

Service Instructions

Syntron®
TSS 31 C - TEST
SIEVE SHAKER

INSTRUCTIONS

MODEL TSS 31 C - TEST SIEVE SHAKER

The TSS-31 Test Sieve is designed to separate bulk materials into various size particles. A high frequency vibration (3600 vpm), caused by a rectified current acting upon a magnet and armature assemblies, creates a sifting action.

OPERATION

For best operation, do not use this equipment in an ambient temperature of less than 50°F (10°C).

Place sieve shaker on a level and solid support. This unit operates from a 115/230V/50-60 CY power supply. Be sure switch is in off position; insert plug into proper receptive.

To remove sieves, raise locking lever on the side of the unit at the top. Arrange sieve pans to obtain the screening results required. The sieves with the larger mesh are placed on top, graduating the size of the meshes, placing the finest on the bottom. Each sieve pan is labeled noting the number and size opening of the mesh. If less than 6 sieves are required, remove the unused sieves and place them on the base unit, below the bottom pan.

Place material to be sifted in the top pan; check to be sure sieves are tightly nested and properly seated on the seating ring. Turn locking lever downward to lock sieves into place. Set timer (20 minutes is considered average sifting time) and place operating switch to the ON position.

Using the knurled knob on the timer, turn the green pointer to the desired time in minutes. Throw the line toggle switch to the ON position. Press the button in the center of the timer face and the unit will begin operation.

Adjust the rheostat so that voltage indicated on the voltmeter reads 90 volts at 115-volt operation or 180 volts at 230-volt operation.

The test sieve shaker will operate for the preset period of time. When this period elapses, the unit will automatically stop and the timer pointer will return to the set number of minutes. To operate again, for the same period of time, press the button in the center of the timer face.

When shaker is not to operate for an extended length of time (overnight), throw the main toggle switch to the OFF position.

MAINTENANCE

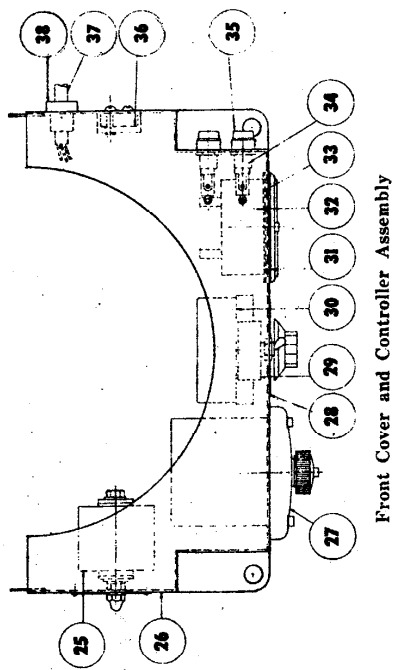
A periodic check of the hardware and electrical connections should be made to be sure they are secure.

The sieve shaker should be thoroughly cleaned after each use. Material build-up within the sieves or on the unit will affect the efficiency of the unit.

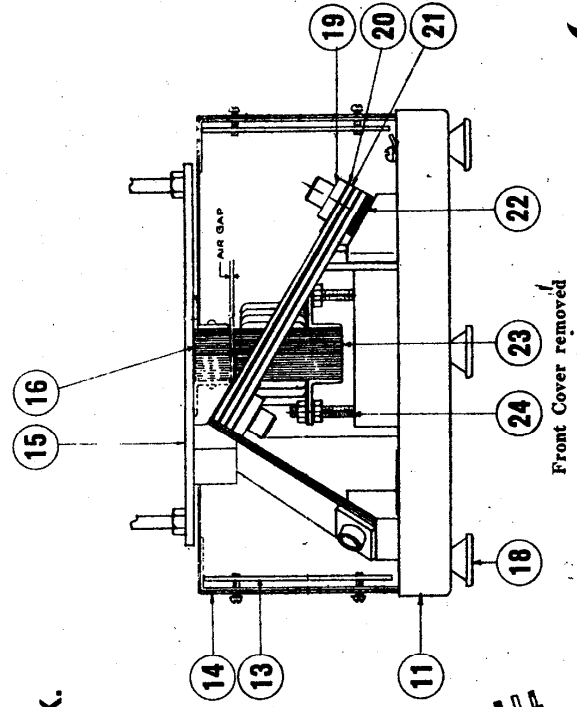
The unit does not require lubrication.

Refer to manufacturer's instructions for maintenance and adjustment of automatic timer.

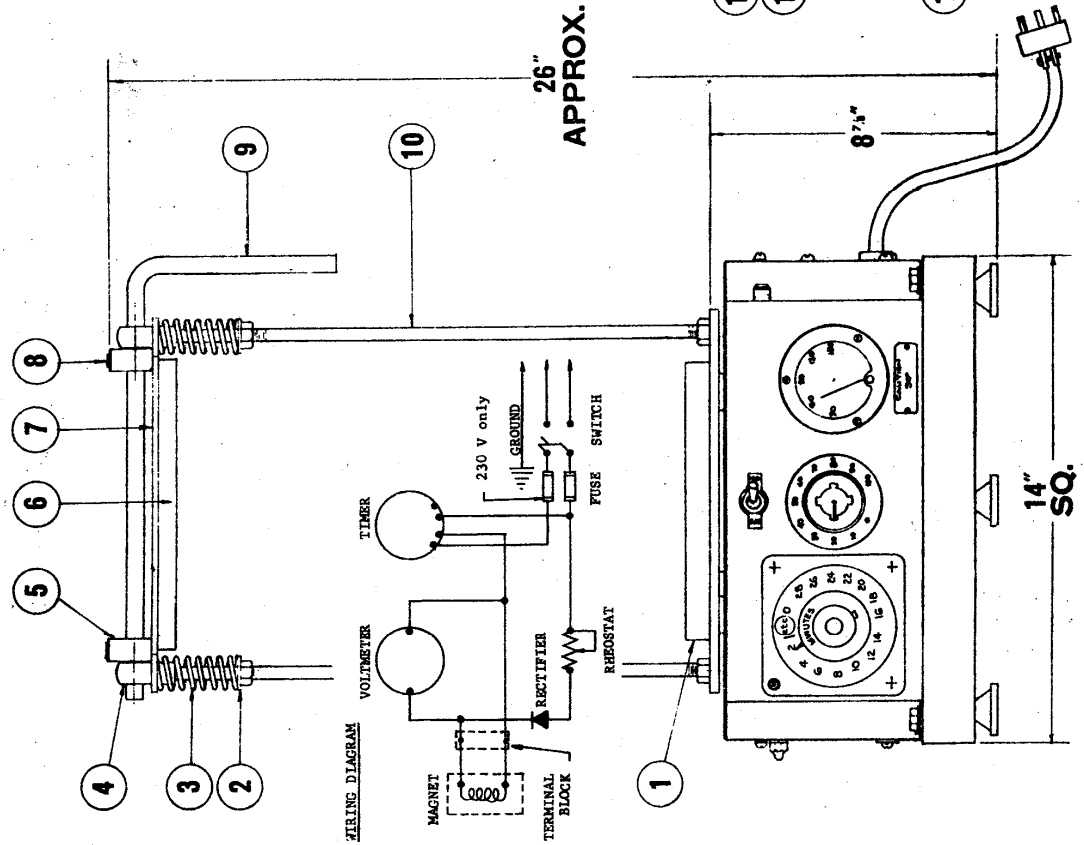
ASSEMBLY AND PARTS LIST



Front Cover and Controller Assembly



Front Cover removed



PARTS LIST – Model TSS-31-C Test Sieve Shaker

<u>Item</u>	<u>Description</u>	<u>Quantity</u>	<u>Part No.</u>
1	Seating Ring	1	A-33605
2	Spring Seat	2	A-29797
3	Coil Spring	2	A-33604
4	Guide	2	A-29798-A
5	Cam	2	A-32552-A
6	Rubber Gasket	1	A-22347
7	Locking Plate	1	A-29787
8	Set Screw – 3/8" – 24 x 5/8"	2	H0410300
9	Locking Lever	1	A-63456
10	Tie Rod	2	A-29796
11	Base	1	D-158327-B
13	Clamping Strip	2	A-63455
14	Back Cover	1	A-63450
15	Mounting Plate	1	C-63423-A
16	Armature	1	A-58054
18	Rubber Feet	4	A-23450
19	Clamping Block	9	A-53132
20	Spring Spacer	20	A-53133
21	Leaf Spring - 1/8" Thk (60 Cy) }	As	A-34286
	Leaf Spring – 3/16" Thk (50 Cy) }	Req'd	A-58014
22	Spring Shim	12	A-56425
23	Magnet Assembly 115V / 60 Cy }		B-129755-H
	Magnet Assembly 230V / 60 Cy }	1	B-129755-J
	Magnet Assembly 115V / 50 Cy }	Only	B-129755-K
	Magnet Assembly 230V / 50 Cy }		B-129755-L
24	Core Studs	4	A-58159
25	Rectifier	1	A-136670-AL
26	Front Cover	1	B-77896
27	Timer – 115V 60 Cy }		0051X815
	Timer – 230V 60 Cy }	1	0051X816
	Timer – 115V 50 Cy }	Only	0051X817
	Timer – 230V 50 Cy }		0051X818
28	Dial	1	A-47953
29	Switch	1	0051X186
30	Rheostat – 115 V }	1	0052X102
	Rheostat – 230 V }	Only	0052X204
31	Rubber Cushion	2	A-56892
32	Voltmeter – 115 V }	1	0252X003
	Voltmeter – 230 V }	Only	0252X005
33	Voltmeter Mounting Plate	1	A-65480
34	Fuse Holder	1 (115V) 2 (230V)	0038X257
35	Fuse 5A	1 (115V)	0174X025
	Fuse 3A	2 (230V)	0174X023
36	Terminal Block	1	0173X028
37	Cable Assembly – 115 V }	1	A-99587-A
	Cable Assembly – 230 V }	Only	A-107362
38	Strain Relief	1	0230X006

TROUBLESHOOTING

PROBLEM	CAUSE	CORRECTION
Unit does not operate	No power	Check power source Check electrical connections
	Blown fuse	*Replace
Unit operates too slow or to fast	Improper air gap setting	Adjust air gap See air gap section of this manual
	Improper power supply	Power supply must be that as designated on nameplate
Unit becomes noisy Operates with loud Rapping noise	Faces of armature and magnet coming in contact	Adjust air gap See air gap section of this manual
Material accumulates to one side	Unit not level	Shim base to level unit
	Improper air gap	See air gap section of this manual

*Replace only with parts recommended, or supplied by Syntron Material Handling.

AIR GAP

The air gap is the space between the faces of the armature and magnet. This gap should be between .075” and .090” wide. To adjust air gap, disconnect power supply and remove base cover. To widen air gap, loosen the four lower hex nuts which secure magnet to the mounting studs until the proper air gap is obtained. Tighten the upper hex nuts to lock the magnet assembly in place. To close the air gap, loosen the upper hex nuts and then adjust lower hex nuts until the proper air gap is obtained. Tighten upper hex nuts until magnet is locked in place. These nuts must be loosened a little at a time and each an equal amount. **THE FACES OF THE MAGNET AND ARMATURE MUST BE PARALLEL AND THE MAGNET MUST BE SECURELY LOCKED IN PLACE.**

SPRING REPLACEMENT

The following procedure should be used to replace or rebuild the spring stacks:

1. Disconnect the power supply and remove covers from the unit.
2. Working on one spring stack at a time, remove spring clamping bolts. Remove all clamping blocks, spacers, leaf springs and shims.
3. If a spring must be replaced, Syntron Material Handling recommends replacing all springs in that stack. Always replace springs with springs of the same size.
4. With the springs, clamps, spacers and shims in the proper arrangement, insert the cap screw and torque to 1440 inch-pounds.
5. Adjust air gap as previously explained in this manual.
6. Replace covers and connect power supply. The unit is now ready for operation.

NOTE: NEVER OIL THE SPRING ASSEMBLIES!!

Syntron Material Handling LLC reserves the right to alter at any time, without notice and without liability or other obligations on its part, materials, equipment specifications and models. Syntron Material Handling LLC also reserves the right to discontinue the manufacture of models, parts, and components thereof.

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