



REK-O-KUT

SERVICE MANUAL



MODELS K-33, K-33H, N-33H

REK-O-KUT CO., INC.

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INTRODUCTION

REK-O-KUT Rondine Stereotables are designed to professional standards, and are carefully manufactured to the closest tolerances. Belt drive and single ball-bearing suspension of the turntable provide quiet, rumble-free stereo operation at 33 1/3 rpm.

Models N-33H and K-33H feature a self-lubricating hysteresis synchronous motor. The Model K-33 is supplied with a heavy-duty, 4-pole induction motor.

Models K-33 and K-33H are partially assembled

kits. Assembly can be completed in 30 minutes, using only a few simple tools.

The Model N-33H is assembled, ready for operation when received.

REK-O-KUT turntables should be mounted on a 3/4-inch plywood board (commonly known as a motor-board) to provide stable and adequate mass for the turntable assembly. The motorboard should be level, to assure proper arm tracking on the record.

LUBRICATION

Turntable Shaft and Shaft Well

1. Remove turntable from shaft well by slowly lifting it straight up.
2. Remove ball bearing from bottom of shaft well.
3. Clean turntable shaft, shaft well, and ball bearing with carbon tetrachloride.
4. Replace ball bearing in bottom of shaft well.
5. Lubricate turntable shaft and shaft well by lightly coating with REK-O-KUT Lubricant (#20 S.A.E. motor oil).
6. Use enough lubricant to just cover ball bearing in bottom of shaft well (Fig. 1).
7. Replace turntable in shaft well by lowering gently, with a turning motion, into position.
8. Clean outside rim of turntable and pulley on motor shaft, to remove any oil or foreign matter, before replacing belt.

Motors

The motor in Models N-33H and K-33H is permanently oiled at the factory. Do not oil.

The motor in the Model K-33 is oiled at the factory. Five or six drops of #20 S.A.E. motor oil are required in the upper and lower motor oil feed holes every 12 months, when the motor is operated under normal conditions. On later models, where no oil tubes are visible, the motor has been permanently oiled at the factory. Do not oil.

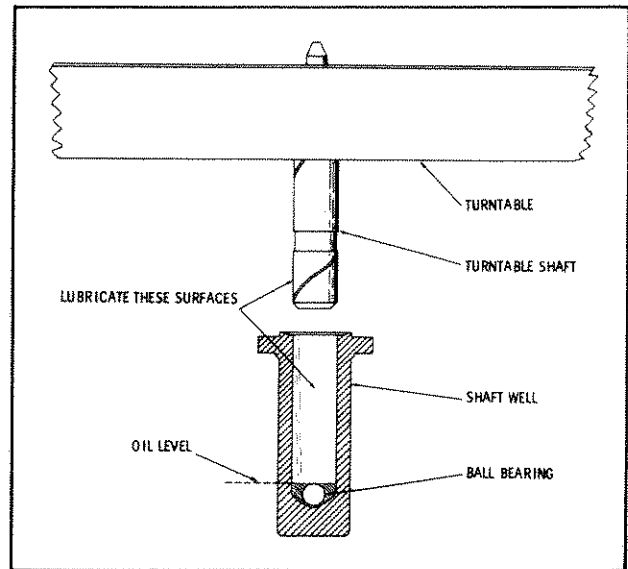


Fig. 1. Turntable Lubrication Points

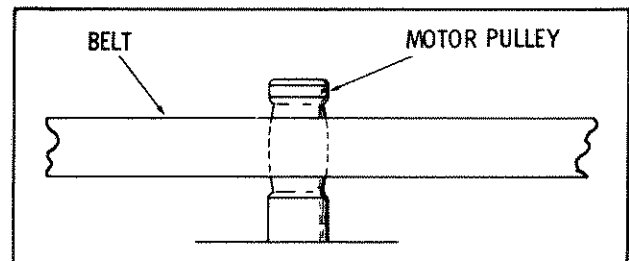


Fig. 2. Belt Position on Motor Pulley

ADJUSTMENTS

Belt Position

While the turntable is turning, inspect the belt to make sure it is riding in the correct position on the motor pulley. (Fig. 2).

If the belt is too high on the motor pulley, turn motor adjustment screw (A) (Figs. 3 and 4) clockwise to lower it.

If the belt is too low on the motor pulley, turn motor adjustment screw (A) counterclockwise to raise it.

Belt Tension

Sufficient tension must be applied to the belt to maintain traction on the turntable and motor pulley. Too much tension will produce turntable rumble.

If the belt tension is insufficient to turn the turntable properly, loosen three screws (8) and turn adjustment screw (10) counterclockwise to increase the tension to the correct amount. Tighten three screws (8) to lock the adjustment.

If the belt tension is excessive, reduce the tension by loosening three screws (8) and turning adjustment

screw (10) clockwise until the turntable rumble is eliminated. Tighten three screws (8) to lock the adjustment.

Speed (K-33 only)

Operate the turntable for 20 minutes before making speed adjustments. Check the speed by viewing the strobe disc under fluorescent, neon, or incandescent lighting. Loosen three screws (8).

If the strobe line moves counterclockwise (turntable running slow), turn adjustment screw (10) clockwise until the strobe line stands still, indicating that the correct speed has been reached. Tighten three screws (8) to lock the adjustment.

If the strobe line moves clockwise (turntable running fast), turn adjustment screw (10) counterclockwise until the strobe line stands still. Tighten three screws (8) to lock the adjustment.

Check and adjust the belt position, if necessary as described under "Adjustments - Belt Position".

N-33H and K-33H do not require speed adjustments. Their speed is determined by the frequency of the AC supply.

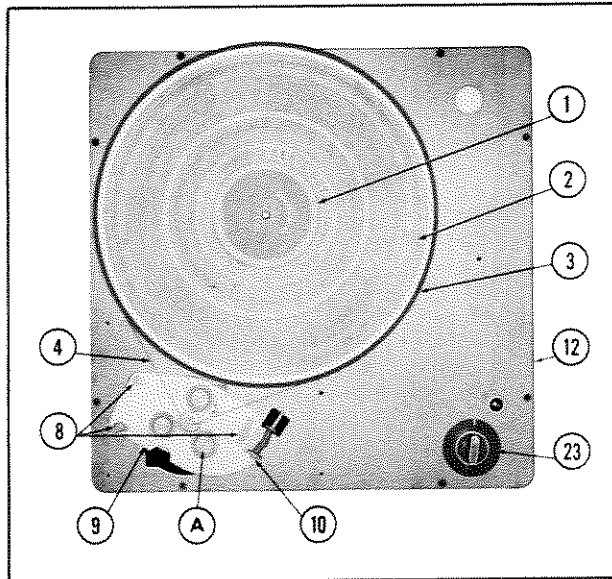


Fig. 3. Top View - N-33H with Cover Removed

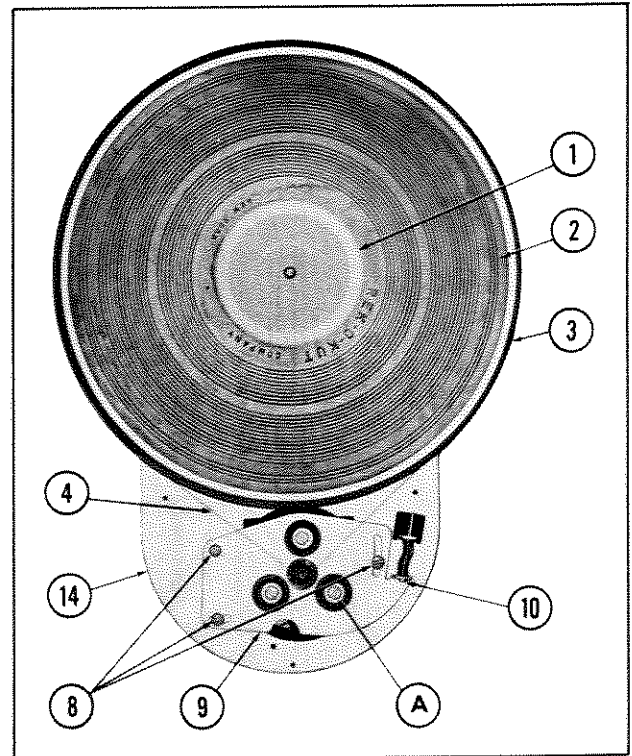


Fig. 4. Top View - K-33 and K-33H with Cover Removed

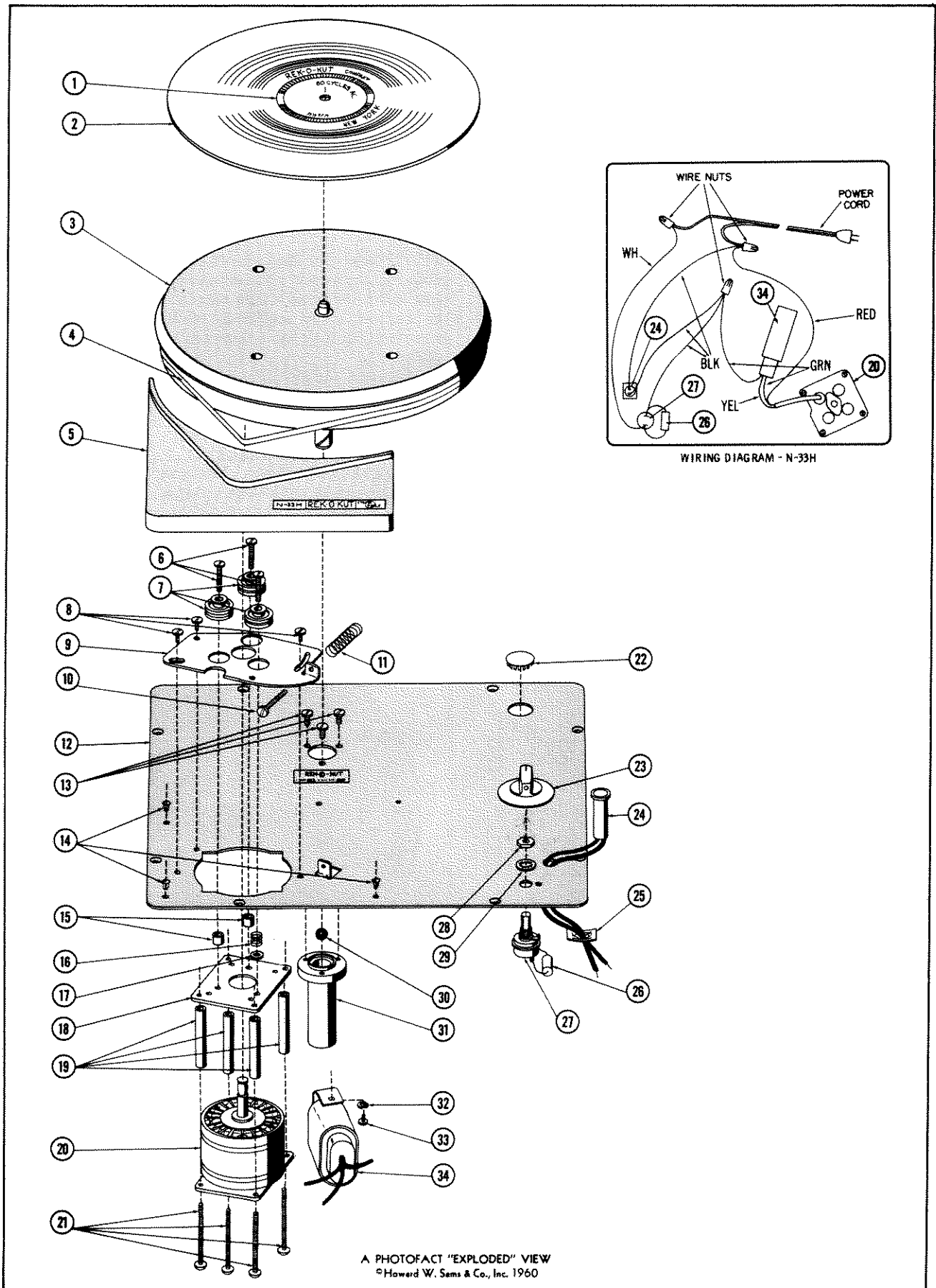


Fig. 5. Exploded View - N-33H

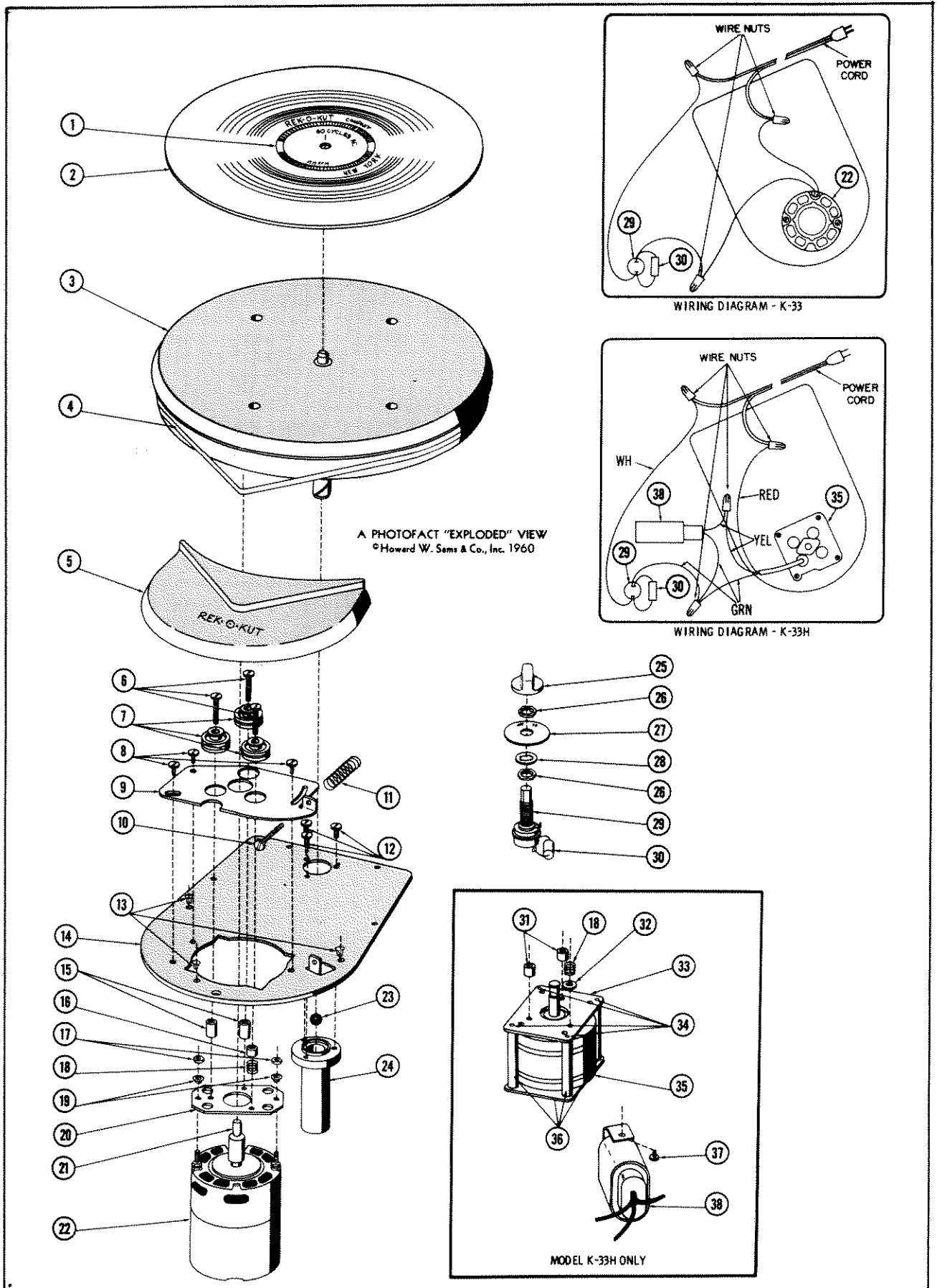


Fig. 6. Exploded View - K-33 and K-33H

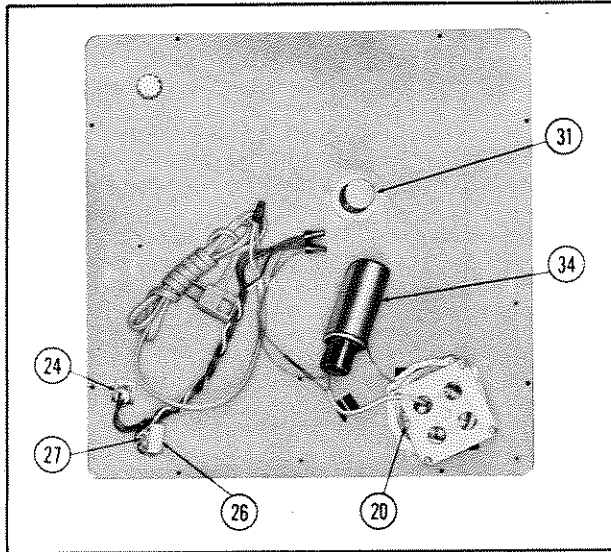


Fig. 7. Bottom View - N-33H

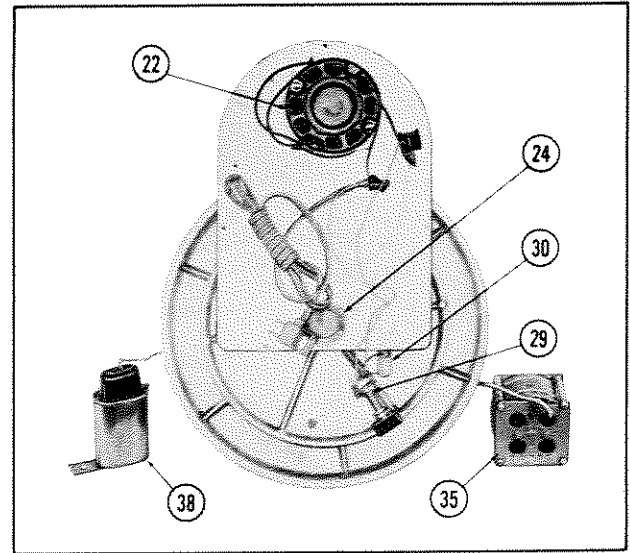


Fig. 8. Bottom View - K-33 and K-33H

TROUBLE CHART

Symptom	Cause	Remedy
Turntable runs slowly.	1. Incorrect speed adjustment.	1. Adjust as described under "Adjustments".
	2. Oil on motor pulley.	2. Clean motor pulley and belt with carbon tetrachloride.
	3. No oil in turntable shaft well.	3. Clean and lubricate turntable shaft and shaft well.
	4. Line voltage too low. (K-33 only)	4. Adjust line voltage with auto transformer, etc. (K-33 only)
	5. Motor bearings out of line or worn. Scored rotor shaft.	5. Replace bearings or motor.
	6. Defective motor.	6. Replace motor.
Turntable rumble.	1. Excessive belt tension	1. Adjust as described under "Adjustments".
	2. Rough motor.	2. Replace motor.
	3. Worn bearings.	3. Factory or service-station repair.
	4. Motor shaft out of alignment.	4. Replace motor shaft or complete motor.
	5. Eccentric or burred pulley. (K-33 only)	5. Factory repair.
Audible noise (not through speaker).	1. No oil in turntable shaft well.	1. Clean and lubricate turntable shaft and shaft well.
	2. Turntable scraping on frame.	2. Replace ball bearing in shaft well, if missing. Check for foreign material between turntable and frame. If turntable is misaligned, return to factory.

TROUBLE CHART (Continued)

Symptom	Cause	Remedy
	3. Motor bearings worn.	3. Factory or service-station repair.
	4. Belt rubbing on cover.	4. Adjust belt position (Fig. 2) as described under "Adjustments".
Turntable does not start.	1. AC line not connected.	1. Check power source.
	2. Open motor winding.	2. Replace motor.
	3. Switch defective.	3. Replace switch.
	4. Ball bearing missing from shaft well.	4. Install ball bearing.
	5. Motor shaft frozen.	5. Return to factory.
	6. Motor capacitor defective. (N-33H and K-33H only).	6. Replace capacitor.
Turntable wow	1. Motor pulley not concentric.	1. Factory repair.
	2. Pulley loose on motor shaft (K-33 only).	2. Factory repair.
	3. No oil in turntable shaft well.	3. Clean and lubricate turntable shaft and shaft well.
	4. Motor shaft binding.	4. Factory repair.
	5. Belt tension incorrect.	5. Adjust as described under "Adjustments".
	6. May be inherent in recording.	6. Do not use recording.
Turntable flutter.	1. Motor pulley out of round.	1. Factory or service-station repair.
	2. Motor out of balance.	2. Replace motor.
Incorrect speed.	1. Incorrect speed adjustment (K-33 only).	1. Readjust as described under "Adjustments".
	2. Hardened oil or sludge in shaft well.	2. Clean turntable shaft and shaft well with carbon tetrachloride, and relubricate.
	3. Incorrect belt position (K-33H and N-33H only).	3. Adjust belt position (Fig. 2) as described under "Adjustments".
Turntable continues to run with switch in Off position.	1. Defective switch.	1. Replace switch.
	2. Shorted capacitor on switch.	2. Replace capacitor.
Pop heard from speaker when switch is turned to On position.	1. Defective (open) capacitor on switch.	1. Replace capacitor.

NOTE: Replace motor only after all other remedies fail to eliminate trouble symptoms.

N-33H PARTS LIST

Ref. No.	REK-O-KUT Part No.	Description
1	UP-3	Strobe Disc*
2	UC-32-12-2	Mat, Turntable
3		Turntable and Shaft Assembly
4	UC-101	Belt
5	N-33HZ-40-1	Cover
6		#10-32 x 15/16" BH Machine Screw
7	UC-701	Shock Mount
8		#8-32 x 1/4" BH Machine Screw
9	UC-15	Plate, Shift
10	UC-17	Screw, Shift Plate
11	UC-16	Spring, Shift Plate
12	N-33H-10-1	Frame
13		#10-32 x 3/8" RH Machine Screw
14	UC-9	Clip, Tubular
15	UC-602	Spacer, 60-cps Operation
	UC-603	Spacer, 50-cps Operation
16	UC-601	Spring, Motor Mounting
17		7/32" x 1/2" Washer, Spacer, 60-cps Operation
	UC-605	Spacer, 50-cps Operation
18	UC-41-2	Plate, Motor Mounting
19	UC-42	Spacer
20	UC-503	Motor, 60-cps Operation
	KNA-33-78-50	Motor and Pulley Assembly, 50-cps Operation
21		#8-32 x 2 1/4" RH Machine Screw
22	UC-2001	Plug
23	N-33H-902	Knob
24	UC-6	Pilot-Light Assembly
25		Speed Nut (Part of 24)
26	UC-98	Capacitor, .047 mfd.
27	N-33H-201	Switch
28		3/8" Hex Nut (Part of 27)
29		3/8" Lockwasher (Part of 27)
30		Ball Bearing, 0.343" Diameter
31	UC-20-1	Well, Shaft
32		#10 Lockwasher
33		#10-32 x 1/4" BH Machine Screw
34	UC-97	Capacitor, 4 mfd, 60-cps Operation
	UC-92	Capacitor, 6 mfd, 50-cps Operation

*Not used on later models.

K-33 and K-33H PARTS LIST

Ref. No.	REK-KUT Part No.	Description
1	UP-3	Strobe Disc*
2	UC-32-12-2	Mat, Turntable
3		Turntable and Shaft Assembly
4	UC-101	Belt
5	K-33Z-40-1	Cover (K-33 only)
	K-33ZH-40-1	Cover (K-33H only)
6		#10-32 x 1 1/8" BH Machine Screw (K-33 only)
		#10-32 x 15/16" BH Machine Screw (K-33H only)
7	UC-701	Shock Mount
8		#8-32 x 1/4" BH Machine Screw
9	UC-15	Plate, Shift
10	UC-17	Screw, Shift Plate
11	UC-16	Spring, Shift Plate
12		#10-32 x 3/8" RH Machine Screw
13	UC-9	Clip, Tubular
14	K-33-10-1	Frame
15	UC-603	Spacer (K-33 only)
16	UC-605	Spacer (K-33 only)
17		#8-32 Hex Nut (K-33 only)
18	UC-601	Spring, Motor Mounting
19		Brass Rivet (K-33 only)
20	K-33-17	Plate, Motor (K-33 only)
21	K-33-44	Pulley, Motor, 60-cps Operation (K-33 only)
	K-33-44-50	Pulley, Motor, 50-cps Operation (K-33 only)
22	UC-507	Motor, 60-cps Operation (K-33 only)
	UC-507-50	Motor, 50-cps Operation (K-33 only)
23		Ball Bearing, 0.312" Diameter
24	UC-20-1	Well, Shaft
25	K-33-901	Knob
26		3/8" Hex Nut (Part of 29)
27	UP-12	Plate, Switch
28		3/8" Lockwasher (Part of 29)
29	K-33-200	Switch
30	UC-98	Capacitor, .047 mfd
31	UC-602	Spacer, 60-cps Operation (K-33H only)
	UC-603	Spacer, 50-cps Operation (K-33H only)
32		7/32" x 1/2" Washer, Spacer, 60-cps Operation (K-33H only)
	UC-605	Spacer, 50-cps Operation (K-33H only)
33	UC-41-2	Plate, Motor Mounting (K-33H only)
34		#8-32 x 2 1/4" RH Machine Screw (K-33H only)
35	UC-503	Motor, 60-cps Operation (K-33H only)
	UC-503X	Motor, 50-cps Operation (K-33H only)
36	UC-42	Spacer (K-33H only)
37		#10 x 1/2" RH Wood Screw (K-33H only)
38	UC-97	Capacitor, 4 mfd, 60-cps Operation (K-33H only)
	UC-92	Capacitor, 6 mfd, 50-cps Operation (K-33H only)