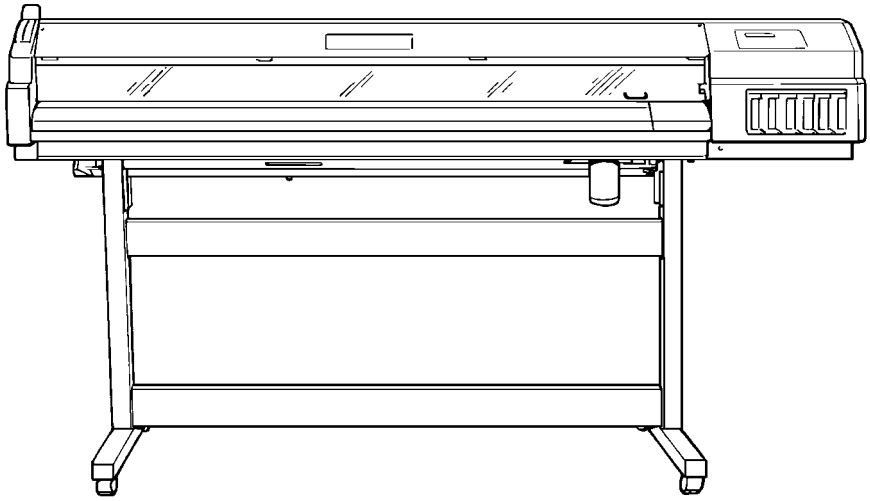
SERVICE NOTES

Roland

HI-FI JET

HIGH FIDELITY 6 COLOR INKJET PRINTER

FJ-52 / 42



Contents

Second Edition

FJ-52/42 '00.Dec

Printed in Japan

Roland DG Corporation

5205-01

Revision Record

Revision No.	Date	Description of Changes	Approval	Issued by
0	2000.5.19	First Edition	Inagaki	Kaneko
1	2000.12.29	1-15 : CARRIAGE WIRE TENSION ADJUSTMENT has been changed.	Nozawa	Kawai
		1-3 : Size of WASHER FLAT has been changed.		
		1-3 : A WASHER FLAT has been added in the picture.		

To Ensure Safe Work

About ⚠WARNING and ⚠CAUTION Notices

⚠WARNING	Used for instructions intended to alert the operator to the risk of death or severe injury should the unit be used improperly.
⚠CAUTION	Used for instructions intended to alert the operator to the risk of injury or material damage should the unit be used improperly. * Material damage refers to damage or other adverse effects caused with respect to the home and all its furnishings, as well to domestic animals or pets.

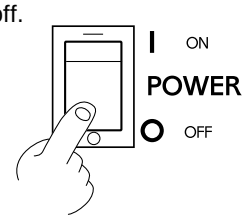
About the Symbols

	The △ symbol alerts the user to important instructions or warnings. The specific meaning of the symbol is determined by the design contained within the triangle. The symbol at left means "danger of electrocution."
	The ⃠ symbol alerts the user to items that must never be carried out (are forbidden). The specific thing that must not be done is indicated by the design contained within the circle. The symbol at left means not to touch.
	The ● symbol alerts the user to things that must be carried out. The specific thing that must be done is indicated by the design contained within the circle. The symbol at left means the power-cord plug must be unplugged from the outlet.

⚠WARNING

Turn off the primary power SW before servicing.

Power SW still supplied even secondary SW is turned off.



Do not recharge, short-circuit, disassemble the lithium battery, nor put it into fire.

It may cause heat, explosion and fire.

Do not use the lithium battery by mixing the new one with the old one nor mixing the different types together.

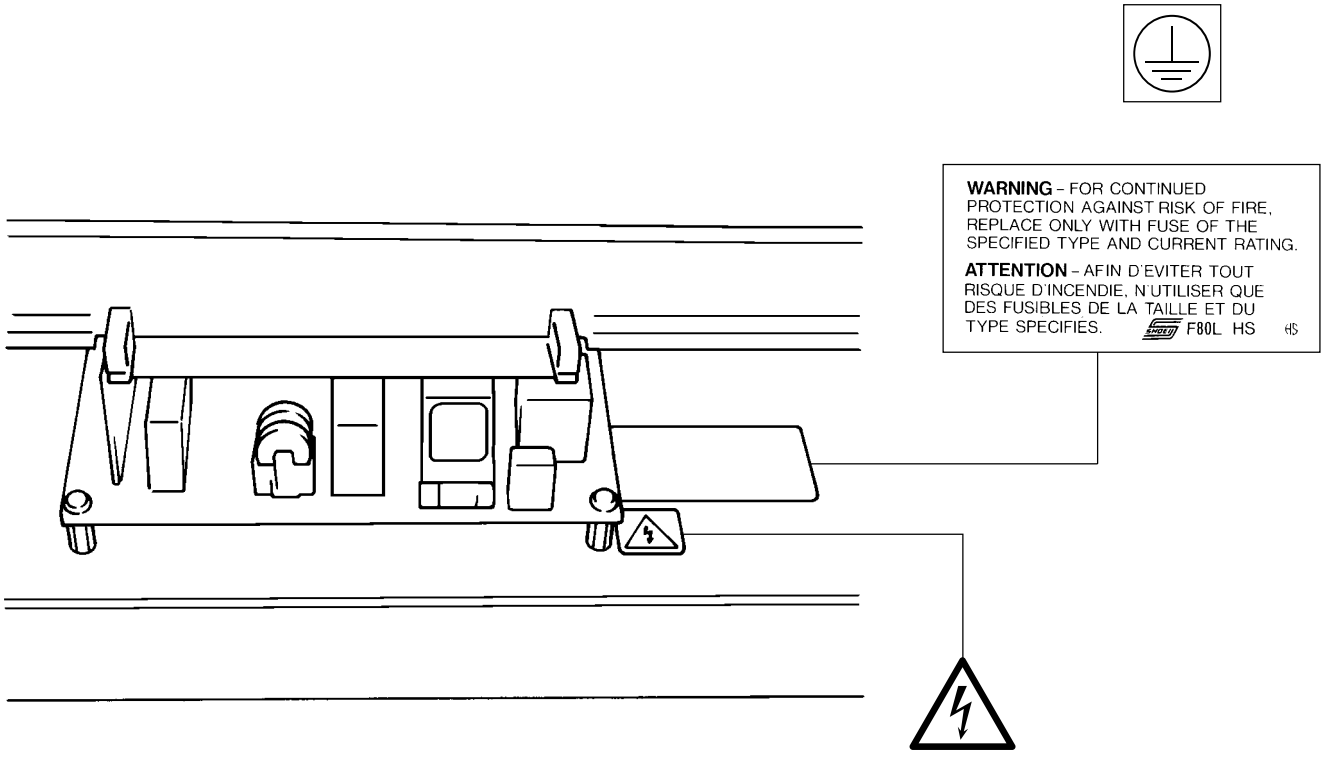
It may cause heat, explosion and fire.

Put tape around the lithium battery for insulation for disposal or preservation.

It may cause heat, explosion and fire.

About the Labels Affixed to the Unit

These labels are affixed to the body of this product.
The following figure describes the location.



In addition to the ⚠WARNING and ⚠CAUTION symbols, the symbols shown below are also used.

: Tips and advice before the adjustment.

: Indicates amount for Pen Pressure and Tension.

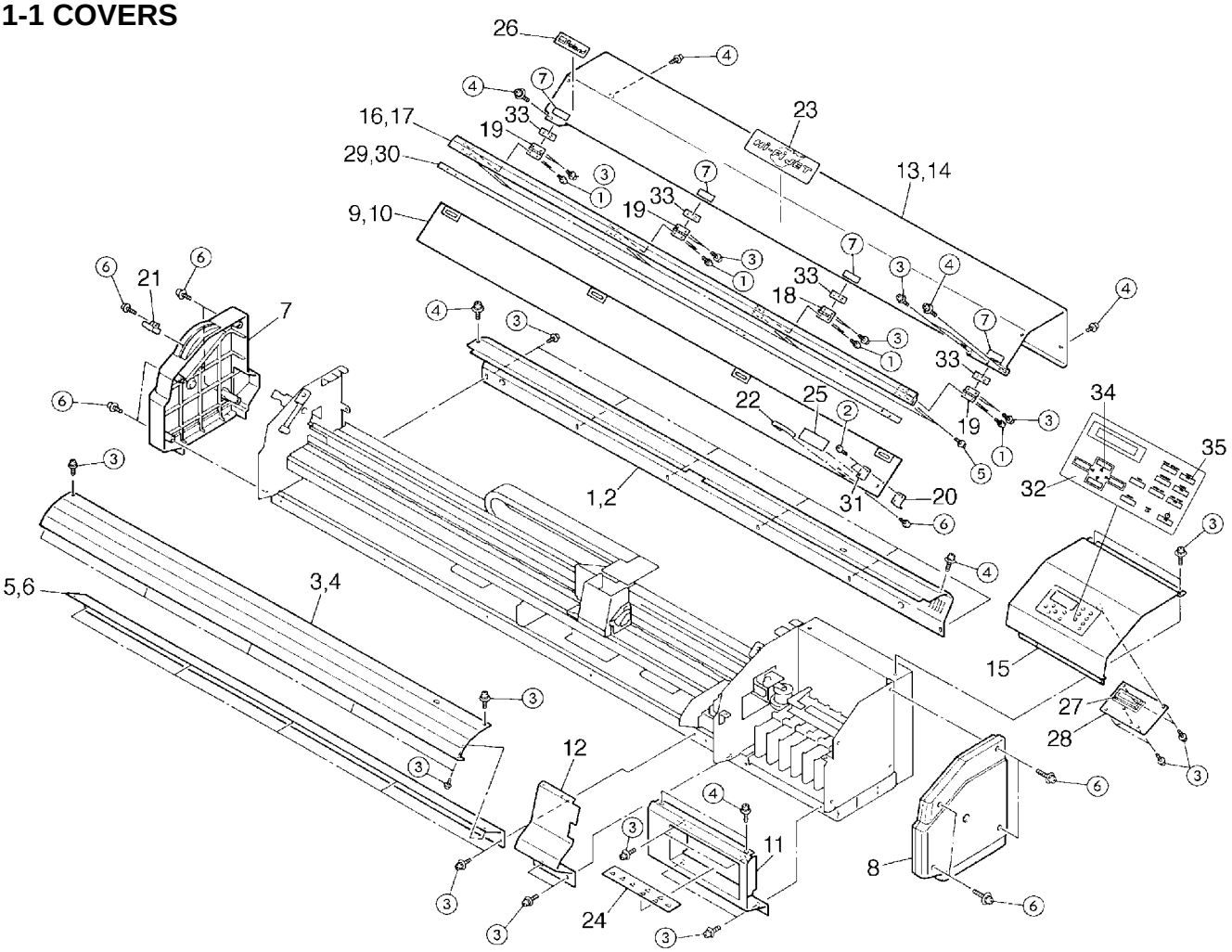
: Indicates tightening torque.

: Indicates clearance.

- MEMO -

1 Structure & Spare Parts

1-1 COVERS



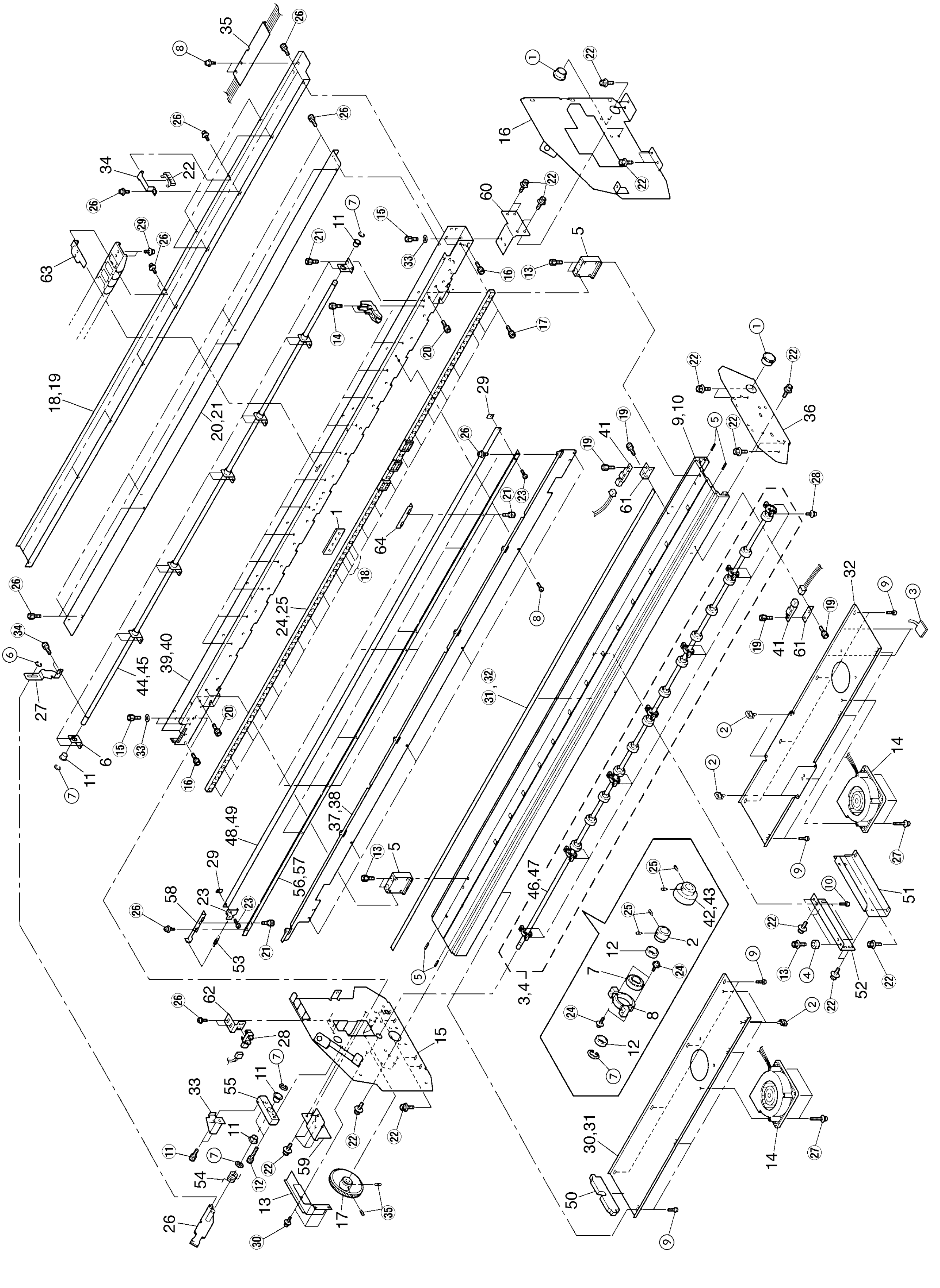
PARTS LIST -Main Parts-

	Parts No.	Parts Name	FJ-52	FJ-42
1	22095105	APRON,B FJ-40		●
2	22095106	APRON,B FJ-50	●	
3	22095104	APRON,F FJ-40		●
4	22095103	APRON,F FJ-50	●	
5	22095124	APRON,F UNDER FJ-42		●
6	22095123	APRON,F UNDER FJ-52	●	
7	22805365	ASS'Y,COVER SIDE L FJ-52	●	●
8	22805366	ASS'Y,COVER SIDE R FJ-52	●	●
9	22805367	ASS'Y,COVER FRONT FJ-42		●
10	22805368	ASS'Y,COVER FRONT FJ-52	●	
11	22025438	COVER,I/C FJ-52	●	●
12	22025292	COVER,PUMP FJ-50	●	●
13	22025440	COVER,RAIL FJ-42		●
14	22025439	COVER,RAIL FJ-52	●	
15	22025437	COVER,TOP FJ-52	●	●
16	22115797	FRAME,COVER F FJ-42		●
17	22115796	FRAME,COVER F FJ-52	●	
18	22325106	HINGE,001	●	●
19	22325113	HINGE,006	●	●
20	21645101	HOOK,INT SW CM-500	●	●
21	22475106	KNOB CJ-500	●	●
22	12479103	KNOB,UGF-50	●	●
23	22535250	LABEL,HI-FIJET FJ-52 #LA141	●	●
24	22535128	LABEL,SET INK FJ-50 #929	●	●
25	22535134	LABEL,CAUTION COVER FJ50 #LA14	●	●
26	22535220	LABEL,CORPORATE LOGOTYPE #LA79	●	●
27	15029402	LCD RCM2065R-A 16*2	●	●
28	7468240010	PANEL BOARD ASS'Y FJ-52	●	●
29	22055383	PLATE,COVER F FJ-40		●
30	22055382	PLATE,COVER F FJ-50	●	
31	22055356	PLATE,F COVER CM-500	●	●
32	22665259	SHEET,PANEL SW FJ-52	●	●
33	22165184	SPACER,HINGE FJ-50	●	●
34	22495205	KEYTOP,DS-LX1H MWG	●	●
35	22495204	KEYTOP,DS-LD1H MWG	●	●

PARTS LIST -Supplemental Parts-

	Parts Name	
①	SCREW BINDING HEAD	BC 3X4
②	SCREW BINDING HEAD	BC 3X6
③	SCREW W-SEMS	BC 3X6
④	SCREW W-SEMS	BC 4X6
⑤	SCREW W-SEMS	BC 3X10
⑥	SCREW W-SEMS	BC 4X10
⑦	LABEL BLIND CJ-70	

1-2 FRAME



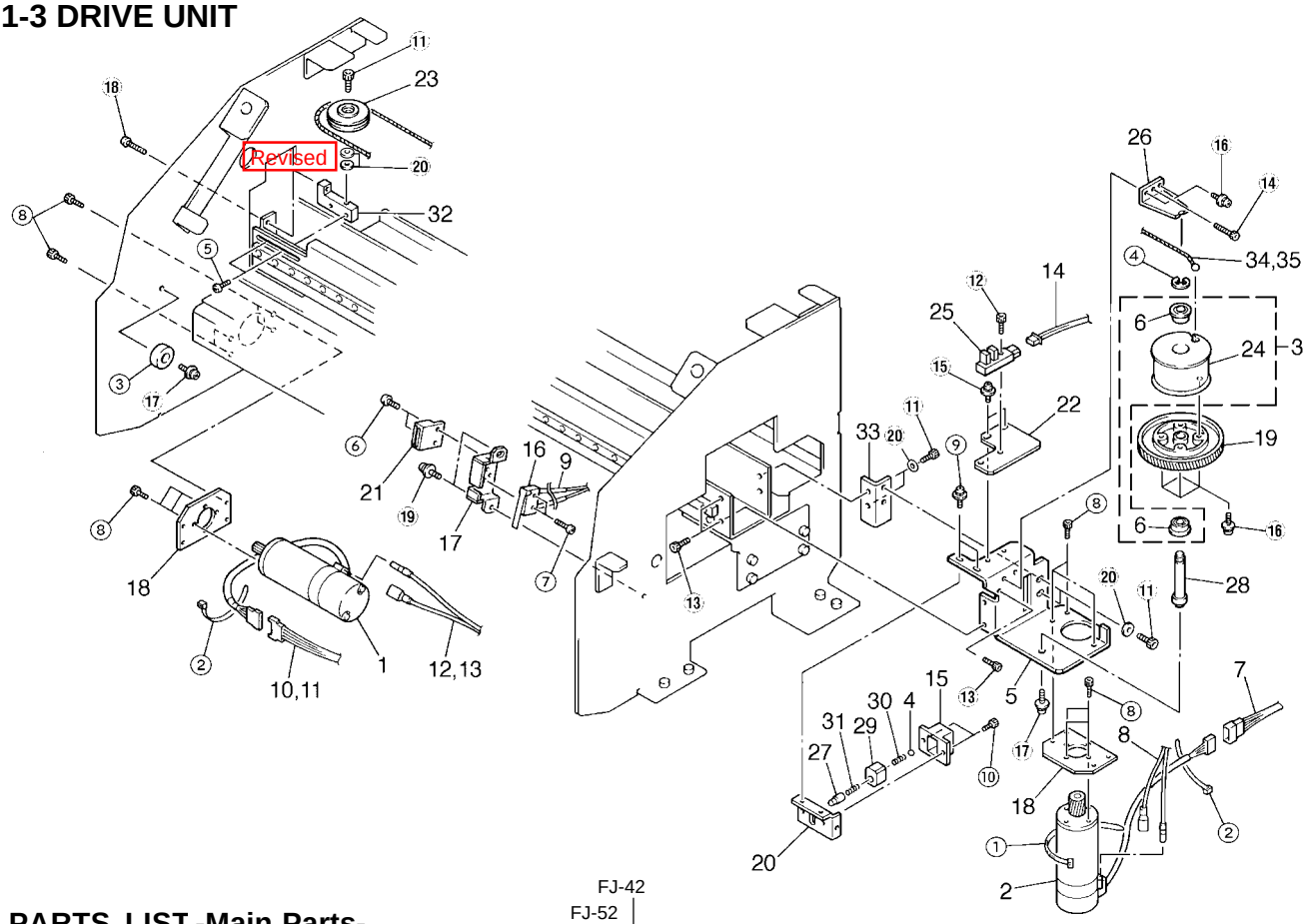
PARTS LIST -Main Parts-

	Parts No.	Parts Name	FJ-52	FJ-42
1	21905134	ADAPTER,RAIL FJ-50	●	●
2	22165129	AL SPACER	●	●
3	22805312	ASS'Y,GRIT ROLLER FJ-40		●
4	22805311	ASS'Y,GRIT ROLLER FJ-50	●	
5	22355660	BASE,RAIL FJ-50	●	●
6	22355662	BASE,SHAFT OILES FJ-50	●	●
7	22175870	BEARING 10-19ZZ	●	●
8	22115106	BEARING HOUSING A	●	●
9	22005116	BED,FJ-40		●
10	22005115	BED,FJ-50	●	
11	12159563	BUSH,80F-1006	●	●
12	22165165	COLLAR	●	●
13	22025298	COVER,GEAR FJ-50	●	●
14	21715104	FAN,SCIROCCO 109BF24HA2-10	●	●
15	22115758	FRAME,SIDE L FJ-50	●	●
16	22115757	FRAME,SIDE R FJ-50	●	●
17	21685119	GEAR,S300S10	●	●
18	22135552	GUIDE ,TUBE FJ-40		●
19	22135553	GUIDE ,TUBE FJ-50	●	
20	22135550	GUIDE,CABLE FJ-40		●
21	22135551	GUIDE,CABLE FJ-50	●	
22	22135544	GUIDE,TUBE POM FJ-50	●	●
23	21655131	HOLDER,LINEAR SCALE CJ-70	●	●
24	21895123	L-BEARING,3RSR9KZUUCS+1540LM		●
25	21895122	L-BEARING,3RSR9KZUUCS+1760LM	●	
26	22145436	LEVER,CAM PINCH FJ-50	●	●
27	22145434	LEVER,SHAFT P FJ-50	●	●
28	15229705	PHOTO INTERRUPTER GP1A71A1	●	●
29	22055316	PLATE,LINEAR SCALE CJ-70	●	●
30	22055369	PLATE,SHUTTER L FJ-40		●
31	22055368	PLATE,SHUTTER L FJ-50	●	
32	22055370	PLATE,SHUTTER R FJ-50	●	●
33	22055377	PLATE,STOPPER FJ-50	●	●
34	22055378	PLATE,TUBE GUIDE FJ-50	●	●
35	22135554	GUIDE,INK TUBE FJ-50	●	●
36	22115804	FRAME,PUMP FJ-52	●	●
37	22185356	RAIL,ENCODER FJ-40		●
38	22185357	RAIL,ENCODER FJ-50	●	
39	22185358	RAIL,GUIDE FJ-40		●
40	22185359	RAIL,GUIDE FJ-50	●	
41	15229505	SENSOR,INTERRUPTER GP2A25	●	●
42	22075115	SET,G-ROLLER FJ-40		●
43	22075114	SET,G-ROLLER FJ-50	●	
44	22295172	SHAFT,PINCH 10 FJ-40		●
45	22295170	SHAFT,PINCH 10 FJ-50	●	
46	22295176	SHAFT,X DRIVE FJ-40		●
47	22295175	SHAFT,X-DRIVE FJ-50	●	
48	22665235	SHEET,LINEAR SCALE CJ-60		●
49	22665227	SHEET,LINEAR SCALE CJ-70	●	
50	22125425	SHUTTER,FJ-50	●	●
51	22165173	SPACER,BED LOWER FJ-50	●	●
52	22165172	SPACER,BED UPPER FJ-50	●	●
53	22175122	SPRING,BACKUP PNC-960	●	●
54	22175164	SPRING,LEVER FJ-50	●	●
55	22035133	STAND,LEVER FJ-50	●	●
56	22715165	STAY,LINEAR SCALE FJ-40		●
57	22715164	STAY,LINEAR SCALE FJ-50	●	
58	22715163	STAY,LINEAR SPRING FJ-50	●	●
59	22715158	STAY,RAIL L FJ-50	●	●
60	22715157	STAY,RAIL R FJ-50	●	●
61	22715156	STAY,SENSOR FJ-50	●	●
62	22715159	STAY,SENSOR PINCH FJ-50	●	●
63	22715162	STAY,TUBE FJ-50	●	●
64	22325421	SUPPORT,LINEAR SCALE FJ-50	●	●

PARTS LIST -Supplemental Parts-

	Parts Name	
①	BUSH NB-19	
②	CLAMP WIRE PLWS-1U	
③	CLIP CA-19	
④	NUT HEXAGONAL	Cr M4
⑤	PIN SPRING	SUS 2.5X8
⑥	RING E-RING	ETW-3
⑦	RING E-RING	ETW-7
⑧	SCREW BINDING HEAD	BC 3X6
⑨	SCREW BINDING HEAD P-TIGHT	BC 3X6
⑩	SCREW BINDING HEAD P-TIGHT	BC 3X8
⑪	SCREW FLANGE SOCKET	Cr 3X8
⑫	SCREW HEXAGONAL CAP	BC 4X20
⑬	SCREW HEXAGONAL CAP	BC 4X15
⑭	SCREW HEXAGONAL CAP	BC 4X4
⑮	SCREW HEXAGONAL CAP	BC 4X6
⑯	SCREW HEXAGONAL CAP	BC 3X4
⑰	SCREW HEXAGONAL CAP	BC 2.6X6
⑱	SCREW HEXAGONAL CAP	BC 3X8
⑲	SCREW HEXAGONAL CAP	BC 3X6
⑳	SCREW HEXAGONAL CAP	BC 4X10
㉑	SCREW HEXAGONAL CAP	Cr 3X4
㉒	SCREW HEXAGONAL CAP+FW	Cr 4X12
㉓	SCREW PAN HEAD	Cr 3X5
㉔	SCREW PAN HEAD+FW	Cr 3X4
㉕	SCREW SOCKET SET WP	Cr 3X3
㉖	SCREW W-SEMS	BC 3X6
㉗	SCREW W-SEMS	BC 3X40
㉘	SCREW W-SEMS	BC 3X12
㉙	SCREW W-SEMS	BC 4X10
㉚	SCREW W-SEMS	BC 4X6
㉛	TAPE REFLECTION FNS50 8X10	L=1576MM
㉜	TAPE REFLECTION FNS50 8X10	L=1351MM
㉝	WASHER FLAT	Cr 4X10X0.8
㉞	SCREW HEX.CAP+SPW+NYLOCK	Cr 3X8
㉟	SCREW SOCKET SET WP	BC 3X5

1-3 DRIVE UNIT



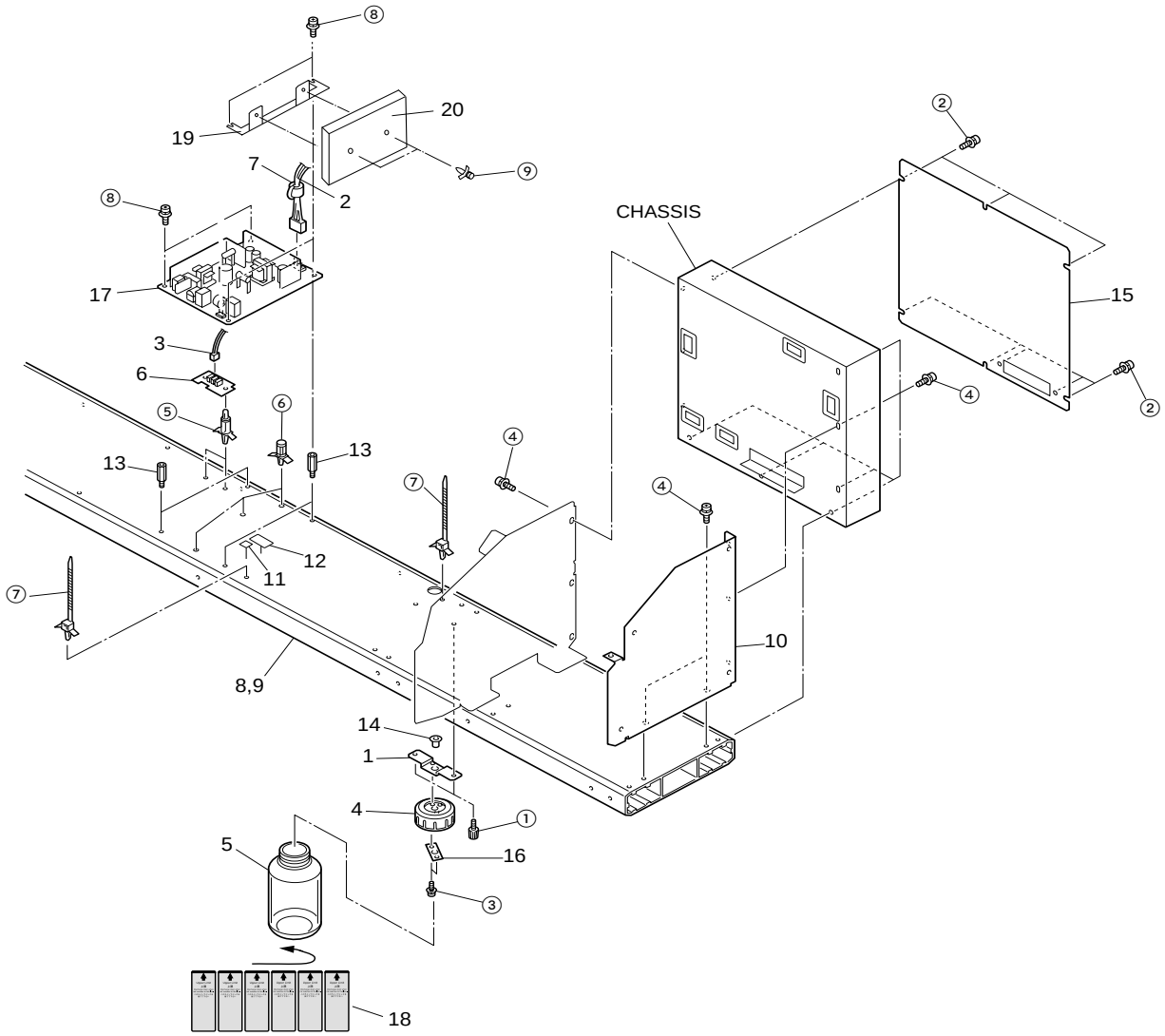
PARTS LIST -Main Parts-

	Parts No.	Parts Name	FJ-52	FJ-42
1	22805310	ASS'Y,MOTOR X FJ-50	●	●
2	22805309	ASS'Y,MOTOR Y FJ-50	●	●
3	22805209	ASS'Y,PULLEY HD48.46S16 CJ-70	●	●
4	11869103	BALL,4MM	●	●
5	22355661	BASE,MOTOR Y FJ-50	●	●
6	22175815	BEARING F8-16ZZ	●	●
7	23505426	CABLE-ASSY C ENCORDER FJ-50	●	●
8	23505425	CABLE-ASSY C POWER FJ-50	●	●
9	23505433	CABLE-ASSY COVER SW FJ-50	●	●
10	23505436	CABLE-ASSY G ENCODER FJ-40		●
11	23505431	CABLE-ASSY G ENCODER FJ-50	●	
12	23505435	CABLE-ASSY G POWER FJ-40		●
13	23505432	CABLE-ASSY G POWER FJ-50	●	
14	23505421	CABLE-ASSY SENSOR FJ-50	●	●
15	21365103	CASE,LOCK CJ-70	●	●
16	13169102	COVER SW R (AVT32344)	●	●
17	22025295	COVER,INT SW FJ-50	●	●
18	21995109	FLANGE,MOTOR FJ-50	●	●
19	21685116	GEAR,H235S20(B8)	●	●
20	21345101	LOCK,STAY CJ-70	●	●
21	12399102	MAGNET CATCH TL-105	●	●
22	22055374	PLATE,SENSOR CARRIAGE FJ-50	●	●
23	12179723	PULLEY WITH BEARING	●	●
24	21975117	PULLEY,HD48.46S16(B31C36.5)	●	●
25	15229506	SENSOR,INTERRUPTER,GP1A05A5	●	●
26	22145122	SHAFT STAY NO.1	●	●
27	22295117	SHAFT,LOCK CJ-70	●	●
28	22295118	SHAFT,PULLEY CJ-70	●	●
29	22185101	SLIDER,LOCK CJ-70	●	●
30	22175134	SPRING,A CJ-70	●	●
31	22175160	SPRING,LOCK FJ-50	●	●
32	22035136	STAND,PULLEY FJ-50	●	●
33	22715161	STAY,MOTOR FJ-50	●	●
34	21945123	WIRE,Y FJ-40		●
35	21945122	WIRE,Y FJ-50	●	

PARTS LIST -Supplemental Parts-

	Parts Name	
①	BINDER T-18L	204MM
②	BINDER T-18S	80MM
③	CUSHION RUBBER K17	
④	RING E-RING	ETW-6
⑤	SCREW BINDING HEAD	BC 3X10
⑥	SCREW BINDING HEAD	BC 3X4
⑦	SCREW BINDING HEAD	BC 2.3X8
⑧	SCREW FLANGE SOCKET	Cr 3X8
⑨	SCREW FLANGE SOCKET	Cr 3X6
⑩	SCREW HEXAGONAL CAP	BC 3X6
⑪	SCREW HEXAGONAL CAP	Cr 4X8
⑫	SCREW HEXAGONAL CAP	BC 4X10
⑬	SCREW HEXAGONAL CAP	BC 3X12
⑭	SCREW HEXAGONAL CAP	BC 4X8
⑮	SCREW W-SEMS	BC 3X6
⑯	SCREW W-SEMS	BC 3X12
⑰	SCREW W-SEMS	BC 4X10
⑱	SCREW W-SEMS	BC 4X15
⑲	SCREW W-SEMS	BC 4X6
⑳	WASHER FLAT Revised	BC 4X8X0.8

1-4 BASE FRAME



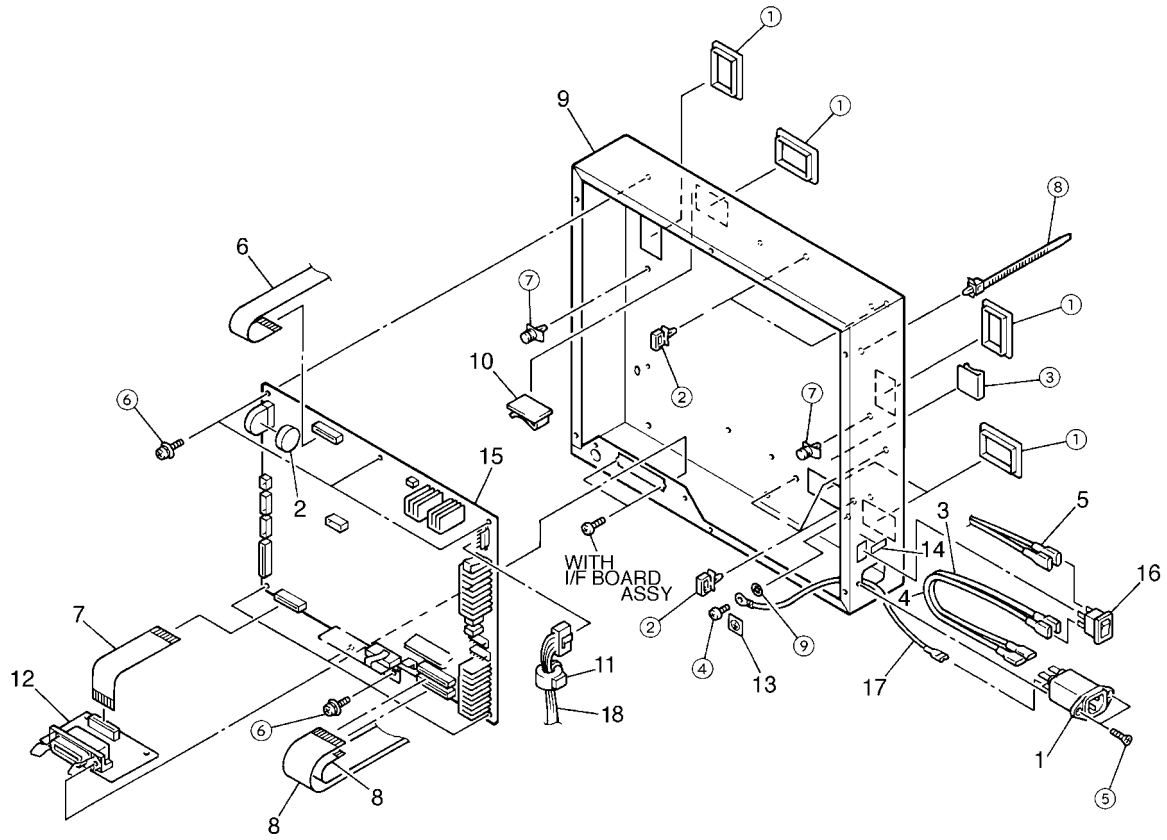
PARTS LIST -Main Parts-

	Parts No.	Parts Name	FJ-52	FJ-42
1	21985120	BRACKET,INK CATCH TANK FJ-50	●	●
2	23505420	CABLE-ASS'Y POWER FJ-50	●	●
3	23505423	CABLE-ASSY FAN JUNCTION FJ-50	●	●
4	22335127	CAP,BOTTLE PMP CJ-70	●	●
5	11369108	CASE,PMP BOTTLE	●	●
6	7468240030	FAN JUNCTION BOARD ASS'Y	●	●
7	12399334	FILTER(E),TFC-16-8-13	●	●
8	22115756	FRAME,AL FJ-40		●
9	22115754	FRAME,AL FJ-50	●	
10	22115755	FRAME,SUB R FJ-50	●	●
11	22505244	LABEL,FLASH-LIGHTING NO.E-582	●	●
12	22505122	LABEL,WARNING FUSE REPLACE#347	●	●
13	21575109	NUT,BOSS H14MM S3MM N3MM	●	●
14	22155763	OILES BUSH 80F-0806	●	●
15	22055376	PLATE,CHASSIS FJ-50	●	●
16	22055317	PLATE,INK CATCH TANK CJ-70	●	●
17	22425107U0	POWER UNIT SWITCHING FJ-50	●	●
18	22535144	LABEL,DRAIN BOTTLE#LA29	●	●
19	22355727	BASE,FILTER CJ-500	●	●
20	22275113	FILTER CJ-500	●	●

PARTS LIST -Supplemental Parts-

	Parts Name	
①	SCREW "HIPICK"(WHITE)	3X10
②	SCREW W-SEMS	BC 3X6
③	SCREW W-SEMS	SUS 3X8
④	SCREW W-SEMS	BC 4X10
⑤	SPACER PCB-8L	
⑥	SPACER PCB-8S	
⑦	TIE RT30SSF5	
⑧	SCREW W-SEMS	BC3x8
⑨	SPACER PUSH PS-4-01	

1-5 CHASSIS



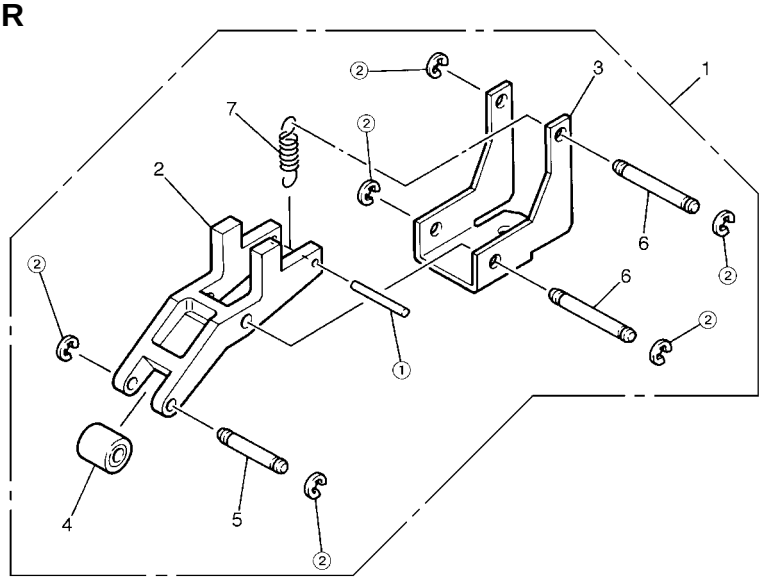
PARTS LIST -Main Parts-

	Parts No.	Parts Name	FJ-52	FJ-42
1	13429746	AC INLET SUP-J3G-E+FILTER	●	●
2	15009101	BATTERY CR2032	●	●
3	23505462	CABLE-ASSY JUNBI A FJ-50	●	●
4	23505463	CABLE-ASSY JUNBI B FJ-50	●	●
5	23505419	CABLE-ASSY JUNBI D FJ-50	●	●
6	23475150	CABLE-CARD 20P 420L BB	●	●
7	23475151	CABLE-CARD 22P 120L BB	●	●
8	23475153	CABLE-CARD 28P 2280L BB HIGH-V	●	●
9	22815131	CHASSIS,FJ-50	●	●
10	11769103	CLAMP MFC-3000	●	●
11	12399334	FILTER(E),TFC-16-8-13	●	●
12	7468240040	I/F BOARD ASS'Y FJ-50	●	●
13	22505242	LABEL,EARTH MARK-1 NO.E-580	●	●
14	22535117	LABEL,POWER CM-500 NO.893	●	●
15	7468214000	MAIN BOARD ASS'Y FJ-50	●	●
16	13129170	POWER SW AJ7201B	●	●
17	23505899	WIRE,C GRX-410	●	●
18	23505420	CABLE-ASSY POWER FJ-50	●	●

PARTS LIST -Supplemental Parts-

	Parts Name	
①	BUSH SQUARE SB-4025	
②	CLAMP WIRE PLWS-1U	
③	CLIP FLAT CABLE	MFC-1000
④	SCREW BINDING HEAD	SUS 4X5
⑤	SCREW OVAL HEAD	BC 3X8
⑥	SCREW W-SEMS	BC 3X6
⑦	SPACER PUSH	PS-4-01
⑧	TIE RT30SSF5	
⑨	WASHER IN SIDE TEETH	Cr M4

1-6 PINCH ROLLER



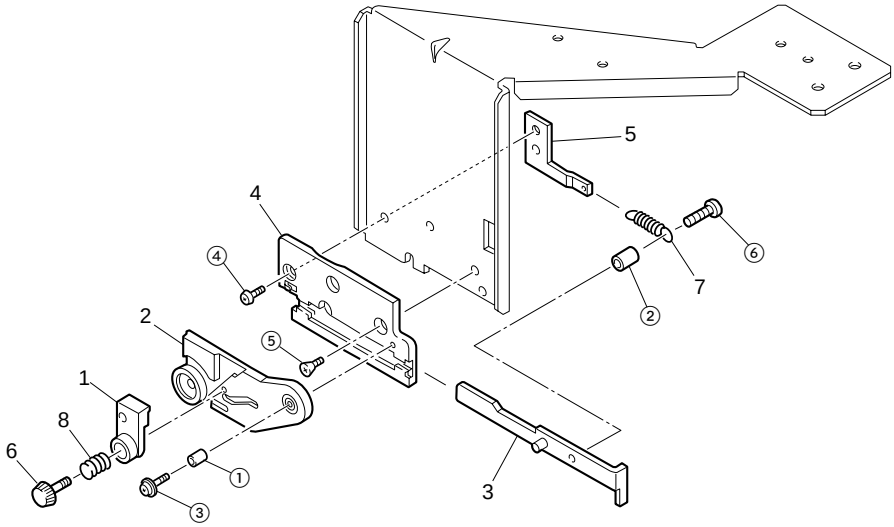
PARTS LIST -Main Parts-

	Parts No.	Parts Name	FJ-52	FJ-42
1	22805313	ASS'Y,P-ROLLER FJ-50	●	●
2	22145433	LEVER,PINCH FJ-50	●	●
3	22055361	PLATE,PINCH FJ-50	●	●
4	21505108	ROLLER,PINCH FJ-50	●	●
5	22295173	SHAFT,PINCH 18 FJ-50	●	●
6	22295174	SHAFT,PINCH 22.5 FJ-50	●	●
7	22175162	SPRING,PINCH 700 FJ-50	●	●

PARTS LIST -Supplemental Parts-

	Parts Name	
①	PIN PARALLEL	SUS 2X15H7
②	RING E-RING	ETW-2

1-7 AUTO CUTTER



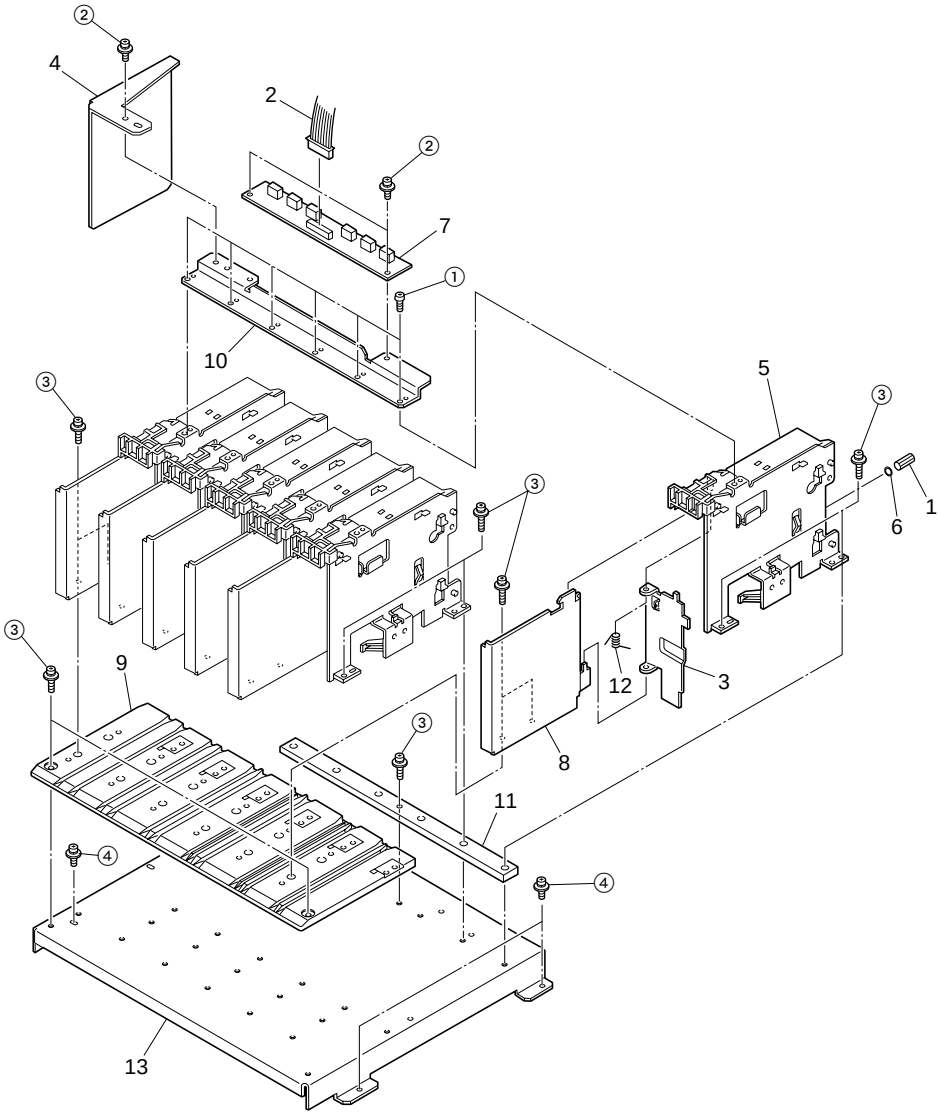
PARTS LIST -Main Parts-

	Parts No.	Parts Name	FJ-52	FJ-42
1	22805292	ASS'Y,CLAMP BLADE CM-500	●	●
2	22805291	ASS'Y,HOLDER BLADE CM-500	●	●
3	22805306	ASS'Y,PLATE CAM SLIDE FJ-50	●	●
4	22355656	BASE,CUTTER CM-500	●	●
5	22055372	PLATE,WIRE FJ-50	●	●
6	21495115	SCREW,BLADE SET CM-500	●	●
7	22175154	SPRING,BLADE UP CM-500	●	●
8	22175155	SPRING,SCREW CM-500	●	●

PARTS LIST -Supplemental Parts-

	Parts Name	
①	BUSH ROLL	3X5
②	BUSH ROLL	2X4
③	SCREW BINDING HEAD	BC 3X10
④	SCREW BINDING HEAD	BC 3X6
⑤	SCREW FLAT HEAD	BC 3X6
⑥	SCREW TRUSS HEAD	BC 2X6

1-8 INK SYSTEM



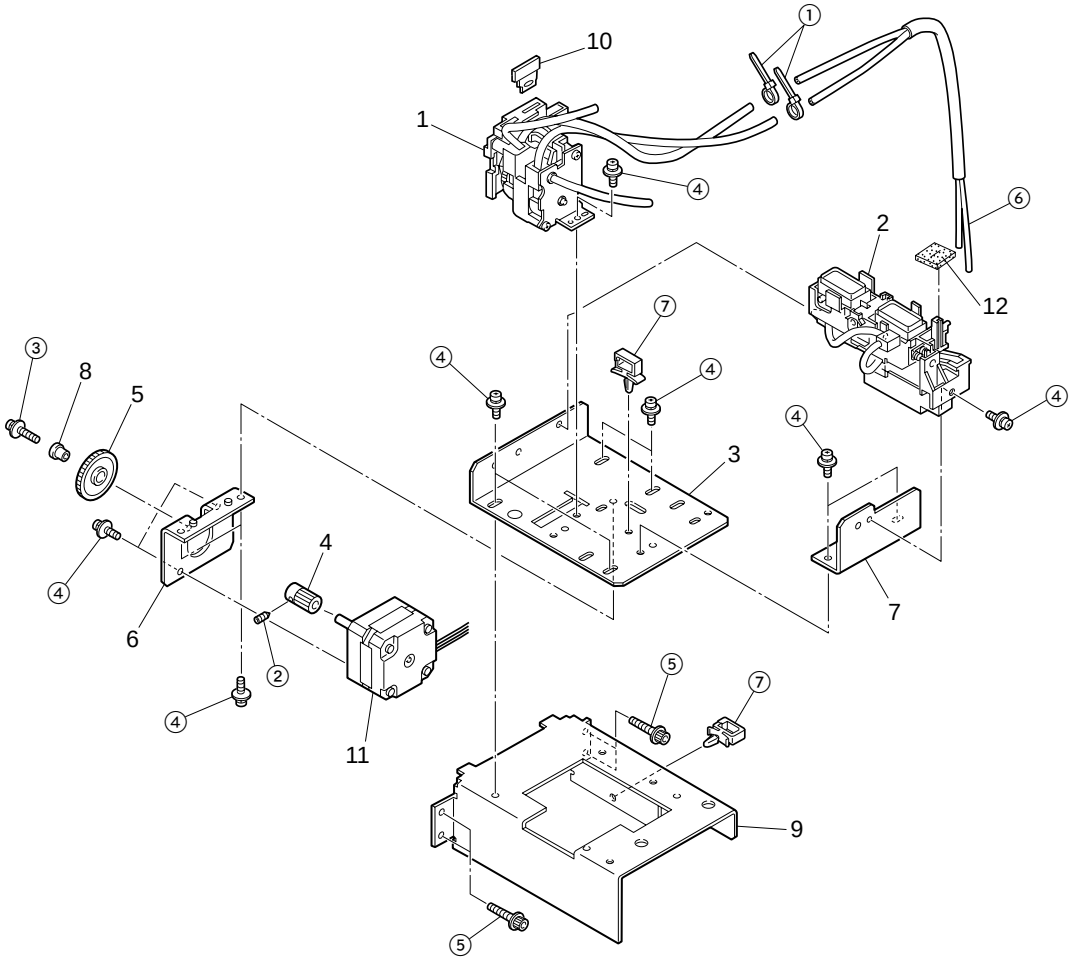
PARTS LIST -Main Parts-

	Parts No.	Parts Name	FJ-52	FJ-42
1	11909133	ADAPTER,SCREW 2FAI FJ-50	●	●
2	23505422	CABLE-ASSY INKTANK-SENS FJ-50	●	●
3	12029300	COVER,HOLDER I/C FJ-50	●	●
4	22025297	COVER,INK FJ-50	●	●
5	11659152	HOLDER,INK CARTRIDGE FJ-50	●	●
6	11659149	HOLDER,RING O 2FAI FJ-50	●	●
7	7468240070	INKTANK SENS BOARD ASS'Y FJ-52	●	●
8	22055364	PLATE,HOLDER I/C FJ-50	●	●
9	22055362	PLATE,INK FJ-50	●	●
10	22055365	PLATE,INK JOINT FJ-50	●	●
11	22165179	SPACER,INK FJ-50	●	●
12	22175167	SPRING,CARTRIDGE FJ-50	●	●
13	22035131	STAND,INK CARTRIDGE FJ-50	●	●

PARTS LIST -Supplemental Parts-

	Parts Name	
①	SCREW BINDING HEAD S-TIGHT	Cr 3X6
②	SCREW W-SEMS	BC 3X6
③	SCREW W-SEMS	BC 3X12
④	SCREW W-SEMS	BC 4X6

1-9 PUMP SYSTEM



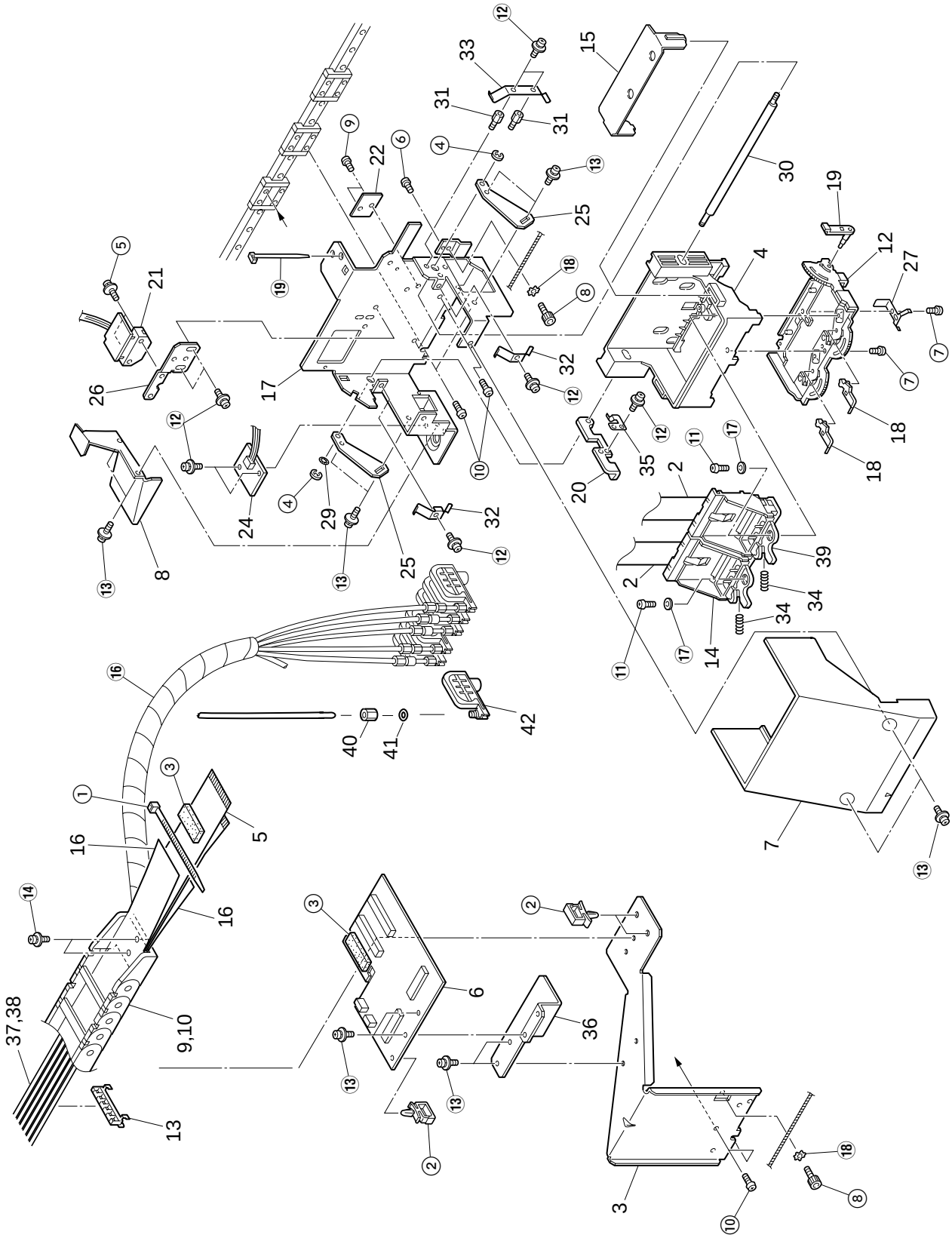
PARTS LIST -Main Parts-

	Parts No.	Parts Name	FJ-52	FJ-42
1	12809269	ASS'Y PUMP FJ-50	●	●
2	12809268	ASS'Y,CAP FJ-50	●	●
3	22355663	BASE,CAP FJ-50	●	●
4	21685122	GEAR,S10(S20)	●	●
5	21685120	GEAR,S34S4.3	●	●
6	22055367	PLATE,MOTOR FJ-50	●	●
7	22055366	PLATE,SLIDER FJ-50		
8	22165178	SPACER,6FAI FJ-50	●	●
9	22035132	STAND,CAP FJ-50	●	●
10	11379105	WIPER,HEAD ASP FJ-50	●	●
11	22505302	X-MOTOR	●	●
12	21755106	CLEANER,CARRIAGE FJ-500	●	●

PARTS LIST -Supplemental Parts-

	Parts Name	
①	BINDER T-18S	80MM
②	SCREW SOCKET SET WP	Cr 3X3
③	SCREW W-SEMS	BC 3X10
④	SCREW W-SEMS	BC 3X6
⑤	SCREW HEXAGONAL CAP+FW	Cr 4X12
⑥	TUBE INK CJ-70	L=400MM
⑦	CLAMP WIRE PLWS-1U	

1-10 INK JET CARRIAGE



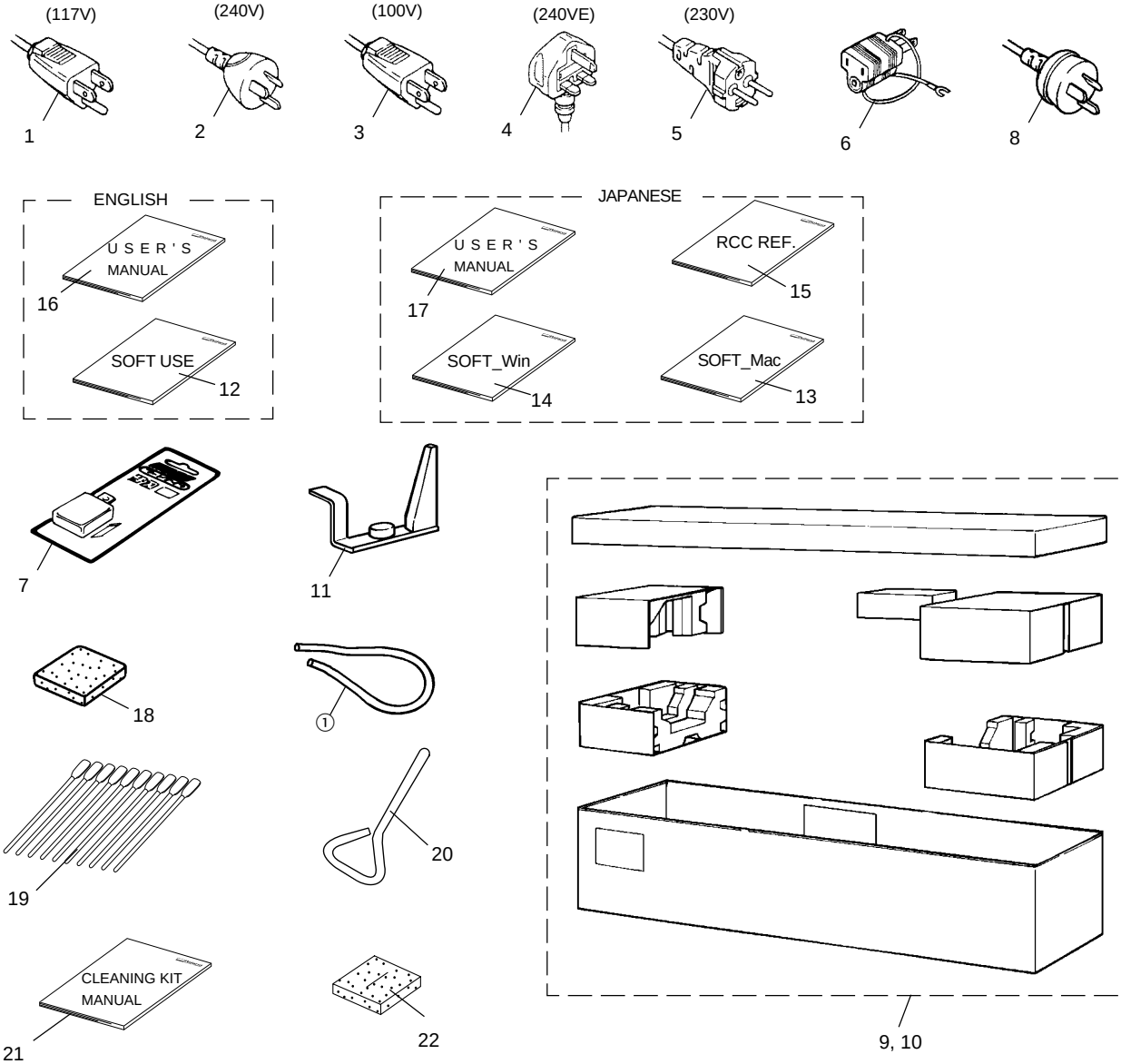
PARTS LIST -Main Parts-

	Parts No.	Parts Name	FJ-52	FJ-42
2	22805301	ASS'Y,CABLE-CARD 24P1 220L BB	●	●
3	22355664	BASE,AUTO CUT FJ-50	●	●
4	22355659	BASE,CARRIAGE FJ-50	●	●
5	23475153	CABLE-CARD 28P2280L BB HIGH-V	●	●
6	7468240060	CARRIAGE BOARD ASS'Y FJ-50	●	●
7	22025283	COVER,CARRIAGE FJ-50	●	●
8	22025426	COVER,P SENS 2 FJ-50	●	●
9	12039527	COVER,TKP0180-2B R50-50	●	●
10	12039526	COVER,TKP0180-2B R50-57	●	
12	12119752	FRAME,CARRIAGE FJ-50	●	●
13	22135544	GUIDE,TUBE POM FJ-50	●	●
14	22805318	ASS'Y,HEAD INKJET L FJ-50	●	●
15	22055379	PLATE,DUMPER FJ-50	●	●
16	21655150	HOLDER,CABLE FJ-50	●	●
17	21655151	HOLDER,CARRIAGE FJ-50	●	●
18	12149432	LEVER,HEAD LEFT FJ-50	●	●
19	12149431	LEVER,HEAD RIGHT FJ-50	●	●
20	22145435	LEVER,LOCK FJ-50	●	●
21	7468240020	LINEAR ENCODER BOARD ASS'Y	●	●
22	21345104	LOCK,FJ-50	●	●
24	7468240050	PAPER SIDE SENSOR BOARD ASS'Y	●	●
25	22055373	PLATE,ARM LOCK FJ-50	●	●
26	22055371	PLATE,ENCO SENS FJ-50	●	●
27	22055363	PLATE,HEAD GND FJ-50	●	●
29	11519107	RING,O P4	●	●
30	22295171	SHAFT,CARRIAGE FJ-50	●	●
31	22155567	SPACER M3X5	●	●
32	22175158	SPRING,CARRIAGE FJ-50	●	●
33	22175159	SPRING,CARRIAGE SIDE FJ-50	●	●
34	12179156	SPRING,HEAD FJ-50	●	●
35	22175161	SPRING,LEVER FJ-50	●	●
36	22715160	STAY,HEAD FJ-50	●	●
37	22805314	ASS'Y,TUBE INK FJ-50	●	
38	22805315	ASS'Y,TUBE INK FJ-40		●
39	22805317	ASS'Y,HEAD INKJET R FJ-50	●	●
40	11909133	ADAPTER,SCREW 2FAI FJ-50	●	●
41	11659149	HOLDER,RING O 2FAI FJ-50	●	●
42	11959109	DAMPER INK 2FAI	●	●

PARTS LIST -Supplemental Parts-

	Parts Name	
①	BINDER T-18L	204MM
②	CLAMP WIRE PLWS-1U	
③	CUSHION FELT	W=35MM
④	RING E-RING	ETW-3
⑤	SCREW BINDING HEAD	BC 2.6X12
⑥	SCREW BINDING HEAD	BC 2.6X4
⑦	SCREW BINDING HEAD P-TIGHT	BC 3X6
⑧	SCREW HEXAGONAL CAP	BC 4X4
⑨	SCREW OVAL HEAD	BC 3X8
⑩	SCREW PAN HEAD	Cr 3X5
⑪	SCREW PAN HEAD B-TIGHT	BC 2.5X6
⑫	SCREW PAN HEAD+FW	Cr 3X4
⑬	SCREW W-SEMS	BC 3X6
⑭	SCREW W-SEMS	BC 4X10
⑮	TUBE 1.4FAI	L=20MM
⑯	TUBE SPIRAL SPP-08L 8X6	L=80MM
⑰	WASHER FLAT	Cr 3X8X1.0
⑱	WASHER OUT SIDE TEETH	Cr M4
⑲	BINDER T-18S	80MM

1-11 ACCESSORIES



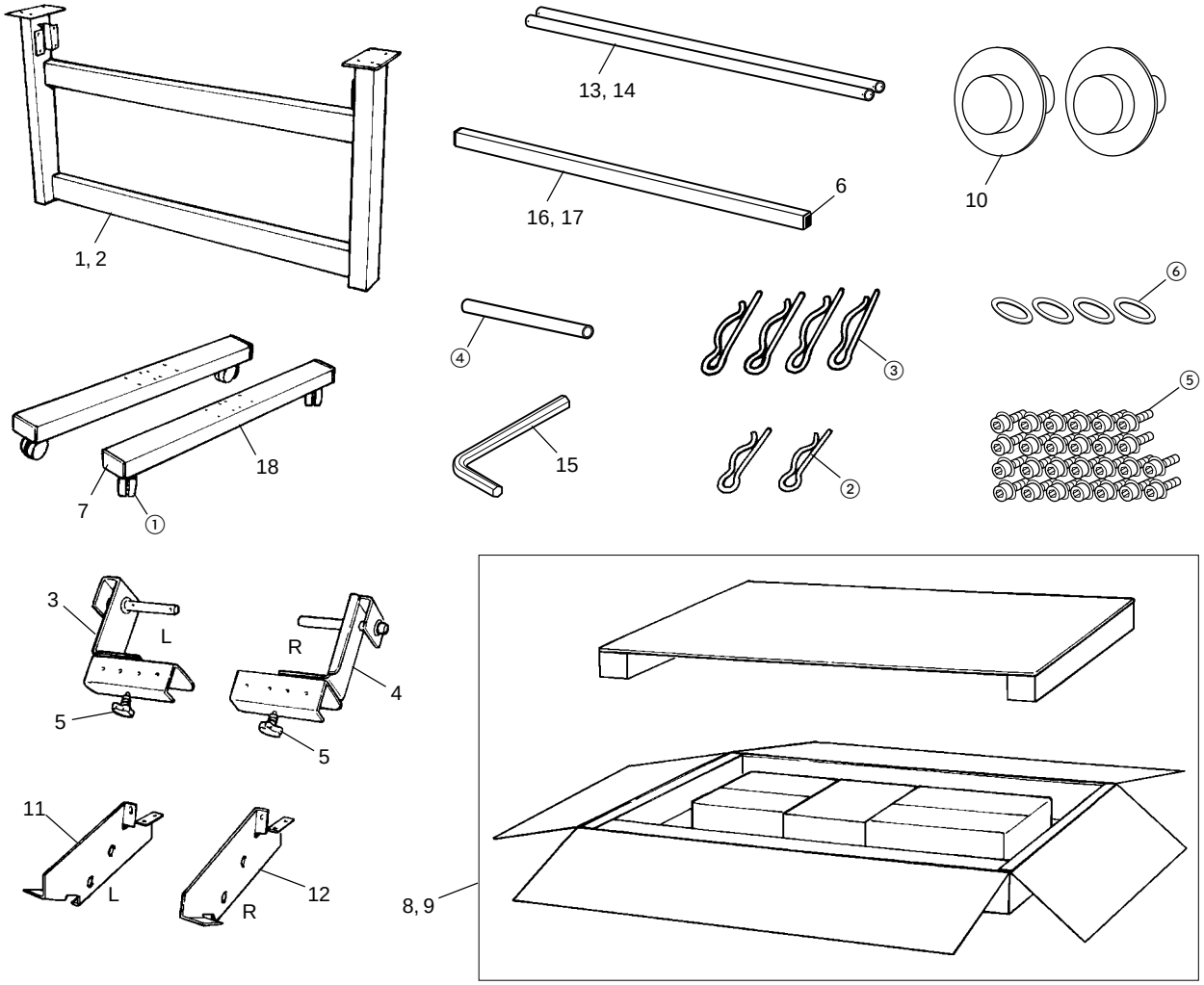
PARTS LIST -Main Parts-

	Parts No.	Parts Name	FJ-52	FJ-42
1	13499109	AC CORD SJT 117V 10A 3PVC	●	●
2	23495124	AC CORD 3ASL/100 240VA 10A SAA	●	●
3	23495214	AC CORD VCTF 100V 7A 3P-S	●	●
4	13499111	AC CORD H05VV-F 240VE 10A S	●	●
5	23495125	AC-CORD H05VV 230V 10A S	●	●
6	13499209	ADAPTER PLUG (100V)	●	●
7	11849102	BLADE,OLFA AUTO CUTTER XB10	●	●
8	13439801	CABLE-AC 3P CHINA 10A/250V S	●	●
9	22605293	CARTON,SET FJ-40		●
10	22605292	CARTON,SET FJ-50	●	
11	22805316	ASS'Y,STOPPER CARRIAGE FJ-50	●	●
12	26015234	MANUAL,SOFTUSE EN RCC3.0	●	●
13	26015233	MANUAL,SOFT-MAC JP RCC3.0	●	●
14	26015232	MANUAL,SOFT-WIN JP RCC3.0	●	●
15	26015235	MANUAL,REF JP RCC3.0	●	●
16	26015249	MANUAL,USE EN FJ-52/42	●	●
17	26015248	MANUAL,USE JP FJ-52/42	●	●
18	21545118	PAD,INK CATCH CJ-70	●	●
19	ST-037	CLEAN STICK TX712A	●	●
20	11939135	TOOL,SCREWDRIVER TRIANGLE+NO2	●	●
21	26015268	MANUAL,USE-CKIT JP/EN FJ-52/42	●	●
22	21755106	CLEANER,CARRIAGE FJ-500	●	●

PARTS LIST -Supplemental Parts-

	Parts Name	
①	TUBE CAPPING G16-586-06	L=100MM

1-12 STAND(PNS-52/42)



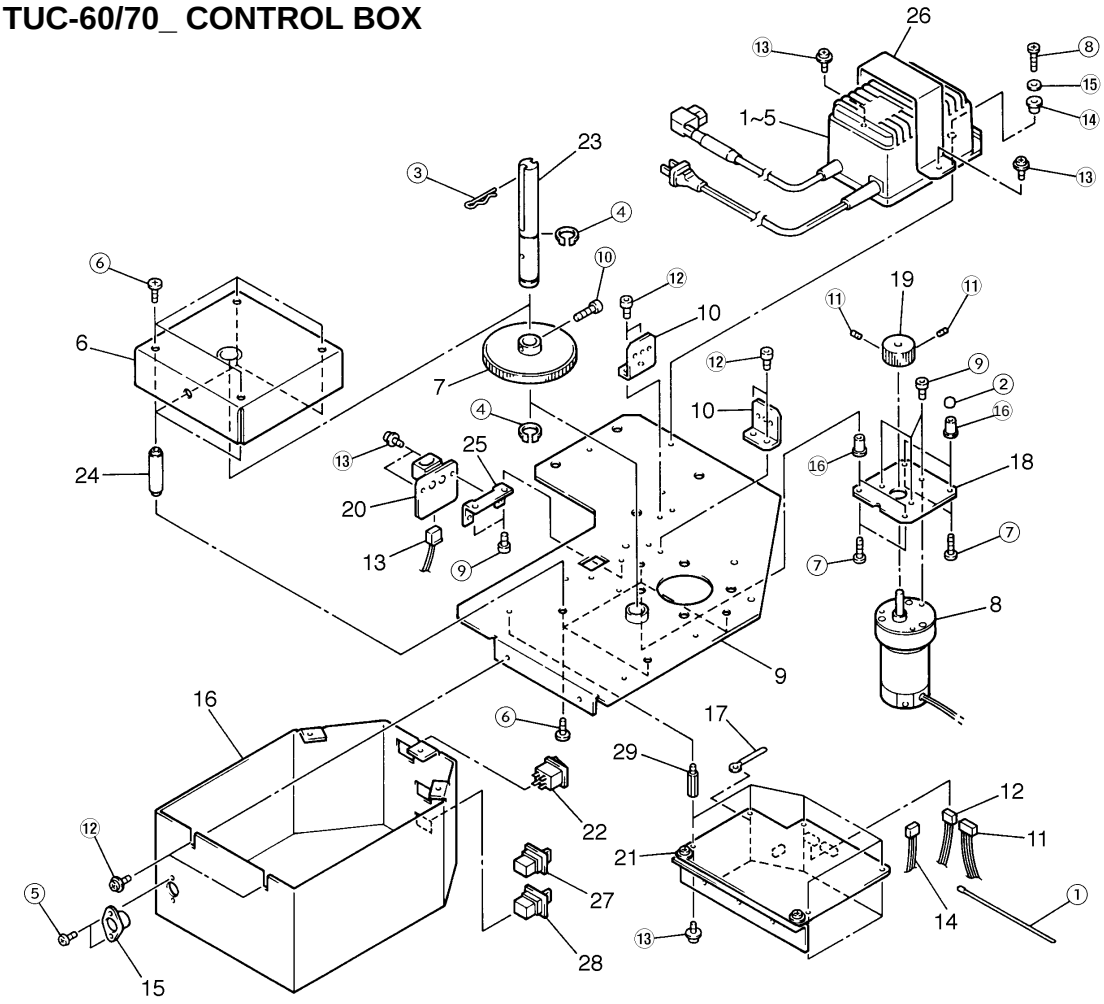
PARTS LIST -Main Parts-

	Parts No.	Parts Name	PNS-52	PNS-42
1	22805370	ASS'Y,STAND PNS-52	●	
2	22805369	ASS'Y,STAND PNS-42		●
3	22805302	ASS'Y,ARM L PNS-50	●	●
4	22805303	ASS'Y,ARM R PNS-50	●	●
5	22805230	ASS'Y,SCREW TUC-60/70	●	●
6	12339121	CAP,50X30	●	●
7	12339128	CAP,R 7545B	●	●
8	22605291	CARTON PNS-40		●
9	22605290	CARTON PNS-50	●	
10	21995106	FLANGE,GUIDE 2 PNS-70	●	●
11	21995111	FLANGE,ROLL L PNS-50	●	●
12	21995110	FLANGE,ROLL R PNS-50	●	●
13	22135579	GUIDE,PAPER PNS-40		●
14	22135578	GUIDE,PAPER PNS-50	●	
15	22565682	HEXAGONAL WRENCH 5	●	●
16	22185361	RAIL,ROLL PNS-40		●
17	22185360	RAIL,ROLL PNS-50	●	
18	22035138	STAND,BASE PNS-50	●	●

PARTS LIST -Supplemental Parts-

	Parts Name	
①	CASTER DESIGN CASTER	DN-50-B
②	PIN SNAP	M14
③	PIN SNAP	M16
④	PIPE 8FAIX1TX150L	SUS304
⑤	SCREW FLANGE SOCKET	BC 6x20
⑥	WASHER FLAT	UC 6.5X16X1

1-13 TUC-60/70_ CONTROL BOX



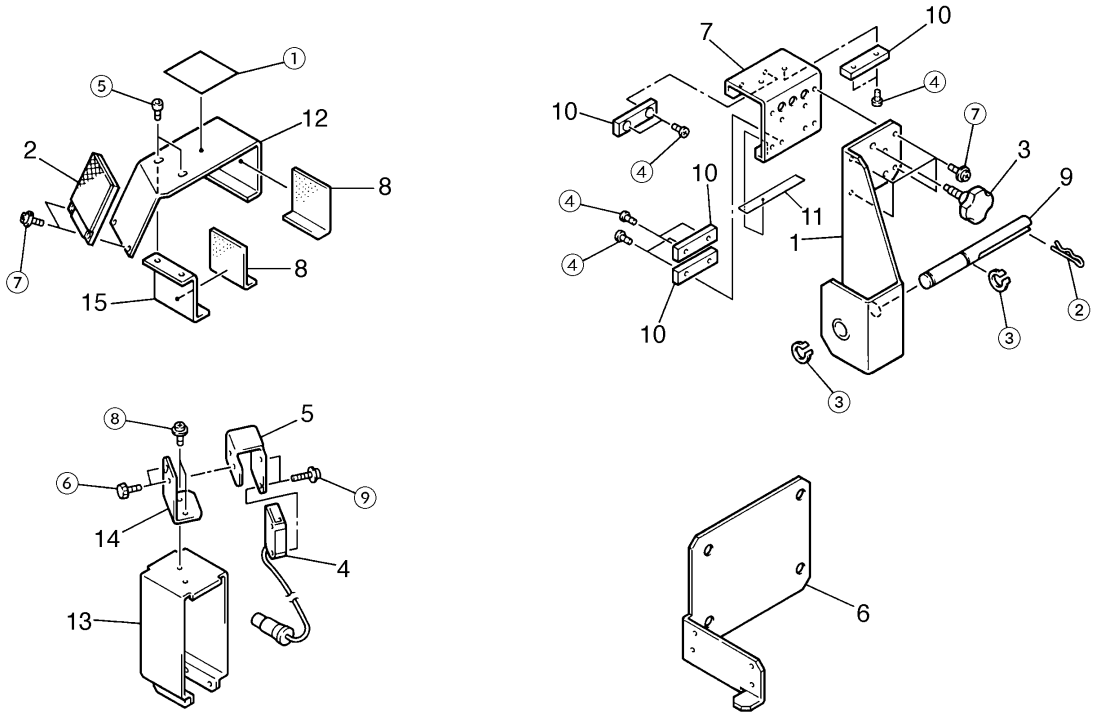
PARTS LIST -Main Parts-

	Parts No.	Parts Name
1	22445659	AC ADAPTER DCP-301A (100V)
2	22445660	AC ADAPTER DCP-302A (117V)
3	22445661	AC ADAPTER DCP-303A (230V)
4	22445662	AC ADAPTER DCP-304A (240VA)
5	22445663	AC ADAPTER DCP-305A (240VE)
6	22805225	ASS'Y,COVER GEAR TUC-60/70
7	22805229	ASS'Y,GEAR S80S60 TUC-60/70
8	22805226	ASS'Y,MOTOR TUC-60/70
9	22805224	ASS'Y.FRAME R TUC-60/70
10	21985112	BRACKET,TUC-60/70
11	23505370	CABLE-ASSY 3P FBSW TUC-60/70
12	23505371	CABLE-ASSY 3P MODESW TUC-60/70
13	23505372	CABLE-ASSY 4P POWER TUC-60/70
14	23505373	CABLE-ASSY DIN TUC-60/70
15	13369134	CONNECTOR TCS-2230-01-1101
16	22025232	COVER,TUC-60/70
17	12369446	CS-2 CLIP
18	21995107	FLANGE,MOTOR TUC-60/70
19	21685115	GEAR,S24S6(B6.5C12) TUC-60/70
20	7440709020	INLET BOARD ASS'Y
21	7440709010	MAIN BOARD ASS'Y
22	13129170	POWER SW AJ7201B
23	22295148	SHAFT,M4TAP TUC-60/70
24	22295149	SHAFT,SUPPORT TUC-60/70
25	22715133	STAY,INLET TUC-60/70
26	22135336	STOPPER,ADAPTOR TUC-60/70
27	13119304	SW MJ3J-13AS
28	13119305	SW MJ3J-18AS
29	2215359200	BOSS NUT #592

PARTS LIST -Supplemental Parts-

	Parts Name	
①	BINDER T-18S	80MM
②	CAP DIP VCP-3	BK
③	PIN SNAP	M14
④	RING TYPE C	M14
⑤	SCREW BINDING HEAD	Ni 3X6
⑥	SCREW BINDING HEAD	BC 5X12
⑦	SCREW BINDING HEAD	BC 4X15
⑧	SCREW HEXAGONAL CAP	BC 4X10
⑨	SCREW HEXAGONAL CAP	BC 4X6
⑩	SCREW HEXAGONAL CAP	BC 4X20
⑪	SCREW SOCKET SET WP	Cr 3X3
⑫	SCREW W-SEMS	BC 4X10
⑬	SCREW W-SEMS	BC 3X6
⑭	SPACER POLY PIPE	4.3X8X4
⑮	WASHER FLAT	BC 5X10X1.0
⑯	WELL-NUT	B-832

1-14 TUC-60/70_ OTHERS



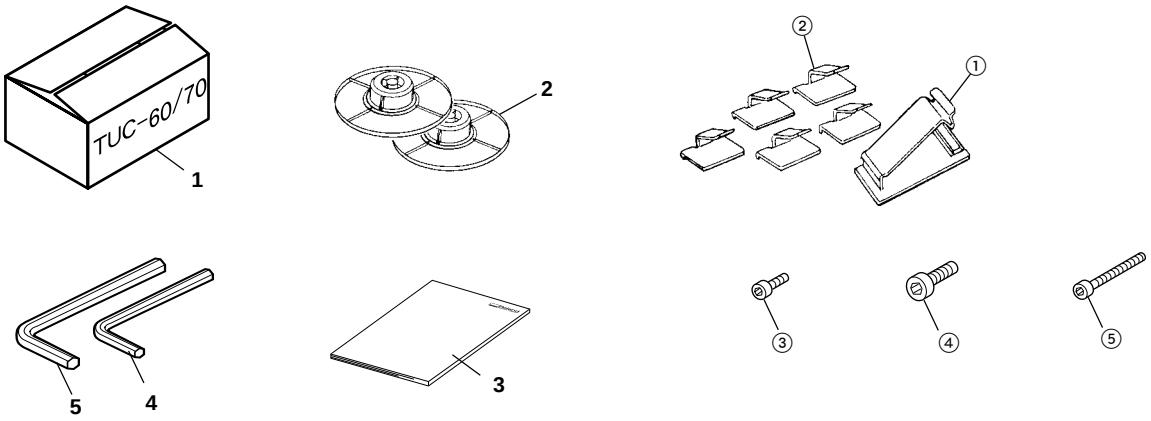
PARTS LIST -Main Parts-

	Parts No.	Parts Name
1	22805231	ASS'Y,ARM TUC-60/70
2	22805227	ASS'Y,MIRROR TUC-60/70
3	22805230	ASS'Y,SCREW TUC-60/70
4	22805228	ASS'Y,SENSOR TUC-60/70
5	21985113	BRACKET,SENSOR TUC-60/70
6	22115714	FRAME,L TUC-60/70
7	21655139	HOLDER,SLIDER TUC-60/70
8	21545125	PAD,STAY TUC-60/70
9	22295147	SHAFT,TUC-60/70
10	22185103	SLIDER,1 TUC-60/70
11	22185102	SLIDER,GUIDE TUC-60/70
12	22715134	STAY,MIRROR TUC-60/70
13	22715131	STAY,SENSOR LOW TUC-60/70
14	22715132	STAY,SENSOR UP TUC-60/70
15	22135337	STOPPER,MIRROR TUC-60/70

PARTS LIST -Supplemental Parts-

	Parts Name	
①	LABEL DO NOT KICK	IDNo.753
②	PIN SNAP	M14
③	RING TYPE C	M14
④	SCREW BINDING HEAD	BC 3X6
⑤	SCREW HEXAGONAL CAP	BC 4X10
⑥	SCREW PLASTICK HEAD	BK 3X6
⑦	SCREW W-SEMS	BC 4X10
⑧	SCREW W-SEMS	BC 3X6
⑨	SCREW W-SEMS	BC 3X15

1-15 TUC-60/70_ ACCESSORIES



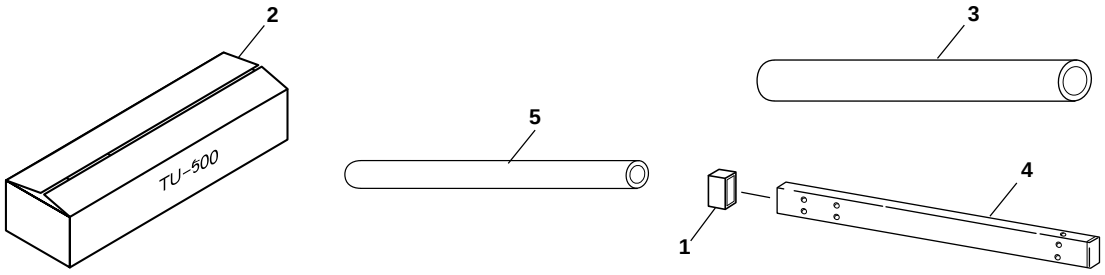
PARTS LIST -Main Parts-

	Parts No.	Parts Name
1	22605275	CARTON,TUC-60/70
2	21995106	FLANGE,GUIDE 2 PNS-70
3	26015157	MANUAL,USE JP/EN TU-70/60
4	21935130	TOOL,HEXAGON 3 ZN
5	21935131	TOOL,HEXAGON 6 ZN

PARTS LIST -Supplemental Parts-

	Parts Name	
①	CLAMP CABLE CLAMP FCN-3010	
②	CLAMP CORD KEEP K-106G	
③	SCREW HEXAGONAL CAP	BC 4X6
④	SCREW HEXAGONAL CAP	Ni 8X10
⑤	SCREW HEXAGONAL CAP	BC 4X40

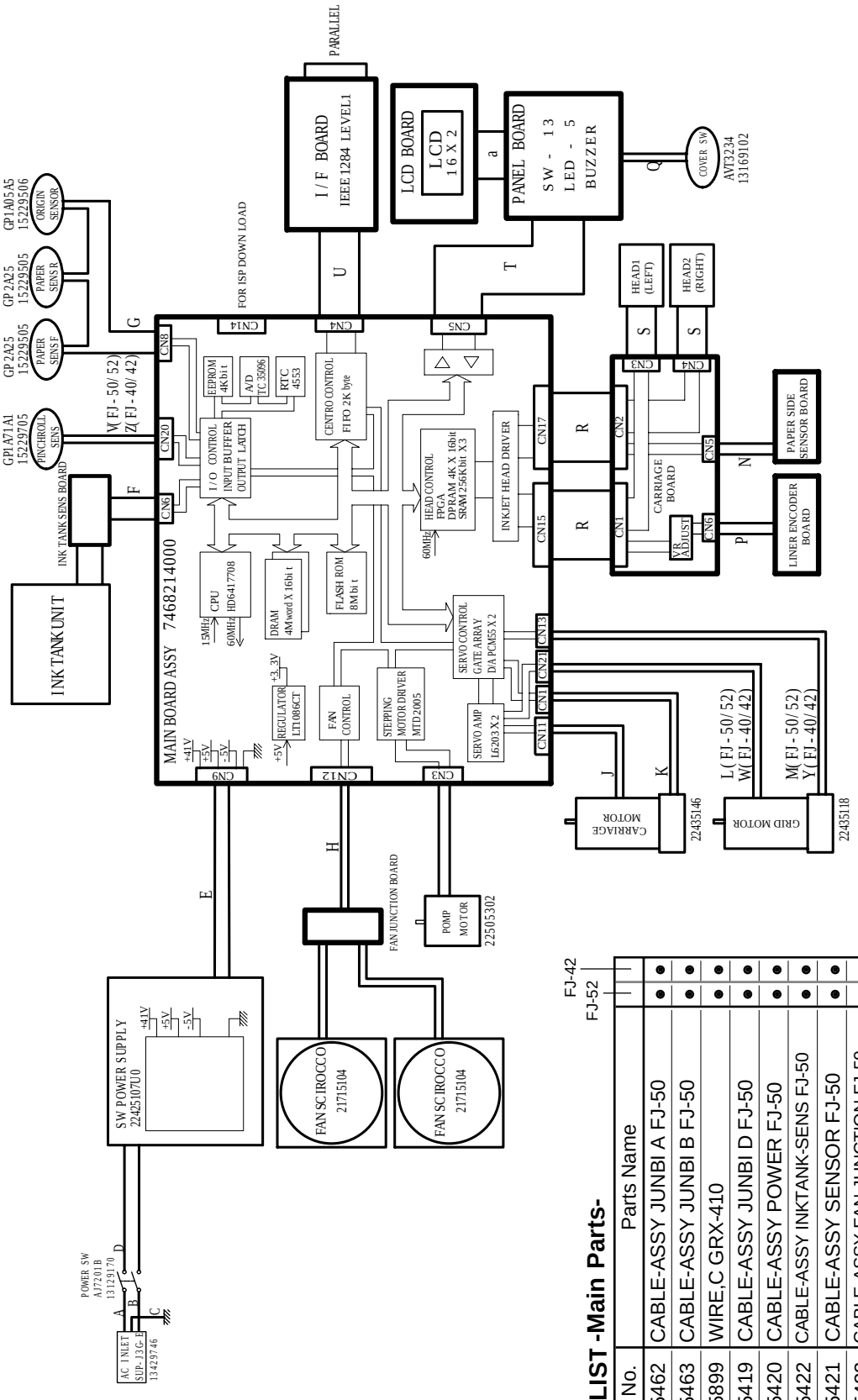
1-16 TU-500/400



PARTS LIST -Main Parts-

	Parts No.	Parts Name	TU-500	TU-400
1	12339121	CAP,50*30	●	●
2	22605312	CARTON,SET TU-500	●	
	22605324	CARTON,SET TU-400		●
3	22155124	PIPE,TAKE UP TU-500	●	
	22155157	PIPE,TAKE UP TU-400		●
4	22185407	RAIL,SLIDER TU-500	●	
	22185410	RAIL,SLIDER TU-400		●
5	21505109	ROLLER,DANCER TU-500	●	
	21505110	ROLLER,DANCER TU-400		●

2-1 WIRING MAP

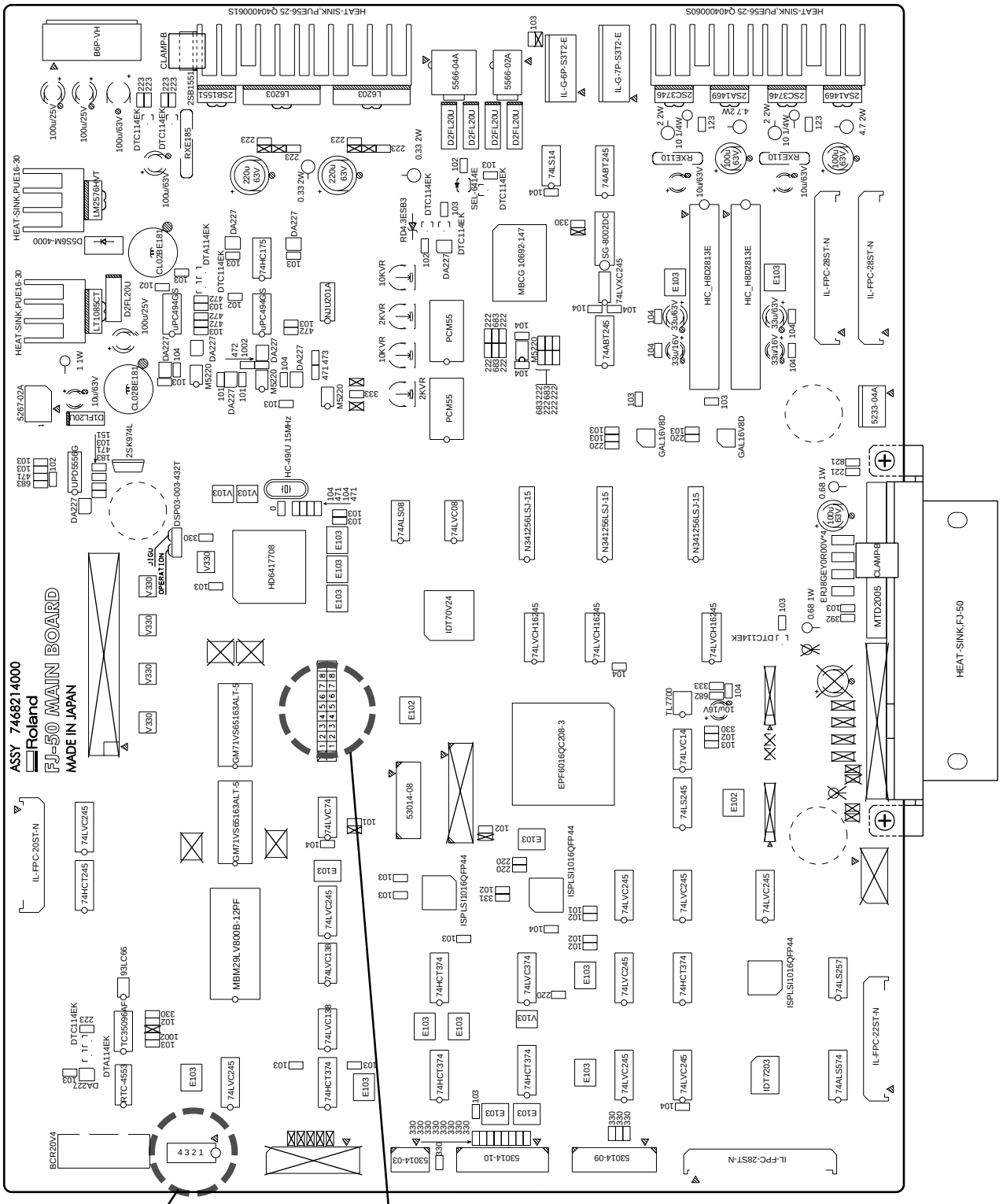


PARTS LIST -Main Parts-

	Parts No.	Parts Name	FJ-42	FJ-52
A	23505462	CABLE-ASSY JUNBI A FJ-50	●	●
B	23505463	CABLE-ASSY JUNBI B FJ-50	●	●
C	23505899	WIRE,C GRX-410	●	●
D	23505419	CABLE-ASSY JUNBI D FJ-50	●	●
E	23505420	CABLE-ASSY POWER FJ-50	●	●
F	23505422	CABLE-ASSY INKTANK-SENS FJ-50	●	●
G	23505421	CABLE-ASSY SENSOR FJ-50	●	●
H	23505423	CABLE-ASSY FAN JUNCTION FJ-50	●	●
J	23505425	CABLE-ASSY C POWER FJ-50	●	●
K	23505426	CABLE-ASSY C ENCODER FJ-50	●	●
L	23505432	CABLE-ASSY G POWER FJ-50	●	
M	23505431	CABLE-ASSY G ENCODER FJ-50	●	
N	23505428	CABLE-ASSY P-SIDE-SENS FJ-50	●	●
P	23505430	CABLE-ASSY LINER ENCODER FJ-50	●	●
Q	23505433	CABLE-ASSY COVER SW FJ-50	●	●
R	23475153	CABLE-CARD 28P 2280L BB HIGH-V	●	●
S	22805301	ASS'Y,CABLE-CARD 24P1 220L BB	●	●
T	23475150	CABLE-CARD 20P 420L BB	●	●
U	23475151	CABLE-CARD 22P 120L BB	●	●
V	23505434	CABLE-ASSY PINCH-SENS FJ-50	●	
W	23505435	CABLE-ASSY G POWER FJ-40		●
Y	23505436	CABLE-ASSY G ENCODER FJ-40		●
Z	23505437	CABLE-ASSY PINCH-SENS FJ-40		●
a	23505464	CABLE-ASSY LCD FJ-52	●	●

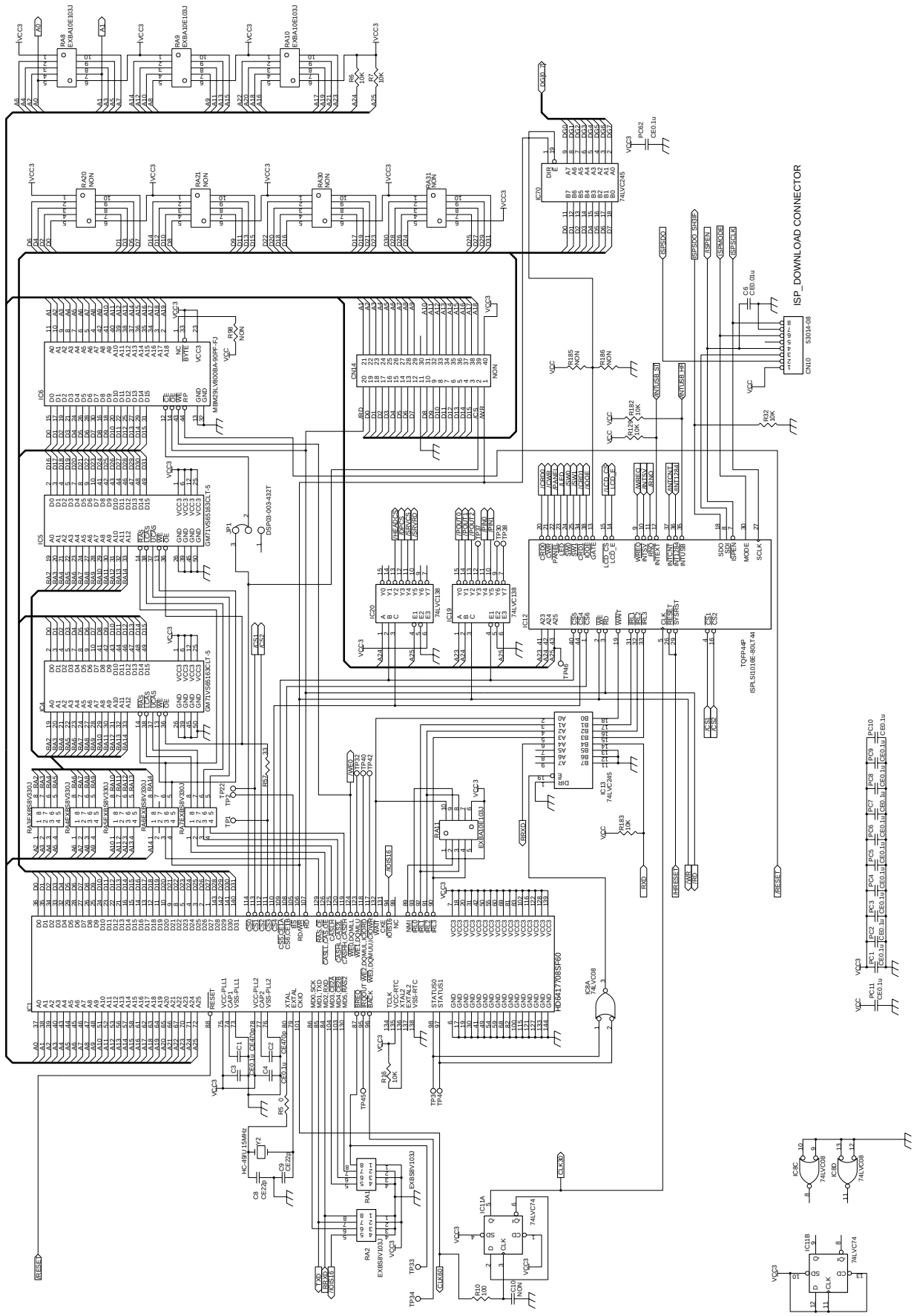
2-2 MAIN BOARD ASS'Y

DESCRIPTION



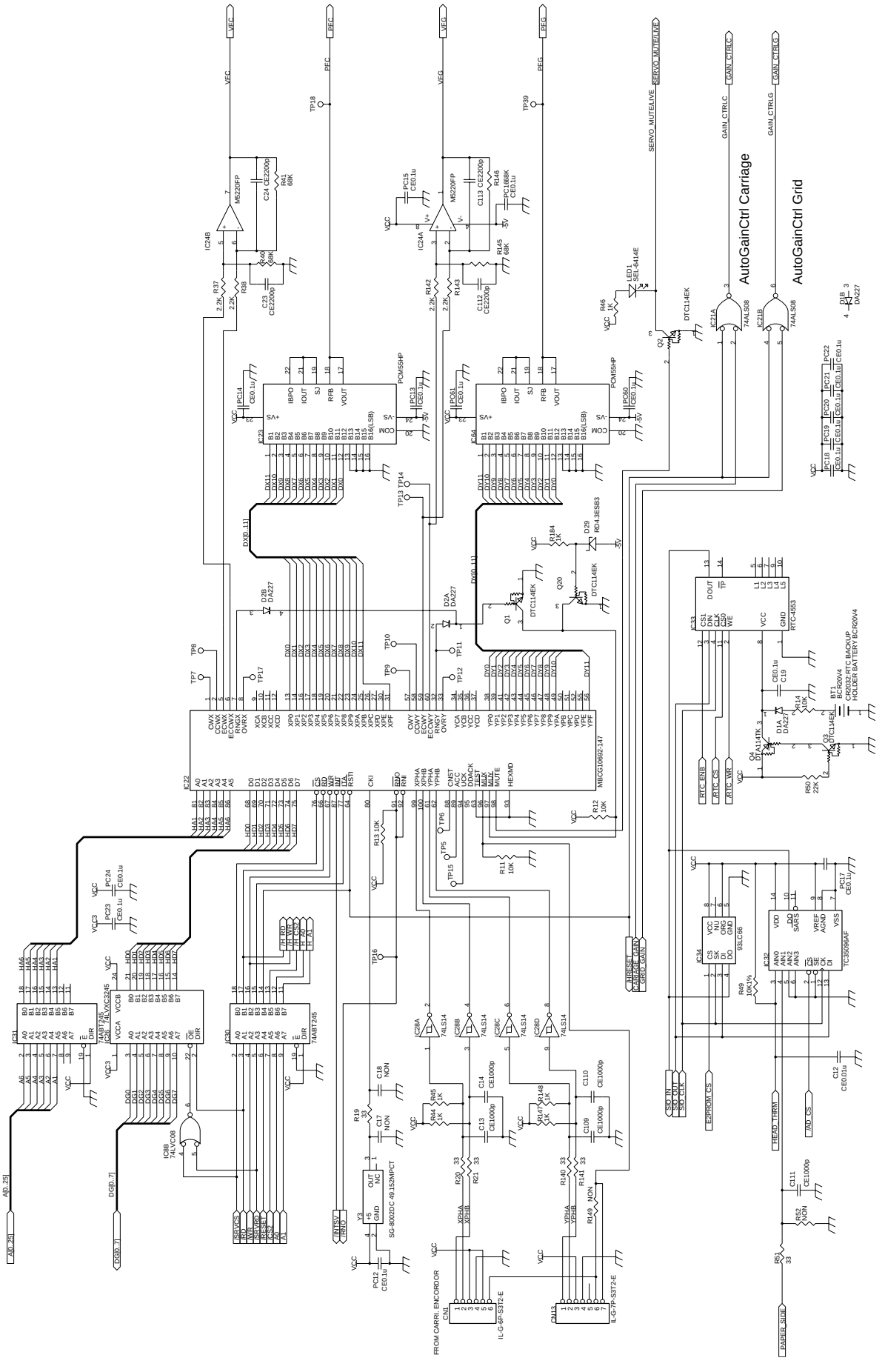
	FJ-52	FJ-42
SW1	ON	OFF
SW2	ON	ON
SW3	OFF	OFF
SW4	OFF	OFF

MAIN BOARD_1/9 Circuit Diagram

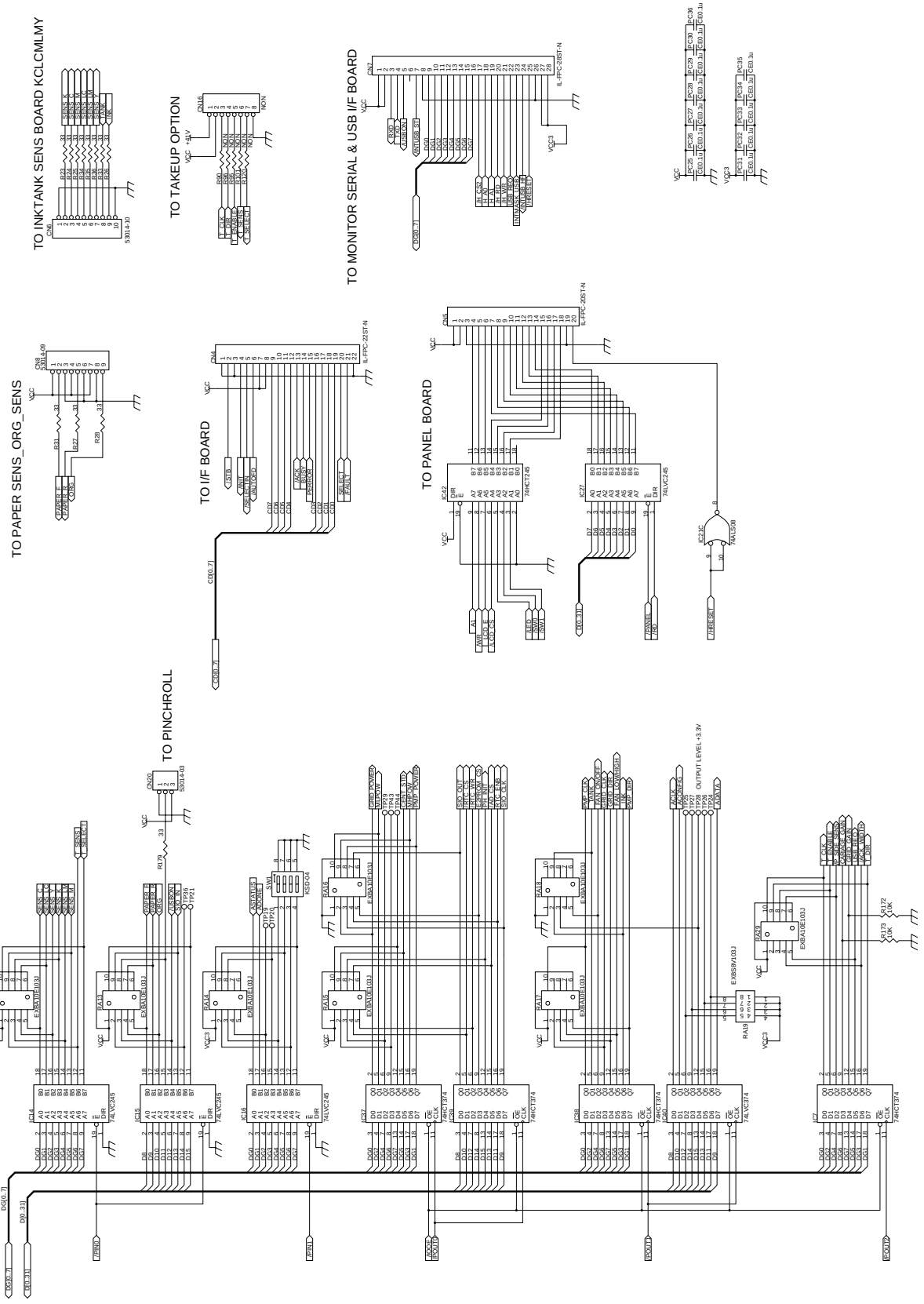


2

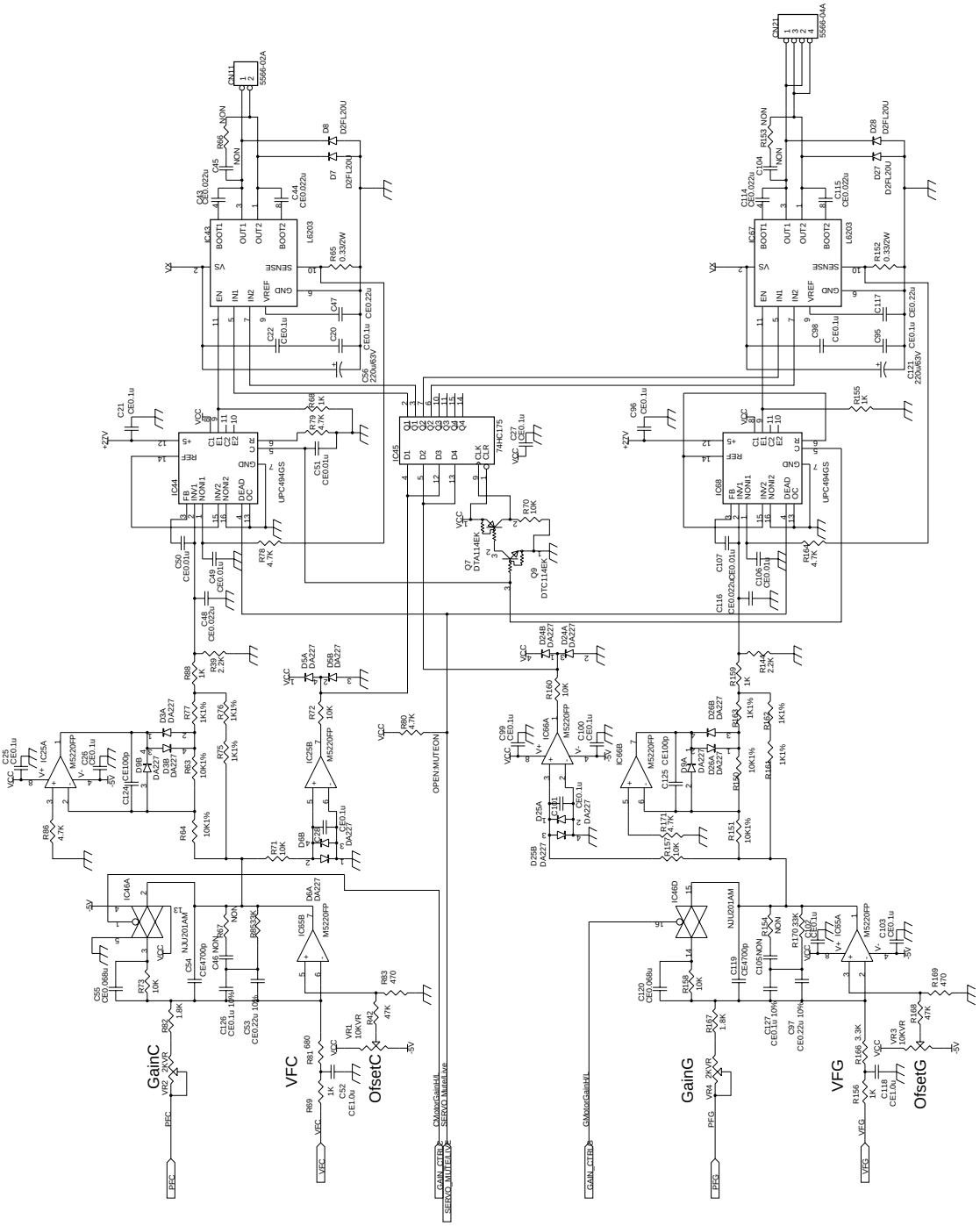
MAIN BOARD_2/9 Circuit Diagram



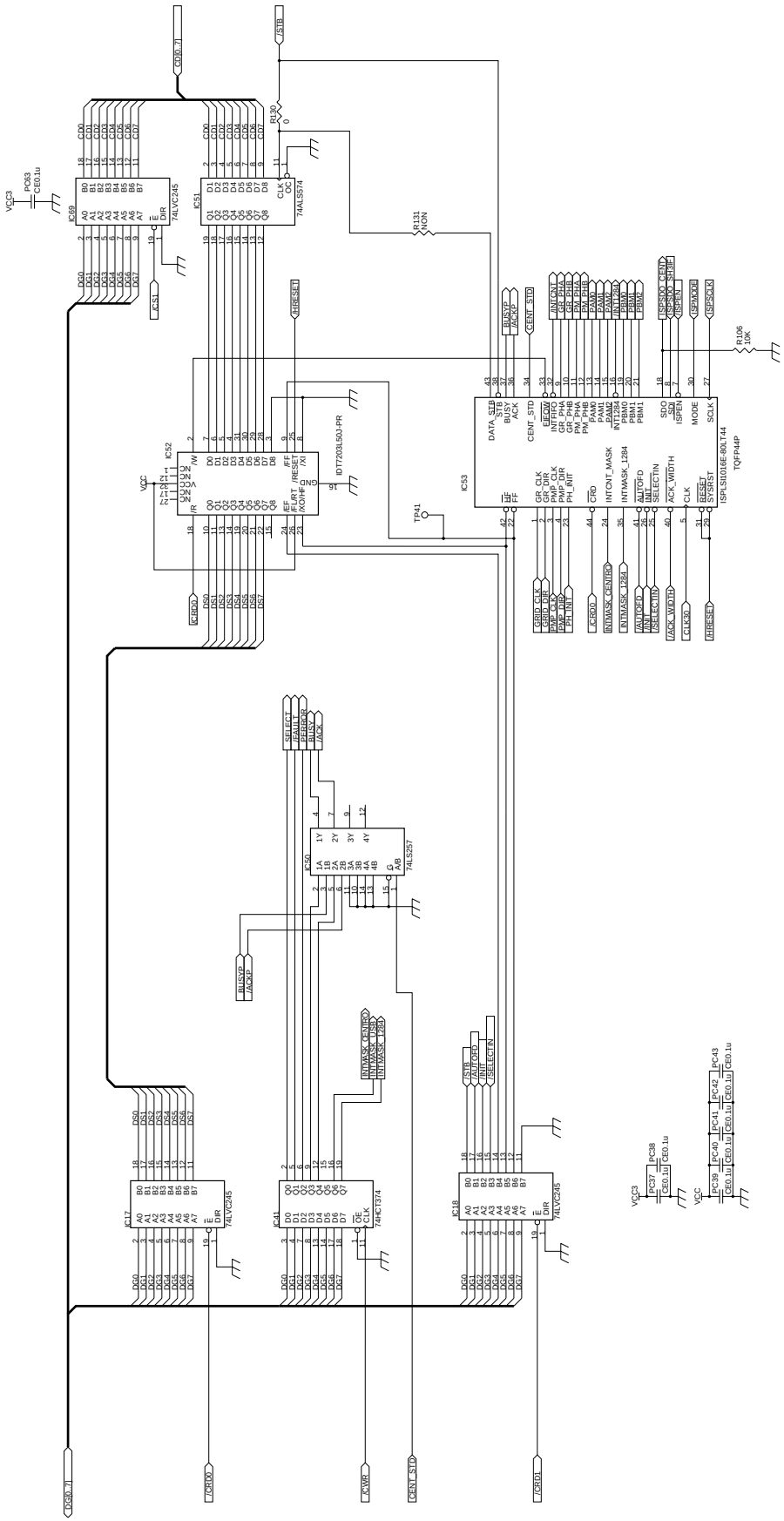
MAIN BOARD_3/9 Circuit Diagram



MAIN BOARD_4/9 Circuit Diagram

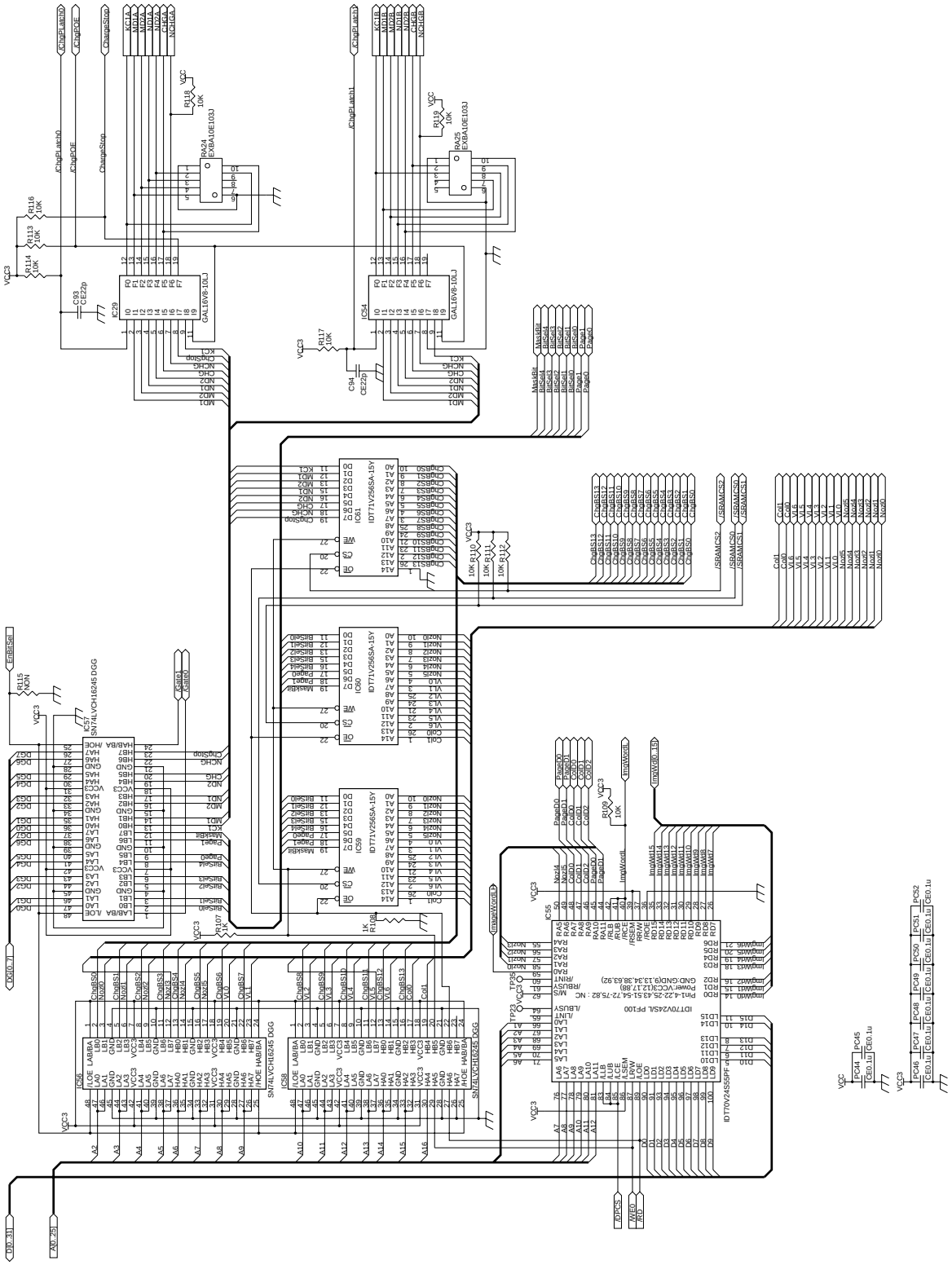


MAIN BOARD_5/9 Circuit Diagram

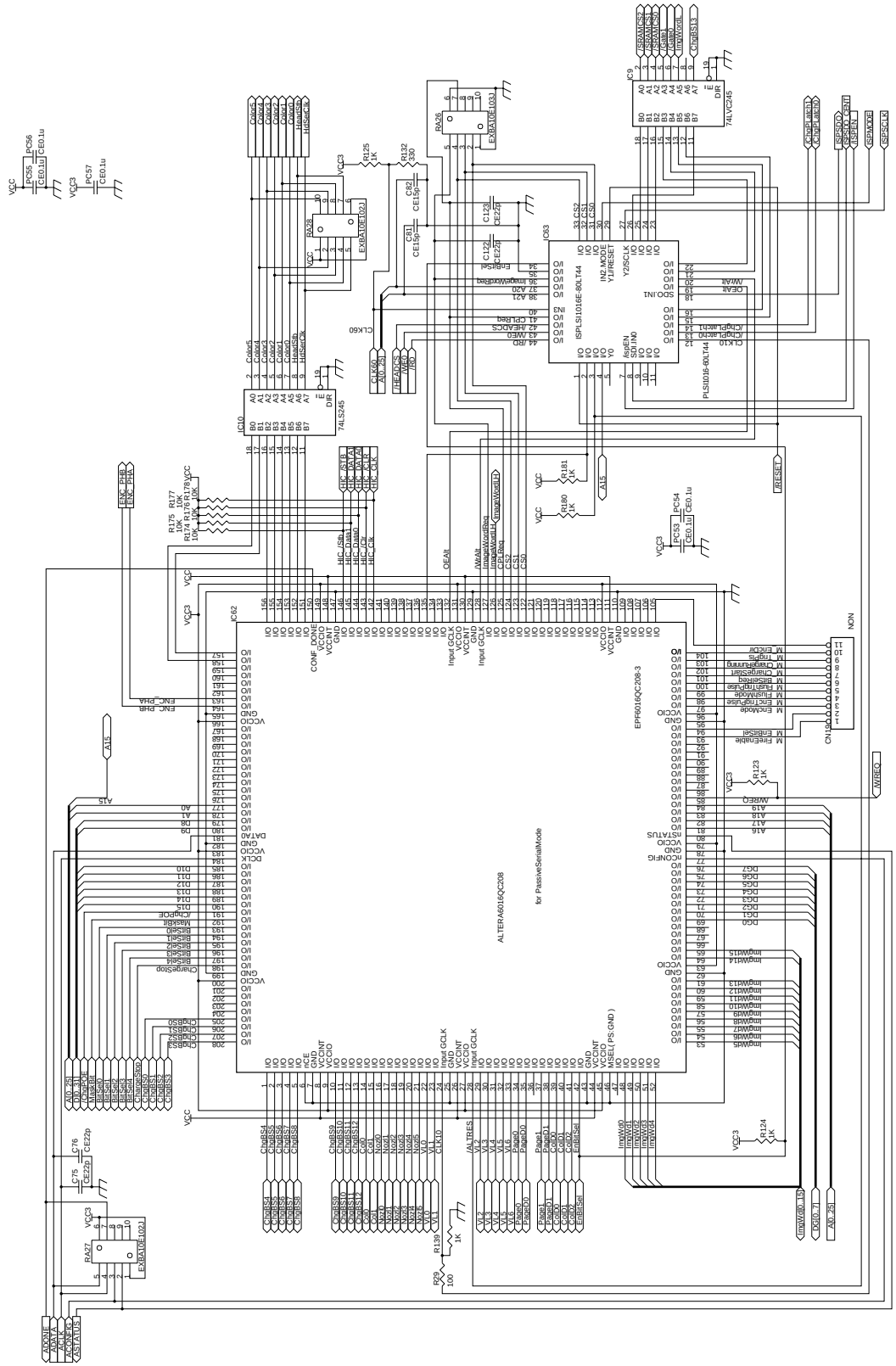


2

MAIN BOARD_6/9 Circuit Diagram

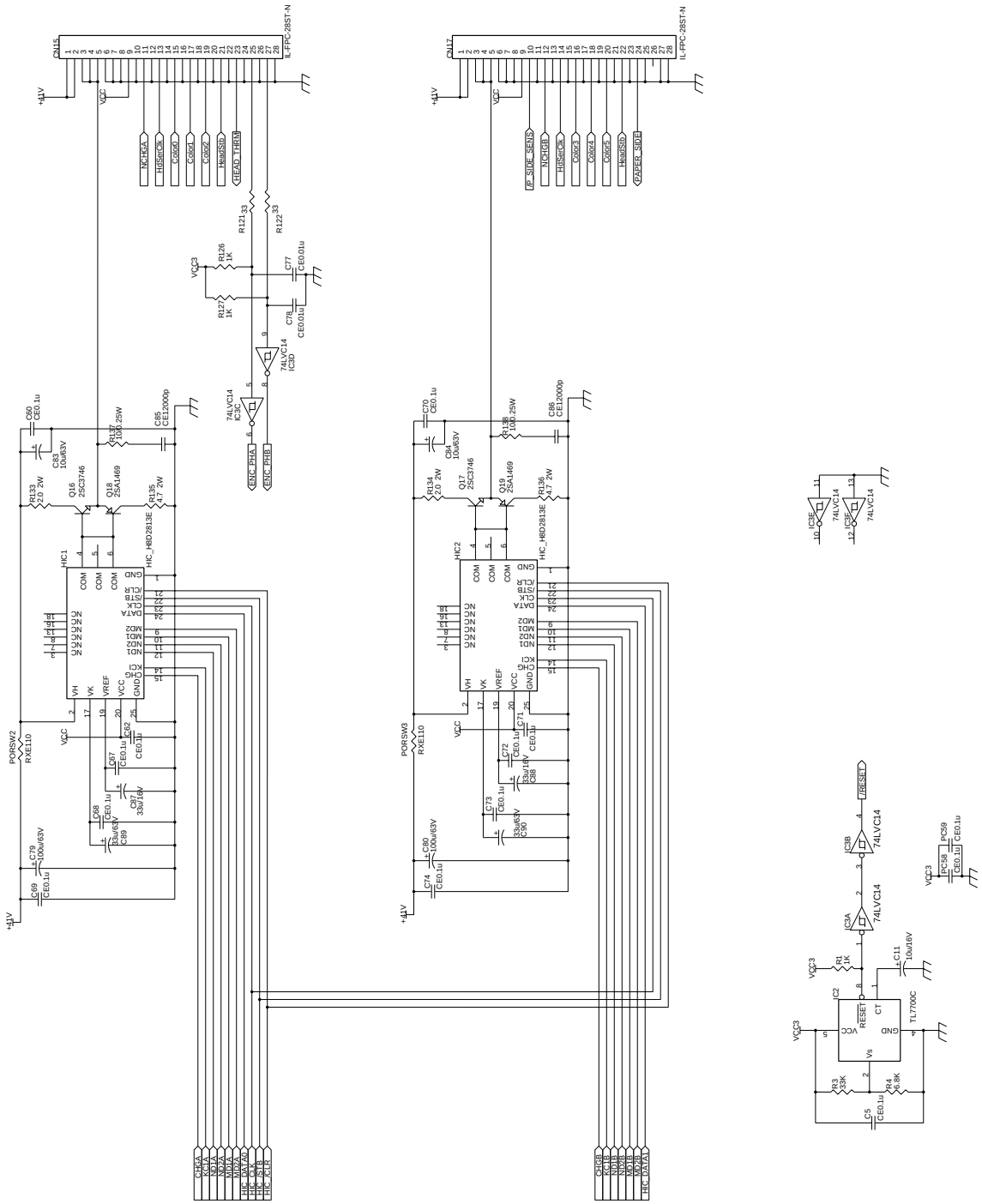


MAIN BOARD_7/9 Circuit Diagram

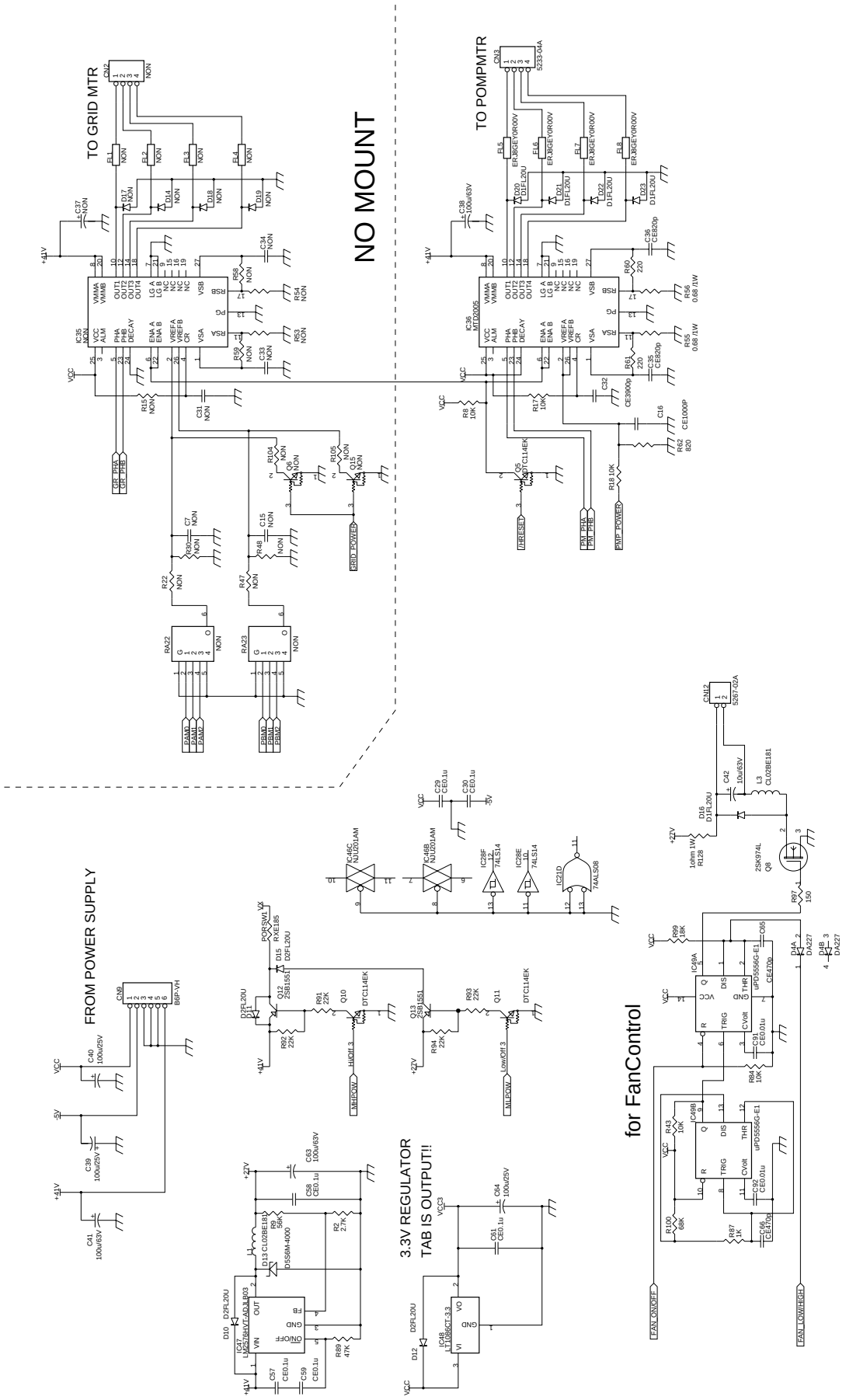


2

MAIN BOARD_8/9 Circuit Diagram

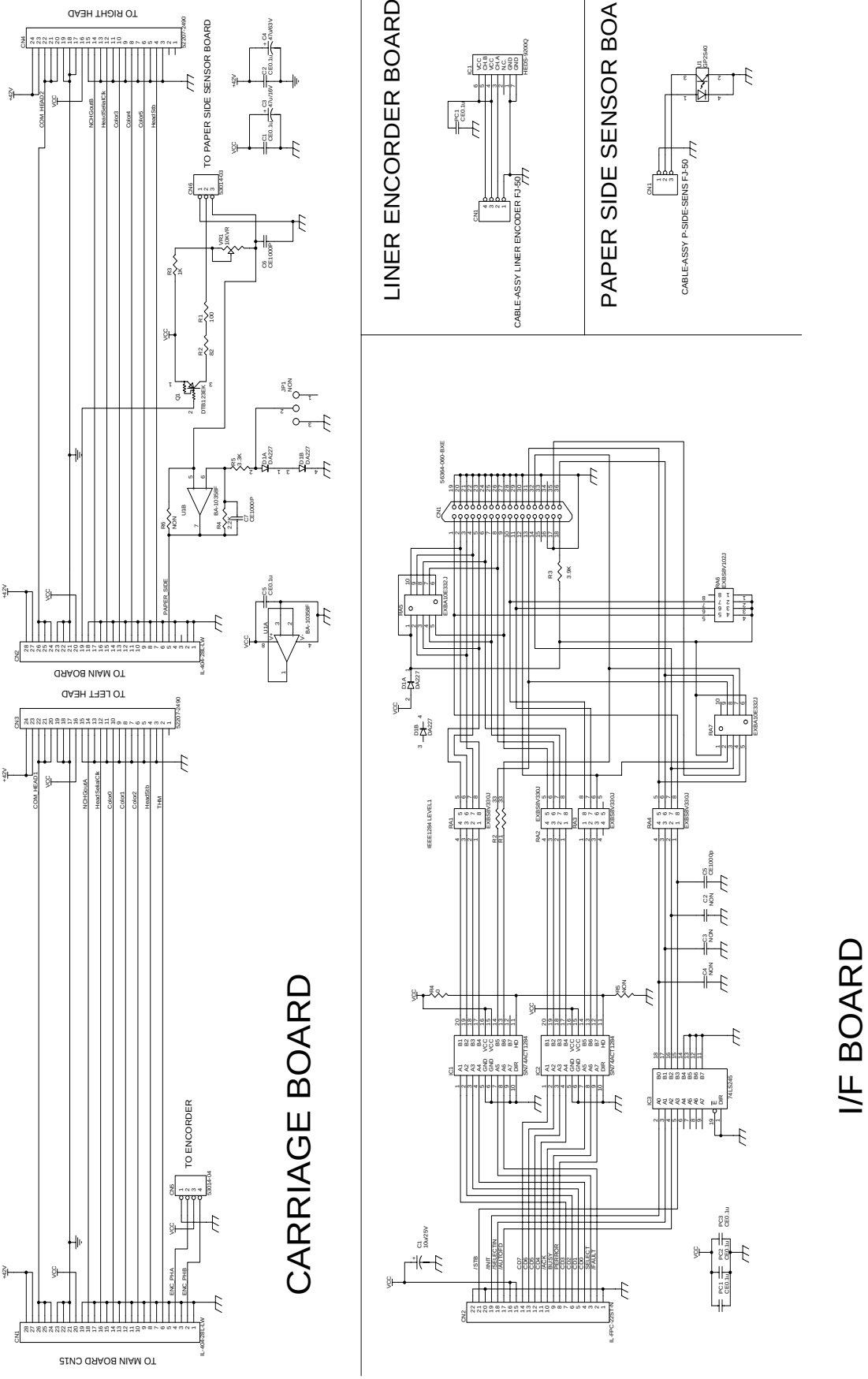


MAIN BOARD_9/9 Circuit Diagram

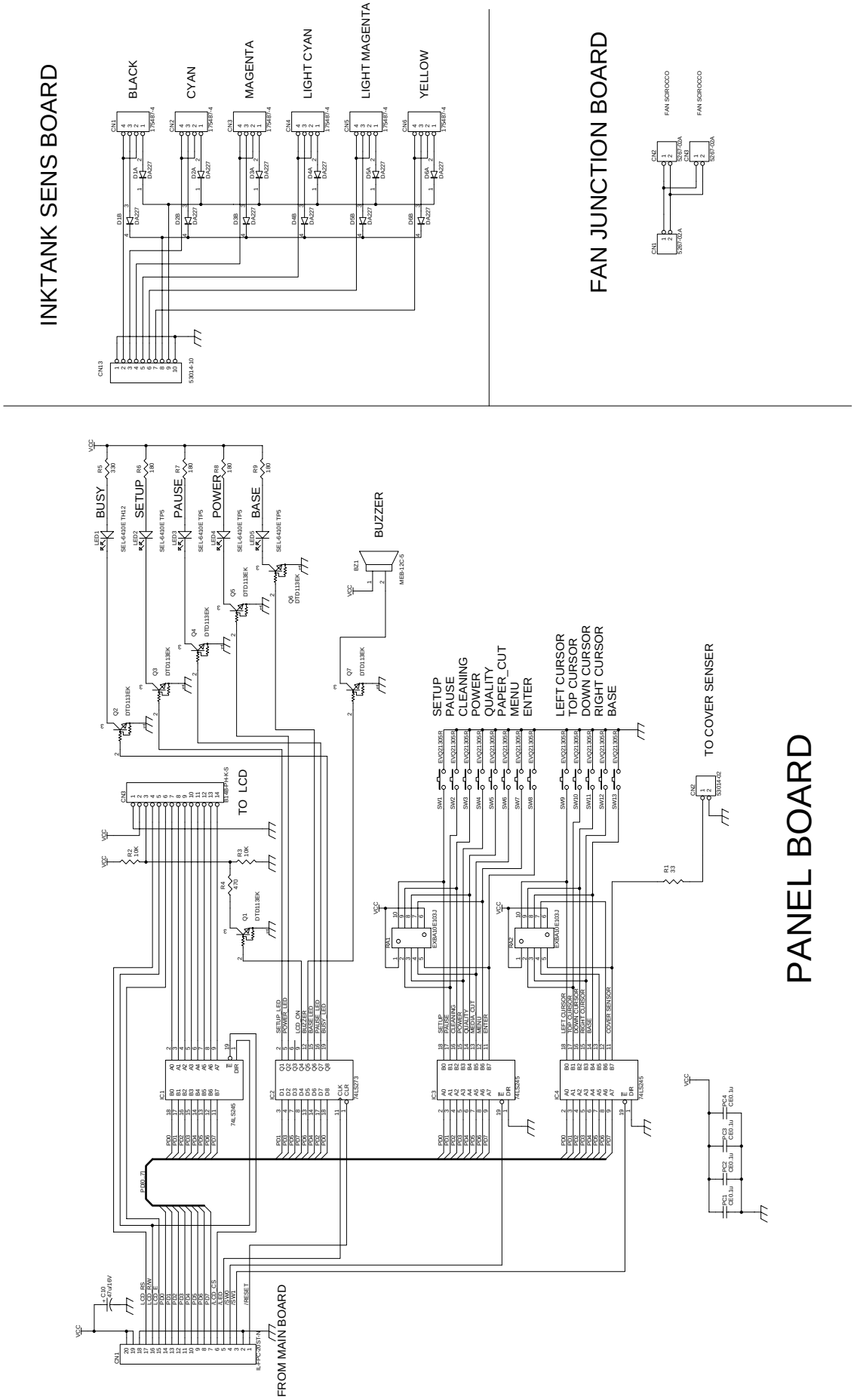


2-3 SUB BOARD ASS'Y

SUB BOARD_1/2 Circuit Diagram



SUB BOARD_2/2 Circuit Diagram



2-4 ELECTRIC MAINTENANCE PART

MAIN BOARD

IC.No.	Parts No.	Description	Function
IC10	15269234	SN74LS245NS	Head I/F Buffer
IC36	15189105	MTD2005	Pump Motor Driver
IC43	15199952	L6203	Carriage Motor Driver
IC67	15199952	L6203	Grit Motor Driver
IC47	15199112	LM2576HVT-ADJLB03	Regulator (+27V)
IC48	15199117	LT1086CT-3.3	Regulator (+3.3V)
HIC1	15159103	HIC_H8D2813E	Left Head Control Driver
HIC2	15159103	HIC_H8D2813E	Right Head Control Driver
Q8	15119110	2SK974L	Fan Driver
Q12	15129444	2SB1551	Voltage Select
Q13	15129444	2SB1551	Voltage Select
Q16	15129111	2SC3746R	Left Head Power Driver
Q17	15129110	2SA1469R	Left Head Power Driver
Q18	15129111	2SC3746R	Right Head Power Driver
Q19	15129110	2SA1469R	Right Head Power Driver

SUB BOARD

IC.No.	Parts No.	Description	Function
IC1	15169146	SN74ACT1284NS	Centronics I/F Buffer
IC2	15169146	SN74ACT1284NS	Centronics I/F Buffer
IC3	15269234	SN74LS245NS	Centronics I/F Buffer

3 Replacement of Main Parts

Following table describes the necessary adjustment after the replacement of each parts.

Replacement Parts	Necessary Adjustments
HEAD	1. HEAD RANK SETTING
	2. HEAD ALIGNMENT

Replacement Parts	Necessary Adjustments
MAIN BOARD	1. DIP SW SETTING
	2. INSTALLATION OF BATTERY
	3. FIRMWARE UPDATE
	4. EEPROM INITIALIZE
	5. LIMIT POSITION INITIALIZE
	6. MOTOR BALANCE ADJUSTMENT
	7. HEAD RANK SETTING
	8. FLUSHING POSITION ADJUSTMENT
	9. LINEAR ENCODER SETUP
	10. PAPER SIDE SENSOR ADJUSTMENT
	11. CUT DOWN POSITION ADJUSTMENT
	12. HEAD ALIGNMENT (HORIZONTAL & BIDIRECTION)
	13. CALIBRATION

Replacement Parts	Necessary Adjustments
CAPPING ASSEMBLY	1. CAPPING POSITION ADJUSTMENT
	2. LIMIT POSITION INITIALIZE
	3. FLUSHING POSITION ADJUSTMENT
	4. CUT DOWN POSITION ADJUSTMENT

Replacement Parts	Necessary Adjustments
ENCODER SCALE	1. LINEAR ENCODER SETUP
	2. LIMIT POSITION INITIALIZE
	3. FLUSHING POSITION ADJUSTMENT
	4. CUT DOWN POSITION ADJUSTMENT

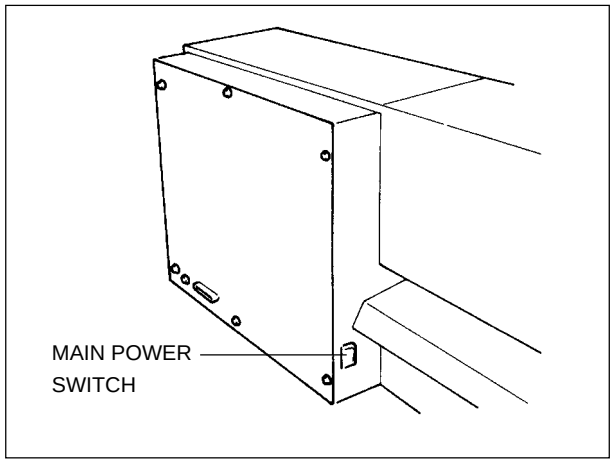
Replacement Parts	Necessary Adjustments
CARRIAGE WIRE	1. WIRE TENSION ADJUSTMENT
	2. LIMIT POSITION INITIALIZE
	3. LINEAR ENCODER SETUP
	4. CUT DOWN POSITION ADJUSTMENT
	3. FLUSHING POSITION ADJUSTMENT

Replacement Parts	Necessary Adjustments
ASS'Y,MOTOR Y	1. MOTOR BALANCE ADJUSTMENT

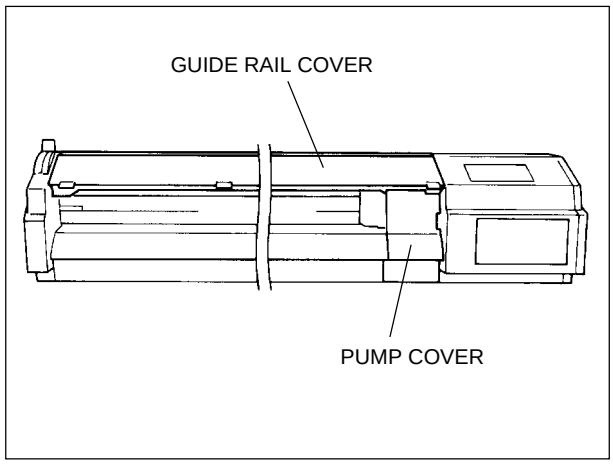
3-1 HEAD_REPLACEMENT

1 Turn off the main power switch.

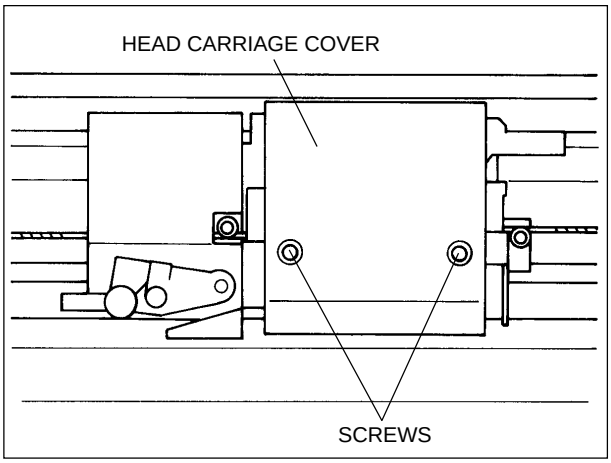
Make sure to turn off the main power switch when replacing the HEAD. HEAD will break.
It is recommended to unplug the machine for safety.



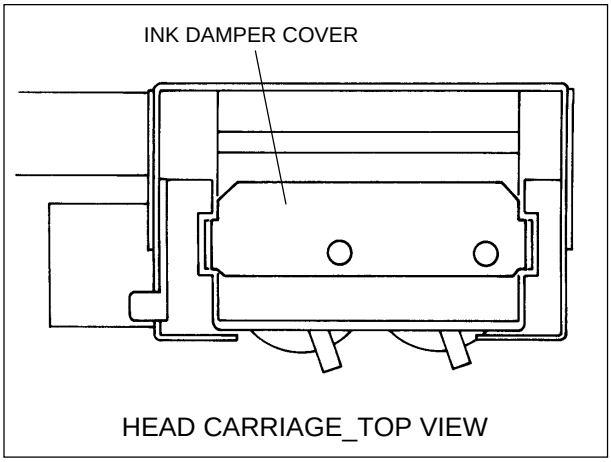
2 Remove the PUMP COVER and then the GUIDE RAIL COVER.



3 Remove the HEAD CARRIAGE COVER.

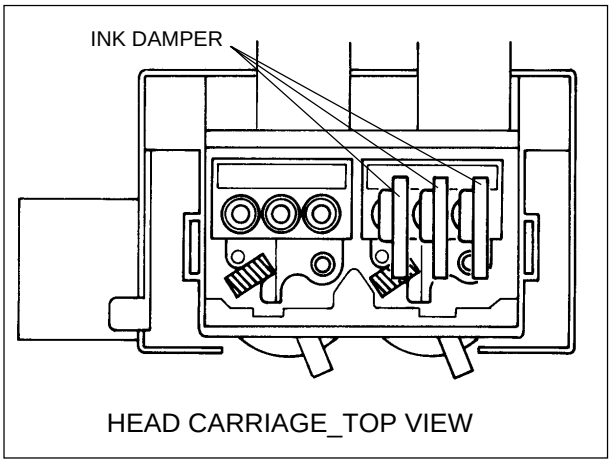


4 Remove the INK DAMPER COVER.

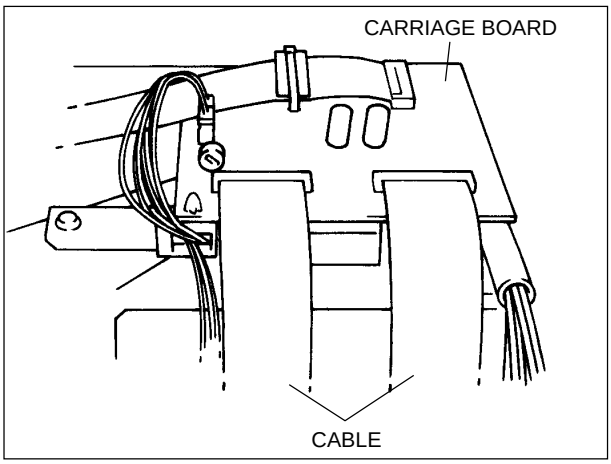


5 Disconnect the INK DAMPER from the HEAD.

Do not hold the sides of the INK DAMPER. It could break.

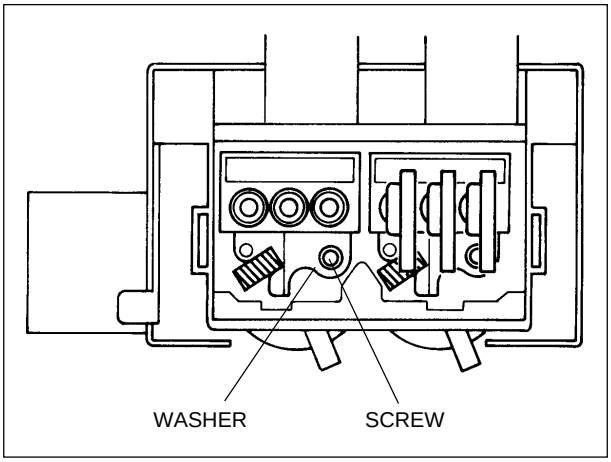


6 Disconnect the CABLE from the CARRIAGE BOARD.



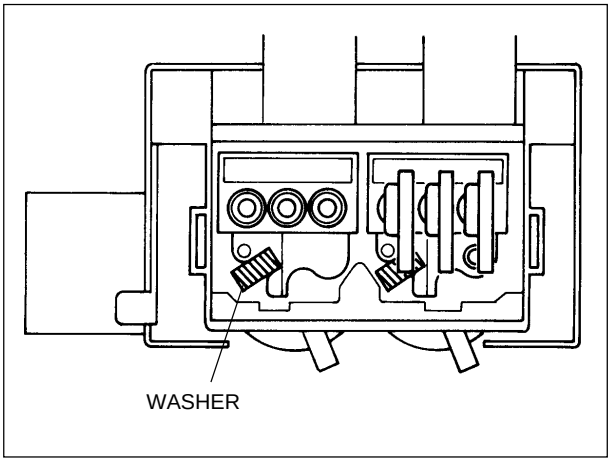
7 Remove the SCREW and WASHER fixing the HEAD.

1. Be careful not to lose the WASHER.
2. Don't touch the HEAD where the INK DAMPER is connected.

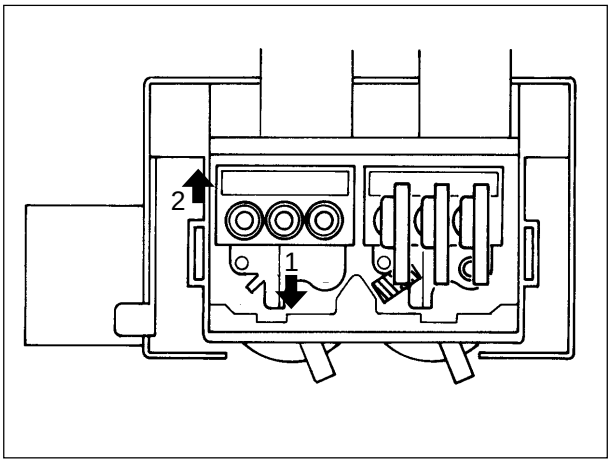


8 Remove the SPRING.

Be careful not to lose the SPRING.

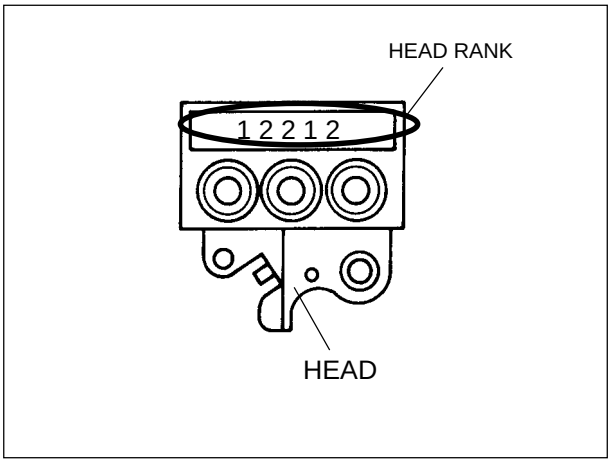


9 Pull the HEAD towards the front and then pull it up to remove it together with the CABLE.



10 Write down the HEAD RANK written on the top part of the new HEAD.

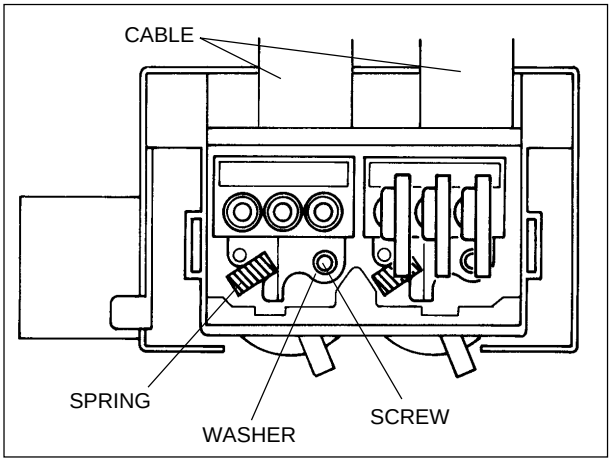
It is necessary when setting the HEAD RANK.



11 Connect the CABLE to the new HEAD.

3

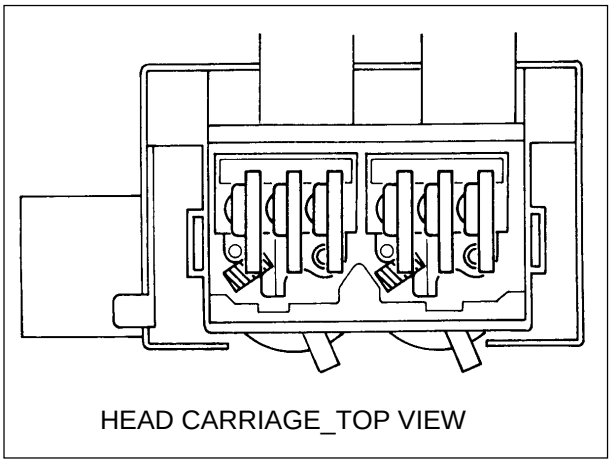
12 Fix the new HEAD and the SPRING on the HEAD CARRIAGE.
Make sure that the CABLE will go behind the SHAFT of the HEAD CARRIAGE.



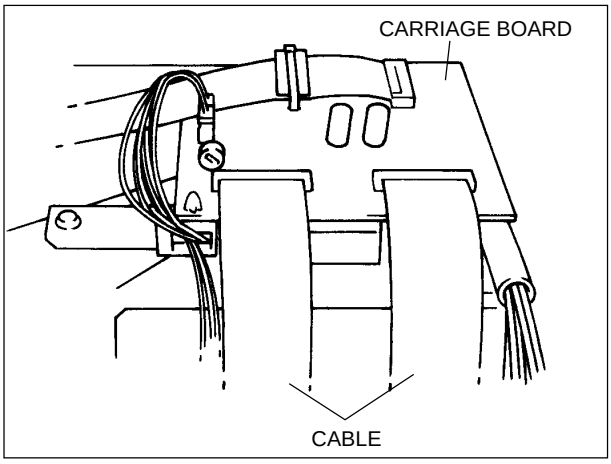
It is easier to fix the SPRING on the HEAD first.

13 Connect the INK DAMPER to the HEAD.

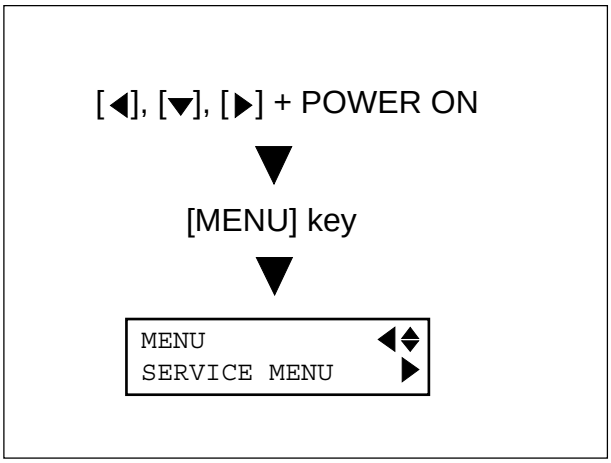
Do not hold the sides of the INK DAMPER. It could break.



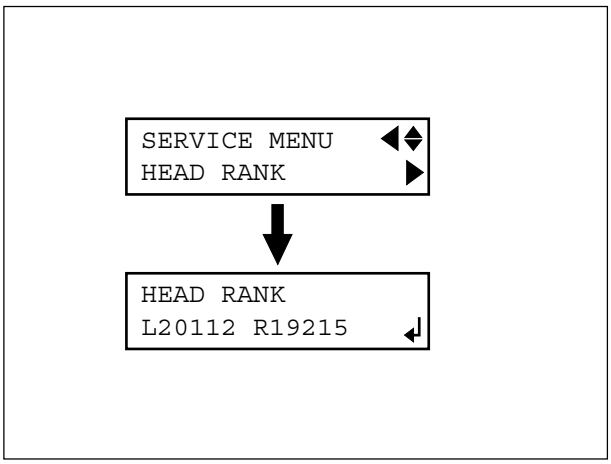
14 Connect the CABLE to the CARRIAGE BOARD.



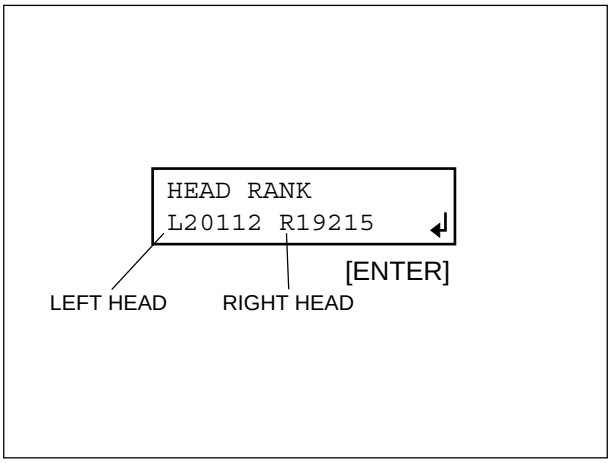
15 Turn on the sub power switch while pressing [◀], [▼] and [▶] keys to enter the SERVICE MODE.



16 Select [HEAD RANK] menu.



17 Set the HEAD RANK by selecting the digit with [◀] and [▶] keys, and changing the parameters with [▲] and [▼] keys.
Press the [ENTER] key to save the settings.

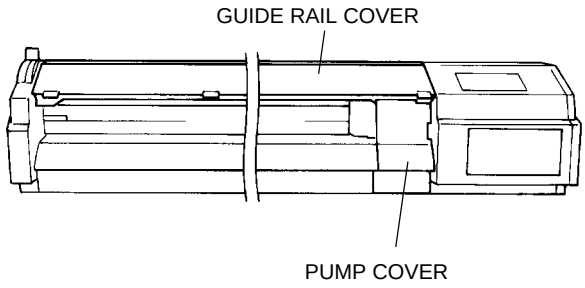


18 Carry out the following adjustments after resetting the dot count in the [HISTORY MENU].

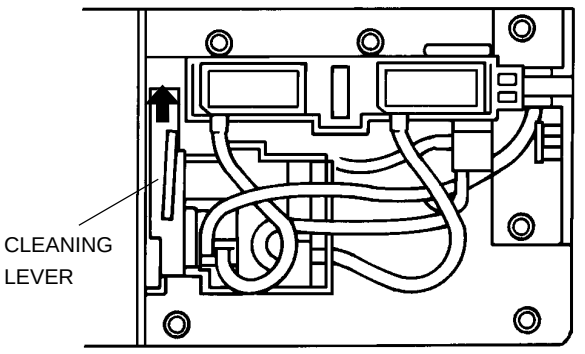
1. HEAD ALIGNMENT
2. THERMISTOR CHECK

3-2 CLEANING WIPER_REPLACEMENT

1 Remove the PUMP COVER.

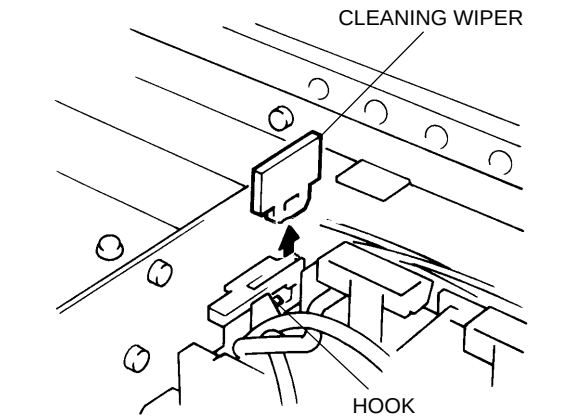


2 Set the CLEANING LEVER to the rear side.

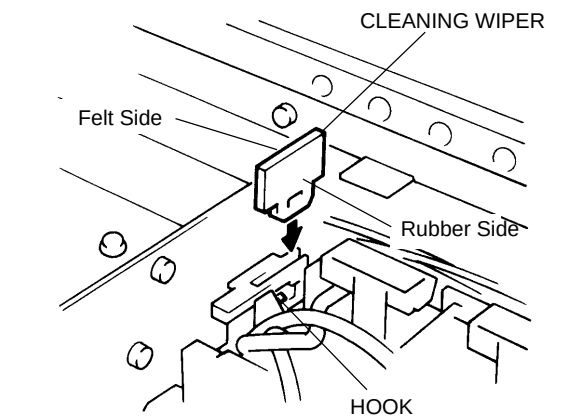


PUMP UNIT_TOP VIEW

3 Unhook the CLEANING WIPER and replace it with new one.



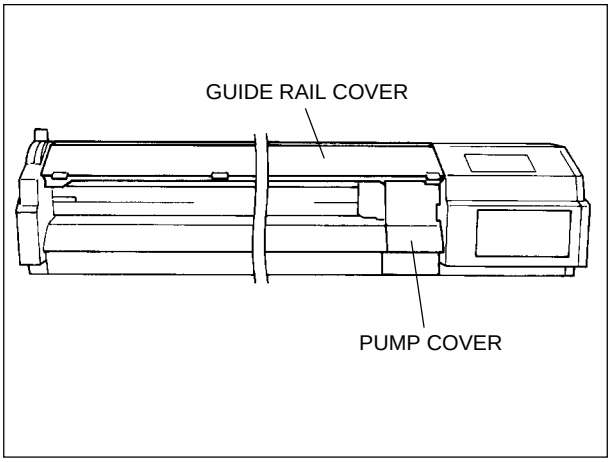
4 Fix the new CLEANING WIPER to the CLEANING LEVER.



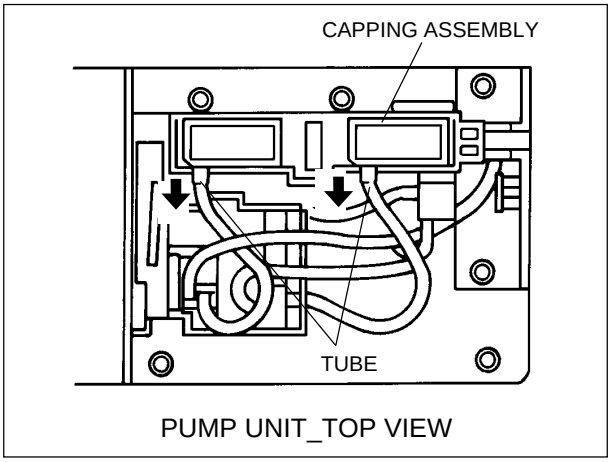
Be careful with the direction of the CLEANING WIPER.
Make sure that dust won't stick on the CLEANING WIPER when fixing it.

3-3 CAPPING ASSEMBLY_REPLACEMENT

1 Remove the PUMP COVER and then the GUIDE RAIL COVER.

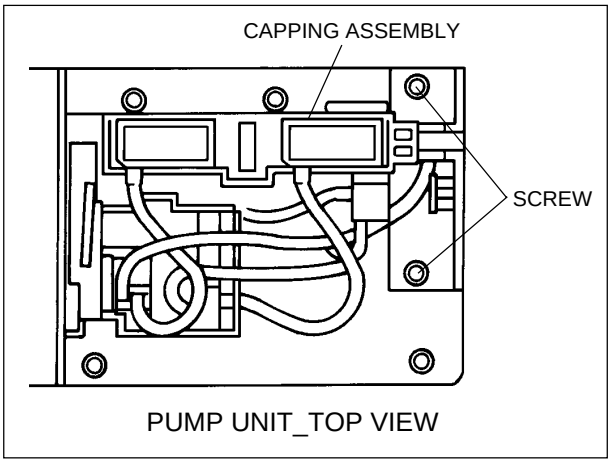


2 Disconnect the 2 TUBEs connected to the CAPPING ASSEMBLY from the PUMP UNIT.



PUMP UNIT_TOP VIEW

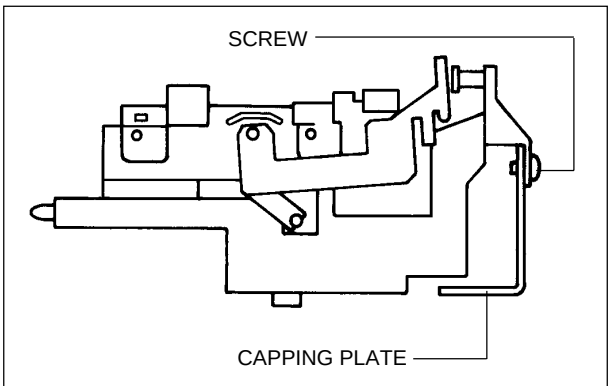
3 Remove the 2 screws fixing the CAPPING PLATE and remove the CAPPING ASSEMBLY by sliding it to the right side.



PUMP UNIT_TOP VIEW

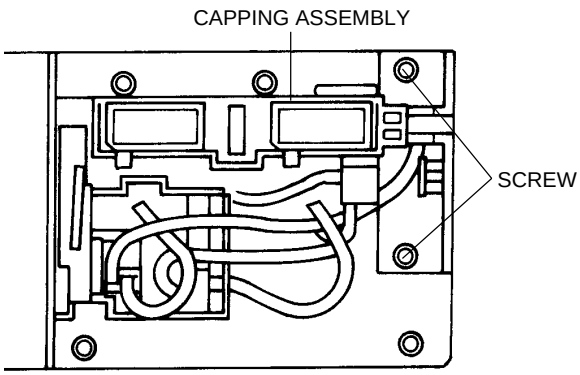
4 Remove the CAPPING PLATE and fix it on the new CAPPING ASSEMBLY.

Don't touch the sponge inside the CAP.
Make sure that the dust won't stick on the CAPPING part.



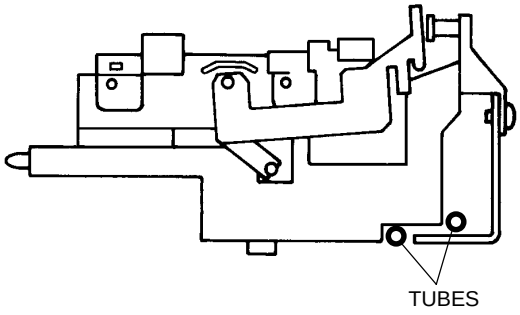
CAPPING ASSEMBLY_SIDE VIEW

5 Fix the new CAPPING ASSEMBLY to the PUMP UNIT.



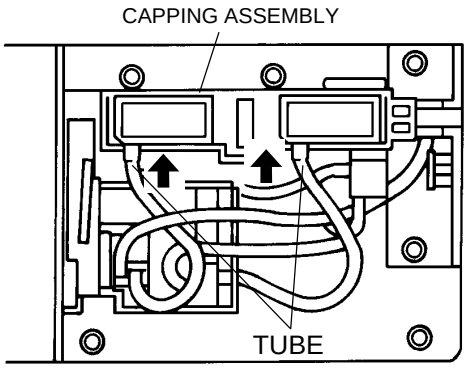
PUMP UNIT_TOP VIEW

Make sure that the TUBEs won't go underneath the CAPPING ASSEMBLY.



CAPPING ASSEMBLY_SIDE VIEW

6 Connect the 2 TUBEs from the PUMP UNIT to the CAPPING ASSEMBLY.



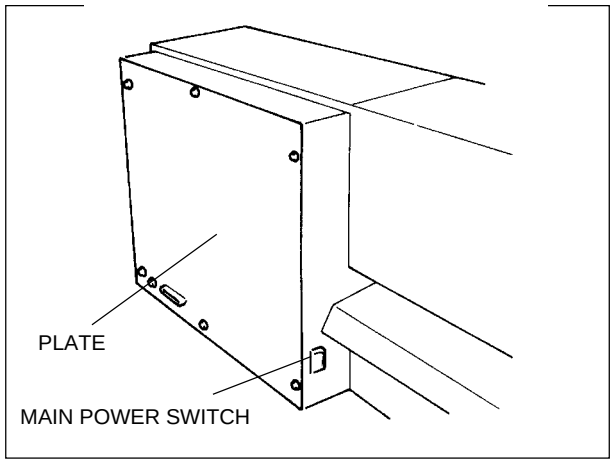
PUMP UNIT_TOP VIEW

7 Carry out the following adjustments.

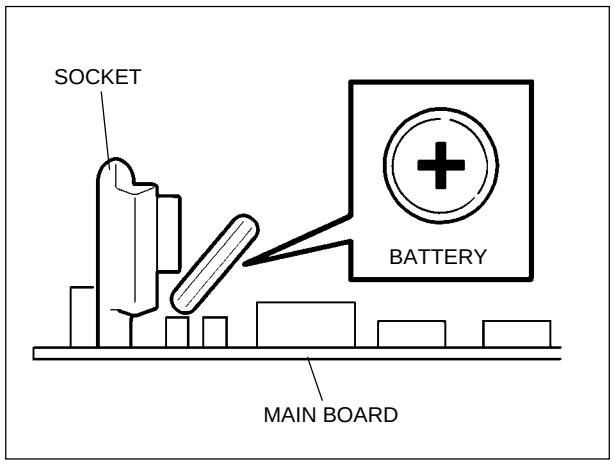
1. CAPPING POSITION ADJUSTMENT
2. LIMIT POSITION INITIALIZE
3. FLUSHING POSITION ADJUSTMENT
4. CUT DOWN POSITION ADJUSTMENT

3-4 MAIN BOARD_REPLACEMENT

1 Turn off the main power switch.
Remove the PLATE behind the RIGHT SIDE COVER.



2 Remove the BATTERY from the current MAIN BOARD and install it on the new MAIN BOARD.



3 Follow the steps listed in the following table after replacing the MAIN BOARD.

Replacement Parts	Necessary Adjustment
MAIN BOARD	1. DIP SW SETTING
	2. INSTALLATION OF BATTERY
	3. FIRMWARE UPDATE
	4. EEPROM INITIALIZE
	5. LIMIT POSITION INITIALIZE
	6. MOTOR BALANCE ADJUSTMENT
	7. HEAD RANK SETTING
	8. FLUSHING POSITION ADJUSTMENT
	9. LINEAR ENCODER SETUP
	10. PAPER SIDE SENSOR ADJUSMENT
	11. CUT DOWN POSITION ADJUSTMENT
	12. HEAD ALIGNMENT (HORIZONTAL & BIDIRECTION)
	13. CALIBRATION

3-5 BATTERY_REPLACEMENT

⚠ CAUTION

Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type recommended by the manufacturer.
Dispose of used batteries according to the manufacturer's instructions.

⚠ ATTENTION

II y a danger d'explosion s'il y a remplacement incorrect de la batterie.
Remplacer uniquement avec une batterie du même type ou d'un type équivalent recommandé par le constructeur. Mettre au rebut les batteries usagées conformément aux instructions du fabricant.

⚠ ADVARSEL!

Lithiumbatteri - Eksplosionsfare ved fejlagtig handtering.
Udskiftning ma kun ske med batteri af samme fabrikat og type.
Levér det brugte batteri tilbage til leveranøren.

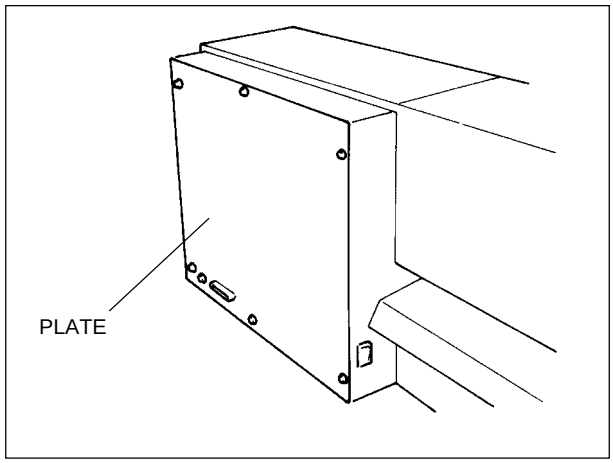
⚠WARNING

Do not recharge, short-circuit, disassemble the lithium battery, nor put it into fire.
It may cause heat, explosion and fire.

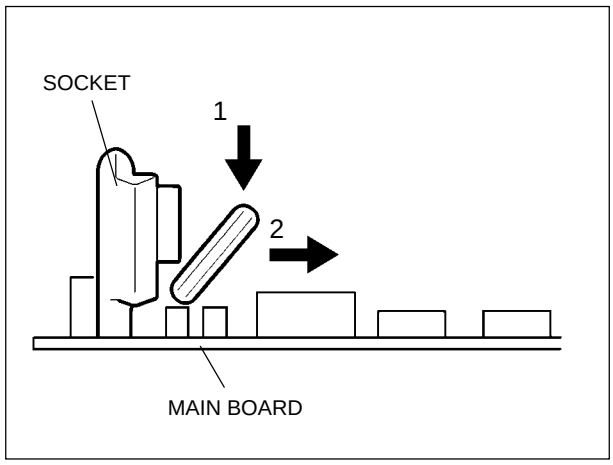
Do not use the lithium battery by mixing the new one with the old one nor mixing the different types together.
It may cause heat, explosion and fire.

Put tape around the lithium battery for insulation for disposal or preservation.
It may cause heat, explosion and fire.

1 Turn off the main power switch.
Remove the PLATE behind the RIGHT SIDE COVER.

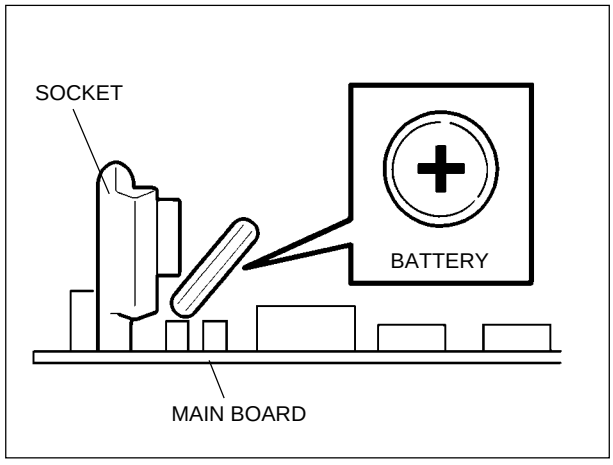


2 Remove the BATTERY on the MAIN BOARD by pushing it down and tilting towards the right.

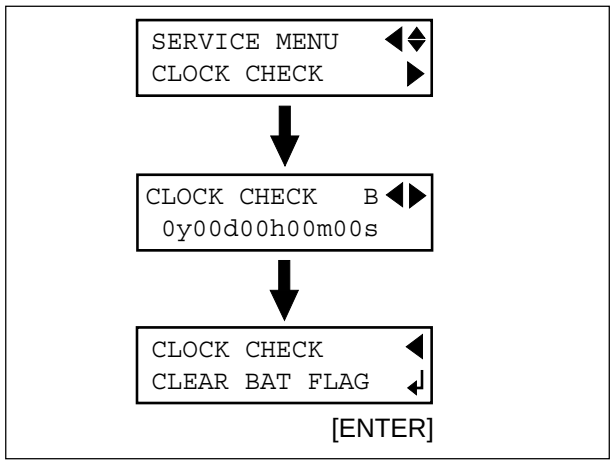


3 Replace the BATTERY to the new one.

Be careful with the direction of the BATTERY.



4 Clear the BATTERY EMPTY FLAG from the [CLOCK CHECK] in the SERVICE MODE.

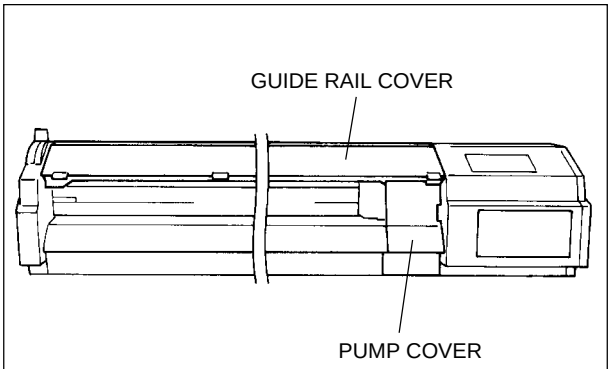


5 Dispose the BATTERY.

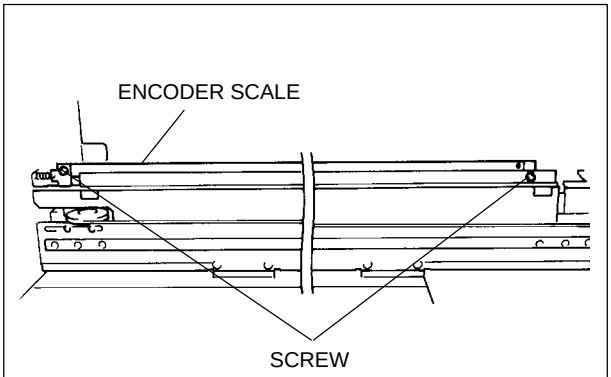
FOLLOWING MAY CAUSE EXPLOSION OF BATTERY.
RECHARGE, SHORT-CIRCUIT, DISASSEMBLY, HEATING, PUTTING INTO FIRE.
DON'T PUT BATTERY WITH OTHER METAL OR BATTERY.
DISPOSE BATTERY WITHOUT INSULATION.

3-6 ENCODER SCALE_REPLACEMENT

1 Turn off the main power switch.
Remove the PUMP COVER and then the GUIDE RAIL COVER.

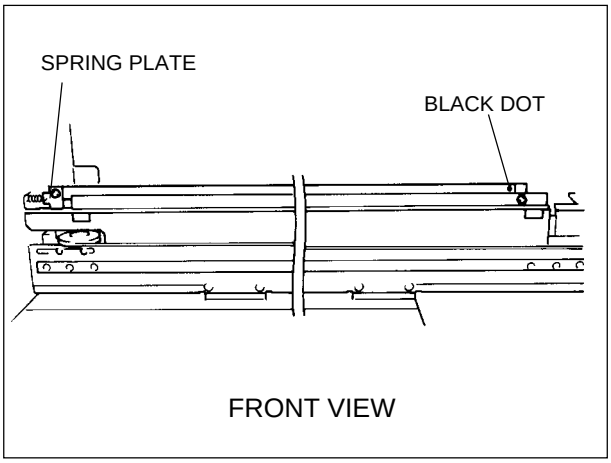


2 Remove the ENCODER SCALE.

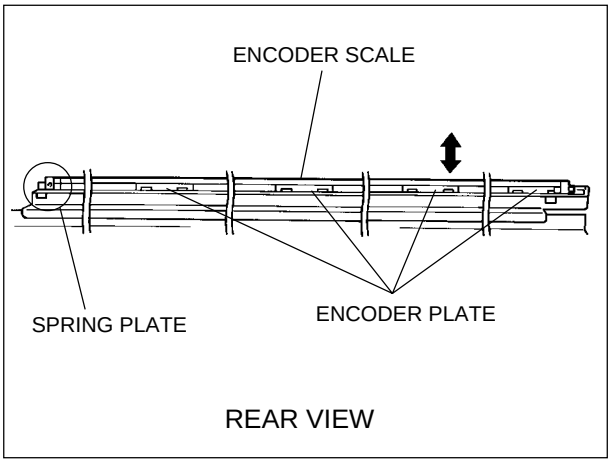


3 Fix the SPRING PLATE to the end of the new ENCODER SCALE where there is no black dot written on it.

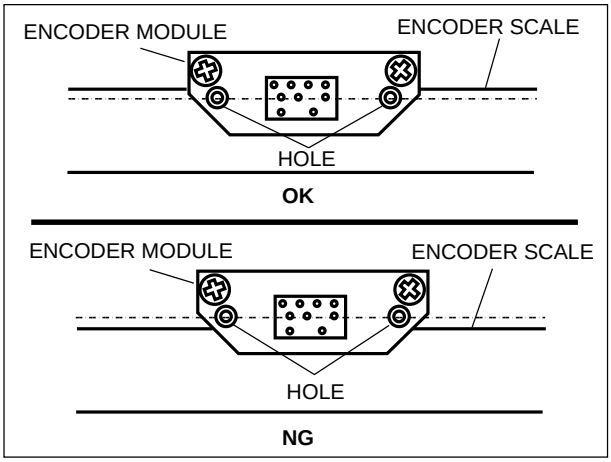
Make sure not to make scratches or put grease on the ENCODER SCALE when fixing it.



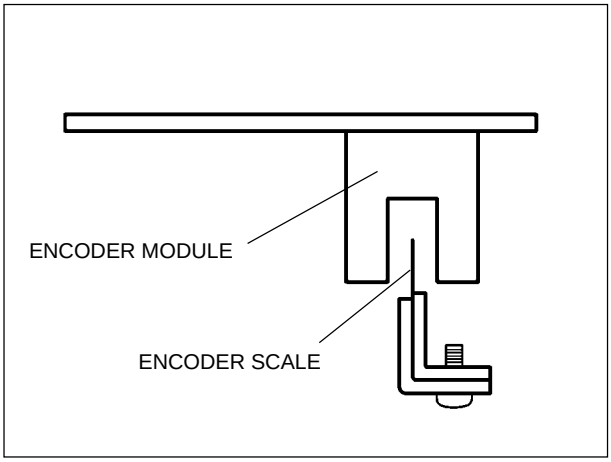
4 Fix the ENCODER SCALE to the ENCODER PLATE.
Make sure that the ENCODER SCALE moves up and down by hand at the SPRING PLATE side by hand.



5 Make sure that the ENCODER SCALE is placed above the center of two holes of the ENCODER MODULE.
If not, adjust the position of the ENCODER MODULE.



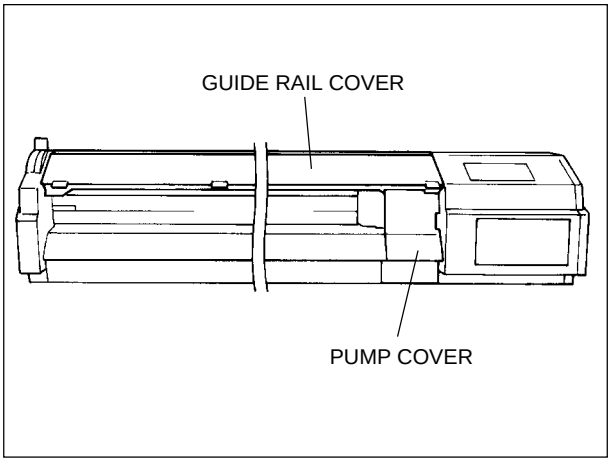
6 Move the HEAD CARRIAGE in a whole distance and make sure that the ENCODER SCALE doesn't rub against the ENCODER MODULE.



7 Carry out the LINEAR ENCODER SETUP.

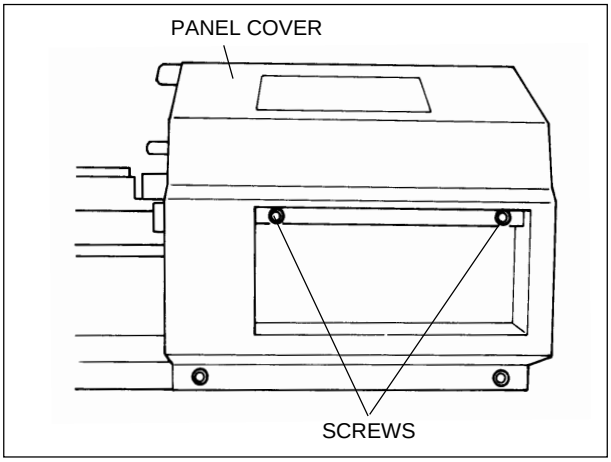
3-7 CARRIAGE WIRE_REPLACEMENT

1 Turn off the main power switch.
Remove the PUMP COVER and then the GUIDE RAIL COVER.

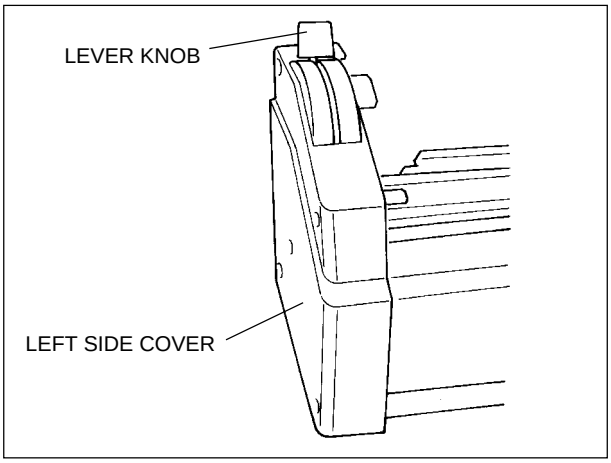


2 Remove the PANEL COVER.

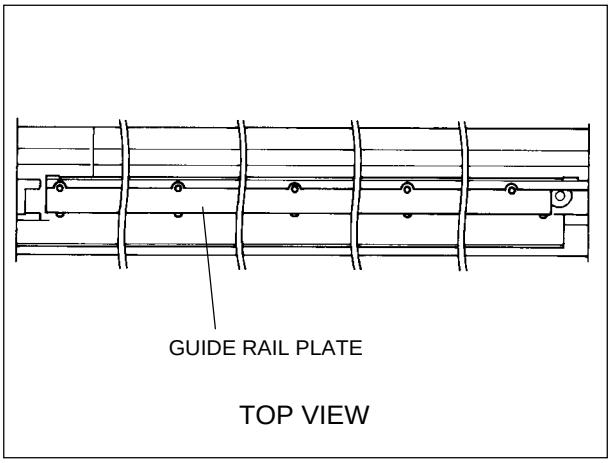
1. 2 screws fixing the PANEL COVER from the front are located at the CARTRIDGE HOLDER part.
2. Be careful with the CABLE and WIRE when removing the PANEL COVER.



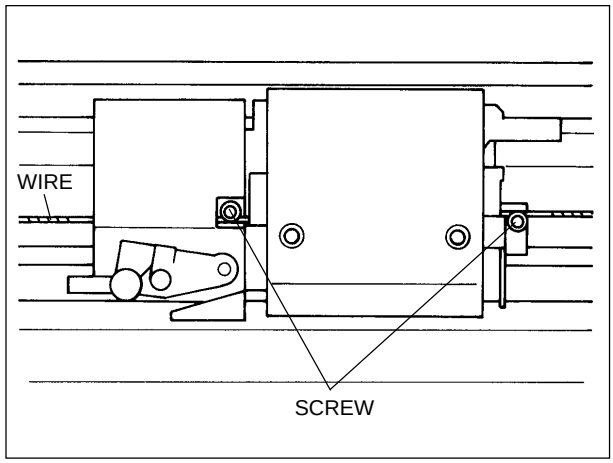
3 Remove the LEVER KNOB and then the LEFT SIDE COVER.



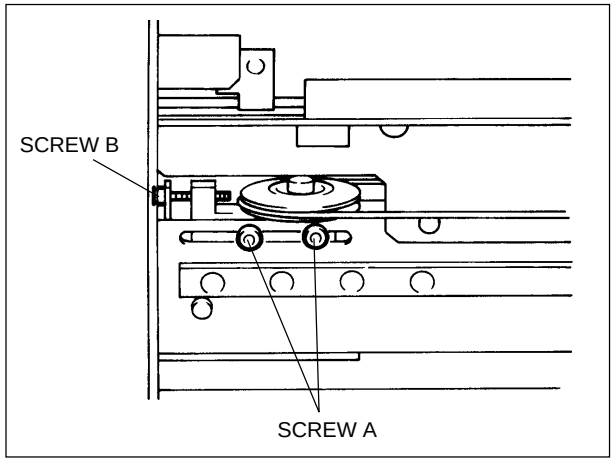
4 Remove the GUIDE RAIL PLATE.



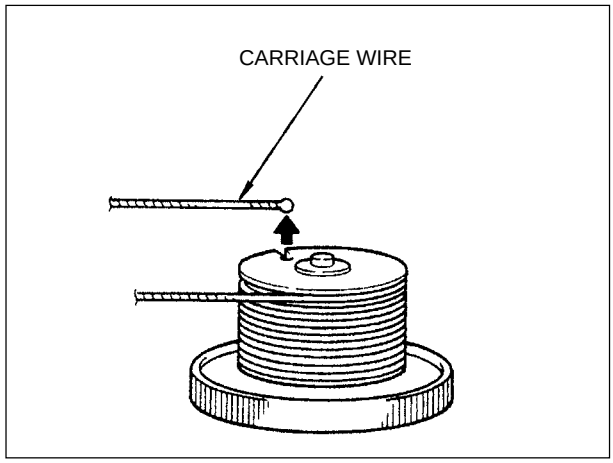
5 Loosen the 2 screws fixing the HEAD CARRIAGE to the CARRIAGE WIRE.



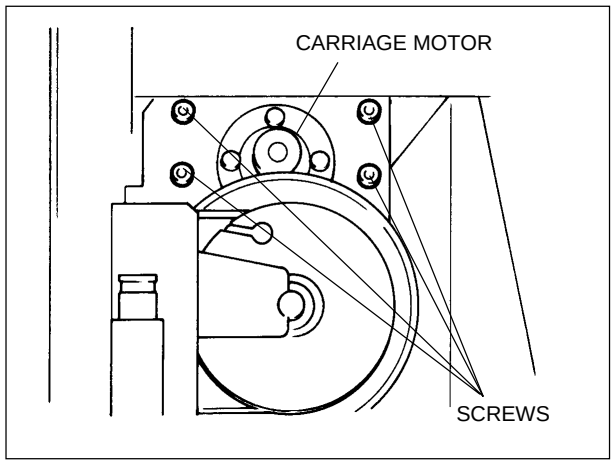
6 Loosen SCREW A and SCREW B located at the left side of the unit in order.



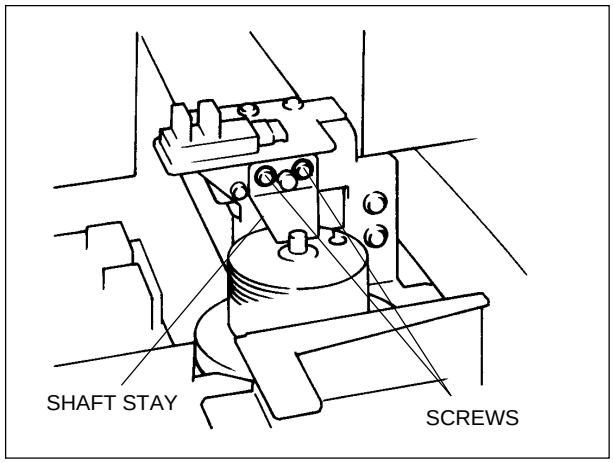
7 Remove the CARRIAGE WIRE as shown in the figure.



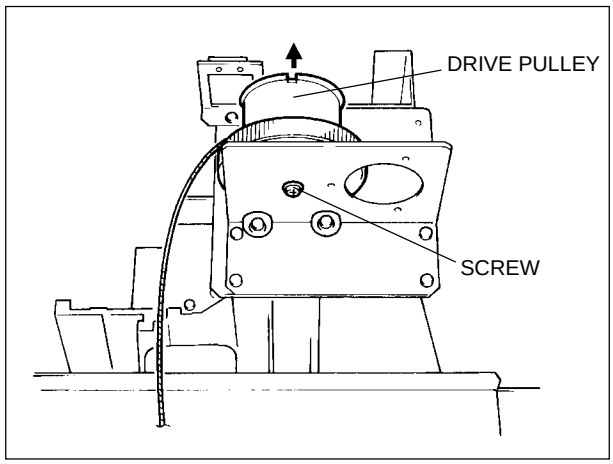
8 Loose the 4 screws fixing the CARRIAGE MOTOR.



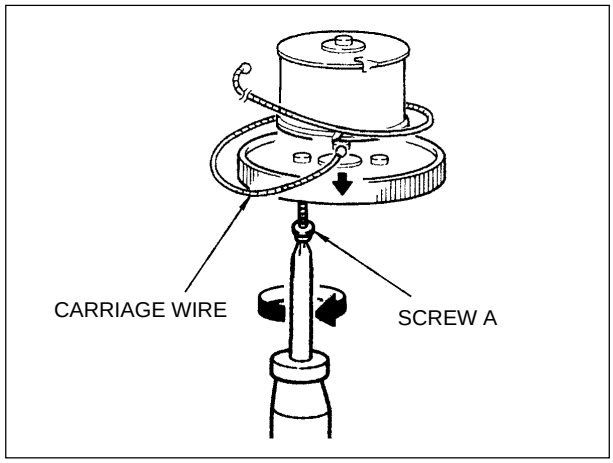
9 Remove the SHAFT STAY.



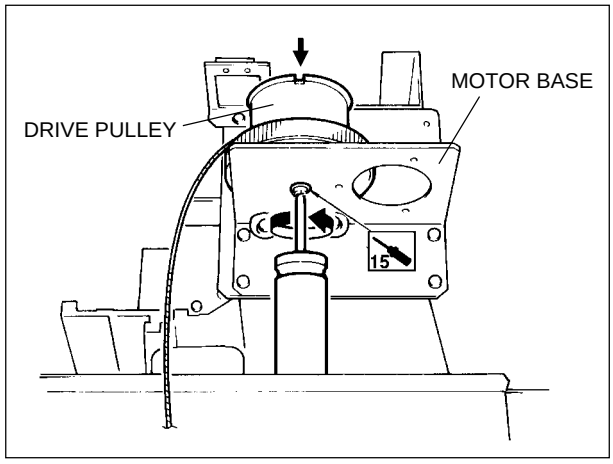
10 Remove the DRIVE PULLEY.



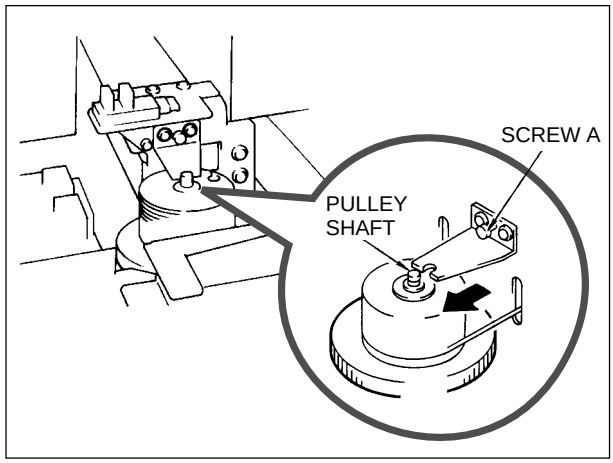
11 Loosen the SCREW A and pull out the CARRIAGE WIRE and replace it with new one.



12 Fix the DRIVE PULLEY to the MOTOR BASE.

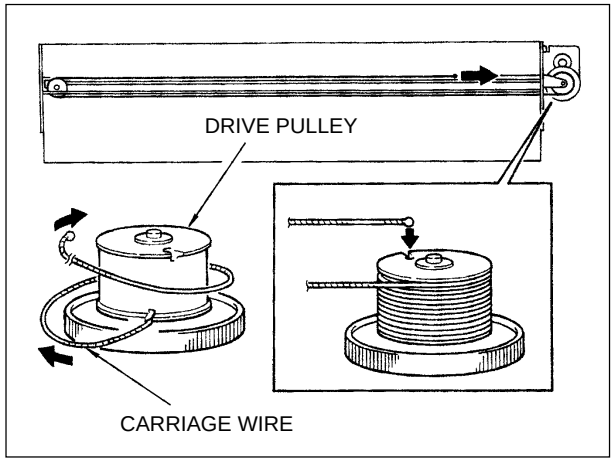


13 Tighten the SCREW A until the PULLEY SHAFT makes contact with the SHAFT STAY.
Then, tighten SCREW B.

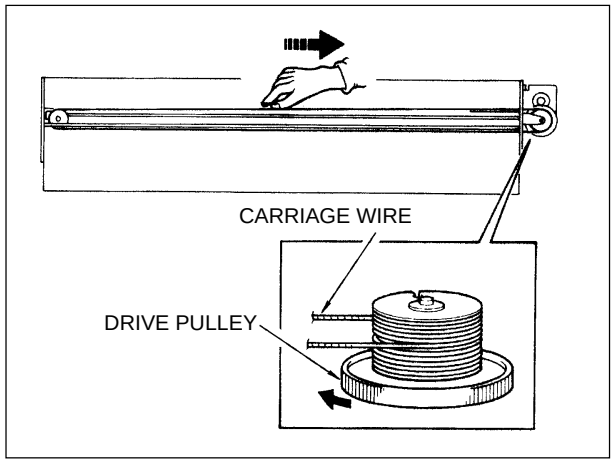


14 Wind the CARRIAGE WIRE around the DRIVE PULLEY from the bottom to the top.

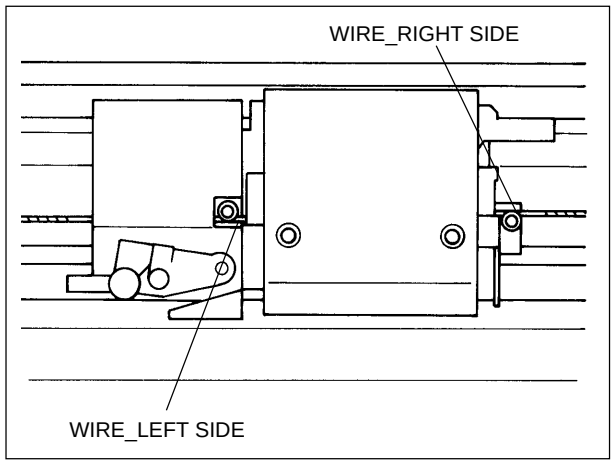
Make sure that the CARRIAGE WIRE doesn't cross over.



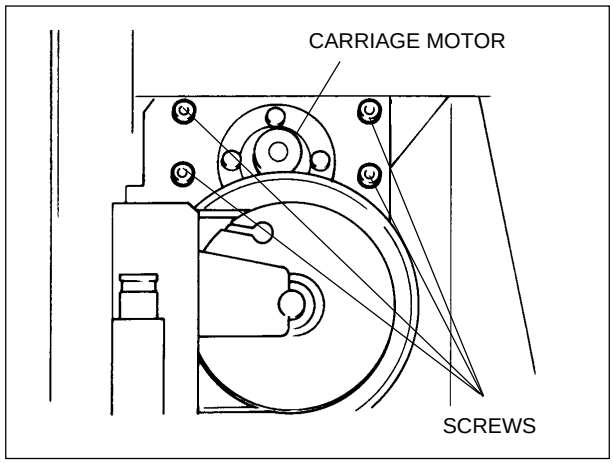
15 Rotate the DRIVE PULLEY until the CARRIAGE WIRE comes to its center.



16 Fix the HEAD CARRIAGE at the center part of the GUIDE RAIL.
Fix the CARRIAGE WIRE at the bottom part of the LEFT SCREW and top part of the RIGHT SCREW.



17 Fix the CARRIAGE MOTOR so that there is no looseness or too much load.



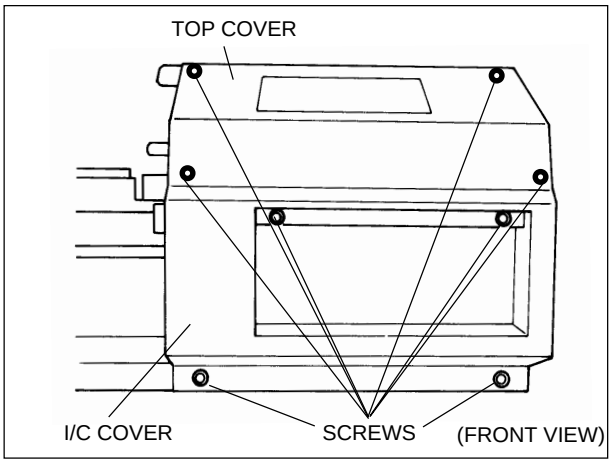
18 Move the HEAD CARRIAGE in a whole distance of the GUIDE RAIL to remove the slack in the CARRIAGE WIRE.
Carry out the following adjustments after fixing the CARRIAGE MOTOR.

1. WIRE TENSION ADJUSTMENT
2. LIMIT POSITION INITIALIZE
3. LINEAR ENCODER SETUP
4. CUT DOWN POSITION ADJUSTMENT
5. FLUSHING POSITION ADJUSTMENT

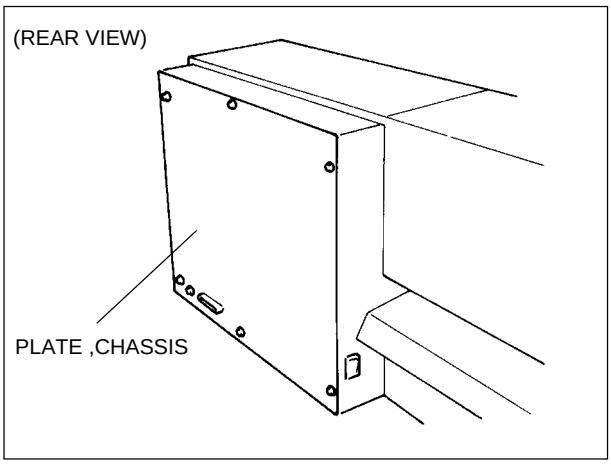
3-8 ASS'Y , MOTOR Y_REPLACEMENT

1 Turn off the main power switch.
Remove the TOP COVER and the I/C COVER.

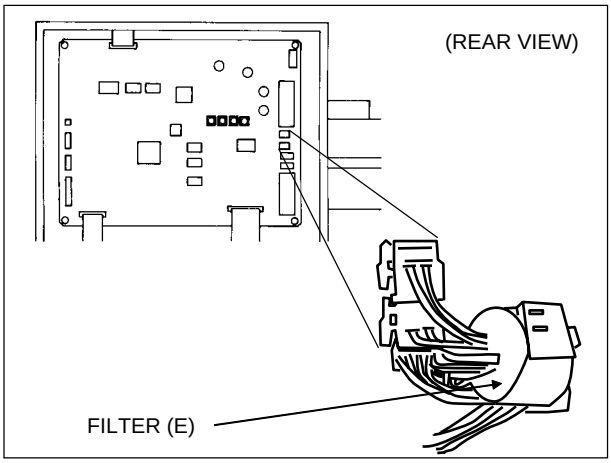
1. 2 screws fixing the TOP COVER from the front are located at the CARTRIDGE HOLDER part.
2. Be careful with the CABLE and the WIRE when removing the TOP COVER.



2 Remove the PLATE,CHASIS on the back of the right SIDE COVER.

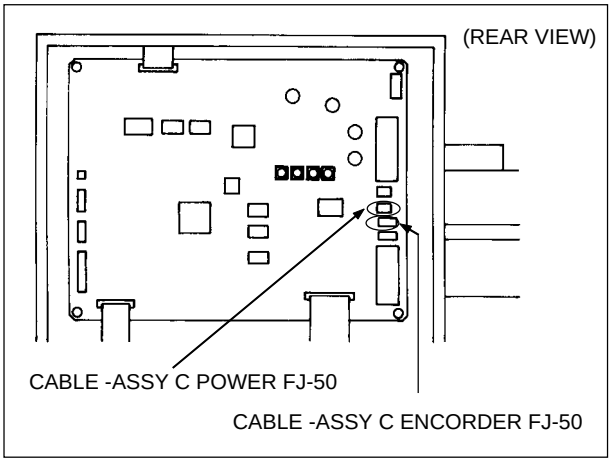


3 Open the FILTER (E) with the Tweezers.

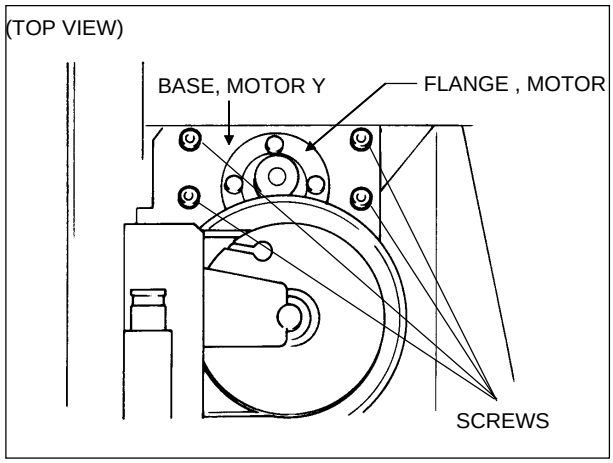


4 Disconnect the following 2 cables from the MAIN BOARD.

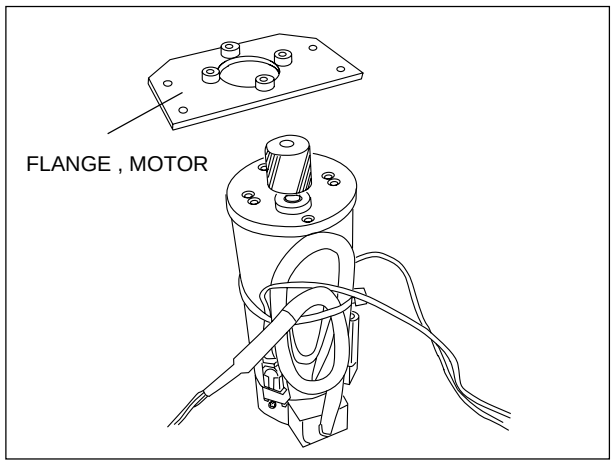
1. CABLE-ASSY C POWER
   from the CN11 (2nd connector from the upper)
2. CABLE-ASSY C ENCORDER
   from the CN1 (3rd connector from the upper)



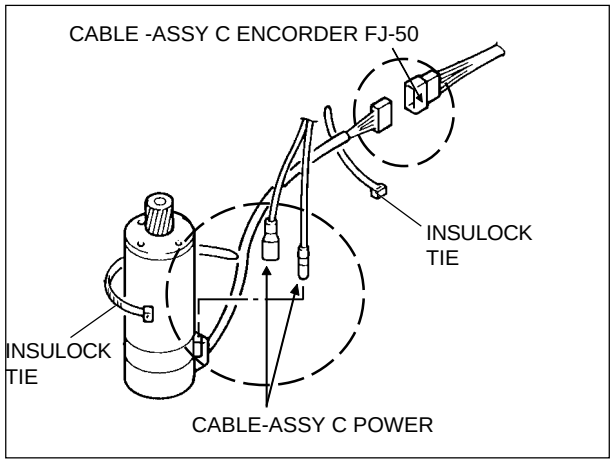
5 Remove the FLANGE,MOTER from the BASE,MOTOR Y with the Hexagonal Wrench.



6 Remove the Y MOTOR ASS'Y from the FLANGE,MOTOR with the Hexagonal Wrench.

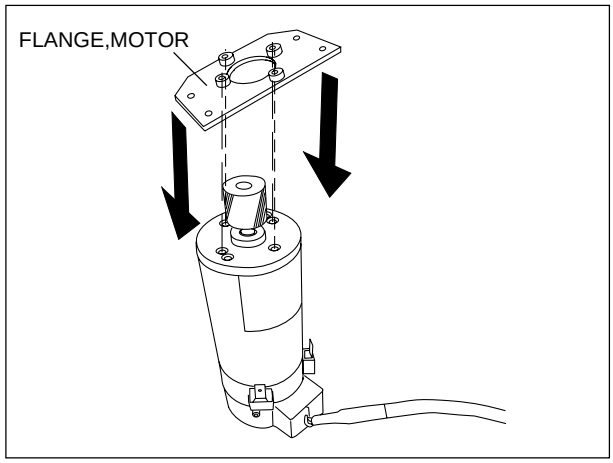


7 Cut the INSULOCK TIES and remove the CABLE-ASSY C ENCORDER and the CABLE-ASSY C POWER from the Y MOTOR.



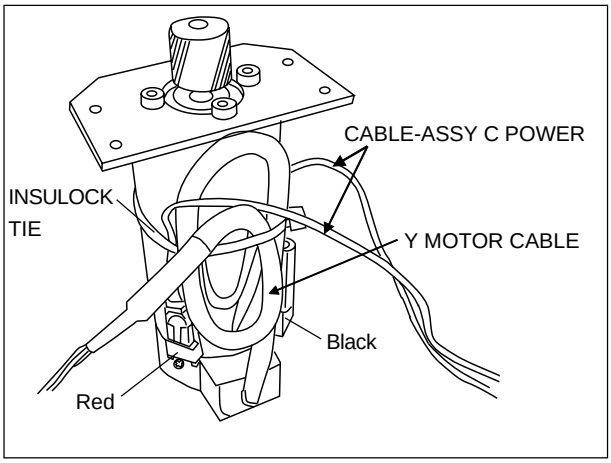
8 Replace the Y MOTOR ASS'Y with a new one and fix the FLANGE,MOTOR to the new Y MOTOR ASS'Y with the Hexagonal Wrench.

Make sure that the fixing direction of the FLANGE,MOTOR is correct.

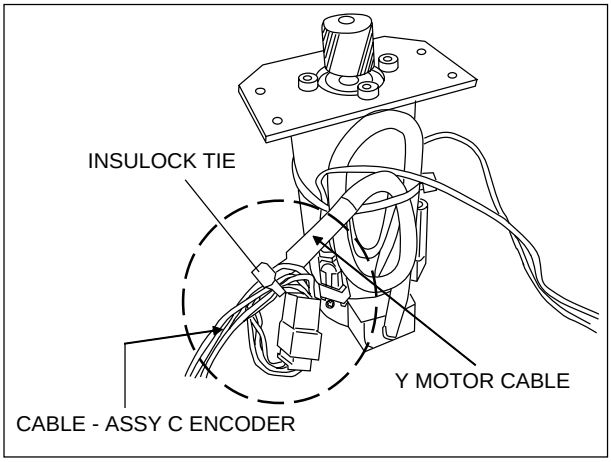


9 Connect the CABLE-ASSY C POWER to the Y MOTOR ASS'Y and fix them together with the Y MOTOR CABLE with the INSULOCK TIE.

Make sure to connect the Red and Black connector correctly.



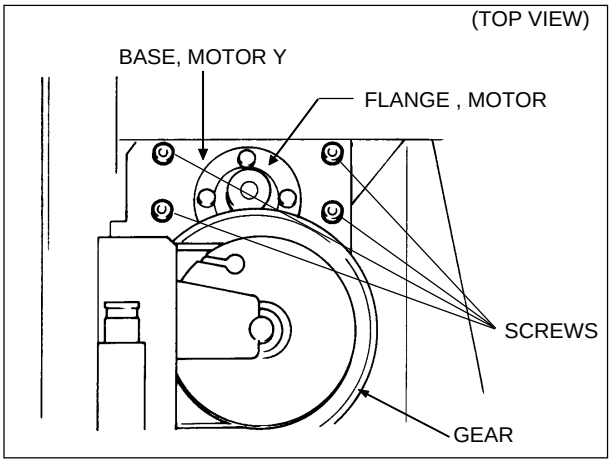
10 Connect the CABLE-ASSY C ENCODER to the Y MOTOR CABLE.
Fix them with the INSULOCK TIE.



11 Fix the FLANGE,MOTOR to the BASE,MOTOR Y with the Hexagonal Wrench.

1. Make sure that the Y MOTOR ASS'Y make contact with the GEAR correctly and pressing it against the GEAR when fixing to the BASE,MOTOR Y.

2. Make sure that the HEAD CARRIAGE moves within a load of 500gf (5N) when pulling it withTENSION GAUGE 2000 (ST-001).

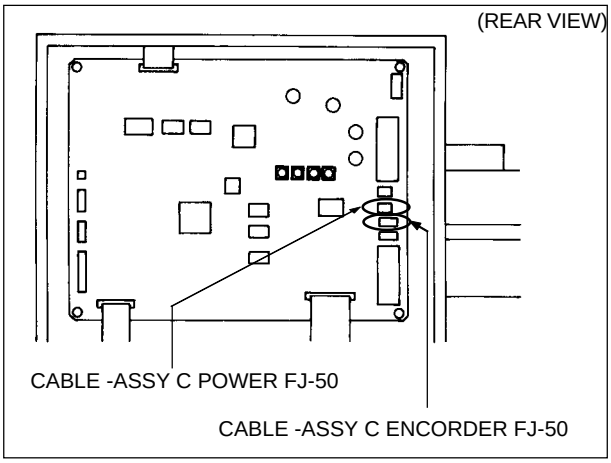


12 Apply the Grease (Floil G-474C) to the GEAR.

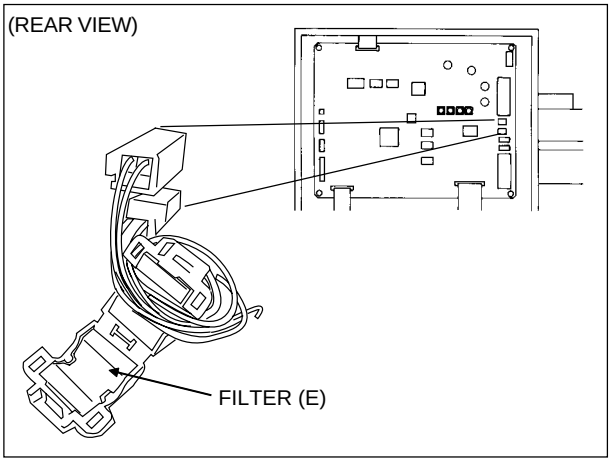
Make sure to apply the Grease to the whole GEAR when moving the HEAD CARRIAGE several times.

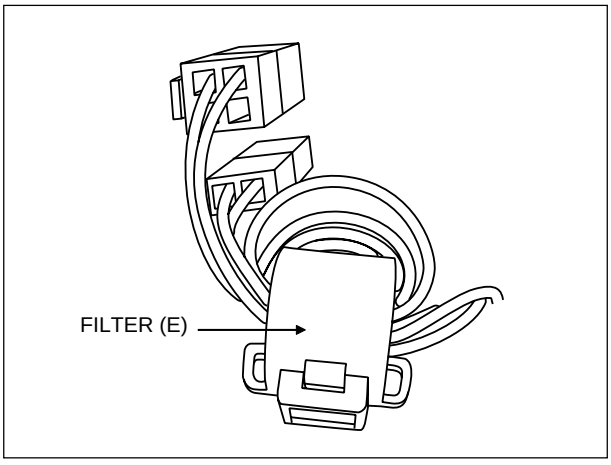
Make sure not apply the Grease to the Wire.

13 Connect the CABLE-ASSY C POWER and the CABLE-ASSY C POWER to the CN11 and CN1 on the MAIN BOARD.



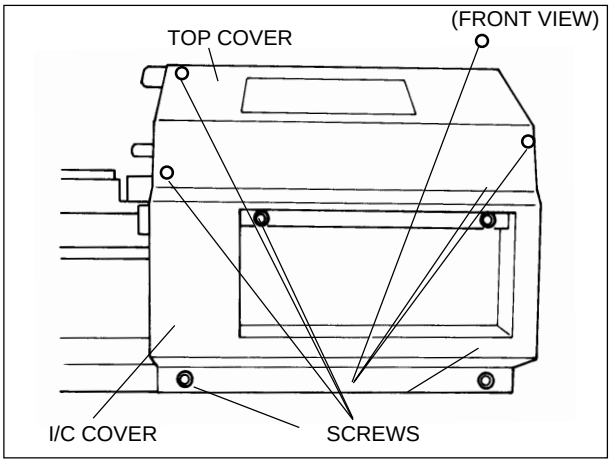
14 Connect the Cables to the MAIN BOARD.
Loop the Cables with the FILTER(E).





15 Fix the TOP COVER and the I/C COVER.

Make sure to connect the Panel Cable and the Cover Switch Cable which are located on the back of the TOP COVER.

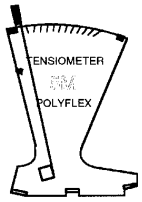


16 Carry out the following adjustment.
1. MOTOR BALANCE ADJUSTMENT

4 Adjustment

4-1 Special Tool

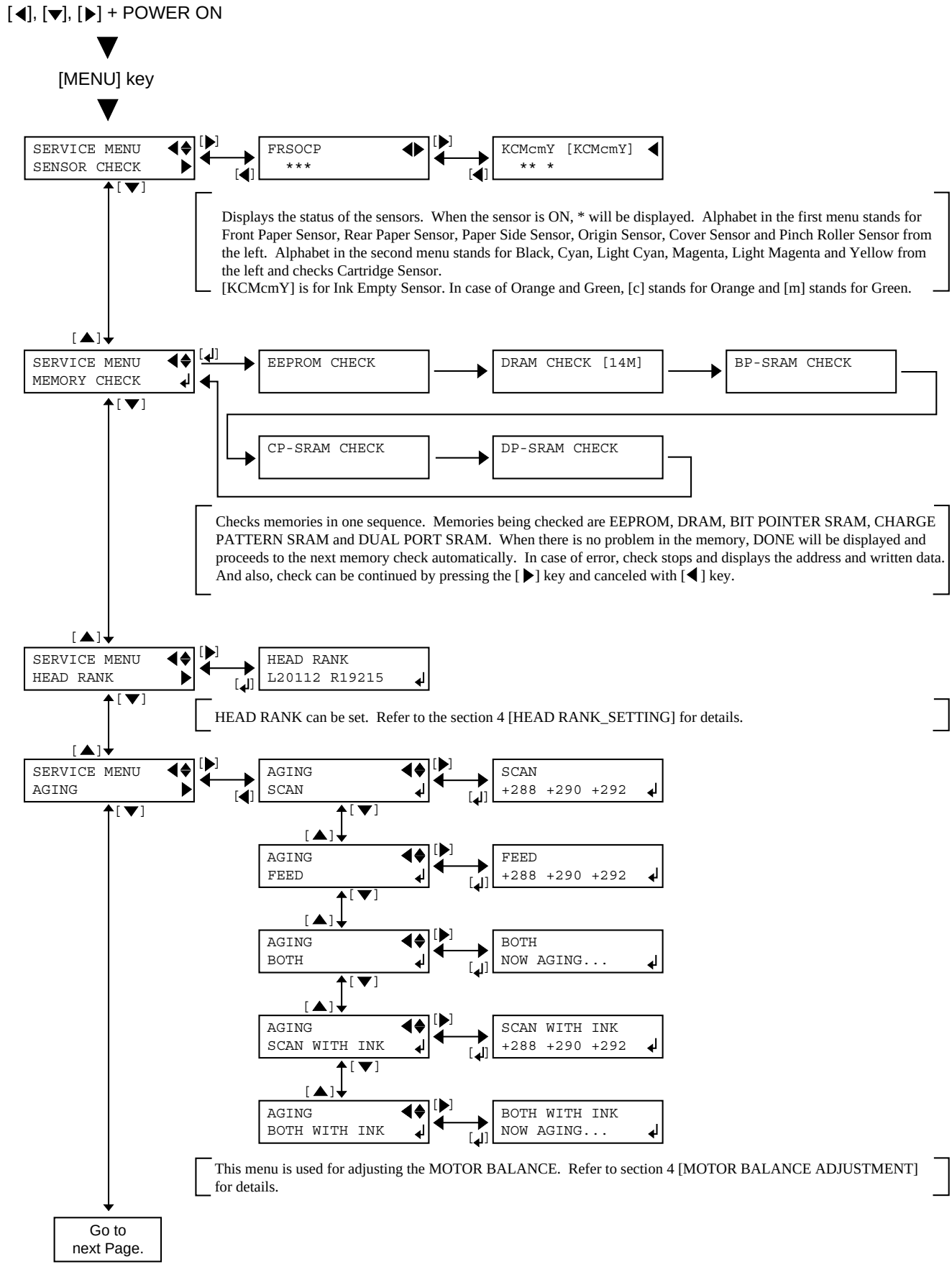
Table shows a list of special tools recommended by Roland DG Corp.

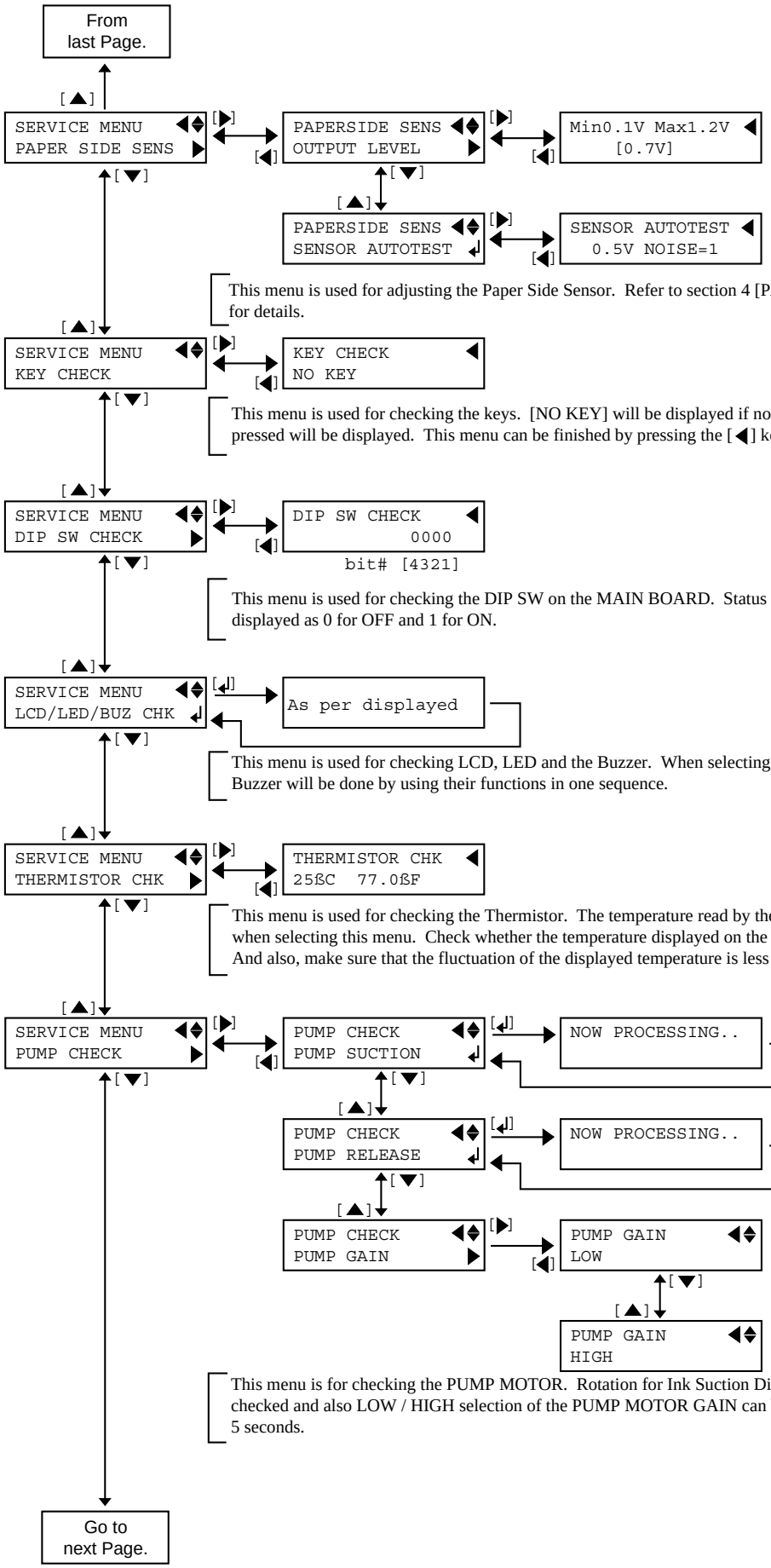
Tool No.	ST-011	
Tool name	TENSION METER	
Purpose	WIRE TENSION ADJUSTMENT	

Tool No.	21755102	
Tool name	CLEANING LIQUID, 500ML CJ-70	
Purpose	HEAD WASH	

Tool No.	22085115	
Tool name	KIT,CLEANING CJ/FJ	
Purpose	HEAD WASH	

4-2 Service Mode





This menu is used for adjusting the Paper Side Sensor. Refer to section 4 [PAPER SIDE SENSOR ADJUSTMENT] for details.

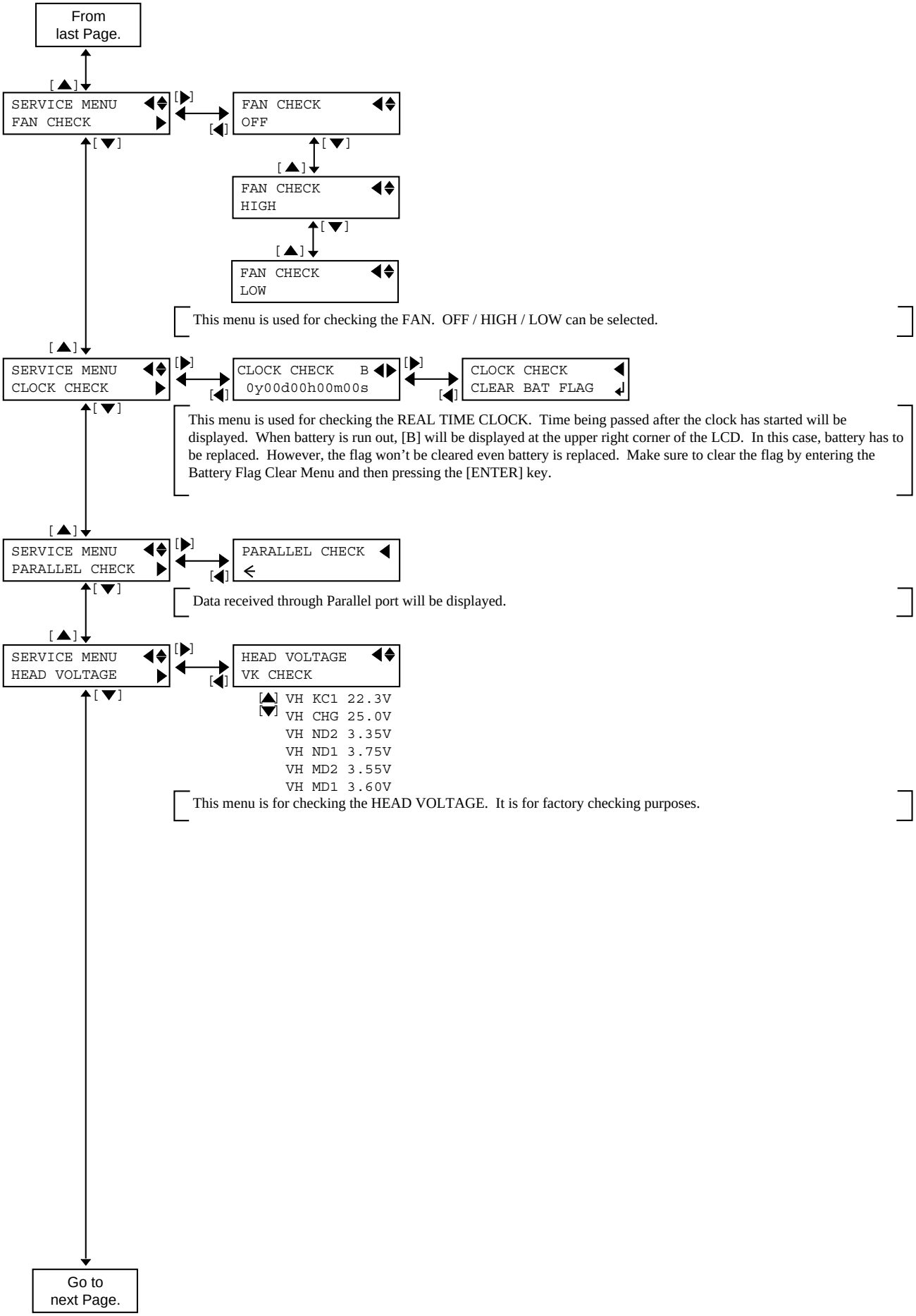
This menu is used for checking the keys. [NO KEY] will be displayed if no key is pressed. The name of the key being pressed will be displayed. This menu can be finished by pressing the [◀] key.

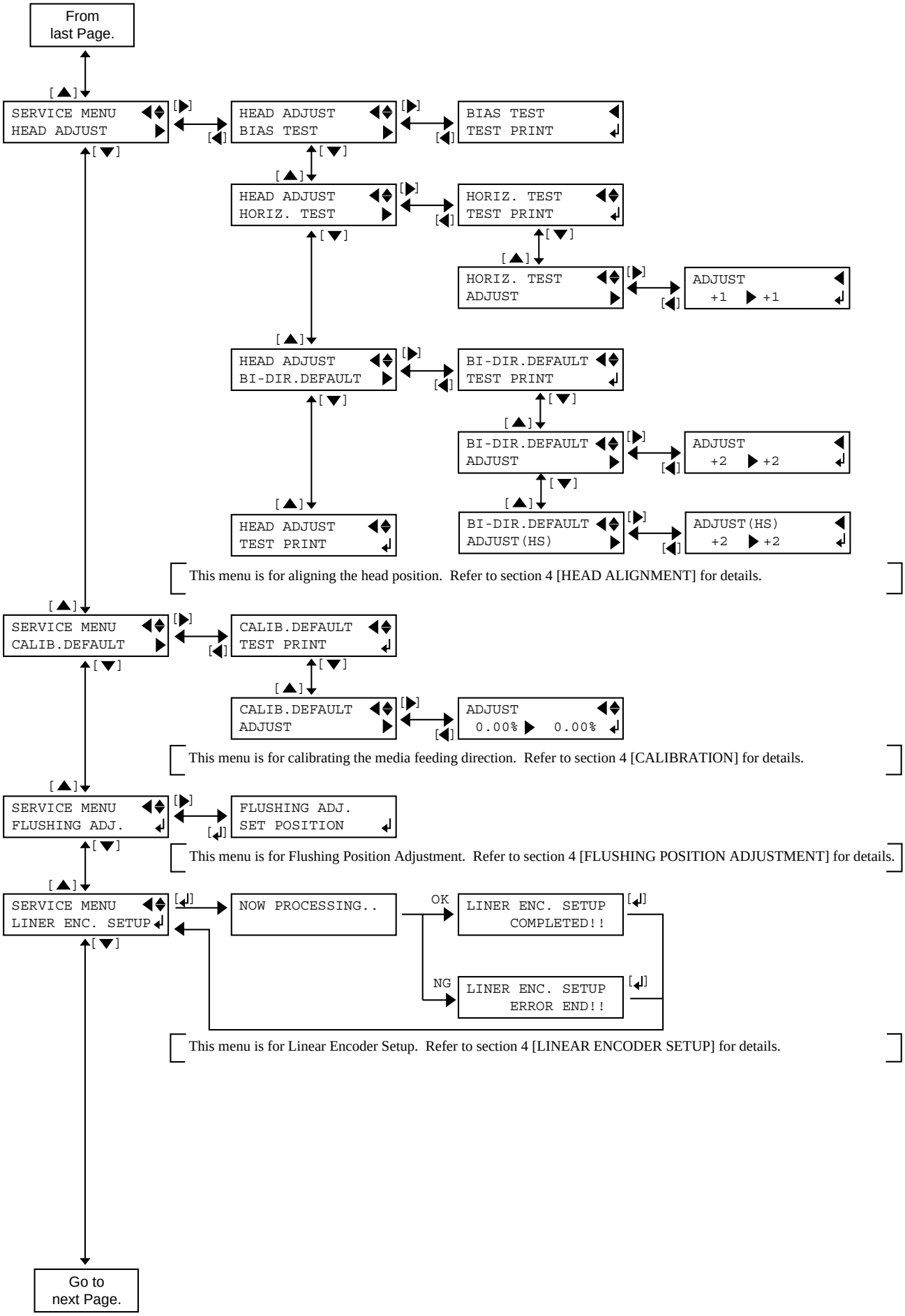
This menu is used for checking the DIP SW on the MAIN BOARD. Status of bit#1 ~ #4 of the DIP SW will be displayed as 0 for OFF and 1 for ON.

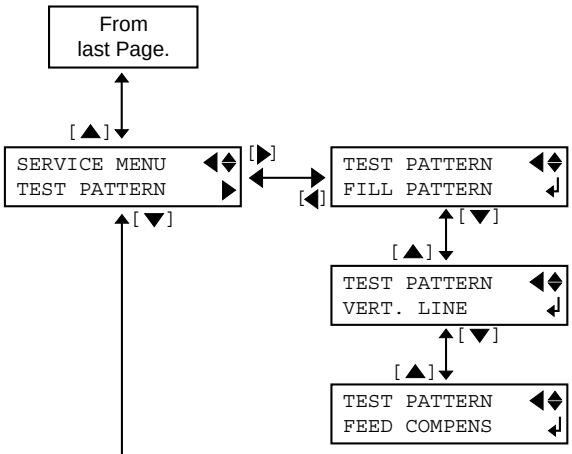
This menu is used for checking LCD, LED and the Buzzer. When selecting this mode, checking for LCD, LED and the Buzzer will be done by using their functions in one sequence.

This menu is used for checking the Thermistor. The temperature read by the thermistor on the HEAD will be displayed when selecting this menu. Check whether the temperature displayed on the LCD is equivalent to the environment. And also, make sure that the fluctuation of the displayed temperature is less than 1 degree.

This menu is for checking the PUMP MOTOR. Rotation for Ink Suction Direction and Ink Drain Direction can be checked and also LOW / HIGH selection of the PUMP MOTOR GAIN can be checked. Rotation check will stop after 5 seconds.


From last Page.
SERVICE MENU
FAN CHECK
FAN CHECK
OFF
FAN CHECK
HIGH
FAN CHECK
LOW
This menu is used for checking the FAN. OFF / HIGH / LOW can be selected.
SERVICE MENU
CLOCK CHECK
CLOCK CHECK B
0y00d00h00m00s
CLOCK CHECK
CLEAR BAT FLAG
This menu is used for checking the REAL TIME CLOCK. Time being passed after the clock has started will be displayed. When battery is run out, [B] will be displayed at the upper right corner of the LCD. In this case, battery has to be replaced. However, the flag won't be cleared even battery is replaced. Make sure to clear the flag by entering the Battery Flag Clear Menu and then pressing the [ENTER] key.
SERVICE MENU
PARALLEL CHECK
PARALLEL CHECK
Data received through Parallel port will be displayed.
SERVICE MENU
HEAD VOLTAGE
HEAD VOLTAGE
VK CHECK
VH KC1 22.3V
VH CHG 25.0V
VH ND2 3.35V
VH ND1 3.75V
VH MD2 3.55V
VH MD1 3.60V
This menu is for checking the HEAD VOLTAGE. It is for factory checking purposes.
Go to next Page.


From last Page.
SERVICE MENU
HEAD ADJUST
HEAD ADJUST
BIAS TEST
BIAS TEST
TEST PRINT
HEAD ADJUST
HORIZ. TEST
HORIZ. TEST
TEST PRINT
HORIZ. TEST
ADJUST
ADJUST
+1 +1
HEAD ADJUST
BI-DIR.DEFAULT
BI-DIR.DEFAULT
TEST PRINT
BI-DIR.DEFAULT
ADJUST
ADJUST
+2 +2
HEAD ADJUST
TEST PRINT
BI-DIR.DEFAULT
ADJUST(HS)
ADJUST(HS)
+2 +2
This menu is for aligning the head position. Refer to section 4 [HEAD ALIGNMENT] for details.
SERVICE MENU
CALIB.DEFAULT
CALIB.DEFAULT
TEST PRINT
CALIB.DEFAULT
ADJUST
ADJUST
0.00% 0.00%
This menu is for calibrating the media feeding direction. Refer to section 4 [CALIBRATION] for details.
SERVICE MENU
FLUSHING ADJ.
FLUSHING ADJ.
SET POSITION
This menu is for Flushing Position Adjustment. Refer to section 4 [FLUSHING POSITION ADJUSTMENT] for details.
SERVICE MENU
LINER ENC. SETUP
NOW PROCESSING..
OK
LINER ENC. SETUP
COMPLETED!!
NG
LINER ENC. SETUP
ERROR END!!
This menu is for Linear Encoder Setup. Refer to section 4 [LINEAR ENCODER SETUP] for details.
Go to next Page.



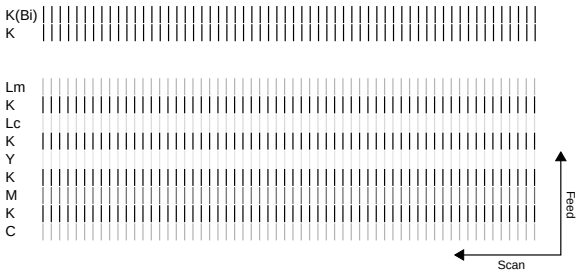
4

FILL PATTERN (100% SOLID COLORS)

Following test pattern will be printed in a whole width of media.
Printing mode is 360dpi / 4pass / Unidirection.

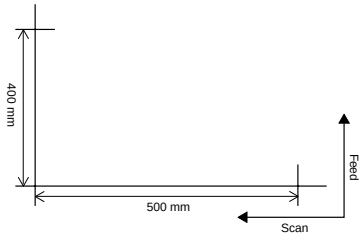
VERTICAL LINES

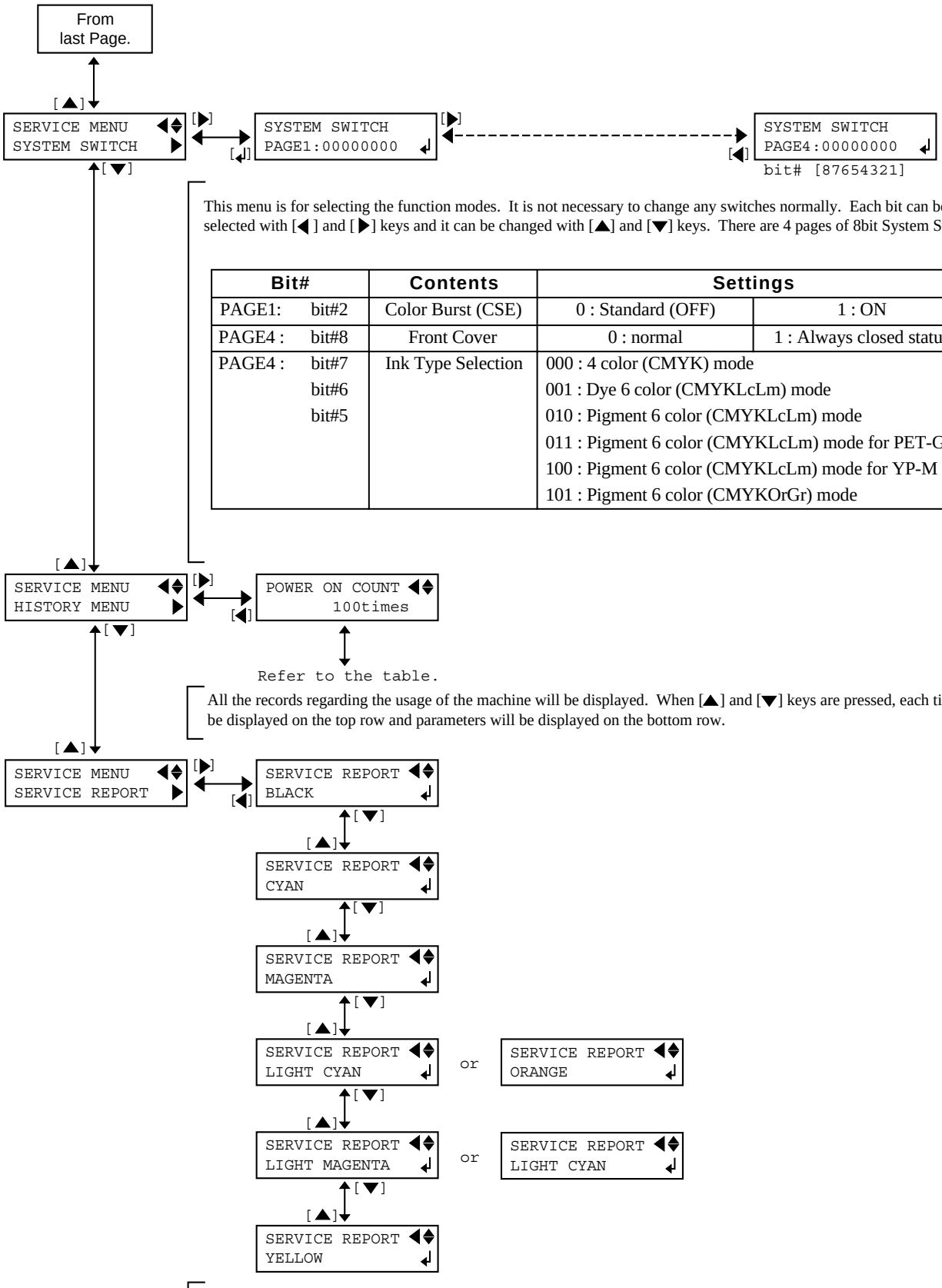
Following test pattern will be printed in a whole width of media.
BLACK and each color will be printed alternately.



FEED COMPENSATION

Following test pattern will be printed.
Printing mode is 720dpi / 4 pass / Unidirection with BLACK.





This menu is for selecting the function modes. It is not necessary to change any switches normally. Each bit can be selected with [◀] and [▶] keys and it can be changed with [▲] and [▼] keys. There are 4 pages of 8bit System Switch.

Bit#		Contents	Settings	
PAGE1:	bit#2	Color Burst (CSE)	0 : Standard (OFF)	1 : ON
PAGE4 :	bit#8	Front Cover	0 : normal	1 : Always closed status
PAGE4 :	bit#7 bit#6 bit#5	Ink Type Selection	000 : 4 color (CMYK) mode 001 : Dye 6 color (CMYKLcLm) mode 010 : Pigment 6 color (CMYKLcLm) mode 011 : Pigment 6 color (CMYKLcLm) mode for PET-G 100 : Pigment 6 color (CMYKLcLm) mode for YP-M 101 : Pigment 6 color (CMYKOrGr) mode	

All the records regarding the usage of the machine will be displayed. When [▲] and [▼] keys are pressed, each title will be displayed on the top row and parameters will be displayed on the bottom row.

Service Report will be printed. Information necessary for service activity will be printed together with the system report. It will be printed on a A4 size landscape media.

Roland Hi-Fi JET

[SYSTEM REPORT]

			Serial No.		
Model	:	FJ-52	Sheet type	:	Opaque
Version	:	2.00	Auto sheet cut	:	Enable
Print Quality	:	720dpi 8pass bi	Page margin	:	10 mm
Over print	:	None	Sleep	:	15 min
Head adjust bi-dir.	:	+4 dot	Menu unit	:	Millimeter
Head adjust bi-dir. HS	:	+12 dot	Menu language	:	English
Calibration	:	0.00%	Temperature	:	23°C 73.4°F
Ink type	:	Pigment LcLm	High speed mode	:	Enable
Ink left	:	[K ******]	[C ********]		[M *******]
		[Lc/Or ******]	[Lm/Gr ******]		[Y ******]

[SERVICE REPORT]

System switch	:	[P4:10000000]	[P3:00000000]	[P2:00000000]	[P1:00000010]
Limit position	:	23.880mm	DIP switch		[0001]
Flushing position	:	13.950mm	Booter version		0.10
Cutter down position	:	2.750mm	Battery		Empty
caribration default	:	-0.65%	Head rank right		9108
Liner limit pos right	:	303	Head rank left		16214
Liner limit pos left	:	9790	Head adjust horizontal		+2 dot
			Head adjust bi-dir.		+5 dot
Power on count		521 times	Head adjust bi-dir. HS		+12 dot
Power on time		4621 hours			
Sleep time		4548 hours	Dot count K		24220073 Kdots
Printing time		326 hours	Dot count C		18071912 Kdots
Sheet cut		883 times	Dot count M		28079939 Kdots
Servo error		8 times	Dot count Lc/Or		14302913 Kdots
Low temperature error		0 times	Dot count Lm/Gr		9569653 Kdots
Head dry-up warning		1 times	Dot count Y		21032120 Kdots
Fill ink		8 times	Cleaning auto		313 times
Head wash		5 times	Cleaning normal		153 times
Pump up		2 times	Cleaning powerful		1 times
Change ink		1 times	Wipe		1235 times
Change cartridge		13 times	Rub		39 times
Pigment LcLm		638 pages	1440dpi 16pass(PHOTO)		42 pages
Pigment OrGr		1431 pages	1440dpi 16pass bi-dir.		14 pages
Dye LcLm		0 pages	900dpi 10pass		0 pages
Over print		0 pages	900dpi 10pass bi-dir.		0 pages
			900dpi 5pass		0 pages
Under 10% duty		110 pages	900dpi 5pass bi-dir.		0 pages
Under 20% duty		225 pages	720dpi 8pass(SUPER)		624 pages
Under 30% duty		230 pages	720dpi 8pass bi-dir.		529 pages
Under 40% duty		311 pages	720dpi 4pass(FINE)		31 pages
Under 50% duty		281 pages	720dpi 4pass bi-dir.		729 pages
Over 50% duty		912 pages	540dpi 6pass		6 pages
			540dpi 6pass bi-dir.		7 pages
Under A3 size		1680 pages	540dpi 3pass		0 pages
Under A2 size		190 pages	540dpi 3pass bi-dir.		0 pages
Under A1 size		102 pages	360dpi 4pass(NORMAL)		20 pages
Under A0 size		47 pages	360dpi 4pass bi-dir.		31 pages
Under 2A0 size		45 pages	360dpi 2pass(FAST)		0 pages
Under 4A0 size		5 pages	360dpi 2pass bi-dir.		31 pages
Over 4A0 size		0 pages	180dpi 1pass(DRAFT)		1 pages
			180dpi 1pass bi-dir.		1 pages

Contents of Service Report

TITLE	CONTENTS	UNIT	REFERENCE
POWER ON COUNT	Number of times being powered on.	times	
POWER ON TIME	Total time being powered on.	hours	
SLEEP TIME	Total time the machine has been in sleep mode.	hours	
PRINTING TIME	Total time of printing performed.	hours	It only counts time for the printing being performed through I/F. It doesn't count time for test prints.
SHEET CUT	Number of times the sheet has been cut.	times	Both command and panel.
SERVO ERROR	Number of times the servo error has occurred.	times	
LOW TEMP.	Number of times the low temp. error has occurred.	times	
HEAD DRY-UP	Number of times the head dry-up error has occurred.	times	Head Carriage will move to the locking position automatically if it is left without capping for 10 min.
DOT CNT K	Number of dots fired from K.	dots (increment of 1000 dots)	
DOT CNT C	Number of dots fired from C.	dots (increment of 1000 dots)	
DOT CNT M	Number of dots fired from M.	dots (increment of 1000 dots)	
DOT CNT Lc/Or	Number of dots fired from Lc/Or.	dots (increment of 1000 dots)	
DOT CNT Lm/Gr	Number of dots fired from Lm/Gr.	dots (increment of 1000 dots)	

TITLE	CONTENTS	UNIT	REFERENCE
DOT CNT Y	Number of dots fired from Y.	dots (increment of 1000 dots)	
CLEAN AUTO	Number of times the auto cleaning has been performed.	times	
CLEAN NORMAL	Number of times the normal cleaning has been performed.	times	
CLEAN POWERFUL	Number of times the powerful cleaning has been performed.	times	
FILL INK	Number of times the fill ink has been performed.	times	
HEAD WASH	Number of times the head wash has been performed.	times	
PUMP UP	Number of times the pump up has been performed.	times	
WIPE	Number of times the head-wiping has been performed.	times	
RUB	Number of times the head-rubbing has been performed.	times	
CHANGE INK	Number of times the ink type has been changed.	times	
CARTRIDGE CHG	Number of times the cartridge has been changed.	times	
PIGMENT LcLm	Total page printed with pigment LcLm.	pages	It only counts time for the printing being performed through I/F. It doesn't count time for test prints.
PIGMENT OrGr	Total page printed with pigment OrGr.	pages	ditto
DYE LcLm	Total page printed with dye LcLm.	pages	ditto

TITLE	CONTENTS	UNIT	REFERENCE
OVER PRINT	Total page printed with overprint function.	pages	ditto
Under 10% duty	Total page printed with less than 10% ink duty.	pages	ditto
Under 20% duty	Total page printed with less than 20% ink duty.	pages	ditto
Under 30% duty	Total page printed with less than 30% ink duty.	pages	ditto
Under 40% duty	Total page printed with less than 40% ink duty.	pages	ditto
Under 50% duty	Total page printed with less than 50% ink duty.	pages	ditto
Over 50% duty	Total page printed with more than 50% ink duty.	pages	ditto
Under A3 size	Total page printed with an area smaller than A3 size.	pages	ditto
Under A2 size	Total page printed with an area smaller than A2 size.	pages	ditto
Under A1 size	Total page printed with an area smaller than A1 size.	pages	ditto
Under A0 size	Total page printed with an area smaller than A0 size.	pages	ditto
Under 2A0 size	Total page printed with an area smaller than 2xA0 size.	pages	ditto
Under 4A0 size	Total page printed with an area smaller than 4xA0 size.	pages	ditto
Over 4A0 size	Total page printed with an area bigger than 4xA0 size.	pages	ditto

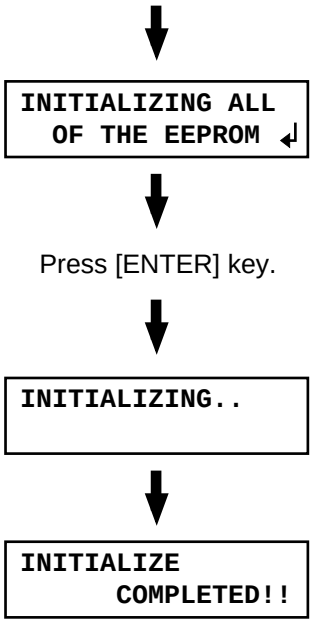
TITLE	CONTENTS	UNIT	REFERENCE
1440dpi 16pass	Total page printed with 1440dpi, 16pass, uni-direction.	pages	ditto
1440dpi 16pass B	Total page printed with 1440dpi, 16pass, bi-direction.	pages	ditto
900dpi 10pass	Total page printed with 900dpi, 10pass, uni-direction.	pages	ditto
900dpi 10pass B	Total page printed with 900dpi, 10pass, bi-direction.	pages	ditto
900dpi 5pass	Total page printed with 900dpi, 5pass, uni-direction.	pages	ditto
900dpi 5pass B	Total page printed with 900dpi, 5pass, bi-direction.	pages	ditto
720dpi 8pass	Total page printed with 720dpi, 8pass, uni-direction.	pages	ditto
720dpi 8pass B	Total page printed with 720dpi, 8pass, bi-direction.	pages	ditto
720dpi 4pass	Total page printed with 720dpi, 4pass, uni-direction.	pages	ditto
720dpi 4pass B	Total page printed with 720dpi, 4pass, bi-direction.	pages	ditto
540dpi 6pass	Total page printed with 540dpi, 6pass, uni-direction.	pages	ditto

TITLE	CONTENTS	UNIT	REFERENCE
540dpi 6pass B	Total page printed with 540dpi, 6pass, bi-direction.	pages	ditto
540dpi 3pass	Total page printed with 540dpi, 3pass, uni-direction.	pages	ditto
540dpi 3pass B	Total page printed with 540dpi, 3pass, bi-direction.	pages	ditto
360dpi 4pass	Total page printed with 360dpi, 4pass, uni-direction.	pages	ditto
360dpi 4pass B	Total page printed with 360dpi, 4pass, bi-direction.	pages	ditto
360dpi 2pass	Total page printed with 360dpi, 2pass, uni-direction.	pages	ditto
360dpi 2pass B	Total page printed with 360dpi, 2pass, bi-direction.	pages	ditto
180dpi 1pass	Total page printed with 360dpi, 1pass, uni-direction.	pages	ditto
180dpi 1pass B	Total page printed with 360dpi, 1pass, bi-direction.	pages	ditto

Other Function Mode

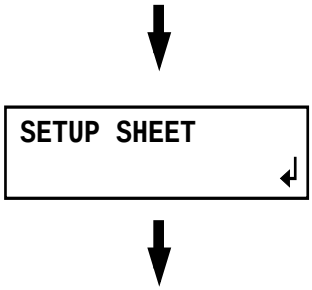
EEPROM INITIALIZE

All data inside the EEPROM will be initialized. Turn on the sub power switchwhile pressing [ENTER], [▲] and[▼] keys.



PRINTING SERVICE REPORT

Service Report will be printed. Turn on the sub power switch while pressing [▼] key.

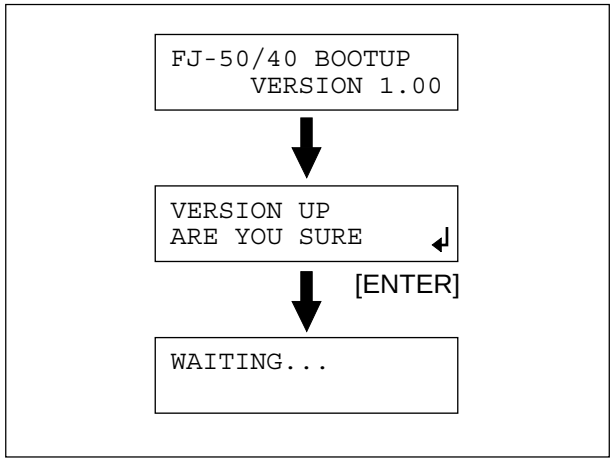


4-3 HOW TO UPDATE FIRMWARE

1 Connect the PC and FJ with PARALLEL CABLE.

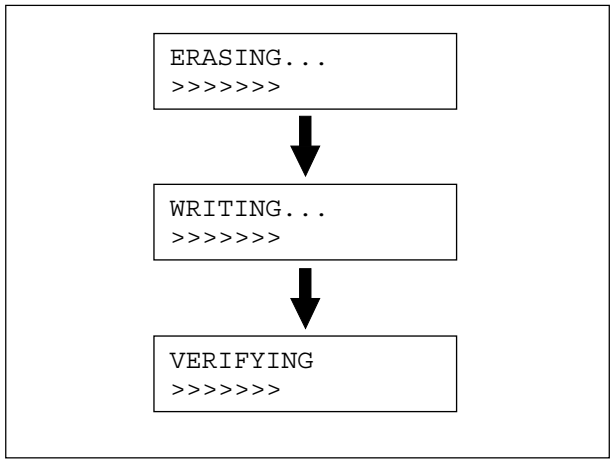
It is necessary to prepare the followings to update the firmware.
1. FIRMWARE DISK
2. PC with MS-DOS
3. PARALLEL CABLE

2 Turn on the sub power switch while pressing [▲], [▼] and [◀] keys.
Then, press the [ENTER] key.

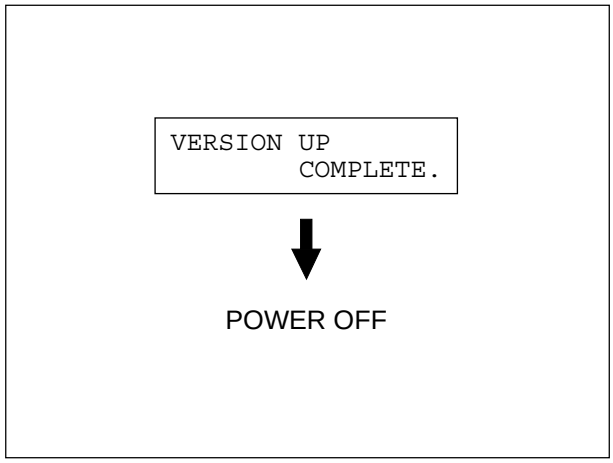


3 Open the download.BAT from MS-DOS. (Type download and press [RETURN] key.)
PC starts to send the updated data to FJ.

Some PCs can not use the BAT FILE. Please refer to the ReadMe file in the FIRMWARE DISK.



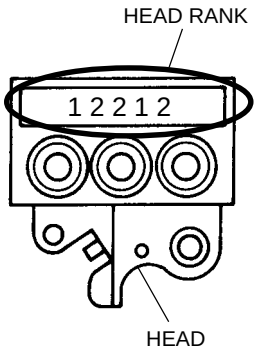
4 Turn off the sub power switch when update is completed.



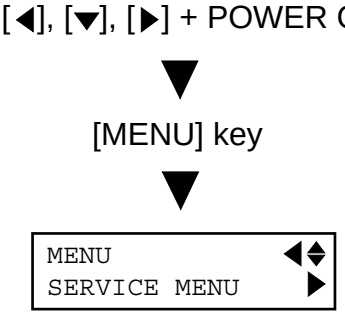
4-4 HEAD RANK SETTING

Necessary when ....
HEAD RANK is necessary to set the proper voltage for each heads. If it is not set correctly for each head, ink can not be fired with the proper amount, i.e. too much ink or too less ink.
The symptom on the printing would be dark printing, light printing and misaligned dot.

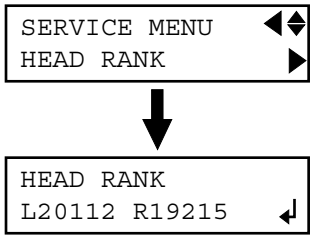
1 Check the HEAD RANK written on top of the HEAD.



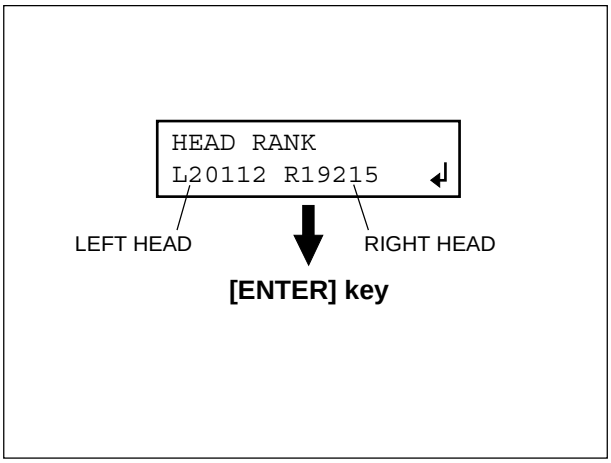
2 Turn on the sub power switch while pressing the [◀], [▼] and [▶] keys to enter the SERVICE MODE.



3 Select [HEAD RANK] menu.



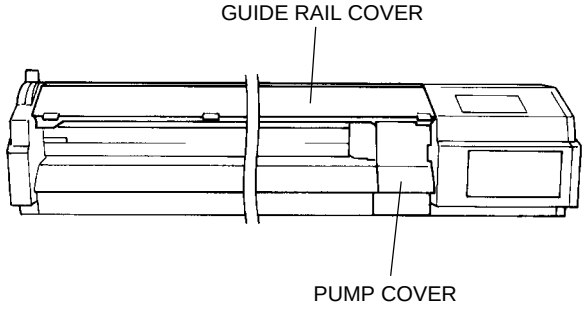
4 Set the HEAD RANK by selecting the digit with [◀] and [▶] keys, and changing the parameters with [▲] and [▼] keys.
Press the [ENTER] key to save the settings.



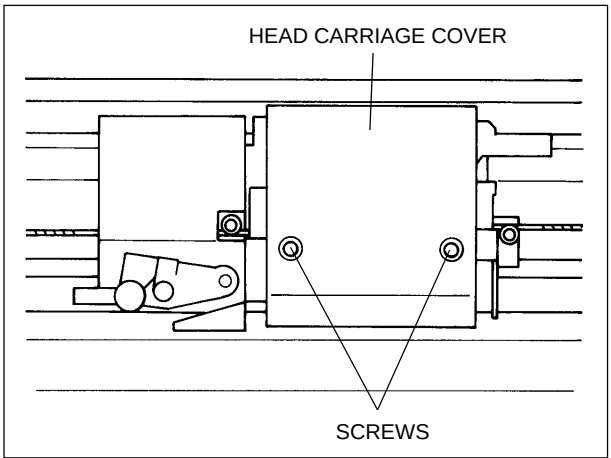
4-5 HEAD ALIGNMENT

Necessary when ....
HEAD ALIGNMENT is necessary to obtain the good printing quality. If the heads are not aligned, printing problem could occur, such as banding appears in printing, white gap between the bands, gap between the colors.

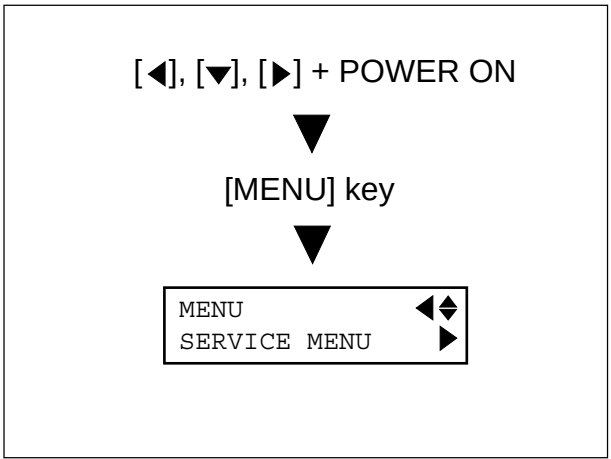
1 Remove the PUMP COVER and then the GUIDE RAIL COVER.



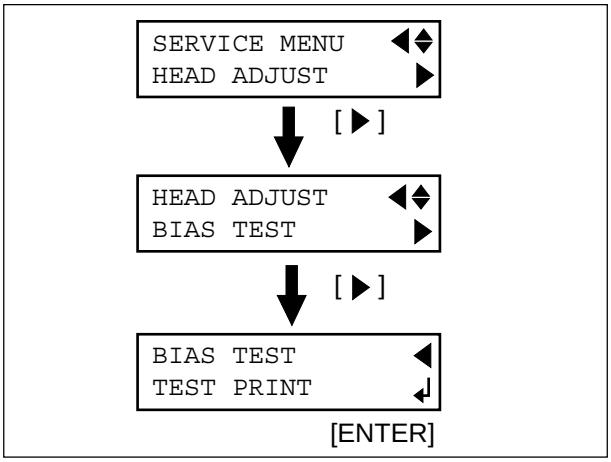
2 Remove the HEAD CARRIAGE COVER.



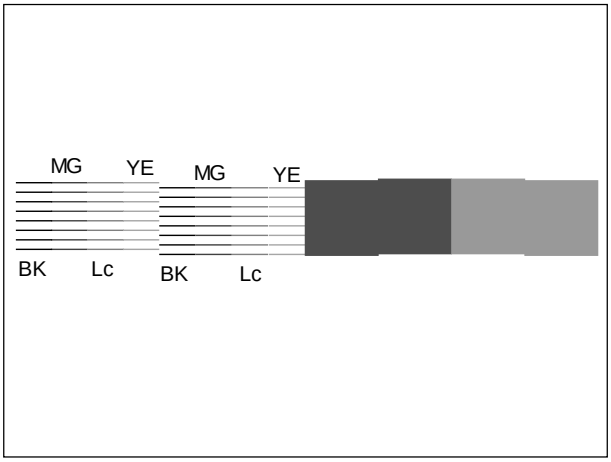
3 Set the PET film, approximately A4 size, on the FJ.
Turn on the sub power switch while pressing [◀], [▼] and [▶] keys to enter the SERVICE MODE.



4 Select the [BIAS TEST] menu under the [HEAD ADJUST] menu and press the [ENTER] key.

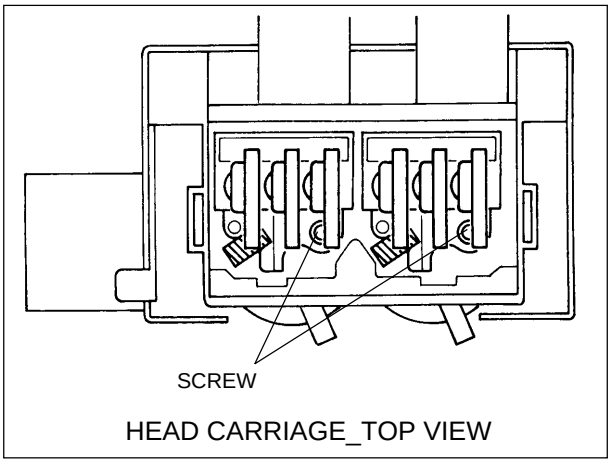


5 TEST PATTERN shown in the right figure will be printed.

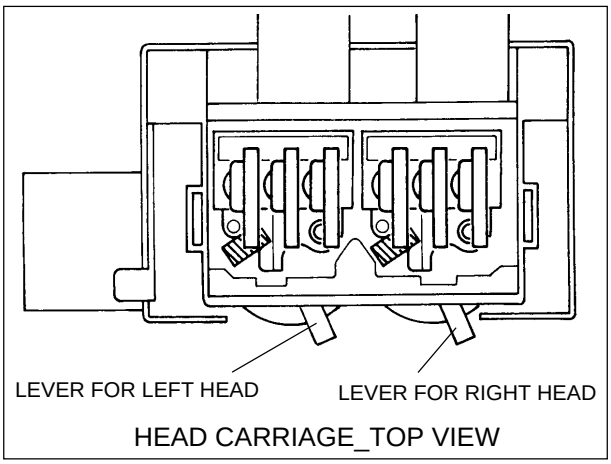


[BIAS ADJUSTMENT]

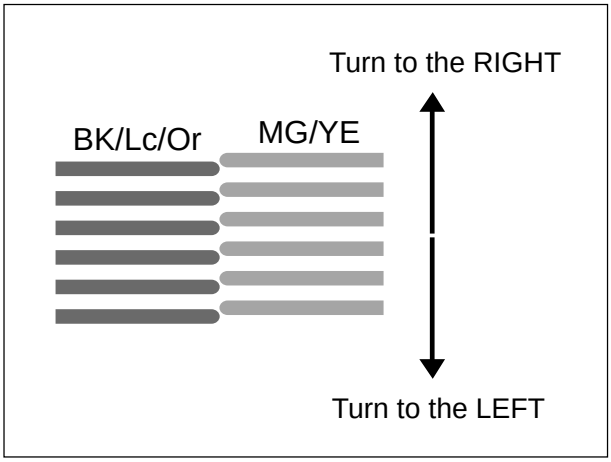
6 Loosen the screws fixing the HEAD.



7 Adjust the LEVER in front of the HEAD to align the BLACK lines with MAGENTA lines for the LEFT HEAD, and Lc/Or lines with YELLOW lines for the RIGHT HEAD.

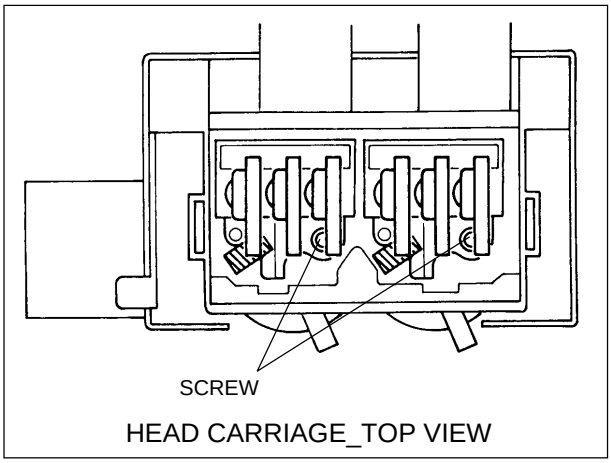


8 MAGENTA/YELLOW lines will move to the FRONT side when LEVER is turned to the LEFT side, and they will move to the REAR side when the LEVER is turned to the RIGHT side.



Shifting of each color (BLACK and MAGENTA, and Lc/Or and YELLOW) within 1/2 dot is in the tolerance.

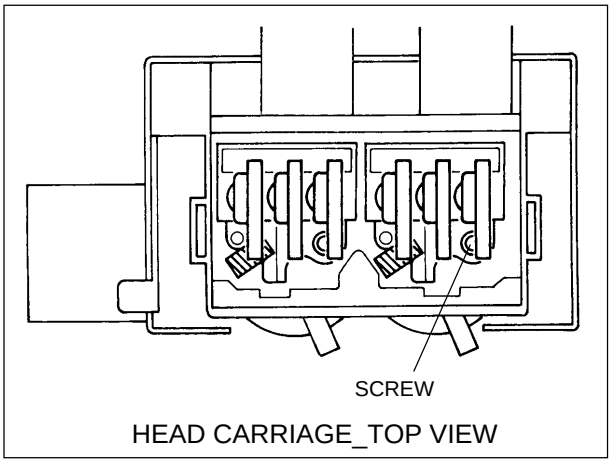
9 Tighten the screw for fixing the HEAD and print the TEST PATTERN again.
If the result is NG, repeat 6—8 .



HEAD CARRIAGE_TOP VIEW

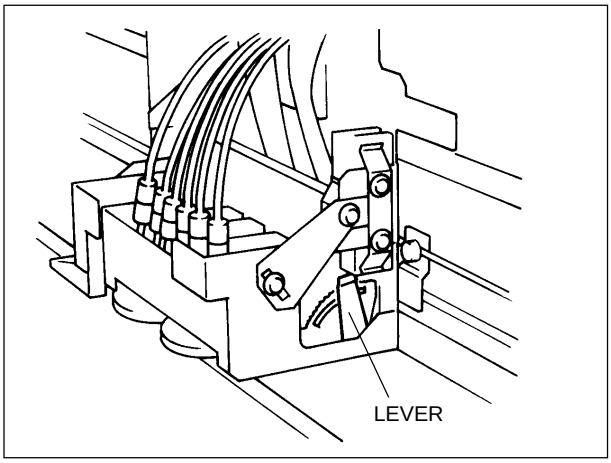
[ALIGNING 2 HEADS_FRONT & REAR]

10 Loosen the screw fixing the RIGHT HEAD.

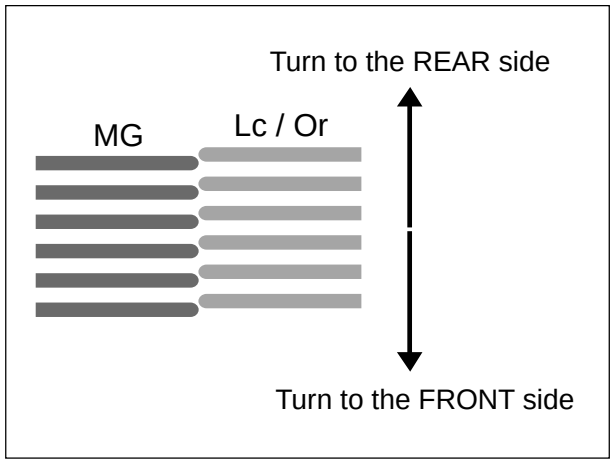


HEAD CARRIAGE_TOP VIEW

11 Adjust the LEVER on the right side of the HEAD CARRIAGE to align the MAGENTA lines with Lc/Or lines.

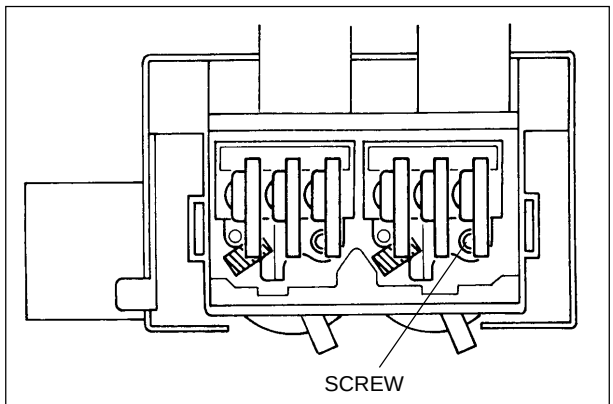


12 Lc/Or lines will move to the FRONT side when the LEVER is turned to the FRONT side, and to the REAR side when LEVER is turned to the REAR.



Shifting of MAGENTA lines and Lc/Or lines within 1/2 dot is in tolerance.

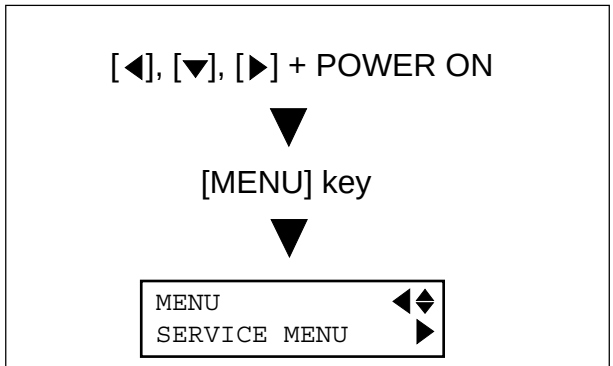
13 Tighten the screw for fixing the RIGHT HEAD and print the TEST PATTERN again.
If the result is NG, repeat 11—13.



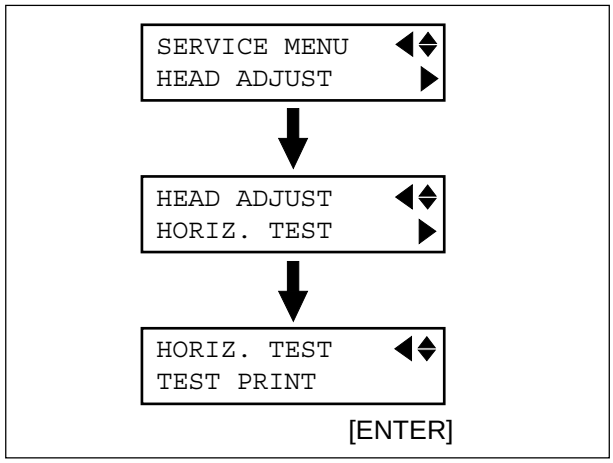
HEAD CARRIAGE_TOP VIEW

[ALIGNING 2 HEADS_HORIZONTAL]

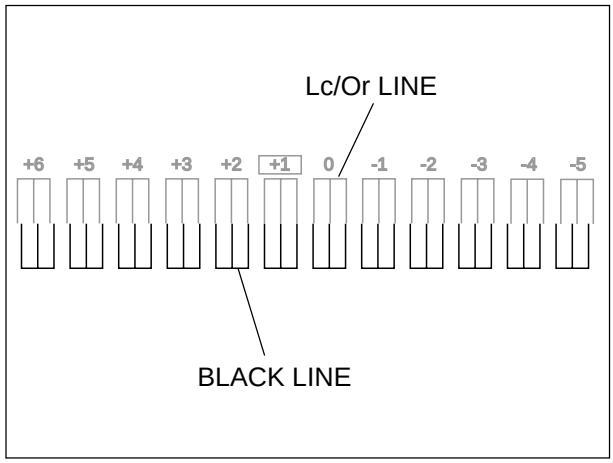
14 Set the PET film, approximately A4 size, on the FJ.
Turn on the sub power switch while pressing [◀], [▼] and [▶] keys to enter the SERVICE MODE.



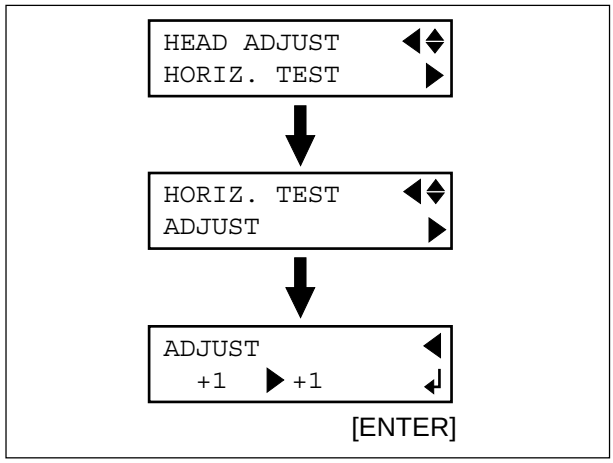
15 Select the [HORIZ.TEST] menu under the [HEAD ADJUST] menu.
Print the TEST PATTERN by pressing the [ENTER] key.



16 TEST PATTERN shown at the right will be printed.
Check the number which has the Lc/Or line alinged to the BLACK line.

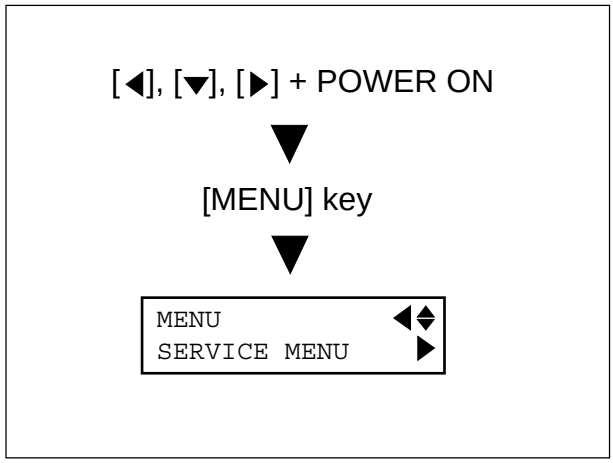


17 Go into [ADJUST] menu under the [HEAD ADJUST] menu and change the number confirmed at 16 with [▲] and [▼] keys.
Press the [ENTER] key to save the settings.

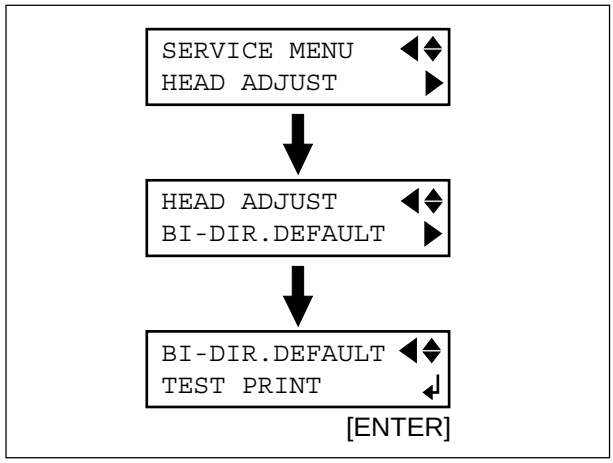


[BIDIRECTION ADJUSTMENT]

18 Set the PET film, approximately A4 size, on the FJ.
Turn on the sub power switch while pressing [◀], [▼] and [▶] keys to enter the SERVICE MODE.

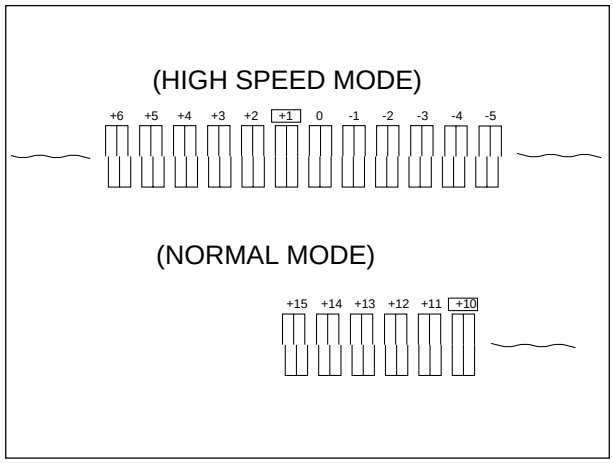


19 Select the [ADJUST] menu under the [BIDIRECTION] menu.
Print the TEST PATTERN by pressing the [ENTER] key.

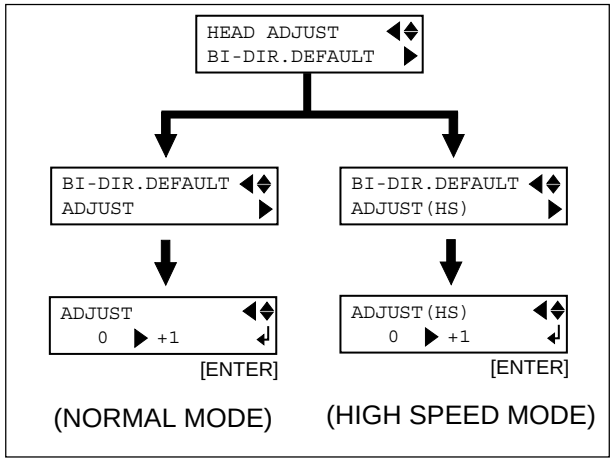


20 TEST PATTERN shown at the right will be printed.
The upper part is the number for HIGH SPEED MODE and the lower part is the number for NORMAL MODE.

Check the number which has the TOP PART and BOTTOM PART matched perfectly.



21 Go into [ADJUST] menu and [ADJUST(HS)] under the [BIDIRECTION] menu and change the number confirmed at 20 with [▲] and [▼] keys.
Press the [ENTER] key to save the settings.

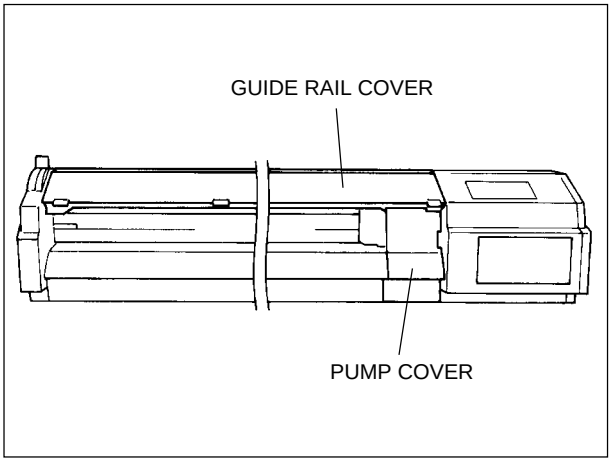


4

4-6 CAPPING POSITION ADJUSTMENT

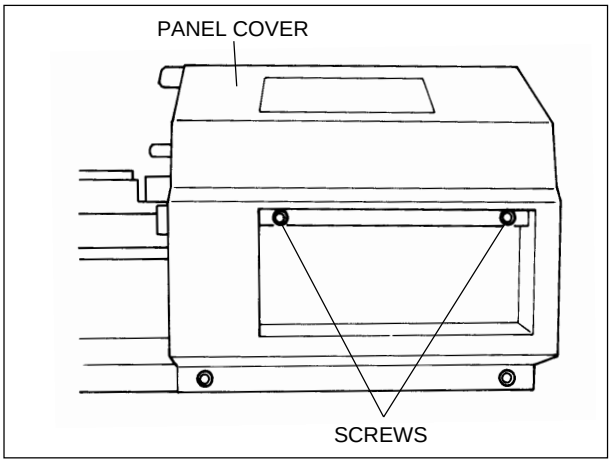
Necessary when ....
There are 2 main purposes for the CAPPING POSITION ADJUSTMENT. It is necessary for protecting the head from drying up and also to maintain good ink suction.
If the capping position is not adjusted, head could cause misfiring of ink or cause ink suction problem.

1 Remove the PUMP COVER and then the GUIDE RAIL COVER.

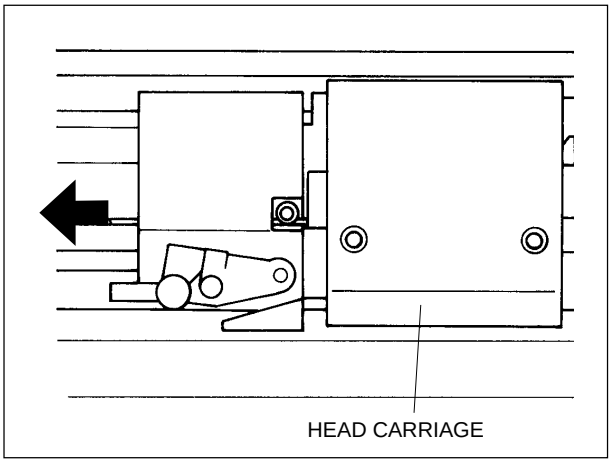


2 Remove the PANEL COVER.

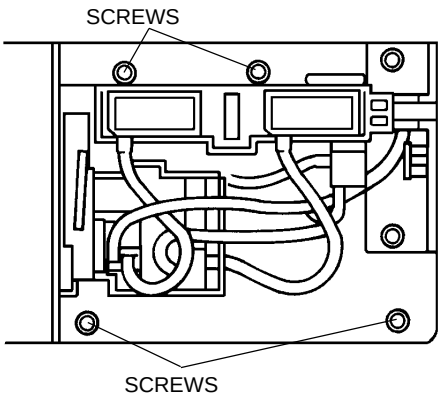
1. 2 screws for fixing the PANEL COVER from the front are located at the CARTRIDGE HOLDER part.
2. Be careful with the CABLE and WIRE when removing the PANEL COVER.



3 Move the HEAD CARRIAGE to the left by hand to unlock it from the locking position.

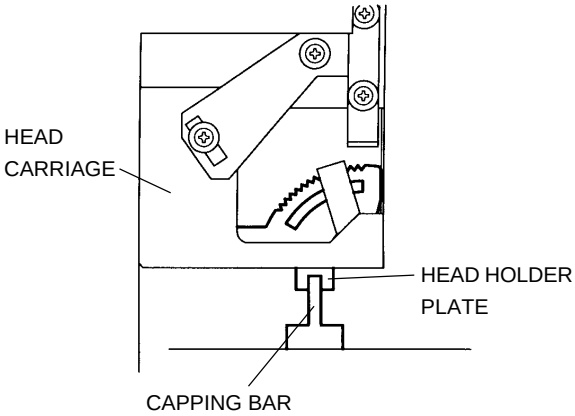


4 Loosen the 4 screws for fixing the PUMP UNIT.



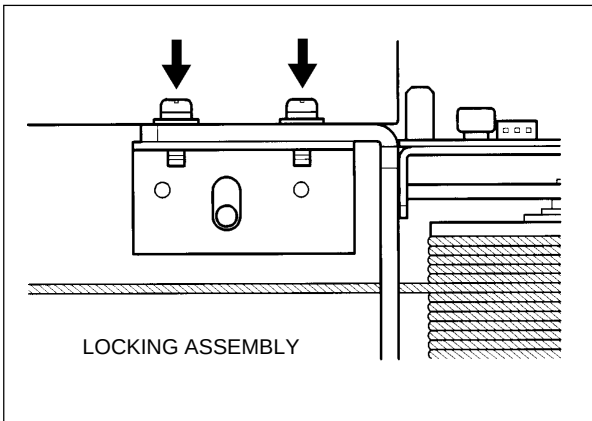
PUMP UNIT_TOP VIEW

5 Adjust the position of the PUMP UNIT so that the centers of the HEAD HOLDER PLATE and the CAPPING BAR are aligned.
Tighten the 4 screws for fixing the PUMP UNIT.

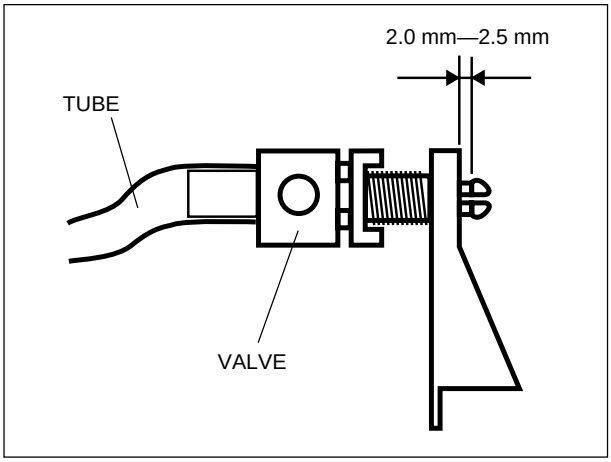


6 Move the HEAD CARRIAGE left and right at the PUMP UNIT and make sure that it moves free without making any contact with the CAPPING UNIT.
If NG, repeat 4—5.

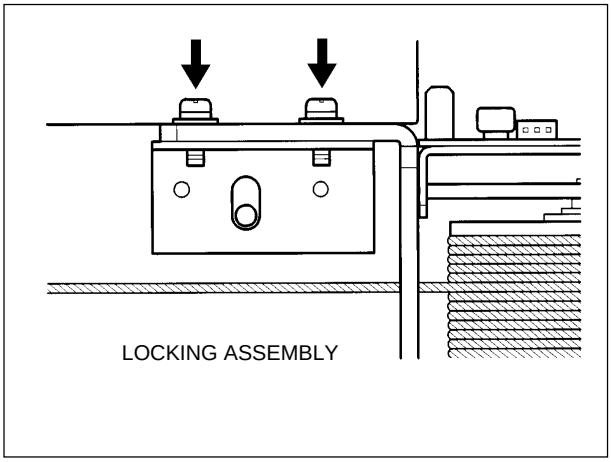
7 Loosen the screws fixing the LOCKING ASSEMBLY and move the HEAD CARRIAGE to the porision where it will be locked.



8 Adjust the position of the LOCKING ASSEMBLY so that the clearance "X" at the VALVE part will be 2.0—2.5 mm.



9 Tighten the screws fixing the LOCKING ASSEMBLY.



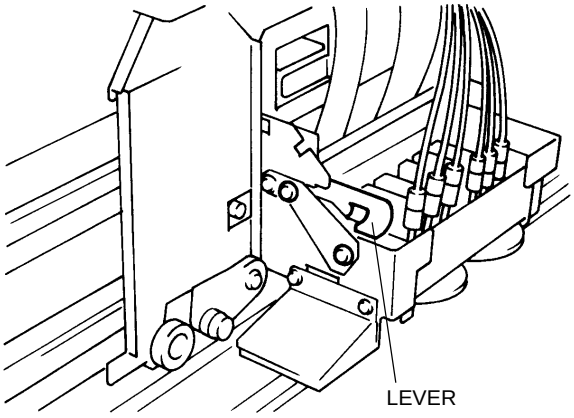
10 Carry out the following adjustments.

1. LIMIT POSITION INITIALIZE
2. FLUSHING POSITION ADJUSTMENT
3. CUT DOWN POSITION ADJUSTMENT

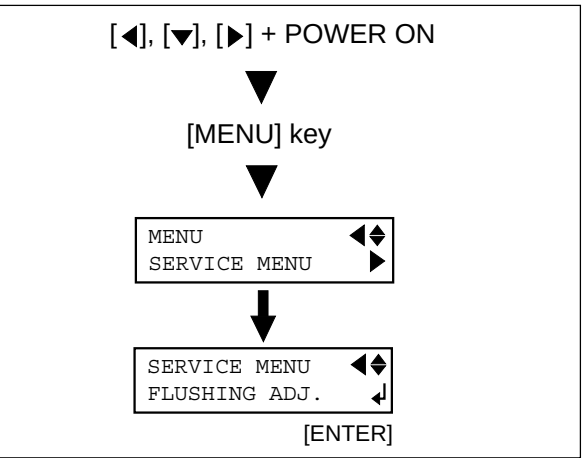
4-7 FLUSHING POSITION ADJUSTMENT

Necessary when ....
FLUSHING POSITION must be kept at the correct position to have the ink fired inside the capping during the flushing. If not, ink will be fired outside the cap and stain the pump unit with ink.
And in the worst case, media could be stained with ink.

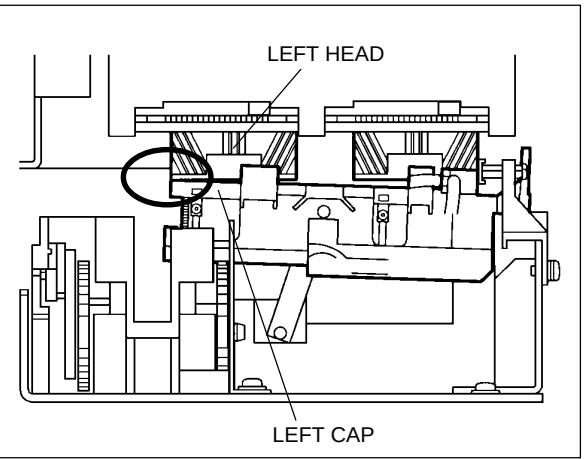
1 Lower the HEAD to the lowest position with the LEVER on the HEAD CARRIAGE.



2 Turn on the sub power switch while pressing the [◀], [▼] and [▶] keys to enter the SERVICE MODE.
Select [FLUSHING ADJ.] menu and press the [ENTER] key.



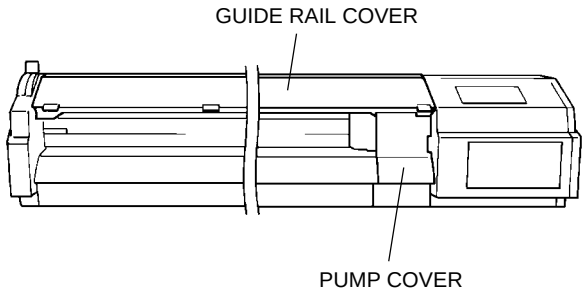
3 Adjust the position of the HEAD CARRIAGE to where the left edge of the LEFT CAP makes slight contact with the surface of the HEAD with [◀] and [▶] keys.
Press the [ENTER] key to save the settings.



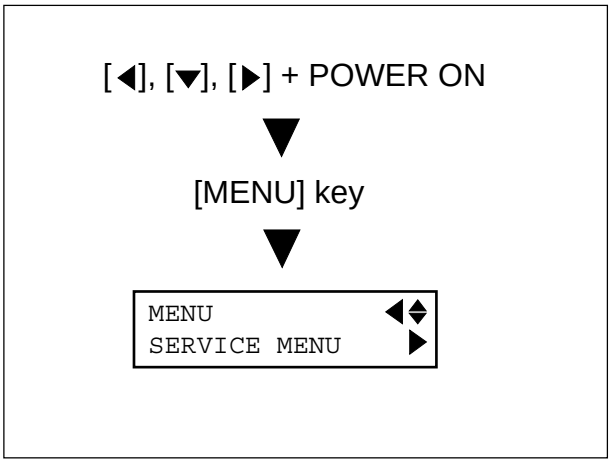
4-8 PAPER SIDE SENSOR ADJUSTMENT

Necessary when ....
This is for adjusting the sensitivity of the PAPER SIDE SENSOR, which is for detecting the width of the media. If it is not adjusted, media width could not be detect correctly.

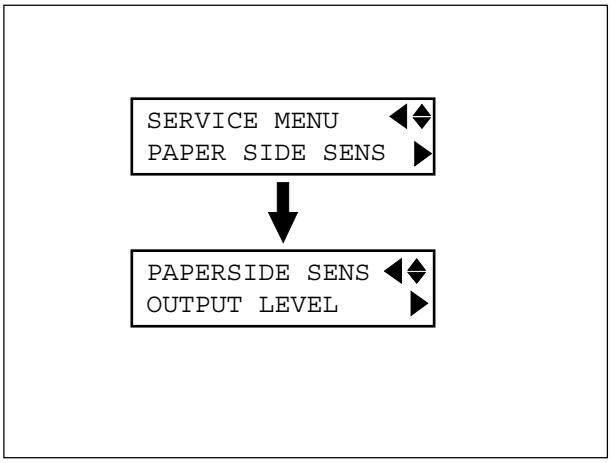
1 Remove the PUMP COVER and then the GUIDE RAIL COVER.



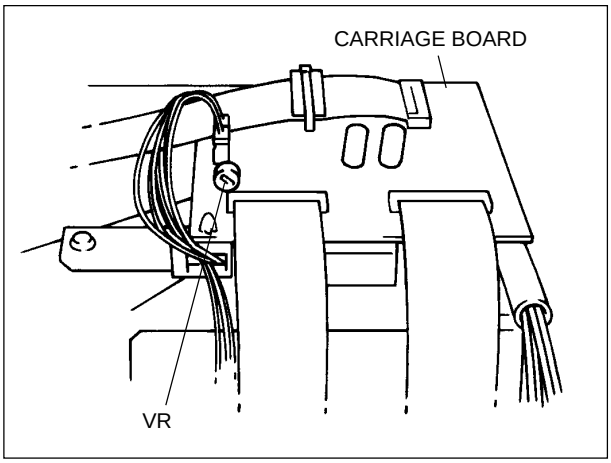
2 Turn on the sub power switch while pressing the [◀], [▼] and [▶] keys to enter the SERVICE MODE.



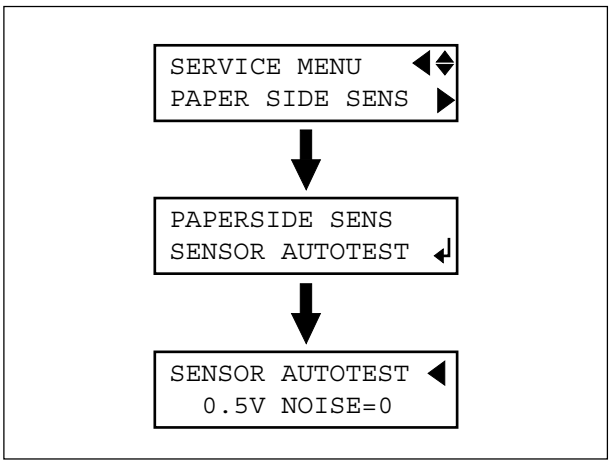
3 Select the [OUTPUT LEVEL] menu under the [PAPER SIDE SENS] menu.



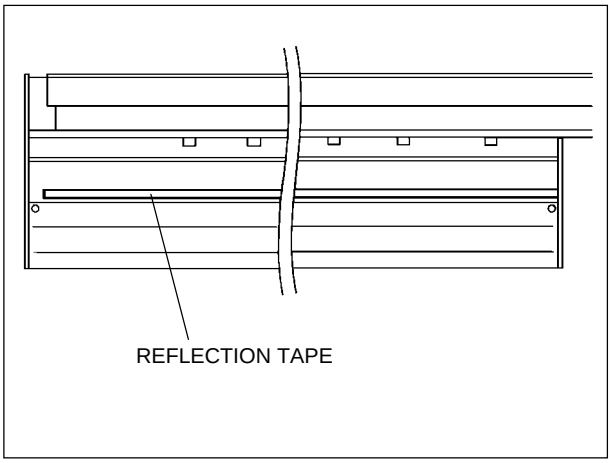
4 Adjust the VR on the CARRIAGE BOARD so that the [OUTPUT LEVEL] will be 0.5—0.7V.



5 Select the [SENSOR AUTOTEST] menu under the [PAPERSIDE SENS] menu.
Press the [ENTER] key to carry out the test and make sure that the voltage is 0.5—1.0V and the noise is 0.



6 If the noise is more than 0, try the followings.
1. Clean the REFLECTION TAPE.
2. Replace the REFLECTION TAPE in case of scratches.



7 If the voltage is less than 0.5V, increase the voltage for 0.1V in the [OUTPUT LEVEL] menu and carry out the [SENSOR AUTOTEST] for checking.

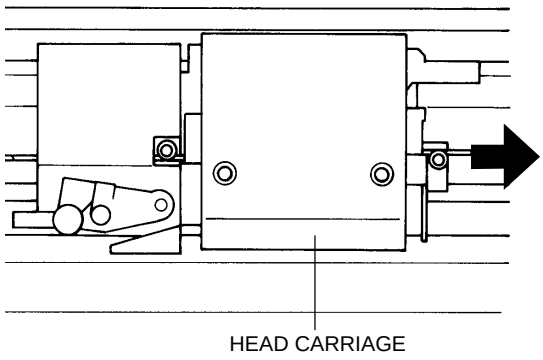
8 If the voltage is more than 1.0V, decrease the voltage for 0.1V in the [OUTPUT LEVEL] menu and carry out the [SENSOR AUTOTEST] for checking.

9 Repeat 3—8 until the voltage and the noise are in the range.

4-9 LIMIT POSITION INITIALIZE

Necessary when ....
This is necessary to correct the offset of the origin sensor and the capping positions. When the LIMIT POSITION has not been initialized, error message [INITIALIZE THE LIMIT] will appear.

1 Move the HEAD CARRIAGE to the locking position.



2 Turn on the sub power switch while pressing the [◀], [▲] and [▼] keys.

[◀], [▲], [▶] + POWER ON

▼

```
INITIALIZING
     THE LIMIT  ↲
```

3 Carry out the LIMIT POSITION INITIALIZE by pressing the [ENTER] key.
Sub Power Switch will be off after completing the INITIALIZE.

```
INITIALIZING...
               ↲
```

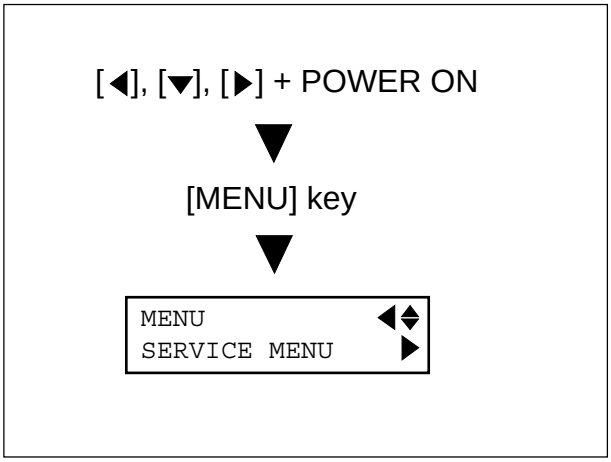
▼

```
INITIALIZE
      COMPLETED!!
```

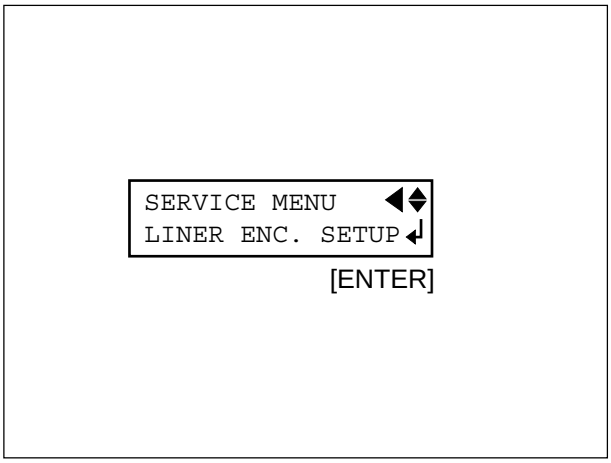
4-10 LINEAR ENCODER SETUP

Necessary when ....
LINEAR ENCODER SETUP is necessary for the machine to recongnize the width by the software coordinates.
It is also necessary for checking whether the enoder module can read the scale correctly in the whole width.

1 Lower the PINCH ROLLER.
Turn on the sub power switch while pressing the [◀], [▼] and [▶] keys to enter the SERVICE MODE.

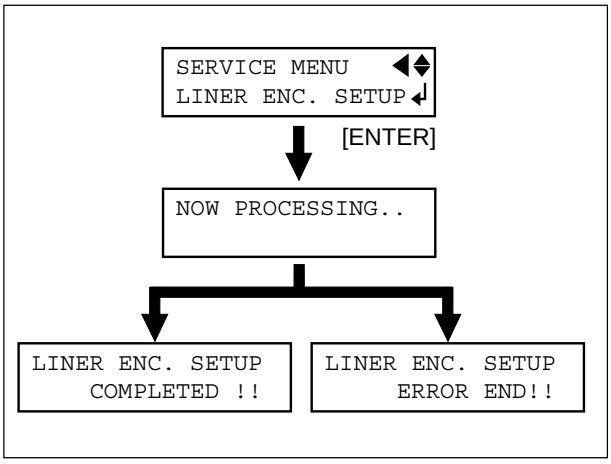


2 Select the [LINEAR ENC. SETUP] menu and press the [ENTER] key to start the auto-set up.



3 Either one of the message will appear at the completion of the set up. In case of an error, check the followings.

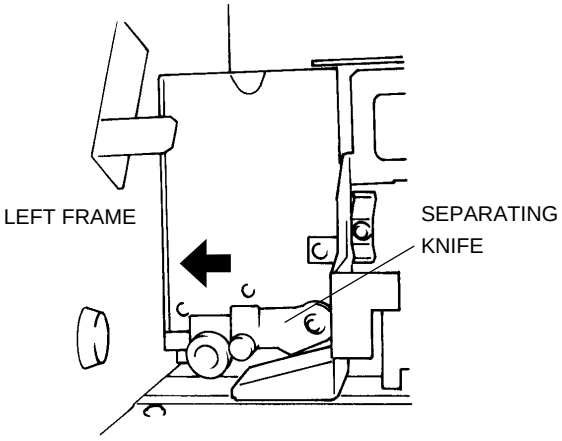
1. Dirt / Scratch on the ENCODER SCALE.
2. Dirt / Scratch on the ENCODER MODULE.
3. ENCODER SCALE is not between the ENCODER MODULE.
4. Position of the ENCODER MODULE is too high.



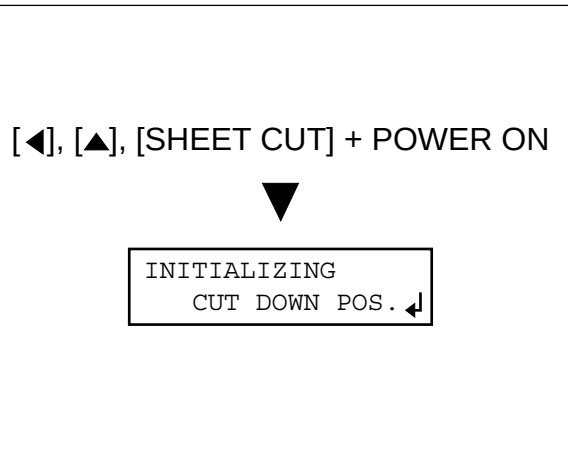
4-11 CUT DOWN POSITION ADJUSTMENT

Necessary when ....
This adjustment is to set the Cut Down Position. If the adjustment hasn't been carried out, the problem related to the sheet cutter, such as the sheet cutter doesn't move down, will occur.

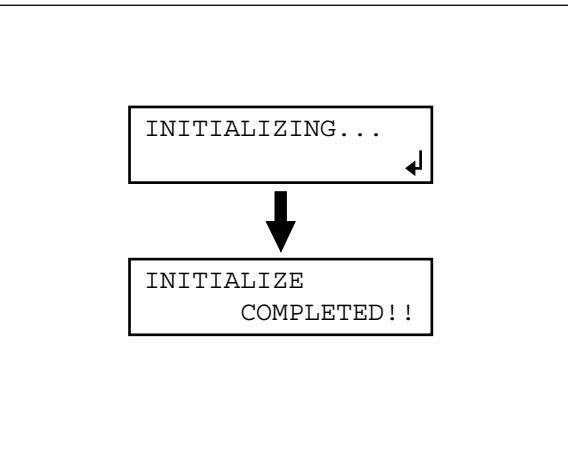
1 Make sure that the LIMIT POSITION has been initialized. Move the HEAD CARRIAGE with CUTTER DOWN STATUS until it makes contact with the LEFT FRAME.



2 Turn on the sub power switch while pressing the [◀], [▶] and [SHEET CUT].



3 Press the [ENTER] key to carry out the auto-set up.

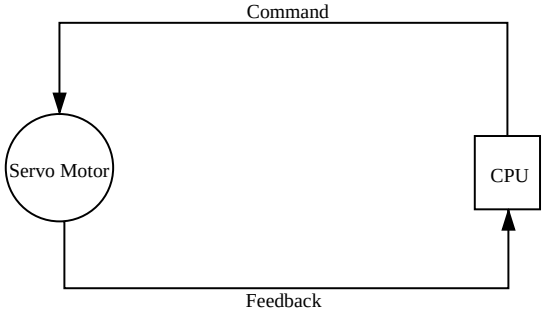


4-12 MOTOR BALANCE ADJUSTMENT

Servo Motor feeds back to the CPU the actual rotation corresponds to the instruction.

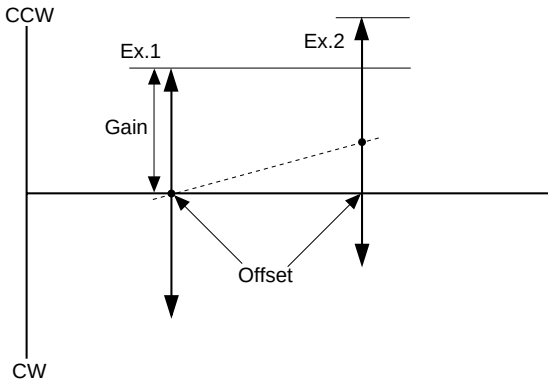
Motor tries to follow the instruction from the CPU.
Difference between the actual rotation and the instruction could be adjusted with the Motor balance (GAIN) Adjustment.

- If the difference is small (=GAIN is small), motor becomes very sensitive. As a result, it vibrates.
- If the difference is big (=GAIN is big), motor becomes dull to the instruction. And as a result, cutting quality will be damaged.

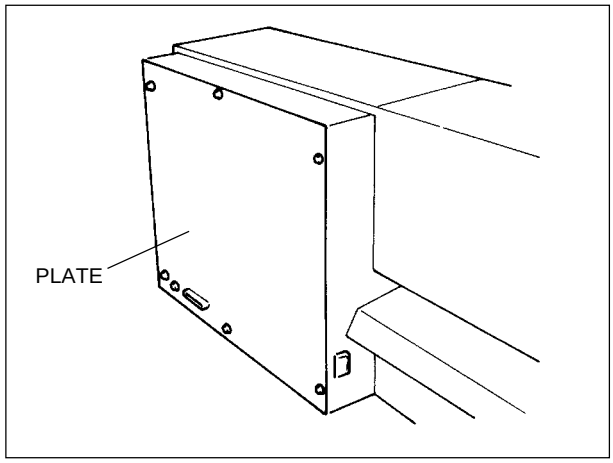


Motor Balance (OFFSET) Adjustment is used to adjust the GAIN for CW and CCW directions to be equal.

- Ex.1 in the figure shows that both the OFFSET and GAIN is adjusted in both CW and CCW directions.
- Ex.2 shows that the GAIN is adjusted but the OFFSET is shifted. Therefore, the GAIN will be big in CCW direction and small in CW direction.
  As a result, motor becomes dull in CCW direction and sensitive in CW direction causing problems.

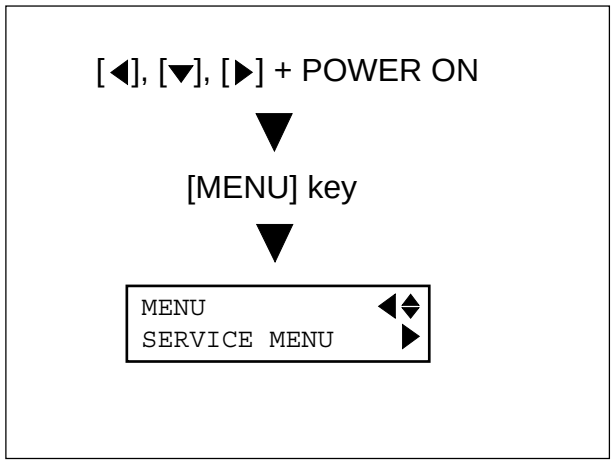


1 Remove the PLATE behind the RIGHT SIDE COVER.

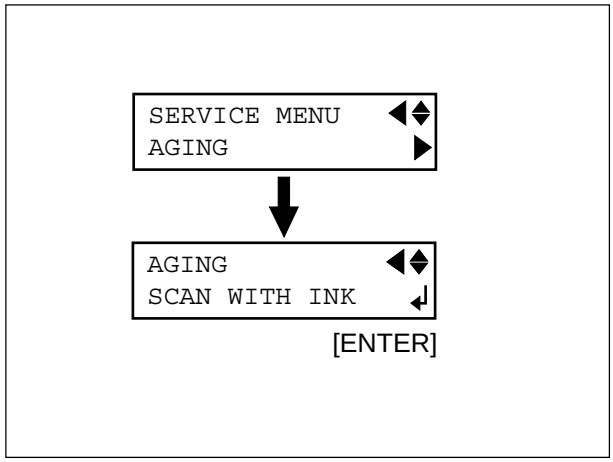


[SCANNING DIRECTION]

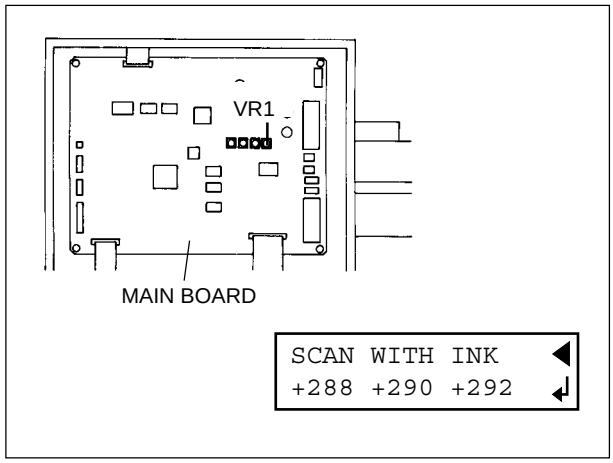
2 Turn on the sub power switch while pressing the [◀], [▼] and [▶] keys to enter the SERVICE MODE.



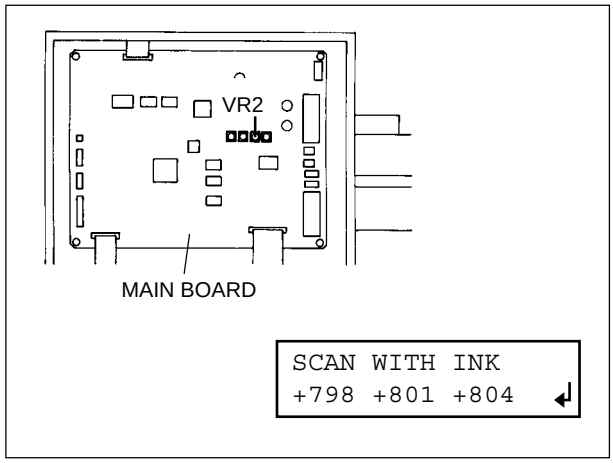
3 Select [SCAN WITH INK] menu under the [AGING] menu and press the [ENTER] key to start.



4 Adjust VR1 on the MAIN BOARD so that the difference of the absolute values displayed in the middle will be less than 10.

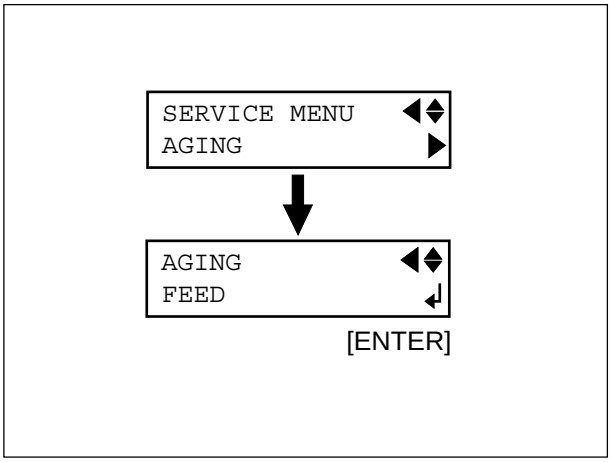


5 Adjust VR2 on the MAIN BOARD so that the absolute values displayed in the middle will be 800—810.

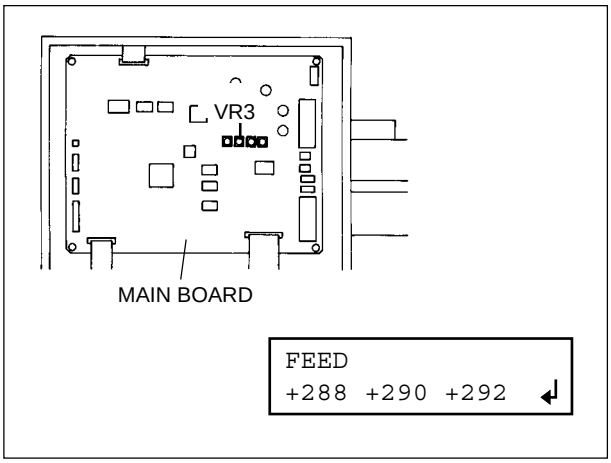


[FEEDING DIRECTION]

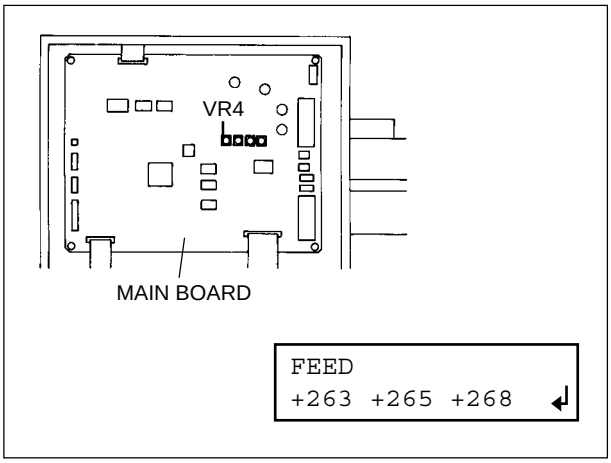
6 Select [FEED] menu under the [AGING] menu and press the [ENTER] key to start.



7 Adjust VR3 on the MAIN BOARD so that the difference of the absolute values displayed in the middle will be less than 10.



8 Adjust VR4 on the MAIN BOARD so that the absolute values displayed in the middle will be 250—260.

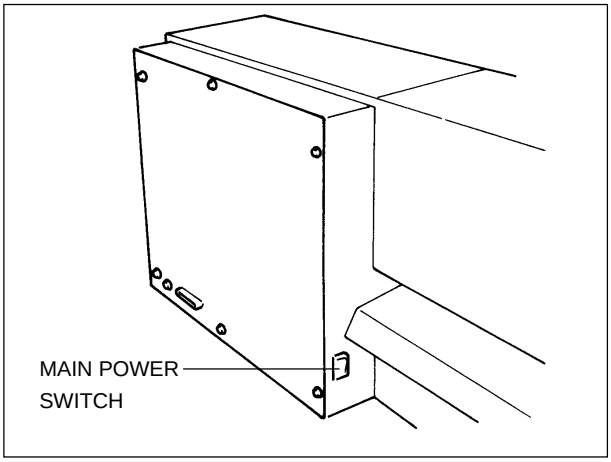


4-13 HEAD CARRIAGE HEIGHT ADJUSTMENT

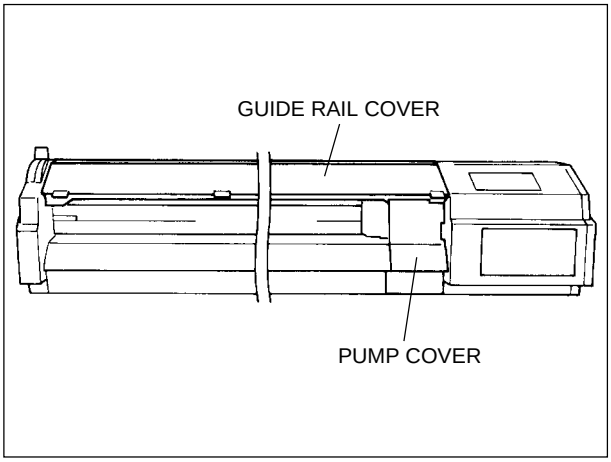
Necessary when ....
HEAD CARRIAGE HEIGHT must be set to have the ink fired as straight as possible and also to protect the heads from getting rubbed against the media.
If this adjustment is not done correctly, printing problem, such as blurry printing and banding, could occur.

1 Turn off the main power switch.

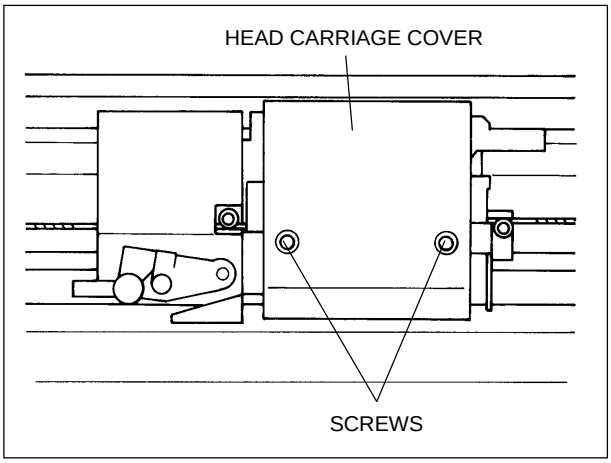
It is recommended to unplug the machine for preventing the HEAD from damage.



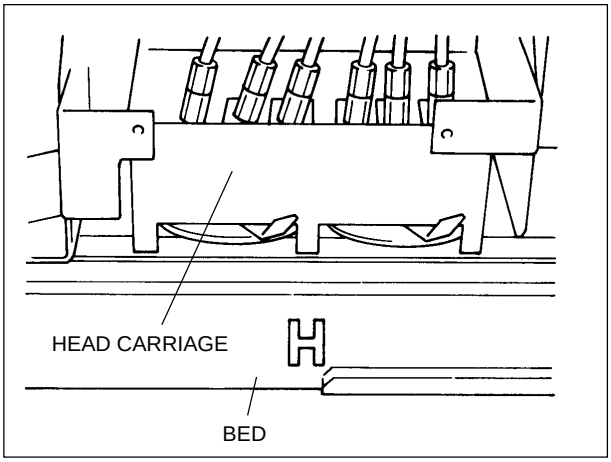
2 Remove the PUMP COVER and then the GUIDE RAIL COVER.



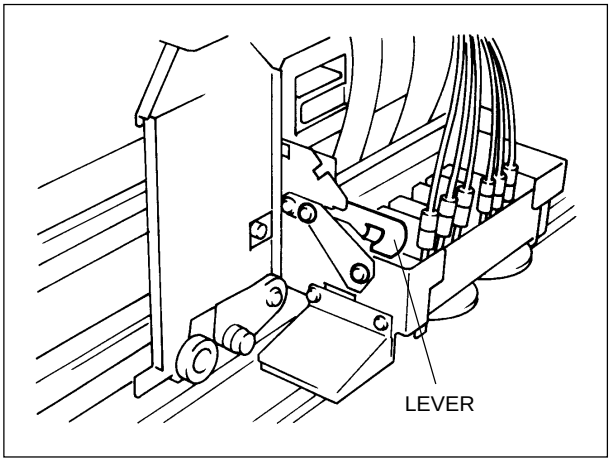
3 Remove the HEAD CARRIAGE COVER and FRONT APRON.



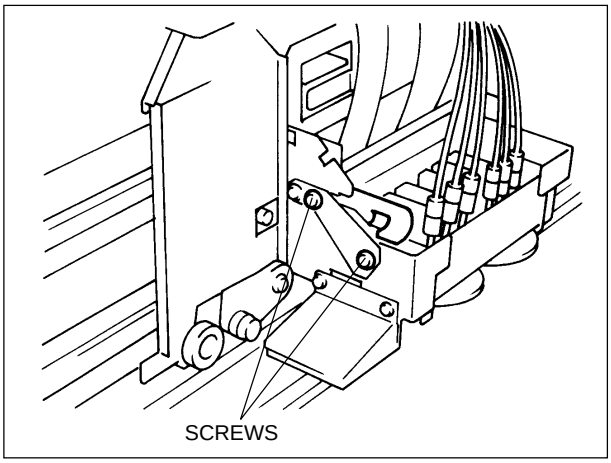
4 Lower the PINCH ROLLER and move the HEAD CARRIAGE to the position where [H] mark is written on the BED.



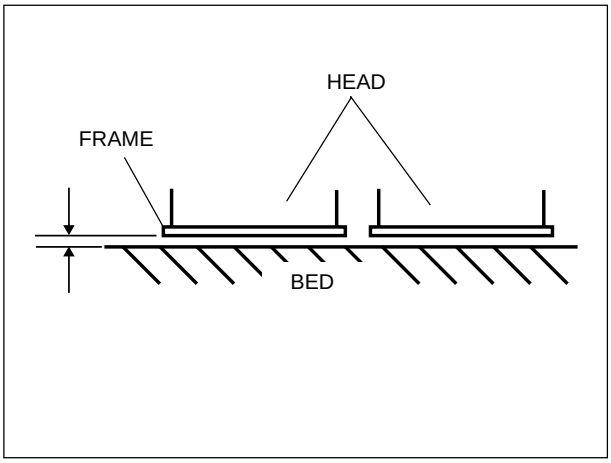
5 Lower the HEAD to the lowest position with the LEVER on the HEAD CARRIAGE.



6 Loosen the screws for fixing the LEFT and RIGHT ARM PLATE. (There are 2 screws on both sides.)

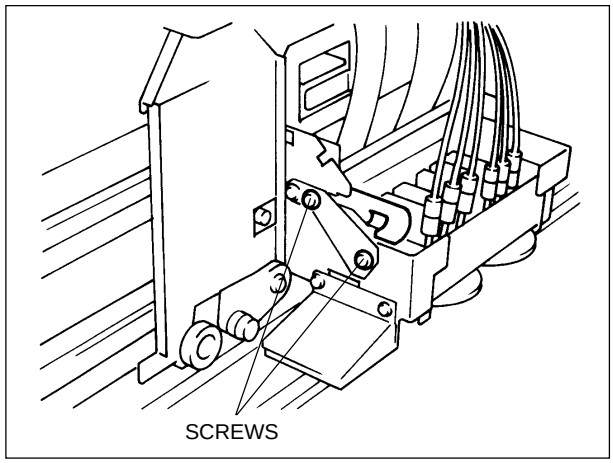


7 Put the 1.2 mm THICKNESS GAUGE between the HEAD and the BED.



Make sure that the thickness gauge is making contact only at the frame of the HEAD and not the surface.

8 Tighten the screws for fixing the LEFT and RIGHT ARM LOCK PLATEs while pushing down the HEAD CARRIAGE against the THICKNESS GAUGE.



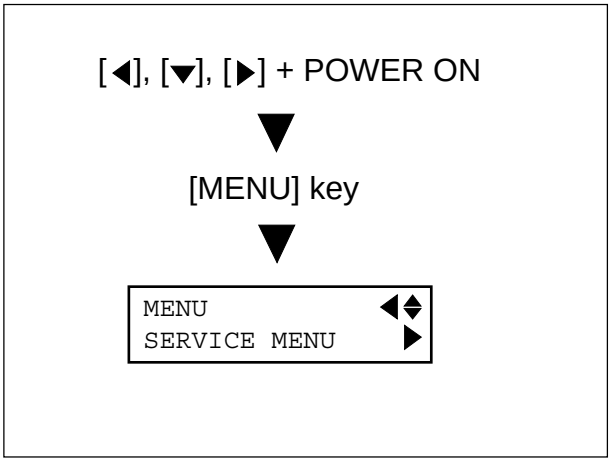
9 Check and make sure that the 1.1 mm THICKNESS GAUGE can be put in between the both HEADs and the BED.
And 1.4 mm THICKNESS GAUGE won't go in between.

Adjustment Range : 1.2 mm $^{+0.2mm}_{-0.1mm}$

4-14 CALIBRATION (FEEDING DIRECTION)

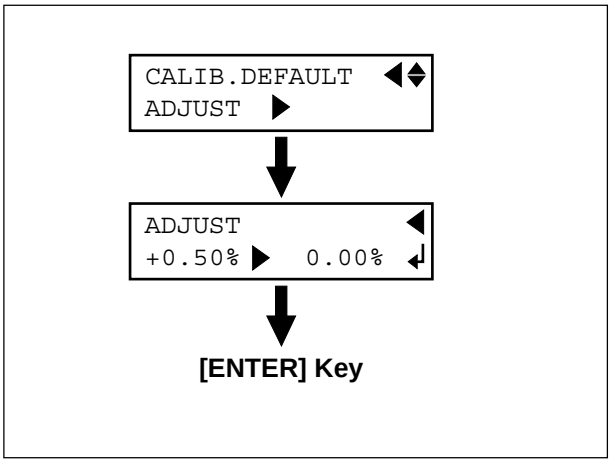
Necessary when ....
CALIBRATION is for adjusting the feeding amount of the GRIT ROLLER.
Carry out this adjustment, in case of having problem to print in the correct length in the media feeding direction.
Calibration is done by using the PET-G-1050 in the Factory. Calibrate the feeding direction with customer's media if necessary.

1 Turn on the sub power switch while pressing the [◀], [▼] and [▶] keys to enter the SERVICE MODE.

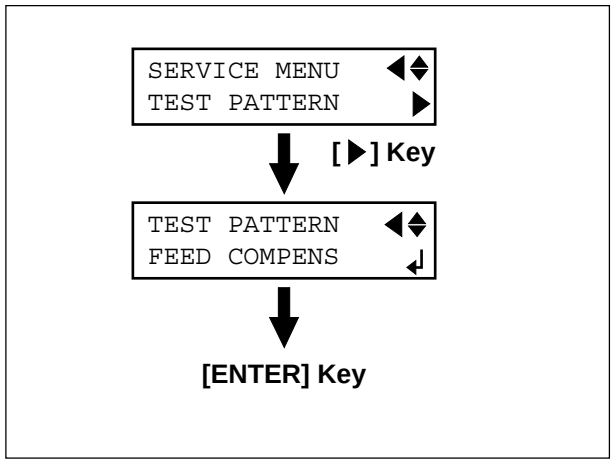


2 Set the PET film with a size of minimum 540 mm (w) x 440 mm (l) on the FJ.

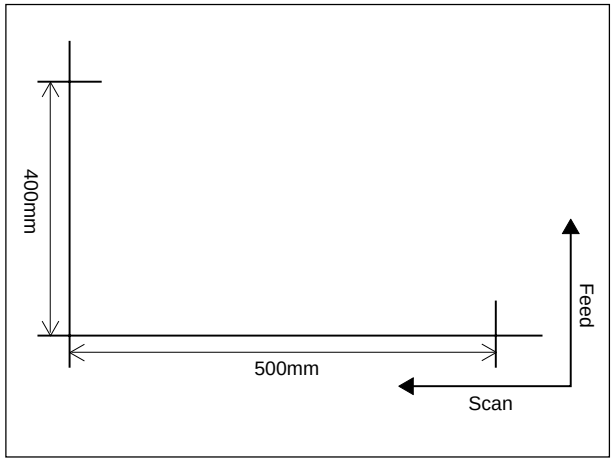
3 Select the [ADJUST] menu under the [CALIB.DEFAULT] menu and change the amount to be 0.00% with [▲] and [▼] keys.
Press the [ENTER] key to save the settings.



4 Select the [FEED COMPENS] menu under the [FEED COMPENS] menu and press the [ENTER] key.



5 TEST PATTERN will be printed.
Calibrating amount can be calculated with the formula shown at 6 based on the printing result.



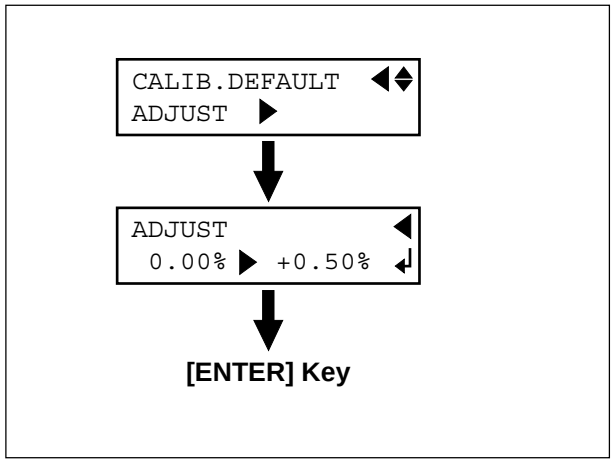
6 Calculate the amount to be calibrated with the formula shown at the right figure.

1. CA = Calibrating amount
2. CL = Commanded length (400 mm)
3. ML = Measured length

FORMULA

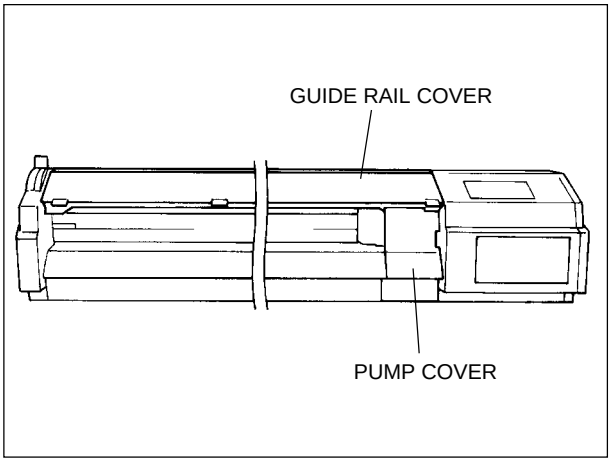
$$CA = \frac{CL - ML}{ML} \times 100$$

7 Select the [ADJUST] menu under the [CALIB. DEFAULT] menu and change the amount to be calibrated with [▲] and [▼] keys.
Press the [ENTER] key to save the settings.

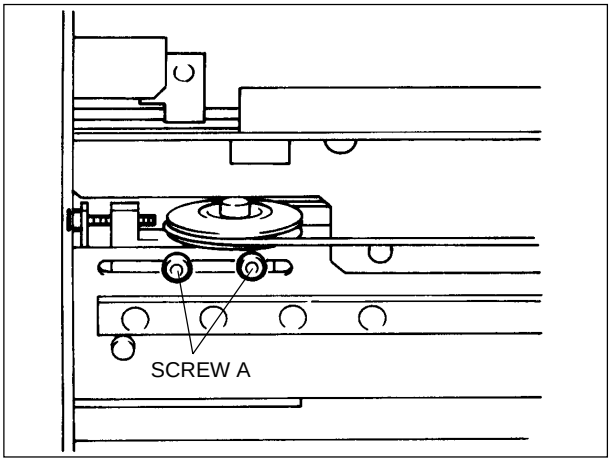


4-15 CARRIAGE WIRE TENSION ADJUSTMENT

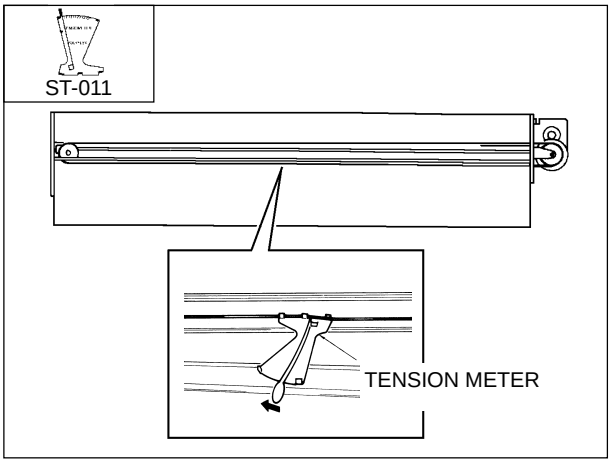
1 Remove PUMP COVER and then the GUIDE RAIL COVER.



2 Loosen the SCREWS A on the left side of the machine.



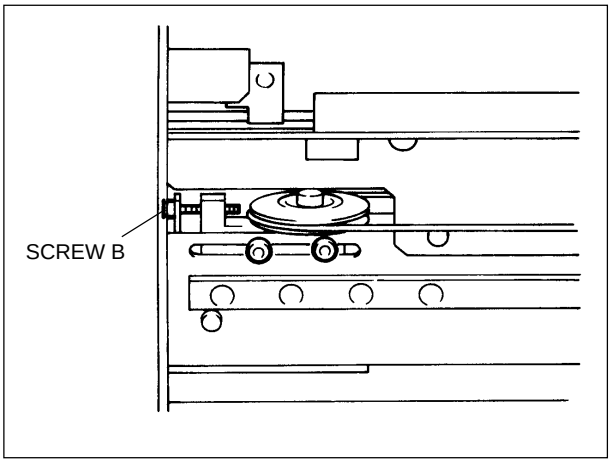
3 Measure the wire tension with the TENSION METER (ST-011) at the connecting part of 2 LM GUIDES.



Revised

4 Adjust the wire tension with the SCREW B so that it will be 13 lb ~ 15 lb when replacing the wire, or 9 lb ~ 11 lb in other case.

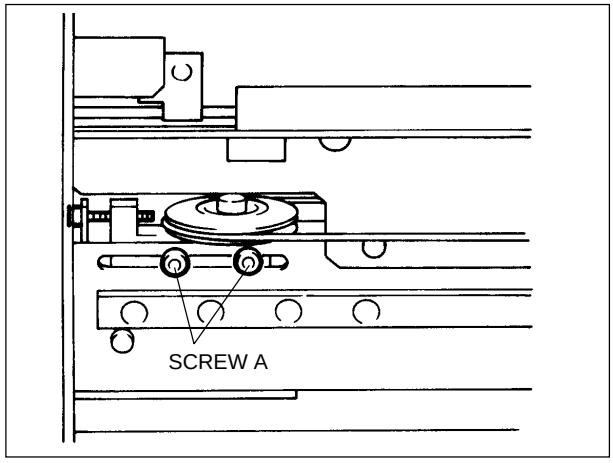
9 lb ~ 11 lb is the optimal wire tension. The value for the wire tension when replacing the wire is set on the assumption that the tension will get settled in the optimal wire tension, 9 lb ~ 11 lb, due to the stretch of the wire.



Revised

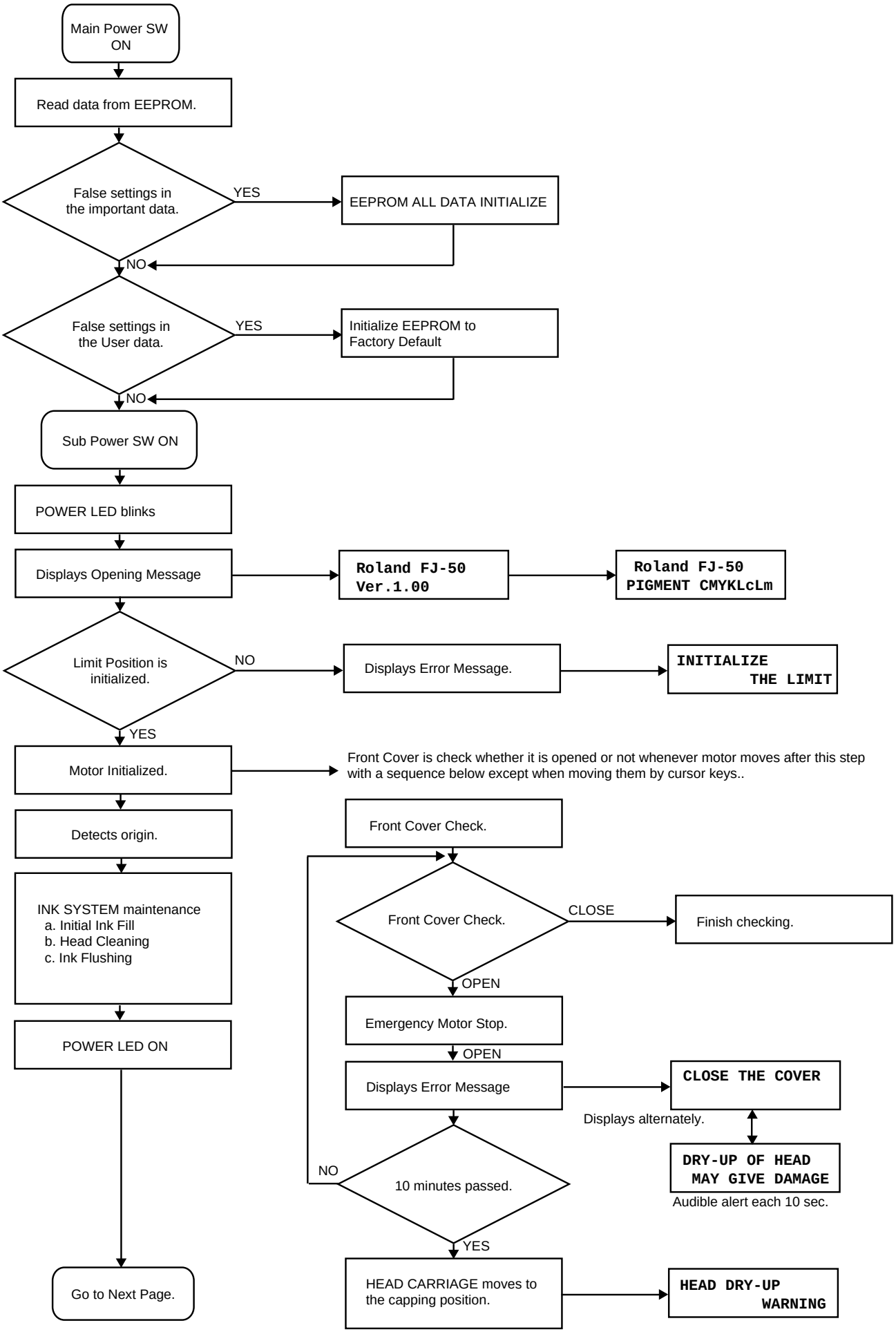
5 After adjusting the wire tension, move the TOOL CARRIAGE back and forth 20 times in a whole distance of the GUIDE RAIL.
Check the wire tension again and readjust it if it has changed.

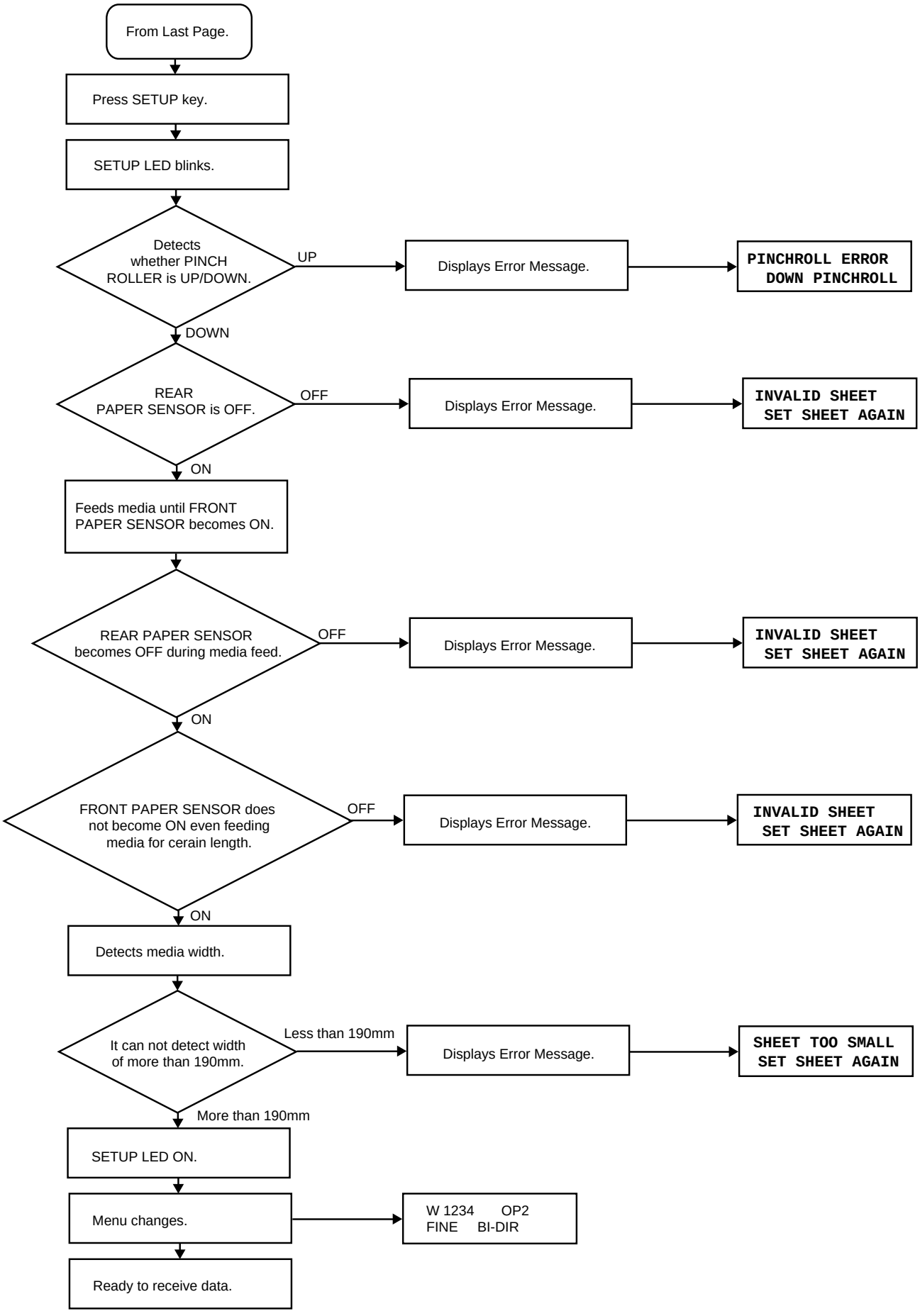
6 Tighten SCREW A after completing the adjustment.



7 Check and make sure that the tension is within the range.
If not, adjust it again.

5-1 OPERATIONAL SEQUENCE




From Last Page.
Press SETUP key.
SETUP LED blinks.
Detects whether PINCH ROLLER is UP/DOWN.
UP
Displays Error Message.
PINCHROLL ERROR
DOWN PINCHROLL
DOWN
REAR PAPER SENSOR is OFF.
OFF
Displays Error Message.
INVALID SHEET
SET SHEET AGAIN
ON
Feeds media until FRONT PAPER SENSOR becomes ON.
REAR PAPER SENSOR becomes OFF during media feed.
OFF
Displays Error Message.
INVALID SHEET
SET SHEET AGAIN
ON
FRONT PAPER SENSOR does not become ON even feeding media for cerain length.
OFF
Displays Error Message.
INVALID SHEET
SET SHEET AGAIN
ON
Detects media width.
It can not detect width of more than 190mm.
Less than 190mm
Displays Error Message.
SHEET TOO SMALL
SET SHEET AGAIN
More than 190mm
SETUP LED ON.
Menu changes.
W 1234 OP2
FINE BI-DIR
Ready to receive data.

5-2 SENSOR MAP

ENCODER MODULE

This sensor detects scanning coordinates and also generates printing signal.

REAR PAPER SENSOR

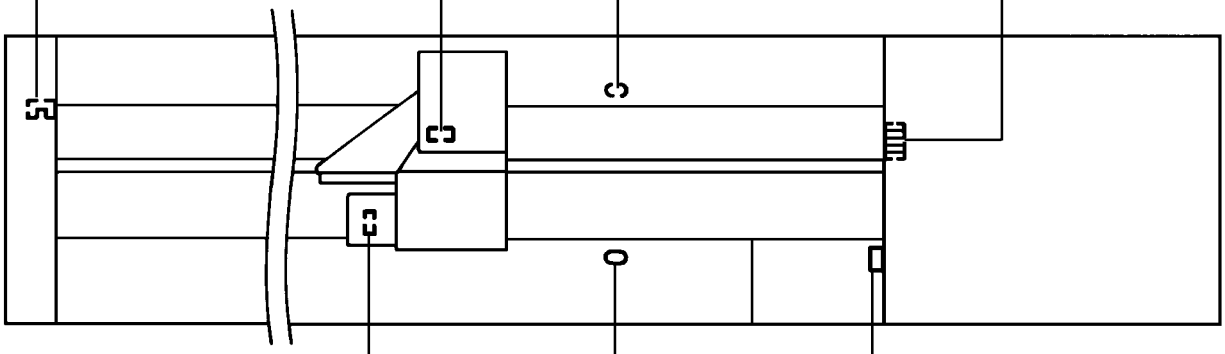
This sensor detects the rear edge of the media.

PINCH ROLLER SENSOR

This sensor detects whether the PINCH ROLLER is up or down.

ORIGIN SENSOR

This sensor detects the origin.



PAPER SIDE SENSOR

This sensor detects the left and right edge of the media.

FRONT PAPER SENSOR

This sensor detects the front edge of the media and also whether the media is set or not.

COVER SWITCH

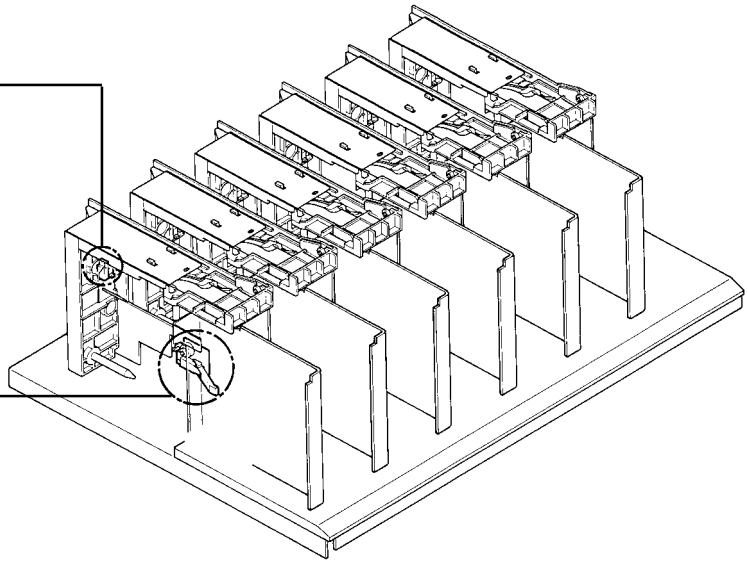
This switch detects whether the Front Cover is opened or closed. HEAD CARRIAGE stops when the Front Cover is opened. And starts when it is closed again.

INK CARTRIDGE SENSOR

This sensor detects whether the INK CARTRIDGE is installed or not.

INK EMPTY SENSOR

This sensor detects whether the INK CARTRIDGE is empty or not.



5-3 MANUAL HEAD CLEANING

This instuction is same as the one in the User's Manual.
Manual head Cleaning is necessary to remove the dusts accumulated on the HEAD, HEAD CARRIAGE and CAPPING UNIT and can't be removed by the built-in Cleaning Function of FJ-52/42.

Table of Contents

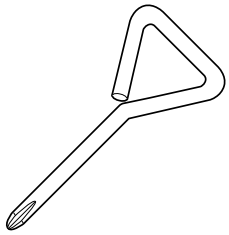
Cleaning using this kit should be carried out when automatic cleaning and forced cleaning from the [HEAD CLEANING] menu fail to correct image drop-out.

Before starting cleaning, read through this manual carefully to familiarize yourself with the procedures, then carry out the cleaning operations quickly.
Cleaning is performed while the caps on the printing heads are detached, so cleaning must be completed before the heads dry out. It is suggested that cleaning be completed in ten minutes or less.
If it appears that cleaning operations may take more than ten minutes, stop the cleaning operations and follow the steps below.

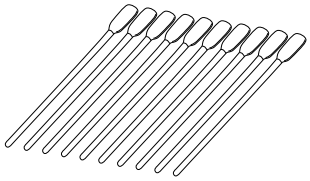
1. **Return the carriage to standby position and cap the heads.**
2. **Attach the cover and tighten the screws.**
3. **Switch on the power, and from the [HEAD CLEANING] menu, carry out cleaning of the heads.**
4. **When the head cleaning ends, perform cleaning using this kit again.**

Checking Supplied Items

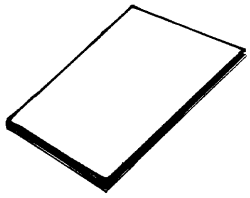
The following items are packed with the cleaning kit. Before use, check to make sure they are present.



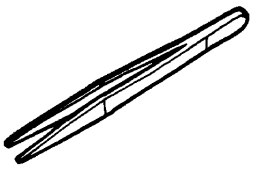
Phillips screwdriver 1



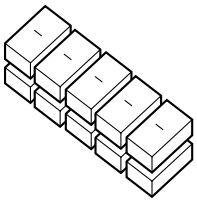
Cleaning sticks 10



Cleaning kit
user's manual 1



Tweezers 1



Sponges
(for cleaning hooks) 10

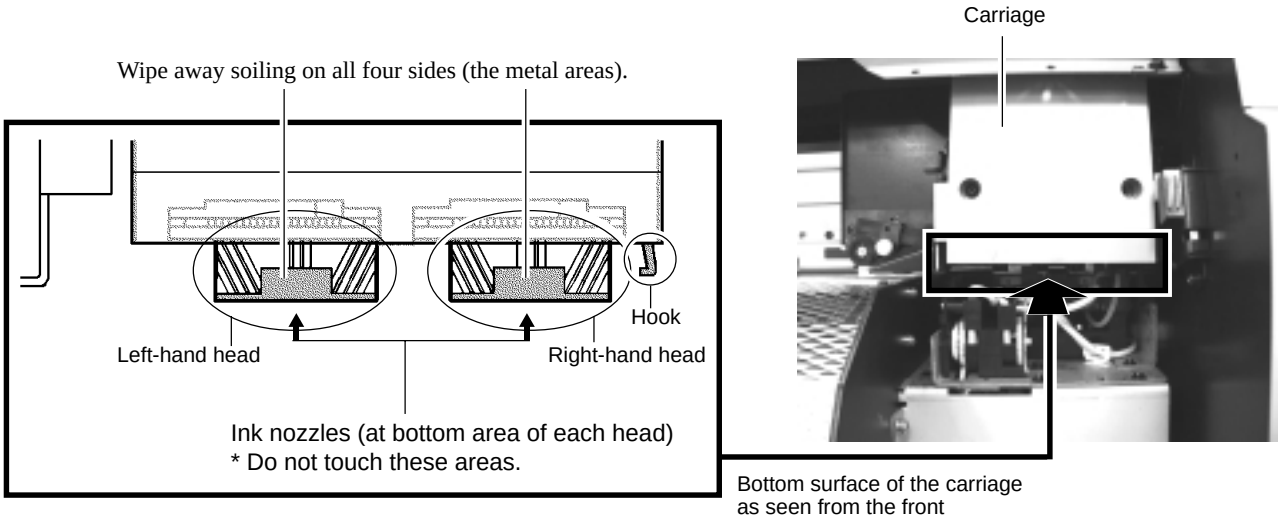
Overview of the Cleaning Method

1) Switch off the power.

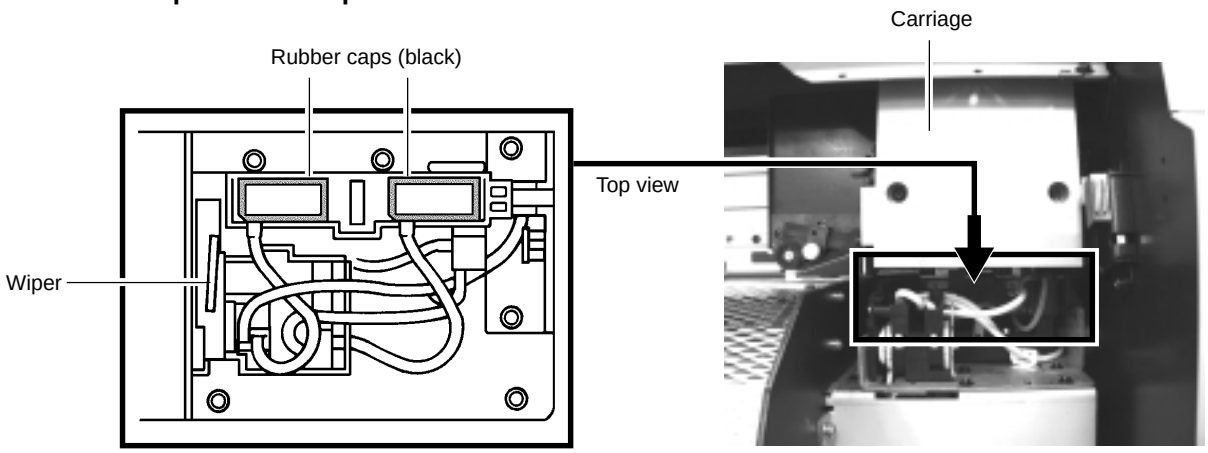
2) Detach the cover.

3) Move the carriage away from standby position.

4) Clean the heads (on the left-hand and right-hand sides) and the hook inside the carriage.



5) Clean the rubber caps and the wiper.



6) Replace the sponge (for cleaning the hook). * Do this only if the sponge has soaked up ink.

7) Return the carriage to standby position.

8) Attach the cover.

9) Switch on the power.

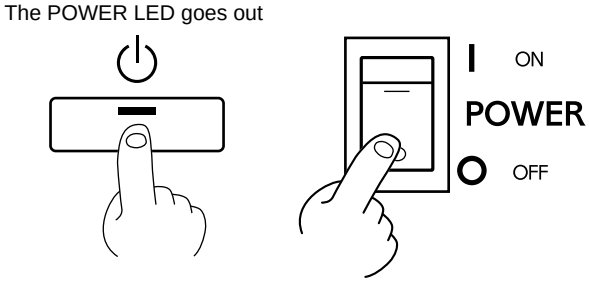
10) Check the results of cleaning.

Performing Cleaning

⚠CAUTION

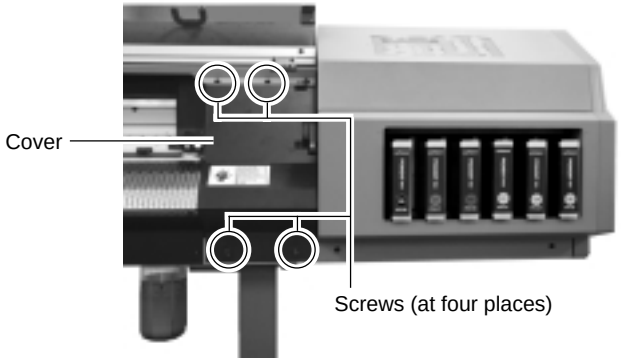
Before starting the procedure, be sure to turn off the main power switch.
Also, do not turn on the power while the cover is detached.
When you turn on the power and close the front cover, the carriage may move and cause injury.

1 After pressing the [POWER] key to switch off the sub power, turn off the main power switch.

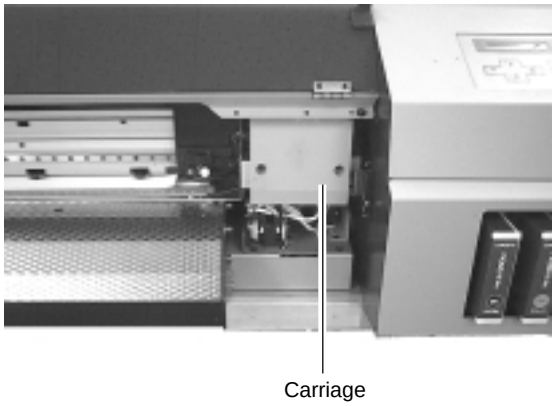


2 Open the front cover.

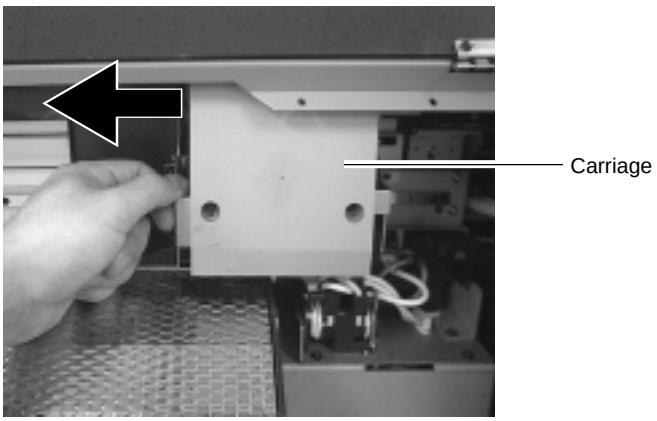
3 Detach the cover shown in the figure.
Use the included Phillips screwdriver to remove the screws.



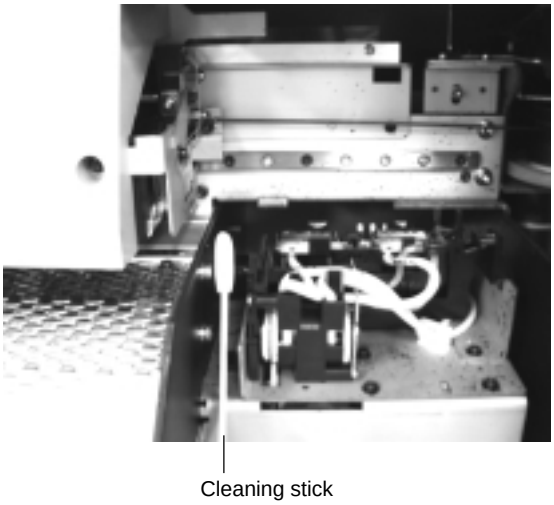
View with cover detached



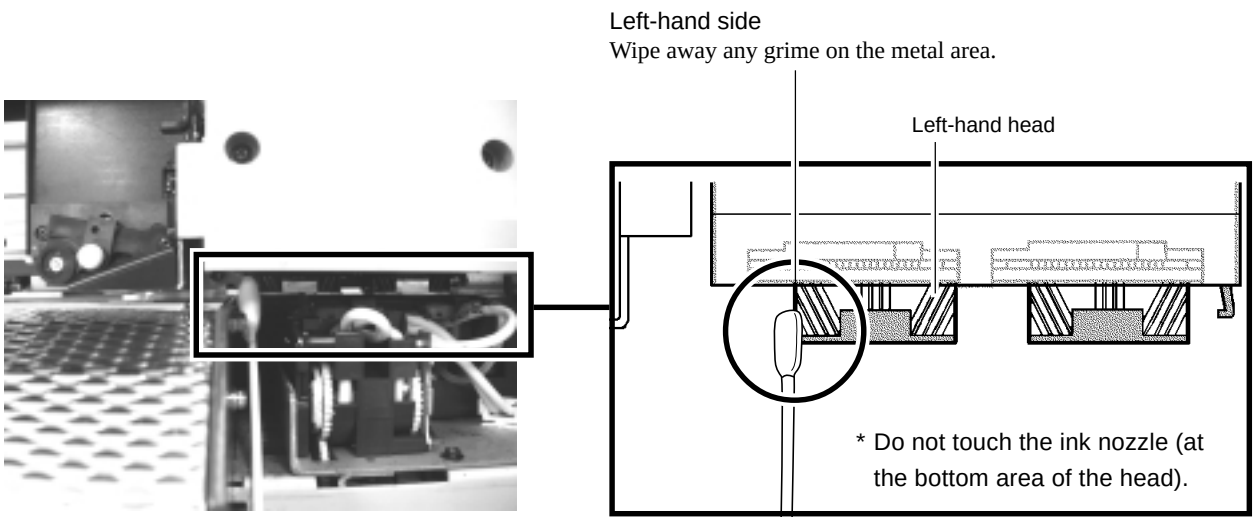
4 Pull out the carriage in the direction shown in the figure. You may need to apply slight force to move it.



5 Insert a cleaning stick into the space shown in the figure.



6 Move the carriage to a location where the cleaning stick reaches the left-hand side surface of the left-hand head, and wipe away any grime on the left-hand side surface (the metal area) of the left-hand head.



NOTICE

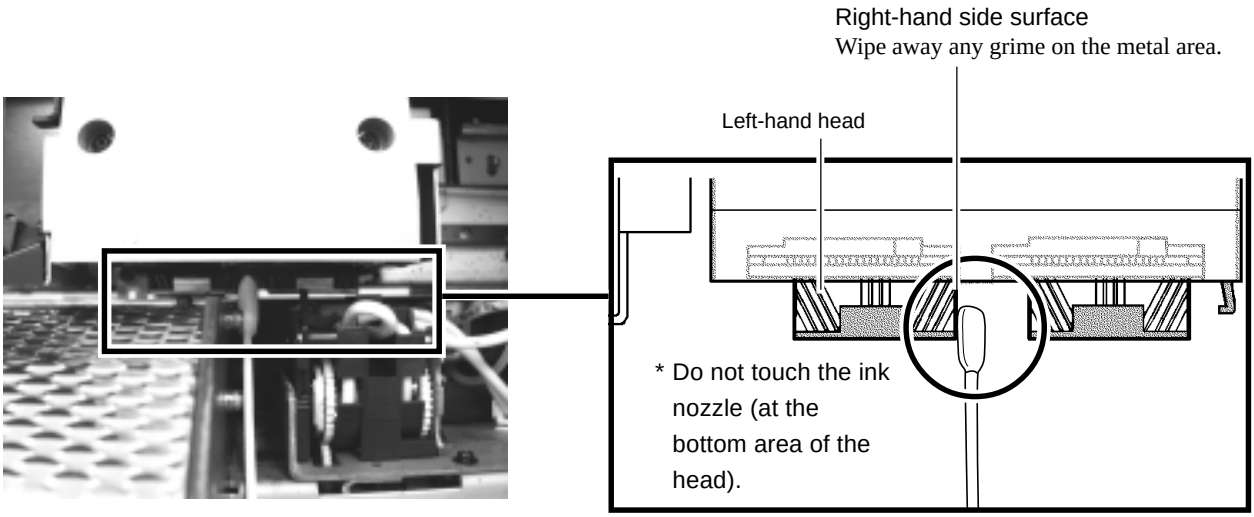
Do not touch the ink nozzle (at the bottom area of the head).

Wipe only the silver-colored metal area.

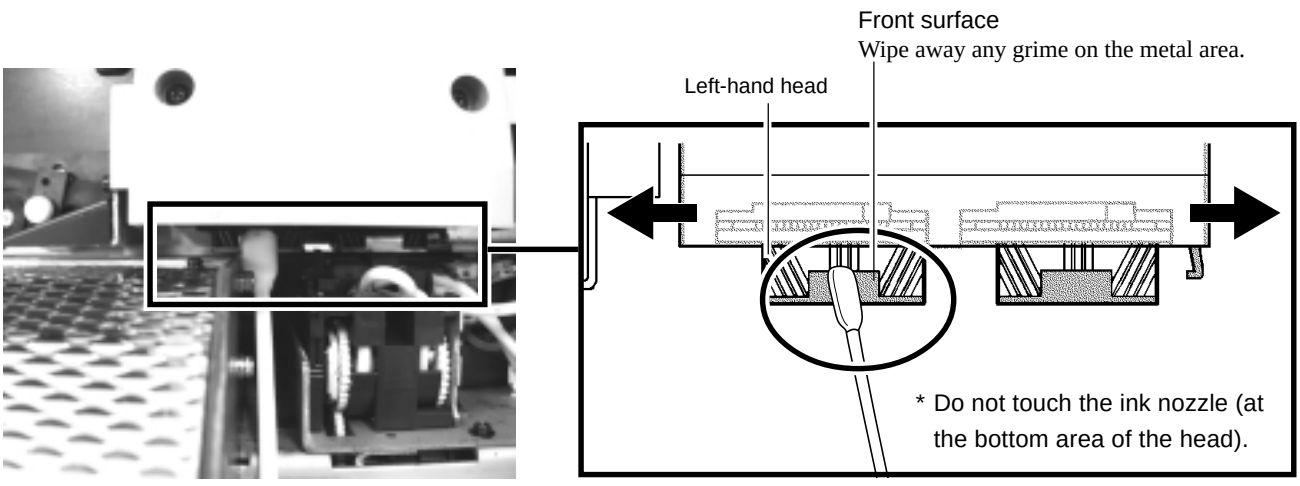
There is no need to apply force when wiping. You can remove dust by simply stroking the surface.

Do not use a soiled cleaning stick.
Use lint-free tissue or the like to remove grime adhering to a cleaning stick. Also, if a cleaning stick becomes extremely dirty, discard it and perform cleaning with a new one.

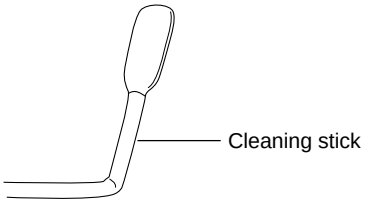
7 Move the carriage to a location where the cleaning stick reaches the right-hand side surface of the left-hand head, and wipe away any grime on the right-hand side surface (the metal area) of the left-hand head.



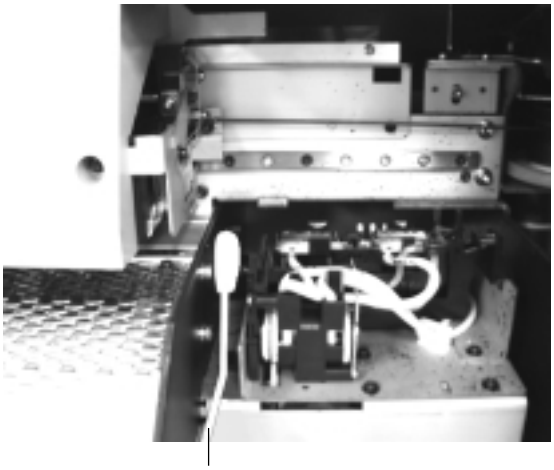
8 Move the carriage to a location where the cleaning stick reaches the front surface of the left-hand head.
While holding the tip of the cleaning stick against the front of the head, move the carriage to the left and right to wipe away grime.



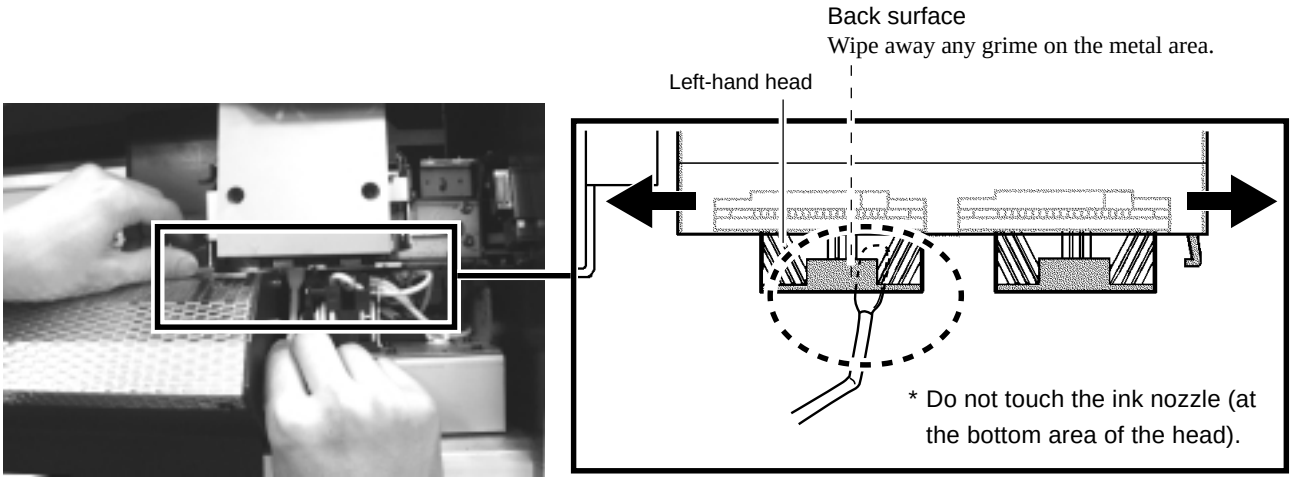
9 Bend a cleaning stick as shown in the figure.



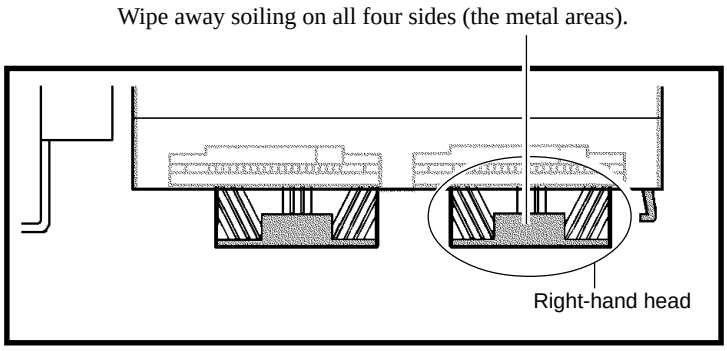
10 Insert the cleaning stick into the space shown in the figure as far as it will go.



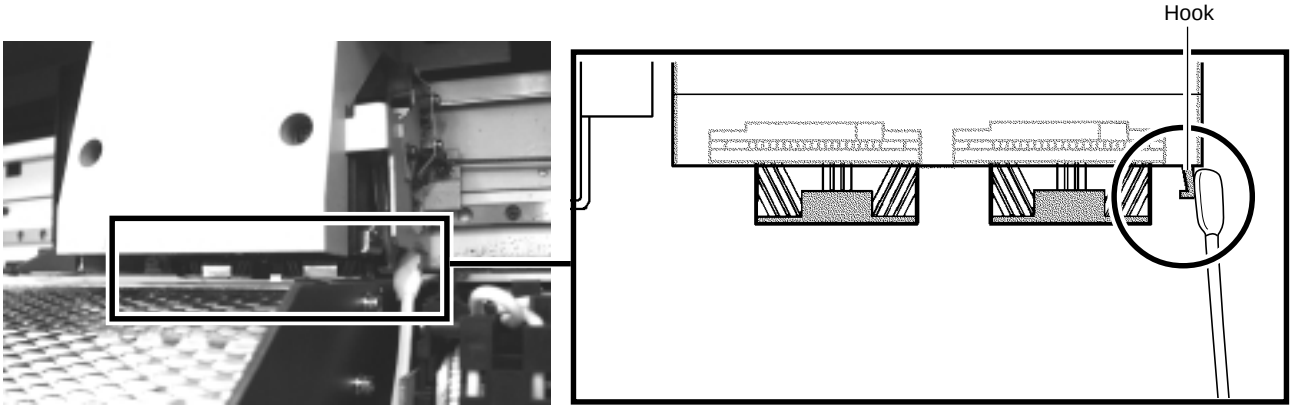
11 Move the carriage to a location where the cleaning stick reaches the back surface of the left-hand head.
While holding the tip of the cleaning stick against the back of the head, move the carriage to the left and right to wipe away grime.



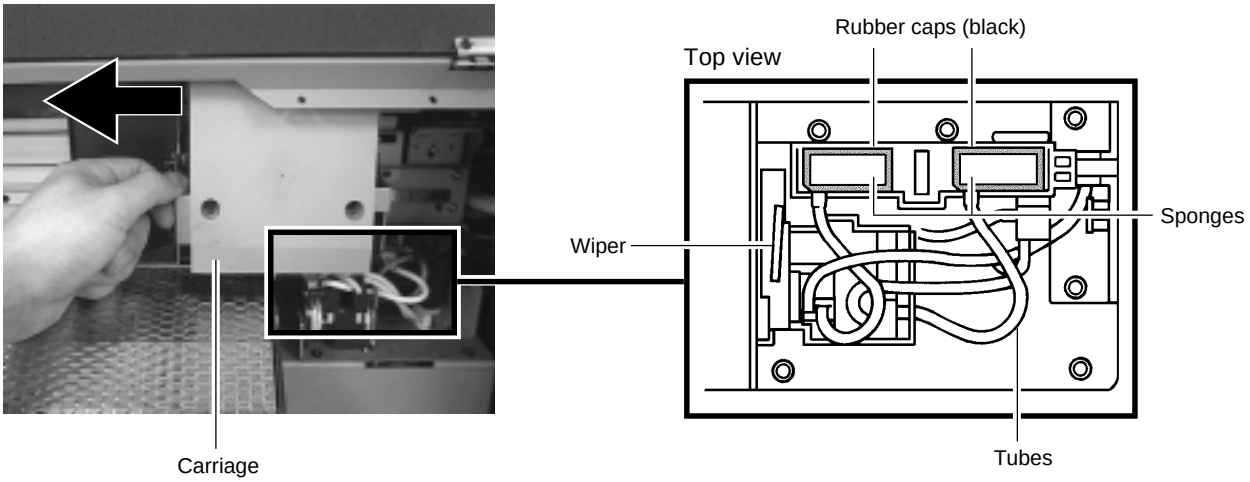
12 Repeat steps 5 through 11 to clean the right-hand head in the same way.



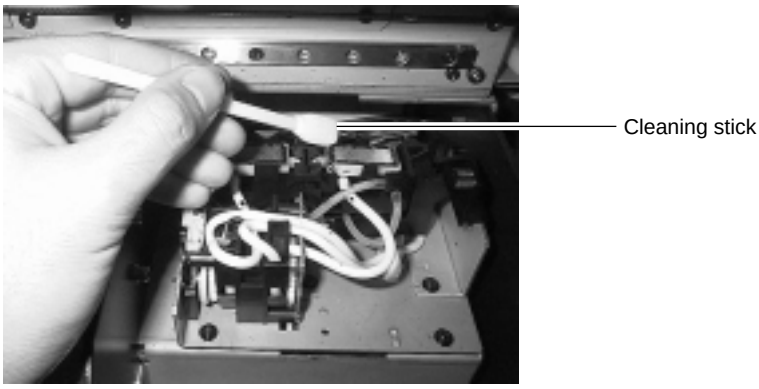
13 Clean the hook (the metal portion) below the right-hand side of the carriage.



14 Pull the carriage by hand to move it to the left-hand side until the black rubber caps, sponges, and tubes can be seen.



15 Wipe away any grime adhering to the edges of the left-hand and right-hand rubber caps. Use the tip of the cleaning stick to scrape off grime.



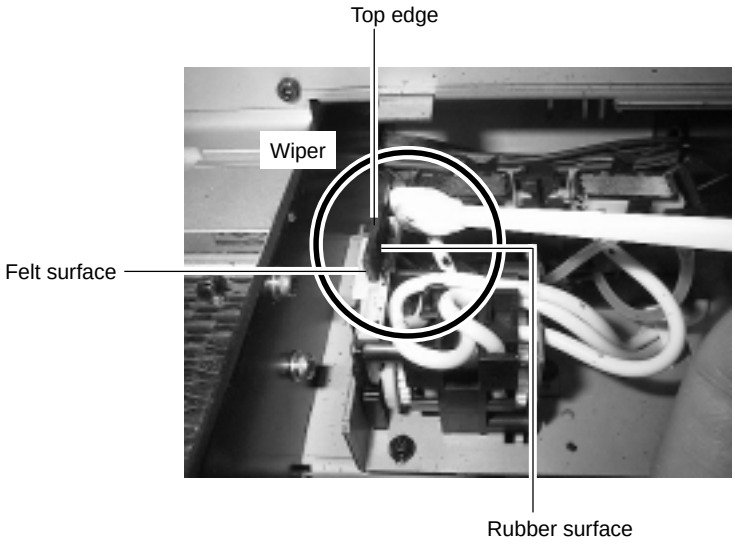
NOTICE

Be sure to use one of the included cleaning sticks.

If no grime is present, do not touch the sponges inside the rubber caps.

When removing grime adhering to the sponge inside a rubber cap, touch the sponge gently with the tip of the cleaning stick to pick up the grime. Rubbing forcefully may damage the surface of the sponge.

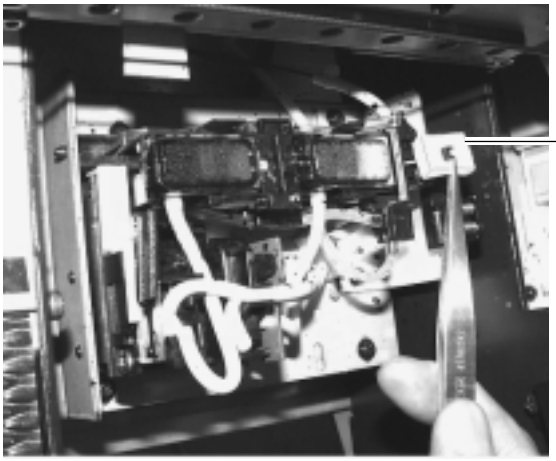
16 Clean the wiper area.
When viewed from the front, the wiper has a rubber surface on its right-hand side and a felt surface on its left-hand side. Clean mainly the rubber surface and the top edge.



NOTICE

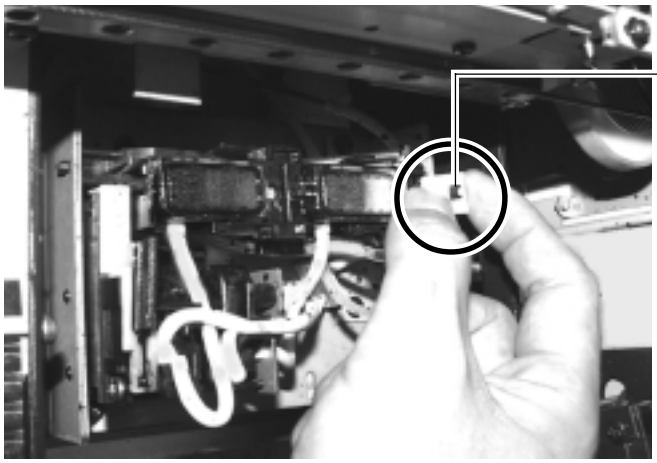
Rubbing the felt surface with too much force may make the surface fuzzy. Remove grime by stroking gently several times with the tip of the cleaning stick.

17 If ink is oozing from the sponge shown in the figure, replace it with a new sponge.
Use the included tweezers to pull it out from above.

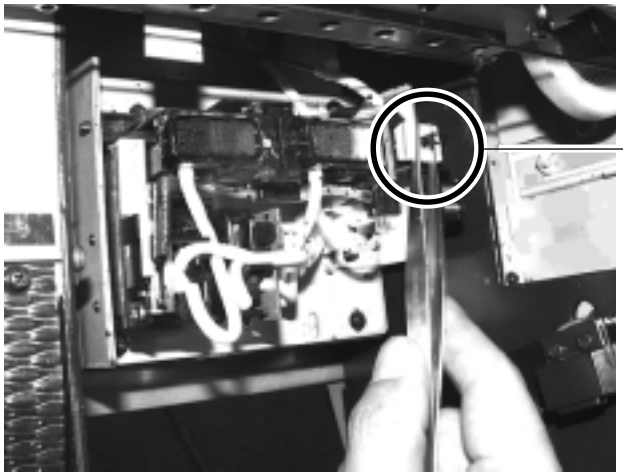


* If the sponge is not oozing ink, it doesn't need to be replaced. Skip ahead to step 20.

18 Orient a new sponge (included with the cleaning kit) as shown in the figure and insert it.

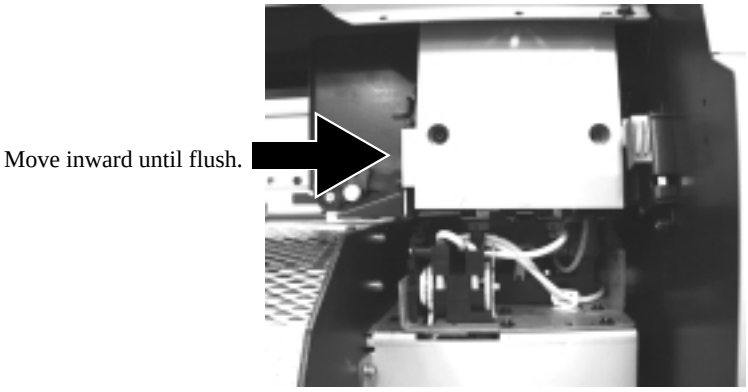


19 Use the tweezers to press down the sponge.
Slowly press it downward until it makes contact.

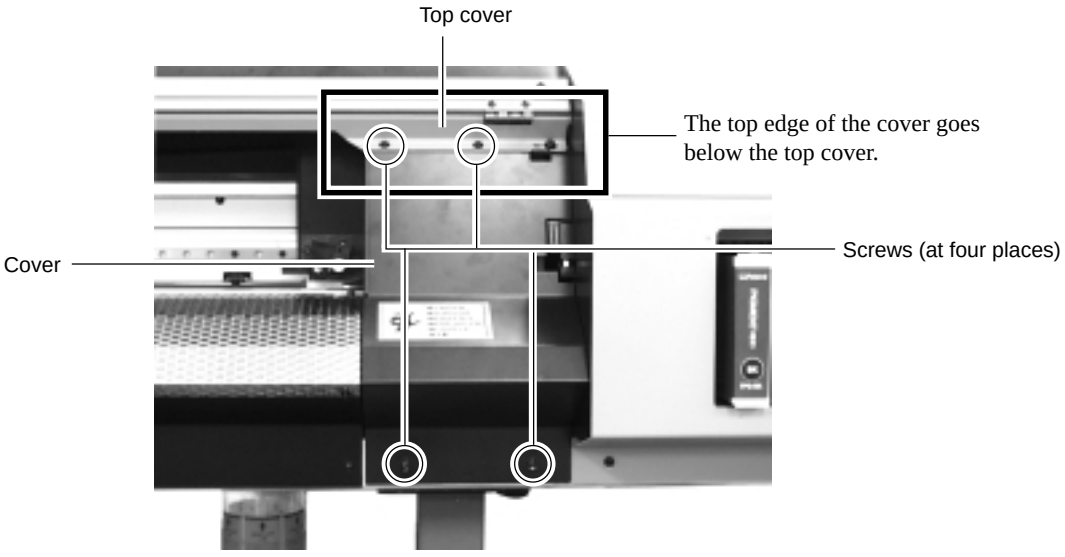


20 Return the carriage to standby position.

NOTICE If allowed to stand with the carriage remaining away from standby position for a prolonged period, problems such as drying-out of the printing heads or dot drop-out during printing may occur. When finished cleaning, promptly return the carriage to standby position.



21 Use the screws to attach the cover you removed in step 3.



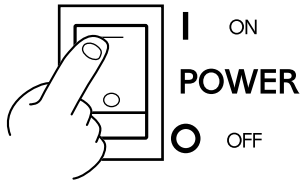
22 Close the front cover.

23 Turn on the main power switch at the back side of the unit, then press the [POWER] key to switch on the sub power.

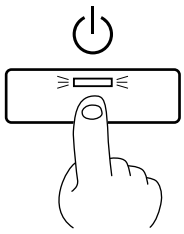
⚠CAUTION

Attach the cover before turning on the power.

When you turn on the power and close the front cover, the carriage may move and cause injury.

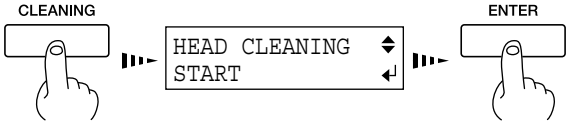


The POWER LED lights up



24 Load the material.

25 Press the [CLEANING] key to make the following screen appear on the display.
Press the [ENTER] key, head cleaning starts.



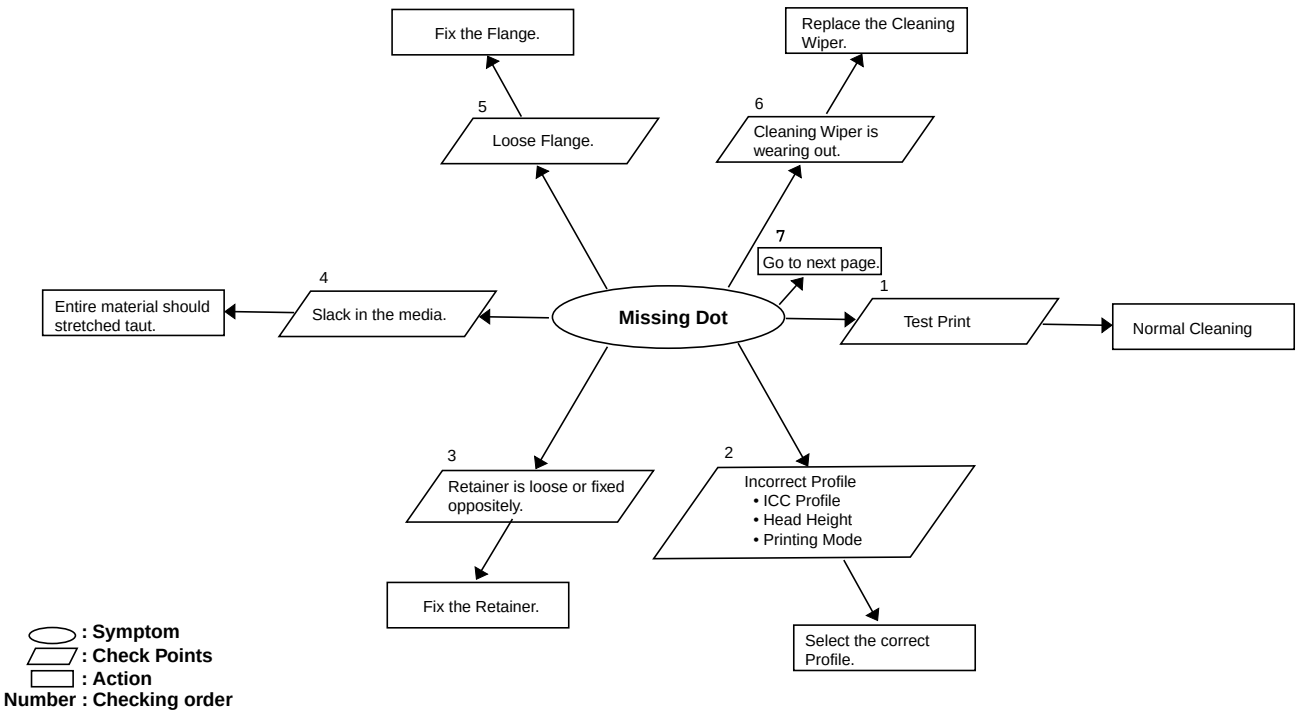
26 When head cleaning ends, press the [▼] key to display the screen shown in the figure. Press the [ENTER] key to start the printing test.

27 Examine the printing test results to make sure all dots are printed attractively.

*** If dot drop-out persists, contact your authorized Roland DG Corp. dealer or service center.**

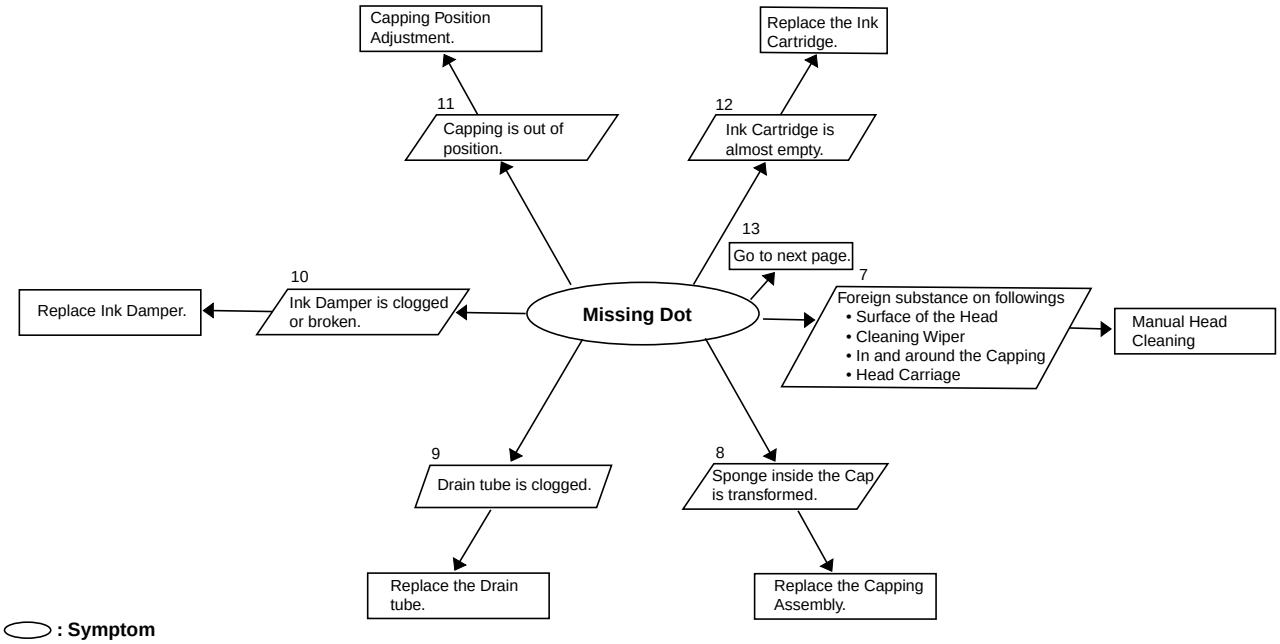
6-1 PRINTING PROBLEMS

6-1-1. MISSING DOT / WAVY DOT / SCRATCHY PRINTING FLOWCHART



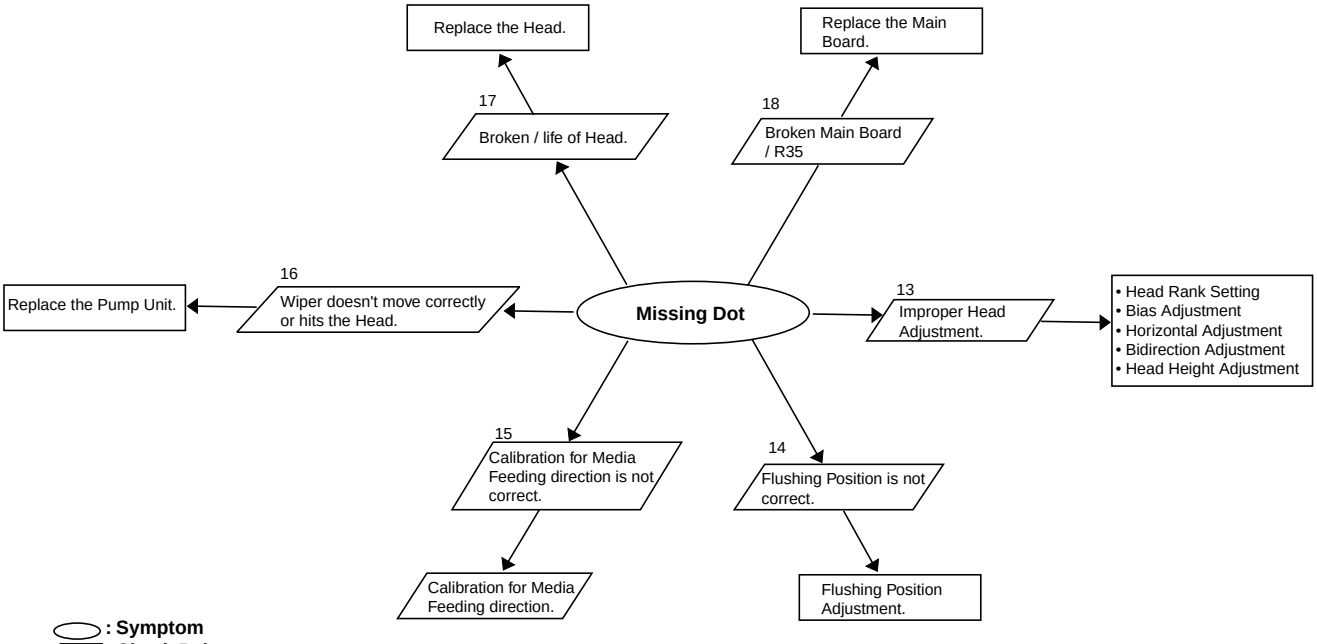
6-1-1. MISSING DOT / WAVY DOT / SCRATCHY PRINTING OUTLINE

NO	CHECKING POINT	ACTION	REFERENCE	OUTLINE
1	TEST PRINT	NORMAL CLEANING	Section 4 [Service Mode]	Perform TEST PRINT with the [CLEANING] key. In case there is a problem in the printing result, perform Head Cleaning by pressing the [CLEANING] key.
2	Incorrect Profile	Select the correct Profile	Section 7 [RCC3.00 Profile List]	Incorrect setup by the users or when the printing mode and head height don't match to the media being used, it results in scratchy printing due to the lack of ink.
3	Retainer is loose or fixed oppositely	Fix the Retainer		When the Retainer is loose or left and right retainers are fixed oppositely, roll sheet rotates eccentric and the media feeding becomes unstable. It could result in scratchy printing or white lines.
4	Slack in the media	Entire material should stretched taut		Media skews at the Head due to the slack in the media when setting it up and results in the scratchy printing or white lines.
5	Loose Flange	Fix the Flange		When the Flanges are inserted loosely to the paper tube of the media, media skews and results in scratchy printing or white lines.
6	Cleaning Wiper is wearing out	Replace the Cleaning Wiper	Section 3 [Cleaning Wiper _ Replacement]	Head cleaning function is built inside the machine to maintain the correct nozzle condition to fire the ink. When Cleaning Wiper wears out, correct nozzle condition can not be maintained because the Cleaning Wiper is used for the cleaning and results in missing and wavy dots. referential time for replacing the Cleaning Wiper is 3000 times of WIPING an 500 times of RUBBING.



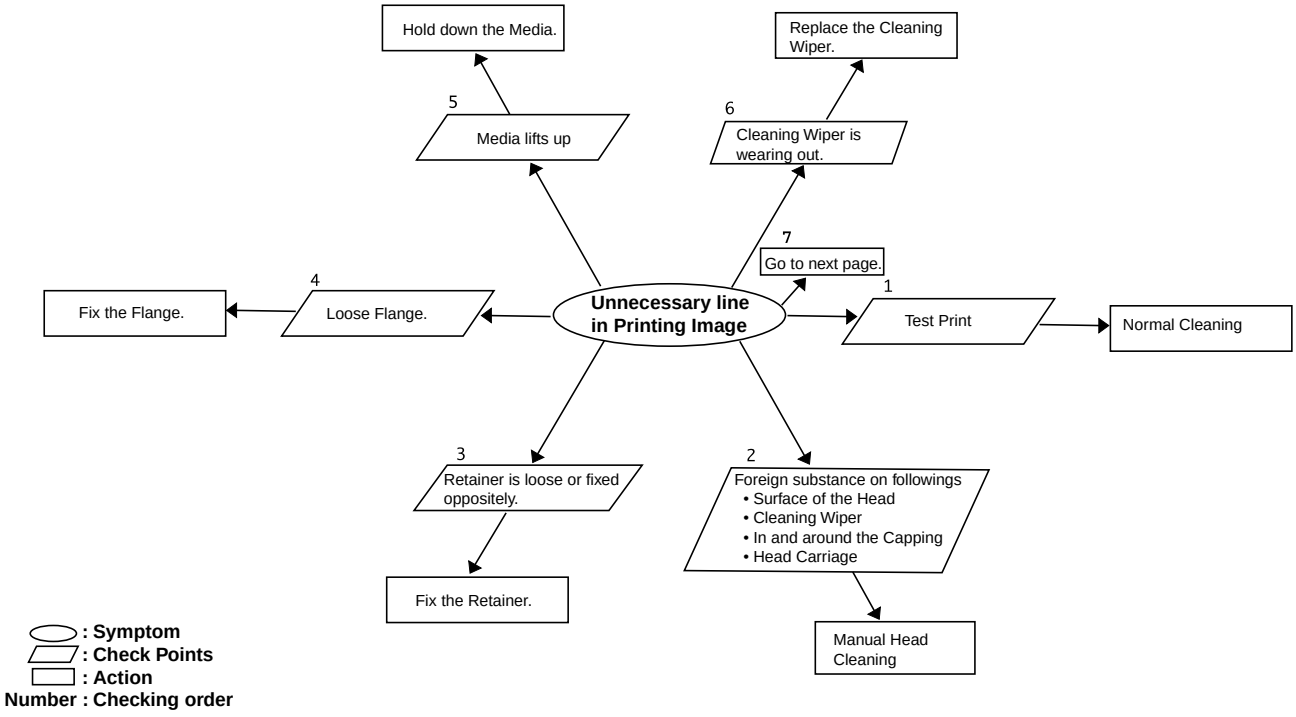
: Symptom
: Check Points
: Action
Number : Checking order

NO	CHECKING POINT	ACTION	REFERENCE	OUTLINE
7	Foreign substance	Manual Head Cleaning	Section 5 [Manual Head Cleaning]	Fine dust on the media will stick to the Head, Cap, Head Carriage and Cleaning Wiper. This type of dust can not be removed with the built-in Head Cleaning. In this case, the nozzle condition to fire the ink correctly will be damaged and results in missing and wavy dots.
8	Sponge inside the Cap is transformed	Replace the Capping Assembly	Section 3 [Capping Assembly _ Replacement]	Ink bubbles will gather inside the Cap when the Sponge inside the Cap transforms and cause gap between the Head and the Cap. When nozzles make contact with the ink bubbles, correct nozzle condition will be damaged and results in missing and wavy dots.
9	Drain tube is clogged	Replace Drain Tube		Ink suction is done by using the pump. Drain Tubes are inside the PUMP and therefore, if the Drain Tube is clogged, enough ink for the Head to fire correctly won't be supplied and results in missing and wavy dots.
10	Ink Damper is clogged or broken	Replace Ink Damper		When the Ink Damper is clogged, ink suction can not be maintain. Therefore, enough ink for the Head to fire correctly won't be supplied and results in missing and wavy dots.
11	Capping is out of position	Capping Position Adjustment	Section 4 [Capping Position Adjustment]	Enough ink for the Head to fire correctly won't be supplied when Capping Position is not correct because ink lines won't be vacuumed if there is gap between the Head and the Bed. Therefore, it results in missing and wavy dots.
12	Ink Cartridge is almost empty	Replace the Ink Cartridge		Printing will be continued even the [Ink Empty] message is displayed when the [Continued] is selected in the [Empty Mode]. In this case, remaining printing area is 1m2. When printing is continued more than 1m2 after detecting the [Ink Empty], amount of ink being fired will suddenly become less and results in missing dots or white lines. in this case, replace the ink cartridge and perform the Powerful Cleaning. When some colours are mixed inside the ink line, perform the cleaning with the cleaning liquid. It is recommended for the users to replace the ink cartridge as soon as the machine detects ink empty.



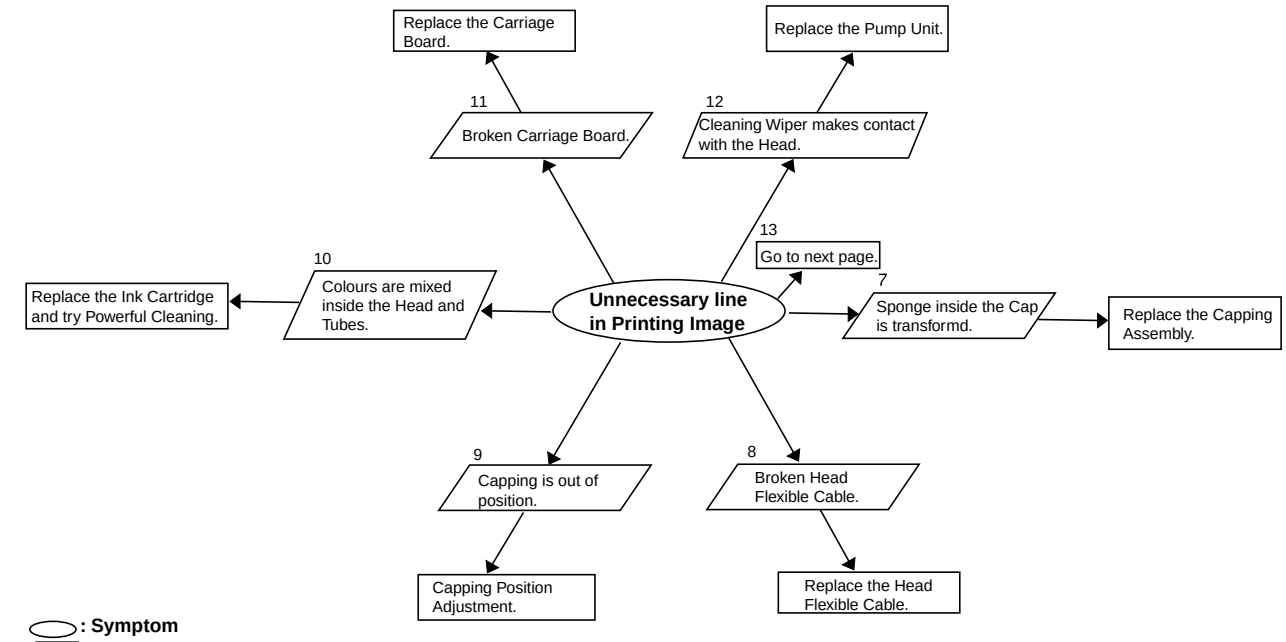
NO	CHECKING POINT	ACTION	REFERENCE	OUTLINE
13	Improper Head Adjustment	Head Rank Setting Bias Adjustment Horizontal Adjustment Bidirection Adjustment Head Height Adjustment	Section 4 [Head Rank Setting], [Head Alignment]	Head Rank Setting -> It is necessary to calibrate the manufacturing tolerance of the Piezo Element so that all heads fire the same amount of ink straight down. Bias Adjustment -> It is for adjusting the positions of each Head so the it is placed horizontally to the Guide Rail. Horizontal Adjustment -> there I a difference in a timing for firing ink in each Head. therefore, the positions where each colour prints will be different if the timing is not adjusted because the Head Carriage moves when printing. this adjustment is to setup the timing in left head to match the timing of the right head. Bidirection Adjustment -> When printing in Bidirection, colour order for printing will be reversed in each way. Therefore, if the timing to fire ink is different, the landing position of the dots will be different in each directions. Head Height Adjustment -> it is designed to maintain the correct clearance between the Head and the Bed in order to fire ink close to the designated point as close as possible and also to keep the enough space to prevent the Head from rubbing against the media.
14	Flushing Position is not correct	Flushing Position Adjustment	Section 4 [Flushing Position Adjustment]	Flushing is to fire the ink inside the Cap once in a while during the printing or built-in cleaning Function. Flushing Position should be adjusted so that the Head will be on top of the Cap. If it is not adjusted, ink will be fired outside of the Cap. when the flushed ink sticks to the surface of the Head, nozzle condition will be damaged and results in missing and wavy dots.
15	Calibration for Media Feeding Direction is not correct	Calibration for Media Feeding Direction	Section 4 [Calibration]	Media feeding amount is slightly different in each media because of the difference in its thickness. Re-calibrate the feeding amount to match the media being used.
16	Wiper doesn't move correctly or hits the Head all the time	Replace the Pump Unit		When there is a problem in the movement of the Wiper due to the dirt on the Pump Unit, Wiper touches the Head and results in missing dots or white lines.
17	Broken / life of Head	Replace the Head	Section 3 [Head _ Replacement]	Life time of the Head is 2 billion dots / 1 nozzles. (128 billion dots in Service Report) When it is close to the life, power to fire the ink becomes weak and results in missing dots or white lines. And also, if the ink is firing from all the nozzles, Head is electrically damaged due to the disconnection of the Sheet Cutter and the Head Carriage while printing or replacement has taken place while the primary switch is on. In this case, replace the Head.
18	Broken Main Board / R35	Replace the Main Board	Section 3 [Main Board _ Replacement]	If the ink is firing from all the nozzles, Head is electrically damaged due to the disconnection of the Sheet Cutter and the Head Carriage while printing or replacement has taken place while the primary switch is on. In this case, the Q18 on the Main Board could also be damaged. Check the Resistor R15 on the Main Board and if it is burned, replace the Main Board.

6-1-2. UNNECESSARY LINES IN PRINTING IMAGE FLOWCHART



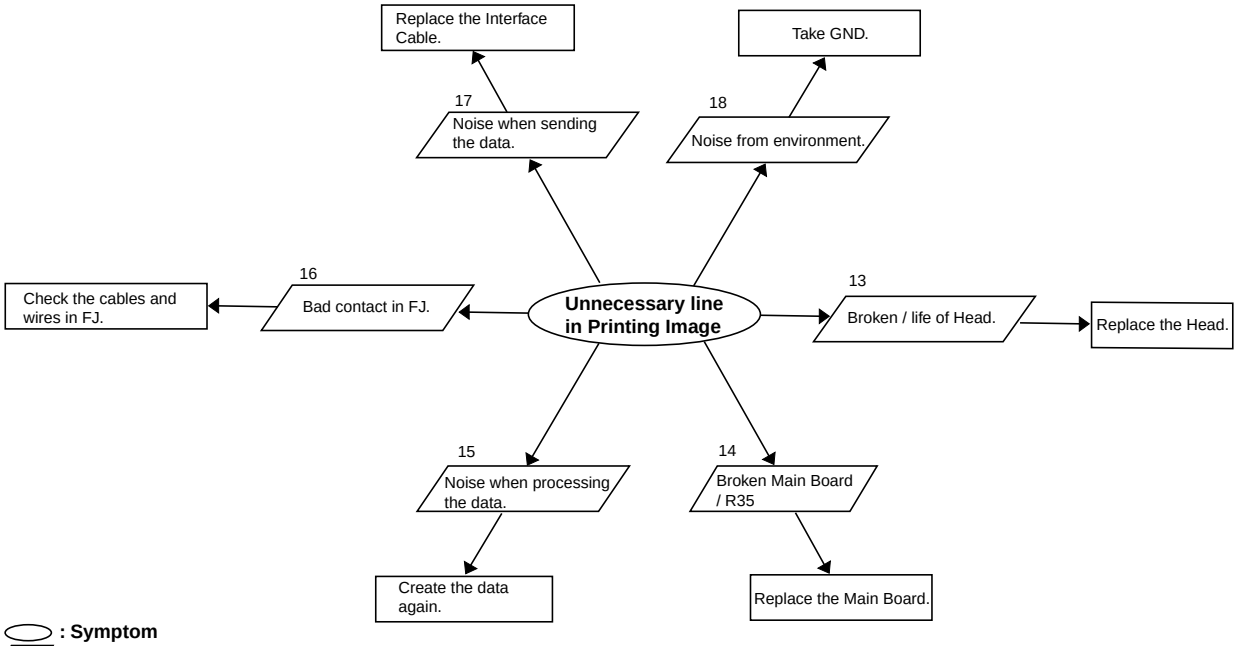
6-1-2. UNNECESSARY LINES IN PRINTING IMAGE OUTLINE

NO	CHECKING POINT	ACTION	REFERENCE	OUTLINE
1	TEST PRINT	NORMAL CLEANING	Section 4 [Service Mode]	Perform TEST PRINT with the [CLEANING] key. In case there is a problem in the printing result, perform Head Cleaning by pressing the [CLEANING] key.
2	Foreign substance	Manual Head Cleaning	Section 5 [Manual Head Cleaning]	Fine dust on the media will stick to the Head, Cap, Head Carriage and Cleaning Wiper. This type of dust can not be removed with the built-in Head Cleaning. In this case, the nozzle condition to fire the ink correctly will be damaged and the unnecessary lines will be printed.
3	Retainer is loose or fixed oppositely	Fix the Retainer		When the Retainer is loose or left and right retainers are fixed oppositely, roll sheet rotates eccentric and the media feeding becomes unstable. It could print unnecessary lines.
4	Loose Flange	Fix the Flange		When the Flanges are inserted loosely to the paper tube of the media, media skews and results in unnecessary lines in the printing image.
5	Media lifts up	Hold down the Media		The media could rub against the Head and could become dirty if it become wavy at the Bed. It could be held down by putting the card board to both sides.
6	Cleaning Wiper is wearing out	Replace the Cleaning Wiper	Section 3 [Cleaning Wiper _ Replacement]	Head cleaning function is built inside the machine to maintain the correct nozzle condition to fire the ink. When Cleaning Wiper wears out, correct nozzle condition can not be maintained because the Cleaning Wiper is used for the cleaning and results in unnecessary lines in the printing image. referential time for replacing the Cleaning Wiper is 3000 times of WIPING an 500 times of RUBBING.



6

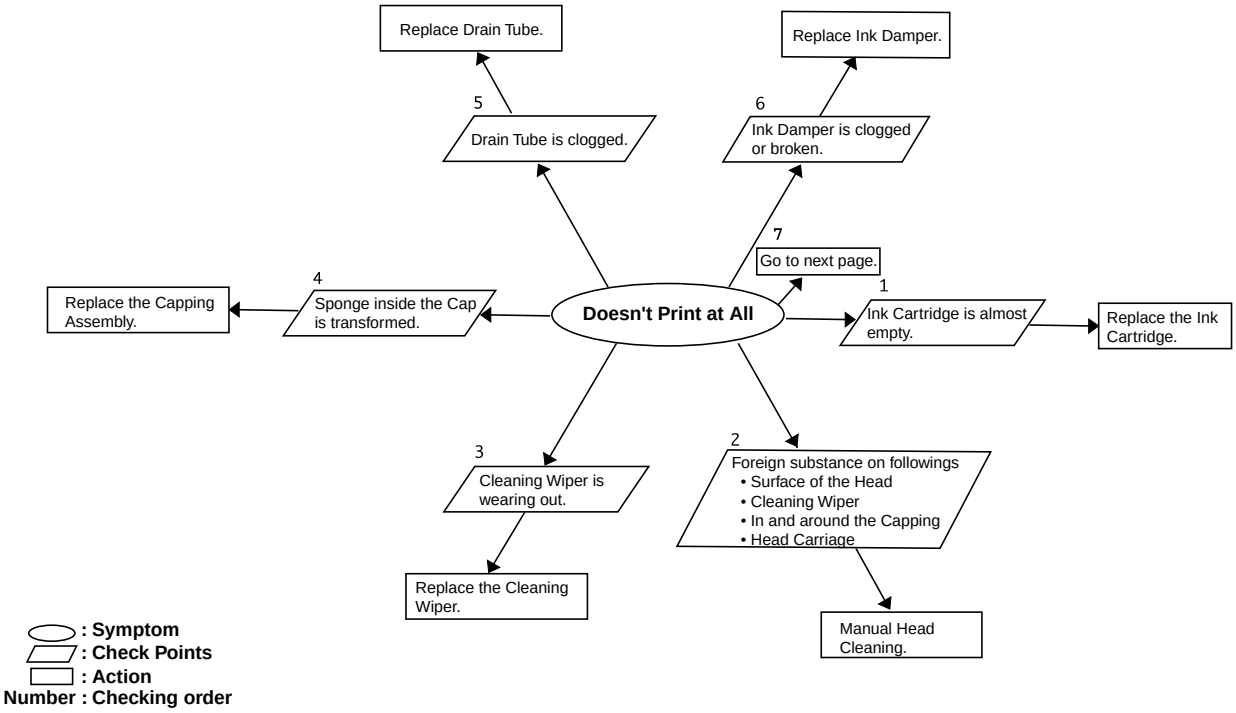
NO	CHECKING POINT	ACTION	REFERENCE	OUTLINE
7	Sponge inside the Cap is transformed	Replace the Capping Assembly	Section 3 [Capping Assembly _ Replacement]	Ink bubbles will gather inside the Cap when the Sponge inside the Cap transforms and cause gap between the Head and the Cap. When nozzles make contact with the ink bubbles, correct nozzle condition will be damaged and results in unnecessary lines in the printing image.
8	Broken Head Flexible Cable	Replace the Head Flexible Cable		Unnecessary lines will be printed if there is cut-line in the Carriage Flexible Cable.
9	Capping is out of position	Capping Position Adjustment	Section 4 [Capping Position Adjustment]	Enough ink for the Head to fire correctly won't be supplied when Capping Position is not correct because ink lines won't be vacuumed if there is gap between the Head and the Bed. Therefore, it results in a problem that the unnecessary lines will be printed in the printing image.
10	Colours are mixed in the printing, head and the tubes	Replace the Ink Cartridge and try Powerful Cleaning		Negative pressure inside the Ink Package will be high wen the printing is continued when the Ink Cartridge reaches the end. When the negative pressure exceeds the certain level, ink will be sucked reverselly. When it happens, the drain ink inside the cap will be sucked and goes inside the Head, Ink Damper and the Ink Tube. Replace the Ink Cartridge to the new one and perform the Powerful Cleaning when it happens. And also, recommend the users to replace the Ink Cartridge whenever the machine detects Ink Empty.
11	Broken Carriage Board	Replace the Carriage Board		Unnecessary lines will be printed if the Carriage Board is broken.
12	Cleaning Wiper makes contact with the Head	Replace the Pump Unit		Cleaning Wiper sometimes doesn't move smoothly when the Pump Unit becomes dirty. In this case, Cleaning Wiper makes contact with the Head and creates unnecessary lines in the printing image.



: Symptom
: Check Points
: Action
Number : Checking order

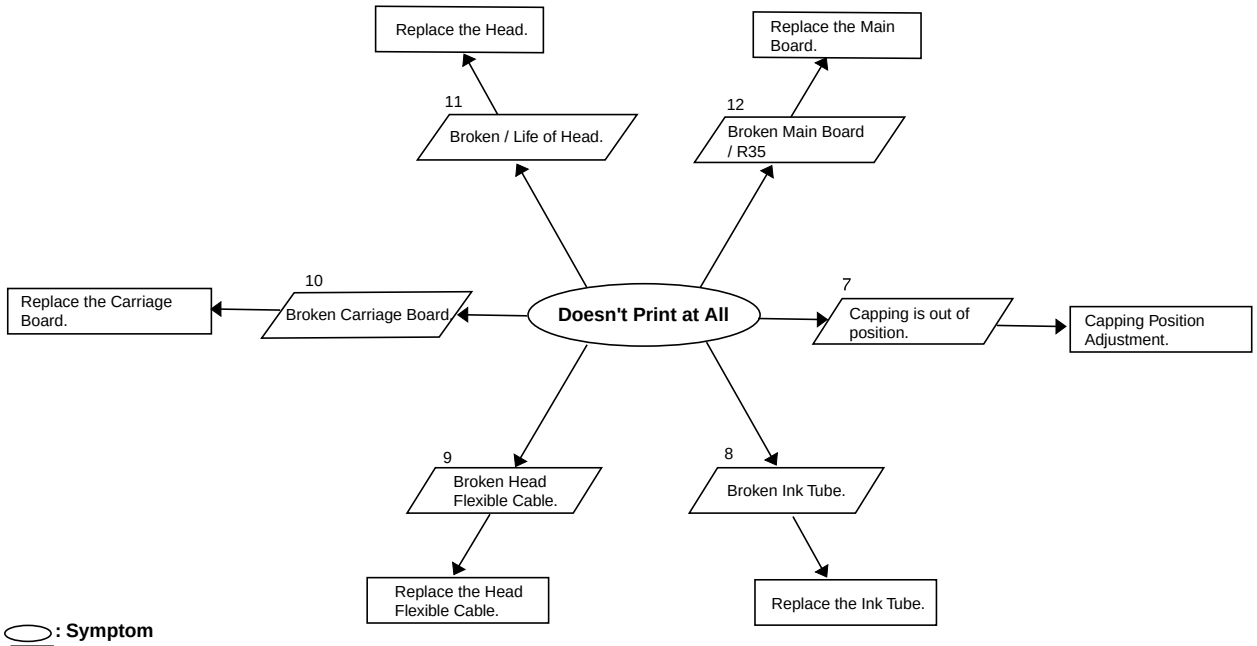
NO	CHECKING POINT	ACTION	REFERENCE	OUTLINE
13	Broken / life of Head	Replace the Head	Section 3 [Head _ Replacement]	Life time of the Head is 2 billion dots / 1 nozzles. (128 billion dots in Service Report) When it is close to the life, power to fire the ink becomes weak and results in missing dots or white lines. And also, if the ink is firing from all the nozzles, Head is electrically damaged due to the disconnection of the Sheet Cutter and the Head Carriage while printing or replacement has taken place while the primary switch is on. In this case, replace the Head.
14	Broken Main Board / R35	Replace the Main Board	Section 3 [Main Board _ Replacement]	If the ink is firing from all the nozzles, Head is electrically damaged due to the disconnection of the Sheet Cutter and the Head Carriage while printing or replacement has taken place while the primary switch is on. In this case, the Q18 on the Main Board could also be damaged. Check the Resistor R15 on the Main Board and if it is burned, replace the Main Board.
15	Noise when processing the data	Create the data again		Send the same data twice and check whether the unnecessary line will be printed at the same position. If so, noise could be caught during the processing of the data. Create the data again.
16	Bad contact in FJ	Check the cables and wires in FJ		Disconnect the Interface Cable from FJ and try the Demo Print. If there is unnecessary lines printed in Demo Print, check the cables and wires so that there is no bad-contact or cut-line in the cable.
17	Noise when sending the data	Replace the Interface Cable		Noise could be caught easily when the Interface Cable is long. Replace the Cable to the shorter one and try again.
18	Noise from environment	Take GND		Make sure to take GND on the machines, including the computer, whenever sending the data.

6-1-3. DOESN'T PRINT AT ALL FLOWCHART



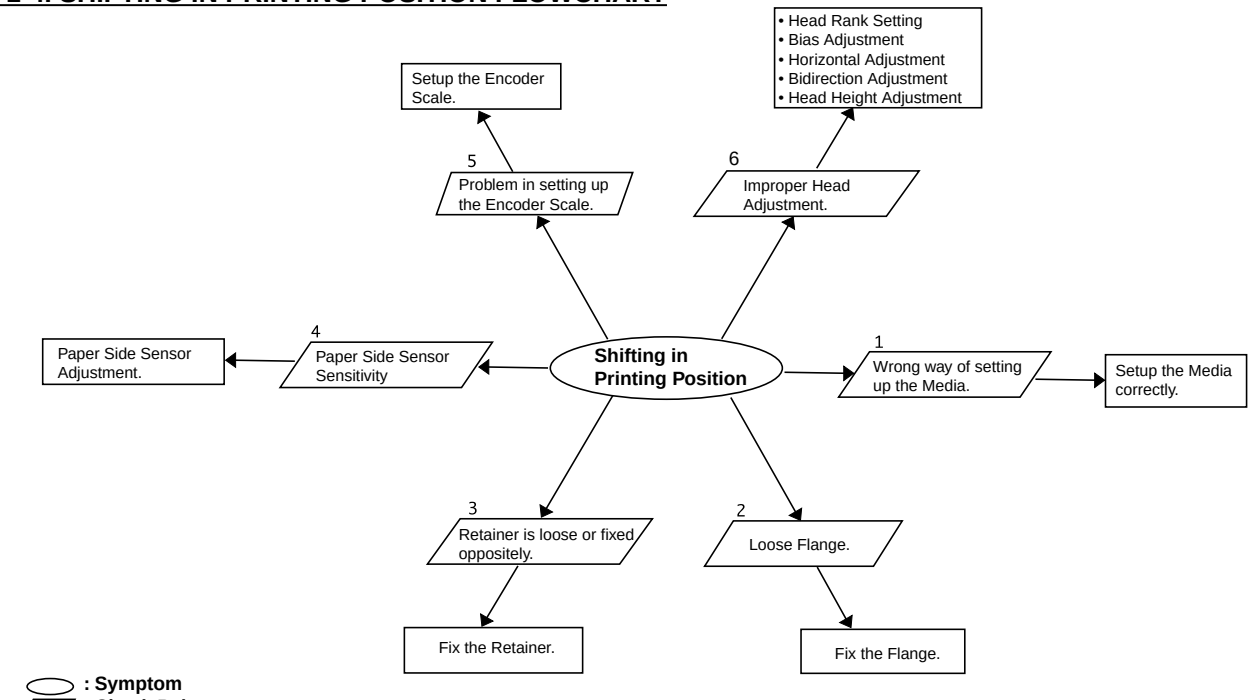
6-1-3. DOESN'T PRINT AT ALL OUTLINE

NO	CHECKING POINT	ACTION	REFERENCE	OUTLINE
1	Ink Cartridge is almost empty	Replace the Ink Cartridge		Replace the Ink Cartridge to the new one. And also, recommend the users to replace the Ink Cartridge as soon as the machine detects Ink Empty.
2	Foreign substance	Manual Head Cleaning	Section 5 [Manual Head Cleaning]	Fine dust on the media will stick to the Head, Cap, Head Carriage and Cleaning Wiper. This type of dust can not be removed with the built-in Head Cleaning. In this case, the nozzle condition to fire the ink correctly will be damaged and the some portion of the printing will be missed.
3	Cleaning Wiper is wearing out	Replace the Cleaning Wiper	Section 3 [Cleaning Wiper _ Replacement]	Head cleaning function is built inside the machine to maintain the correct nozzle condition to fire the ink. When Cleaning Wiper wears out, correct nozzle condition can not be maintained because the Cleaning Wiper is used for the cleaning and results in problem that the some portion of the printing will be missed. referential time for replacing the Cleaning Wiper is 3000 times of WIPING an 500 times of RUBBING.
4	Sponge inside the Cap is transformed	Replace the Capping Assembly	Section 3 [Capping Assembly _ Replacement]	Ink bubbles will gather inside the Cap when the Sponge inside the Cap transforms and cause gap between the Head and the Cap. When nozzles make contact with the ink bubbles, correct nozzle condition will be damaged and results in a problem that the some portion of the printing will be missed.
5	Drain tube is clogged	Replace Drain Tube		Ink suction is done by using the pump. Drain Tubes are inside the PUMP and therefore, if the Drain Tube is clogged, enough ink for the Head to fire correctly won't be supplied and results in a problem that the some portion of the printing will be missed.
6	Ink Damper is clogged or broken	Replace Ink Damper		When the Ink Damper is clogged, ink suction can not be maintain. Therefore, enough ink for the Head to fire correctly won't be supplied and results in a problem that the some portion of the printing will be missed.



NO	CHECKING POINT	ACTION	REFERENCE	OUTLINE
7	Capping is out of position	Capping Position Adjustment	Section 4 [Capping Position Adjustment]	Enough ink for the Head to fire correctly won't be supplied when Capping Position is not correct because ink lines won't be vacuumed if there is gap between the Head and the Bed. Therefore, it results in a problem that the some portion of the printing will be missed.
8	Broken Ink Tube	Replace the Ink Tube		Some portion of the printing will be missed if there is a hole or a cut in the Ink Tube.
9	Broken Head Flexible Cable	Replace the Head Flexible Cable		Some portion of the printing will be missed if there is cut-line in the Carriage Flexible Cable.
10	Broken Carriage Board	Replace the Carriage Board		Some portion of the printing will be missed if the Carriage Board is broken.
11	Broken / life of Head	Replace the Head	Section 3 [Head _ Replacement]	Life time of the Head is 2 billion dots / 1 nozzles. (128 billion dots in Service Report) When it is close to the life, power to fire the ink becomes weak and results in a problem that the some portion of the printing will be missed. And also, if the ink is firing from all the nozzles, Head is electrically damaged due to the disconnection of the Sheet Cutter and the Head Carriage while printing or replacement has taken place while the primary switch is on. In this case, replace the Head.
12	Broken Main Board / R35	Replace the Main Board	Section 3 [Main Board _ Replacement]	If the ink is firing from all the nozzles, Head is electrically damaged due to the disconnection of the Sheet Cutter and the Head Carriage while printing or replacement has taken place while the primary switch is on. In this case, the Q18 on the Main Board could also be damaged. Check the Resistor R15 on the Main Board and if it is burned, replace the Main Board.

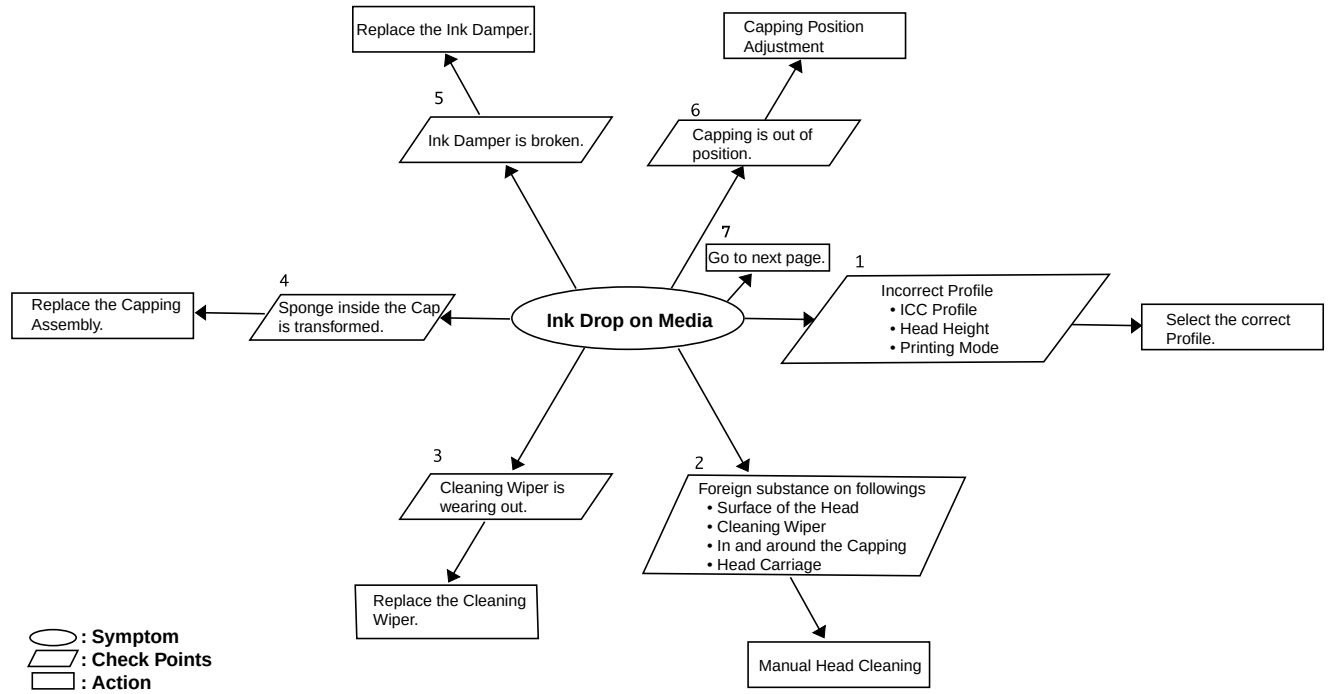
6-1-4. SHIFTING IN PRINTING POSITION FLOWCHART



6-1-4. SHIFTING IN PRINTING POSITION OUTLINE

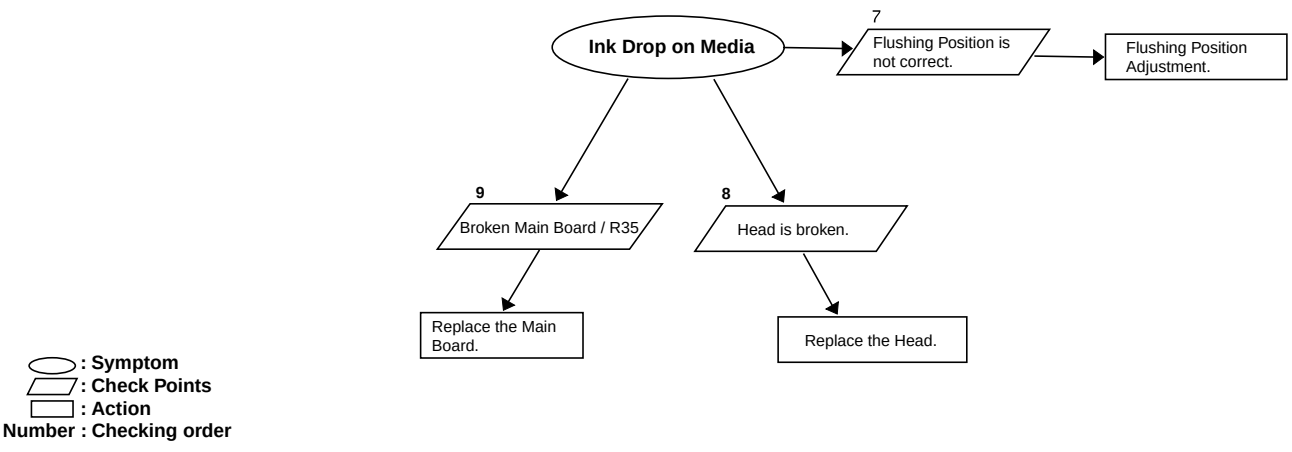
NO	CHECKING POINT	ACTION	REFERENCE	OUTLINE
1	Wrong way of setting up the Media	Setup the Media correctly		The best way to prevent the media from skewing is to set it up to be parallel to the machine. Especially when printing a long image, slight shifting in setting up the media could result in big skewing. It is recommended to setup the media by adding some tension towards the roll and then feed it out with cursor key to check the skewing before the printing.
2	Loose Flange	Fix the Flange		When the Flanges are inserted loosely to the paper tube of the media, media rotates eccentric and the media feeding becomes unstable. It could result in the shifting in the printing position.
3	Retainer is loose or fixed oppositely	Fix the Retainer		When the Retainer is loose or left and right retainers are fixed oppositely, roll sheet rotates eccentric and the media feeding becomes unstable. It could result in the shifting in the printing position.
4	Problem in the Sensitivity of the Paper Side Sensor	Paper Side Sensor Adjustment	Section 4 [Paper Side Sensor Adjustment]	When the sensitivity of the Paper Side Sensor is not correct, the media width will be read wrongly and cause the printing position to shift.
5	Problem in setting up the Encoder Scale	Setup the Encoder Scale	Section 4 [Linear Encoder Setup]	Printing position shifts when the Encoder Module can not detect the scale because the maximum media width can not be read correctly.
6	Improper Head Adjustment	Head Rank Setting Bias Adjustment Horizontal Adjustment Bidirection Adjustment Head Height Adjustment	Section 4 [Head Rank Setting], [Head Alignment]	Head Rank Setting -> It is necessary to calibrate the manufacturing tolerance of the Piezo Element so that all heads fire the same amount of ink straight down. Bias Adjustment -> It is for adjusting the positions of each Head so the it is placed horizontally to the Guide Rail. Horizontal Adjustment -> there I a difference in a timing for firing ink in each Head. therefore, the positions where each colour prints will be different if the timing is not adjusted because the Head Carriage moves when printing. this adjustment is to setup the timing in left head to match the timing of the right head. Bidirection Adjustment -> When printing in Bidirection, colour order for printing will be reversed in each way. Therefore, if the timing to fire ink is different, the landing position of the dots will be different in each directions. Head Height Adjustment -> it is designed to maintain the correct clearance between the Head and the Bed in order to fire ink close to the designated point as close as possible and also to keep the enough space to prevent the Head from rubbing against the media.

6-1-5. INK DROP ON MEDIA FLOWCHART



6-1-5. INK DROP ON MEDIA OUTLINE

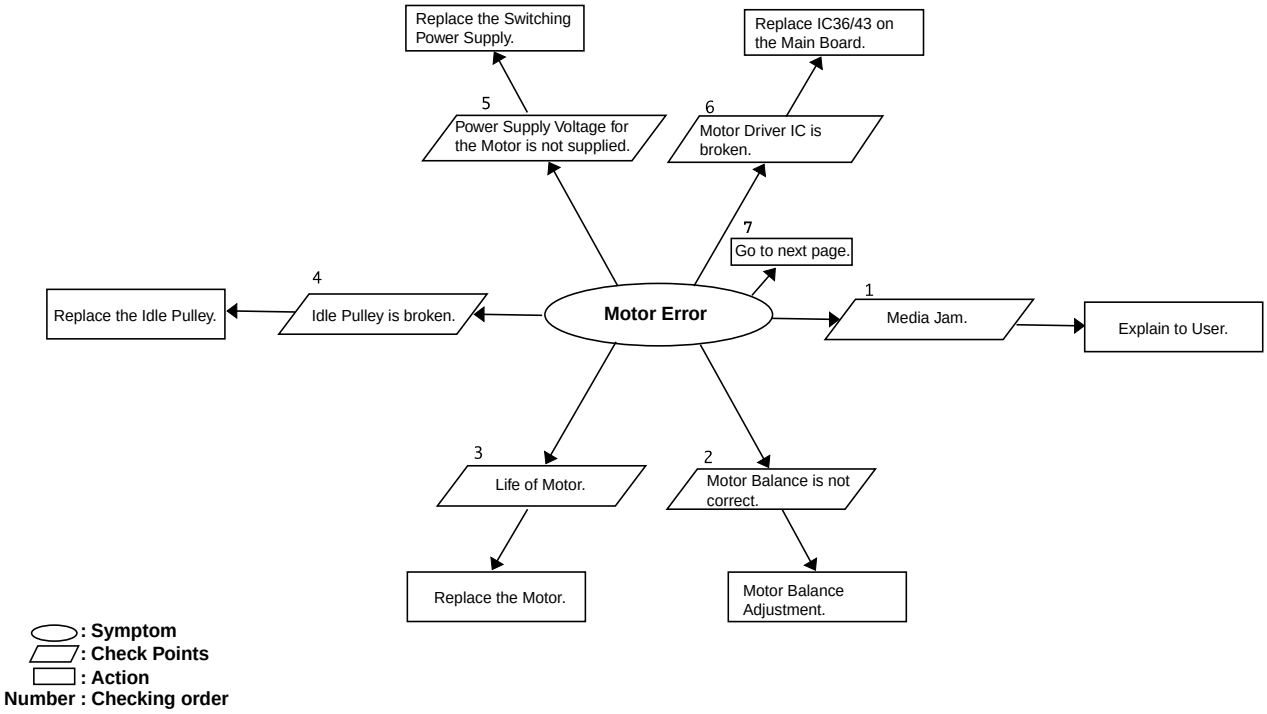
NO	CHECKING POINT	ACTION	REFERENCE	OUTLINE
1	Incorrect Profile	Select the correct Profile	Section 7 [RCC3.00 Profile List]	Incorrect setup by the users or when the printing mode and head height don't match to the media being used, it results in ink-overflow due to too much ink.
2	Foreign substance	Manual Head Cleaning	Section 5 [Manual Head Cleaning]	Fine dust on the media will stick to the Head, Cap, Head Carriage and Cleaning Wiper. This type of dust can not be removed with the built-in Head Cleaning Function. In this case, ink sucked by the dust will drop on the media.
3	Cleaning Wiper is wearing out	Replace the Cleaning Wiper	Section 3 [Cleaning Wiper _ Replacement]	Head cleaning function is built inside the machine to maintain the correct nozzle condition to fire the ink. When Cleaning Wiper wears out, dust accumulated on the surface of the Head and Head Carriage can not be removed and will suck the ink being fired already and drops on the media. Referential time for replacing the Cleaning Wiper is 3000 times of WIPING and 500 times of RUBBING.
4	Sponge inside the Cap is transformed	Replace the Capping Assembly	Section 3 [Capping Assembly _ Replacement]	Ink bubbles will gather inside the Cap when the Sponge inside the Cap transforms and cause gap between the Head and the Cap. When nozzles make contact with the ink bubbles, correct nozzle condition will be damaged and fired ink will accumulated on the surface of the Head with surface tension and will be dropping on the media.
5	Ink Damper is broken	Replace Ink Damper		Ink drops from the Head on the media when there is a hole in the Ink Damper because the vacuumed condition can not maintain in the ink line.
6	Capping is out of position	Capping Position Adjustment	Section 4 [Capping Position Adjustment]	Head won't be capped at the correct position when Capping Position is not adjusted. Therefore, ink or dust accumulated around the Cap sticks to the Head and drops on the media.



NO	CHECKING POINT	ACTION	REFERENCE	OUTLINE
7	Flushing Position is not correct	Flushing Position Adjustment	Section 4 [Flushing Position Adjustment]	Flushing is to fire the ink inside the Cap once in a while during the printing or built-in cleaning Function. Flushing Position should be adjusted so that the Head will be on top of the Cap. If it is not adjusted, ink will be fired outside the Cap. When the flushed ink accumulates on the Head drops on the media.
8	Head is broken	Replace the Head	Section 3 [Head _ Replacement]	When Head is structurally damaged, ink leaks from the crack and ink drops on the media.
9	Broken Main Board / R35	Replace the Main Board	Section 3 [Main Board _ Replacement]	If the ink is firing from all the nozzles, Head is electrically damaged due to the disconnection of the Sheet Cutter and the Head Carriage while printing or replacement has taken place while the primary switch is on. In this case, the Q18 on the Main Board could also be damaged. Check the Resistor R15 on the Main Board and if it is burned, replace the Main Board.

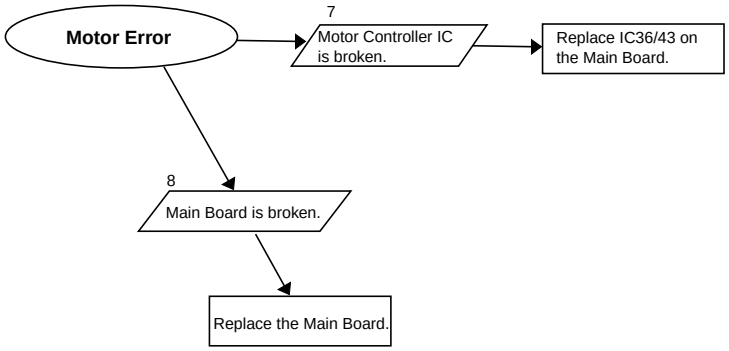
6-2 ERROR MESSAGES

6-2-1. MOTOR ERROR FLOWCHART



6-2-1. MOTOR ERROR OUTLINE

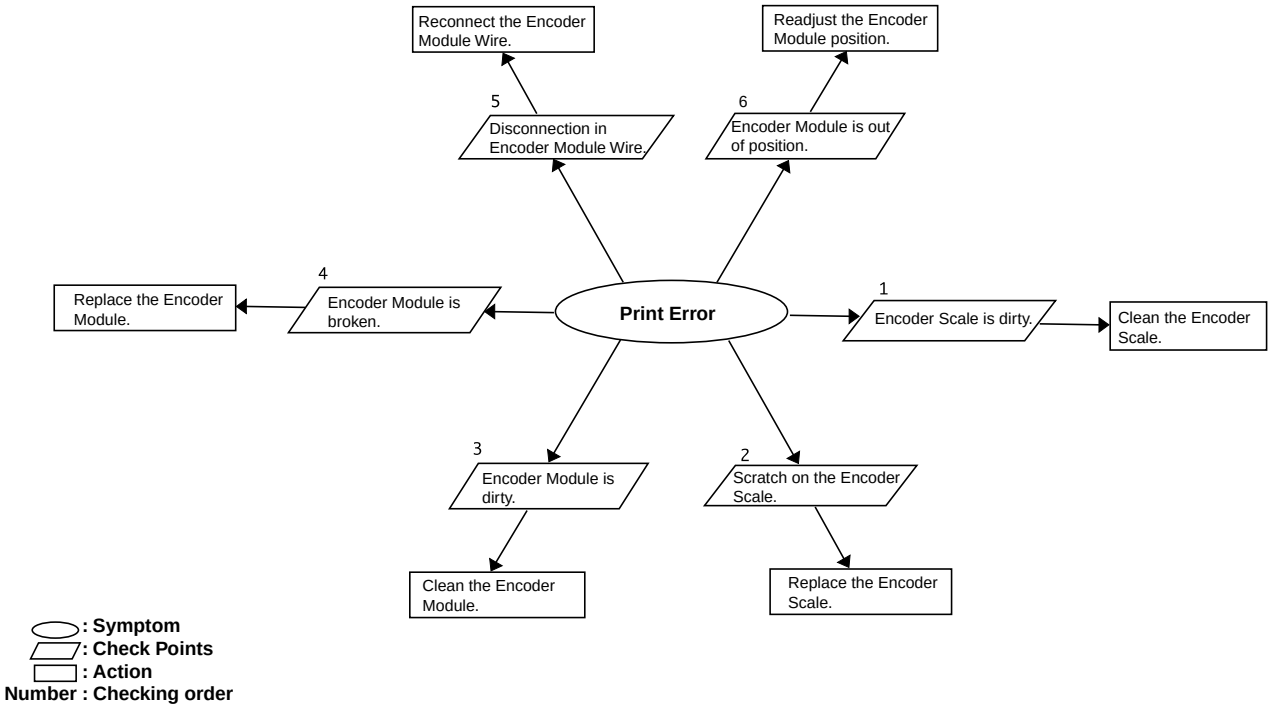
NO	CHECKING POINT	ACTION	REFERENCE	OUTLINE
1	Media Jam	Explain to User		Motor Error occurs when the media is jammed by the Head Carriage or Sheet Cutter. In most cases, it could be recovered from an error by turning it off and on again. However, in the worst case, it could result in Head Damage or broken circuit board. Therefore, it is important to explain to the user how to set the media correctly.
2	Motor Balance is not correct	Motor Balance Adjustment	Section 4 [Motor Balance Adjustment]	Motor Error occurs when the Motor Balance is not adjusted. It is for setting up the Gain to be in the correct range for the motor.
3	Life of Motor	Replace the Motor	Section 3 [Carriage Motor _ Replacement]	Servo Motor has a brush to supply th current to the Motor. Brush wears out due to the rotation of the motor and therefore, when it reaches life, correct current won't be supplied to the motor and cause motor error. Life time of the Carriage motor is 1,500 hours. If the ink is firing from all the nozzles, Head is electrically damaged due to the disconnection of the Sheet Cutter and the Head Carriage while printing or replacement has taken place while the primary switch is on. In this case, the Q18 on the Main Board could also be damaged. Check the Resistor R15 on the Main Board and if it is burned, replace the Main Board.
4	Idle Pulley is broken	Replace the Idle Pulley		Wire is entangled when the Idle Pulley is broken and results in Motor Error.
5	Power Supply voltage for the Motor is not supplied	Replace the Switching Power Supply		Check points of the Power Supply Voltage for the Motor are as follows. MAIN BOARD IC18 1pin -> +5V 2pin -> -5V 6pin -> 41V 3-5pin -> GND
6	Motor Driver IC on the Main Board is broken	Replace IC36 / 43 on the Main Board		Motor Driver IC is a chip to supply the current to drive the motor. When it is broken, motor doesn't rotate as instructed by the servo chip and results in Motor Error because the IC can not supply the correct current.



: Symptom
: Check Points
: Action
Number : Checking order

NO	CHECKING POINT	ACTION	REFERENCE	OUTLINE
7	Motor Controller IC on the Main Board is broken	Replace IC47 / 48 on the Main Board		Motor Controller IC is a chip to control the current that is supplied to the moor. When it is broken, motor doesn't rotate as instructed by the servo chip and results in Motor Error because the current won't be supplied to the motor correctly.
8	Main Board is broken	Replace the Main Board		Malfunctioning of the CPU could cause Motor Error.

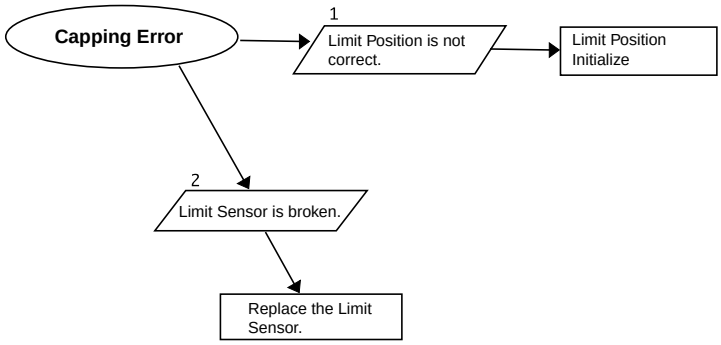
6-2-2. PRINT ERROR FLOWCHART



6-2-2. PRINT ERROR OUTLINE

NO	CHECKING POINT	ACTION	REFERENCE	OUTLINE
1	Encoder Scale is dirty	Clean the Encoder Scale		Encoder Scale is for reading the printing positions for the Carriage Moving Direction. If the encoder Scale is dirty, Encoder Module won't be able to read the Scale correctly and results in print error. Use KIMWIPE for cleaning. Never use chemicals, such as alcohol, for cleaning.
2	Scratch on the encoder Scale	Replace the Encoder Scale	Section 3 [Encoder Scale _ Replacement]	When there I scratch or dirt tat can not be removed on the Encoder Scale, it causes print error because the encoder Module won't be able to read the Scale correctly.
3	Encoder Module is dirty	Clean the Encoder Module		Encoder Module is sensing the Encoder Scale to read the printing positions for Carriage Moving Direction. If the Encoder Module is dirty, Scale can not be read correctly ad results in print error. Use cotton swab and alcohol for cleaning.
4	Encoder Module is broken	Replace the Encoder Module		When Encoder Module is broken, it won't be able to read the Scale correctly and cause print error.
5	Disconnection in Encoder Module Wiring	Re-connect the Encoder Module Wiring		Wire from the Encoder Module could be disconnected.
6	Encoder Module is out of position	Re-adjust the Encoder Module Position		Encoder Module could be fixed too high. Re-adjust the Encoder Module Position.

6-2-3. CAPPING ERROR FLOWCHART



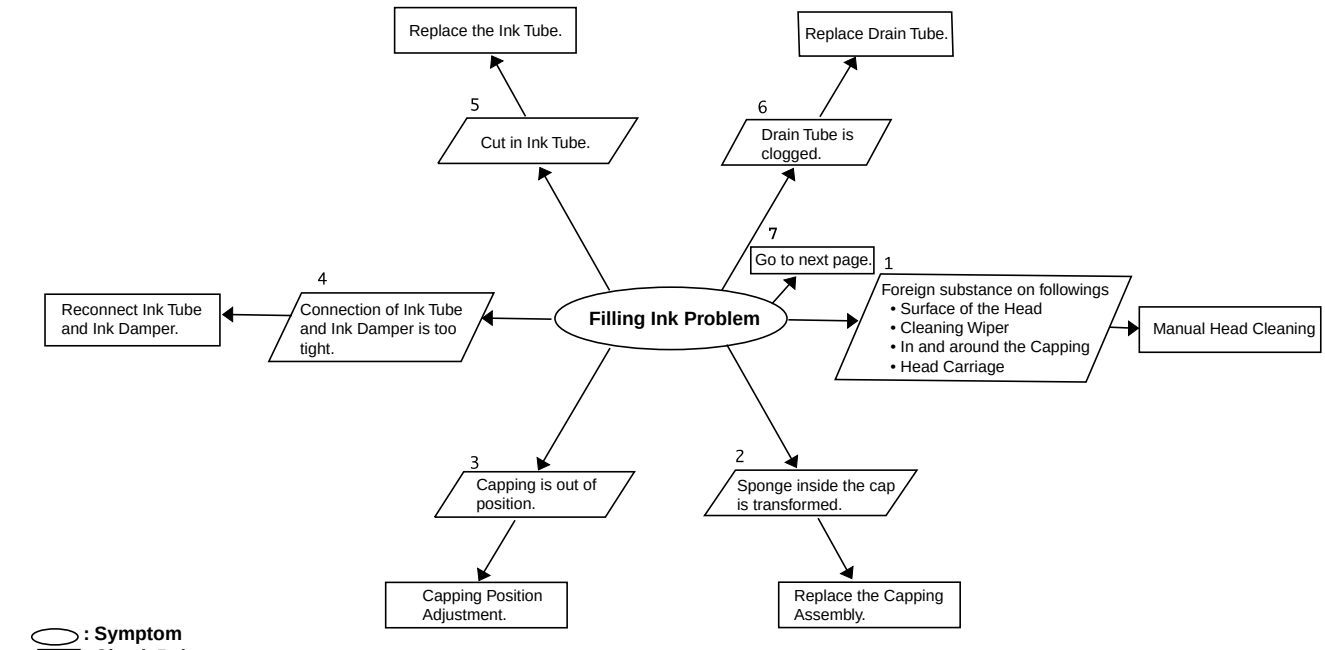
: Symptom
: Check Points
: Action
Number : Checking order

6-2-3. CAPPING ERROR OUTLINE

NO	CHECKING POINT	ACTION	REFERENCE	OUTLINE
1	Limit Position is not correct	Limit Position Initialize	Section 4 [Service Mode]	Capping Error occurs when the Head Carriage is out of the correct locking position. Therefore, it can be recovered by initialising the locking position again.
2	Limit Sensor is broken.	Replace the Limit Sensor	Section 4 [Service Mode]	When the limit sensor is broken, limit position can not be detected ad results in capping error.

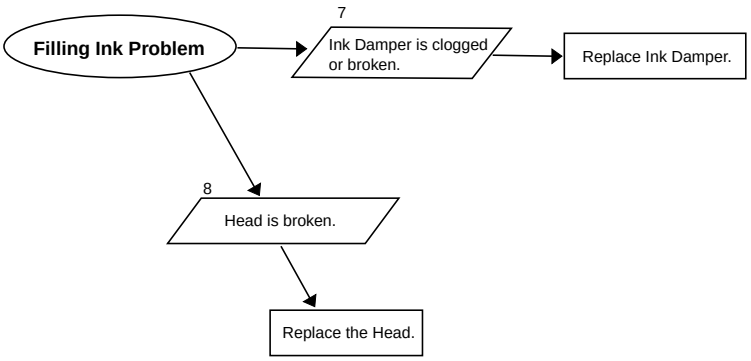
6-3 OTHERS

6-3-1. FILLING INK PROBLEM FLOWCHART



6-3-1. FILLING INK PROBLEM OUTLINE

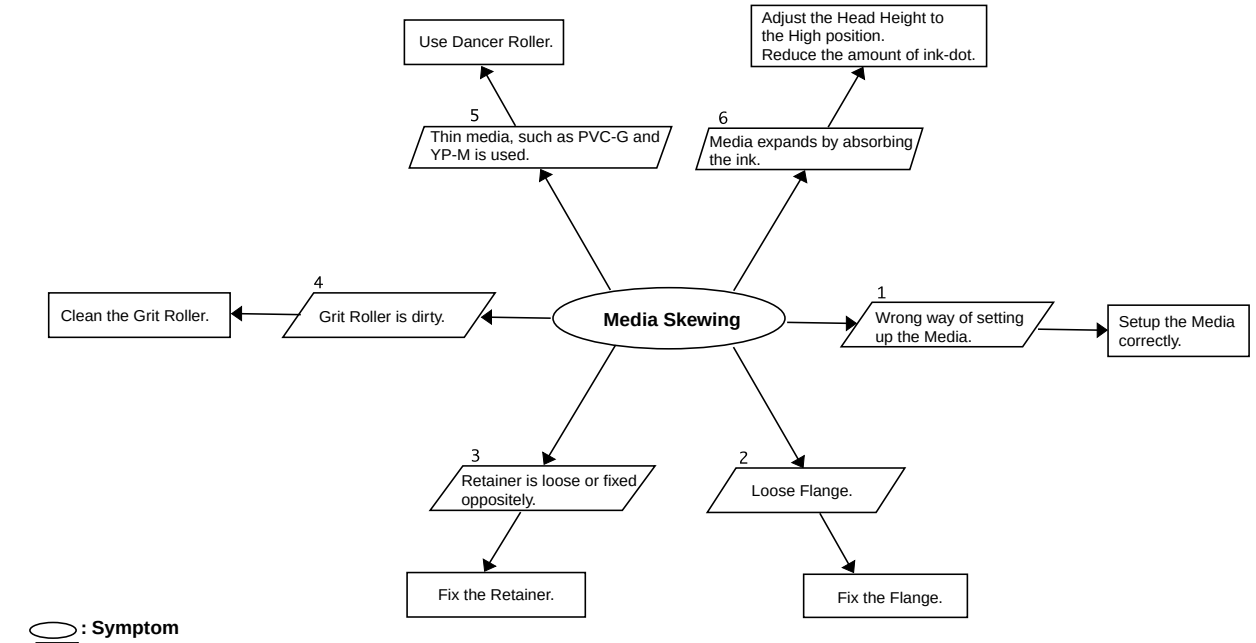
NO	CHECKING POINT	ACTION	REFERENCE	OUTLINE
1	Foreign substance	Manual Head Cleaning	Section 5 [Manual Head Cleaning]	Fine dust on the media will stick to the Head, Cap, Head Carriage and Cleaning Wiper. This type of dust can not be removed with the built-in Head Cleaning. When the dust accumulates around the Cap and Head, there will be a gap between the Head and Capping to result in Fill Ink Problem because the ink line won't be vacuumed.
2	Sponge inside the cap is transformed	Replace Capping Assembly	Section 3 [Capping Assembly _ Replacement]	When the Sponge inside the Cap transforms and cause gap between the Head and the Cap, ink line won't be vacuumed and results in Fill Ink Problem.
3	Capping is out of position	Capping Position Adjustment	Section 4 [Capping Position Adjustment]	When Capping is out of position, it causes gap between the Head and the Capping and results in Fill Ink Problem.
4	Connection of Ink Tube and Ink Damper is too tight	Reconnect Ink Tube and Ink Damper		Ink Tubes will be squeezed and ink won't flow correctly in the ink line when the connection of Ink Tube and Ink Damper is too tight. Squeezed part of the Ink Tube should be fixed or cut before reconnecting it.
5	Cut in Ink Tube	Replace Ink Tube		When there is a hole or cut in the Ink Tube, ink won't flow correctly in the ink line and results in Fill Ink Problem. In most cases, ink drops on media.
6	Drain Tube is clogged	Replace Drain Tube		Ink suction is done by using the pump. Drain Tubes are inside the PUMP and therefore, if the Drain Tube is clogged, ink won't flow correct in the ink line and results in Fill Ink Problem.



: Symptom
: Check Points
: Action
Number : Checking order

NO	CHECKING POINT	ACTION	REFERENCE	OUTLINE
7	Ink Damper is clogged or broken	Replace Ink Damper		When Ink Damper is clogged, ink suction can not be maintain. Therefore, ink won't flow correctly in the ink line and results in Fill Ink Problem.
8	Head is broken	Replace the Head	Section 3 [Head _ Replacement]	When Head is structurally damaged, ink line won't be vacuumed and results in Fill Ink Problem.

6-3-2. MEDIA SKEWING FLOWCHART



6-3-2. MEDIA SKEWING OUTLINE

NO	CHECKING POINT	ACTION	REFERENCE	OUTLINE
1	Wrong way of setting up the Media	Setup the Media correctly		The best way to prevent the media from skewing is to set it up to be parallel to the machine. Especially when printing a long image, slight shifting in setting up the media could result in big skewing. It is recommended to setup the media by adding some tension towards the roll and then feed it out with cursor key to check the skewing before printing.
2	Loose Flange	Fix the Flange		When the Flanges are inserted loosely to the paper tube of the media, media skews during the feeding process.
3	Retainer is loose or fixed oppositely	Fix the Retainer		When the Retainer is loose or left and right retainers are fixed oppositely, roll sheet rotates eccentric and the media feeding becomes unstable. It could result in skewing or jamming.
4	Grit Roller is dirty	Clean the Grit Roller		When dust such as pieces of vinyl is stick to the grit roller, power to hold the media will be weakened and results in media skewing. Use brush to clean the Grit Roller.
5	Thin media, such as PVC-G and YP-M is used. (When using TU.)	Use Dancer Roller		Thin media such as PVC-G or YP-M can not be wound up with the same tension by the Take-up roller and therefore, results in skewing. In this case, put the Dancing Roller on the center of the media.
6	Media expands by absorbing the ink	Adjust the Head Height to the High position Reduce the amount of ink-dot		The media is mainly paper base such as PHSP expands by absorbing the ink and becomes uneven and also the side of the media warps. If the symptom is markedly, do not use the media.

7-1 INSTALLATION CHECK LIST

FJ-52/42 Installation Check List

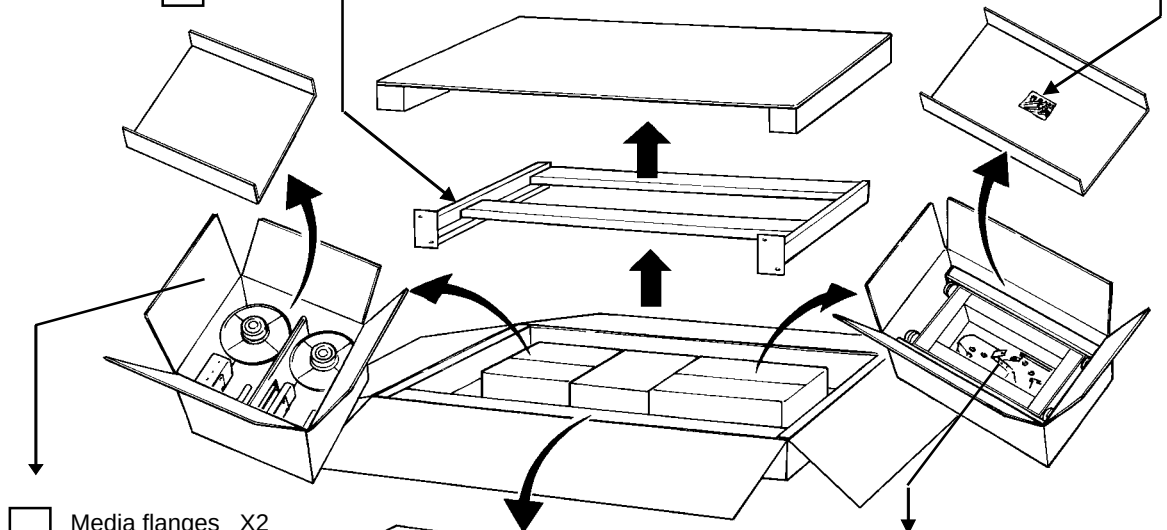
Date: _____

Serial Number	User	Date	FJ-52 Minimum Space Required
			2.3m (W) X0.8m (L) X1.3m (H)
Classification			FJ-42 Minimum Space Required
Purchase Loan Unit Demo Unit Replacement			2.1m (W) X0.8m (L) X1.3m (H)

☐ Accessories PNS-52/42

• Check inside Vinyl Bag

☐ Pipe X1
☐ Hexagonal Wrench X1
☐ Shaft retaining pins X4
☐ Washer X4
☐ Bolts (M6) X26
☐ Flange retaining pins X2
☐ Stand leg X1



☐ Media flanges X2
☐ Retainers L&R X1each
☐ Hangers L&R X1each
☐ Caster flats X2
☐ Retainer mounting bar X1
☐ Shaft X2

☐ Assembly PNS-52/42

☐ Invert the stand legs and attach the left and right hand caster flats.

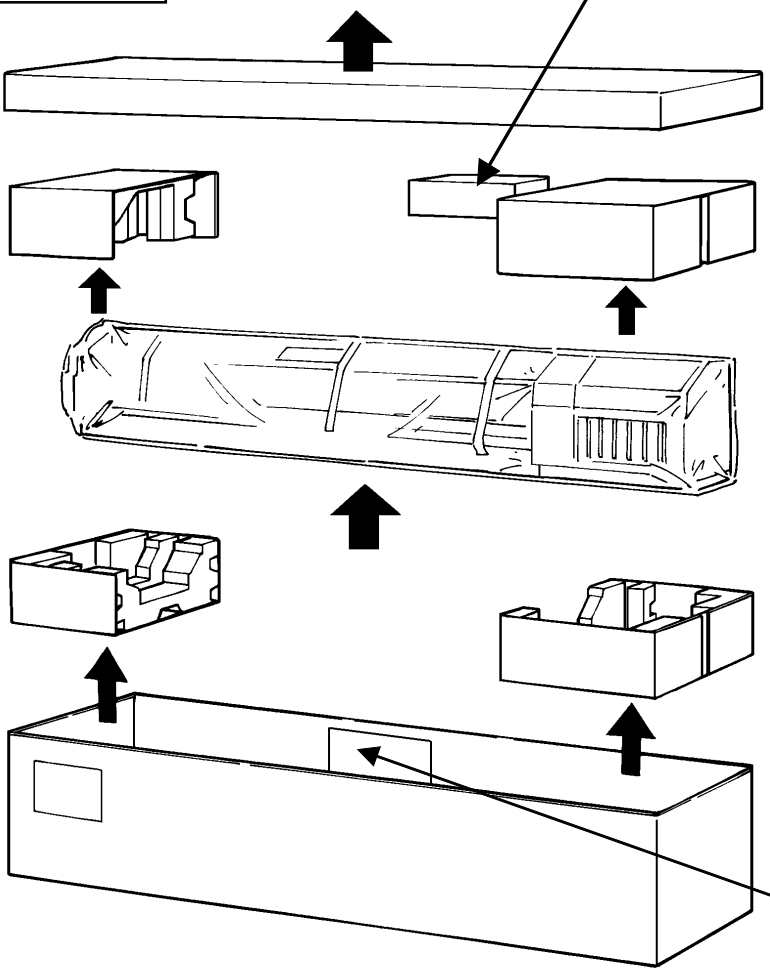
- Use 4 bolts on each left and right sides.
- Use Hexagonal wrench together with pipe to secure the bolts.

☐ Set the stand upright with the caster flats downward.

Accessories
FJ-52/42

• Check inside Accessory Box

- Power cord X1
- Drain bottle X1
- Drain-botle cap X1
- Screws X2
- Replacement blade for separating knife X1

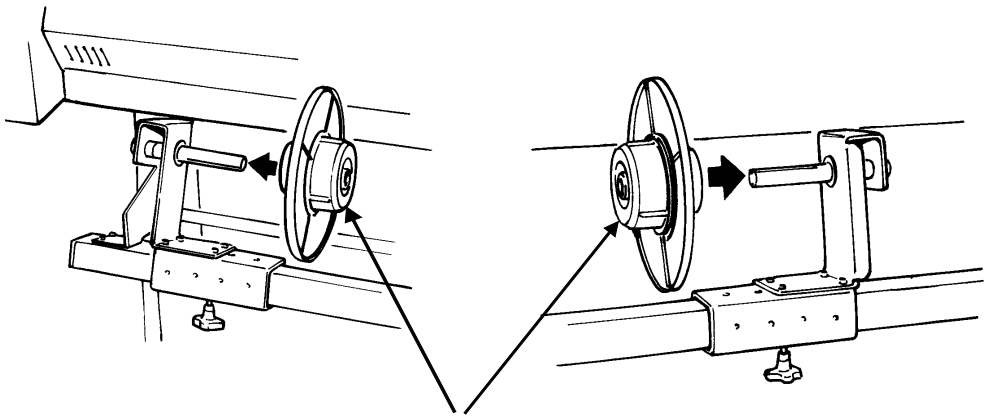


• Check inside vinyl bag

- User's Manual X1
- RCC COLORCHOICE installaion guide X1
- Roland COLORCHOICE CD-ROM X1
- Cleaning kit X1

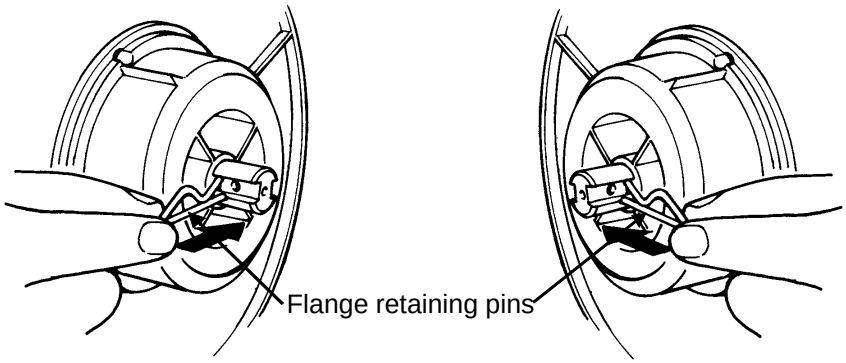
Assembly
FJ52/42

- [ ] Place the main unit on the stand.
  - Use 2pcs. of bolts and washers for both left and right sides. (PNS-52/42)
  - Use Hexagonal wrench together with pipe to secure the bolts.
- [ ] Remove 3pcs. of Paper tape for securing the Linear Encoder.
- [ ] Remove the clasp and screw (white) for securing the Tool Carriage.
  - Clasp should be fixed to the left back of the machine.
- [ ] Remove the tape for securing the drain tube.
- [ ] Install the hangers on the back of the unit.
  - Use 3pcs. of bolts each on left and right sides.
  - Make sure not to install the hangers conversely. It may effect the printing.
- [ ] Pass the left and right retainers onto the retainer mounting bar.
- [ ] Mount the bar with the retainers installed on the hanger.
  - Use 3pcs. of bolts each on left and right sides.
- [ ] Pass the 2pcs. of the Media flanges onto the retainers.

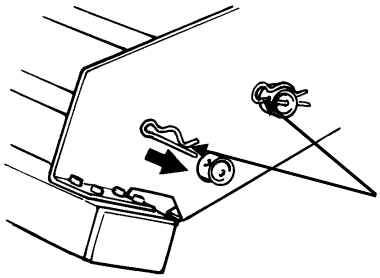


Assembly
FJ-52/42

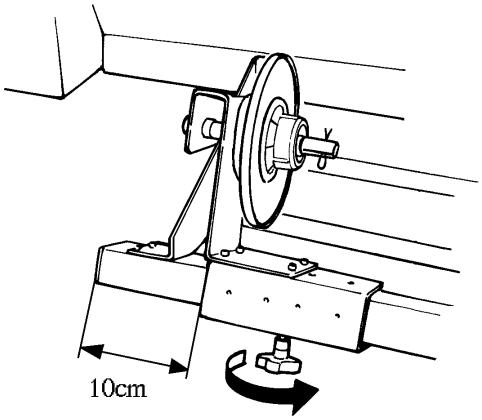
☐ Secure in place with the flange retaining pins.



☐ Pass the two shafts through the holes in the hanger and secure in place with the shaft retaining pins.



☐ Move the retainer on the left-hand side to the position shown in the figure, and tighten the screw to secure in place.
The retainer on the right-hand side is secured in place when loading roll material.



☐ Detach the tube plug from the drain tube.
• Do not throw the tube plug away.

☐ Attach the drain bottle to the machine.
1. Pass the tube through the hole in the drain bottle mounting cap and tighten the 2 screws.
2. Screw the bottle to the drain bottle mounting cap.

☐ Bring the carton box back if the customer doesn't need it.

☐ Connection	☐ Connect power cord to power connector on the back side of the unit. ☐ Connect either parallel or USB cable to the main unit. • Use PSI Card or USB adapter when using Macintosh. ☐ Connect FJ-52/42 to PC.
☐ Preparation for Printing	☐ Insert ink cartridges into the ink-cartridge ports. • Explain to the customer not to remove the ink cartridges so often once they are inserted. It may result in missing dot. • Make sure that ink color matches with the ink cartridge ports before inserting the ink cartridges. ☐ Pigment CMYKLcLm ☐ Pigment CMYKOrGr ☐ Dye CMYKLcLm ☐ Turn on the power. • Explain to the customer that daily power-on/off should be done with the sub power switch. ☐ Ink fill • Select ink type from LCD. ☐ Loading the media (Roll Sheets) 1. Insert media flanges to the paper tube of media. • Explain to the customer that media flange can be used on 2 different paper tubes, 2in. and 3in. 2. Place the roll sheet on the shaft and fit the hole at the left-hand side all the way onto the left-hand media flange. 3. Fit the right-hand media flange all the way into the hole on the right-hand side of the roll sheet, and tighten the retainer screw to secure in place. 4. Pass the end of the material through the unit from back to front and line up the end of the sheet with the lines of reflective tape. • If the front edge of the sheet has been cut at an angle, pull out the sheet so that all of the sheet covers the reflective tape. 5. With the sheet pulled out from the roll stretched taut with no slack, move the sheet loading lever toward "LOAD". • Explain to the customer to remove the slack in the media. 6. Close the front cover, and press the [SETUP] key.
☐ Test Print	☐ Perform [TEST PRINT] by pressing [TEST PRINT] key. • If there are any missing dots or other evidence of a drop in printing quality, clean the head by pressing [CLEANING] key.

☐ Setting	☐ Installation of Roland COLORCHOICE • Explain to the customer to read the README file.
☐ Demo Print	☐ Print Demo Print from Roland COLORCHOICE. ☐ Print Service Report from the Service Mode.
☐ Operation CJ-52/42	☐ Description of Keys and Display Menu • User's Manual [4-5 Description of Keys and Display Menu] ☐ Loading the Material • User's Manual [2-4 Loading the Material], [4-1 Material] and [4-2 Adjusting the Height of the Printing Head] ☐ Printing Test • User's Manual [2-5 Printing Test] ☐ Setting the Printing Mode and Printing Direction • User's Manual [2-6 Setting the Printing Mode] ☐ Setting the Printing at the Desired Location and the Printing Area • User's Manual [2-6 Printing at the Desired Location] and [4-3 Printing Area] ☐ Performing Overprinting • User's Manual [2-9 Performing Overprinting] ☐ Setting the Page Margins • User's Manual [2-9 Setting the Page Margins] ☐ Downloading Printing Data • User's Manual [2-6 Downloading Printing Data] ☐ If the "INK EMPTY" message appears while printing • User's Manual [2-6 Printing] • Explain to the customer that the printing quality may be adversely affected and exhibit faintness or other problems if the "INK EMPTY" message is ignored and continued without replacing the ink cartridge. • Explain to the customer that the difference between the [LATER] and [PROMPT]. Refer to the User's Manual [Description of Menus / INK CONTROL].

☐ Operation FJ-52/42	☐ Feed Correction • User's Manual [2-6 Making Corrections for Printing] ☐ Remove the Material • User's Manual [2-7 Ending Printing Operations] ☐ Height of the Printing Head • User's Manual [4-2 Adjusting the Height of the Printing Head]
☐ Maintenance FJ-52/42	☐ Replacing the Ink Cartridges • User's Manual [3-1 Replacing the Ink Cartridges] ☐ Remaining Ink • User's Manual [3-2 Remaining Ink] ☐ Head Cleaning • User's Manual [3-3 Cleaning the Printing Heads] ☐ Head Cleaning selected from the menu (Powerful Cleaning) ☐ Head Cleaning selected by pressing [CLEANING] key (Normal Cleaning) ☐ Manual Head Cleaning ☐ Changing the Type of Ink • User's Manual [3-4 Changing the Type of Ink] • Explain to the customer that it requiers three optionally available cleaning cartridges. ☐ How to Replace the Separating Knife • User's Manual [3-5 How to Replace the Separatng Knife] ☐ When Not in Use for a Prolonged Period • User's Manual [2-8 When Not in Use]

☐ Operation RCC	☐ How to send the data from Applications to RCC ☐ How to send the data from RCC to FJ52/42 ☐ Output Profile and Printing Mode for each media • Refer to [RCC3.00 Profile] for details.
☐ Consumables (Referential Time for Replacement)	☐ Head 2billion dots/nozzle (128billion dots in Service Report) ☐ Carriage Motor Printing Time + Cutting Time = 1500hours ☐ Cleaning Wiper Wiping : 3000 times, Rubbing : 500 times in Service Report ☐ Pinch Roller 24months

RCC3.0 /FJ-52/42 PROFILE for LcLm

Media	Media No.	Profile (LcLm)	Ink Coverage	Resolution	Printing Mode	Head Height	DRAFT	FAST	NORMAL	FINE2	FINE	SUPER	PHOTO
Non Flammable Cloth	BEC-1270/1050	FJ2PigLcLm_BEC_FINE2.icm	240	540	FINE2	High	for test	NG	NG	OK	NG	NG	NG
		FJ2PigLcLm_BEC_NORMAL.icm	240	360	NORMAL		for test	OK*1	OK	NG	NG	NG	NG
PET Gloss	PET-G-1320 / 1050	FJ2PigLcLm_PET-G_SUPER-PHOTO.icm	212	720	SUPER/PHOTO	Low	for test	NG	NG	NG	NG	OK	OK
		FJ2PigLcLm_PET-G_FINE2.icm	240	540	FINE2		for test	NG	NG	OK	NG	NG	NG
		FJ2PigLcLm_PET-G_NORMAL.icm	240	360	NORMAL		for test	NG	OK	NG	NG	NG	NG
Photo Grade Semi Gloss Paper	PHSP-1100	FJ2PigLcLm_PHSP_SUPER-PHOTO.icm	220	720	SUPER/PHOTO	High*2	for test	NG	NG	NG	NG	OK	OK
		FJ2PigLcLm_PHSP_FINE2.icm	240	540	FINE2		for test	NG	NG	OK	NG	NG	NG
PVC Gloss Adhesive	PVC-G-1200T/1050T	FJ2PigLcLm_PVC-G_SUPER-PHOTO.icm	240	720	SUPER/PHOTO	Low	for test	NG	NG	NG	NG	OK	OK
		FJ2PigLcLm_PVC-G_FINE2.icm	240	540	FINE2		for test	NG	NG	OK	NG	NG	NG
		FJ2PigLcLm_PVC-G_NORMAL.icm	240	360	NORMAL		for test	NG	OK	NG	NG	NG	NG
PVC Matte Adhesive	PVC-M-1200T/1050T	FJ2PigLcLm_PVC-M_FINE2.icm	200	540	FINE2	Low	for test	NG	NG	OK	NG	NG	NG
		FJ2PigLcLm_PVC-M_NORMAL.icm	220	360	NORMAL		for test	OK*1	OK	NG	NG	NG	NG
Matte Synthetic Paper Adhesive	YP-M-1270T/1050T	FJ2PigLcLm_YP-MT_FINE.icm	188	720	FINE	Low	for test	NG	NG	NG	OK	NG	NG
		FJ2PigLcLm_YP-MT_FINE2.icm	240	540	FINE2		for test	NG	NG	OK	NG	NG	NG
		FJ2PigLcLm_YP-MT_NORMAL.icm	240	360	NORMAL/FAST		for test	OK*1	OK	NG	NG	NG	NG
Matte Synthetic Paper	YP-M-1300/1050	FJ2PigLcLm_YP-M_FINE.icm	188	720	FINE	Low	for test	NG	NG	NG	OK	NG	NG
		FJ2PigLcLm_YP-M_FINE2.icm	240	540	FINE2		for test	NG	NG	OK	NG	NG	NG
		FJ2PigLcLm_YP-M_NORMAL.icm	240	360	NORMAL/FAST		for test	OK*1	OK	NG	NG	NG	NG

RCC3.0 / FJ-52/42 PROFILE for OrGr

Media	Media No.	Profile (OrGr)	Ink Coverage	Resolution	Printing Mode	Head Height	DRAFT	FAST	NORMAL	FINE2	FINE	SUPER	PHOTO
Non Flammable Cloth	BEC-1270/1050	FJ2PigOrGr_BEC_FINE2.icm	240	540	FINE2	High	for test	NG	NG	OK	NG	NG	NG
		FJ2PigOrGr_BEC_NORMAL.icm	240	360	NORMAL		for test	OK*1	OK	NG	NG	NG	NG
PET Gloss	PET-G-1320/1050	FJ2PigOrGr_PET-G_SUPER-PHOTO.icm	212	720	SUPER/PHOTO	Low	for test	NG	NG	NG	NG	OK	OK
		FJ2PigOrGr_PET-G_FINE2.icm	240	540	FINE2		for test	NG	NG	OK	NG	NG	NG
		FJ2PigOrGr_PET-G_NORMAL.icm	240	360	NORMAL		for test	NG	OK	NG	NG	NG	NG
Photo Grade Semi Gloss Paper	PHSP-1100	FJ2PigOrGr_PHSP_SUPER-PHOTO.icm	220	720	SUPER/PHOTO	High*2	for test	NG	NG	NG	NG	OK	OK
		FJ2PigOrGr_PHSP_FINE2.icm	240	540	FINE2		for test	NG	NG	OK	NG	NG	NG
PVC Gloss Adhesive	PVC-G-1200T/1050T	FJ2PigOrGr_PVC-G_SUPER-PHOTO.icm	220	720	SUPER/PHOTO	Low	for test	NG	NG	NG	NG	OK	OK
		FJ2PigOrGr_PVC-G_FINE2.icm	240	540	FINE2		for test	NG	NG	OK	NG	NG	NG
		FJ2PigOrGr_PVC-G_NORMAL.icm	240	360	NORMAL		for test	NG	OK	NG	NG	NG	NG
PVC Matte Adhesive	PVC-M-1200T/1050T	FJ2PigOrGr_PVC-M_FINE2.icm	204	540	FINE2	Low	for test	NG	NG	OK	NG	NG	NG
		FJ2PigOrGr_PVC-M_NORMAL.icm	224	360	NORMAL		for test	OK*1	OK	NG	NG	NG	NG
Matte Synthetic Paper Adhesive	YP-M-1270T/1050T	FJ2PigOrGr_YP-MT_FINE.icm	188	720	FINE	Low	for test	NG	NG	NG	OK	NG	NG
		FJ2PigOrGr_YP-MT_FINE2.icm	240	540	FINE2		for test	NG	NG	OK	NG	NG	NG
		FJ2PigOrGr_YP-MT_NORMAL.icm	240	360	NORMAL/FAST		for test	OK*1	OK	NG	NG	NG	NG
Matte Synthetic Paper	YP-M-1300/1050	FJ2PigOrGr_YP-M_FINE.icm	188	720	FINE	Low	for test	NG	NG	NG	OK	NG	NG
		FJ2PigOrGr_YP-M_FINE2.icm	240	540	FINE2		for test	NG	NG	OK	NG	NG	NG
		FJ2PigOrGr_YP-M_NORMAL.icm	240	360	NORMAL/FAST		for test	OK*1	OK	NG	NG	NG	NG

*1 : Ink could stain or overflow on the media when using FAST MODE. (FAST MODE can not be used with NORMAL Profile for Glossy Media.)
*2 : If the white lines are visual, adjust the head height to "Medium". However, please understand there is a possibility that the head rubs the media.

7-2 MAINTENANCE CHECK LIST

3 MONTHS MAINTENANCE CHECK LIST

Serial Number	User	Date

FUNCTION CHECK

Check Points		Service Note	
☐ 1. Firmware upgrade		Adjustment	4-3
☐ 2. Printing Test	☐ Missing/ Wavy Dots/White line	Troubleshooting	6-1-1
	☐ Prints unnecessary lines	Troubleshooting	6-1-2
	☐ No printing	Troubleshooting	6-1-3
	☐ Print is done at incorrect position	Troubleshooting	6-1-4
	☐ Ink dorops on Media	Troubleshooting	6-1-5
☐ 3. Connect to the Customer's PC and try printing.			

STRUCTURE CHECK

Check Points			Details
Carriage drive	1. Drive Gear	☐ OK ☐ NG	☐ Crack ☐ Dirty
	2. Backlash	☐ OK ☐ NG	☐ Loose
	3. Wire Tension	☐ OK ☐ NG	☐ Loose
Grit Roller Drive	1. Drive Gear	☐ OK ☐ NG	☐ Crack ☐ Dirty
	2. Backlash	☐ OK ☐ NG	☐ Loose
	3. Grit roller	☐ OK ☐ NG	☐ Dirty
Head / Guide Rail	1. Pinch Roller	☐ OK ☐ NG	☐ Rotation ☐ Wear out
	2. Head	☐ OK ☐ NG	☐ Dirty ☐ Wavy / Missing dots
Cleaning Wiper		☐ OK ☐ NG	☐ Wearing out

CONSUMABLE PARTS

Consumable	Referential Time for Replacement	Service Note	
Head	2 billion dots (128 billion dots in Service Report)	☐ OK ☐ Replacement	3-1
Carriage Motor	1500 hours	☐ OK ☐ Replacement	3-8
Cleaning Wiper	Wiping : 3000 times, Rubbing : 500 times	☐ OK ☐ Replacement	
Ink Tube	4000 hours	☐ OK ☐ Replacement	
Capping Assembly	24 months	☐ OK ☐ Replacement	3-3
Lithium Battery	24 months	☐ OK ☐ Replacement	3-5

LUBRICATION

Check Points			
Floil G-474C	Carriage Drive Gear	☐ OK ☐ NG	☐ Cleaning ☐ Lubrication
	Grit Drive Gear	☐ OK ☐ NG	☐ Cleaning ☐ Lubrication

OPERATION

Explaining Points	
☐ The way of setting up media	
Printing	☐ How to set up Printing Mode
Maintenance	☐ How to setup INK EMPTY ☐ How to change Type of Ink ☐ How to clean the Head - Test Print -Cleaning by [CLEANING] key. -Cleaning by selecting from the menu. (Midium / Powerful)
User's Reference	☐ Adjusting the Height of the Printing Head ☐ Making Corrections for Printing ☐ Overprint ☐ Printing Area
Roland COLORCHOICE	☐ Profile
Application Software	☐ Illustrator, CorelDraw, QuarkExpress
Q&A	

- ☐ Service Report
- ☐ Demo Print (for checking Printing Quality)

NOTE

9 MONTHS MAINTENANCE CHECK LIST

Serial Number	User	Date

FUNCTION CHECK

Check Points		Service Note	
☐ 1. Firmware upgrade		Adjustment	4-3
☐ 2. Printing Test	☐ Missing/ Wavy Dots/White line	Troubleshooting	6-1-1
	☐ Prints unnecessary lines	Troubleshooting	6-1-2
	☐ No printing	Troubleshooting	6-1-3
	☐ Print is done at incorrect position	Troubleshooting	6-1-4
	☐ Ink dorops on Media	Troubleshooting	6-1-5
☐ 3. Connect to the Customer's PC and try printing.			

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STRUCTURE CHECK

Check Points			Details
Carriage drive	1. Drive Gear	☐ OK ☐ NG	☐ Crack ☐ Dirty
	2. Backlash	☐ OK ☐ NG	☐ Loose
	3. Wire Tension	☐ OK ☐ NG	☐ Loose
Grit Roller Drive	1. Drive Gear	☐ OK ☐ NG	☐ Crack ☐ Dirty
	2. Backlash	☐ OK ☐ NG	☐ Loose
	3. Grit roller	☐ OK ☐ NG	☐ Dirty
Head / Guide Rail	1. Pinch Roller	☐ OK ☐ NG	☐ Rotation ☐ Wear out
	2. Head	☐ OK ☐ NG	☐ Dirty ☐ Wavy / Missing dots
Cleaning Wiper		☐ OK ☐ NG	☐ Wearing out

CONSUMABLE PARTS

Consumable	Referential Time for Replacement	Service Note	
Head	2 billion dots (128 billion dots in Service Report)	☐ OK ☐ Replacement	3-1
Carriage Motor	1500 hours	☐ OK ☐ Replacement	3-8
Cleaning Wiper	Wiping : 3000 times, Rubbing : 500 times	☐ OK ☐ Replacement	
Ink Tube	4000 hours	☐ OK ☐ Replacement	
Capping Assembly	24 months	☐ OK ☐ Replacement	3-3
Lithium Battery	24 months	☐ OK ☐ Replacement	3-5

LUBRICATION

	Check Points		
Floil G-474C	Carriage Drive Gear	☐ OK ☐ NG	☐ Cleaning ☐ Lubrication
	Grit Drive Gear	☐ OK ☐ NG	☐ Cleaning ☐ Lubrication

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☐ Head Cleaning

☐ Service Report

☐ Demo Print (for checking Printing Quality)

NOTE

7-3 SPECIFICATION

		FJ-52	FJ-42
Printing method		Piezo ink-jet method	
Printing width		210 mm — 1320 mm (8-5/16 in. — 52 in.)	210 mm — 1066 mm (8-5/16 in. — 42 in.)
Acceptable material widths		210 mm — 1350 mm (8-5/16 in. — 53-1/8 in.)	210 mm — 1125 mm (8-5/16 in. — 44-1/4 in.)
Width of material that can be cut off		210 mm — 1350 mm (8-5/16 in. — 53-1/8 in.)	210 mm — 1125 mm (8-5/16 in. — 44-1/4 in.)
Conditions for usable materials		Maximum material thickness: 1.0 mm (0.039 in.) (When head is raised) Maximum diameter for roll material: 180 mm (7-1/16 in.) Core inner diameter for roll material: 50.8 mm (2 in.) or 76.2 mm (3 in.) Maximum weight for roll material: 20 kg (44.1 lb.)	
Ink cartridges	Pigment ink	Use only pigment ink cartridge exclusively for use with the Hi-Fi JET	
	Capacity	220 cc ±5 cc	
	Color	Six colors: the four colors cyan, magenta, yellow, and black, plus either light cyan and light magenta or orange and green	
	Dye ink	Use only dye ink cartridge exclusively for use with the Hi-Fi JET	
	Capacity	220 cc ±5 cc	
	Color	Cyan, magenta, yellow, black, light cyan, and light magenta	
Apparent colors		16.7 million colors	
Printing resolution (Printing dot resolution)		1440 dpi x 720 dpi / 720 dpi x 720 dpi / 540 dpi x 540 dpi / 360 dpi x 720 dpi / 180 dpi x 720 dpi	
Distance accuracy		Error of less than ±0.3% of distance traveled, or 0.3 mm, whichever is grater (at Roland PET-film, print travel: 1 m (39-3/8 in.))	
Printing heads cleaning		Automatic cleaning and manual cleaning	
Interface		Bidirectional parallel interface (compliant with IEEE 1284: nibble mode)	
Instruction system		RD-RTL, RD-PJL	
Power-saving function		Auto-sleep	
Power consumption	Printing mode	Maximum: 0.7A/100V—240V ±10% 50/60 Hz	
	Standby mode	Maximum: 0.3A/100V—240V ±10% 50/60 Hz	
Acoustic noise level	Printing mode	60dB (A) or less (According to ISO7779)	
	Standby mode	40dB (A) or less	
Dimensions	Main unit	2247 mm [W] x 381 mm [D] x 392 mm [H] (88-1/2 in. [W] x 15 in. [D] x 15-7/16 in. [H])	2022 mm [W] x 381 mm [D] x 392 mm [H] (79-5/8 in. [W] x 15 in. [D] x 15-7/16 in. [H])
	With stand	2247 mm [W] x 736 mm [D] x 1251 mm [H] (88-1/2 in. [W] x 29 in. [D] x 49-5/16 in. [H])	2022 mm [W] x 736 mm [D] x 1251 mm [H] (79-5/8 in. [W] x 29 in. [D] x 49-5/16 in. [H])
Weight	Main unit	75 kg (165.3 lb.)	69 kg (152.1 lb.)
	With stand	90.5 kg (199.5 lb.)	84 kg (185.2 lb.)
Environment	Power on	Temperature: 15°C to 35°C (59°F to 95°F), Humidity: 35% to 80% (non-condensing)	
	Power off	Temperature: 5°C to 40°C (41°F to 104°F), Humidity: 20% to 80% (non-condensing)	
Accessories		Power cord: 1, Drain-bottle cap: 1, Screws: 2, Drain bottle: 1, Replacement blade for separating knife: 1, Roland COLORCHOICE® CD-ROM: 1, User's manual: 1, Roland COLORCHOICE® installation guide: 1, Cleaning kit: 1	

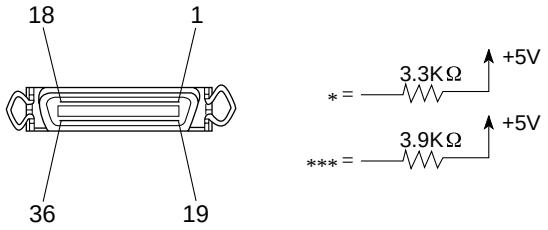
Interface Specifications

Standard	Bidirectional parallel interface (compliant with IEEE 1284: nibble mode)
Input signals	$\overline{\text{STROBE}}$ (1BIT), DATA (8BITS), $\overline{\text{SLCT IN}}$, $\overline{\text{AUTO FEED}}$, $\overline{\text{INIT}}$
Output signals	BUSY (1BIT), $\overline{\text{ACK}}$ (1BIT), $\overline{\text{FAULT}}$, SLCT, PERROR
Level of input output signals	TTL level
Transmission method	Asynchronous

Parallel Connector
(in compliance with specifications of Centronics)

Signal number	Terminal number		Signal number
$\overline{\text{SLCT IN}}$	36	18	HIGH***
HIGH*	35	17	GND
NC	34	16	GND
GND	33	15	NC
$\overline{\text{FAULT}}$	32	14	$\overline{\text{AUTO FEED}}$
$\overline{\text{INIT}}$	31	13	SLCT
	30	12	PERROR
	29	11	BUSY
	28	10	$\overline{\text{ACK}}$
	27	9	D7
	26	8	D6
GND	25	7	D5
	24	6	D4
	23	5	D3
	22	4	D2
	21	3	D1
	20	2	D0
	19	1	$\overline{\text{STROBE}}$

Pin Connection



- MEMO -

Roland

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