

# Maintenance

## PREPARING PHONOGRAPH FOR MOVING

1. Remove the tone arm and pack it in its original packing box.
2. Remove all records, re-install the record discs in the trays. Install the tray stack shipping rod.
3. Install the clamping blocks for the turntable and chassis.
4. Install the shipping nut and washer on the shipping bolt and tighten to hold the floating chassis against the shelf.
5. Install the shipping screws, washers and nuts in the pre-amplifier mountings.
6. If the wood screw in the amplifier holding clamp has been removed, it should be replaced.
7. Cover the phonograph to protect it from scratches and weather.

### Note

In transporting the phonograph, always keep it in an upright position. When the phonograph is tied or strapped, the utmost care should be used to avoid putting strain or pressure on any of the plastic surfaces.

## REPLACEMENT OF TONE ARM CARTRIDGE

The tone arm cartridge may be slipped out of the tone arm by grasping the tone arm with one hand and supporting the cartridge receptacle with the thumb. Grasp the cartridge with the thumb and forefinger of other hand and withdraw the cartridge from the re-

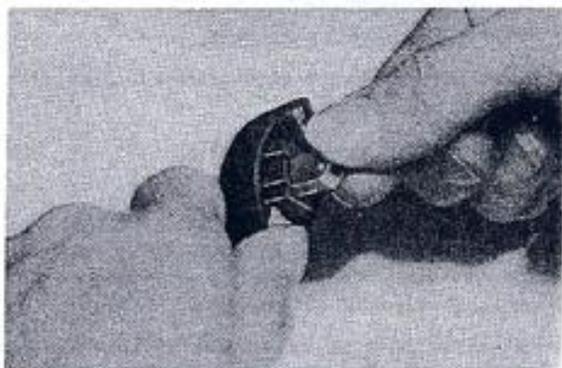


Figure 51-Installing Tone Arm Cartridge

ceptacle. When installing the cartridge, be sure that the key on rear of the cartridge is aligned with slot in receptacle (see figure 51). The receptacle will retract into the tone arm during this operation, but when it reaches the end of its travel the insertion of the cartridge may be continued until the cartridge is firmly seated in the receptacle.

## LUBRICATION

### Record Changer

Oil the main cam shaft front and rear bearings, the motor oil cups, the brake and the turntable shaft and bearing assembly with SAE No. 10 acid free and wax free oil. Use SAE No. 40 oil to lubricate the clutch pin and the main drive gears. (See figures 52, 53, 54, and 55.)

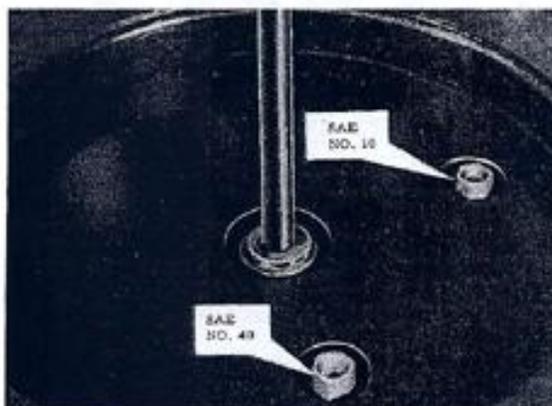


Figure 52.-Main Cam Shaft Rear Bearing, Brake, Main Drive Assembly and Clutch Pin Lubrication Points

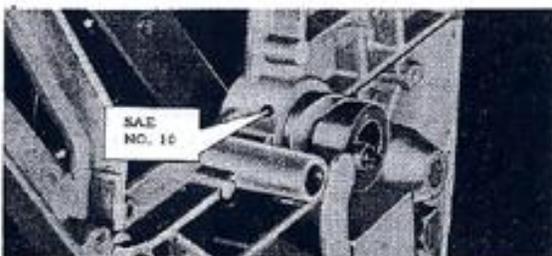


Figure 53.-Main Cam Shaft Front Bearing Lubrication Point

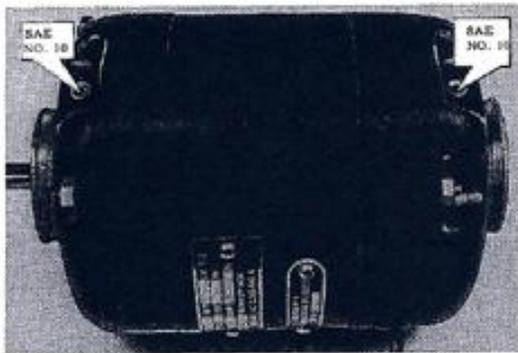


Figure 54-Drive Motor Lubrication Points

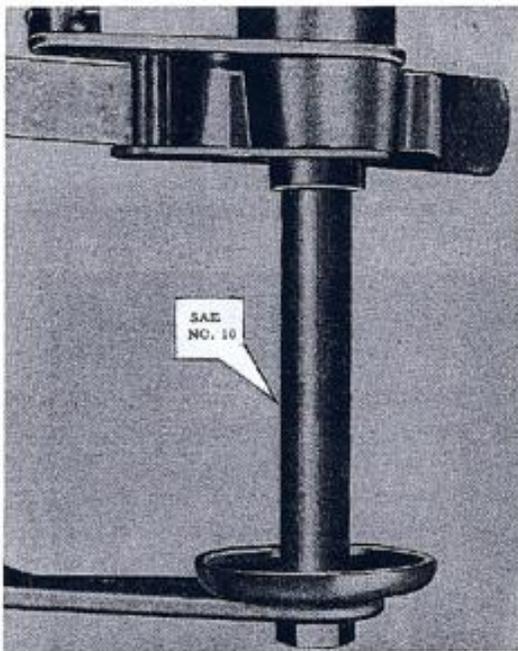


Figure 55-Record Tray Shaft Lubrication Point

#### Encore Program Selector

All bearings and the wind-up motor in the program selector are of the oil-less type and require very little lubrication. The gears are thoroughly treated with Lubriplate No. 105 when the phonograph is constructed. At yearly intervals, or in cases where the phonograph has been subjected to severe overheating, lubricate the program selector motor bearings by the application of ONE DROP of

SAE No. 10 oil to each bearing and apply Lubriplate No. 105 to all gear teeth and the worm gear.

#### Coin Register Mechanism

The coin register mechanism is lubricated with SAE No. 10 oil at the points indicated in figure 56. Use Lubriplate No. 105 on the gear teeth in the motor, on the end of the cancel arm where it strikes the bar of the timing switch, and on the coin gate arm where it rubs on the base casting under the lower coin chute.

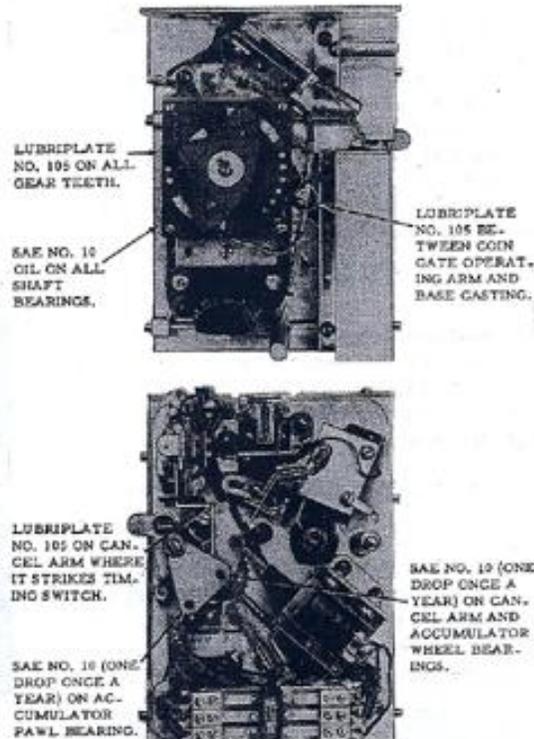


Figure 56-Coin Register Mechanism Lubrication Points

#### General

All electrical contacts are of solid silver construction. To clean, use carbon tetrachloride and a clean dry cloth. Never use abrasive materials for cleaning.

Never oil the slug rejector. Wipe it clean with a dry cloth. Abrasives may be used if necessary.

## MAINTENANCE OF SKY-TOP RECORD CHANGER WINDOW

Three useful items for maintenance of the record changer plastic window, i. e. cleaner, polish and polishing wax, are available as Sky Top Window Maintenance Material, Part No. 51880.

The cleaner should be used in all cleaning operations to remove marks, oil, grease, and similar surface conditions. It should be applied according to the instructions accompanying the cleaner. The window may also be cleaned by washing with plenty of soap and water. A piece of chamois is recommended, although a sponge or soft cloth may be used in the washing process. Dry by rubbing with a DAMP chamois or cloth. Rubbing with a dry cloth should be avoided as it builds up an electrical charge on the window which will cause it to attract dust from the air. Oil and grease may be removed either with cleaner or by rubbing with a cloth moistened with kerosene after which the window should be washed.

After cleaning, the window should be polished with the polishing wax. The wax should be applied in a thin coat and brought to a high polish by rubbing lightly with a soft clean cloth.

Minor scratches, dull spots, etc., may be removed by the use of the polish, according to the instructions supplied with the polish. Large scratches may be removed with fine sandpaper, used with care to avoid heating the window surface by friction. Due precautions should be taken to prevent the formation of an uneven surface due to excessive sanding. An area considerably larger than the blemish should be sanded, so that a gradual change in the surface results where the blemish was removed, in preference to a sharp indentation. After sanding the polish should be applied by rubbing well until the sanded area is clear and transparent. Cleaner may then be used if required, after which the window should be waxed.

## MAINTENANCE OF ENCORE PROGRAM SELECTOR

### Program Holders

Open the front door of the phonograph, lift the program selector cover and swing it back

to allow access to the program holders. Pull out the knurled plungers and slide the program holders away from the center drive shaft so that they can be lifted straight up and out of the selector assembly. When installing, be sure the holders are centered on the drive shaft hubs so that the flat side of the opening on the inner end of the holder is aligned with the flat side of the drive hub, before pushing the knurled plungers into the locked position over the outer pins on the holder.

Two types of program inserts are available. The standard program slips, available in sheets of 24 slips, Part No. 20281, may be inserted in the individual holders with one record title per strip. Program cards are also available in sheets of six, (four titles to be printed on each) Part No. 51715, which can be installed in the outer slots at the top and bottom of each face of each program holder.

### Program Selector

Remove the plug from the receptacle in junction box marked "Rotary Selector" and remove the two clips which hold the cable. Remove the make selection light sockets and bulbs and coin entry light sockets and bulbs from their openings. Disconnect the moving light line cords. Swing back the program selector top cover, loosen the wing nuts and swing them away from the program selector. The program selector can then be lifted up and away from the front door.

When installing program selector, be sure to align the two plates at the bottom of the sides of the selector over the studs in the front door casting.

### Note

The two make selection light sockets and bulbs must be installed in the correct manner i. e. the socket with the two wires should be installed in the outer insulated opening and the socket with the single wire in the inner opening. If they are reversed, the result will be excessive brilliance and possible burning out of one bulb and non-operation of the other bulb. There is no preference in the location of the coin entry light sockets and bulbs.

### Rotary Contacts

Access to the rotary contactor assemblies

for cleaning of points, etc., is gained by removing both program holders. The covers beneath the holders are then removed by disengaging the two machine screws, one at each side of the program selector assembly. The retainer springs which hold the contact mouldings are sprung out of their seats and lifted up, after which the mouldings may be removed from their positions.

The contact arm assemblies are on keyed shafts and may be removed. Care should be taken when installing that the shafts are aligned with the slots in the contact arm assemblies. The contact mouldings are also keyed, and should be aligned before positioning the retainer springs.

#### Number Rollers

Each number roller assembly is held in place by three machine screws. The wire may be disconnected when necessary by slipping the insulating tubing off the disconnect clip which may then be disconnected. After removing the three screws, the roller assembly may be removed from the rotary selector.

At each end of the rollers are slots in which rest the retainers on the end caps. There is a retainer spring on the end near the metal mounting plate. By holding back this spring the roller may be rotated inside the end cap until the retainers align with the removal slots. The roller may then be slipped from the end cap. This gives access to the number roller light bulbs.

When installing, either retainer near the copper spring is slipped into the locking slot for the spring and the remaining retainers into their removal slots. The roller is then rotated until the spring slips into the locking slot so that the roller is firmly seated in the end cap.

When installing the roller assembly, be sure the keyed inner end cap of the cylinder is properly aligned on cylinder drive hub.

#### Removal of Main Drive Shaft Spring

To replace the spring in the main drive shaft the taper pin in the fibre gear and hub assembly must first be driven out. The fibre gear may then be removed from the main drive shaft and the two indexing screws removed from the index plate. The index plate and the plate and hub assembly can now be removed from the main drive shaft. Remove the retaining ring which retains the gear and

drive disc assembly. A loop of soft copper wire or a strong cord can now be hooked over the spring hook. Pull the hook out of its retaining slot and secure temporarily to retain a tension on the spring. The drive gear and spring may now be slipped off the drive shaft and free of the spring housing assembly.

#### Installation of Main Drive Shaft Assembly

The assembly and adjustment of the main drive shaft assembly is accomplished by prewinding and holding the spring in a keeper or by winding the spring in a counter-clockwise direction on the main drive shaft hub with strong twine or soft wire. In either process the spring must be securely anchored on the drive screw in the hub. The final drive disc should be installed and locked in place before winding the spring if the latter process is used.

The drive disc and hub assembly is installed in the spring housing with its bushing flange at the bottom of the housing. The housing is then slipped over the spring and outer end of the spring secured in the anchor cut in the circumference of the housing. With the spring secure, the spring retainer is removed, or the prewinding wire clipped and removed.

At this stage of assembly the torque of the spring should be enough to rotate the program holders. This setting may be accomplished by raising the housing slightly from the gear and jumping over the driving dogs on the final drive disc and hub assembly. Install the retaining ring on the short shaft end.

Wind the spring completely to its stop (approximately 2 turns) and hold it against the stop while setting the indexing plate. Screw the indexing plate and hub assembly on to the spring housing hub, making sure that the threads are clean and free all the way. Hold it in place with the distance between it and the spring housing .270 to .275-inches and install the indexing plate in a position where one pair of its twelve screw holes align with the holes in the indexing plate and hub assembly and one of its notches align with the actuating bracket. Install the two screws and lockwashers.

Install the gear and hub assembly with its taper hole in the same direction as the taper hole in the main drive shaft. Install the taper pin and seat firmly. The ends of the pin must be at least flush with the hub.

## CABINET REFINISHING

The following information is based on the use of materials which are standard for wood refinishing, and which are easily obtained. These materials are available through your distributor as Touch-up Kit, Part No. 42053, which contains sufficient quantities of each item for a number of cabinet repairs. The procedure which follows may also be used to refinish Di-noc surfaces.

French Varnish is used on areas where shallow abrasions or blemishes are to be covered, and the injury has just penetrated the lacquered surface, without causing discoloration. The varnish is applied with a pad made of a folded piece of cheese cloth. Dip the pad into the varnish and rub into the area to be repaired. Allow short intervals between each coat for the varnish to dry while building up and blending the varnish to match the surrounding area. This should be continued until the desired result is obtained.

If discoloration has occurred it is well to bring the area to the proper color before applying the French Varnish. In this manner the color is beneath the varnish and will not be wiped off easily. French Ochre, Burnt Sienna and Burnt Turkey Umber should be used either alone or mixed in suitable combinations to color the surface by rubbing the dry colors into the material being repaired before applying French Varnish. In certain cases, desired results can be obtained by mixing the dry colors with the varnish.

Various burning-in cements are used in the repair of dents and deep scratches which have penetrated into the veneer and wood of the cabinet. The burn-in knife should have a flexible blade, heavy enough to retain a suitable amount of heat. Heat the burn-in knife to a temperature to melt the cement used to a fluid or pasty condition so that it can be worked into the surface being repaired. Select a cement which most closely matches the color of the surface being repaired.

The burn-in knife may be heated by resting its blade against a small electric or gas hot plate. The barrel of a heated soldering iron may be used in an emergency. The use of an open flame should be avoided as it will discolor the knife blade and the cement. Melt

off a small amount of cement on to the heated knife blade and work it into the cavity. Best results are obtained by building up the area with small amounts of cement, working in well to insure a film bond. Keep the knife blade at a suitable temperature by re-heating as required and finish off by smoothing and blending the cement with the hot knife blade to match the surrounding area.

If the damaged area is too large to be cleaned up with the above method, for example, checking, burns, etc., the entire damaged surface should be refinished. Lacquer thinner is used to remove the existing finish down to the veneer by swabbing the thinner on the surface with a pad of cheese cloth and washing the finish off with the thinner. Walnut filler is then used in the same way as putty. Apply with a palette knife to fill in dents and holes in the wood. Walnut filler should not be confused with liquid fillers which are brushed or rubbed into new wood for the purpose of sealing the pores.

After the filler has dried, steel wool should be used where needed to produce an even surface. Walnut stain is then applied by rubbing in with a cheese cloth pad until a color match is achieved. After drying, apply lacquer over the repaired surface (preferably by spraying) and finish by polishing when the lacquer is dried. Application of lacquer and polishing may be repeated as often as necessary to achieve the desired result.

Polishing is done with a cheese cloth pad, using polish oil liberally and rubbing down until the desired finish is obtained. Polishing alone is frequently all that is required to remove small scratches, white spots, and general dullness of finish caused by severe atmospheric conditions.

### CONTENTS OF TOUCH-UP KIT, PART NO. 42053

French varnish	Gloss lacquer
French Ochre, dry	Lacquer thinner
Burnt Turkey umber, dry	#3 Burning-in cement
	#5 Burning-in cement
Burnt Sienna, dry	#13 Burning-in cement
Wurlitzer Polish Oil	#30 Burning-in cement
Walnut stain	Walnut filler
3/0 steel wool	Burning-in knife
Cheese cloth	Palette knife