



MC-50



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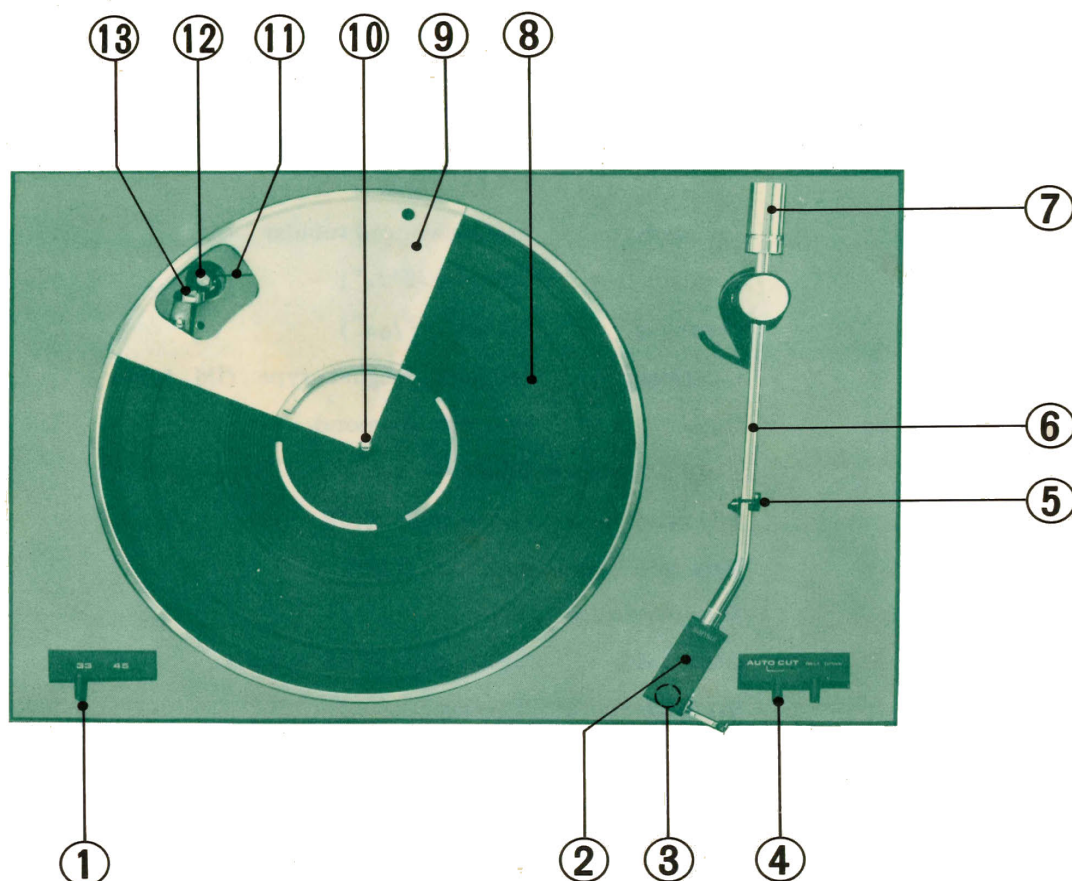
# 1. SPECIFICATION

Type:	2-speed, belt-driven turntable with Auto Return
Rated Speeds:	33 <sup>1</sup> / <sub>3</sub> , 45 rpm
Motor:	4-pole synchronous
Turntable (Platter):	Aluminum alloy die-cast, 301 mm (11 <sup>13</sup> / <sub>16</sub> " ) $\phi$ , 1.0 kg (2.2 lbs)
Tonearm:	Static-balanced tubular
Arm length:	235 mm (9 <sup>1</sup> / <sub>4</sub> " )
Overhang:	10 mm (2 <sup>5</sup> / <sub>64</sub> " )
Cartridge:	Induced magnet type (IM type)
Stylus:	0.7 mil diamond
Load impedance:	50 k $\Omega$
S/N ratio:	Better than 30 dB
Wow and Flutter:	Less than 0.18%
Output voltage:	5 mV
Crosstalk:	Better than 16 dB at 1 kHz
Stylus pressure:	3 grams

※ Manufacturer reserves a right to change design and/or specifications without notice for purpose of improvement.



## 2. CONTROLS, INDICATORS AND OTHERS



- |   |                       |   |                      |   |                   |
|---|-----------------------|---|----------------------|---|-------------------|
| ① | Speed selector switch | ⑥ | Tonearm              | ⑩ | Turntable spindle |
| ② | Shell                 | ⑦ | Main weight          | ⑪ | Belt              |
| ③ | Cartridge (Stylus)    | ⑧ | Turntable rubber mat | ⑫ | Capstan           |
| ④ | Auto Cut lever        | ⑨ | Turntable (Platter)  | ⑬ | Belt guide        |
| ⑤ | Arm rest              |   |                      |   |                   |



## 3. MAINTENANCE

### 3-1. Changing the capstan

The MC-50's power source frequency has been properly adjusted for the area. If the turntable is brought to the country or area where electrical cycles change from 50 to 60 Hz or vice versa, an adjustment in the turntable speed is necessary as follows.

1. Remove the turntable (platter) and belt.
2. Loosen the setscrew of the capstan and pull the capstan up.
3. Attach a proper capstan (the thicker one is for 50 Hz).
4. Adjust the height of the capstan so that the belt moves smoothly while changing the turntable speed from  $33\frac{1}{3}$  to 45 rpm or vice versa, then tighten the setscrew of the capstan securely.

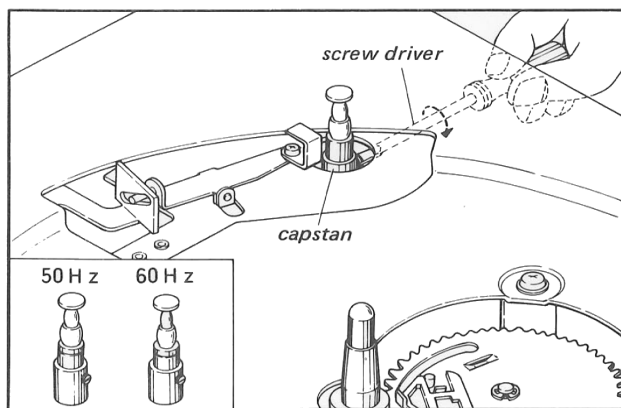


Fig. 3-1

### 3-2. Oiling

Although the need for oiling depends on usage, oiling should be performed once a year (every 1,000 hours of operation).

#### 1. Motor

Remove the turntable (platter) and apply a few drops of oil. Use only the oil attached with the turntable. Be careful that the oil does not stain the belt or the capstan.

#### 2. Turntable spindle

Loosen the setscrew of the turntable spindle, pull the spindle up and apply a few drops of oil.

#### 3. Gear ass'y

Apply a few drops of oil in the oil orifice of the gear ass'y.

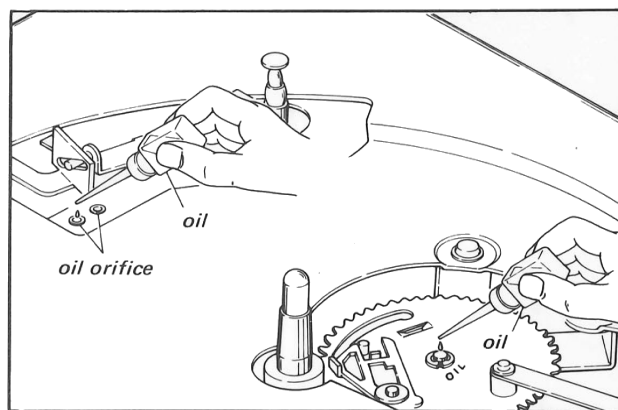


Fig. 3-3

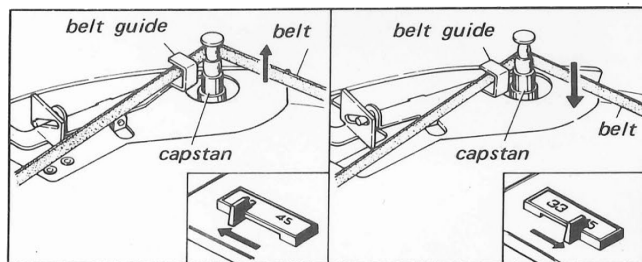


Fig. 3-2

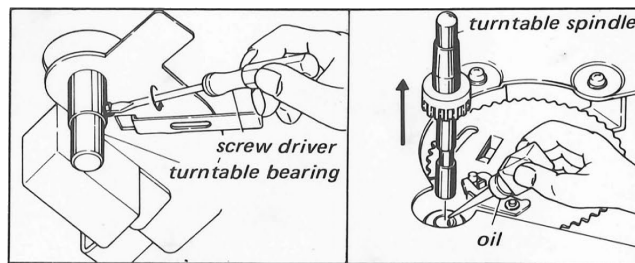


Fig. 3-4

## 4. ADJUSTMENT

### 4-1. Adjusting the Auto mechanism

#### 1. Improper timing of the Auto Lift mechanism.

- 1) Adjust the adjusting screw "A" so that the Auto Lift device operates as soon as the stylus reaches the finishing groove as Fig.4-1.
- 2) To turn the adjusting screw "A" clockwise is for leading and counterclockwise is for lagging.
- 3) After adjustment properly, check its operation a few times.
- 4) Apply the locking paint in place to the screw after adjustment.

#### 2. Improper timing of the Auto Return mechanism.

- 1) Adjust the adjusting screw "B" so that the tonearm starts returning as soon as the arm lifter raises completely as Fig. 4-1.
- 2) To turn the adjusting screw "B" clockwise is for leading and counterclockwise is for lagging.
- 3) After adjustment properly, check its operation a few times.
- 4) Apply the locking paint in place to the screw after adjustment.

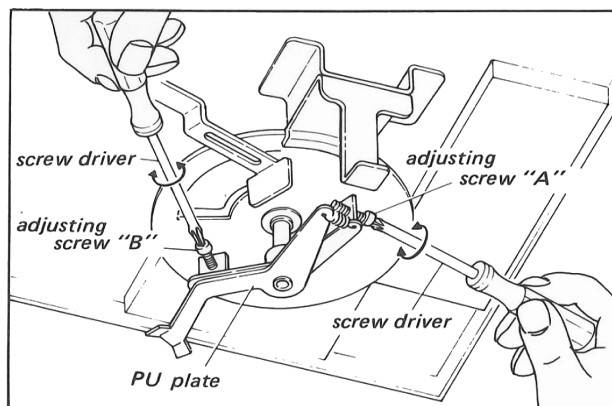
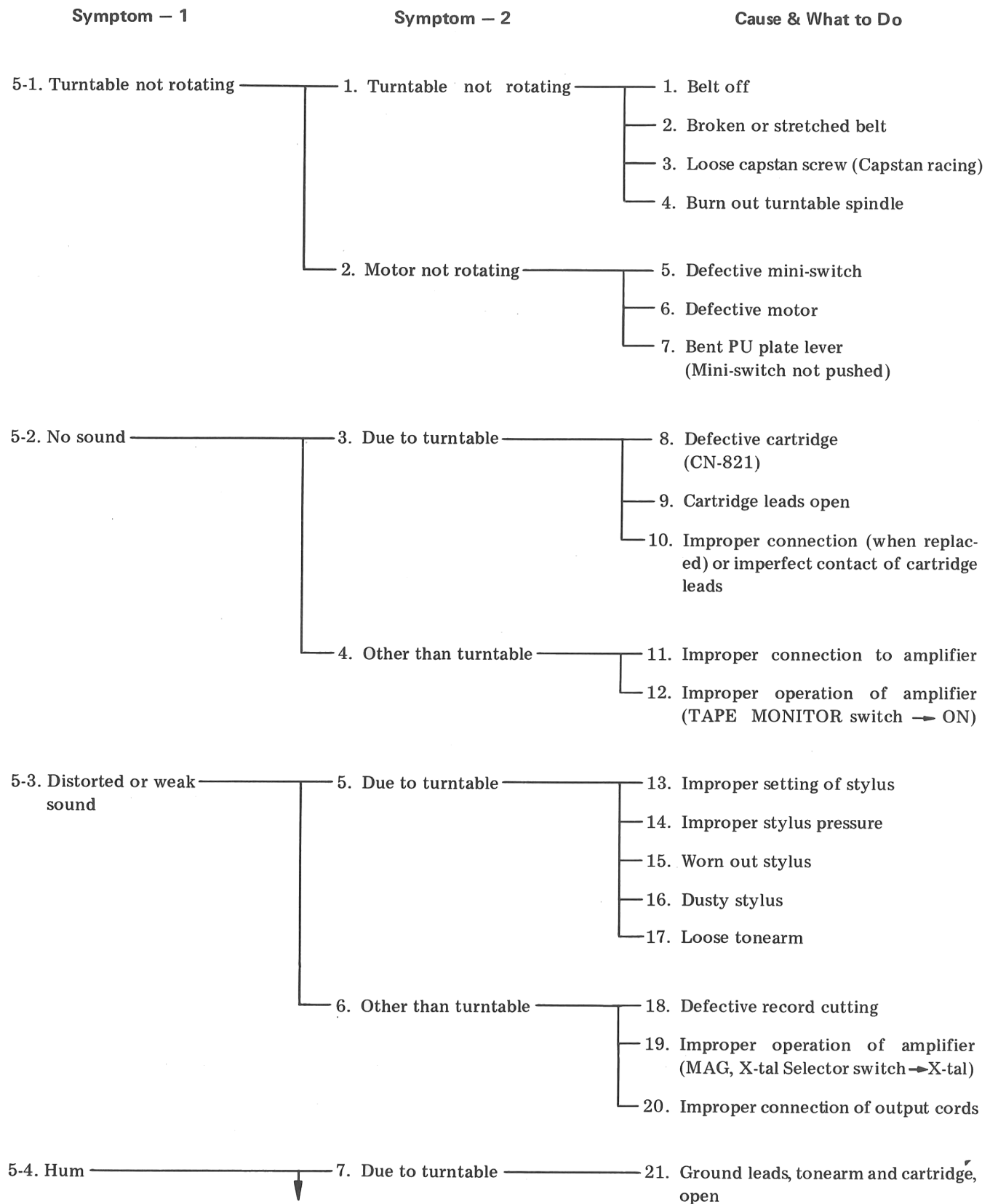


Fig. 4-1



## 5. TROUBLESHOOTING



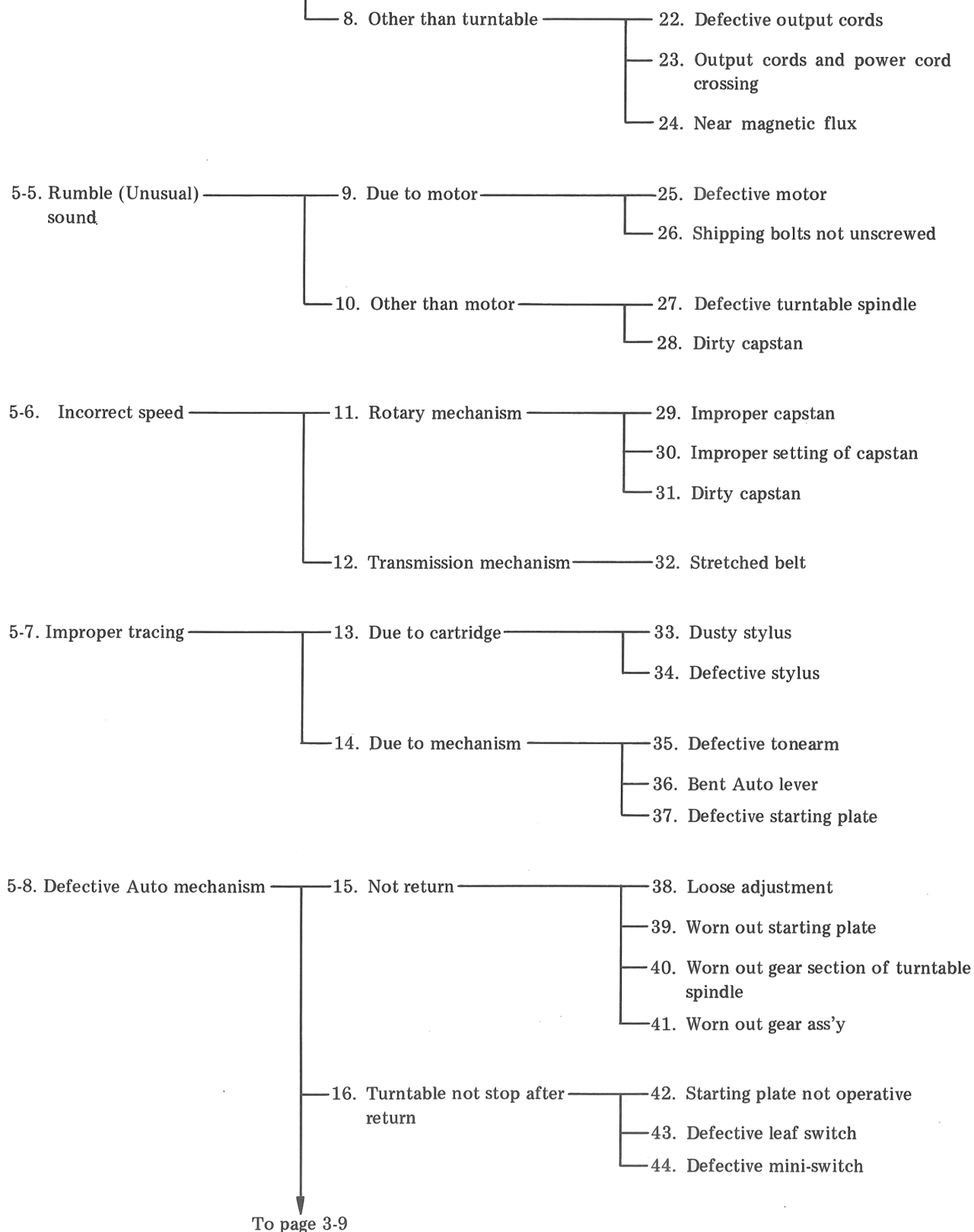
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**Symptom — 1**

**Symptom — 2**

**Cause & What to Do**

From page 3-7
















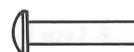

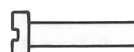




















**Symptom – 1****Symptom – 2****Cause & What to Do**

From page 3-8

- |                              |                                 |
|------------------------------|---------------------------------|
| └ 17. Auto cut not operative | └ 45. Defective cut lever ass'y |
|                              | └ 46. Bent auto lever           |

## 6. EXPLODED VIEW & PARTS LIST

### Hardware Nomenclature

	Name	Abbreviation	Type
SCREW	Pan Head Screw - - - - -	P	 
	Binding Head Screw - - - - -	B	 
	Round Head Screw - - - - -	R	 
	Flat Countersunk Head Screw - - - - -	F	 
	Oval Countersunk Head Screw - - - - -	O	 
	Truss Head Screw - - - - -	T	 
	Flat Fillister Screw - - - - -	FS	 
	Oval Countersunk Wood Screw - - - - -	OC	 
	Flat Countersunk Wood Screw - - - - -	FC	 
	Pan Head Tapping Screw - - - - -	PT	 
SETSCREW	Hex. Socket Setscrew - - - - -	S	 
	Slot Type Setscrew - - - - -	SS	 
WASHER	Retaining Ring (E washer) - - - - -	E	 
	Plane Washer - - - - -	P	 
	Spring Washer - - - - -	S	 
	Corrugated Washer - - - - -	C	 
	Toothed Lock Washer - - - - -	TL	 

### EXAMPLE

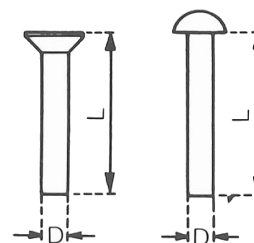
FS type Screw, M3 x 6 (BLK)

----- Color

----- Length in mm (L)

----- Diameter in mm (D)

----- Type & Name



All screws conform to ISO standards, unless otherwise noted.



## 6-1. Exploded view (1) and parts list (See Fig. 6-1)

※ Use the stock number for parts order. If the stock number is unknown, use the model's name, fig. number, parts number and parts name correctly.

Parts No.	Stock No.	Description	Parts No.	Stock No.	Description
1	5502100	Rubber Mat, turntable	49	5121340	P Type Washer, 3 x 1.1 x 0.7
2	6112030	Turntable	50	5022010	Case, leaf switch
3	6032030	Belt	51	5103041	P Type Screw, M3 x 4
4	5103043	P Type Screw, M3 x 6	52	5103041	P Type Screw, M3 x 4
5	5103043	P Type Screw, M3 x 6	53	5103041	P Type Screw, M3 x 4
6	5103047	P Type Screw, M3 x 14	54		Leaf Switch
7	5110341	Hex Nut, M3 x 5.5 x 2.4	55	5151002	E Type Ring, 2 φ
8	5103047	P Type Screw, M3 x 14	56	5151002	E Type Ring, 2 φ
9	5110341	Hex. Nut, M3 x 5.5 x 2.4	57		Steel Pole
10		Spring, PU Plate	58		Holder, leaf switch case
11		PU Plate Ass'y	59	5103041	P Type Screw, M3 x 4
12		E Type Ring, 8 φ		7032030	Turntable Spindle Ass'y
13		P Type Washer, 10 x 13 x 0.5	60		Spindle, turntable
14	5151004	E Type Ring, 3 φ	61		Hex. Nut, M10
15	5151004	E Type Ring, 3 φ	62		P Type Washer, 10 x 12 x 10
16		Crank Lever	63		Bearing, turntable
17	7052090	Disk Plate Ass'y	64	5103043	P Type Screw, M3 x 6
18		P Type Washer, 10 x 13 x 0.5	65	5120141	P Type Washer, 3 x 8 x 0.5
19	5103025	P Type Screw, M2.6 x 8	66	5103043	P Type Screw, M3 x 6
20	5121320	S Type Washer, 2.6 x 1.0 x 0.6	67	5120141	P Type Washer, 3 x 8 x 0.5
21		Control Spring	68	5103043	P Type Screw, M3 x 6
22	7082030	Guide, arm	69		TL Type Washer, M3
23		Lifter, arm	70	5103043	P Type Screw, M3 x 6
24	5103043	P Type Screw, M3 x 6	71	5120141	P Type Washer, 3 x 8 x 0.5
25	5103043	P Type Screw, M3 x 6	72	5242070	Bracket, gear mtg
26	5252030	PU Stand	73	5103004	P Type Screw, M2 x 6
	7092030	Tonearm Ass'y	74		P Type Washer, 2 x 8 x 1.5
27		SS Type Screw, M4 x 6	75		Spacer, auto lever
28	6912030	Main Weight	76	6502070	Auto Lever
29		Tonearm	77	5151004	E Type Ring, 3 φ
30		R Type Screw, 2 x 5	78	5110341	Hex. Nut, M3 x 5.5 x 2.4
31		Shell Ass'y	79		P Type Washer, 3 x 10 x 0.5
32	5103027	P Type Screw, M2.6 x 12	80	6622030	Arm Rest Ass'y
33	5103027	P Type Screw, M2.6 x 12	81	5103024	PT Type Screw, M2.6 x 6
34		Cover, stylus	82	6522010	Knob, auto cut
35	4940010	Stylus (SN-33)	83		Spring, auto cut
36	4310010	Cartridge (CN-821)	84	7052030	Fulcrum Plate Ass'y
37	6642030	Shell	85	6502030	Knob Lever
38	5151002	E Type Ring, 2 φ	86	6532010	Cut Lod
39	7052080	Starting Plate Ass'y	87	5502080	Rubber Bushing, cut lever
40	5151005	E Type Ring, 4 φ	88	5151004	E Type Ring, 3 φ
41	7062040	Gear Ass'y	89		Shaft, cut lever
42		Polyethylene Washer	90	5110341	Hex. Nut, M3 x 5.5 x 2.4
43		Setscrew, stopper	91	7052040	Cut Lever Ass'y
44	5110341	Hex. Nut, M3 x 5.5 x 2.4	92	5103024	P Type Screw, M2.6 x 6
45	5121340	S Type Washer, 3 x 1.1 x 0.7	93	5103024	P Type Screw, M2.6 x 6
46		Spring, stopper	94	7052050	Cut Base
47	6502060	Stopper			
48	5103043	P Type Screw, M3 x 6			

Fig. 6—1

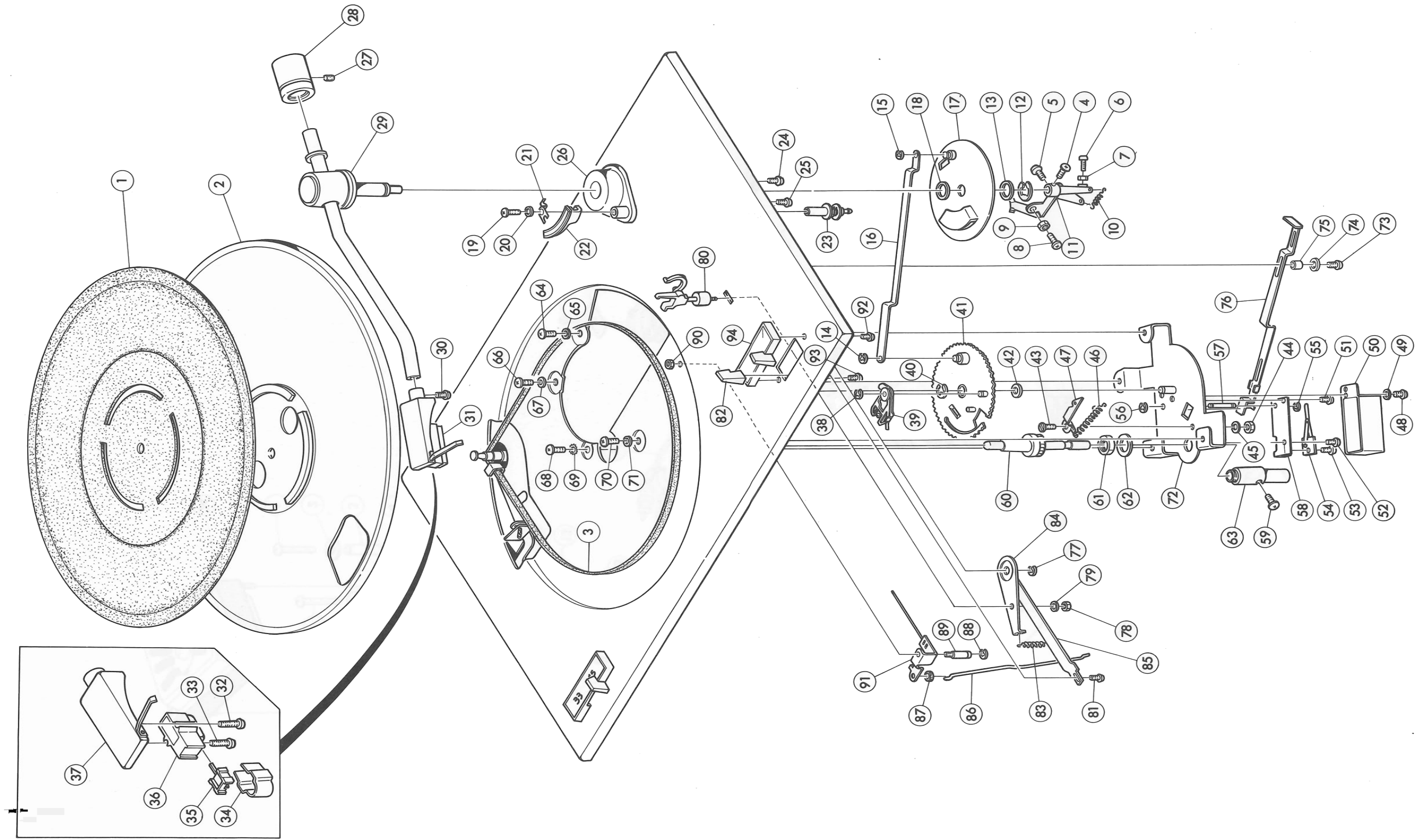
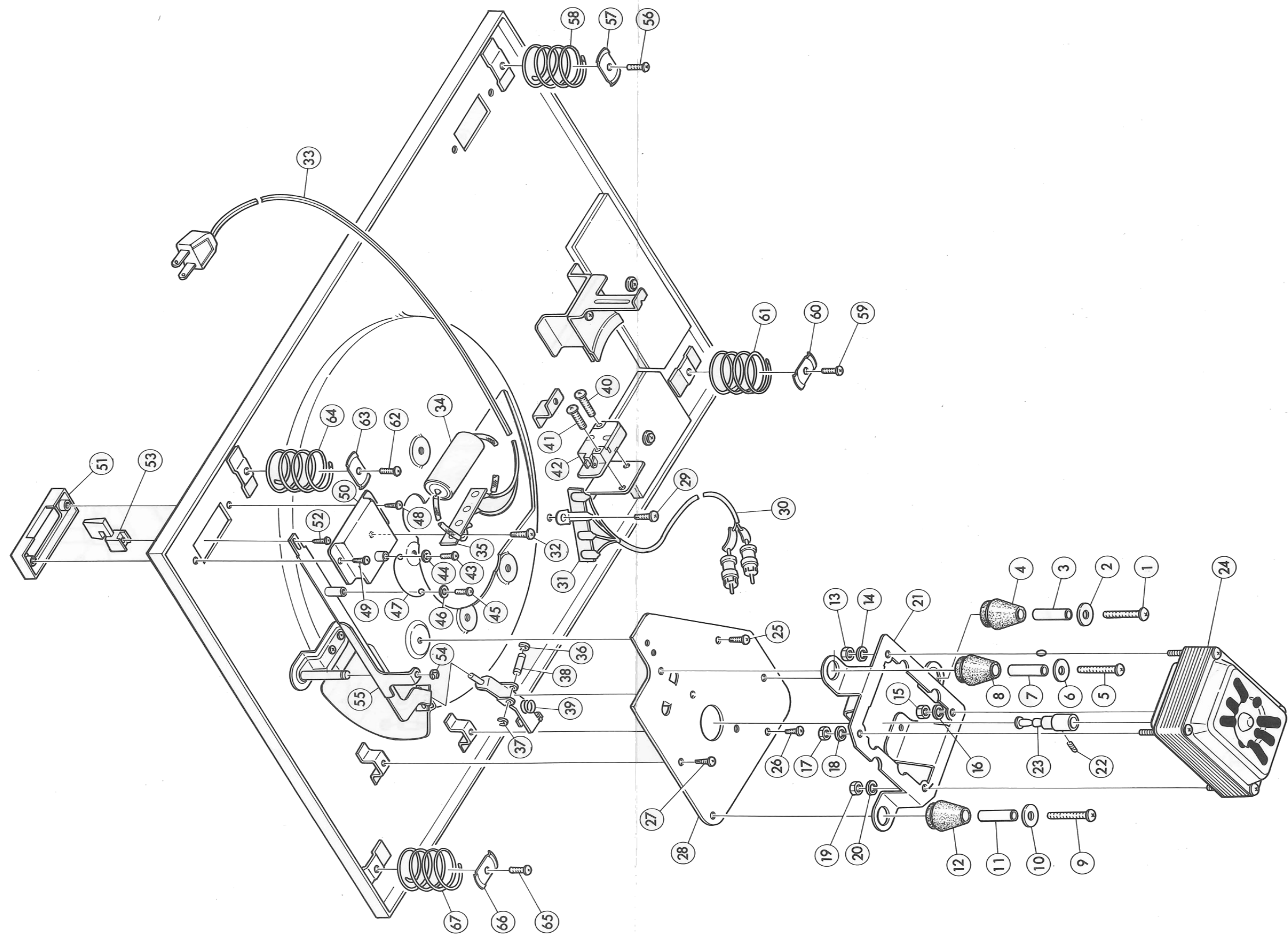




Fig. 6-2



## 6-2. Exploded view (2) and parts list (See Fig. 6-2)

※ Use the stock number for parts order. If the stock number is unknown, use the model's name, fig. number, parts number and parts name correctly.

Part No.	Stock No.	Description
1	5103070	P Type Screw, M4 x 30
2		P Type Washer, 4 x 15 x 1.0
3	5232040	Spacer, motor
4	5502090	Rubber Cushion, motor
5	5103070	P Type Screw, M4 x 30
6		P Type Washer, 4 x 15 x 1.0
7	5232040	Spacer, motor
8	5502090	Rubber Cushion, motor
9	5103070	P Type Screw, M4 x 30
10		P Type Washer, 4 x 15 x 1.0
11	5232040	Spacer, motor
12	5502090	Rubber Cushion, motor
13	5100361	Hex Nut, M4 x 7 x 3.2
14	5121360	S Type Washer, 4 x 1.4 x 1.0
15	5100361	Hex Nut, M4 x 7 x 3.2
16	5121360	S Type Washer, 4 x 1.4 x 1.0
17	5100361	Hex Nut, M4 x 7 x 3.2
18	5121360	S Type Washer, 4 x 1.4 x 1.0
19	5100361	Hex Nut, M4 x 7 x 3.2
20	5121360	S Type Washer, 4 x 1.4 x 1.0
21	5242090	Sheet, motor
22		SS Type Screw, M3 x 4
23	6142050	Capstan (50 Hz)
	6142060	Capstan (60 Hz)
24	4320070	Motor
25	5103541	PT Type Screw, M3 x 6
26	5103541	PT Type Screw, M3 x 6
27	5103541	PT Type Screw, M3 x 6
28	6612020	Sub Panel
29	5103542	PT Type Screw, M3 x 8
30		Output Cords
31	2110070	4-Lug Terminal Strip
32	5103542	PT Type Screw, M3 x 8
33		AC Cord
34		Oil Capacitor, 0.3 $\mu$ F 600 V

Parts No.	Stock No.	Description
35	2110070	4-Lug Terminal strip
36	5151002	E Type Ring, 2 $\phi$
37	5151002	E Type Ring, 2 $\phi$
38		Shaft, step lever
39	7052070	Step Lever Ass'y
40	5103028	P Type Screw, M2.6 x 14
41	5103028	P Type Screw, M2.6 x 14
42		Mini-Switch
43	5103003	P Type Washer M2 x 5
44	5120102	P Type Washer, 2 x 6 x 0.4
45	5103003	P Type Screw, M2 x 5
46	5120102	P Type Washer, 2 x 6 x 0.4
47		Spring, Selector Lever
48		PT Type Screw, M2.6 x 8
49		PT Type Screw, M2.6 x 8
50		Blind Metal
51	6632010	Selector Base
52		PT Type Screw, M2.6 x 6
53		Knob, Selector
54	5151005	E Type Ring, 4 $\phi$
55	7052060	Selector Lever Ass'y
56	5103041	P Type Screw, M3 x 4
57		Spring Holder
58		Spring, panel
59	5103041	P Type Screw, M3 x 4
60		Spring Holder
61		Spring, panel
62	5103041	P Type Screw, M 3 x 4
63		Spring Holder
64		Spring, panel
65	5103041	P Type Screw, M3 x 4
66		Spring Holder
67		Spring, panel

## 7. OPERATION OF AUTO MECHANISM

1. When the tonearm is lifted off the arm rest, the PU plate leaves from the mini-switch so that the turntable is automatically switched on and the platter begins to rotate.
2. While playing, the adjusting screw "A" starts pushing the Auto lever.
3. Then, the Auto lever pushes the starting plate.
4. The pitch of the record is about 0.05 mm at the recorded groove and 4 — 9 mm at the finishing groove. As soon as the stylus reaches the finishing groove, the starting plate gears into the turntable spindle so that the gear ass'y begins to operate.
5. When the gear ass'y is actuated, the disk plate linked with the crank lever begins to rotate.
6. The disk plate rotates half as much as the gear ass'y.
7. In the first half of revolution of the disk plate, the arm lifter elevates so that the stylus is raised from the record as Fig. 7-2. At the same time, the "release plate" on the disk plate pushes the adjusting screw "B" so that the tonearm returns to the arm rest.
8. In the next half of revolution, the arm lifter goes down so that the tonearm is set in its rest as Fig. 7-4.
9. At this time, the PU plate pushes the mini-switch so that the turntable is automatically switched off and the platter stops rotating.

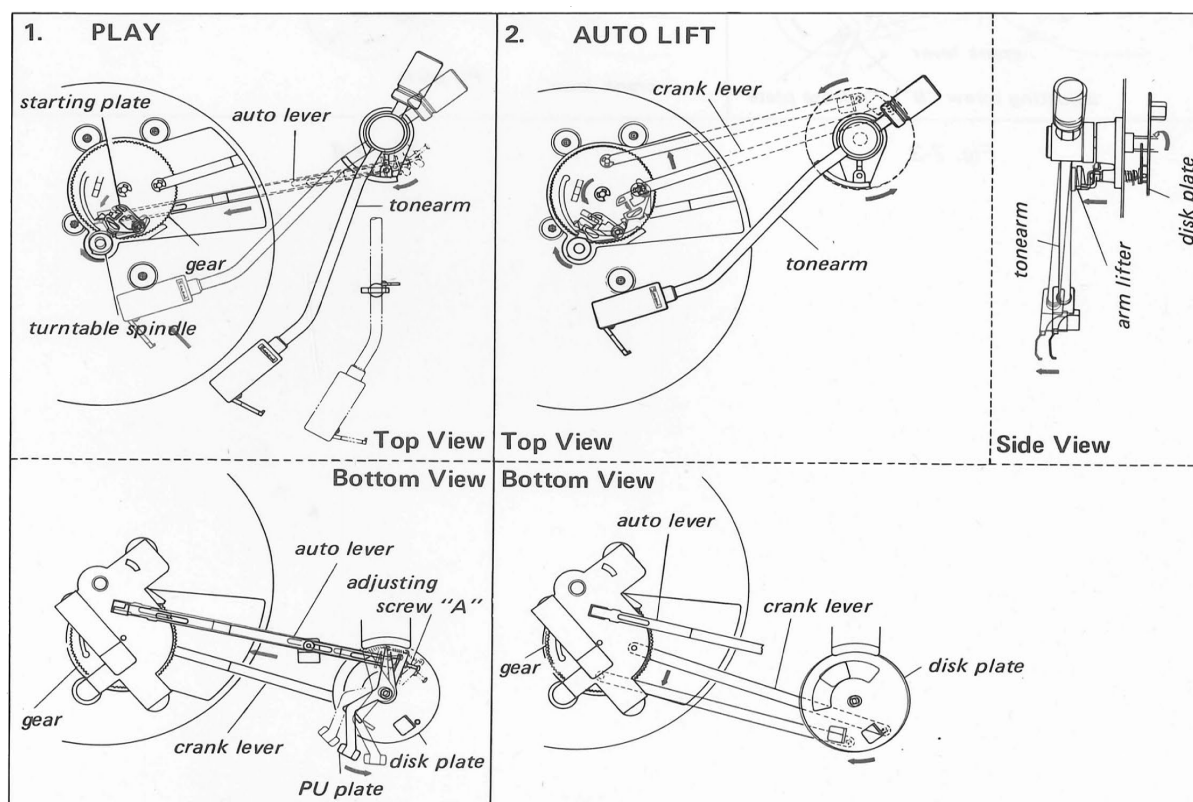
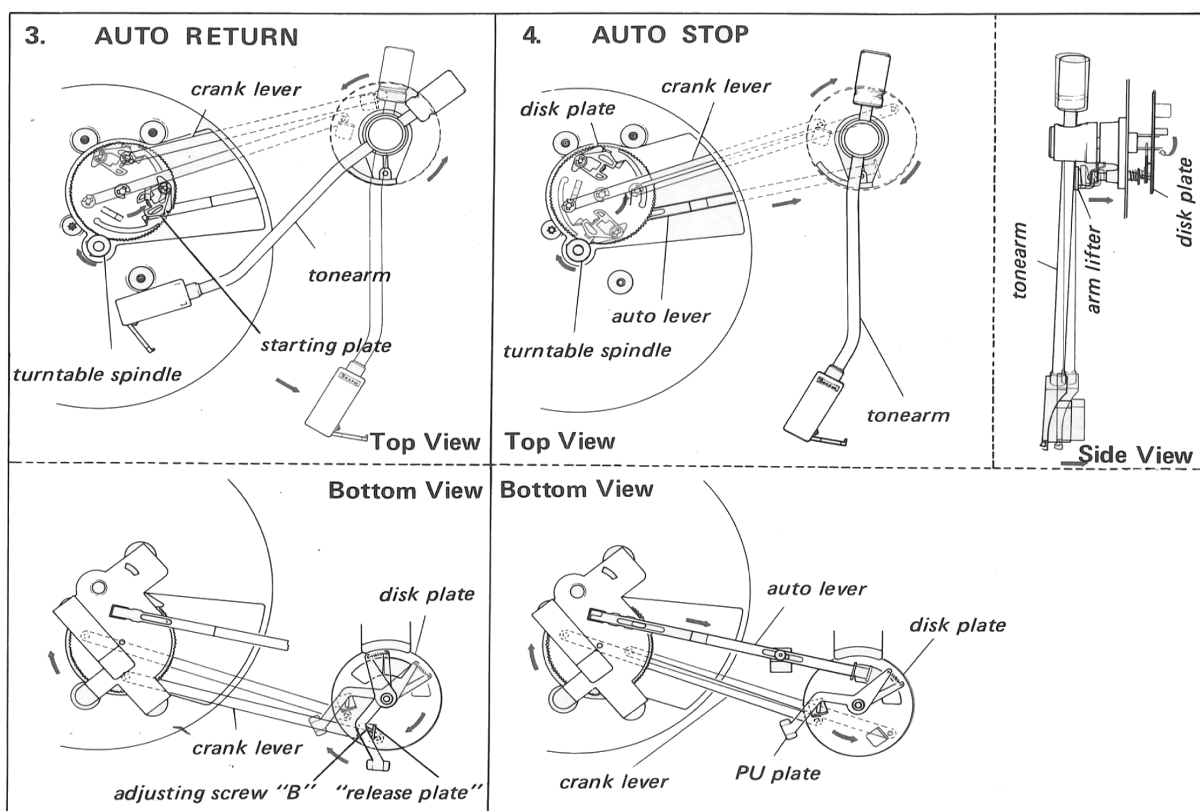


Fig. 7-1

Fig. 7-2



*Fig. 7-3*

*Fig. 7-4*