

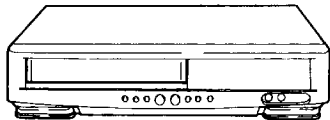
HITACHI

SERVICE MANUAL

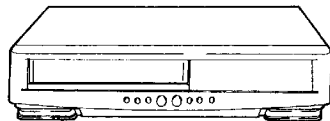
TK

No.4301E

VT-M170A/M171A
VT-M171AW/M265A
VT-M270A/M272A



— VT-M171A/M270A/M272A —

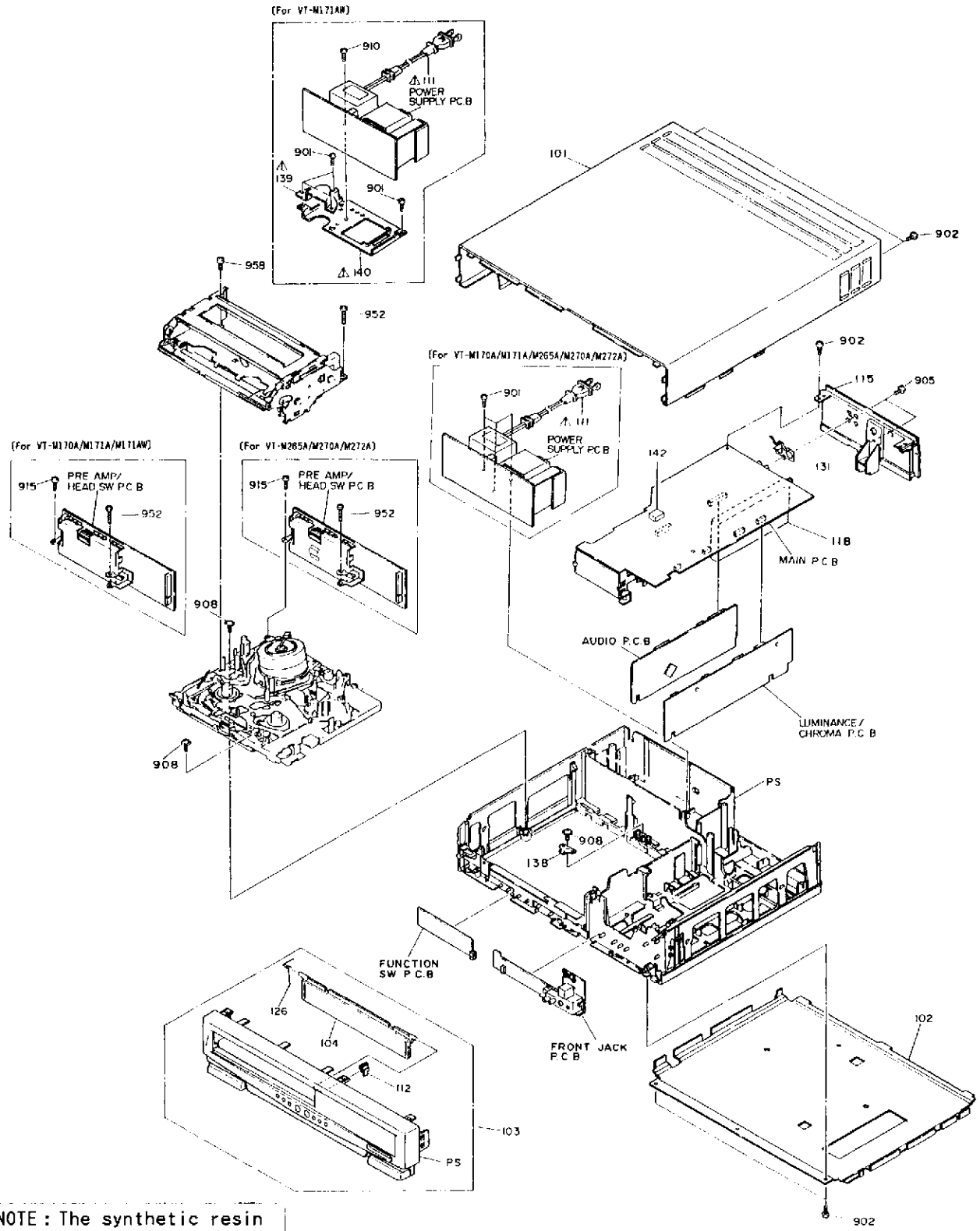


— VT-M170A/M171AW/M265A —

• Technical Specifications

Recording:	Rotary two-head helical scan azimuth recording
Video:	NTSC color EIA standard
Cassette:	VHS type
Heads:	2 video heads for SP and EP 1 full track audio/video erase head 1 combination head for control track, audio erase and audio record/play (3 heads/single housing)
Tape Speed:	33.35 mm/sec (SP), 16.67 mm/sec (LP) (playback only), 11.12 mm/sec (EP)
Tape Width:	12.7 mm
RF Output:	Channel 3 or 4
RF Input:	UHF/VHF 75 ohm
Turning Range:	VHF LOW CH, 2-6 (54 MHz - 88 MHz) VHF MID CH, A-5 - A-1 and A-1 (90 MHz - 174 MHz) CATV VHF HIGH CH, 7-13 (174 MHz - 216 MHz) VHF SUPER CH, J-W (216 MHz - 300 MHz) CATV

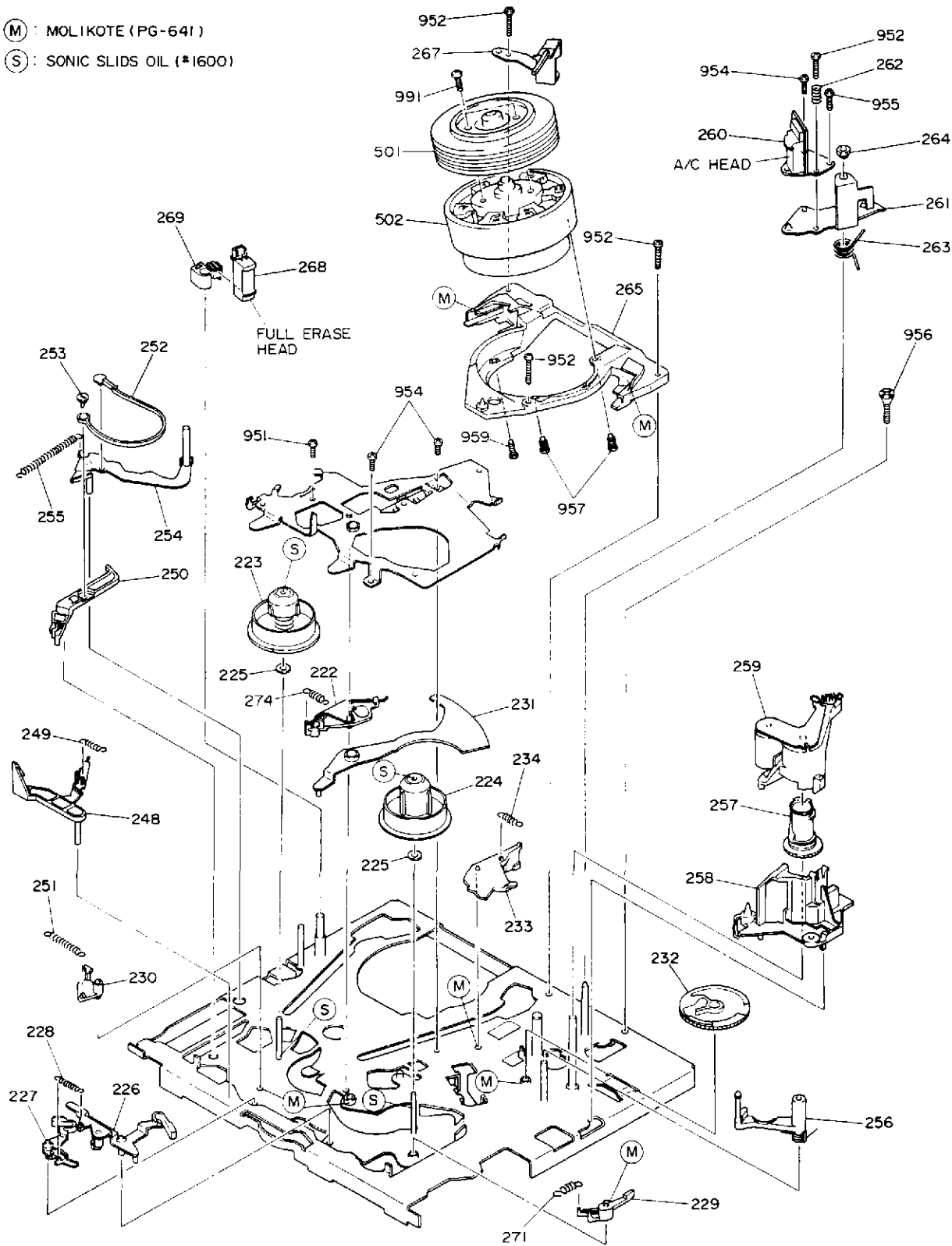
EXPLODED VIEWS
1. CABINET SECTION



NOTE: The synthetic resin members that can be dismantled are shown by abbreviations using letters.

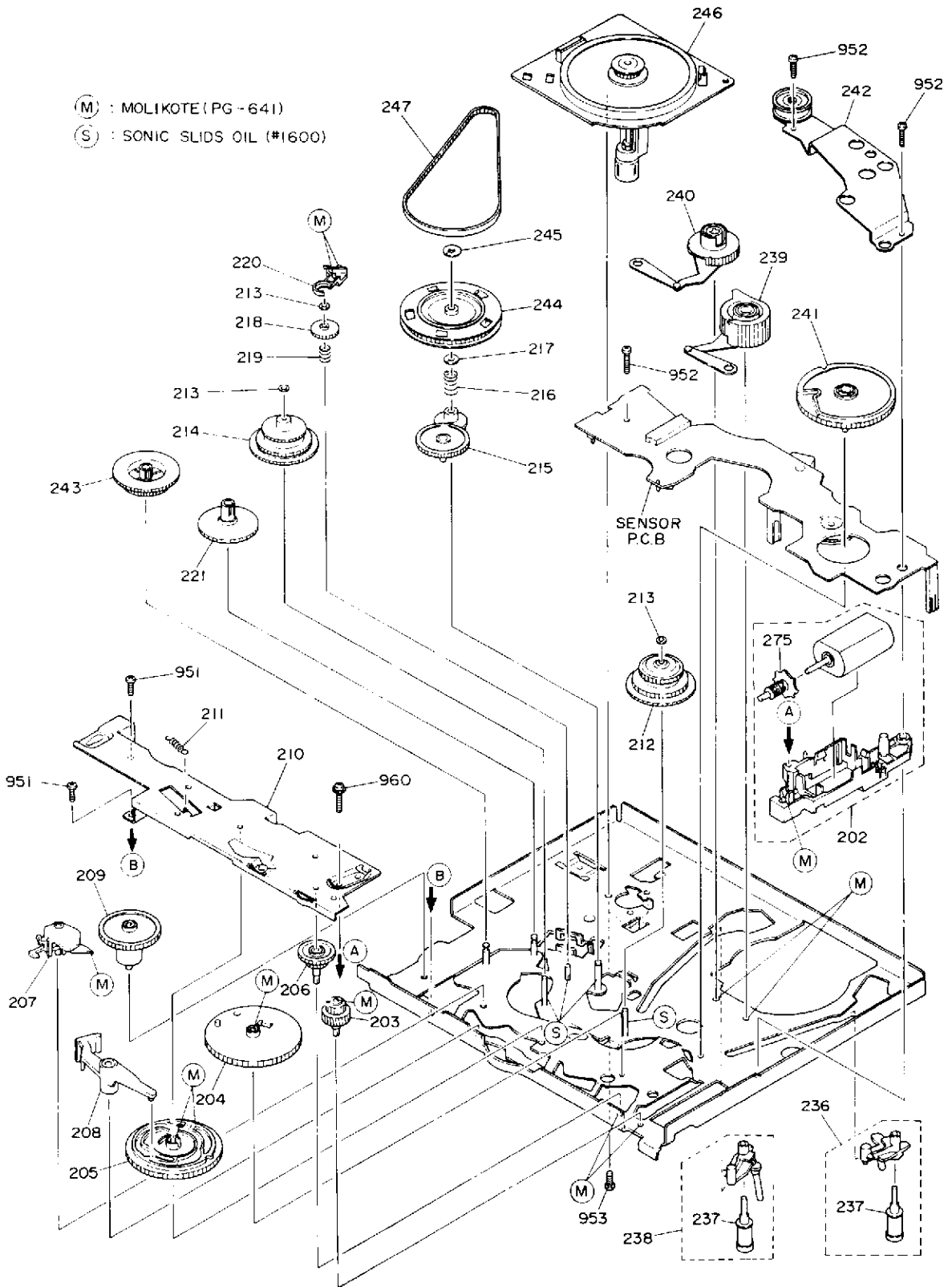
(M) : MOLIKOTE (PG-641)

(S) : SONIC SLIDS OIL (#1600)

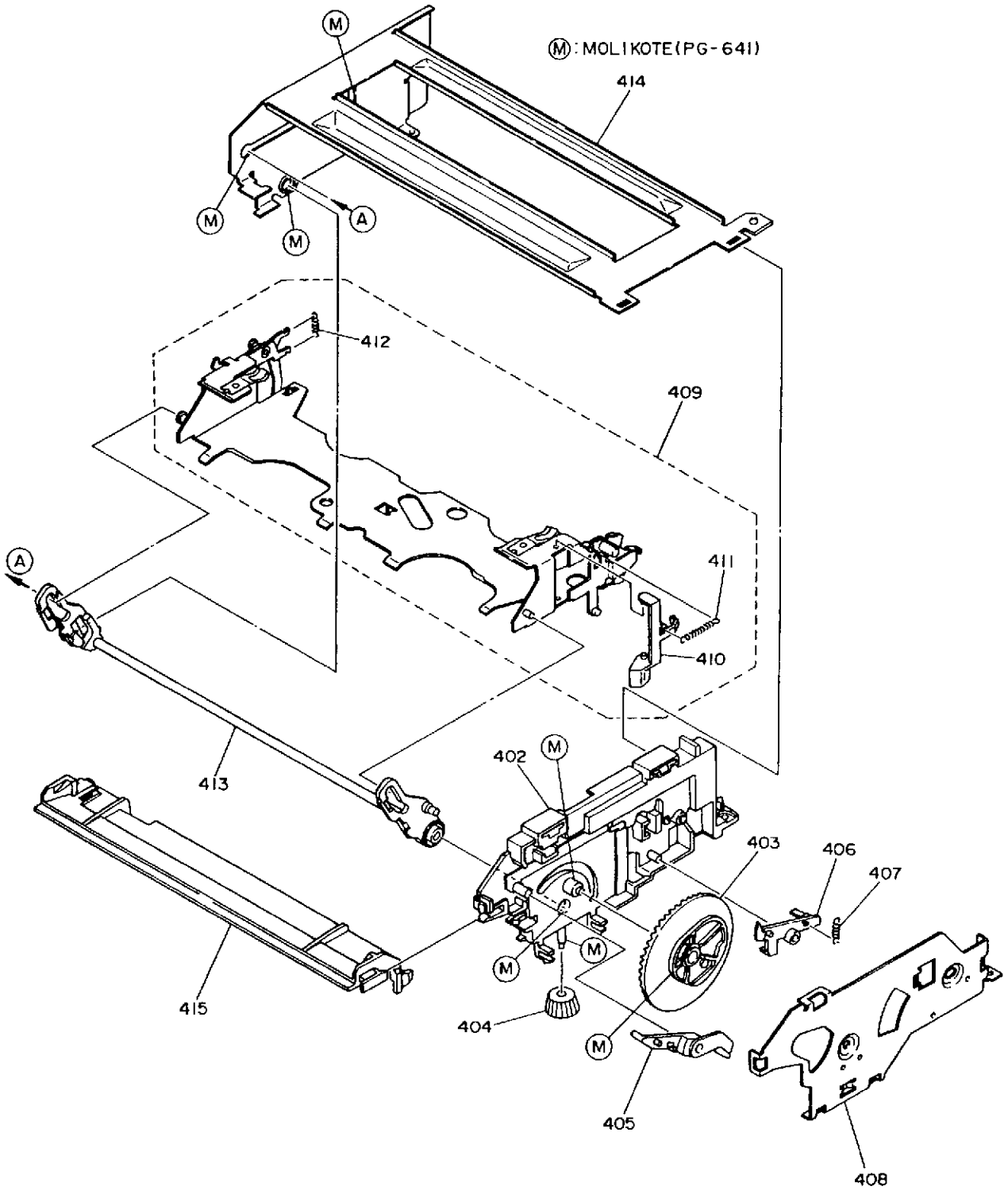


(M) : MOLIKOTE (PG-641)

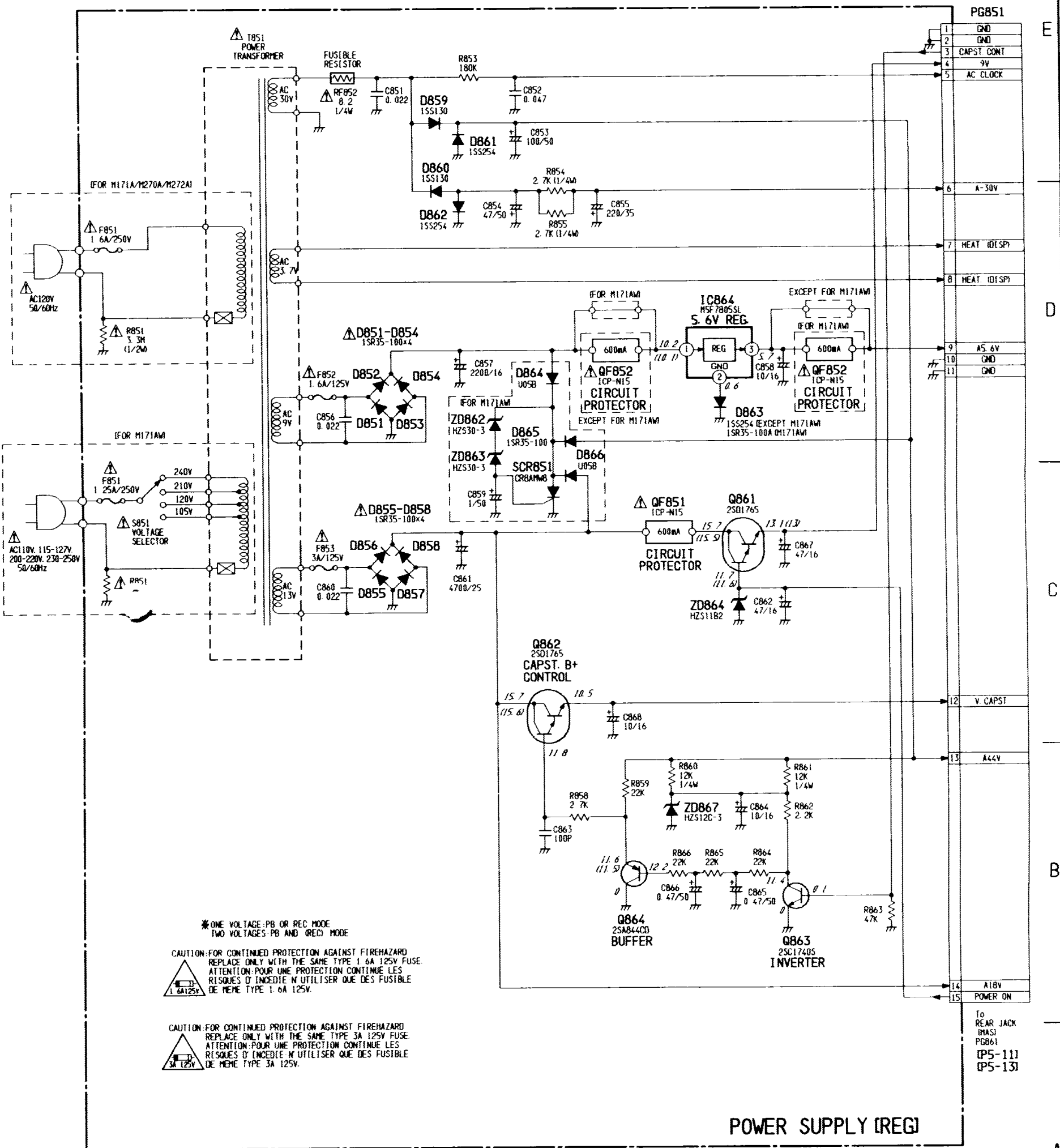
(S) : SONIC SLIDS OIL (#1600)



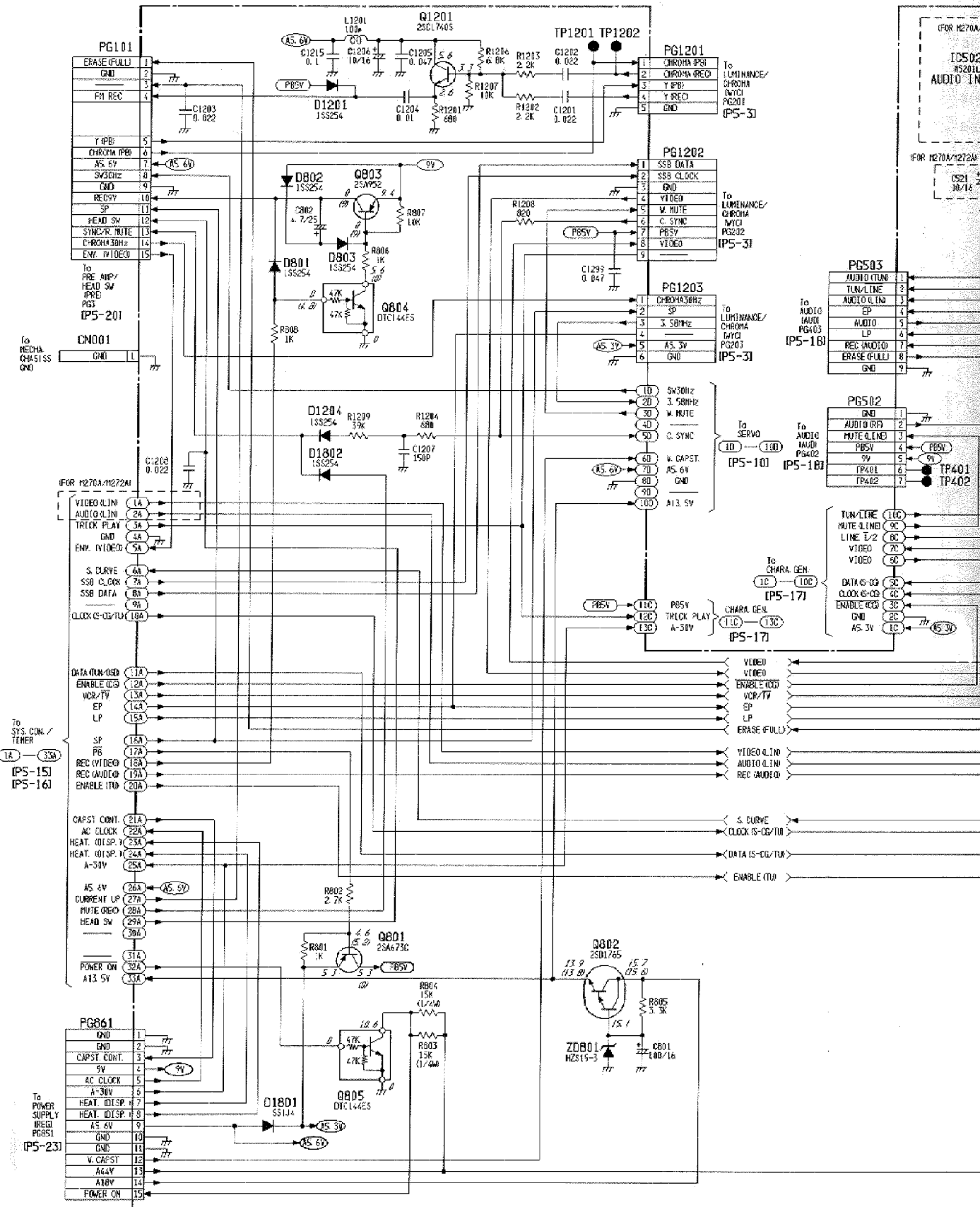
(M) : MOLIKOTE (PG-641)



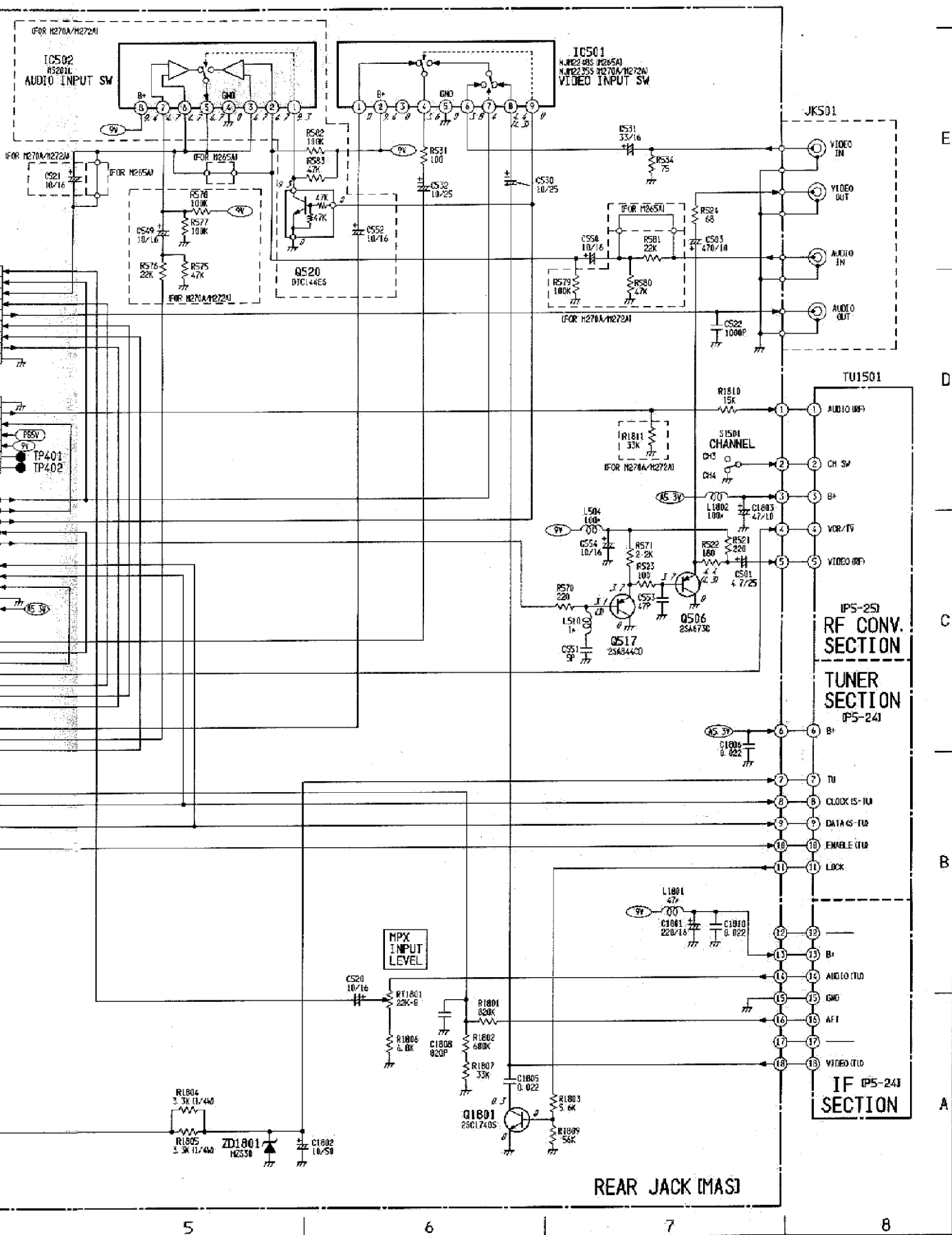
POWER SUPPLY (REG) SCHEMATIC DIAGRAM



REAR JACK (MAS) SCHEMATIC DIAGRAM (VT-M265A/M270A/M272A)



*ONE VOLTAGE-PB OR REC MODE
TWO VOLTAGES-PB AND (REC) MODE



E

D

C

B

A

REPLACEMENT PARTS LIST

1. MECHANICAL PARTS LIST

Note : This replacement parts list applies to the following model.

Applicable model: VT-M171A

: Obtain the components marked with asterisks * in the parts list at your site.

SYMBOL-NO	P-NO	DESCRIPTION	SYMBOL-NO	P-NO	DESCRIPTION
FOR FINAL ASSEMBLY			253	6823511	SHAFT
			254	6500683	ARM, TENSION
			255	6553352	SPRING
101	6009461	COVER, TOP	256	6638935	ARM
102	* 6009474	COVER, BOTTOM	257	6823521	GEAR, CAM
103	* 4725321	PANEL, FRONT	258	6823445	BRACKET
104	* 4723415	DOOR, CASSETTE	259	6500431	ROLLER, PRESSURE
△111	5891408	CORD, POWER	260	5434151	HEAD, AUDIO CONTROL
112	4590321	STOPPER, DOOR	261	6500592	BASE, HEAD
115	* 4725971	PANEL, REAR	262	6304906	SPRING
118	* 5582211	TUNER IF UNIT	263	6553151	SPRING
126	6551851	SPRING, DOOR	264	7785673	NUT
131	7479971	PLATE	265	6638903	BASE, CYLINDER
138	7429641	BRACKET	267	5794062	BRUSH
142	6562924	RUBBER	268	5423071	HEAD, FULL ERASE
202	6500761	MOTOR, LOADING	269	6823462	BASE, HEAD
203	6441371	GEAR	271	6558502	SPRING
204	6441392	GEAR	274	6320576	SPRING
205	6441403	GEAR	275	6816211	WORM
206	6441381	GEAR	402	6823612	BRACKET
207	6823133	ARM	403	6823621	GEAR
208	6823171	ARM, OPERATION	404	6823631	GEAR
209	6441421	GEAR	405	6823641	ARM
210	6500332	PLATE	406	6823652	ARM
211	6558551	SPRING	407	6558531	SPRING
212	* 6405182	GEAR	408	6500612	BRACKET
213	7788341	WASHER	409	6500622	HOLDER
214	6405191	GEAR	410	6823691	ARM
215	6401445	ARM	411	6558541	SPRING
216	6522979	SPRING	412	6558561	SPRING
217	6500841	WASHER	413	6823662	ARM
218	6441433	GEAR, CHANGE	414	6500671	BRACKET
219	6522978	SPRING	415	6823701	HOLDER
220	6823183	ARM	501	5457962	UPPER CYLINDER(CY-Z2N)
221	6441411	GEAR	502	5435681	CYLINDER LOWER(CY-G2NA)
222	6823314	ARM	901	8699410	SCREW(3X10)
223	6416631	REEL, TABLE(S)	902	8699412	SCREW (3X12) BLACK
224	6416651	REEL, TABLE(T)	905	7781582	FALT SCREW-3MMDX10MM(BLACK)
225	7789126	WASHER	908	7781138	SCREW(3X10BT)
226	6823195	ARM, BRAKE (R)	915	0671305	DT SCREW-2.6MMDX5MM
227	6823229	ARM, BRAKE (L)	951	0711304	SCREW(2.6X4)
228	6318613	SPRING	952	0711312	PAN HEAD SCREW-2.6MMDX12MM
229	6823271	BRAKE	953	8691306	BT SCREW 2.6MM
230	6823261	BRAKE	954	0711306	PAN HEAD SCREW-2.6MMDX6MM
231	6500414	ARM	955	7773741	SCREW
232	6823251	GEAR	956	45281813	SCREW
233	6823292	BRAKE	957	7775582	SCREW
234	6558452	SPRING	958	7773761	SCREW
236	6638941	BASE, GUIDE ROLLER(IN)	959	8741408	SCREW(B3X8)
237	4583122	GUIDE ROLLER	960	8650914	SCREW(2.6X14)
238	6638952	BASE, GUIDE ROLLER(OUT)	991	7784131	SCREW(3X8)
239	6500504	GEAR, LOADING (L)	FOR ACCESSARIES		
240	6500463	GEAR, LOADING (R)	802	5861141	VCR COAXIAL RF CABLE
241	6823536	GEAR, MODE	803	5616491	REMOTE HAND SET
242	6500548	PLATE			
243	6823541	GEAR			
244	6823332	PULLEY			
245	6500841	WASHER			
246	1470083	DC MOTOR			
247	6359061	BELT			
248	6823422	ARM			
249	6553361	SPRING			
250	6823435	ARM			
251	6553301	SPRING			
252	6823473	BAND, TENSION			

SYMBOL-NO	P-NO	DESCRIPTION
SEMI-CONDUCTORS		
D0201	5339131	D10DE 1SS254
D0202	5339131	D10DE 1SS254
D0402	5339131	D10DE 1SS254
D0602	5339131	D10DE 1SS254
D0700	5339131	D10DE 1SS254
D0702	5339131	D10DE 1SS254
D0703	5339131	D10DE 1SS254
D0704	5339131	D10DE 1SS254
D0706	5339131	D10DE 1SS254
D0707	5339131	D10DE 1SS254
D0714	5339131	D10DE 1SS254
D0801	5339131	D10DE 1SS254
D0802	5339131	D10DE 1SS254
D0803	5339131	D10DE 1SS254
△D0851	5339231	D10DE 1R35-100A
△D0852	5339231	D10DE 1R35-100A
△D0853	5339231	D10DE 1R35-100A
△D0854	5339231	D10DE 1R35-100A
△D0855	5339231	D10DE 1R35-100A
△D0856	5339231	D10DE 1R35-100A
△D0857	5339231	D10DE 1R35-100A
△D0858	5339231	D10DE 1R35-100A
D0859	5339171	D10DE 1SS130
D0860	5339171	D10DE 1SS130
D0861	5339131	D10DE 1SS254
D0862	5339131	D10DE 1SS254
D0863	5339131	D10DE 1SS254
D1201	5339131	D10DE 1SS254
D1203	5339131	D10DE 1SS254
D1411	5339131	D10DE 1SS254
D1412	5339131	D10DE 1SS254
D1801	5339551	D10DE SS1J4
Q2101	5380933	LED GL451
Q3501	5339131	D10DE 1SS254
Q3502	5339131	D10DE 1SS254
IC001	1346747	IC BA7182AS
IC0201	1345947	IC HA118170NT
IC0203	1362261	IC CXL5507P
IC0401	1341472	IC LA7297
IC0501	1360031	IC NJM2335S
IC0502	5366981	IC M5201L
IC0601	1345871	IC HD49781NT
IC0802	5350601	IC NJM4558D
IC0701	1366582	IC M38184MB-123FP
IC0702	5300794	IC BA6209U4
IC0703	1345903	IC PS7600G
IC0864	1341511	IC M5F7805L
IC1401	1340781	IC M3601D-0125P
IC1411	1361932	IC BA7045A
IC2101	5327521	PHOTO TRANSISTOR SPI-315-C
IC2102	5327521	PHOTO TRANSISTOR SPI-315-C
IC3551	1388711	PWB ASSY SBK1644
Q0001	5327063	TRANSISTOR 2SC1740S
Q0002	5327063	TRANSISTOR 2SC1740S
Q0003	5327073	TRANSISTOR DTC144ES
Q0005	5327073	TRANSISTOR DTC144ES
Q0201	5327063	TRANSISTOR 2SC1740S
Q0202	5327063	TRANSISTOR 2SC1740S
Q0203	5327063	TRANSISTOR 2SC1740S
Q0204	5327063	TRANSISTOR 2SC1740S
Q0205	5327063	TRANSISTOR 2SC1740S
Q0206	5327063	TRANSISTOR 2SC1740S

Q0207	5327073	TRANSISTOR DTC144ES
Q0208	5327021	TRANSISTOR 2SA844CD
Q0211	5327021	TRANSISTOR 2SA844CD
Q0212	5327021	TRANSISTOR 2SA844CD
Q0214	5327063	TRANSISTOR 2SC1740S
Q0215	5327073	TRANSISTOR DTC144ES
Q0217	5327021	TRANSISTOR 2SA844CD
Q0219	5327073	TRANSISTOR DTC144ES
Q0220	5327073	TRANSISTOR DTC144ES
Q0221	5327063	TRANSISTOR 2SC1740S
Q0222	5327073	TRANSISTOR DTC144ES
Q0225	5327073	TRANSISTOR DTC144ES
Q0226	5327073	TRANSISTOR DTC144ES
Q0401	5327091	TRANSISTOR 2SD1504E
Q0402	5327073	TRANSISTOR DTC144ES
Q0403	5327091	TRANSISTOR 2SD1504E
Q0404	5327101	TRANSISTOR 2SC3553(B/C)
Q0406	5327091	TRANSISTOR 2SD1504E
Q0506	5327031	TRANSISTOR 2SA673(C)
Q0517	5327021	TRANSISTOR 2SA844CD
Q0520	5327073	TRANSISTOR DTC144ES
Q0601	5327063	TRANSISTOR 2SC1740S
Q0602	5327063	TRANSISTOR 2SC1740S
Q0603	5327073	TRANSISTOR DTC144ES
Q0751	5327063	TRANSISTOR 2SC1740S
Q0801	5327031	TRANSISTOR 2SA673(C)
Q0802	1321341	TRANSISTOR 2SD1765
Q0803	5327151	TRANSISTOR 2SA952-ML2
Q0804	5327073	TRANSISTOR DTC144ES
Q0805	5327073	TRANSISTOR DTC144ES
Q0861	1321341	TRANSISTOR 2SD1765
Q0862	1321341	TRANSISTOR 2SD1765
Q0863	5327063	TRANSISTOR 2SC1740S
Q0864	5327021	TRANSISTOR 2SA844CD
Q1201	5327063	TRANSISTOR 2SC1740S
Q1411	5327063	TRANSISTOR 2SC1740S
Q1412	5327063	TRANSISTOR 2SC1740S
Q1413	5327063	TRANSISTOR 2SC1740S
Q1461	5327063	TRANSISTOR 2SC1740S
Q1462	5327063	TRANSISTOR 2SC1740S
Q1463	1320012	TRANSISTOR 2SA933 (S, R)
Q1464	5327063	TRANSISTOR 2SC1740S
Q1465	5327073	TRANSISTOR DTC144ES
Q1466	5327073	TRANSISTOR DTC144ES
Q1801	5327063	TRANSISTOR 2SC1740S
Q2101	5324651	PHOTO TRANSISTOR PT-483F1H
Q2102	5324651	PHOTO TRANSISTOR PT-483F1H
△Q0851	5721946	IC PROTECTOR ICP-N15
△Q0852	5721946	IC PROTECTOR ICP-N15
Z00700	5339462	ZENER D10DE HZS12A1
Z00702	5339571	D10DE UT26 2B
Z00801	5339274	D10DE HZS15-3
Z00864	5339268	D10DE HZS11B2
Z00867	5339255	D10DE HZS12-C3T
Z01801	53392883	D10DE HZS30-3
TRANSFORMERS		
T0403	5261531	COIL
△T0851	*5214591	TRANSFORMER
COILS		
L0001	0770057	CHOKE COIL 100UH+-5%
L0002	0770057	CHOKE COIL 100UH+-5%

18. Roller Plate, Mode Gear

◆ Caution when reinstalling

- 1) Align mark (G) on cam gear-A and mark (F) on the mode gear. (See Fig. 6-23)
- 2) Align the arrow on the sensor P.C.B and arrow (No.1) on the mechanism state switch. (See Fig. 6-23)
- 3) With the above conditions, align mark (B) on the mechanism state switch and mark (C) on the mode gear. (See Fig. 6-23)

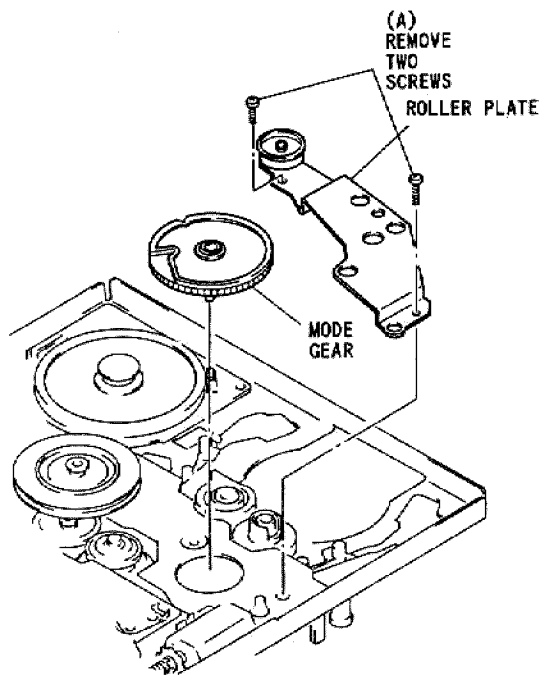


Fig. 6-20

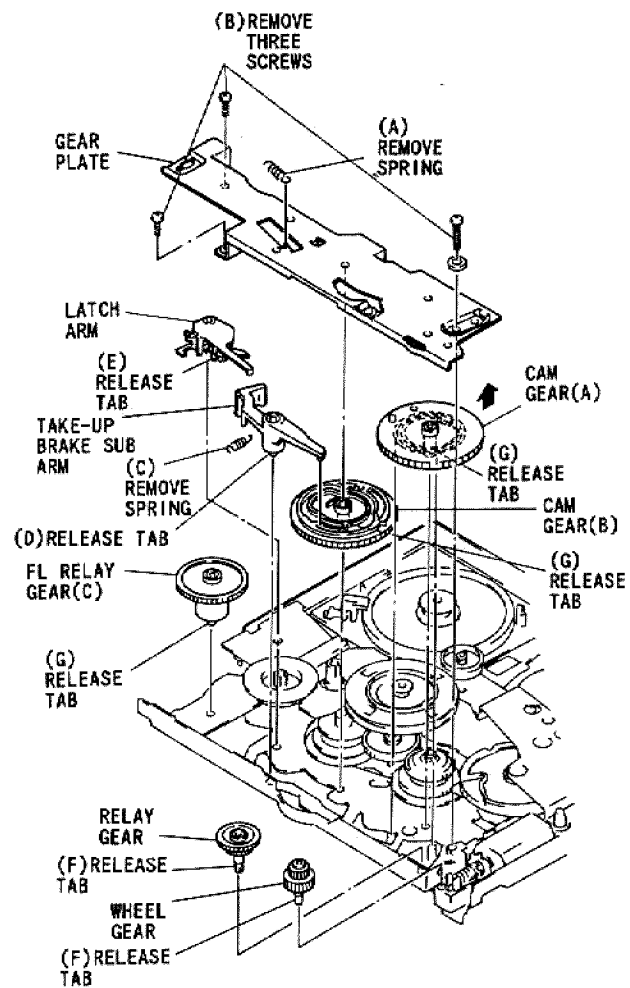


Fig. 6-21

19. Gear Plate, Relay Gear, Wheel Gear, Take-up Brake Sub Arm, Latch Arm, Relay Gear - (C), Cam Gears (A)/(B)

◆ Caution when reinstalling

- 1) Align hole (A) in the cam gear-(A) and the hole in the chassis.
Also align mark (G) on the cam gear-(A) and mark (F) on the mode gear. (See Fig.6-23)
- 2) Check that the bosses of the supply sub brake and tension drive arm are inserted into the specified positions. (See Fig. 6-22)
- 3) Align mark (I) in the cam gear-(B) and mark (H) on the cam gear-(A). (See Fig. 6-23)
- 4) Check that the boss of the pressure roller drive arm is inserted into the groove in the cam gear-(B). (See Fig. 6-22)

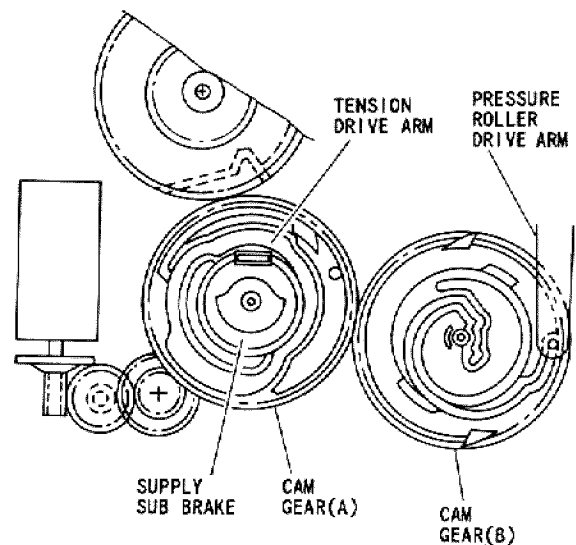


Fig. 6-22

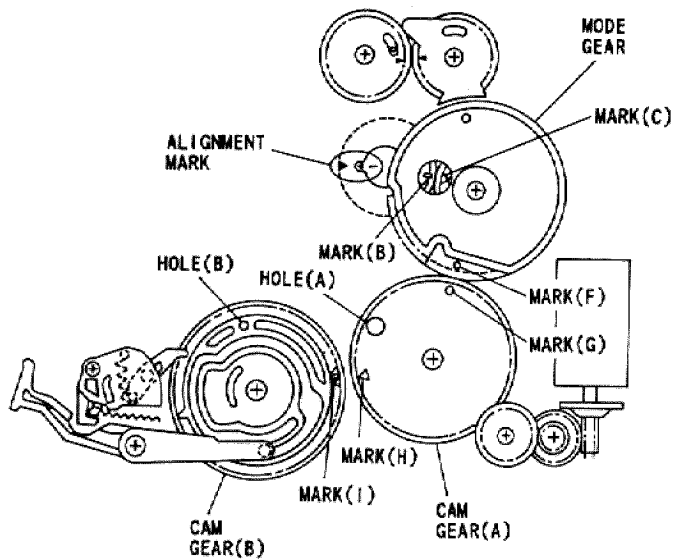


Fig. 6-23

20. Loading Motor Assembly

◆ Components to remove previously

- 1) FL Relay Gear (B) and Centre Pulley (Item 6-16)
- 2) Roller Plate, Mode Gear (Item 6-18)
- 3) Gear Plate, Relay Gear and Wheel Gear (Item 6-19)

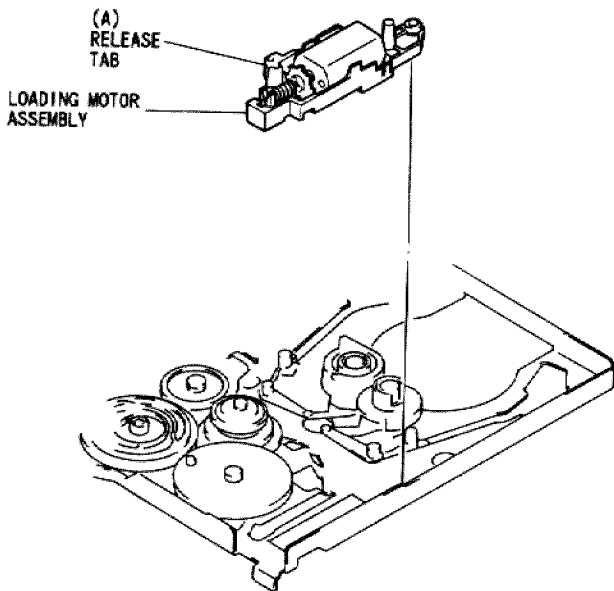


Fig. 6-24

21. FL Relay Gear -(A), FL Change Arm, FL Change Gear

◆ Components to remove previously

- 1) Roller Plate, Mode Gear (Item 6-18)
- 2) Centre Pulley, FL Relay Gear (B) (Item 6-16)
- 3) Sensor P.C.B (Item 3-6)

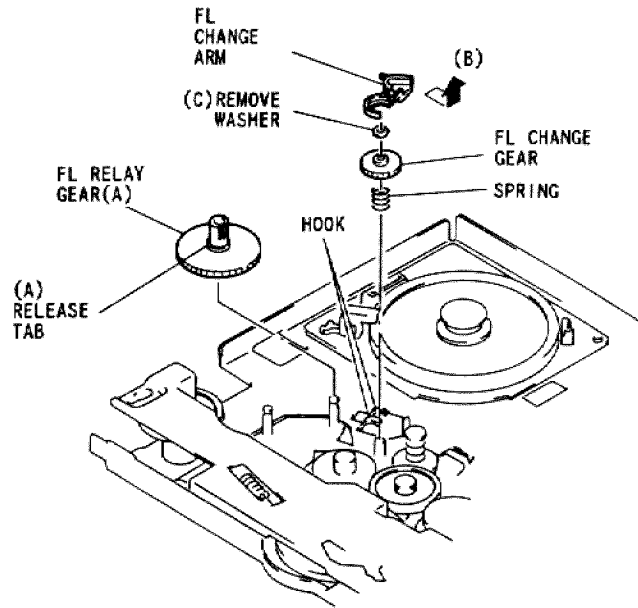


Fig. 6-25

◆ Cautions when reinstalling

- Install the FL change arm by the following procedure. Do not narrow the "U"-shaped section of the arm when installing it. (See Fig. 6-26)
- 1) Place the arm sideways and pass it through the hole in the chassis.
 - 2) Turn the arm to the front (to the right).
 - 3) Push up the whole arm, taking care that section (a) of the arm does not hit the chassis and insert the bosses of the arm into the holes in the axis supports in the chassis.
 - 4) After installing the arm, check that the arm moves smoothly.

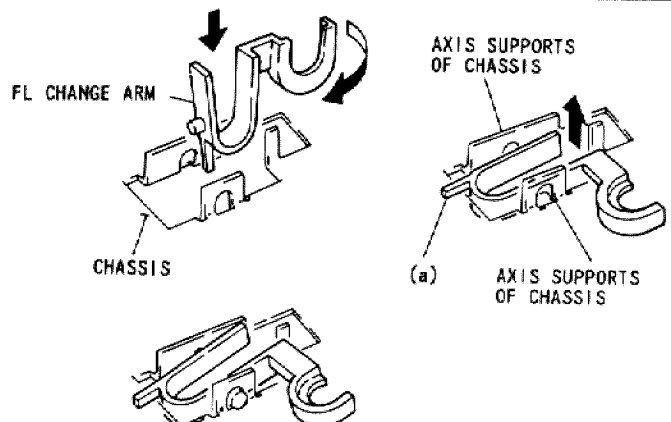
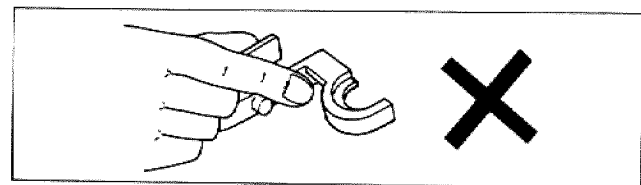


Fig. 6-26

22. Supply/Take-up Loading Arms

- ◆ Components to remove previously
 - 1) Roller Plate, Mode Gear (Item 6-18)
 - 2) Centre Pulley, FL Relay Gear (B) (Item 6-16)
 - 3) Sensor P.C.B (Item 3-6)

- ◆ Caution when installation
 - 1) Align the markings on each gear.
 (See Fig. 6-28)

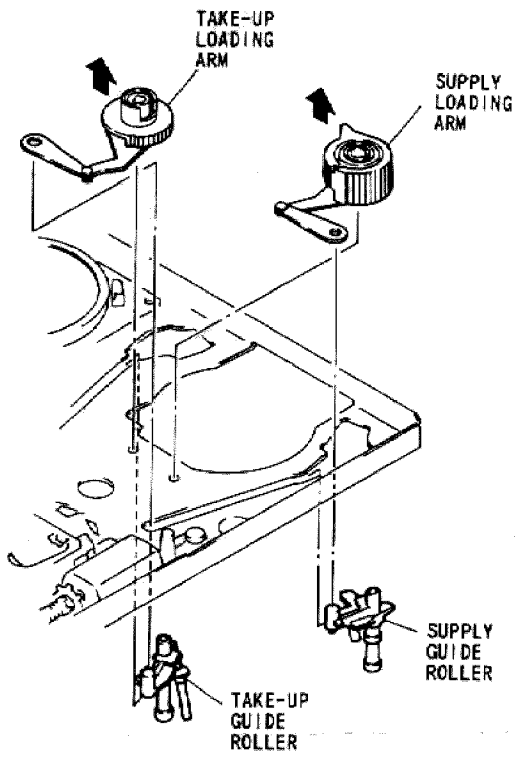


Fig. 6-27

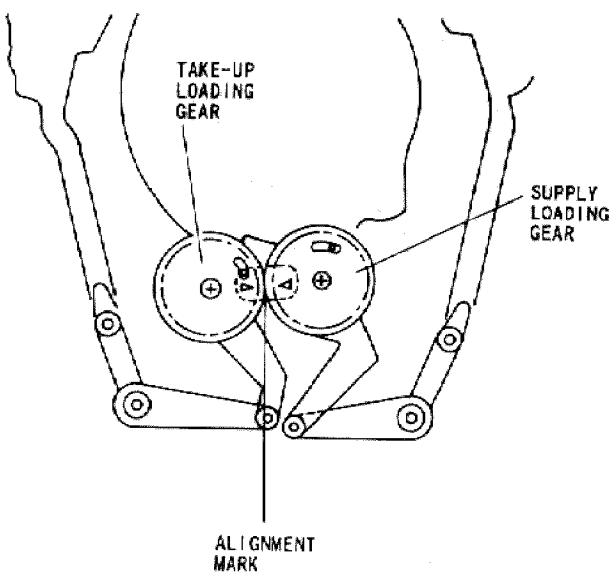


Fig. 6-28

23. Torque Arm Installation Procedure

- 1) Insert the torque arm as shown in the figure.
- 2) Fit the torque arm to the upper plate as shown in Fig. 6-29.
- 3) Install the torque arm into the upper plate while turning the arm in the direction of the arrow.

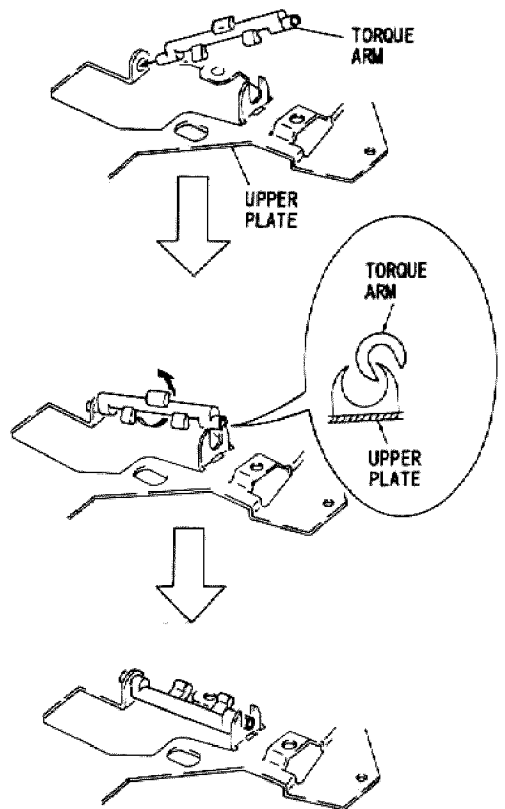


Fig. 6-29