TROUBLESHOOTING FOR PRO COOLING UNIT

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GENERAL MAINTENANCE OF PROCOOL 10

The amount of use and the working enviroment should be taken into consideration when planning the frequency of maintenance. Careful use and preventive maintenance will help to ensure trouble-free operation.

CHECK DAILY!

- amount of cooling liquid **(NOTE! If cooling liquid has boiled, it must be replaced, because then the solution has lost its metal coats protective effect.)**
- check with test switch that liquid is also returned to reservoir.
- gaskets of welding/liquid cables. *DON´T USE LEAKING WELDING CABLES OR HOSES.*
- condition of connection cables.

The number of systems in operation and the importance of minimize not running time will determine to what extend consumable- and spare parts will be stocked.

TROUBLESHOOTING CHART

TROUBLE	**CAUSE**	**REMEDY**
Indicator lamp H002 is swicthed on. Pump does not work, motor does not rotate.	Faulty pumpr, motor does not rotate or PROCOOL is out of liquid. Liquid leakage in cooling system. See check point picture.	Repair the pump/pumpmotor or add cooling liquid. Repair/change leaking liquid hose. ***Follow the the check point instructions.***
Indicator lamp H001 is swit-ched on. Liquid circulation continues.	Cooling liquid is overheated.	Wait until cooling liquid and PTC is cooled.
MIG/TIG unit stops welding, liquid circulation continues.	Control cable broke ***during welding.*** Bad connection in control cables.	Check that control cables are properly tightened. Check all wires with multimeter that they are not cut. ***See picture of connector and cable.***
MIG/TIG welding can not be started.	Control cable broke ***when welding is not going on.*** Bad connection in control cables.	Check that control cables are properly tightened. Check all wires with multimeter that they are not cut. ***See picture of connector and cable.***

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TROUBLESHOOTING CHART

TROUBLE	CAUSE	REMEDY
Welding is interrupted.	Supply voltage 220 V is disconnected during welding.	Check supply voltage cable and tighten wires from connection terminal Check supply voltage 220V from connector X1/1 - X1/3 on PCB A001.
MIG/TIG welding can not be started.	Supply voltage 220 V is disconnected when welding is not going on.	Check supply voltage cable and tighten wires from connection terminal Check supply voltage 220V from connector X1/1 - X1/3 on PCB A001.
Signal lamp H2 is flashing when there is normal pause in liquid circulation.	Pressure guard is broke or there is pressure in system. See check point picture, check point 3.	Check funktion of the pressure guard from connector X2/1 - X2/2 on PCB A001 with multimeter that S003 is not broken; enough pressuer 0V and low pressure 5V.
PRCOOL don´t work at all.	Burned fuse F1 on PCB A001.	Check/change fuse F1 (630 mA).

CONTROL CONNECTOR AND CABLE

PCB A001 CONNECTOR X3

1. Data, serial

2. +50 VDC

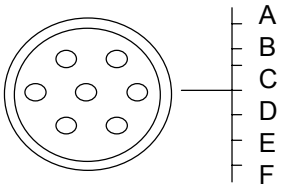
3. GND

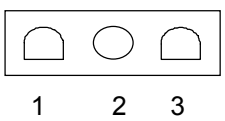
CONTROL CABLE X003

A. GND

B. Data, serial

C. +50 VDC





TROUBLESHOOTING FOR PRO COOLING UNIT

WATER CIRCULATION PARTS (see check point picture)

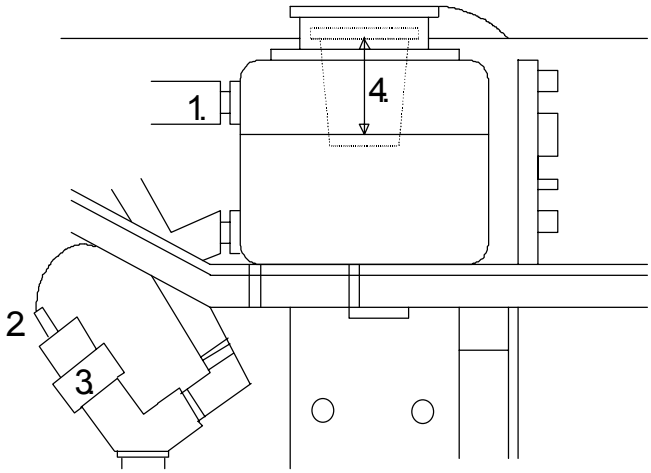
1. Return hose for liquid

2. Ajustment screw

3. Pressure guard

4. Liquid surface level

CHECK POINT PICTURE



NOTE !

If signal lamp for pressure illuminates, liquid circulation operates from test switch S2. Is there any leakage, check disturbance as follows:

1. Press switch S2.

2. Check through filling opening of reservoir that liquid returned to reservoir and the height of the liquid surface is right, **check point 4.**, (about 60 mm). If any liquid dosen´t come from the return hose of liquid, **check point 1**., take contact with nearest KEMPPI authorised service repair shop.

3. Continue pressing on switch S2 and adjust the ADJUSTMEN SCREW for pressure, **check point 2.**, insuch way that the signal lamp H2 is only just switched off.

4. Release switch S2 and wait for approx.10 s and check that signal lamp H2 is not flashing.

5. Still check by welding for approx. 20 s that there aren´t any more disturbances.

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JUMPERS

X8 With this jumper two alternative usage methods can be sellected:

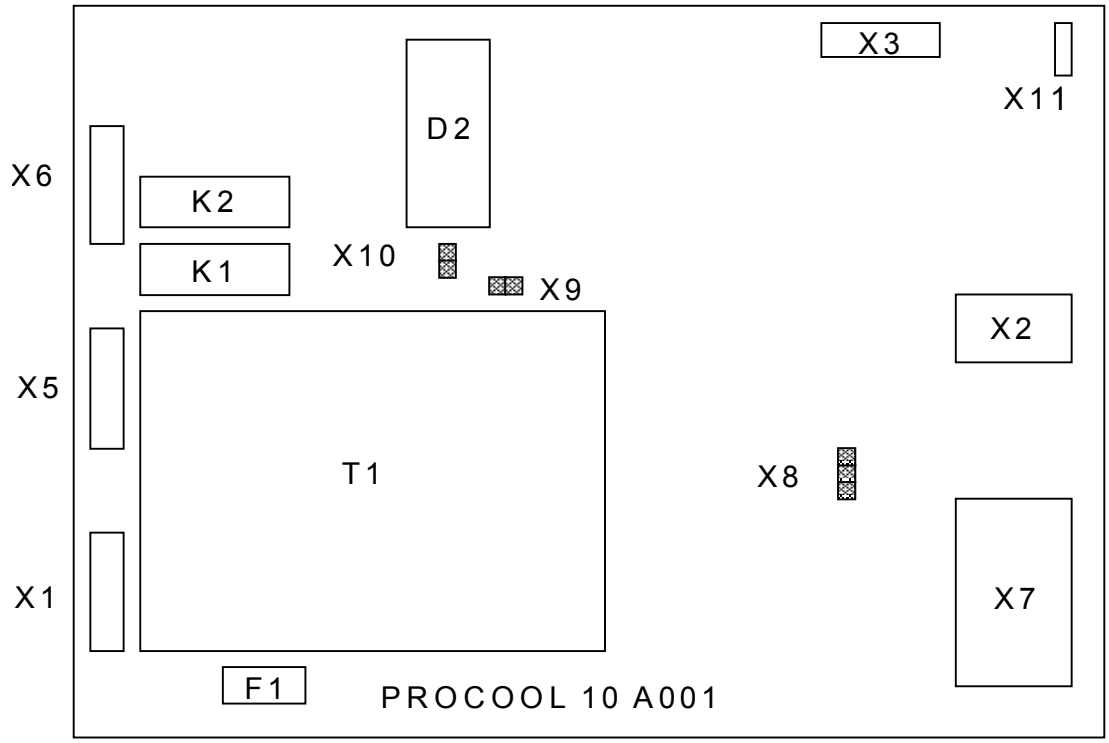
1. AUTOMATIC START/STOP. Short circuit block between X8/2 - X8/3.
   Start and stop is determined by the MIG/TIG unit.

2. CONTINUOUS LIQUID CIRCULATION (MANUAL START/STOP). Short circuit block between X8/1 - X8/2. Liquid circulation starts immediately
   after S001 is switched on. Liquid circulation is stopped only if an error is detected or S001 is switched off.

X9 A short circuit block between X9/1 - X9/2 decreases the operation time after welding to 15s. NOTE ONLY FOR TEST USE!

X10 Not in use.

JUMPERS AND CONNECTORS ON CONTROL CARD A001



Previous - Back - Next