

INSTRUCTIONS

**Pug Mill
Models
NRA-03S
NRA-07S**

 **SHIMPO**

— A TRADITION OF EXCELLENCE —

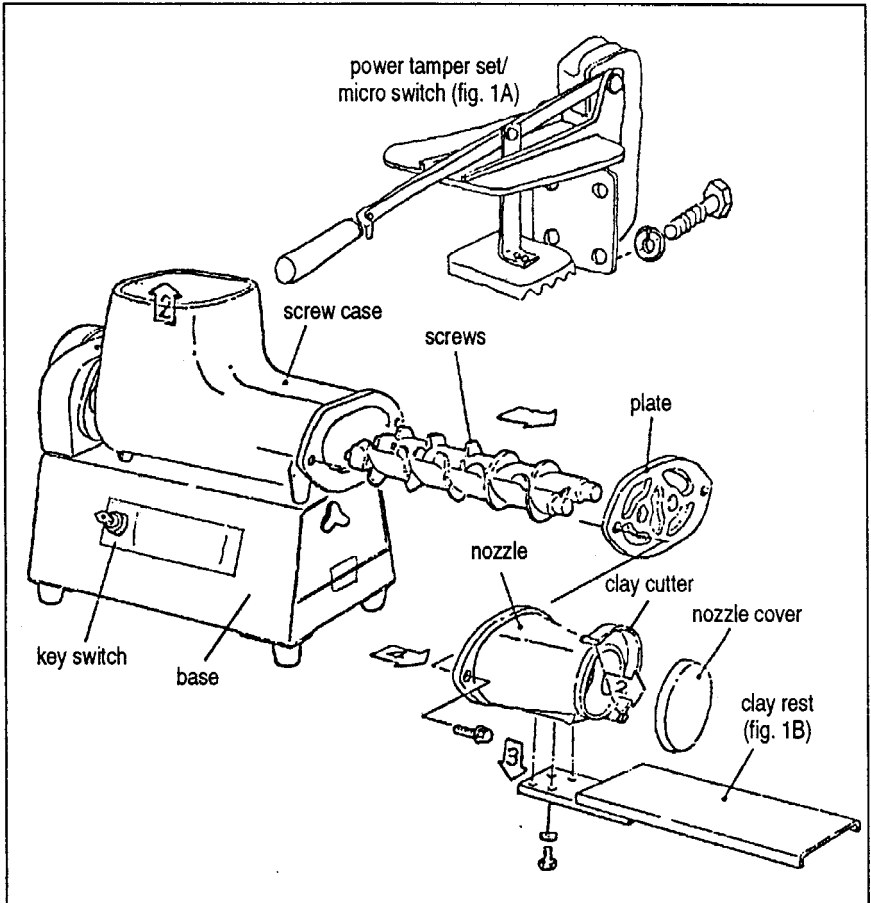


fig. 1

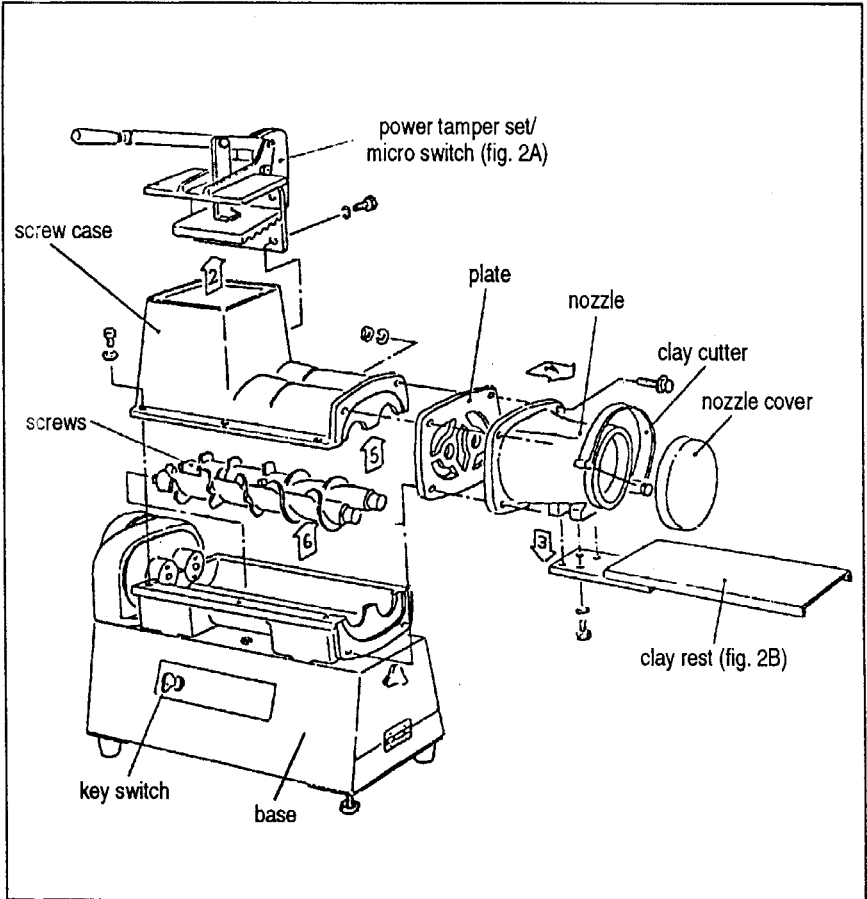


fig. 2

Specifications

Model	NRA-03S	NRA-07S
Motor	1/3HP, 250W, 115V, 60Hz, AC	1HP, 750W, 220V, 60Hz, AC
Capacity	620 lbs/hr.	1760 lbs/hr.
Tube opening	3"diameter	4"diameter
Hopper size	4 ³ / ₄ " x 6"	7 ¹ / ₄ " x 7 ¹ / ₄ "
Dimensions (LxWxH)	35 ¹ / ₂ " x 11" x 16 ¹ / ₂ "	49" x 12 ¹ / ₂ " x 21 ¹ / ₂ "
Weight	70 lbs	198 lbs
Shipping weight	99 lbs	267 lbs
Accessories	Stainless steel clay rest, clay cutter and nozzle cover	
Safety device	Power tamper set/micro switch, key-operated on/off switch	
Tools included	Allen wrench, 2 open-end wrenches (10mm x 13mm) 2 13mm bolts with lock washers (for clay rest) 4 10mm bolts with lock washers (for power tamper unit)	

Installation

1. Release power tamper set (figs. 1A and 2A). Secure to hopper with bolts provided.
2. Attach clay rest under nozzle with bolts provided (figs. 1B and 2B).
3. Level pug mill with adjustable foot: loosen nut, adjust foot and retighten nut.

Before You Start

1. Plug electrical cord into proper voltage outlet:
NRA-03S: 115V (regular household outlet)
NRA-07S: 220V
2. Close power tamper lid.

3. Turn key switch to ON.
4. Check that machine is level and that there are no vibrations, wobbling or irregular sounds.
5. Lift and lower power tamper. Make sure screws do not turn when lid is open. (Screws should turn only when lid is down.)

CAUTION:

If power tamper set/micro switch safety feature is not working properly, DO NOT OPERATE! Do not bypass this safety mechanism.

Operation

1. Switch key to ON.
2. Lift power tamper. Screws should be stopped.
3. Throw moderate-sized lumps of soft clay into hopper. Clay must be softened outside of pug mill. Do not add water to clay inside pug mill.

Your pug mill is designed to wedge newly made or reclaimed clay. Machine performance is dependent upon operation and clay body. Please experiment with feeding and clay consistency.

4. Lower power tamper. Clay will move through machine and be extruded onto clay rest.
5. Using clay cutter, cut extruded clay from nozzle.

Caution:

Keep hands away from hopper and screws while screws are turning.

6. When finished, turn switch off and unplug electrical cord.
7. Put on nozzle cover and lower power tamper to close hopper.

Clay should not be left in pug mill as it may harden and dry.

Do not operate if there is hardened or dry clay inside machine. It must be removed or it may cause motor to burn out.

Cleaning

1. Turn switch off and *unplug electrical cord*.
2. Remove nozzle and plate.
3. Remove screw case (model NRA-07S).
4. *Before* removing screws, note exact position of right and left screws.
5. Remove screws and mark them right and left for proper reassembly.
6. Carefully wash all parts with clean water and wipe dry to avoid corrosion.

To Reassemble

Be sure electrical cord is unplugged.

■ NRA-03S:

1. Apply a light coat of grease on both ends of each screw with a clean cloth.
2. To insert square end of screw, arrange right and left screws correctly and insert simultaneously into coupling at gear box. (Screw case must be on gear case and base before inserting screws into couplings).
3. Fit end of screws into plate. Wipe off any excess grease and attach plate and nozzle to screw case.

■ NRA-07S:

1. Apply a light coat of grease on both ends of each screw with a clean cloth.
2. Install screws. Match "01" and "02" marks engraved on couplings and screw ends (fig. 3). Arrange right and left screws correctly and insert simultaneously.
3. Assemble screw case on screw base and loosely tighten six bolts.
4. Fit end of screws into plate. Wipe off any excess grease and attach plate and nozzle.
5. Firmly retighten the six bolts of screw case.

Pug mill should operate smoothly and quietly.

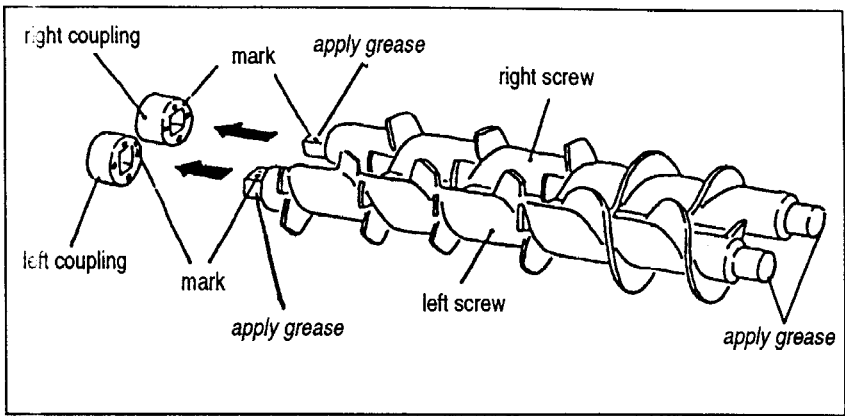


fig. 3

Lubrication

Be sure electrical cord is unplugged.

The gearing has been permanently lubricated with Shell Darina Grease EP.0, Mobil Mobilax EP No. 1 or equivalent. Re-lubrication is required only if repairs are needed.

NRA-07S:

Lubricate chain every 2-4 weeks with bicycle chain-type oil. Do not apply heavy oil or grease.

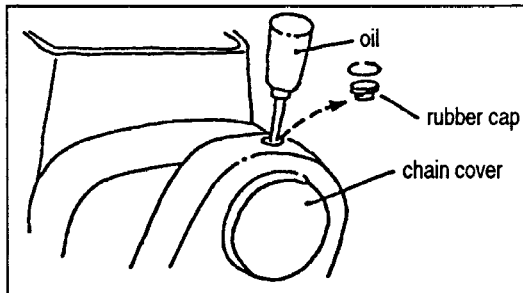


fig. 4

Belt Replacement (NRA-03S only)

Be sure electrical cord is unplugged.

1. Remove belt cover.
2. Place screw driver between large pulley and belt.
3. Rotate large pulley by hand in direction of arrow.
4. Remove belt and place new belt on small pulley.
5. Slip belt onto large pulley by again rotating pulley in direction of arrow.

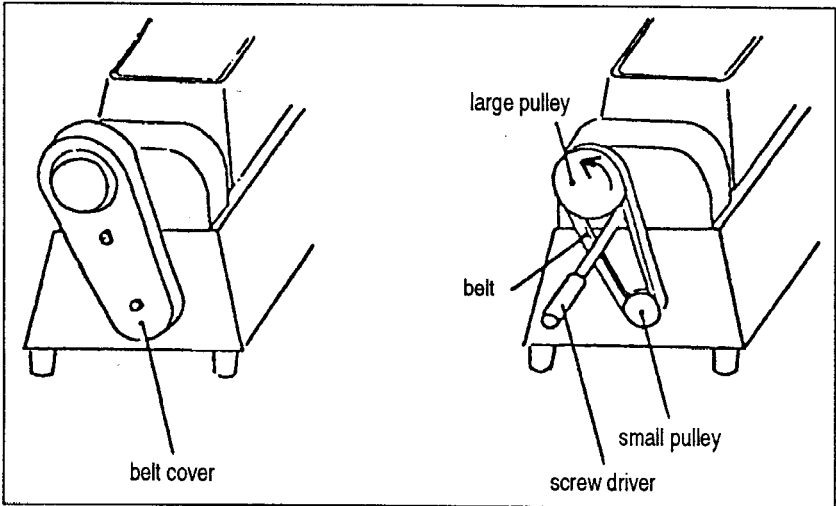


fig. 5



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General Information

The electrical supply for the pugmill alone should be at least 20 amps and at least 30 amps for the pugmill with the vacuum pump. DO NOT USE extension cords, double adapters, or power boards with multiple outlets.

Maintenance

Use any all purpose machinery/gear grease found in hardware or automotive stores.

Check oil level in vacuum pump weekly. The level should be within the circle seen through the sight glass oil level indicator (see diagram). If the oil is low top with SAE #40 oil. To add oil unscrew nut number 1 (see diagram) and fill.

Change the oil in the vacuum pump if it becomes dark or discolored. Following are instructions to change the oil using SAE #40 oil.

1. Unplug power cord.
2. Unscrew nut number 1 (see diagram).
3. Turn pump upside down and allow old oil to flow into a container.
4. Turn pump right side up and add new oil through the same opening. Be sure the oil level is within the circle of the sight glass oil level indicator (see diagram).

