

# Pioneer

## Service Manual

ORDER NO.  
**RRV4439**

AV Receiver

# VSX-423-K

## VSX-423-S

## VSX-523-K

**THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).**

| Model     | Type   | Power Requirement | Remarks |
|-----------|--------|-------------------|---------|
| VSX-423-K | SYXE8  | AC 220 V to 230 V |         |
| VSX-423-S | SYXE8  | AC 220 V to 230 V |         |
| VSX-423-K | PWVXE8 | AC 220 V to 240 V |         |
| VSX-523-K | PWXE   | AC 220 V to 240 V |         |
| VSX-523-K | AXQ5   | AC 220 V          |         |

**This service manual should be used together with the following manual(s).**

| Model No.        | Order No. | Remarks |
|------------------|-----------|---------|
| VSX-523-K/CUXESM | RRV4418   |         |

**For SPECIFICATIONS and PANEL FACILITIES, refer to the operating instructions.**

**PIONEER CORPORATION** 1-1, Shin-ogura, Saiwai-ku, Kawasaki-shi, Kanagawa 212-0031, Japan  
**PIONEER ELECTRONICS (USA) INC.** P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.  
**PIONEER EUROPE NV** Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium  
**PIONEER ELECTRONICS ASIACENTRE PTE. LTD.** 253 Alexandra Road, #04-01, Singapore 159936  
©PIONEER CORPORATION 2013

K-ZZZ APR. 2013 Printed in Japan

# 1. CONTRAST OF MISCELLANEOUS PARTS

NOTES: ● Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.

- The  $\Delta$  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Screws adjacent to  $\nabla$  mark on product are used for disassembly.
- For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions, apply as you think it appropriate.)
- Nos. indicate the pages and Nos. in the service manual for the base model.
- When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560Ω → 56 x 10<sup>1</sup> → 561 ..... RD1/4PU5 6 1 J  
 47kΩ → 47 x 10<sup>3</sup> → 473 ..... RD1/4PU4 7 3 J  
 0.5Ω → R50 ..... RN2HR 5 0 K  
 1Ω → 1R0 ..... RS1P 1 R 0 K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62kΩ → 562 x 10<sup>1</sup> → 5621 ..... RN1/4PC 5 6 2 1 F

## CONTRAST TABLE

### VSX-423

VSX-523-K/CUXESM, VSX-423-K/SYXE8, VSX-423-S/SYXE8 and VSX-423-K/PWVXE8 are constructed the same except for the following:

| Mark                   | No.             | Symbol and Description                        | VSX-523-K /CUXESM | VSX-423-K /SYXE8 | VSX-423-S /SYXE8 | VSX-423-K /PWVXE8 | Remarks |
|------------------------|-----------------|---|-------------------|------------------|------------------|-------------------|---------|
| <b>PCB ASSEMBLIES</b>  |                 |   |                   |                  |                  |                   |         |
| NSP                    | P48-1<br>P48-12 | 1..PCB TTL ASSY MAIN                          | 7025HK1211010-IL  | 7025HK1211020-IL | 7025HK1211030-IL | 7025HK1211040-IL  |         |
|                        |                 | 2..MAIN ASSY                                  | 7028073311010-IL  | 7028073311020-IL | 7028073311020-IL | 7028073311040-IL  |         |
|                        |                 | 2..REG ASSY                                   | 7028073312010-IL  | 7028073312020-IL | 7028073312020-IL | 7028073312020-IL  |         |
| NSP                    |                 | 1..PCB TTL ASSY DMAIN                         | 7025HK1211012-IL  | 7025HK1211022-IL | 7025HK1211032-IL | 7025HK1211042-IL  |         |
| NSP                    | P48-6           | 1..PCB TTL ASSY CPU                           | 7025HK1211013-IL  | 7025HK1211023-IL | 7025HK1211033-IL | 7025HK1211043-IL  |         |
|                        |                 | 2..CPU ASSY                                   | 7028073331010-IL  | 7028073331020-IL | 7028073331020-IL | 7028073331040-IL  |         |
| NSP                    |                 | 1..PCB TTL ASSY AMP5                          | 7025HK1211014-IL  | 7025HK1211024-IL | 7025HK1211034-IL | 7025HK1211044-IL  |         |
| NSP                    | P48-9           | 1..PCB TTL ASSY FRONT                         | 7025HK1211011-IL  | 7025HK1211021-IL | 7025HK1211031-IL | 7025HK1211041-IL  |         |
|                        |                 | 2..FRONT ASSY                                 | 7028073321010-IL  | 7028073321020-IL | 7028073321020-IL | 7028073321020-IL  |         |
| NSP                    | $\Delta$ P48-11 | 1..PCB TTL ASSY SMPS                          | 7025HK1211015-IL  | 7025HK1211025-IL | 7025HK1211035-IL | 7025HK1211045-IL  |         |
|                        |                 | 2..SMPS ASSY                                  | 7028073361010-IL  | 7028073361020-IL | 7028073361020-IL | 7028073361040-IL  |         |
| <b>PACKING SECTION</b> |                 |   |                   |                  |                  |                   |         |
|                        | P45-5           | Quick Start Guide                             | 5707000007800-IL  | 5707000007820-IL | 5707000007820-IL | 5707000007820-IL  |         |
|                        | P45-6           | Operating Instructions (CD-ROM)               | 6517000001280-IL  | 6517000001300-IL | 6517000001300-IL | 6517000001300-IL  |         |
| NSP                    |                 | Operating Instructions_VSX-523 (En) (pdf)     | ARB7517           | Not used         | Not used         | Not used          |         |
| NSP                    |                 | Operating Instructions_VSX-523 (Frca) (pdf)   | ARC8192           | Not used         | Not used         | Not used          |         |
| NSP                    |                 | Operating Instructions_VSX-523 (Es) (pdf)     | ARC8193           | Not used         | Not used         | Not used          |         |
| NSP                    |                 | Operating Instructions_VSX-323/423 (En) (pdf) | Not used          | ARB7520          | ARB7520          | ARB7520           |         |
| NSP                    |                 | Operating Instructions_VSX-323/423 (Fr) (pdf) | Not used          | ARC8197          | ARC8197          | ARC8197           |         |
| NSP                    |                 | Operating Instructions_VSX-323/423 (De) (pdf) | Not used          | ARC8198          | ARC8198          | ARC8198           |         |
| NSP                    |                 | Operating Instructions_VSX-323/423 (It) (pdf) | Not used          | ARC8199          | ARC8199          | ARC8199           |         |
| NSP                    |                 | Operating Instructions_VSX-323/423 (Es) (pdf) | Not used          | ARC8200          | ARC8200          | ARC8200           |         |
| NSP                    |                 | Operating Instructions_VSX-323/423 (Nl) (pdf) | Not used          | ARC8201          | ARC8201          | ARC8201           |         |
| NSP                    |                 | Operating Instructions_VSX-323/423 (Ru) (pdf) | Not used          | ARC8202          | ARC8202          | ARC8202           |         |
| NSP                    |                 | Operating Instructions_VSX-823 (En) (pdf)     | ARB7518           | Not used         | Not used         | Not used          |         |
| NSP                    |                 | Operating Instructions_VSX-823 (Frca) (pdf)   | ARC8194           | Not used         | Not used         | Not used          |         |
| NSP                    |                 | Operating Instructions_VSX-823 (Es) (pdf)     | ARC8195           | Not used         | Not used         | Not used          |         |
| NSP                    |                 | Operating Instructions_VSX-528/828 (En) (pdf) | Not used          | ARB7521          | ARB7521          | ARB7521           |         |
| NSP                    |                 | Operating Instructions_VSX-528/828 (Fr) (pdf) | Not used          | ARC8203          | ARC8203          | ARC8203           |         |
| NSP                    |                 | Operating Instructions_VSX-528/828 (De) (pdf) | Not used          | ARC8204          | ARC8204          | ARC8204           |         |
| NSP                    |                 | Operating Instructions_VSX-528/828 (It) (pdf) | Not used          | ARC8205          | ARC8205          | ARC8205           |         |
| NSP                    |                 | Operating Instructions_VSX-528/828 (Es) (pdf) | Not used          | ARC8206          | ARC8206          | ARC8206           |         |

| Mark | No.    | Symbol and Description                        | VSX-523-K<br>/CUXESM | VSX-423-K<br>/SYXE8 | VSX-423-S<br>/SYXE8 | VSX-423-K<br>/PWVXE8 | Remarks |
|------|--------|---|----------------------|---------------------|---------------------|----------------------|---------|
| NSP  |        | Operating Instructions_VSX-528/828 (Ni) (pdf) | Not used             | ARC8207             | ARC8207             | ARC8207              |         |
| NSP  |        | Operating Instructions_VSX-528/828 (Ru) (pdf) | Not used             | ARC8208             | ARC8208             | ARC8208              |         |
| NSP  | P45-7  | Box, Gift                                     | 6007212370000-IL     | 60072123701B0-IL    | 60072123701C0-IL    | 60072123701E0-IL     |         |
| NSP  | P45-10 | Warranty Card                                 | ARY7172              | ARY7158             | ARY7158             | ARY7158              |         |
| ⚠    |        | AC Power Cord                                 | Not used             | Not used            | Not used            | L068250100040-IL     |         |
|      |        | <b>EXTERIOR SECTION</b>                       |                      |                     |                     |                      |         |
| ⚠    | P48-16 | Power Trans                                   | 8200960611280-IL     | 8200960611290-IL    | 8200960611290-IL    | 8200960611290-IL     |         |
| ⚠    | P48-17 | Cord Assy                                     | L068125101710-IL     | L068250161710-IL    | L068250161710-IL    | Not used             |         |
|      | P48-22 | Pioneer Badge                                 | XAM3006              | XAM3006             | VAM1129             | XAM3006              |         |
|      | P48-23 | Cabinet VSX-523                               | 3008212076000-IL     | 3008212076000-IL    | 3008212076010-IL    | 3008212076000-IL     |         |
|      | P48-24 | Front Panel                                   | 3067215871000-IL     | 3067215871100-IL    | 3067215871200-IL    | 3067215871100-IL     |         |
|      | P48-25 | Back Chassis                                  | 3207214566000-IL     | 3207214566010-IL    | 3207214566020-IL    | 3207214566100-IL     |         |
|      | P48-27 | Foot  | 4000210391000-IL     | 4000210391000-IL    | 4007210391000-IL    | 4000210391000-IL     |         |
|      | P48-36 | Knob  | 5080212431000-IL     | 5080212431000-IL    | 5087212431100-IL    | 5080212431000-IL     |         |
|      | P48-37 | Button  | 5090213741100-IL     | 5090213741100-IL    | 5097213741000-IL    | 5090213741100-IL     |         |
|      | P48-38 | 5 Key Button                                  | 5090214561000-IL     | 5090214561000-IL    | 5097214561100-IL    | 5090214561000-IL     |         |
| ⚠    |        | Bushing                                       | Not used             | 2410040353010-IL    | 2410040353010-IL    | 2410040353010-IL     | No.53   |
|      |        | Socket, Power AC                              | Not used             | Not used            | Not used            | G430040560021-IL     | No.54   |

Notes : The numbers in the remarks column correspond to the numbers on the "EXPLODED VIEWS".  
For PCB ASSEMBLIES, Refer to "CONTRAST OF PCB ASSEMBLIES".

## VSX-523

VSX-523-K/CUXESM, VSX-523-K/PWXE and VSX-523-K/AXQ5 are constructed the same except for the following:

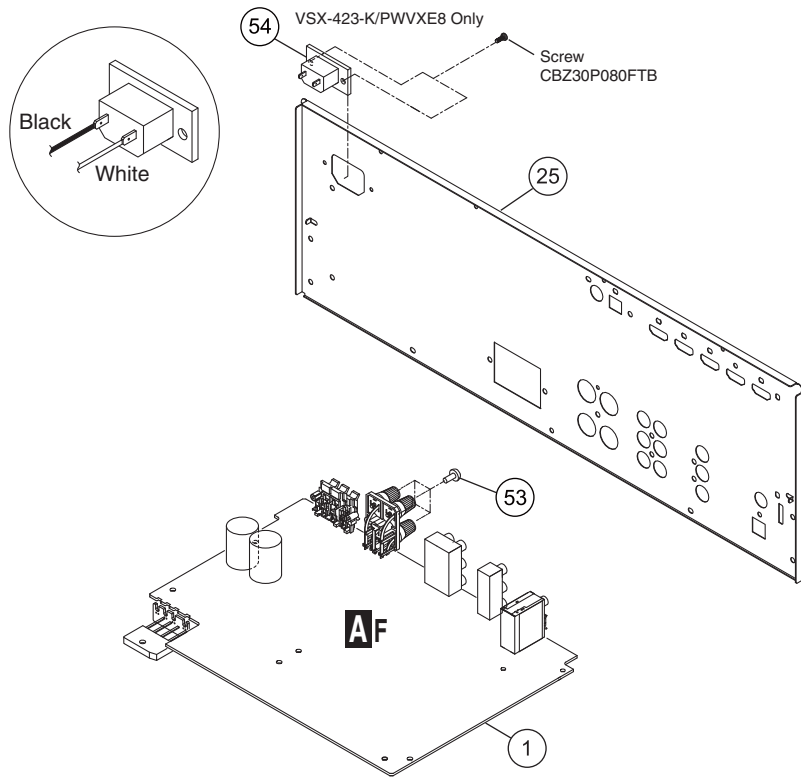
| Mark | No.    | Symbol and Description                     | VSX-523-K<br>/CUXESM                 | VSX-523-K<br>/PWXE                   | VSX-523-K<br>/AXQ5                   | Remarks |
|------|--------|--|--------------------------------------|--------------------------------------|--------------------------------------|---------|
|      |        | <b>PCB ASSEMBLIES</b>                      |                                      |                                      |                                      |         |
| NSP  | P48-1  | 1..PCB TTL ASSY MAIN<br>2..MAIN ASSY       | 7025HK1211010-IL<br>7028073311010-IL | 7025HK1211060-IL<br>7028073311060-IL | 7025HK1211070-IL<br>7028073311070-IL |         |
| NSP  |        | 1..PCB TTL ASSY DMAIN                      | 7025HK1211012-IL                     | 7025HK1211062-IL                     | 7025HK1211072-IL                     |         |
| NSP  | P48-6  | 1..PCB TTL ASSY CPU<br>2..CPU ASSY         | 7025HK1211013-IL<br>7028073331010-IL | 7025HK1211063-IL<br>7028073331060-IL | 7025HK1211073-IL<br>7028073331070-IL |         |
| NSP  |        | 1..PCB TTL ASSY AMP5                       | 7025HK1211014-IL                     | 7025HK1211064-IL                     | 7025HK1211074-IL                     |         |
| NSP  | P48-9  | 1..PCB TTL ASSY FRONT<br>2..FRONT ASSY     | 7025HK1211011-IL<br>7028073321010-IL | 7025HK1211061-IL<br>7028073321020-IL | 7025HK1211071-IL<br>7028073321020-IL |         |
| NSP  | P48-11 | 1..PCB TTL ASSY SMPS<br>2..SMPS ASSY       | 7025HK1211015-IL<br>7028073361010-IL | 7025HK1211065-IL<br>7028073361020-IL | 7025HK1211075-IL<br>7028073361020-IL |         |
|      |        | <b>PACKING SECTION</b>                     |                                      |                                      |                                      |         |
|      | P45-5  | Quick Start Guide                          | 5707000007800-IL                     | Not used                             | Not used                             |         |
|      |        | Operating Instructions (En)                | Not used                             | 5707000007850-IL                     | Not used                             |         |
|      |        | Operating Instructions (Zhcn)              | Not used                             | Not used                             | 5707000007750-IL                     |         |
| NSP  | P45-6  | Operating Instructions (CD-ROM)            | 6517000001280-IL                     | Not used                             | Not used                             |         |
|      |        | Operating Instructions_VSX-523 (En) (pdf)  | ARB7517                              | Not used                             | Not used                             |         |
| NSP  |        | Operating Instructions_VSX-523 (Frca)(pdf) | ARC8192                              | Not used                             | Not used                             |         |
| NSP  |        | Operating Instructions_VSX-523 (Es) (pdf)  | ARC8193                              | Not used                             | Not used                             |         |
| NSP  |        | Operating Instructions_VSX-823 (En) (pdf)  | ARB7518                              | Not used                             | Not used                             |         |
| NSP  |        | Operating Instructions_VSX-823 (Frca)(pdf) | ARC8194                              | Not used                             | Not used                             |         |
| NSP  |        | Operating Instructions_VSX-823 (Es) (pdf)  | ARC8195                              | Not used                             | Not used                             |         |
| NSP  | P45-7  | Box, Gift                                  | 6007212370000-IL                     | 6007212370110-IL                     | 6007212370120-IL                     |         |
| NSP  | P45-10 | Warranty Card                              | ARY7172                              | Not used                             | ARY7137                              |         |
|      |        | Tuner Isolator                             | Not used                             | Not used                             | L170200060010-IL                     | No.12   |
|      |        | <b>EXTERIOR SECTION</b>                    |                                      |                                      |                                      |         |
| ⚠    | P48-16 | Power Trans 523CU                          | 8200960611280-IL                     | 8200960611290-IL                     | 8200960611310-IL                     |         |

| Mark | No.    | Symbol and Description | VSX-523-K /CUXESM | VSX-523-K /PWXE  | VSX-523-K /AXQ5  | Remarks |
|------|--------|------------------------|-------------------|------------------|------------------|---------|
| A    | P48-17 | Cord Assy              | L068125101710-IL  | L068250751710-IL | L068250101710-IL |         |
|      | P48-24 | Front Panel 523CU      | 3067215871000-IL  | 3067215871110-IL | 3067215871110-IL |         |
|      | P48-25 | Back Chassis           | 3207214566000-IL  | 3207214566030-IL | 3207214566300-IL |         |

Notes : The numbers in the remarks column correspond to the numbers on the "EXPLODED VIEWS".  
 For PCB ASSEMBLIES, Refer to "CONTRAST OF PCB ASSEMBLIES".

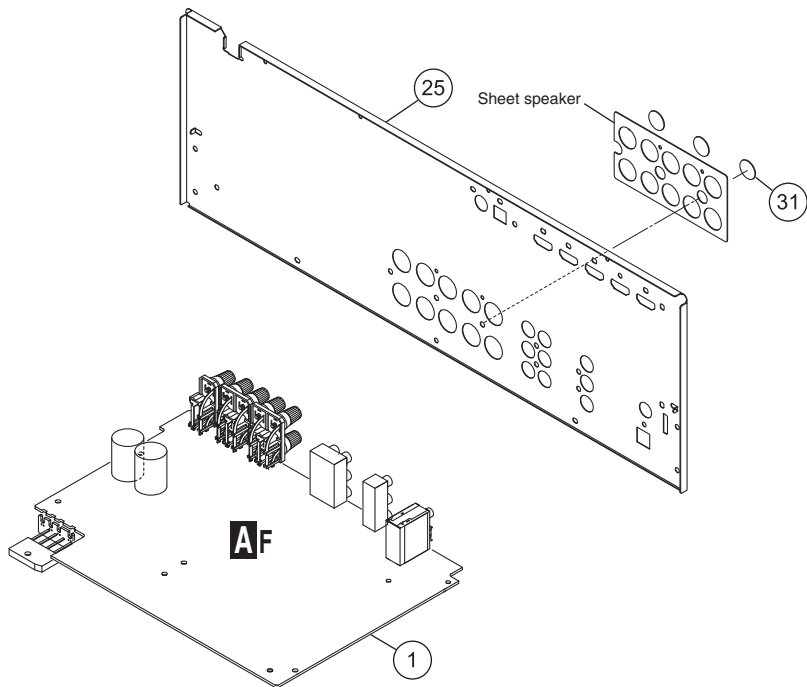
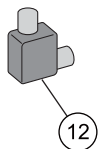
## EXPLODED VIEWS

### EXTERIOR SECTION (VSX-423-K)



### PACKING SECTION (VSX-523-K/AXQ5)

### EXTERIOR SECTION (VSX-523-K/AXQ5)



## CONTRAST OF PCB ASSEMBLIES

### A F MAIN ASSY

7028073311010-IL, 7028073311020-IL and 7028073311040-IL are constructed the same with the exception of some components, including the following:

| Mark | Symbol and Description     | 7028073311010-IL | 7028073311020-IL | 7028073311040-IL | Remarks |
|------|----------------------------|------------------|------------------|------------------|---------|
|      | 601 TUNER,FM/AM            | E903004100780-IL | E903104100780-IL | E903104100780-IL |         |
|      | X1200 CRYSTAL (14.32 MHz)  | E80014R318080-IL | Not used         | Not used         |         |
|      | X1200 CRYSTAL (17.734 MHz) | Not used         | Not used         | E80017R734410-IL |         |
|      | X1201 CRYSTAL (17.734 MHz) | Not used         | E80017R734410-IL | Not used         |         |

7028073311010-IL, 7028073311060-IL and 7028073311070-IL are constructed the same with the exception of some components, including the following:

| Mark | Symbol and Description     | 7028073311010-IL | 7028073311060-IL | 7028073311070-IL | Remarks |
|------|----------------------------|------------------|------------------|------------------|---------|
|      | X1201 CRYSTAL (17.734 MHz) | Not used         | E80017R734410-IL | E80017R734410-IL |         |
|      | JA101 TER,BOARD SCREW 4P   | G612405E0200Y-IL | G612405E0200Y-IL | Not used         |         |
|      | JA101 TER,BOARD SCREW 8P   | Not used         | Not used         | G614108V1010M-IL |         |
|      | JA102 TER,BOARD PUSH 6P    | G596601SA010Y-IL | G596601SA010Y-IL | Not used         |         |
|      | JA102 TER,BOARD SCREW 2P   | Not used         | Not used         | G611201A0200Y-IL |         |

The mounting positions of the additional parts are described in the circuit diagram and PCB diagram of the parent manual.

Note: This list is not complete. Only components that are available as service part are listed!

### B F D-MAIN ASSY

7028073351010-IL (CUXESM) and 7028073351010-IL (Except CUXESM) are constructed the same with the exception of some components, including the following:

| Mark | Symbol and Description | 7028073351010-IL<br>(CUXESM) | 7028073351010-IL<br>(Except CUXESM) | Remarks |
|------|------------------------|------------------------------|-------------------------------------|---------|
|      | IC2001                 | Not Resisted                 | 8952523000020-IL                    |         |
|      | IC2019                 | Not Resisted                 | 8952523000030-IL                    |         |

Note: This list is not complete. Only components that are available as service part are listed!

### F F CPU ASSY

7028073331010-IL, 7028073331020-IL and 7028073331040-IL are constructed the same with the exception of some components, including the following:

| Mark | Symbol and Description | 7028073331010-IL | 7028073331020-IL | 7028073331040-IL | Remarks |
|------|------------------------|------------------|------------------|------------------|---------|
|      | IC203                  | Not Resisted     | 8952523000010-IL | 8952523000010-IL |         |

7028073331010-IL, 7028073331060-IL and 7028073331070-IL are constructed the same with the exception of some components, including the following:

| Mark | Symbol and Description | 7028073331010-IL | 7028073331060-IL | 7028073331070-IL | Remarks |
|------|------------------------|------------------|------------------|------------------|---------|
|      | IC203                  | Not Resisted     | 8952523000010-IL | 8952523000010-IL |         |

Note: This list is not complete. Only components that are available as service part are listed!

### F F FRONT ASSY

7028073321010-IL and 7028073321020-IL are constructed the same with the exception of some components, including the following:

| Mark | Symbol and Description | 7028073321010-IL | 7028073321020-IL | Remarks |
|------|------------------------|------------------|------------------|---------|
|      | R779, R780             | C060001063050-IL | C0602R2063050-IL |         |

Note: This list is not complete. Only components that are available as service part are listed!

# K F SMPS ASSY

7028073361010-IL, 7028073361020-IL and 7028073361040-IL are constructed the same with the exception of some components, including the following:

A

| Mark | Symbol and Description                   | 7028073361010-IL | 7028073361020-IL | 7028073361040-IL | Remarks |
|------|--|------------------|------------------|------------------|---------|
| ⚠    | FU101 FUSE GLASS TUBE 20mm (T8AL/250V)   | N751508001160-IL | Not used         | Not used         |         |
| ⚠    | FU101 FUSE GLASS TUBE 20mm (T6.3AL/250V) | Not used         | N751506301160-IL | N751506301160-IL |         |
| ⚠    | CN9100 CN.WAFER 7.92mm                   | L108396030010-IL | L108396030010-IL | Not used         |         |

The mounting positions of the additional parts are described in the circuit diagram and PCB diagram of the parent manual.

Note: This list is not complete. Only components that are available as service part are listed!

# L F REG ASSY

B

Although 7028073312010-IL and 7028073312020-IL are different and are NOT COMPATIBLE! Some components on these assy's are different. Since these different components are not available as service part, they are not listed.

C

D

E

F