INSTRUCTION MANUAL

8" SIEVE SHAKER

LA-4430 and LA-4430-01

CONTENTS

SAFETY INFORMATION

Please read these instructions thoroughly to familiarize yourself with the operation of the unit before attempting to run it.

The buyer is responsible for ensuring that users are properly trained, that they are aware of all of the information and instructions in this document, and that they are aware of the potential risks of operating the apparatus. The manufacturer will not be responsible for any damage to people and/or property caused by noncompliance with any instructions in this manual.

NOTE: These instructions are intended only as a guide for general operation of this device and should not be used in place of test protocol. Refer to current ATSM standards for complete and detailed test procedures.

ALWAYS ensure the motor and other electrical components are properly configured for your intended use and available power source. LA-4430 runs on 115V,60Hz 1/4hp motor. LA-4430-01 model runs on 230V,50Hz. Motors are NOT explosion-proof.

ALWAYS use a properly-wired, three-pronged plug, or otherwise ground the machine. Make sure the cord is located where no one will trip or get tangled in it.

ALWAYS check electrical wiring for loose connections and for pinched or frayed wiring.

ALWAYS disconnect and lock out power supply when the machine is not in use, especially before performing maintenance and repairs.

⚠ **WARNING: This machine operates on an electric current. Improper operation could result in electric shock, electrocution, or an explosion! Motors are NOT explosion-proof!**

⚠ **WARNING:** Do not wear loose clothing that might be caught in the machine and keep all body parts away from moving parts of the machine. ALWAYS wear safety glasses, hearing protection, and other personal protective equipment while operating, maintaining, or repairing this machine.

⚠ **WARNING:** DO NOT operate the machine without having all guards and covers in place.

⚠ **WARNING:** DO NOT perform tasks on the machine other than those for which it was designed. Only use the machine in the manner for which it was intended, as described in this instruction manual. ately if excessive noise, vibration, or machine movement occurs.

1.0 UNPACKING & SETUP

NOTE: DO NOT plug in or otherwise connect the unit to a power source until this initial inspection is complete. Damage claims MUST be filed with shipping carrier within ten days. The unit is ready to operate as shipped.

1. The unit weighs approximately 52lb (24kg). Use appropriate equipment and manpower to uncrate the Sieve Shaker. Wear safety glasses and work gloves.
2. Open the top of the carton and lift the unit out by the stabilizer bar. If at all possible, **do not** cut away the carton since you will need it if the machine must be returned. If you do not have equipment for lifting the machine, you will have to cut away the carton. Set the unit on a solid, substantial surface, and inspect it for shipping damage and for loose or missing parts or documents.
3. Inspect the unit for shipping damages. Damage claims should be noted on carrier's bill of lading before signing for acceptance. It is the recipient's responsibility to immediately file damage claims with the carrier.
4. Check that the unit is wired to match your power supply. The standard LA-4430 comes with a 1/4hp, 115V, 60-cycle motor.
5. The sieve shakers are designed to operate using the four rubber feet installed on the bottom flanges and when placed on a stable surface, such as a concrete floor or similar sturdy work surface.

NOTE: Do not bolt or secure the sieve shaker to the work surface. The sieve shakers are counterbalanced and designed to be operated on a sturdy work surface capable of absorbing the energy created by the vibrations of the sieve shakers. Bolting the shaker down will damage the drive mechanism. Shakers which have been bolted down are not covered under warranty.

2.0 OPERATION

Please read and understand all safety and operating instructions for the unit before putting it into service.

1. Make sure that the unit is unplugged from the power supply before beginning operation.
2. Rotate EZ-Clamp knobs so buttons face inward. While holding the knobs, push both buttons in firmly and slide the cover up to the desired position. When you release the buttons, the cover assembly will remain in position, allowing insertion of the sieve stack.
3. Load your sieve stack onto the sieve platform of the unit, ensuring it is centered on the platform.
4. Turn the EZ-Clamp knobs so buttons face inward, push the buttons, and slide the cover assembly down firmly on top of the sieve stack.
5. Tighten the knobs by turning them clockwise until the lid feels securely clamped. If the knobs "pop", they were turned too far. Simply retighten to secure the cover assembly on the stack.
6. Plug in the unit after confirming your power supply is configured correctly and grounded properly. Set the timer and turn on the machine.
7. The Sieve Shaker comes with a spring-wound timer, which serves as the on/off switch as well as test timer. The timer ring stop may be rotated and set to exactly repeat test times by tightening the slotted knurled clamp screw. The stop peg should be set for greater than five minutes.

NOTE: The main device that the timer controls may be restricted to operating on a more limited electrical supply range. Check the device carefully to ensure compatibility with your electrical supply.

3.0 MAINTENANCE

Before performing maintenance or repairs on the Sieve Shaker, **ALWAYS** read and understand the safety, operating, and maintenance instructions.

ALWAYS disconnect the unit from its power before performing maintenance or repair. The unit's motor has internal thermal protection which may cause it to restart automatically.

3.1 Cleaning the Unit

1. Clean the unit **AT LEAST** once a year. It is designed to give consistent results. Dirt can affect test results. An appropriate cleaning schedule for your unit depends on the frequency of use, exposure to dirt, and sample makeup.
2. Clean beneath the unit at least annually. Take care not to introduce cleaning agents into the timer or the motor. If a thorough cleaning is required, the motor and timer must first be removed. See steps 2 and 3 in Section 3.3.
3. To perform maintenance or repairs, or to inspect the internal parts of the unit, place the unit on either of its sides or on its back as appropriate. Make sure to prop up the machine as necessary to avoid damage to the power cord or platform.

3.2 Drive Belt

1. Periodically check drive belt for wear, tension, and alignment. A worn, loose, tight, or misaligned drive belt can affect the operation of your unit. The belt should be snug: neither too tight nor too loose. A snug fit assures longer life, less bearing wear, and quieter operation than a belt which is too tight. A loose belt may cause the unit to run too slowly or to slip. The drive belt should deflect 1/64 of the value of the space of the pulleys. The pulleys should be aligned to avoid excessive edge wear on the belt.

2. To adjust or replace the belt, lay the unit on its left side, making sure not to pinch the electrical cord. Loosen the four Motor Mounting Bolts (26) on the top of the outer case (see Section 7.0). Move the motor up or down to adjust tension in the drive belt. Use a straightedge to maintain pulley alignment. If you must adjust the belt past the end of the slots to get proper snugness, replace the belt. **NEVER** force or pry the belt over the pulley flanges.

3.3 Motor

1. Apply a few drops of oil to the motor and bearings at least once a year.

2. To remove the motor, lay the unit on back or left side so that it will fall away from other internal parts when the mounting bolts are removed. Remove the four motor mounting bolts on top of the outer case. As the motor loosens remove the drive belt. Remove the motor terminal cover plate, which is held with two screws, located where the power and timer cords enter the motor.

3. Disconnect the power and timer wire terminals, noting where each is attached, loosen the cord, and remove the wires from the motor terminal box. The motor is now completely free. Remove motor belt pulley by loosening the setscrew.

4. Have the motor cleaned or overhauled by a trained electric motor repair person. Replacement motors are available. To install the motor, reverse the steps of the procedure described previously. Make sure that both pulleys are aligned and that the belt is properly tensioned.

3.4 Spring Wound Timer

To remove the Timer, loosen both Timer terminals and pull off the leads. Remove both screws from the retaining bracket on the back of the timer. This should free the timer unit.

3.5 Main Shaft

1. To remove the Main Shaft (1) and attached subunits, lay the unit on either side (but not on its back) and loosen the drive belt following the instructions in Section 3.2, and remove it. Loosen the four setscrews touching the Main Shaft: Main Shaft Pulley (11), Counterweight (10), Eccentric (9), and Main Shaft Collar (3). Remove the Yoke Bushing Shoulder Bolts (8). This frees the Main Shaft to be pushed to the right toward the front of the unit creating enough space to remove the Main Shaft Pulley (11), Counterweight (10), Eccentric (9), Eccentric Bearing (5), Yoke Bearing Collar (6), and Main Shaft Collar (4,) respectively.

2. The Main Shaft can be moved to the left (to the rear of the outer case) if only a few components on the right side are being serviced. Notice the spacing as each piece is removed. Inspect each disassembled piece for wear, especially the Main Shaft Bushing (2), Main Shaft (1), and Eccentric (9). Any signs of wear or egg-shaping warrant the part's replacement. Order replacement parts by name and part number.

3.6 Reassembly of the Unit

To reassemble the unit, follow the above described sequence in reverse, taking caution to reestablish drive belt alignment and spacing of components. Use Section 7.0 as a guide.

4.0 TROUBLESHOOTING

- ***Unit Fails to Operate:***

  First, establish that power is being delivered to the unit. The wall outlet should be tested with a meter or other device for evaluating current.

  Check the Timer to make sure it is functioning properly. If the Timer is not functioning, order a new one.

  Next, loosen the Motor Mounting Bolts and remove the Drive Belt.

  If the motor still will not run, continue with the motor removal procedure described in Section 3.3. To gain access to the motor terminal cover plate, remove the plate and test for power cord continuity. If the power cord is not at fault, then repair or replace the motor.

- ***Drive Shaft Binding is Evident:***

  Remove and inspect the bearings, bushings, and other components attached to the Main Shaft. To disassemble the drive shaft components, see the procedure outlined in Section 3.0. **Note belt alignment and component spacing for reassembly.**

- ***Unit Operates but is Excessively Noisy:***

  Excessive noise may come from loose sieve retainer clamps, bolts, nuts, egg-shaping of bushings, or worn bearings. Always check for loose nuts, bolts, and clamps before disassembling the unit's components. Replace the frame guide bushing (21) when the bushing makes a flopping sound.

5.0 SIEVING ACCURACY

Accurate sieving is achieved by applying a proper combination of equipment, including standard quality test sieves, and sieving technique.

The following suggestions will help improve test results:

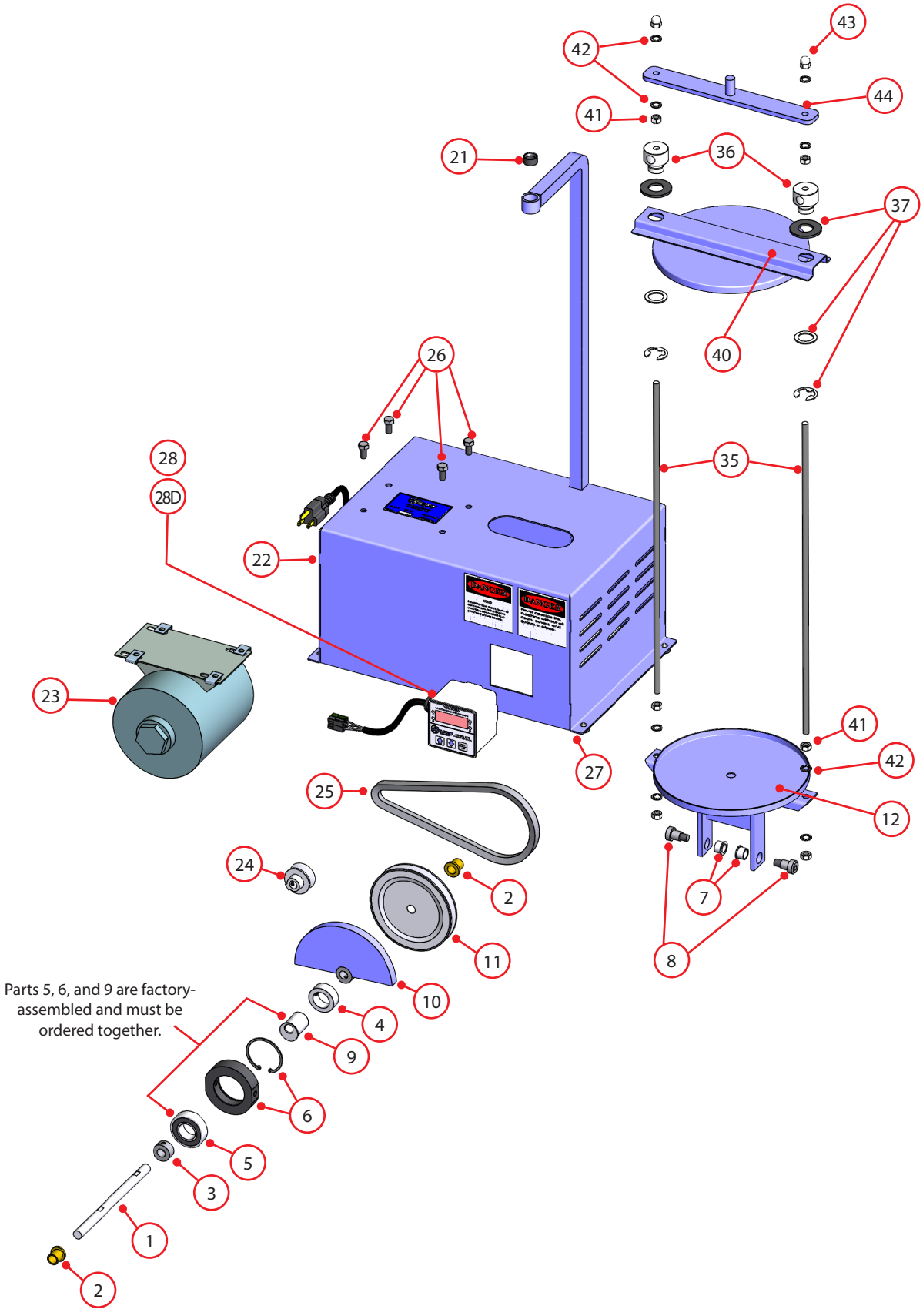
1. Determine suitable test times for each type of sample. One method is to shake each test sieve singly with a pan (by machine or by hand) for an additional minute following a test. If a significant percentage, say 1–2%, of the retained materials passes with the added sieving time, test time should be increased.
2. Use only sample types within the design range of the test apparatus. The LA-4430 has an approximate design range of No.4–No.50 test sieve sizes, but acceptable results may be possible over a wider range depending on sample specific gravity, particle shape, and fraction of sample that is outside the normal design range.
3. **DO NOT** overload test sieves. Maximum loading at completion of sieving is about 132cc on individual 8in (203mm) test sieves in the design range. If the loading is greater, either reduce the starting sample size or insert an extra intermediate-height test sieve to reduce loading on the critical test sieve.
4. Check test sieves periodically to ensure that the wire cloth is in accordance with ASTM E11 standards. Calibration beads are available for precision work where effective test sieve opening ratings are determined for each test sieve rather than using the nominal size ratings.

6.0 TECHNICAL SUPPORT

Contact Forney Technical Support for assistance with applications, operation, maintenance, or repair.

- **Telephone:** 724-346-7400 | 800-367-6397
- **Email:** sales@forneyonline.com
- **Web:** forneyonline.com

7.0 PARTS DIAGRAM



8.0 REPLACEMENT PARTS

Item No.	Part No.	Description	No. Req.
MAIN SHAFT PARTS			
1	RPSS-15KEY1	Main Shaft	1
2	RPSS-15KEY2	Main Shaft Bushing	2
3	RPSS-15KEY3	Main Shaft Collar	1
4	RPSS-15KEY4	Eccentric Locking Collar	1
5	RPSS-15KEY5	Eccentric Bearing	1
6	RPSS-15KEY6	Yoke Bearing Collar with Snap Ring	1
7	RPSS-15KEY7	Yoke Bushing	2
8	RPSS-15KEY8	Yoke Bushing Shoulder Bolt	2
9	RPSS-15KEY9	Eccentric	1
10	RPSS-15KEY10	Counterweight	1
11	RPSS-15KEY11-5	Main Shaft Pulley for 60Hz	1
11	RPSS-15KEY11-6	Main Shaft Pulley for 50Hz (SS-15F)	1
SIEVE CLAMPING & HOLDING PARTS			
12	RPSS-15KEY12	Sieve Platform with Yoke	1
21	RPSS-15KEY21	Sieve Retainer Frame Guide Bushing	1
35	RPSS-15KEY35	Sieve Retaining Rod	2
36	RPSS-15KEY36	EZ-Clamp Knob, Push Button, & Spring Assembly	2
37	RPSS-15KEY37	Rubber Washer, Plastic Washer, & Retaining Ring	2
40	RPSS-15KEY40	Sieve Cover Clamping Assembly	1
41	RPSS-15KEY41	Sieve Retaining Frame Hex Nut	6
42	RPSS-15KEY42	Sieve Retaining Frame Washer	8
43	RPSS-15KEY43	Sieve Retaining Frame Acorn Nut	2
44	RPSS-15KEY44	Sieve Retaining Frame	1
ELECTRIC & DRIVER PARTS			
23	RPSS-15KEY23	Motor for 115V,60Hz	1
23	RPSS-15KEY23-1	Motor for 220V,50Hz	1
24	RPSS-15KEY24	Motor Pulley for 115V,60Hz	1
24	RPSS-15KEY24.5	Motor Pulley for 220V,50Hz	1
25	RPSS-15KEY25-6	Drive Belt for 115V,60Hz	1
25	RPSS-15KEY25-5	Drive Belt for 220V,50Hz	1
26	RPSS-15KEY26	Motor Mounting Bolts with Clip Nut	4
27	RPSS-15KEY27	Rubber Feet	4
28	RPSS-15KEY28	Spring-Wound Timer	1
28D	RP-TIMER-ART	Digital Timer	1
22	RPSS-15KEY22	Outer Case with Stabilizer Bar	1

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