

PS-LX310/310(C)/311

SERVICE MANUAL



PS-LX310
US Model
AEP Model
UK Model

PS-LX310(C)
Canadian Model

PS-LX311
AEP Model
E Model

The PS-LX310 (US model) is not supplied with a cartridge, while the PS-LX310(C) (Canadian model) is supplied with a VL-45G cartridge and PS-LX310 (AEP, UK model) is supplied with an XL-250G cartridge and PS-LX311 is supplied with a VL-42G cartridge.

PHOTO: PS-LX310

SPECIFICATIONS

| | |
|--------------------------|---|
| Turntable | |
| Platter | 30.1 cm (12 in.), aluminum-alloy diecast |
| Motor | Linear torque BSL (brushless and slotless) motor |
| Drive system | Direct drive |
| Control system | Quartz lock servo control system |
| Speed | 33 $\frac{1}{3}$ rpm, 45 rpm |
| Starting characteristics | Comes to nominal speed within $\frac{2}{3}$ revolution (33 $\frac{1}{3}$ rpm) |
| Wow and flutter | 0.025% (WRMS)* 0.03% (WRMS) $\pm 0.045\%$ (DIN) |
| Signal-to-noise ratio | 75 dB (DIN-B) |
| Load characteristics | 0% up to 100 g stylus force (at lead-in groove of a record) |
| Speed deviation | Within $\pm 0.0003\%$ |
| Automatic system | Return, reject |
| Tonearm | |
| Type | PS-LX310/310(c)Statically balanced PS-LX311Dynamic balanced |
| Pivot-to-stylus length | 216.5 mm (8 $\frac{1}{2}$ in.) |
| Overhang | 16.5 mm ($\frac{21}{32}$ in.) |
| Usable cartridge | PS-LX310/310(c)Plug-in type, 6 g PS-LX311Integrate type, 8 g |

| | |
|--|---|
| Cartridge VL-45G [supplied with PS-LX310 (US model)/310(c)] | |
| Type | Moving magnet type |
| Frequency response | 20 Hz to 20 kHz |
| Channel separation | 20 dB at 1 kHz |
| Output voltage | 3.5 mV at 1 kHz, 5 cm/sec. |
| Load impedance | 47 to 100 kilohms |
| Tracking force | 1.25 g |
| Stylus | Sony ND-145G (conical 0.6 mil diamond) |
| Weight | 6 g |

| | |
|---|---|
| Cartridge XL-250G [supplied with PS-LX310 (AEP, UK model)] | |
| Type | Moving magnet type |
| Frequency response | 20 Hz to 20 kHz |
| Channel separation | 18 dB at 1 kHz |
| Output voltage | 5 mV at 1 kHz, 5 cm/sec. |
| Load impedance | 47 to 100 kilohms |
| Tracking force | 1.25 g |
| Stylus | Sony ND-250G (conical 0.6 mil diamond) |
| Weight | 6 g |

— continued on page 2 —

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.



STEREO TURNTABLE SYSTEM
SONY®

Cartridge VL-42G [supplied with PS-LX311]

| | |
|--------------------|---|
| Type | Moving magnet type |
| Frequency response | 20 Hz to 20 kHz |
| Channel separation | 16 dB at 1 kHz |
| Output voltage | 2.5 mV at 1 kHz, 5 cm/sec. |
| Load impedance | 50 to 100 kilohms |
| Tracking force | 1.5 to 2.5 g (2 g recommended) |
| Stylus | Sony ND-142G (Conical 0.6 mil diamond) |
| Weight | 8 g |

General

| | |
|--------------------|--|
| Power requirements | US, Canadian model: 120 V ac, 60 Hz AEP model: 220 V ac, 50/60 Hz UK model: 240 V ac, 50/60 Hz E model: 110-120 V, 220-240 V ac 50/60 Hz |
| Power consumption | 5 W |
| Dimensions | Approx. 430 × 110 × 340 mm (w/h/d) (17 × 4 ³ / ₈ × 13 ³ / ₈ in.) including projecting parts and controls |
| Weight | Approx. 4.5 kg (9 lbs 15 oz), net Approx. 5.4 kg (11 lbs 14 oz), in shipping carton |

FEATURES

Linear torque BSL motor

Direct drive system with Sony's unique BSL (Brushless and slotless) motor which has a high signal-to-noise ratio to virtually eliminate wow and flutter. The motor's high torque assures a quick attainment of 33¹/₃ rpm after only ²/₃ revolution.

Quartz lock servo system

The turntable maintains an accurate and drift-free speed by referring to a frequency generated by a very stable quartz oscillator.

Automatic turntable system

Automatic return and reject functions are activated by merely pushing the buttons.

Low-mass tonearm and cartridge

The low-mass tonearm and cartridge allow the stylus to track with greater accuracy.

Resilient feet

The turntable has resilient feet that isolate the mechanism from external shock and vibration.

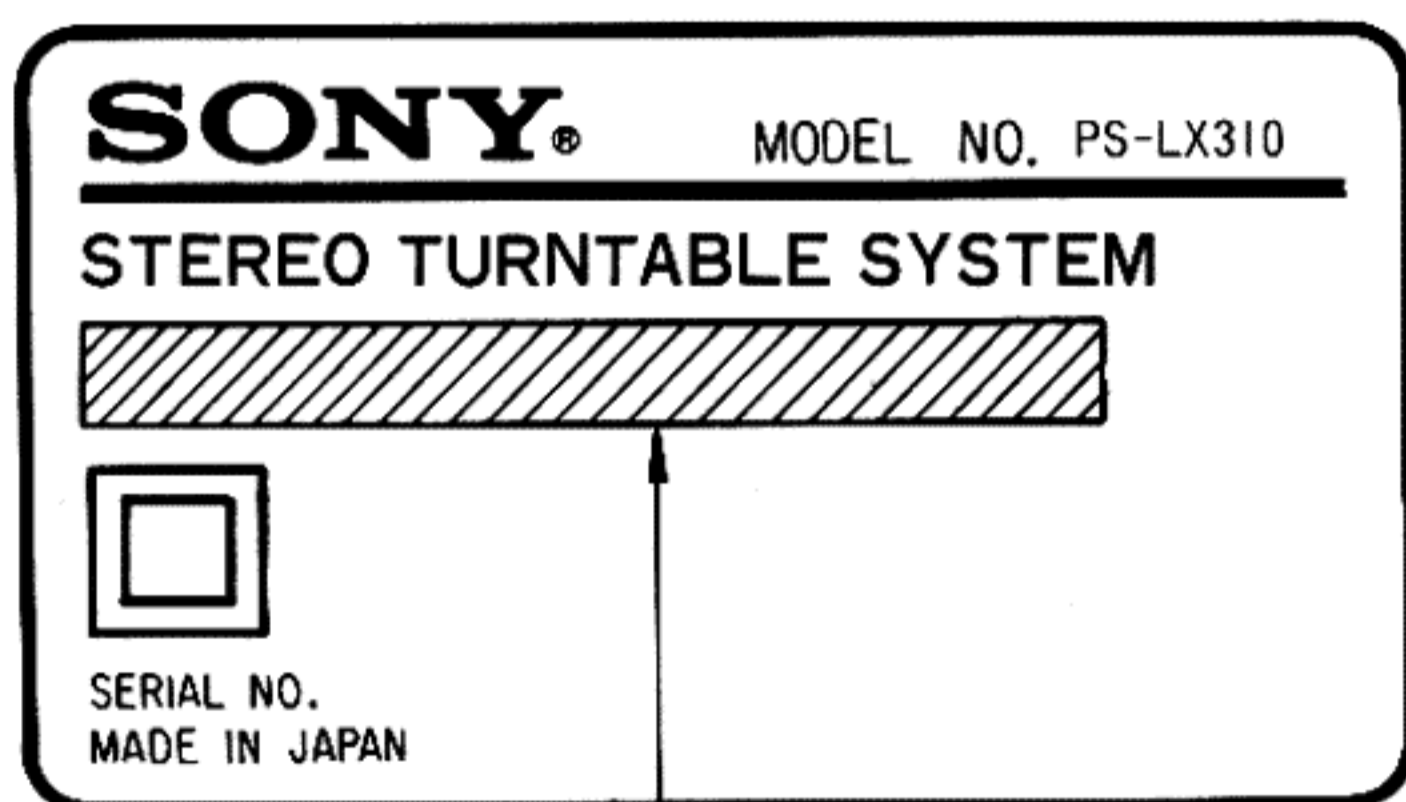
Disc centering guides

Disc centering guides facilitate placing a 30 cm record over the center spindle.

MODEL IDENTIFICATION

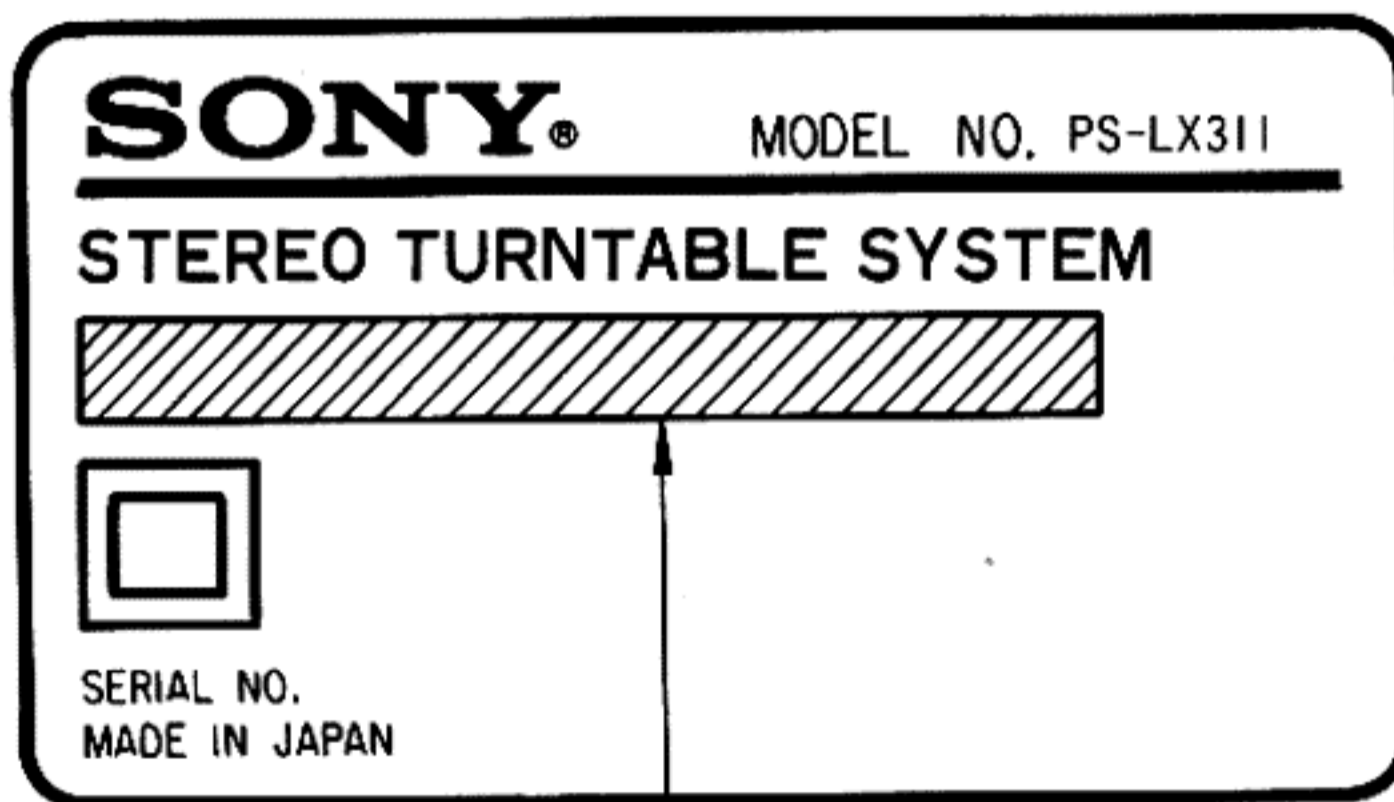
— Specification Label —

PS-LX310/310(C)



US, Canadian model: AC: 120 V ~ 60 Hz 5 W
AEP model: AC: 220 V ~ 50/60 Hz 5 W
G-AEP model: AC: 220 V ~ 50/60 Hz 5 W
UK model: AC: 240 V ~ 50/60 Hz 5 W

PS-LX311



AEP model: AC: 220 V ~ 50/60 Hz 5 W
E model: AC: 110-120 V, 220-240 V ~ 50/60 Hz 5 W

SAFETY CHECK-OUT (US Model)

After correcting the original service problem, perform the following safety check before releasing the set to the customer:

Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

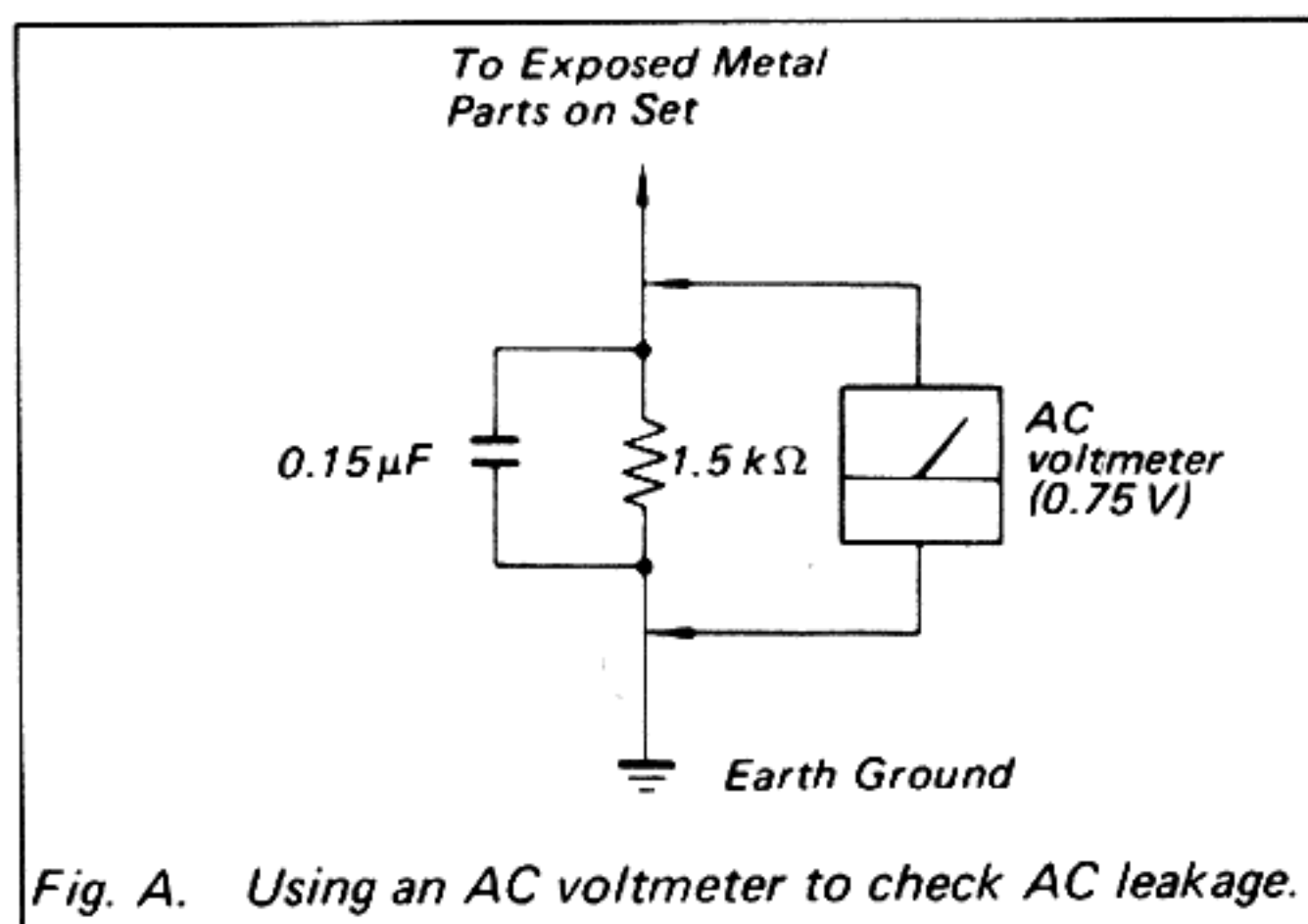
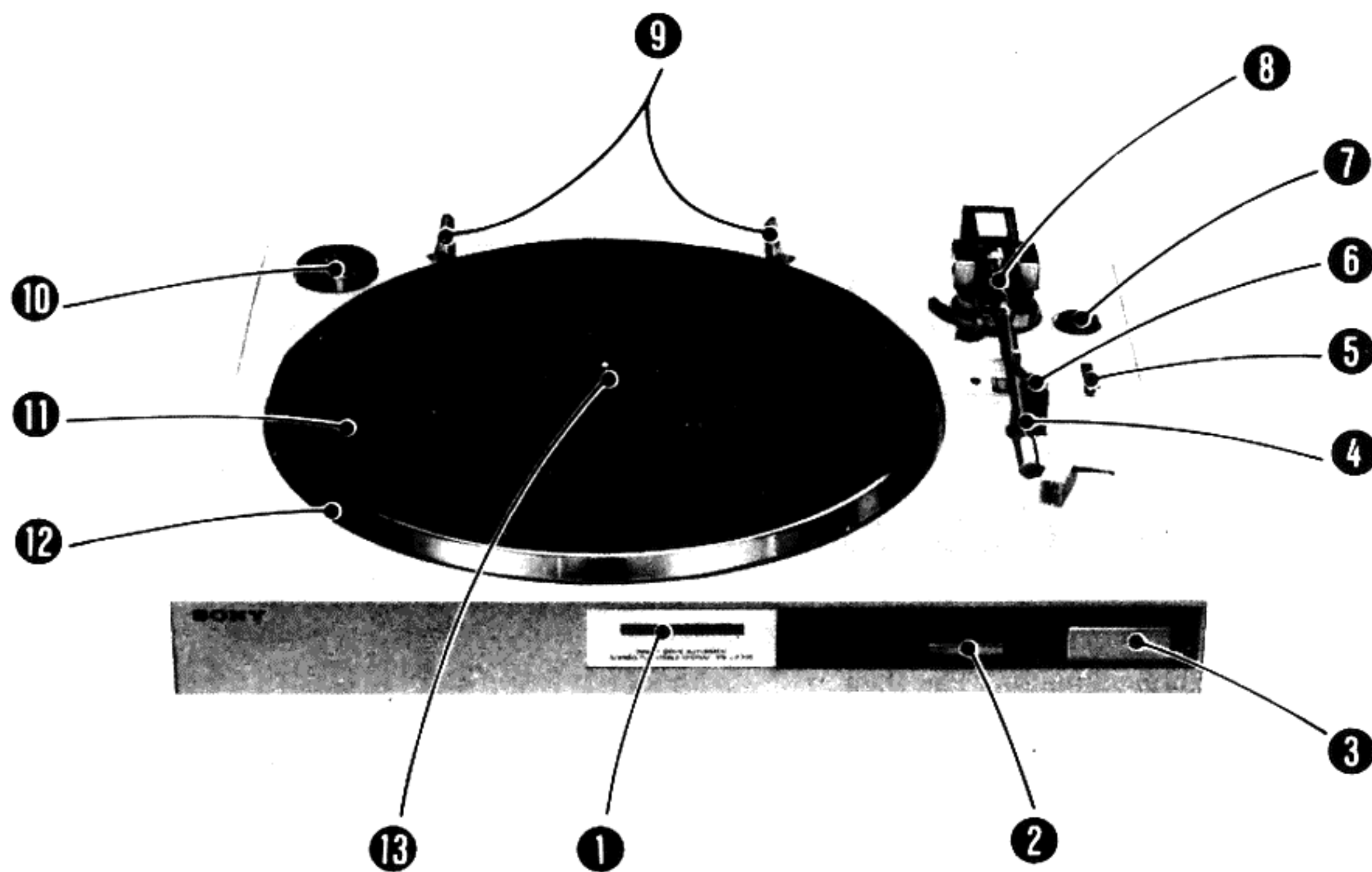


Fig. A. Using an AC voltmeter to check AC leakage.

PARTS IDENTIFICATION

The numbers in the photo are keyed to the following explanations.



1 QUARTZ LOCK indicator

When the platter speed is stabilized, this indicator lights up.

2 SPEED selector

Set the SPEED selector according to the speed of the record to be played. For 45-rpm records, depress the selector. For 33 $\frac{1}{3}$ -records, press it again.

3 REJECT button

To stop during play, press this button.

4 Tonearm

5 ∇/∇ (cueing) lever

Used to lift or lower the tonearm.

6 Arm rest

7 ANTI-SKATING compensator

8 Sub-weight

9 Disc centering guides

10 45-rpm adaptor

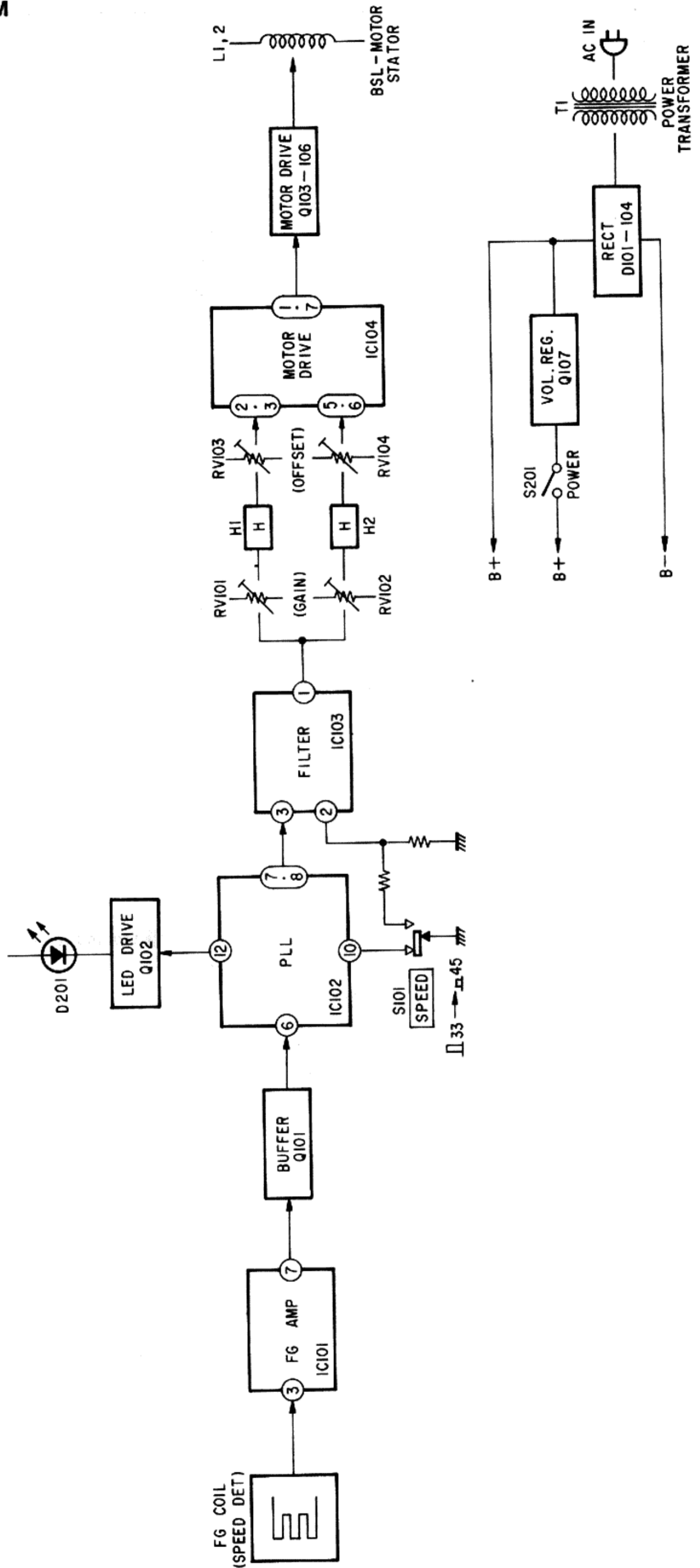
11 Rubber mat

12 Turntable platter

13 Center spindle

SECTION 1 OUTLINE

1-1. BLOCK DIAGRAM

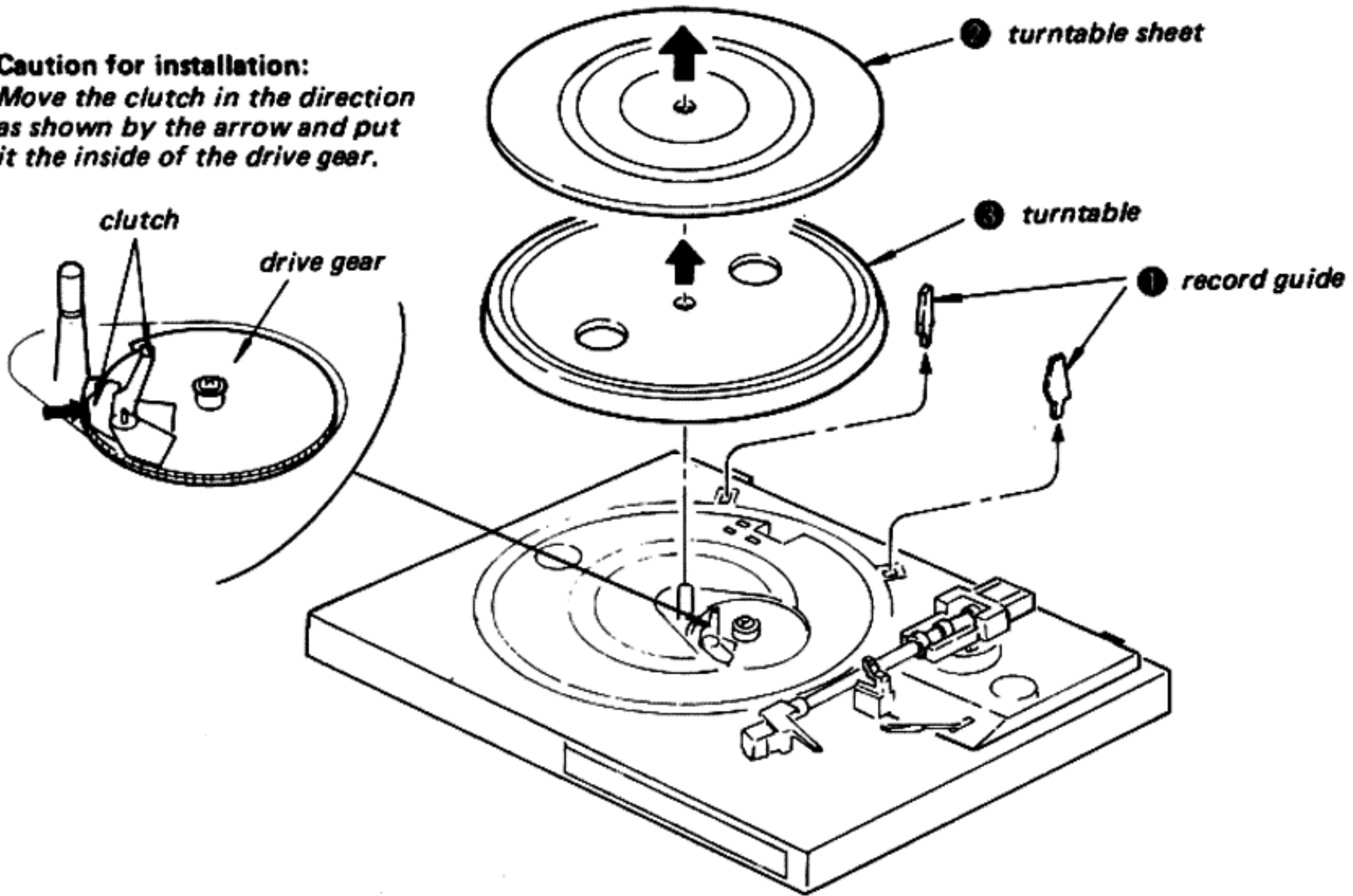


SECTION 2 DISASSEMBLY

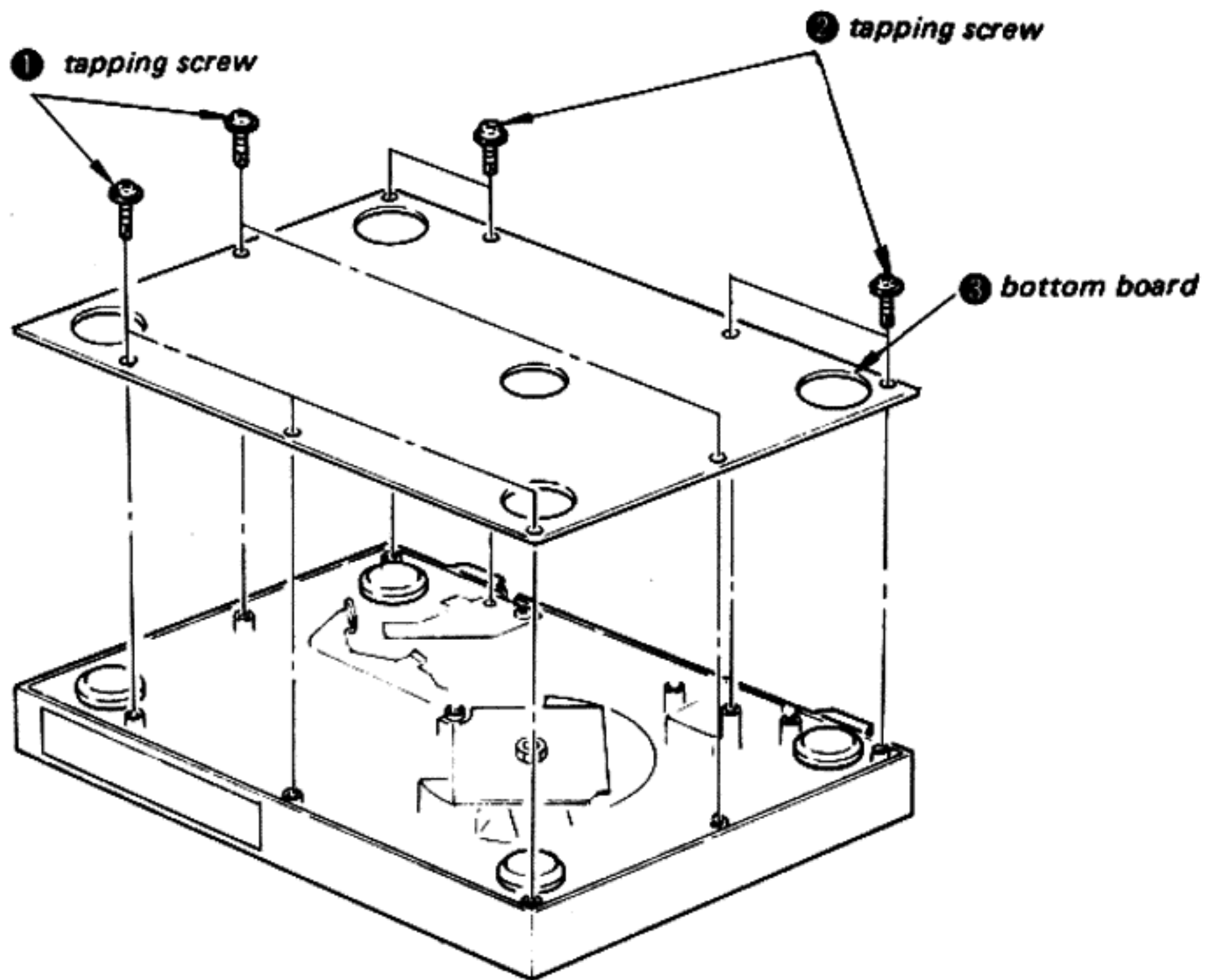
Note: Follow the disassembly procedure in the numerical order given.

TURNTABLE REMOVAL

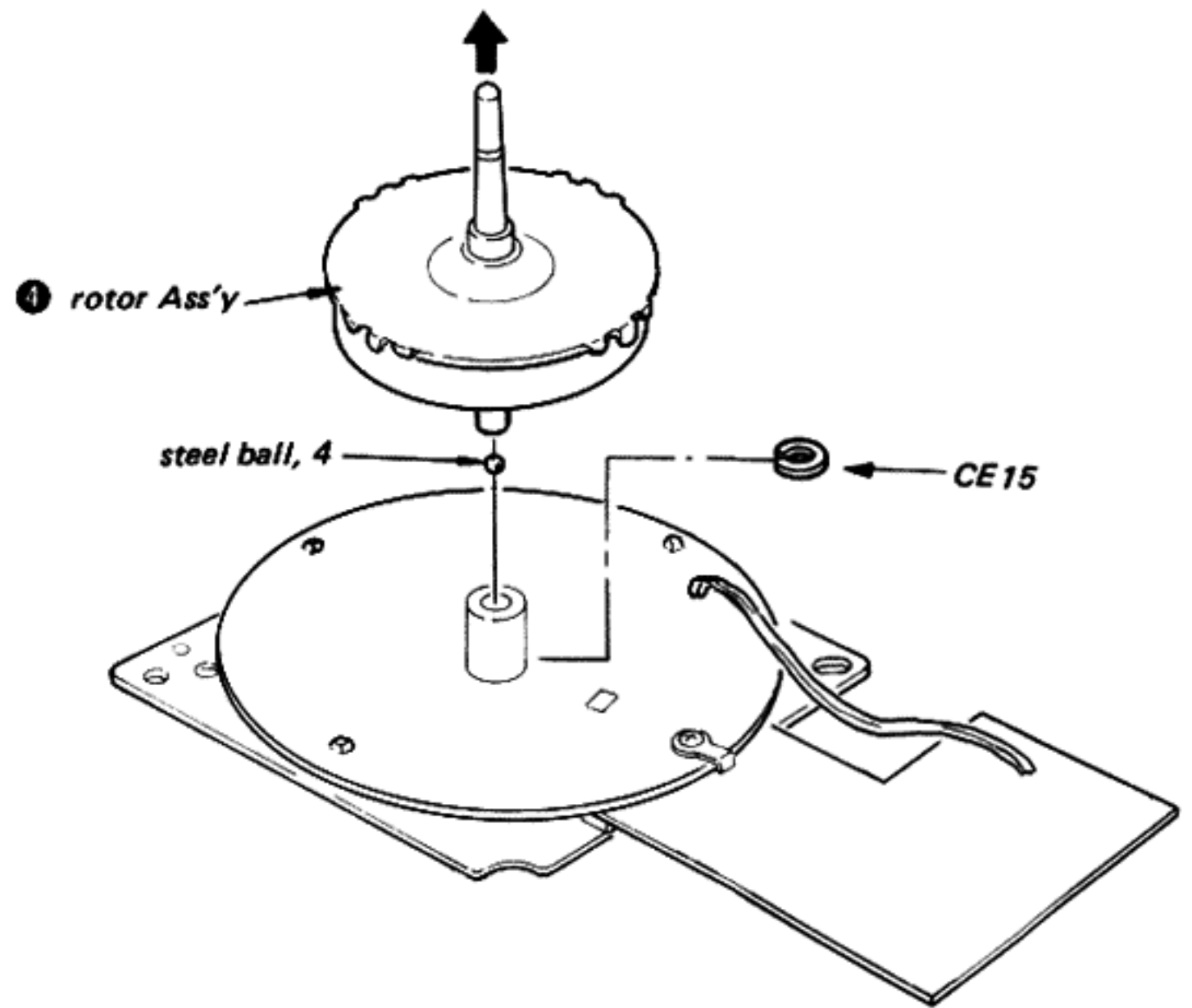
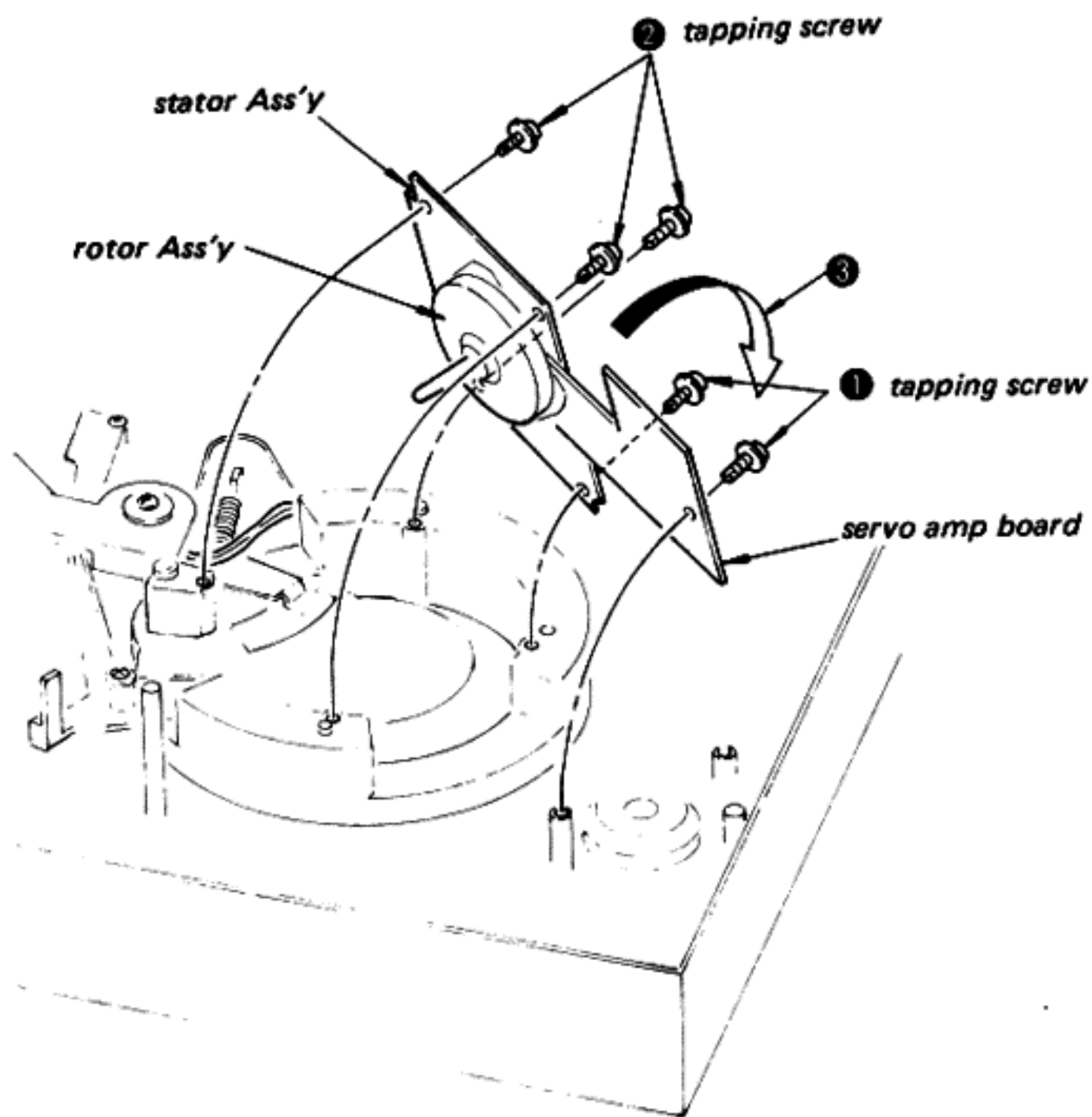
Caution for installation:
Move the clutch in the direction
as shown by the arrow and put
it the inside of the drive gear.



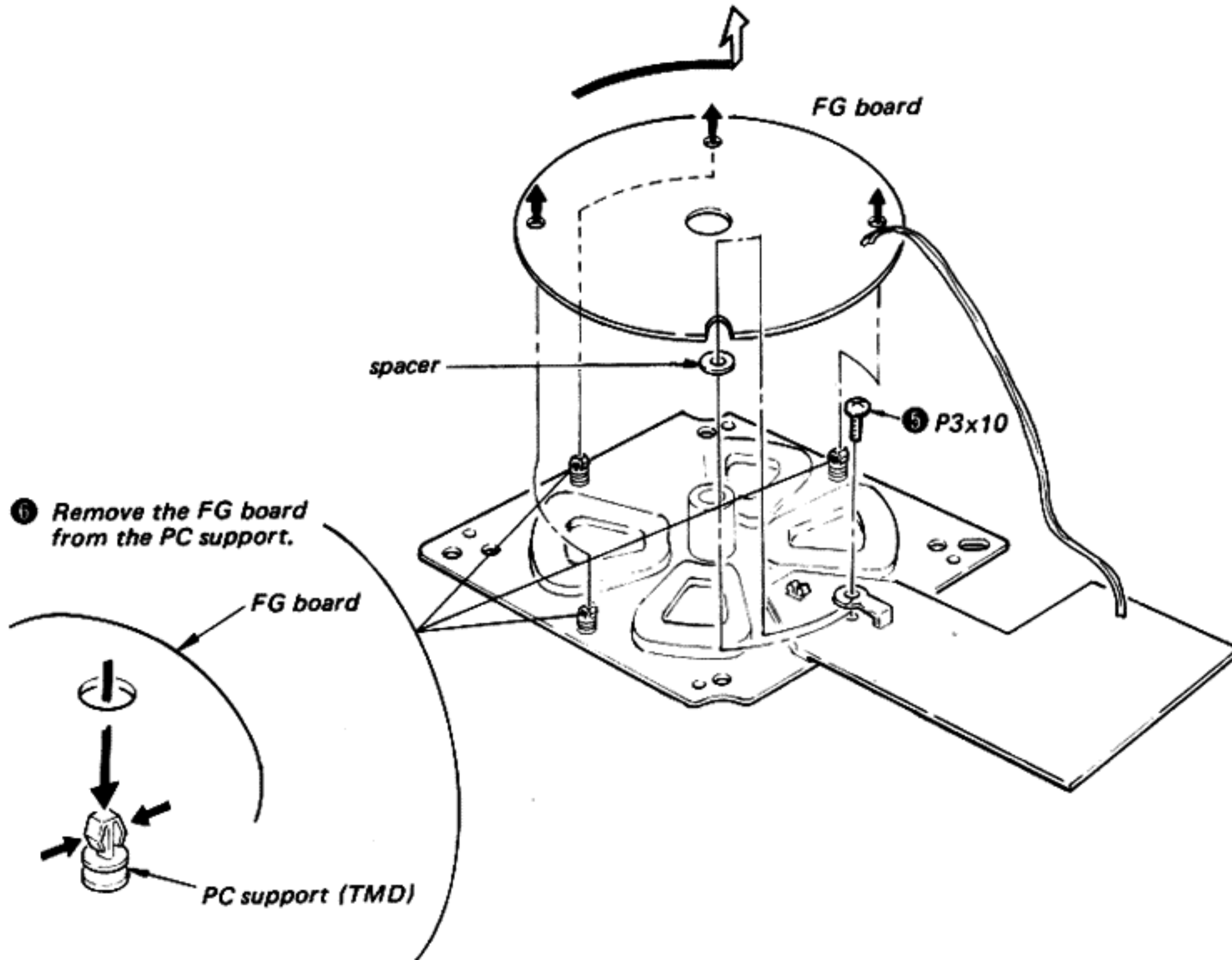
BOTTOM BOARD REMOVAL



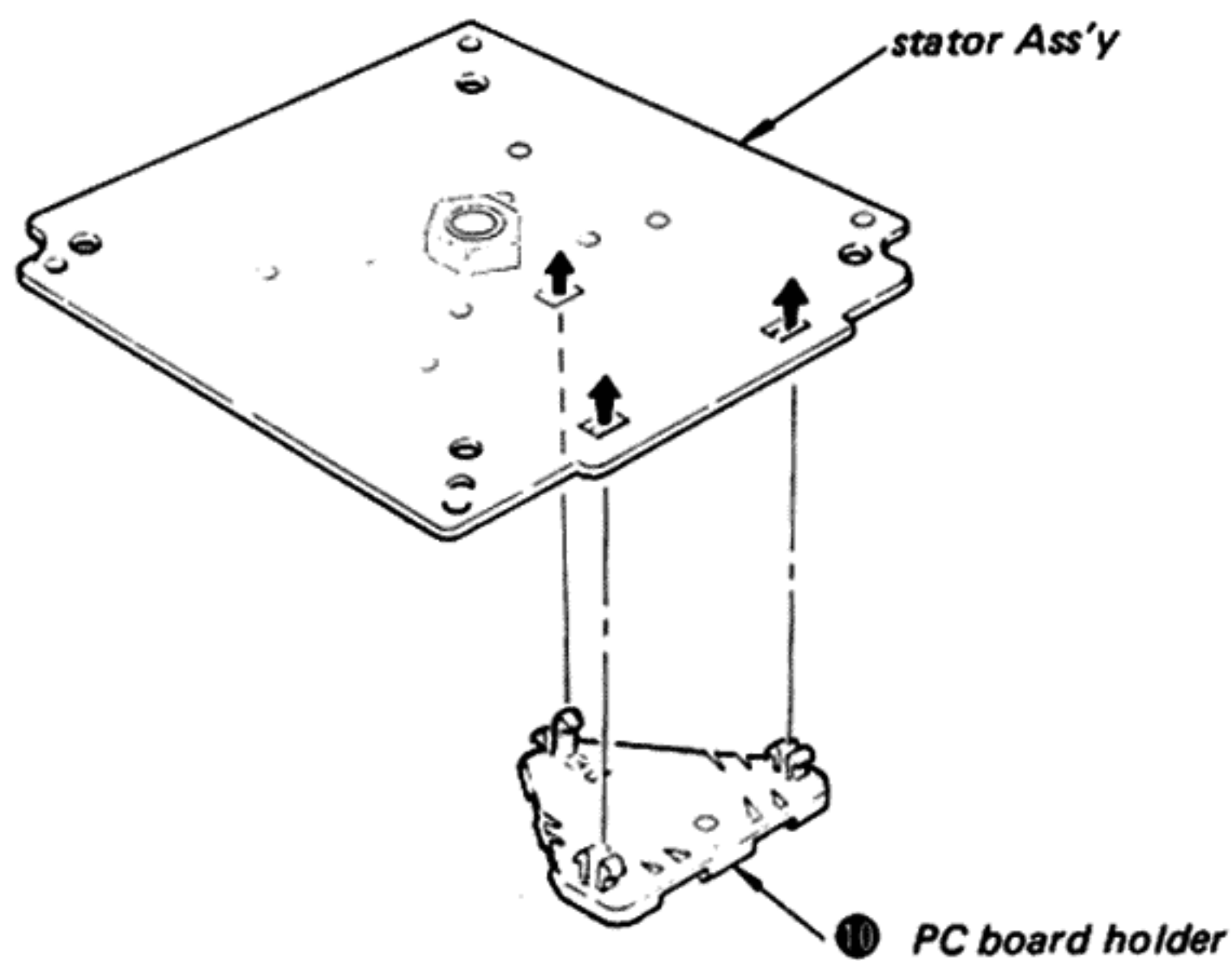
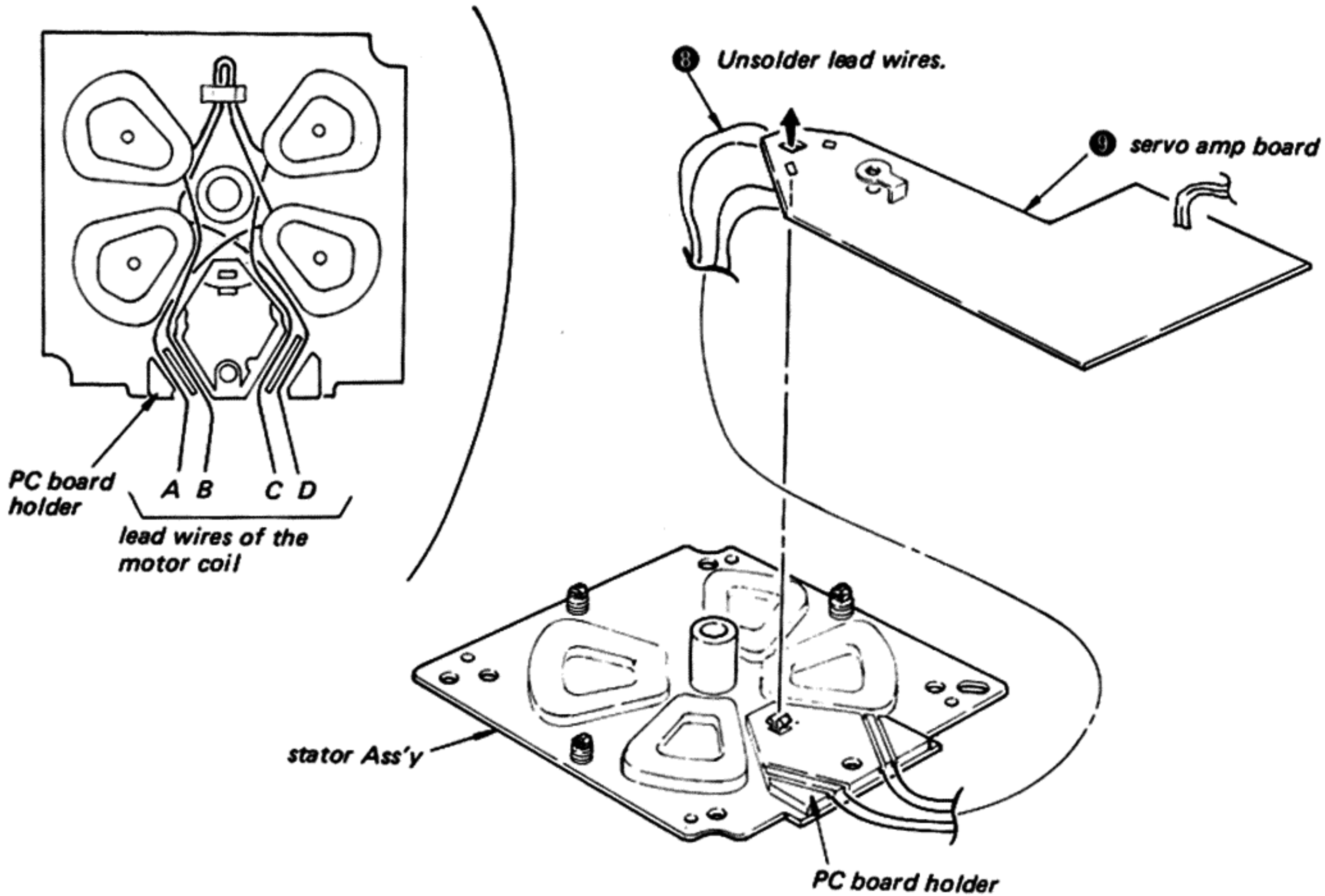
SERVO AMP BOARD / STATOR ASS'Y / ROTOR ASS'Y REMOVAL



① Turn the FG board in the direction as shown by the arrow and remove it.



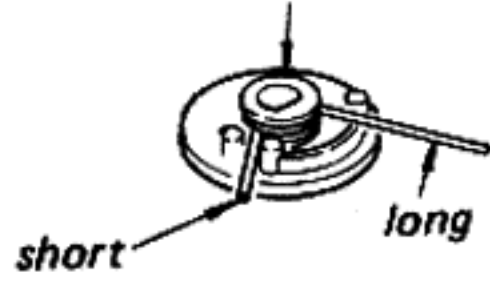
When installing, run the lead wires of the motor coil through the grooves of the PC board holder.



ANTI-SKATING KNOB INSTALLATION

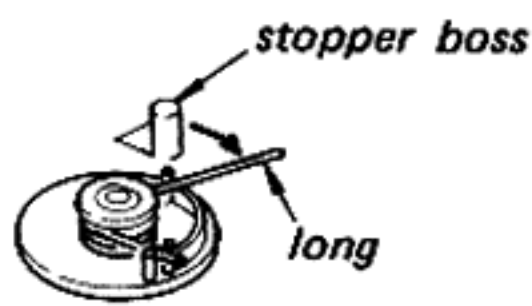
If necessary, apply grease (SGL-501) to the specified portion.

- ④ Install the spring on the IFC cam.

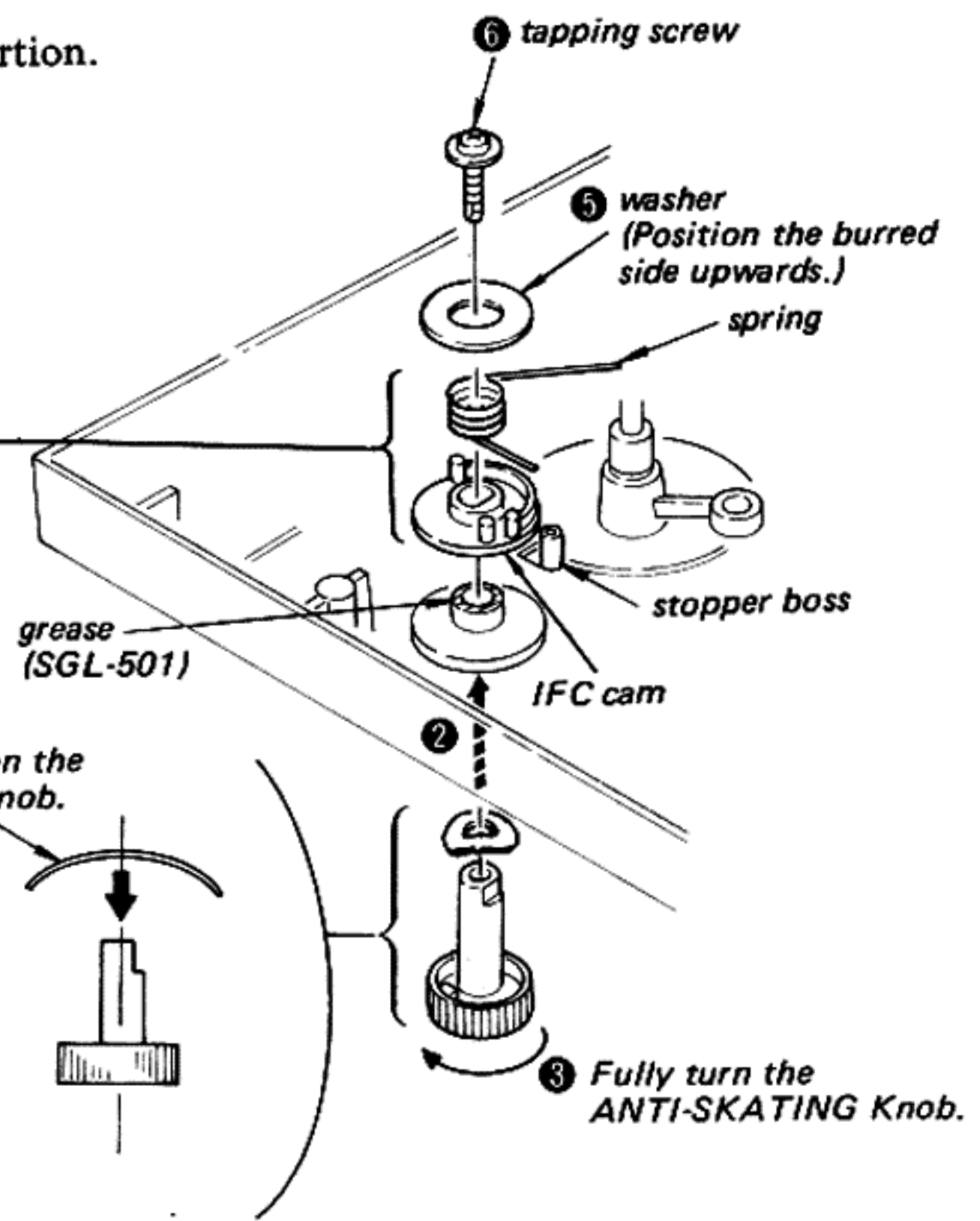


CAUTION:

Install the spring so that the long side of the spring is located in the portion as shown by the arrow.



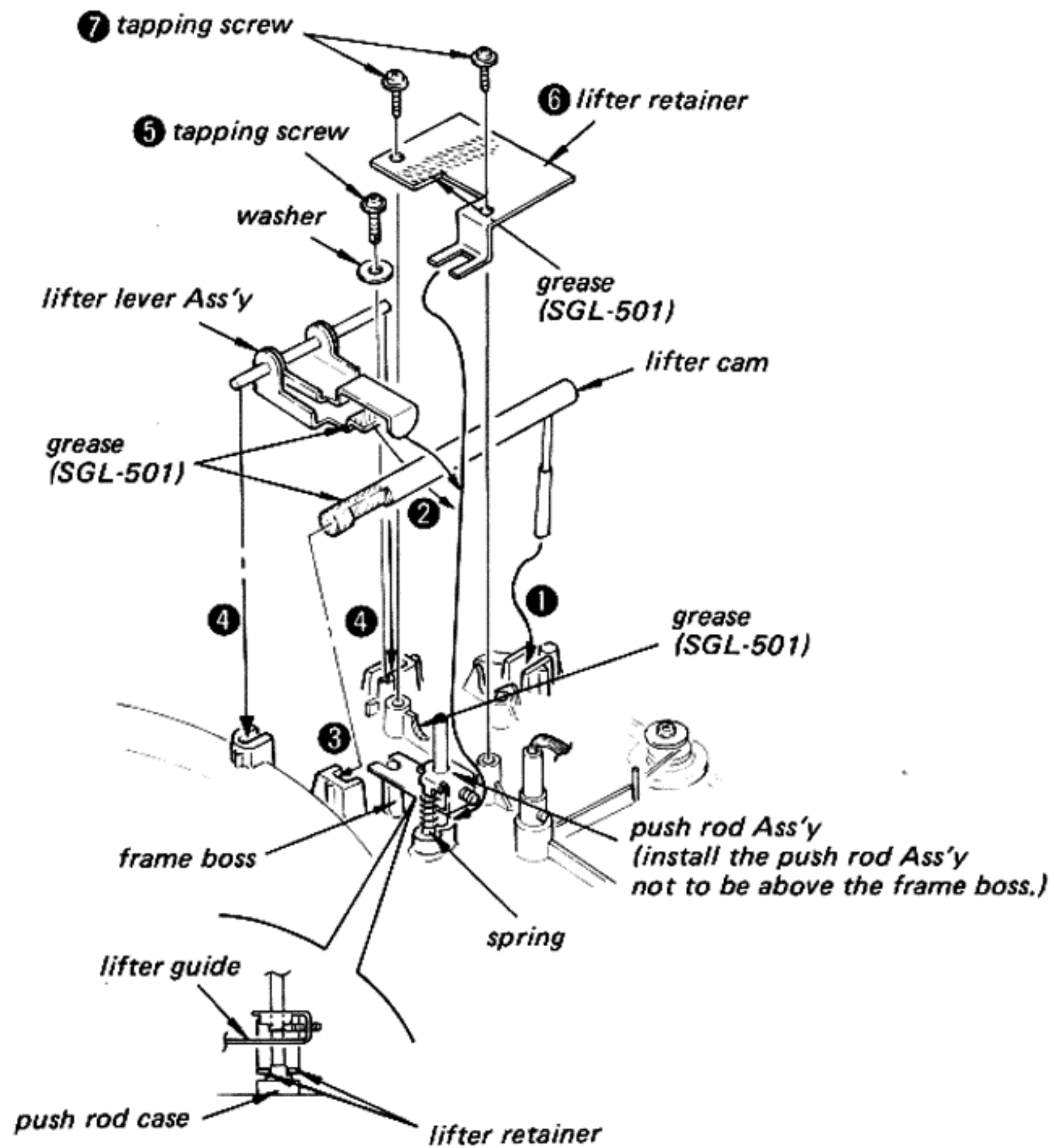
- ① Install washer (N) on the ANTI-SKATING Knob.



- ③ Fully turn the ANTI-SKATING Knob.

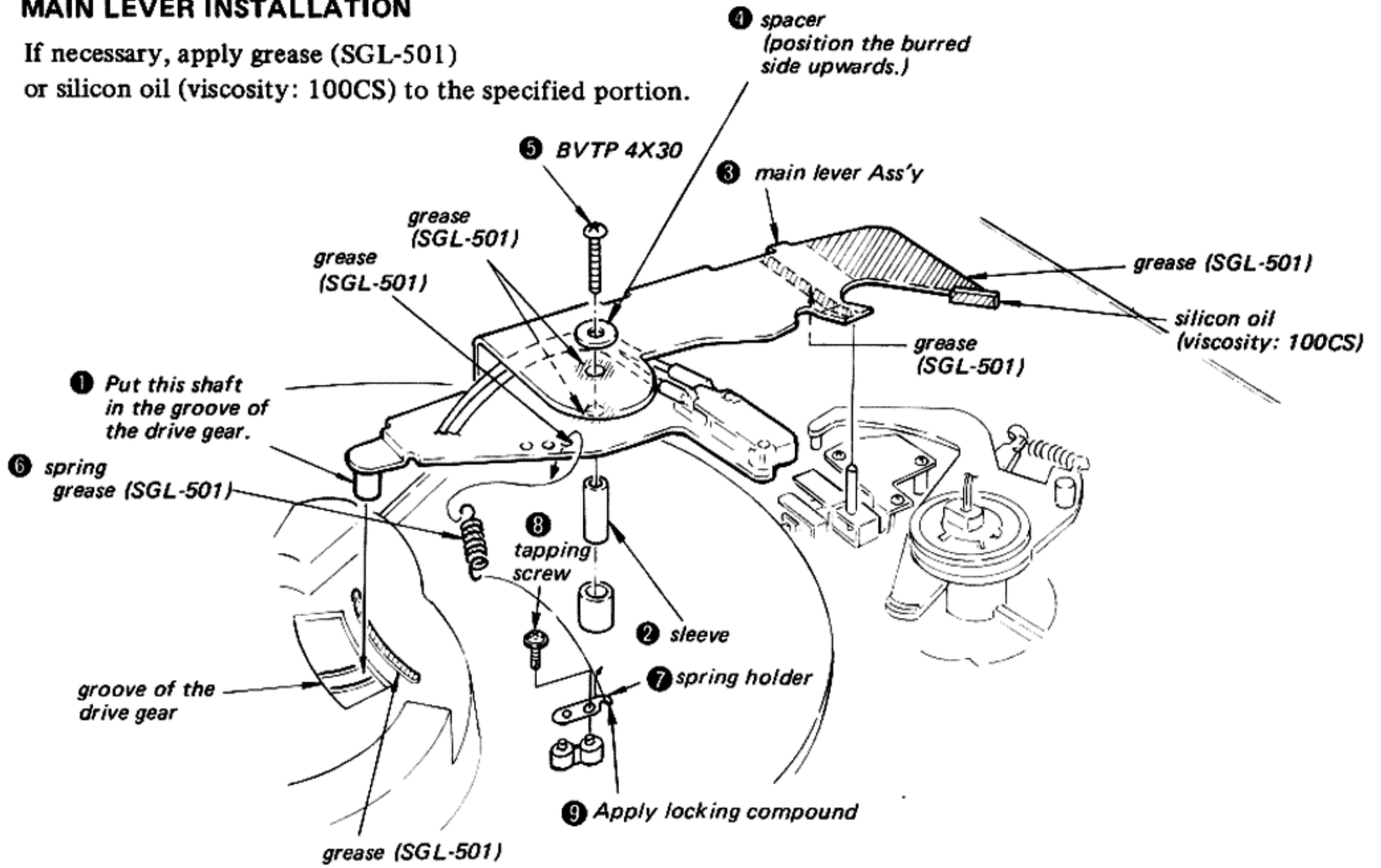
LIFTER LEVER ASS'Y INSTALLATION

If necessary, apply grease (SGL-501) to the specified portion.



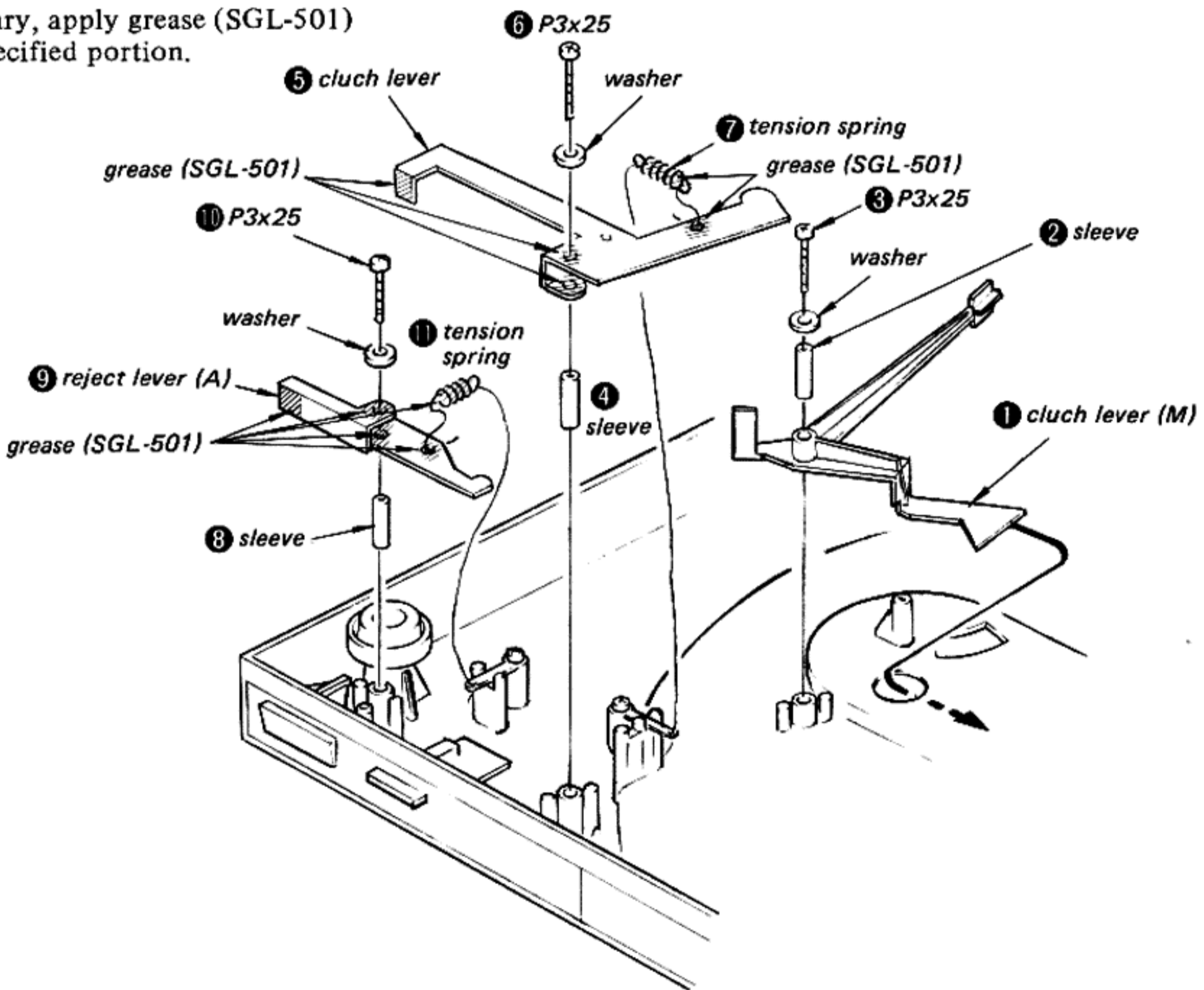
MAIN LEVER INSTALLATION

If necessary, apply grease (SGL-501)
or silicon oil (viscosity: 100CS) to the specified portion.

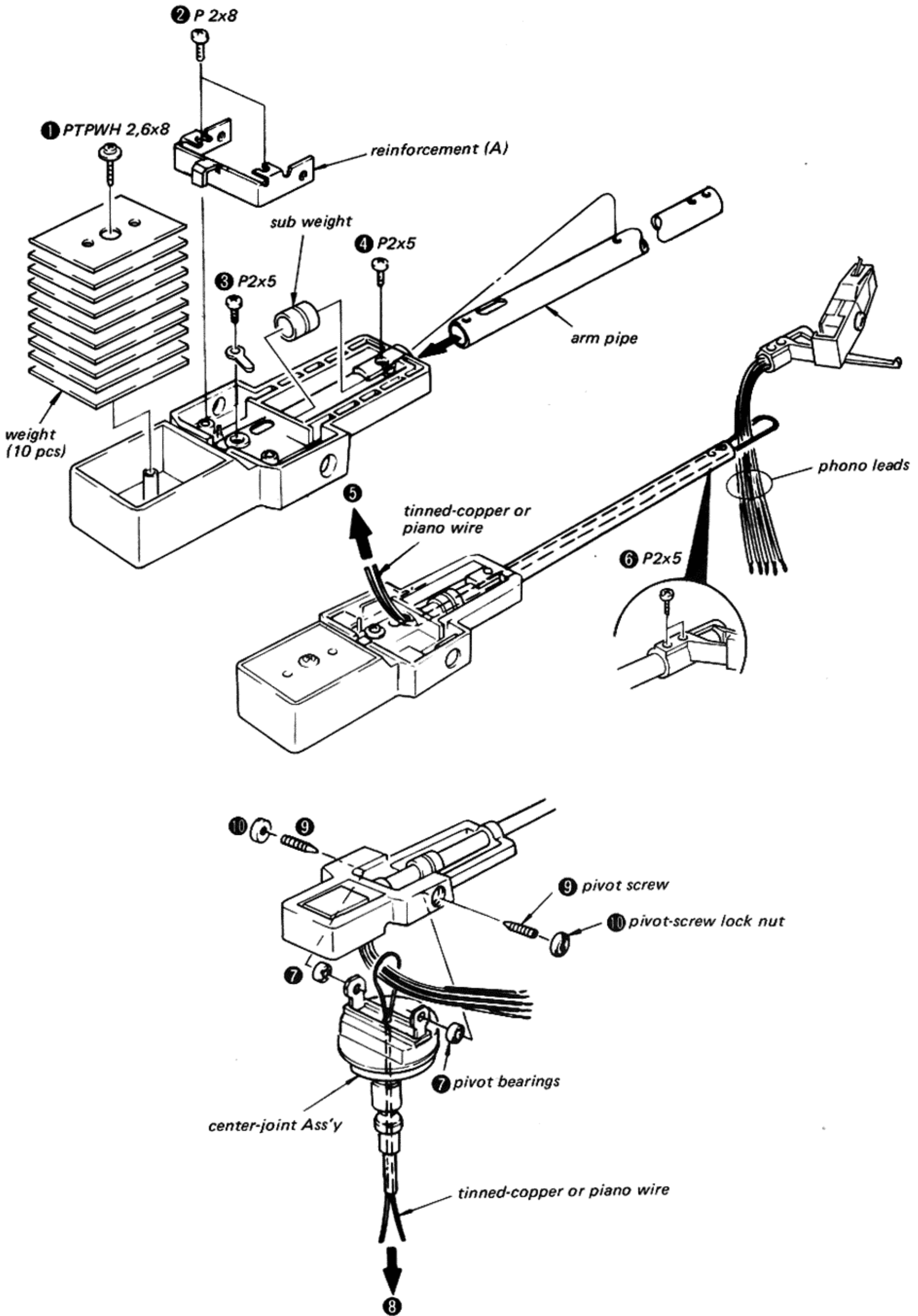


CLUCH LEVER (M)/CLUCH LEVER/REJECT LEVER (A) INSTALLATION

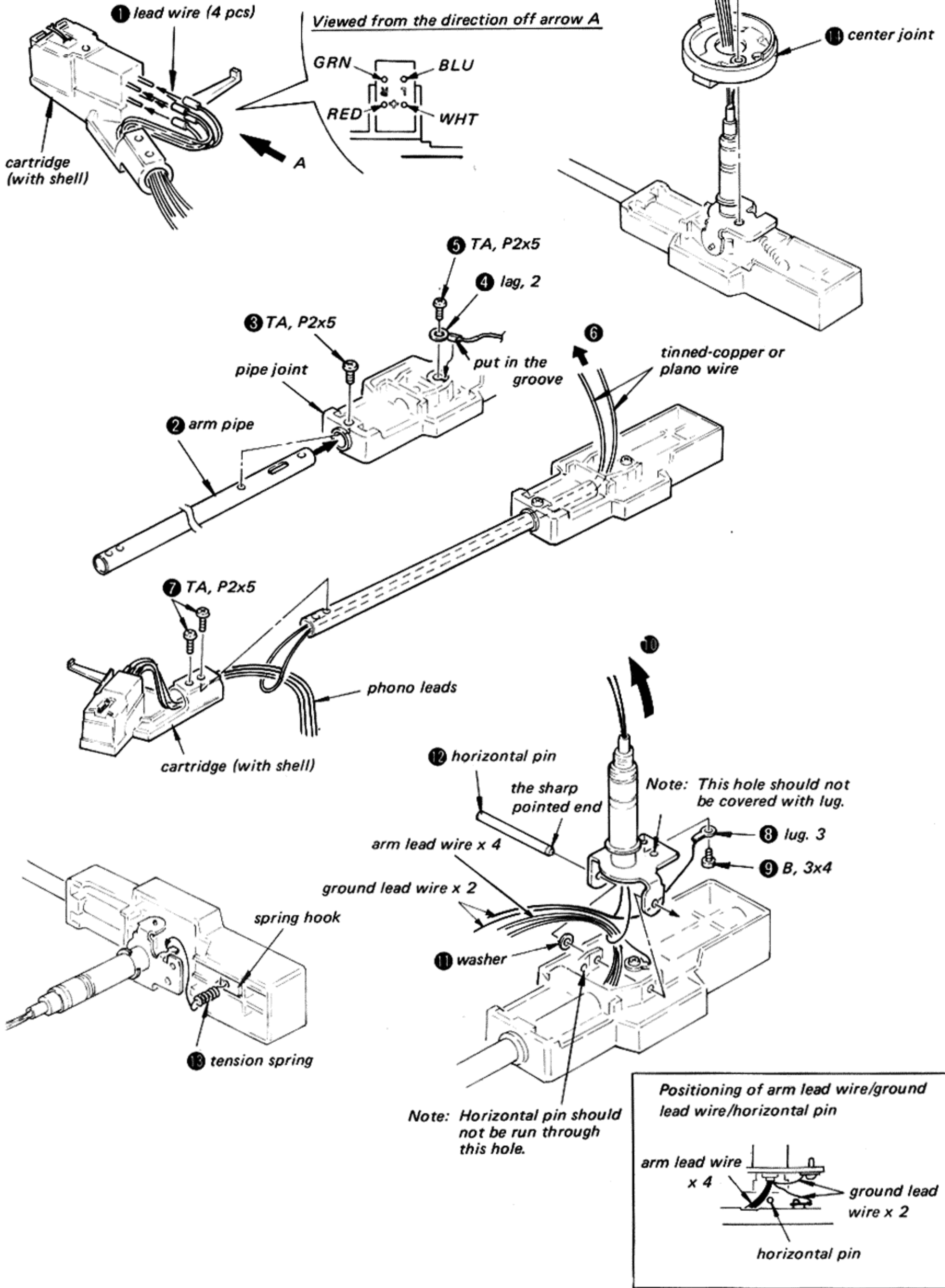
If necessary, apply grease (SGL-501)
to the specified portion.



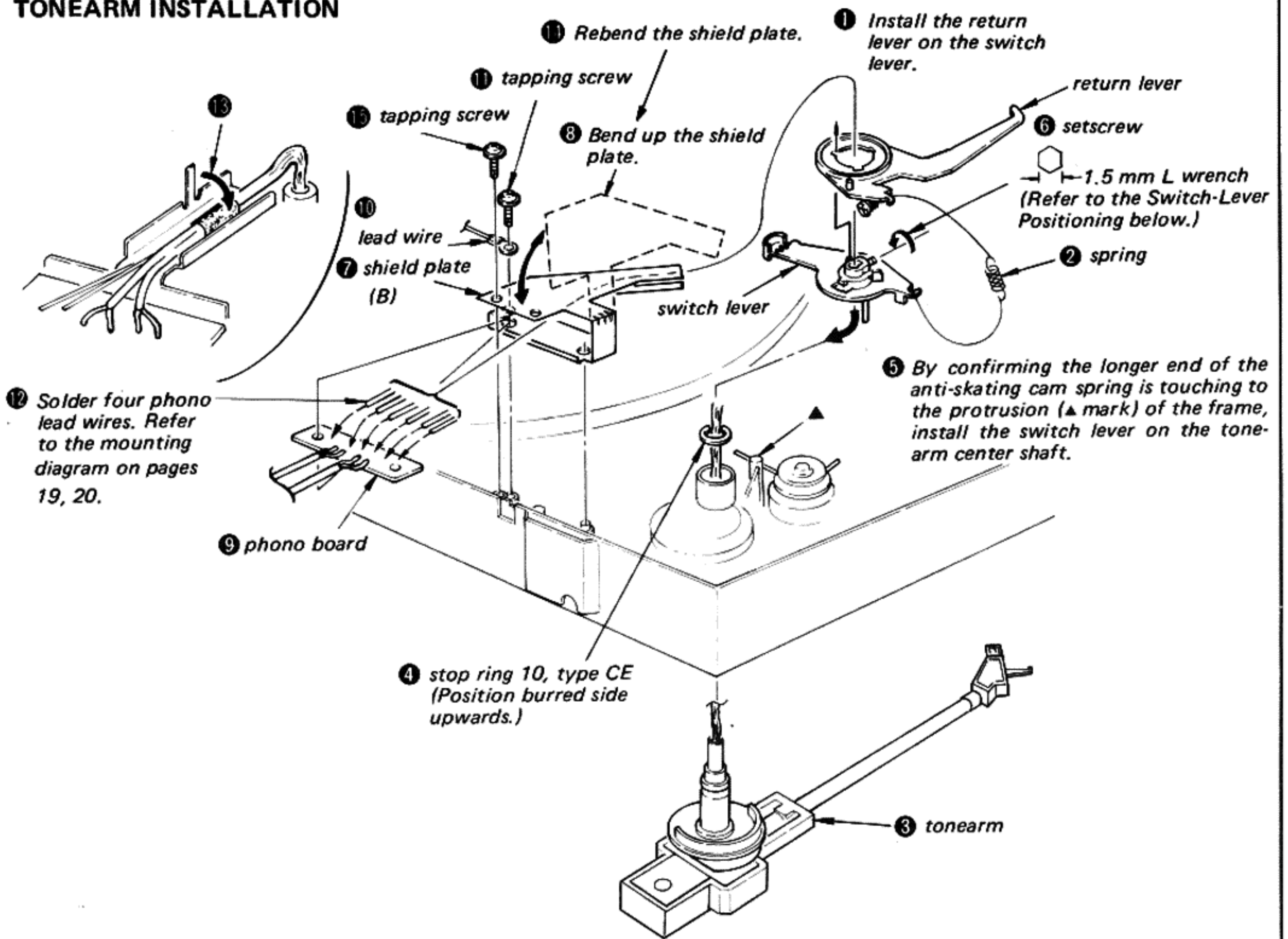
ASSEMBLING THE TONEARM (PS-LX310/310(C))



ASSEMBLING THE TONEARM (PS-LX311)

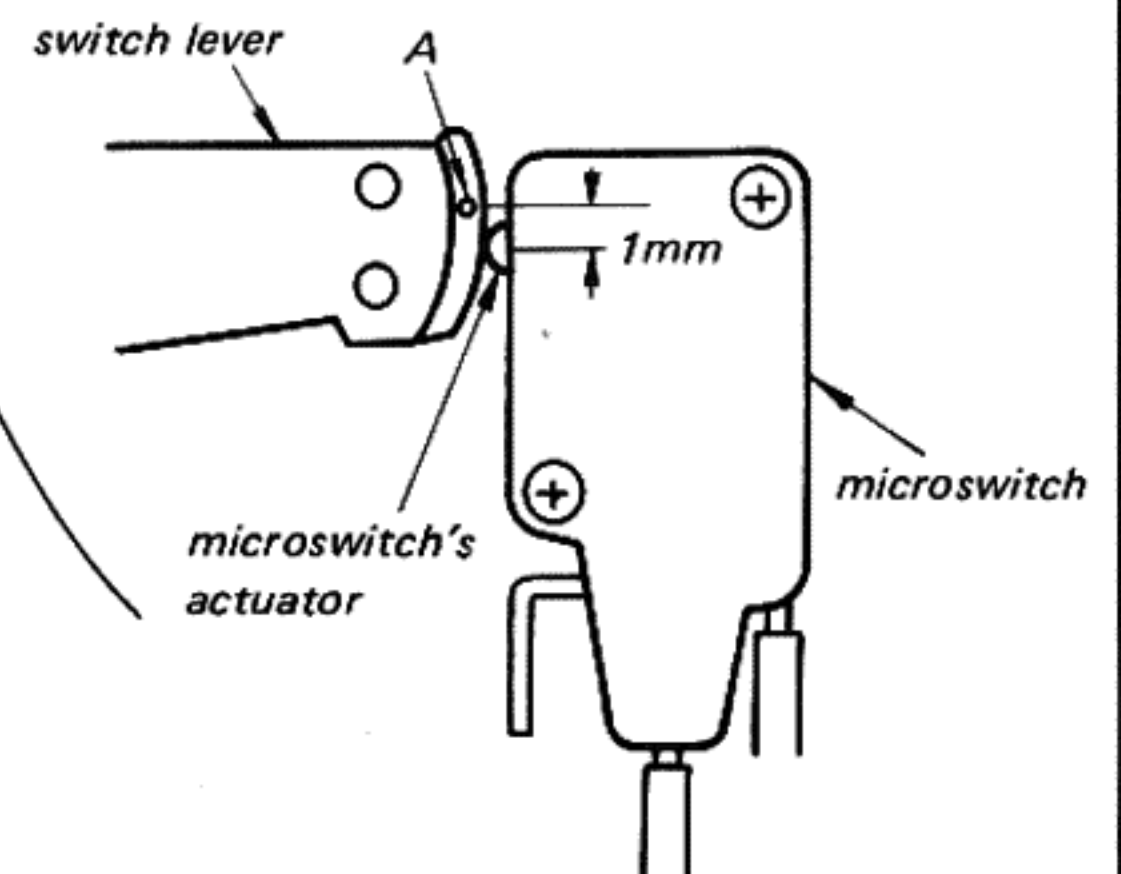
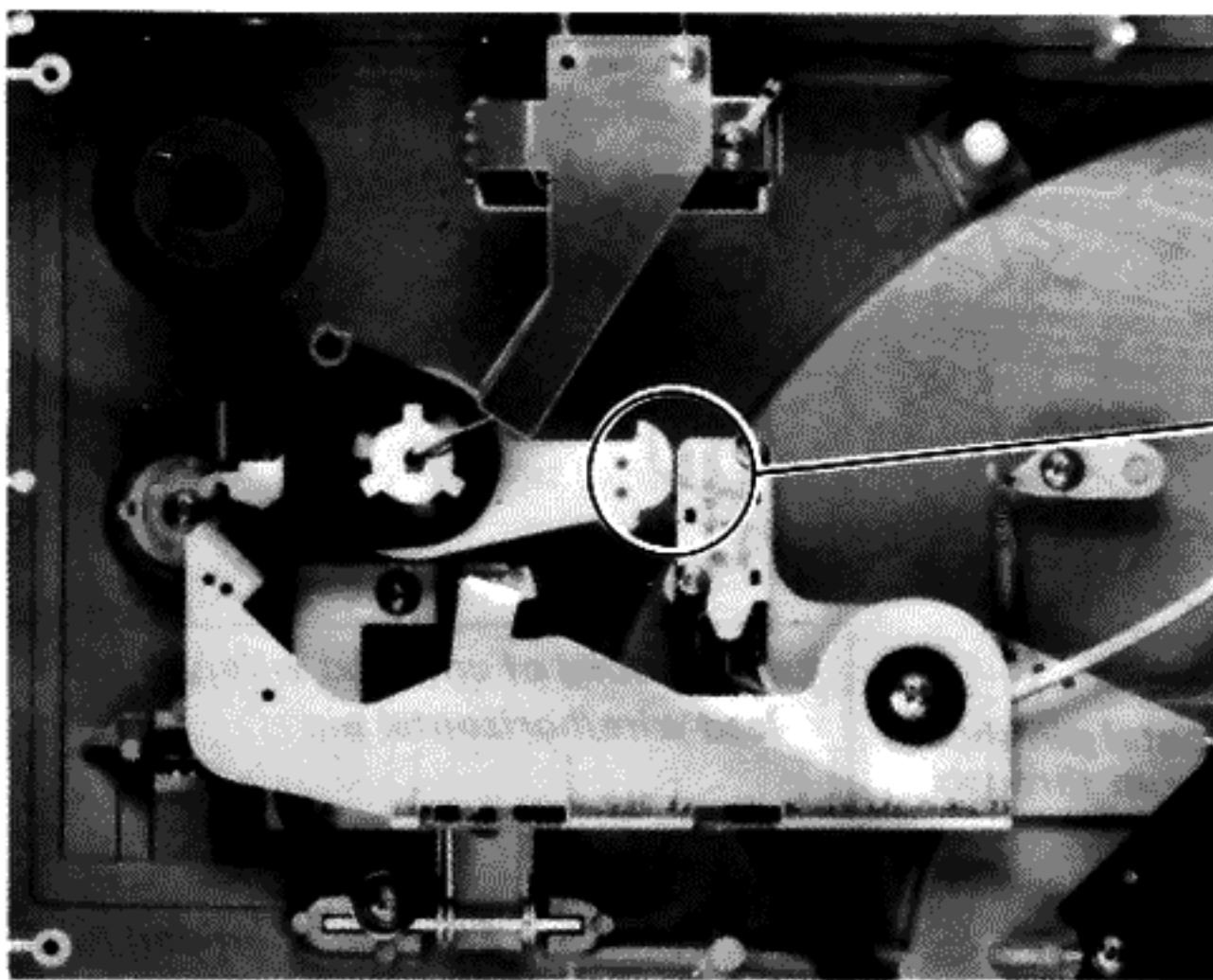


TONEARM INSTALLATION



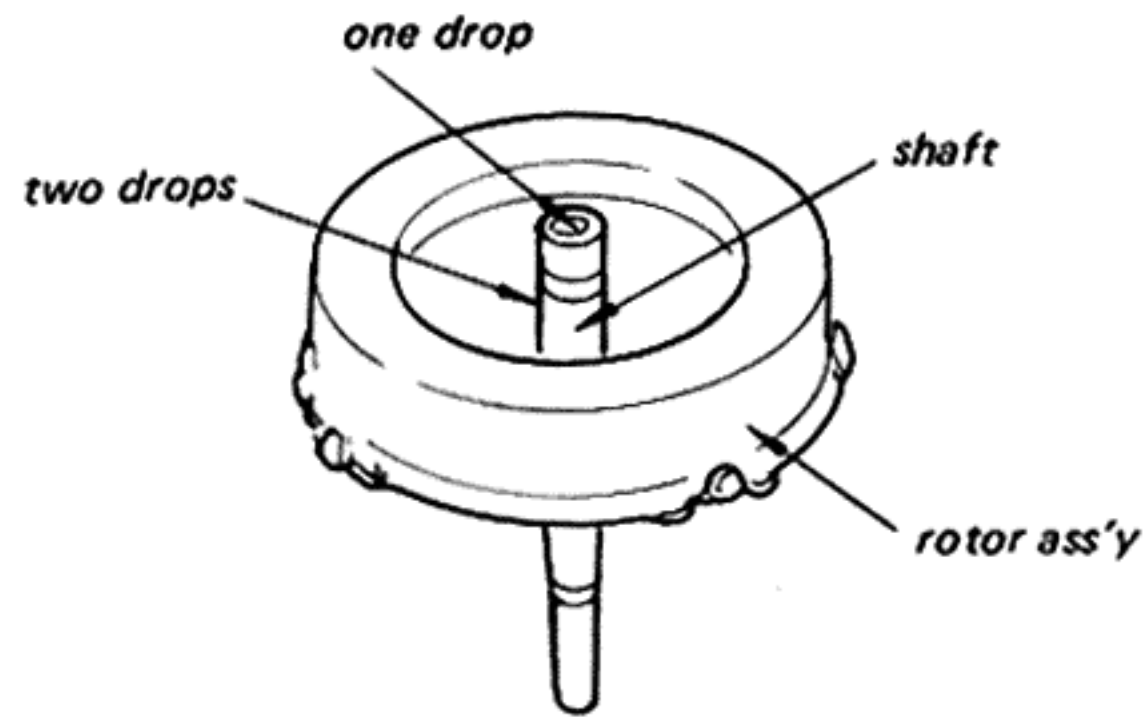
Switch-Lever Positioning:

1. Place the tonearm on the tonearm rest.
2. Position the drive gear to the rest mode.
3. Position the part A of the switch lever 1mm off the microswitch's actuator as shown in the figure and tighten the set screw securely.

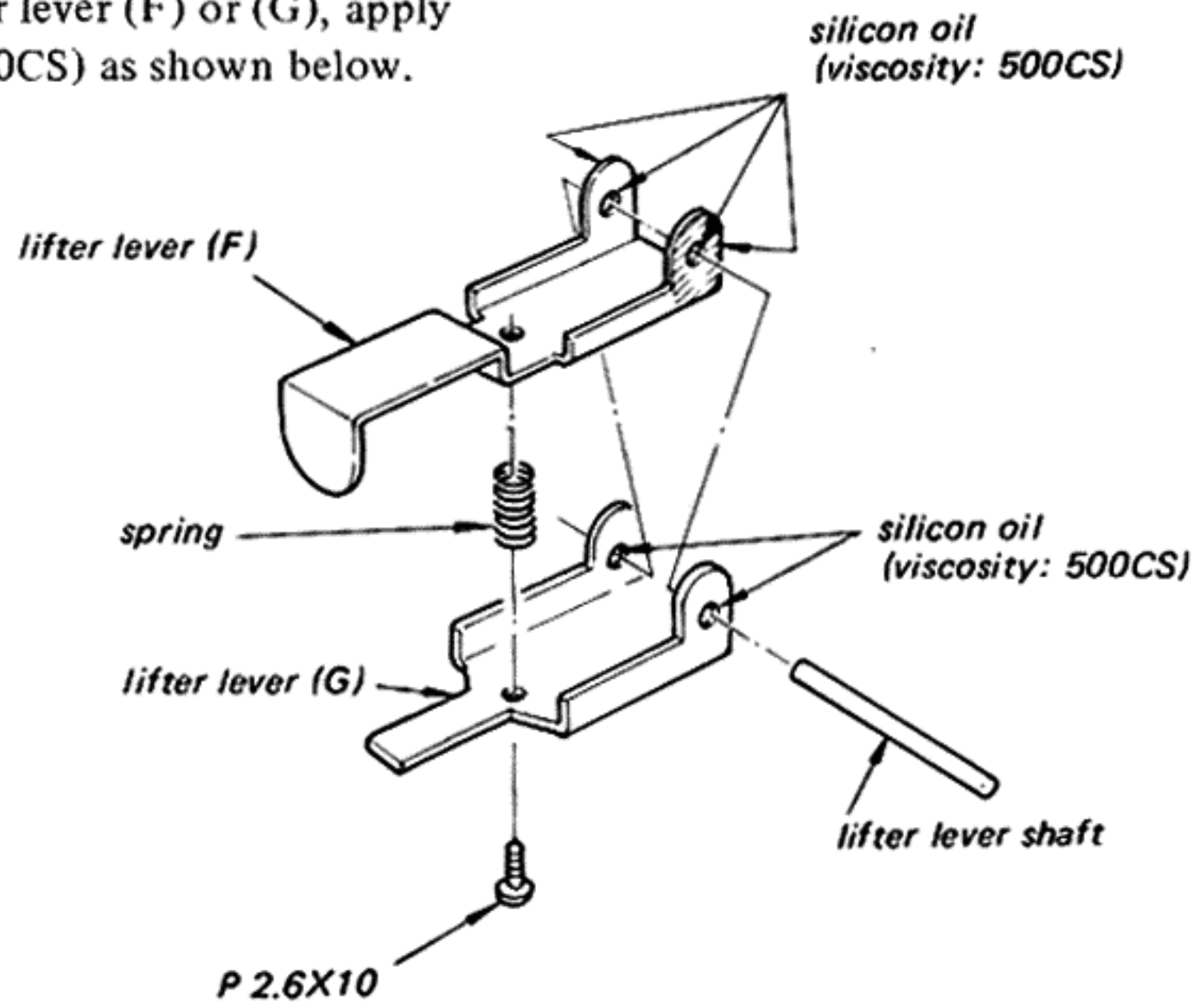


LUBRICATION

1. When the motor rotor ass'y is replaced, apply Sony oil OL-2KA to the rotor shaft as illustrated below.



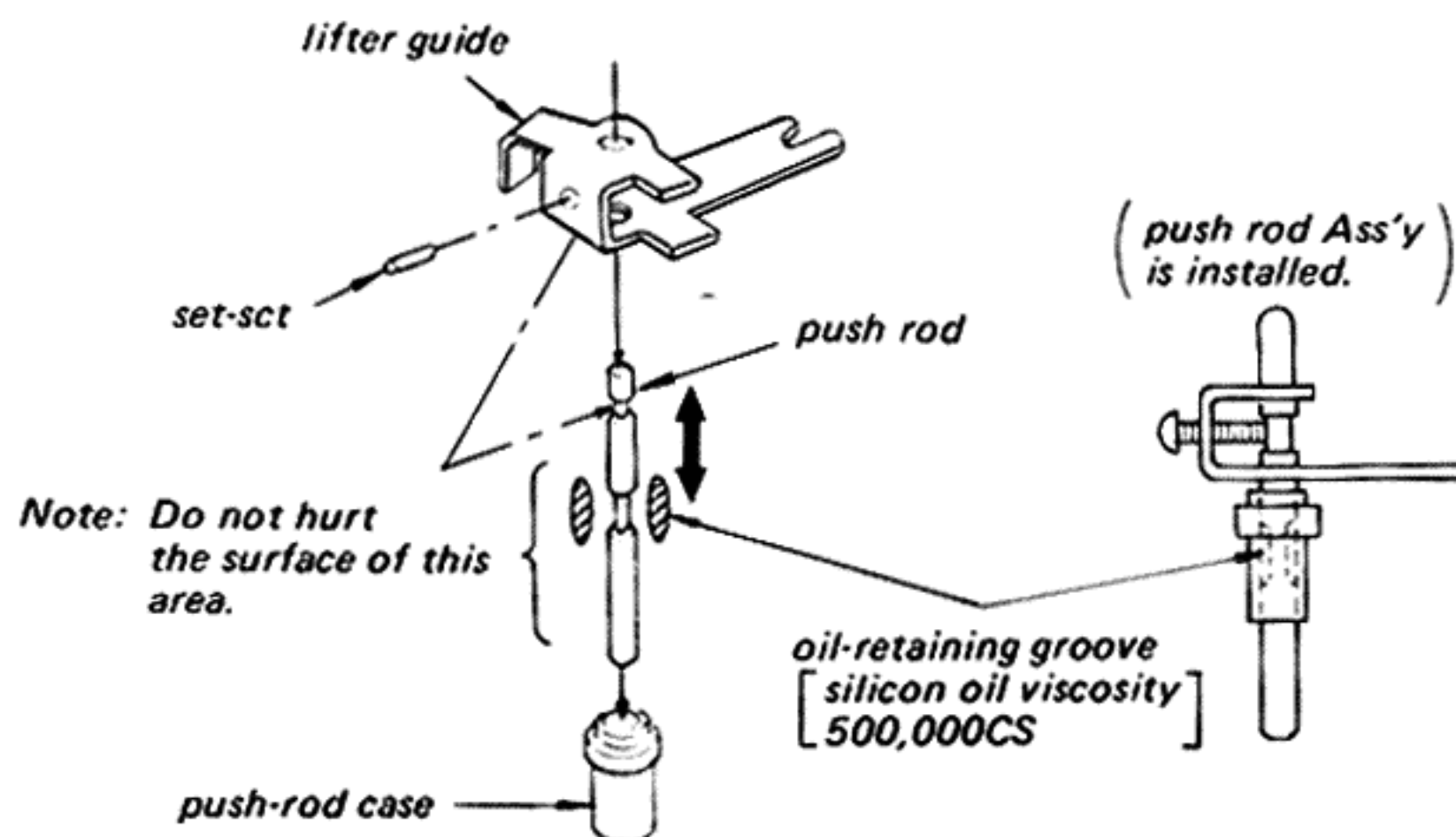
2. When replacing the lifter lever (F) or (G), apply silicon oil (viscosity: 500CS) as shown below.



3. Lubrication for push rod

CAUTION:

When lubricating, rotate and move the push rod up and down a few times.



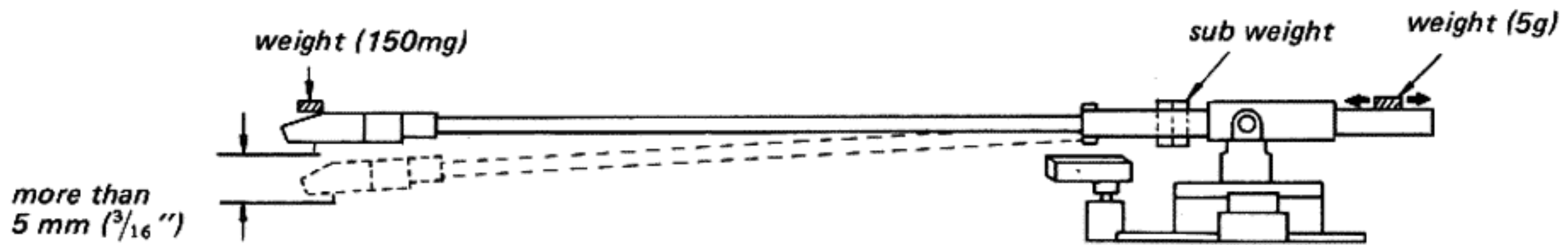
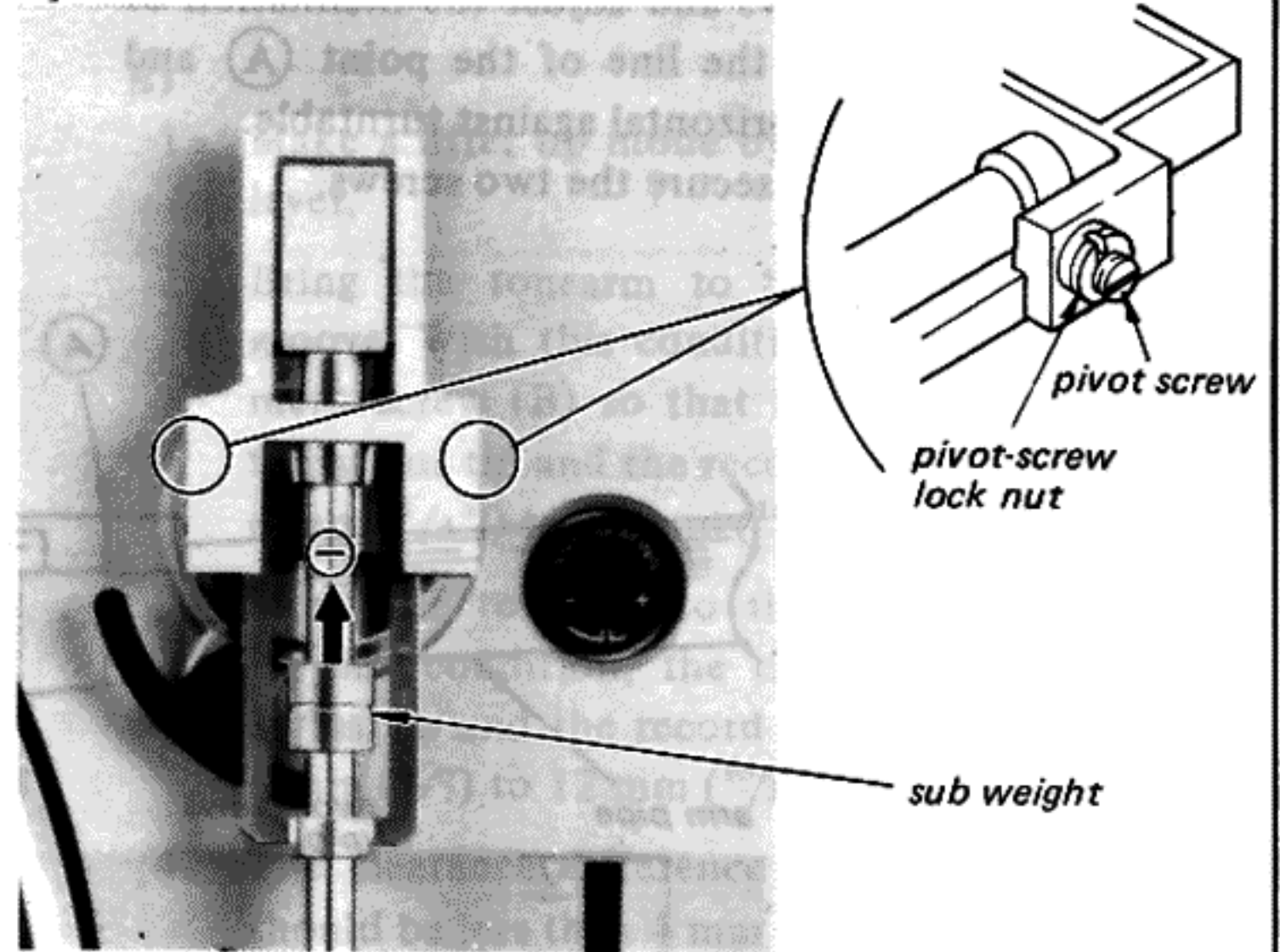
SECTION 3 ADJUSTMENTS

3-1. MECHANICAL ADJUSTMENTS

Longitudinal Sensitivity Adjustment (PS-LX310/310(C))

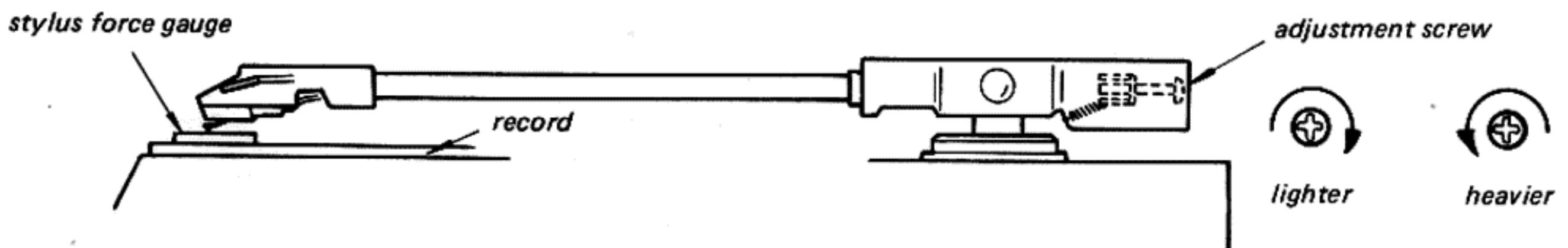
1. Install the cartridge and slide the sub weight at \ominus side.
2. Place a weight of about 5g on the pipe joint.
3. Adjust the weight position so that the arm is balanced.
4. Place a weight of about 150mg on the cartridge (right over the stylus).
5. Adjust the pivot screw so that the stylus tip goes down 5mm or more.

Note: If the pivot screw is secured excessively, the pivot bearing may be damaged.



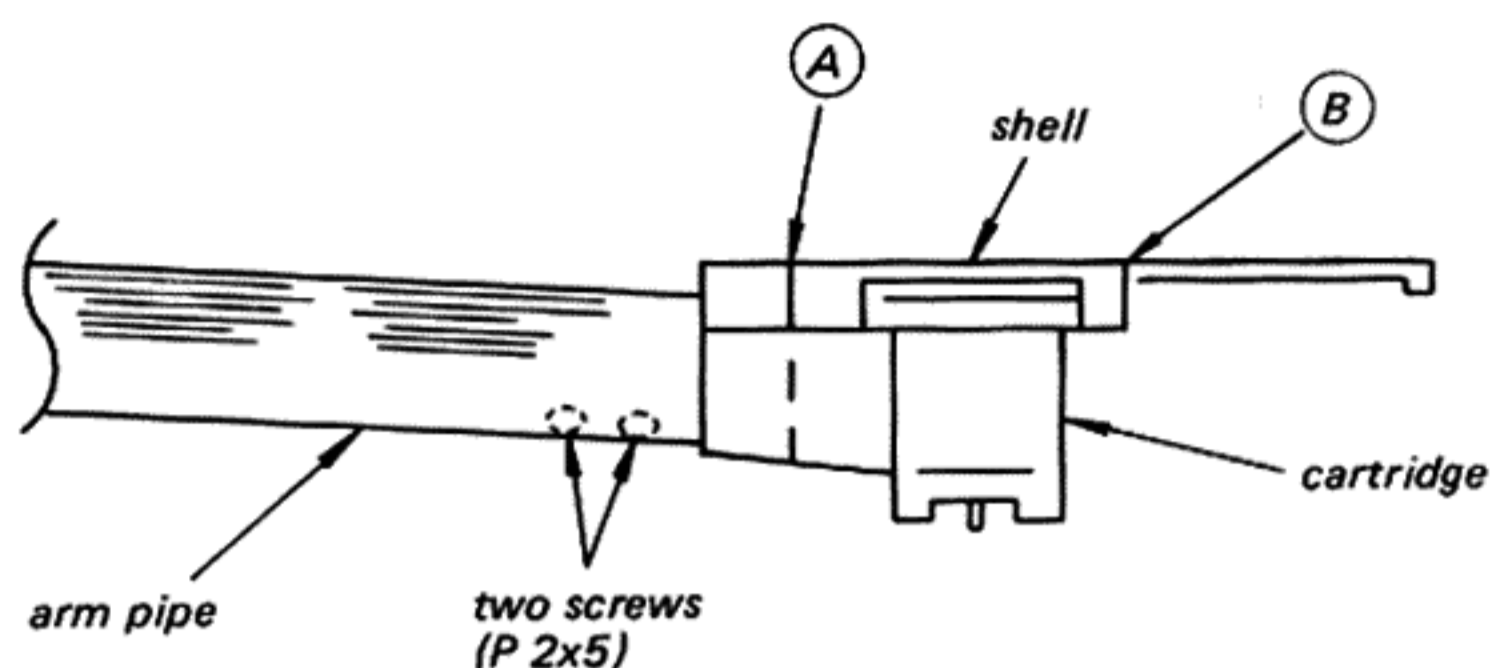
Stylus Force Adjustment (PS-LX311)

1. Turn the adjustment screw to obtain zero balance.
2. Turn the adjustment screw again so that stylus force becomes 2g on stylus force gauge.



Cartridge Level Adjustment

Loosen the two screws and adjust the inclination of the cartridge so that the line of the point (A) and point (B) becomes horizontal against turntable. After the adjustment, secure the two screws.

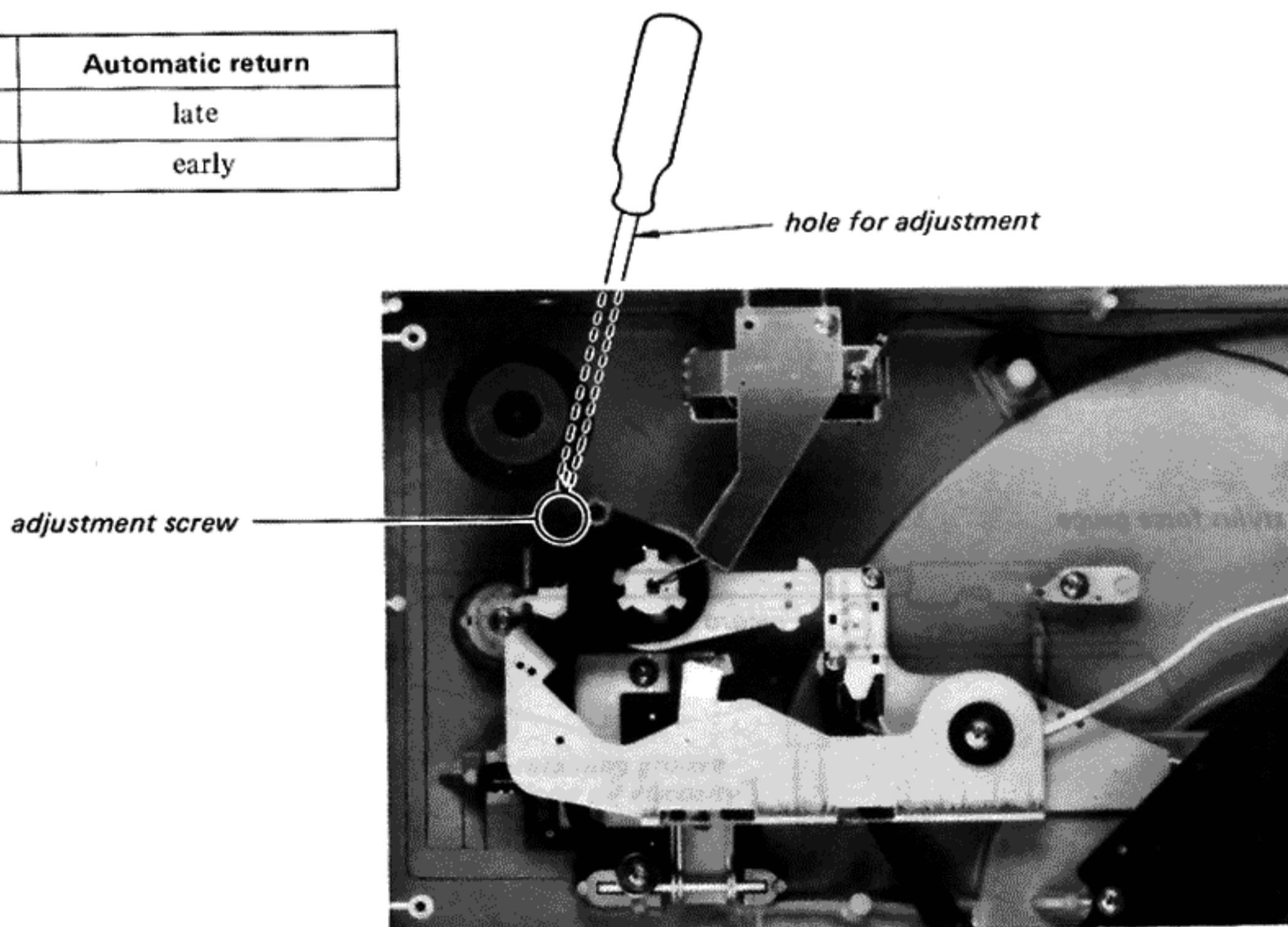


Automatic Return Position Adjustment

1. Reject the tonearm by REJECT button.
2. Bring the tonearm to the automatic-return test groove (inside portion) of the test record (YFSC-16), and adjust the screw for making the tonearm return at count 3 to 12.

Note: The normal auto-return position is between 59 mm (2-3/8") and 64 mm (2-1/2") from the center of the center shaft.

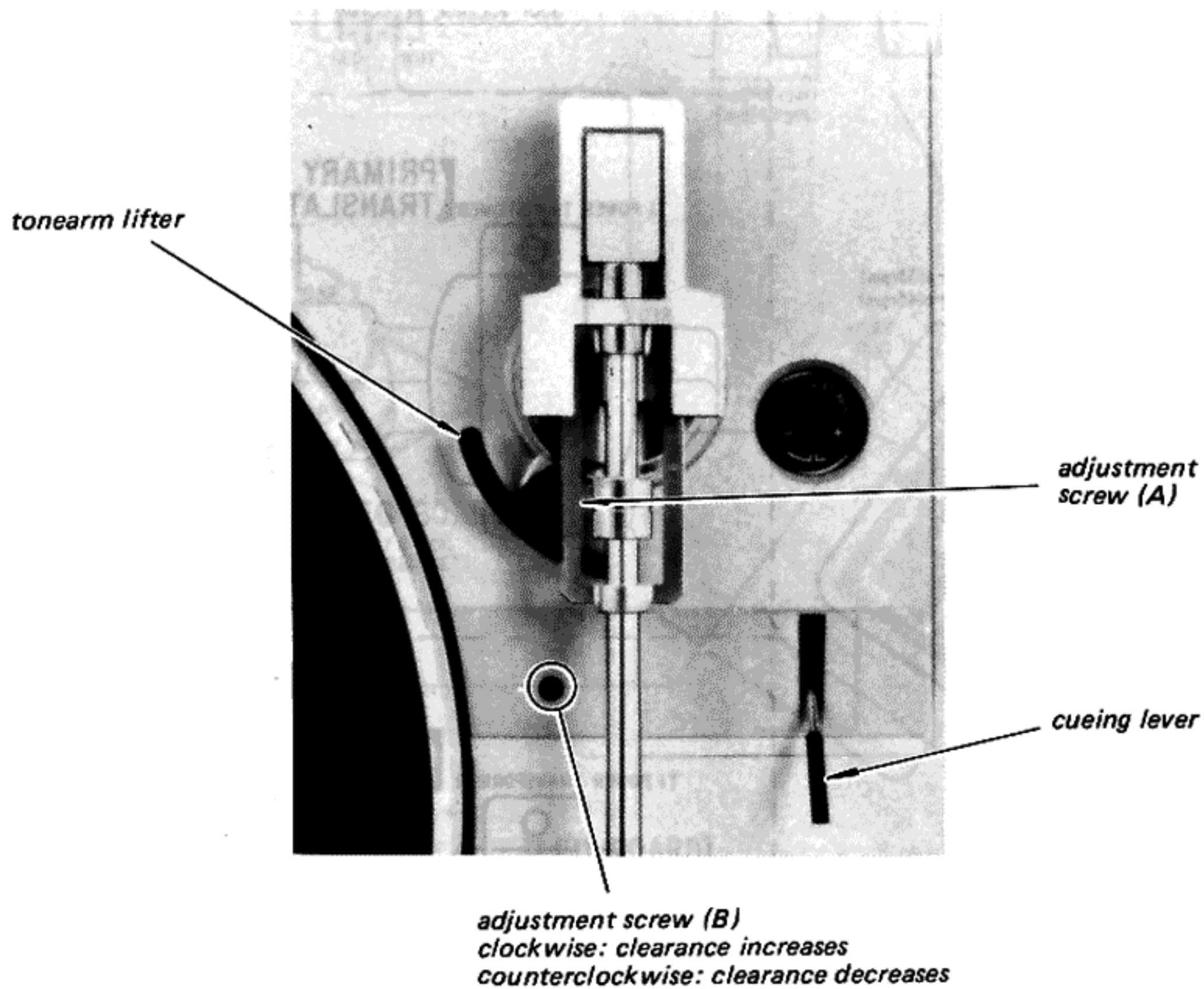
| Turning direction | Automatic return |
|-------------------|------------------|
| clockwise | late |
| counterclockwise | early |



Tonearm Height Adjustment

Note: Perform both adjustments A) and B).

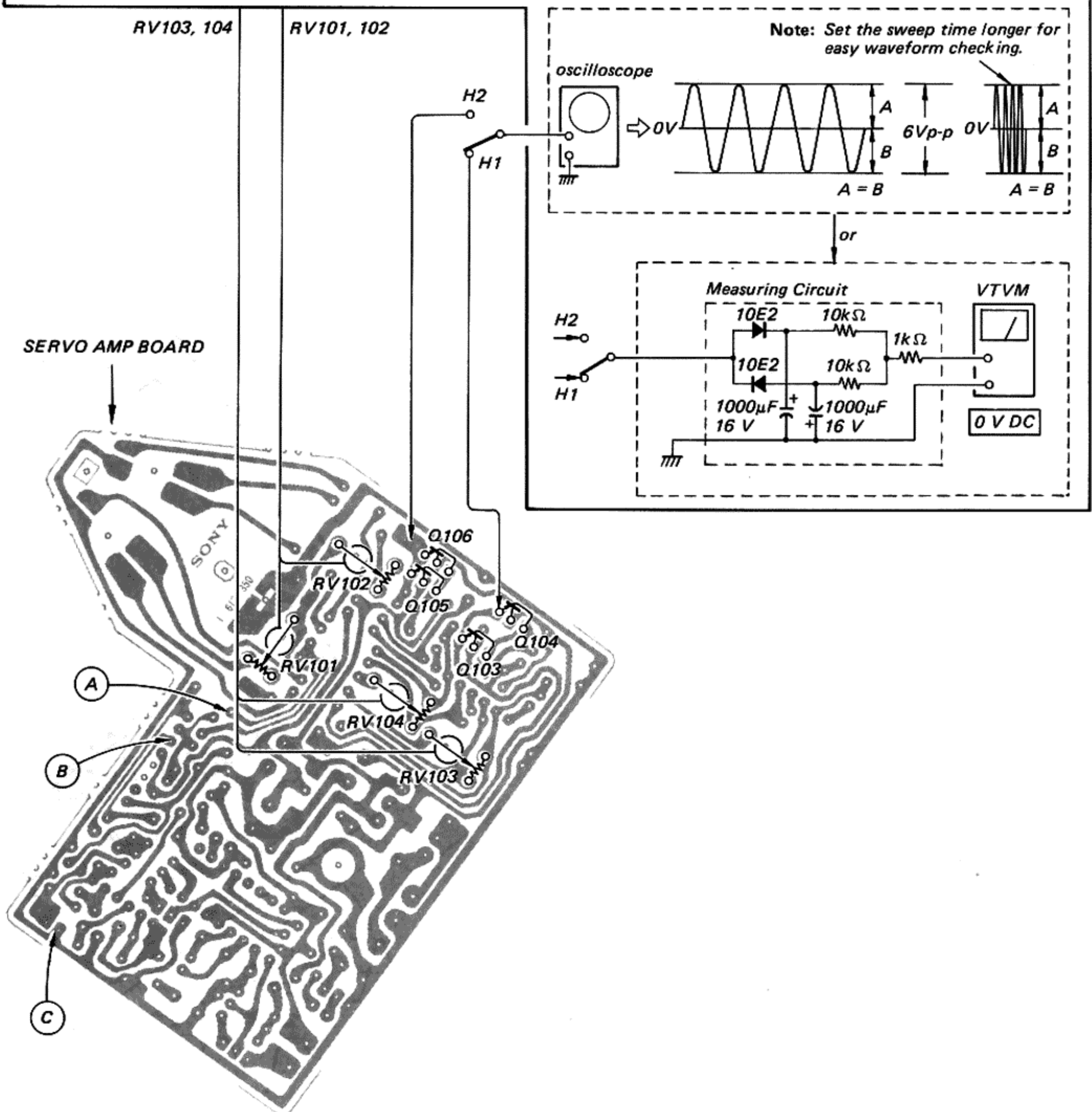
- A)
1. Bring the tonearm toward the inner of the record and put the stylus in the last groove of the record.
 2. Push the REJECT button and slowly turn the turntable by hand to lift the tonearm.
 3. Adjust the height of the tonearm lifter by turning the adjustment screw(A) so that the clearance between the stylus tip and the record is approx. 6 mm ($\frac{1}{4}$ ") to 12 mm ($\frac{15}{32}$ ").
 4. After the adjustment, make sure by turning the turntable by hand that the tonearm smoothly returns to the tonearm rest.
- B)
1. Make a lifter up mode by lifting up the cueing lever.
 2. Bring the tonearm to the outer-most record groove. With this condition, adjust the adjustment screw (B) so that the clearance between the stylus tip and the record surface becomes in 6 mm ($\frac{1}{4}$ ") to 12 mm ($\frac{15}{32}$ ").
 3. Move the tonearm to the inner-most groove. In this condition, the clearance between the stylus tip and the record surface should also be 6 mm ($\frac{1}{4}$ ") to 12 mm ($\frac{15}{32}$ ").
 4. The clearance difference between A) and B)-3 should be less than 4 mm ($\frac{3}{16}$ ").
 5. After the adjustment, lock the adjustment screw (B) with locking compound.



3-2. ELECTRICAL ADJUSTMENTS

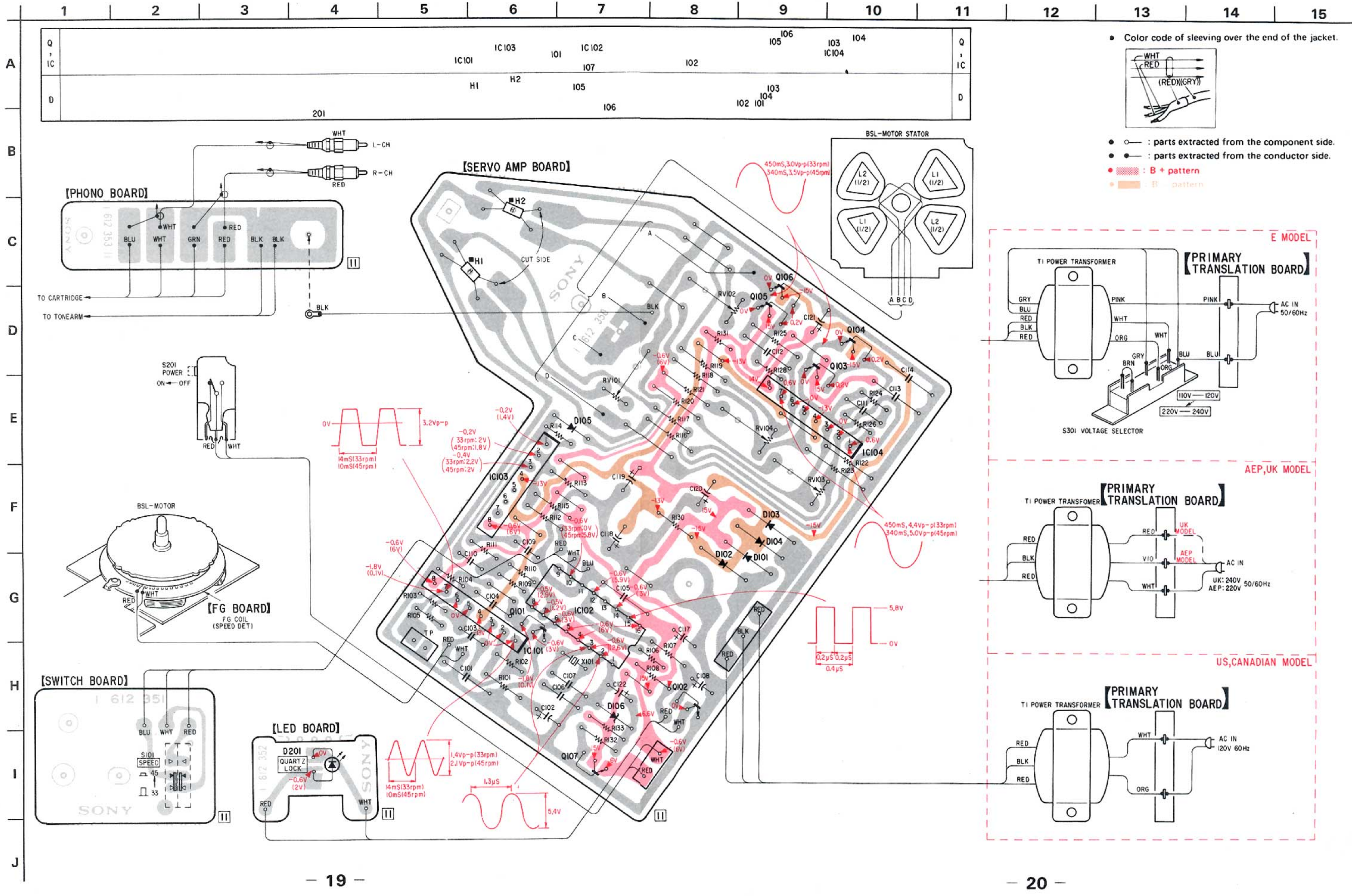
Gain/Offset Adjustment

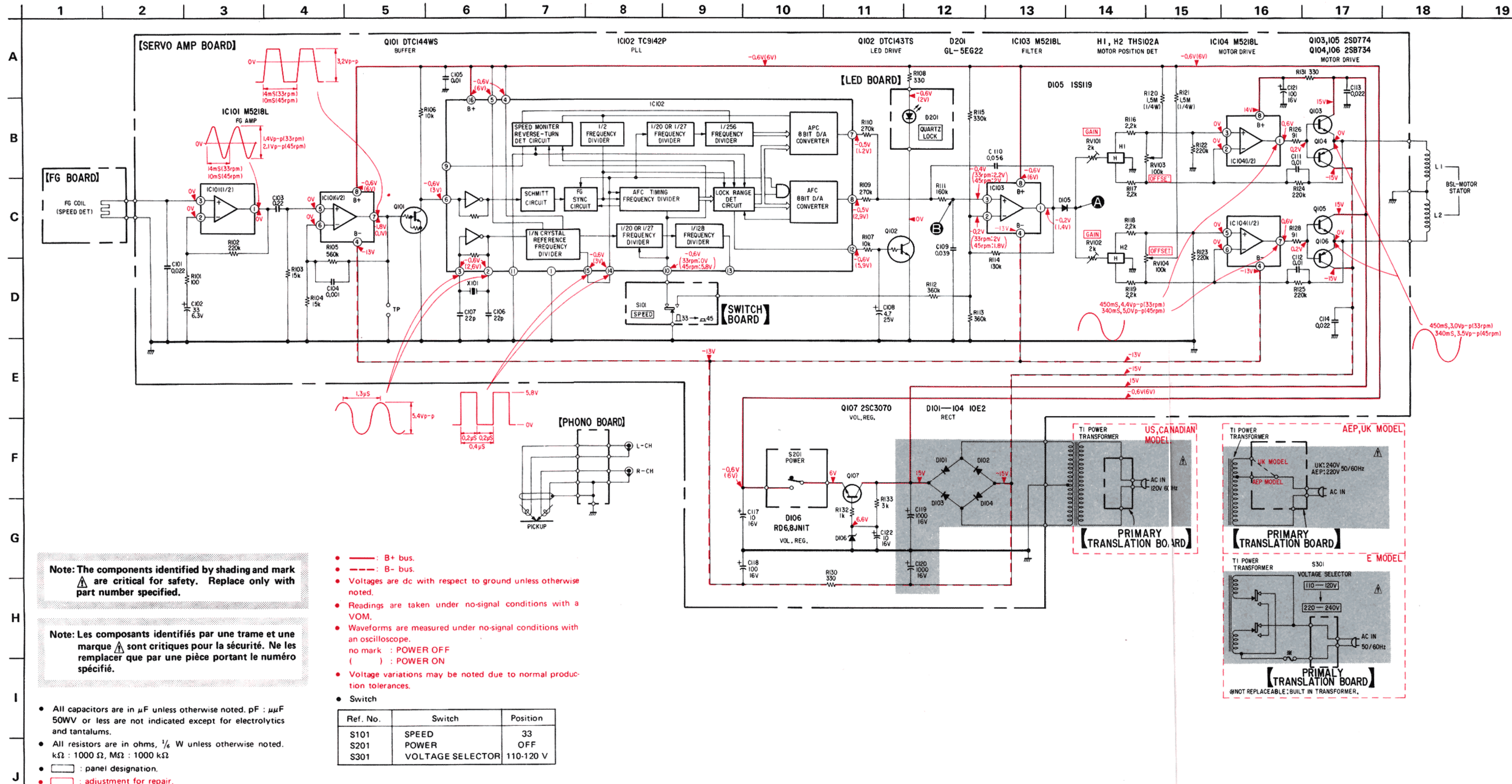
1. Take off the turntable sheet and turntable.
2. Connect IC 103 pin ③ (pattern ②) to the ground pin (pattern ③).
3. Apply a 1 V DC to the cathode of D 105 (pattern ①).
4. Adjust RV 103 (H1) and RV 104 (H2) so that the emitter waveforms of Q103, 104 (H1) and Q105, 106 (H2) are shown below (or so that DC potential is 0 V). Offset Adjustment
5. Apply a 2 V DC to the cathode of D 105.
6. Adjust RV 101 (H1) and RV 102 (H2) so that the emitter voltage of Q103, 104 (H1) and Q105, 106 (H2) are 6 Vp-p. Gain Adjustment
7. After adjustments, remove the jumper lead connected in Step 2, 3 (or 5).



4-1. MOUNTING DIAGRAM
- Conductor Side -

SECTION 4
DIAGRAMS





Note: The components identified by shading and mark are critical for safety. Replace only with part number specified.

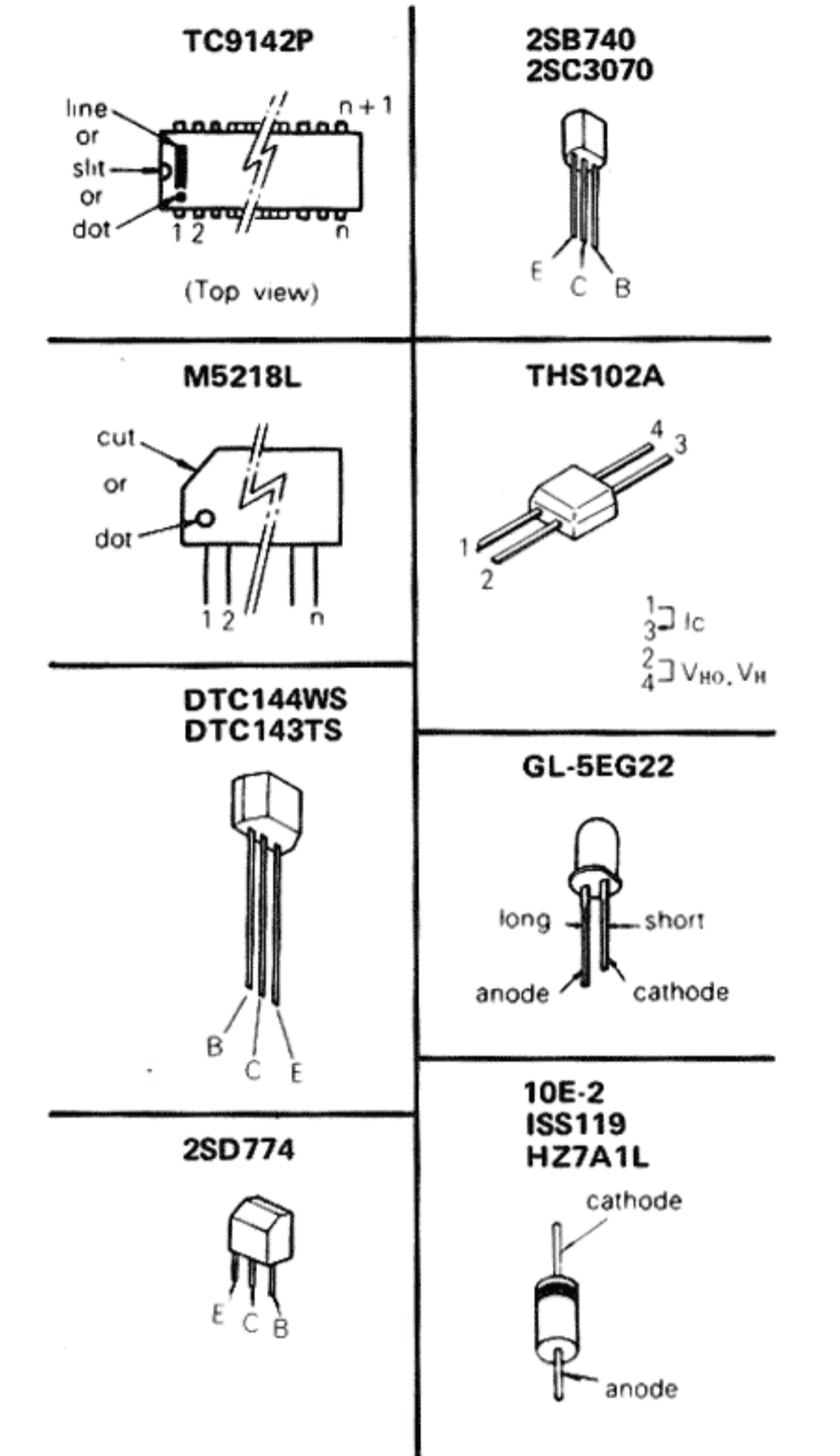
Note: Les composants identifiés par une trame et une marque sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- : B+ bus.
- - -: B- bus.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no-signal conditions with a VOM.
- Waveforms are measured under no-signal conditions with an oscilloscope.
- no mark : POWER OFF
- () : POWER ON
- Voltage variations may be noted due to normal production tolerances.
- Switch

| Ref. No. | Switch | Position |
|----------|------------------|-----------|
| S101 | SPEED | 33 |
| S201 | POWER | OFF |
| S301 | VOLTAGE SELECTOR | 110-120 V |

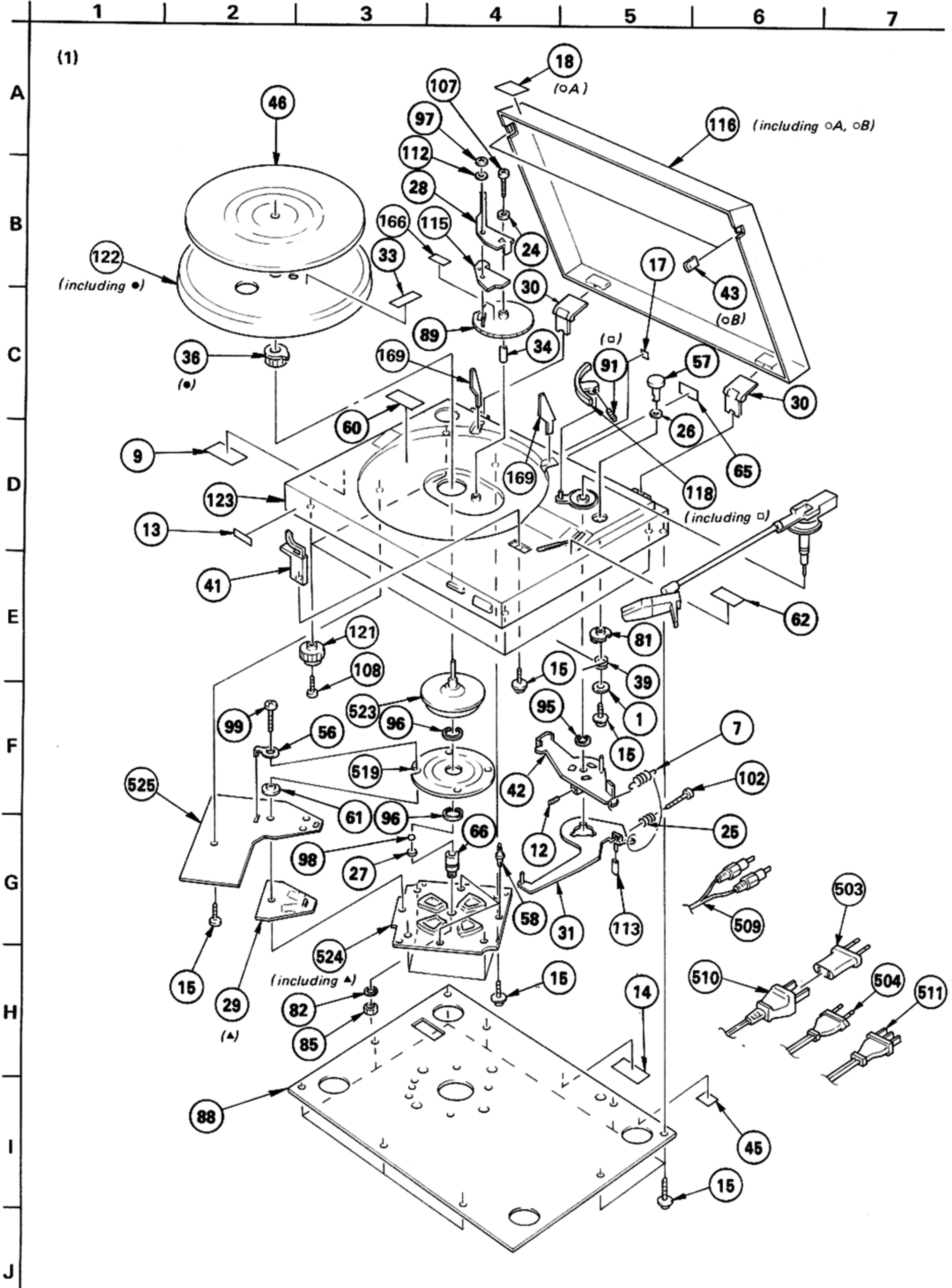
- All capacitors are in μF unless otherwise noted. pF : μF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, $\frac{1}{6}$ W unless otherwise noted. k Ω : 1000 Ω , M Ω : 1000 k Ω
- : panel designation.
- : adjustment for repair.

Semiconductor Lead Layouts



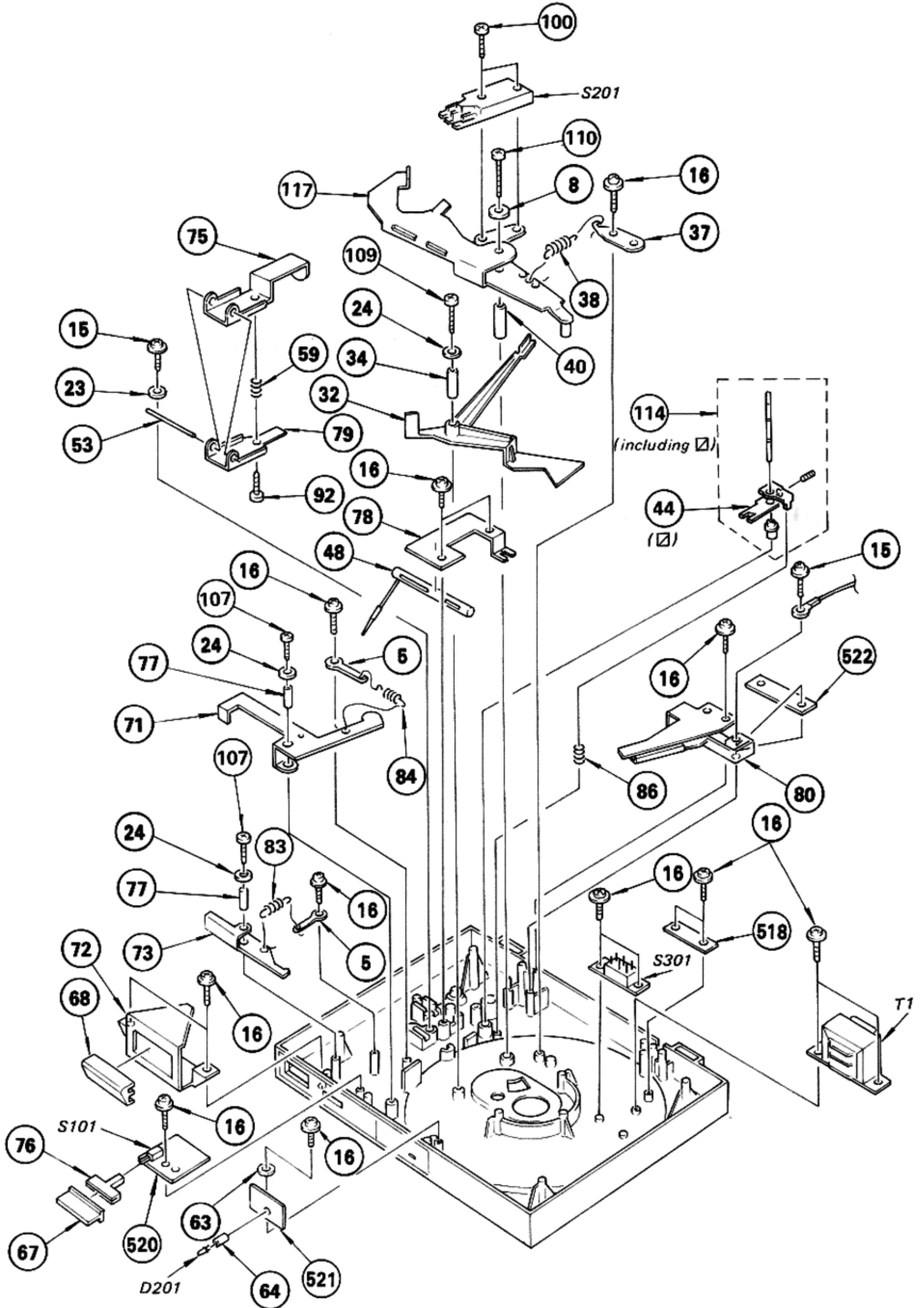
- Note:** Checking BSL Motor Block.
- Connect point **(B)** on schematic diagram to ground.
 - Apply +1 V DC to point **(A)** on schematic diagram.
 - BSL motor is normal if it rotates when power is turned on. (For connection on PC board, see step 2, 3 in Gain/Offset adjustment on page 18.)

SECTION 5 EXPLODED VIEWS AND PARTS LIST



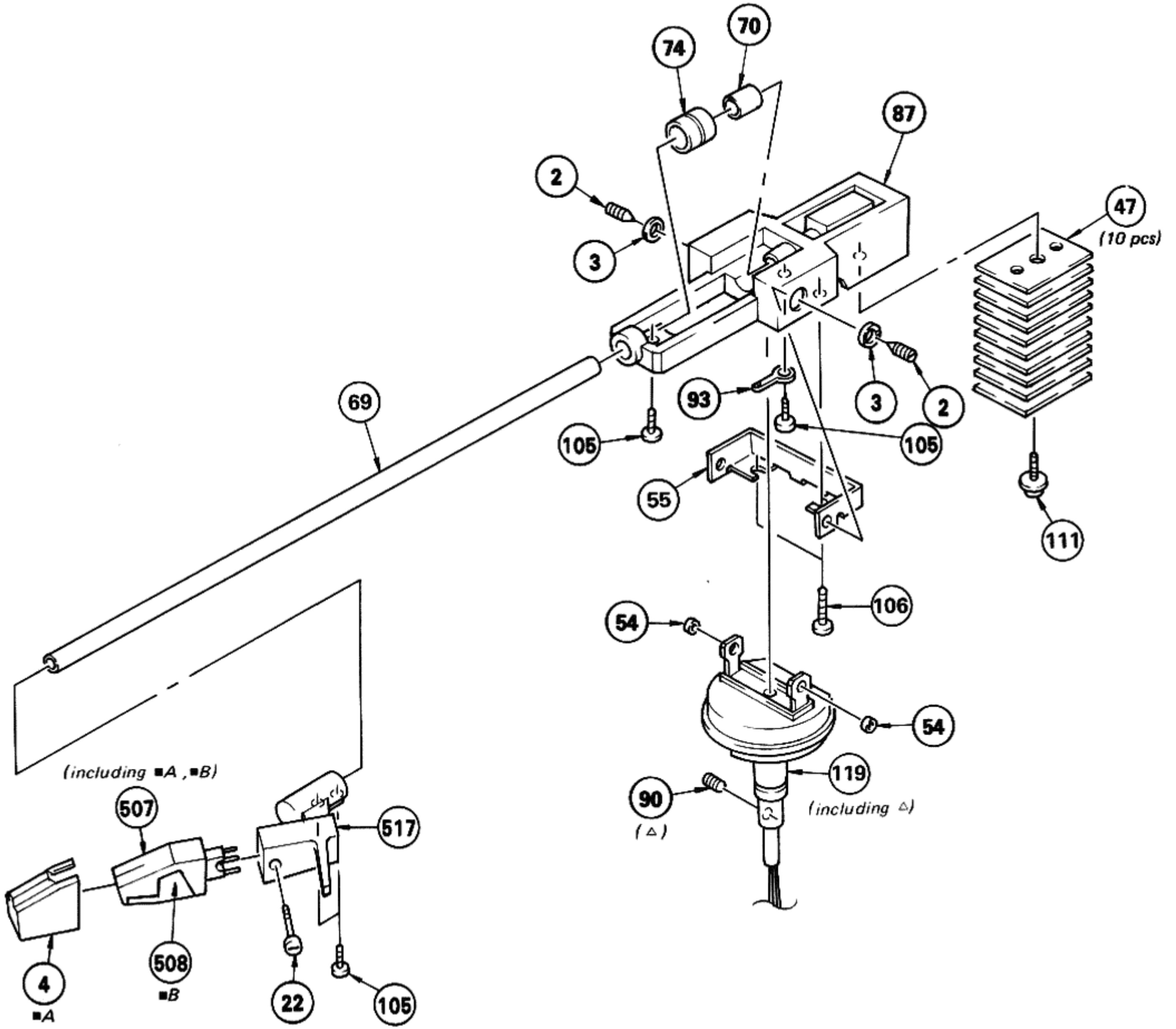
(2)

A
B
C
D
E
F
G
H
I
J



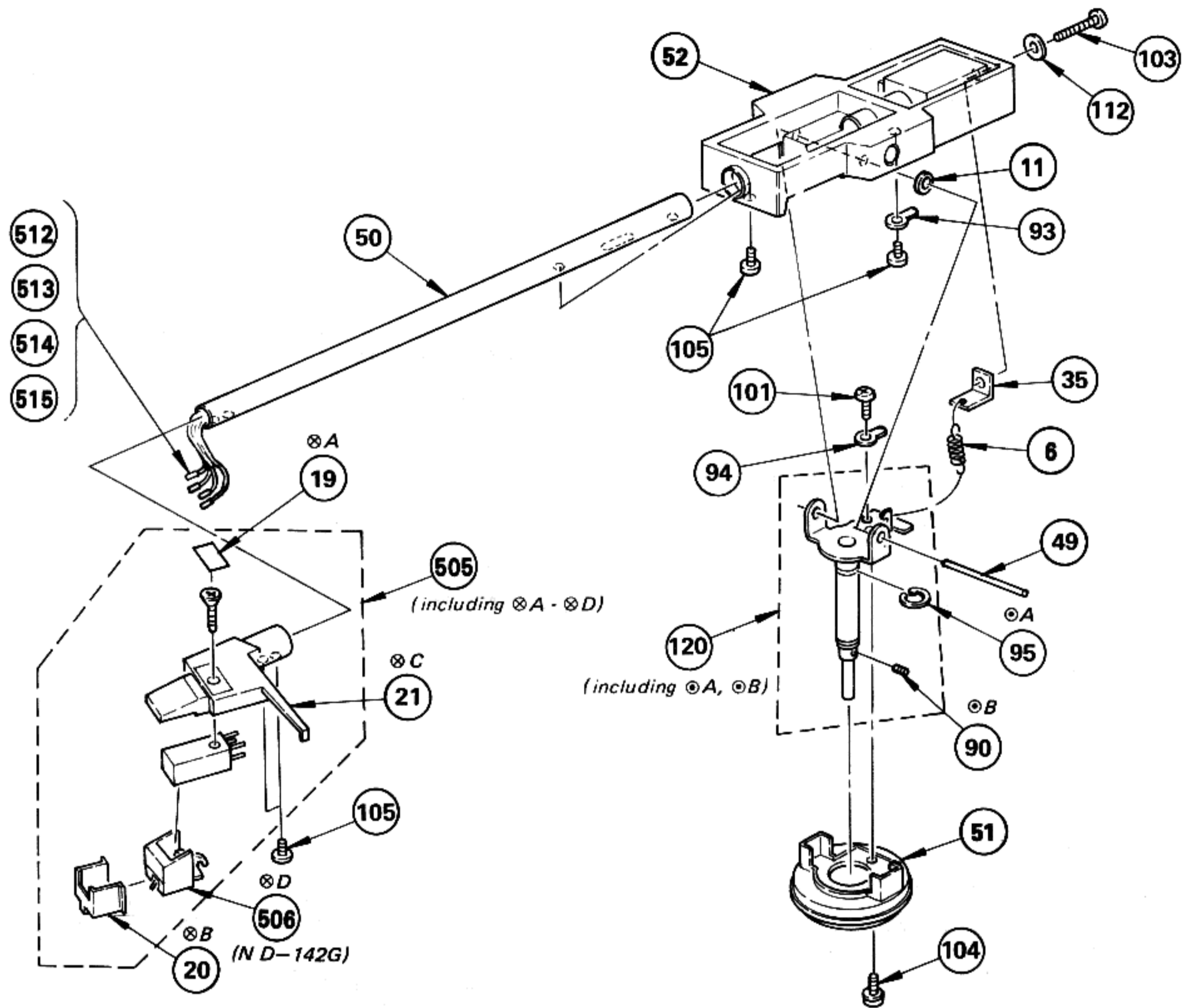
(3) PS-LX310/310(C)

A
B
C
D
E
F
G
H



(4) PS-LX311

A
B
C
D
E
F
G



GENERAL SECTION

| No. | Part No. | Description |
|-----|--------------|---|
| 1 | 0-056-028-00 | WASHER, PLAIN, 14 DIA |
| 2 | 2-203-518-61 | SCREW, PIVOT |
| 3 | 2-203-519-00 | NUT (A), LOCK, PIVOT |
| 4 | 2-331-824-01 | PROTECTOR (XL-250G) |
| 4 | 4-903-347-01 | PROTECTOR (VL-45G) |
| 5 | 3-460-077-00 | CLAMP, WIRE |
| 6 | 3-465-159-XX | SPRING, TENSION |
| 7 | 3-536-780-00 | SPRING, TENSION |
| 8 | 3-610-931-11 | SPACER, SHAFT, DRUM, HEAD |
| 9 | 3-701-030-00 | LABEL, SERIAL NUMBER |
| 10 | | |
| 11 | 3-701-437-01 | WASHER |
| 12 | 3-701-508-00 | SET SCREW, DOUBLE POINT 3X6 |
| 13 | 3-701-690-00 | (LX310;UK)...LABEL (MADE IN JAPAN) |
| 14 | 3-703-043-21 | (LX310;UK)...LABEL, CAUTION, MAIN |
| 14 | 3-703-845-01 | (LX310; US, LX310(C)) ...LABEL (N), MAIN CAUTION |
| 15 | 3-703-136-00 | SCREW, TAPPING |
| 16 | 3-703-137-00 | SCREW, TAPPING |
| 17 | 9-910-999-33 | (LX310;US)...LABEL, IDENTIFICATION |
| 18 | 3-703-705-01 | STICKER, SONY SYMBOL (30) |
| 19 | 3-706-612-00 | LABEL, CARTRIDGE |
| 20 | 3-706-613-00 | PROTECTOR (VL-42G) |
| 21 | 3-706-614-00 | SHELL |
| 22 | 3-706-937-01 | SCREW, SET, CARTRIDGE |
| 23 | 4-301-647-00 | WASHER, SPECIAL |
| 24 | 4-812-554-00 | WASHER |
| 25 | 4-836-836-00 | SPRING, COMPRESSION |
| 26 | 4-844-041-00 | WASHER, (N) |
| 27 | 4-852-007-00 | RETAINER (A), THRUST |
| 28 | 4-852-013-05 | CLUTCH (A) |
| 29 | 4-857-642-00 | HOLDER, PC BOARD |
| 30 | 4-857-653-00 | HINGE, DUST COVER |
| 31 | 4-858-234-00 | LEVER, RETURN |
| 32 | 4-858-240-00 | LEVER (M), CLUTCH |
| 33 | 4-858-264-21 | LABEL, CAUTION |
| 34 | 4-861-933-00 | SLEEVE (D) |
| 35 | 4-868-016-00 | HOOK, SPRING |
| 36 | 4-868-052-00 | GEAR, CENTER |
| 37 | 4-870-752-00 | HOLDER, SPRING |
| 38 | 4-870-785-00 | SPRING, TENSION (MAIN LEVER) |
| 39 | 4-874-250-00 | SPRING |
| 40 | 4-875-207-00 | SLEEVE |
| 41 | 4-875-208-00 | (SILVER)...REST, ARM |
| 41 | 4-875-208-31 | (BLACK)...REST, ARM |

GENERAL SECTION

| No. | Part No. | Description |
|-----|--------------|--|
| 42 | 4-875-214-00 | LEVER, SWITCH |
| 43 | 4-876-304-00 | CUSHION, DUST COVER |
| 44 | 4-876-317-00 | GUIDE, LIFTER |
| 45 | 4-876-344-00 | (LX310;AEP,G-AEP,LX311;AEP)..... LABEL, CAUTION, POWER CORD |
| 46 | 4-877-807-11 | SHEET, TURNTABLE |
| 47 | 4-877-810-00 | WEIGHT |
| 48 | 4-877-824-00 | CAM, LIFTER |
| 49 | 4-880-619-00 | PIN, HORIZONTAL |
| 50 | 4-880-623-00 | PIPE, ARM |
| 51 | 4-880-631-00 | JOINT, CENTER |
| 52 | 4-880-635-00 | JOINT, PIPE |
| 53 | 4-881-611-00 | SHAFT, LEVER, LIFTER |
| 54 | 4-881-618-00 | BEARING, PIVOT |
| 55 | 4-881-628-00 | REINFORCEMENT (A) |
| 56 | 4-881-629-00 | PLATE (A), GROUND |
| 57 | 4-881-633-00 | (LX311)...KNOB (I), IFC |
| 57 | 4-903-333-01 | (LX310, LX310(C))....KNOB, IFC |
| 58 | 4-881-636-11 | SUPPORT (TMD), PC |
| 59 | 4-881-642-00 | SPRING, COMPRESSION |
| 60 | 4-881-683-00 | (LX311;E)...LABEL, VOLTAGE |
| 61 | 4-885-727-00 | SPACER |
| 62 | 4-885-792-00 | PLUG IN SEAL (A) |
| 63 | 4-890-173-00 | WASHER |
| 64 | 4-901-657-00 | SPACER (A), LED |
| 65 | 4-903-301-01 | (LX310;AEP).....LABEL, MODEL NUMBER |
| 65 | 4-903-302-01 | (LX310; US, LX310(C)) ...LABEL, MODEL NUMBER |
| 65 | 4-903-340-01 | (LX310;UK).....LABEL, MODEL NUMBER |
| 65 | 4-903-341-01 | (LX311;AEP).....LABEL, MODEL NUMBER |
| 65 | 4-903-342-01 | (LX311;E).....LABEL, MODEL NUMBER |
| 65 | 4-903-343-01 | (LX310;G-AEP)...LABEL, MODEL NUMBER |
| 66 | 4-903-304-01 | BEARING |
| 67 | 4-903-305-01 | (SILVER)...KNOB (SRS), T MOLD |
| 67 | 4-903-305-11 | (BLACK)...KNOB (SRS), T MOLD |
| 68 | 4-903-306-01 | (SILVER)...KNOB (SR), T MOLD |
| 68 | 4-903-306-11 | (BLACK)...KNOB (SR), T MOLD |
| 69 | 4-903-307-01 | PIPE, ARM |
| 70 | 4-903-308-01 | SHEET (S) |
| 71 | 4-903-309-01 | LEVER, CLUTCH |
| 72 | 4-903-310-01 | HOLDER, REJECT |
| 73 | 4-903-311-01 | LEVER (A), REJECT |
| 74 | 4-903-312-01 | WEIGHT, SUB |
| 75 | 4-903-317-01 | LEVER (F), LIFTER |
| 76 | 4-903-318-01 | JOINT, KNOB |
| 77 | 4-903-319-01 | SLEEVE (R) |

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MF:μF, PF:μμF.

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- All resistors are in ohms.
- F : nonflammable

COILS

MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:
 UA... : μA..., UPA... : μPA..., UPC... : μPC,
 UPD... : μPD...

GENERAL SECTION

| No. | Part No. | Description |
|-----|--------------|---|
| 78 | 4-903-320-01 | RETAINER (D), LIFTER |
| 79 | 4-903-321-01 | LEVER (G), LIFTER |
| 80 | 4-903-322-01 | PLATE, SHIELD |
| 81 | 4-903-323-01 | CAM, IFC |
| 82 | 4-903-324-01 | PACKING (TMD) |
| 83 | 4-903-325-01 | SPRING (REJECT), TENSION |
| 84 | 4-903-329-01 | SPRING (CLUTCH), TENSION |
| 85 | 4-903-330-01 | NUT (TMD), BEARING |
| 86 | 4-903-331-01 | SPRING (LIFTER), COMPRESSION |
| 87 | 4-903-336-01 | JOINT, PIPE |
| 88 | 4-903-338-01 | BOARD, BOTTOM |
| 89 | 4-903-339-01 | GEAR, DRIVE |
| 90 | 7-621-712-26 | SET-SCREW, SLOT 2.6X3 CUP POINT |
| 91 | 7-621-738-08 | SET-SCT, HEX. 2.6X4, FLAT POINT |
| 92 | 7-621-775-50 | SCREW +B 2.6X10 |
| 93 | 7-623-505-01 | LUG, 2 |
| 94 | 7-623-508-01 | LUG, 3 |
| 95 | 7-624-133-54 | STOP RING 10, TYPE-CE |
| 96 | 7-624-133-94 | STOP RING 15, TYPE-CE |
| 97 | 7-624-190-81 | STOP RING 2, TYPE-CS |
| 98 | 7-671-156-01 | BALL, STENLESS |
| 99 | 7-682-149-13 | SCREW +P 3X10 |
| 100 | 7-682-150-01 | SCREW +P 3X12 |
| 101 | 7-682-545-04 | SCREW +B 3X4 |
| 102 | 7-682-553-09 | SCREW +B 3X20 |
| 103 | 7-682-555-04 | SCREW +B 3X30 |
| 104 | 7-682-647-01 | SCREW +PS 3X6 |
| 105 | 7-685-103-24 | SCREW +P 2X5 TYPE2 SLIT |
| 106 | 7-685-105-24 | SCREW +P 2X8 TYPE2 SLIT |
| 107 | 7-685-152-21 | SCREW +P 3X25 TYPE2 SLIT |
| 108 | 7-685-650-21 | SCREW +BVTP 3X16 TYPE2 SLIT |
| 109 | 7-685-665-01 | SCREW +BVTP 3X25 |
| 110 | 7-685-666-21 | SCREW +BVTP 4X30 TYPE2 SLIT |
| 111 | 7-687-234-21 | SCREW, TOTSU PTPWH 2.6X8, TYPE2 |
| 112 | 7-688-003-11 | W 3, MIDDLE |
| 113 | 9-911-815-01 | CUSHION |
| 114 | A-4637-063-A | (LX310, LX310(C))...ROD ASSY (P), PUSH |
| 114 | A-4637-067-A | (LX311)...ROD ASSY (I), PUSH |
| 115 | X-4852-007-2 | CLUTCH (B) ASSY |
| 116 | X-4877-804-0 | COVER ASSY, DUST |
| 117 | X-4877-805-6 | LEVER ASSY, MAIN |
| 118 | X-4880-501-0 | (LX311)...PLATE ASSY, UP AND DOWN |
| 118 | X-4903-302-1 | (LX310, LX310(C))...PLATE ASSY, UP AND DOWN |

GENERAL SECTION

| No. | Part No. | Description |
|-----|--------------|--|
| 119 | X-4881-604-0 | JOINT ASSY, CENTER |
| 120 | X-4881-605-1 | SHAFT ASSY, ROTARY |
| 121 | X-4903-301-1 | INSULATOR ASSY |
| 122 | X-4903-303-1 | TABLE ASSY, TURN |
| 123 | X-4903-304-1 | (LX310, LX310(C); SILVER)...FLAME ASSY |
| 123 | X-4903-305-1 | (LX310, LX310(C); BLACK)...FLAME ASSY |
| 123 | X-4903-306-1 | (LX311; SILVER)...FLAME ASSY |
| 123 | X-4903-307-1 | (LX311; BLACK)...FLAME ASSY |

| ACCESSORY & PACKING MATERIAL | | |
|------------------------------|--------------|---|
| No. | Part No. | Description |
| 161 | 3-701-616-00 | (LX310;US)...BAG, POLYETHYLENE |
| 162 | 3-701-630-00 | BAG, POLYETHYLENE |
| 163 | 3-701-634-00 | BAG, POLYETHYLENE |
| 164 | 3-701-806-00 | ADAPTOR, 45, (E) |
| 165 | 3-773-849-11 | (LX310;AEP;UK).....MANUAL, INSTRUCTION |
| 165 | 3-773-849-21 | (LX310;US,Canadian)...MANUAL, INSTRUCTION |
| 165 | 3-773-849-31 | (LX310;Canadian).....MANUAL, INSTRUCTION |
| 165 | 3-773-849-41 | (LX310;AEP,G-AEP).....MANUAL, INSTRUCTION |
| 165 | 3-773-850-11 | (LX311;AEP,E).....MANUAL, INSTRUCTION |
| 165 | 3-773-850-41 | (LX311;AEP).....MANUAL, INSTRUCTION |
| 166 | 3-794-123-11 | LABEL, CAUTION |
| 167 | 3-795-753-21 | (LX310;US)...INSTRUCTION |
| 168 | 4-858-078-00 | SHEET, PROTECTION |
| 169 | 4-874-262-00 | GUIDE, RECORD |
| 170 | 4-903-344-01 | (LX310) INDIVIDUAL CARTON |
| 171 | 4-903-404-01 | CUSHION (LEFT), UPPER |
| 172 | 4-903-405-01 | CUSHION (RIGHT), UPPER |
| 173 | 4-903-406-01 | CUSHION (LEFT), LOWER |
| 174 | 4-903-407-01 | CUSHION (RIGHT), LOWER |
| 175 | 4-903-427-01 | HOLDER, TURNTABLE |
| 176 | 4-903-345-01 | (LX310(C)).....INDIVIDUAL CARTON |
| 177 | 4-903-346-01 | (LX311).....INDIVIDUAL CARTON |
| 178 | 4-903-348-01 | HOLDER, ARM |
| 179 | 4-903-423-01 | ORPECTOR |

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CAPACITORS:

MF:μF, PF:μμF.

RESISTORS

- All resistors are in ohms.
- F : nonflammable

COILS

MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:
 UA...: μA..., UPA...: μPA..., UPC...: μPC,
 UPD...: μPD...

ELECTRICAL PARTS

| Ref.No. | Part No. | Description |
|---------|----------------|---|
| 501 | •;1-508-799-00 | BASE POST (U TYPE) |
| 502 | •;1-508-800-13 | U TYPE BASE POST 3P |
| 503 | 1-526-565-00 | (LX311;E)...AC PLUG ADAPTOR |
| 504 | △;1-534-817-XX | (LX310;AEP,G-AEP,LX311;AEP)...CORD, POWER, EULO PLUG |
| 505 | 1-549-109-00 | (LX311)...CARTRIGE (WITH SHELL)(VL-42G) |
| 506 | 1-549-112-00 | STYLUS (ND-142G) |
| 507 | 1-549-117-00 | (LX310;Canadian)...CARTRIDGE (VL-45G) |
| 507 | A-4505-089-C | (LX310;AEP,G-AEP,UK)...CARTRIDGE COMPLETE ASSY (XL-250G) |
| 508 | 1-549-118-00 | (PS-LX310;Canadian)...STYLUS (ND-145G) |
| 508 | A-4587-071-B | (PS-LX310;AEP,G-AEP,UK)...STYLUS ASSY (ND250G) |
| 509 | 1-551-294-00 | CORD |
| 510 | △;1-551-472-00 | (LX311;E).....CORD, POWER |
| 510 | △;1-551-628-00 | (LX310;US,Canadian)...CORD, POWER |
| 511 | △;1-556-562-00 | (LX310;UK).....CORD, POWER |
| 512 | 1-556-044-11 | LEAD (WITH TERMINAL)(RED) |
| 513 | 1-556-044-21 | LEAD (WITH TERMINAL)(GRN) |
| 514 | 1-556-044-31 | LEAD (WITH TERMINAL)(BLU) |
| 515 | 1-556-044-41 | LEAD (WITH TERMINAL)(WHT) |
| 516 | •;1-560-200-00 | BASE POST, MCD CONNECTOR 2P |
| 517 | 1-562-517-11 | CONNECTOR (WITH HEAD SHELL) 4P |
| 518 | •;1-608-536-00 | PC BOARD, PRIMARY TRANSLATION |
| 519 | •;1-608-883-00 | PC BOARD, FG |
| 520 | •;1-612-351-11 | PC BOARD, SWITCH |
| 521 | •;1-612-352-11 | PC BOARD, LED |
| 522 | •;1-612-353-11 | PC BOARD, PHONO |
| 523 | A-4608-277-A | ROTOR ASSY |
| 524 | A-4608-278-A | STATOR ASSY |
| 525 | •;A-4619-235-A | MOUNTED PCB, AMPLIFIER, SERVO |
| C101 | 1-161-494-00 | CERAMIC 0.022MF 30% 25V |
| C102 | 1-123-318-00 | ELECT 33MF 20% 6.3V |
| C103 | 1-130-169-00 | FILM 0.22MF 5% 50V |
| C104 | 1-162-110-00 | CERAMIC 0.001MF 10% 50V |
| C105 | 1-162-113-00 | CERAMIC 0.01MF 30% 16V |
| C106 | 1-162-052-00 | CERAMIC 22PF 5% 50V |
| C107 | 1-162-052-00 | CERAMIC 22PF 5% 50V |
| C108 | 1-123-369-00 | ELECT 4.7MF 20% 25V |
| C109 | 1-130-627-00 | FILM 0.039MF 5% 50V |
| C110 | 1-130-629-00 | FILM 0.056MF 5% 50V |
| C111 | 1-162-113-00 | CERAMIC 0.01MF 30% 16V |
| C112 | 1-162-113-00 | CERAMIC 0.01MF 30% 16V |
| C113 | 1-161-494-00 | CERAMIC 0.022MF 30% 25V |
| C114 | 1-161-494-00 | CERAMIC 0.022MF 30% 25V |
| C117 | 1-123-356-00 | ELECT 10MF 20% 16V |

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COILS

MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:
 UA.... : μA...., UPA.... : μPA...., UPC.... : μPC,
 UPD.... : μPD....

ELECTRICAL PARTS

| Ref.No. | Part No. | Description |
|---------|----------------|----------------------|
| C118 | 1-123-333-00 | ELECT 100MF 20% 16V |
| C119 | △;1-123-324-00 | ELECT 1000MF 20% 16V |
| C120 | △;1-123-324-00 | ELECT 1000MF 20% 16V |
| C121 | 1-123-333-00 | ELECT 100MF 20% 16V |
| C122 | 1-123-356-00 | ELECT 10MF 20% 16V |
| D101 | △;8-719-200-02 | DIODE 10E-2 |
| D102 | △;8-719-200-02 | DIODE 10E-2 |
| D103 | △;8-719-200-02 | DIODE 10E-2 |
| D104 | △;8-719-200-02 | DIODE 10E-2 |
| D105 | 8-719-911-19 | DIODE 1SS119 |
| D106 | 8-719-910-71 | DIODE HZ7A1L |
| D201 | 8-719-907-36 | DIODE GL-5EG22 |
| H1 | 8-719-800-17 | DIODE THS102A |
| H2 | 8-719-800-17 | DIODE THS102A |
| IC101 | 8-759-600-02 | IC M5218L |
| IC102 | 8-759-201-58 | IC TC9142P |
| IC103 | 8-759-600-02 | IC M5218L |
| IC104 | 8-759-600-02 | IC M5218L |
| Q101 | 8-729-900-85 | TRANSISTOR DTC144WS |
| Q102 | 8-729-900-74 | TRANSISTOR DTC143TS |
| Q103 | 8-729-177-43 | TRANSISTOR 2SD774 |
| Q104 | 8-729-374-02 | TRANSISTOR 2SB740 |
| Q105 | 8-729-177-43 | TRANSISTOR 2SD774 |
| Q106 | 8-729-374-02 | TRANSISTOR 2SB740 |
| Q107 | 8-729-800-34 | TRANSISTOR 2SC3070 |
| R101 | 1-247-807-00 | CARBON 100 5% 1/6W |
| R102 | 1-247-887-00 | CARBON 220K 5% 1/6W |
| R103 | 1-247-859-00 | CARBON 15K 5% 1/6W |
| R104 | 1-247-859-00 | CARBON 15K 5% 1/6W |
| R105 | 1-247-897-00 | CARBON 560K 5% 1/6W |
| R106 | 1-247-855-00 | CARBON 10K 5% 1/6W |
| R107 | 1-247-855-00 | CARBON 10K 5% 1/6W |
| R108 | 1-247-819-00 | CARBON 330 5% 1/6W |
| R109 | 1-247-889-00 | CARBON 270K 5% 1/6W |
| R110 | 1-247-889-00 | CARBON 270K 5% 1/6W |
| R111 | 1-247-884-00 | CARBON 160K 5% 1/6W |
| R112 | 1-247-892-00 | CARBON 360K 5% 1/6W |
| R113 | 1-247-892-00 | CARBON 360K 5% 1/6W |
| R114 | 1-247-882-00 | CARBON 130K 5% 1/6W |
| R115 | 1-247-891-00 | CARBON 330K 5% 1/6W |
| R116 | 1-247-839-00 | CARBON 2.2K 5% 1/6W |
| R117 | 1-247-839-00 | CARBON 2.2K 5% 1/6W |
| R118 | 1-247-839-00 | CARBON 2.2K 5% 1/6W |
| R119 | 1-247-839-00 | CARBON 2.2K 5% 1/6W |
| R120 | 1-202-459-00 | SOLID 1.5M 5% 1/4W |
| R121 | 1-202-459-00 | SOLID 1.5M 5% 1/4W |

The components identified by shading and mark △ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

ELECTRICAL PARTS

| <u>Ref.No.</u> | <u>Part No.</u> | <u>Description</u> |
|----------------|-----------------|---|
| R122 | 1-247-887-00 | CARBON 220K 5% 1/6W |
| R123 | 1-247-887-00 | CARBON 220K 5% 1/6W |
| R124 | 1-247-887-00 | CARBON 220K 5% 1/6W |
| R125 | 1-247-887-00 | CARBON 220K 5% 1/6W |
| R126 | 1-247-806-00 | CARBON 91 5% 1/6W |
| R128 | 1-247-806-00 | CARBON 91 5% 1/6W |
| R130 | 1-247-819-00 | CARBON 330 5% 1/6W |
| R131 | 1-247-819-00 | CARBON 330 5% 1/6W |
| R132 | 1-247-831-00 | CARBON 1K 5% 1/6W |
| R133 | 1-247-842-00 | CARBON 3K 5% 1/6W |
| S101 | 1-516-657-00 | SWITCH, MICRO |
| S201 | 1-553-331-21 | SWITCH, PUSH (SPEED) |
| S301 | ▲.1-552-535-00 | (LX311;E)...SWITCH, POWER & VOLTAGE CHANGE |
| RV101 | 1-226-234-00 | RES, ADJ, CARBON 2K |
| RV102 | 1-226-234-00 | RES, ADJ, CARBON 2K |
| RV103 | 1-226-239-00 | RES, ADJ, CARBON 100K |
| RV104 | 1-226-239-00 | RES, ADJ, CARBON 100K |
| T1 | ▲.1-447-256-00 | (LX310;UC,Canadian)..TRANSFORMER, POWER |
| T1 | ▲.1-447-257-00 | (LX310;AEP,G-AEP,UK,LX311;AEP) ...TRANSFORMER, POWER |
| T1 | ▲.1-447-691-00 | (LX311;E)...TRANSFORMER, POWER |
| X101 | 1-567-259-11 | VIBRATOR, CRYSTAL |

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MMH : mH, UH : μH

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UA...: μA..., UPA...: μPA..., UPC...: μPC,
UPD...: μPD...

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Sony Corporation

9-951-386-11

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