



Figure 1—Model RP-218-1

# RCA VICTOR RECORD CHANGER

## RP-217 Series RP-218 Series

### SPECIFICATIONS

**TURNTABLE SPEED** ..... 16 2/3, 33 1/3, 45, or 78 RPM  
**RECORD CAPACITY**.....Twelve—10 inch (1/4" centerhole)  
                                   Ten—12 inch (1/4" centerhole)  
                                   Ten—10" and 12" intermixed (1/4" centerhole)  
                                   Ten—7", 10" and 12" intermixed (1/4" centerhole)  
                                   Twelve—7 inch (1 1/2" centerhole)  
**1 1/2" CENTERPOST** ....Not interchangeable with previous models.  
                                   The Stabilizer arm must be employed  
                                   when using the 1 1/2" centerpost.  
**STYLUS FORCE** (all models except RP-217-3,4) .4 to 7 grams  
**STYLUS FORCE RP-217-3,4** .....9 to 11 grams  
**POWER REQUIREMENTS**.....117 volts, 60 cycles AC, 15 watts

| Model         | Stereo/<br>Mono | Cartridge | Stylus<br>78 MG   | Turn-<br>table |
|---------------|-----------------|-----------|-------------------|----------------|
| RP-217-1..... | Stereo          | Ceramic   | Sapphire-Diamond  | 12"            |
| RP-217-2..... | Stereo          | Ceramic   | Sapphire-Sapphire | 12"            |
| RP-217-3..... | Mono            | Crystal   | Sapphire-Sapphire | 9"             |
| RP-217-4..... | Stereo          | Crystal   | Sapphire-Sapphire | 9"             |
| RP-218-1..... | Stereo          | Ceramic   | Sapphire-Diamond  | 12"            |

### GENERAL DESCRIPTION

The RP-217 and RP-218 series record changers are four-speed mechanisms designed to play in automatic sequence, 7, 10, and 12 inch records. Manual operation is also provided. Records with 1/4 inch centerholes may be intermixed in any sequence of 7 inch, 10 inch and 12 inch diameters. A detachable centerpost is provided for playing records having 1 1/2 inch centerholes.

The pickup arm is coupled to the mechanism through a friction clutch arrangement which permits handling of the pickup arm in or out of cycle without damage to the mechanism. A full 90° lift of the pickup arm is possible for ease of stylus and cartridge replacement.

Record separation is accomplished by means of a push-off finger and shelf at the centerhole of the records. The stabilizer arm must be employed for proper record separation when playing either 1/4 inch or 1 1/2 inch centerhole records.

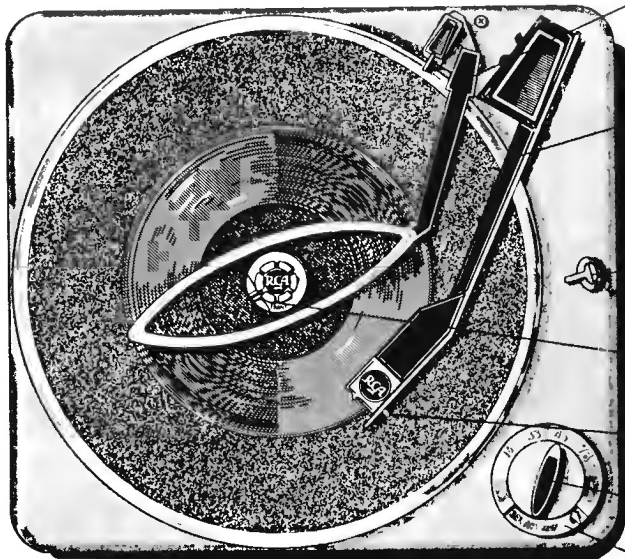


Figure 2—Controls

- STABILIZER ARM** To load or remove records, lift and turn the stabilizer arm off to the side. After loading, place the stabilizer arm so that it rests on the record stack.
- PICKUP ARM** May be handled manually when in "MAN" position of function control—the pickup arm returns to the pickup arm rest and the mechanism shuts off automatically after playing the last record.
- PICKUP ARM REST** Pickup arm may be pressed down on pickup arm rest for positive holding of the pickup arm.
- 1 1/2" CENTERHOLE SPINDLE** Used when playing records having 1 1/2" centerholes.
- STYLUS SELECTOR** Slide action lever for selecting 78 rpm or MG stylus.
- SPEED CONTROL** Selects 16 2/3, 33 1/3, 45 or 78 rpm turntable speeds.
- FUNCTION CONTROL** Provides for selection of "MAN" (manual), "SEL" (select), "AUT" (automatic), and "OFF" positions.

CONTROLS

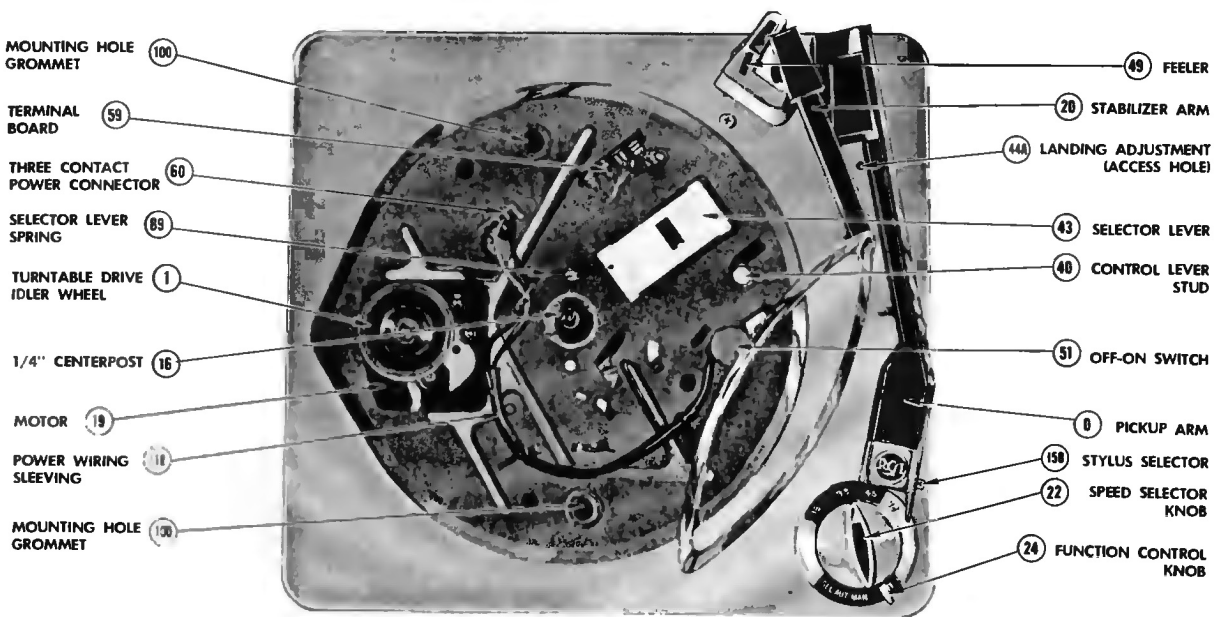


Figure 3—Top View of RP-218 With Turntable Removed

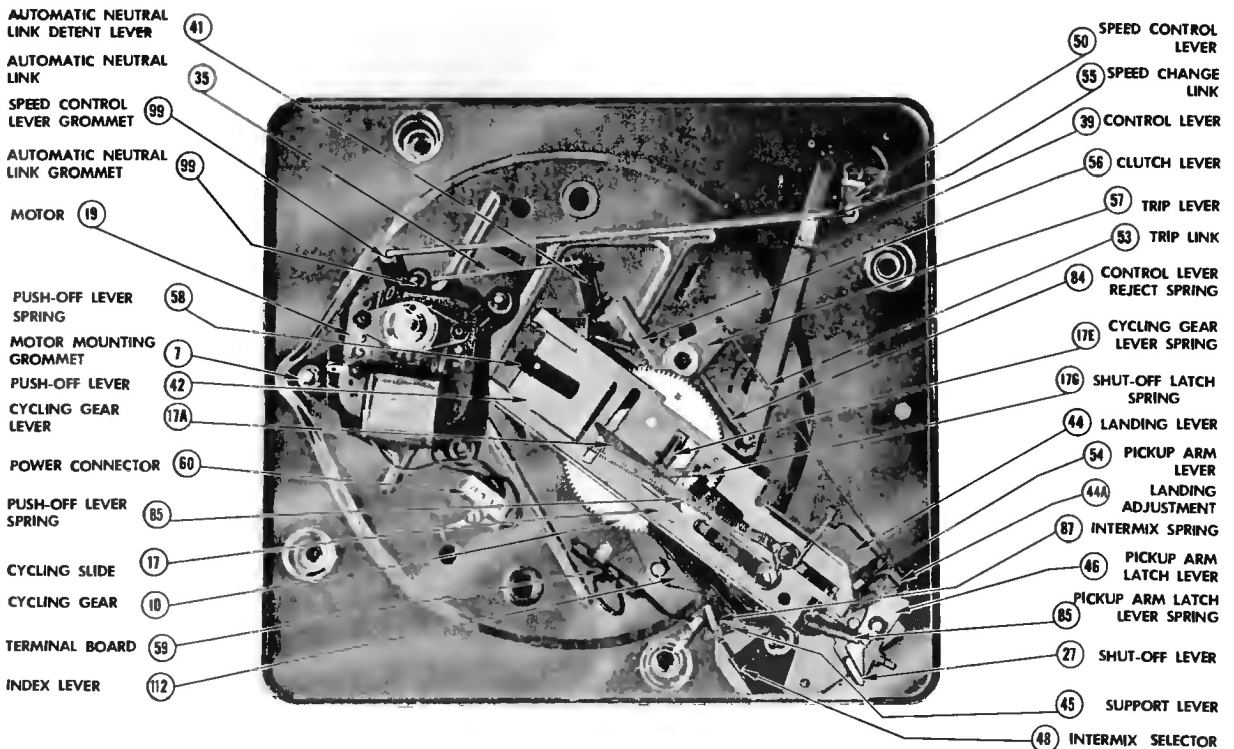


Figure 4—Bottom View of RP-218 Mechanism

## ADJUSTMENTS

### LANDING ADJUSTMENT

The landing position of the stylus is adjusted by means of an eccentric landing adjustment screw. When adjusted for correct landing on one size record (12 inch preferably), the landing position for each of the other two sizes is automatically established.

The landing adjustment screw (44A) is accessible from the underside of the record changer, or through an access hole provided in the motorboard. Disconnect the power cord from the instrument and place a 12 inch record on the centerpost with the stabilizer in place. Turn the function knob to "SEL" and rotate the turntable by hand until the record drops and the stylus is poised above the starting grooves of the record. Then turn the landing adjustment screw so the stylus will land on the record midway between the outer edge and the recorded portion.

Connect the power and cause the mechanism to go through cycle several times while observing the landing position.

Slight "touch up" of this adjustment may be necessary so that the pickup will land correctly for all three record sizes.

### HEIGHT ADJUSTMENT

Two height adjustment screws are provided on the RP-217 and RP-218 series mechanisms.

Height adjustment screw (67) on the cycling slide is adjusted with the mechanism OUT OF CYCLE for a gap of from .065" to .075", (about the thickness of a penny) between the landing lever (44) and the pickup arm lever (54).

Height adjustment screw (11) in the pickup arm is adjusted with the mechanism IN CYCLE with the pickup arm at its full height. Adjust the height adjustment screw (11) so that the stylus is 1 3/16 inches above the turntable mat.

These adjustments will prevent the stylus from touching the motorboard out of cycle; and, further, enable the stylus to land properly on a full stack of records.

### STYLUS FORCE

There is no adjustment provided for stylus force in the RP-217 and RP-218 series record changers.

The stylus force for all models except the RP-217-3 and RP-217-4 is 4 to 7 grams. The stylus force for the RP-217-3 and RP-217-4 is 9 to 11 grams.

If the stylus force is incorrect, the pickup arm counterweight spring (12) should be checked or replaced.

### STYLUS REPLACEMENT

Removal of the "clip-in" stylus assembly and servicing of the cartridge is facilitated by the full 90° lift provided for the pickup arm. To remove the stylus grasp the stylus selector and pull away from the pickup body by 1/8", then pull the stylus assembly forward and out of the pickup.

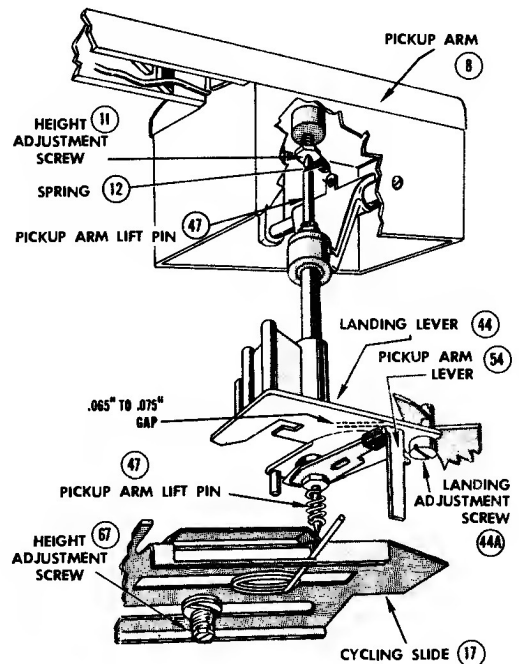


Figure 6—Adjustments

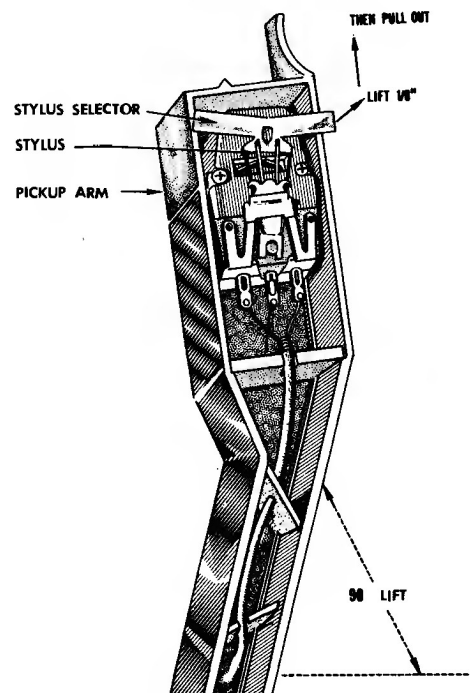


Figure 7—Stylus Replacement

## CYCLE OF OPERATION

**NOTE:** In the cycle of operation it is assumed the mechanism has stopped automatically with the pickup arm on the rest.

### PRELIMINARY PROCEDURE

Lift the stabilizer arm and place a stack of 1/4" centerhole records (7"-10"- and 12") on the spindle (intermixed if so desired). Place the record stabilizer arm so it rests on the records.

OR

If playing records with 1 1/2" centerhole, first place the large centerpost over the regular spindle. Place the record stabilizer arm so it rests on the records.

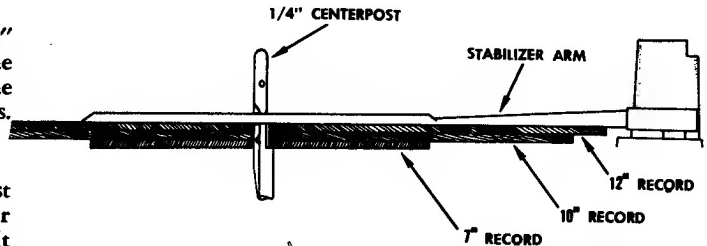


Figure 8—Preliminary Procedure

### FUNCTION KNOB TURNED TO "MAN" (MANUAL) POSITION

Control lever (39) moves closing "OFF-ON" switch (51), and motor starts. The opposite end of the control lever actuates the automatic neutral link detent lever (41) and through the automatic neutral link engages the drive wheel to the motor shaft. Turntable starts turning.

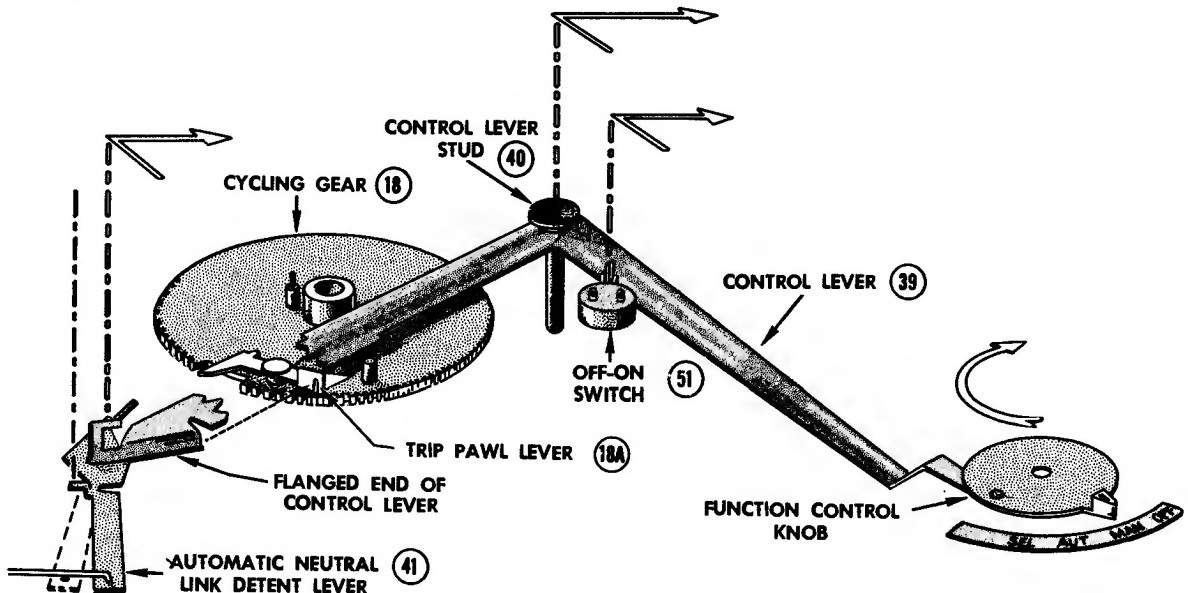


Figure 9—Manual Position

### FUNCTION KNOB TURNED TO "SEL" (SELECT) POSITION

Further movement of the control lever (39) (now a lateral motion due to the control lever stud (40) following the right angle slot in the motorboard) causes flanged end of the control lever to strike the tab end of the trip pawl lever (18A). This causes the trip pawl to advance into the path of the projection on the turntable hub. Cycling gear (18) starts rotating when the projection on turntable hub arrives to strike trip pawl.

### SERVICE HINTS

*Failure to turn on may be caused by bent tab on control lever (39) not engaging switch (51). Binding of knobs or sticking in "SEL" position can be corrected by light lubrication of the knob shafts.*

## CYCLE OF OPERATION

### CYCLING STARTS

As the cycling gear rotates, the cycling slide (17) starts its outward motion—this is accomplished by the pin extending downward from the cycling gear traveling in the elongated slot in the cycling slide. During the change cycle, the cycling gear will complete one revolution and the cycling slide will perform one complete excursion (outward and inward) of travel.

### PICKUP ARM RISES (A)

Feeler (49) starts moving out as the cycling slide (17) continues its outward motion. Further outward motion of cycling slide causes pickup arm lift pin (47) to ride up the inclined portion of the lance on the cycling slide. Vertical motion of pickup arm lift pin causes the pickup arm (8) to rise, and also causes engagement of pickup arm lever (54) with landing lever (44) through the pressure of the rubber surface of pickup arm lever and the metal surface of the landing lever.

### SERVICE HINTS

*If cycling fails to start, check condition of trip pawl (18A). If mechanism stalls or slows down in cycle, check for bent or binding cycling gear (18).*

*The lift pin (47) must be free to travel vertically and the ends smooth and rounded for proper lift of the pickup arm.*

*Failure of the feeler to operate smoothly may be due to screw (97) being too tight. See Figures 34 and 35.*

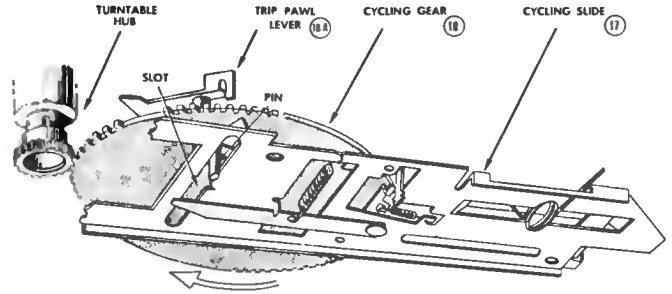


Figure 10—Cycling Starts

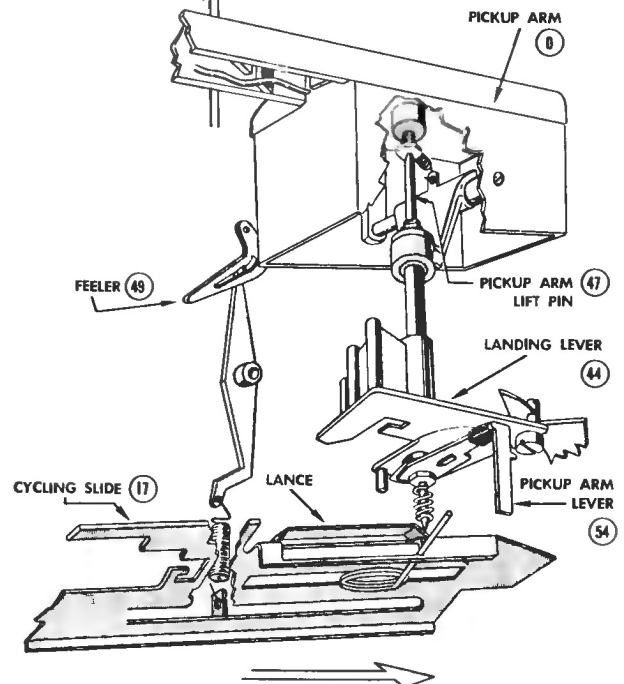
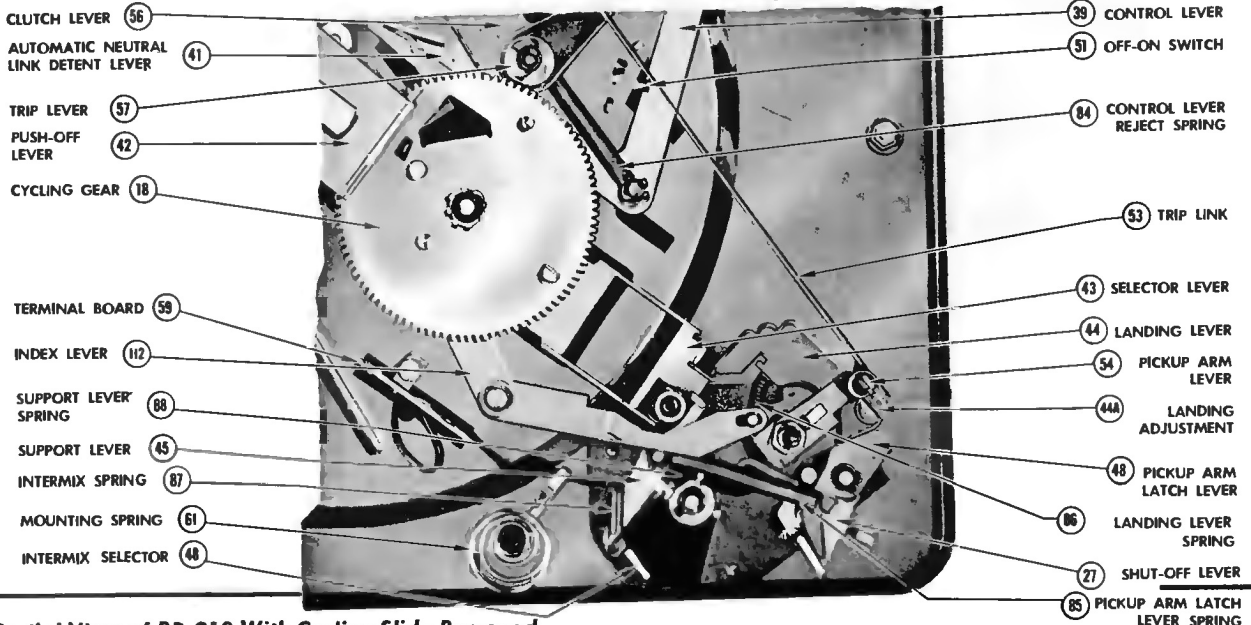


Figure 11—Pickup Arm Rises



Partial View of RP-218 With Cycling Slide Removed

### CYCLE OF OPERATION

#### PICKUP ARM RISES (B)

Further outward movement of the cycling slide (17) causes pickup arm lift pin (47) to arrive at the flat portion of lance on cycling slide completing the vertical rise of pickup arm (8). Continued outward movement of the cycling slide causes the vertical tab on the shut-off latch actuator (17C) to contact the tab on the shut-off lever (27). This starts the unlatching of the pickup arm latch lever (46) and the landing lever (44).

Continued rotation of the cycling gear causes the vertical tab on the selector lever (43) to contact the triangular tab of the cycling gear (18). This starts the vertical rise of the selector lever.

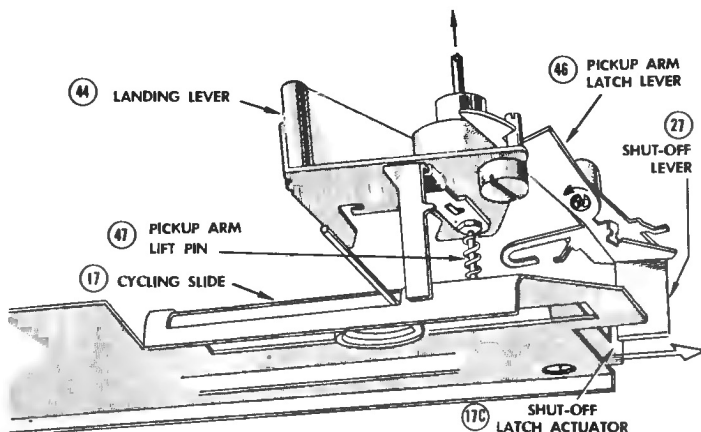


Figure 12—Pickup Arm Rises

#### SERVICE HINTS

*Failure of the selector lever to rise may be caused by the vertical tab on the selector lever failing to contact the triangular tab. Check for missing springs (87) and (88) if feeler fails to rise from intermix housing.*

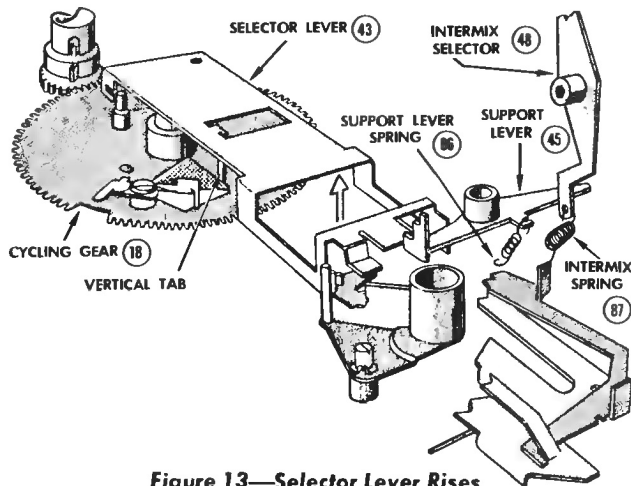


Figure 13—Selector Lever Rises

#### PICKUP ARM MOVES OUT

Further rotation of the cycling gear (18) and further outward movement of the cycling slide (17) results in the contact of actuator spring (17D) with the pickup arm lever (54) causing the pickup arm (8) to start its outward travel.

At this time the selector lever (having risen to full upward position) rests on the 7" step of the support lever (45). The feeler (49) reaches its full outward position and is now prepared to sense the diameter of a dropping record.

The pickup arm latch lever (46) and the landing lever (44) become fully unlatched at this time.

The selector lever continues to rest upon the 7" step of the support lever even after the triangular tab of the cycling gear has passed the vertical tab extending downward from the selector lever. This is because the support lever is forced against the selector lever by the support lever spring (88).

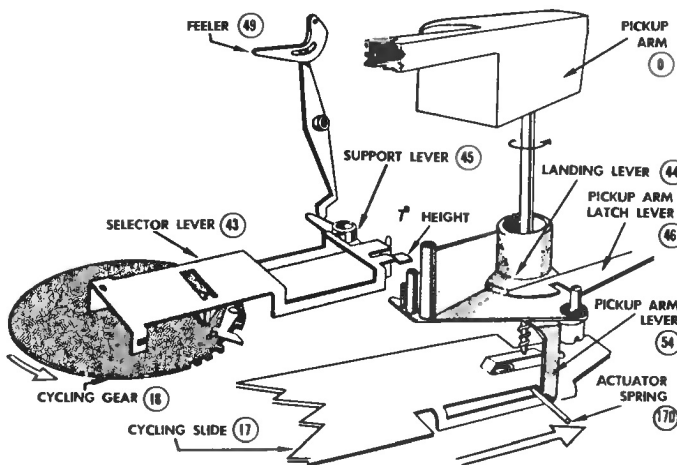


Figure 14—Pickup Arm Moves Out

### CYCLE OF OPERATION

#### PICKUP ARM APPROACHES FULL OUTWARD POSITION

Continued outward motion of the cycling slide (17) causes the pickup arm lever (54) and the pickup arm (8) to approach full outward position and finally reach maximum outward position determined by contact of the upper part of the landing lever eccentric stud (44A) with the throat of the pickup arm latch lever (46). The additional outward movement of the cycling slide causes actuator spring (17D) to bend back and absorb this motion and does not result in any further outward movement of the pickup arm. At this time the bent tab projecting downward from the cycling gear (18) comes into contact with the push-off lever (42).

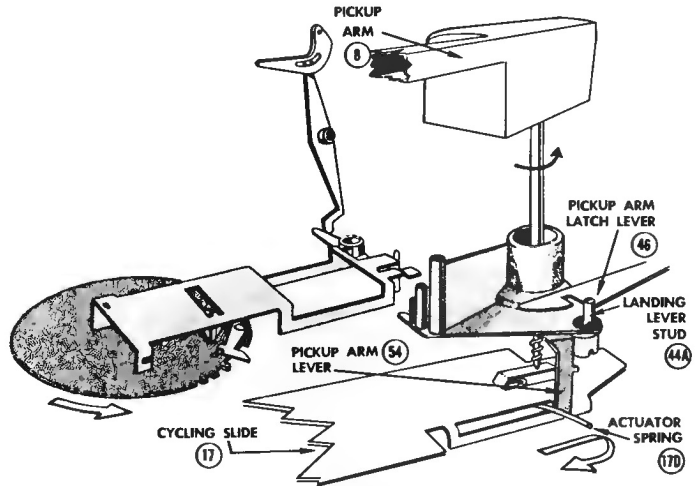


Figure 15—Full Outward Position

#### RECORD DROPS

Additional rotation of the cycling gear (18) results in further movement of the push-off lever (42). This motion results in the movement of the push-off finger in the spindle assembly (16) which causes the record to drop. The feeler (49) senses the record diameter—a 7" record causes no deflection; a 10" record causes partial deflection; and a 12" record causes full deflection of the feeler. As a result of the deflection of the feeler, the selector lever (43) falls to the appropriate step of the support lever (45), thus establishing the proper height of the selector lever for that record diameter. At this time, full 180 degree rotation of the cycling gear is accomplished and full outward motion of the cycling slide is reached.

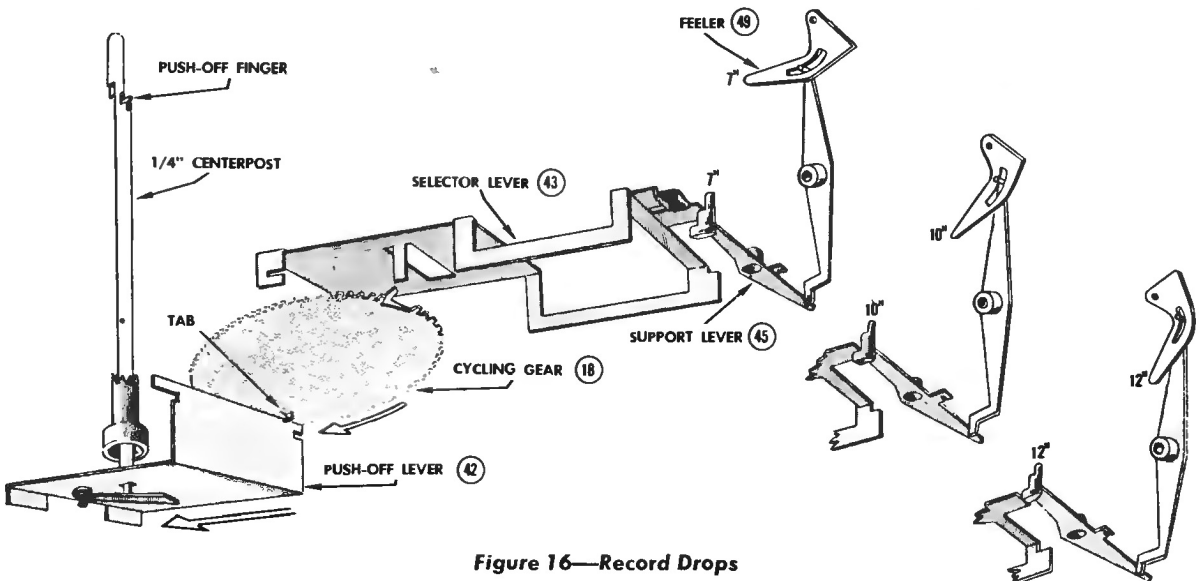


Figure 16—Record Drops

## CYCLE OF OPERATION

### PICKUP ARM MOVES IN

The cycling slide (17) starts its inward travel as the cycling gear (18) continues its rotation. The actuator spring (17D) guides the pickup arm back as the landing lever (44) moves toward landing position. (The pickup arm follows the landing lever due to the pressure between the pickup arm lever (54) and the landing lever.) Spring action (86) on the landing lever is the force which moves the landing lever at this time. The receding cycling slide merely directs the movement of the pickup arm lever. Push-off lever (42) returns to normal position. The unlatched condition of the pickup arm latch lever (46) and the landing lever (44) permits the free inward motion of the pickup arm.

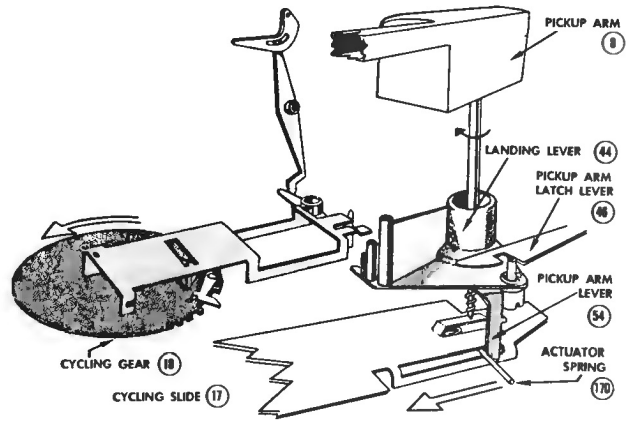


Figure 17—Pickup Arm Moves In

### PICKUP ARM ARRIVES OVER LANDING POSITION

As the cycling slide (17) continues its inward travel the landing lever (44) contacts the selector lever (43) at the appropriate step previously determined by the height of the selector lever. Slack in the selector lever (lateral motion) is taken up by this contact and a positive position of the pickup arm above the starting grooves of the record is established.

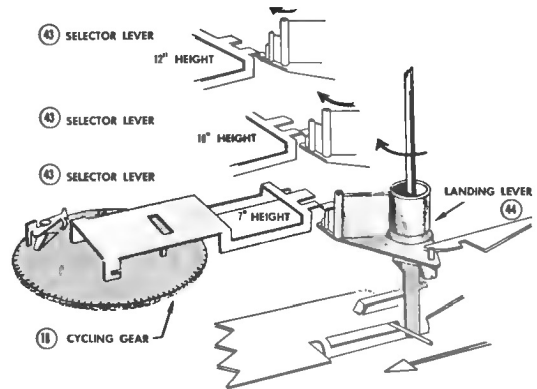


Figure 18—Landing Position Established

### PICKUP ARM DESCENDS TO RECORD

Lift pin (47) rides down the inclined portion of the lance on the cycling slide (17) as the cycling slide continues its inward motion. The feeler (49) starts its return to the housing (6A). At this time the engagement pawl (18A) is reset by striking the casting on the turntable hub mounting assembly (26). The pickup arm lever (54) becomes disengaged from the landing lever (44) due to the relaxing of the brake tension between these two components.

### SERVICE HINTS

If erratic landing is encountered check for proper placement of actuator spring (17D) in cycling slide. Make sure the metal surface of the landing lever (44) is clean and dry. Improper HEIGHT adjustment can cause erratic LANDING.

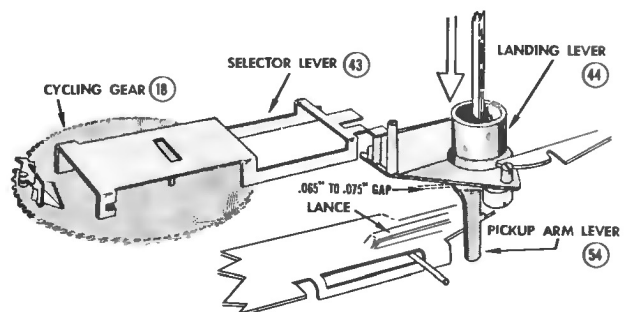


Figure 19—Pickup Arm Descends To Record



## CYCLE OF OPERATION

### PICKUP ARM TOUCHES RECORD

The stud extending above the cycling gear (18) resets the clutch lever (56). The landing lever (44) moves away from the selector lever (43) due to the action of the index lever (112). The selector lever simply drops to the lowest step on the landing lever as the landing lever moves away and finally becomes latched to the pickup arm latch lever (46). The "helper" lever (17A) assists in the completion of the last portion of the cycle of operation. The feeler recedes fully into the housing (6A). At this time the cycling gear completes 360 degrees of rotation and the cycling slide completes its inward travel.

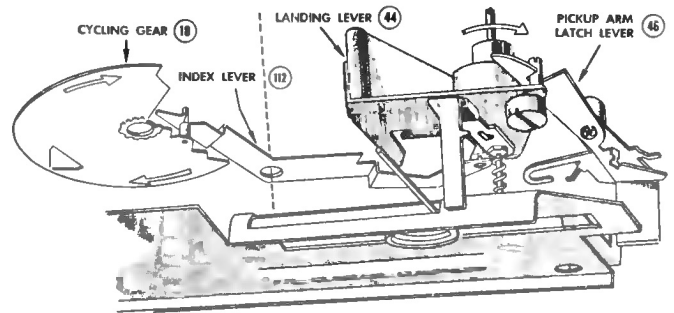


Figure 20—Landing Lever Re-Latches

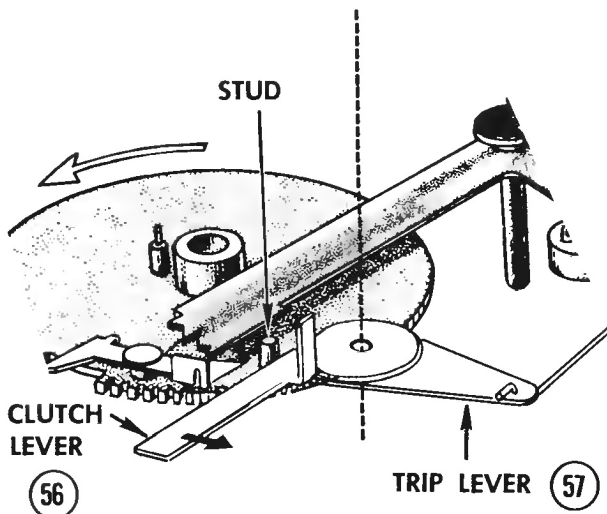


Figure 21—Clutch Lever Re-Set

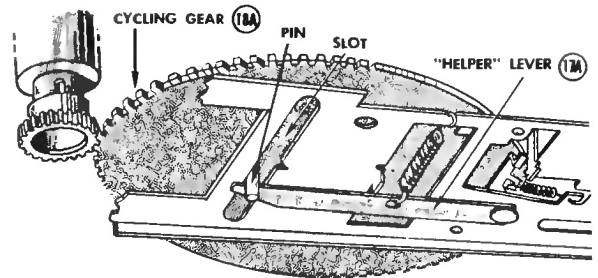


Figure 22—"Helper" Lever Action

### RECORD PLAYS

The pickup arm, having descended to the record, causes contact of the stylus with the record starting grooves. The pickup arm is now directed solely by the grooves on the record; the only mechanical engagement is that of the trip link (53) connecting the pickup arm lever (54) to the trip lever.

As the record plays and finally comes to the spiral lead-in grooves, the trip link (operated by the inward travel of the pickup arm lever) causes the trip lever to move the clutch lever (56) into contact with the trip pawl lever (18A) on the cycling gear. This causes the cycle of operation to repeat.

### SERVICE HINTS

*Continuous trip may be caused by failure of the clutch lever (56) to re-set. Check for oil or loose assembly. If stylus skips grooves or fails to become free at the time of "touchdown" check action of index lever (112) and check for proper clearance between landing lever (44) and pickup arm lever (54). See Figure 6.*

## LAST RECORD PROCEDURE

As the last record falls, the stabilizer arm (20) drops also, with the shaft end resting on the extended portion of the shut-off latch actuator (17C). This does not affect the playing of the last record; however, at the completion of the change cycle which caused the last record to drop, the stabilizer arm shaft drops further and forms an obstruction to the free movement of the cycling slide.

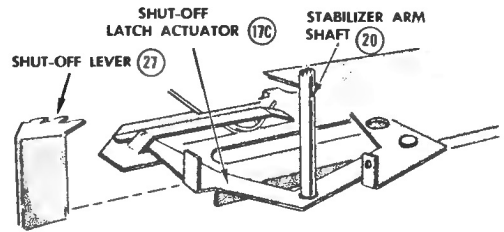


Figure 23—Stabilizer Drops

### SHUT-OFF CYCLE STARTS

At the completion of the last record the cycle of operation starts to repeat. Since the stabilizer arm shaft is now in the downward position, the shut-off latch actuator (17C) is forced inward as the cycling slide (17) moves outward. This causes the shut-off latch actuator to miss the shut-off lever (27) as the cycling slide moves out. The pickup arm lever (54) and the landing lever (44) remain latched.

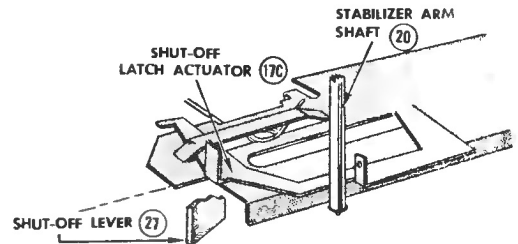


Figure 24—Stabilizer Arm Drops Further

### PICKUP ARM DESCENDS TO REST POSITION

As the cycling slide starts its inward travel, the latched condition of the pickup arm lever (54) to the landing lever (44) prevents the pickup arm from following the receding actuator spring on the cycling slide. The pickup arm then descends to the rest position.

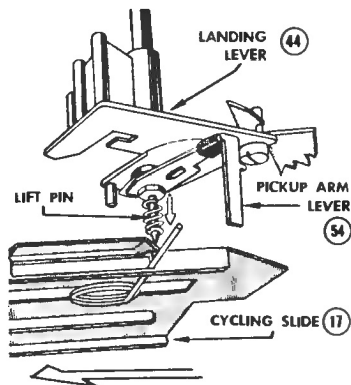


Figure 25—Pickup Arm Descends to Rest Position

### LAST RECORD CYCLING COMPLETED

Further inward travel of the cycling slide (17) causes the shut-off latch to contact the control lever stud (40) and thereby push the control lever to the off position. The control lever also actuates the off-on switch, which shuts off the motor, and actuates the automatic neutral link detent lever (41), which causes the drive system to come to an automatic neutral condition.

### SERVICE HINTS

*Stabilizer arm shaft must be lubricated and free to drop for proper last record action. Check for free motion of control lever (39) if mechanism stalls at the time of shut-off. To check automatic neutral operation, turntable should be free to turn in either direction after mechanism has completely stopped.*

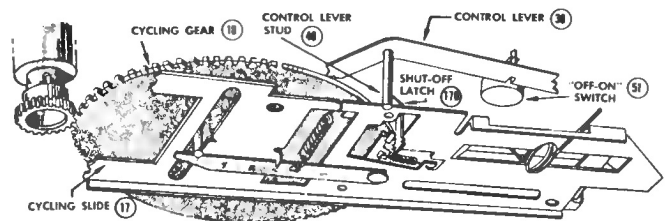


Figure 26—Shut-Off Occurs

## MANUAL OPERATION

### FUNCTION KNOB TURNED TO "MAN" POSITION

As the function knob is turned to the manual position the control lever (39) closes the "off-on" switch (51) causing the motor to start, and through the automatic neutral link detent lever (41) causes the drive system to engage the turntable (13).

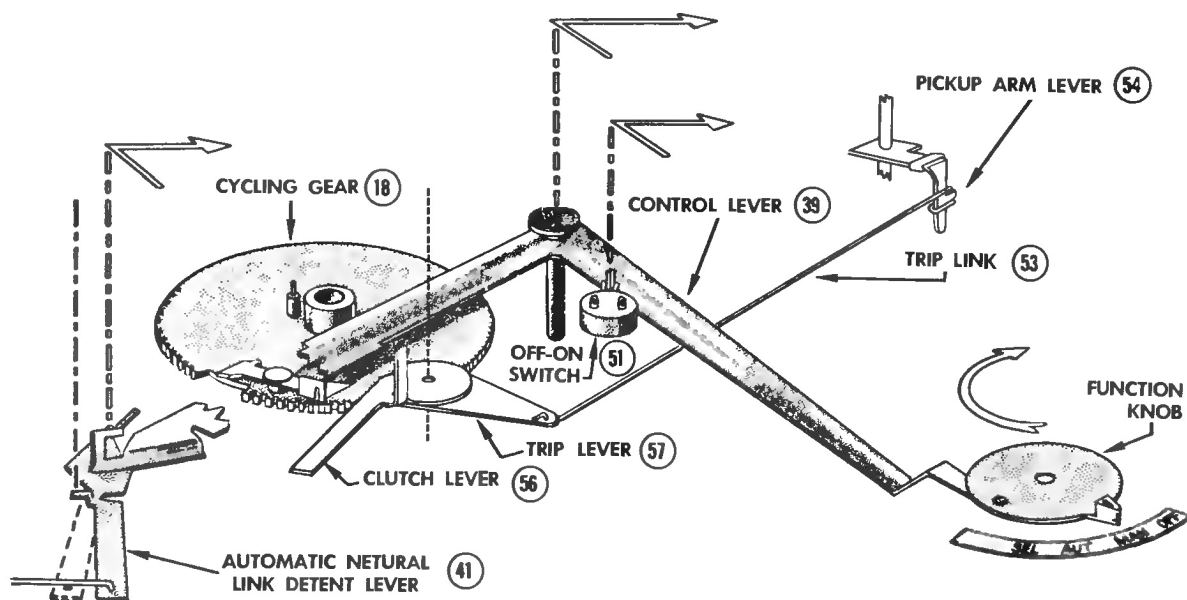


Figure 27—Manual Operation

### CONDITIONS EXISTING IN "MAN" POSITION

The control lever linkage is in such a position as to prevent the inward movement of the clutch lever (56). This prevents automatic trip at the end of the record.

The cycling gear (18) and the cycling slide (17) remain stationary.

The pickup arm lever (54) and the landing lever (44) remain disengaged.

### PLAYING RECORDS MANUALLY

The pickup arm may be manually raised and placed upon the starting grooves of any size record (or placed at any point in the recorded portion of any size record). At the end of the record no automatic trip occurs. The pickup arm must be manually lifted and placed on the rest. Additional record selections are manually re-placed on turntable and pickup arm placed on starting grooves for each record selection.

### SERVICE HINTS

*If mechanism trips in manual, check for bent ear on clutch lever (56). Also check trip pawl lever (18A) for freedom of motion. If pickup arm fails to become free for manual handling, check for proper clearance between landing lever (44) and pickup arm lever (54). See Height Adjustment, Figure 6.*

REPLACEMENT PARTS

| ILL. NO.                       | STOCK NO. | DESCRIPTION   |
|--------------------------------|-----------|---|
| <b>PICKUP AND ARM ASSEMBLY</b> |           |   |
| 6                              | 110985    | Arm—pickup arm shell with cable, date brown, for RP-217-1, -2             |
| 6                              | 111194    | Arm—pickup arm shell with cable, RP-217-3                                 |
| 6                              | 111195    | Arm—pickup arm shell with cable, RP-217-4                                 |
| 6                              | 110986    | Arm—pickup arm shell with cable, black for RP-218-1                       |
| 9                              | 110987    | Bracket—pickup arm swivel, for RP-217-1, -2, -3, -4                       |
| 9                              | 110988    | Bracket—pickup arm swivel, for RP-218-1                                   |
| 10                             | 110906    | Shaft—pickup arm pivot, for RP-218-1                                      |
| 10                             | 110989    | Shaft—pickup arm pivot, for RP-217-1, -2, -3, -4                          |
| 11                             | 110990    | Screw—pickup arm height adjustment, #6-32 x 0.38 long for Ill. #12        |
| 12                             | 110992    | Spring—pickup arm counterweight, 0.195" O. D., x 0.62" long, RP-217-3, -4 |
| 12                             | 111202    | Spring—pickup arm counterweight, 0.195 O. D., x 0.62" long, RP-217-1, -2  |
| 13                             | 110993    | Cable—pickup arm cable assembly, RP-217-1, -2                             |
| 13                             | 111200    | Cable—pickup arm cable assembly, RP-217-3                                 |
| 13                             | 111201    | Cable—pickup arm cable assembly, RP-217-4                                 |
| 14                             | 108537    | Screw—pickup mounting, #4-40 x .38 long, RP 217-1, -2                     |

| ILL. NO. | STOCK NO. | DESCRIPTION  |
|----------|-----------|--|
| 15       | 110023    | Pickup—complete with 3 mil synthetic sapphire and 0.7 mil diamond styli (pickup stamped RMP 200-9) RP-217-1, RP-218-1    |
| 15       | 110021    | Pickup—complete with 3 mil and 0.7 mil synthetic sapphire "snap in" styli (pickup stamped RMP 200-8) RP-217-2            |
| 15       | 111196    | Pickup—with sapphire synthetic 1 mil and 3 mil styli, complete with spring, RP-217-3                                     |
| 15       | 111197    | Pickup—with dual sapphire synthetic 3 mil and 0.7 mil styli, with spring, RP-217-4                                       |
| 15A      | 110022    | Stylus—3 mil synthetic sapphire and 0.7 mil diamond stylus assembly for (pickup stamped RMP 200-9) RP-217-1 and RP-218-1 |
| 15A      | 103331    | Stylus—1 mil synthetic sapphire, RP-217-3  |
| 15A      | 108719    | Stylus—0.7 mil synthetic sapphire, RP-217-4  |
| 15A      | 110020    | Stylus—dual 3 mil and 0.7 mil sapphire stylus for pickup stamped RMP 200-8, RP-217-2                                     |
| 158      | 105483    | Stylus—3 mil synthetic, RP-217-3, -4   |
| 21       | 111199    | Knob—stylus selector knob and retainer cap, RP-217-3, -4   |
| 22       | 111198    | Spring—0.147 O. D. x 0.27" long for pickup RP-217-3, -4  |
| 27       | 110994    | Shield—hum RP-217-1, -2, RP-218-1  |

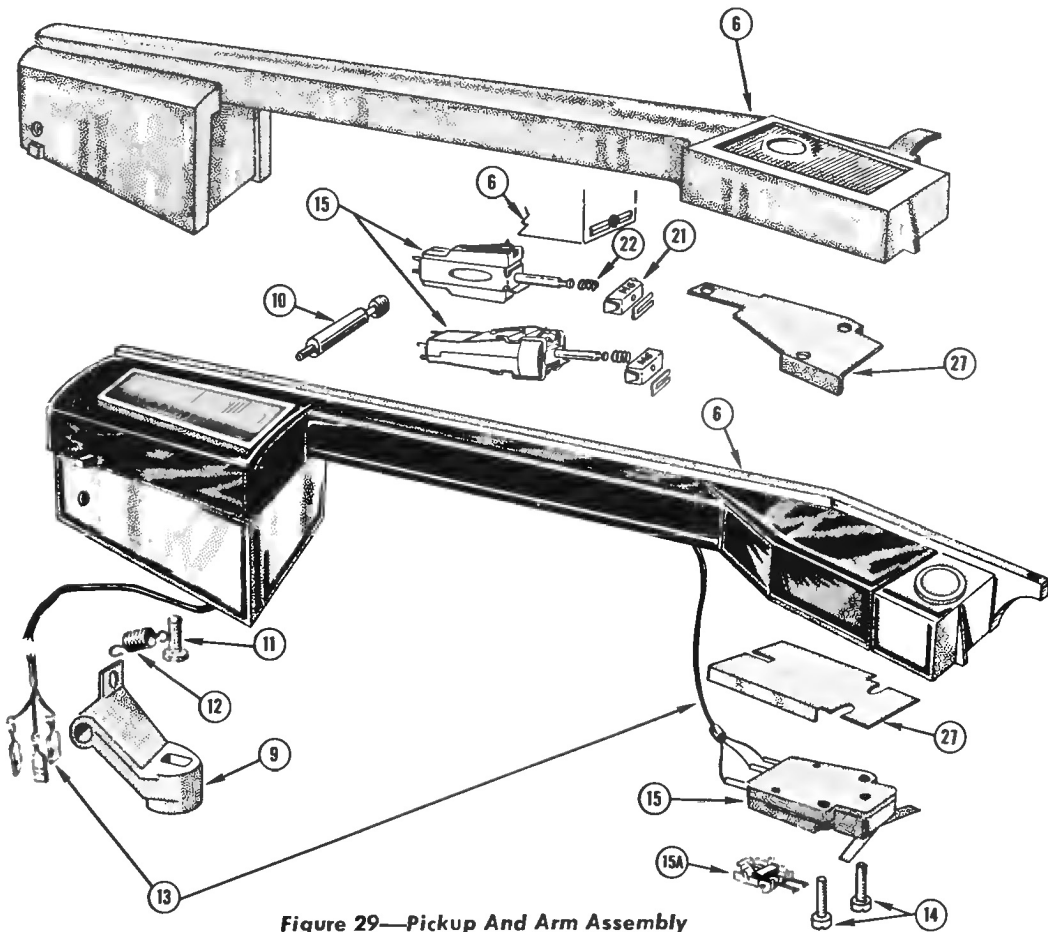


Figure 29—Pickup And Arm Assembly

LUBRICATION

The mechanism is properly lubricated when it leaves the factory; additional lubrication should not be necessary for a long period of time.

A light machine oil (Singer Sewing Machine Oil or equivalent) should be used to lubricate the stabilizer arm shaft, pickup lift rod and the bearings of the drive motor.

On all other bearing surfaces use \*STA-PUT No. 320 or equivalent heavy oil sparingly.

Apply a medium weight clinging type of grease to sliding surfaces such as: control lever stud (40), automatic neutral link detent lever (41), elongated slot in cycling slide, push-off lever and the points upon which the cycling slide travels. COSMOLUBE No. 1 (or equivalent) may be used for this application.

## SERVICE HINTS

**ERRATIC LANDING**

Figure

|   |         |
|---|---------|
| (Pickup lands off record, or on recorded portion of record)     |         |
| Landing adjustment incorrect .....                              | 6       |
| Landing adjustment stud (44A) loose .....                       | 6       |
| Pickup arm wiring interferes with pickup .....                  | 29      |
| Pickup arm lever brake cushion (54C) out of place or oily ..... | 19      |
| Pickup arm shaft binding in intermix housing support (6A) ..... | 34 & 35 |
| Actuator spring (17D) improperly positioned .....               | 17      |
| Height adjustment (67) incorrect .....                          | 6       |

**IMPROPER LANDING**

(Pickup lands for wrong diameter record)

|  |    |
|--|----|
| Selector lever (43) bent .....   | 18 |
| Landing lever (44) binding on shaft .....                              | 18 |
| Support lever (45) binding on intermix selector (48) .....             | 16 |
| Intermix selector (48) binding or feeler (49) binding in housing ..... | 34 |
| Pickup arm wiring interferes with support lever movement .....         | 29 |
| Intermix spring (87) missing .....                                     | 35 |
| Support spring (88) missing .....                                      | 35 |
| Selector spring (89) missing .....                                     | 34 |
| Retainer ring (72) on cycling gear (18) not seated properly .....      | 16 |

**PREMATURE TRIP—FAILURE TO TRIP — CONTINUOUS TRIP**

|   |    |
|---|----|
| Ear on clutch lever (56) bent .....                           | 21 |
| Trip lever spring (78) missing or trip lever bent .....       | 35 |
| Clutch lever (56) bent or inside surface not smooth .....     | 21 |
| Trip link (53) bent or binding on pickup arm lever (54) ..... | 21 |
| Grease between clutch lever (56) and trip lever (57) .....    | 21 |
| Function knob sticking in "select" position .....             | 34 |
| Trip pawl lever (18A) rounded at point of engagement .....    | 21 |
| Clutch lever mounting stud (in motorboard) bent .....         | 35 |

**FAILURE TO TRACK RECORDS**

(Pickup skips grooves)

|  |         |
|--|---------|
| Incorrect stylus being used .....                                    | 29      |
| Pickup wiring interferes with free movement of pickup arm .....      | 29      |
| Binding of pickup arm shaft (54A) in housing .....                   | 34 & 35 |
| Spiral wrap of trip link (53) binding on pickup arm lever (54) ..... | 21      |

**TRIPS IN MANUAL**

|   |    |
|---|----|
| Ear on clutch lever (56) bent .....     | 27 |
| End of trip pawl lever (18A) bent ..... | 27 |

**FAILURE TO TURN ON—NO POWER**

|  |   |
|--|---|
| Cable connections, wiring, soldered connections open circuited       |   |
| Actuator on switch (51) not engaging tab on control lever (39) ..... | 9 |

**FAILURE TO DROP RECORDS**

Figure

|  |    |
|--|----|
| Stabilizer arm and shaft (20) bent or binding .....                    | 24 |
| Push off lever (42) binding or improperly assembled ..                 | 16 |
| Lever in spindle assembly (16) binding or bent .....                   | 16 |
| Tab on cycling gear (18) bent or not engaging push of lever (42) ..... | 16 |
| ¼ inch spindle assembly mounting nut (76) loose .....                  | 35 |
| (For 1½ inch centerhole records) 1½ inch spindle not seated .....      | 30 |

**STALLS OR SLOWS DOWN IN CYCLE**

|  |    |
|--|----|
| Cycling gear (18) bent or binding .....                | 10 |
| Turntable bearing binding .....                        | 34 |
| Motor idler greasy, or slipping on turntable rim ..... | 32 |
| Motor or motor linkage jammed .....                    | 32 |

**PICKUP ARM STRIKES BOTTOM OF RECORD STACK**

|                                       |   |
|---------------------------------------|---|
| Improper height adjustment (11) ..... | 6 |
|---------------------------------------|---|

**STYLUS DRAGGING TOP OF RECORD STACK**

(On Turntable)

|   |   |
|---|---|
| Improper height adjustment (11) .....       | 6 |
| Stylus improperly installed in pickup ..... | 7 |

**FAILURE TO SHUT OFF AFTER LAST RECORD OR IMPROPER SHUT OFF**

|  |    |
|--|----|
| Stabilizer arm shaft (20) not lubricated, or binding ..... | 24 |
| Shut off latch (27) bent or not assembled properly .....   | 24 |
| Switch actuator ear on control lever (39) bent .....       | 26 |
| Height adjustment (67) incorrect—set too low .....         | 6  |

**LOW SPEED—RUMBLE—WOW**

|  |         |
|--|---------|
| Grease or oil on turntable drive surface or on motor idler .....           | 32 & 34 |
| Motor bearings binding .....   | 32      |
| Rubber motor mounting grommets improperly assembled, missing, worn .....   | 32      |
| Turntable support (26) mounting screws loose or missing .....              | 34      |
| Neoprene washer or turntable bearing washers not lubricated, missing ..... | 34      |
| Turntable (13) bent .....  | 34      |
| Obstruction touching underside of turntable .....                          | 35      |
| Bump or cut on motor idler (1) .....                                       | 32      |
| Spindle assembly (16) not tight .....                                      | 34      |
| Motor shaft bent .....   | 32      |

**CLEANING**

It is important that the drive motor spindle, rubber idler wheel and the inside rim of the turntable be kept clean and free of oil and grease.

Chlorothene (Dow Chemical Co.), naphtha or isopropyl alcohol are recommended cleaning agents for cleaning rubber and metal parts of the mechanism.

### 16-2/3—45 RPM CENTERPOST

#### REPLACEMENT PARTS (Cont.)

| ILL. NO. | STOCK NO. | DESCRIPTION  |
|----------|-----------|--|
| 104      | 110905    | 45 R.P.M. CENTERPOST<br>Centerpost—45 rpm centerpost assembly—complete |

#### OPERATION OF 16 2/3 — 45 RPM CENTERPOST

When playing records with 1½ inch centerholes, the detachable 1½ inch centerpost is employed. The records rest upon a shelf formed by the centerpost body assembly and the nose cap. The records are also supported by a retractable shelf at a point just opposite the formed shelf.

At the time of record drop, the "movable shelf-push off slide" is actuated by the push off finger in the ¼ inch centerpost. This causes the retractable shelf to recede into the centerpost body, and at the same time the push off slide forces the bottom record off the formed shelf causing the record to drop. The other records in the stack remain in position due to the opposition of the retainer in the nose cap. The centerpost should always be installed or removed with a STRAIGHT VERTICAL MOTION with the word FRONT facing the front of the record changer. The STABILIZER ARM should always be employed when using the centerpost.

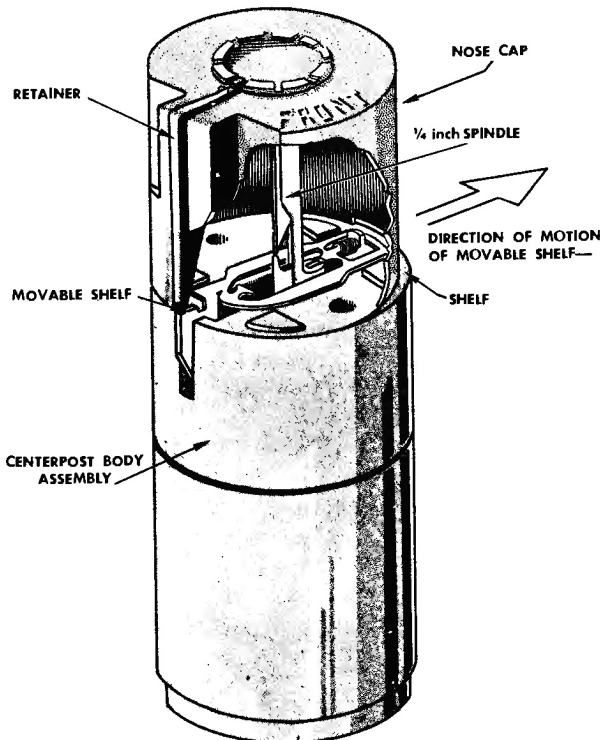


Figure 30—Centerpost Operation

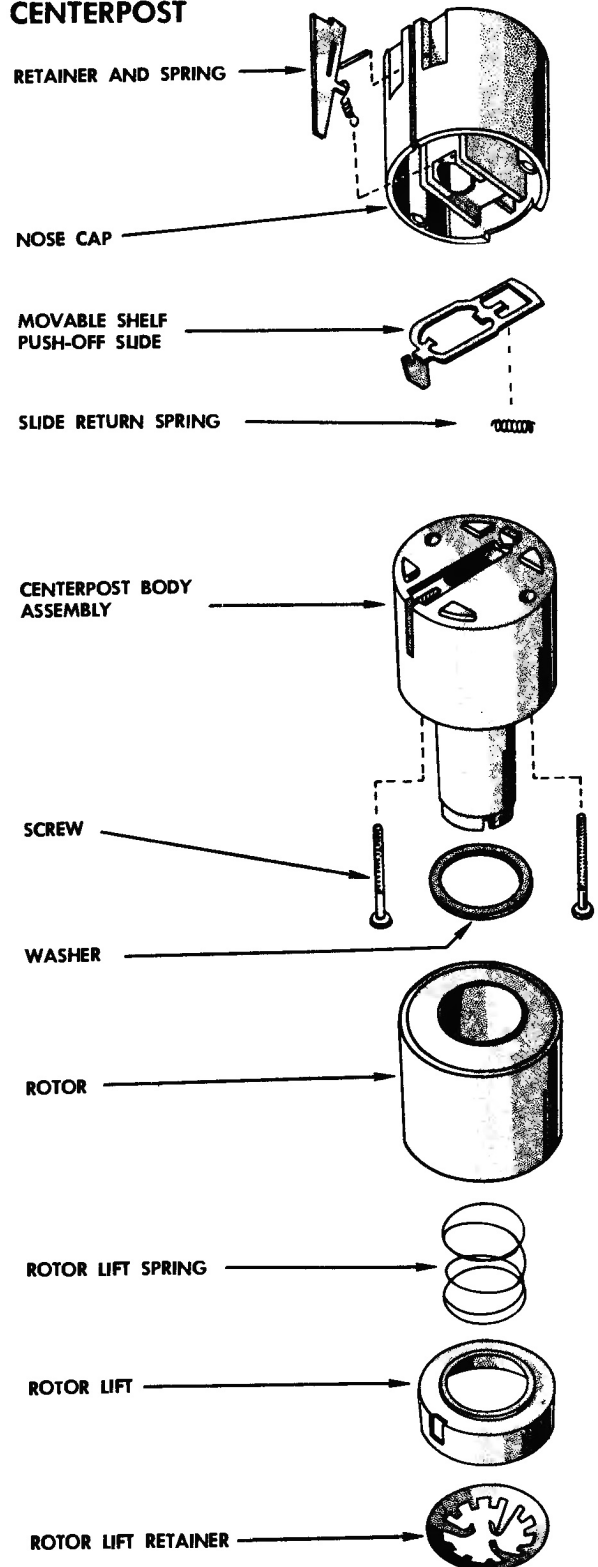


Figure 31—16 2/3—45 rpm Centerpost

REPLACEMENT PARTS (Cont.)

| ILL. NO.   | STOCK NO. | DESCRIPTION   |
|--|-----------|---|
| <b>MOTOR ASSEMBLY</b><br>Stamped 1096251-1, Code 190<br>105/125 v., 60 cycle |           |   |
| 1  | 108602    | Wheel—Turntable drive idler   |
| 2  | 108603    | Arm—Idler   |
| 3  | 108601    | Link—Toggle   |
| 4  |           | Spring—Compression for Ill. #3  |
| 5  | 102595    | Washer—Cup, for idler pulley support stud                             |
| 6  | 108606    | Spring—Detent, 0.187" O. D. x 1.937" long                             |
| 7  | 75761     | Grommet—Motor mounting  |
|  | 78374     | Spring—Idler wheel tension, 0.185/0.200" O. D. x 0.570" long          |
| 8  |           |   |
| 9  | 111058    | Motor—Complete  |
| 10   | 20165A    | Washer—"C" retaining ring, 0.375" O. D. x 0.122" I. D. x 0.025" thick |
| 11   | 108604    | Washer—Fiber, 0.192" I. D. x 0.312" O. D. x 0.015" thick              |
| 12   | 78647     | Washer—Shim, 0.375" O. D. x 0.188"/0.192" I. D. x 0.008/0.010" thick  |

| ILL. NO.  | STOCK NO. | DESCRIPTION   |
|---|-----------|---|
| <b>MOTOR ASSEMBLY</b><br>Stamped: 1096251-1, CODE 107<br>105/125 v., 60 cycle |           |   |
| 1   | 103445    | Washer—"C" retaining washer 0.094" I. D. x 0.230" O. D. x 0.015" thk. |
| 2   | 108607    | Washer—Flat Metal, 1/4" O. D. x 0.130"/0.127" I. D. x 0.008" thk.     |
| 3   | 108608    | Washer—Fiber, 5/16" O. D. x 0.123"/0.121" I. D. x 0.015" thk.         |
| 4   | 110040    | Wheel—Turntable drive idler wheel                                     |
| 5   | 108610    | Spring—For idler link, 0.125" O. D. x 21/32" length, 0.012" wire      |
| 6   | 108611    | Link—Idler link with screw (111 #6A) and nylon insert (111 #6B)       |
| 6A  |           | Screw—Set screw   |
| 6B  |           | Insert—For idler link set screw                                       |
| 7   |           | Plate—Idler plate assembly  |
| 8   | 108613    | Spring—For idler plate, 5/32" O. D. x 3/4" length, 0.008" wire        |
| 9   | 108614    | Spring—Detent spring, 0.171" O. D. x 1/2" length, 0.022" wire         |
| 10  | 75761     | Grommet—Motor mounting grommet  |
| 11  | 111058    | Motor—Phono motor assembly complete                                   |

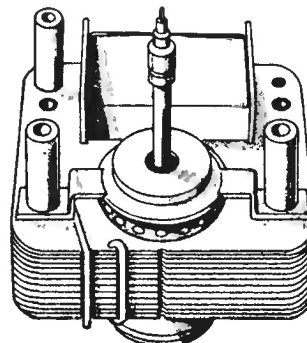
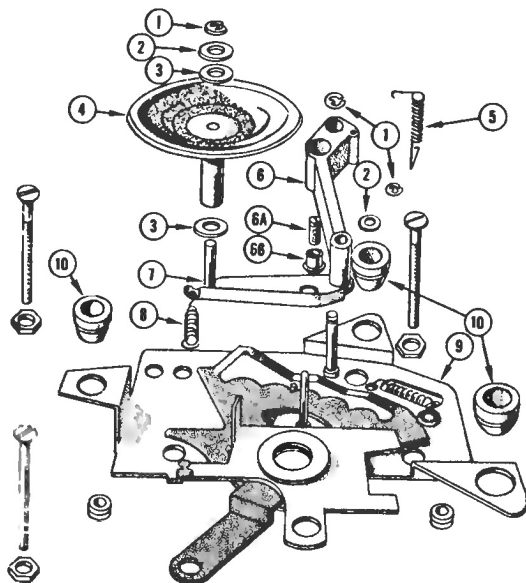
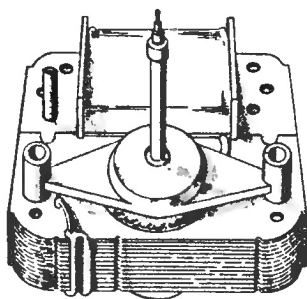
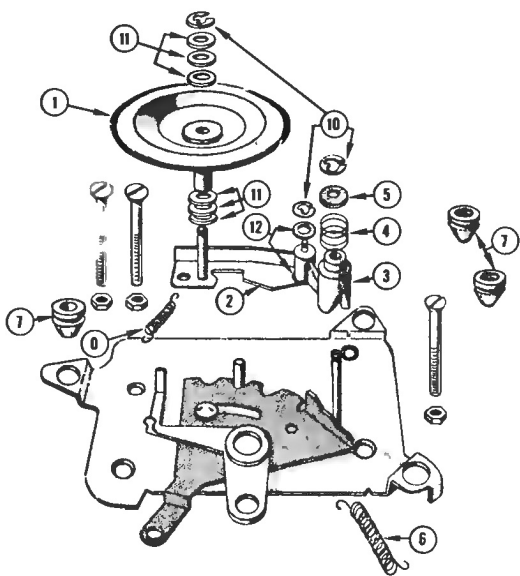


Figure 32—Motor Assembly Stamped 1096251-1 190

Figure 33—Motor Assembly Stamped 1096251-1 107

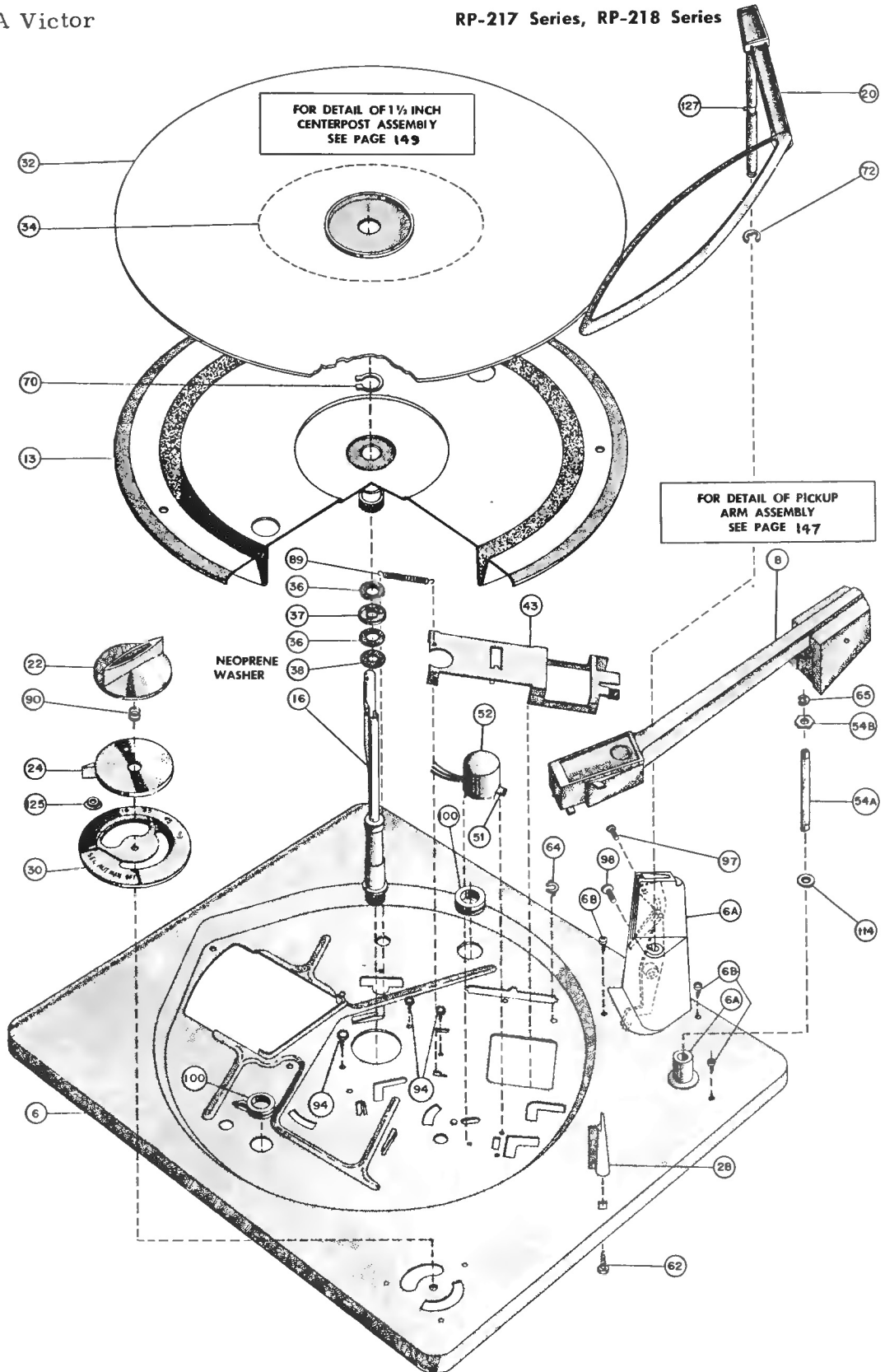


Figure 34—Exploded View RP-217-1 Top



## REPLACEMENT PARTS (Cont.)

| ILL. NO. | STOCK NO. | DESCRIPTION  |
|----------|-----------|--|
| 6        | 110835    | Motorboard—Sub-assembly with welded and staked parts—and intermix housing—champagne gold—for RP-217-1, -2, -3 and -4 |
| 6        | 110904    | Motorboard—Sub-assembly with welded and staked parts—and intermix housing—frast aluminum—for RP-218-1                |
| 6A       |           | Support—Intermix housing stabilizer arm and tone arm pivot—champagne gold—for RP-217-1, -2, -3 and -4                |
| 6A       |           | Support—Intermix housing stabilizer arm and tone arm pivot—frast aluminum—for RP-218-1                               |
| 6B       |           | Screw—#8-32 x 3/8" lang for Support 6A   |
| 8        |           | Pickup arm assembly  |
| 13       | 110907    | Turntable—Complete with bearing and pinion—RP-217-1  |
| 13       | 110908    | Turntable—Complete with bearing and pinion—RP-218-1  |
| 13       | 111191    | Turntable—9" diameter—complete with bearing and pinion—RP 217-3 and -4   |
| 16       | 110909    | Spindle—Assembly—1/4" diameter   |
| 17       | 111174    | Slide—Cycling—complete with latch—lever and springs  |
| 17A      |           | Lever—Cycling gear   |
| 17B      |           | Latch—Shut-off   |
| 17C      |           | Actuator—Shut-off latch  |
| 17D      | 110911    | Spring—Actuator—0.60" diameter—music wire  |
| 17E      | 110912    | Spring—Cycling gear lever—0.218" O. D. x 0.81" lang  |
| 17F      | 110296    | Spring—Shut-off latch actuator—0.23" O. D. x 0.56" lang  |
| 17G      | 110101    | Spring—Shut-off latch—0.200" O. D. x 5/8" lang   |
| 18       | 111172    | Gear—Cycling—complete with staked parts  |
| 18A      |           | Lever—Trip pawl  |
| 18B      | 111173    | Spring—Straight music wire—for trip pawl   |
| 19       | 111058    | Motor—Assembly   |
| 20       | 110915    | Arm—Stabilizer—RP-217-1, -2, -3 and -4   |
| 20       | 110916    | Arm—Stabilizer—RP-218-1  |
| 22       | 110917    | Knob—Speed selector with shaft—RP-217-1, -2, -3 and -4   |
| 22       | 110918    | Knob—Speed selector with shaft—RP-218-1  |
| 24       | 110919    | Knob—Function Control—RP-217-1, -2, -3 and -4  |
| 24       | 110920    | Knob—Function control—RP-218-1   |
| 26       | 110921    | Support—Turntable  |
| 27       | 110922    | Lever—Shut-off   |
| 28       | 110923    | Rest—Pickup arm—RP-217-1, -2, -3 and -4  |
| 28       | 110924    | Rest—Pickup arm—RP-218-1   |
| 30       | 110925    | Escutcheon—Control—RP-217-1, -2, -3 and -4   |
| 30       | 110926    | Escutcheon—Control—RP-218-1  |
| 32       | 110927    | Mat—Turntable—RP-217-1, -2   |
| 32       | 111192    | Mat—Turntable—RP-217-3 and -4  |
| 32       | 110928    | Mat—Turntable—RP-218-1   |
| 34       | 110929    | Insert—Turntable mat—RP-218-1  |
| 35       | 110930    | Link—Automatic neutral   |
| 36       | 78720     | Washer—Bearing—0.410" I. D., 0.685" O. D.  |
| 37       | 78660     | Bearing—Turntable thrust   |
| 38       | 110931    | Washer—Oil resistant sheet rubber  |
| 39       | 110933    | Lever—Control  |
| 40       | 110932    | Stud—Control lever   |
| 41       | 110934    | Lever—Automatic neutral link detent  |
| 42       | 110935    | Lever—Push-off   |
| 43       | 110936    | Lever—Selector—with vinyl tubing   |
| 44       | 110937    | Lever—Landing  |
| 44A      | 110938    | Stud—Landing lever eccentric   |
| 44B      | 74431     | Retainer—Landing lever   |
| 45       | 111142    | Lever—Support  |
| 46       | 110940    | Lever—Pickup arm latch   |
| 47       | 110941    | Lift Pin—Pickup arm—RP-217-1, -2, -3 and -4  |
| 47       | 111193    | Lift pin—Pickup arm—RP-218-1   |
| 48       | 110942    | Lever—Intermix selector  |
| 49       | 110943    | Feeler—(Intermix indexing lever)   |
| 50       | 111175    | Lever—Speed control  |
| 51       | 108457    | Switch   |
| 52       |           | Cover—Switch   |
| 53       | 110945    | Link—Trip—5.96" lang with looped end   |
| 54       | 110946    | Lever—Pickup arm   |
| 54A      | 110947    | Shaft—Pickup arm lever   |
| 54B      | 103402    | Nut—Shaft retainer   |
| 54C      | 110948    | Cushion—Pickup arm lever brake   |
| 55       | 111176    | Link—Motor speed change  |
| 56       | 110949    | Lever—Clutch   |

| ILL. NO. | STOCK NO. | DESCRIPTION  |
|----------|-----------|--|
| 57       | 110950    | Lever—Trip   |
| 58       | 110951    | Spring—Flat—push-off lever—for Ill. #42  |
| 59       |           | Board—Terminal   |
| 60       | 109440    | Connector—Three-contact female—for phana power   |
| 61       | 110176    | Spring—Mounting  |
| 62       |           | Screw—#10 x .44" long—hex head—for Ill. #28  |
| 63       | 33726     | Washer—"C" type retaining—for Ill. #19, 50, 67   |
| 64       | 74431     | Washer—Spring—for Ill. #40, 112  |
| 65       | 77269     | Washer—"C" type retaining—for Ill. #24, 47, 56   |
| 66       | 204043    | Washer—"C" type retaining—for Ill. #113  |
| 67       | 110952    | Screw—Slide assembly height adjustment—0.164-32 x 0.875" lang—for Ill. #17                 |
| 68       | 110953    | Spring—Pickup arm torque   |
| 69       |           | Eyelet—Slide assembly height adjustment screw—Ill. #67                                     |
| 70       | 78654     | Ring—Retaining—for Ill. #13  |
| 71       | 101517    | Ring—Retaining—for Ill. #26, 88  |
| 72       | 101500    | Ring—Retaining—for Ill. #18, 46, 45, 84  |
| 73       | 110954    | Ring—Retaining—for Ill. #27  |
| 74       | 110955    | Ring—Retaining—for Ill. #44  |
| 75       |           | Eyelet—Push-off lever—Ill. #42   |
| 76       | 100342    | Nut—Spindle retaining—.500-32—for Ill. #6  |
| 77       | 103402    | Nut—Pickup arm retaining, 0.250-32—for Ill. #8   |
| 78       | 110956    | Spring—Trip clutch—for Ill. #57  |
| 79       | 110957    | Spring—Height adjustment—five active turns—0.031" wire diameter, 0.187" I. D.—for Ill. #67 |
| 80       | 110958    | Spring—Lift pin, 3/2 active turns—0.018" wire diameter, 0.250" x .50" lang—for Ill. #47    |
| 81       | 110959    | Spring—Push-off lever—0.218" I. D. x .38" lang—four turns—0.031 wire diameter—for Ill. #42 |
| 82       |           | Terminal—Support lever spring—for Ill. #88   |
| 84       | 110961    | Spring—Control lever reject spring—0.250" O. D. x 1.75" lang—for Ill. #39                  |
| 85       | 110962    | Spring—Push-off lever—and tone arm latch return—.250" O. D. x 1.84" lang—for Ill. #17, 46  |
| 86       | 111056    | Spring—Landing lever—0.187" O. D. x 0.75" lang—for Ill. #44                                |
| 87       | 110963    | Spring—Intermix—0.195" O. D. x 1.02" lang—for Ill. #48                                     |
| 88       | 110964    | Spring—Support lever—0.190" O. D. x 0.50" lang—for Ill. #45                                |
| 89       | 110965    | Spring—Selector lever—0.190" O. D. x 0.61" lang—for Ill. #43                               |
| 90       | 110966    | Spring—Speed shift knob—two active turns—0.016 wire diameter—0.12" I. D.—for Ill. #22      |
| 93       | 79240     | Washer—0.140" I. D.—0.300" O. D., 0.010" thick—for Ill. #42, 56                            |
| 94       |           | Screw—Turntable support—#8 x 0.19" lang—for #26  |
| 95       |           | Screw—Terminal board—#6 x .25" lang—for Ill. #59   |
| 96       |           | Screw—#6 x .62" lang—for Ill. #60  |
| 97       |           | Screw—#4 x .40, .38" lang—for Ill. #49   |
| 98       |           | Screw—Intermix selector—#6-32, 0.75" lang—for Ill. #48                                     |
| 99       | 106620    | Grammet—Motor and speed control lever—Ill. #19, 50   |
| 100      |           | Grammet—Motorboard—Ill. #6   |
| 109      |           | Spacer—Knob  |
| 110      |           | Washer—Adjusting screw—0.172" I. D., 0.500" O. D., 0.018" thick—for Ill. #67               |
| 112      | 110967    | Lever—Index  |
| 113      | 110968    | Stud—Lever index—for Ill. #112   |
| 114      | 78649     | Washer—Pickup arm lever—for Ill. #54   |
| 115      |           | Wire—1.5" lang—for Ill. #59  |
| 116      |           | Washer—0.156" I. D., 0.375" O. D.—for Ill. #60   |
| 117      |           | Washer—Landing lever assembly—0.515 I. D., 0.75 O. D.—for Ill. #44                         |
| 119      |           | Washer—Spring—0.260" I. D., 3/16" O. D.—for Ill. #113                                      |
| 120      |           | Lug—Mounting spring—for Ill. #61   |
| 121      | 75740     | Washer—Motor—0.190" I. D. 3/8" O. D., 0.0299" thick—for Ill. #19, 48                       |
| 122      | 75752     | Washer—Pickup arm torque spring—0.500" O. D., 0.252" I. D., 0.015" thick—for Ill. #68      |
| 123      | 100173    | Washer—"C" type retaining—0.230" O. D., 0.094" I. D.—for Ill. #47                          |
| 125      |           | Bushing—Knob—for Ill. #22  |
| 127      |           | Pin—Stabilizer arm   |
| 129      |           | Lug—Connector—for Ill. #60   |
| 131      | 78652     | Washer—"C" type retaining—for Ill. #67   |

APPLY TO YOUR RCA DISTRIBUTOR FOR PRICES OF REPLACEMENT PARTS

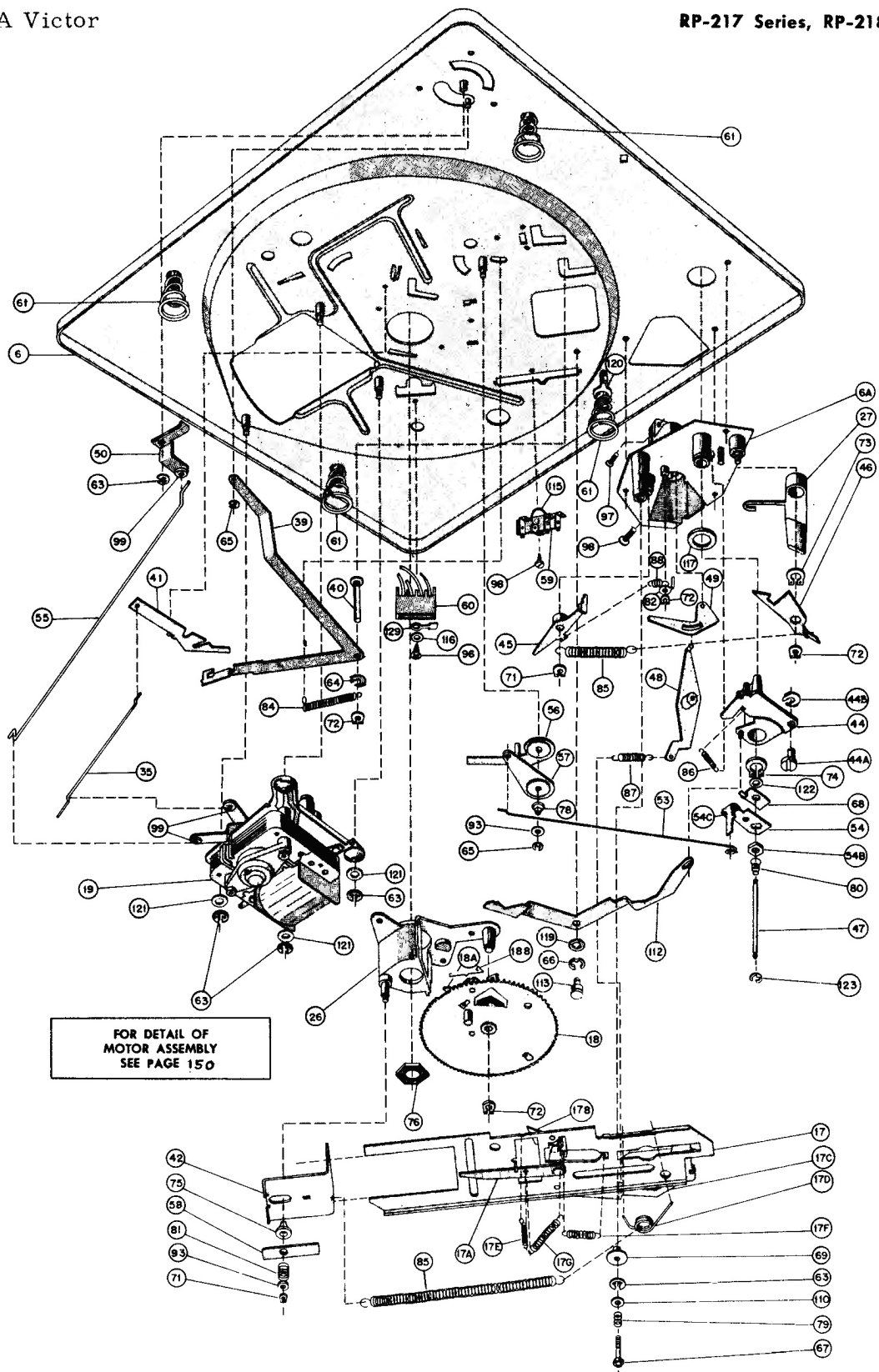


Figure 35—Exploded View RP-217-1 Bottom