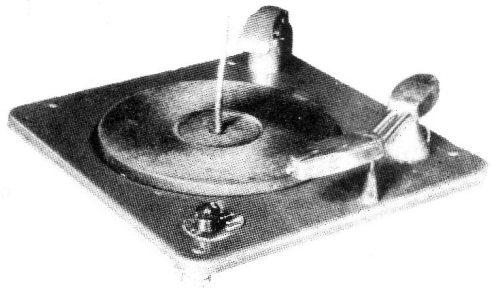
SERVICE BULLETIN

Northern Electric
A National Electrical Service
Northern Electric Company Limited

Northern Electric RADIO



MODEL 800

AUTOMATIC RECORD CHANGER

SERVICE INFORMATION

SPECIFICATIONS

General:

The Model 800 Automatic Record Changer is designed to play twelve 10" or ten 12" standard phonograph records, which are changed automatically as each record is finished.

Stopping:	Manual
Color:	Ornamental gold finish on base with black plastic parts.
Frequency:	25 or 60 cycles in accordance with the nameplate frequency of the radio phonograph combination with which it is associated.
Pickup:	High impedance crystal type.
Needle:	Not supplied with changer. Semi-permanent metal or jewel point type recommended.

DESCRIPTION OF CYCLE

A. Control Mechanism

When the control knob (19) is turned to "Man" (manual) position marked on the escutcheon (18), the control cam (25) revolves. A leg on the control cam engages the switch arm on the switch assembly (71), throwing it to the "On" position, which closes the electrical circuit, thus energizing the motor (20) (109) and causing the turntable (2) to rotate.

The automatic record changing mechanism does not function until the control knob is turned to the "REJ" (reject) position marked on the escutcheon. This rotates the control cam causing the control link (28) to move laterally along its axis, which pushes the off-set end of the trip link (52), causing it to rotate on its axis, thereby releasing the worm follower (64) from the hook on the trip link. When the worm follower drops and engages in the worm threads (106), the automatic mechanism is started into motion. The cam spring (23) returns the control cam and knob to the "AUT" (automatic) position marked on the escutcheon, as soon as pressure is removed from the control knob.

B. Turntable and Motor

When the motor (20) (109) is energized, its rotor pulley revolves, turning the drive wheel (21), which causes the turntable (2) and turntable shaft (102) to rotate on its bearings (99 and 107) in the sub-frame assembly (Fig. 3).

C. Trip

As the pickup arm (10) moves across the record, the pickup crank (44) turns on its axis, which in turn moves the trip crank (41), causing the trip screw (35) to approach the trip plate (50). When the pickup needle enters the trip groove at the end of the record, the trip screw presses against the trip plate. The trip plate shaft (50) then is rotated such that the crank end of the shaft relaxes its pressure against the trip link (52). The trip link spring (61) then pulls the hook on the trip link away from the worm follower (64). When the worm follower drops and engages in the worm threads (106), the automatic cycle is started.

D. Drive Mechanism

As the worm follower (64) engages the worm threads (106), the follower arm (30) is caused to pivot on its fulcrum (51) with the following results:

1. It causes the opposite end of the follower arm (87 in Fig. 1) to raise and lift the trip crank (76), lift shaft (83), and lift screw (80) assembly upward such that the lift screw also raises the pickup arm up from the record. In this upward travel, the trip crank (76) is caused to ride against the inclined edge of the index (77), which imparts a certain rotation to the pickup axis, causing the pickup arm to move past the outer diameter of the records on the turntable.
2. The timing screw (53) is pushed by the follower arm (30), which causes the ejector arm (55) to pivot in its fulcrum (59). This pivots the trigger (95 in Fig. 2) upward and forward in its housing (88), pushing the

ejector slide (93), which in turn pushes the record off the shelf of the storage shaft (100 in Fig. 3).

When the worm follower reaches the end of the worm threads in the down direction, the cycle peak has been reached, and the worm follower then follows the cross-over threads on the worm and travels back up the worm to be caught by the hook on the trip link in the rest position.

As the worm follower returns to rest, the follower arm is caused to pivot in the reverse direction on its fulcrum with the following results:

1. The timing screw (53) is relieved of the pressure of the follower arm (30), allowing trigger spring (94 in Fig. 2) to return the trigger (95), the ejector slide (93), and the ejector arm (55) to normal rest position. As the ejector slide returns to normal, the rim of the next record drops in place in front of the two small tabs on the ejector slide.
2. The pickup arm lowers to the starting groove of the record as the trip crank (76 in Fig. 1) falls, vertically guided by the restraining edge of the index (77).

LUBRICATION

Additional lubrication should not be required for the life of the changer, but in cases of unusual use or high operating temperature the changer should be lubricated as follows:-

Apply light grease to:-

1. Worm threads (106).
2. Lift shaft (83).
3. Contact point between pickup crank (85) and trip crank (76).
4. Follower arm (30).
   - *(a)* At pivot of fulcrum (51).
   - *(b)* At contact point of trip crank (76).
   - *(c)* At contact point of sub-frame (63).
5. Ejector Arm (55)
   - *(a)* At contact point with trigger (95).
   - *(b)* At contact point of follower arm (30) and screw head (53).
6. Index (77) on surfaces of slide for trip crank arm (76).
7. Follower guide (65) where follower (64) bears.

Apply a small quantity of light oil to:

1. Surface between turntable shaft (102) and storage shaft (100).
2. Follower (64) at pivot with follower arm (30).
3. Ejector arm (55) at pivot with ejector fulcrum (59).
4. Index (40) at bearing with slide bracket (48).
5. Trip Link (52).
   - *(a)* At bearing in fulcrum (51).
   - *(b)* At bearing in trip bracket (60).
6. Trip plate (50) at bearing in fulcrum (51).

ADJUSTMENTS:

Needle Set-Down:

Set-down of needle is adjusted by index screw (36). If needle sets down too far out, turn screw clockwise. Conversely, if needle sets down too far in, screw must be turned counterclockwise. If set-down has been disturbed from holding pickup arm (10) during cycle or other wilful damage, pickup arm crank (44) must first be properly aligned with pickup arm (10). Loosen crank screw (43) slightly, turn pickup arm crank (44) until it is stopped by screw (42) in base plate (1), push pickup arm (10) until it is approximately 1/4" from storage shaft (3); lock pickup arm crank (44) into this alignment with pickup arm (10) by tightening crank screw (43) securely. Proceed to adjust set-down as above described.

Center Trip:

Center trip is adjusted by turning the trip screw (35) until changer trips when the needle reaches a point 1-7/8" from the center of the record.

Ejector Slide Position:

Tabs on ejector slide (93) should be approximately 1/32" from the edge of a record. This is adjusted by screw (97).

Timing:

Timing of record drop is adjusted by screw (53) on end of ejector arm (55). Adjustment should be such to release just the bottom record of a stack of ten 12" records during cycle.

Pickup Arm Height:

The pickup arm (10) height is adjusted by the screw (80) located on top of the pickup lift shaft (83). Turn the screw (80) out or in until the top of the pickup arm clears the records on the storage shaft (3) by 1/16" to 1/8" during cycle.

Caution:

All adjustments must be locked into position by means of lock nuts provided for each adjusting screw.

SERVICE INFORMATION:

Turntable does not revolve when control knob is turned to "On" position:

1. *Machine stalled in cycle:*

   Turn turntable (2) carefully by hand until it starts rotating under its own power.

2. *No current at motor:*
   - *(a)* Check to determine if current is reaching A.C. leads of changer.
   - *(b)* Check switch (71) to determine if it is closing the electrical circuit.
   - *(c)* Check wiring and soldered terminals in changer.

3. *Motor defective:*

   Remove turntable (10) to allow motor (20) (109) to operate without load. If current is reaching motor and pulley does not rotate, the motor is defective. Repair or replace.

4. *Motor idler wheel (21) not engaging turntable rim:*

   If motor pulley is turning but turntable is not;
   - *(a)* Check motor idler assembly to determine if it is free to contact the motor pulley and the turntable.
   - *(b)* Wipe off the inside rim of the turntable to remove flock or if oily, clean turntable rim and rubber tire of idler wheel (21) with carbon tetrachloride.

5. *Turntable bearing (99) tight:*

   Hold idler wheel (21) away from turntable or remove idler wheel and rotate turntable by hand to see if it is free. If binding occurs, remove turntable and lubricate the oilite turntable shaft bearing (99) with light oil.

Changer does not cycle when control knob is turned to "REJ"position:

1. *Changer stalled or motor not driving turntable.* (See "TURNTABLE DOES NOT REVOLVE WHEN CONTROL KNOB IS TURNED TO "ON" POSITION" 1, 2, 3, 4 and 5.
2. *Manual reject not actuating trip:* Turn control knob to "REJ" position, hold and see if hook on end of trip link (52) is pulled back sufficiently to allow worm follower (64) to drop and engage in worm threads (106).
   (a) If trip link (52) does not release follower (64), check control link rod (28). If rod is bent, carefully straighten and check for trip again.
   (b) If trip link (52) is not restricting follower (64), but follower still does not engage in worm (106), the follower (64) must be removed from the follower arm (30) and dirt or other foreign particles cleaned from the pivot point and from between the line of contact between the two parts.

   To remove follower (64):

   (1) Be sure changer is not in cycle.
   (2) Remove turntable (10).
   (3) Remove two screws (62) from base plate and sub-frame (63).
   (4) Carefully work sub-frame assembly (63) out of base plate (1) and revolve assembly counter-clockwise to work it off follower (64) and follower arm (30).
   (5) Remove follower (64).

   (c) If follower (64 drops but does not engage in worm (106):
   (1) Check for excessive wear in pivot of follower (64) and follower arm (30).
   (2) Check to see if spring (29) has become unhooked.
   (3) Check for dirt in follower - follower arm pivot as per paragraph 2-*b*, above
3. *Turntable (2) not engaging turntable lock (103):*

   If turntable (2) has become unseated from the turntable lock (103), reseat as follows:-
   (a) Push idler wheel (21) back out of the way.
   (b) Turn control knob (19) to position marked "REJ" (Power must not be connected.)
   (c) Revolve turntable until it drops into position on its tapered shaft (102).
4. *Turntable lock (103) loose on turntable shaft (102):*

   Replace with new lock or with new turntable shaft assembly (102).

Record does not drop when changer cycles:-

1. Check for bent storage shaft (3).
2. Check for under or over size record or enlarged center hole.
3. Check position of ejector slide (93) per third paragraph under "ADJUSTMENTS".
4. Check screw (53) in ejector arm (55) to see if it hits follower arm (30) when follower (64) is at bottom of worm (106). If lock nut on this screw has worked loose, reset screw per fourth Paragraph under "ADJUSTMENT".
5. Check to see if ejector slide (93) is properly seated with its pushing mechanism on the trigger (95).
6. Check for defective trigger (95) by slowly pulling ejector arm (55) down by hand and checking if record drops. If record does not drop, trigger (95) must be repaired or replaced. To remove trigger:
   (a) Unhook index spring (49) from ejector link (56).
   (b) Remove 4 screws (57) from base plate and housing assembly.
   (c) Lift trigger (95) from housing (88) and check for broken weld on strengthening brace.

Two records drop at once:-

1. Hole in record too large or records undersized.
2. Guide (101) in storage shaft (100) not fully down.
   (a) Check guide to be sure it is free and does not bind at any point. Clean out foreign matter or straighten if necessary. DO NOT OIL.
   (b) When records are placed on storage shaft (100), be sure the guide (101) is all the way down.
3. Check for position of ejector slide (93) per third paragraph under "ADJUSTMENTS".

Record hits pickup arm:-

1. Check timing of changer cycle per fourth paragraph under "ADJUSTMENTS".
2. Check for a creeping index (40). Index "creeps" if it moves when changer goes through cycle. To correct this condition:
   (a) Be sure that the pickup (10) and pickup crank (44) are aligned with each other as described in first paragraph under "ADJUSTMENTS".
   (b) Place ejector slide (5) in 12" position, cycle changer until follower (64) is at bottom of worm (106). Index spring (49) should be *just barely slack*. Ejector link (56) may be bent forward or back to give the index spring (49) this required slack.
3. Check for too much gap between follower arm (87) and trip crank (76). This gap should be about the thickness of a sheet of paper (.005 to .016). To reduce gap, do one of the following:
   (a) Bend follower arm (87) up.
   (b) Replace follower arm (87).

Needle does not set on both 10" and 12" records:-

1. Check needle set-down for 10" position by holding the index (40) in with the fingers as far as it will go and cycle changer.
2. Check needle set-down for 12" position by holding the index (40) out with the fingers as far as it will go and cycle changer.
3. If 1 and 2 above are all right, when index (40) is held in either position, check for "creeping index" per paragraph "Record hits pickup arm"-2.
4. Check for binding between guide tabs on index (40) and index screw (36).
5. Check for binding between index (40) and index slide bracket (48).

Needle does not track across record properly:-

1. Check for gap between follower arm (87) and trip crank (76). This gap should be about the thickness of a sheet of paper (.005 to .016). To increase gap do *one* of the following:
   (a) Bend follower arm (87) down.
   (b) Place an appropriate thickness washer over the lift shaft (83) and under the lift nut (81).
2. Check for lack of vertical play of lift shaft (83) in the pickup post (84). There should be .003 to .010 play here. To correct, loosen screw (43) in pickup crank (85), place shim between pickup hinge washer (78) and pickup post (84) and reset pickup (10) and pickup crank (76) per first paragraph under "AD-

Needle does not track across record properly:- (Cont'd)

JUSTMENTS", and remove shim.

3. Check for lack of lubrication between lift shaft (83) and pickup post (84).

Center trip defective:-

1. Check to be sure control knob (19) is in "AUT" position.
2. If changer trips too soon or too late, re-adjust per second paragraph under "ADJUSTMENTS".
3. If changer does not center trip, push trip plate (50) back by hand and see if hook on trip link (52) is pulled back sufficiently to release worm follower (64). See "Change does not cycle when control knob is turned to "REJ" position" -2. If trip link hook does not release the follower (64), check for the following:
   (a) Weak or damaged spring (61).
   (b) Binding between trip bracket (60) and trip link (52).
   (c) Binding due to burrs between die-cast fulcrum (51) and trip link (52).
   (d) If none of the above show trouble, bend the tail of the trip link (52) in toward the side of the fulcrum (51). This will allow the hook on the other end of the trip link (52) to pull back farther.
4. If changer trips continuously, check for the following:
   (a) Spring (33) weak or unhooked.
   (b) Binding between trip plate rod (50) and the die-cast fulcrum (51).
   (c) Too much clearance between hook on trip link (52) and follower (64). Correct by bending tail on trip link (52) away from side of fulcrum casting (51). This will cause the hook end of the trip link to engage the follower (64) more closely.
5. If needle jumps out of eccentric groove in record:
   (a) Check trip pressure. This should not exceed 12 grams. If trip pressure is too high, check:
      (1) For binding as in 4-*b* above.
      (2) Spring (33) too strong. May be weakened by carefully stretching one of the center loops.
   (b) Record may be defective. The trip grooves are often too shallow. Check with a record known to be good.
   (c) Needle point may be worn.

Turntable speed too slow:-

1. Binding in turntable bearing (99). See "Turntable does not revolve when control knob is turned to "On" position" -5.
2. Motor pulley too small in diameter. Replace with motor pulley of correct diameter.
3. Line voltage too low. Voltage in a 115 volt changer should not be less than 100 volts.
4. Operating temperature too low. Surrounding temperature should not be less than 60°F.

Turntable speed too fast:-

Motor pulley too large in diameter. Replace with motor pulley of correct diameter.

Turntable stalls in cycle:-

1. Idler wheel (21) not engaging turntable (2). See "Turntable does not revolve when control knob is turned to "On" position" - 4.
2. Turntable bearing (99) tight. See "Turntable does not revolve when control knob is turned to "On" position" -5.
3. Operating temperature too low. See "Turntable speed too slow" -4.
4. Line voltage too low. See "Turntable speed too slow" -3.
5. Binding between follower (64) and worm (106).
   (a) Check lubrication of follower arm (30) at point of bearing with sub-frame (63).
   (b) Check lubrication of worm threads (106).
   (c) File some metal from follower arm (30) at point of bearing with sub-frame (63) to allow more clearance between worm (106) and follower (64). To remove follower arm (30):
      (1) Remove spring (29).
      (2) Remove cotter pin (31).
      (3) Remove follower arm (30).
6. Trip crank (76) jams on index (77):
   (a) Check for lubrication on index (40) at point of bearing with trip crank (41).
   (b) Check for burrs on inclined surface of index (40). Surface must be very smooth. Polish with crocus cloth.
   (c) Check for grooves worn into trip crank arm (41) at contact point with index (40). File smooth with fine file, if necessary.

Noise during playing of record:-

1. Rumble:
   (a) *From Motor (20) (109):* If a low pitched rumbling sound comes from the loudspeaker while a record is being played, check the motor spacers (22) to be sure the motor is freely suspended on them. The motor lead wires should have slack to allow the motor to float. Motor rumble may also come from an out of balance motor rotor. In this case, the motor should be replaced.
   (b) *From Bearings:* Defective turntable shaft bearings (99) can cause rumble. Check for foreign matter. Lubricate with light oil.
2. *Defective motor idler wheel:*

   A rapid thumping sound while the motor is running may indicate a flat spot on the motor idler wheel (21). Remove the turntable (2) and check the rubber tire on the idler. If the surface of the rubber tire is not smooth and even, replace the idler.
3. *Defective needle:*

   A bad needle will cause loud needle scratch or hiss through both the speaker and the air directly from the needle. For reduced needle scratch and "needle talk", use a needle with high vertical compliance such as an off-set "Dog leg" type needle.
4. *Defective Record:*

   Worn or defective records cause needle scratch and distortion of the recorded sound. If the record is warped, it may slip on the other records causing "wow", a waver in the recorded sound. An enlarged hole in the record can also cause "wow".
5. *Turntable scrapes:*

   If a scraping sound occurs as the turntable revolves, check:
   (a) Turntable (2) warped, causing outer rim to rise and fall.
   (b) Motor idler (21) bent.
6. *Squeaks:*

   Squeaking sound as changer operates indicates lack of lubricant. Lubricate points indicated under LUBRICATION.

Noise during cycling:-

1. There is normally an audible snap when the follower (64) engages with the hook end of the

Noise during cycling:-(Cont'd)

trip link (52) at the end of the cycle.

2. Squeaks: See LUBRICATION.
3. Grinding sound indicates lack of lubrication or worn parts.

Distortion of recorded sound:-

1. Defective needle. See "Noise during playing of record" -3.
2. Defective record. See "Noise during playing of record" -4.
3. Defective pickup cartridge (13).

   When the cartridge is defective, the recorded sound may be distorted, weak or stop entirely.
4. Defective amplifier:

   Check phonograph amplifier and speaker.

No sound during playing:-

1. Defective cartridge (13). See "Distortion of recorded sound" -3.
2. Defective wiring.

   Check pickup leads for a shorted or open lead.
3. Defective amplifier. See "Distortion of recorded sound" -4.

Excessive record wear:-

1. Binding in pickup arm (10). See "Needle does not track across record properly" -1 and 2.
2. Defective needle. See "Noise during playing of record" -3.
3. Excessive needle pressure:

   The pickup arm (10) is designed to give the proper needle pressure when an aluminum cased cartridge is used. If a cartridge with a die-cast housing is used, a compensating spring must be used to bring the needle pressure down to the usual standard of 1 oz. to 1-1/2 oz. If the needle pressure is too great on a pickup arm using a compensating spring,, bend the long end of the spring.

Turntable continues to rotate after control knob is turned to "Off" position:

Switch (71) defective, check for defects and replace if necessary.

Figure No. 1

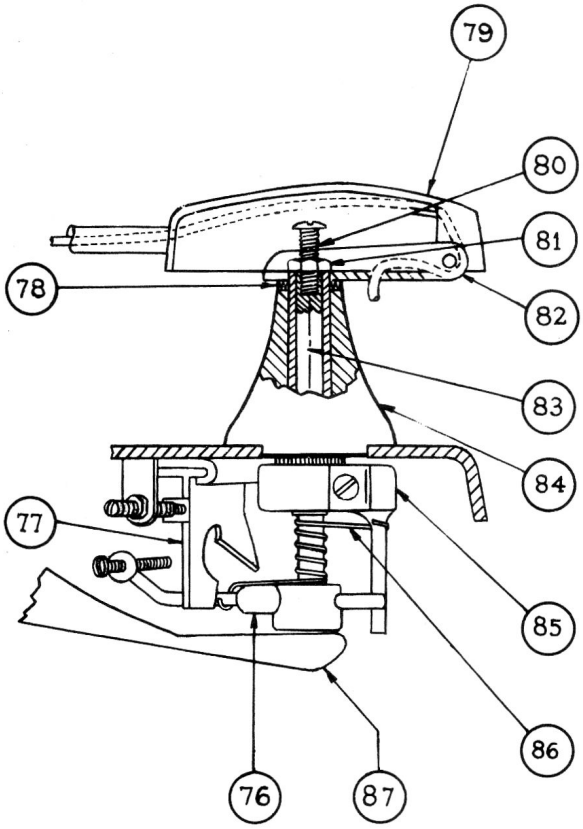
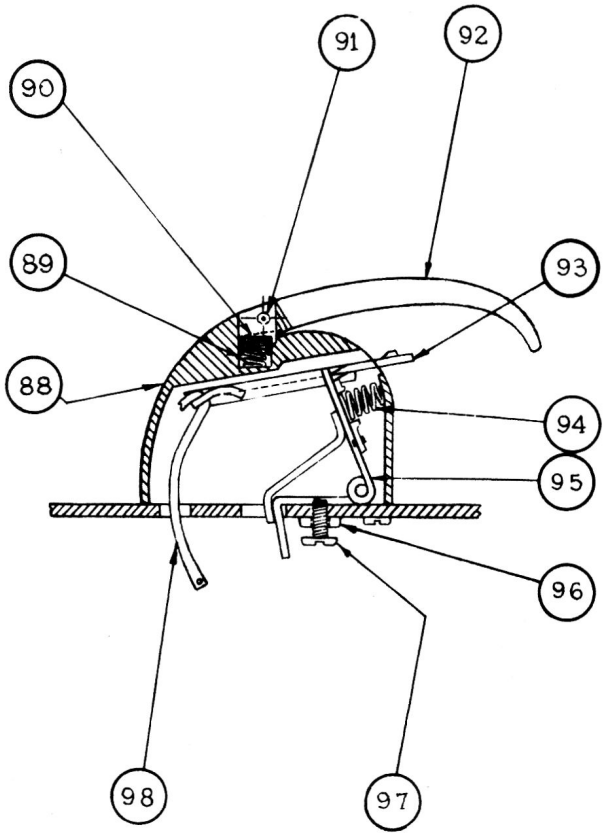


Figure No. 2



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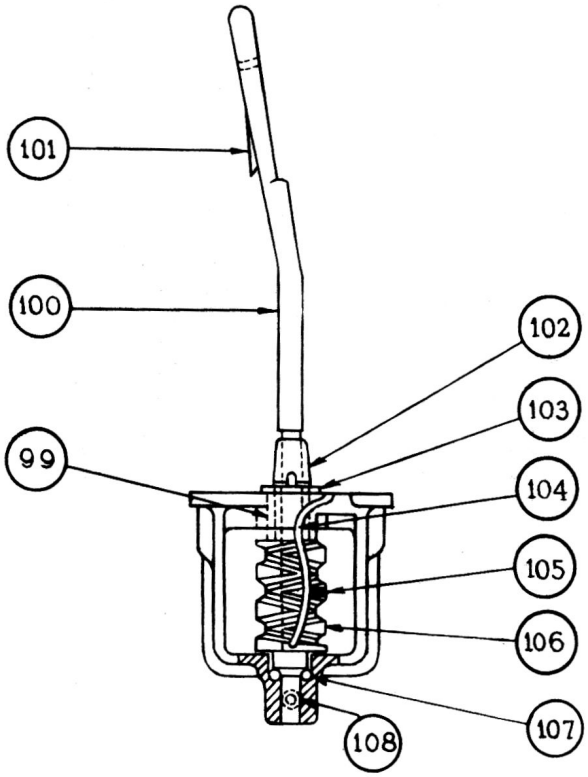

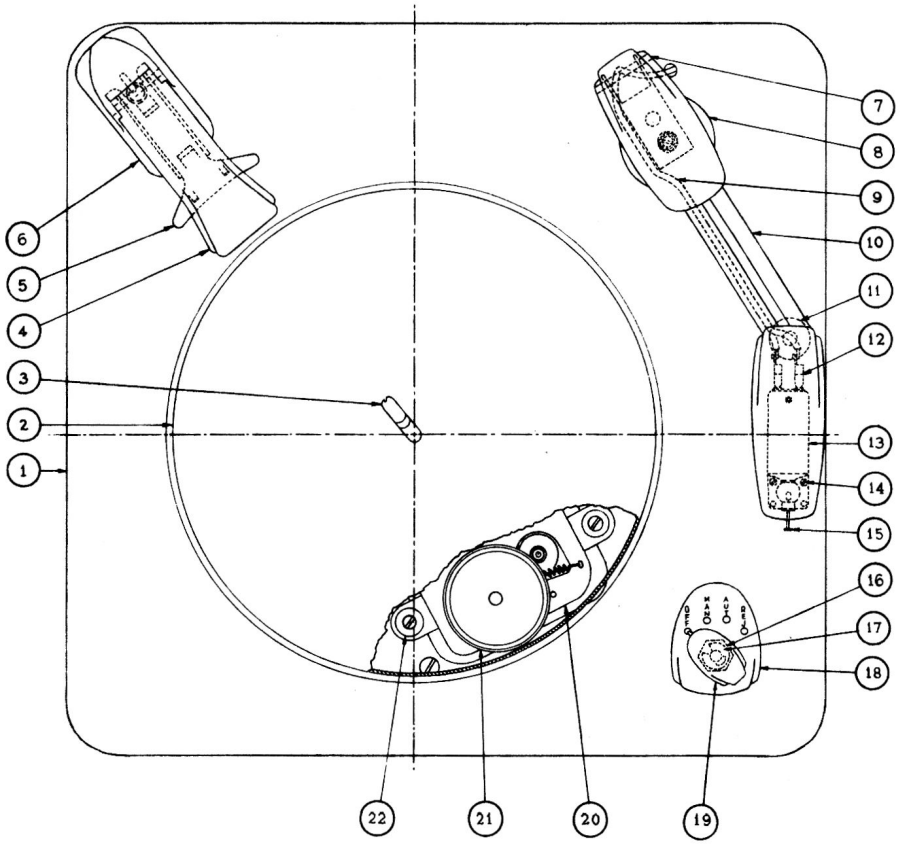

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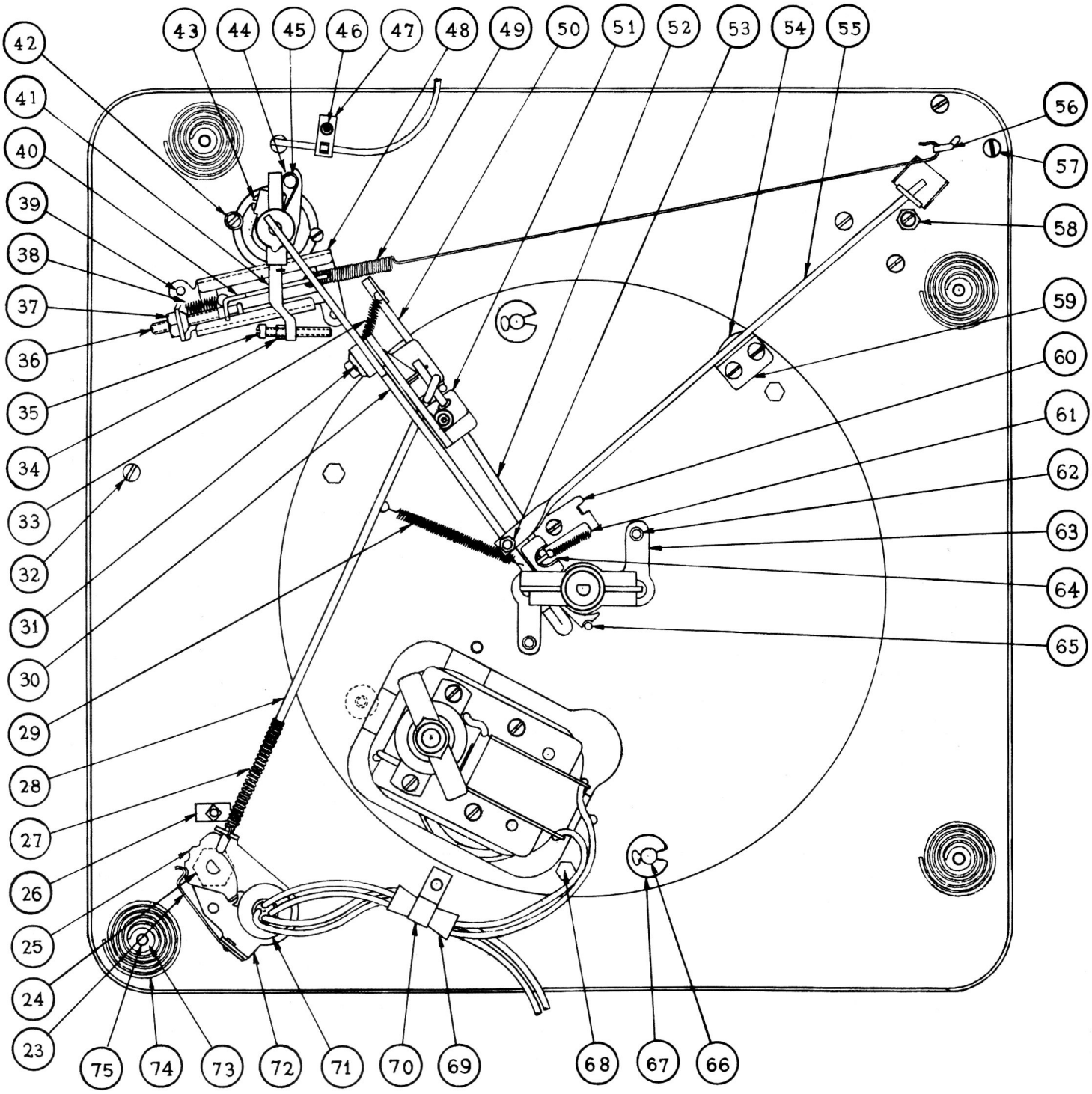
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Figure No. 5

SERVICE PARTS AND SERVICE ASSEMBLIES

LOC.	PART NAME	PART NO.	DWG.NO.
1	Base Plate Assembly	1750NE	
	1 - 89 Pickup Cord Clamp		
	4 - 90 Rivet		
	2 - 94 Rivet		
	1 - 127 Motor Cord Clamp		
	4 - 478 Spring - Mounting		
	1 - 681 Pickup Post		
	2 - 709B Screw		
	4 - 934 Cup Washer		
	1- 1741 NE Base Plate		
	2 - 1771 Rivet		
	1 - 1806 Index Slide Ass'y.		
	1 - 1877 Stop Washer		
2	Turntable	518	
3	Storage Shaft Assembly	1754	
	1 - 1555 Guide Spring		
	1 - 1556 Guide		
	1 - 1655 Storage Shaft		
	1 - 1656 Pin		
4	Hold-Down	1746NE	R16269-23
5	Ejector Slide	1802	
6	Housing	1793NE	
7	Hinge Pin - Tone Arm	941-B	
8	Pickup Post	681NE	
9	Cable and Clip Assembly	984-B	
	1 - 560-B Cable		
	2 - 982 Cartridge Clip		
10	Pickup Assembly	1744NE	
	2 - 713 Screw		
	1 - 589B Lead Clip		
	1 - 649E Cartridge		
	1 - 984B Cable & Clip Ass'y		
	1 - 1747 Pickup Arm		
10	Pickup Arm	1747NE	R16269-24
11	Pickup Rest	981NE	R16269-25
12	Cartridge Clip	982	
13	Cartridge	649-E	
14	Screw #4 x 1/4 Type "Z"	713	
15	Cartridge Thumb Screw	1572	R16269-26
16	Control Shaft Bearing	1789	
17	"C" Washer	1719	
18	Escutcheon	963-3NE	
19	Knob	1711NE	R16269-27
20	Motor Assembly, 60 Cy	6011C-8	R16269-51
21	Idler Wheel	904	R16269-28
22	Motor Spacer	516	
22	Grommet	962	
22	Washer - Motor Mounting	970	
22	Screw - #6 x 5/8 Type "Z"	1717	
23	Cam Spring	1788	R16269-29
24	Control Bearing Nut	1660	
25	Control Cam Assembly	1800	
26	Speed Nut	983	
27	Spring - Control Rod	62	R16269-30
28	Control Link	1784	R16269-31
29	Spring - Follower Arm	1876	R16269-32
30	Follower Arm Assembly	1791	R16269-33
31	Cotter Pin	996-B	
32	Screw #10 x 1/2 Type "Z"	1728	
33	Spring - Trip Plate	1909	R16269-34
34	Nut - #6-32 x 1/4 Hex	1732	
35	Trip Screw #6-32 x 1	873-A	
36	Index Screw	1787	
37	Nut - #10-32	712	
38	Spring - Slide Return	1663	R16269-35
39	Rivet	1771	
40	Index	1785	
41	Trip Crank Assembly	1755	
	1 - 833 Lift Shaft		
	1 - 1796 Trip Crank		
41	Trip Crank	1796	
42	Stop Washer	1877	
43	Screw #10-32 x 5/8 R.H.	711-B	
44	Pickup Crank	1743	R16269-37
45	Spring - Crank	686	R16269-38
46	Rivet - Cord Clamp	94	
47	Pickup Cord Clamp	89	
48	Slide Bracket	1786	
48	Index Slide Assembly	1806	R16269-39
	1 - 712 Nut		
	1 - 1663 Spring		
	1 - 1785 Index		
	1 - 1786 Slide Bracket		
	1 - 1787 Index Screw		
49	Spring - Index	884	R16269-40
50	Trip Plate Assembly	1772	R16269-41
51	Fulcrum	926	
52	Trip Link	1794	
53	Nut #6-32 x 5/16 Hex	466	
53	Screw - #6-32 Phillips B. H.	1807	
54	Rivet	705	
55	Ejector Arm	669	
55	Ejector Arm and Fulcrum Assy.	1821	R16269-42
	1-- 669 Ejector Arm		
	1 - 705 Rivet		
	1 - 1766 Ejector Arm Fulcrum		
56	Ejector Link	695	
57	Screw #6 Type "Z"	709-B	
58	Screw - #6-32 x 1/2 B.H.	1668	
59	Ejector Arm Fulcrum	1766	
60	Trip Bracket	1765	
61	Spring - Trip Link	1790	R16269-43
62	Screw with Lockwasher	409	
63	Sub-Frame	1658	
64	Follower	1795	
65	Follower Guide	875	
66	Shipping Bolt	1723-A	
67	"C" Washer (shipping bolt)	1736	
68	Leg Stud	1902	
69	Motor Cord Loom	138	
70	Motor Cord Clamp	127	
71	Switch	467	
71	Switch Cover	1737	
72	Switch Bracket Assembly	1748	R16269-44
	1 - 94 Rivet		
	1 - 467 Switch		
	1 - 1737 Switch Cover		
	1 - 1769 Switch Bracket		
	1 - 1788 Cam Spring		
72	Switch Bracket	1769	
73	Cup Washer - Mounting Spring	934	
74	Spring - Mounting	478	R16269-45
75	Rivet - Mounting Spring	90	
76	Trip Crank Assembly	1755	R16269-46
	1 - 833 Lift Shaft		
	1 - 1796 Trip Crank		
76	Trip Crank	1796	
77	Index	1785	
78	Fibre Washer	48	
79	Pickup Lead Clip	589-B	
80	Screw - #5-40 x 1/2 B.H.	1616-A	
81	Nut - #5-40 x 5/16 Hex	1617	
82	Pickup Hinge Assembly	746	
83	Lift Shaft	833	
84	Pickup Post	681	
85	Pickup Crank	1743	
86	Spring Crank	686	
87	Follower Arm Assembly	1791	
88	Housing	1793	
89	Spring	428	R16269-47
90	Hold-down Cup	1757	
91	Hinge Pin - Hold-down	941-A	
92	Hold-down	1746	
93	Ejector Slide	1802	
94	Spring	423	R16269-48
95	Trigger Assembly	777	R16269-49
96	Nut #6-32 x 5/16 Hex	466	
97	Screw #6-32 x 1/2 B.H.	1668	
98	Ejector Link	695	
99	Bearing	689-A	
100	Storage Shaft Assembly	1754	
101	Guide	1556	
102	Turntable Shaft	1804	
102	Turntable Shaft-Assembly	1805	
	1 - 679 Turntable Lock		
	1 - 1804 Turntable Shaft		
103	Turntable Lock	679	
104	Follower Guide	875	
105	Set Screw	707	
106	Worm	680	
107	Ball Bearing	724	
108	Screw #6-32 x 1/2	539	
109	Motor Assembly, 25 Cy	2511C-8	R16269-52
Fig.3	Sub-Frame Assembly	1830	R16269-50
	1 - 539 Screw		
	1 - 680 Worm		
	1 - 689-A Bearing		
	1 - 707 Set Screw		
	8 - 724 Ball Bearing		
	1 - 875 Follower Guide		
	1 - 1658 Sub-Frame		
	1 - 1805 turntable Shaft Assembly		

NOTE: *Only those parts bearing drawing numbers are carried in stock. Special orders must be placed for other parts.*

Drawing numbers must be used when ordering stock items.