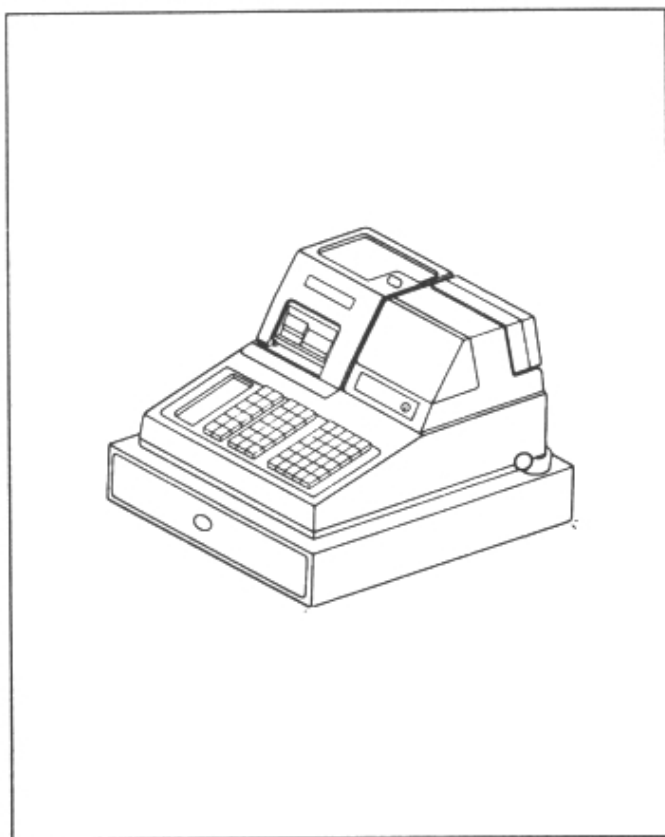


SAMSUNG

ER-4615 SERIES

SERVICE *Manual*

ELECTRONIC CASH REGISTER



CONTENTS

1. Precaution Statements
2. Product Specification and Comparison Charts.
3. Operating Instructions and Installation.
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5. Alignment and Adjustments
6. Troubleshooting
7. Exploded Views and Parts List (Appendix Service Manual)
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1 Precaution Statements

Follow these safety, servicing and ESD precautions to prevent damage and to protect against potential hazards such as electrical shock.

1-1 Safety Precautions

1. Be sure that all built-in protective devices are replaced. Restore any missing protective shields.
2. When reinstalling the chassis and its assemblies, be sure to restore all protective devices, including nonmetallic control knobs and compartment covers.
3. Make sure there are no cabinet openings through which people - particularly children - might insert fingers and contact dangerous voltages. Such openings include excessively wide cabinet ventilation slots and improperly fitted covers and drawers.
4. Design Alteration Warning:
Never alter or add to the mechanical or electrical design of the ECR. Unauthorized alterations might create a safety hazard. Also, any design changes or additions will void the manufacturer's warranty.
5. Components, parts and wiring that appear to have overheated or that are otherwise damaged should be replaced with parts that meet the original specifications. Always determine the cause of damage or overheating, and correct any potential hazards.
6. Observe the original lead dress, especially near the following areas: sharp edges, and especially the AC and high voltage supplies. Always inspect for pinched, out-of-place, or frayed wiring. Do not change the spacing between components and the printed circuit board. Check the AC power cord for damage. Make sure that leads and components do not touch thermally hot parts.
7. Product Safety Notice:
Some electrical and mechanical parts have special safety-related characteristics which might not be obvious from visual inspection. These safety features and the protection they give might be lost if the replacement component differs from the original - even if the replacement is rated for higher voltage, wattage, etc.

Components that are critical for safety are indicated in the circuit diagram by shading, () or (). Use replacement components that have the same ratings, especially for flame resistance and dielectric strength specifications. A replacement part that does not have the same safety characteristics as the original might create shock, fire or other hazards

CAUTION

Danger of explosion if battery is incorrectly replaced.

Replace only with the same or equivalent type recommended by the manufacturer.

Dispose used batteries according to the manufacturer's instructions.

ATTENTION

Il y a danger d'explosion s'il y a un 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.

1-2 Servicing Precautions

Warning 1: First read the "Safety Precautions" section of this manual. If some unforeseen circumstance creates a conflict between the servicing and safety precautions, always follow the safety precautions.

Warning 2: An electrolytic capacitor installed with the wrong polarity might explode.

1. Always unplug the unit's AC power cord from the AC power source before attempting to:
(a) Remove or reinstall any component or assembly, (b) Disconnect an electrical plug or connector, (c) Connect a test component in parallel with an electrolytic capacitor.
2. Some components are raised above the printed circuit board for safety. An insulation tube or tape is sometimes used. The internal wiring is sometimes clamped to prevent contact with thermally hot components. Reinstall all such elements to their original position.
3. After servicing, always check that the screws, components and wiring have been correctly reinstalled. Make sure that the portion around the serviced part has not been damaged.
4. Check the insulation between the blades of the AC plug and accessible conductive parts (examples: metal panels and input terminals).
5. Insulation Checking Procedure: Disconnect the power cord from the AC source and turn the power switch ON. Connect an insulation resistance meter (500V) to the blades of the AC plug.
The insulation resistance between each blade of the AC plug and accessible conductive parts should be greater than 1 megohm.
7. Never defeat any of the B+ voltage interlocks. Do not apply AC power to the unit (or any of its assemblies) unless all solid-state heat sinks are correctly installed.
8. Always connect an instrument's ground lead to the instrument chassis ground *before* connecting the positive lead; always remove the instrument's ground lead last.

1-3 Precautions for Electrostatically Sensitive Devices (ESDs)

1. Some semiconductor ("solid state") devices are easily damaged by static electricity. Such components are called Electrostatically Sensitive Devices (ESDs); examples include integrated circuits and some field-effect transistors. The following techniques will reduce the occurrence of component damage caused by static electricity.
2. Immediately before handling any semiconductor components or assemblies, drain the electrostatic charge from your body by touching a known earth ground. Alternatively, wear a discharging wrist-strap device. (Be sure to remove it prior to applying power - this is an electric shock precaution.)
3. After removing an ESD-equipped assembly, place it on a conductive surface such as aluminum foil to prevent accumulation of electrostatic charge.
4. Do not use freon-propelled chemicals. These can generate electrical charges that damage ESDs.
5. Use only a grounded-tip soldering iron when soldering or unsoldering ESDs.
6. Use only an anti-static solder removal device. Many solder removal devices are not rated as "anti-static"; these can accumulate sufficient electrical charge to damage ESDs.
7. Do not remove a replacement ESD from its protective package until you are ready to install it. Most replacement ESDs are packaged with leads that are electrically shorted together by conductive foam, aluminum foil or other conductive materials.
8. Immediately before removing the protective material from the leads of a replacement ESD, touch the protective material to the chassis or circuit assembly into which the device will be installed.
9. Minimize body motions when handling unpacked replacement ESDs. Motions such as brushing clothes together, or lifting a foot from a carpeted floor can generate enough static electricity to damage an ESD.

2 Product Specifications and Comparison Charts

2-1 Product Specifications

Table 2-1 Product Specifications

Item	Description	Remark
Power Source	120Vac / 60Hz, 230Vac / 50Hz	
Power Consumption	34watts (MAX)	
Printer	ERP-300V / ERP-400 9- Pin dot matrix printing speed : 3.0 lines/sec	
Processor	INTEL 80C32/80C52/WINBOND 78C32C	
Memory	• SRAM : KM62256 • EPROM (27C512)	back-up by battery
Battery	Ni-MH,80mA, Charge time : 24hours Lithium,3V,950Mah	
Drawer	• 4B/8C,5B/5C • Weight : 9.0 kg • Dimension : 460(W) x 60(L)x110(H)	
Dimension	450(L) X 400(W) X 309(H)mm	
Weight	18.3Kg	
Display	• FRONT : 10 DIGITS • REAR : 9 DIGITS	
Key Board	• 60 KEY : (Membrane Type) • 15 KEY : Department Key	

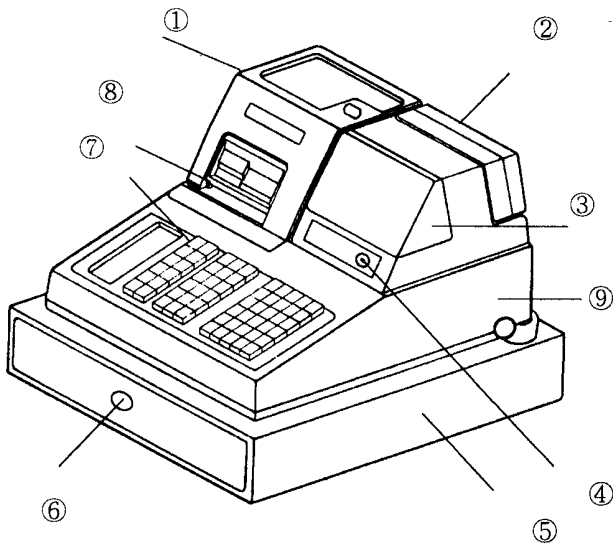
Equipment specifications are subjected to change without notice.

Table 2-2 Printer Specifications

Equipment specifications are subjected to change without notice.

2-3 Features and Dimensions

2-3-1 Features



1. Cover Printer
2. Turret (Rear) Display
3. Window Display
4. Mode Key Switch
5. Cash Drawer
6. Drawer Lock Key
7. Key Board
8. Impact Dot Printer
9. Lower Case

Fig. 2-1 Features

2-3-2 Mode Switch

Table 2-3 Function of Mode Key Switch

MODE	FUNCTION
OFF	Operation stop
REG	Sales Operation
X	X level reports
Z	Z level reports
P	Program mode
MC	Service mode

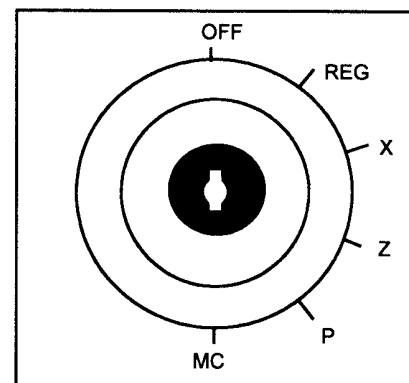


Fig. 2-2. Mode Key Switch

2-3-3 Dimensions

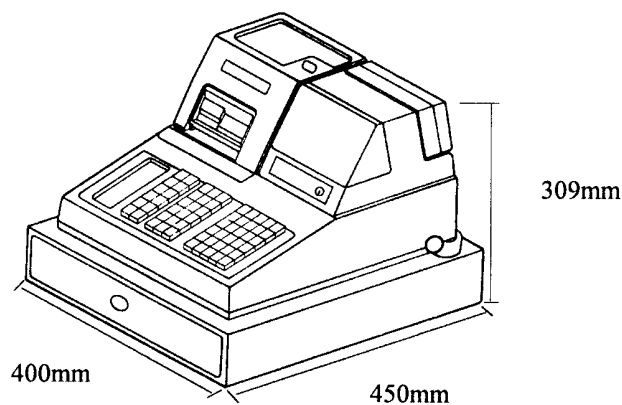


Fig. 2-3. Dimensions

2-4 Comparison Charts

2-4-1 Transformer

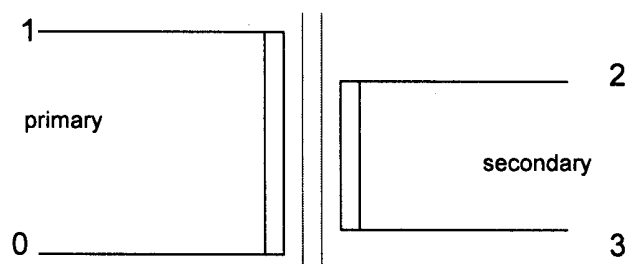


Fig. 2-4 Transformer Diagram

Table 2-4 Comparison Chart

Item		Europe	USA
Transformer	Primary (0-1)	230V / 50Hz	120V / 60Hz
	Secondary (2-3)	22.5 Vac	22.5 Vac
Fuse	Specification	T3.15A 250V	T3.15A 250V
	Code No.	3601-000261	3601-000261

3 Operating Instructions and Installation

3-1 Operating Instruction

3-1-1 Initial Clear

The Initial clear procedure may be used for clearing keyboard lock-ups and constant error conditions. This procedure will finish the current transaction / operation and clear temporary memory buffers. An initial clear procedure will not effect register programming, or erase the stored totals in RAM memory.

Caution: An initial clear will cause balancing discrepancies if it is performed in the middle of a transaction. If you Power ON while the display connector on the PCB is open, it may harm the system, especially the CPU.

Turn the Mode Key to the " P " position on the mode key plate and press the SUBTOTAL Key. While holding the SUBTOTAL key down, power ECR off and power it back on. Then, the following receipt will print.

```
-----  
RAM ALL CLEAR OK !  
-----  
CLERK 0   NO. 000001  
TIME 10:19   0000  
DATE 06.10. '94
```

Fig. 3-1 Printing Message

3-1-2 Clearing Totals in the Memory

The RAM memory of this register must be Cleared before the initial programming take place. Turn the "C" key in the SM-Mode position allows for memory clearing.

- Confer to the Fig. 3-2 Mode Key.

3-1-3 Total Clear (00 Key) Total Clear

the RAM on the cash register erases all totals and installs the default program. This procedure must take place before programming the cash register.

3-1-4 Clear all RAM memory

Use this procedure to clear totals from memory.

1. Unplug ECR.
2. Insert the key (marked C) into the control lock and turn clockwise, past the position marked P, to the Service mode (SM). This position is not marked on the control lock plate, but the C key can travel to this position.
3. While holding the "00" key down, power the register off and back on.
4. Switch off the CN21 shunt switch (near keyboard connector CN11) by changing the shunt switch position ON to off. After this procedure, total memory RAM clear cannot be performed. If you want this procedure after installation, you have to switch CN21 on(only for ER-4615R).
5. Continue to hold the key down until the receipt printer stops printing and the display shows 0.00.

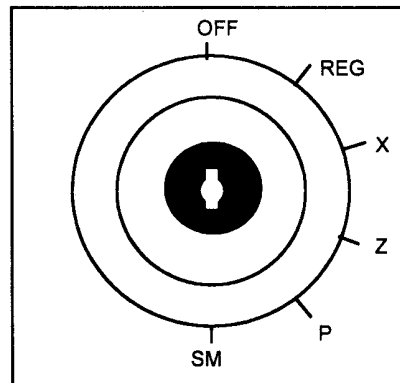


Fig. 3-2 Mode Key

3 Operating Instructions and Installation

Table 3-1 Clearing the RAM

Key	00	CHECK	CASH
Clear	Total Memory RAM Clear	Reset All Total & Counters	Reset Grand Total Only
Printed Paper	<pre> ***** RAM ALL CLEAR OK ! ***** CLERK 0 NO. 000001 TIME 14:08 0000 DATE 12.28.'94 MON </pre>	<pre> ***** RESET ALL CN/TOTAL ! ***** CLERK 0 NO. 000001 TIME 14:08 0000 DATE 12.28.'94 MON </pre>	<pre> ***** RESET GRAND TOTAL ! ***** CLERK 0 NO. 000001 TIME 14:08 0000 DATE 12.28.'94 MON </pre>

3-2 Service Mode Diagnostics

The Samsung register offers several diagnostic routines while in the SM or Service Mode. Each of these tests require the "C" key to be turned to the SM Mode position. See the Fig. 3-2 Mode Key.

The available diagnostics are listed at the Table 3-2 the Available Diagnostics below.

Table 3-2 Available Diagnostics

Test	Diagnostics
Printer / display Test	Enter 1 and press the CASH TEND Key. The register will cycle completely through the print character set while testing the display.
Keyboard Test	Enter 2 and press the CASH TEND key. Press each key on the keyboard, one key at a time. Each key shows its location code on the display as you press it. Exit the keyboard test mode by pressing the CLEAR key twice.
Key Lock Test	Enter 3 and press the CASH TEND key. The corresponding code will appear on the display as the "C" key is rotated from position to position.

```

áááááÁÀèèèèèíííííîñóó
óóóóóúúúúúß !"#%&'()*
+,-./0123456789;(<=>)?
@ABCDEFGHIJKLMNPOQRSTU
VWXYZRfçÊFabcdefgfhijk
lmnopqrstuvwxyzz~ááááá
ÁÀèèèèèíííííîñóóóóóó
óóóóóúúúúúß !"#%&'()*
+,-./0123456789;(<=>)?@A
BCDEFGHIJKLMNPOQRSTUV
WXYZRfçÊFabcdefghijklm
nopq rstuvwxyzz~áááááÁ
Áèèèèèíííííîñóóóóóóóó
úúúúúß !"#%&'()*
+,-./0123456789;(<=>)?@ABCDE
FGHIJKLMNPOQRSTUVWXYZ
RfççÊFabcdefgfhijklmnop
qrstuvwxyzz~áááááÁÁèèè
èèèèèíííííîñóóóóóóóóóó
úúúúúß !"#%&'()*
+,-./0123456789;(<=>)?@ABCDEF
GHIJKLMNPOQRSTUVWXYZR
fççÊFabcdefgfhijklmnopq
rstuvwxyzz~áááááÁÁèèè
DATE 01.14.'96 FRI

```

Fig. 3-3 Printer Test Result

3-3 EPROM Check Sum

Enter 4 and press the CASH TEND key. The software version and the Check sum data will print on the receipt.

```
*****
MODEL      :ER-4615R
VERSION NO :STAND01
CHECK SUM  :IF8A
*****
CLERK 0    NO. 000004
TIME 14:11      0000
DATE 12.28. '94  MON
```

Fig. 3-4 Check Sum Result

3-4 Setting the number of Departments

- 1) Insert the C key into the control lock (c.f. Fig.3-2 Mode Key) and turn clockwise to the SM (service) mode position. This position is not marked on the control lock plate, and only the C key will travel to this position.
- 2) Enter the following key sequence

Table 3-3 Key Sequence

Model Name	Key Sequence	
ER-4915	5, 10, 15	
ER-4940	15, 40	
ER-4615	5, 10, 0[15]	
ER-4615R	5, 10, 0[15]	
ER-4640	15, 0[40]	

To refer the Other departments programming, see the User Manual.

Now, this ECR is ready to operate using the default program. The programming procedures take place with the control lock in the 'P' position.

3-5 Installation

3-5-1 Key Board Installation

When you connect the keyboard to the MAIN PCB, make sure membrane sheet is the shape as shown in Fig. 3-5 (b). If you assemble as in Fig. 3-5 (a), the keyboard may malfunction.

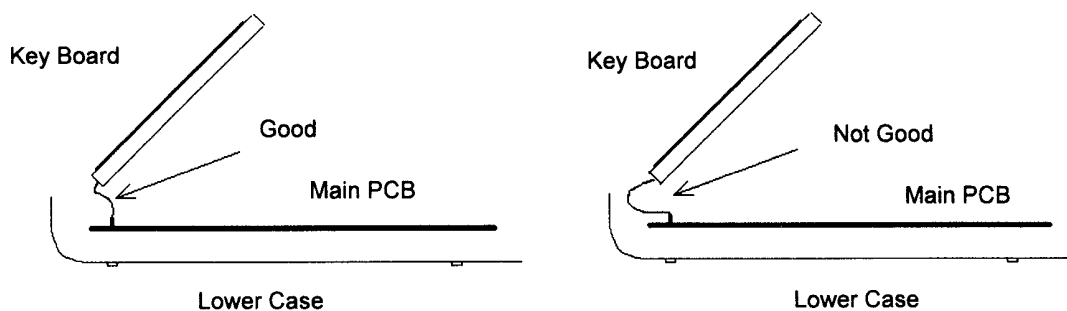
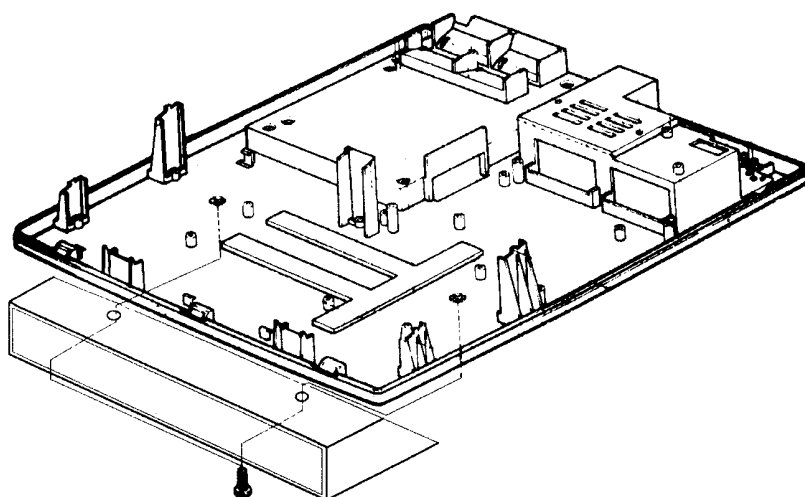


Fig. 3-5 Key Board Installation

3-5-2 Drawer Installation



To install the drawer in the lower case, fix the ! screws, as you see in the figure, together with the drawer and lower case. Refer to the exploded diagram for the disassembly details for other parts of ECR.

Fig. 3-6 Drawer

Installation

3-5-3 Ribbon Cassette

1. Before inserting the Ribbon Cassette (2), turn the Knob (1) counter clockwise in order to prevent twisting the Ribbon.
2. After inserting the Ribbon Cassette (2), turn the Knob (1) counter clockwise in order to prevent twisting the Ribbon.

Fig. 3-7 Ribbon Cassette

3-5-4 Insertion of the Receipt / Journal Paper

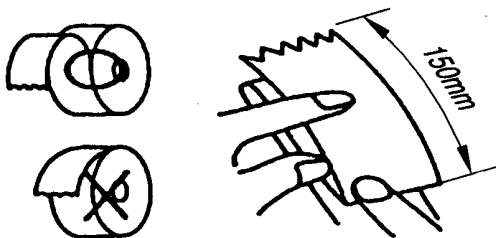


Fig. 3-8 Folding the Paper

- Under the condition of marked O paper, unroll the paper about 150mm, then fold the paper like the Fig. 3-8.

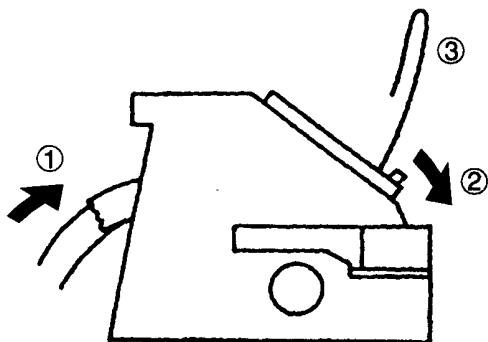


Fig. 3-9 Inserting the Paper to the Printer

- Insert the folded paper in the back(1) of ERP-300V. While holding the lever(2) down, pull the paper out until the fold point(3) is completely out of the machine.

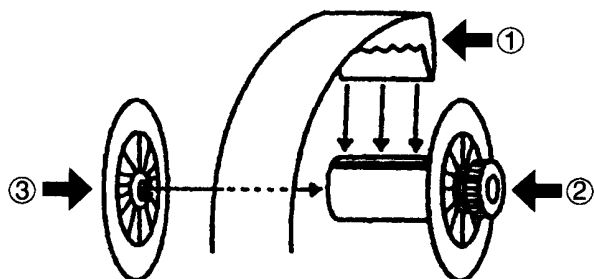


Fig. 3-10 Inserting the Paper to the Spindle

- Cut the Receipt Side Paper
- Insert the Journal Side Paper in the slit of the rewind spindle. Wind the spindle 3 or 4 times. Push disk(3) onto the spindle as shown in Fig 4-10.

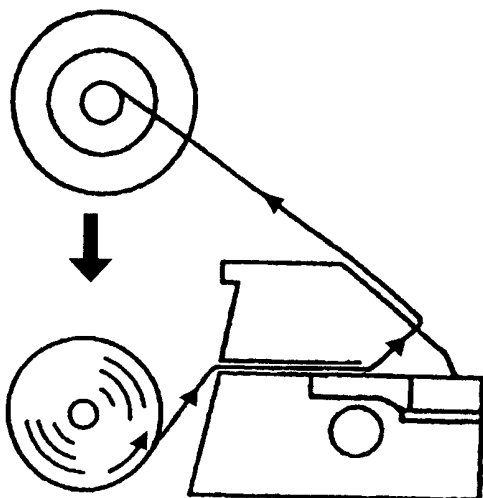


Fig. 3-11 Inserted Paper Diagram

- When the journal side paper is loose, rewind the spindle to make the paper tight.

4 ERP-300V Printer Disassembling and Reassembling

4-1 Procedure of Disassembling

- 1) Remove the four screws [a] on the upper frame assy (C) and disassemble cover (A) (see Fig. 4-1).
- 2) Remove the screws [b] (two) and disassemble the Ribbon Frame (B) from the Lower Frame Assembly (I) as Fig. 4-1 Printer Disassembling.

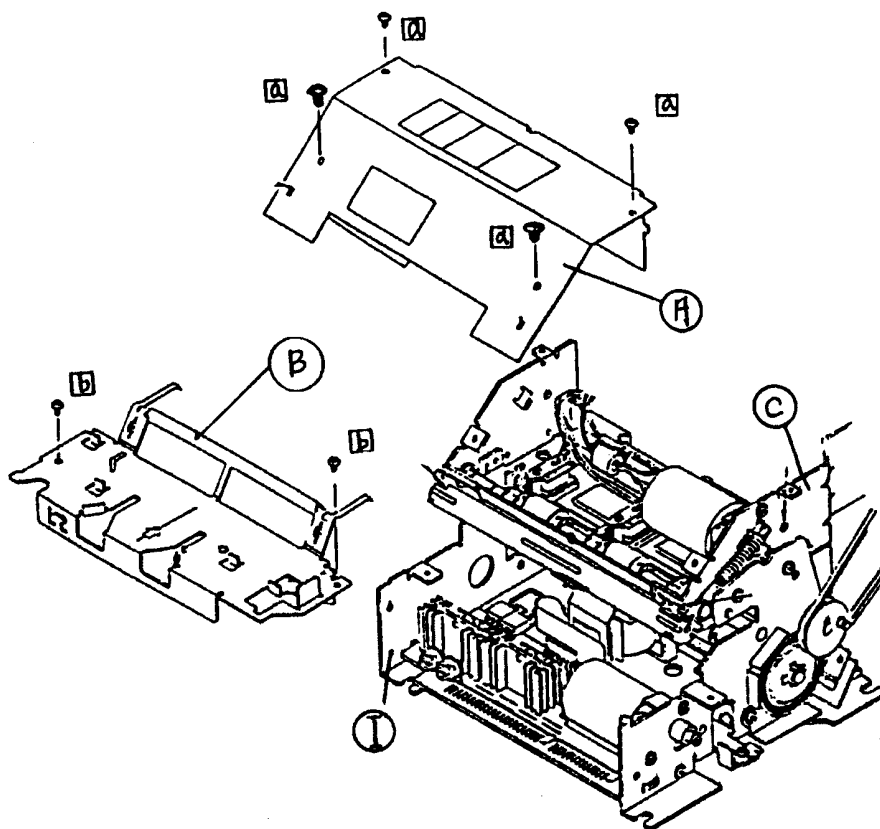


Fig 4-1 Disassembling the Printer

4 ERP-300V Printer Disassembling and Reassembling

- 3) Remove the four screws **C** and disassemble the Upper frame Assembly **C** from the Lower frame Assembly **I**
- 4) When you disassemble the Upper frame Assembly **C** from the Lower frame Assembly **I**, pull the **C** assembly up away from the Lower frame Assembly like the direction of the diagram .

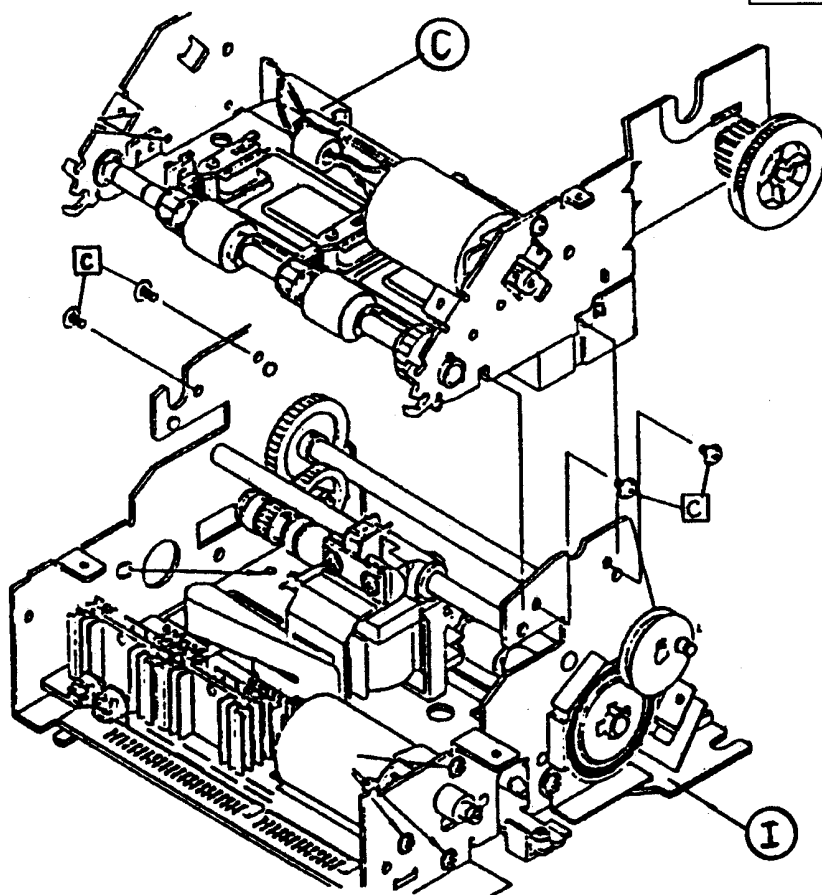
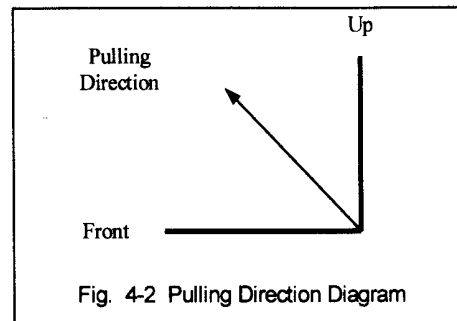


Fig. 4-3 Disassembling the Upper Frame and Lower Frame

- 5) Turn the upper Frame upside down and remove the three screws d Disassemble the Stamp Paper Guide Assembly D from the Upper frame Assembly C

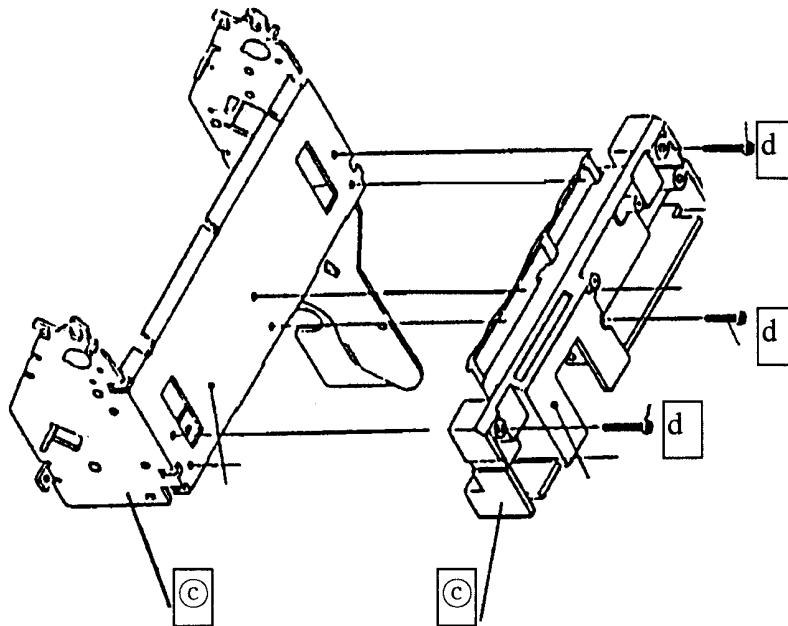


Fig. 4-4 Disassembling the Stamp Paper Guide

- 6) Remove the Platen Paper Guide Assembly E left side screw e which ties the platen paper guide Assembly E to the Stamp paper guide Assembly D

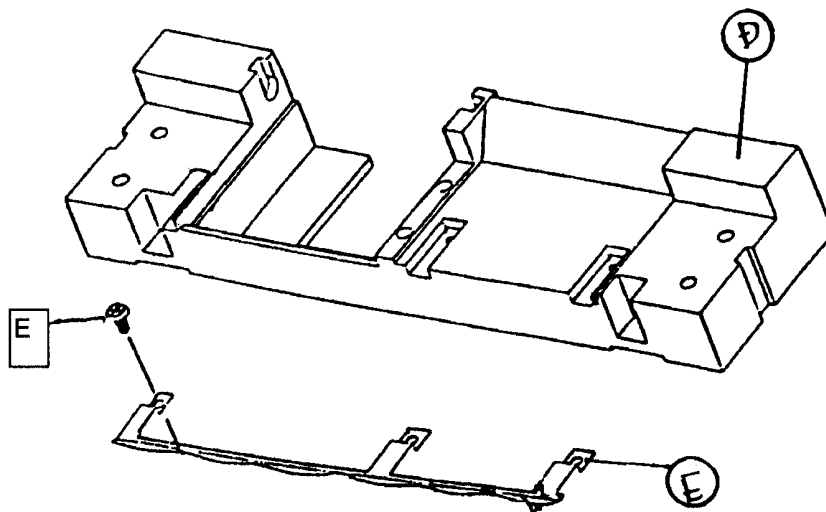


Fig. 4-5 Disassembling Platen Paper Guide

4-2 Printer Assembly

When you assemble the printer, do the reverse sequence of the disassembling procedure.

Caution: When you adjust Head Gap, see and follow the head gap adjusting method (next page). When you adjust upper frame Assembly ③ locate STAMP PUSHER(F) on hatched area as you see in the assembly diagram.

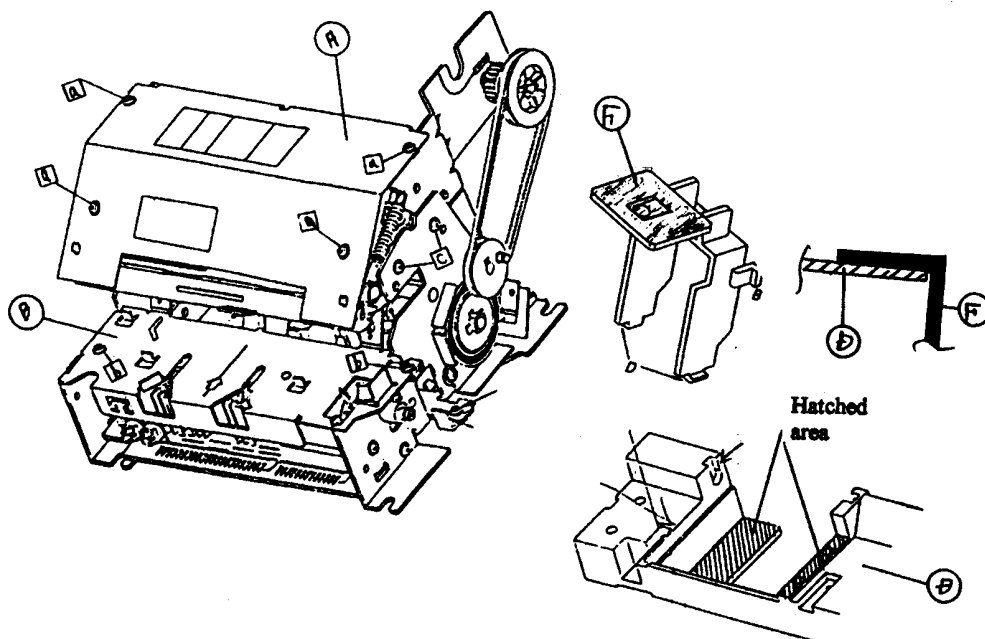


Fig. 4-6 Diagram of the Printer Assembly

5 Alignment and Adjustments

5-1 Adjusting of Roll paper Near-end Detector (Type 1 Paper Sensor)

5-1-1 Adjusting Point

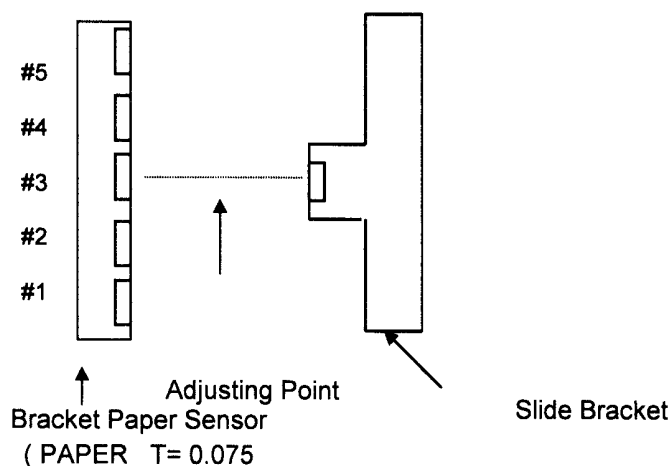


Fig. 5-1 Adjusting the Paper Sensor

As you see in the Fig. 5-1, the slide bracket is fixed at adjusting scale #3 for the roll paper recommended by Samsung.

5-1-2 The Relationship between Adjusting Scale and the Remnant of Roll Paper :

When using Samsung recommended roll paper (paper thickness = 0.075mm, paper width = 44.5 ± 0.5 mm), the relationship between adjusting scale and remnant of roll paper is as follows.

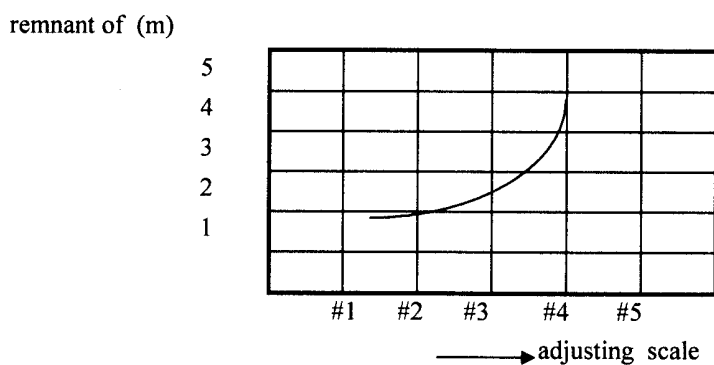


Fig. 5-2 Relationship between adjusting scale and the remnant of Roll paper

When using the other paper to Samsung recommended paper (thickness: approx. 0.075mm), ignore the figure above.

5 Alignment and Adjustments

3) The relationship between adjusting scale and Roll paper winding core :
adjusting scale

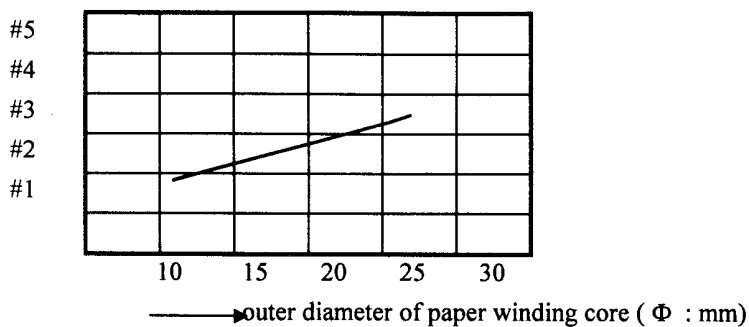


Fig. 5-3 Relationship Diagram between adjusting scale and Roll Paper

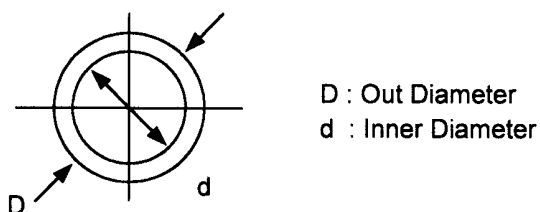


Fig. 5-4 Description of the Roll paper

Note: When employing roll paper other than Samsung recommended paper, the length of remnant of roll paper will be differ.

When using roll paper with a red end mark at the end of it, winding core may be pulled out of its holder due to the paper sticking to the winding core. The paper sensor may malfunction if the winding core is pulled out of its holder.

5-2 Adjusting the Head Gap

- 1) Be assemble the Upper Frame Assembly to the Lower Frame Assembly by reverse sequence of disassembling procedure. Lock the screws loosely.
- 2) Wind Head Gear counter clockwise, move the Head to the right end of platen guide. Insert Gap Gauge (width 0.5mm) between Head and platen. Assemble the two screws (C) tightly.
- 3) In the same method, wind Gear and move the Head to the left end of platen guide. Insert GAP GAUGE (0.5mm) and assemble the two screws (C) (left side).
- 4) When the (C) screws are in place, Neji-Lock (kind of bond) on the position of the four screws.

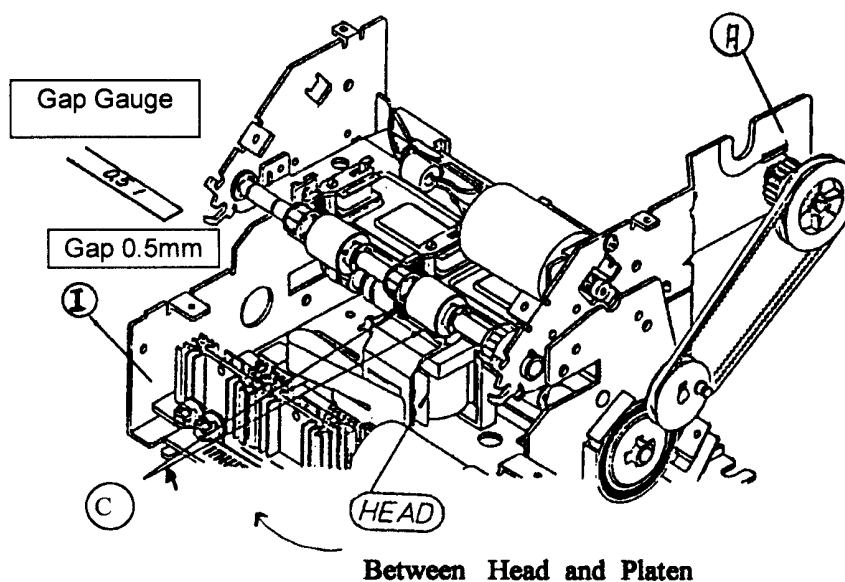


Fig. 5-5 Adjusting the Head Gap

6 Troubleshooting

6-1 "P.P. " error on the display under Power On.

1. Check for disconnection of connector between Main PCB side and Printer side (CN7, CN8, CN13).
2. Check the Printer Ribbon and Paper Jam.

6-2 Buzzing as soon as Power On.

1. Check whether the display connector is connected or not.
2. Check whether the turret connector is connected or not.

6-3 EI error on the display .

1. Press the CLEAR key to escape this condition.

Refer to other message , see the user manual .

Appendix Information

Edition date : 04.04.2000

NO.	DESCRIPTION	SEC CODE	BUYER MODEL
01	MAIN BOARD	JK92-00113A	ER-4615 AND,ARGO,ARK,CEL,CITI,E/TRD,GEMEX, GES, GOOD,INT,JR,MAKRO,MIRA,MT,MUL, NIKO,PRT,ROC,SEF,SEG,SESAB,SGE,TRD, UK,WANS
		JK92-00114A	ER-4640 ARGO,CEL,E/TRD,ELM,GAL,GEMEX,GES, GOOD,LANG,MAKRO,MAWA,MELK,MIRA,MT, MUL,NAC,NIKO,PED,PRT,PUM,ROC,SEF,SEG SEP,UK,ULT,WANS
		JK92-00115A	ER-4800 AND,ARGO,E/TRD,GOOD,JR,MIRA,MUL,PRT, PUM,SEF,SEG,SESAB,SGE,SMB,UK
		JK92-00116A	ER-4615 ALMA,ASPA,MON,MON1,SCAN,SER,SIC, TRAS,C/OFI
		JK92-00117A	ER-4640 ALMA,CAS,ELC,HYC,IASP,MON,MON1,SER, C/OFI
		JK92-00118A	ER-4800 ASPA,CAS,HISEN,C/OFI
		JK92-00119A	ER-4615 LAT,RUSA,RUSB,RUSO
		JK92-00128M	ER-4900 CRS,CRSA,CRSN
		JK92-00128N	ER-4940 CRS,CRSA,CRSN
		JK92-00128P	ER-4915 CRS,CRSA,CRSN
02	POWER TRANS	JK26-30105E	AND,ARGO,ARK,CEL,CITI,E/TRD,ELC,ELM,GAL, GEMEX,GES,GOOD,HISEN,HYC,IASP,INT,JR,LANG, LAT,MAKRO,MAWA,MELK,MIRA,MON,MT,MUL,NAC, NIKO,PED,PRT,PUM,ROC,RUSA,RUSB,RUSO,SCAN, SEF,SEG,SEP,SER,SESAB,SGE,SIC,SMB,TRAS,TRD, UK,ULT,WANS
		JK26-30105F	ALMA,CAS
		JK26-30105D	ASPA,CRS,CRSA,CRSN,C/OFI,MON1
03	POWER CORD	JK39-10302D	ALMA,AND,ARGO,ARK,CEL,CITI,E/TRD,ELM,GAL, GEMEX,GES,LANG,INT,LAT,MAKRO,MAWA,MELK, MIRA,MT,MUL,NAC,NIKO,PED,PRT,PUM,RUSA,RUSB, RUSO,SEF,SEG,SEP,SESAB,SGE,SMB,TRD,ULT, WANS
		JK39-10301T	GOOD,HYC,SCAN,SER,SIC,TRAS
		JK39-00019A	JR
		JK39-10301X	ROC,UK
		JK39-10301U	ASPA,CAS,CRS,CRSA,CRSN,MON1,C/OFI
		JK39-10509A	MON
		JK39-10301V	ELC,IASP
		JK39-10507A	HISEN

8 Electrical Parts List

8-1 Main Board Parts List

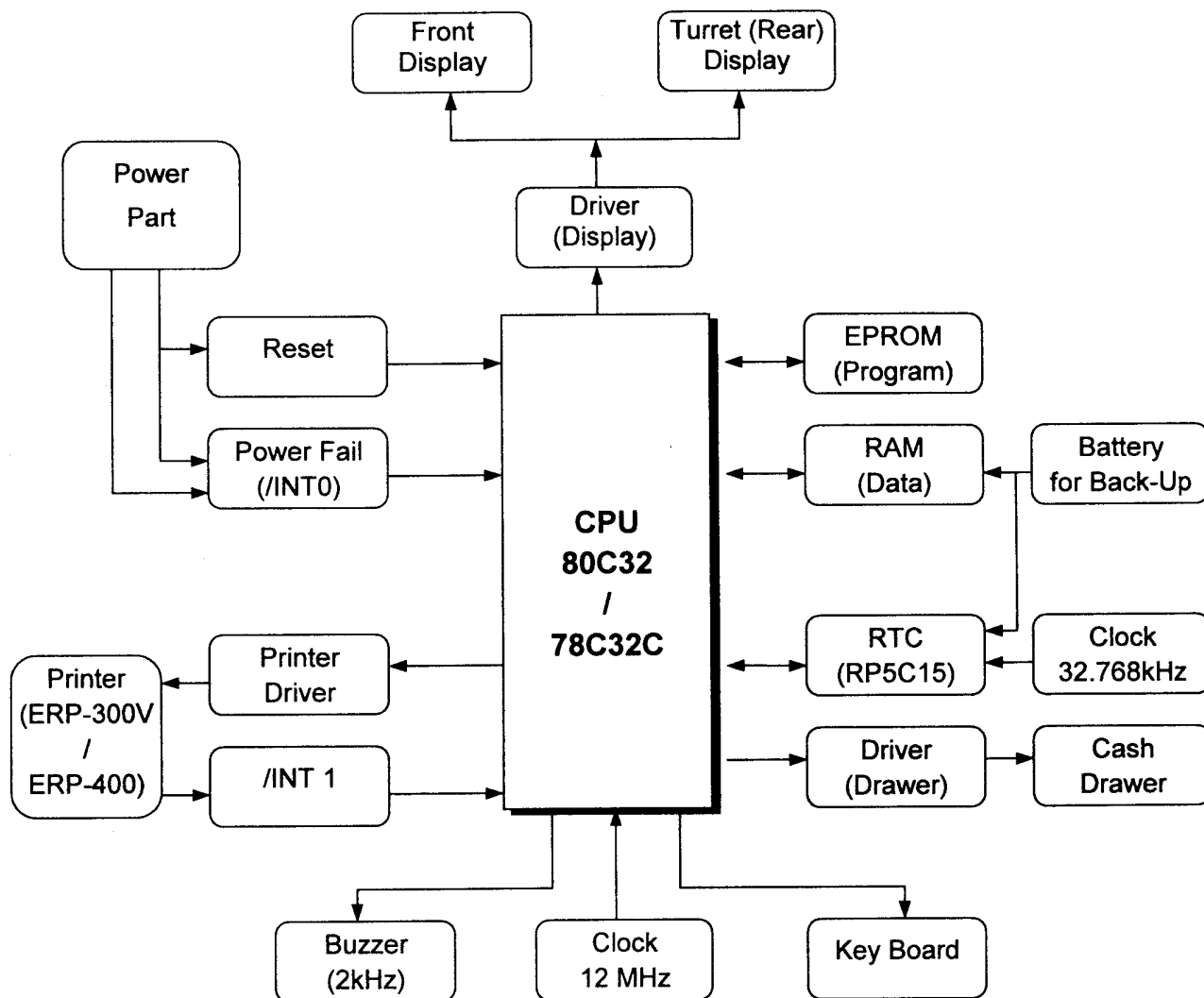
Code No.	Description	Q'ty	Service	SPEC	Location No.
JK92-00116A	PBA MAIN-MAIN BOARD	1	Y	ER-4615, SAMSUNG, STD, -, -, -, -	
0201-000008	ADHESIVE-HM	0.005	N	PP #3748, WHT, 6500CPS, -	
0202-000118	SOLDER-WIRE	0.01	N	KR-19 RMA, -, DO.8, -, -	
0202-000216	SOLDER-BAR	0.04	N	S63S-B20, S63S, 350X34, SN63/PB37	
0202-001025	SOLDER-WIRE FLUX	0.02	N	KS-611, -, -, -, spray	
0204-000004	ETHANOL	0.01	N	ISO-PROPYLENE, C2H5OH, 99.8%, -	
0402-000168	DIODE-RECTIFIER	1	Y	1N5822, 40V, 3A, DO-201AD, TP	D33
0402-000287	DIODE-BRIDGE	1	Y	GBL01, 100V, 3A, SIP-4, ST	B01
0502-000288	TR-POWER	1	Y	KSD288, NPN, 25W, TO-220, -, 120-24	Q11
0506-001019	TR-ARRAY	3	Y	STA471A, NPN, 4, 4W, SIP-10, ST, 200	TA1, TA2, TA3
0801-000485	IC-CMOS LOGIC	1	Y	74HCT138, 3-TO-8 DECODER, DIP, 16	U8
0801-000522	IC-CMOS LOGIC	2	Y	74HCT541, BUFFER/DRIVER, DIP, 20P	U9, U10
0801-000528	IC-CMOS LOGIC	2	Y	74HCT574, D FLIP-FLOP, DIP, 20P, 3	U12, U13
0801-000530	IC-CMOS LOGIC	1	Y	74HCT573, D LATCH, DIP, 20P, 300M	U17
0801-000894	IC-CMOS LOGIC	1	Y	74HCT00, NAND GATE, DIP, 14P, 300M	U18
0801-000918	IC-CMOS LOGIC	1	Y	74HCT139, 1-TO-4 DECODER, DIP, 16	U11
0803-001206	IC-TTL	2	Y	74LS05, INVERTED GATE, DIP, 14P, 3	U14, U15
0803-001211	IC-TTL	1	Y	74LS14, SCHMITT INVERTER, DIP, 14P, 300MIL, HEX, ST, PLASTIC, TOTEM-POLE	U18
0903-001083	IC-MICROCONTROLLER	1	Y	79C32B, 8BIT, DIP, 40P, -, 12MHz, ST	U1(WINBOND, 78B32C)
0909-000111	IC-REAL TIME CLOCK	1	Y	5C15, 4BIT, DIP, 18P, 300MIL, 0.032	U5
1102-000173	IC-EPROM	1	Y	27C512, 64Kx8BIT, DIP, 28P, 600MIL	U2
1106-001095	IC-SRAM	1	Y	62256, 32Kx8BIT, DIP, 28P, 600MIL, -	U3
1202-000103	IC-VOLTAGE COMP.	1	Y	393, DIP, 8P, 300MIL, DUAL, 36V, CMO	U21
1203-000391	IC-DC/DC CONVERTER	1	Y	34063, DIP, 8P, 250MIL, PLASTIC, 40	U20
1206-000139	IC-TIMER	1	Y	NE555CN, DIP, 8P, 250MIL, PLASTIC, -	U19
2001-000038	R-CARBON	1	Y	3900HM, 5%, 1/4W, AA, TP, 2.4X6.4MM	R100
2001-000626	R-CARBON	1	Y	3000HM, 5%, 1/4W, AA, TP, 2.4X6.4MM	R101
2011-000290	R-NETWORK	1	Y	1KOHM, 5%, 1/8W, A, SIP, 10P, BK	RA4
2011-000539	R-NETWORK	2	Y	4.7KOHM, 5%, 1/8W, A, SIP, 9P, ST	RA1, RA2
2011-000766	R-NETWORK	1	Y	15KOHM, 5%, 1/8W, A, SIP, 9P, ST	RA3
2401-000230	C-AL	2	Y	100uF, 20%, 100V, GP, TP, 12.5x20.5	C10, C15
2401-001312	C-AL	1	Y	4700uF, 20%, 50V, GP, BK, 22x40, 10	C9
2503-001030	C-NETWORK	1	N	100PFx8, 20%, 50V, X7R	CA1
2503-001030	C-NETWORK	1	N	100PFx8, 20%, 50V, X7R	CA2
2801-000140	CRYSTAL-UNIT	1	Y	12MHz, 50ppm, 28-AAM, S, 30ohm, -	X2
2801-003376	CRYSTAL-UNIT	1	Y	0.032768MHz, 20ppm, 28-AA, Y, 12.5p	X1
3002-001027	BUZZER-PIEZO	1	Y	85dB, 1.5V, 24mA, 2.048KHz, BK	
3601-000261	FUSE-CARTRIDGE	1	Y	250V, 3.15A, TIME-LAG, GLASS, 5.2x20mm	
3704-000235	SOCKET-IC	1	Y	28P, DIP, SN, 2.54mm	U2
3708-000327	CONNECTOR-FPC/FC/PIC	2	Y	8P, 2.54mm, STRAIGHT, SN	CN12, CN14
3711-000041	CONNECTOR-HEADER	1	Y	BOX, 8P, 1R, 2.5mm, STRAIGHT, SN	CN6
3711-000183	CONNECTOR-HEADER	2	Y	1WALL, 2P, 1R, 3.96mm, STRAIGHT, SN	CN2, CN3
3711-001133	CONNECTOR-HEADER	1	Y	BOX, 8P, 1R, 2.5mm, STRAIGHT, SN	CN11
3711-003969	CONNECTOR-HEADER	1	Y	BOX, 2P, 1R, 2.5mm, STRAIGHT, SN	CN19
3711-003969	CONNECTOR-HEADER	1	Y	BOX, 2P, 1R, 2.5mm, STRAIGHT, SN	CN20
3711-003969	CONNECTOR-HEADER	1	Y	BOX, 2P, 1R, 2.5mm, STRAIGHT, SN	CN4
4302-000126	BATTERY-NICD(2ND)	1	Y	3.6V(1.2Vx3), 60mAh, CYLINDR, -, 3	
6501-000115	CABLE TIE	1	Y	DA100, T1, W2.5, L102, NTR, NYLON66	PRINTER CONN
JC68-10564A	LABEL(P)-PROTECTOR	1	Y	SLB-3108H, ART, -, 100(S), BLK	EPROM
JK27-60100D	COIL FILTER-	1	Y	ER-350, 140 UH, -, -	L1
JK39-40302W	CBF HARNESS-	1	Y	-, UL 1007, 220, RED/WHT, 26	CN13
JK39-40302X	CBF HARNESS-	1	Y	-, UL 1007, 210/230, RED/WHT, 26	CN7, CN8
JK39-40541A	CBF HARNESS-MAIN	1	Y	ER-4615, 1R, UL1015, 220mm, GRN/YE	
JK92-00138A	PBA MAIN-PCB AUTO	1	N	ER-4615, SAMSUNG, BASIC, -, -, -, -	
0401-000005	DIODE-SWITCHING	13	Y	1N4148, 100V, 200MA, DO-35, TP	D1-D8/D21-D25
0401-000005	DIODE-SWITCHING	12	Y	1N4148, 100V, 200MA, DO-35, TP	D9 ~ D20
0402-000129	DIODE-RECTIFIER	4	Y	1N4003, 200V, 1A, DO-41, TP	D26, 27, 29, 30
0402-000208	DIODE-RECTIFIER	1	Y	EK-04, 40V, 1.5A, DO-41	D32
0402-000208	DIODE-RECTIFIER	1	Y	EK-04, 40V, 1.5A, DO-41	D34
0403-000343	DIODE-ZENER	1	Y	UZ3.9B, 3.9V, 3.7-4.1V, 500mW, DO-	ZD2

8 Electrical Parts List

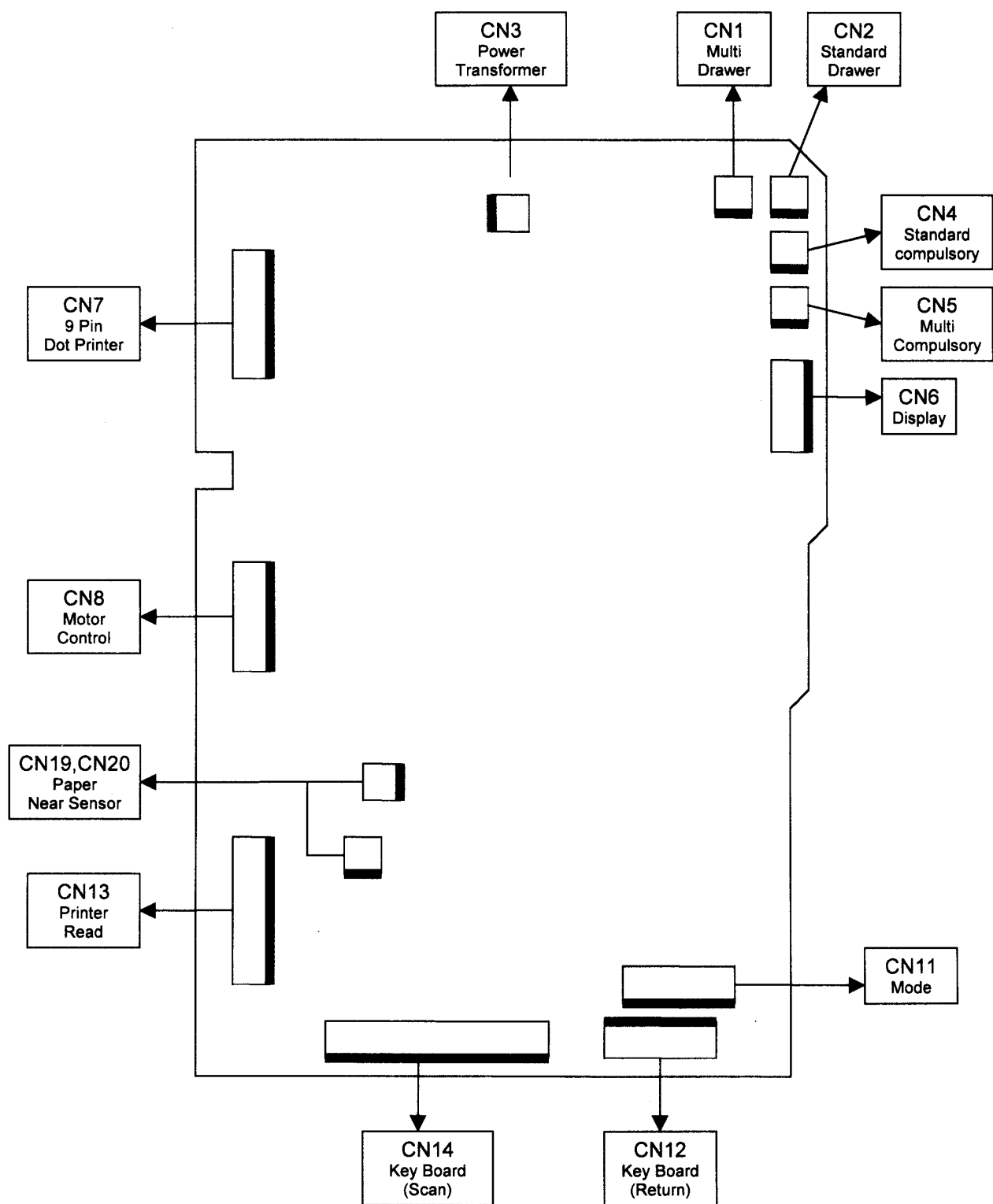
Code No.	Description	Q'ty	Service	SPEC	Location No.
0403-000537	DIODE-ZENER	1	Y	1N4749A, 24V, 5%, 1W, DO-41, TP	ZD1
0501-000399	TR-SMALL SIGNAL	8	Y	KSC945-G, NPN, 250mW, TO-92, TP, 20	Q2 ~ Q7/Q9/Q10
2001-000027	R-CARBON	3	Y	1000HM, 5%, 1/4W, AA, TP, 2.4X6.4MM	R1, R2, R3
2001-000034	R-CARBON	3	Y	2200HM, 5%, 1/4W, AA, TP, 2.4X6.4MM	R32, R34, R35
2001-000036	R-CARBON	2	Y	3300HM, 5%, 1/4W, AA, TP, 2.4X6.4MM	R20, R21
2001-000036	R-CARBON	1	Y	3300HM, 5%, 1/4W, AA, TP, 2.4X6.4MM	R33
2001-000042	R-CARBON	10	Y	1K0HM, 5%, 1/4W, AA, TP, 2.4X6.4MM	R16/R17/R23-R27/29-31
2001-000042	R-CARBON	1	Y	1K0HM, 5%, 1/4W, AA, TP, 2.4X6.4MM	R44
2001-000055	R-CARBON	1	Y	4.7K0HM, 5%, 1/4W, AA, TP, 2.4X6.4MM	R10
2001-000055	R-CARBON	1	Y	4.7K0HM, 5%, 1/4W, AA, TP, 2.4X6.4MM	R36
2001-000055	R-CARBON	10	Y	4.7K0HM, 5%, 1/4W, AA, TP, 2.4X6.4MM	R43, R45 ~ R53
2001-000060	R-CARBON	2	Y	6.8K0HM, 5%, 1/4W, AA, TP, 2.4X6.4MM	R18, R19
2001-000065	R-CARBON	6	Y	10K0HM, 5%, 1/4W, AA, TP, 2.4X6.4MM	R37-R42
2001-000073	R-CARBON	1	Y	33K0HM, 5%, 1/4W, AA, TP, 2.4X6.4MM	R7
2001-000076	R-CARBON	2	Y	47K0HM, 5%, 1/4W, AA, TP, 2.4X6.4MM	R4, R5
2001-000113	R-CARBON	1	N	18K0HM, 5%, 1/4W, AA, TP, 2.4X6.4MM	R11
2001-000213	R-CARBON	1	Y	1.1K0HM, 2%, 1/4W, AA, TP, 2.4X6.4MM	R22
2001-000495	R-CARBON	1	Y	20K0HM, 5%, 1/4W, AA, TP, 2.4X6.4MM	R6
2001-000841	R-CARBON	1	Y	510HM, 5%, 1/4W, AA, TP, 2.4X6.4MM	R15
2001-000855	R-CARBON	3	Y	5600HM, 5%, 1/4W, AA, TP, 2.4X6.4MM	R8/R9/R28
2004-000284	R-METAL	1	Y	12Kohm, 1%, 1/4W, AA, TP, 2.4x6.4mm	R12
2004-000825	R-METAL	1	Y	36Kohm, 1%, 1/4W, AB, TP, 2.4x6.4mm	R13
2005-000210	R-WIRE WOUND	1	Y	0.33ohm, 5%, 1W, AC, BK, 4.5x11mm	R14
2201-000119	C-CERAMIC, DISC	1	Y	100nF, +80-20%, 50V, Y5V, TP, 8x3.5	C100
2201-000119	C-CERAMIC, DISC	13	Y	100nF, +80-20%, 50V, Y5V, TP, 8x3.5	C20 ~ C31, C36
2201-000119	C-CERAMIC, DISC	1	Y	100nF, +80-20%, 50V, Y5V, TP, 8x3.5	C34
2201-000162	C-CERAMIC, DISC	1	Y	10nF, +80-20%, 50V, Y5V, TP, 7x3.5	C7
2201-000464	C-CERAMIC, DISC	4	Y	0.03nF, 5%, 50V, SL, TP, 5x3.5	C1-C4
2201-000558	C-CERAMIC, DISC	1	Y	0.47nF, 10%, 50V, Y5P, TP, 5x3.5	C8
2201-000764	C-CERAMIC, DISC	1	Y	0.082nF, 5%, 50V, NPO, TP, 8x3.5, 5	C42
2201-000764	C-CERAMIC, DISC	1	Y	0.082nF, 5%, 50V, NPO, TP, 8x3.5, 5	C43
2201-000776	C-CERAMIC, DISC	2	Y	47nF, +80-20%, 50V, Y5V, TP, 6.5x3.5	C5, C6
2301-000010	C-FILM, PEF	3	Y	100nF, 5%, 100V, TP, 11.5x12.5mm, 5	C17, C18, C19
2401-000042	C-AL	2	Y	100uF, 20%, 16V, GP, TP, 6.3x7.5	C11, C14
2401-000603	C-AL	1	Y	1uF, 20%, 50V, GP, TP, 5x11.5	C35
2401-000660	C-AL	1	Y	2.2uF, 20%, 50V, GP, TP, 5x11.5	C12
2401-000962	C-AL	1	Y	22uF, 20%, 50V, GP, TP, 5x11.5	C33
2401-002144	C-AL	1	Y	47uF, 20%, 16V, GP, TP, 5x11.5	C13
3301-000292	CORE-FERRITE BEAD	2	Y	AA, 3.5x6.5mm, -, -	FB4, FB9
3301-000299	CORE-FERRITE BEAD	2	Y	AA, 3.6x5.0mm, 550, 3100G	FB5, FB8
3301-000344	CORE-FERRITE BEAD	2	Y	ZZ, 3.5x6.5mm, -, -	FB3, FB10
3602-000001	FUSE-CLIP	2	Y	-, -, 30mohm	
JB02-10501A	TAPE-SEQ M/C	0.001	N	TESLA, PP, TO. 12, W6, L3000M	
JC39-40511A	CBF HARNESS-	1	Y	ML-80, JUMPER, AWG22, 52mm, SILVER	A
JC39-40511A	CBF HARNESS-	1	Y	ML-80, JUMPER, AWG22, 52mm, SILVER	J101
JC39-40511A	CBF HARNESS-	2	Y	ML-80, JUMPER, AWG22, 52mm, SILVER	J104
JC39-40511A	CBF HARNESS-	19	Y	ML-80, JUMPER, AWG22, 52mm, SILVER	J1-J19
JC39-40511A	CBF HARNESS-	73	Y	ML-80, JUMPER, AWG22, 52mm, SILVER	J22-J94
JK41-10012A	PCB-MAIN	1	N	ER-4615(NEW), FR-1, 1L, T1.6, 330X	
JK96-00940A	ELA HOU-HEAT SINK	1	N	ER-4615, BASIC, WORLD, -, -, -, -	LARGE D73
0205-000003	OIL-SILICON	0.001	N	G746, -	
0502-000395	TR-POWER	1	Y	-, NPN, 30W, TO-220, -, 120-240	
6002-000175	SCREW-TAPPING	1	Y	PWH, +, 2, M3, L8, ZPC(YEL), SM20C	
6203-000107	HEAT SINK	1	Y	NONE, T2, W17, L22, H45, DEGRE, AL60	

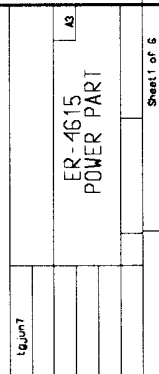
9 Block Diagrams

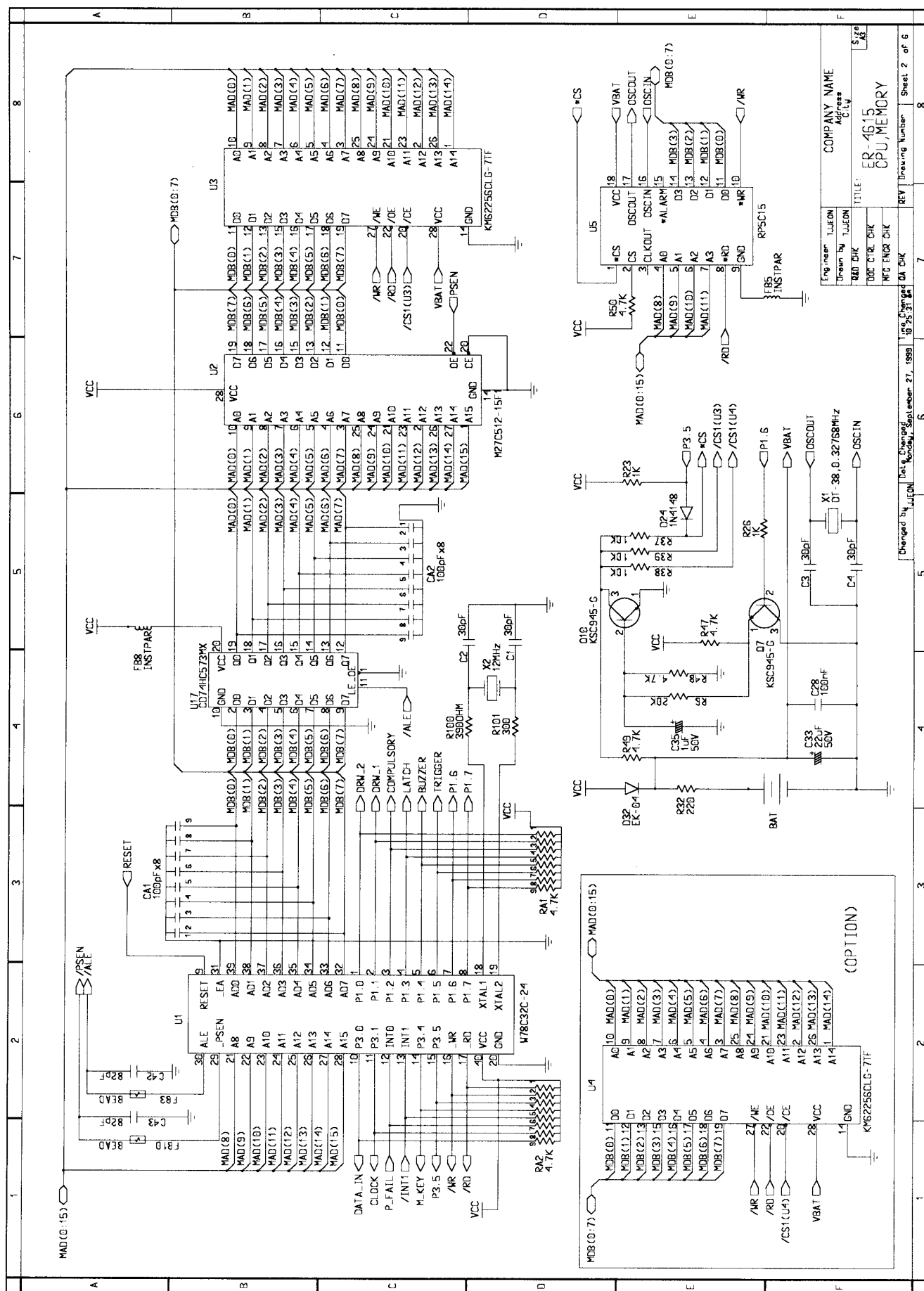
9-1 Main Board Block Diagram

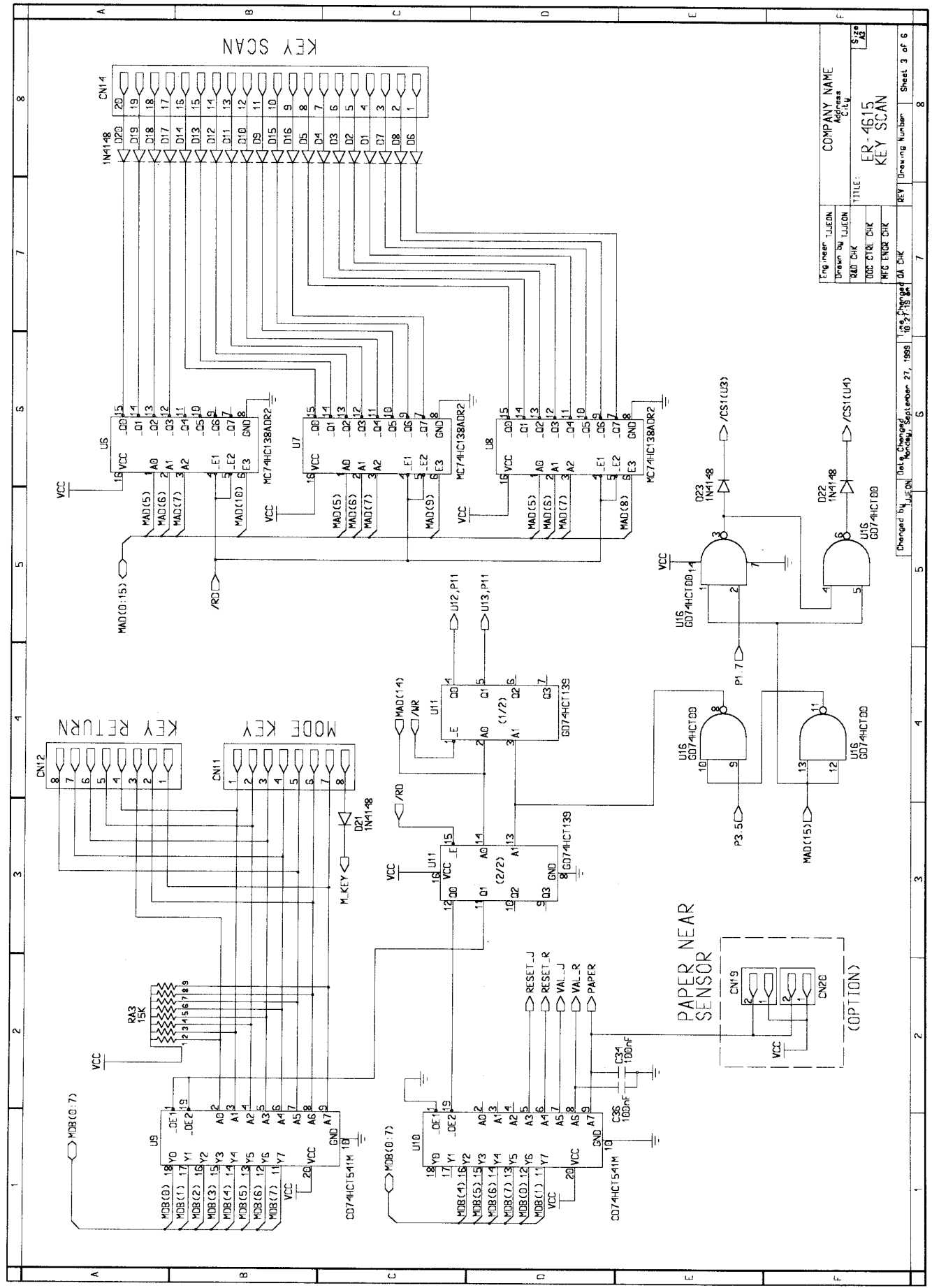


10 Wiring Diagrams









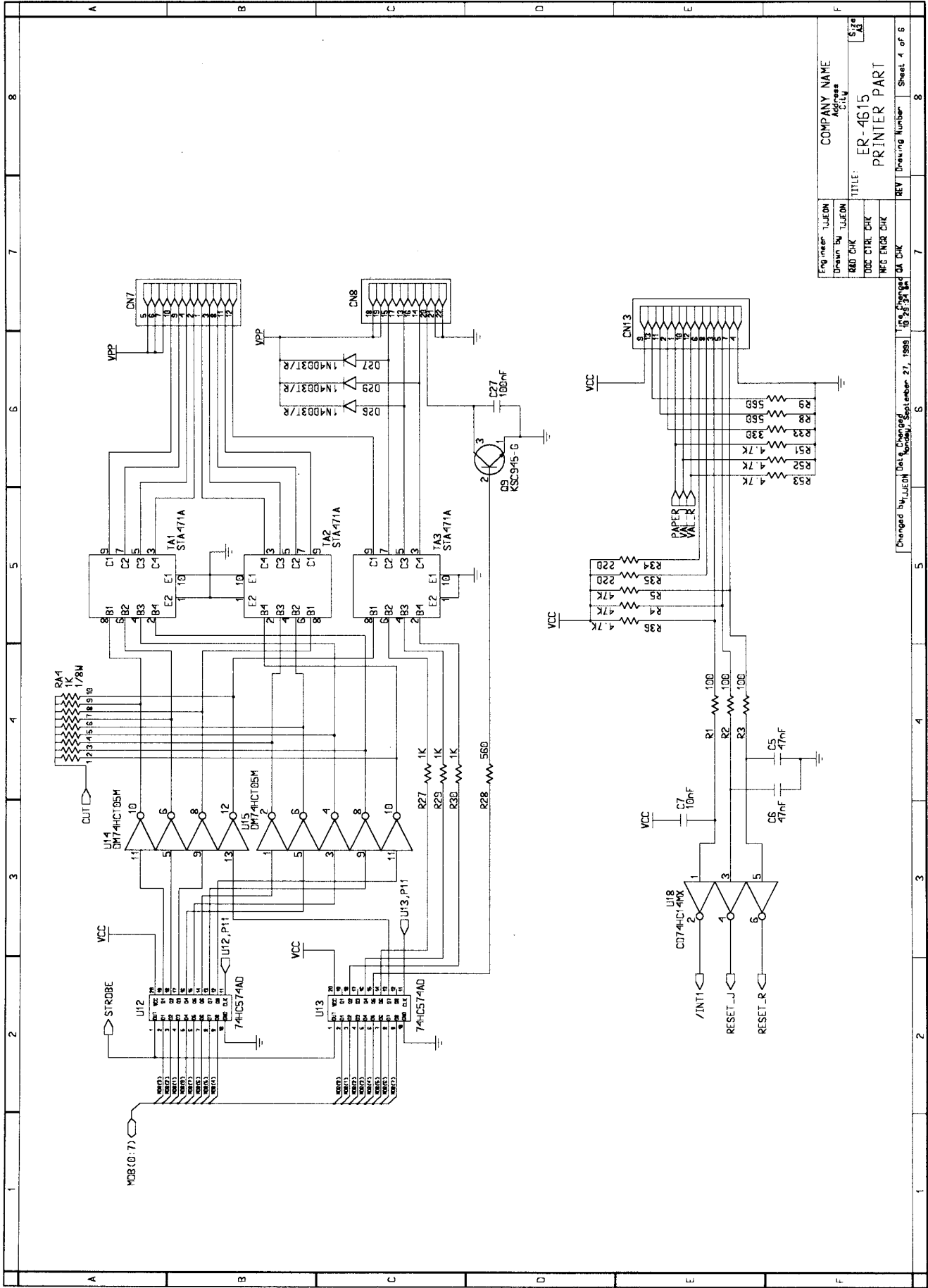
Eng. Name	TJEDON
Drawn by	TJEDON
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TOPE CHK	CHK
MFG ENGOK CHK	
REV	1
Design Number	8
Sheet 3 of 6	

COMPANY NAME
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CITY

TITLE:
ER-4615
KEY SCAN

Size
A3

Changed by TJEDON
Date Changed Monday, September 27, 1995 10:27:15 AM



Eng. Name	TJLEON	Company Name	Address
Drawn By	TJLEON	Address	
Rev. 001	CHK	Rev. 001	CHK
Rev. 002	CHK	Rev. 002	CHK
Rev. 003	CHK	Rev. 003	CHK
Rev. 004	CHK	Rev. 004	CHK
Rev. 005	CHK	Rev. 005	CHK
Rev. 006	CHK	Rev. 006	CHK
Rev. 007	CHK	Rev. 007	CHK
Rev. 008	CHK	Rev. 008	CHK
Rev. 009	CHK	Rev. 009	CHK
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COMPANY NAME
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ER-4615
PRINTER PART

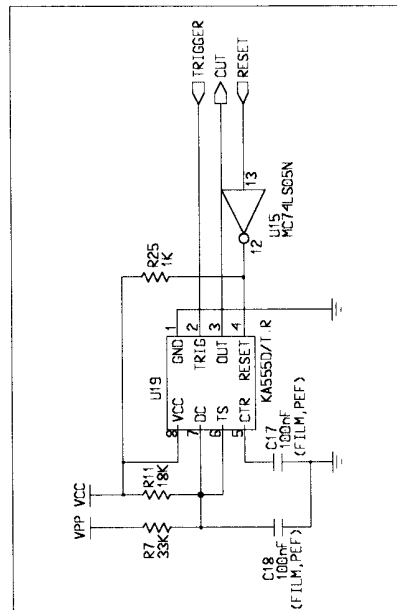
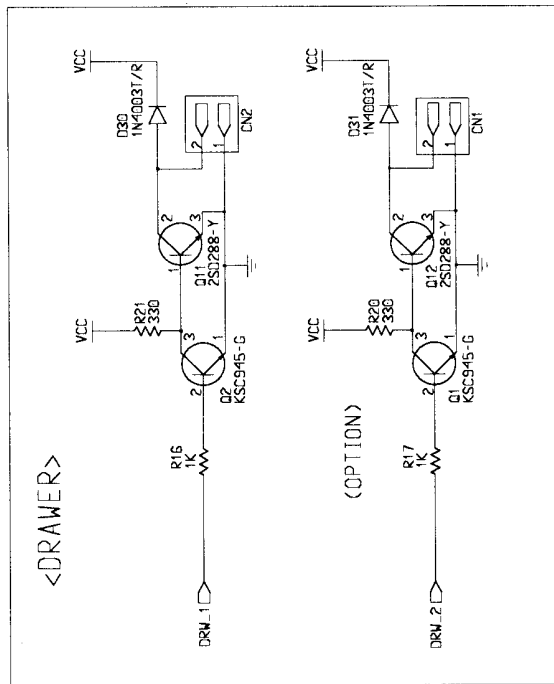
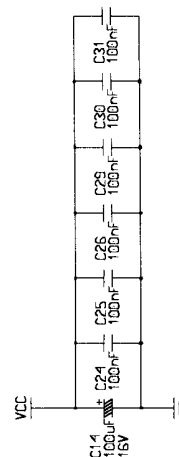
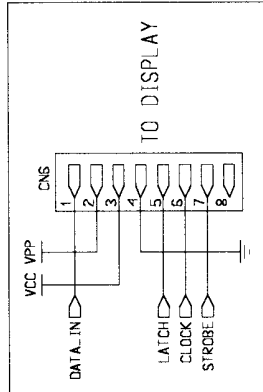
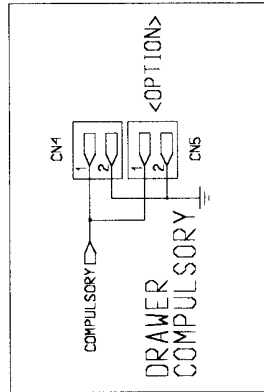
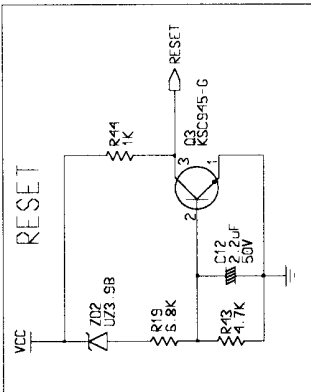
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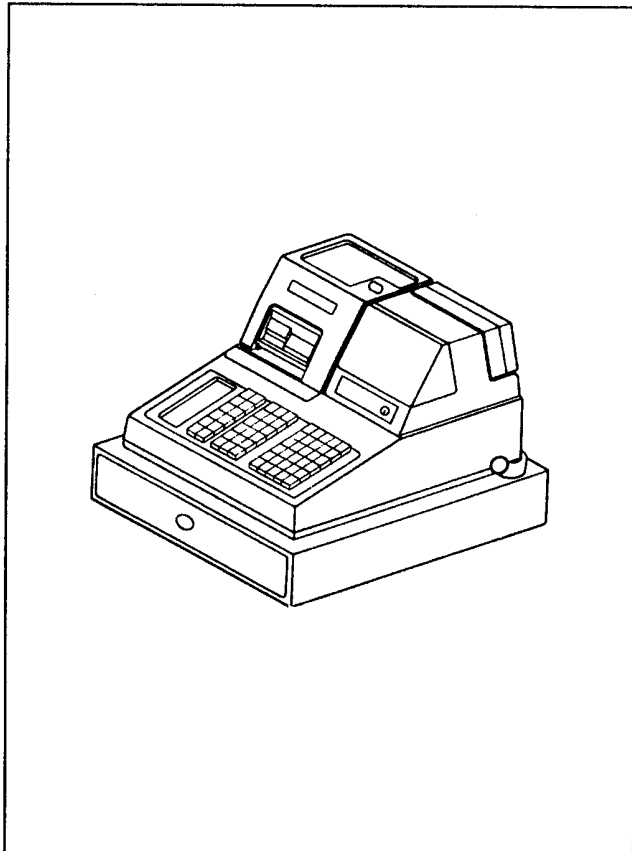
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APPENDIX

Service Manual

ELECTRONIC CASH REGISTER



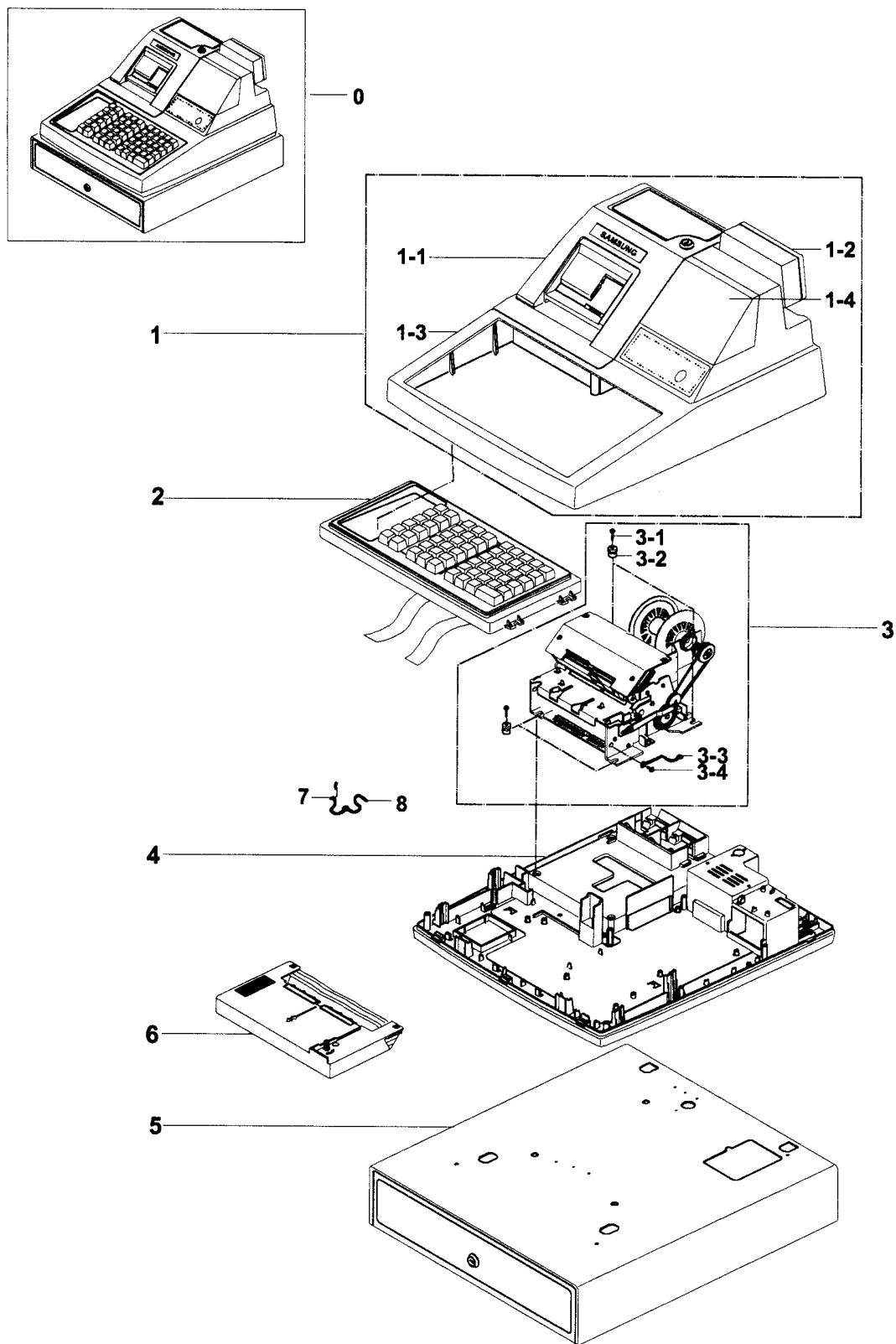
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Exploded Views and Parts Lists

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- 5. Cover Lower Ass'y Exploded View & Parts Lists**
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1. Main Exploded View



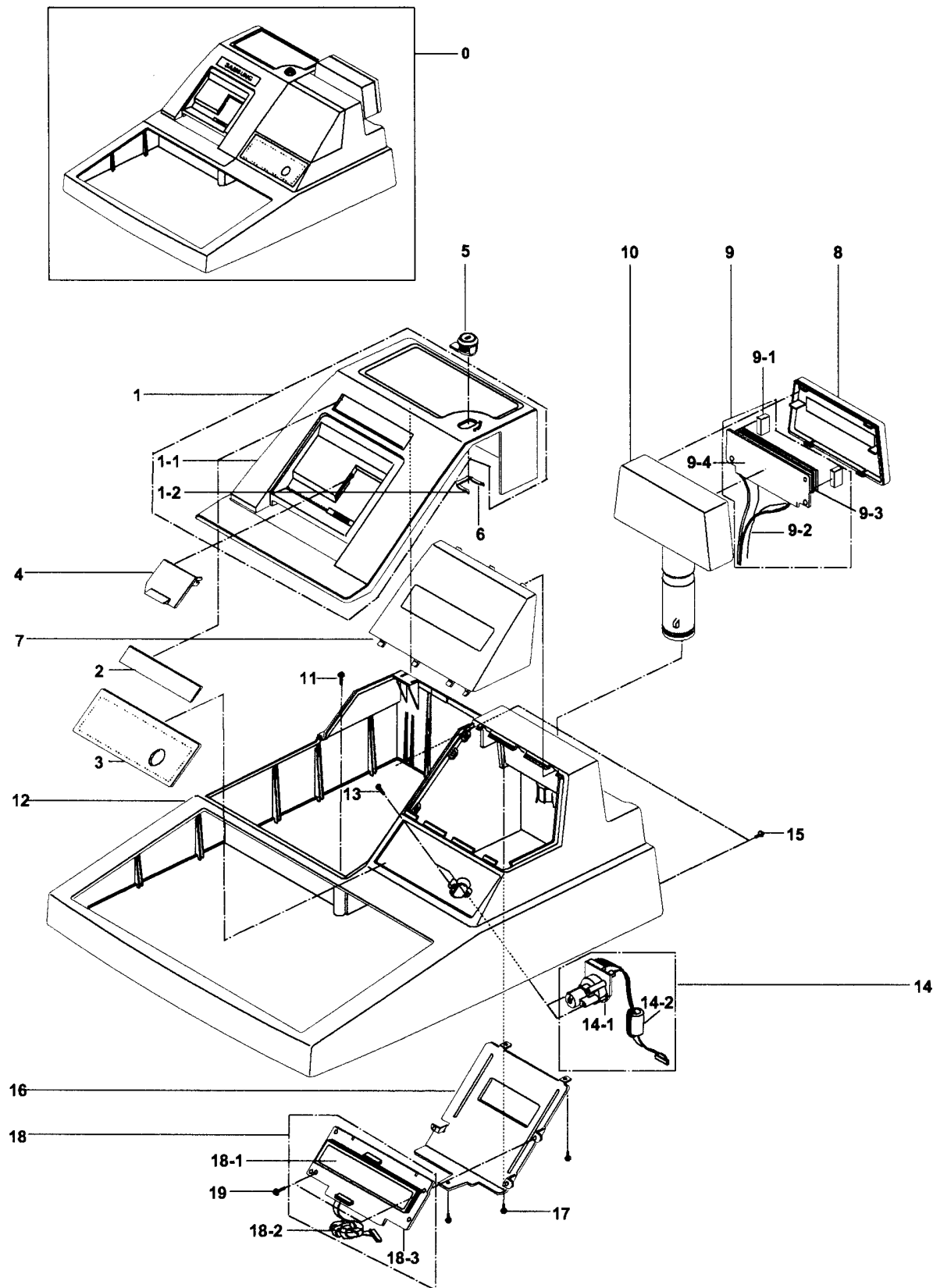
Main Parts Lists

SA. : Service Available

Location No.	Description	SEC. Code	Q'ty	SA	Remark
0	MAIN SET	ER-4615(UK)	1	X	
1	COVER ASS'Y	-	1	X	
1-1	MEA-COVER PRINTER	JK97-01070A	1	O	
1-2	ELA ETC-TURRET	JK96-00194A	1	O	
1-3	PMO-CASE UPPER	JK72-00027A	1	O	
1-4	ELA HOU-DISPLAY	JK96-00141A	1	O	
2	UNIT-KEYBOARD	JK59-10131A	1	O	
3	UNIT-PRINTER ASS'Y(ERP-400)	JK59-10511A	1	O	
3-1	SCREW-TAPPING	6002-000209	4	O	
3-2	RMO-PRINTER	JK73-40201A	4	O	
3-3	CBF-HARNESS (GND)	JK39-40021A	1	O	
3-4	SCREW-MACHINE	6001-000618	1	O	
4	COVER LOWER-ASS'Y	-	1	X	
5	DRAWER ASS'Y (MEC-DRAWER A84YA)	JK75-00017A	1	O	
6	MEC-RIBBON CASSETTE	JK75-10383A	1	O	
7	CBF-HARNESS (GND)	JK39-40200A	1	O	
8	CBF-HARNESS (GND)	JK39-40302C	1	O	

O: Service available X: Service not available

2. Cover Ass'y Exploded View



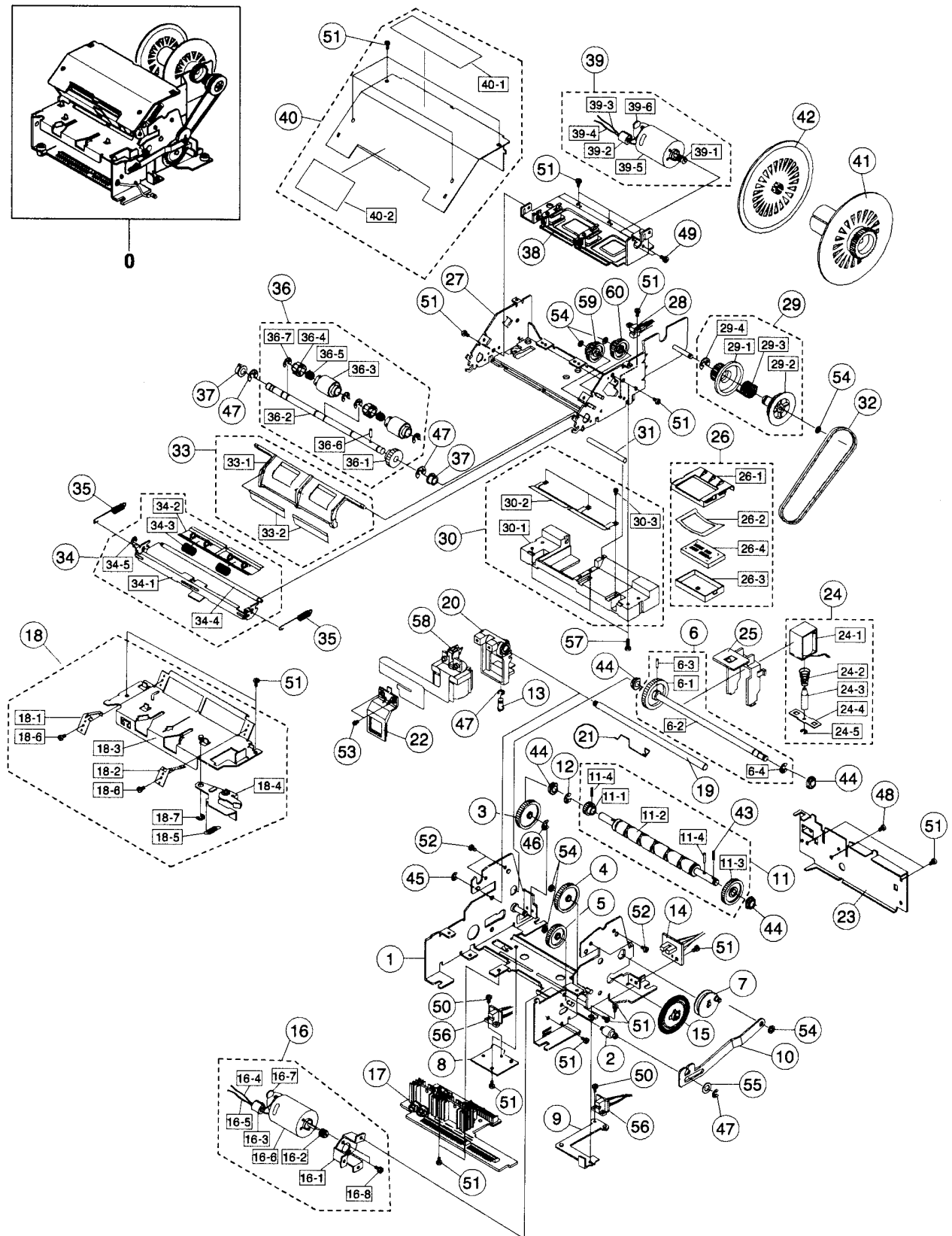
Cover Ass'y Parts Lists

SA : Service Available

Location No.	Description	SEC. Code	Q'ty	SA	Remark
0	COVER ASS'Y	-	1	X	
1	MEA-COVER PRINTER	JK97-01070A	1	O	
1-1	PMO-COVER PRINTER	JK72-40905A	1	O	
1-2	IPR-CUTTER PAPER	JK70-10319A	1	O	
2	LABEL(R)-SAMSUNG	JK68-30221A	1	O	
3	LABEL(R)-MODE S/W	JK68-30111D	1	O	
4	PMO-WINDOW JOURNAL	JK72-40315A	1	O	
5	MEC-LOCK	JK75-10388A	1	O	
6	IPR-PLATE CLIP	JK70-10323A	1	O	
7	PMO-WINDOW DISPLAY	JK72-40235A	1	O	
8	PMO-WINDOW TURRET	JK72-40317A	1	O	
9	ELA ETC-TURRET	JK96-00194A	1	O	
9-1	RPR-PAD TURRET	JK73-10202A	2	O	
9-2	CBF-HARNESS	-	1	X	
9-3	DISPLAY VFD-DC9G	JK07-00003A	1	O	
9-4	PCB-TURRET	-	1	X	
10	PMO-TURRET BODY	JK72-40316A	1	O	
11	SCREW-MACHINE	6001-000321	1	O	
12	PMO-CASE UPPER	JK72-00027A	1	O	
13	SCREW-TAPPING	6002-000367	2	O	
14	ELA ETC-MODE S/W	JK96-00130A	1	O	
14-1	SWITCH-ROTARY	3406-000116	1	O	
14-2	CBF-HARNESS	JK39-40023A	1	O	
15	SCREW-MACHINE	6001-000367	2	O	
16	IPR-BRKT DISPLAY	JK70-10378A	1	O	
17	SCREW-TAPPING	6002-000175	3	O	
18	PBA SUB-4615, DISPLAY	JK92-00973A	1	O	
18-1	DISPLAY VFD-DC10G	JK07-00004A	1	O	
18-2	CBF HARNESS	-	10	X	
18-3	PCB-DISPLAY(FRONT)	-	1	X	
19	SCREW-TAPPING	6002-000175	2	O	

O: Service available X: Service not available

3. Printer Ass'y (ERP-400) Exploded View



Printer Ass'y (ERP-400) Parts Lists

SA : Service Available

Location No.	Description	SEC. Code	Q'ty	SA	Remark
0	UNIT-PRINTER ASS'Y (ERP-400)	JK59-10511A	1	O	
1	MAIN FRAME CAULKING ASS'Y	JK81-10511Z	1	O	
2	SHAFT LEVER SUPPORT	JK81-10131A	1	O	
3	GEAR REDUCTION_2	JK81-10506G	1	O	
4	GEAR HEAD IDLE_2	JK81-10506Q	1	O	
5	GEAR HEAD IDLE_1	JK81-10506P	1	O	
6	GEAR REDUCTION_3 ASS'Y	JK81-10512A	1	O	
6-1	GEAR REDUCTION_3	JK81-10054A	1	O	
6-2	SHAFT REDUCTION_3	JK81-10055A	1	O	
6-3	SPRING PIN (2x10)	JK81-10513G	1	O	
6-4	E-RING (RE5.0)	JK81-10511M	1	O	
7	ROLLING CAM ASS'Y	JK81-10512B	1	O	
8	R-DETECTOR PLATE L	JK81-10057A	1	O	
9	R-DETECTOR PLATE R	JK81-10058A	1	O	
10	RIBBON DRIVING LEVER	JK81-10510J	1	O	
11	LEAD CAM ASS'Y	JK81-10512E	1	O	
11-1	GEAR REDUCTION_1	JK81-10059A	1	O	
11-2	LEAD CAM	JK81-10060A	1	O	
11-3	GEAR_HEAD_FEEDING	JK81-10286A	1	O	
11-4	SPRING PIN (2X10)	JK81-10513G	2	O	
12	E-RING (RE5.0)	6044-000231	1	O	
13	SHAFT_TRACER	JK81-10099A	1	O	
14	ENCODER SENSOR ASS'Y	JK81-10063A	1	O	
15	ENCODER	JK81-10508A	1	O	
16	HEAD MOTOR ASS'Y	JK81-10064A	1	O	
16-1	MOTOR HEAD BRACKET	JK81-10065A	1	O	
16-2	GEAR HEAD MOTOR	JK81-10066A	1	O	
16-3	CORE	JK81-10067A	1	O	
16-4	WIRE (L140, BLU)	JK81-10068A	1	O	
16-5	WIRE (L140, RED)	JK81-10069A	1	O	
16-6	MOTOR (RS-380PH)	JK81-10070A	1	O	
16-7	CONDENSOR (104)	JK81-00118A	1	O	
16-8	SCREW (PS 2.6x4)	JK81-10513H	2	O	
17	MAIN PCB ASS'Y	JK81-10072A	1	O	
17-1	MAIN PCB	JK81-10073A	1	O	
17-2	HEAT SINK	JK81-10074A	2	O	
17-3	SCREW-M (PH3x4)	JK81-10075A	2	O	
17-4	TR (TIP41C)	JK81-10076A	1	O	
17-5	TR (TIP42C)	JK81-10077A	1	O	
17-6	JUMP WIRE	JC39-40511A	7	O	
17-7	RESISTOR (12K)	JK81-10079A	1	O	
17-8	RESISTOR (18K)	JK81-10080A	1	O	
17-9	RESISTOR (2K)	JK81-10081A	1	O	
17-10	RESISTOR (220Ω)	JK81-10082A	1	O	
17-11	RESISTOR (6.2K)	JK81-10083A	2	O	
17-12	RESISTOR-CEMENT (7Ω)	JK81-10084A	1	O	
17-13	RESISTOR-CEMENT (10Ω)	JK81-10085A	1	O	
17-14	RESISTOR-SEMI (2K)	JK81-10086A	2	O	

Printer Ass'y (ERP-400) Parts Lists

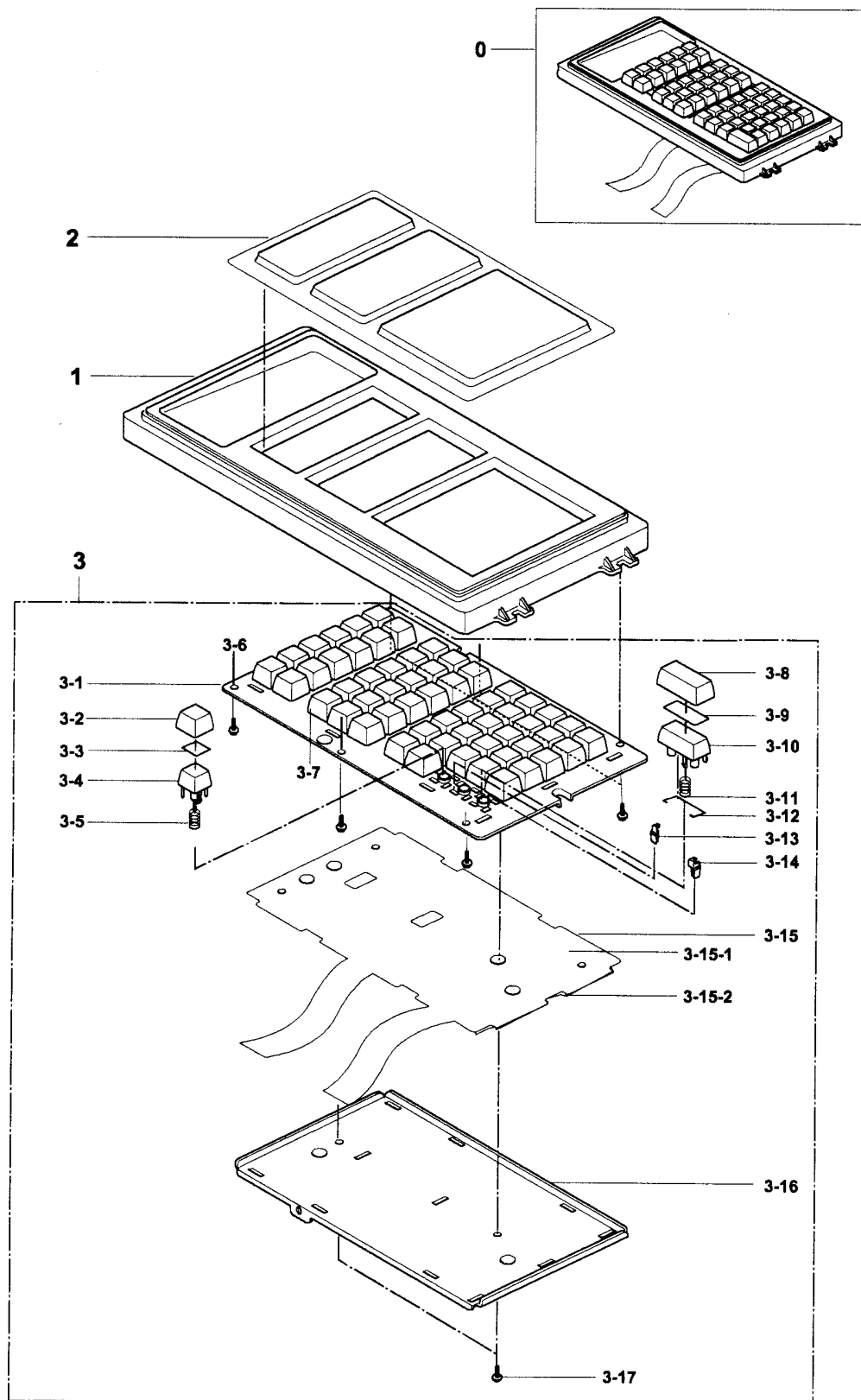
SA : Service Available

Location No.	Description	SEC. Code	Q'ty	SA	Remark
17-15	CAPACITOR-E (50V, 47UF)	JK81-10087A	2	O	
17-16	IC (L200)	JK81-10088A	2	O	
17-17	CONNECTOR (12PIN)	JK81-10089A	1	O	
17-18	CONNECTOR (13PIN)	JK81-10090A	1	O	
17-19	CONNECTOR (22PIN)	JK81-10091A	1	O	
18	RIBBON FRAME ASS'Y	JK81-10092A	1	O	
18-1	RIBBON GUIDE PLATE L	JK81-10093A	1	O	
18-2	RIBBON GUIDE PLATE R	JK81-10094A	1	O	
18-3	RIBBON FRAME CAULKING ASS'Y	JK81-10095A	1	O	
18-4	RIBBON FEED LEVER ASS'Y	JK81-10096A	1	O	
18-5	SPRING RIBBON FEEDING	JK81-10097A	1	O	
18-6	SCREW (T/T PH 3X4)	JK81-10511D	2	O	
18-7	E-RING (RE4.0)	JK81-10511L	1	O	
19	SHAFT HEAD GUIDE	JK81-10098A	1	O	
20	HEAD CARRIAGE ASS'Y	JK81-10512M	1	O	
21	SPRING CARRIAGE LOAD	JK81-10100A	1	O	
22	HEAD COVER	JK81-10507A	1	O	
23	BACK COVER	JK81-10512Q	1	O	
24	SOLENOID STAMP ASS'Y	JK81-10512R	1	O	
24-1	SOLENOID STAMP	-	1	X	
24-2	STAMP COIL SPRING	-	1	X	
24-3	STAMP PLUNGER	-	1	X	
24-4	STAMP SPRING	-	1	X	
24-5	E-RING (RE3.0)	-	1	X	
25	STAMP PUSER	JK81-10512S	1	O	
26	STAMP ASS'Y	-	1	X	
26-1	STAMP COVER	JK81-10510M	1	O	
26-2	PLATE STAMP SPRING	JK81-10510N	1	O	
26-3	STAMP CASE	JK81-10101A	1	O	
26-4	RPR-STEAMP RUBBER	JK73-10204A	1	O	
27	UPPER FRAME ASS'Y	JK81-10512T	1	O	
28	VALIDATION SENSOR ASS'Y	JK81-10102A	1	O	
29	PAPER ROLLING ASS'Y	JK81-10512V	1	O	
29-1	GEAR PAPER ROLLING	JK81-10103A	1	O	
29-2	PULLEY PAPER ROLLING	JK81-10104A	1	O	
29-3	SPRING PAPER ROLLING	JK81-10105A	1	O	
29-4	E-RING (RE6.0)	JK81-10106A	1	O	
30	STAMP PAPER GUIDE ASS'Y	JK81-10512W	1	O	
30-1	STAMP PAPER GUIDE	JK81-10107A	1	O	
30-2	PLATEN PAPER GUIDE	JK81-10108A	1	O	
30-3	SCREW (T/T CH 2x4)	JK81-10109A	3	O	
31	SHAFT PAPER ROLLER	JK81-10110A	1	O	
32	TIMMING BELT	JK81-10509Y	1	O	
33	PAPER GUIDE ASS'Y	JK81-10512Y	1	O	
33-1	PAPER GUIDE	JK81-10111A	1	O	
33-2	GUIDE	JK81-10112A	2	O	

SA. : Service Available

Location No.	Description	SEC. Code	Q'ty	SA	Remark
34	RELEASE LEVER ASS'Y	JK81-10512Z	1	O	
34-1	RELEASE LEVER	JK81-10113A	1	O	
34-2	PAPER HOLD ROLLER PLATE	JK81-10114A	1	O	
34-3	PAPER HOLD ROLLER	JK81-10115A	2	O	
34-4	SHAFT HOLD ROLLER	JK81-10116A	1	O	
34-5	E-RING (RE2.5)	JK81-10117A	1	O	
35	SPRING RELEASE	JK81-10521A	2	O	
36	PAPER FEED ROLLER ASS'Y	JK81-10118A	1	O	
36-1	GEAR PAPER FEED	-	1	X	
36-2	SHAFT PAPER FEED	-	1	X	
36-3	PAPER FEED ROLLER ASS'Y	-	2	X	
36-4	RATCHET	-	2	X	
36-5	CLUTCH SPRING	-	2	X	
36-6	SPRING PIN (2X10)	-	1	X	
36-7	E-RING (RE4.0)	-	4	X	
37	POLY BEARING	JK81-10170A	2	O	
38	MOTOR FEEDING BRACKET ASS'Y	JK81-10513B	1	O	
39	PAPER MOTOR ASS'Y	JK81-10124A	1	O	
39-1	GEAR FEED MOTOR	JK81-10125A	1	O	
39-2	CORE	JK81-10067A	1	O	
39-3	WIRE (L340, BLU)	JK81-10126A	1	O	
39-4	WIRE (L340, RED)	JK81-10127A	1	O	
39-5	MOTOR (RS-380PH)	JK81-10070A	1	O	
39-6	CONDENSOR (104)	JK81-00118A	1	O	
40	COVER-1	JK81-10513D	1	O	
40-1	LABEL STICKER-1	-	1	X	
40-2	LABEL STICKER-2	-	1	X	
41	SPOOL ASS'Y	JK81-10513E	1	O	
42	DISK	JK81-10513F	1	O	
43	PARALLEL PIN (ø2x10)	JK81-10511Q	1	O	
44	OILLESS METAL_1	JK81-10510R	4	O	
45	E-RING (RE3.0)	JK81-10511K	1	O	
46	E-RING (RE4.0)	JK81-10511L	1	O	
47	E-RING (RE5.0)	JK81-10511M	4	O	
48	SCREW (PH 3x3)	JK81-10128A	1	O	
49	SCREW (PS 2.6x4)	JK81-10513H	2	O	
50	SCREW (T/T PH 3x4)	JK81-10511D	2	O	
51	SCREW (T/T BH 3x5)	JK81-10513J	20	O	
52	SCREW (CP 3x6)	JK81-10513K	4	O	
53	SCREW (T/P PH 3x10)	JK81-10513L	2	O	
54	PSW (ø3.6x6x0.5)	JK81-10511F	6	O	
55	PW (ø5x10x1.0)	JK81-10511H	1	O	
56	PHOTO SENSOR (SG-23FH)	JK81-10130A	2	O	
57	SCREW (PH+ 3X18)	JK81-10129A	3	O	
58	PRINTER HEAD	JK81-10038A	1	O	
59	GEAR FEED IDLE_1	JK81-10286H	1	O	
60	GEAR FEED IDLE_2	JK81-10286J	1	O	

4. KeyBoard Ass'y (60 Key) Exploded View



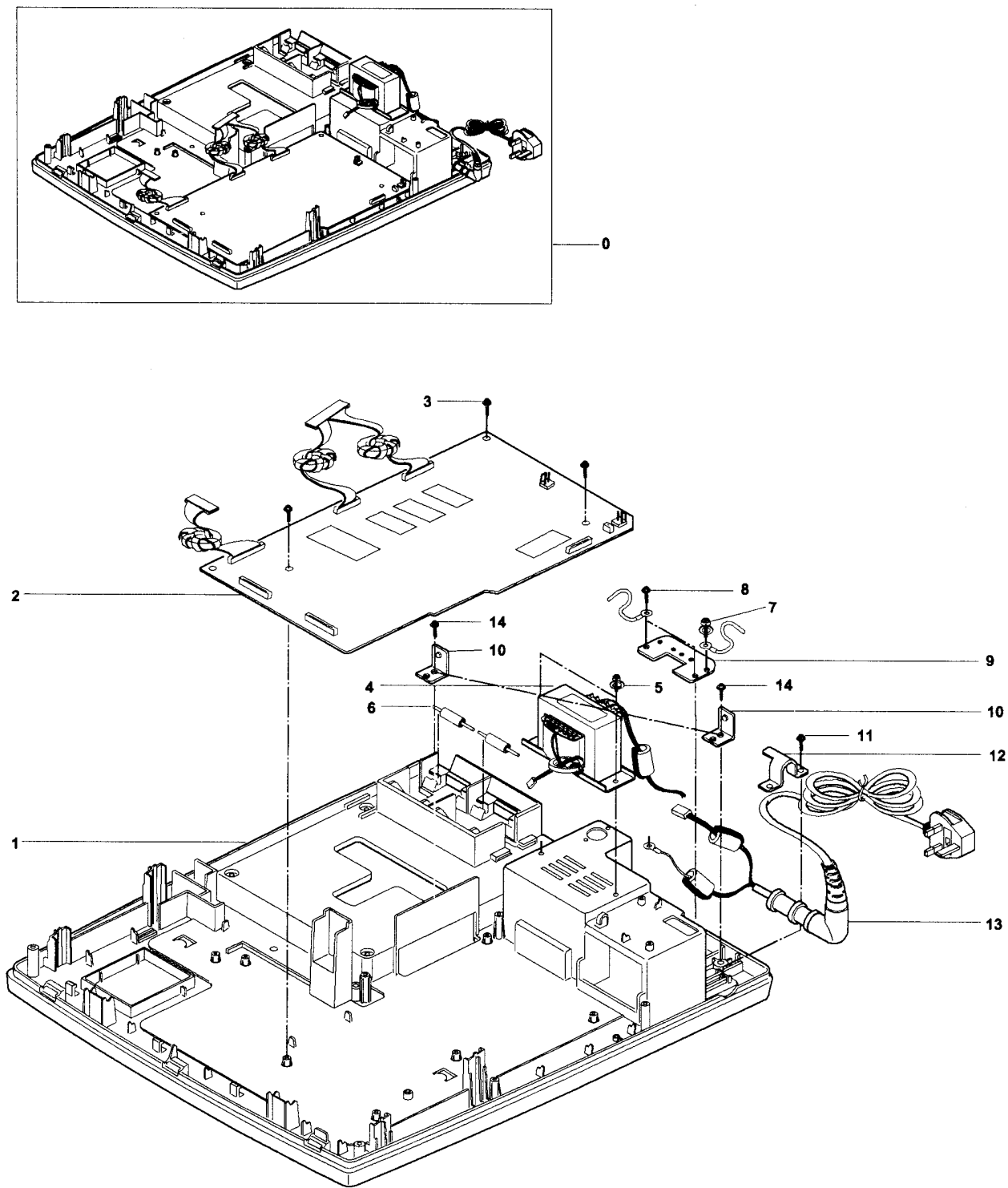
KeyBoard Ass'y (60 Key) Parts Lists

SA : Service Available

Location No.	Description	SEC. Code	Q'ty	SA	Remark
0	ELA UNIT-KEYBOARD	-	1	X	
1	PMO-HOUSING KEYBOARD	JK72-40322A	1	O	
2	REX-WATER PROOF	JK73-20201A	1	O	
3	UNIT-KEYBOARD	JK59-10131A	1	O	
3-1	PMO-FRAME KEYBOARD	-	1	X	
3-2	AS-KEY CAP S (1 x 1)	JK81-10286D	1	O	
3-3	KBD LABEL	-	1	X	
3-4	MEC KEY TOP S	JK75-00029A	1	O	
3-5	AS-SPRING RETURN	JK81-10286A	1	O	
3-6	SCREW-TAPPING	6002-000175	8	O	
3-7	MEC-KEY TOP ASSY	JK75-00028A	1	O	
	PMO-KEY CAP/1	-	1	X	
	PMO-KEY CAP/2	-	1	X	
	PMO-KEY CAP/3	-	1	X	
	PMO-KEY CAP/4	-	1	X	
	PMO-KEY CAP/5	-	1	X	
	PMO-KEY CAP/6	-	1	X	
	PMO-KEY CAP/7	-	1	X	
	PMO-KEY CAP/8	-	1	X	
	PMO-KEY CAP/9	-	1	X	
	PMO-KEY CAP/00	-	1	X	
	PMO-KEY CAP/.	-	1	X	
	PMO-KEY CAP/0	-	1	X	
3-8	AS-KEY CAP L(1x2)	JK81-10286E	1	O	
3-9	KBD LABEL	-		X	
3-10	MEC KEY TOP L	JK75-00030A	1	O	
3-11	SPRING-TS	JK61-70301A	1	O	
3-12	IPR-SPACER KEYBOARD	JK70-10382A	1	O	
3-13	PMO-HOLDER HOOK(A)	JK72-40324A	1	O	
3-14	PMO-HOLDER HOOK(B)	JK72-40325A	1	O	
3-15	ASSY PCB-FPC	JK41-10100F	1	O	
3-15-1	PCB-FPC A, 60KEY	-	1	X	
3-15-2	PCB-FPC B, 60KEY	-	1	X	
3-16	IPR-PLATE BASE	JK70-10379A	1	O	
3-17	SCREW-TAPPING	6002-000147	2	O	

O: Service available X: Service not available

5. Cover Lower Ass'y Exploded View



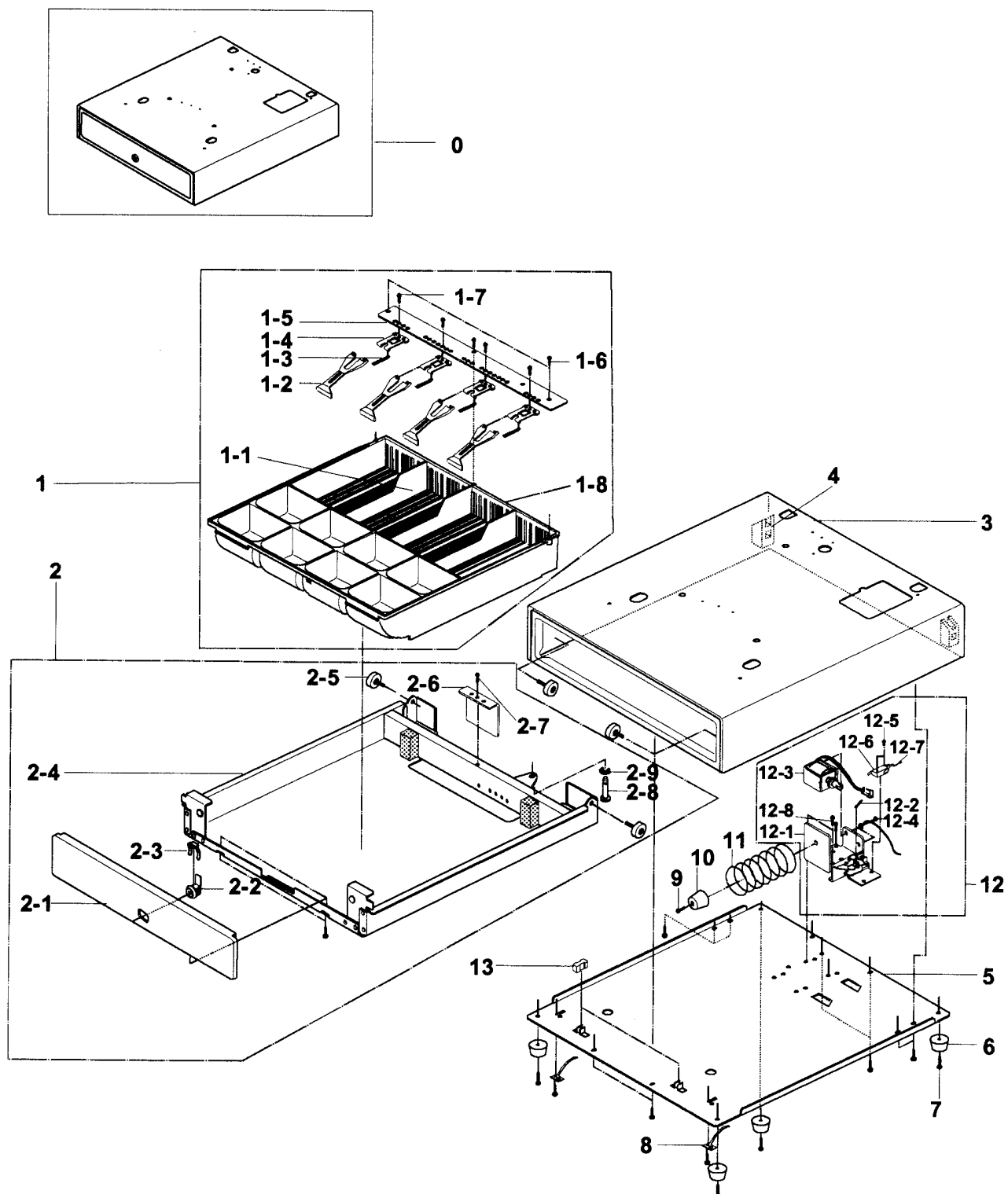
Cover Lower Ass'y Parts Lists

SA. : Service Available

Location No.	Description	SEC. Code	Q'ty	SA	Remark
0	COVER LOWER ASS'Y	-	1	X	
1	PMO-CASE LOWER	JK72-00028A	1	O	
2	PBA MAIN-MAIN BOARD	JK92-00113A	1	O	
3	SCREW-TAPPING	6002-000174	3	O	
4	TRANS POWER	JK26-30105E	1	O	
5	SCREW-ASS'Y TAPPING	6006-000195	2	O	
6	PMO-ROLLER PAPER/END	JK72-40330A	2	O	
7	SCREW-ASS'Y TAPPING	6006-000199	1	O	
8	SCREW-TAPPING	6002-000174	2	O	
9	GROUND-PLATE	JK70-10417A	1	O	
10	IPR-BRK CASING	JK70-10002A	2	O	
11	SCREW-TAPPING	6002-000174	2	O	
12	IPR-HOLDER CORD	JK70-10312A	1	O	
13	CBF POWER CORD(250V,7A)	JK39-10301W	1	O	
14	SCREW TAPPING	6002-000171	2	O	

O: Service available X: Service not available

6. Drawer Ass'y Exploded View



Drawer Ass'y Parts Lists

SA : Service Available

Location No.	Description	SEC. Code	Q'ty	SA	Remark
0	DRAWER ASS'Y (MEC-DRAWER A84YA)	JK75-00017A	1	O	
1	MEA UNIT-BILL COIN	JK97-00409A	1	O	
1-1	PMO-PANEL PARTITION	JK72-40269A	3	O	
1-2	PMO-LEVER PRESS	JK72-40267A	4	O	
1-3	SPRING-ES	6107-000134	4	O	
1-4	IPR-HOLDER LEVER	JK70-10314A	4	O	
1-5	IPR-PLATE HOLDER	JK70-10304A	1	O	
1-6	SCREW-TAPPING	6002-000175	3	O	
1-7	SCREW-TAPTITE	6003-001078	4	O	
1-8	PMO-BILL/COIN TILL	JK72-40291A	1	O	
2	MEA UNIT-TRAY TILL	JK97-01073A	1	O	
2-1	IPR-PLATE FRONT	-	1	X	
2-2	MEC-LOCK	JK75-10388A	1	O	
2-3	IPR-PLATE CLIP	JK70-10323A	1	O	
2-4	MEC-TRAY TILL	-	1	X	
2-5	MEC-ROLLER	JK75-10386A	2	O	
2-6	IPR-SUPPORT TRAY	-	1	X	
2-7	SCREW-TAPPING	6002-000221	1	O	
2-8	ICT-SHAFT PIN	-	1	X	
2-9	RING-E	-	1	X	
3	MEC-SUB HOUSING(BASIC)	JK75-00026A	1	O	
	IPR-HOUSING DRAWER	-	1	X	
	IPR-FRONT PLATE	-	1	X	
	IPR-CHANNEL LH	-	1	X	
	IPR-CHANNEL RH	-	1	X	
	IPR-SUPPORT CHANNEL	-	1	X	
	IPR-REAL PLATE	-	1	X	
4	REX-PAD DRAWER	JK73-20207A	2	O	
5	IPR-PLATE BOTTOM	JK70-10938A	1	O	
6	FOOT-RUBBER	JK61-40200A	4	O	

O: Service available X: Service not available

Drawer Ass'y Parts Lists

SA. : Service Available

Location No.	Description	SEC. Code	Q'ty	SA	Remark
7	SCREW-TAPPING	6001-000172	4	O	
8	IPR-PLATE SPRING/D	JK70-10401A	2	O	
9	SCREW-MACHINE	6001-000172	1	O	
10	REX-BUMPER	JK73-20210A	1	O	
11	SPRING-PUSH	JK61-70100A	1	O	
12	MEA UNIT-LOCK LEVER	JK97-01075A	1	O	
12-1	MEC-LOCK LEVER	JK75-10027A	1	O	
12-2	SPRING-ES	6107-001041	1	O	
12-3	SOLENOID-DC	JK33-10500A	1	O	
12-4	SCREW-MACHINE	6001-000131	2	O	
12-5	SCREW-MACHINE	6001-000525	2	O	
12-6	SWITCH-MICRO	3405-001013	1	O	
12-7	CBF-HARNESS	JK39-40301R	1	O	
12-8	SCREW-TAPPING	6003-000221	3	O	
13	RMO-STOPPER	JK73-40200A	2	O	

O: Service available X: Service not available

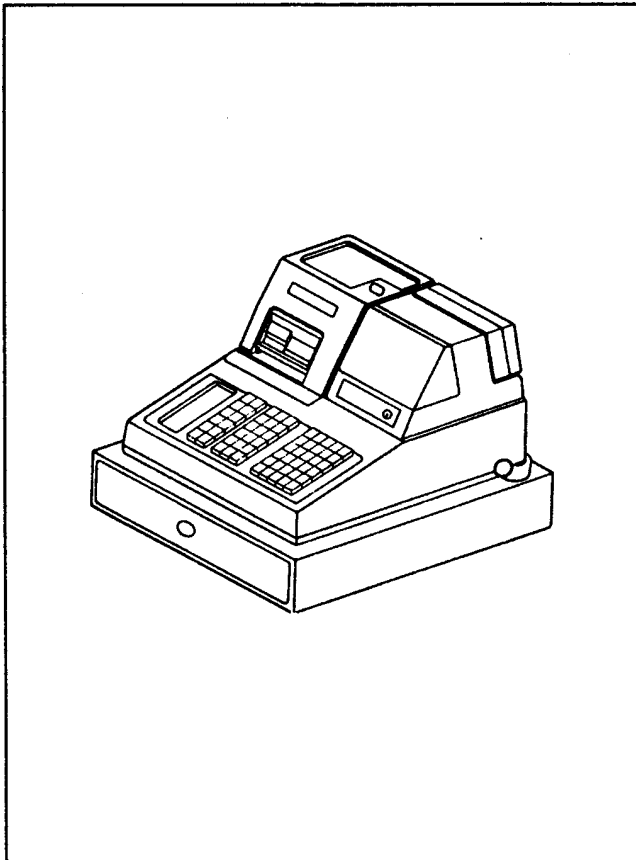
SAMSUNG

ER-4615 SERIES

ER-4640

APPENDIX **Service Manual**

ELECTRONIC CASH REGISTER



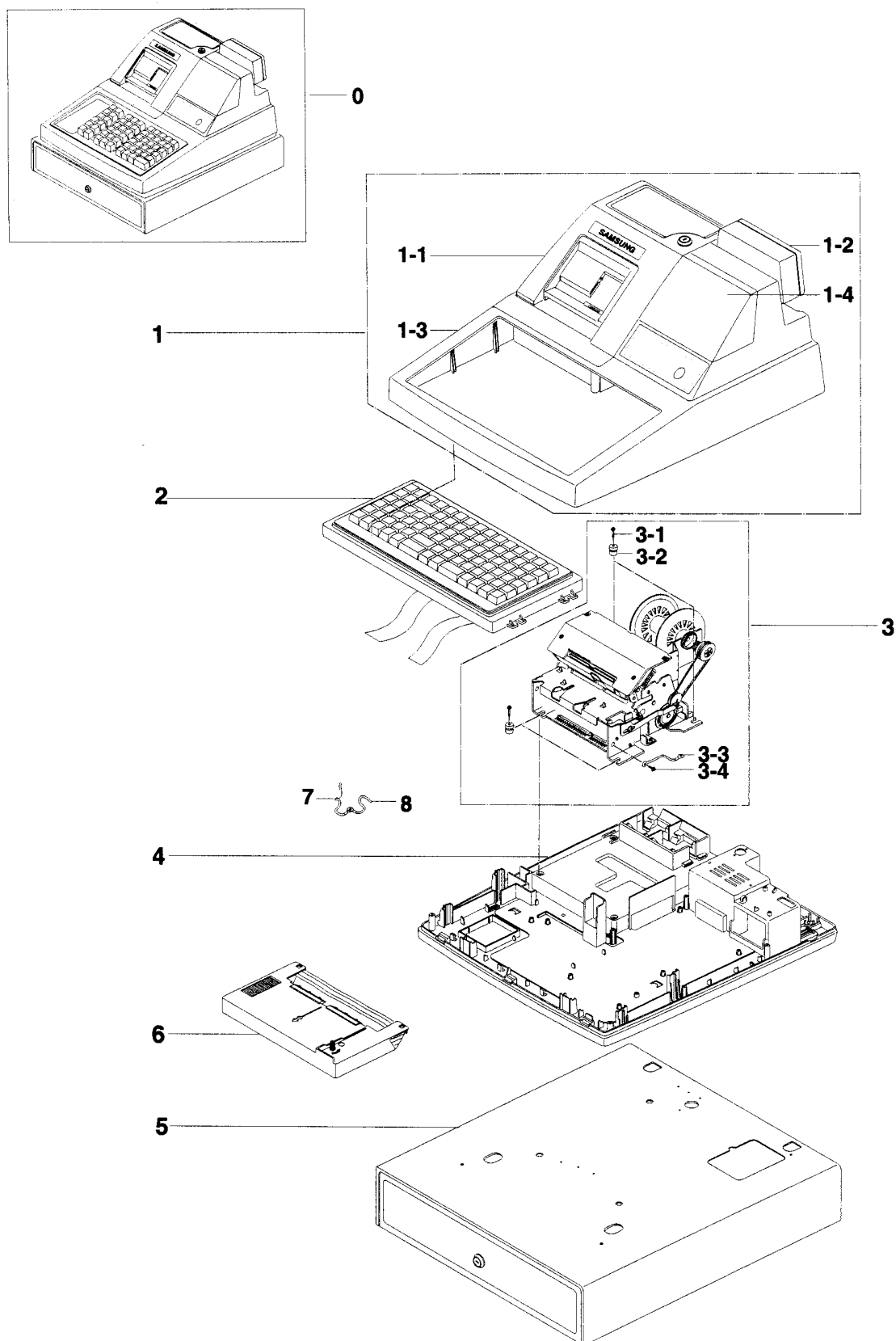
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1. Exploded Views and Parts List

Exploded Views and Parts Lists

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- 3. Printer Ass'y (ERP-400) Exploded View & Parts Lists**
- 4. KeyBoard Ass'y (90 Key) Exploded View & Parts Lists**
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1. Main Exploded View



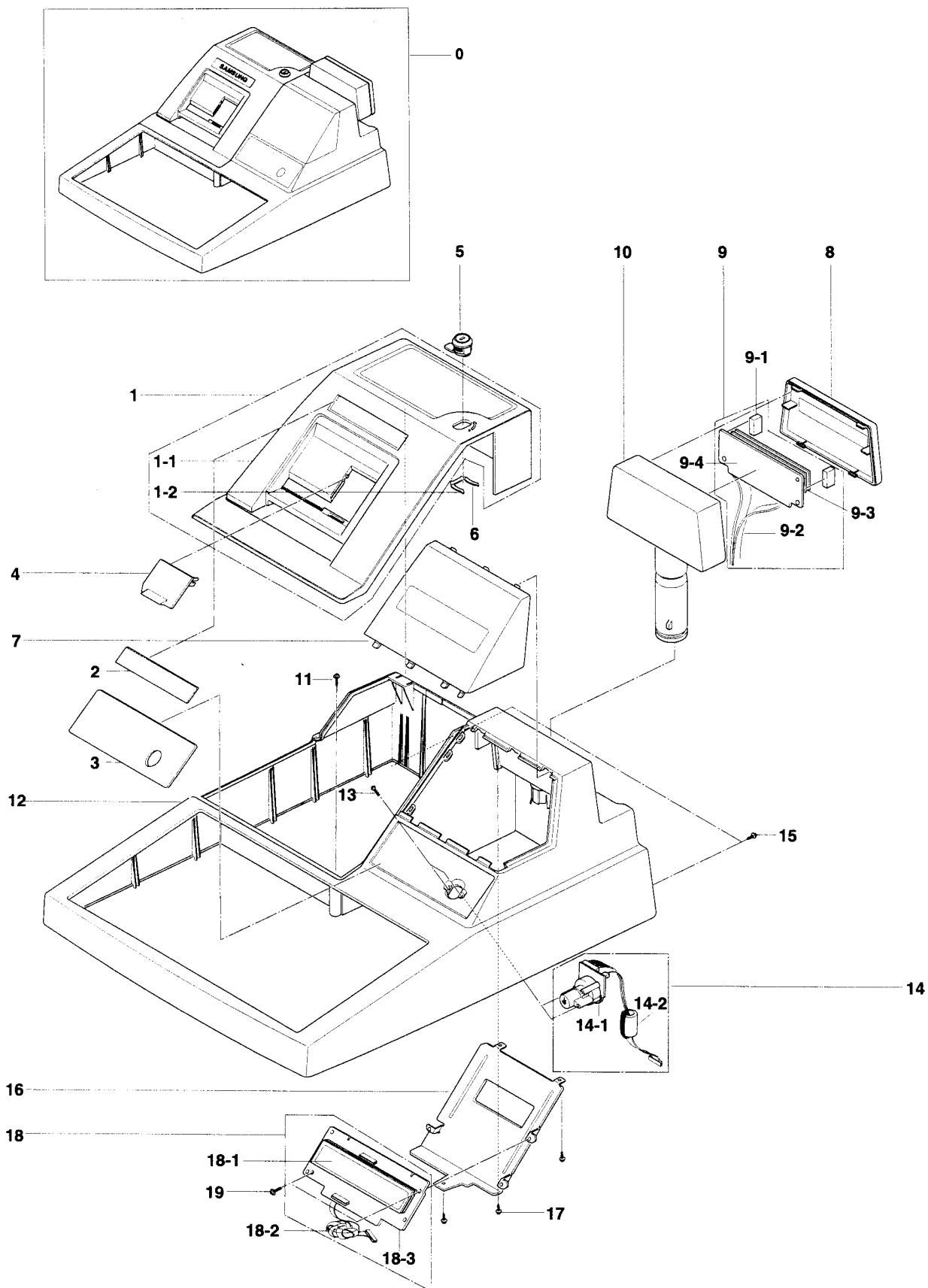
Main Parts Lists

SA. : Service Available

Location No.	Description	SEC. Code	Q'ty	SA	Remark
0	MAIN SET	ER-4640(UK)	1	X	
1	COVER ASS'Y	-	1	X	
1-1	MEA-COVER PRINTER	JK97-01070A	1	O	
1-2	ELA ETC-TURRET	JK96-00194A	1	O	
1-3	PMO-CASE UPPER	JK72-00027A	1	O	
1-4	ELA HOU-DISPLAY	JK96-00141A	1	O	
2	UNIT-KEYBOARD	JK59-10145A	1	O	
3	UNIT-PRINTER ASS'Y(ERP-400)	JK59-10511A	1	O	
3-1	SCREW-TAPPING	6002-000209	4	O	
3-2	RMO-PRINTER	JK73-40201A	4	O	
3-3	CBF-HARNESS (GND)	JK39-40021A	1	O	
3-4	SCREW-MACHINE	6001-000618	1	O	
4	COVER LOWER-ASS'Y	-	1	X	
5	DRAWER ASS'Y (MEC-DRAWER A84YA)	JK75-00017A	1	O	
6	MEC-RIBBON CASSETTE	JK75-10383A	1	O	
7	CBF-HARNESS (GND)	JK39-40200A	1	O	
8	CBF-HARNESS (GND)	JK39-40302C	1	O	

O: Service available X: Service not available

2. Cover Ass'y Exploded View



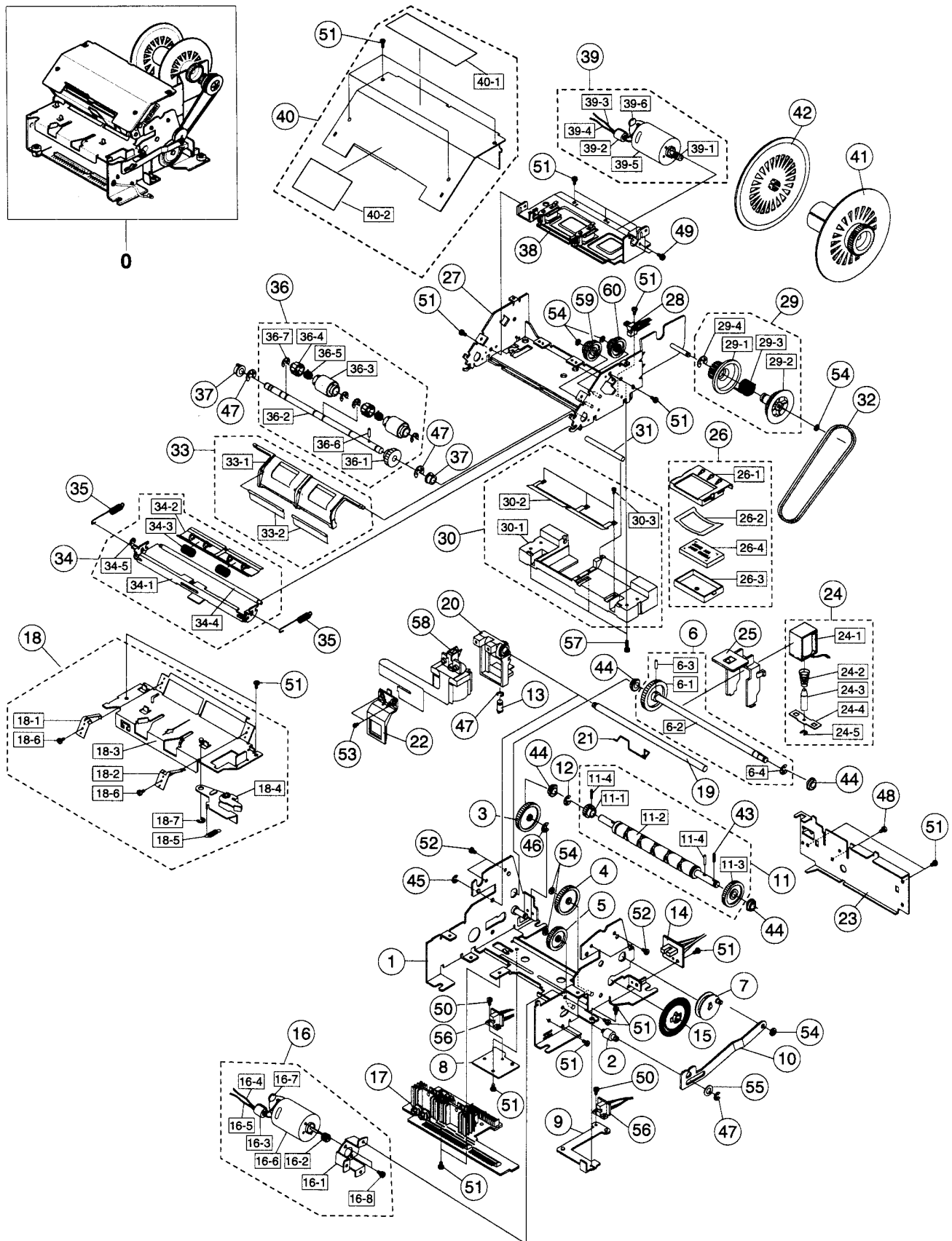
Cover Ass'y Parts Lists

SA. : Service Available

Location No.	Description	SEC. Code	Q'ty	SA	Remark
0	COVER ASS'Y	-	1	X	
1	MEA-COVER PRINTER	JK97-01070A	1	O	
1-1	PMO-COVER PRINTER	JK72-40905A	1	O	
1-2	IPR-CUTTER PAPER	JK70-10319A	1	O	
2	LABEL(R)-SAMSUNG	JK68-30221A	1	O	
3	LABEL(R)-MODE S/W	JK68-30111E	1	O	
4	PMO-WINDOW JOURNAL	JK72-40315A	1	O	
5	MEC-LOCK	JK75-10388A	1	O	
6	IPR-PLATE CLIP	JK70-10323A	1	O	
7	PMO-WINDOW DISPLAY	JK72-40235A	1	O	
8	PMO-WINDOW TURRET	JK72-40317A	1	O	
9	ELA ETC-TURRET	JK96-00194A	1	O	
9-1	RPR-PAD TURRET	JK73-10202A	2	O	
9-2	CBF-HARNESS	-	1	X	
9-3	DISPLAY VFD-DC9G	JK07-00003A	1	O	
9-4	PCB-TURRET	-	1	X	
10	PMO-TURRET BODY	JK72-40316A	1	O	
11	SCREW-MACHINE	6001-000321	1	O	
12	PMO-CASE UPPER	JK72-00027A	1	O	
13	SCREW-TAPPING	6002-000367	2	O	
14	ELA ETC-MODE S/W	JK96-00130A	1	O	
14-1	SWITCH-ROTARY	3406-000116	1	O	
14-2	CBF-HARNESS	JK39-40023A	1	O	
15	SCREW-MACHINE	6001-000367	2	O	
16	IPR-BRKT DISPLAY	JK70-10378A	1	O	
17	SCREW-TAPPING	6002-000175	3	O	
18	PBA SUB-4615, DISPLAY	JK92-00973A	1	O	
18-1	DISPLAY VFD-DC10G	JK07-00004A	1	O	
18-2	CBF HARNESS	-	10	X	
18-3	PCB-DISPLAY(FRONT)	-	1	X	
19	SCREW-TAPPING	6002-000175	2	O	

O: Service available X: Service not available

3. Printer Ass'y (ERP-400) Exploded View



Printer Ass'y (ERP-400) Parts Lists

SA. : Service Available

Location No.	Description	SEC. Code	Q'ty	SA	Remark
0	UNIT-PRINTER ASS'Y (ERP-400)	JK59-10511A	1	O	
1	MAIN FRAME CAULKING ASS'Y	JK81-10511Z	1	O	
2	SHAFT LEVER SUPPORT	JK81-10131A	1	O	
3	GEAR REDUCTION_2	JK81-10506G	1	O	
4	GEAR HEAD IDLE_2	JK81-10506Q	1	O	
5	GEAR HEAD IDLE_1	JK81-10506P	1	O	
6	GEAR REDUCTION_3 ASS'Y	JK81-10512A	1	O	
6-1	GEAR REDUCTION_3	JK81-10054A	1	O	
6-2	SHAFT REDUCTION_3	JK81-10055A	1	O	
6-3	SPRING PIN (2x10)	JK81-10513G	1	O	
6-4	E-RING (RE5.0)	JK81-10511M	1	O	
7	ROLLING CAM ASS'Y	JK81-10512B	1	O	
8	R-DETECTOR PLATE L	JK81-10057A	1	O	
9	R-DETECTOR PLATE R	JK81-10058A	1	O	
10	RIBBON DRIVING LEVER	JK81-10510J	1	O	
11	LEAD CAM ASS'Y	JK81-10512E	1	O	
11-1	GEAR REDUCTION_1	JK81-10059A	1	O	
11-2	LEAD CAM	JK81-10060A	1	O	
11-3	GEAR_HEAD_FEEDING	JK81-10286A	1	O	
11-4	SPRING PIN (2X10)	JK81-10513G	2	O	
12	E-RING (RE5.0)	6044-000231	1	O	
13	SHAFT_TRACER	JK81-10099A	1	O	
14	ENCODER SENSOR ASS'Y	JK81-10063A	1	O	
15	ENCODER	JK81-10508A	1	O	
16	HEAD MOTOR ASS'Y	JK81-10064A	1	O	
16-1	MOTOR HEAD BRACKET	JK81-10065A	1	O	
16-2	GEAR HEAD MOTOR	JK81-10066A	1	O	
16-3	CORE	JK81-10067A	1	O	
16-4	WIRE (L140, BLU)	JK81-10068A	1	O	
16-5	WIRE (L140, RED)	JK81-10069A	1	O	
16-6	MOTOR (RS-380PH)	JK81-10070A	1	O	
16-7	CONDENSOR (104)	JK81-00118A	1	O	
16-8	SCREW (PS 2.6x4)	JK81-10513H	2	O	
17	MAIN PCB ASS'Y	JK81-10072A	1	O	
17-1	MAIN PCB	JK81-10073A	1	O	
17-2	HEAT SINK	JK81-10074A	2	O	
17-3	SCREW-M (PH3x4)	JK81-10075A	2	O	
17-4	TR (TIP41C)	JK81-10076A	1	O	
17-5	TR (TIP42C)	JK81-10077A	1	O	
17-6	JUMP WIRE	JC39-40511A	7	O	
17-7	RESISTOR (12K)	JK81-10079A	1	O	
17-8	RESISTOR (18K)	JK81-10080A	1	O	
17-9	RESISTOR (2K)	JK81-10081A	1	O	
17-10	RESISTOR (220Ω)	JK81-10082A	1	O	
17-11	RESISTOR (6.2K)	JK81-10083A	2	O	
17-12	RESISTOR-CEMENT (7Ω)	JK81-10084A	1	O	
17-13	RESISTOR-CEMENT (10Ω)	JK81-10085A	1	O	
17-14	RESISTOR-SEMI (2K)	JK81-10086A	2	O	

Printer Ass'y (ERP-400) Parts Lists

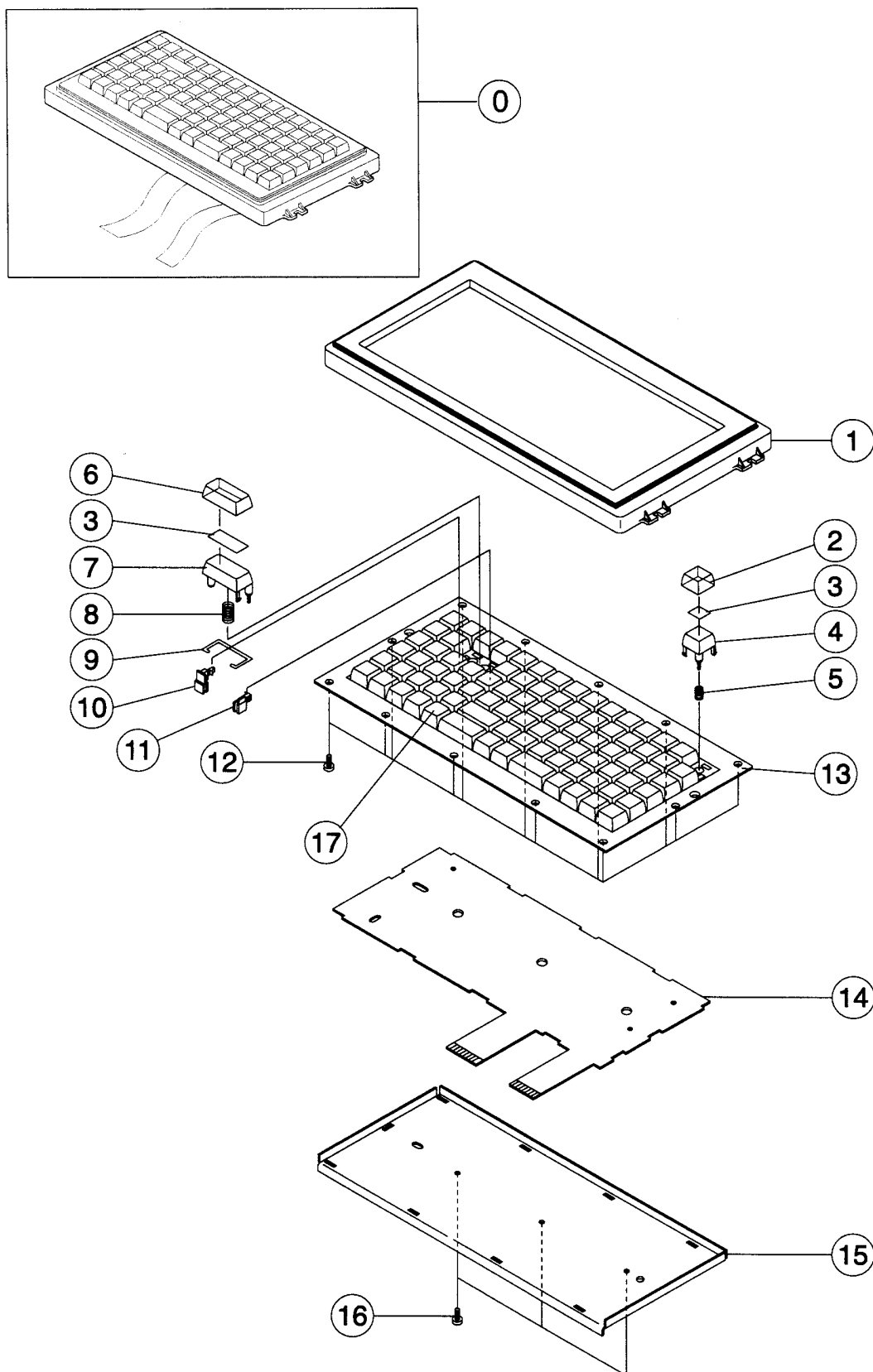
SA : Service Available

Location No.	Description	SEC. Code	Q'ty	SA	Remark
17-15	CAPACITOR-E (50V, 47UF)	JK81-10087A	2	O	
17-16	IC (L200)	JK81-10088A	2	O	
17-17	CONNECTOR (12PIN)	JK81-10089A	1	O	
17-18	CONNECTOR (13PIN)	JK81-10090A	1	O	
17-19	CONNECTOR (22PIN)	JK81-10091A	1	O	
18	RIBBON FRAME ASS'Y	JK81-10092A	1	O	
18-1	RIBBON GUIDE PLATE L	JK81-10093A	1	O	
18-2	RIBBON GUIDE PLATE R	JK81-10094A	1	O	
18-3	RIBBON FRAME CAULKING ASS'Y	JK81-10095A	1	O	
18-4	RIBBON FEED LEVER ASS'Y	JK81-10096A	1	O	
18-5	SPRING RIBBON FEEDING	JK81-10097A	1	O	
18-6	SCREW (T/T PH 3X4)	JK81-10511D	2	O	
18-7	E-RING (RE4.0)	JK81-10511L	1	O	
19	SHAFT HEAD GUIDE	JK81-10098A	1	O	
20	HEAD CARRIAGE ASS'Y	JK81-10512M	1	O	
21	SPRING CARRIAGE LOAD	JK81-10100A	1	O	
22	HEAD COVER	JK81-10507A	1	O	
23	BACK COVER	JK81-10512Q	1	O	
24	SOLENOID STAMP ASS'Y	JK81-10512R	1	O	
24-1	SOLENOID STAMP	-	1	X	
24-2	STAMP COIL SPRING	-	1	X	
24-3	STAMP PLUNGER	-	1	X	
24-4	STAMP SPRING	-	1	X	
24-5	E-RING (RE3.0)	-	1	X	
25	STAMP PUSER	JK81-10512S	1	O	
26	STAMP ASS'Y	-	1	X	
26-1	STAMP COVER	JK81-10510M	1	O	
26-2	PLATE STAMP SPRING	JK81-10510N	1	O	
26-3	STAMP CASE	JK81-10101A	1	O	
26-4	RPR-STEAMP RUBBER	JK73-10204A	1	O	
27	UPPER FRAME ASS'Y	JK81-10512T	1	O	
28	VALIDATION SENSOR ASS'Y	JK81-10102A	1	O	
29	PAPER ROLLING ASS'Y	JK81-10512V	1	O	
29-1	GEAR PAPER ROLLING	JK81-10103A	1	O	
29-2	PULLEY PAPER ROLLING	JK81-10104A	1	O	
29-3	SPRING PAPER ROLLING	JK81-10105A	1	O	
29-4	E-RING (RE6.0)	JK81-10106A	1	O	
30	STAMP PAPER GUIDE ASS'Y	JK81-10512W	1	O	
30-1	STAMP PAPER GUIDE	JK81-10107A	1	O	
30-2	PLATEN PAPER GUIDE	JK81-10108A	1	O	
30-3	SCREW (T/T CH 2x4)	JK81-10109A	3	O	
31	SHAFT PAPER ROLLER	JK81-10110A	1	O	
32	TIMMING BELT	JK81-10509Y	1	O	
33	PAPER GUIDE ASS'Y	JK81-10512Y	1	O	
33-1	PAPER GUIDE	JK81-10111A	1	O	
33-2	GUIDE	JK81-10112A	2	O	

SA. : Service Available

Location No.	Description	SEC. Code	Q'ty	SA	Remark
34	RELEASE LEVER ASS'Y	JK81-10512Z	1	O	
34-1	RELEASE LEVER	JK81-10113A	1	O	
34-2	PAPER HOLD ROLLER PLATE	JK81-10114A	1	O	
34-3	PAPER HOLD ROLLER	JK81-10115A	2	O	
34-4	SHAFT HOLD ROLLER	JK81-10116A	1	O	
34-5	E-RING (RE2.5)	JK81-10117A	1	O	
35	SPRING RELEASE	JK81-10521A	2	O	
36	PAPER FEED ROLLER ASS'Y	JK81-10118A	1	O	
36-1	GEAR PAPER FEED	-	1	X	
36-2	SHAFT PAPER FEED	-	1	X	
36-3	PAPER FEED ROLLER ASS'Y	-	2	X	
36-4	RATCHET	-	2	X	
36-5	CLUTCH SPRING	-	2	X	
36-6	SPRING PIN (2X10)	-	1	X	
36-7	E-RING (RE4.0)	-	4	X	
37	POLY BEARING	JK81-10170A	2	O	
38	MOTOR FEEDING BRACKET ASS'Y	JK81-10513B	1	O	
39	PAPER MOTOR ASS'Y	JK81-10124A	1	O	
39-1	GEAR FEED MOTOR	JK81-10125A	1	O	
39-2	CORE	JK81-10067A	1	O	
39-3	WIRE (L340, BLU)	JK81-10126A	1	O	
39-4	WIRE (L340, RED)	JK81-10127A	1	O	
39-5	MOTOR (RS-380PH)	JK81-10070A	1	O	
39-6	CONDENSOR (104)	JK81-00118A	1	O	
40	COVER-1	JK81-10513D	1	O	
40-1	LABEL STICKER-1	-	1	X	
40-2	LABEL STICKER-2	-	1	X	
41	SPOOL ASS'Y	JK81-10513E	1	O	
42	DISK	JK81-10513F	1	O	
43	PARALLEL PIN (ø2x10)	JK81-10511Q	1	O	
44	OILLESS METAL_1	JK81-10510R	4	O	
45	E-RING (RE3.0)	JK81-10511K	1	O	
46	E-RING (RE4.0)	JK81-10511L	1	O	
47	E-RING (RE5.0)	JK81-10511M	4	O	
48	SCREW (PH 3x3)	JK81-10128A	1	O	
49	SCREW (PS 2.6x4)	JK81-10513H	2	O	
50	SCREW (T/T PH 3x4)	JK81-10511D	2	O	
51	SCREW (T/T BH 3x5)	JK81-10513J	20	O	
52	SCREW (CP 3x6)	JK81-10513K	4	O	
53	SCREW (T/P PH 3x10)	JK81-10513L	2	O	
54	PSW (ø3.6x6x0.5)	JK81-10511F	6	O	
55	PW (ø5x10x1.0)	JK81-10511H	1	O	
56	PHOTO SENSOR (SG-23FH)	JK81-10130A	2	O	
57	SCREW (PH+ 3X18)	JK81-10129A	3	O	
58	PRINTER HEAD	JK81-10038A	1	O	
59	GEAR FEED IDLE_1	JK81-10286H	1	O	
60	GEAR FEED IDLE_2	JK81-10286J	1	O	

4. KeyBoard Ass'y (90 Key) Exploded View



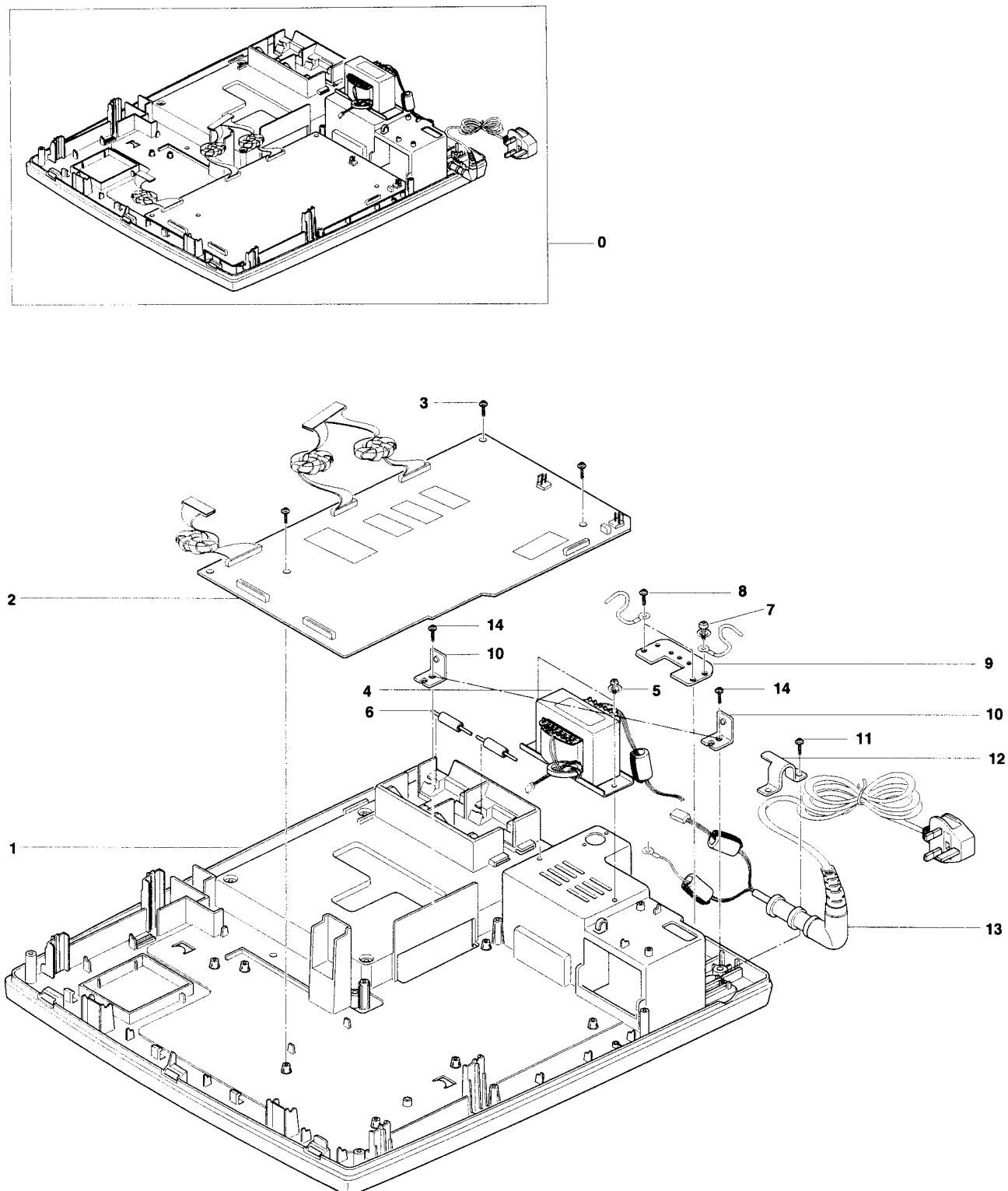
KeyBoard Ass'y (90 Key) Parts Lists

SA. : Service Available

Location No.	Description	SEC. Code	Q'ty	SA	Remark
0	ELA UNIT-KEYBOARD	-	1	X	
1	PMO-HOUSING KEYBOARD	JK72-40323A	1	O	
2	REX-WATER PROOF	JK72-20202A	1	O	
3	UNIT-KEYBOARD	JK59-10145A	1	O	
3-1	PMO-FRAME KEYBOARD	-	1	X	
3-2	AS-KEY CAP S (1 x 1)	JK81-10286D	1	O	
3-3	KBD LABEL	-	1	X	
3-4	MEC KEY TOP S	JK75-00029A	1	O	
3-5	AS-SPRING RETURN	JK81-10286A	1	O	
3-6	SCREW-TAPPING	6002-000175	8	O	
3-7	MEC-KEY TOP ASSY	JK75-00028A	1	O	
	PMO-KEY CAP/1	-	1	X	
	PMO-KEY CAP/2	-	1	X	
	PMO-KEY CAP/3	-	1	X	
	PMO-KEY CAP/4	-	1	X	
	PMO-KEY CAP/5	-	1	X	
	PMO-KEY CAP/6	-	1	X	
	PMO-KEY CAP/7	-	1	X	
	PMO-KEY CAP/8	-	1	X	
	PMO-KEY CAP/9	-	1	X	
	PMO-KEY CAP/00	-	1	X	
	PMO-KEY CAP/.	-	1	X	
	PMO-KEY CAP/0	-	1	X	
3-8	AS-KEY CAP L(1x2)	JK81-10286E	1	O	
3-9	KBD LABEL	-		X	
3-10	MEC KEY TOP L	JK75-00030A	1	O	
3-11	SPRING-TS	JK61-70301A	1	O	
3-12	IPR-SPACER KEYBOARD	JK70-10382A	1	O	
3-13	PMO-HOLDER HOOK(A)	JK72-40324A	1	O	
3-14	PMO-HOLDER HOOK(B)	JK72-40325A	1	O	
3-15	ASSY PCB-FPC	JK41-10100K	1	O	
3-15-1	PCB-FPC A, 90KEY	-	1	X	
3-15-2	PCB-FPC B, 90KEY	-	1	X	
3-16	IPR-PLATE BASE	JK70-10380A	1	O	
3-17	SCREW-TAPPING	6002-000147	2	O	

O: Service available X: Service not available

5. Cover Lower Ass'y Exploded View



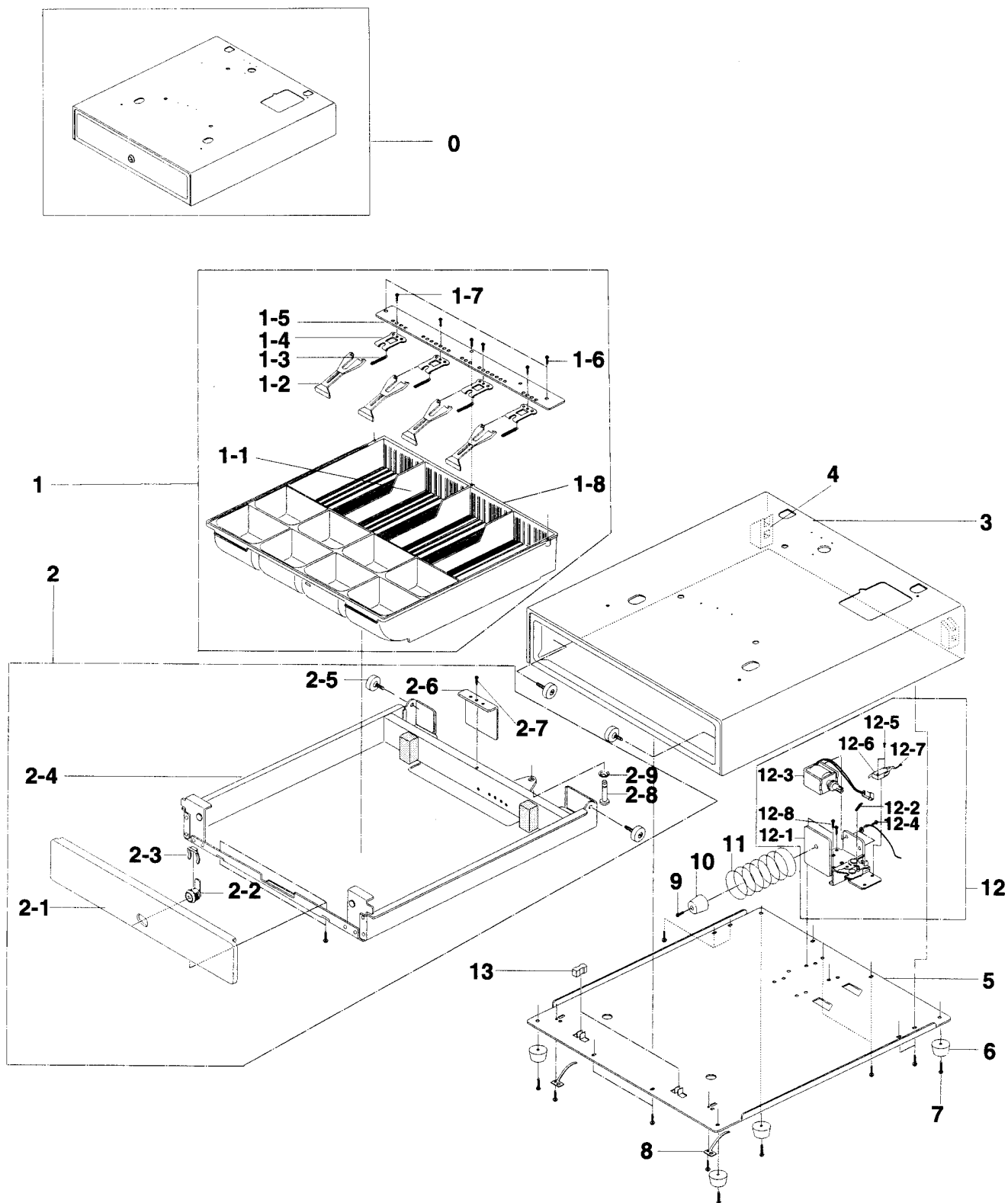
Cover Lower Ass'y Parts Lists

SA. : Service Available

Location No.	Description	SEC. Code	Q'ty	SA	Remark
0	COVER LOWER ASS'Y	-	1	X	
1	PMO-CASE LOWER	JK72-00028A	1	O	
2	PBA MAIN-MAIN BOARD	JK92-00114A	1	O	
3	SCREW-TAPPING	6002-000174	3	O	
4	TRANS POWER	JK26-30105E	1	O	
5	SCREW-ASS'Y TAPPING	6006-000195	2	O	
6	PMO-ROLLER PAPER/END	JK72-40330A	2	O	
7	SCREW-ASS'Y TAPPING	6006-000199	1	O	
8	SCREW-TAPPING	6002-000174	2	O	
9	GROUND-PLATE	JK70-10417A	1	O	
10	IPR-BRK CASING	JK70-10002A	2	O	
11	SCREW-TAPPING	6002-000174	2	O	
12	IPR-HOLDER CORD	JK70-10312A	1	O	
13	CBF POWER CORD(250V,7A)	JK39-10301W	1	O	
14	SCREW TAPPING	6002-000171	2	O	

O: Service available X: Service not available

6. Drawer Ass'y Exploded View



Drawer Ass'y Parts Lists

SA. : Service Available

Location No.	Description	SEC. Code	Q'ty	SA	Remark
0	DRAWER ASS'Y (MEC-DRAWER A84YA)	JK75-00017A	1	O	
1	MEA UNIT-BILL COIN	JK97-00409A	1	O	
1-1	PMO-PANEL PARTITION	JK72-40269A	3	O	
1-2	PMO-LEVER PRESS	JK72-40267A	4	O	
1-3	SPRING-ES	6107-000134	4	O	
1-4	IPR-HOLDER LEVER	JK70-10314A	4	O	
1-5	IPR-PLATE HOLDER	JK70-10304A	1	O	
1-6	SCREW-TAPPING	6002-000175	3	O	
1-7	SCREW-TAPTITE	6003-001078	4	O	
1-8	PMO-BILL/COIN TILL	JK72-40291A	1	O	
2	MEA UNIT-TRAY TILL	JK97-01073A	1	O	
2-1	IPR-PLATE FRONT	-	1	X	
2-2	MEC-LOCK	JK75-10388A	1	O	
2-3	IPR-PLATE CLIP	JK70-10323A	1	O	
2-4	MEC-TRAY TILL	-	1	X	
2-5	MEC-ROLLER	JK75-10386A	2	O	
2-6	IPR-SUPPORT TRAY	-	1	X	
2-7	SCREW-TAPPING	6002-000221	1	O	
2-8	ICT-SHAFT PIN	-	1	X	
2-9	RING-E	-	1	X	
3	MEC-SUB HOUSING(BASIC)	JK75-00026A	1	O	
	IPR-HOUSING DRAWER	-	1	X	
	IPR-FRONT PLATE	-	1	X	
	IPR-CHANNEL LH	-	1	X	
	IPR-CHANNEL RH	-	1	X	
	IPR-SUPPORT CHANNEL	-	1	X	
	IPR-REAL PLATE	-	1	X	
4	REX-PAD DRAWER	JK73-20207A	2	O	
5	IPR-PLATE BOTTOM	JK70-10938A	1	O	
6	FOOT-RUBBER	JK61-40200A	4	O	

O: Service available X: Service not available

Drawer Ass'y Parts Lists

SA. : Service Available

Location No.	Description	SEC. Code	Q'ty	SA	Remark
7	SCREW-TAPPING	6001-000172	4	O	
8	IPR-PLATE SPRING/D	JK70-10401A	2	O	
9	SCREW-MACHINE	6001-000172	1	O	
10	REX-BUMPER	JK73-20210A	1	O	
11	SPRING-PUSH	JK61-70100A	1	O	
12	MEA UNIT-LOCK LEVER	JK97-01075A	1	O	
12-1	MEC-LOCK LEVER	JK75-10027A	1	O	
12-2	SPRING-ES	6107-001041	1	O	
12-3	SOLENOID-DC	JK33-10500A	1	O	
12-4	SCREW-MACHINE	6001-000131	2	O	
12-5	SCREW-MACHINE	6001-000525	2	O	
12-6	SWITCH-MICRO	3405-001013	1	O	
12-7	CBF-HARNESS	JK39-40301R	1	O	
12-8	SCREW-TAPPING	6003-000221	3	O	
13	RMO-STOPPER	JK73-40200A	2	O	

O: Service available X: Service not available

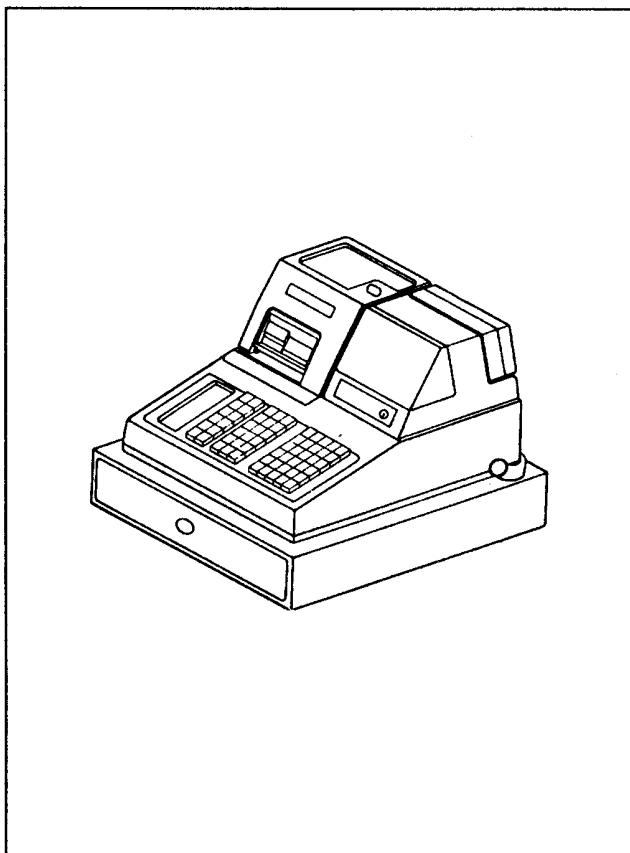
SAMSUNG

ER-4615 SERIES

ER-4800

APPENDIX **Service Manual**

ELECTRONIC CASH REGISTER



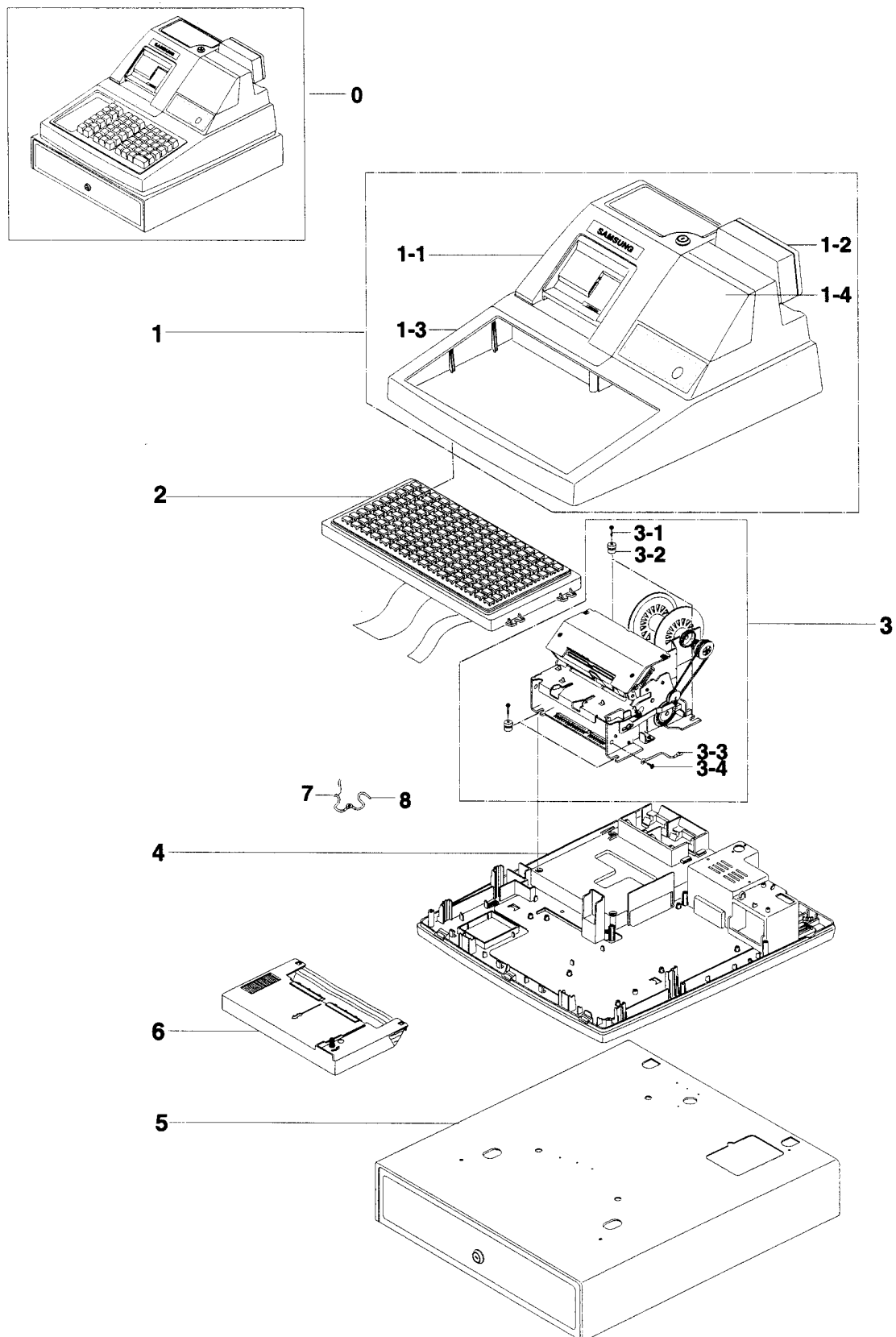
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Exploded Views and Parts Lists

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- 3. Printer Ass'y (ERP-400) Exploded View & Parts Lists**
- 4. KeyBoard Ass'y (160 Key) Exploded View & Parts Lists**
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1. Main Exploded View



Main Parts Lists

SA. : Service Available

Location No.	Description	SEC. Code	Q'ty	SA	Remark
0	MAIN SET	ER-4800(UK)	1	X	
1	COVER ASS'Y	-	1	X	
1-1	MEA-COVER PRINTER	JK97-01070A	1	O	
1-2	ELA ETC-TURRET	JK96-00194A	1	O	
1-3	PMO-CASE UPPER	JK72-00027A	1	O	
1-4	ELA HOU-DISPLAY	JK96-00141A	1	O	
2	UNIT-KEYBOARD	JK59-10129A	1	O	
3	UNIT-PRINTER ASS'Y(ERP-400)	JK59-10511A	1	O	
3-1	SCREW-TAPPING	6002-000209	4	O	
3-2	RMO-PRINTER	JK73-40201A	4	O	
3-3	CBF-HARNESS (GND)	JK39-40021A	1	O	
3-4	SCREW-MACHINE	6001-000618	1	O	
4	COVER LOWER-ASS'Y	-	1	X	
5	DRAWER ASS'Y (MEC-DRAWER A84YA)	JK75-00017A	1	O	
6	MEC-RIBBON CASSETTE	JK75-10383A	1	O	
7	CBF-HARNESS (GND)	JK39-40200A	1	O	
8	CBF-HARNESS (GND)	JK39-40302C	1	O	

O: Service available X: Service not available



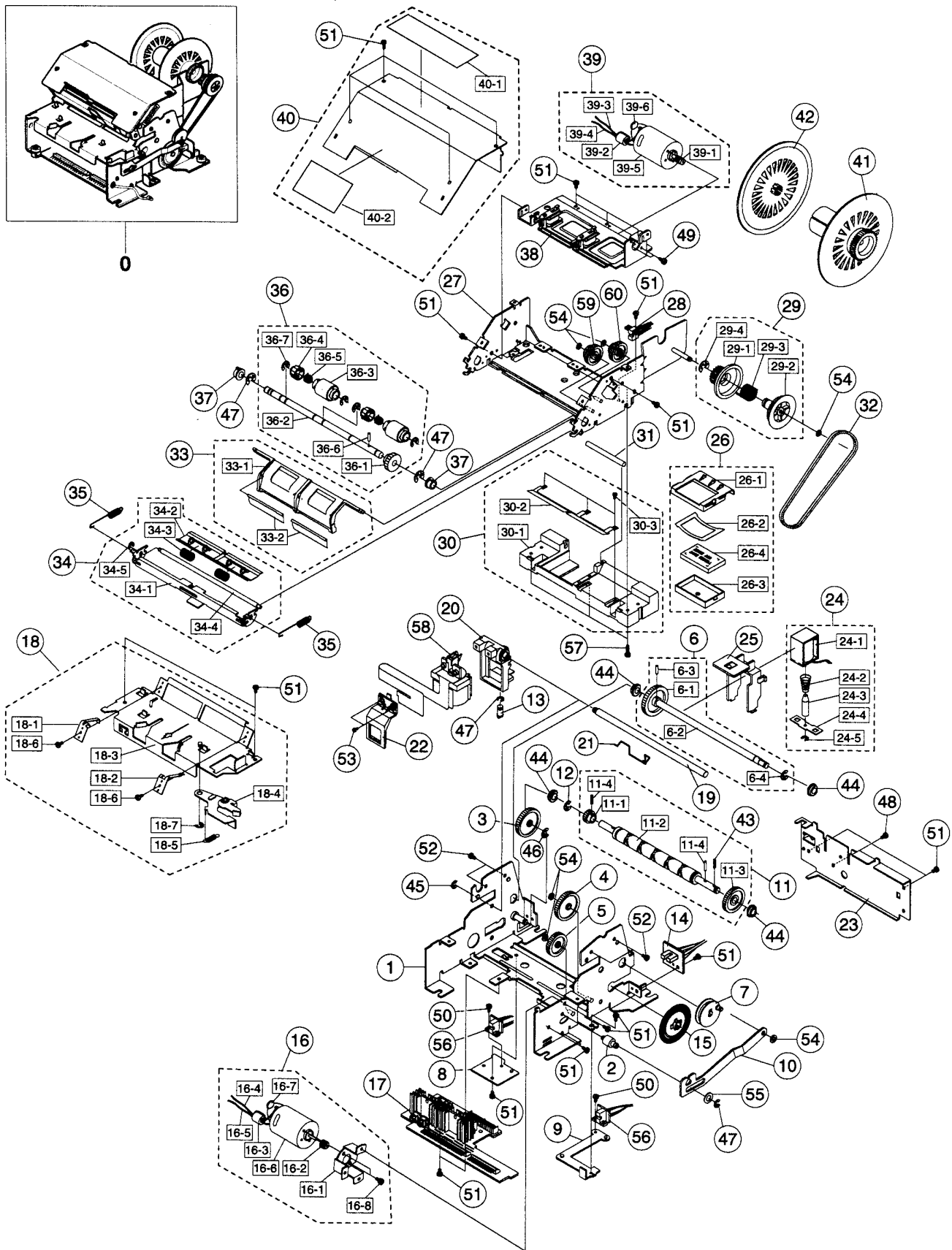
Cover Ass'y Parts Lists

SA : Service Available

Location No.	Description	SEC. Code	Q'ty	SA	Remark
0	COVER ASS'Y	-	1	X	
1	MEA-COVER PRINTER	JK97-01070A	1	O	
1-1	PMO-COVER PRINTER	JK72-40905A	1	O	
1-2	IPR-CUTTER PAPER	JK70-10319A	1	O	
2	LABEL(R)-SAMSUNG	JK68-30221A	1	O	
3	LABEL(R)-MODE S/W	JK68-30111F	1	O	
4	PMO-WINDOW JOURNAL	JK72-40315A	1	O	
5	MEC-LOCK	JK75-10388A	1	O	
6	IPR-PLATE CLIP	JK70-10323A	1	O	
7	PMO-WINDOW DISPLAY	JK72-40235B	1	O	
8	PMO-WINDOW TURRET	JK72-40317A	1	O	
9	ELA ETC-TURRET	JK96-00194A	1	O	
9-1	RPR-PAD TURRET	JK73-10202A	2	O	
9-2	CBF-HARNESS	-	1	X	
9-3	DISPLAY VFD-DC9G	JK07-00003A	1	O	
9-4	PCB-TURRET	-	1	X	
10	PMO-TURRET BODY	JK72-40316A	1	O	
11	SCREW-MACHINE	6001-000321	1	O	
12	PMO-CASE UPPER	JK72-00027A	1	O	
13	SCREW-TAPPING	6002-000367	2	O	
14	ELA ETC-MODE S/W	JK96-00130A	1	O	
14-1	SWITCH-ROTARY	3406-000116	1	O	
14-2	CBF-HARNESS	JK39-40023A	1	O	
15	SCREW-MACHINE	6001-000367	2	O	
16	IPR-BRKT DISPLAY	JK70-10378A	1	O	
17	SCREW-TAPPING	6002-000175	3	O	
18	PBA SUB-4615, DISPLAY	JK92-00973A	1	O	
18-1	DISPLAY VFD-DC10G	JK07-00004A	1	O	
18-2	CBF HARNESS	-	10	X	
18-3	PCB-DISPLAY(FRONT)	-	1	X	
19	SCREW-TAPPING	6002-000175	2	O	

O: Service available X: Service not available

3. Printer Ass'y (ERP-400) Exploded View



Printer Ass'y (ERP-400) Parts Lists

SA. : Service Available

Location No.	Description	SEC. Code	Q'ty	SA	Remark
0	UNIT-PRINTER ASS'Y (ERP-400)	JK59-10511A	1	O	
1	MAIN FRAME CAULKING ASS'Y	JK81-10511Z	1	O	
2	SHAFT LEVER SUPPORT	JK81-10131A	1	O	
3	GEAR REDUCTION_2	JK81-10506G	1	O	
4	GEAR HEAD IDLE_2	JK81-10506Q	1	O	
5	GEAR HEAD IDLE_1	JK81-10506P	1	O	
6	GEAR REDUCTION_3 ASS'Y	JK81-10512A	1	O	
6-1	GEAR REDUCTION_3	JK81-10054A	1	O	
6-2	SHAFT REDUCTION_3	JK81-10055A	1	O	
6-3	SPRING PIN (2x10)	JK81-10513G	1	O	
6-4	E-RING (RE5.0)	JK81-10511M	1	O	
7	ROLLING CAM ASS'Y	JK81-10512B	1	O	
8	R-DETECTOR PLATE L	JK81-10057A	1	O	
9	R-DETECTOR PLATE R	JK81-10058A	1	O	
10	RIBBON DRIVING LEVER	JK81-10510J	1	O	
11	LEAD CAM ASS'Y	JK81-10512E	1	O	
11-1	GEAR REDUCTION_1	JK81-10059A	1	O	
11-2	LEAD CAM	JK81-10060A	1	O	
11-3	GEAR_HEAD_FEEDING	JK81-10286A	1	O	
11-4	SPRING PIN (2X10)	JK81-10513G	2	O	
12	E-RING (RE5.0)	6044-000231	1	O	
13	SHAFT_TRACER	JK81-10099A	1	O	
14	ENCODER SENSOR ASS'Y	JK81-10063A	1	O	
15	ENCODER	JK81-10508A	1	O	
16	HEAD MOTOR ASS'Y	JK81-10064A	1	O	
16-1	MOTOR HEAD BRACKET	JK81-10065A	1	O	
16-2	GEAR HEAD MOTOR	JK81-10066A	1	O	
16-3	CORE	JK81-10067A	1	O	
16-4	WIRE (L140, BLU)	JK81-10068A	1	O	
16-5	WIRE (L140, RED)	JK81-10069A	1	O	
16-6	MOTOR (RS-380PH)	JK81-10070A	1	O	
16-7	CONDENSOR (104)	JK81-00118A	1	O	
16-8	SCREW (PS 2.6x4)	JK81-10513H	2	O	
17	MAIN PCB ASS'Y	JK81-10072A	1	O	
17-1	MAIN PCB	JK81-10073A	1	O	
17-2	HEAT SINK	JK81-10074A	2	O	
17-3	SCREW-M (PH3x4)	JK81-10075A	2	O	
17-4	TR (TIP41C)	JK81-10076A	1	O	
17-5	TR (TIP42C)	JK81-10077A	1	O	
17-6	JUMP WIRE	JC39-40511A	7	O	
17-7	RESISTOR (12K)	JK81-10079A	1	O	
17-8	RESISTOR (18K)	JK81-10080A	1	O	
17-9	RESISTOR (2K)	JK81-10081A	1	O	
17-10	RESISTOR (220Ω)	JK81-10082A	1	O	
17-11	RESISTOR (6.2K)	JK81-10083A	2	O	
17-12	RESISTOR-CEMENT (7Ω)	JK81-10084A	1	O	
17-13	RESISTOR-CEMENT (10Ω)	JK81-10085A	1	O	
17-14	RESISTOR-SEMI (2K)	JK81-10086A	2	O	

Printer Ass'y (ERP-400) Parts Lists

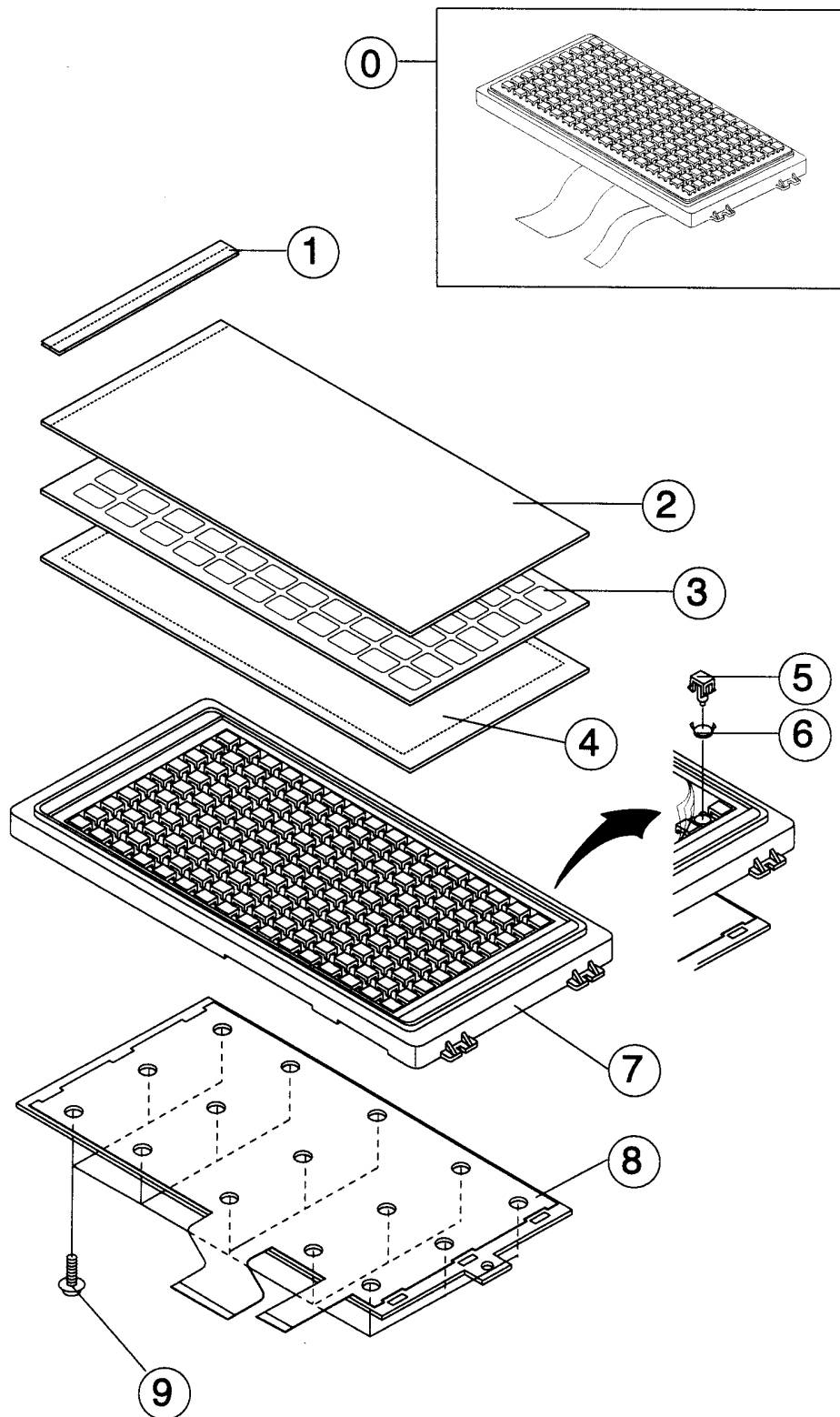
SA. : Service Available

Location No.	Description	SEC. Code	Q'ty	SA	Remark
17-15	CAPACITOR-E (50V, 47UF)	JK81-10087A	2	O	
17-16	IC (L200)	JK81-10088A	2	O	
17-17	CONNECTOR (12PIN)	JK81-10089A	1	O	
17-18	CONNECTOR (13PIN)	JK81-10090A	1	O	
17-19	CONNECTOR (22PIN)	JK81-10091A	1	O	
18	RIBBON FRAME ASS'Y	JK81-10092A	1	O	
18-1	RIBBON GUIDE PLATE L	JK81-10093A	1	O	
18-2	RIBBON GUIDE PLATE R	JK81-10094A	1	O	
18-3	RIBBON FRAME CAULKING ASS'Y	JK81-10095A	1	O	
18-4	RIBBON FEED LEVER ASS'Y	JK81-10096A	1	O	
18-5	SPRING RIBBON FEEDING	JK81-10097A	1	O	
18-6	SCREW (T/T PH 3X4)	JK81-10511D	2	O	
18-7	E-RING (RE4.0)	JK81-10511L	1	O	
19	SHAFT HEAD GUIDE	JK81-10098A	1	O	
20	HEAD CARRIAGE ASS'Y	JK81-10512M	1	O	
21	SPRING CARRIAGE LOAD	JK81-10100A	1	O	
22	HEAD COVER	JK81-10507A	1	O	
23	BACK COVER	JK81-10512Q	1	O	
24	SOLENOID STAMP ASS'Y	JK81-10512R	1	O	
24-1	SOLENOID STAMP	-	1	X	
24-2	STAMP COIL SPRING	-	1	X	
24-3	STAMP PLUNGER	-	1	X	
24-4	STAMP SPRING	-	1	X	
24-5	E-RING (RE3.0)	-	1	X	
25	STAMP PUSER	JK81-10512S	1	O	
26	STAMP ASS'Y	-	1	X	
26-1	STAMP COVER	JK81-10510M	1	O	
26-2	PLATE STAMP SPRING	JK81-10510N	1	O	
26-3	STAMP CASE	JK81-10101A	1	O	
26-4	RPR-STEAMP RUBBER	JK73-10204A	1	O	
27	UPPER FRAME ASS'Y	JK81-10512T	1	O	
28	VALIDATION SENSOR ASS'Y	JK81-10102A	1	O	
29	PAPER ROLLING ASS'Y	JK81-10512V	1	O	
29-1	GEAR PAPER ROLLING	JK81-10103A	1	O	
29-2	PULLEY PAPER ROLLING	JK81-10104A	1	O	
29-3	SPRING PAPER ROLLING	JK81-10105A	1	O	
29-4	E-RING (RE6.0)	JK81-10106A	1	O	
30	STAMP PAPER GUIDE ASS'Y	JK81-10512W	1	O	
30-1	STAMP PAPER GUIDE	JK81-10107A	1	O	
30-2	PLATEN PAPER GUIDE	JK81-10108A	1	O	
30-3	SCREW (T/T CH 2x4)	JK81-10109A	3	O	
31	SHAFT PAPER ROLLER	JK81-10110A	1	O	
32	TIMMING BELT	JK81-10509Y	1	O	
33	PAPER GUIDE ASS'Y	JK81-10512Y	1	O	
33-1	PAPER GUIDE	JK81-10111A	1	O	
33-2	GUIDE	JK81-10112A	2	O	

SA : Service Available

Location No.	Description	SEC. Code	Q'ty	SA	Remark
34	RELEASE LEVER ASS'Y	JK81-10512Z	1	O	
34-1	RELEASE LEVER	JK81-10113A	1	O	
34-2	PAPER HOLD ROLLER PLATE	JK81-10114A	1	O	
34-3	PAPER HOLD ROLLER	JK81-10115A	2	O	
34-4	SHAFT HOLD ROLLER	JK81-10116A	1	O	
34-5	E-RING (RE2.5)	JK81-10117A	1	O	
35	SPRING RELEASE	JK81-10521A	2	O	
36	PAPER FEED ROLLER ASS'Y	JK81-10118A	1	O	
36-1	GEAR PAPER FEED	-	1	X	
36-2	SHAFT PAPER FEED	-	1	X	
36-3	PAPER FEED ROLLER ASS'Y	-	2	X	
36-4	RATCHET	-	2	X	
36-5	CLUTCH SPRING	-	2	X	
36-6	SPRING PIN (2X10)	-	1	X	
36-7	E-RING (RE4.0)	-	4	X	
37	POLY BEARING	JK81-10170A	2	O	
38	MOTOR FEEDING BRACKET ASS'Y	JK81-10513B	1	O	
39	PAPER MOTOR ASS'Y	JK81-10124A	1	O	
39-1	GEAR FEED MOTOR	JK81-10125A	1	O	
39-2	CORE	JK81-10067A	1	O	
39-3	WIRE (L340, BLU)	JK81-10126A	1	O	
39-4	WIRE (L340, RED)	JK81-10127A	1	O	
39-5	MOTOR (RS-380PH)	JK81-10070A	1	O	
39-6	CONDENSOR (104)	JK81-00118A	1	O	
40	COVER-1	JK81-10513D	1	O	
40-1	LABEL STICKER-1	-	1	X	
40-2	LABEL STICKER-2	-	1	X	
41	SPOOL ASS'Y	JK81-10513E	1	O	
42	DISK	JK81-10513F	1	O	
43	PARALLEL PIN (ø2x10)	JK81-10511Q	1	O	
44	OILLESS METAL_1	JK81-10510R	4	O	
45	E-RING (RE3.0)	JK81-10511K	1	O	
46	E-RING (RE4.0)	JK81-10511L	1	O	
47	E-RING (RE5.0)	JK81-10511M	4	O	
48	SCREW (PH 3x3)	JK81-10128A	1	O	
49	SCREW (PS 2.6x4)	JK81-10513H	2	O	
50	SCREW (T/T PH 3x4)	JK81-10511D	2	O	
51	SCREW (T/T BH 3x5)	JK81-10513J	20	O	
52	SCREW (CP 3x6)	JK81-10513K	4	O	
53	SCREW (T/P PH 3x10)	JK81-10513L	2	O	
54	PSW (ø3.6x6x0.5)	JK81-10511F	6	O	
55	PW (ø5x10x1.0)	JK81-10511H	1	O	
56	PHOTO SENSOR (SG-23FH)	JK81-10130A	2	O	
57	SCREW (PH+ 3X18)	JK81-10129A	3	O	
58	PRINTER HEAD	JK81-10038A	1	O	
59	GEAR FEED IDLE_1	JK81-10286H	1	O	
60	GEAR FEED IDLE_2	JK81-10286J	1	O	

4. KeyBoard Ass'y (160 Key) Exploded View



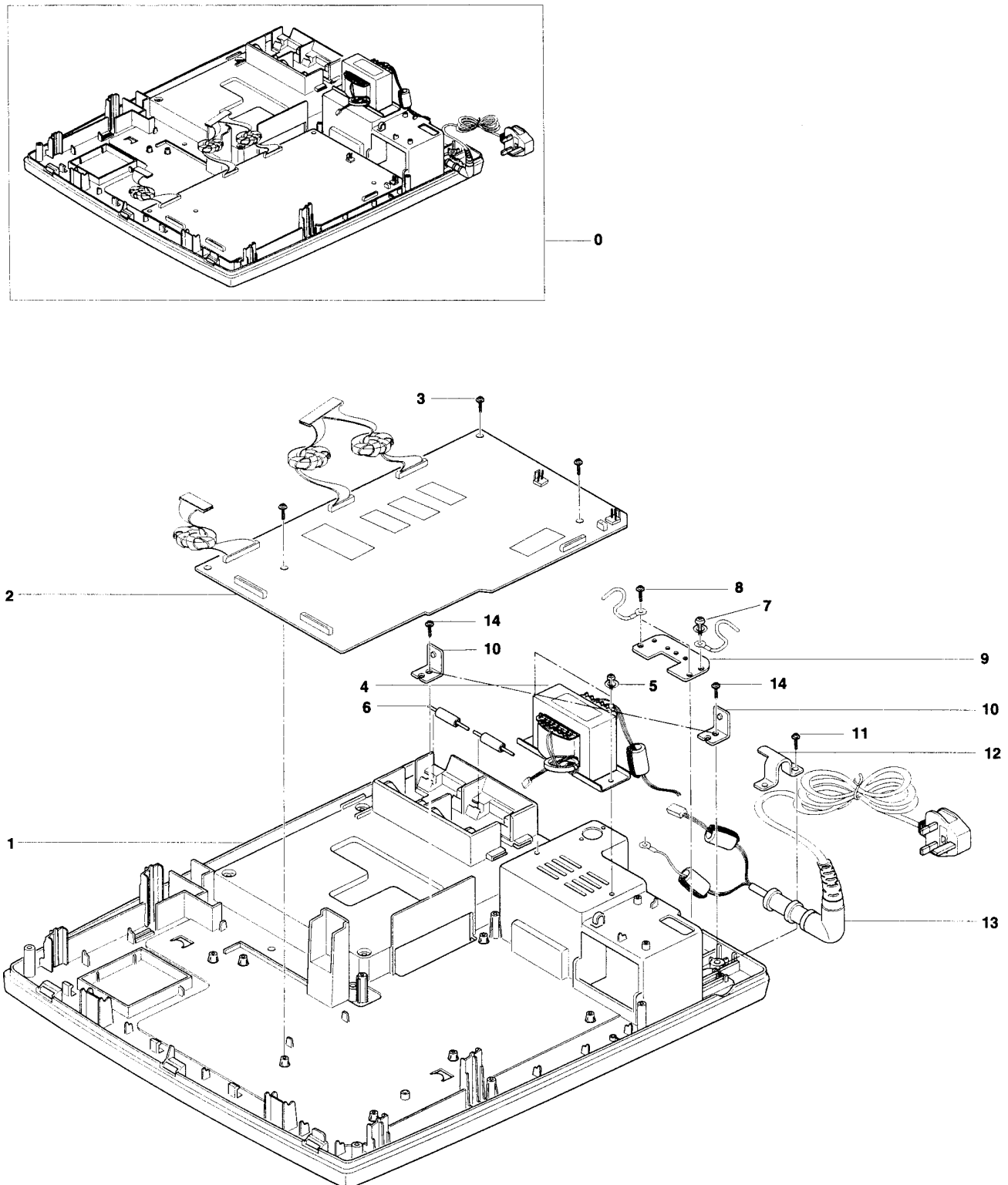
KeyBoard Ass'y (160 Key) Parts Lists

SA. : Service Available

Location No.	Description	SEC. Code	Q'ty	SA	Remark
0	ELA UNIT-KEYBOARD	-	1	X	
1	PMO-HOUSING KEYBOARD	JK72-40323A	1	O	
2	REX-WATER PROOF	JK72-20202A	1	O	
3	UNIT-KEYBOARD	JK59-10129A	1	O	
3-1	PMO-FRAME KEYBOARD	-	1	X	
3-2	AS-KEY CAP S (1 x 1)	JK81-10286D	1	O	
3-3	KBD LABEL	-	1	X	
3-4	MEC KEY TOP S	JK75-00029A	1	O	
3-5	AS-SPRING RETURN	JK81-10286A	1	O	
3-6	SCREW-TAPPING	6002-000175	8	O	
3-7	MEC-KEY TOP ASSY	JK75-00028A	1	O	
	PMO-KEY CAP/1	-	1	X	
	PMO-KEY CAP/2	-	1	X	
	PMO-KEY CAP/3	-	1	X	
	PMO-KEY CAP/4	-	1	X	
	PMO-KEY CAP/5	-	1	X	
	PMO-KEY CAP/6	-	1	X	
	PMO-KEY CAP/7	-	1	X	
	PMO-KEY CAP/8	-	1	X	
	PMO-KEY CAP/9	-	1	X	
	PMO-KEY CAP/00	-	1	X	
	PMO-KEY CAP/.	-	1	X	
	PMO-KEY CAP/0	-	1	X	
3-8	AS-KEY CAP L(1x2)	JK81-10286E	1	O	
3-9	KBD LABEL	-		X	
3-10	MEC KEY TOP L	JK75-00030A	1	O	
3-11	SPRING-TS	JK61-70301A	1	O	
3-12	IPR-SPACER KEYBOARD	JK70-10382A	1	O	
3-13	PMO-HOLDER HOOK(A)	JK72-40324A	1	O	
3-14	PMO-HOLDER HOOK(B)	JK72-40325A	1	O	
3-15	ASSY PCB-FPC	JK41-10100H	1	O	
3-15-1	PCB-FPC A, 160KEY	-	1	X	
3-15-2	PCB-FPC B, 160KEY	-	1	X	
3-16	IPR-PLATE BASE	JK70-10380A	1	O	
3-17	SCREW-TAPPING	6002-000147	2	O	

O: Service available X: Service not available

5. Cover Lower Ass'y Exploded View



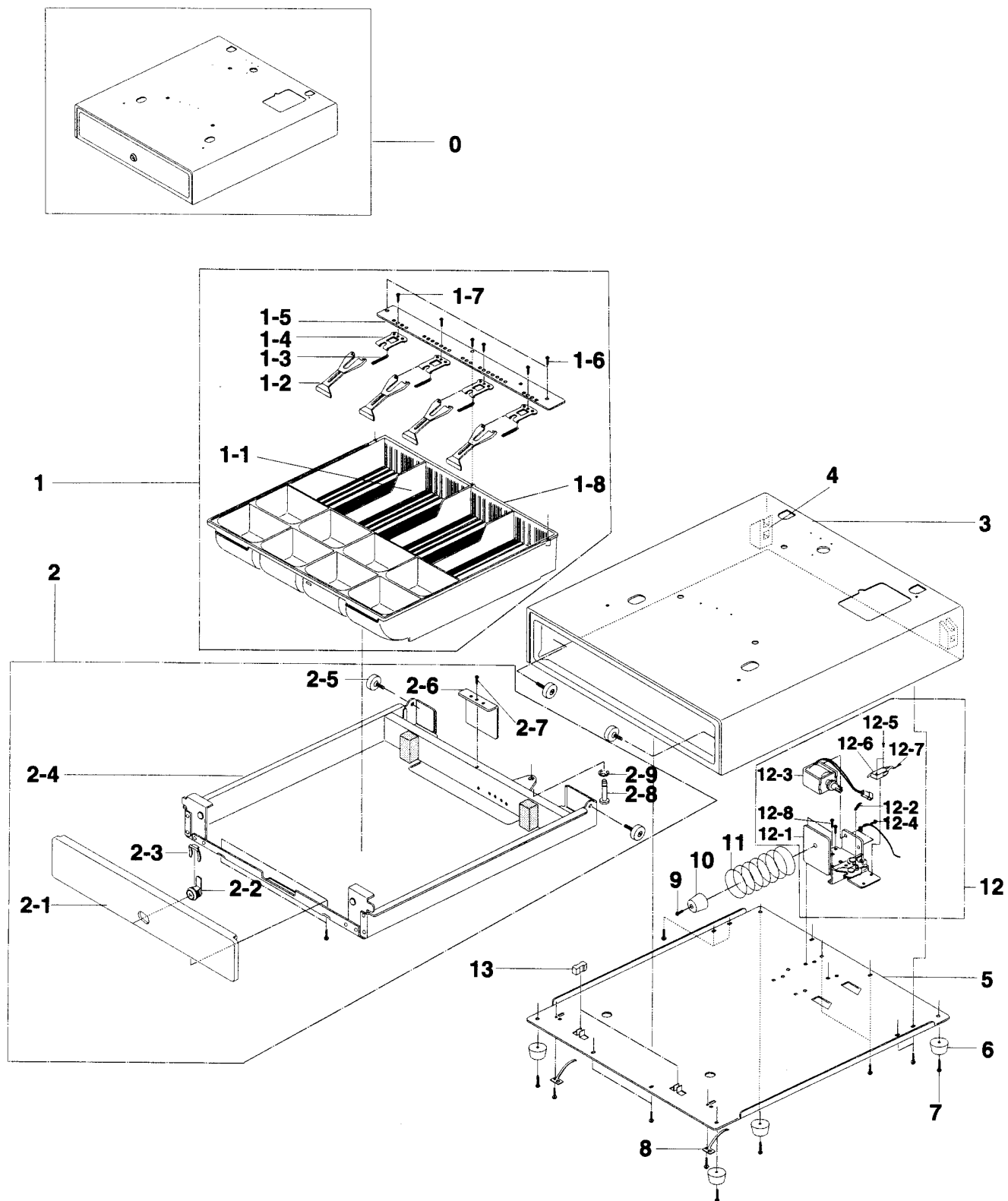
Cover Lower Ass'y Parts Lists

SA. : Service Available

Location No.	Description	SEC. Code	Q'ty	SA	Remark
0	COVER LOWER ASS'Y	-	1	X	
1	PMO-CASE LOWER	JK72-00028A	1	O	
2	PBA MAIN-MAIN BOARD	JK92-00115A	1	O	
3	SCREW-TAPPING	6002-000174	3	O	
4	TRANS POWER	JK26-30105E	1	O	
5	SCREW-ASS'Y TAPPING	6006-000195	2	O	
6	PMO-ROLLER PAPER/END	JK72-40330A	2	O	
7	SCREW-ASS'Y TAPPING	6006-000199	1	O	
8	SCREW-TAPPING	6002-000174	2	O	
9	GROUND-PLATE	JK70-10417A	1	O	
10	IPR-BRK CASING	JK70-10002A	2	O	
11	SCREW-TAPPING	6002-000174	2	O	
12	IPR-HOLDER CORD	JK70-10312A	1	O	
13	CBF POWER CORD(250V,7A)	JK39-10301W	1	O	
14	SCREW TAPPING	6002-000171	2	O	

O: Service available X: Service not available

6. Drawer Ass'y Exploded View



Drawer Ass'y Parts Lists

SA. : Service Available

Location No.	Description	SEC. Code	Q'ty	SA	Remark
0	DRAWER ASS'Y (MEC-DRAWER A84YA)	JK75-00017A	1	O	
1	MEA UNIT-BILL COIN	JK97-00409A	1	O	
1-1	PMO-PANEL PARTITION	JK72-40269A	3	O	
1-2	PMO-LEVER PRESS	JK72-40267A	4	O	
1-3	SPRING-ES	6107-000134	4	O	
1-4	IPR-HOLDER LEVER	JK70-10314A	4	O	
1-5	IPR-PLATE HOLDER	JK70-10304A	1	O	
1-6	SCREW-TAPPING	6002-000175	3	O	
1-7	SCREW-TAPTITE	6003-001078	4	O	
1-8	PMO-BILL/COIN TILL	JK72-40291A	1	O	
2	MEA UNIT-TRAY TILL	JK97-01073A	1	O	
2-1	IPR-PLATE FRONT	-	1	X	
2-2	MEC-LOCK	JK75-10388A	1	O	
2-3	IPR-PLATE CLIP	JK70-10323A	1	O	
2-4	MEC-TRAY TILL	-	1	X	
2-5	MEC-ROLLER	JK75-10386A	2	O	
2-6	IPR-SUPPORT TRAY	-	1	X	
2-7	SCREW-TAPPING	6002-000221	1	O	
2-8	ICT-SHAFT PIN	-	1	X	
2-9	RING-E	-	1	X	
3	MEC-SUB HOUSING(BASIC)	JK75-00026A	1	O	
	IPR-HOUSING DRAWER	-	1	X	
	IPR-FRONT PLATE	-	1	X	
	IPR-CHANNEL LH	-	1	X	
	IPR-CHANNEL RH	-	1	X	
	IPR-SUPPORT CHANNEL	-	1	X	
	IPR-REAL PLATE	-	1	X	
4	REX-PAD DRAWER	JK73-20207A	2	O	
5	IPR-PLATE BOTTOM	JK70-10938A	1	O	
6	FOOT-RUBBER	JK61-40200A	4	O	

O: Service available X: Service not available

Drawer Ass'y Parts Lists

SA. : Service Available

Location No.	Description	SEC. Code	Q'ty	SA	Remark
7	SCREW-TAPPING	6001-000172	4	O	
8	IPR-PLATE SPRING/D	JK70-10401A	2	O	
9	SCREW-MACHINE	6001-000172	1	O	
10	REX-BUMPER	JK73-20210A	1	O	
11	SPRING-PUSH	JK61-70100A	1	O	
12	MEA UNIT-LOCK LEVER	JK97-01075A	1	O	
12-1	MEC-LOCK LEVER	JK75-10027A	1	O	
12-2	SPRING-ES	6107-001041	1	O	
12-3	SOLENOID-DC	JK33-10500A	1	O	
12-4	SCREW-MACHINE	6001-000131	2	O	
12-5	SCREW-MACHINE	6001-000525	2	O	
12-6	SWITCH-MICRO	3405-001013	1	O	
12-7	CBF-HARNESS	JK39-40301R	1	O	
12-8	SCREW-TAPPING	6003-000221	3	O	
13	RMO-STOPPER	JK73-40200A	2	O	

O: Service available X: Service not available



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