before reassembly.

MAINTENANCE

WARNING: DISCONNECT THE ELECTRICAL POWER SUPPLY BEFORE CLEANING OR SERVICING THIS MACHINE.

LUBRICATION

Both motor bearings are pre-lubricated and sealed. No further lubrication is required.

Gear Case

To check the oil level in the gear case, turn off the machine, wait at least one minute (for all oil to drain down) and check the oil level sight gauge (Fig. 1). Maintain the oil at the proper level as described on page 3.

Every six months, remove the drain plug (Fig. 1) and drain the gear case. Refill with approximately 84 fluidounces of Mobil DTE HM oil.

Chain Drive Reservoir

Replenish the chain drive reservoir (Fig. 1) as necessary with MPO-30 Multi-Purpose Oil.

SERVICE

Contact your local Hobart Service Office for any repairs or adjustments needed on this equipment.