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1 Introduction

DataCOLD 500 has a modular design. In case of a complaint or defect it is necessary to have a correct diagnosis of the possible defect. Once the diagnosis is made replace only the corresponding module and not the complete system.

This recorder is covered by a 1 year parts only warranty from the date of purchase. To claim warranty see your local Carrier Transicold dealer.

To claim warranty it is important to take notice of following conditions:

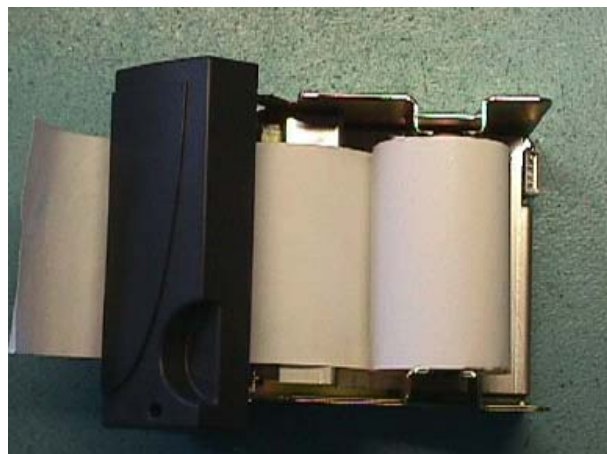
- ✓ For all complaints concerning functions of the recorder not working properly check if the settings for the concerned functions are set properly. **Important**; join the parameter settings print to the defective part . (To obtain a parameter print out press the blue button for 2 seconds. Enter menu 1.3, confirm with green button and enter the pin code 1-2-1-2.)
- ✓ Follow the diagnose instructions.
- ✓ Only replace the modules which are defective. Parts shipped back without defect will not be refunded and costs for handling will be charged.

2 Replacement parts

P/N 12-00585-59

Printer module for 500 R

Printer module is equipped with a fixed PCB edge connector. Not exchangeable with printer for 500T.



P/N 12-00585-60

Printer module for 500 T

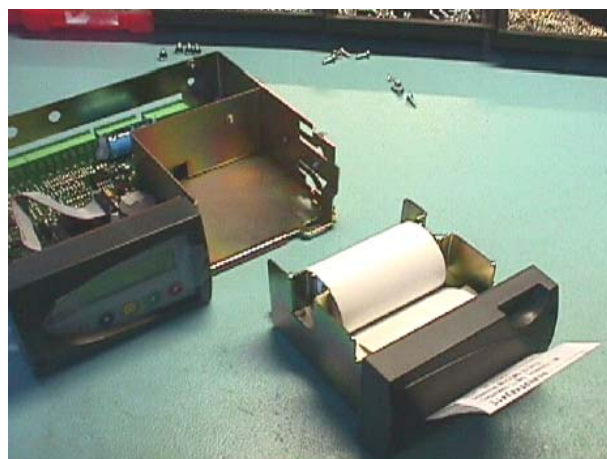
Printer module is connected to the recorder with a 4-pin connector. Not exchangeable with printer for 500R.

P/N 12-00585-73

Main PCB 500R + house+ display

Replace only the metal housing without printer

Important: Main module contains data, which might be important for the customer. Download the data with PC-software or print out before replacing.

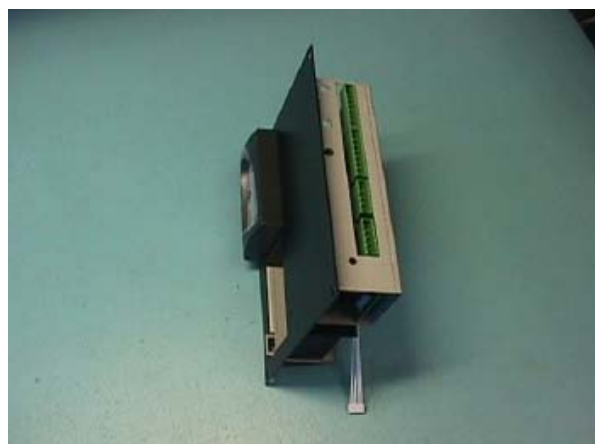


P/N 12-00585-74

Main PCB 500T + frame + display

Replace only the metal frame with the main PCB and display. Do not change printer or plastic housing

Important: Main module contains data, which might be important for the customer. Download the data with PC-software or print out before replacing.



3 Troubleshooting instructions

3.0 Power supply

If nothing happens on the recorder:

- ✓ Check power supply polarity
- ✓ Check power supply voltage: must be >10v and <36v
- ✓ Check external fuse 3A on positive line

3.1 Temperature and Digital inputs

3.1.1 Displayed temperature not correct

Do not compare the temperature on the display of the DataCOLD with the temperature on the refrigeration controller. To check correct temperatures use a precision reference thermometer.

- ✓ Check if sensor cable or sensing element is physically damaged. If damaged replace sensor.
- ✓ Check if the sensor cable is connected properly to the connector on the recorder. Also check if connection is not corroded. If corroded clean the connection.
- ✓ Check the recorder inputs with a precision reference resistor of 1500 ohm, 0,1 %;
 - The displayed temperature should be $34.6\text{ }^{\circ}\text{C} \pm 1\text{ }^{\circ}\text{C}$ ($94.3\text{ }^{\circ}\text{F} \pm 2\text{ }^{\circ}\text{F}$). If temperature deviation is $< 1\text{ }^{\circ}\text{C}$ ($< 2\text{ }^{\circ}\text{F}$) the input is working correct, replace the installed sensor.
 - Follow the procedure 'set correction factor' (in the installation manual, enclosure D) if deviation is $> 0.3\text{ }^{\circ}\text{C}$ ($0.5\text{ }^{\circ}\text{F}$) for more accurate temperatures.
 - If after the calibration the deviation using the reference resistor is $> 1\text{ }^{\circ}\text{C}$ ($> 2\text{ }^{\circ}\text{F}$), the main module is defective. Replace the main module.

3.1.2 Status digital input not changing

- ✓ Check if the settings for digital inputs are correct
- ✓ Check if the connections are properly connected to the recorder input
- ✓ Disconnect the connector and inset a jumper across the + and – of the digital input. If the input status still does not change, replace the main module.

3.1.3 No Carrier refrigeration unit information displayed in status menu (if RS232 cable plugged)

- ✓ Check in the setting if the correct protocol has been enabled
- ✓ Check if the unit is switched on. If not, switch on the reefer and try again
- ✓ Check if cable connection between controller and recorder is correct according to the electrical schematic.

3.2 Display module

3.2.1 Display is completely blank

- ✓ Press blue button for printing;
 - if the recorder is not reacting;
 - Check if power supply is connected to the recorder (see paragraph 3.0 Power supply)
 - Check if the flat cable connectors are fitted properly both on display module and on main module.
 - Disconnect power and connect again. If problem is not solved replace the main module.

3.2.2 Lines or characters missing

- ✓ Check if the flat cable connectors are fitted properly both on display module and on main module. If connection is OK, replace the main module.

3.2.3 When pressing buttons recorder is not reacting

- ✓ Check if there is communication to microprocessor in progress (arrow blinking on recorder display)
- ✓ Check if the flat cable connectors are fitted properly both on display module and on main module. If connection is OK, replace the main module.

3.3 Printer functions

3.3.1 When printing the message appears 'No paper/no printer'

- ✓ Check if there is paper roll into printer module
- ✓ Check if the paper roll is fitted correct into printer module
- ✓ Check if the printer is connected to the recorder properly
- ✓ Replace printer module:
 - If the same message appears replace the main module.

3.3.2 Temperature/Digital's information do not appear on print

- ✓ If temperature/digital information does not appear, adjust the compartment settings to enable them for printing

3.3.3 When printing message 'nothing to print' appears

- ✓ For selected period no data available, select other period.

3.3.4 Printer is running but paper is showing nothing or only partly

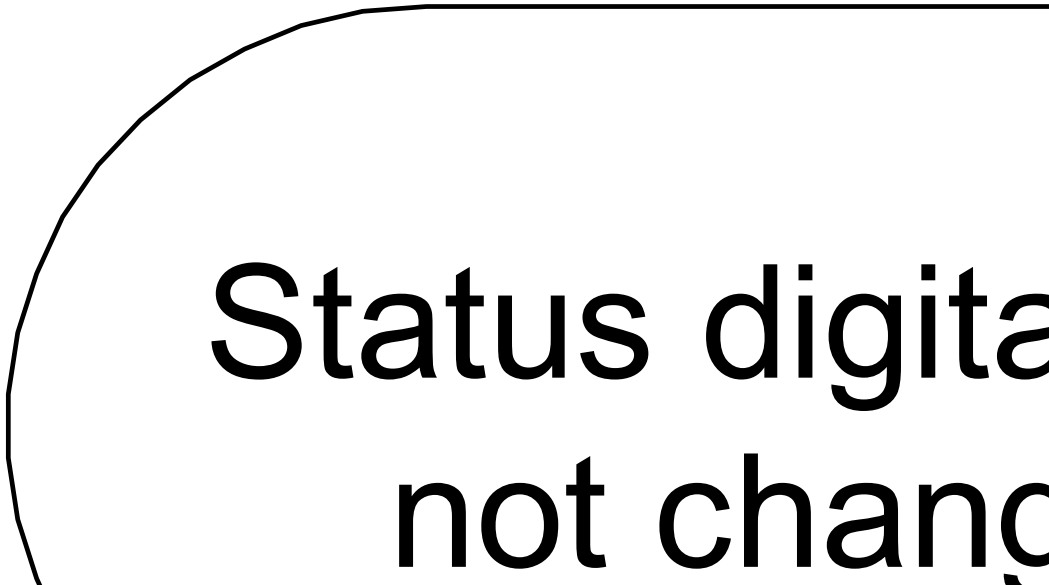
- ✓ Check if paper roll is inserted correctly. Thermo paper can only be printed on one side
- ✓ If the paper roll been exposed to temperatures > 70 °C (150 °F) replace the paper roll
- ✓ If the paper roll has been exposed to liquids or aggressive gasses replace the paper roll
- ✓ If complaint is not solved replace the printer module.

3.3.5 When trying to print the recorder resets

- ✓ Supply voltage is dropping < 10V. Power supply must be able to supply 25W. See also paragraph 3.0 Power supply.

3.1.1. D

3.1.2



**Status digital
not changing**

3.1.3. No



No unit i
displaye

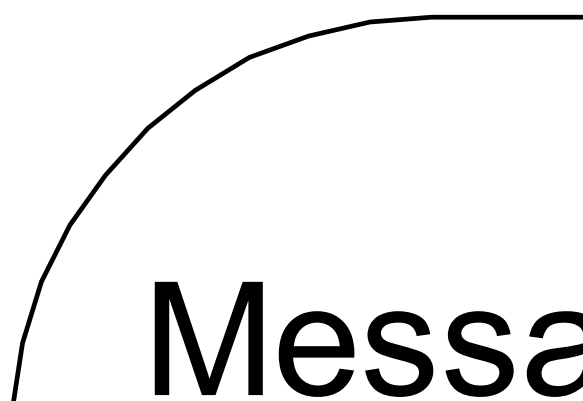
3.2. Disp



**Display
completely**

3.3.2

erro



Messa

3.3.x. Prin