

Admiral

RC600 RECORD CHANGER

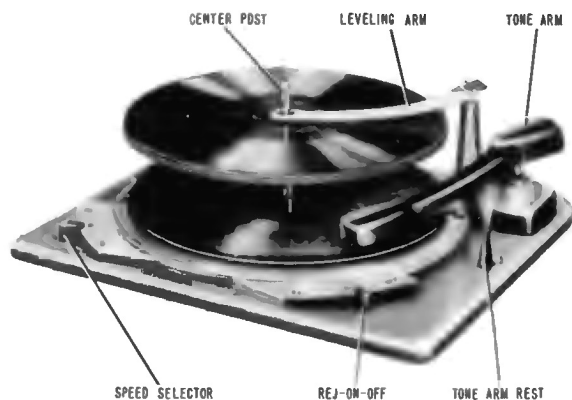


Figure 1. RC600 Record Changer, Top View.

This Admiral record changer will automatically play—

twelve of the 10-inch, 78 or 33 RPM records, or ten of the 12-inch, 78 RPM records, or twelve of the 12-inch, 33 RPM records, or fourteen of the 7-inch, 45 RPM records, or ten of the 7-inch, 33 RPM records.

The push-off is built into the record changer centerpost and operates automatically during the regular change cycle.

The tone arm set-down point is automatically selected during change cycle immediately after the first record drops to the turntable. The set-down index finger at the edge of the turntable rises momentarily to determine the correct set-down position for the tone arm.

SETTING THE SPEED SELECTOR KNOB: Correct turntable speed may be selected by sliding the speed selector pointer to the position indicated for 33, 78 or 45 RPM. See figure 2.

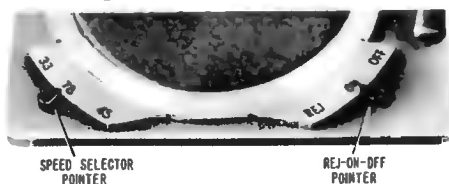


Figure 2. RC600 Record Changer Control Panel.

LOADING AND STARTING: Remove needle guard which protects phonograph needle during shipment. Select a stack of records of same size and speed. Grasp the leveling arm at the shaft end and lift it to clear the top of the centerpost. Swing the leveling arm toward the tone arm where it is out of the way of records.



Figure 3. Loading Records.

Place the stack of records on the centerpost. Then, swing the leveling arm back over the centerpost and lower it on the record stack with the centerpost extending up through the opening. See figure 3.

REJECTING A RECORD: If the record changer will not trip into change cycle at the end of a record, or if you wish to stop playing a record and start playing the next one, merely slide the reject pointer to the "REJ" position momentarily.

STOPPING AND UNLOADING: Do not switch off the record changer or handle the tone arm during the change cycle. This record changer may be stopped manually only after the changer is out of change cycle and has begun playing a record. The tone arm may be carefully lifted off the playing surface of the record and placed on the tone arm rest at the side of the changer pan. Slide the reject pointer to the "OFF" position to stop the turntable. To restart, repeat procedure described for starting and operating the record changer.

This record changer will automatically switch off power to the turntable motor after the last record has played and the tone arm returned to the tone arm rest.

Grasp the leveling arm at the shaft end and lift it to clear the top of the centerpost. Swing the leveling arm toward the tone arm where it is out of the way of records. Lift the stack of records off the centerpost. (Continued on the next 7 pages.)

CHANGE CYCLE

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When following this change cycle, keep in mind that a velocity type trip is used, which depends upon a rapid movement of the tone arm toward the centerpost. Note that the Push-off, Trip, and Set-Down mechanisms function independently.

If at all possible, observe the change cycle of a record changer which is operating properly. It is a good idea to rotate the turntable by hand and repeat the change cycle until the function of each part is understood.

The changer operates as follows: The turntable is driven by the motor idler wheel (56), riding against its inside rim. The speed of the turntable is determined by the diameter of the shaft (either 78 RPM, 45 RPM, or 33 RPM) driving the idler wheel rubber tire (56).

The 78 RPM drive shaft is part of the motor armature. The 33 RPM drive shaft (51) and the 45 RPM drive shaft (52) are moved in and out of position mechanically by the speed selector link (34). See figure 6.

The changer mechanism is driven during its change cycle by the drive gear (42), which in turn is driven by the geared hub of the turntable. During normal record play, the "dead spot" on the drive gear is held next to the turntable hub by the gear indexing arm (39) and spring (40).

VELOCITY TRIP

This changer employs a velocity trip, consisting primarily of two parts: the trip motion arm (44), and the gear engagement pawl (46). These parts are mounted near the "dead spot" on the drive gear. See figure 4A.

During normal record play, the trip slider (49) is moved slowly by the stud on the tone arm control lever (64) which moves with the tone arm. The stud on the trip slider (49) rides against the trip motion arm (44), moving it very slightly. Since the gear engagement pawl (46) is held against the trip motion arm (44) by the trip friction washer (47), the gear engagement pawl (46) is also moved slightly toward the turntable hub. Since this movement is only slight, the vertical catch on the gear engagement pawl (46) is just touched and "kicked away" by the lug on the turntable hub. This occurs with each revolution of the turntable until the gear engagement pawl is moved in rapidly enough to position in front of the lug for the next turntable cycle.

This rapid movement only occurs when the trip slider (49) is moved rapidly, by the tone arm, as the needle enters the trip grooves of the record. The gear engagement pawl (46) then moves in front of and engages the lug on the turntable hub. This causes the drive gear (42) to be rotated far enough so that the teeth on the drive gear will engage the teeth on the turntable hub, starting the change cycle. See figure 4B.

The changer can also be tripped by sliding the reject pointer to the "REJ" position momentarily. The stud on the end of the reject arm (35) moves the gear engagement pawl (46) into position to engage the lug on turntable hub.

As the drive gear begins to rotate, the drive eccentric (82) also rotates, since both parts are mounted on the same shaft. See figure 6. As the drive eccentric rotates clockwise, the drive link (75) pivots the control plate (71). As the control plate pivots, the inclined cut-out moves from beneath the tone arm lift rod (65), raising the tone arm from the record. The safety arm (73) travels with the control plate (71). The stud on the safety arm engages the tone arm control lever (64) and moves the tone arm away from the centerpost.

PUSH-OFF

When the tone arm is clear of the turntable, the roller on the drive eccentric (82) engages the push-off link (84). The push-off link moves the push-off lever (85) which engages the push-off adjustment nut (92) on the end of the push-off shaft in the centerpost. As the push-off link is moved by the drive eccentric, the push-off lever moves the push-off shaft up into the centerpost. The push-off shaft engages the ejector and pushes it up and out at the shelf of the centerpost. See figure 9.

As the ejector moves up, it engages the center hole of the record at the bottom of the stack on the shelf. As the ejector moves out of the centerpost, the record moves with it until the center hole is clear of the shelf of the centerpost. The record drops down the centerpost to the turntable. The balance of the stack of records is held on the shelf by the centerpost slide above the ejector.

As the drive eccentric starts into the second half of the change cycle, the push-off return spring (93) returns the push-off lever (85) and the push-off link (84) to proper position and permits the push-off ejector to return into position for push-off for the next record on the shelf of the centerpost.

SET-DOWN

After push-off and during the second half of the change cycle, the tone arm is returned to the edge of the record on the turntable. The tone arm is mounted to the tone arm control lever (64). The engagement spring (66) presses the tone arm control lever against the cork friction washer on the set-down arm (63). As the set-down arm return spring (68) draws the set-down arm toward the centerpost, the cork friction washer returns the tone arm control lever with the set-down arm.

As the control plate (71) is returned by the drive link (75), the inclined cut-out moves beneath the tone arm lift rod (65). As the tone arm lift rod descends into the inclined cut-out, the tone arm is lowered to the record.

The **SET-DOWN INDEX** (69) automatically determines the correct set-down position of the tone arm for each record size. An index finger with a stepped rubber cap extends above the changer pan momentarily to de-

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termine the size of the first record to be played. An index pin on the set-down arm (63) engages with the set-down index (69). As the long stud on the safety arm (73) moves the set-down arm (63), the index pin on the set-down arm releases the set-down index and permits it to pivot of its own weight and lift the index finger to the edge of the turntable.

A 7-inch record cannot obstruct the index finger. Therefore, the set-down index will pivot its full distance to the position which will permit the index pin on the set-down arm to enter the proper index slot for 7-inch set-down. The set-down arm return spring (68) draws the set-down arm toward the centerpost and the index pin on the set-down arm travels in to the end of the index slot. Since the index pin is held in the index slot against moving further toward the centerpost, the index slot will determine where set-down occurs.

A 10-inch record will extend past the edge of the turntable approximately $\frac{1}{2}$ inch; the lower step of the index finger cap momentarily "feels" the edge of the record. The index finger cannot rise as high as it was when no record obstructed its rise, thus the set-down index is positioned to permit the index pin on the set-down arm to enter the index slot for 10-inch set-down.

A 12-inch record extends approximately $1\frac{1}{4}$ inches beyond the edge of the turntable. Thus, the index finger rises just slightly since the top step momentarily "feels" the record and the set-down index cannot lower enough to permit the index pin in either the slot for 7-inch or 10-inch set-down. As the set-down arm returns, the set-down index will hold the index pin in the proper position for 12-inch set-down for the tone arm.

FOR INDIVIDUAL PARTS DETAIL, SEE FIGURE 11, "RC600 RECORD CHANGER, EXPLODED VIEW"

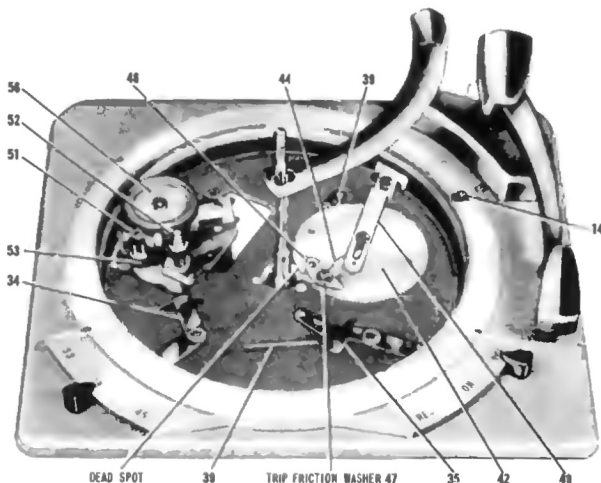


Figure 5. RC600 Record Changer with Turntable Removed.

AUTOMATIC SHUT-OFF

After the last record of the stack on the shelf has been ejected to the turntable, the leveling arm (26) drops about $\frac{3}{16}$ of an inch beneath the shelf. The bottom end of the leveling arm shaft extends beneath the changer pan and will lower the shut-off delay stop (80). The shut-off link control arm on the shut-off link (76) is then permitted to pivot with the shut-off arm spring (77) fastened at its other end to the control plate (71). The shut-off link control arm will draw the shut-off link and engage its cam that positions the shut-off link in line with the stud on the reject arm (35).

As the shut-off link (76) is drawn toward the control plate (71), the stop on the shut-off link moves into the path of the stud on the tone arm control lever (64).

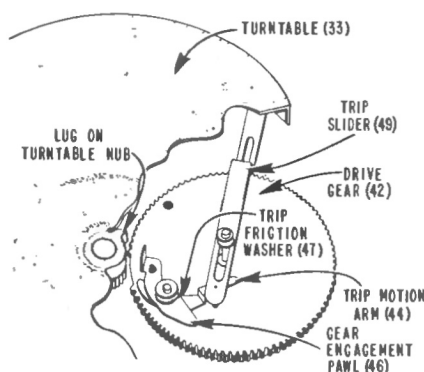


Figure 4A. Position of Drive Gear Out of Change Cycle.

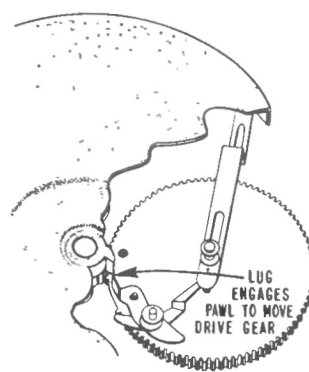


Figure 4B. Position of Drive Gear During Change Cycle.

When the control plate (71) begins to return in the second half of the change cycle, a stud on the control plate moves the shut-off link (76) to snap off the phonograph motor switch (99) and return the control knob lever (23) to "OFF".

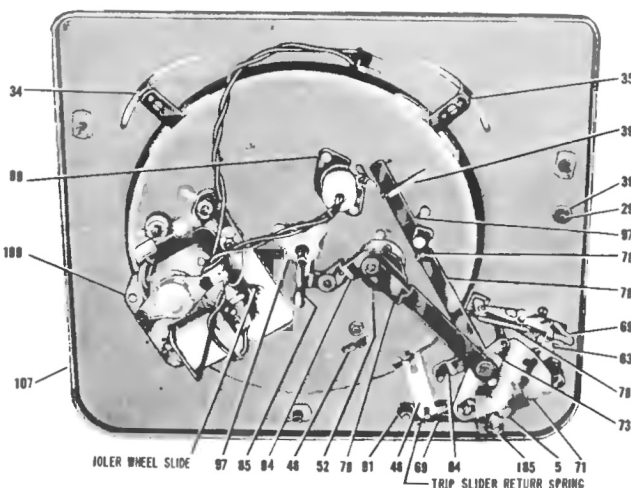


Figure 6. Bottom View, Changer Out of Cycle.

The tone arm control lever (64) is held by the tone arm stop on the shut-off link (76) while the control plate (71) is going through the second half of the

change cycle; the tone arm is held suspended above the tone arm rest (29). As the inclined cut-out moves under the tone arm lift rod (65), the tone arm is lowered onto the tone arm rest.

ADJUSTMENTS

When making the following adjustments, keep in mind that the Push-off, Trip, and Set-Down mechanisms function independently.

VELOCITY TRIP MECHANISM

This record changer uses a velocity type trip, which depends upon a rapid movement of the tone arm toward the centerpost in any area between $2\frac{7}{8}$ " to $\frac{7}{8}$ " from the center of the record. **This trip requires no adjustment.** However, in order for the changer to trip properly, there must be sufficient friction between the trip motion arm (44) and the gear engagement pawl (46). Friction may be increased by placing a very slight amount of a silicone lubricant on the fibre washer (45). If necessary, replace the trip friction washer (47). See Figure 4A.

SET-DOWN ADJUSTMENT

The set-down adjustment may be made while the changer is in its compartment or cabinet. Adjustment of the set-down point is made by adjusting the set-down adjusting screw (6). See Figure 7. **The tone arm will automatically set-down properly on 7-inch or 12-inch records if the set-down adjustment is made properly on a 10-inch record.** The set-down adjusting screw is accessible through the hole in the left side of the tone arm. Turning this screw out (counterclockwise) moves the set-down point of the tone arm closer to the centerpost, and turning this screw in (clockwise) moves it away from the centerpost.

Be sure the record changer is level. Make the set-down adjustment as follows:

1. Grasp the leveling arm at the shaft end and swing the arm from the centerpost to its stop above the tone arm rest.
2. Place a standard 10-inch, 78 RPM record on the turntable.
3. When operating the record changer out of its cabinet, the television line cord with the interlock socket (Admiral part number 89A22-1) may be used as an adapter for power at the phonograph motor plug.
4. Slide the reject pointer to the "REJ" position momentarily and let it return to "ON". The changer will begin its automatic cycle. *Slide the reject pointer to the "OFF" position so that the turntable will stop after set-down has begun, but before the needle has touched the record.*
5. Place a ruler against the centerpost and measure the distance between the near side of the centerpost and the needle. This distance should be between $4\frac{10}{16}$ " and $4\frac{11}{16}$ ".

6. When the 10-inch adjustment is correct, the needle should set-down between $5\frac{19}{32}$ " and $5\frac{22}{32}$ " from the near side of the centerpost on 12-inch records, and between $3\frac{1}{4}$ " to $3\frac{5}{32}$ " on 7-inch records.
7. Check the set-down point with each size of record. "Touch-up" set-down adjustment until the set-down has been optimized for all record sizes.

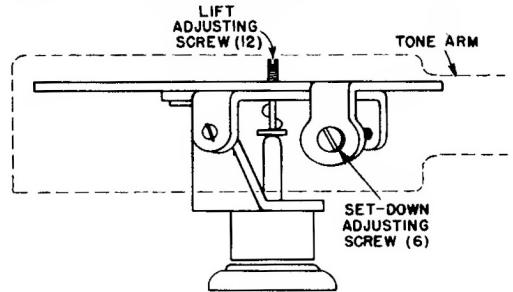


Figure 7. Set-Down and Lift Adjustments.

ADJUSTING THE TONE ARM LIFT

Be sure the record changer is level. The tone arm lift adjustment may be made while the changer is in its compartment or cabinet. The tone arm lift adjusting screw (12) is accessible through a hole on the top of the tone arm at the tone arm base. See figure 7. If the tone arm lift is too great, that is, the tone arm touches the record at the bottom of the stack on the shelf of the centerpost, turn the lift adjusting screw counterclockwise. If the tone arm lift is not great enough to pass above a stack of 12 standard 10", 78 RPM records on the turntable, turn the lift adjusting screw clockwise.

When the changer is not in change cycle, the end of the needle should be approximately $\frac{1}{4}$ " above the changer pan. Lift the tone arm off the tone arm rest and let it suspend over the surface of the changer pan between the tone arm rest and the edge of the turntable escutcheon. See figure 8. The distance between the end

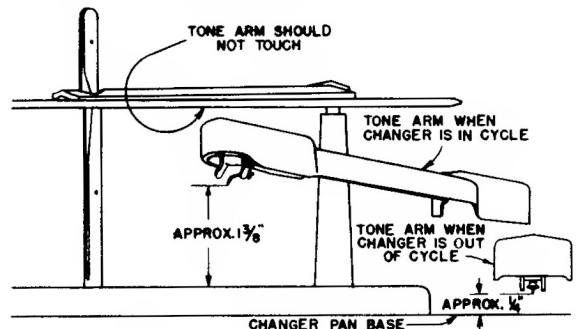


Figure 8. Checking Tone Arm Lift.

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of the needle and the surface of the changer pan may be conveniently measured by passing an ordinary pencil between the needle and the pan.

When the changer is in change cycle, the needle must be approximately $1\frac{3}{8}$ " above the surface of the turntable; the tone arm must pass over 12 standard 10", 78 RPM records.

PUSH-OFF ADJUSTMENT

Push-off adjustment must be checked whenever the centerpost has been removed or changed. Record push-off is accomplished by means of an ejector and push-off shaft built into the centerpost. During change cycle, the ejector and push-off shaft are moved by the push-off lever (85). If ejector travel is not sufficient for record push-off, adjustment may be required.

Ejector travel is adjusted by the hexagonal adjustment nut (92). With proper push-off adjustment, the ejector should extend just slightly beyond the edge of the shelf on the centerpost. See figure 9.

Additional travel must be allowed for the push-off shaft and ejector after the push-off lever (85) has moved its full distance.

To adjust the push-off, proceed as follows:

1. Rotate the turntable by hand. Slide the reject pointer to "REJ" position and let it return to "ON".
2. Continue rotating turntable slowly until the roller on the drive eccentric (82) engages the push-off link (84). Rotate turntable until the roller has moved the link its full distance. The push-off lever (85) is now extended its maximum travel.
3. Check the position of the ejector at the shelf of the centerpost. The ejector should extend **just beyond** the edge of the shelf. See figure 9. If the ejector does not extend beyond the edge of the shelf, turn the push-off adjustment nut (92) counterclockwise to increase the amount of push-off. Use a $\frac{1}{4}$ " open-end wrench for this adjustment.

CAUTION: The push-off adjustment nut has been specially slotted to stay tight on the push-off shaft after adjustment is made. Do not turn the nut all the

way on the push-off shaft; this will spread the slots and allow the nut to turn out of adjustment.

4. Press the hexagonal adjustment nut (92) to check for additional travel before the push-off shaft stops. The ejector should move out past the shelf slightly more than necessary for push-off before it stops.
5. Slide a 15 thousandths of an inch (.015) feeler gauge* between the flat surface of the adjustment nut (92) and the push-off lever (85) to check and adjust until gauge passes freely.

NOTE: The additional travel for the push-off shaft may vary, of course, in order to obtain proper push-off. However, the clearance of 15 thousandths of an inch (.015) must not vary more than plus or minus 5 thousandths.

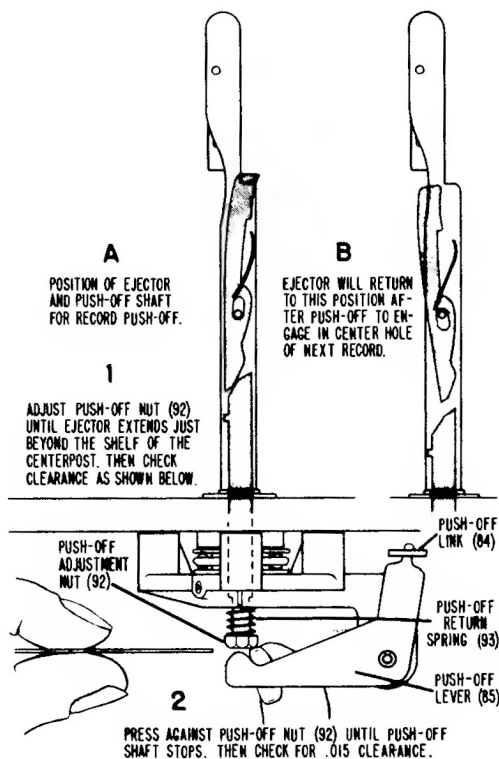


Figure 9. Adjusting for Correct Push-Off.

RECORD CHANGER TROUBLE SHOOTING

Records Do Not Push Off Or More Than One Record Drops To The Turntable.

1. Check for broken or weak ejector return spring in the centerpost.
2. Check for weak push-off return spring (93).
3. Check the push-off adjustment. See figure 9.
4. Check that no foreign material is between the record shelf and the ejector in the centerpost.

Changer Causes Rumble Or Noise.

1. BE SURE that the shipping screws (21) on each side of changer pan have been removed.
2. Check for any mechanical rub near the motor.
3. Check for broken float spring (104).
4. Be sure plastic escutcheon is securely held to changer pan by the four mounting screws.

* A dollar bill folded three times (eight thicknesses) will closely approximate 15 thousandths of an inch.

PARTS LIST

REF. No.	PART No.	DESCRIPTION	REF. No.	PART No.	DESCRIPTION
1	403C 60	Tone Arm	57	412A 30	Fibre Washer
2	409A 13	Pickup Cortridge with Needle and Knurled Nut	58	405A 15	Idle Wheel Retaining Clip
	409A 13-1	Pickup Cortridge with Needle (push-in type)	59	401A 396-4	Retaining Ring
	409A 13-2	Pickup Cortridge (export type) with Needle and Knurled Nut	60	405A 149	Set-Down Pivot Retaining Spring
3	98A 15-19	Needle for 409A13 Cortridge	61	401A 396-5	Retaining Ring
	98A 15-18	Needle for 409A13-1 Cortridge	62	415A 34	Spacer Washer
4	1A 72-1-20	Cortridge Mtg. Screw Shockproof Type 25 (2 req.)	63	G400A 616	Set-Down Arm Assembly
5	G400A 529-1	Tone Arm Lead and Pin Jack Assembly	64	F400A 615	Tone Arm Control Lever and Shaft Assembly
6	45-750-C2-47	Set-Down Adjusting Screw, #4-40x3/4 BMS	65	402A 284	Lift Rod
7	405A 137	Set-Down Adjusting Lock Spring	66	405A 144	Engagement Spring
8	G400A 611	Tone Arm Mtg. and Pivot Plate Assembly	67	4B 1-67-47	Washer (.196x5/16x1/32)
9	2B 10-5-59	Speed Nut (2 req.)	68	405A 146	Set-Down Arm Return Spring
10	404A 40	Tone Arm Counterweight	69	G400A 618	Set-Down Index Assembly
11	1A 70-6-20	Counterweight Mtg. Screw, #4x5/8 (2 req.)	70	405A 143	Set-Down Index Return Spring
12	402A 290	Lift Adjusting Screw	71	G400A 621	Control Plate Assembly
13	405A 148	Lift Adjusting Spring	72	401A 355-2	Retaining Ring
14	406A 27	Index Finger Rubber Cap	73	G400A 622	Safety Arm and Stud Assembly
15	401A 355-1	Retaining Ring (12 req.)	74	405A 145	Safety Spring
16	414A 48	Pivot Shaft	75	401A 375	Drive Link
17	G400A 610	Tone Arm Mount and Hub (includes Allen Set Screw)	76	G400A 629	Shut-Off Link and Arm Assembly
18	402A 296	Allen Set Screw, #8-32x3/16 (2 req.)	77	405A 151	Shut-Off Arm Spring
19	403C 61	Tone Arm Plastic Base Assembly (includes bearings)	78	405A 152	Cam Return Spring
20	13A 2-8-57	Snap-In Buttons	79	401A 355-7	Retaining Ring
21	103-1750-F2-52	"Held-Down" Screw, #10-32x1 3/4 (for shipping only)	80	401A 398	Shut-Off Delay Stop
22	403A 63	Plastic Control Pointer (Maroon) (2 req.)	81	405A 153	Shut-Off Delay Stop Engagement Spring
23	401A 385	Control Knob Lever (2 req.)	82	G400A 605	Drive Eccentric Assembly
24	402A 342	Control Knob Mtg. Screw, #4x1/4 PHST (2 req.)	83	285-250-C2-47	Screw, #8-32x1/4 BH (includes lock washer)
25	760-187-C2-57	Screw, #6-32x3/16, BH (includes lock washer) (2 req.)	84	401A 379	Push-Off Link
26	G400B 625	Leveling Arm Assembly	85	G400A 603	Push-Off Lever and Stud Assembly
27	405A 150	Leveling Arm Return Spring	86	4B 1-68-47	Washer (.196x3/8x1/32)
28	401A 355-3	Retaining Ring (2 req.)	87	404B 41	Turntable Hub Support and Shaft (less Allen set screw)
29	403A 65	Tone Arm Rest	88	1A 70-10-47	Screw, Self-tapping, #6x3/8 (3 req.)
30	2B 10-40-59	Speed Nut (3/16)	89	415A 31	Drive Gear Bearing
31	403D 64	Plastic Escutcheon (Gold)	90	405A 99	Retaining Ring
32	1A 26-54-57	Screw (for mtg. Esc.) #2x1/4	91	415A 29	Turntable Thrust Bearing
33	G400B 602	Turntable	92	402A 277	Push-Off Adjustment Nut
34	G400A 607	Speed Selector Link Assembly	93	405A 142	Push-Off Shaft Return Spring
35	G400A 608	Switch and Reject Arm Assembly	94	G400B 601	Centerpost Assembly (includes 92 and 93)
36	4A 5-19-0	Spring Washer	95	402A 263	Screw, Self-Topping, #6x5/8 (3 req.)
37	401A 388	Flat Washer (6 req.)	96	9A 8-2	Tone Arm Lead Clamp
38	405A 140	Reject Arm Return Spring; Shut-Off Link Return Spring	97	414A 49	Shut-Off Link Held-Down
39	G400A 620	Gear Indexing Arm and Stud Assembly	98	1A 27-53-47	Screw, Self-tapping, #6x3/16 (4 req.)
40	405A 147	Gear Indexing Spring	99	G400A 606	Switch and Mtg. Plate Assembly
41	4B 2-178-0	Flat Washer (5 req.)	100	{ 407C 20 407C 20-1 407X 20-4	*3-Speed Motor Complete, 117V., 60 cycles 3-Speed Motor Complete, 117V., 50 cycles 3-Speed Motor Complete, 230V., 50 cycles
42	G400A 587	Drive Gear and Stud Assembly	101	406A 19	Motor Grommet
43	402A 292	Trip Pivot Hub	102	401A 355-4	Retaining Ring
44	401A 351-1	Trip Motion Arm	103	406A 24	Speed Selector Link Grommet
45	412A 36	Fibre Washer	104	{ 19A 10-3 405A 139	Float Spring, 7/8" high (3 req.) Float Spring, 3/4" high (3 req.)
46	401A 352	Gear Engagement Pawl	105	10B 1-18	Terminal Board
47	401A 366	Trip Friction Washer	106	413A 11-1	Audio Cable, 15" (includes plug)
48	401A 355-6	Retaining Ring	107	G400D 627-1	Chonger Pon Assembly (Gold)
49	G400A 575	Trip Slider	108	48A 8-2	45 RPM Record Adapters
50	98A 15-9	Oil Retaining Felt Washer (2 req.)	109	{ 96B 18-8-10-0 34E 60-1 34E 60-2	Plastic Tubing, 1 1/2" Plastic Base (Ebony) for RP601 Plastic Base (Mahogany) for RP602
51	98A 15-10	33 RPM Drive Shaft (60 cycles)			
52	98A 15-11	45 RPM Drive Shaft (60 cycles)			
53	406A 20	Drive Belt (2 req.)			
54	98A 15-21	Idle Wheel Tie Lug			
55	98A 15-20	Idle Wheel Spring			
56	G400A 279	Idle Wheel Assembly			

PARTS FOR CONVERTING 407C20 MOTOR FOR 50 CYCLES

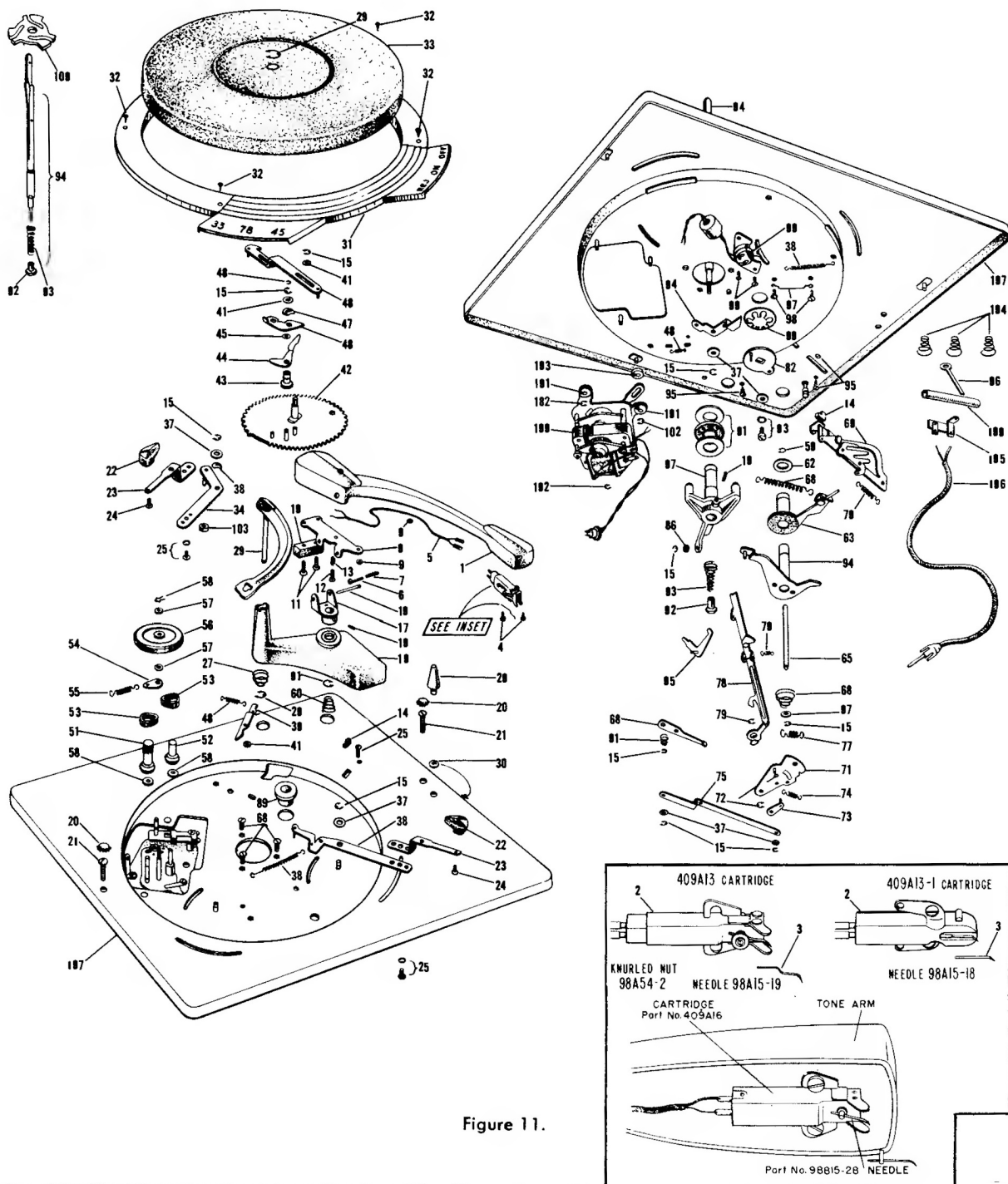
78 RPM Drive Shaft Spring (50 cycles)	405A 113
45 RPM Drive Shaft (50 cycles)	98A 15-15
33 RPM Drive Shaft Spring (50 cycles)	405A 112

*407C 20 motor is not used on "Canadian Admiral" chong-
ers. For Canadian Admiral replacement motors order:

{ 60 cycle, 105 to 125 volts.....407Y 20-60
{ 25 cycle, 105 to 125 volts.....407Y 20-25

RC600 RECORD CHANGER, EXPLODED VIEW

To find part number and description for any part, locate part and reference number in illustration. Then, find reference number in list on opposite page.



SERVICE AND REPAIR

LUBRICATION

DO NOT apply GREASE to the TRIP SLIDER (49). Under normal operating conditions, the motor should never require lubricating. When lubricating the changer, keep oil or grease away from turntable.

Before lubricating the set-down index (69), see figure 10. Grease or oil must not exist at certain points of the set-down index. This assembly must be clean and dry at these points in order to pivot freely of its own weight.

Friction between the gear engagement pawl (46) and the trip motion arm (44) may be increased by placing a very slight amount of a silicone lubricant such as Cosmolube #1 (Admiral part number 418A50) on the fibre washer (45). Lubriplate #107 or vaseline petroleum jelly may be used as a substitute here, but, be sure others parts are free of oil or grease and dirt.

The shaft for the leveling arm (26) must be free of binding in its bearing in the tone arm base. Dry graphite powder preferably should be used to lubricate the shaft; graphite oil or a light machine oil may be used as a substitute here.

The oilite bearing in the turntable hub and the tone arm base should be lubricated with SAE No. 20 oil. Oil used here must be fluid in order that it may penetrate and be absorbed by the bearing material. Never use grease of any kind.

Other points of movement throughout the record changer should be cleaned and lubricated with Cosmolube #1 whenever the changer is serviced. A good automobile chassis lubricant may be used as a substitute.

Use carbon tetrachloride and remove any oil or grease which may be on the idler wheel tire, inside rim of the turntable, the rubber drive belts, or the rubber grommets.

REMOVING AND REPLACING TURNTABLE

CAUTION: Attempting to pry the turntable out of the changer pan will damage the plastic escutcheon. Do not remove the escutcheon to remove the turntable.

Remove the changer from its compartment or cabinet. Then, proceed as follows:

1. Remove the "E" retaining ring* at the top of the turntable hub.
2. Grasp leveling arm at shaft end and lift and swing arm aside.
3. Place the changer so that the front edge with the control panel is to the right. The tone arm base should be at the far left hand corner.
4. Grasp the changer pan between the palms of both hands and extend the fingers over the turntable.

5. Invert the changer pan and allow the turntable to drop into the fingers of both hands. Use care when removing the turntable to prevent losing the turntable thrust bearing (91).
6. Before replacing the turntable, be sure the rim of the turntable and the idler wheel tire are clean. Use carbon tetrachloride to remove finger marks, etc.
7. Do not force the turntable to engage the idler wheel with the turntable rim. Always move the idler wheel by moving the idler wheel slide which is accessible from the underside of the changer pan through the opening for the turntable motor. See figure 6. Do not handle the rubber tire on the idler wheel or attempt to pry the idler wheel with any tools.

REPLACING SET-DOWN INDEX (69)

Although the set-down index is factory assembled and requires no adjustment, some care is required when it is being replaced. The top surface of the set-down index bracket mounts to the changer pan and is positioned by two $\frac{1}{4}$ inch diameter half-punches which interlock in holes in the changer pan. A #6-32 machine screw secures the set-down index in place. See figure 10.

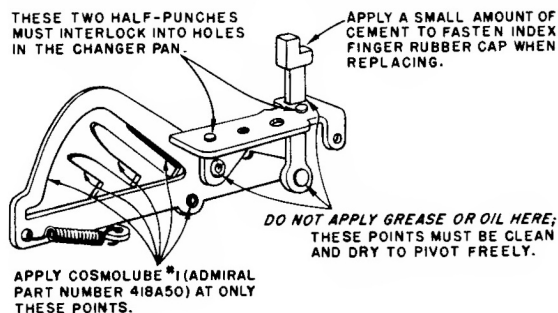


Figure 10. Set-Down Index Assembly.

REPLACING THE CENTERPOST

The centerpost is held in the turntable hub by an Allen set screw. The milled flat at the lower end of the centerpost (just above the push-off return spring) must be aligned with this set screw. The lower edge of the retaining ring groove on the centerpost must be flush with the top surface of the turntable shaft to within 5 thousandths of an inch above after the Allen set screw is tightened to hold the centerpost in place.

Whenever the centerpost has been removed or replaced, the push-off adjustment must be checked. The push-off adjustment nut on the push-off shaft is pre-adjusted at the factory and is ready for installation and final adjustment is made after centerpost is installed.

CAUTION: The push-off adjustment nut is slotted to stay tight on the push-off shaft after adjustment is made. Do not turn the nut all the way on the the push-off shaft; the slots will spread and allow the nut to turn.

* Place one hand over the turntable hub while removing to prevent losing the retaining ring.