TECHNICAL REPORT

Parts Change (VOL. 26)

DATE. Jul. 30, 1982

NO. C-708

MODEL. EL,CS,OS,CE, PC Printer

Industrial Instruments Group Reliability & Quality Control Department.

| | | | Current | | New | | | !ime of change (from | | | |
|-----|--|------------|---------------|---------------|---------------|-------------|----------|----------------------|---|--------------|-------|
| No. | Model | Area | rants code : | Price rank | Parts code | New mark | ew Frice | Interchangeabilit. | | prod | Parts |
| | | | | | | | | Description | | of) | |
| 1 | EL-318 EL-506H EL-512 EL-5103 | countries | PPAPM1025CCZZ | AA | (Abolished) | - | - | Мето pad | | Jul. | E |
| - | | 411 | - | - | PCUSG1149CCZZ | | ДД | Cushion | - | Mid- Feb. | С |
| 3 | E5094 | countries. | FCUSG1149CCZZ | ΔΔ | (Abolished) | - | - | Cushion | - | Jun. | Ε |

is interchangeable.

To Current type replaceable with the type.

New type not replaceable with ournest type.

To Current type not replaceable with current type.

New type replaceable with current type.

Let Not intercompleable.

To Intercompressive if replaced with same types of related comes in use.

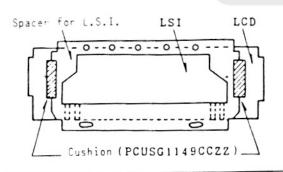
trens. Refer to the textual explanation

- A: After the stock of the jurrent parts runs out, we will supply the rew parts.
- A: Both pants, purrent and new, will be in supply. In New pants will be in inneciate supply.
- Tigeth cants, current and rewall, be in subblunceser, vil. the new cants will be in subbluaften the stock of the current cants guns out.
 - E: Current parts is in suppli.

(Changes)

1. Discontinued use of memo pad

2. Adoption of cushion

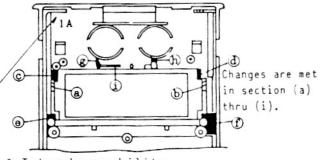


| OLD | 1 (| or a | 2 |
|-----|-----|------|-----|
| NEW | 1 A | or | 2 A |

3. Discontinued use of cushion

Use of the cushion will be discontinued due to structural change in the top cabinet.

* Change in the top cabinet



Interchangeability

| Cushion Top cabinet | Used | Not used |
|------------------------|------|----------|
| Old | Yes | No |
| New | No | Yes |

NOTE: There is no parts code change for the top cabinet.

 $^{1}4_{10}$

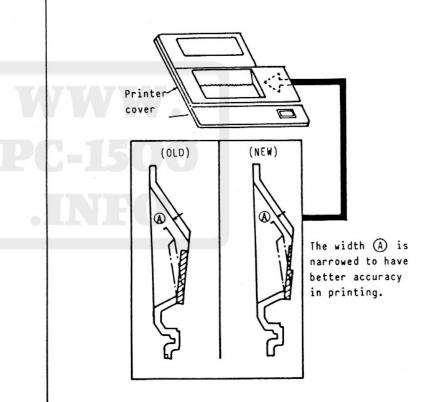
| | | | Current | | New | | | Time of change (from | | | |
|-----|--------------------|------------------|---------------|-------|---------------|------|-----------|----------------------|------|--------------|-----------------|
| No. | Model | odel Area | | Price | | New | Price | Interchangeabi | lity | prod | Parts supply |
| | | | Parts code | rank | Parts code | mark | mark rank | Description | | of) | ,,,,,, |
| 4 | CS-1183 QS-1183 | All countries | VVK11ST28//-1 | АХ | VVKFiP11D6A-1 | | ΑV | Display tube | 1 | Jul. | D |
| 5 | EL-1193 | All countries | VVK11ST28ZA-1 | AW | VVKFiP11D6A-1 | | ΑV | Display tube | 1 | Jul. | D |
| 6 | CE-150 | All countries | CCOVA1335CC01 | ΑE | CCOVA1356CC01 | N | AP | Printer cover | 3 | Mid- Jul. | D |
| 7 | PC-1500 | All countries | VHiSC613128FN | вн | VHiSC613128F4 | N | BF | ROM | 4 | Mid- Jun. | В |

(Changes)

4. Structural change

5. Change in manufacturer

6. Structural change



(Side view from inside of the printer cover)

7. Change in ROM specification

| No. | Changed subject | Old SC613128 AO1 or SC613128 AO3 | New SC613128 A04 |
|-----|--|---|---|
| 1 | SIN COS TAN | *Radian or gradient mode When calculate SIN $\pi/18$, COS $\pi/18$, TAN $\pi/18$, please it as A= $\pi/18$ first, then compute as SIN A, COS A and TAN A reapectively. | *Radian or gradient mode You can compute directly as SIN $\pi/18$, COS $\pi/18$ and TAN $\pi/18$. |
| | FOR-NEXT (Remarks) Final value # step × n + initial value When using this alge- braic expres- sion, current loop times of PC1500 must be n + 1 while usual personal com- puters in market are n times. Now PC1500 are changed to n times to con- form to such personal computers since this machine is appraised as one of perso- nal computers in quality- wise. (for example) final value | Specifications are different from those of other personal computers in general. (1) The final value of counter variable after execution is different. The number of repetions is the same. (Example) 10 FOR K=1 TO 10 20 NEXT K 30 PRINT K On line 30, "10" will appear. (2) The number of repetions is different. (The loop counter variable is the same.) (Example) 10 S=0 | On line 30, "11" will appear. |
| | =10 step time = 4 n = 3 initial value = 1 | 20 FOR K=1 TO 10 STEP 4 30 S=S+1 40 NEXT K 50 PRINT S On line 50, "4" will appear. | On line 50, "3" will appear. |
| 3 | Difference in true or false judgement of IF statement | Specifications are different from general personal computers in markets. In IF A statement, A>0true A<0false | Specifications are the same with general personal computers in markets. In IF A statement, A=0false |

| No. | Changed subject | Old SC613128 AO1 or SC613128 AO3 | New SC613128 AO4 |
|-----|--------------------|---|---|
| 4 | INPUT # | When variables named by two letters (for example, like "AA" or "BC\$") are used in INPUT # statement, the variables must be specified in the data area beforehand. If not specified, ERROR 43 will occure. (This is not applied to array variable.) | It is not necessary to specify two letter variables in the data area beforehand. (This is not applied to array variable. The data array variable must first be dimensioned, using DIM.) |
| 5 | USING . | When putting USING clause with numeric valiables such as AA, CF, B2 so on, ERROR message may not appear. | When putting USING clause with numeric variables, ERROR 7 will occur. |
| 6 | AND OR NOT | If AND, OR and NOT are executed in addition to the results of previous AND, OR and NOT, the symbol() must be added. (Example) A OR(NOT 2) | <pre>It is not necessary to add the symbol(). (Example) A OR (NOT 2)</pre> |



| | | | Current | | Ne | u | | lime of change | (fro | n | |
|-----|---------|------------------|---------------|-------|---------------|----------|---------|---------------------------|------|------|-----------------|
| No. | Model | Area | Parts code | Price | Parts code | New | Price | Interchangeabi | lity | prod | Parts supply |
| | | | ra | rank | nk Parts tode | mark | rk rank | Description | | of) | |
| 8 | | | DUNTK6381CCZZ | CA | DUNTK6814CCZZ | N | CA | Key PWB unit | 6 | Jul. | D |
| 9 | | | DUNTK6382CCZZ | ВХ | DUNTK6815CCZZ | N | BU | Operation PWB unit | 6 | Jul. | D |
| 10 | PC-1500 | All countries | RH-DZ1008CCN1 | AC | (Abolished) | - | - | Diode DAN202 | 6 | Jul. | £ |
| 11 | | | VRS-1P28D562J | АА | (Abolished) | - | - · | Resistor 1/8W 5.6k ohm | 6 | Jul. | E |
| 12 | | | - | - | VRS-TP2BD105J | | АА | Resistor 1/8W 1M ohm | - | Jul. | С |

(Changes)

8. Changes in key PWB unit

Use of jumper wire and circuit pattern cut applied to prevent *display of unnecessary segments in LCD are discontinued.

Also, disuse of jumper wire and change in printed circuit pattern are executed for the change of the RAM R/W signal circuit. For more details after the change, refer to "PC-1500 Key PWB (from the July 1982 production)" that will be issued separately.

* When switch on, all segments appear and can be alway seen as the digit 8. Therefore other digits except 8 will be illegible for unnecessary segments displayed.

9 & 12. Change in Operation PWB unit

Seven pieces of 1M ohms, 1/8W, chip type resistors are inserted to prevent the unnecessary segments-dispay in the LCD. Also, use of the jumper wire is discontinued. This involes change in the circuit pattern. For details after the change, refer to "PC-1500 Operation PWB (from the July 1982 production)" that will be issued separately.

(Circuit change to prevent the unnecessary segments-display in the LCD)

| Production month | Key PWB | Operation PWB |
|---------------------|--|---|
| Up to February | - | - |
| March | - | Seven pieces of 1M ohm, 1/8W, resistors are inserted between HO-6 and Vdisp for the machine in problem of the unnecessary segments-display. |
| April thru June | Cut in the printed circuit pat- tern and insertion of jumper wire. | _ |
| July and and after | _ | Seven pieces of 1M ohms, 1/8W, chip type resistors are inserted between HO - 6 and Vdisp. |

⁵/10

-Interchangeability-

Except preventive measures for the unnecessary segment-display in LCD, there is interchangeability between the old and new types of the Key PWB unit and Operation PWB, respectively.

oInterchangeability in connection with preventive measures for the unnecessary segment-display in LCD

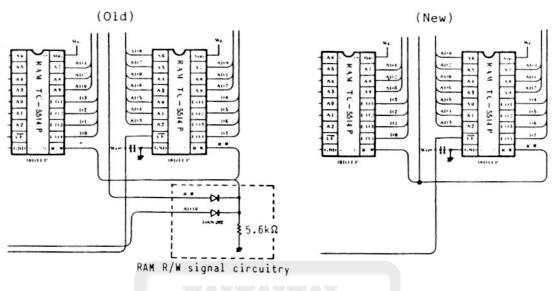
| Operation PWB Key PWB | w/o preventive measures | w/preventive measures |
|--------------------------|-------------------------|-----------------------|
| w/o preventive measures | No | Yes |
| w/preventive measures | Yes | Yes |

Oldentifying preventive measures for the unnecessary segment-display in LCD

| | w/o prevent | ive measures | w/preventi | ve measures | |
|------------------|--|--|---|--|--|
| PWB | Production date (parts code) | Reference material | Production date (parts code) | Reference material | |
| Ke y PWB | | PC-1500 Service Manual and PC- 1500 Key PWB (from the Feb. 1982 pro- duction) PC-1500 Key PWB (from the Jul. 1982 pro- duction) | Apr., May, and Jun., 1982, productions (part of DUNTK 6381CCZZ) | PC-1500 Key PWB (from the Apr. 1982 pro- duction) | |
| Operation PWB | Before the Mar. 1982, pro- duction, except for the machine on which the unnecessary | Service Manual | Part of the Mar., 1982 pro- duction (part of DUNTK6382 CCZZ). | PC-1500 Service Manual and T/R C-706. | |
| r wb | segment-display in LCD is ob- served (part of DUNTK6382CCZZ). | | After the Jul. 1982, pro- duction (DUNTK6815CCZZ) | PC-1500 Opera- tion PWB (form the Jul. 1982 production) | |

10 & 11. Discontinued use of RAM R/W signal circuit

Because a ROM that incorporates the RAM R/W signal circuitry (SC613128 A03 or A04) is used from the top of July production, the use of the present circuitry will be discontinued. SC613128 A03 can be used for the machine before the June production.



-Interchangeability between SC613128 ROM and RAM R/W signal circuitry-

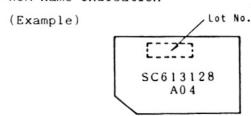
| R/W signal circuitry | Used | Not used |
|----------------------------------|------|----------|
| SC61328 A01 | Yes | No |
| SC61328 A03 or SC61328 A04 | Yes | Yes |

NOTES: (1) ROM parts code

°SC61328 A01 °SC61328 A03 VHiSC61328FN

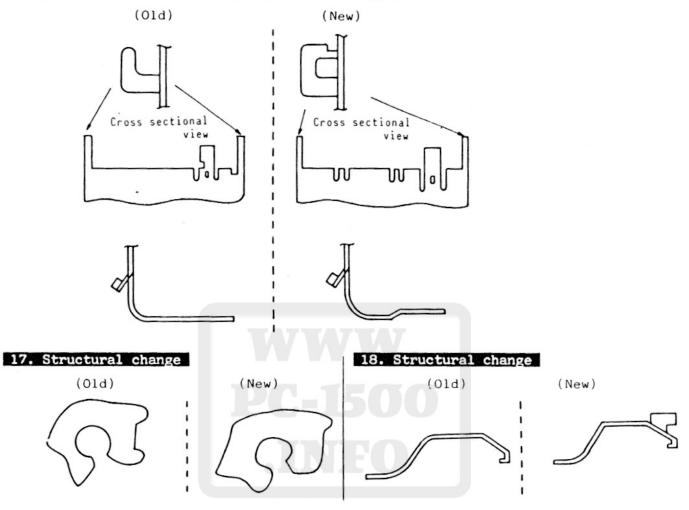
°SC61328 AO4: VHiSC61328F4

(2) ROM name indication

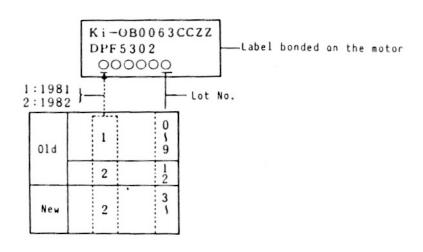


16. Structural change

Shape of the frame unit paper guide is changed.



-Identifying the printer units of No.16 thru No.18-



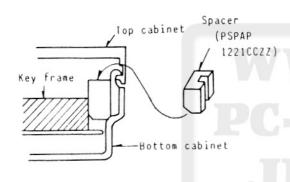
| | | | Current | | New | | | lime of change (form | | | |
|-----|---------|--------|---------------------------------|-------|---------------|-------------|-----------|-----------------------------|-------------|---|-----------------|
| No. | Model | Area | Parts code Price Parts code New | Price | | New | New price | Interchangeab | oility prod | | Parts supply |
| | | | | mark | rk rank | Description | | of) | ,,,, | | |
| 19 | CS-1122 | | GCABB2613CC01 | АМ | GCABB2613CC03 | N | АМ | Top cabinet (for CANADA) | - | | |
| 20 | CS-2122 | | - | - | PSPAP1221CCZZ | N | ΑE | Spacer | - | | |
| 21 | CS-1122 | CANADA | PFiLW1400CC02 | ΑE | PFiLW1400CC04 | N | AK. | Display filter | - | * | С |
| 22 | CS-2122 | | PFILW1400CC01 | ΑE | PFiLW1400CC03 | N | AK | Display filter | - | | |

.* From the first production lot.



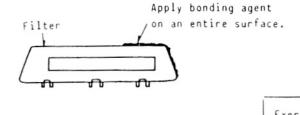
19. Structural change

20. Adoption of spacer

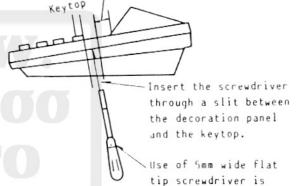


21 & 22. Material change

Top cabinet will be bonded with the filter using the bonding agent (#565) over an entire joint surface, instead of latches.



Opening the top cabinet for the Canadian model



Decoration panel

Insert the flat-tip screwdriver with an inclination of about 45° against the side of the cabinet.

preferable.

