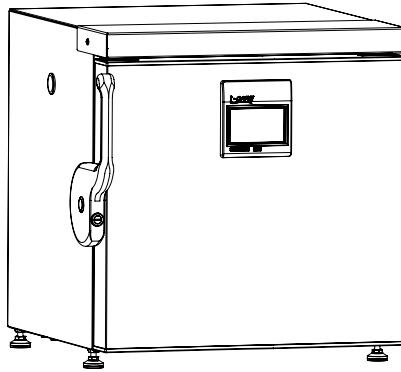


SERVICEMANUAL - EN

MODELS - ULTF-37i



BIOMEDICAL SOLUTIONS

FREEZERS

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ATTENTION!

Before servicing or cleaning the appliance, unplug the appliance from the mains or disconnect the electrical power supply.

ATTENTION!

This service manual is intended for use by persons having electrical and mechanical training and a level of knowledge of these subjects generally considered acceptable in the appliance repair trade. The manufacturer cannot be responsible,

nor assume any liability, for injury or damage of any kind arising from the use of this manual.

ATTENTION!

Bare pcbs are sensitive to ESD, so please take precautions to ensure that tools, persons and appliance is equalised.

ATTENTION!

Compressor and tubes can be hot, please allow the unit to cool down before repairing.

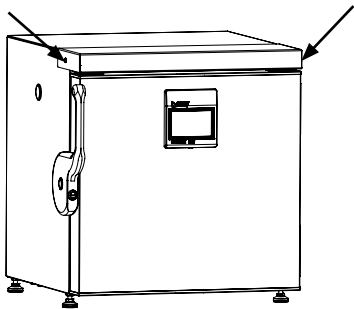
MAINTENANCE SCHEDULE

All below maintenance is recommended.
Please investigate the local legislation in your area.

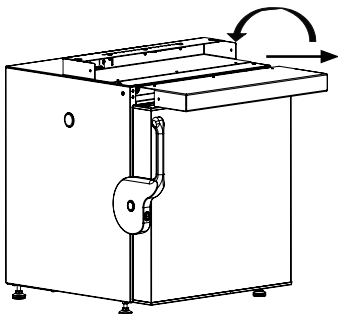
TASK	SCHEDULE
Cleaning of interior	Weekly
Cleaning of compressor compartment (including condenser and compressor)	Monthly
Cleaning of sealing in the door	Quarterly
Replacement of battery for back up	Every third year

REPLACEMENT OF PARTS

Top panel



Loosen the screws see picture



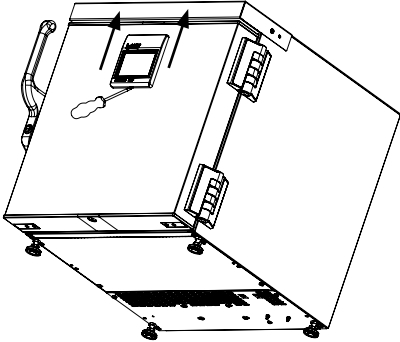
Pull the top panel straight out and place it on top of the unit.

Unplug the wires from connector

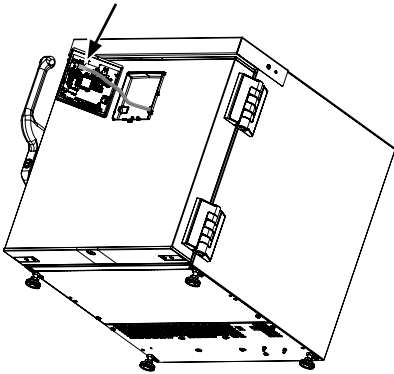
Note!

Be careful not to damage electric wires and not to scratch the unit when placing the top panel upside down.

Display - with integrated keyboard

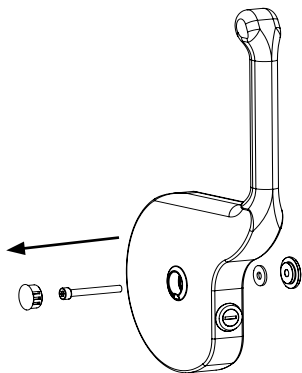


Tilt the appliance and release the touch panel by pushing in the plastic lock and lifting up the panel simultaneously



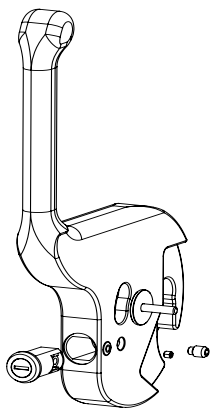
Carefully demount the plug/wire from the touch panels back side

Door handle and lock

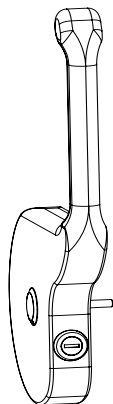


Carefully remove cover, gently pry with screwdriver in the notch on the bottom.

Unscrew the bolt.



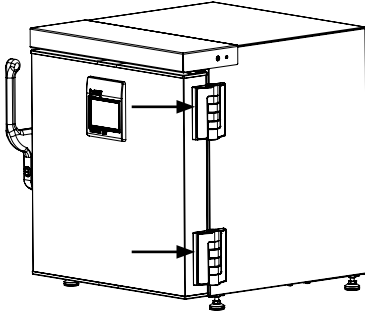
Remove handle.



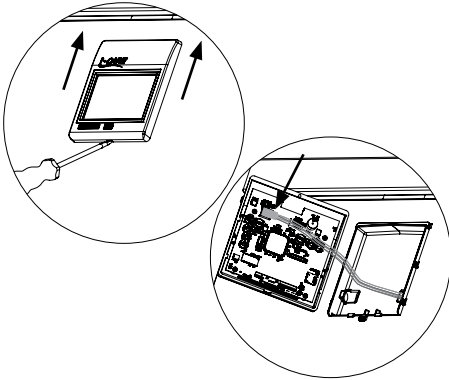
Assemble the new handle as illustrated in the picture to the left.

Now install the new handle.
IMPORTANT! Remember to use locksafe on bolt before mounting

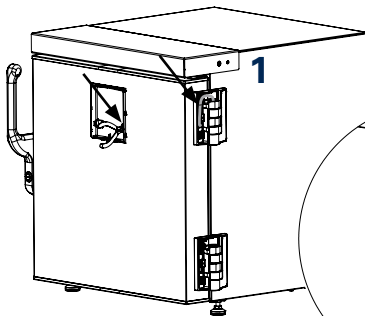
Door



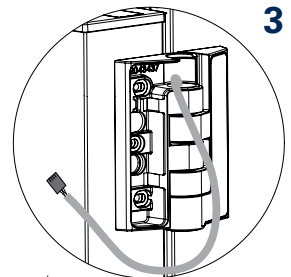
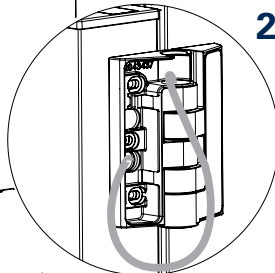
Use screwdriver to carefully remove the two hinge plastcaps hiding the hingescrews on the doorside.

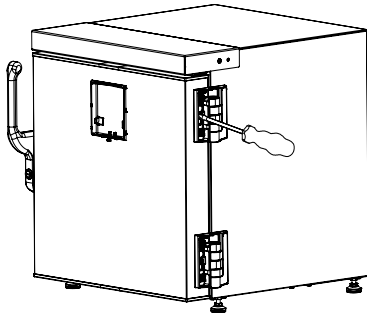


Remove the display, see page 6

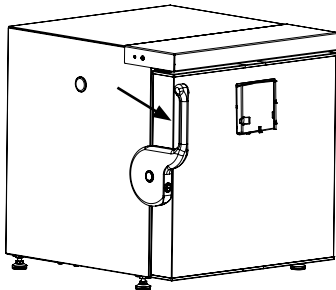


Pull out the wire, cable ties may need to be removed

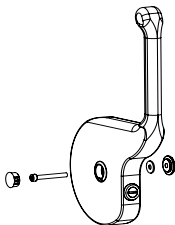




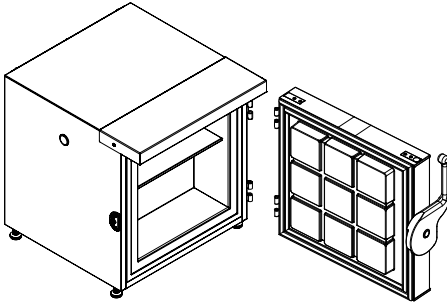
Support the door and remove the six hinge-screws.



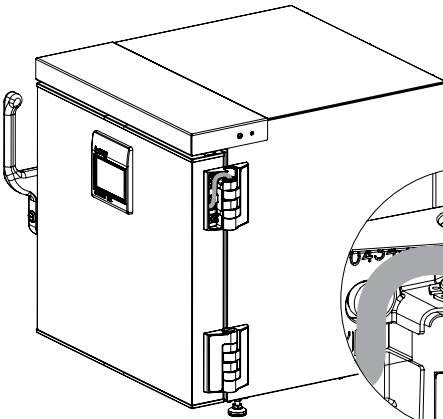
Use the handle to free the door from the cabinet, when the door is free lift it away from the hinges.



Follow the step in chapter replacement of parts - handle.

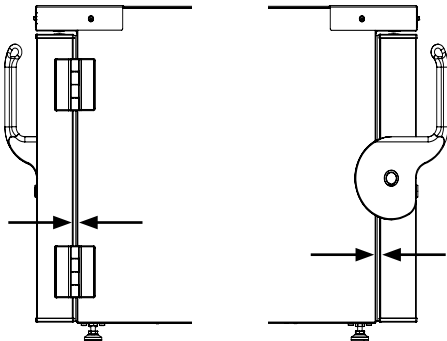
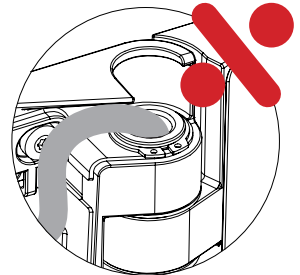
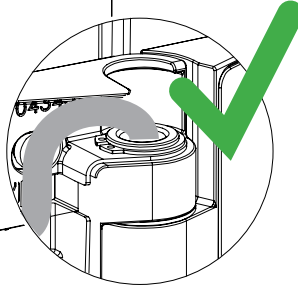


Mount the new door by following the steps backwards.



NOTE!

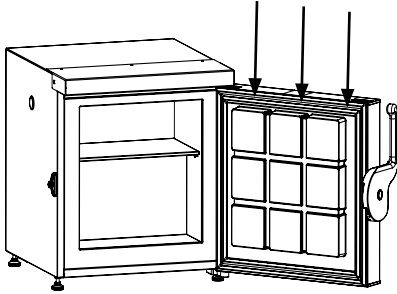
Before mounting the hinge covers, make sure that the locking rings are turned around so that the wider area (with the holes) is facing as shown in the illustration



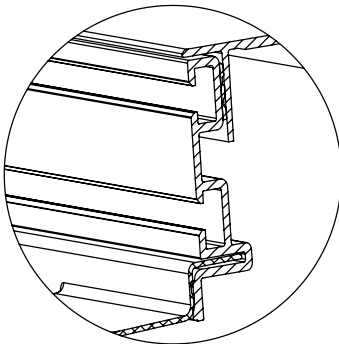
The new door is mounted with a distance of 9 mm between door and front of steel cabinet

Distance is adjusted for both hinge- and handleside

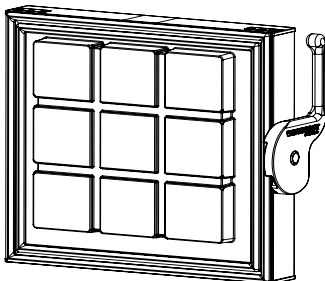
Door gasket



Open the door and pull off the gasket you want to replace



Push the new gasket foot into the profile.

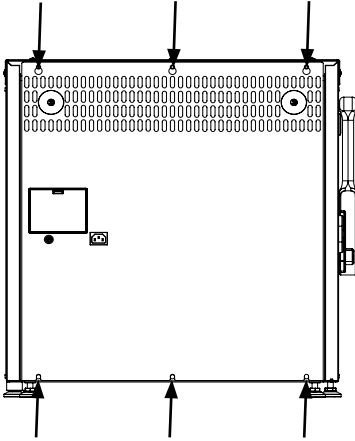


Note!

Make sure that the new gasket is properly inserted in the profile.

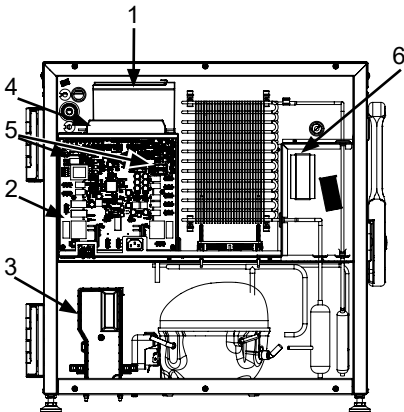
REPLACEMENT OF PARTS IN ENGINE ROOM

Access to engine room



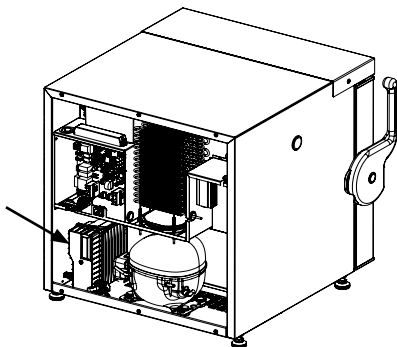
Take the IEC plug out of the unit.

Loosen the 6 screws a few millimeters.
Remove the backplate.



1. Battery
2. Controller
3. Inverter
4. Transformer
5. Fuses
6. Valve

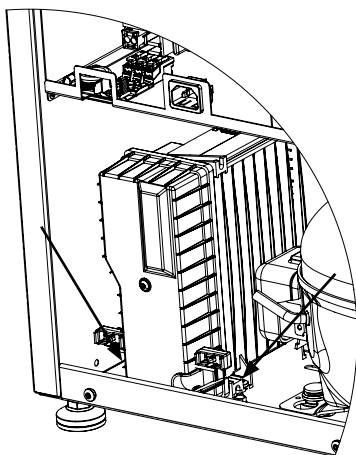
Inverter



1. Disconnect the electric wire on the inverter.

Note!

Ensure that the unit is unplugged and that there is no power on.

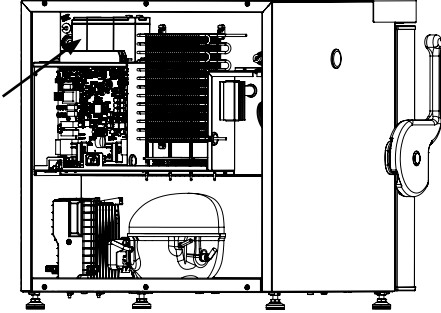


2. Loosen two screws and remove inverter.
3. Mount the NEW inverter with the screws you just unscrewed.
4. Install electric wires again.

Note!

See the electric wire diagram.

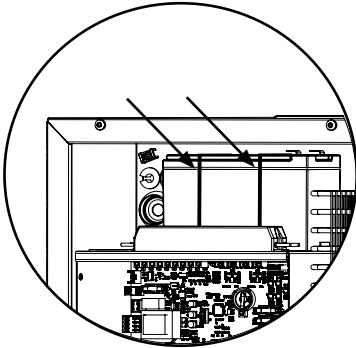
Battery



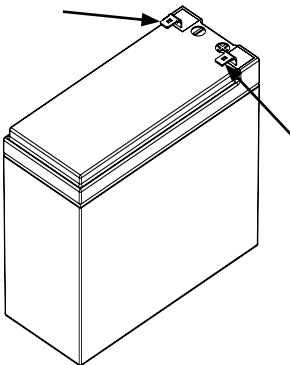
1. Disconnect the electric wire on the battery.

Note!

Ensure that the unit is unplugged and that there is no power on.



2. Cut and remove the cable ties.
3. Take out the old battery and put in the NEW.



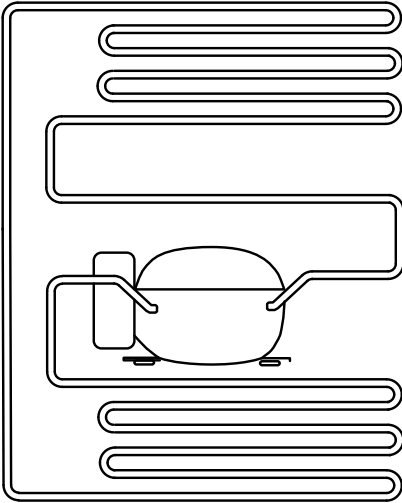
4. Mount the new battery with two new cable ties.
5. Install electric wires again.

Note!

See the electric wire diagram.

COOLING SYSTEM

Change compressor



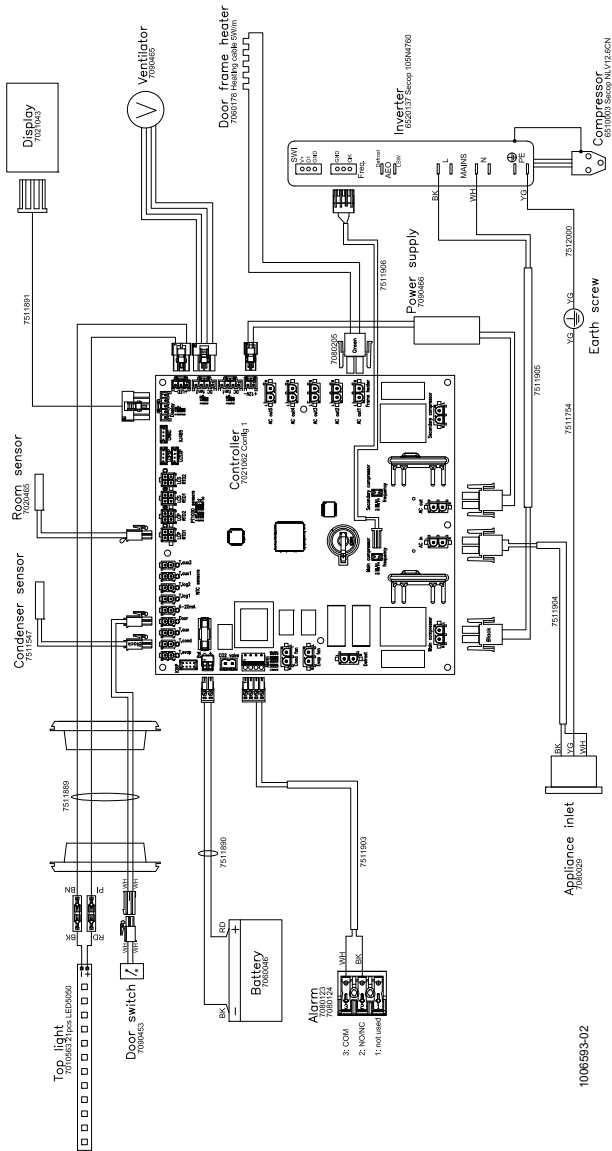
Repairs to the cooling system may only be carried out by trained professionals.

When changing the compressor, the filter drier must also be replaced. It is important to cut out the filter drier, as heating with solder flame will release moisture inside the dry filter. This will vaporize and drive moisture from filter drier back into system. The quantity and type of the refrigerant used in your appliance is indicated on the rating plate.

Do not make sharp bending angles on the pipes. The distance between the pipes must be at least 12 millimetres.

ELECTRICAL SYSTEM

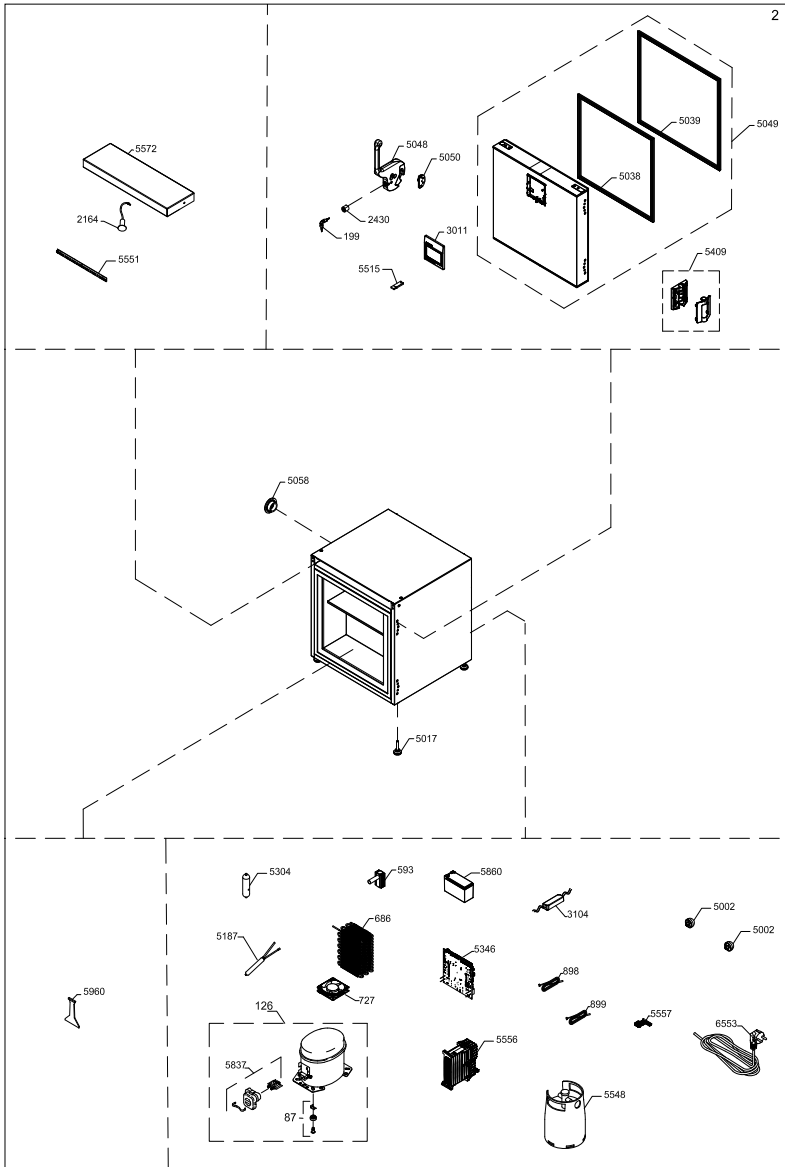
Wire diagram



1006594-02

SPARE PARTS

Spare parts exploded view



Spare parts list

Position	Item number	Item name
0087	0-6038175	Base plate fittings, complete
0126	8-036510310	Compressor -ULTF40
0199	0-4838236	Key set 2 pcs EUROLOCKS / Kulcs szett (2 kulcs / szett)
0593	0-4838095	Vacuum valve
0686	6010168	Block Condenser
0727	7090465	Fan
0898	7020465	Thermostat phail
0899	7511547	Thermostat phail (defrosting)
2164	7090453	Door switch
2430	1510245	Lock push & turn / Zár
3011	8471472	Display
3104	7090466	Transformer
5002	6000959	Foot with pin/distance pieces
5017	A9101510074	Feet Ø38, M10x50 mm/Ø38 Base
5038	3021051-03	Inner door gasket
5039	3021050-03	Outer door gasket
5048	8471732	Handle
5049	A924215	Door
5050	8471314	Lock bearing
5058	3011127-03	Rubber plug for porthole
5187	6530068	Filter drier
5304	6040571	Oil separator
5346	7095665	Electronic control unit
5409	1050178-01	Hinge frontdoor
5502	A903056	Dry contact for Alarm complete
5515	A9167020004	USB key incl plug
5548	7-049954210	Nature-R - refilling with filter
5551	7010563	LED light strip
5556	6520137	Inverter 100-240V 50-60Hz
5837	A921014	Cover + wirring clamp
5860	7060046	Battery
5960	3010173-01	Ice scraper
6553	7535084	Mains lead

LIST OF PARAMETERS

List of Ultra low parameters

Profile name	PROFILE 1 - Ultra low					
Description	Temperature range: -86C to -20C Set point: -82C					
INDEX	PAR NAME	VALUE	UNIT			
1	ADR	***	***			
2	ALL		50 Tenth of°C/F	49	AD1	*** ***
3	ALH		50 Tenth of°C/F	50	AD2	*** ***
4	AAL		-999 Tenth of°C/F	51	AD3	*** ***
5	AAH		0 Tenth of°C/F	52	AD4	*** ***
6	ALD	***	***	53	CDT	*** ***
7	ADD	***	***	54	FCN	*** ***
8	DTX	***	***	55	FCX	*** ***
9	DTD	***	***	56	EDT	*** ***
10	BOD	***	***	57	FEN	*** ***
11	VOP	***	***	58	FEX	*** ***
12	ISP	***	***	59	HPO	*** ***
13	OSP	***	***	60	HUM	*** ***
14	DIN	***	***	61	HRH	*** ***
15	DOO	***	***	62	HRL	*** ***
16	OF1	***	***	63	VBH	*** ***
17	OF2	***	***	64	VBL	*** ***
18	SET		-820 Tenth of°C/F	65	VBX	*** ***
19	HYH	***	***	66	VBY	*** ***
20	HYL	***	***	67	CSO	*** ***
21	SLL		-860 Tenth of°C/F	68	CSH	*** ***
22	SLH		-200 Tenth of°C/F	69	CSD	*** ***
23	CCD	***	***	70	CNS	*** ***
24	ADS	***	***	71	CXS	*** ***
25	ADL	***	***	72	DCS	*** ***
26	CON	***	***	73	FSC	*** ***
27	COF	***	***	74	FSA	*** ***
28	CPH	***	***	75	FSB	*** ***
29	COP	***	***	76	TPD	*** ***
30	CSP	***	***	77	TMI	*** ***
31	TCO	***	***	78	HYA	*** ***
32	BCO	***	***	79	OFS	*** ***
33	PTD	***	***	80	LBO	*** ***
34	FCE	***	***	81	LBC	*** ***
35	MCT	***	***	82	LFU	*** ***
36	FOP	***	***	83	LFD	*** ***
37	FAS		500 Tenth of°C/F	84	LOD	*** ***
38	FAD	***	***	85	PO1	*** ***
39	FSD	***	***	86	PO2	*** ***
40	LET	***	***	87	PO3	*** ***
41	DOP	***	***	88	PI1	*** ***
42	DCM	***	***	89	PI2	*** ***
43	DRP	***	***	90	OP1	*** ***
44	ITD	***	***	91	OP2	*** ***
45	DTE	***	***	92	OP3	*** ***
46	DTO	***	***	93	OP4	*** ***
47	DEO	***	***	94	OP5	*** ***
48	P30	***	***			

List of LCP parameters

INDEX	PAR NAME	VALUE	UNIT
1	ADR	1	Unit
2	ALL	50	Tenth of °C/F
3	ALH	50	Tenth of °C/F
4	AAL	-999	Tenth of °C/F
5	AAH	0	Tenth of °C/F
6	ALD	10	Min
7	ADD	120	Min
8	DTX	200	Tenth of °C/F
9	DTD	10	Min
10	BOD	10	Min
11	VOP	24	Bit flag
12	ISP	9	Bit flag
13	OSP	229	Bit flag
14	DIN	2	Unit
15	DOO	120	Sec
16	OF1	0	Tenth of °C/F
17	OF2	0	Tenth of °C/F
18	SET	-820	Tenth of °C/F
19	HYH	10	Tenth of °C/F
20	HYL	0	Tenth of °C/F
21	SLL	-860	Tenth of °C/F
22	SLH	-200	Tenth of °C/F
23	CCD	5	Sec
24	ADS	15	Sec
25	ADL	1	Min
26	CON	5	Min
27	COF	3	Min
28	CPH	100	%
29	COP	0	Bit flag
30	CSP	-550	Tenth of °C/F
31	TCO	50000	Millisec
32	BCO	3	Sec
33	PTD	0	Tenth of °C/F
34	FCE	350	Tenth of °C/F
35	MCT	580	Tenth of °C/F
36	FOP	2592	Bit flag
37	FAS	500	Tenth of °C/F
38	FAD	60	Sec
39	FSD	500	Tenth of °C/F
40	LET	-250	Tenth of °C/F
41	DOP	0	Bit flag
42	DCM	0	Min
43	DRP	60	Sec
44	ITD	8	Hour
45	DTE	500	Tenth of °C/F
46	DTO	30	Min
47	DEO	0	Min
48	DDT	0	Tenth of °C/F
49	DDP	24	Min
50	AD1	24	Time hour
51	AD2	24	Time hour
52	AD3	24	Time hour
53	CDT	100	Tenth of °C/F
54	FCN	30	%
55	FCX	100	%
56	EDT	100	Tenth of °C/F
57	FEN	35	%
58	FEX	100	%
59	HPO	0	%
60	HUM	20	%
61	HRH	0	%
62	HRL	0	%
63	VBH	14700	mV
64	VBL	12800	mV
65	IBC	50	mA
66	VBY	0	Unit
67	CSO	60	Min
68	CSH	10	Min
69	CSD	10	Min
70	CNS	66	Hz
71	CXS	150	Hz
72	DCS	3	Hz
73	F3C	100	Tenth of °C/F
74	FSA	3	Thousandth of unit
75	FSB	30	Tenth of unit
76	TPD	0	Sec
77	TMI	0	Tenth of °C/F
78	HYA	0	Tenth of °C/F
79	OFS	0	Tenth of °C/F
80	LBO	100	%
81	LBC	0	%
82	LFU	2000	Millisec
83	LFD	500	Millisec
84	LOD	0	Sec
85	PO1	0	Unit
86	PO2	0	Unit
87	PO3	0	Unit
88	PI1	0	Unit
89	PI2	0	Unit
90	OP1	0	Tenth of °C/F
91	OP2	0	Tenth of °C/F
92	OP3	0	Tenth of °C/F
93	OP4	0	Tenth of °C/F
94	SPX	0	Tenth of °C/F

List of LCS parameters

INDEX	PAR NAME	VALUE	UNIT
1	PCT	-1000	Tenth of°C/F
2	PHT	500	Tenth of°C/F
3	PCH	50	Tenth of°C/F
4	PHH	50	Tenth of°C/F
5	PCD	10	Sec
6	PHD	10	Sec
7	PCN	5	Unit
8	PCW	60	Min
9	PHN	5	Unit
10	PHW	60	Min
11	CS1	0	Bit flag
12	CS2	1	Bit flag
13	CS3	0	Bit flag
14	OR1	0	Tenth of°C/F
15	OR2	0	Tenth of°C/F
16	OP1	0	Tenth of°C/F
17	OP2	0	Tenth of°C/F
18	OP3	0	Tenth of°C/F
19	OP4	0	Tenth of°C/F
20	OP5	0	%
21	OP6	0	Tenth of°C/F
22	OP7	0	Tenth of°C/F
23	OP8	0	Tenth of°C/F
24	OP9	0	Tenth of°C/F
25	SAP	2	Unit



Revision date: 19-10-2022
Drawing no.: 8195131 rev 02