

SLV-360/390/390PX/660HF/690HF/L2MX/L2PA/L2PL/L4CS/ L4MX/L4PA/L4PL/L6HFCS/L6HFMX/L6HFPA/L6HFPL RMT-V181/V181A/V182A/V182B/V182D

SONY® SERVICE MANUAL

SUPPLEMENT-2

File this supplement-2 with the Service Manual.

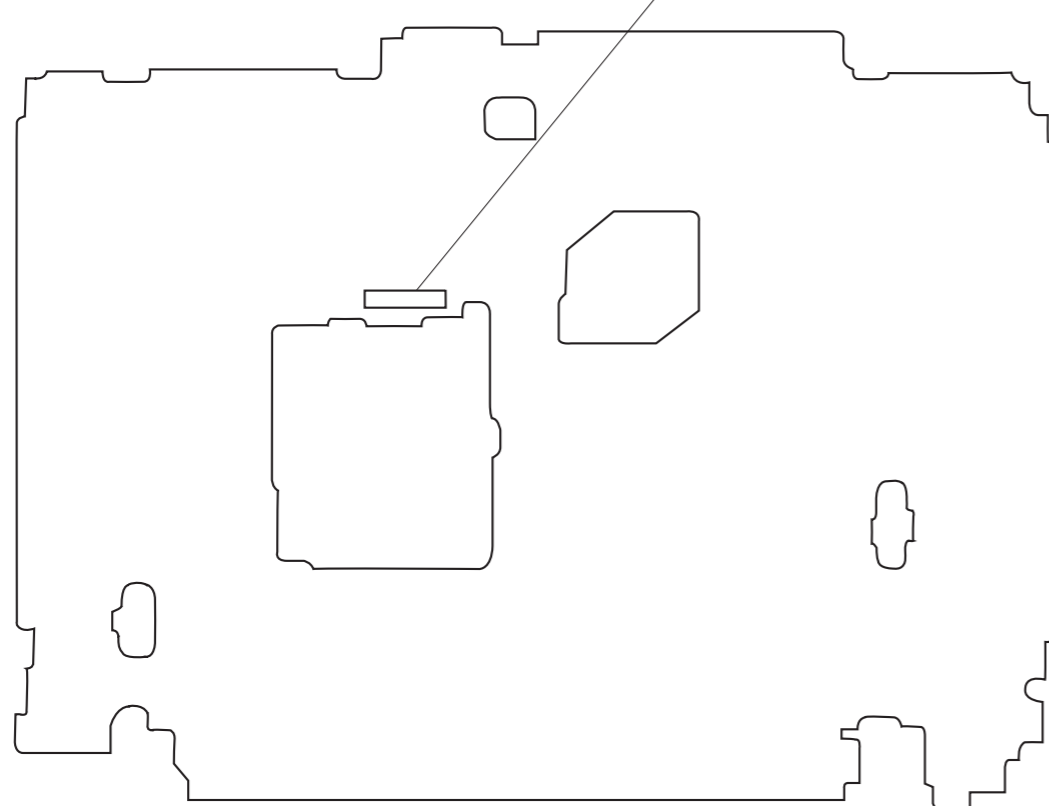
Subject:

- MA-248 Board Modification
- H Mechanism Modification
- Power Block Repair Parts List
- Mechanism Error Code Indication

(SL610279)

- The MA-248 board has been modified and the suffix of its part number is changed to -15.
- This supplement-1 contains the information about the above mentioned modification.
- Before repairing, confirm the part number printed on the MA-248 board as shown below.

MA-248 BOARD (CONDUCTOR SIDE) 1-659-118-15



US Model
SLV-360/390/660HF/690HF
Canadian Model
SLV-360/660HF/690HF
MEXICAN Model
SLV-L2MX/L4MX/L6HFMX
PANAMANIAN Model
SLV-L2PA/L4PA/L6HFPA
PHILIPPINE Model
SLV-L2PL/L4PL/L6HFPL
CHILEAN Model
SLV-L4CS/L6HFCS
PX Model
SLV-390PX

1. MA-248 BOARD DIFFERENT PARTS LIST

Board No.	1-659-118-14		1-659-118-15	
Ref.No.	Part No.	Description	Part No.	Description
	*A-6781-951-A	MA-248 BOARD, COMPLETE(690HF)	*A-6782-951-A	MA-248 BOARD, COMPLETE(690HF:US)
	—	—	*A-6791-050-A	MA-248 BOARD, COMPLETE(690HF:Canadian)
	*A-6781-952-A	MA-248 BOARD, COMPLETE(390,390PX)	*A-6782-952-A	MA-248 BOARD, COMPLETE(390)
	—	—	*A-6791-051-A	MA-248 BOARD, COMPLETE(390PX)
	*A-6782-767-A	MA-248 BOARD, COMPLETE(660HF,L6HF:CS,PL)	*A-6782-767-A	MA-248 BOARD, COMPLETE(660HF:US)
	—	—	*A-6791-049-A	MA-248 BOARD, COMPLETE(660HF:Canadian,L6HF:PL)
	*A-6782-768-A	MA-248 BOARD, COMPLETE(L6HF:MX,PA)	*A-6782-768-A	MA-248 BOARD, COMPLETE(L6HF:CS,MX,PA)
C252	1-163-241-11	CERAMIC CHIP 39PF 5% 50V	1-163-243-11	CERAMIC CHIP 47PF 5% 50V
C259	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	1-163-251-11	CERAMIC CHIP 100PF 5% 50V (EXCEPT L2)
C259	—	—	1-163-257-11	CERAMIC CHIP 180PF 5% 50V (L2)
C267	1-163-239-11	CERAMIC CHIP 33PF 5% 50V	1-163-237-11	CERAMIC CHIP 27PF 5% 50V
C500	—	—	1-164-232-11	CERAMIC CHIP 0.01uF 10% 50V
C512	1-164-232-11	CERAMIC CHIP 0.01uF 50V	—	—
C547	1-163-125-00	CERAMIC CHIP 220PF 5% 50V (EXCEPT L6HF:MX,PA)	1-163-125-00	CERAMIC CHIP 220PF 5% 50V (EXCEPT L6HF:CS,MX,PA)
IC501	8-759-391-35	M37775M5H321GP	8-759-437-14	M37775M7H121GP(390,390PX,690HF)
IC501	—	—	8-759-437-18	M37775M5H334GP(360,660HF,L2,L4,L6HF)
JR275	—	—	1-216-296-91	CONDUCTOR CHIP (3216) (EXCEPT L2)
R212	1-208-782-11	METAL GLAZE 2.2K 0.50% 1/10W (L2)	1-208-786-11	METAL GLAZE 1.5K 0.50% 1/10W (360,390,390PX,L2,L4)
R212	1-208-800-11	METAL GLAZE 5.6K 0.50% 1/10W (EXCEPT L2)	1-208-800-11	METAL GLAZE 5.6K 0.50% 1/10W (660HF,690HF,L6HF)
R219	1-216-049-91	METAL GLAZE 1K 5% 1/10W (660HF,690HF,L6HF)	1-216-049-91	METAL GLAZE 1K 5% 1/10W (EXCEPT L2)
R219	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W (360,390,390PX,L2,L4)	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W (L2)
R229	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	1-208-798-11	METAL GLAZE 4.7K 0.50% 1/10W (660HF, 690HF, L6HF)
R229	—	—	1-208-786-11	METAL GLAZE 1.5K 0.50% 1/10W (360, 390, 390PX, L4)
R229	—	—	1-208-790-11	METAL GLAZE 2.2K 0.50% 1/10W (L2)
R240	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	1-208-786-11	METAL GLAZE 1.5K 0.50% 1/10W (EXCEPT L2)
R240	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	1-216-053-00	METAL CHIP 1.5K 5% 1/10W (L2)
R251	1-216-049-91	METAL GLAZE 1K 5% 1/10W	1-216-039-00	METAL GLAZE 390 5% 1/10W
R253	1-216-043-91	METAL GLAZE 560 5% 1/10W	1-216-033-00	METAL GLAZE 220 5% 1/10W
R264	1-216-049-91	METAL GLAZE 1K 5% 1/10W	1-216-073-00	METAL GLAZE 10K 5% 1/10W
R268	1-216-089-91	METAL GLAZE 47K 5% 1/10W	1-216-097-91	METAL GLAZE 100K 5% 1/10W
R276	1-216-103-00	METAL GLAZE 100K 5% 1/10W	1-216-103-00	METAL GLAZE 180K 5% 1/10W
R280	1-216-081-00	METAL CHIP 22K 5% 1/10W (EXCEPT L2)	1-216-081-00	METAL CHIP 22K 5% 1/10W (660HF, 690HF, L2, L6HF)
R280	1-216-089-11	METAL CHIP 47K 5% 1/10W (L2)	1-216-085-00	METAL GLAZE 33K 5% 1/10W (360, 390, 390PX, L4)
R317	1-216-073-00	METAL GLAZE 10K 5% 1/10W	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W
R473	1-216-049-91	METAL GLAZE 1K 5% 1/10W	1-216-073-00	METAL GLAZE 10K 5% 1/10W

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

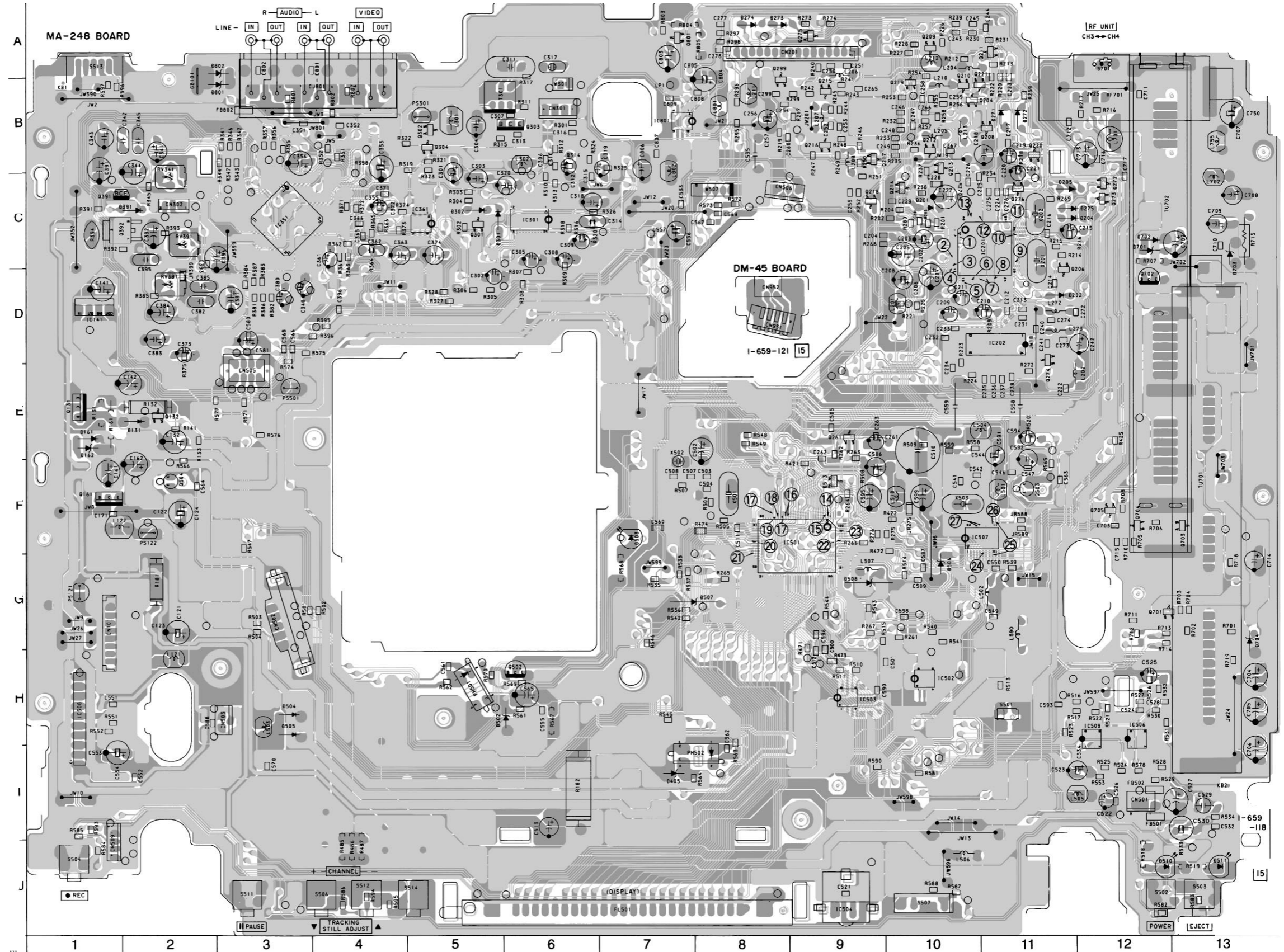
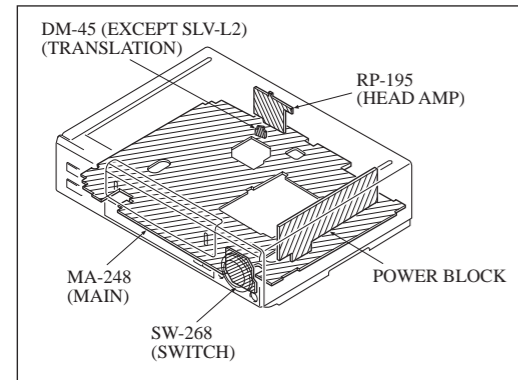
2. MA-248 PRINTED WIRING BOARD

— Ref. No. : MA-248 Board; 1,000 Series —

There are few cases that the part printed on this diagram isn't mounted in this model.

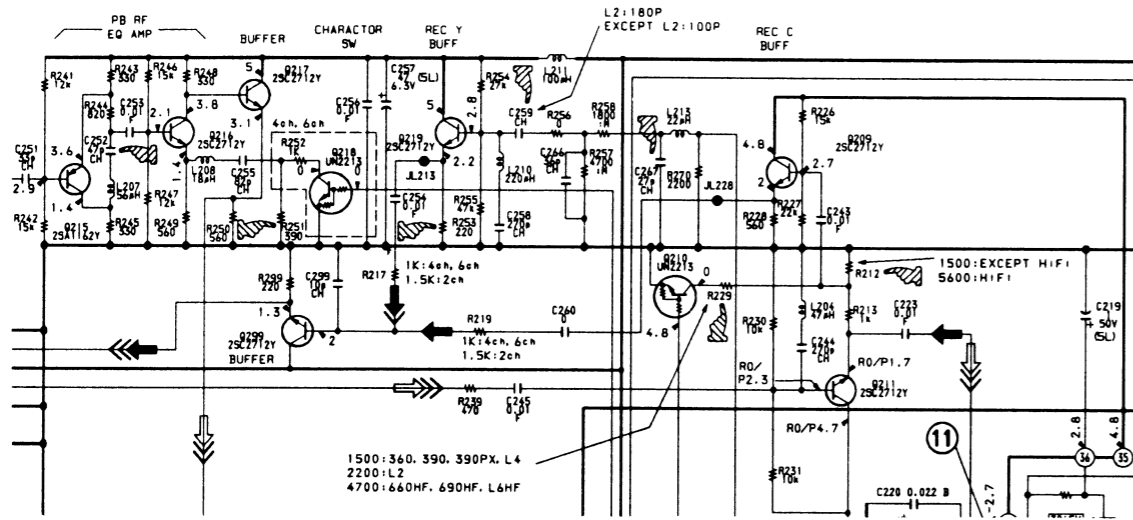
MA-248 BOARD

CN101	G-1	IC506	H-12
CN201	A-9	IC507	F-11
CN301	B-6	IC508	H-1
CN302	C-2	IC509	H-12
CN501	I-12	IC801	B-7
CN502	G-3		
CN503	H-3	Q131	E-1
CN505	E-3	Q132	E-2
CN506	G-9	Q161	F-1
CN509	J-1	Q204	B-11
		Q206	D-11
D131	E-2	Q208	B-11
D161	E-1	Q209	A-10
D162	E-1	Q210	B-10
D201	C-10	Q211	A-11
D202	D-11	Q212	B-10
D204	C-11	Q213	C-10
D205	C-12	Q214	C-10
D301	C-5	Q215	B-9
D302	C-5	Q216	B-9
D391	C-2	Q217	B-9
D503	G-7	Q218	C-9
D504	H-3	Q219	B-10
D505	H-3	Q220	C-11
D506	G-10	Q261	E-9
D507	G-8	Q299	B-8
D508	G-9	Q301	C-5
D510	J-12	Q302	B-5
D513	F-9	Q303	B-6
D701	D-12	Q304	B-5
D702	D-12	Q391	C-1
D703	D-13	Q392	C-2
D704	G-13	Q502	H-6
D801	B-3	Q503	F-11
D802	A-3	Q504	F-2
		Q701	G-12
		Q702	D-12
IC141	D-1	Q703	D-13
IC201	E-11	Q704	F-12
IC301	C-6	Q705	F-12
IC351	C-4	Q801	A-7
IC361	C-6		
IC501	G-9	RV341	C-2
IC502	H-10	RV381	D-2
IC503	H-9	RV391	C-2
IC504	J-9		

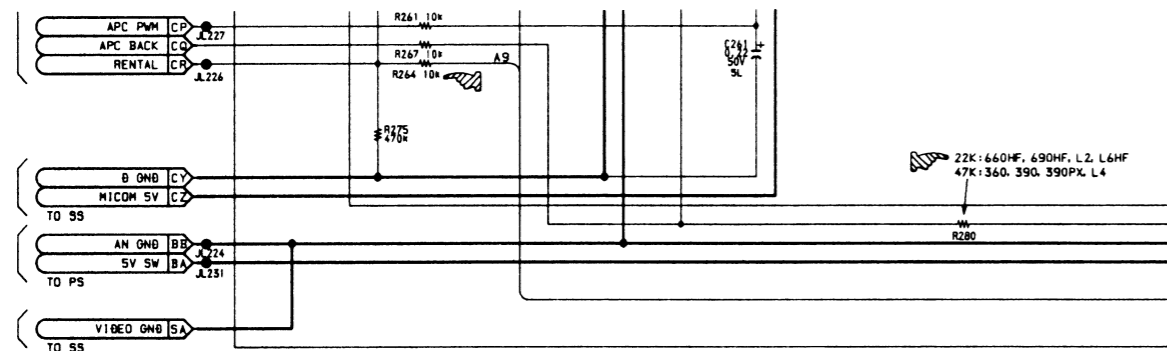


3. SCHEMATIC DIAGRAM

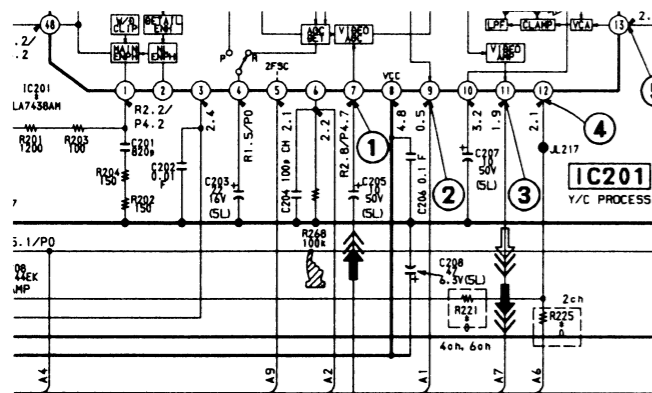
Page 4-10 to 4-11 Location: A-6 to B-12



Page 4-10 to 4-11 Location: H-4 to I-8

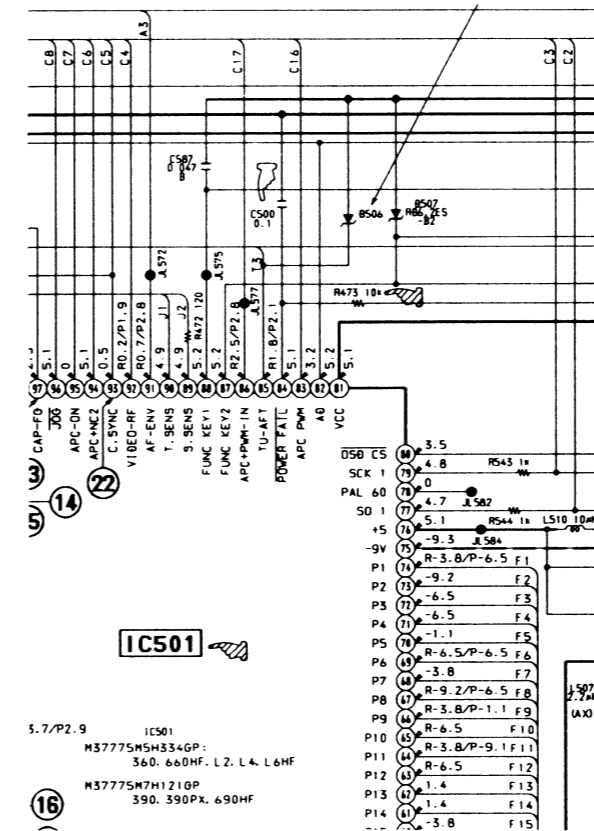


Page 4-11 Location: H-14

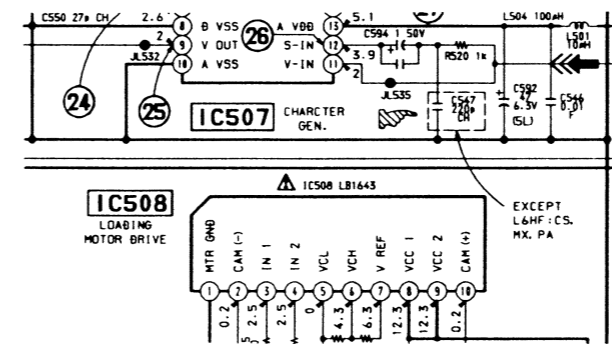


- : Points added parts.
- : Points deleted parts.
- : Points changed parts.

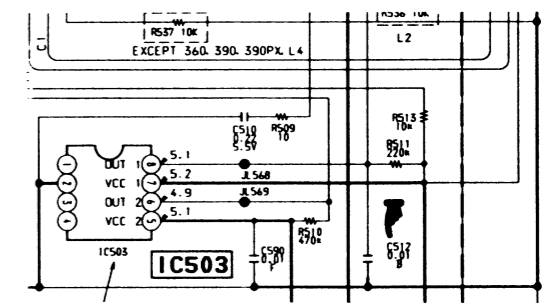
Page 4-14 Location: C-21 to G-24



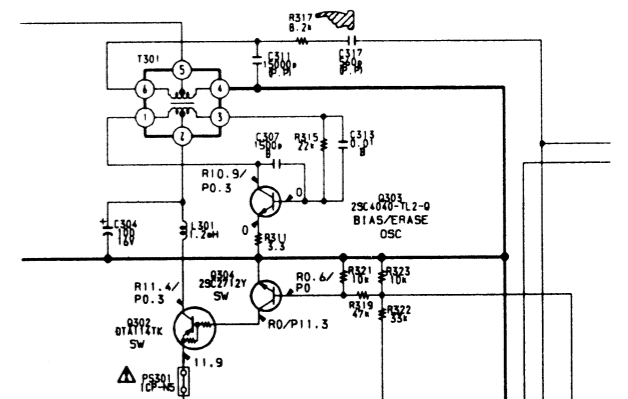
Page 4-14 Location: H-14 to I-17



Page 4-15 Location: K-23 to L-26



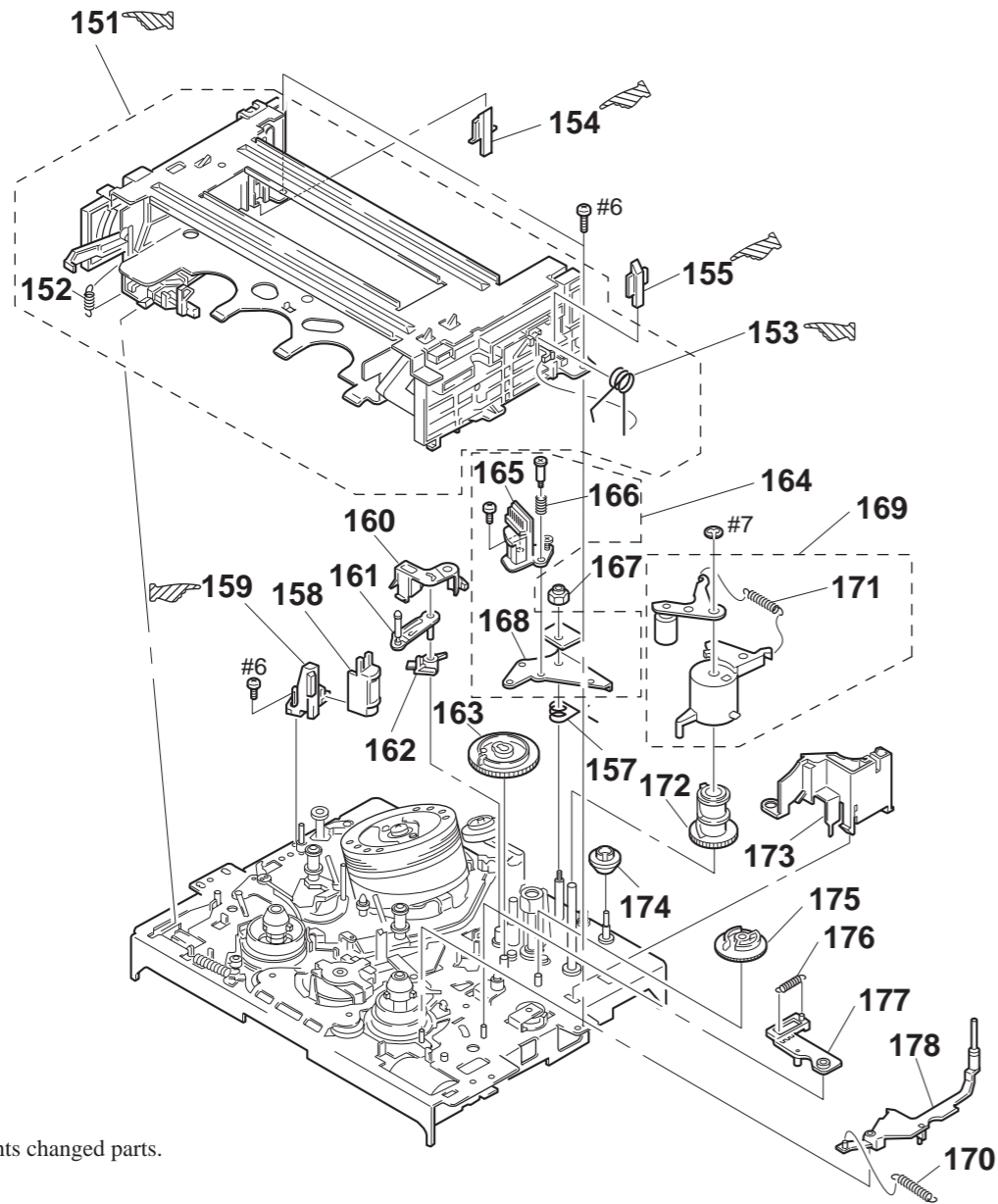
Page 4-17 Location: B-11



4. H MECHANISM MODIFICATION

Page 5-3

5-1-3. VHS MECHANISM DECK ASSEMBLY-1



Page 5-4

5-1-4. VHS MECHANISM DECK ASSEMBLY-2

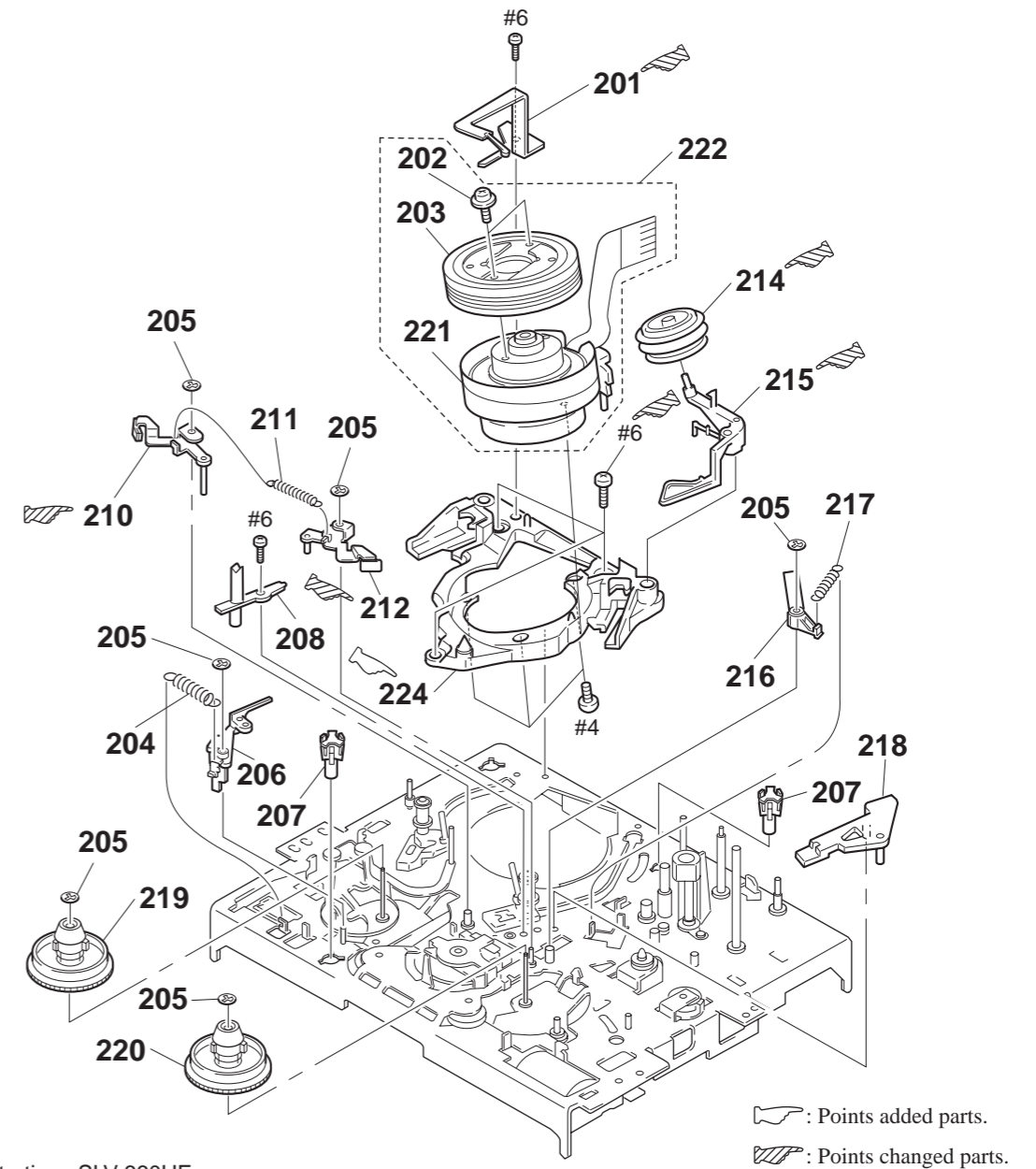
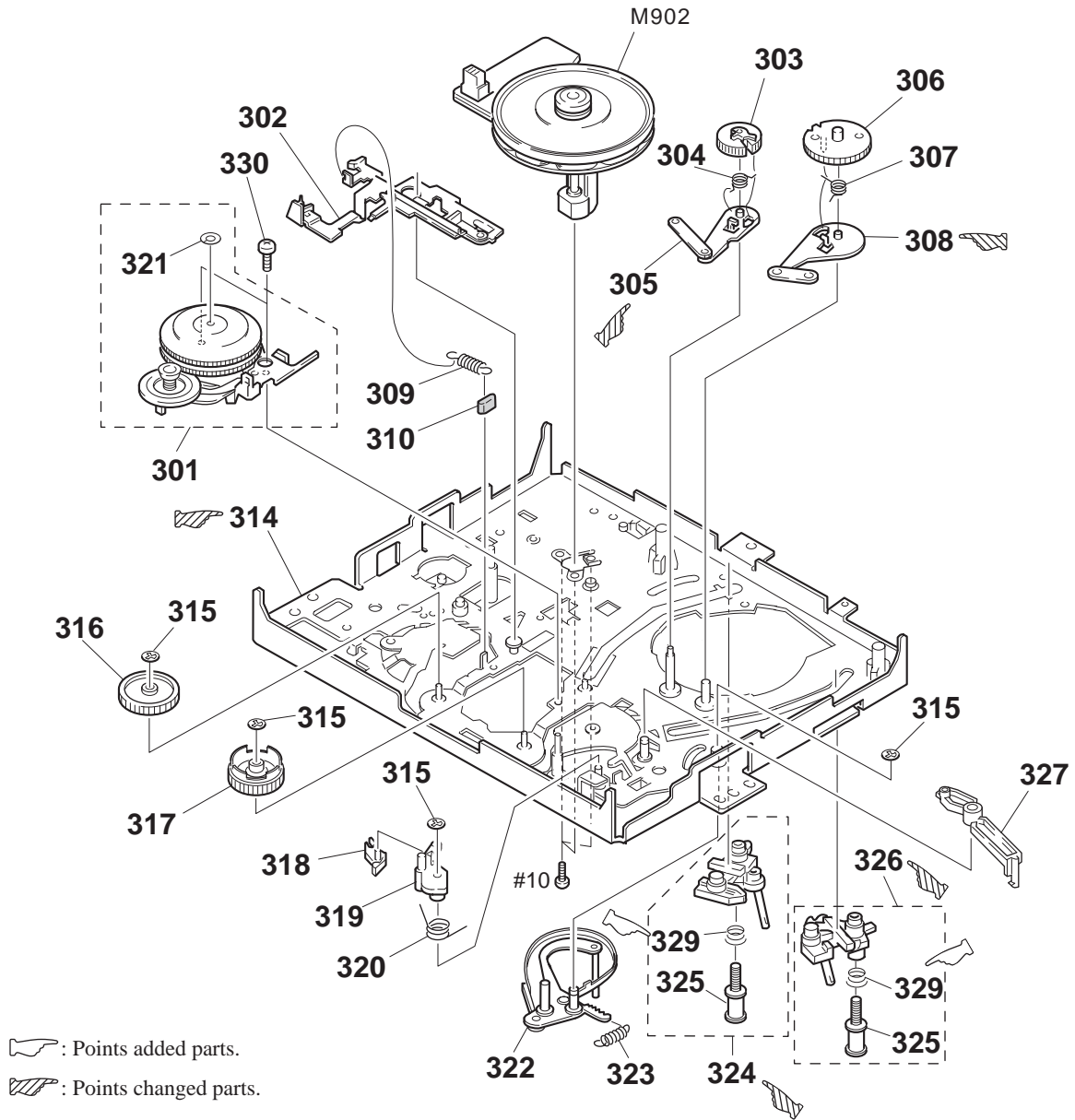


Illustration : SLV-660HF

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
151	A-6759-603-C	FL BLOCK ASSY		166	3-960-439-02	SPRING (ACE), COMPRESSION	
152	3-958-467-01	SPRING, TENSION COIL		167	3-942-867-01	NUT, AC HEIGHT ADJUSTMENT	
153	3-970-471-01	SPRING, TORSION		168	3-958-491-01	BASE, ACE	
154	3-970-472-01	PLATE, LIGHT GUIDE, END SENSOR		169	A-6746-072-A	PRESS BLOCK ASSY, PINCH	
155	3-970-473-01	PLATE, LIGHT GUIDE, TOP SENSOR		170	3-958-505-01	SPRING (SOFT BRAKE T), TENSION	
157	3-958-487-01	SPRING, (ACE) TORSION COIL		171	3-958-455-01	SPRING (PINCH), TENSION	
158	1-500-144-11	HEAD, FE		172	3-958-151-01	GEAR, ELEVATOR	
159	X-3945-348-2	FEH ASSY		173	3-958-454-01	OPNER, LID	
160	3-962-298-01	BRACKET, TG7 TAPE		174	3-958-501-01	SCREW, ACE ADJUSTMENT	
161	X-3944-797-1	TG8 ASSY		175	3-958-153-01	GEAR, PRESS	
162	3-958-421-01	HOLDER, TG8		176	3-958-462-01	SPRING (RVS BRAKE), TENSION	
163	3-958-152-01	GEAR, TG8		177	X-3943-885-1	ARM ASSY, RVS BRAKE	
164	A-6736-103-A	ACE BLOCK ASSY		178	X-3943-882-1	BRAKE (T) ASSY, SOFT	
165	1-506-485-11	PIN, CONNECTOR 6P					

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
201	X-3943-899-7	GROUND ASSY, SHAFT(EXCEPT L2)		215	3-958-508-02	ARM, HC	
202	2-643-205-01	SCREW		216	3-960-139-01	ARM, NEUTRALITY	
203	8-848-576-02	UPPER DRUM ASSY DZR-45-R (M901) (660HF/690HF/L6HF)		217	3-958-535-01	SPRING, TENSION	
204	3-958-443-01	SPRING, STRETCH COIL SPRING		218	3-960-138-01	ARM, PENDULUM COMPULSION	
205	3-669-595-00	WASHER (2), STOPPER		219	X-3943-902-1	TABLE, REEL (S) ASSY	
206	3-958-450-01	BRAKE (S), SOFT		220	X-3943-903-1	TABLE, REEL (T) ASSY	
207	3-958-390-01	SHAFT, PC BOARD		221	8-848-658-11	LOWER DRUM ASSY DZL-45B/J-RP (M901) (660HF/690HF/L6HF)	
208	3-958-391-01	PLATE, LIGHT GUIDE, LED		222	1-759-191-11	DRUM ASSY DZH-71B-R (M901)(L2)	
210	X-3945-443-1	BRAKE (S) ASSY, MAIN		222	8-848-681-11	DRUM ASSY DZH-73B/Q-RP (M901) (360/390/390PX/L4)	
211	3-958-517-01	SPRING, TENSIONCOIL		224	3-969-629-01	DRUM BASE	
212	X-3945-444-1	ARM (T) ASSY, MAIN BRAKE					
214	X-3944-363-4	ROLLER ASSY, HC					

5-1-6. VHS MECHANISM DECK ASSEMBLY-4



: Points added parts.

: Points changed parts.

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
301	A-6739-102-A	RKB BLOCK ASSY		317	3-962-959-01	GEAR (S-K), IDLER	
302	X-3943-897-1	LEVER ASSY, TRIGGER		318	3-958-533-01	CLAW, S WINDING	
303	3-958-485-02	GEAR (T), LOADING		319	3-958-532-01	ARM, S WINDING	
304	3-960-449-01	SPRING (T), TORSION COIL		320	3-958-534-01	SPRING, TORSION	
305	X-3943-891-3	LEVER (T) ASSY, LOADING		321	3-966-092-01	RING, RETAINING, SLIT WASHER	
306	3-958-476-01	GEAR (S), LOADING		322	X-3943-886-1	TG1 ASSY	
307	3-960-448-01	SPRING (S), TORSION COIL		323	3-958-492-01	SPRING (TG1), TENSION COIL	
308	X-3943-890-2	LEVER (S) ASSY, LOADING		324	A-6750-325-A	T BLOCK ASSY, SHUTTLE	
309	3-958-529-01	SPRING (MOMENT), TENSION		325	X-3944-378-1	ROLLER ASSY, GUIDE	
310	3-959-840-11	RUBBER, JOINT		326	A-6750-316-A	SHUTTLE (S) BLOCK ASSY	
314	X-3945-485-4	CHASSIS ASSY, MECHANICAL		327	3-958-504-01	ARM, FIXED RELEASE	
315	3-669-595-00	WASHER (2), STOPPER		329	3-965-178-01	SPRING	
316	3-962-960-01	GEAR (T-K), IDLER		M902	1-698-409-14	MOTOR, DC (CAPSTAN)	

SR700

5. POWER BLOCK REPAIR PARTS LIST

NOTE:

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifique.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
All resistors are in ohms.
METAL: metal-film resistor
METAL OXIDE: Metal Oxide-film resistor
F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
In each case, u: μ , for example:
uA...: μ A..., uPA..., μ PA...,
uPB..., *PB..., uPC..., μ PC...,
uPD..., μ PD...
- CAPACITORS:
uF: μ F
• COILS
uH: μ H

5-1 SR700 (US, Canadian, Mexican, Panamanian Model)

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
	1-468-072-11	POWER BLOCK SR700 *****				< FUSE >	
		< CAPACITOR >				< IC >	
Δ C108	1-107-401-11	ELECT 150uF 200V		Δ F101	1-533-296-11	FUSE	
C109	1-126-963-11	ELECT 4.7uF 50V				< IC >	
C202	1-126-967-11	ELECT 47uF 50V		Δ IC201	8-759-420-19	IC AN1431T	
C203	1-126-183-11	ELECT 1000uF 16V				< PHOTOCOUPLER >	
C204	1-126-935-11	ELECT 470uF @ 16V		Δ PC101	8-719-018-29	PHOTOCOUPLER ON3131	
C205	1-126-797-11	ELECT 1000uF 10V				< TRANSISTOR >	
C206	1-126-935-11	ELECT 470uF 16V		Δ Q101	8-729-904-98	TRANSISTOR 2SC4054	
C207	1-126-933-11	ELECT 100uF 16V		Δ Q102	8-729-012-31	TRANSISTOR 2SC4040Q	
C208	1-126-960-11	ELECT 1uF 50V				< RESISTOR >	
		< DIODE >		R108	1-260-314-51	CARBON 68 1/2W	
Δ D101	8-719-510-06	DIODE S1WBA60		R109	1-260-314-51	CARBON 68 1/2W	
Δ D102	8-719-054-32	DIODE ERA15-06		R110	1-247-825-11	CARBON 560 1/4W	
Δ D103	8-719-058-91	DIODE AG01A					
Δ D104	8-719-920-32	DIODE ERA15-02					
Δ D105	9-900-514-01	DIODE MA165					
Δ D106	8-719-109-61	ZENNER RD3.0ES					
Δ D201	9-900-534-01	DIODE ERA18-02					
Δ D202	8-719-052-52	DIODE 31DF2					
Δ D203	8-719-018-83	DIODE D2S4M					
Δ D204	9-900-534-01	DIODE ERA18-02					
Δ D205	8-719-160-62	DIODE RD15FB					

**5-2. HS-721SF
(Chilean, Philippine Model)**

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
	1-468-073-11	POWER BLOCK HS-721SF *****		△ D201	8-719-052-89	DIODE D1NL40	
		< CAPACITOR >		△ D202	8-719-018-25	DIODE D2L20U	
△ C108	1-125-717-11	ELECT 150uF 400V		△ D203	8-719-018-83	DIODE D2S4M	
C112	1-107-882-11	ELECT 100uF 16V		△ D204	8-719-026-52	DIODE 10ELS2	
C201	1-126-968-11	ELECT 100uF 50V		△ D205	8-719-110-49	ZENNER RD18ES	
C202	1-111-040-11	ELECT 820uF 16V				< FUSE >	
C203	1-126-767-11	ELECT 1000uF 16V		△ F101	1-532-388-31	FUSE 2A 250V	
		< DIODE >				< IC >	
C204	9-980-071-01	ELECT 1000uF 10V		△ IC101	9-939-634-01	IC MIP164	
C205	9-980-071-01	ELECT 1000uF 10V		△ IC201	8-759-420-19	IC AN1431	
C206	1-104-661-11	ELECT 330uF 16V				< PHOTOCOUPLER >	
C207	1-126-960-11	ELECT 1uF 50V		△ PC101	8-749-924-84	PHOTOCOUPLER PS-2561	
C212	1-126-964-11	ELECT 10uF 50V				< THYRISTOR >	
△ D101	8-719-510-06	DIODE S1WBA60		THY1	8-719-046-54	THYRISTOR 03P4M	
△ D102	8-719-312-16	DIODE EG01C					
D103	8-719-110-41	ZENNER RD15ES					
△ D104	9-980-073-01	DIODE 1SS270A					
D106	8-719-110-30	ZENNER RD12ES					

Note: The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

6. MECHANISM ERROR CODE INDICATION

Indication on the fluorescent display tube.

E F F
" "

6-1. 6-2.

6-1. Error State

- 0: No error
- 1: Drum error
- 2: Reel malfunction
- 3: Tape loading error
- 4: Cassette loading error

6-2. Mechanism Mode

- 0: Power-on eject
- 1: Power-on initial
- 2: Power-off eject
- 3: Power-off stop
- 4: FF
- 5: REW
- 6: REC
- 7: REC pause
- 8: Power-on stop
- 9: PB
- 10: FWD ×1
- 11: FWD ×2
- 12: CUE
- 13: PB pause
- 14: RVS pause
- 15: RVS ×1
- 16: RVS ×2
- 17: REV
- 18: Power-off initial
- 19: Mechanism error (power off)
- 20: REW play
- 21: Cassette loading
- 22: Tape loading
- 23: Power-off loading
- 24: Mechanism error (power on)
- 25: Power-on eject initial
- 26: Power-off eject initial
- 27: APC REC
- 28: Cassette loading (no auto PB check)

**SLV-360/390/390PX/660HF/690HF/L2MX/L2PA/L2PL/L4CS/
L4MX/L4PA/L4PL/L6HFCS/L6HFMX/L6HFPA/L6HFPL**