



ROTARY SCREW LIQUID CHILLERS

RENEWAL PARTS

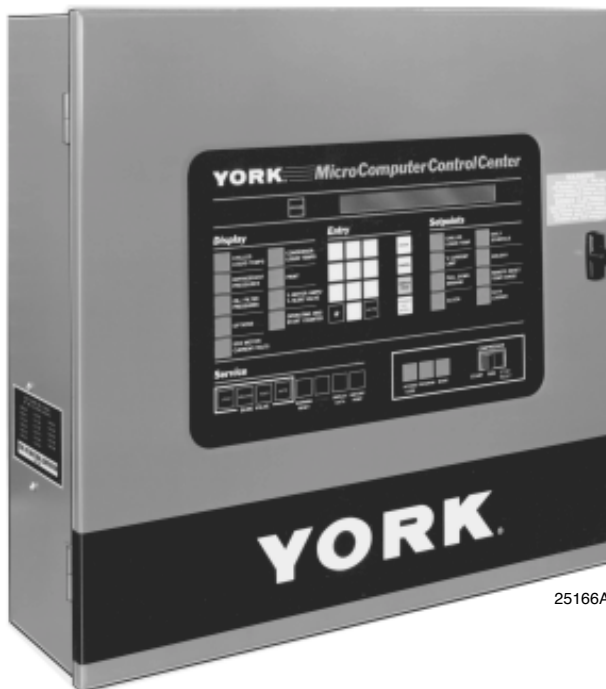
Supersedes: 160.47-RP3 (292)

Form 160.47-RP3 (599)

MICROCOMPUTER CONTROL CENTER

MODELS YS BA BA SO THRU YS FA FB S5 (STYLE A THRU D)
100 - 675 TONS

ELECTRO-MECHANICAL STARTER, SOLID STATE STARTER APPLICATIONS



25166A



26878A

PART NUMBERS

| | | |
|----------------|-------------------------------|---------------|
| Style A | English Display | 371-01200-001 |
| Style C | English Display | 371-01200-003 |
| Style C | English & Simplified Chinese | 371-01200-006 |
| Style C | English & Traditional Chinese | 371-01200-013 |
| Style D | English Display | 371-01200-019 |
| Style D | English & Simplified Chinese | 371-01200-020 |
| Style D | English & Traditional Chinese | 371-01200-021 |

| ITEM | DESCRIPTION | FIG. NO. | QTY. | PART NUMBER |
|------|--|----------|------|------------------------------|
| 1 | RELAY | 1 | 1 | 024-23962-000 |
| 2 | TRANSFORMER | 1 | 1 | 025-27911-000 |
| 3 | FUSE, 5 AMP | 1 | 1 | 025-14019-000 |
| 4 | FUSE, 15 AMP | 1 | 1 | 025-14384-000 |
| 5 | FUSE HOLDER | 1 | 2 | 025-13991-000 |
| 6 | CONTROL, MICRO BOARD | 1 | 1 | TABLE 1 |
| 7 | CONTROL, POWER SUPPLY | 1 | 1 | 031-01080-000 |
| 8 | CONTROL, DIGITAL INPUT | 1 | 1 | 031-00935-000 |
| 9 | CONTROL, RELAY BOARD | 1 | 1 | 031-00932-002 |
| 10 | FASTENER, PAWL ADJ. | 2 | 1 | 021-17252-000 |
| 11 | KEYPAD (STANDARD) | 2 | 1 | 024-25258-000 |
| | (Simplified Chinese Language) | 5 | 1 | 024-27239-000 |
| | (Traditional Chinese Language) | 5 | 1 | 024-27240-000 |
| 12 | DISPLAY | | | |
| | CONTROL CENTER 371-01112-001 | 3, 4 | 1 | 031-00775-000 ⁽¹⁾ |
| | CONTROL CENTER 371-01200-003 | 3, 4 | 1 | 031-00775-001 ⁽²⁾ |
| 13 | SWITCH, ROCKER | 2 | 1 | 024-23143-000 |
| 14 | SUPPRESSOR | 1 | 1 | 031-00808-000 |
| 15 | NOT USED | — | — | — |
| 16 | NOT USED | — | — | — |
| 17 | NOT USED | — | — | — |
| 18 | CONTROL, CURRENT MODULE CM-2 (Electro-Mechanical Starter Application Only) | 3 | 1 | 031-00947-000 |
| 19 | DIODE BRIDGE (Electro-Mechanical Starter Application Only) | 3 | 1 | 031-00210-000 |
| 20 | RESISTOR, VARIABLE (Electro-Mechanical Starter Application Only) | 3 | 2 | 025-20789-000 |
| 21 | CONTROL, LOGIC - 7L (Solid State Starter Application Only) | 4 | 1 | 031-00936-002 |
| 22 | CONTROL, LOGIC - 14L (Solid State Starter Application Only) | 4 | 1 | 031-00936-003 |
| 23 | CONTROL, LOGIC - 26L (Solid State Starter Application Only) | 4 | 1 | 031-00936-004 |
| 24 | CONTROL, LOGIC - 33L (Solid State Starter Application Only) | 4 | 1 | 031-00936-005 |
| 25 | CONTROL, REMOTE RESET (Customer Option) | 1 | — | 031-00814-000 ⁽³⁾ |
| 26 | CARD FILE (Customer Option) | 1 | 1 | 031-00827-000 |
| 27 | IC, REAL TIME CLOCK - U16 | 1 | 1 | 031-00955-000 |
| 28 | EPROM - U17 | 1 | 1 | TABLE 2 |
| 29 | SENSOR, WATER TEMP - 3K OHM | — | 2 | 025-29964-000 |
| 30 | SENSOR, OIL & DISCHARGE TEMP - 50K OHM | — | 2 | 025-32328-000 |
| 31 | PRESSURE TRANSDUCERS | — | — | TABLE 3 |
| 32 | CABLE, RIBBON - MICRO BOARD J4 | 1 | 1 | 031-00950-000 |
| 33 | CABLE, RIBBON - RELAY BOARD J1 | 1 | 1 | 031-00951-000 |
| 34 | CABLE, RIBBON - DISPLAY | 1 | 1 | 031-00952-000 |
| 35 | CABLE, RIBBON - DIGITAL INPUT BOARD J1 | 1 | 1 | 031-00953-000 |
| 36 | CABLE, RIBBON - MICRO BOARD J2 | 1 | 1 | 031-00985-000 |
| 37 | VOLTAGE TRANSIENT PROTECTION Module* for Micro Board RS-485 Serial Port (only used in units equipped with ISN FAX-4500 BAS connected to RS-485 Serial Port TB-7) <i>* If this module is being installed for the first time, order kit #371-01477-000. Kit includes module and Installation Instructions.</i> | 1 | 1 | 031-01586-000 |
| | KIT, RETROFIT - SIMPLIFIED (Chinese Language Display) (also see Fig. 5) | — | — | 371-01708-002 |
| | KIT, RETROFIT - TRADITIONAL (Chinese Language Display) (also see Fig. 5) | — | — | 371-01708-005 |

For Notes, refer to page 3.

NOTES:

1. BABCOCK VF-140-04. If not available, Kit 331-00775-600 will be supplied. Kit consists of Display 031-00775-001, Display Reset Board 031-01305-000 and Installation Instructions.
2. BABCOCK VF-140-02 or IEE 33383-01.
3. If it is desired to remotely reset both chilled water setpoint and current limit setpoint, two each are required. If it desired to remotely reset only one of these setpoints, one each are required.
4. If Control Center is equipped with Micro Board 031-00940-001, transducer 025-28678-002 / -007 is used for both water and brine R22 applications and 025-28678-005 / -008 is not applicable.
5. Style "C" and later chillers use straight cut threads.

Replacement Micro Boards are supplied without EPROMs. In some circumstances it will be necessary to remove the EPROM from the defective board and use it in the replacement board. In other circumstances, the available replacement board will not be compatible with the existing EPROM and therefore, both board and EPROM would have to be ordered.

Therefore, to select a replacement Micro Board that will provide proper operation, it is essential that the part number of the defective board and the part number of the EPROM installed in that board are known prior to placing an order. The board part number is printed on the front surface of the board. The EPROM is component U17 on the Micro Board. Its part number is printed on a label attached to the top surface of the EPROM.

Refer to Table 1 and order a replacement Micro Board as follows:

1. In the left hand column of Table 1, locate the part number of the defective Micro Board and the part number of the EPROM installed in that board. In some cases, no EPROM part number is listed because the EPROM will be removed from the defective board and used in the replacement board.
2. Place an order for selection in right hand column. If an EPROM part number is listed in the right hand column, both the Micro Board part number and the EPROM part number must be ordered. In other cases it is necessary to order only the Micro Board.

TABLE 1 –

| IF EQUIPPED WITH MICRO BOARD / EPROM | SELECTION | REPLACE WITH MICRO BOARD / EPROM |
|--------------------------------------|-----------|--|
| 031-00940-001 / 031-01051-001 | | 031-01065-002 / 031-01102-001 / NOTE 2 |
| 031-00940-001 / 031-01051-002 | (1) | 031-00940-001 / NOTE 1 |
| 031-01065-000, -001, -002 | (1) | 031-01065-002 / NOTE 1 |

NOTES:

1. Servicemen, in the field, must remove the EPROM from the defective Micro Board and re-use in the replacement board.
2. If brine cooling application, transducer 025-28678-003 / -009 must also be ordered to replace existing 025-28678-002 transducer.

TABLE 2 –

| EPROM | | APPLICATION | APPLICABLE MICRO BOARD |
|---------------|----------|----------------------------|---------------------------|
| PART NO. | VERSION | | |
| 031-01051-001 | 4.E | STANDARD CHILLER | 031-00940-001 |
| 031-01051-002 | 4.EF | YORK FAX-4000 | 031-00940-001 |
| 031-01102-002 | S.01F.17 | YORK FAX-4500 AND STANDARD | 031-01065-000; -001; -002 |

TABLE 3 –

| PRESSURE TRANSDUCERS | PART NUMBER THREAD TYPE | |
|---------------------------------------|------------------------------|------------------------------|
| | NPTF | STRAIGHT CUT ⁽⁵⁾ |
| CONDENSER, OIL, FILTER OIL & SEAL OIL | 025-28678-001 | 025-28678-006 |
| EVAPORATOR - R22, WATER | 025-28678-002 ⁽⁴⁾ | 025-28678-007 ⁽⁴⁾ |
| R22, BRINE | 025-28678-003 | 025-28678-009 |
| R134a, WATER & BRINE | 025-28678-005 | 025-28678-008 |

(4), (5) Refer to notes above.

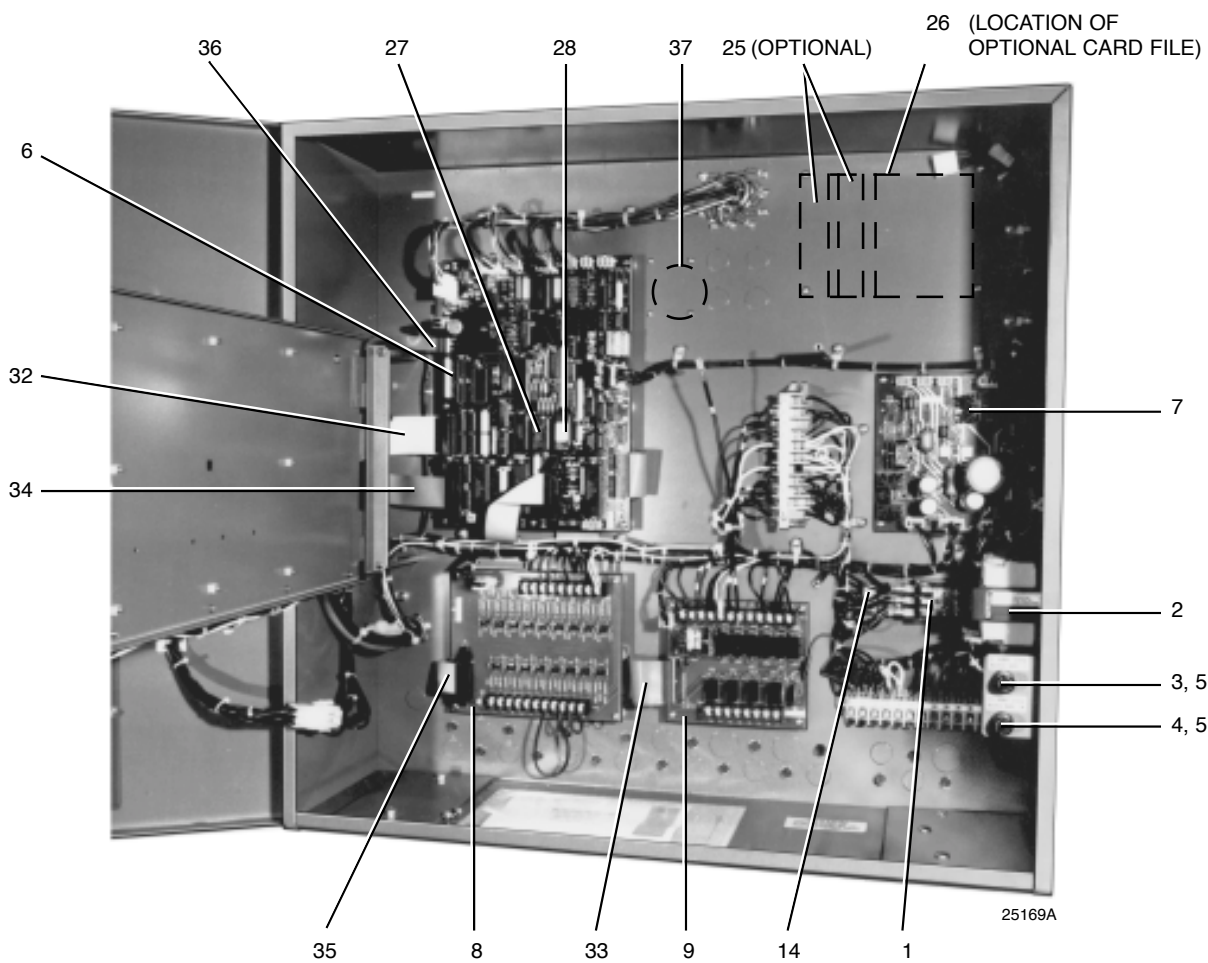


FIG. 1 – MICROCOMPUTER CONTROL CENTER – DOOR AND HINGED PANEL OPEN

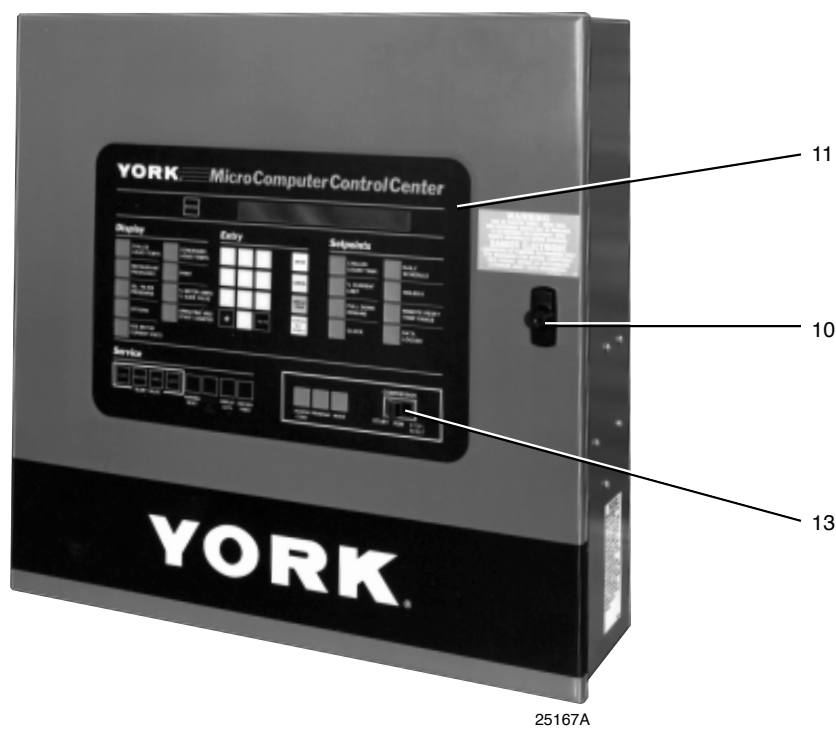
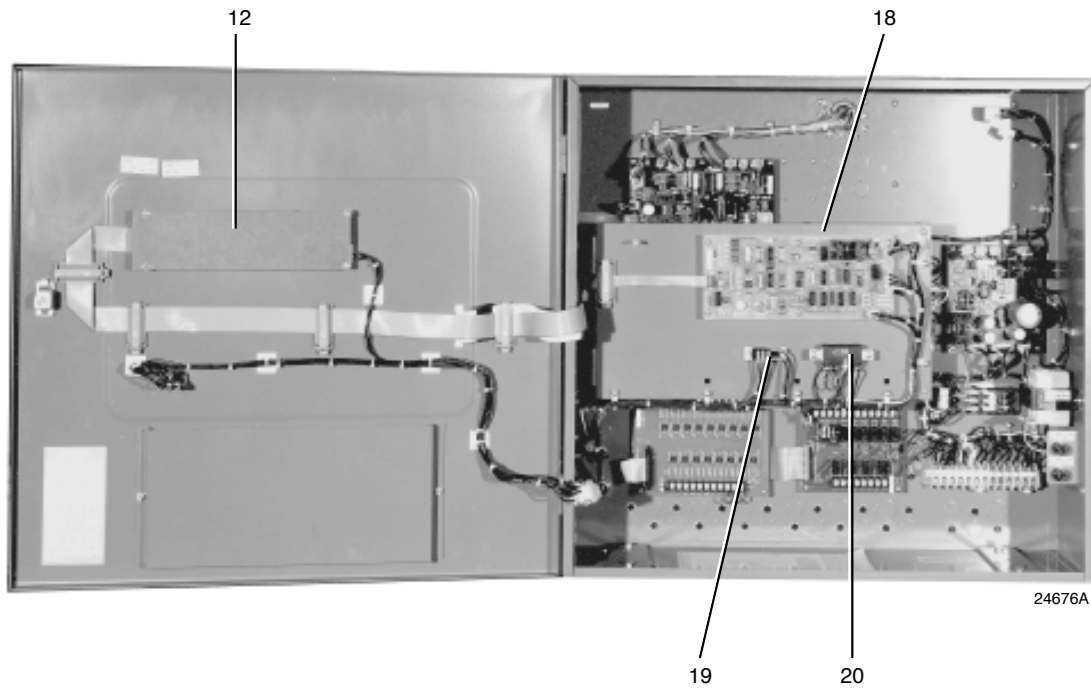
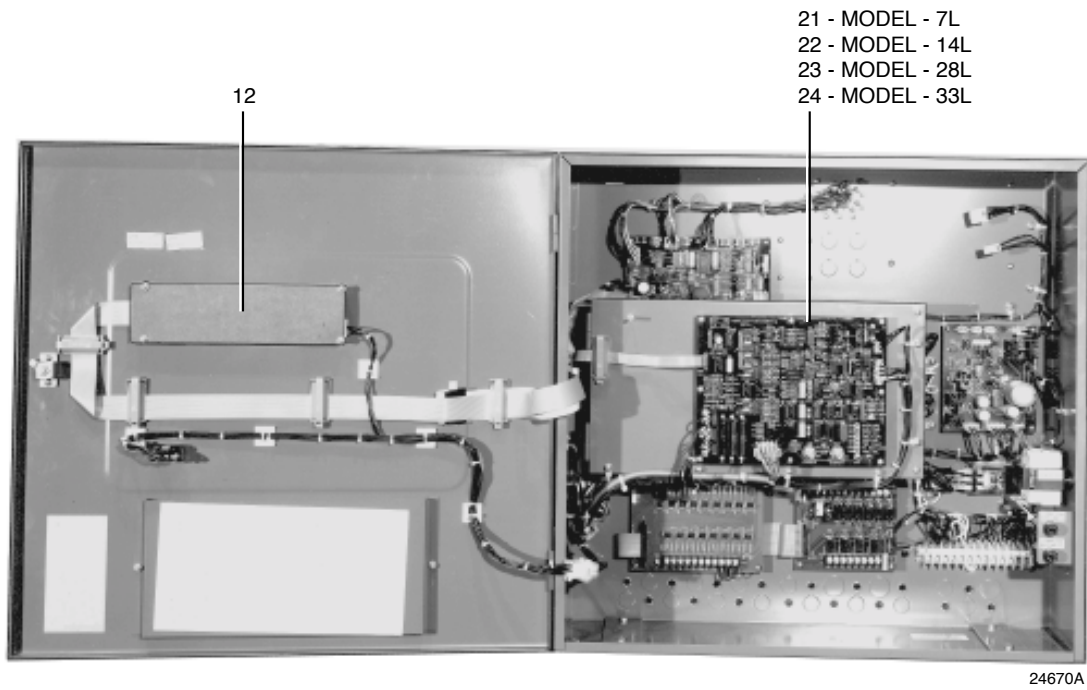


FIG. 2 – MICROCOMPUTER CONTROL CENTER EXTERIOR



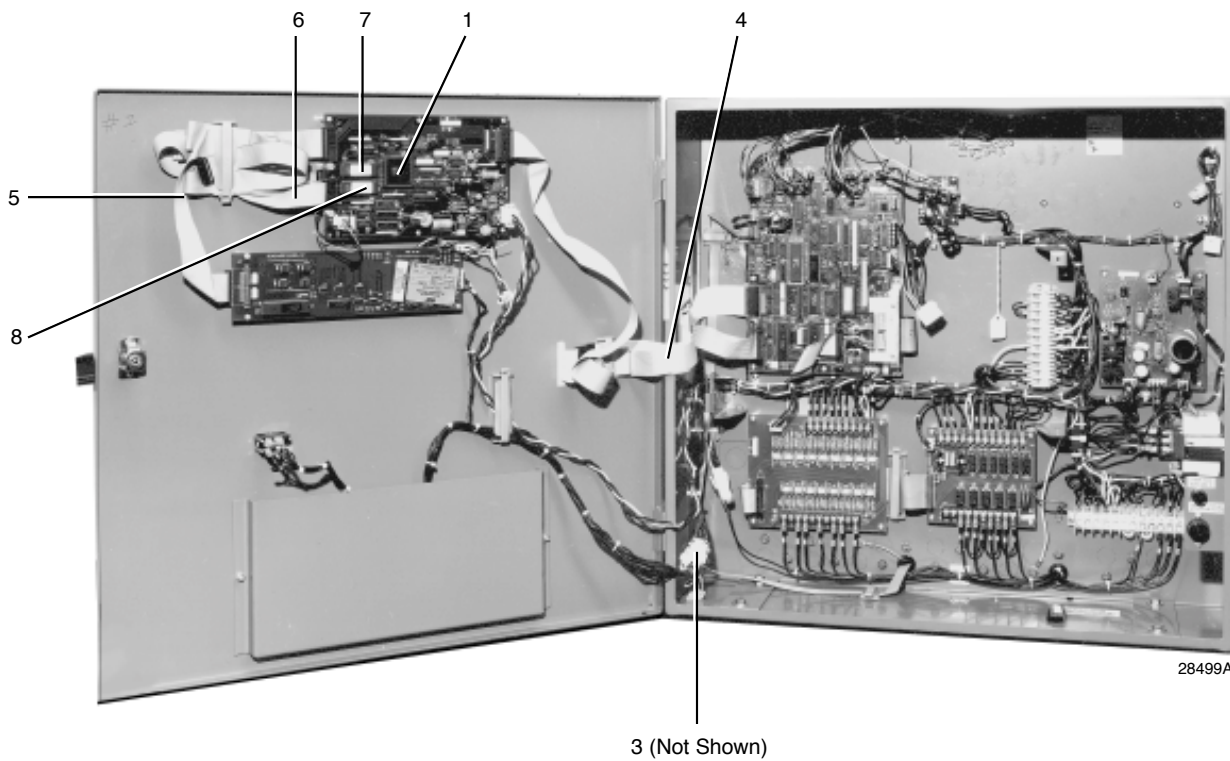
**FIG. 3 – MICROCOMPUTER CONTROL CENTER – DOOR OPEN
ELECTRO-MECHANICAL STARTER APPLICATIONS**



**FIG. 4 – MICROCOMPUTER CONTROL CENTER – DOOR OPEN
ELECTRO-SOLID STATE STARTER APPLICATIONS**



28498AC



28499A

FIG. 5 – CHINESE LANGUAGE DISPLAY COMPONENTS

| ITEM | DESCRIPTION | PART NO. |
|------|---|----------------|
| 1 | PC BOARD, CHINESE LANGUAGE DISPLAY | 031-01616-000 |
| 2 | DISPLAY, CHINESE LANGUAGE LCD GRAPHIC | 031-01653-000 |
| 3 | TRANSFORMER, CHINESE LANGUAGE DISPLAY 115VAC / 24VAC | 025-27911-000 |
| 4 | CABLE, RIBBON – MICRO BOARD TO CHINESE LANGUAGE DISPLAY | 031-01647-000 |
| 5 | CABLE, RIBBON – CHINESE DISPLAY BOARD TO VACUUM FLUORESCENT DISPLAY | 031-01646-000 |
| 6 | CABLE, RIBBON – CHINESE DISPLAY BOARD TO CHINESE LANGUAGE LCD DISPLAY | 031-01645-000 |
| 7 | EPROM – CS.01F.00 (IC-U13) YS – SIMPLIFIED CHINESE LANGUAGE | 031-01639-001* |
| 8 | EPROM – CS.01F.00 (IC-U14) YS – TRADITIONAL CHINESE LANGUAGE | 031-01639-002* |

* See Notes below.

NOTES FOR FIGURE 5

Beginning on / about April 1997, Chinese language displays will be supplied with either: two Simplified translation EPROMs or two Traditional translation EPROMs. If Simplified translation is desired, both of the Simplified EPROMs below are required. If Traditional translation is desired, both of the Traditional EPROMs below are required. The EPROM part numbers and on-board socket locations are as follows:

| EPROM | TRANSLATION | SOCKET LOCATION |
|---------------|-------------|-----------------|
| 031-01699-001 | Simplified | U13 |
| 031-01699-002 | Simplified | U14 |
| 031-01699-003 | Traditional | U13 |
| 031-01699-004 | Traditional | U14 |

Chinese Language displays contained one EPROM (031-01639-001) (socket location U13) that translated to Simplified Chinese and one EPROM (031-01639-002) (socket location U14) that translated to Traditional Chinese. The desired translation was then selected by Program Jumper PT0, located on the Chinese language display board. Due to the addition of messages, two EPROMs are now required for each translation as described above. When equipped with these new EPROMs, Program Jumper PT0 can no longer be used to select between Simplified or Traditional translation. If one of these earlier version EPROMs listed in Fig. 5 fails, it must be replaced with two EPROMs as follows:

| IF THIS EPROM FAILS: | | | REPLACE WITH: | |
|----------------------|----------|-------------|---------------|----------|
| PART NO. | LOCATION | TRANSLATION | PART NO. | LOCATION |
| 031-01639-001 | U13 | SIMPLIFIED | 031-01699-001 | U13 |
| | | | - and - | |
| | | | 031-01699-002 | U14 |
| 031-01639-002 | U14 | TRADITIONAL | 031-01699-003 | U13 |
| | | | - and - | |
| | | | 031-01699-004 | U14 |



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