

SECTION 3 - MAINTENANCE

INTRODUCTION

This section contains three major sub sections:

- Routine Service
- Preventive Maintenance
- Unscheduled Maintenance

Routine and preventive maintenance are to be performed on your normal periodic service call. Unscheduled maintenance is only to be performed if the R-90 Phonograph fails to operate properly.

ROUTINE SERVICE

This topic contains instructions to enable the route person to perform routine service tasks, such as changing records, making collections, and cleaning the R-90 Phonograph cabinet.

Changing Records

Load or change records as follows:

1. Unlock and open the top door.
2. Move the Service switch to the SERVICE position (Refer to Figure 3-1 and Figure 3-2).

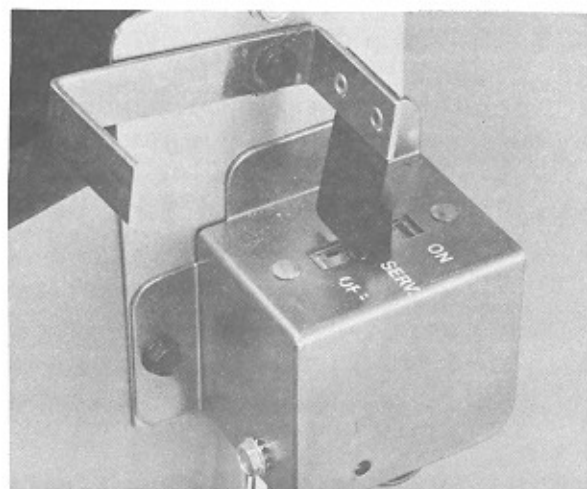


Figure 3-1. Service Switch

3. Press the Scan button to move the record space to the left or right of the transfer arm.
4. Install records as shown in Figure 3-2.

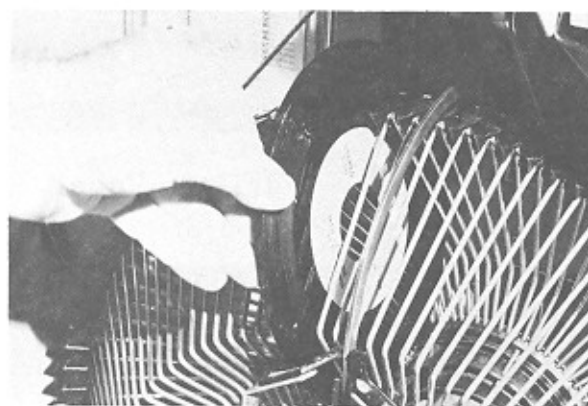


Figure 3-2. Changing A Record

Note: When changing or loading records, be sure to keep the magazine record load approximately balanced. If the magazine is partially loaded with all records on one side, the sprag wheel may lock and the magazine will not turn.

5. Move the Service switch to ON before making selections.

Changing Title Strips

Each time new records are installed, corresponding title strips must also be installed. Install title strips as follows:

1. Unlock and open the top door.
2. Release the title panel as shown in Figure 3-3.
3. Insert new title strips from the right as shown in Figure 3-4.
4. Check title strips and record sequence to ensure that the titles and records correspond.

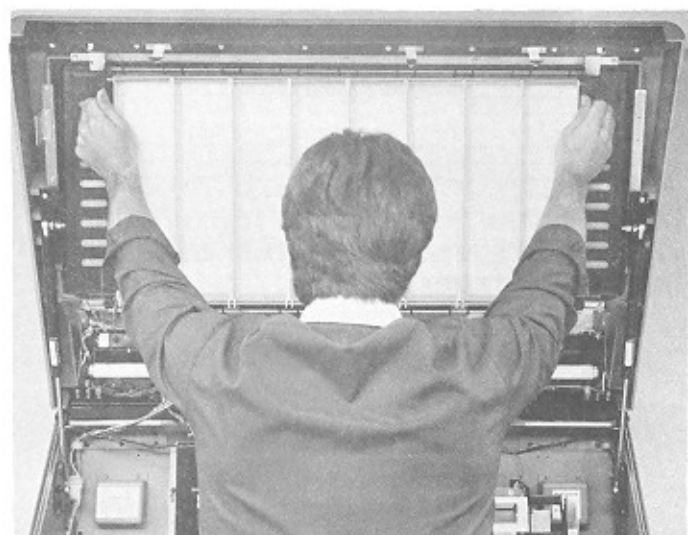


Figure 3-3. Lowering Title Panel

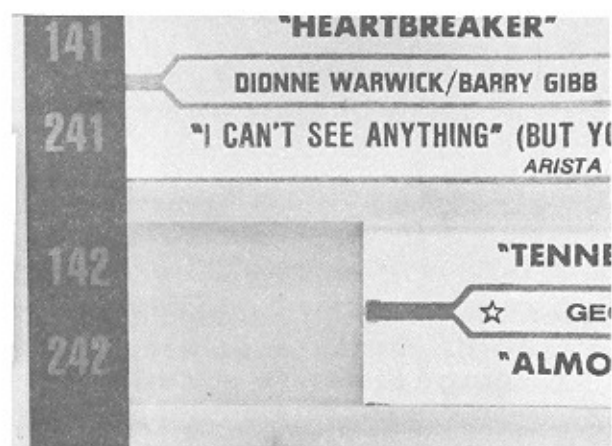


Figure 3-4. Changing Title Strips

Removing The Cash Bag

1. Unlock the cash bag door and pull the door away from the cabinet (See Figure 3-5.).
2. Slide the cash bag along its runners until the cash bag is out of the cabinet.

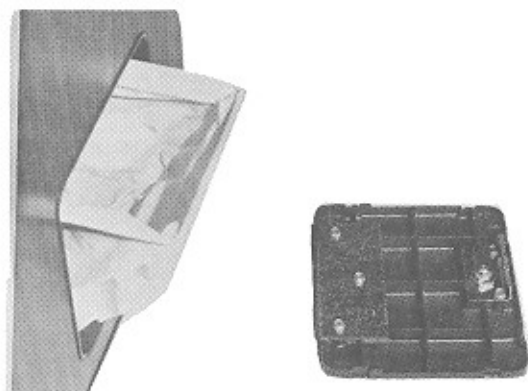


Figure 3-5. Cash Bag Removal

Reading And Resetting Memorec

The Memorec keeps a tally of the number of times each record is selected and the total number of selections made. Memorec registers the number of selections made by the customer but not the total number of times the record has been played. (For example: the number of times the Autoplay chose a selection will not be counted.).

1. Open the phonograph and set the Control Console switch to the SERVICE position.
2. Set the VIDEO/RECORD switch on the Central Control Computer to either RECORD or VIDEO.
3. Set the Popular switch on the Central Control Computer to LEAST or MOST (MOST will start the display at the most popular selection number. The LEAST position will display the least popular selection.). The selection number will appear in the RECORD/VIDEO NUMBER display and the number of times that the record has been selected will be appear in the TIMES SELECTED display.
4. Push and release the Memorec Advances switch to read either the next least popular or next most popular selection (depending on the switch setting).
5. Change the display from the least popular sequence to the most popular selection sequence or vice versa, set the Popular switch to the desired function and progress from least to most popular or most to least popular by pressing the Memorec Advance switch.
6. The readout can be reset to the beginning by moving the Popular switch to one side and then back to its original position.
7. Use the eraser end of a pencil to press the Memorec Reset button. This will reset all Memorec totals to zero.

Note: Once these totals are reset to zero, they cannot be displayed again. Do not press the Reset button until you are finished displaying your totals.

Special Commands (5XX And 7XX)

More information can be gained from Memorec by entering special commands from the Keyboard. When the phonograph is in SERVICE Mode, the special commands that follow can be used:

The number of times a selection has been made, since the last time data was cleared from the memory, can be determined by entering 1XX, 2XX, or 3XX on the phonograph Keyboard. XX can be any two digit number from 00 to 99, which, when added to the first digit in the box, matches a selection number currently installed in the phonograph. The selection number you enter and the number of times that selection has been made will be displayed.

Display Commands (5XX)

The 5XX series of commands are entered from the Keyboard and the Memorec totals. The totals that can be displayed range from 0000 to 9999.

- 500 Number of times an audio selection has been made using the Popular key
- 501 Total number of record selections
- 502 Number of times a video selection has been made using the Popular key
- 503 Total number of video selections
- 504 Total number of AutoPlay selections
- 505 Number of #1 coins received
- 506 Number of #2 coins received
- 507 Number of #3 coins received
- 508 Number of #4 coins received
- 509 Number of #1 bills received

- 510 Number of #2 bills received
- 511 Total money collected (Expressed in nickels)
- 512 Total wallbox money collected
- 513 Total money collected (A permanent total that cannot be reset)

Clearing 5XX Totals

Entering a 0 into Location 97 will allow both the 5XX totals and the popularity totals to be cleared at one time (Use the Memorec Reset switch to clear both totals.). This function is convenient when one person changes records and another collects the money.

If one person collects the money and another changes the records, as in a large route, entering a 1 into Location 97 will allow the popularity totals to be cleared (using the Memorec Reset Switch), but the 5XX totals will not be cleared. A 750 command must be entered from the Service Mode to clear these totals (See **Memorec Clear Commands** that follow.).

If you wish to protect the 5XX totals, enter a 2 into Location 97. This will keep anyone from clearing the totals, except someone who has access to the Programming Mode. The Programming Mode can be protected by a security code (See Section 2.). Popularity data can still be cleared with the Memorec Reset switch. The 5XX totals are cleared when Location 97 is entered at the prompt.

Note: If you are interested in finding the total number of records played by the phonograph, in order to determine the amount of wear on the Record Changer mechanism, check the Total Play counter on the left side of the Record Changer mechanism.

Memorec Clear Commands (7XX)

The 7XX series commands are also entered from the Keyboard. These commands are primarily used to clear Memorec totals.

- 700 Adds 25 cents credit to give free plays or check pricing
- 701 Clears credits
- 702 Clears Autoplay
- 750 Clears 5XX totals (See **Clearing 5XX totals** in the previous paragraph.)
- 799 Clears regular selections

- Use a vacuum cleaner to remove heavy dust deposits.
- Use a clean, lint free cloth saturated in denatured alcohol to clean mechanical parts.
- Clean electrical parts using a clean, dry cloth or camel hair brush.

WARNING: Use solvents in a well ventilated area only. Do not use solvents on plastic parts.

Preventive Maintenance

Preventive maintenance should be performed at the regular intervals specified, while adjustments should be made only when necessary.

In addition to cleaning the cabinet each time the location is visited, clean the interior every three to six months, as required. Keeping the cabinet interior clean reduces dust, resulting in increased record and component life (See Table 3-1 for details.). Always clean the inside of phonograph cabinet before you lubricate the phonograph mechanism.

Cleaning The Glass

1. Open the Cabinet.
2. Remove the Title Rack by pushing outward on the clips on each side that hold it.
3. Remove the Title Rack Blockout panel by pushing outward on the clips on each side that hold it.
4. Clean the glass with a soft cloth that is clean and lint free. Liquid or spray glass cleaner may be used.
5. Replace the Title Rack and the Title Rack Blockout panel.

CABINET CLEANING

ACTION REQUIRED	PROCEDURE
1. Clean Glass	1. a. Clean all glass with a paper towel and a non-abrasive glass cleaner such as Windex. b. Dry with a clean, lint-free cloth.
2. Clean painted wood and metal surfaces	2. a. Clean all painted wood and metal surfaces with mild soap and water. DO NOT USE SOLVENTS. b. Apply a good quality auto or furniture wax to protect the finish.
3. Clean chrome trim	3. a. Use a damp or dry cloth to remove any dust or dirt. b. Use mild soap and water to remove stubborn deposits. Do not use strong detergents or abrasives of any kind.
4. Clean plastic trim	4. a. Wipe all plastic surfaces with a damp or dry cloth only. DO NOT USE SOLVENTS.
5. Clean electrical components	5. a. Clean all electrical components with a clean, dry, lint-free cloth or a soft bristled brush only.

Table 3-1. Cabinet Cleaning

Flashing Lamps

All flashing lamps in the phonograph, except for the lamps on either side of the vertical fluorescent lamp in the front door, can be replaced by turning the lamp 1/8 turn counterclockwise and lifting out the lamp. To replace these lamps:

1. Remove the top two screws from both white panels.
2. Loosen the bottom four screws (two screws on each panel) from both white reflector panels.
3. Lift out both reflector panels and set them aside.
4. Locate the burned out lamps and turn each one 1/8 turn counterclockwise.
5. Install the new lamps by inserting the lamps into the lamp socket and turning the lamps 1/8 turn clockwise.
6. Install the white panels and tighten all eight screws.

Fluorescent Lamps

All fluorescent lamps in the phonograph, except the vertical lamp in the Front Door, can be replaced by turning the lamp 1/4 turn and lifting out the lamp. To replace the vertical Front Door lamp:

1. Remove the top two screws from the white reflector panel; loosen the bottom two screws.
2. Lift out the reflector panel and set it aside.
3. Turn the fluorescent lamp 1/4-turn and lift the lamp out.
4. Slide the new lamp in place, seat the lower end first, seat the upper end, and turn the lamp 1/4 turn.
5. Install the white reflector panel and tighten all four screws.

FIVE YEAR LUBRICATION

Your phonograph requires lubrication only after five years. To maintain smooth, trouble-free operation, lubricate the record changer mechanism as shown in Figure 3-6.

Do Not Over - Lubricate
Do Not Use Oil or Grease on Solenoid Plungers.

One drop 3:1
Electric motor oil

Lift turntable
apply one drop
of oil near end
of shaft and
replace turn-
table.

Apply one drop
of oil to bronze
bearing at shaft
of turntable
motor.

Do Not Get any
Oil or Grease on
Turntable Belt.

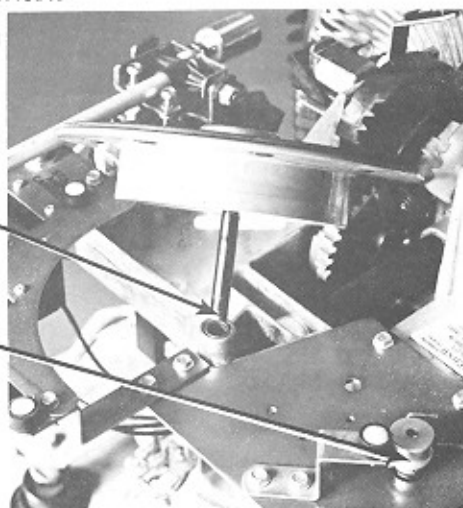


Figure 3-6. Turntable Lubrication

UNSCHEDULED MAINTENANCE

This section contains adjustments, removal, and replacement procedures that are to be followed whenever a malfunction has occurred. Maintenance for the OBA Bill Acceptor is not included. Maintenance procedures for the OBA Bill Acceptor are described in Section 4 of this manual.

Record Changer Adjustments

Sprag Assembly

The following steps must be used to make sprag assembly adjustments.

WARNING - TURN POWER OFF

1. Refer to Figure 3-7 in the following steps. Depress solenoid plunger until the roll pin bottoms on the plunger stop (Actuate by pressing on plunger.).

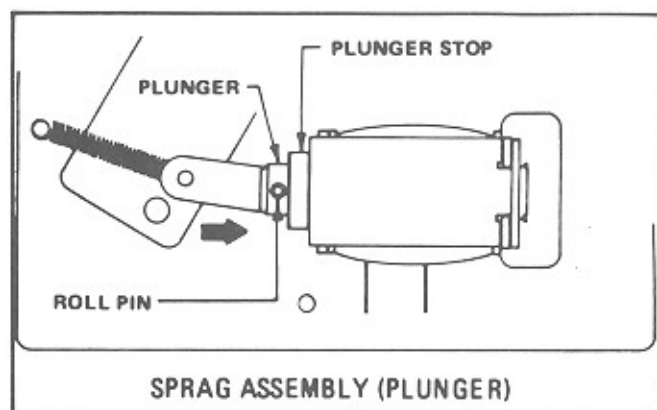


Figure 3-7. Sprag Assembly (Plunger)

2. Rotate the record magazine and note the clearance between the sprag lever and the sprag wheel located on the backside of the sprag plate assembly. The sprag lever must not touch the sprag wheel and the clearance must not be greater than 1/32 inch (See Figure 3-8.). It will be necessary to remove the sprag assembly if corrections are required.

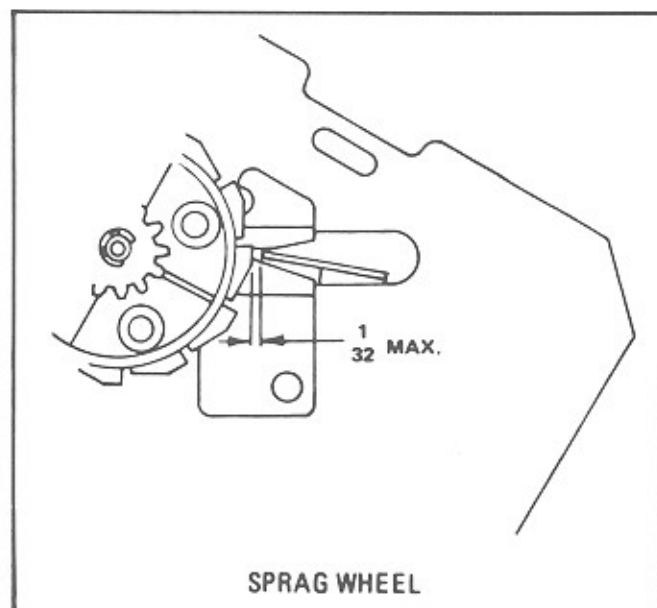


Figure 3-8. Sprag Wheel

Sprag Assembly Removal

1. To remove sprag assembly, disconnect wires to the solenoid and motor, remove the three mounting screws and slide the assembly out of the right side of the mechanism (See Figure 3-9.).

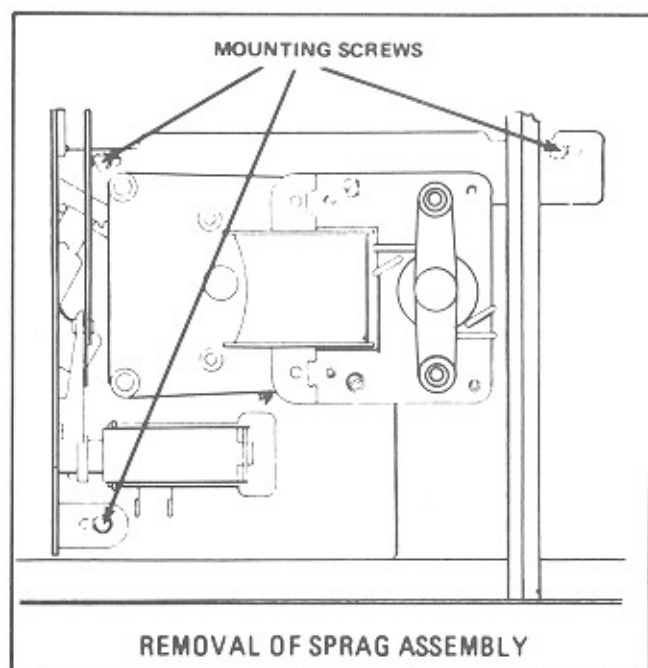


Figure 3-9. Sprag Assembly Removal

2. Loosen the solenoid mounting screws and with the roll pin against the plunger, position the solenoid so that there is a .015 to .025 inch gap between the sprag lever and the highest point on the sprag wheel (See Figure 3-10.).

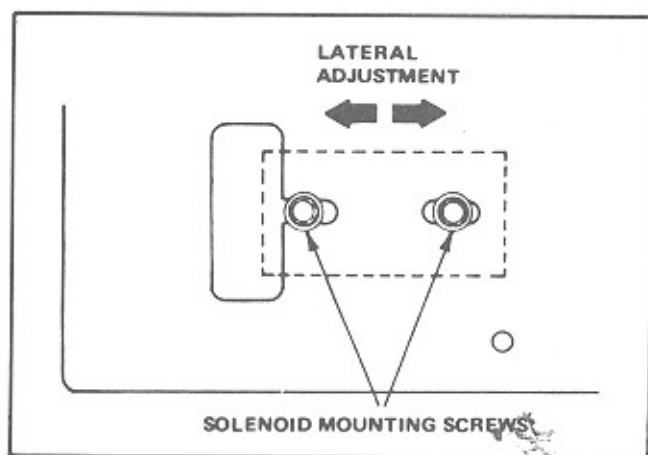


Figure 3-10. Lateral Adjustment

3. Tighten solenoid mounting screws.
4. Replace sprag assembly in mechanism with (3) mounting screws and replace black and white-blue wires to the solenoid and the yellow and yellow-black wires to the magazine motor.

Instructions for aligning the record magazine are in this section under **Aligning Magazine Stopping Position With Transfer Arm**. To readjust the optical switch refer to **Optical Switch** in this section.

Cam Switch

Adjustments

If it is necessary to remove the switch cam from the transfer motor, the following procedure must be followed to ensure that the cam is properly located and not 180 degrees out of position.

Locate the inner lobe so that it is pointing in the same direction as the crank. Turn cam so that neither cam lobe is on a switch before removing or installing cam. (See Figure 3-11.).

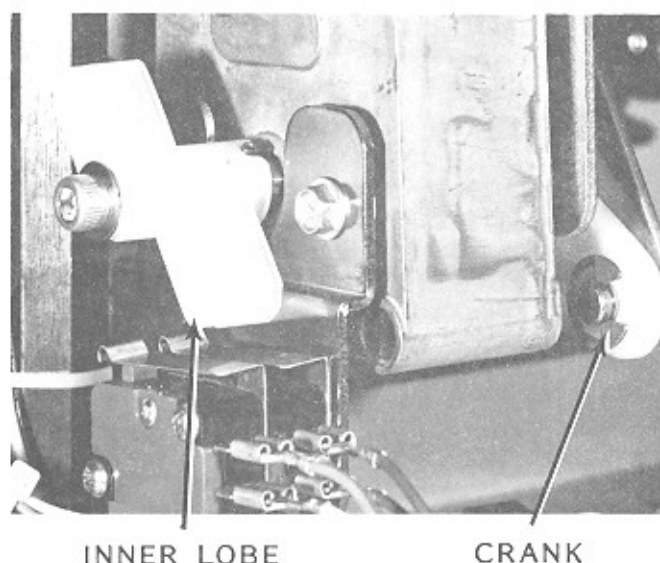


Figure 3-11. Cam Switch

Check And Adjust Cam Switch

1. Check that the plastic cam leaf spring and switch plunger just touch as shown above.
2. To adjust switches, loosen mounting screw under plunger end and move switch housing as required (See Figure 3-12.).

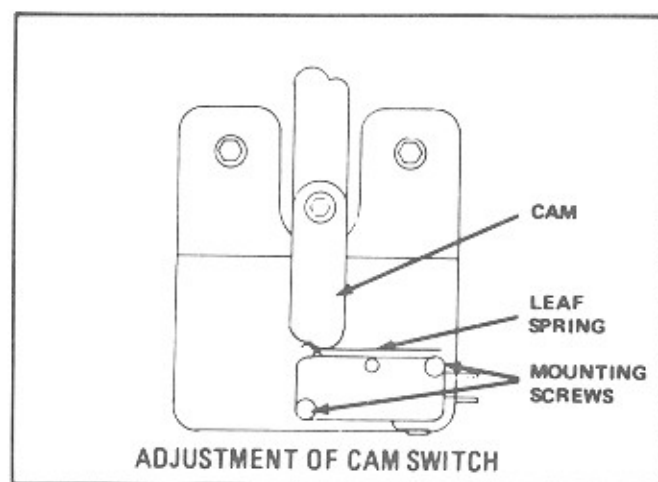


Figure 3-12. Cam Switch Adjustment

3. Tighten mounting screw and recheck operation.

Tone Arm Adjustments

Tone Arm Cam

1. Lift tone arm and turn it clockwise so the pins are disengaged from the cam.
2. With gripper bow in scan position over magazine (transfer motor crank in maximum down position) loosen one Allen-head set screw in collar.
3. Using a 5/32-inch Allen wrench in end of transfer motor shaft, turn motor shaft clockwise until gripper bow is in playing position (transfer motor crank arm in up position).
4. Loosen the other Allen-head set screw in collar.
5. Position tone arm cam so that the outside diameter of the tone arm lifting pin is in line with the edge of the slot in the cam, as shown in Figure 3-13.
6. Tighten Allen head set screws and replace tone arm.

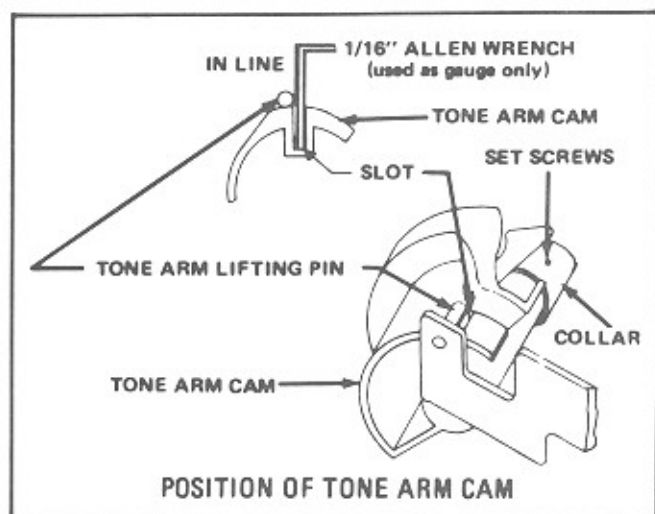


Figure 3-13. Tone Arm Position

Record Magazine Transfer Arm And Support

Adjustment

Eliminate Magazine End Play and Center Transfer Arm Support

1. Loosen set screws in rear Magazine Shaft collar. Push collar on to Magazine Shaft to eliminate end play and tighten screws.
2. Loosen screw that holds transfer arm support to mechanism frame.
3. Adjust transfer arm support so transfer arm is centered in opening.
4. Tighten mechanism frame to transfer arm support screw.

Magazine Belt Adjustment

1. Loosen two adjustment screws shown in Figure 3-14.
2. Raise bracket to tighten belt around magazine.
3. Check that belt rides evenly in center of belt guides, all the way around the magazine.
4. Tighten 2 adjustment screws.

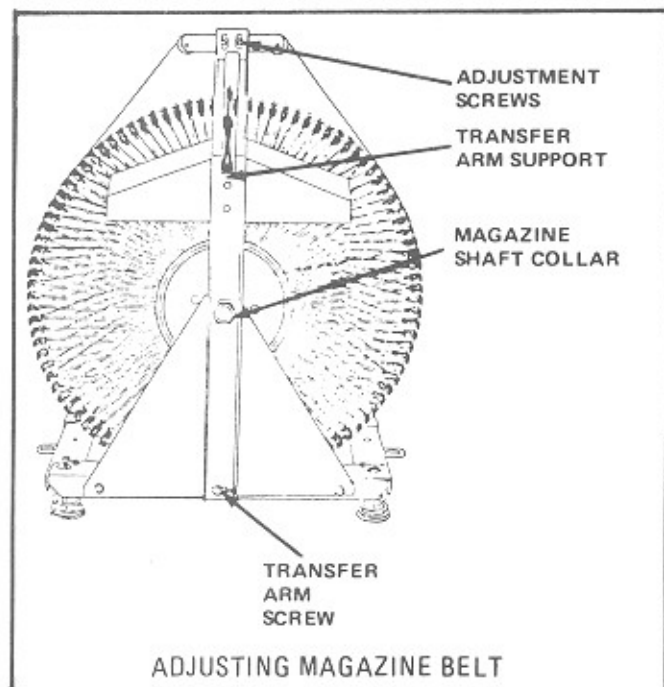


Figure 3-14. Magazine Belt Adjustment

Aligning Magazine Stopping Position With Transfer Arm

1. For this adjustment use a record in good condition without warp or dish. Place this record in any position in the record magazine and rotate the magazine until this record is in the top position. Allow magazine sprag lever to engage and lock magazine in this position.
2. Using a 5/32-inch Allen wrench in end of transfer motor shaft, turn motor shaft clockwise until gripper bow lifts record out of magazine, and outer shoe is approximately 3 inches from its rest position on back support (See Figure 3-15.). In this position, a center line from the inner shoe through the center of the outer shoe will pass through the center of the plastic record guide on the magazine.
3. With the record and gripper bow in this lifted position, rock the magazine to the left and right and make sure the plastic magazine record guides do not come in contact with the record on either side.

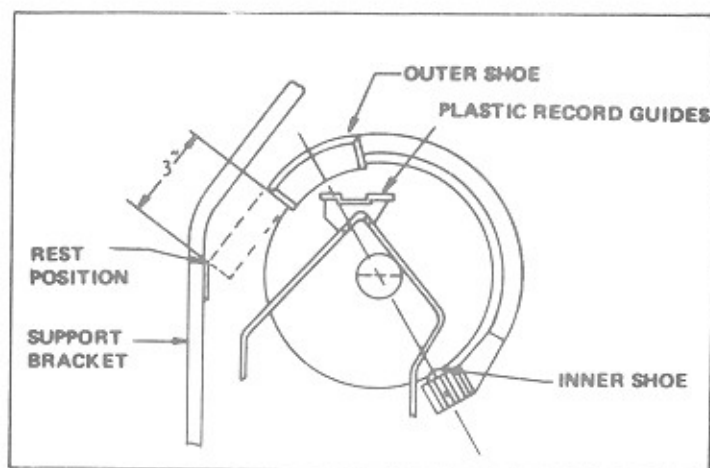


Figure 3-15. Magazine And Transfer Arm Position

If the guide makes contact with the record on one side or magazine space does not center with the record, the following adjustment to the magazine will be necessary.

4. Loosen three screws in magazine motor mounting plate.
5. With sprag wheel locked, move magazine until record is centered between belt guides. (Adjustment screws will be approximately centered in slots. See Figure 3-16.).

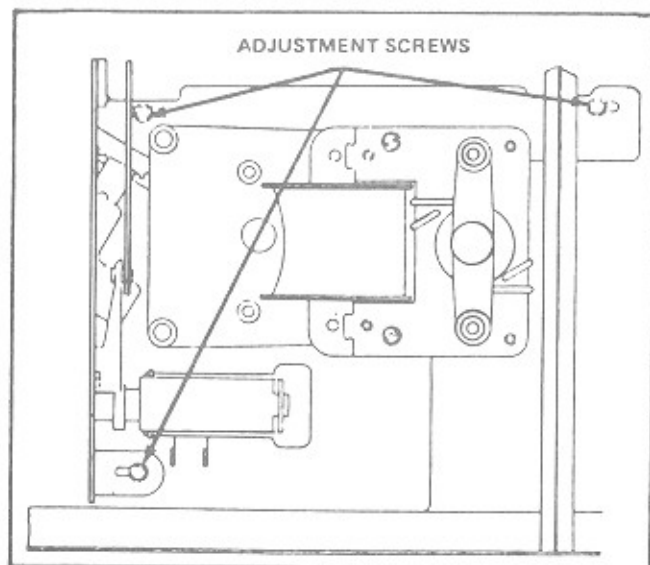


Figure 3-16. Magazine Adjustment

6. Tighten three screws in magazine motor mounting plate securely.
7. Whenever the record magazine is adjusted, the optical switch must

be adjusted as shown in the following adjustment procedure.

Optical Switch

Adjustments

The optical switch position and/or sensitivity adjustments must be made if any of the following modifications or repairs are made to the phonograph record changer mechanism:

- Record magazine is adjusted (adjust position)
- Optical index switch is replaced (adjust Sensitivity and position)
- Mechanism control module is replaced (adjust Sensitivity)

Note: The sensitivity adjustment should be made first, then make the switch position adjustment.

Optical Switch Index Sensitivity (Visual Method)

1. Switch the phonograph to the SERVICE position.
2. Locate the index adjust potentiometer in the upper right hand corner of the mechanism control cover and insert a small screwdriver.

Note: The screwdriver tip must not exceed .090 inch Wide and .040 inch thick.

3. Press CANCEL on the mechanism control unit to rotate the magazine and turn the index potentiometer clockwise until the optical switch index LED turns off.
4. Continue to rotate the magazine and turn the index pot counterclockwise until the optical switch index LED begins to blink. Continue another 1/8 turn counterclockwise. The optical switch index LED should blink consistently as the magazine turns.

Optical Switch Index Sensitivity (Instrument Method)

1. Switch the phonograph to the SERVICE position.
2. Attach meter common (ground) to P203 Pin 2 of the mechanism control unit.
3. Attach the meter + to P203 Pin 4 of the mechanism control unit.
4. Locate the index adjust potentiometer in the upper right hand corner of the mechanism control unit and insert the screwdriver (Use driver as described above).
5. Press CANCEL on the mechanism control unit, and as the magazine rotates adjust the potentiometer for 3.1 - 3.6 VDC. Analog meters may read slightly more (3.4 - 3.8 VDC). With the mechanism control unit locked, the meter should read higher than 7.0 VDC after the position adjustment is made.

Optical Switch Home Sensitivity (Visual Method)

1. Locate the home adjust potentiometer in the upper right hand corner of the mechanism control unit cover.
2. Insert screwdriver and turn pot clockwise to stop.
3. Turn the pot counterclockwise 1/4 turn.

Optical Switch Home Sensitivity (Instrument method)

1. Locate the home adjust potentiometer in the upper right hand corner of the mechanism control module and insert the screwdriver.
2. With the home LED on, and the meter + lead connected to P203 Pin 3, the meter should read .2 VDC or less.
3. With the home LED off, the meter should read 7.0 VDC or more.

ADJUSTING
KNOB
MOUNTING
SCREW
BRACKET

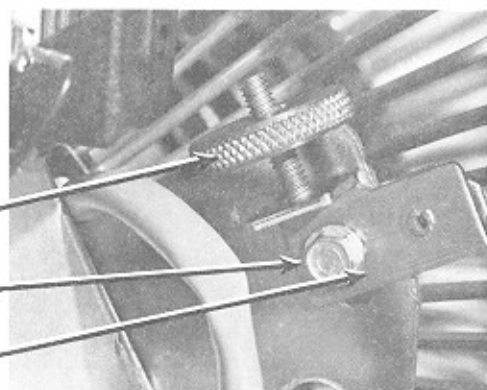


Figure 3-17. Optical Switch Position

Optical Switch Position

1. Release magazine sprag lever from sprag wheel and rotate record magazine until selection "99" is at the top center. Engage the sprag lever locking the magazine in place.
2. Loosen optical switch bracket mounting screw, turn adjusting knob counterclockwise to top of its travel, and move bracket to the most downward position. Snug optical switch bracket mounting screw (Do not tighten.).
3. Rotate record magazine counterclockwise to remove gear backlash, hold in this position during steps 4 and 5.
4. Turn adjusting knob clockwise, moving the bracket upward and watch both the index and home lamps on the mechanism control unit.
5. When both lamps light, continue to move the bracket past this position until the index lamp just goes out. Turn the knob one full turn clockwise. The home lamp will stay on. Tighten the mounting screw.
6. With the sprag lever engaged, rotate the record magazine clockwise and counterclockwise by hand taking up gear backlash in both directions. The index lamp should stay off, and the home lamp should stay on.

7. Release magazine sprag lever from the sprag wheel and rotate record magazine to positions 25, 50, 75 repeating step 6. The index lamp should stay off. The home lamp will not be on.

Vertical Pivot

1. Adjust tone arm pivot screw so that tone arm pivot is loose enough to move free vertically for a distance of two inches above turntable.
2. Check that tone arm moves less than 1/32 inch from side to side at the stylus.

Stylus Force

1. The distance between the counter weight and the tone arm bracket should be 5/8 inch for 3-1/2 grams stylus force (See Figure 3-18.).

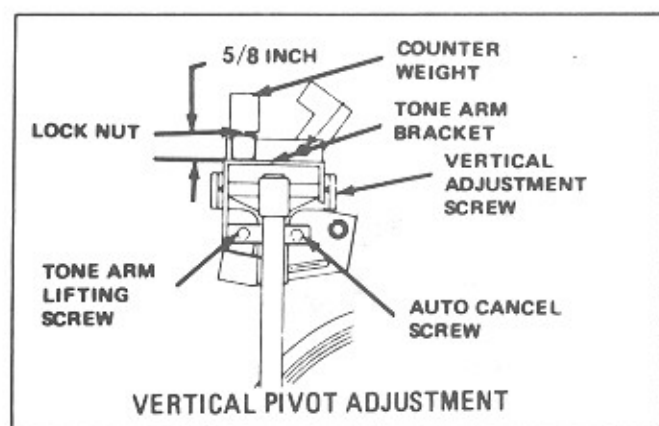


Figure 3-18. Vertical Pivot

2. If distance is not correct, loosen lock nut, adjust counter weight, and tighten lock nut.

Stylus Clearance

Using a 5/32 inch Allen wrench in the end of the transfer motor shaft, turn motor shaft clockwise until gripper bow has placed a record on the turntable. Push down on the tone arm lifting pin (See Figure 3-19.) and continue to turn motor shaft to swing tone arm into the set down position. You will be able to feel the fast rise ramp of the cam contact the tone arm pin. At this point,

release the pressure on the lifting pin and adjust the tone arm lifting screw so that the stylus just touches the record.

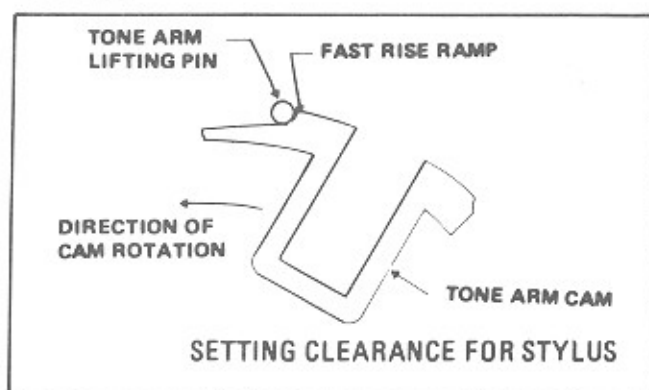


Figure 3-19. Stylus Clearance

Stylus Height

1. Operate transfer assembly to position arm over turntable rim.
2. Turn auto cancel screw until stylus holder is flush to 1/64 above turntable pad surface with tone arm in play position (See Figure 3-20.).

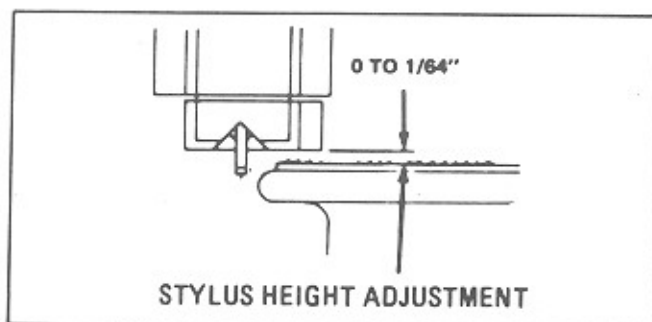


Figure 3-20. Stylus Height

Stylus Setdown Position and Tone Arm Cutoff Switch

1. Place undersize (6 and 25/32 inch diameter) record on turntable (See Figure 3-21.).
2. Operate transfer assembly to bring tone arm to play position.
3. Loosen horizontal adjustment screw.
4. While holding cam follower plate against tone arm cam, move tone arm, as required, until stylus is 2 and 9/16 inches from the edge of the turntable hub.

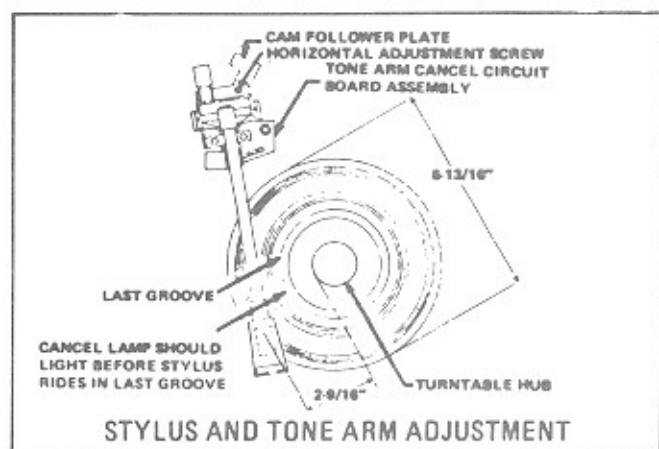


Figure 3-21. Stylus And Tone Arm

5. Tighten horizontal adjustment screw and check adjustment.

Adjust Tone Arm Cutoff Switch

1. Disconnect microcomputer harness from mechanism control board (19 pin connector). (To prevent mechanism from cancelling.)

2. Loosen mounting screw on tone arm cancel circuit board assembly.
3. Position tone arm cancel board assembly, as required, until reed switch is closed, as indicated by cancel lamp in mechanism control unit. This should happen before stylus enters "closed" record groove.

Belt Guide Adjustment

1. Loosen nut that fastens belt guide.
2. Adjust as shown in Figure 3-22.
3. Tighten nut.

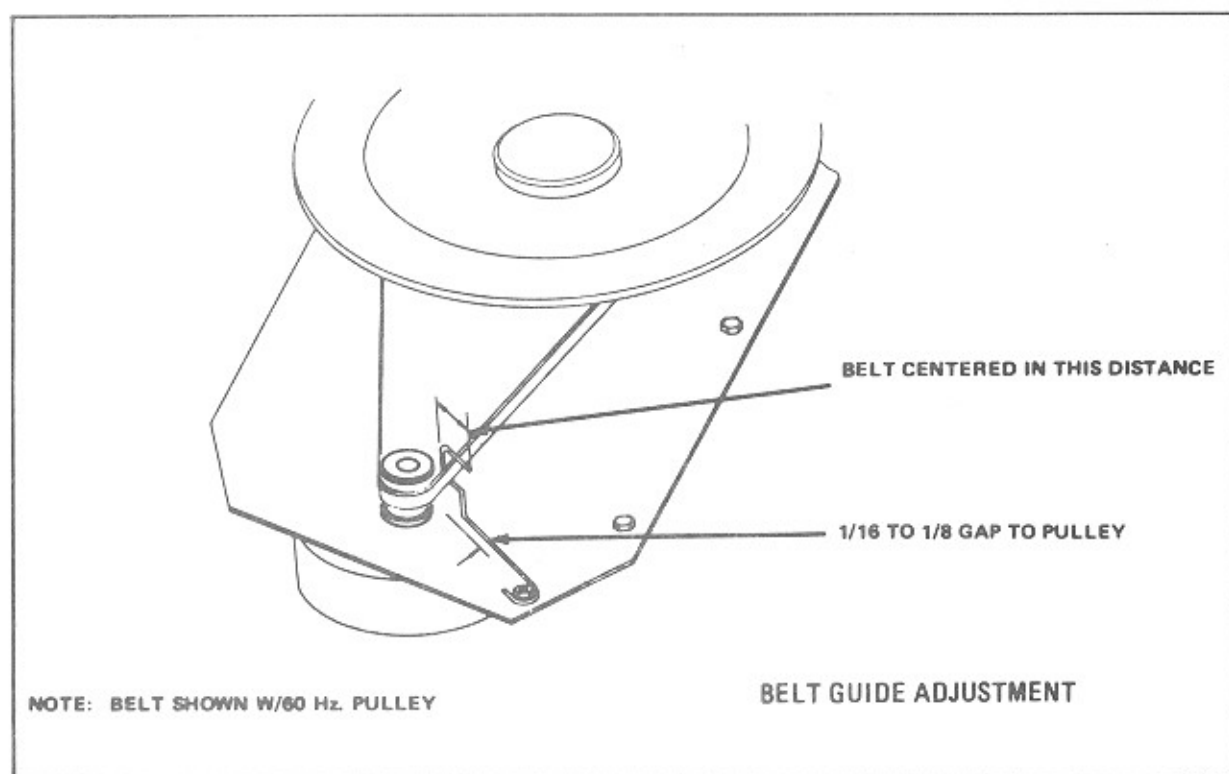


Figure 3-22. Belt Guide Adjustment

Coin Acceptors

Cleaning

All Plastic 3-Coin Acceptors

Submerge the 3-coin acceptor in hot soapy water, shake off the excess water, and let dry.

Note: Do not lubricate.

4-Coin Acceptors

1. Soak in hot soapy water for 10 minutes.
2. Rinse in hot water.
3. Let dry or use a lint free cloth.

4. Clean stubborn areas with a brush.

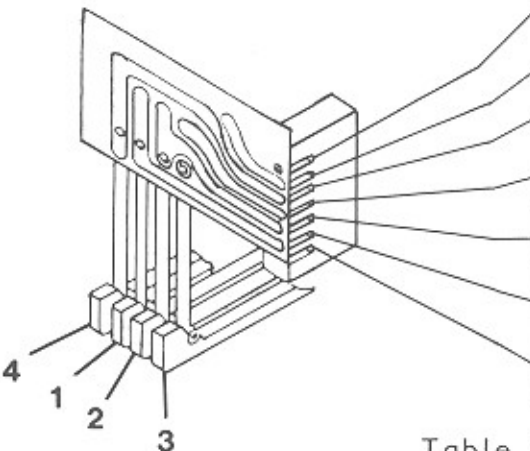
Note: Transfer cradle pins and bushings may be lubricated with a small drop of oil.

Do not use any oil or grease in the coin paths.

Coin Switch

Coin Switch Wiring Note

The phonograph can be programmed to count coin values other than the standard values. To change the coin value, enter the base coin value into Location 25 (The factory setting is 5-cents.). Refer to Table 3-2 for the standard settings.



3 & 4 COIN WIRING	COIN SW. NUMBER	3 COIN VALUE	4 COIN VALUE
KEY		STANDARD	✱
V-COMMON			
W/V	4		5¢
B/Y	3	25¢	50¢
B/O	2	10¢	10¢
S/Y	1	5¢	25¢
KEY			

Table 3-2. Coin Switch Wiring

Money Counter - Non U.S. Currency

If you have altered the coin base amount to a coin value other than 5-cents, the mechanical money counter will not indicate the correct money total. The correct total can be accumulated by replacing the money counter with a new money counter that has the correct multiplier (See **Coin Switch** for base coin switch considerations.).

See Section 2, **Programming Locations 20, 21, 22, 23**

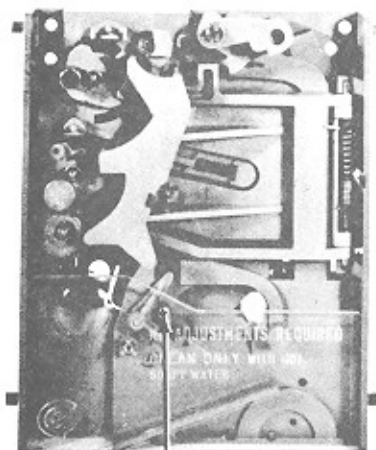
Checks And Adjustments

Coin Lever

Refer to Figure 3-23 in the following steps:

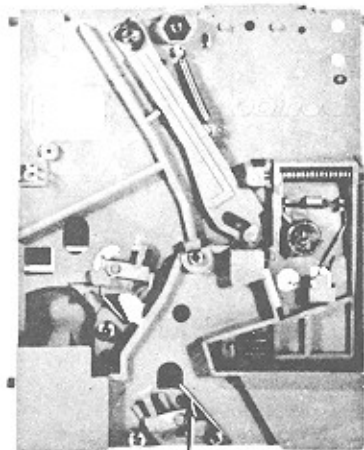
COIN ACCEPTORS 3 COIN

FRONT VIEW



REMOVE COVER AND DRIVE
No. 6-32 SCREW INTO BOSS AS
SHOWN TO REJECT NICKELS

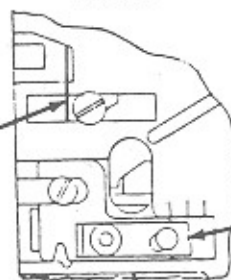
BACK VIEW



TO REJECT DIMES ADD COINCO
No. 903-915 BLOCK OUT WIRE

COIN ACCEPTORS 4 COIN

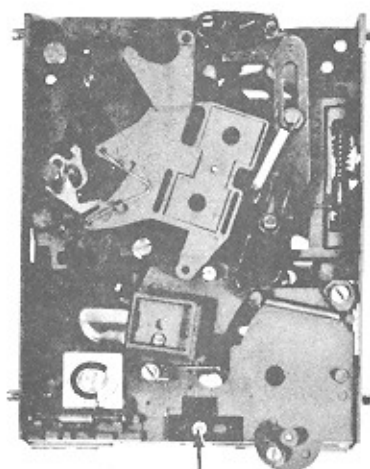
LINE UP EDGE OF
DEFLECTOR WITH
THIS LINE



TO IMPROVE S SLUG REJECTION
ADJUST AS SHOWN

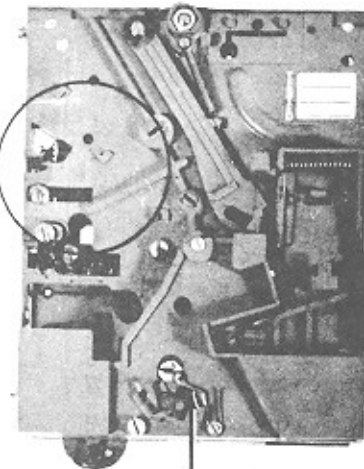
LINE SEPARATOR AS SHOWN

FRONT VIEW



MOVE THIS BRACKET TO RIGHT
TO REJECT NICKELS (OR JUST
FAR ENOUGH TO LEFT TO
ACCEPT NICKELS)

BACK VIEW



TO REJECT DIMES ADD COINCO
No. 903915 BLOCK OUT WIRE

1. Hold plastic coin switch lever in normal position and drop a coin through slug rejector.
2. When the coin comes to rest on the lever, release lever slowly.
3. Check that the weight of the coin operates the lever enough to close the coin switch and allow the coin to fall free.
4. Repeat steps 1, 2, and 3 for other three levers.

Contact Pressure And Gap

1. Check that each moving switch blade pushes against its lever with 7 to 8 grams force to hold lever against cushion (See Figure 3-24.). To adjust pressure, bend the blade near its mounting point.
2. Check that each non-moving blade pushes against its stiffener blade with 8 to 15 grams force. To adjust pressure, bend the contact blade near its mounting point.
3. Check that contact gap at switch with short double paddle is 0.035 inch. Check that contact gap for long paddle switches is 0.045 inch.

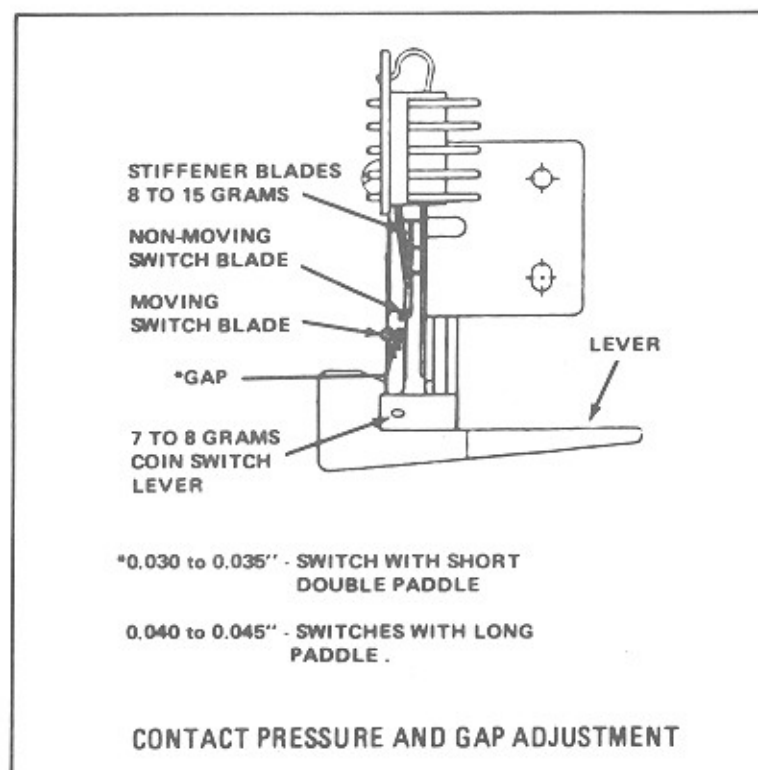


Figure 3-24. Contact Pressure And Gap Adjustment

Door Spring Replacement

1. Open the Top Door.
2. while another person keeps the door open, find the appropriate style spring end fitting in Figure 3-25.
3. Follow the example in Figure 3-25.

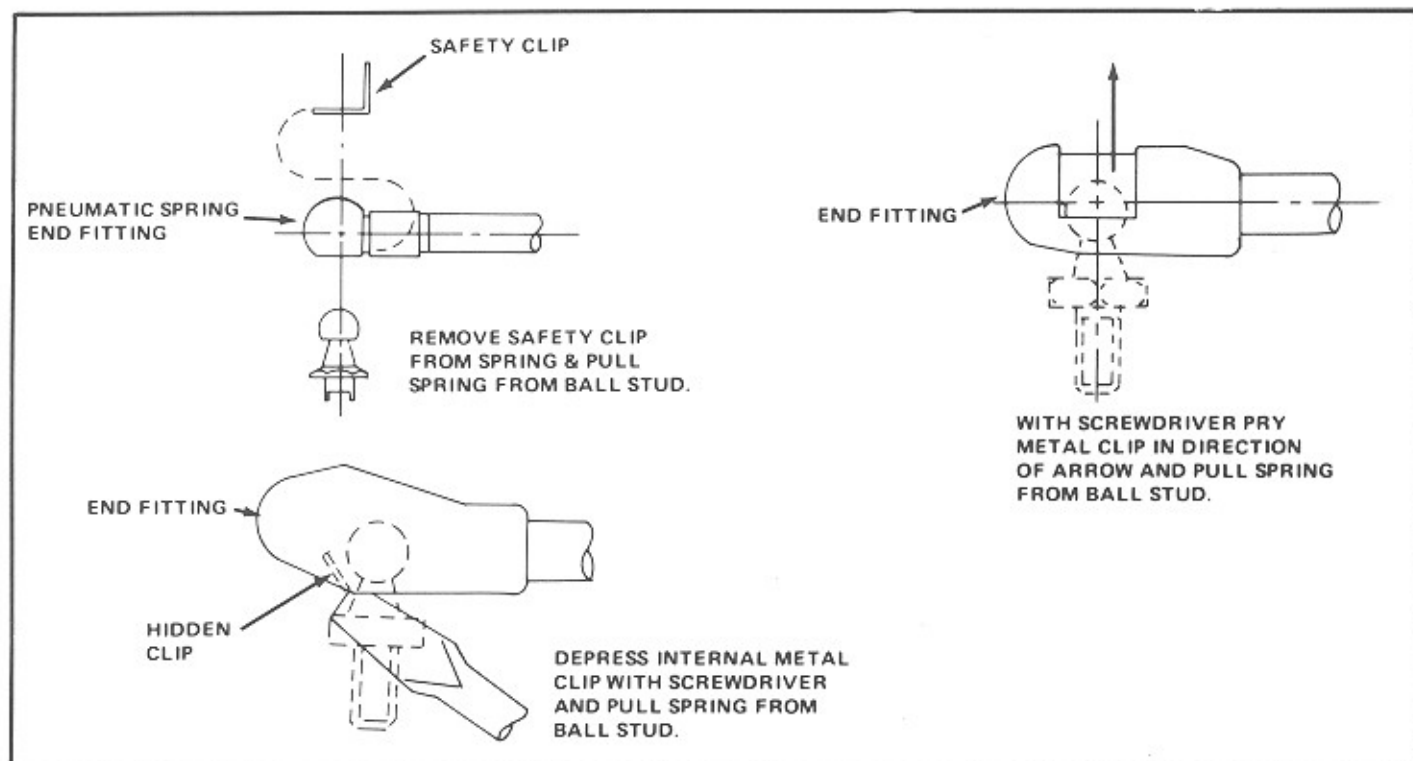


Figure 3-25. Door Spring Fittings

Glass Replacement

1. Turn the power to the Phonograph off.
2. Open the cabinet door.
3. Remove the Title Rack and the Title Rack Block-Out panel.
4. Remove the two Title Rack catches.
5. Remove the five screws and retainer, which secure the top of the Title Rack Housing and Glass.
6. Remove the five screws and retainer, which secure the bottom of the Title Rack Housing and glass.
7. While another person supports the Top Door, disconnect the two door springs from the Door.
8. While another person holds the Glass in place, remove the six screws from the spring retainers on both sides of the Housing and Glass.
9. Remove the retainer from each side of the Glass and Housing.
10. Remove the Glass and Housing.
11. Position the new Glass and Housing in the Door frame.
12. Install the two side retainers (removed in step 9) with six screws.
13. Install the two spring supports (removed in step 8) with six screws.
14. Secure the springs to the supports.
15. Install the retainer (removed in step 6) with five screws.
16. Install the retainer (removed in step 5) with five screws.
17. Install the two Title Rack catches (removed in step 4).
18. Install the Title Rack and Title Rack Blockout panel.