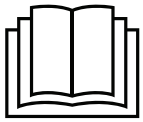
Service Manual
Tumble dryer

TD7–10

Type N1190..



Electrolux PROFESSIONAL

Original instructions

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2026.06.08

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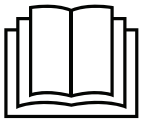
The manufacturer reserves the right to make changes to design and component specifications.

1 Symbols

	Caution
	Caution, hot surface
	Caution, high voltage
	Warning, risk of fire / flammable material
	Danger, crush hazard
	Read the instructions before using the machine

2 Technical data

2.1 Drawing

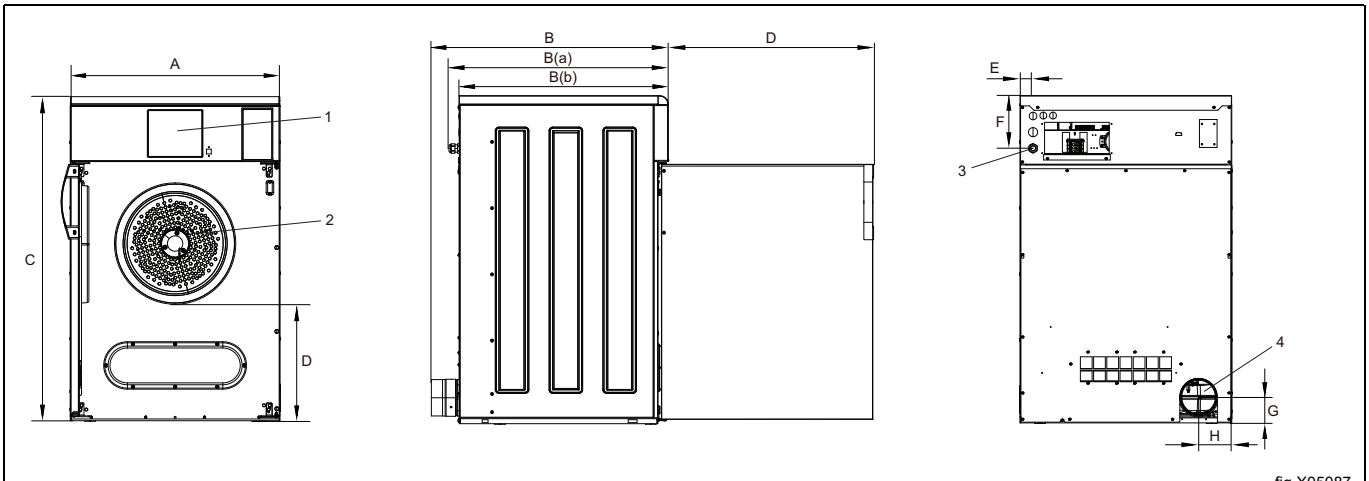


fig.X05087

1	Operating panel
2	Door opening, ⌀ 400 mm
3	Electrical connection
4	Exhaust connection

	A	B	B(a)	B(b)	B(c)	C
mm	720	805	765	750	695	1115

	D	E	F	G	H
mm	405	45	180	90	115

2.2 Technical data

Weight, net	kg	99
Drum volume	litres	190
Drum diameter	mm	680
Drum depth	mm	555
Drum speed	rpm	47
Rated capacity, filling factor 1:18 (Max. load)	kg	10.6
Rated capacity, filling factor 1:22 (Recommended. load)	kg	8.6
Heating: Electricity	kW	6
	kW	8
Air consumption, Electric heating, 6 kW	m^3/h	270
Air consumption, Electric heating, 8 kW	m^3/h	290
Pressure drop, Electric heating, 6 kW	Max. Pa	380
Pressure drop, Electric heating, 8 kW	Max. Pa	350
A-weighted emission sound pressure level at working stations	dB(A)	<70
Heat emission of installed power, max	%	15

2.3 Connections

Air outlet	⌀ mm	125

3 Machine presentation

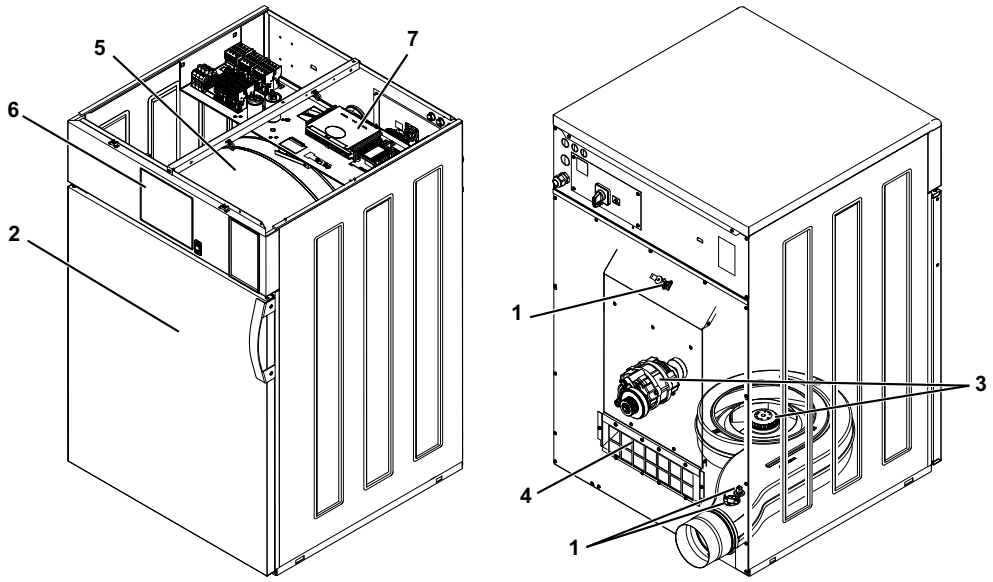


fig.X05470

1	Sensors and overheating thermostats
2	Door
3	Motor
4	Heating unit
5	Drum
6	Control panel with Control system
7	I/O modules

3.1 After a repair has been made

Whenever a repair has been made, a function check must be performed before the machine can be used again.

4 Function check

May only be carried out by qualified personnel.

A function check must be made when the installation is finished and before the machine can be ready to be used.
Whenever a repair has been made, a function check must be performed before the machine can be used again.

4.1 Check the automatic stop of the machine

- Start the machine.
- Check if the micro switches are working properly:
  The machine must stop if the door is opened.

4.2 Check the direction of rotation (only on machines with 3–phase power supply, marine installation)

Demount the top panel and start a program. Check that the drum rotation is clockwise.

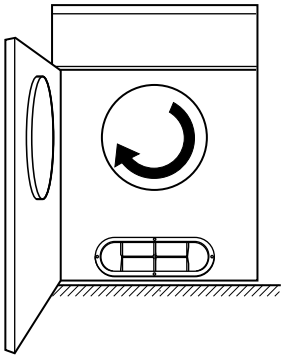


fig.6311

If the direction is wrong, swap two of the three phases to the left on the connection terminal.

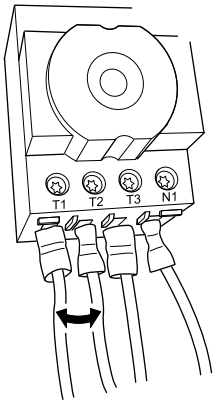


fig.7119

4.3 Check the heat

- Let the machine work for five minutes on a program with heat.
- Check that the heating is working by opening the door and feel if there is heat in the drum.

4.4 Ready to use

If all tests are OK the machine is now ready to be used.

If some of the tests failed, or deficiencies or errors are detected, please contact your local service organisation or dealer.

5 Sensors and overheating thermostats

5.1 Inlet air

5.1.1 Overheating thermostat

Description

The inlet overheating thermostat is placed on the heating module on the back of the machine.
The inlet overheating thermostat opens in the event of overheating and shuts off the machine.

Resetting

Disconnect the power to the machine.
Demount the rear panel.
Press the reset button (A) on the overheating thermostat.

Note!
Resetting must not be done before the cause for overheating is verified and resolved.

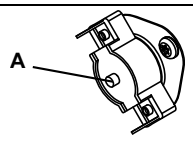


fig.W00252

Remount the rear panel.

Replacement of overheating thermostat

Disconnect the power to the machine.
Demount the rear panel.
Disconnect the overheating thermostat and remove it. Connect the new overheating thermostat.

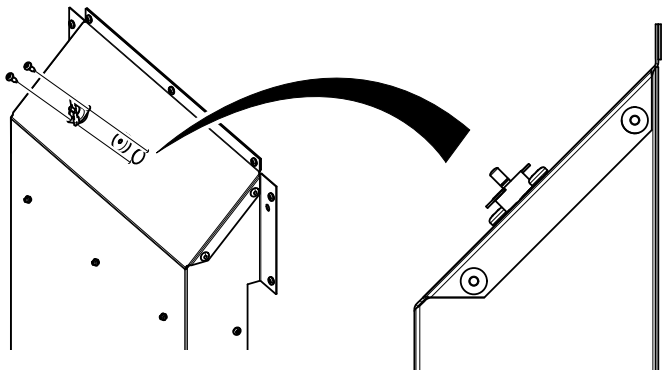


fig.7981

Remount the rear panel.

5.1.2 Heating sensor (PT100)

Description

The heating sensor is placed on the heating module on the back of the machine.

The heating sensor measures the temperature in the inlet air and the signal is returned to the CPU.

The CPU turns the heating unit off when the inlet air thermistor indicates that the required temperature has been reached.

Replacement of heating sensor (PT100)

Disconnect the power to the machine.

Demount the rear panel.

Disconnect the heating sensor and remove it. Connect the new heating sensor and put it in position. Make sure the sensor gets all the way down.

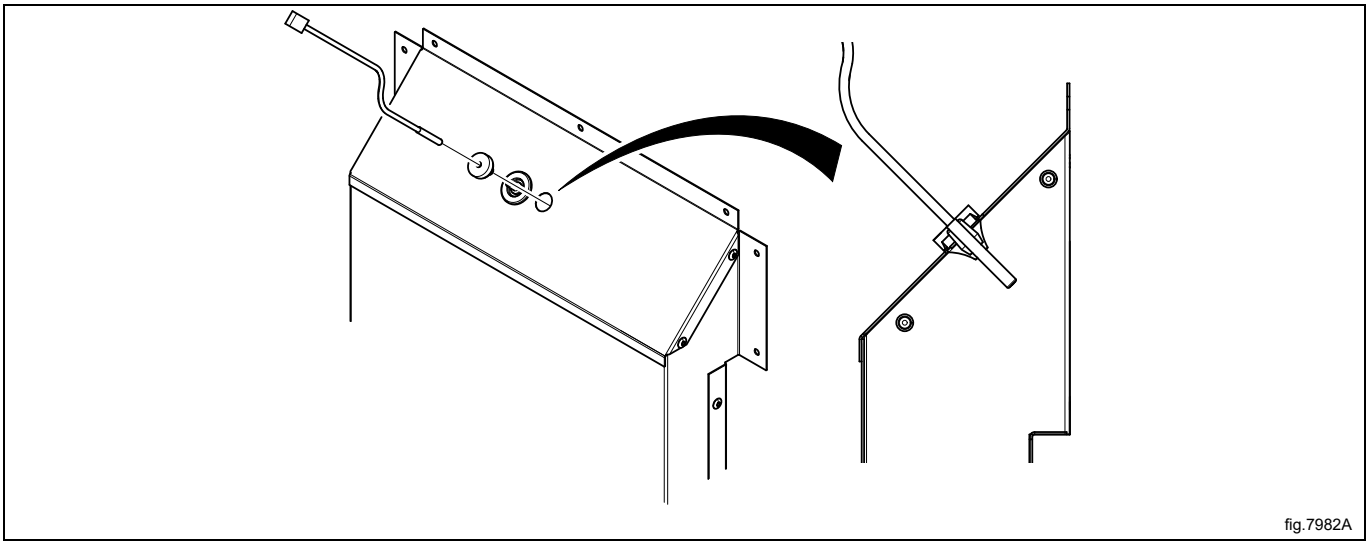


fig.7982A

Remount the rear panel.

5.2 Outlet air

5.2.1 Overheating thermostat

Description

The outlet overheating thermostat is placed on the bottom of the machine on the outlet air flow.
The outlet overheating thermostat ensures that the machine does not overheat during program operation.
The outlet overheating thermostat opens automatically and has to be reset manually.

Resetting

Disconnect the power to the machine.
Demount the rear panel.
Press the reset button (A) on the overheating thermostat.

Note!
Resetting must not be done before the cause for overheating is verified and resolved.

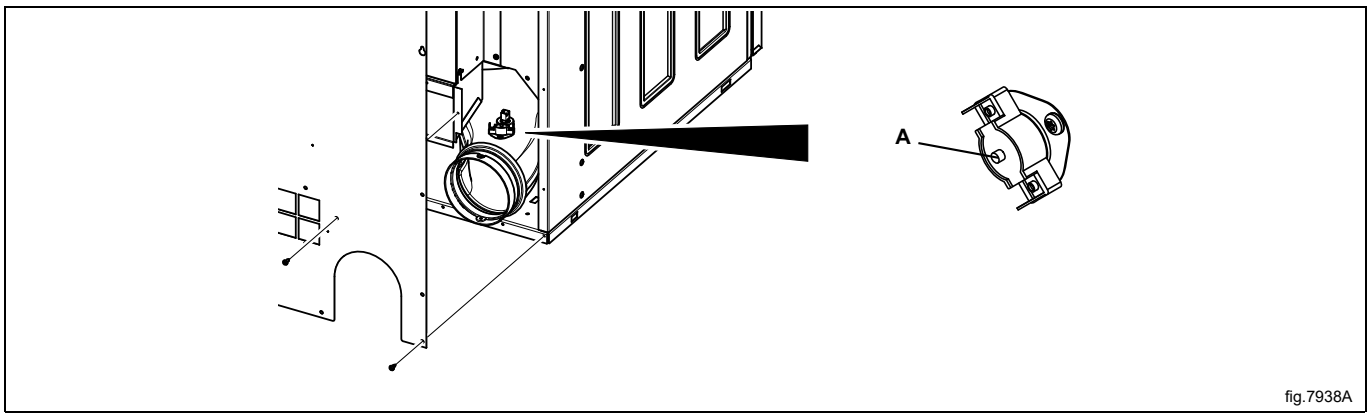


fig.7938A

Remount the rear panel.

Replacement of overheating thermostat

Disconnect the power to the machine.
Demount the rear panel.
Disconnect the overheating thermostat and remove it. Connect the new overheating thermostat.

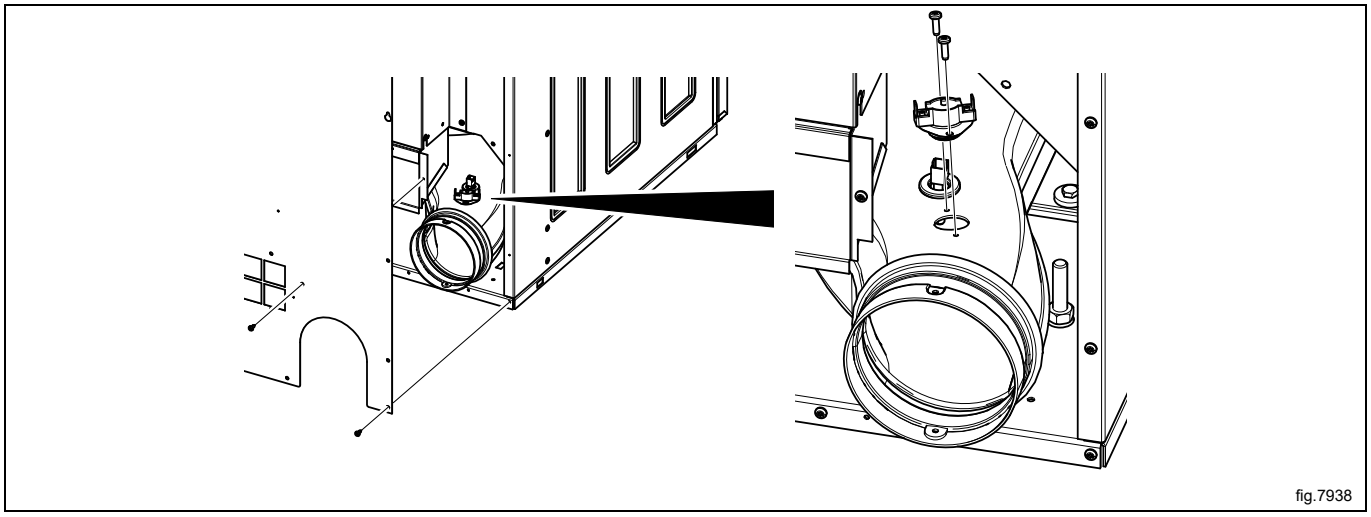


fig.7938

Remount the rear panel.

5.2.2 Heating sensor (NTC-sensor)

Description

The heating sensor is placed on the bottom of the machine on the outlet air flow.

The heating sensor measures the temperature in the outlet air and the signal is returned to the PCB.

The PCB turns the heating unit off when the outlet air thermistor indicates that the required temperature has been reached.

Replacement of heating sensor (NTC-sensor)

Disconnect the power to the machine.

Demount the rear panel.

Disconnect the heating sensor and remove it. Connect the new heating sensor and put it in position. Make sure the sensor gets all the way in.

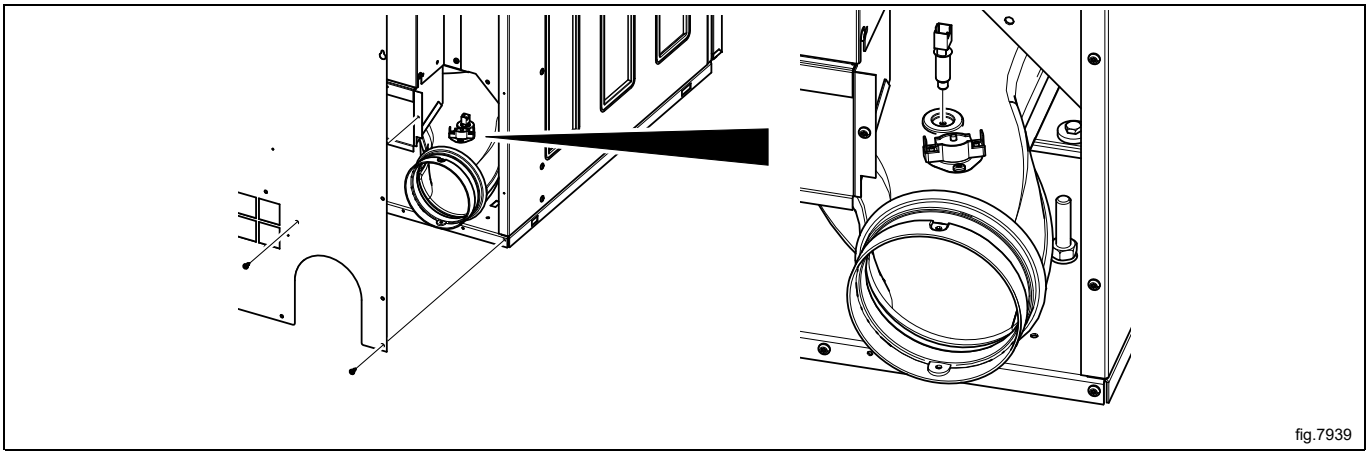


fig.7939

Remount the rear panel.

5.3 Vacuum switch

Function

The vacuum switch is placed on the back of the machine.

The vacuum switch ensures the necessary airflow in the machine.

Replacement of vacuum switch

Disconnect the power to the machine.

Demount the cover panel.

Disconnect the wires to the vacuum switch. Disconnect the vacuum hose. **Note the position of the wires.**
Remove the screws (A) and disconnect the vacuum switch.

Connect the new vacuum switch. Connect the vacuum hose and the wires. **Make sure that the art. No. on the new vacuum switch is the same as the old one.**

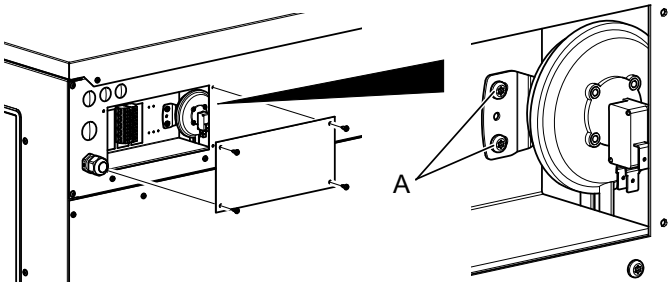


fig.7940

Remount the cover panel.

6 Door

6.1 Door switch

The door switch (A) ensures that the machine stops automatically if the door is opened during operation.

If the machine does not stop when the door is opened or if the door is closed and the error code `DOOR IS OPEN` is displayed (and the machine is unable to start), for example, the door switch needs to be replaced.

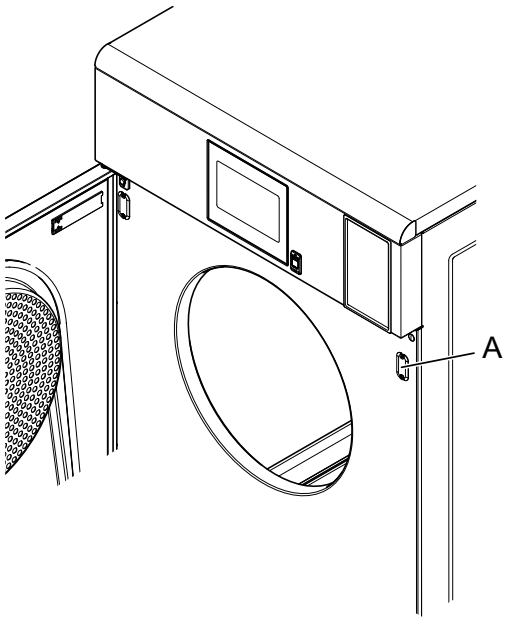


fig.X05471

6.1.1 Replacement of door switch

Disconnect the power to the machine.

Demount the top panel.

Cut the cable tie holding the door switch cable and demount the door switch and the door switch cable and mount the new one.

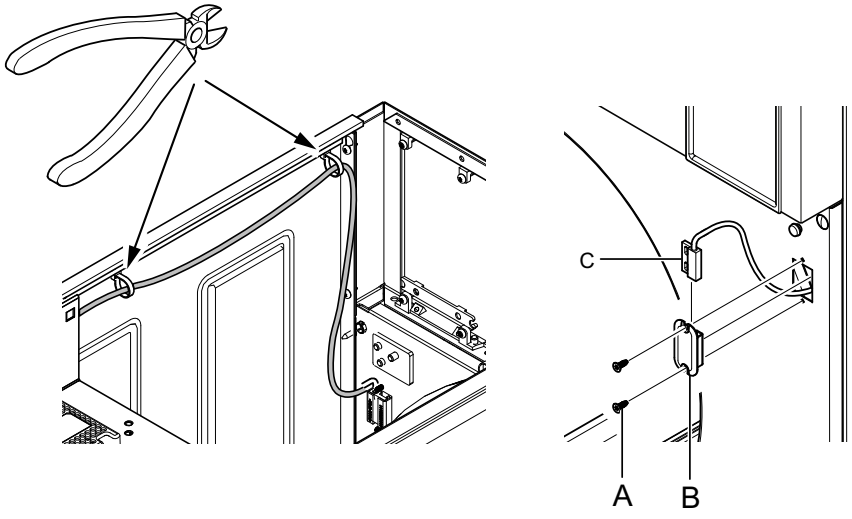


fig.X05472

Remount the top panel.

6.1.2 Replacement of door magnets

Remove the magnet to be replaced and mount the new one.

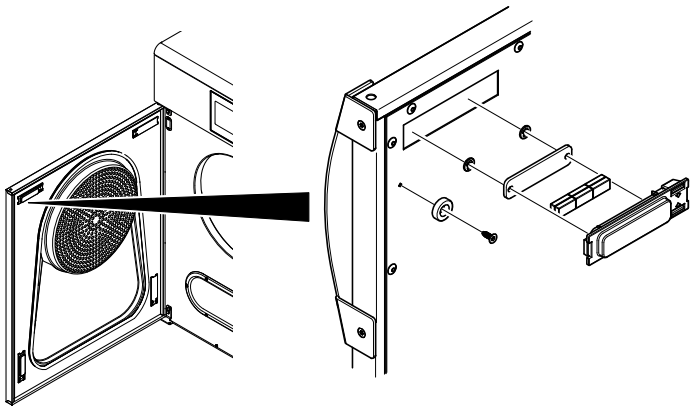


fig.X05473

6.2 Reversing the door

Disconnect the power to the machine. Gas heated machine: Shut off the manual gas valve.

Demount the hinge (A) and refit the screws into the same holes in order to secure the panel on the back. Mount the hinge (A) at the bottom of the opposite side.

Demount the door by carefully lifting it of the front.

Demount hinge (B).

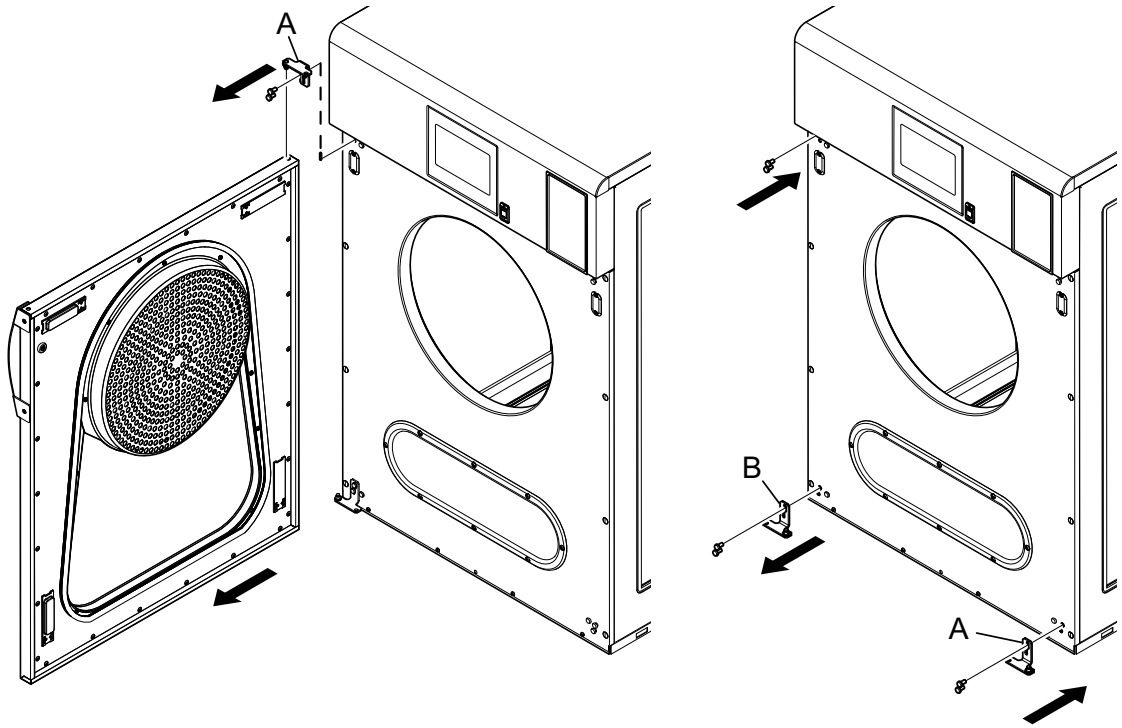


fig.X05474

Demount the top panel.

Cut the cable tie and remove cable (C) to the opposite side.

Demount the plastic cover with door switch (D) and mount on the opposite side.

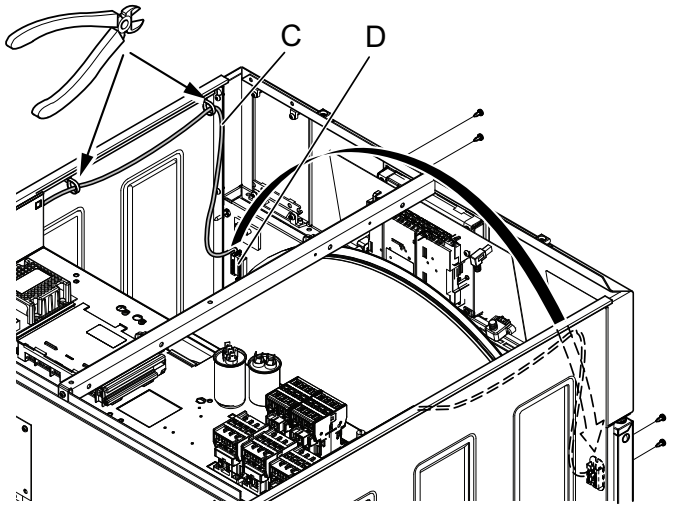


fig.X05475

Demount the door handle and remount the screws. Mount the door handle on the opposite side using the existing screws.

Mount the door by lifting it back on the fitting on the opposite side.

Mount the hinge (B) at the top.

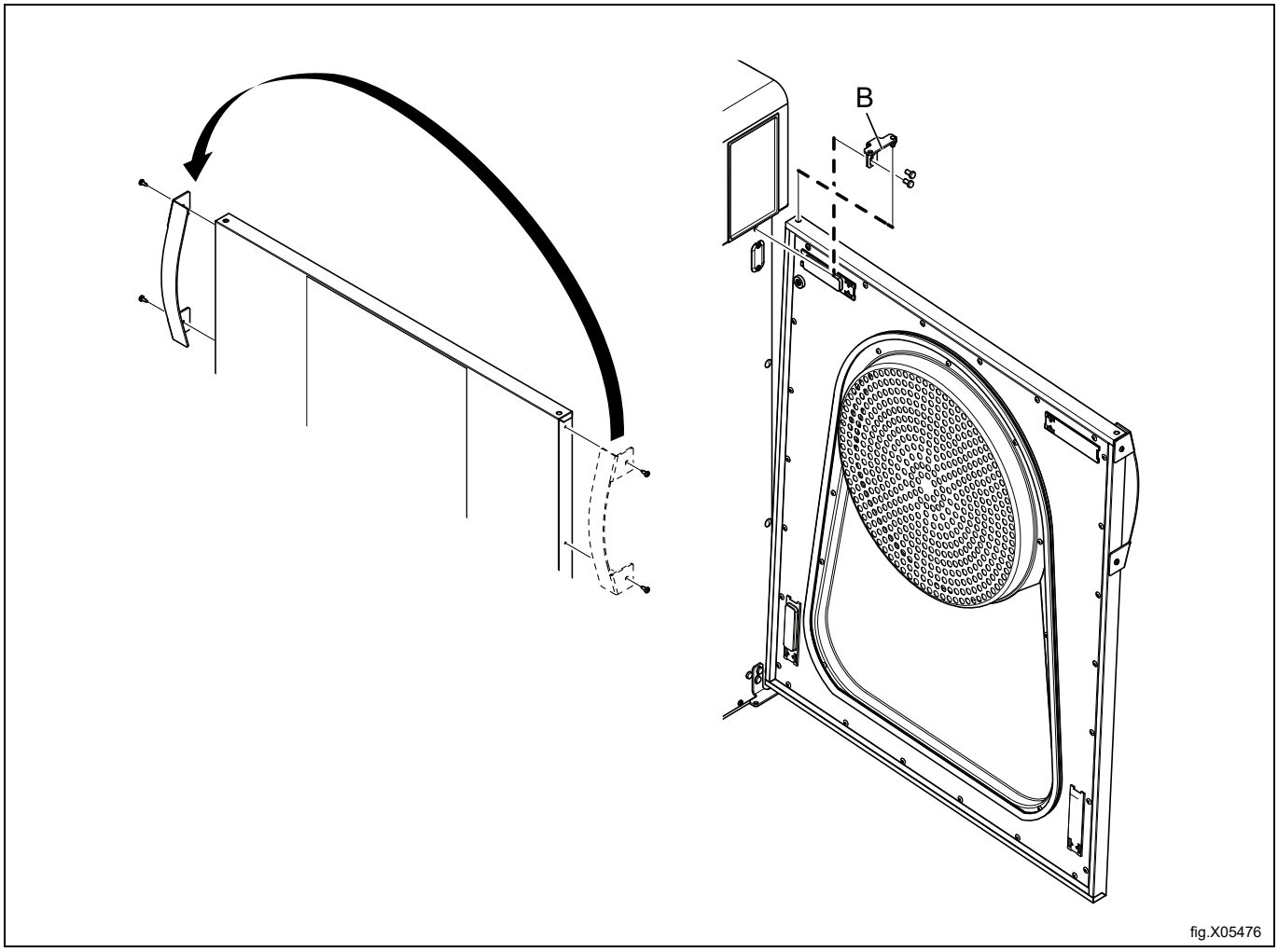


fig.X05476

Demount the magnetic door lock (E) and magnet for switch (F) and mount on the opposite side.

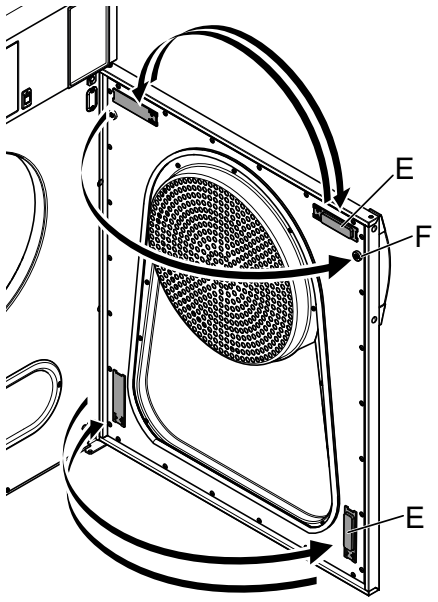


fig.X05477

Connect the power to the machine.
Test run the machine.

7 Motor

7.1 Replacement of fan motor

Disconnect the power to the machine.

Demount the rear panel.

Demount the top hinge and remove the door.

Note!

Only unscrew the two screws holding the hinge. Do not unscrew the screw that secures the reinforcement panel at the back of the front panel.

Demount and remove the filter.

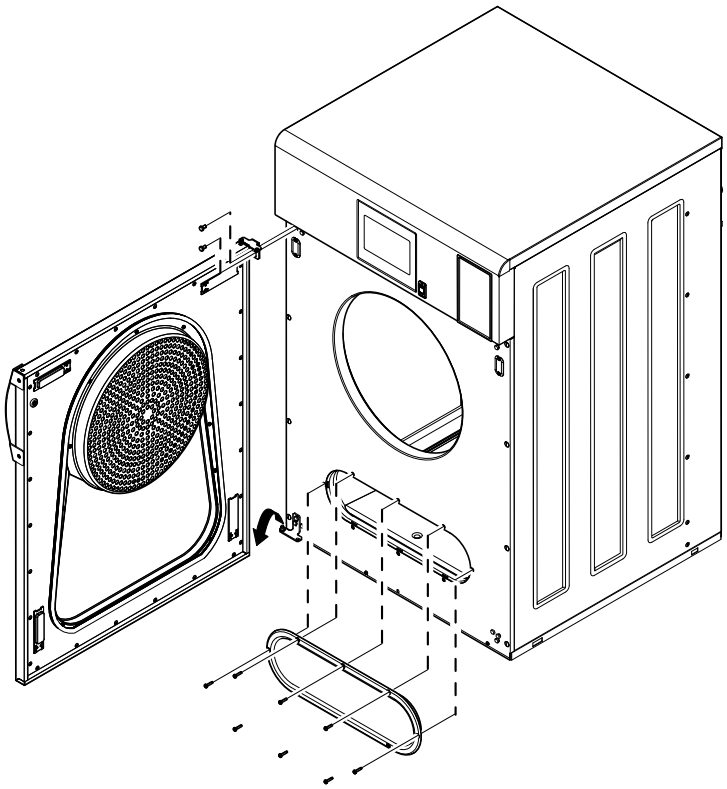


fig.X05479

Demount the top panel.

Disconnect the door switch (A).

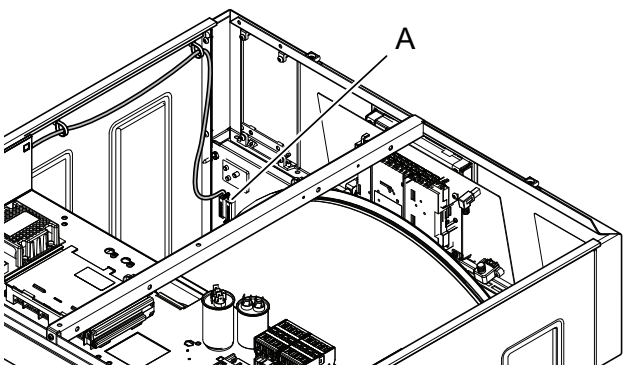


fig.X05480

Remove the screws on the front panel and carefully remove the panel.

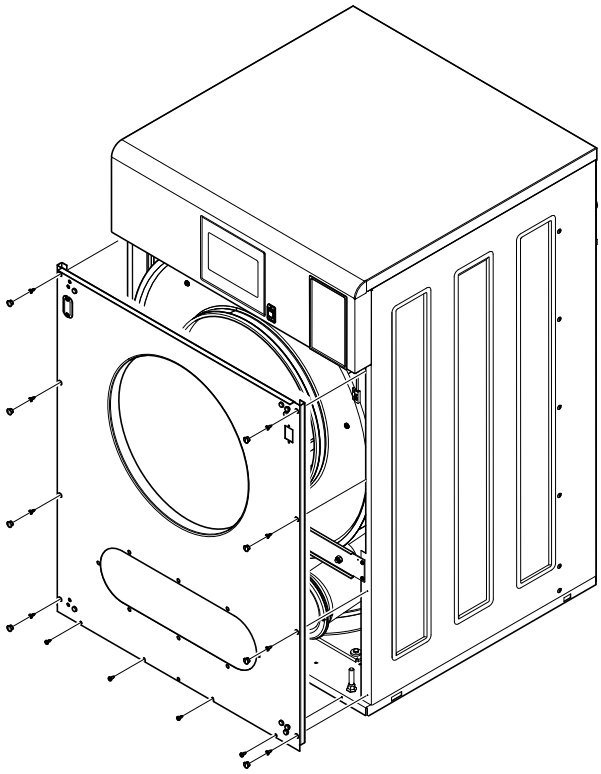


fig.X05481

Disconnect the motor cables, the overheating thermostat, NTC sensor and the pressure hose from the back of the machine.

Demount the fan module from the panel by removing the 4 screws (B).

Demount the air inlet from the blower housing by removing the 3 screws (C).

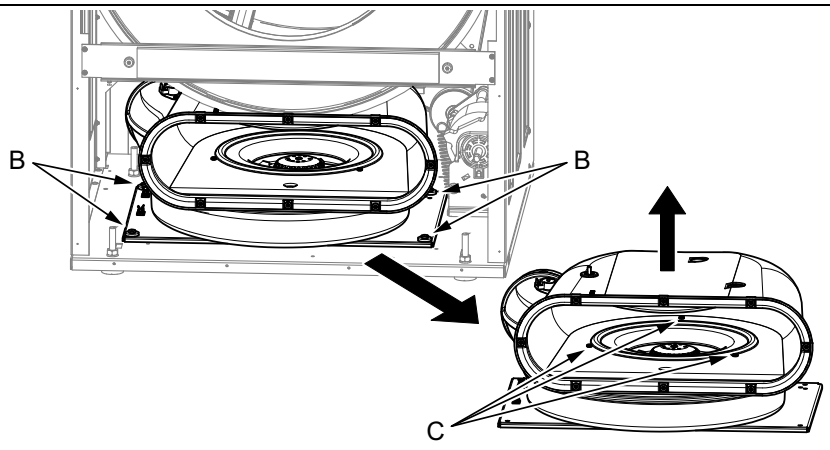


fig.X01834

Remove the fan motor and mount the new one.

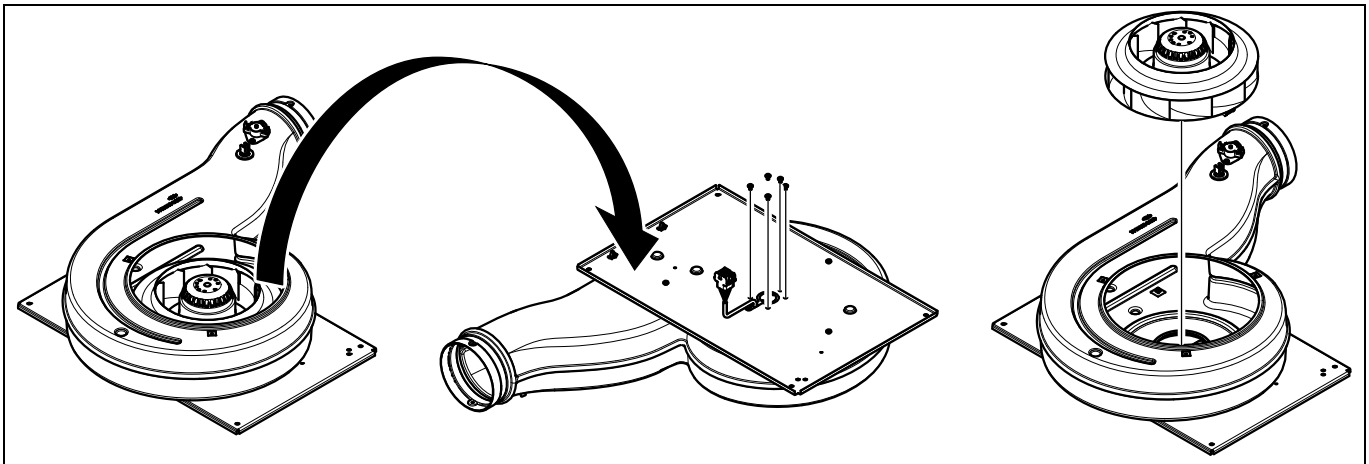


fig.7953

Remount the air inlet on the blower housing.

Remount the fan module on the panel.

Connect the pressure hose, NTC-sensor and overheating thermostat. Connect the motor cables. Remount the rear panel.

Connect the door switch and remount the top panel.

Remount the front panel.

Remount the filter.

Note!

Before remounting the filter, please note the following:

Start from serial numbers 5242030401 there are two lengths of screw to secure the lint filter.

- 3 pcs of MRT 4x20 screws (PN: 471834116) are used in zone A.
- 5 pcs of MRT 4x25 screws (PN: 471834117) are used in zone B.

Make sure to remount the screws correctly to the zones A and B according to the illustration.

Warning

The MRT4x25 screws (PN: 471834117) should not be used in zone A. If so, this longer screw will scratch the drum and make noise.

Tip for mouthing:

Pre-mount all the screws and then fasten them as a second step.

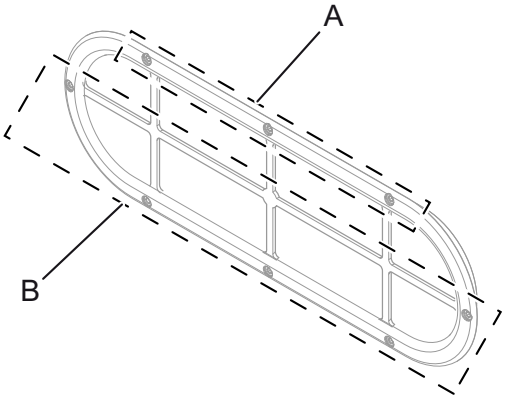
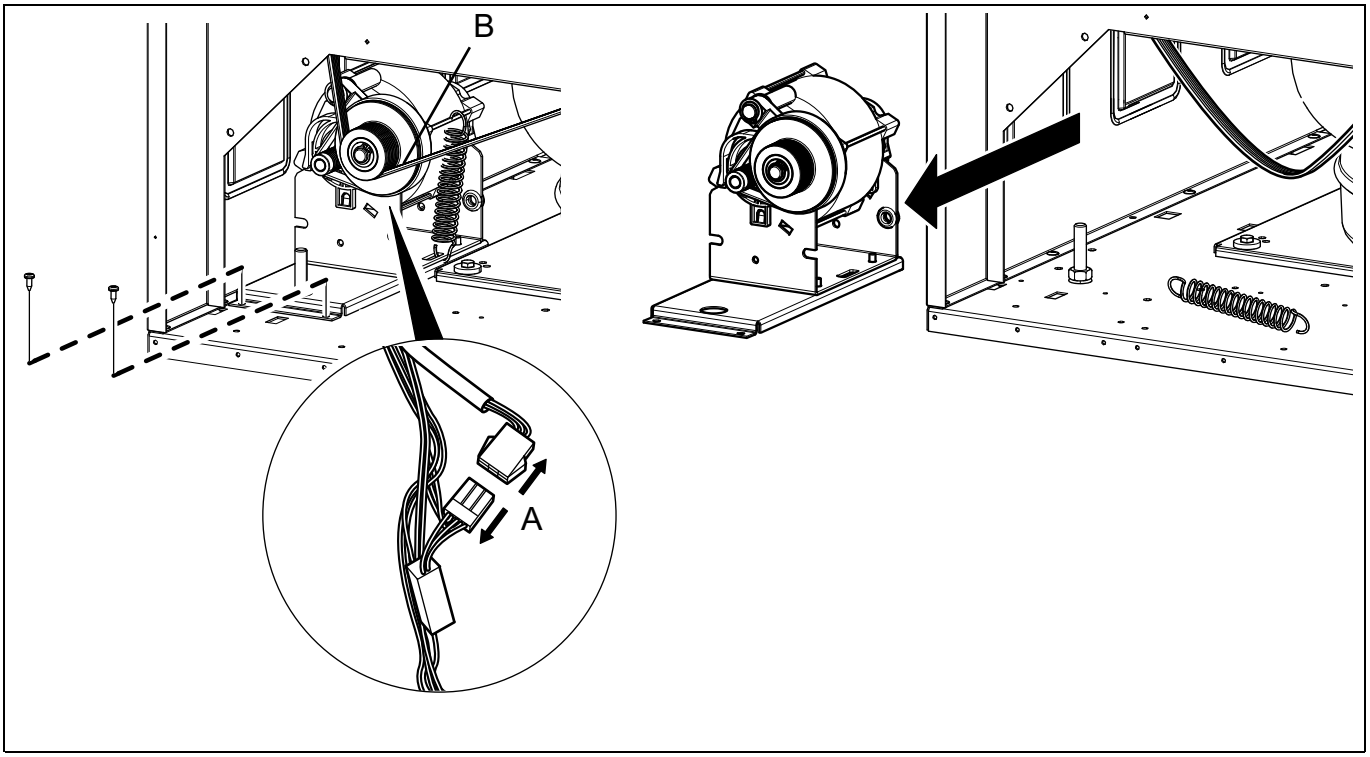


fig.X04851

Remount the door.

7.2 Replacement of drum motor

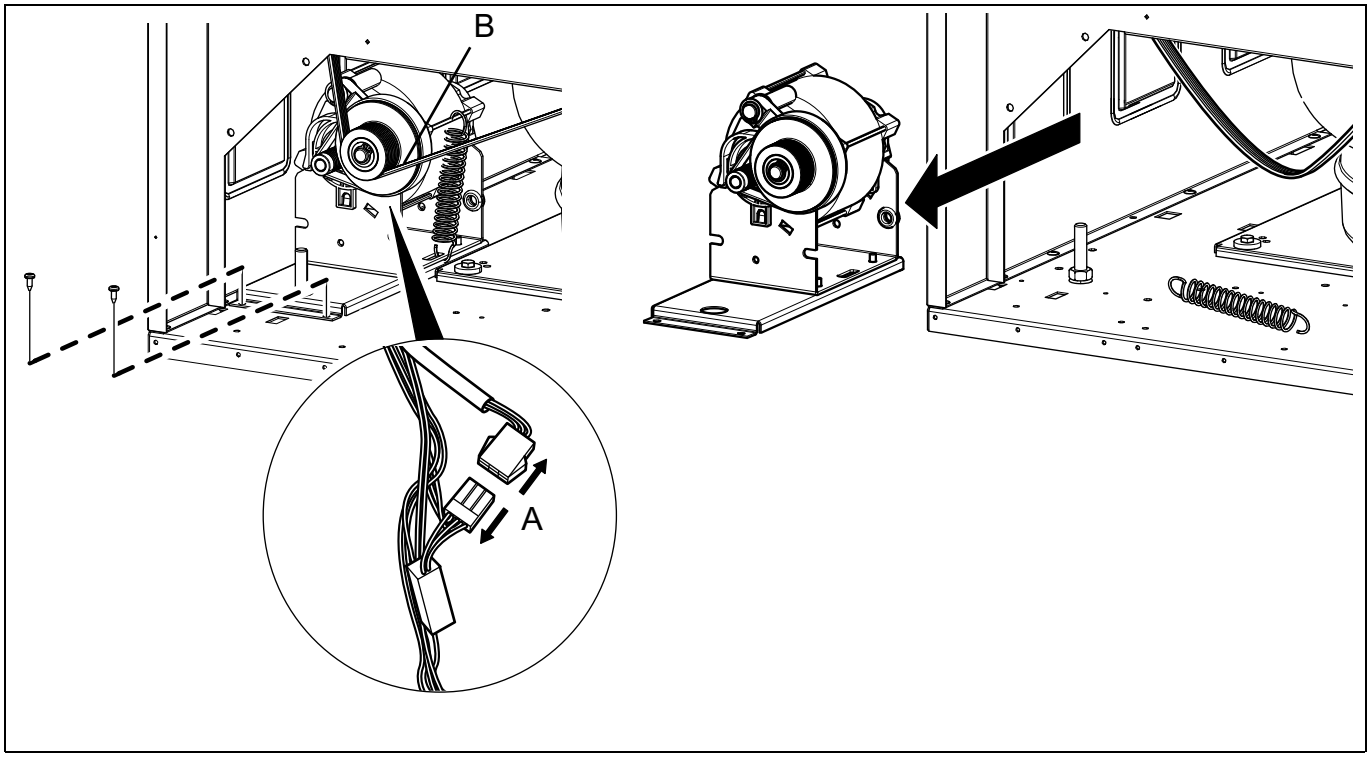
Disconnect the power to the machine.
Demount the rear panel.
Disconnect the motor cable (A).
Demount the spring and the drum belt (B).
Demount the two screws and remove the motor with console and pulley and replace with the new one.



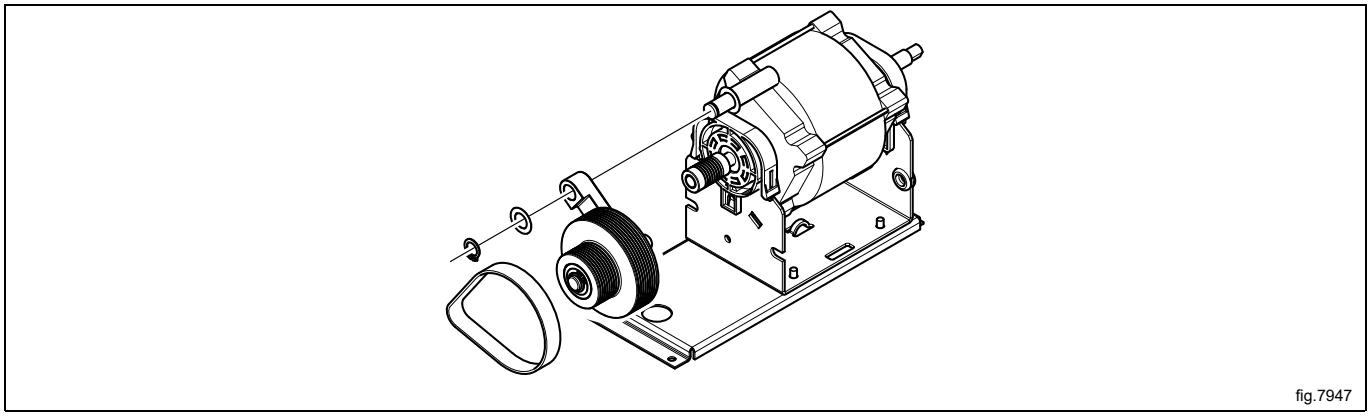
Remount the spring and the drum belt.
Connect the motor cable and remount the rear panel.

7.3 Replacement of drum motor pulley

Disconnect the power to the machine.
Demount the rear panel.
Disconnect the motor cable (A).
Demount the spring and the drum belt (B).
Demount the two screws and remove the motor with console and pulley.



Remove the belt around the motor pulley.
Demount the snap ring, washer and arm with idler.
Remove the motor pulley and mount the new one.



Remount the snap ring, washer and arm with idler.
Remount the belt around the motor pulley.
Remount the motor with console and pulley.
Remount the spring and the drum belt. Make sure the belts are in position.
Connect the motor cable and remount the rear panel.

7.4 Replacement of the belt around the drum motor pulley

Disconnect the power to the machine.
Demount the rear panel.
Disconnect the motor cable (A).
Demount the spring and the drum belt (B).
Demount the two screws and remove the motor with console and pulley.

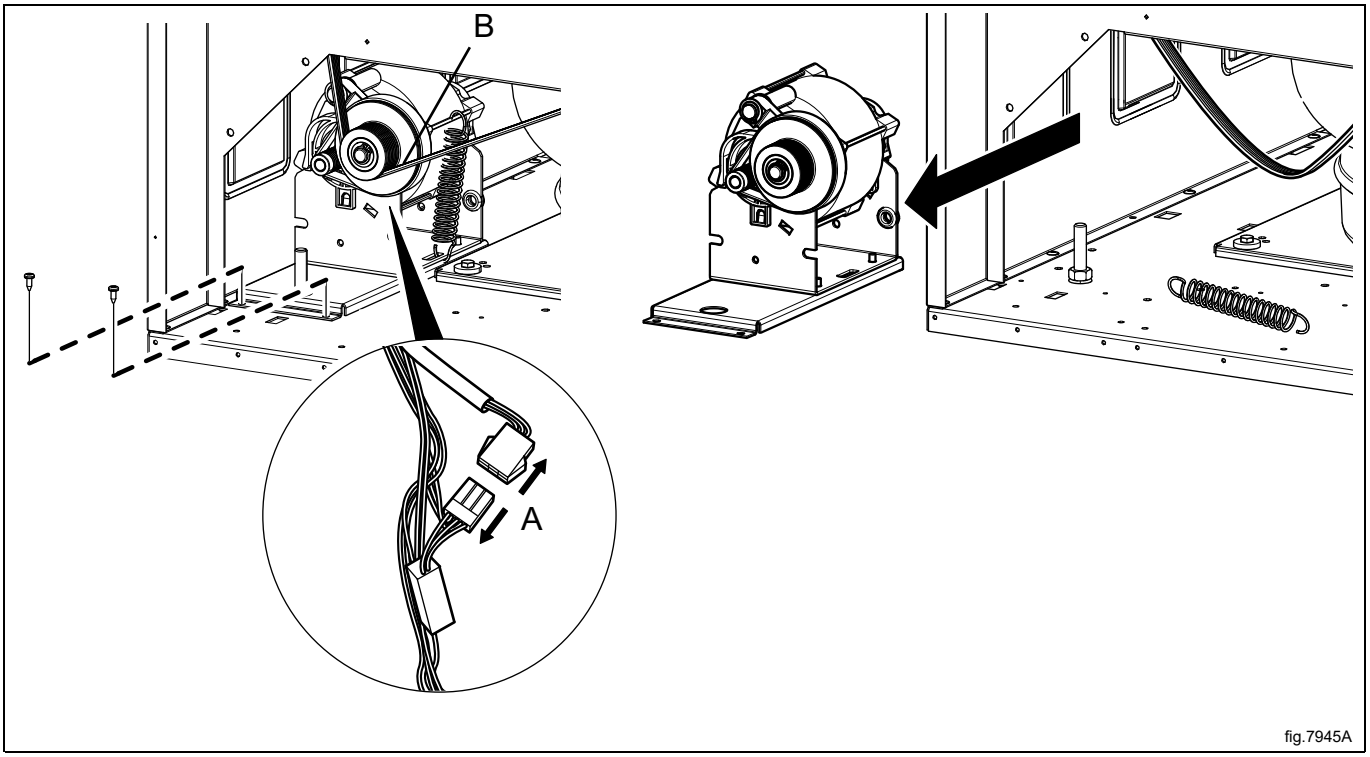


fig.7945A

Remove the belt around the motor pulley and put the new belt in position.

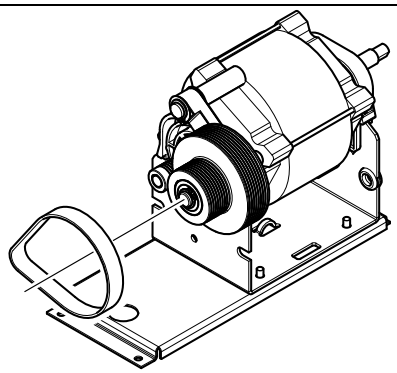


fig.7950

Fasten the drum belt. Make sure the belts are in position.
Remount the spring and the drum belt.
Connect the motor cable and remount the rear panel.

8 Heating unit, electric

8.1 General

Spare part number, effect and voltage are printed on each heating element.

8.2 Replacement of heating element

Disconnect the power to the machine.
Demount the rear panel.
Disconnect the overheating thermostat and the heating sensor.

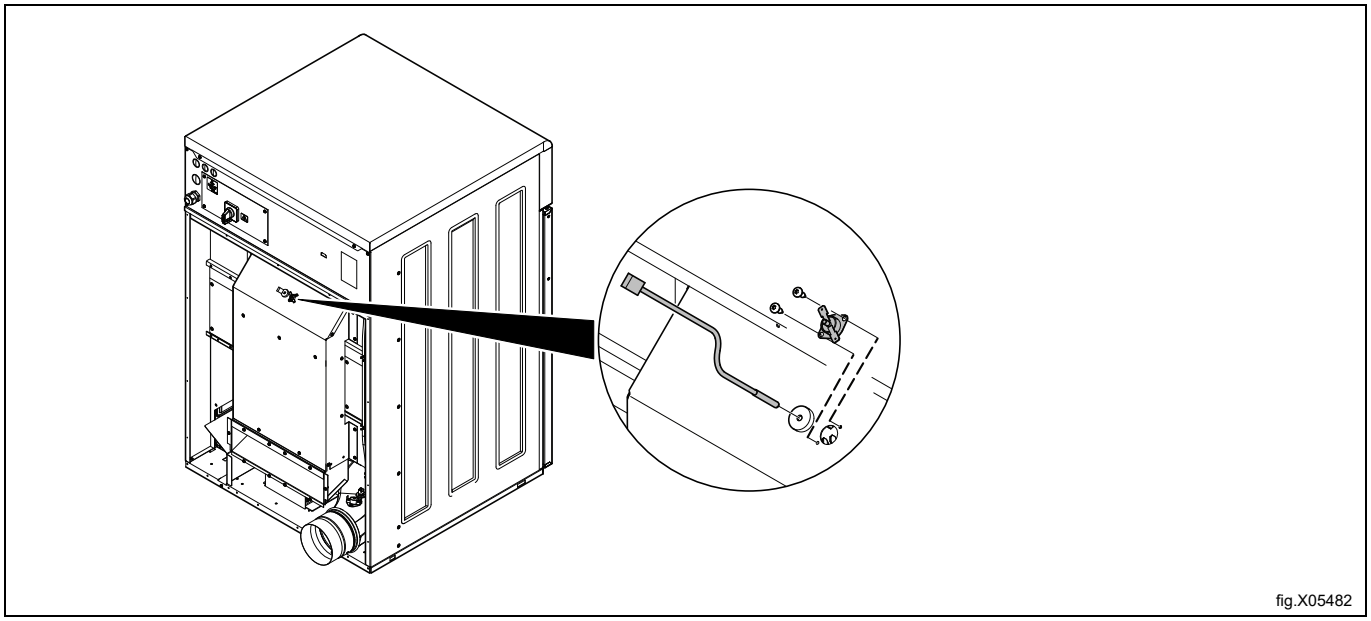


fig.X05482

Disconnect the connectors on the left side of the heating element box. Note the position of the connectors.
Demount the heating element box and lift upwards off the machine.

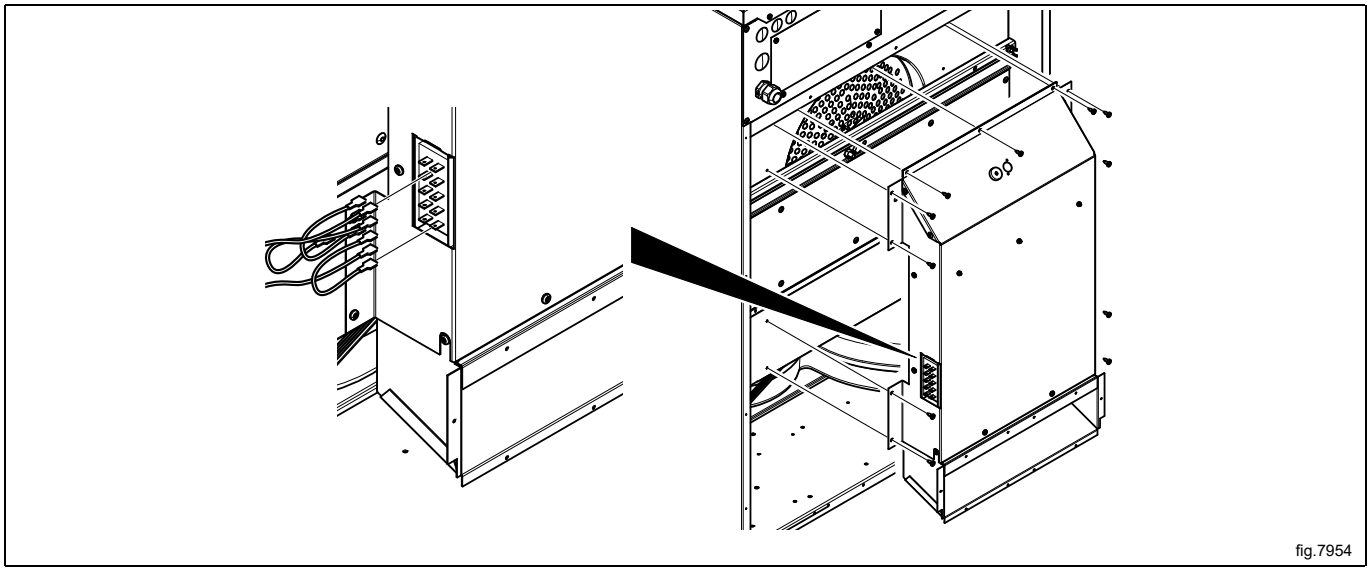


fig.7954

Turn the heating element box upside-down and unscrew the four screws. Demount the heating element and mount the new one. Fasten the four screws.

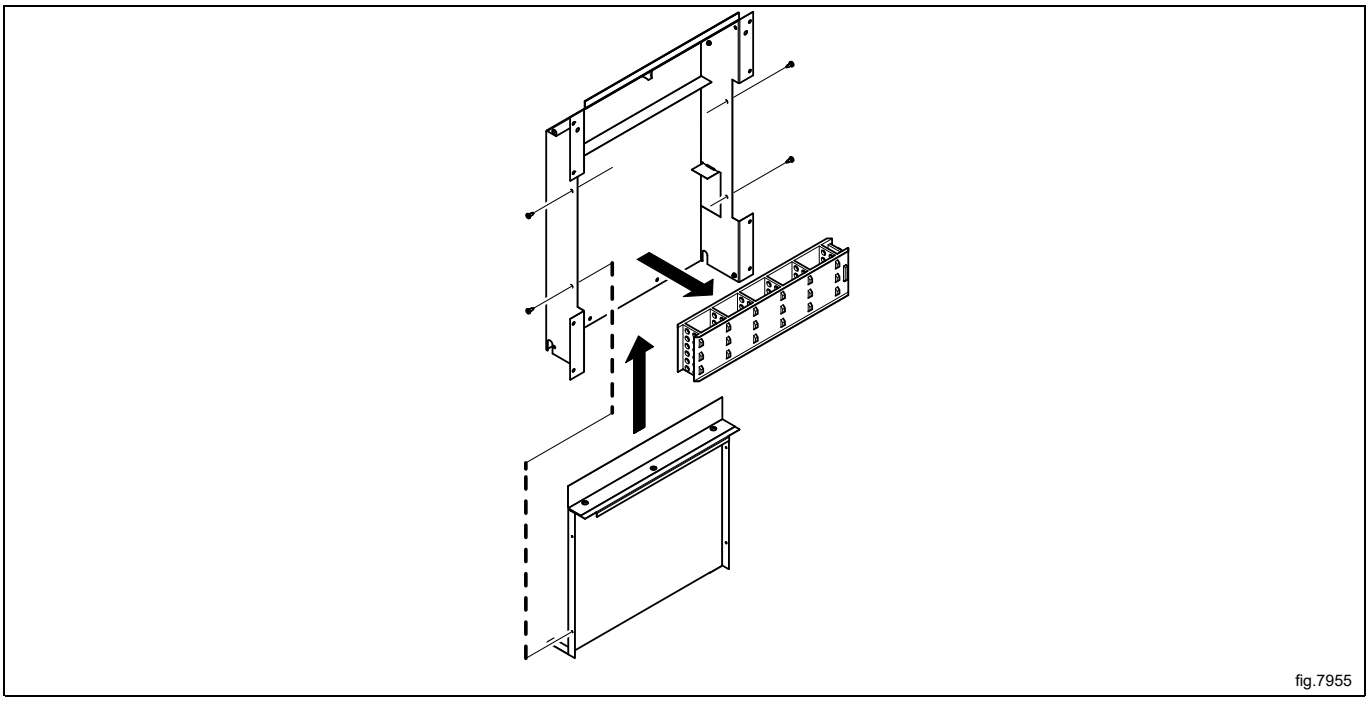


fig.7955

Remount the heating element box in the machine. Reconnect the connectors in the same way as before.
Reconnect the overheating thermostat and the heating sensor.
Remount the rear panel.

9 Drum

9.1 Replacement of drum

9.1.1 Removal of the drum

Disconnect the power to the machine.

Demount the rear panel and the top panel.

Demount the top hinge and remove the door.

Note!

Only unscrew the two screws holding the hinge. Do not unscrew screw that secures the reinforcement panel at the back of the front panel.

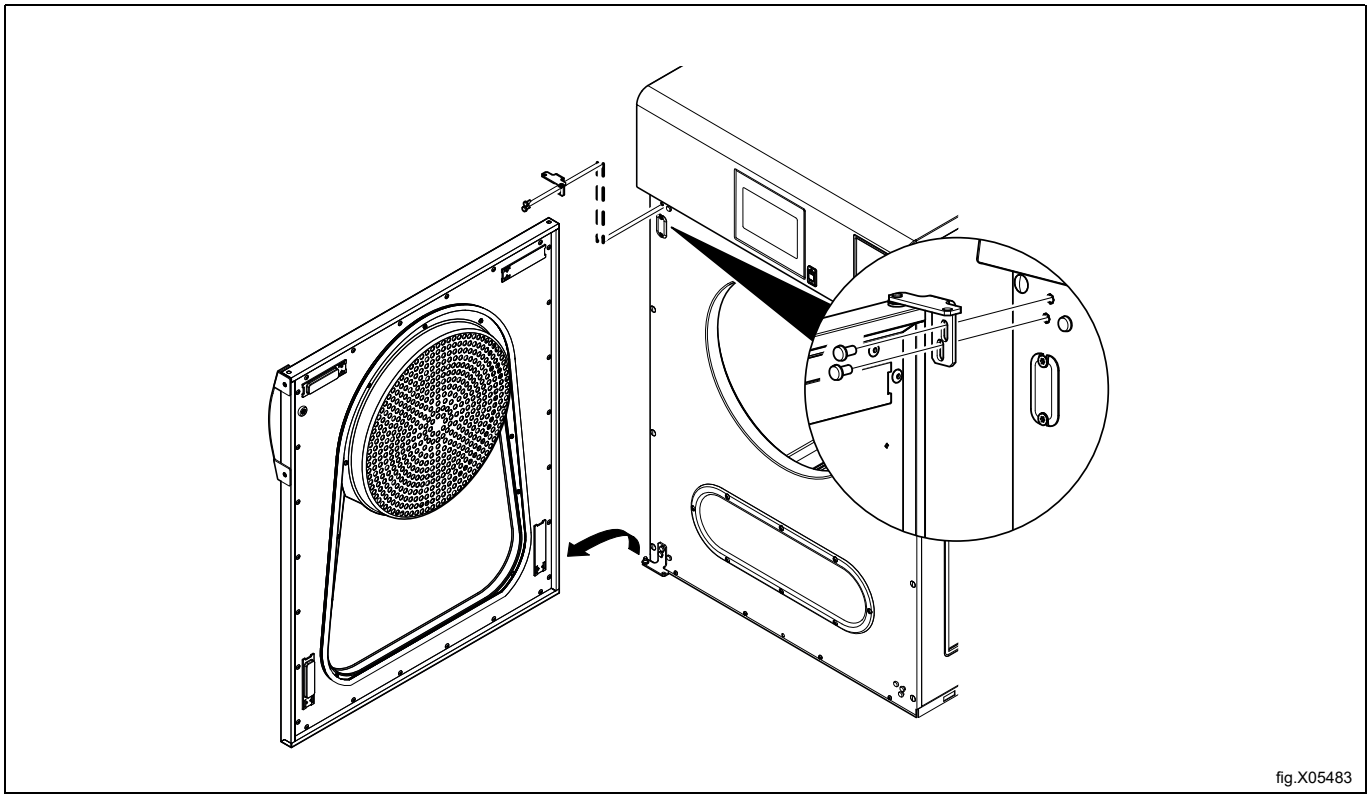


fig.X05483

Disconnect the door switch (A).

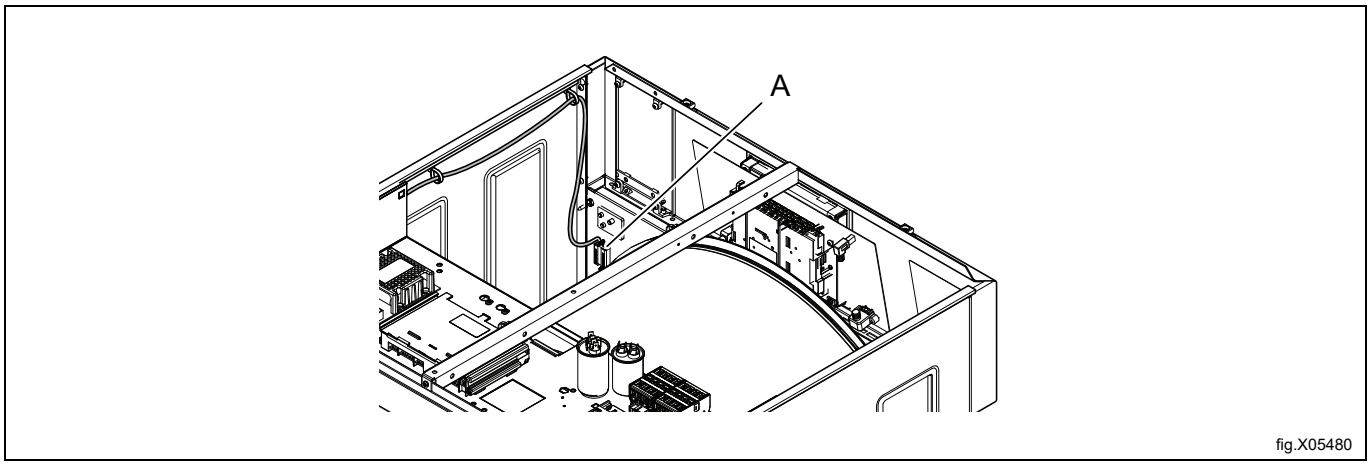
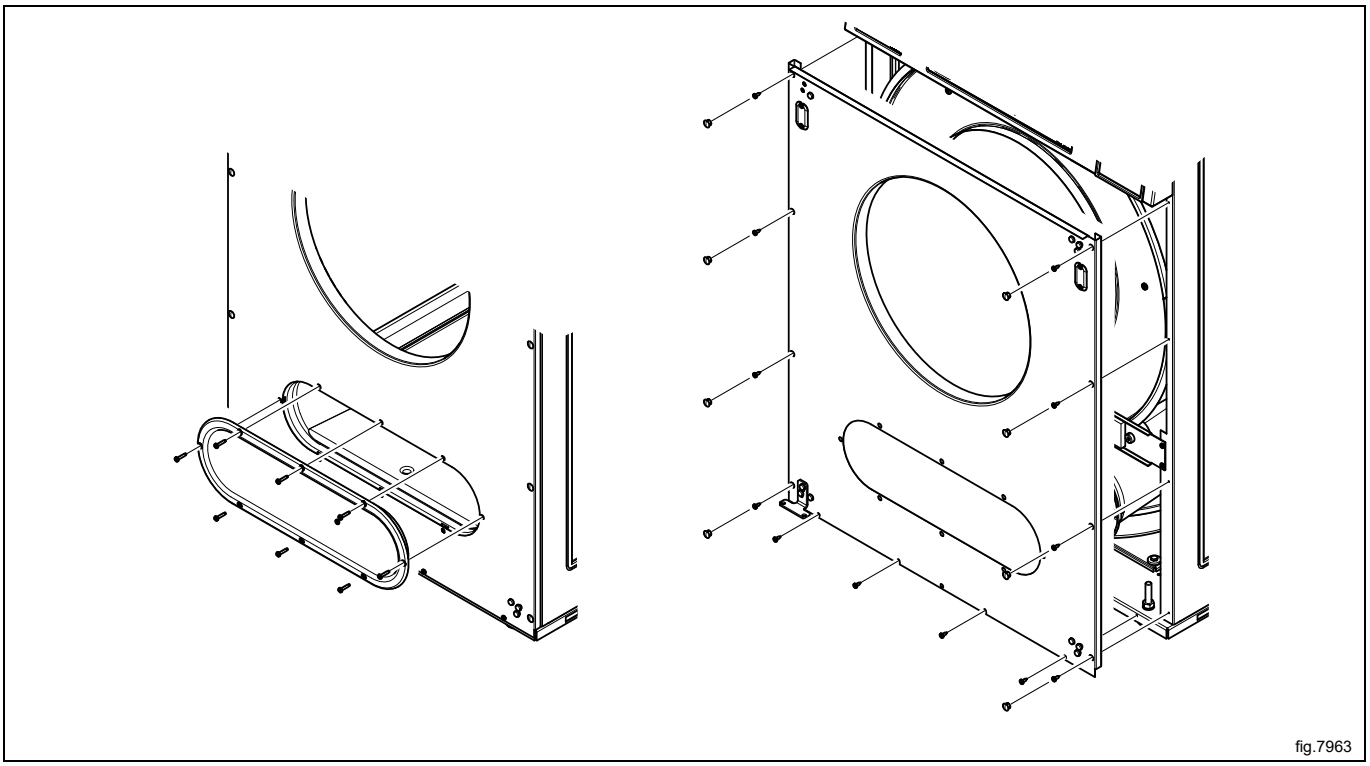


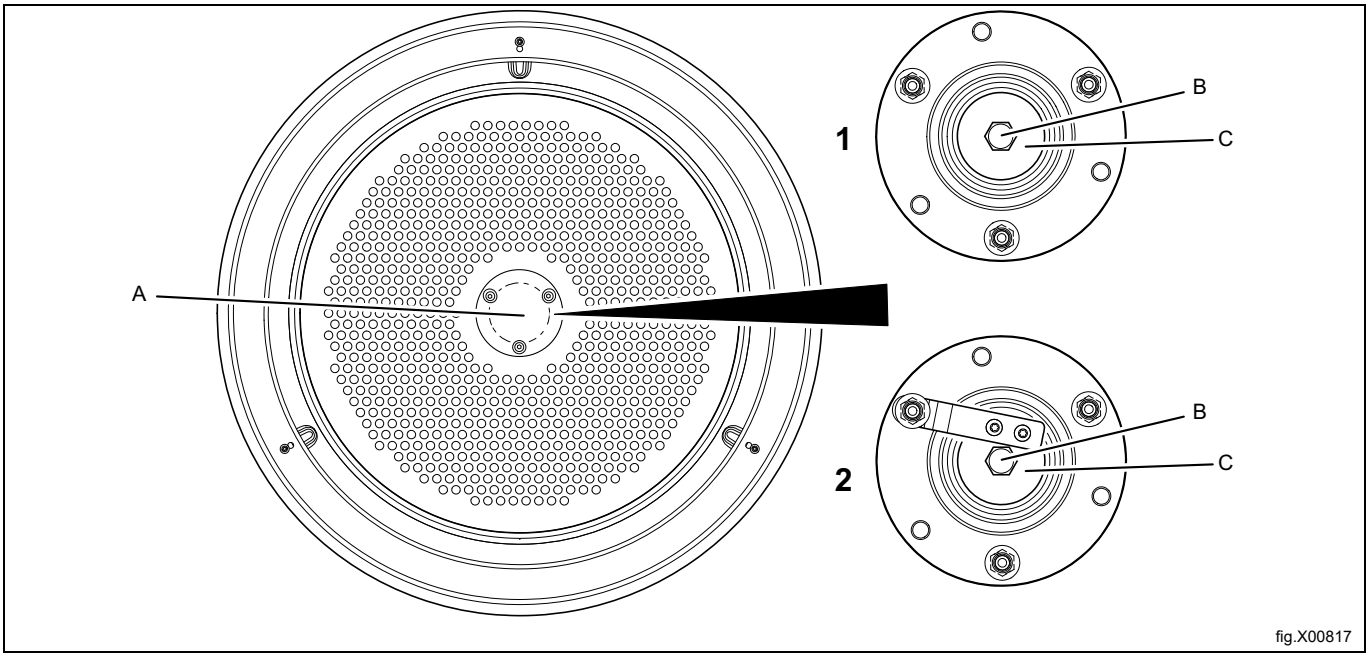
fig.X05480

Demount and remove the filter.
Remove the screws on the front panel and carefully remove the panel.



Remove the screws and the bearing house (A).

1. Shows a machine without RMC. Remove the bolt (B) and the washer (C).
2. Shows a machine with RMC. Loosen the screw and pull the RMC flange to the side in order to remove the bolt (B) and the washer (C).



Remove the belt (A) from the pulley.
Demount the RMC with arm (B) above the drum.

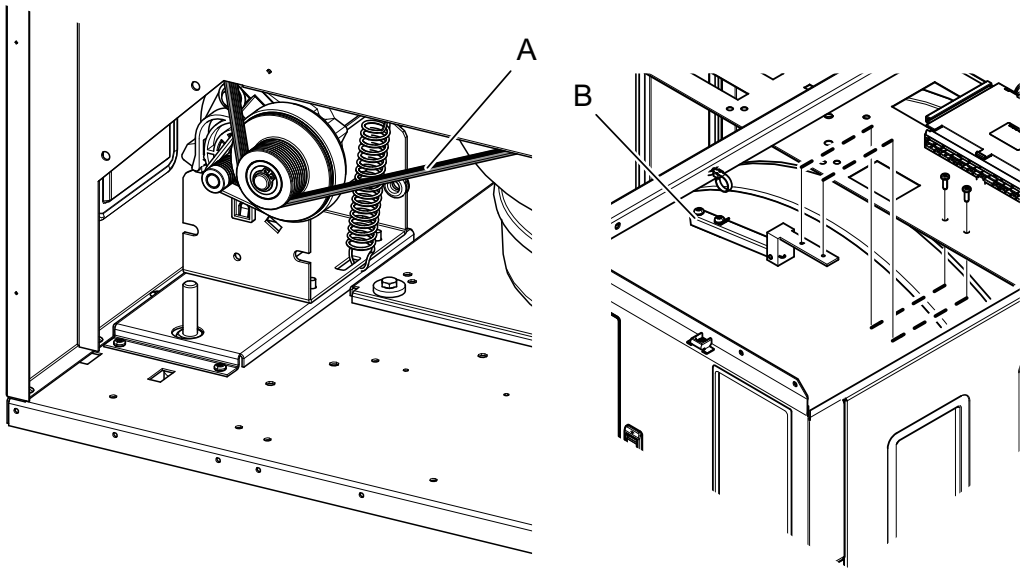


fig.X05484

Demount the control panel.

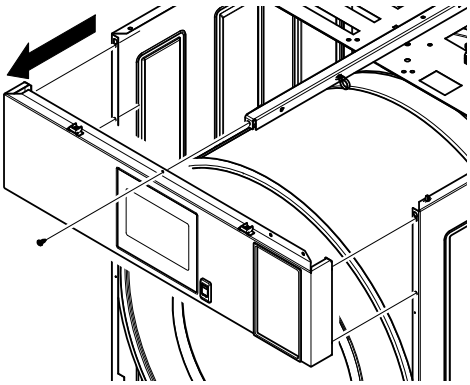


fig.X05485

Demount the supporting rail.

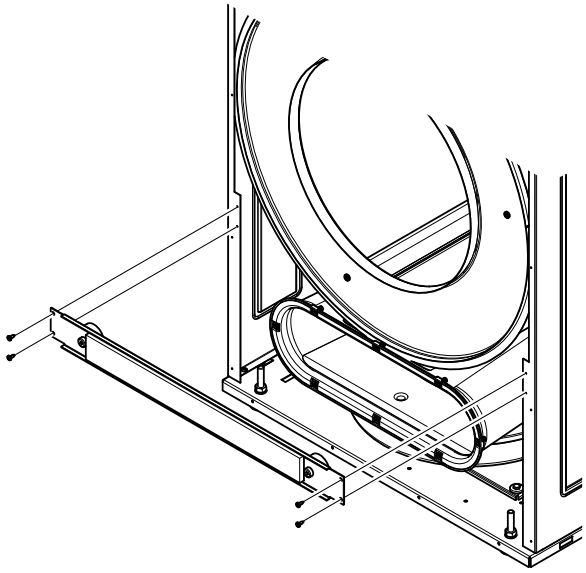


fig.7964

Carefully lift out the drum.
When mounting the new drum, first fasten the belt temporarily on the drum, then put the drum in position.

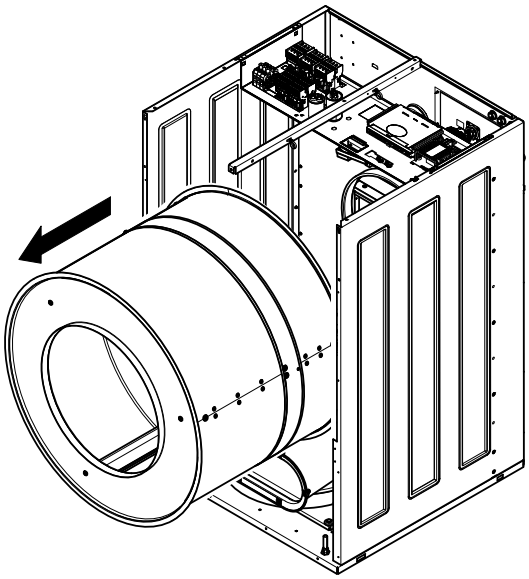


fig.X05486

9.1.2 Remounting of the drum and assembling of the machine

Remount the drum.

Remount the supporting rail.

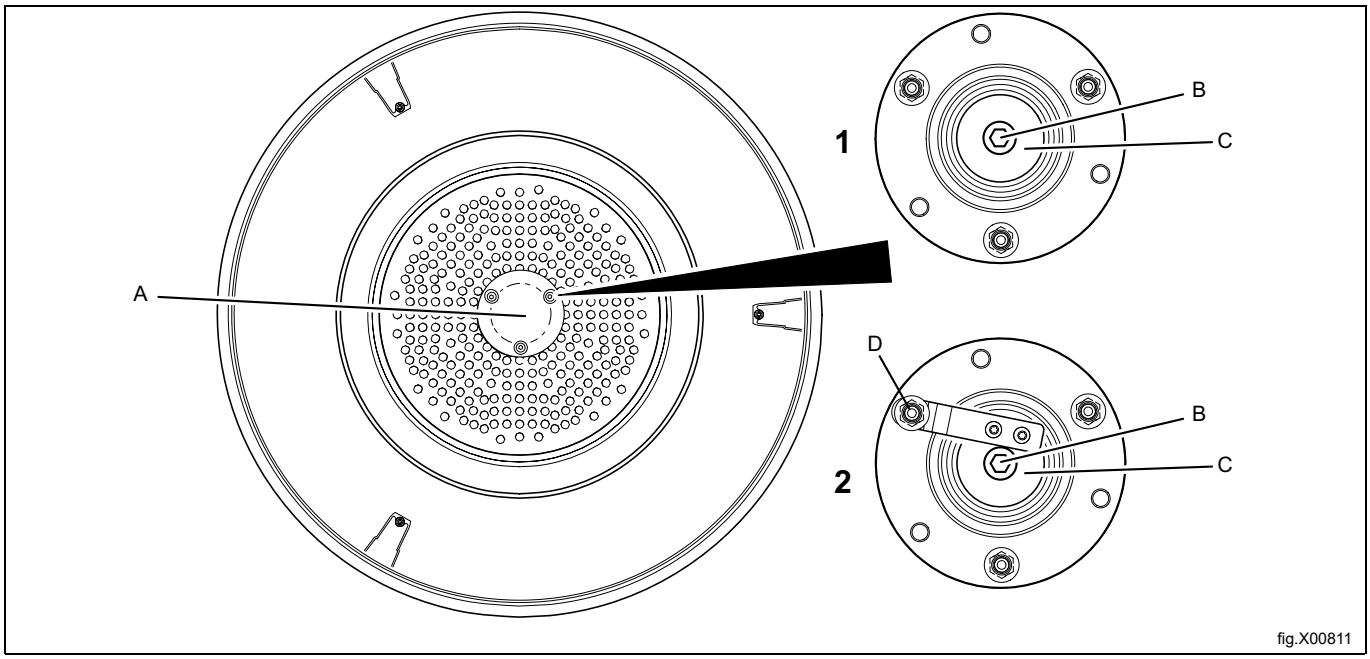
Remount the control panel.

Remount the RMC with arm.

Fasten the bolt and the washer and remount the bearing house. Use tightening torque 20 Nm ± 3 Nm.

On machines with RMC; pull the RMC flange back in position and tighten the screw. Use tightening torque 5 Nm ± 0.5 Nm.

- Remount the bearing.
  1. Shows a machine without RMC: Fasten the washer (C) and the bolt (B). Use tightening torque 20 Nm ± 3 Nm.
  2. Shows a machine with RMC: Fasten the washer (C) and the bolt (B). Pull the RMC flange back into position and fasten the screw (D). Use tightening torque 5 Nm ± 0.5 Nm.
- Fasten the bearing cover (A) with the screws. Use tightening torque 2.3 Nm ± 0.2 Nm.



Fasten the belt and make sure the belt is in position.

Remount the RMC with arm above the drum.

Remount the rear panel and the top panel.

Connect the door switch cable and remount the front panel.

Remount the filter.

Note!

Before remounting the filter, please note the following:

Start from serial numbers 5242030401 there are two lengths of screw to secure the lint filter.

- 3 pcs of MRT 4x20 screws (PN: 471834116) are used in zone A.
- 5 pcs of MRT 4x25 screws (PN: 471834117) are used in zone B.

Make sure to remount the screws correctly to the zones A and B according to the illustration.

Warning

The MRT4x25 screws (PN: 471834117) should not be used in zone A. If so, this longer screw will scratch the drum and make noise.

Tip for mouthing:

Pre-mount all the screws and then fasten them as a second step.

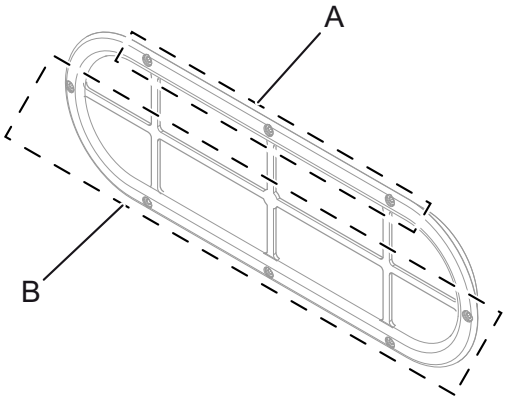


fig.X04851

Remount the door.

9.2 Replacement of bearing

Demount the drum.
Please refer to section Removal of the drum.

When the drum is removed the bearing can be replaced.

Put the drum on the floor.
Remove the bolts and washers (D) and mount the new bearing. Use tightening torque 5 Nm.

1. Shows a machine without RMC.
2. Shows a machine with RMC.

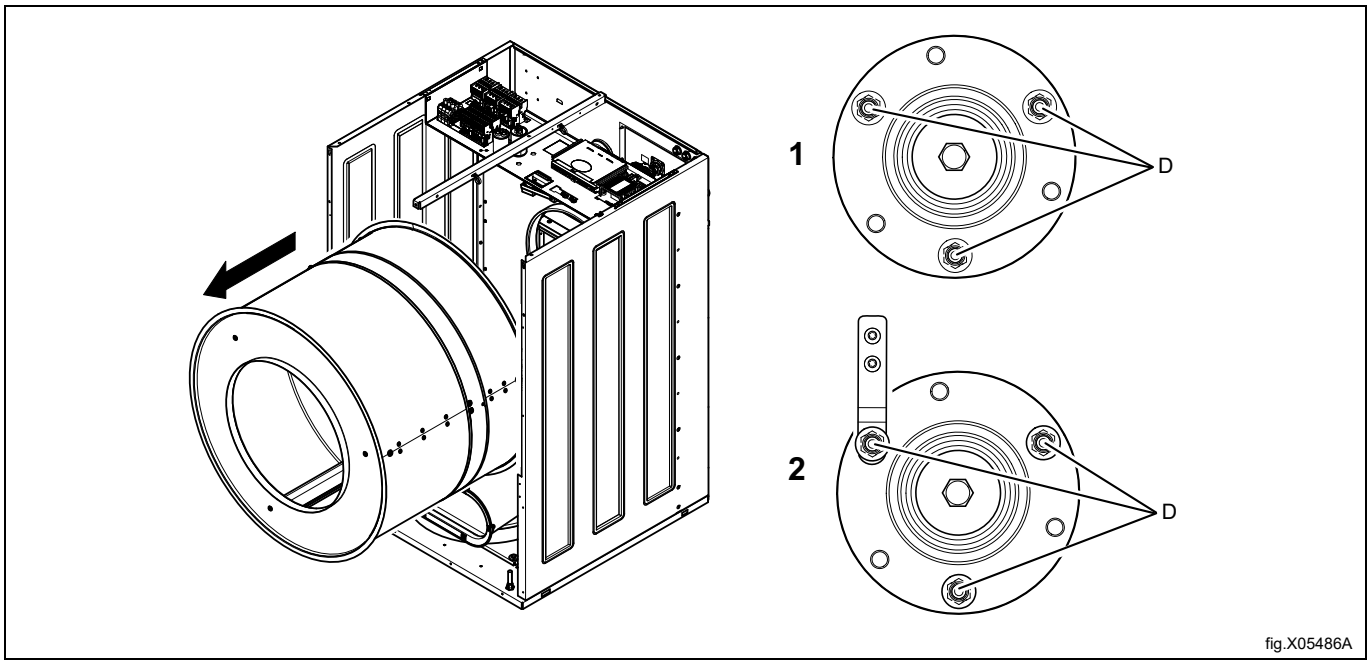


fig.X05486A

Re-assemble the machine.
Please refer to the section Remounting of the drum and assembling of the machine

9.3 Replacement of the belt around the drum

Demount the drum.

Please refer to section Removal of the drum.

When the drum is removed the belt around the drum can be replaced.

Remove the belt from the drum.

When remounting the drum, first fasten the new belt temporarily on the outer drum in the machine, then put the drum in position.

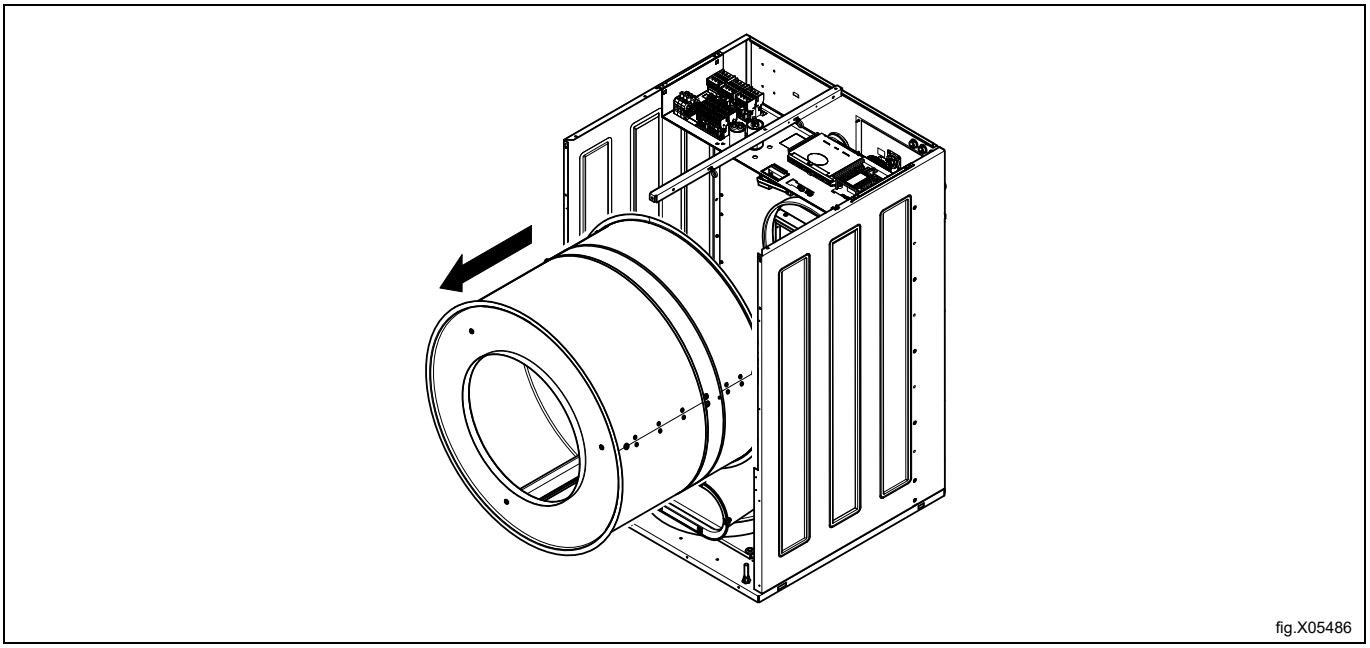


fig.X05486

Note!

If the drum is equipped with RMC, clean the glide surface for the RMC if necessary.

Re-assemble the machine.

Please refer to the section Remounting of the drum and assembling of the machine

9.4 Replacement of rear sealing

Demount the drum.
Please refer to section Removal of the drum.

When the drum is removed the rear sealing can be replaced.

Remove the screws and remove the outer sealing plate.

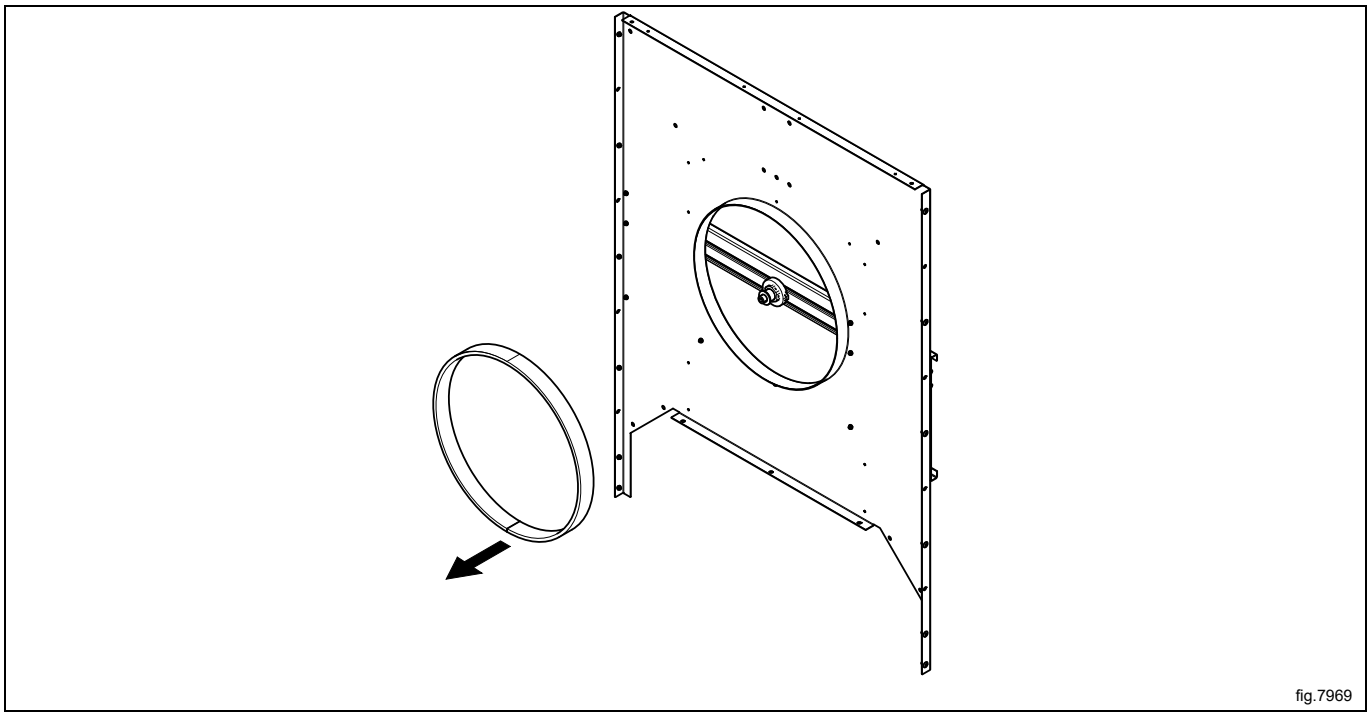
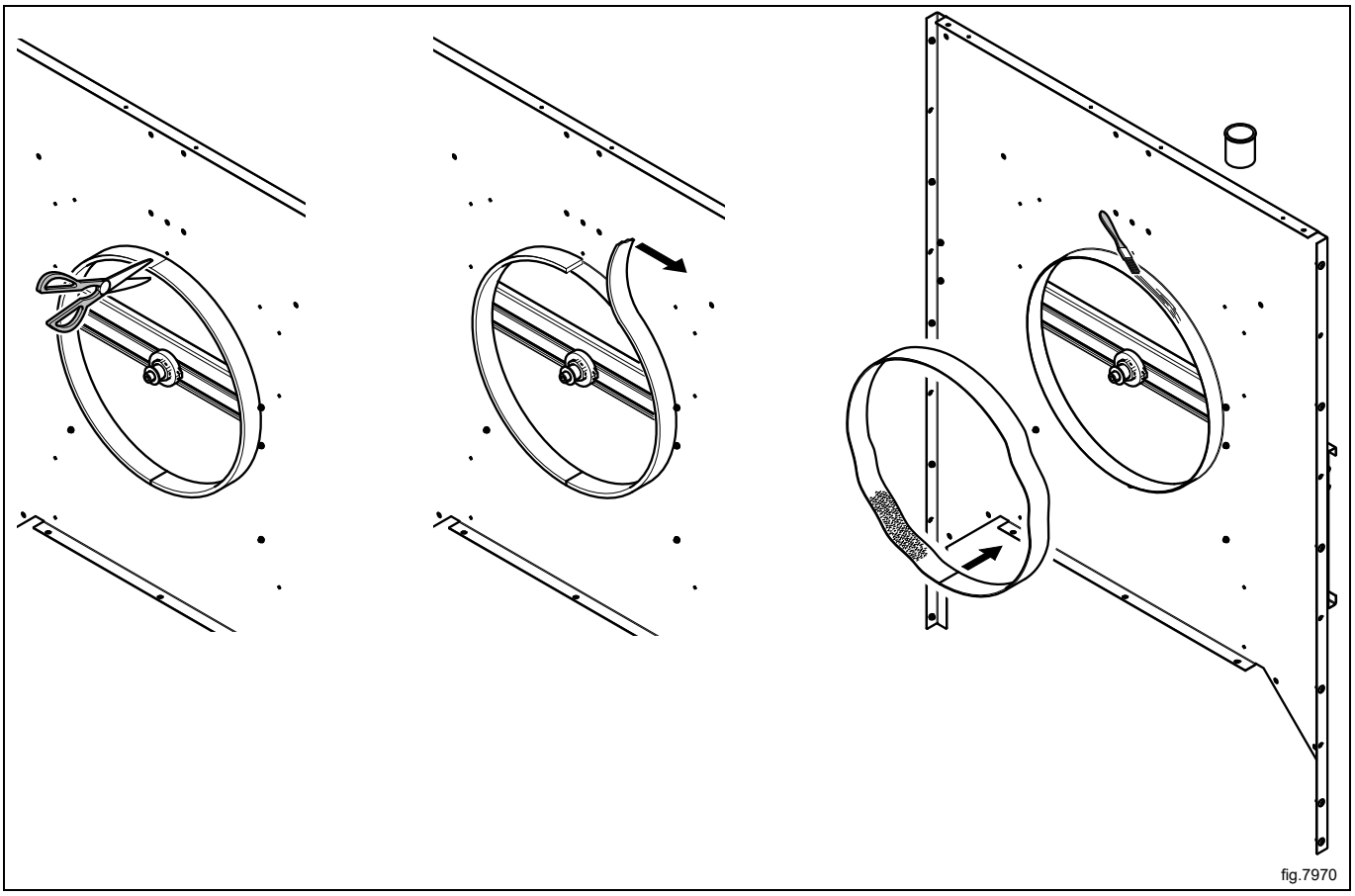


fig.7969

Cut loose the rear sealing from the inner sealing plate.

Put glue on the inner sealing plate and fasten the new rear sealing on the inner sealing plate. The rough side shall be fastened to the glue.



Remount the outer sealing plate and fasten the screws.

Re-assemble the machine.

Please refer to the section Remounting of the drum and assembling of the machine

9.5 Replacement of insulator sheet and RMC band

Demount the drum.
Please refer to section Removal of the drum.

When the drum is removed the insulator sheet and RMC band can be replaced.

Place the drum according to the figure.

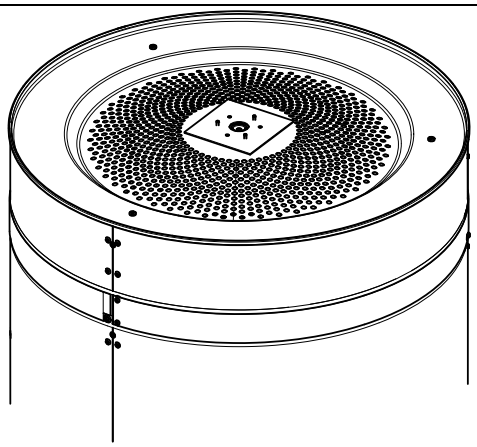


fig.X01971

Demount the RMC band and the insulator sheet. Start from the position showed in the figure. Remove the three screws.

Note!
Be careful when removing the RMC band since it is sharp and might spring back.

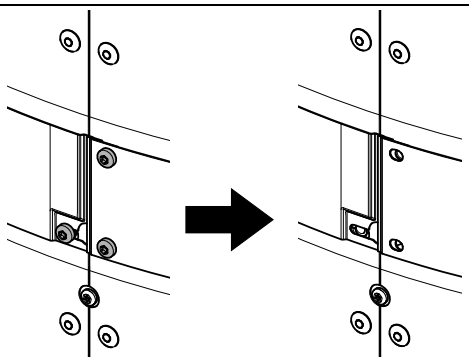


fig.X01972

At the other side of the drum, loosen the two screws and remove the RMC band.

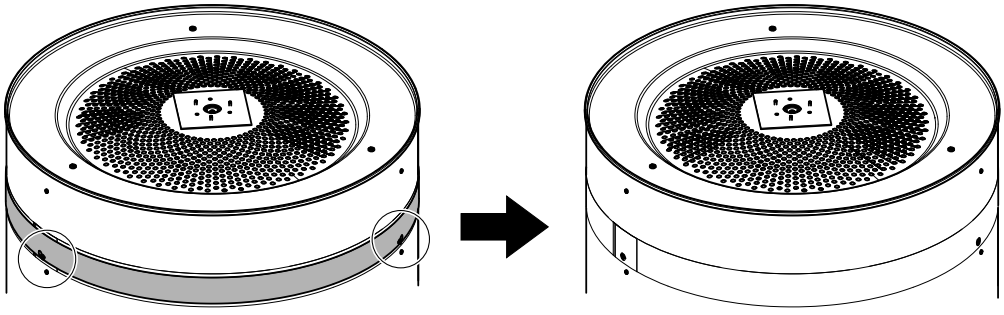


fig.X01973

Mark on the drum where the tip of the insulator sheet is placed. Remove the insulator sheet by pulling it out over the screw head.

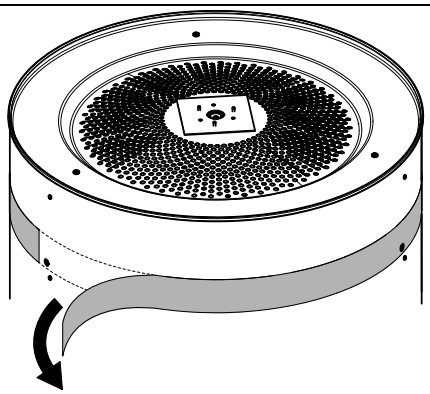


fig.X01974

Mark on the drum where the screws and bushing are placed (Y).

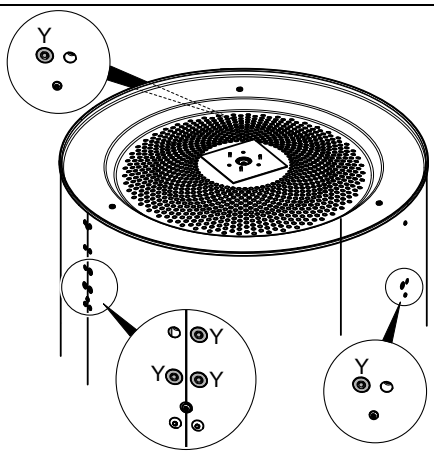


fig.X01975

Replace all screws and bushings by the new ones, pre-assemble all of them in the positions marked in previous step (Y).

Assemble the new insulator sheet in the position marked before. Make sure the bushing is under the insulator sheet where the screw is going to be tightened.

A = position of bushings under the insulator sheet.

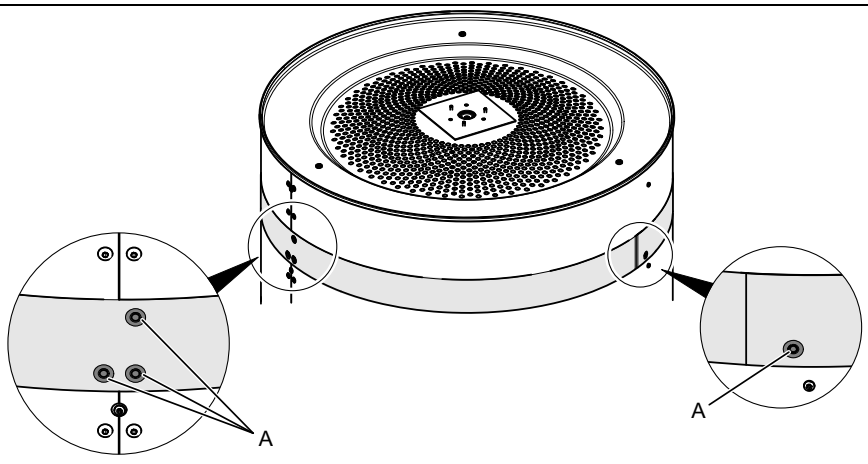


fig.X01976

Assemble the end of the RMC band in correct position on the drum as shown in the figure, use a small screw driver to guide the position. Tighten the screw (B) with tightening torque 0.8-1 Nm (0.6-0.7 lbf.ft).

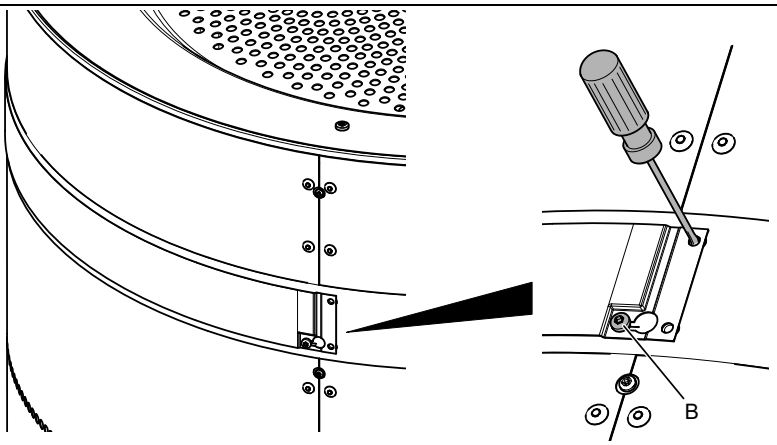


fig.X01977

Pre-assemble the RMC band on the drum. The RMC band shall be positioned under all screws.

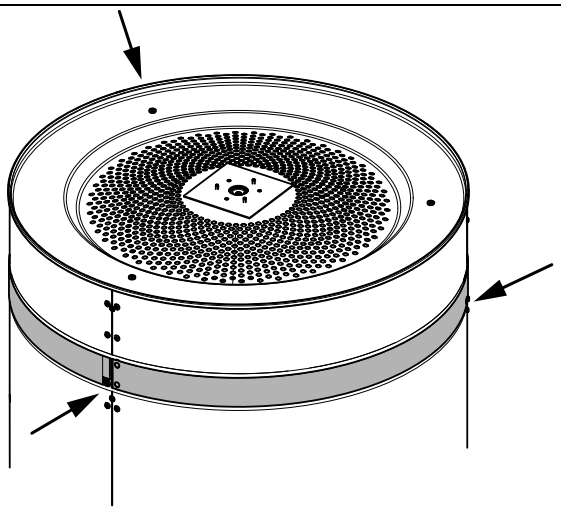


fig.X01978

Use a small screw driver to guide both the RMC band's tip in place and for mounting the screw in place.

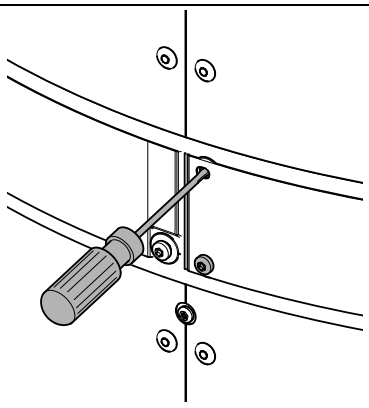


fig.X01979

When ready, tighten all screws with tightening torque 0.8-1 Nm (0.6-0.7 lbf.ft).

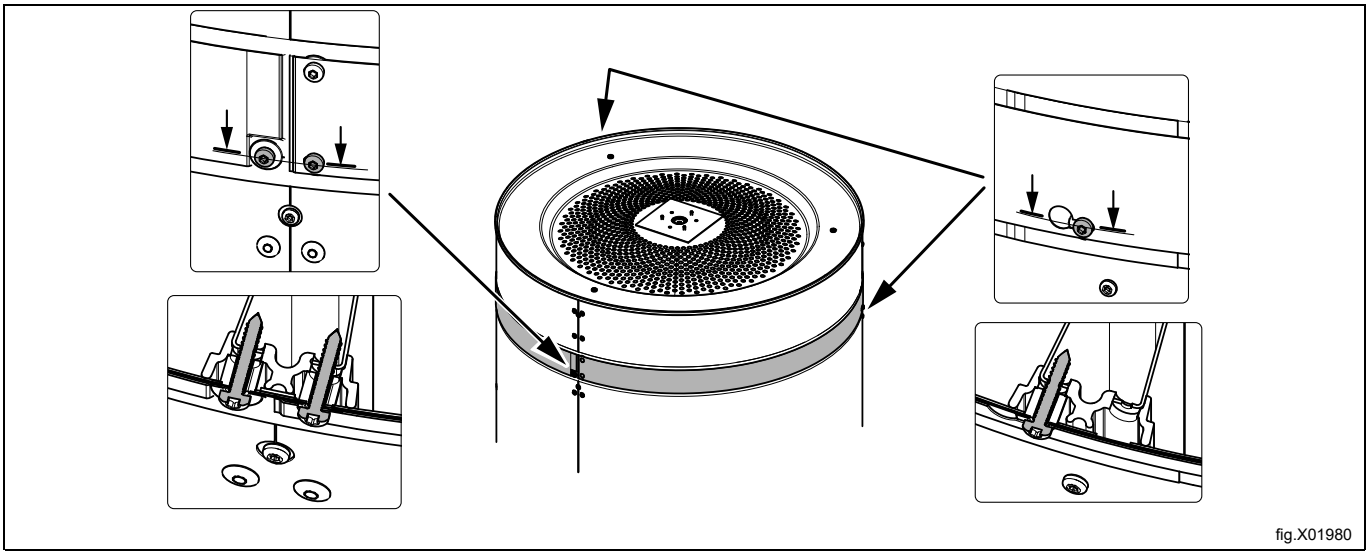


fig.X01980

Check the electric circuit between the inner drum sweep (A), litters (B) and the RMC band (C). The circuit connection according to below:

A<—>B : No connected: OK

B<—>C : Connected: OK

A<—>C : No connected: OK

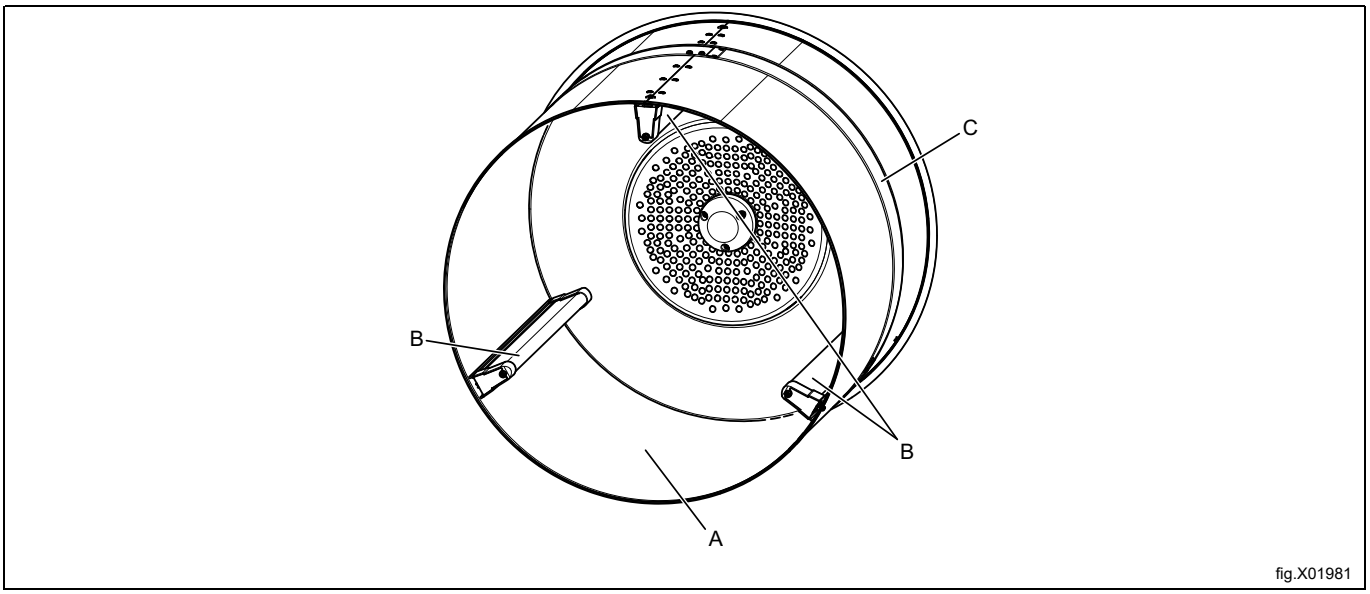


fig.X01981

Re-assemble the machine.

Please refer to the section Remounting of the drum and assembling of the machine

Check the RMC function through the service mode==> enter the password 9191 ==> Function test ==> Show inputs ==> RMC.

RMC value no load = 0%

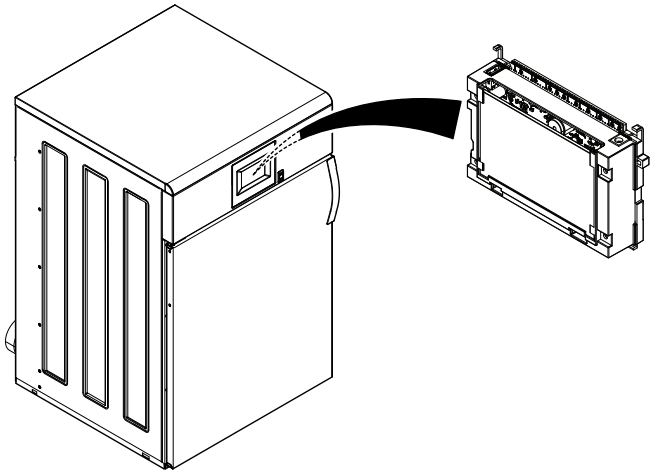
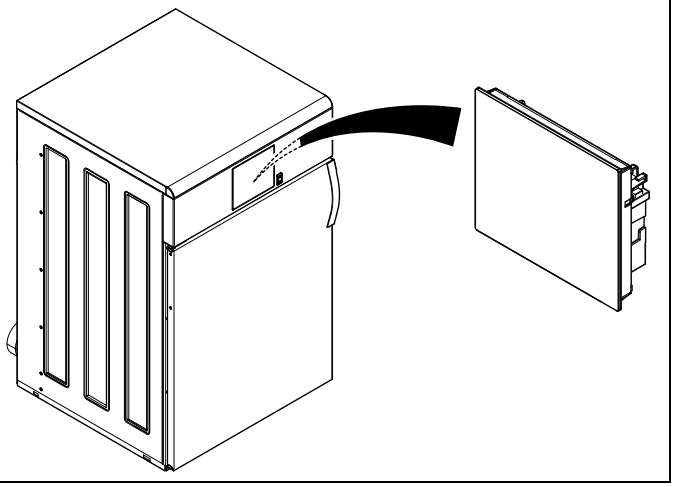
RMC value 100 kΩ between lifter and drum = approximately 24% (Putting your hand over the lifter onto the drum will result in approximately 20% RMC value).

RMC value system short circuit = 50%.

10 Display and control unit

The control unit (CPU) is electronic with a 4.3” or a 7” display and a capacitive touch panel and comprises a circuit board containing microprocessor, program memory, serial interface to the motor control, I/O-boards etc.

The control unit receives 12V DC power from a separate power supply unit which is mounted in the rear control unit.

4.3” display	7” display
	

The control unit receives information about inputs like temperature sensors, RMC, vacuum, door status etc, and activates outputs like drum, fan and heat control.

Every CPU-software is available for download on the official website after log-in. The parameter software installed in the machine's program device on delivery is printed at the front and back of the machine. Using this Article number, you can find the program designation and thereby identify I/O module function options on the web.

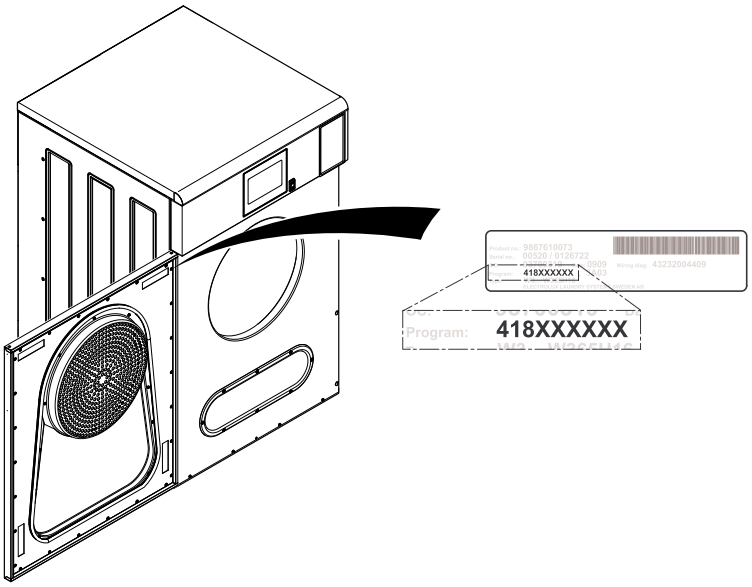


fig.X05494

10.1 Connections

The control unit CPU has the following connections:

Pos	Board connector	Function	Internal connector
1	PWM	(Not in use)	J17
2	RS485	Communication (Heat pump unit)	J6
3	RS485/MCOM	Communication (Not in use)	J9
4	INP2	Input 2 (Not in use)	J13
5	INP1	Input 1 Mechanic coin meter	J12
6	RS232	Serial communication (Protocol Payments; Electronic coin meters / card readers)	J7
7	RS232	Serial communication (Connectivity / ELS / IOT)	J8
8	DBUS	Databus	J5
9	DBUS	Databus	J3
10	SB	Start request (Start confirmation)	J11
11	USB TYPE A	Connection for software/service download	J14
12	-	Display	J15, J18
13	-	(Not in use)	J10
14	-	Service button	PL1

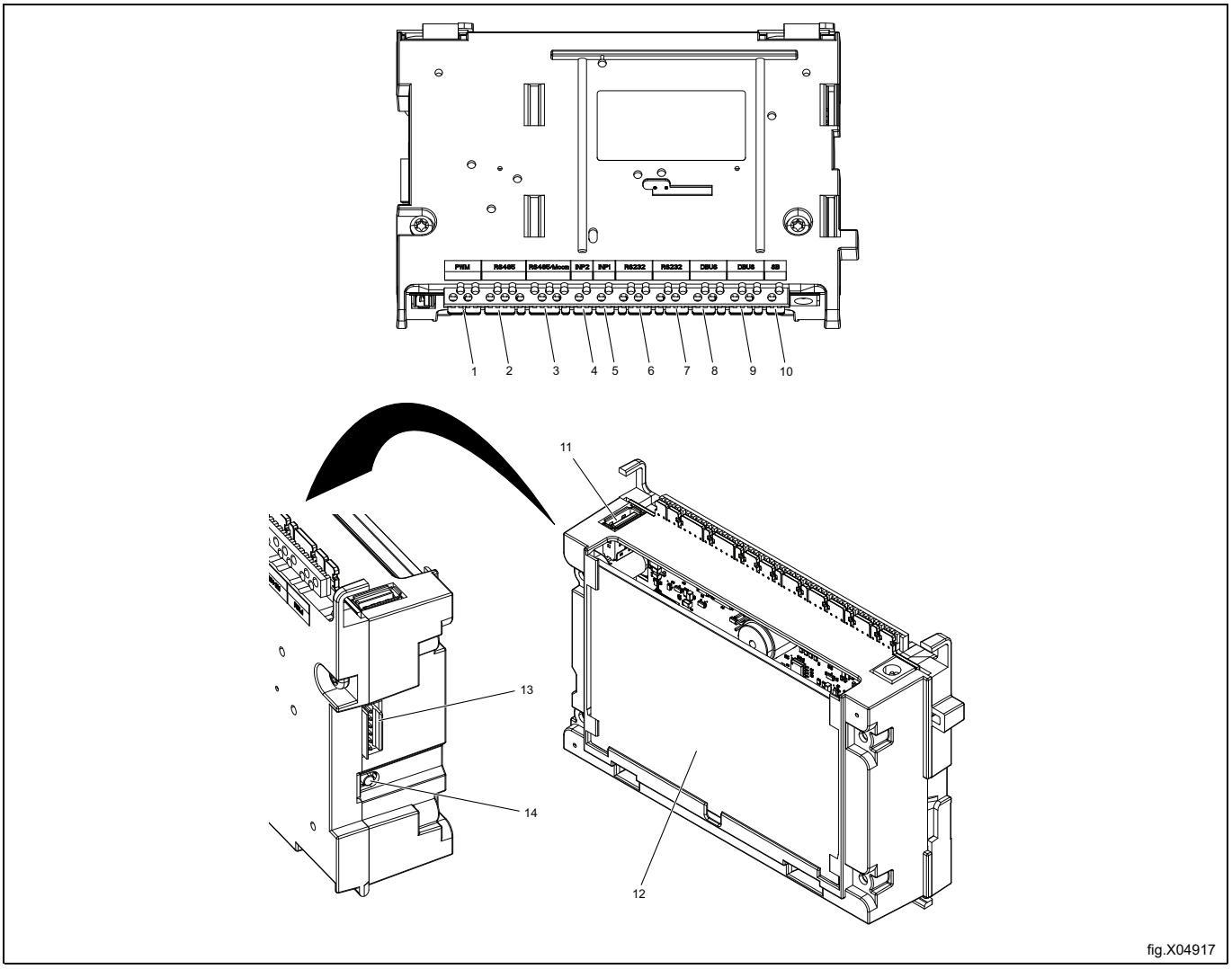


fig.X04917

10.2 Replacement of the control unit

10.2.1 Replacement with 4.3” display

- Disconnect the power to the machine.
- Demount the top panel.

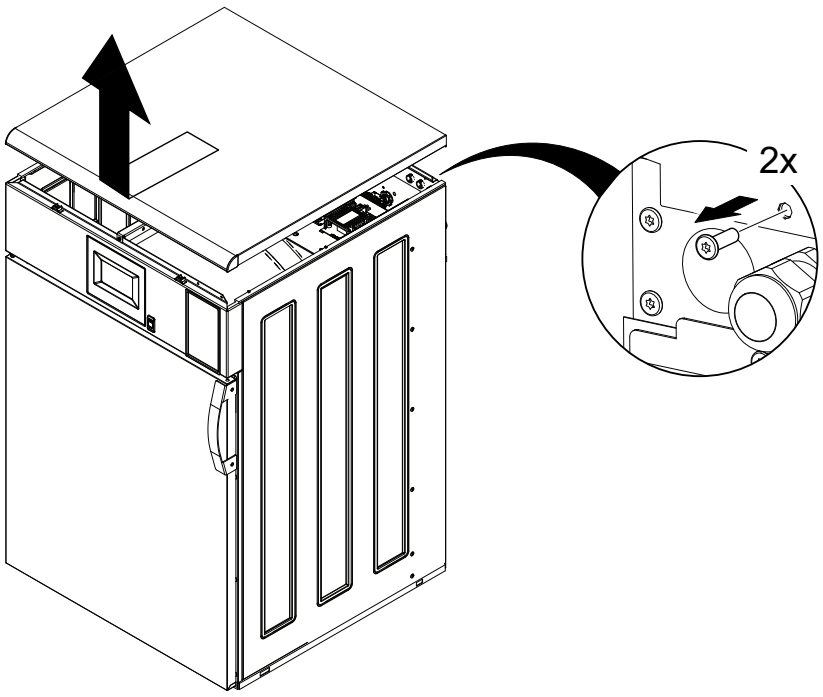


fig.X05555

- Disconnect the cables to the control unit.
- Demount the CPU frame from the control panel by pressing the 2 hooks (1) then pull it out (2).
- Demount the screws (3) to release the control unit from the control panel.

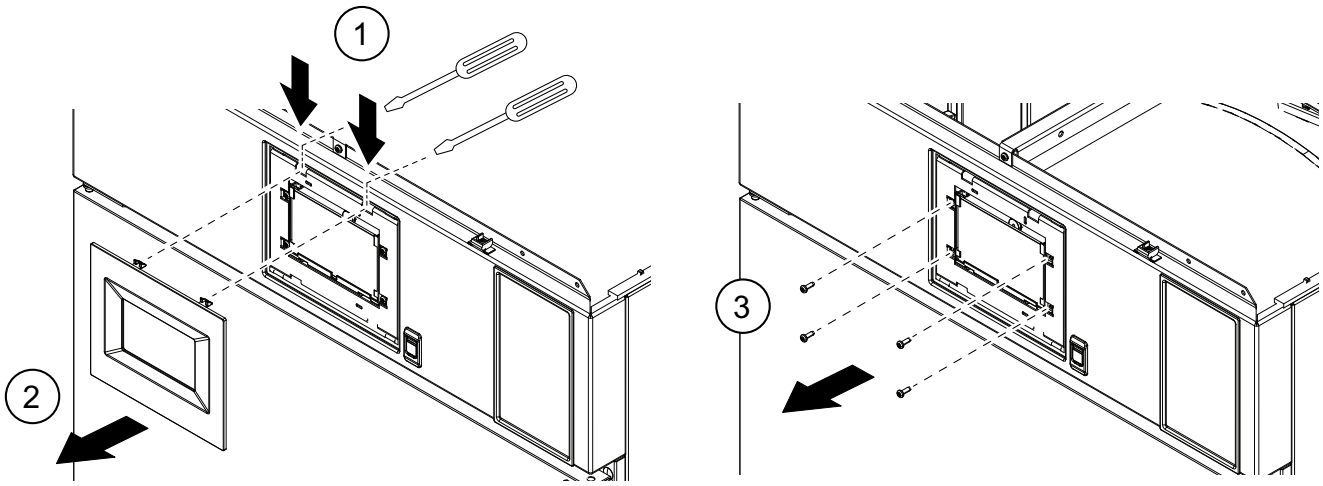


fig.X05556

- Demount the control unit from inside of the machine.

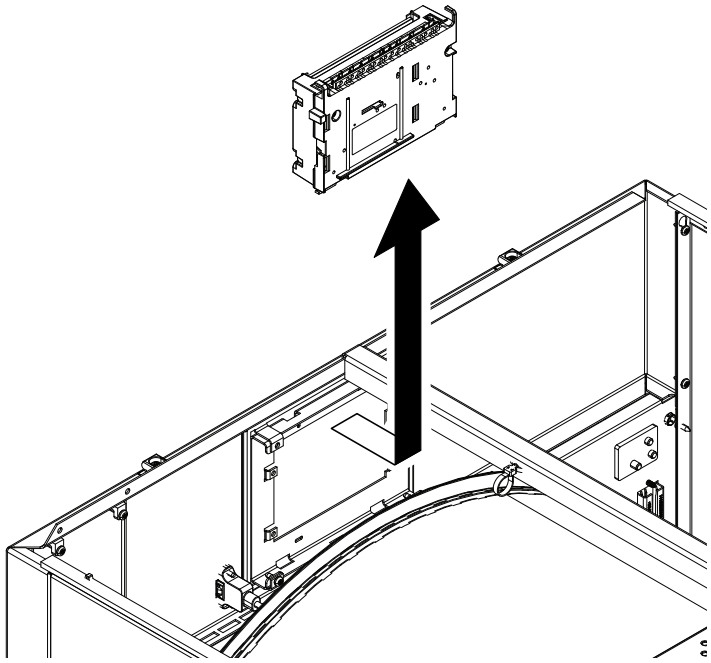


fig.X05557

- Mount the new control unit CPU and fasten the screws.
- Reconnect the cables.
- Remount the CPU frame.
- Remount the top panel.

See the parameter software installed in the machine’s control unit on delivery. This is specified at the front and back on the machine.

Using this article number, you can find the program designation and thereby identify I/O module function options on the web.

Download the latest software from the web.

Connect the power to the machine.

Use the CST to install the software to the machine.

Set the machine’s PNC and serial No. by using the "Set serial number" menu in the CST.

Re-address the I/O board for function options. (e.g. I/O 122j).

Correct the machine address if it is necessary e.g. the machine is connecting to LMIS system.

Disconnect the power to the machine for a short time and connect it again, to restart the node (Machine interface board) if the machine is connected to connectivity or any IOT boards.

Test run the machine.

10.2.2 Replacement with 7” display

- Disconnect the power to the machine.
- Demount the top panel.

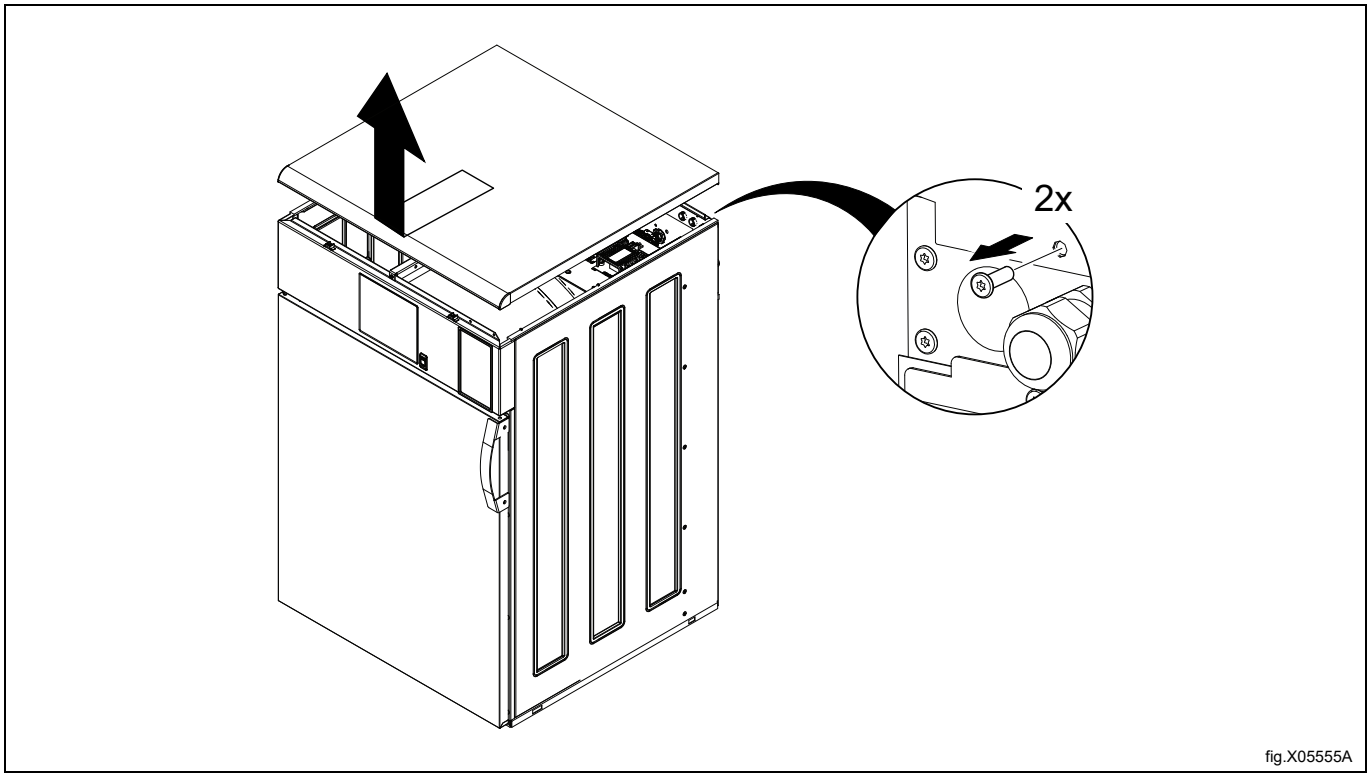


fig.X05555A

- Disconnect the cables to the control unit CPU and demount the control panel.

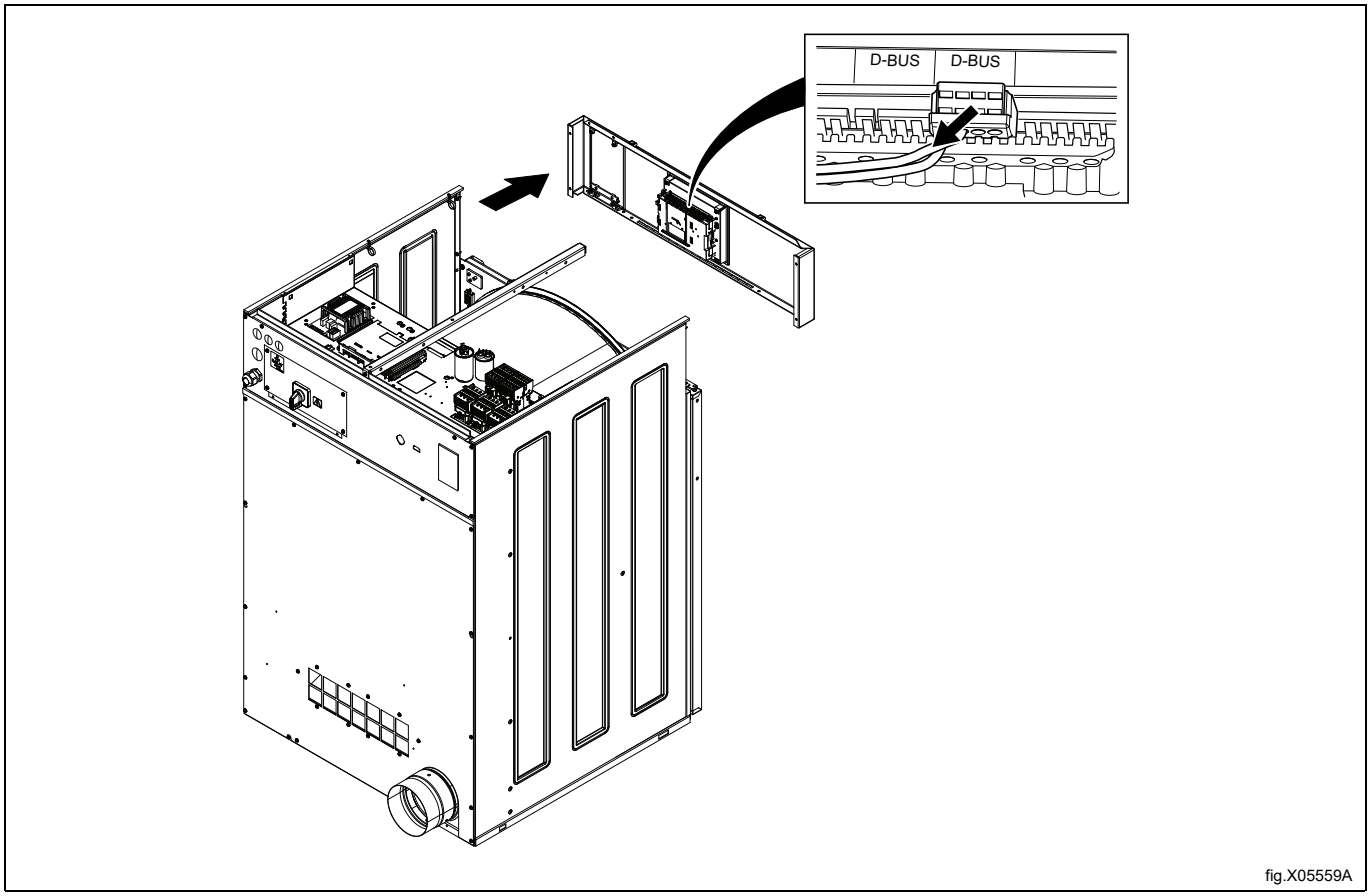


fig.X05559A

- Demount the control unit CPU from the panel.

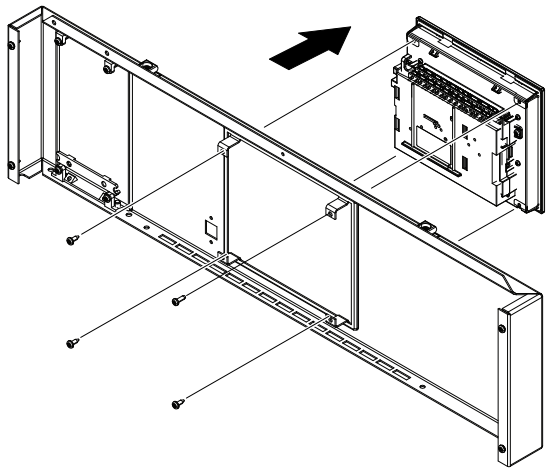


fig.X05558A

- Mount the new control unit CPU and fasten the screws.

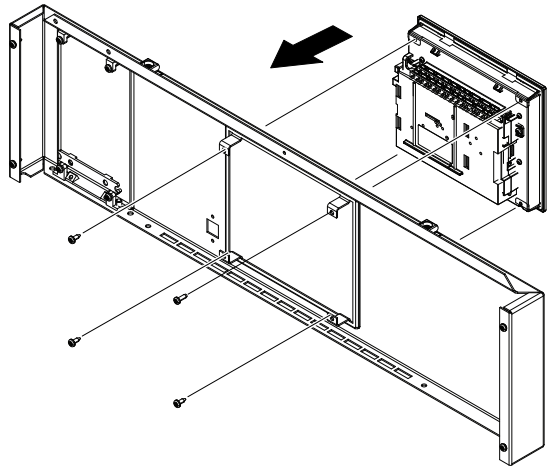


fig.X05558B

- Remount the control panel and connect the cables.

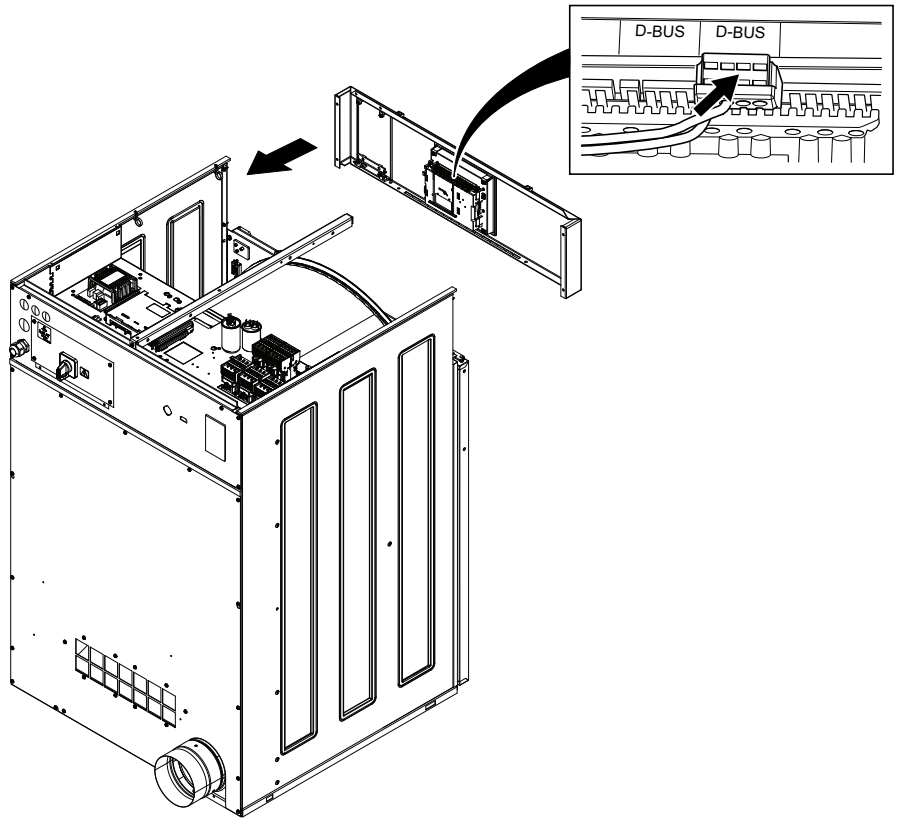


fig.X05559B

- Remount the top panel.

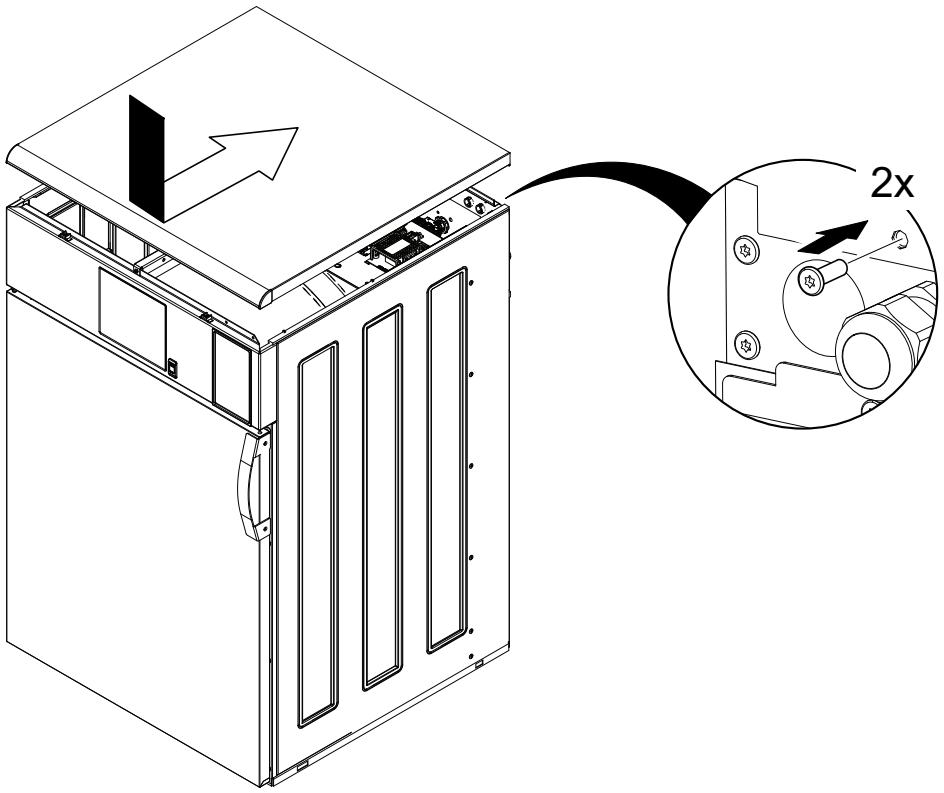


fig.X05555B

- Connect the power to the machine.

See the parameter software installed in the machine’s control unit on delivery. This is specified at the front and back on the machine.

Using this article number, you can find the program designation and thereby identify I/O module function options on the web.

Download the latest software from the web.

Connect the power to the machine.

Use the CST to install the software to the machine.

Set the machine’s PNC and serial No. by using the "Set serial number" menu in the CST.

Re-address the I/O board for function options. (e.g. I/O 122j).

Correct the machine address if it is necessary e.g. the machine is connecting to LMIS system.

Disconnect the power to the machine for a short time and connect it again, to restart the node (Machine interface board) if the machine is connected to connectivity or any IOT boards.

Test run the machine.

10.3 Replacement of the display

10.3.1 Replacement with 4.3” display

- Disconnect the power to the machine.
- Demount the top panel.

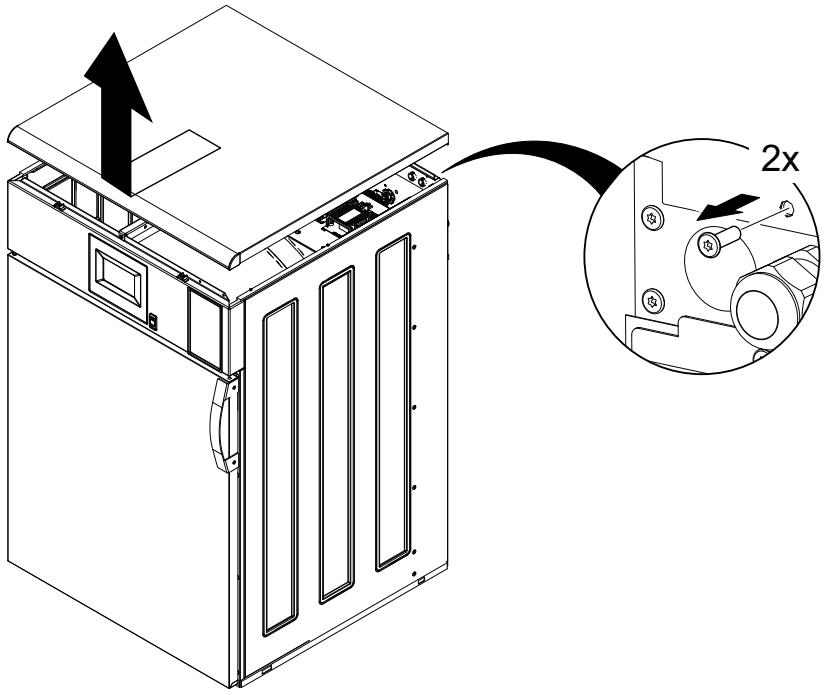


fig.X05555

- Disconnect the cables to the control unit.
- Demount the CPU frame from the control panel by pressing the 2 hooks (1) then pull it out (2).
- Demount the screws (3) to release the control unit from the control panel.

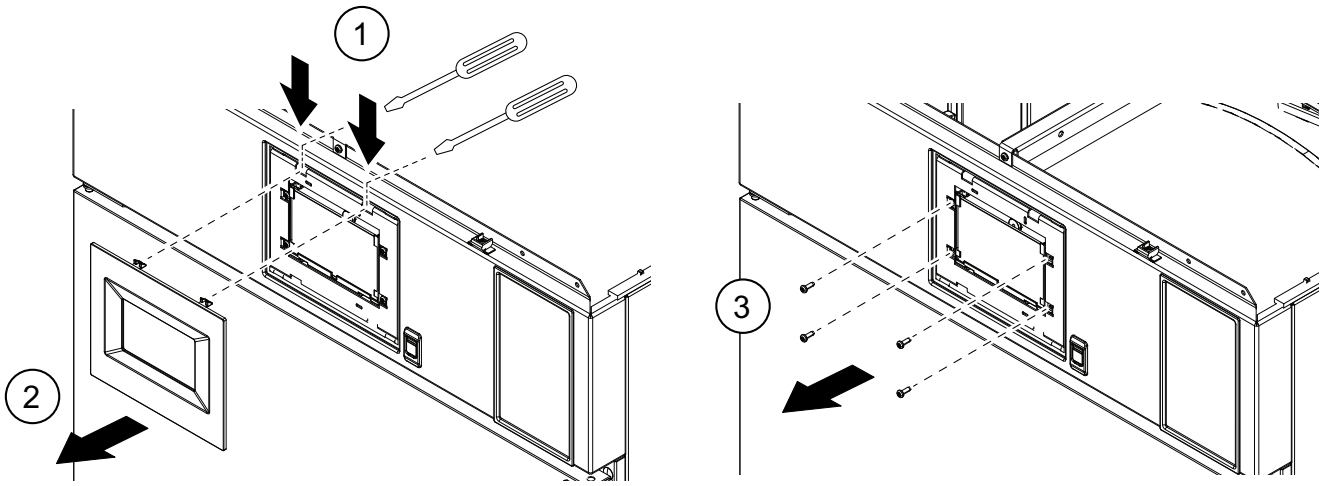


fig.X05556

- Demount the control unit from inside of the machine.

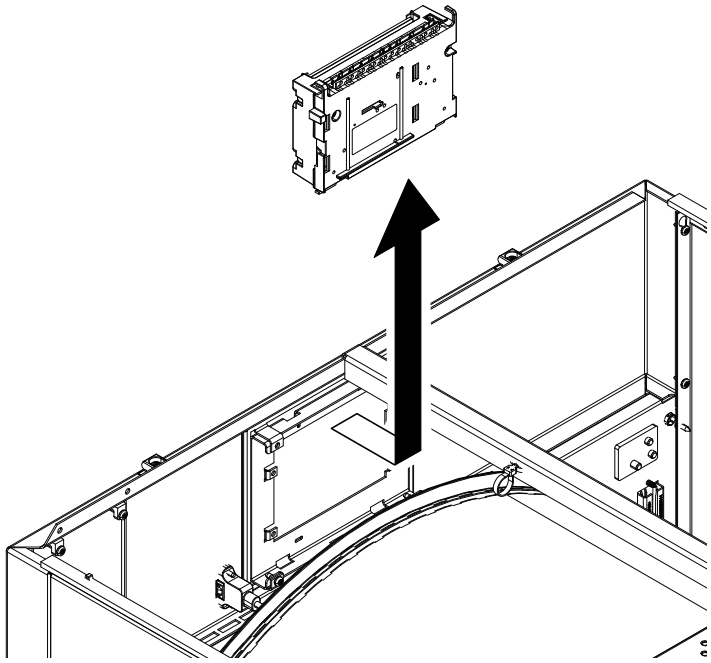


fig.X05557

Note!

Wristband for ESD protection must be used when handling circuit boards.

- Demount the 2 screws on the rear of the control unit.
- Open the control unit.

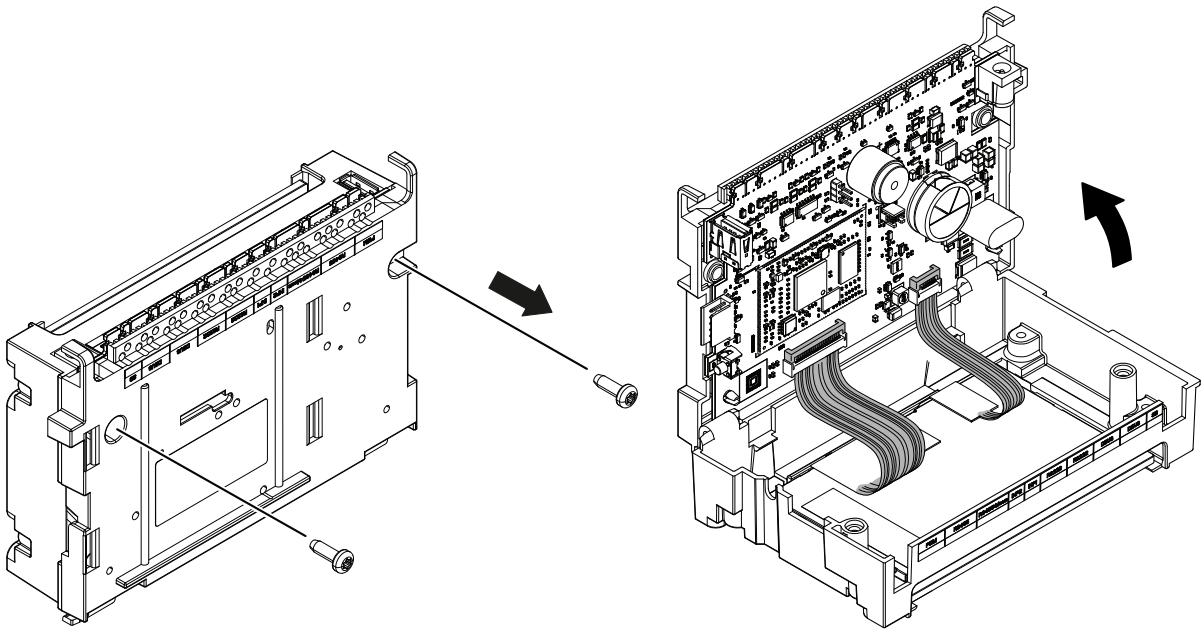


fig.X04938

- Release the bolt locking levers and then demount the flex cables.

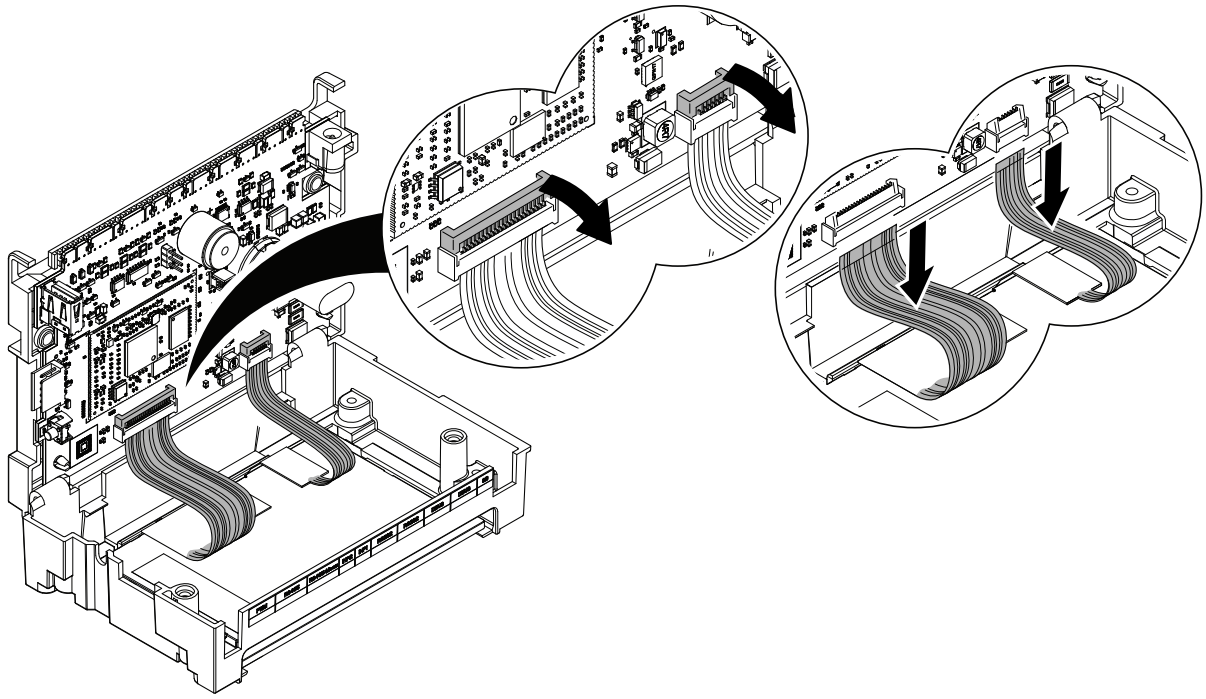


fig.X04939

- Slide out the defective display and replace it with the new one.

- Remount the control unit CPU and connect the cables.
- Remount the top panel.
- Connect the power to the machine.
- Test run the machine.

10.3.2 Replacement with 7” display

- Disconnect the power to the machine.
- Demount the top panel.

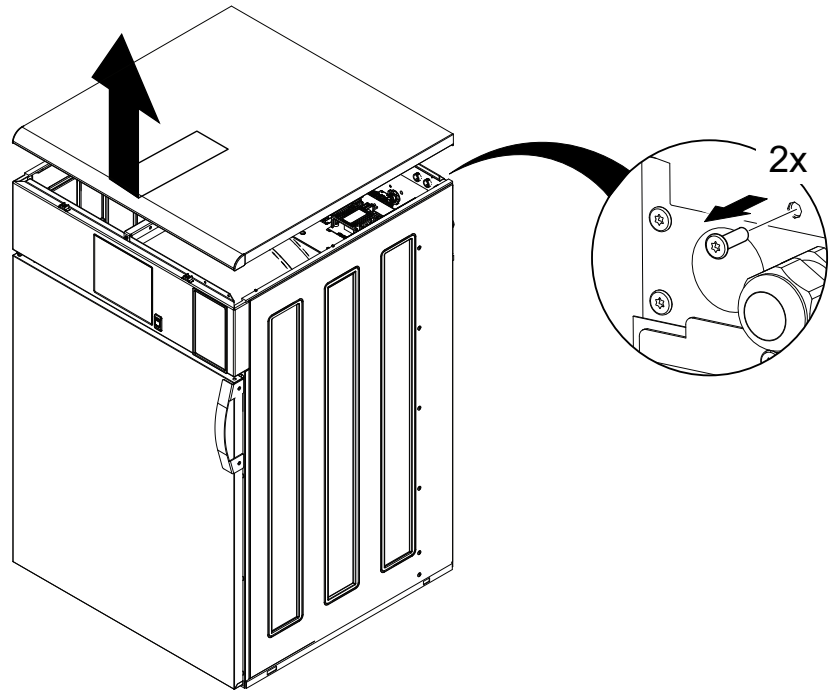


fig.X05555A

- Demount the control panel and disconnect the cable.

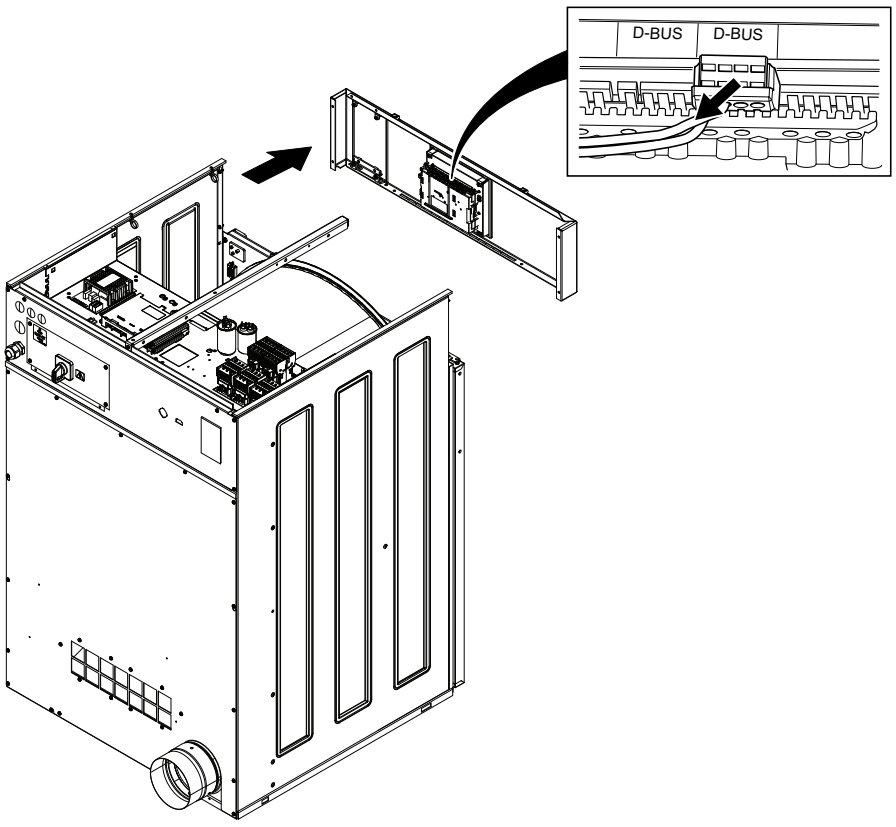


fig.X05559A

- Demount the control unit CPU from the panel.

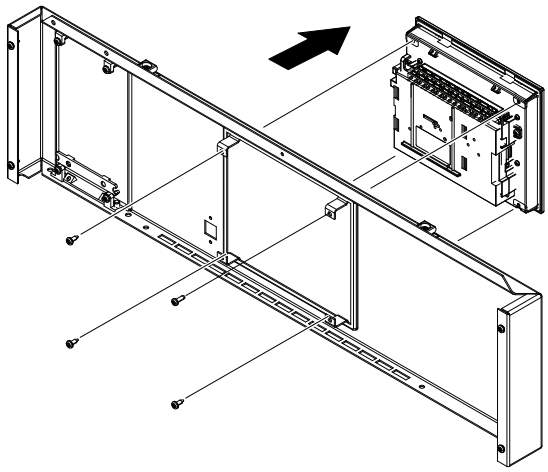


fig.X05558A

Note!

Wristband for ESD protection must be used when handling circuit boards.

- Demount the 2 screws on the rear of the control unit.

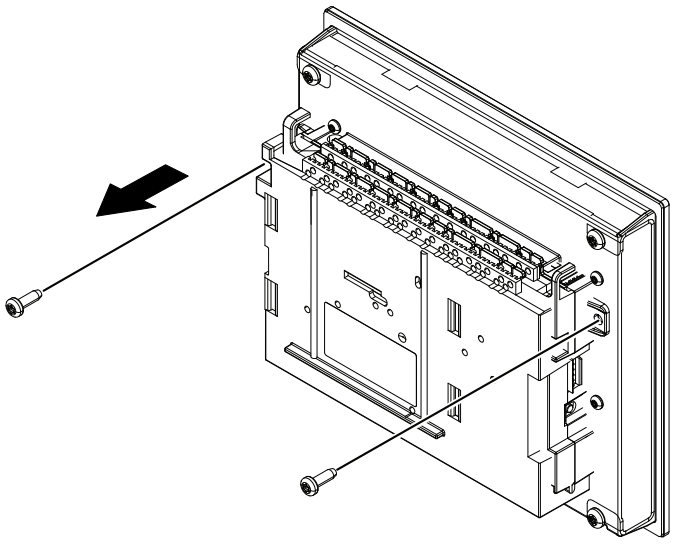


fig.X05564

- Open the control unit.

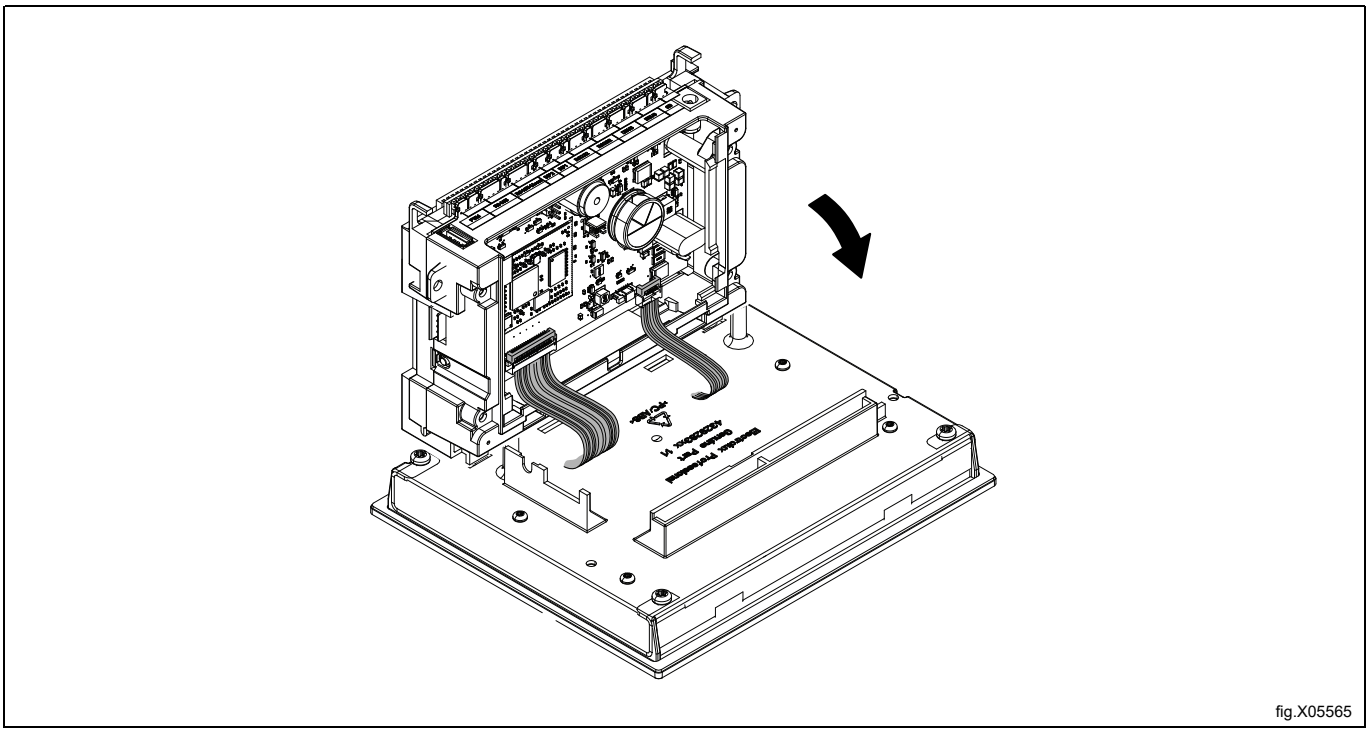


fig.X05565

- Release the bolt locking levers and then demount the flex cables.

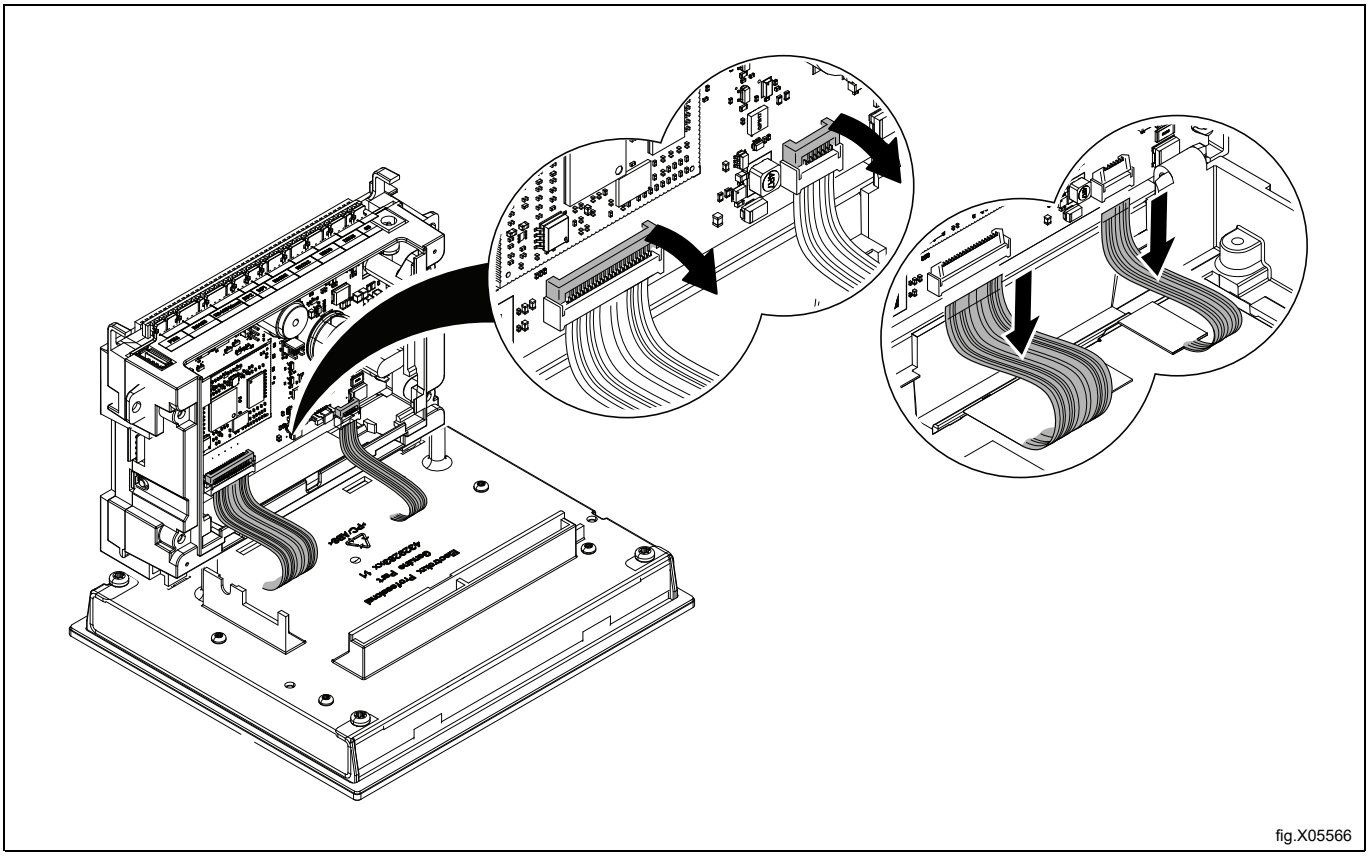


fig.X05566

- Demount the screws.

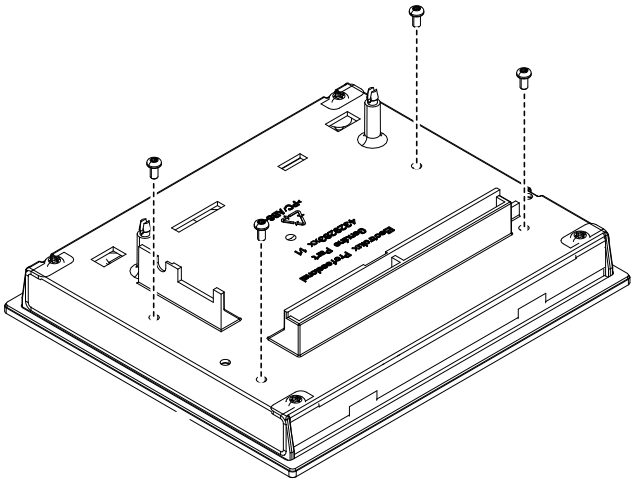


fig.X05567

- Remove the cover and replace the display with a new one.

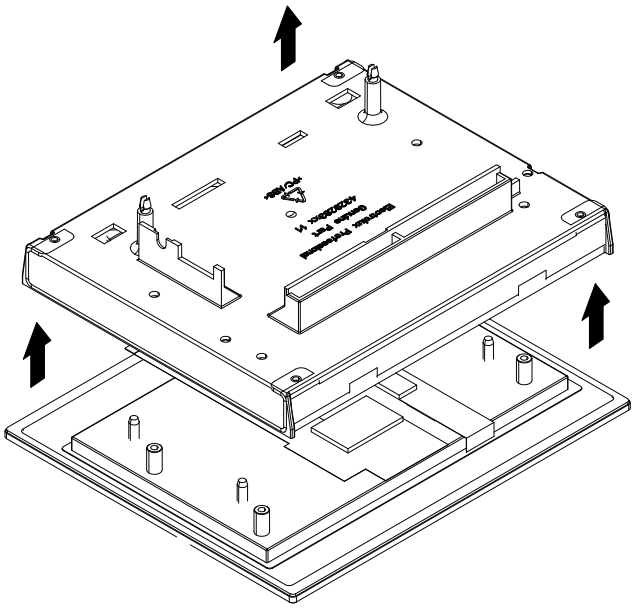


fig.X05568

- Remount all in reverse order.
- Connect the power to the machine.
- Test run the machine.

11 I/O modules

The machine can be equipped with either one, two or three I/O modules:

- I/O module type 36 is always installed in the machine at delivery. It controls internal machine functions and outputs to heating, motors etc.
- I/O module type 22 is installed as an option. It controls the external functions and inputs from payment and booking systems etc.

The functionality of I/O module inputs and outputs is depending on the parameter software downloaded to the machine's program device. The function options for the I/O modules are indicated by a letter in the program designation for each module.

Example of a machine ID can be following:

6G81	LG1	EX	EL	TD7-10	136	122J
Library for program	Language group	Brand name	Heating alternative	Model description	First I/O module type 136	First I/O module type 22 with config. J

Machine fitted with two I/O modules

6G82 LG1 EL TD7-10 36O 22J

36O = Function options I/O module type 36 (internal functions).

22J = Function options I/O module type 22 (external functions).

Machine fitted with one I/O module

6G82 LG1 EL TD7-10 36O 22j

36O = Function options I/O module type 36 (internal functions).

22j = The letter that appears in lower case means that the machine is not fitted with I/O module type 22 but the downloaded parameter software is I/O module type 22 enabled.

11.1 Addressing I/O boards

After replacing an I/O board or in instances where an I/O board has been added to the machine, the new I/O board must be addressed in order to activate the function options. (Or after replacing the CPU.)

Addressing the I/O boards one by one by activating the **Service > Add/remove I/O board** menu (a password is needed to continue).

Click on "Add" on the I/O board from the list which shall be addressed, then follow the instructions on the display.

Or click "Delete" if that I/O board shall be removed.

Note!

Addressing I/O board must be done before the machine panel is remounted.

11.2 Connections

I/O module type 36 has the following connections:

Pos	Board connector	Function
1	POW IN	Power In
2	POW OUT	Power out
3	OH IN	Overheating Thermostat Inlet
4	OH OUT	Overheating Thermostat Outlet
5	L.DOOR	Locked door (Reed switch on)
6	DOOR	Door (Reed switch off)
7	VAC	Vacuum switch (For gas & electric heated machines)
8	HEAT	Heating output (For gas, electric & steam heated machines)
9	MOTOR	Drum motor(Clockwise) (Interlock if Drum Speed Control) Drum motor(counter clockwise) Fan motor (Interlock if Adaptive Fan Control)
10	OH DRUM	Overheated Drum motor (If Drum Speed Control is used = jumpered connection)
11	OH FAN	Overheated Fan motor (If Adaptive Fan Control is used = jumpered connection)
12	MOBUS	Heating for heat pump machines
13	D-BUS	Databus communication
14	D-BUS	Databus communication (If Adaptive Fan Control is used)
15	RMC	Residual moisture control
16	INP	Input (Vacuum switch for HP)
17	SB	Start button (Membrane beside the CPU)
18	GAS	Control box for gas heated machines
19	SENSORS OUT	Outlet sensor (NTC-sensor)
19	SENSORS IN	Inlet sensor (PT100)
20	-	Service button/Addressing button

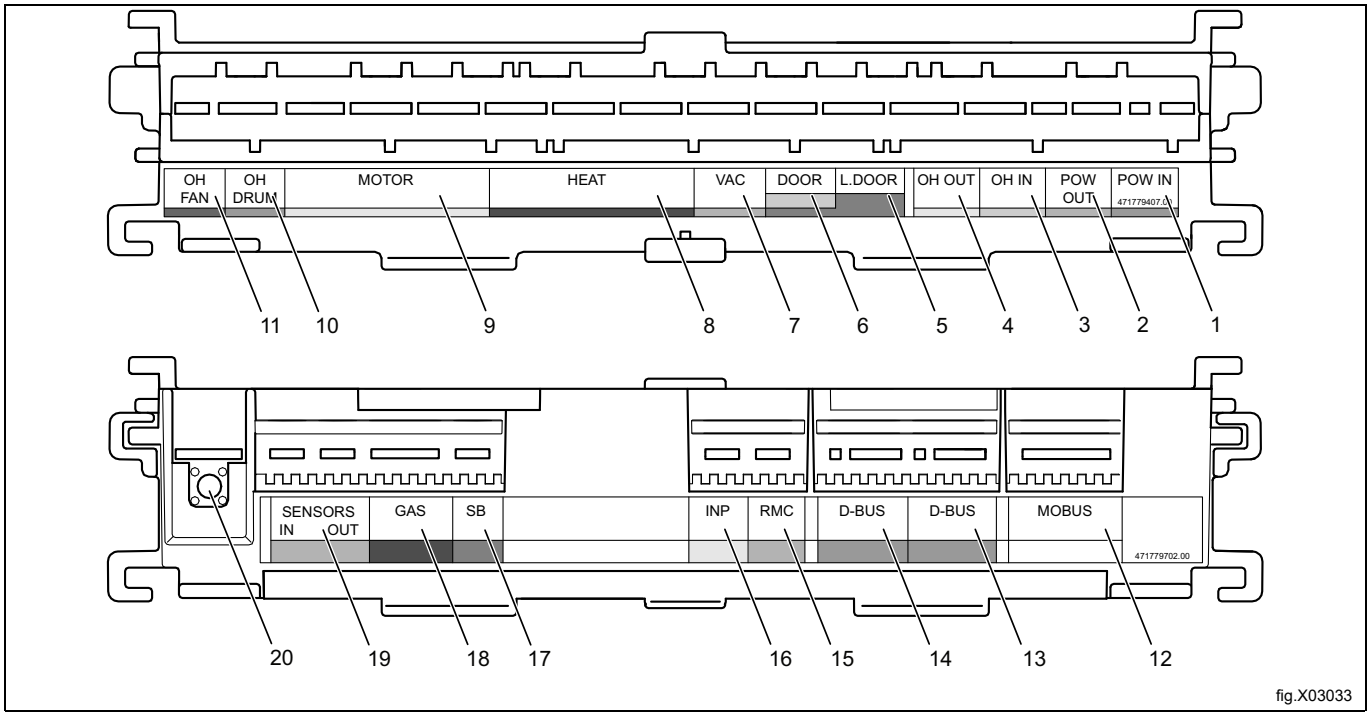


fig.X03033

11.3 Replacement of I/O module

I/O module type 16 and I/O module type 2 are installed in the same way. If the machine has I/O module type 2, it is located on I/O module type 16. The illustration shows replacement of I/O module type 16.

Disconnect the power to the machine.

Demount the top panel.

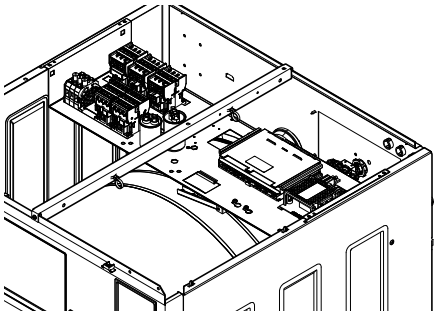


fig.X05495

Remove the electrical connections on the module. (Note the position of the connections).

Remove the module by lifting it towards you and up a bit and then pushing it to the left.

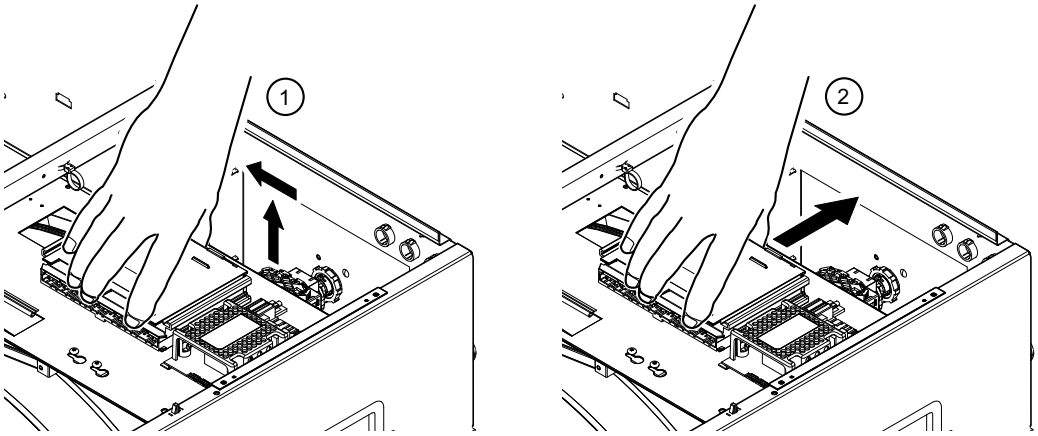


fig.X05496

Insert the new module and make sure it is in position.

Connect the electrical connections in the same way as before.

If both I/O module type 16 and I/O module type 2 is to be replaced it is recommended to fit the modules together before mounting in the machine.

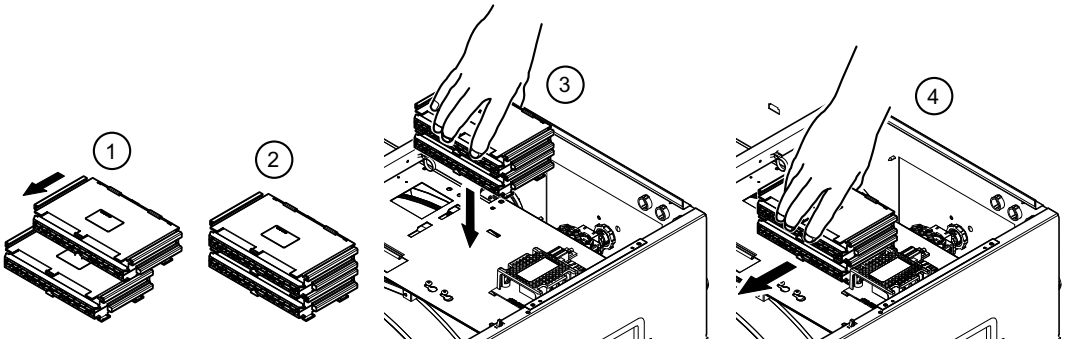


fig.X05497

Connect the power to the machine.
For gas heated machines: Turn on the gas to the machine.
Address the new I/O module to the CPU. (Please refer to the section "Addressing I/O boards".
Test run the machine.
Remount the top panel.

11.4 Functions for I/O-boards

Depending on machine configuration, the inputs are configured according to the following table:

Connection	
Terminal 5	Enable start
Terminal 6	Remote start /stop
Terminal 7	Coin 1
Terminal 8	Free start

The signal level for the inputs can be either 5-24V DC/AC or 100- 240V AC.

For 5-24V, connect the signal reference to terminal 3 and for 100-240V to terminal 4. The potentials on the inputs cannot be mixed!

The electrical schematic can be one of the following:

11.4.1 Enable start

This signal can be used to permit the start of the program when the machine is in standby.

Once permission to start has been granted, the signal from the central payment or the booking system must remain active (high) during drying. When the signal gets inactive (low) the machine will abort ongoing program and enter cooling.

To receive the feedback signal from the machine, 230V or 24V must be connected to terminal 19. The feedback signal on terminal 18 will remain active (high) during entire program.

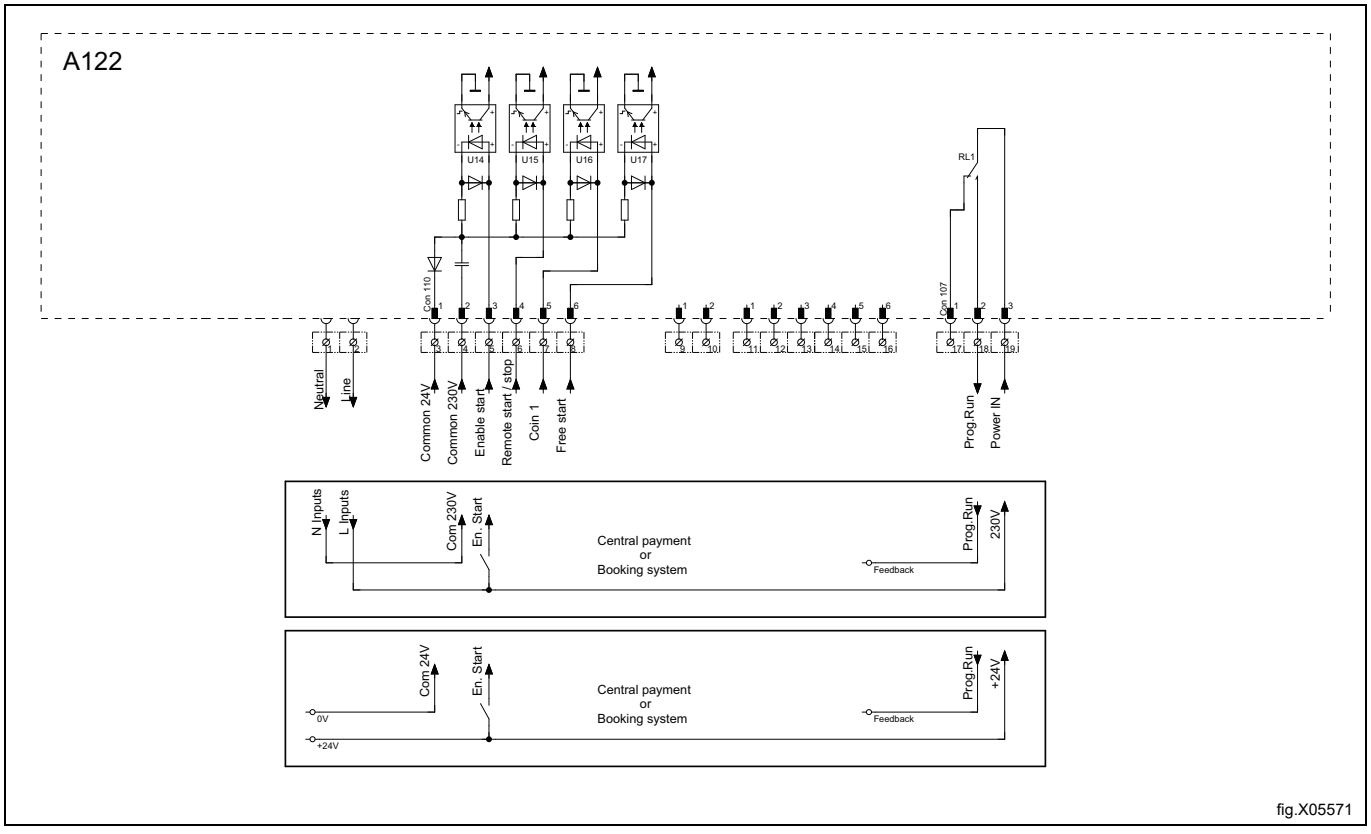


fig.X05571

11.4.2 Remote start/stop

This signal can be used to start the program when the machine is in standby, to pause the cycle when running and to continue the cycle when paused.

The central payment system must provide a pulse 300–3000 ms (500 ms is recommended) to start the program.

To receive the feedback signal from the machine, 230V or 24V must be connected to terminal 19. The feedback signal on terminal 18 will remain active (high) during entire program.

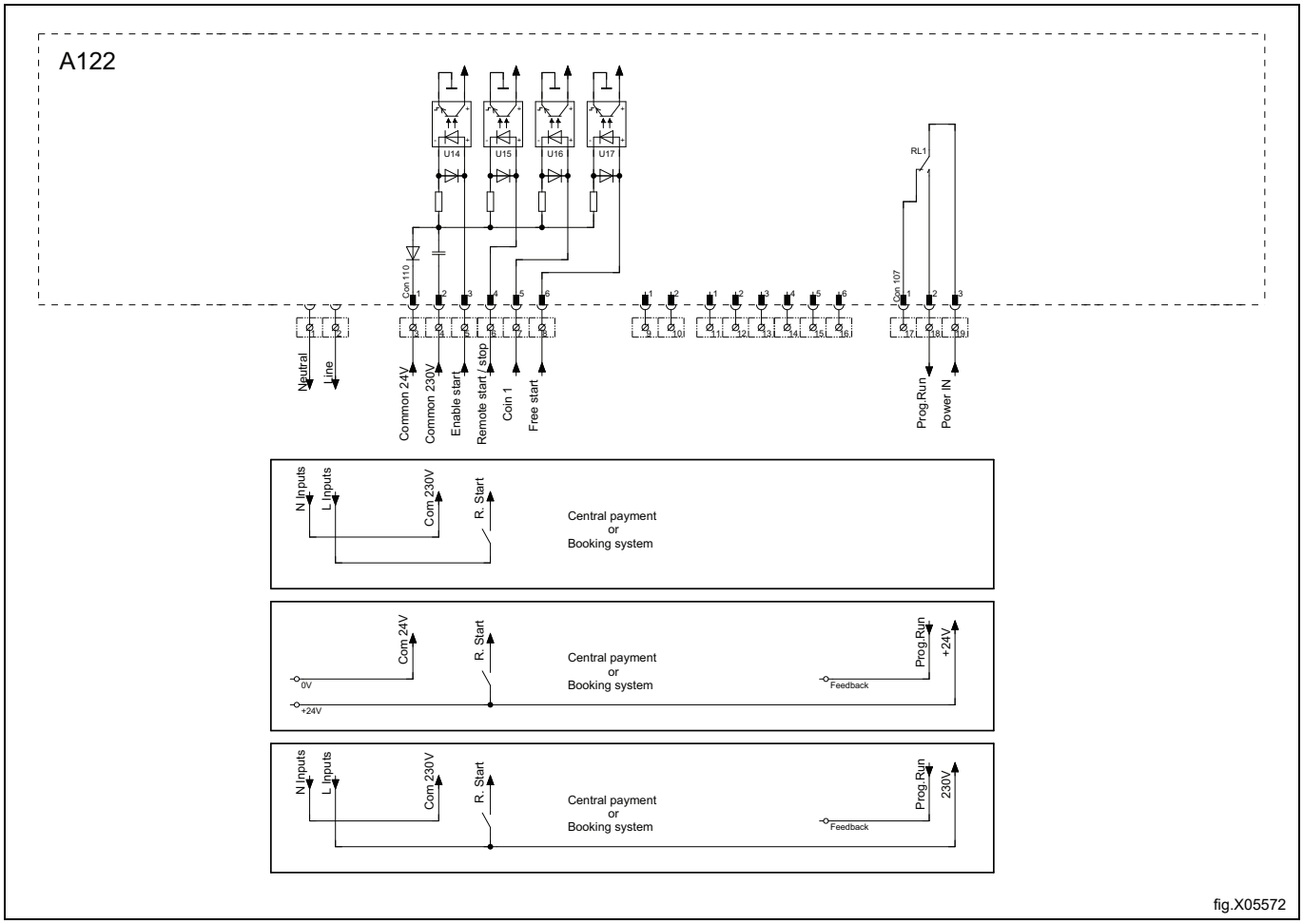


fig.X05572

11.4.3 External coin meter/Central payment

The signal received from external coin meter must be a pulse between 300–3000 ms (500 ms is recommended) with a minimum pause of 300 ms (500 ms is recommended) between two pulses.

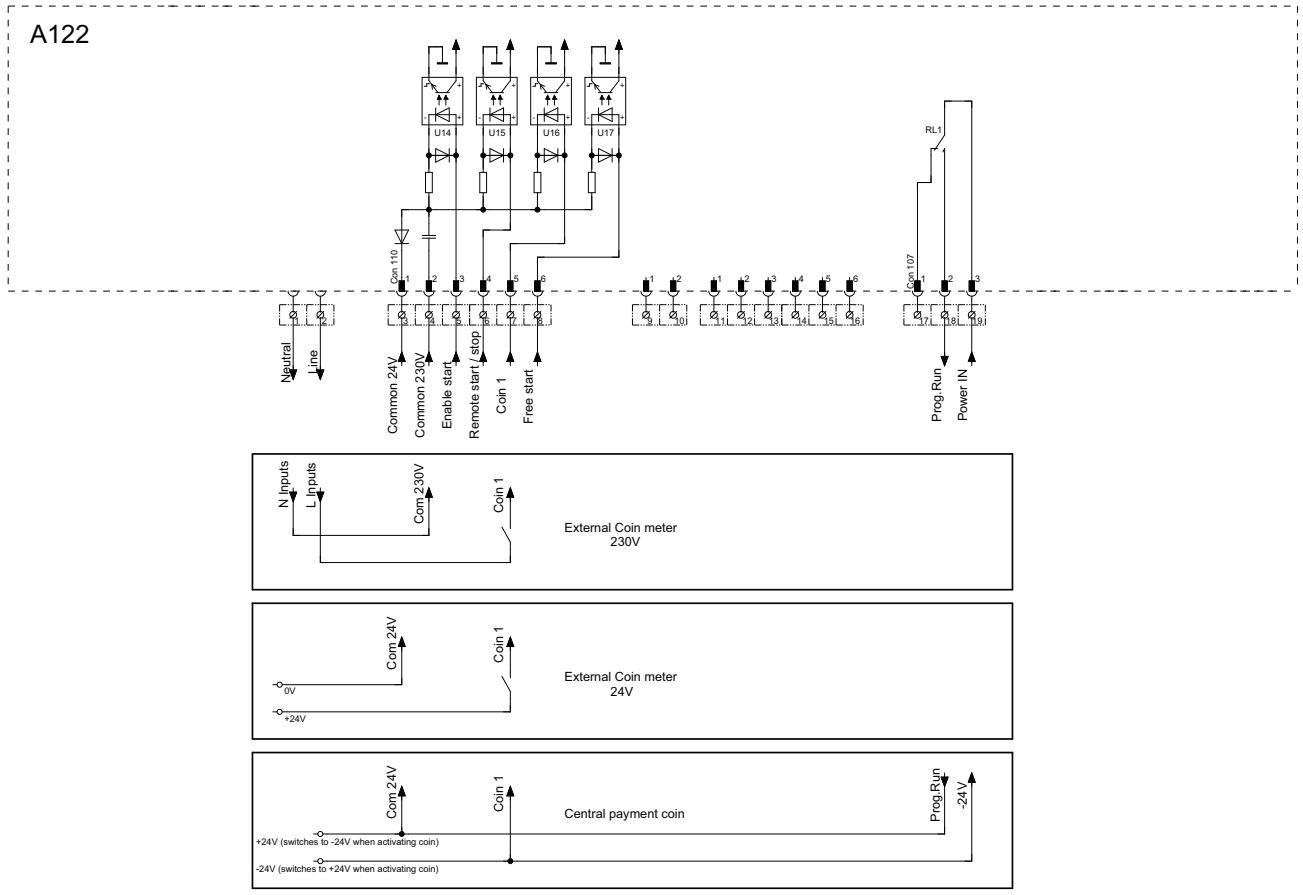


fig.X05573

11.4.4 Free start

This signal can be used to be able to start a program without booking or paying when the machine is connected to a booking or a payment system.

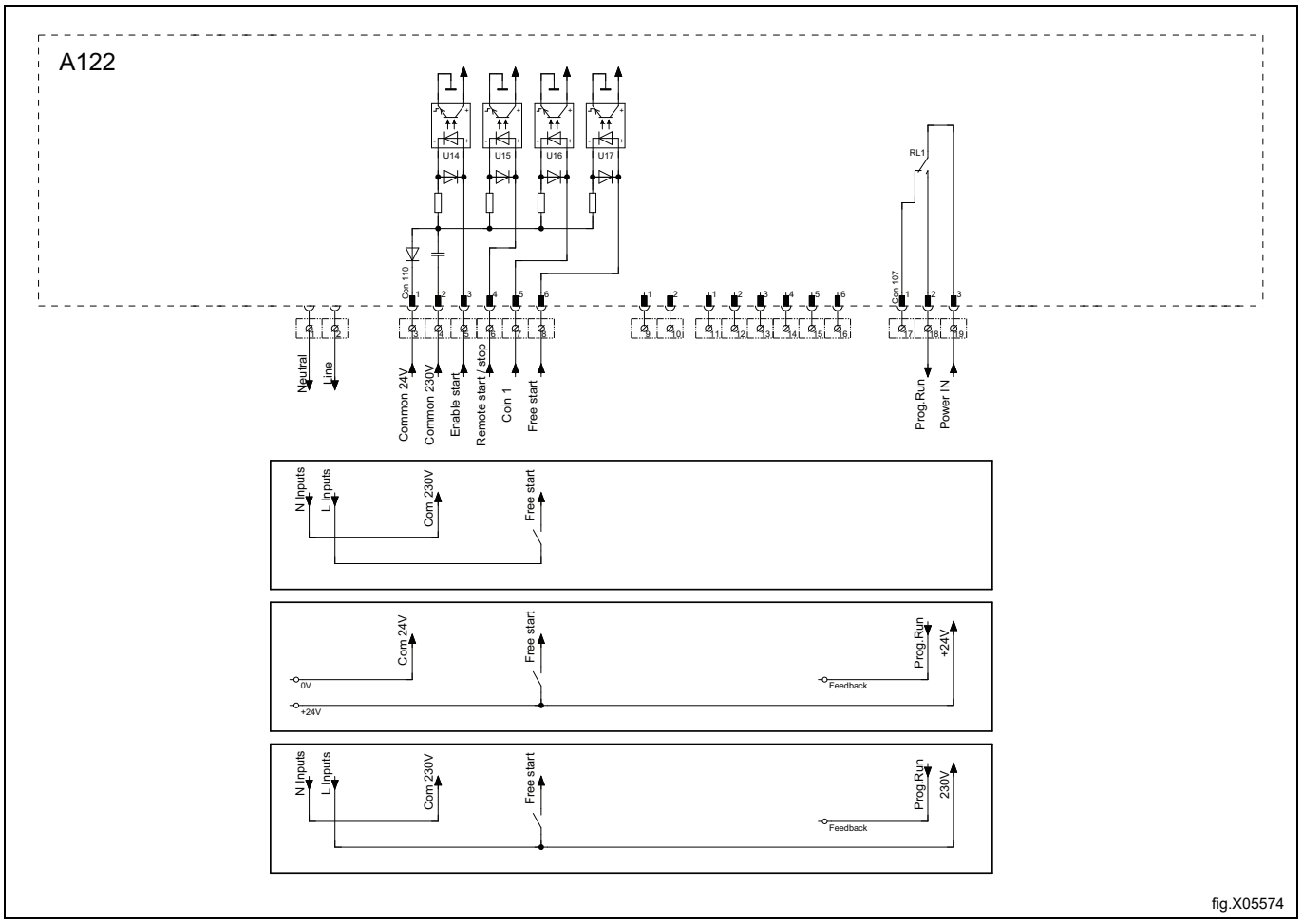


fig.X05574

12 UniVibe password

A password is required when you want to access the Main menu.

There are different passwords for different levels of access.

Default passwords set from factory are:

- 0000: Manager: Chemical dosing. Used to edit pump settings.
- 1111: Manager: Used to edit programs, change settings etc.
- 9191: For Service technicians. Used to edit pump settings, check service parameters e.g. inputs/outputs, error logs etc. and see machine product no. including version information's.

The passwords can be changed in Settings menu.

In case you forgot the password, click the question mark icon (A) at the bottom right corner on the display.

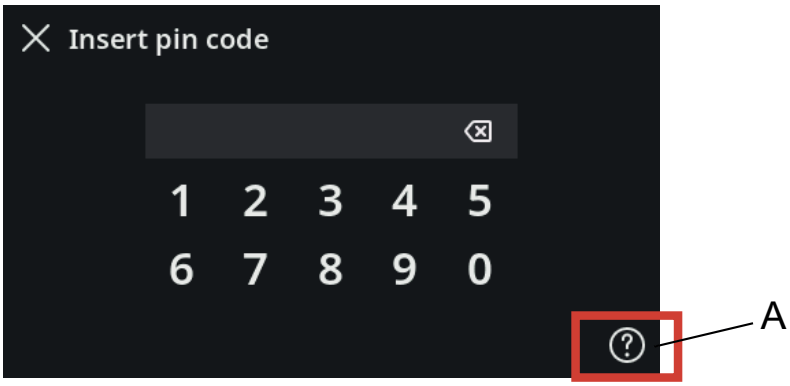


fig.X02341A

Call to authorized service technician and prepare with the pin code on the screen.

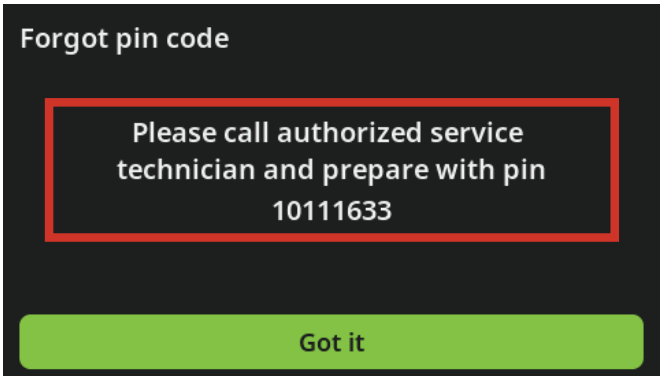


fig.X02342A

The passwords can be reset to default factory passwords by using the Password Generator if you are the authorized service technician.

13 Upgrade the software to the machine (configuration software)

Get to software from website **http://dkx02.electroluxprofessional.com/html/etools/** at “UniVibe Search” section.

Upgrade machine configuration software (g10s) by CST (Common Service Tool)

To upgrade the software, proceed as follows:

- Get the correct configuration software file (g10s) from website.
- Connected USB cable from computer to the UniVibe controller (UI).
- Open the CST then select the g10s file (or directly open g10s file by CST).
- Correct ports “COMx – UniVibe”, follow the instructions on the display.
- Start upload the software to the machine and wait until upgrade completed.
- Re-address the I/O board for function options. (e.g. I/O 122j).
- Correct the machine address if it is necessary e.g. the machine is connecting to LMIS system.
- Disconnect the power to the machine for a short time and connect it again, to restart the node (Machine interface board) if the machine is connected to connectivity or any IOT boards.
- Test run the machine.

14 Trouble shooting

14.1 General

The troubleshooting section is used to trace errors in the machine to a defective component or unit.

There is a memory in the control system that will save the selected program for 10 minutes in the case of power failure. The machine will restart in pause mode if the power is turned on again within this time. For very short power failure (less than 10 seconds) the machine will restart automatically.

Before resetting any error code, always verify and correct the root cause why the error is trigged.

Safety regulations

Troubleshooting may only be carried out by authorised personnel.

Take care during all work on the machine while the power is on.

Take care when measuring the motor control system since all components have a potential difference of approximately 300V in relation to protective earth and neutral.The components will contain dangerous voltages when the green LED on the motor control board is on. The motor control system will remain live for 30-60 seconds after cutting the power to the machine and the motor has stopped running.

Measurements

For information on measuring points, components and voltages, please refer to the electric schematic supplied with the machine.

14.2 Error codes

Error logs allows you to read out vital information about machine error history.

An error in the program or in the machine is indicated on the display by an error code and a descriptive text.

The error codes are divided into different groups called Major comprising different error codes called Minor.

The errors will be displayed as for example 12:15 NO VACUUM.

The following is a description of all Major groups in this case Main Dryer followed by a description of each error code. If the machine have a Heat pump as heating alternative the Major group is number 17.

Error code		Text
Major	**Minor**	
10 MAIN COMMON	1	INTERNAL ERROR CPU TACHO
	11	REAL TIME CLOCK OUT OF ORDER
	13	INITIALIZING FAILED
	15	MACHINE STOP
	16	EMERGENCY STOP

Error code		Text
Major	**Minor**	
12 MAIN DRYER	1	O.H. THERMOSTAT - INLET AIR
	2	O.H. THERMOSTAT - OUTLET AIR
	3	INLET AIR SENSOR - OPEN
	4	INLET AIR SENSOR - SHORT CIRCUITED
	5	OUTLET AIR SENSOR - OPEN
	6	OUTLET AIR SENSOR - SHORT CIRCUITED
	11	Drying / Drying error with RMC program
	12	Drying / Drying error with Autostop program
	13	DRYING ERROR WITH TIME PROGRAM
	14	Gas error, press gas reset button
	15	No vacuum
	16	Vacuum switch shorted
	17	Airflow / Airflow obstructed, contact responsible
	18	Airflow / Redistribution of load needed
	19	ERROR CLOGGED FILTER CLEAN THE FILTER / CONTACT THE TECH. IF ERROR REMAINS
	20	ANALOGUE AIRFLOW SENSOR IS SHORTED OR NOT CONNECTED
	21	THE VACUUM SWITCH TURN ON/OFF FREQUENTLY
	22	NO AIRFLOW
	253	JUMPER 1
	254	JUMPER 2
	255	JUMPER 3

Error code		Text
Major	**Minor**	
17 DRYER (Heat Pump with µPC3 from Carel)	20	HEAT PUMP CRITICAL ERROR
	21	HEAT PUMP INTERNAL ERROR
	22	LOST HEAT PUMP COMMUNICATION
	23	NO HEAT PUMP COMMUNICATION
	24	HEAT PUMP FW MISMATCH
	25	HEAT PUMP FW VERSION MISMATCH

Error code		Text
Major	**Minor**	
20 DRUM MOTOR COMMON	1	Motor / Overheat drum motor
	2	NO MOTOR COMMUNINCATION
	3	LOST MOTOR COMMUNICATION

Error code		Text
Major	Minor	
30 FAN MOTOR COMMON	1	Motor / Overheat fan motor
	2	NO MOTOR COMMUNICATION
	3	LOST MOTOR COMMUNICATION

Error code		Text
Major	Minor	
40 INTERNAL COM.	1–10	I/O INTERLOCK Axxx
	11–20	I/O COMMUNICATION Axxx
	22	I/O BOARD MISMATCH

Error code		Text
Major	Minor	
51 EXTERNAL COM. PAYMENT	22	NO CBT COMMUNICATION PRESS TO RETRY

Error code		Text
Major	Minor	
52 EXTERNAL COM. MIS	1	CMIS COMMUNICATION ERROR

Error code		Text
Major	Minor	
60 INTERNAL	5	FATAL ERROR INVALID RUNNING MODE
	11	FATAL ERROR EXTERNAL FLASH WRITE
	17	FATAL ERROR INVALID OPTION
	18	FATAL ERROR INVALID MODULE
	28	FATAL ERROR INVALID COIN INPUT
	29	FATAL ERROR INVALID FONT

14.3 Description of error codes and causes

MAIN COMMON

10:1 INTERNAL ERROR CPU TACHO

Tacho input on CPU delivers values that is out of range.

Recommended actions:

1. Run motor on highest possible speed in service mode. Check input value for RPM speed.
2. Replace defective component.

10:11 REAL TIME CLOCK OUT OF ORDER

The real time clock is used by the control system for delayed start, measuring time, power failure, error codes, etc.

Upon power on, the communication with the internal real time clock in the control system is established. In case this fails, this error occurs

Recommended actions:

1. Power off the machine for 1 minute and try again.

10:13 INITIALIZATION FAILED

The error code is shown if the hardware initialization has failed to initialize within 15 seconds after power on.

Recommended actions:

1. Press the control knob/start button to retry.
2. Upload a new software that matches the machine configuration and try again.

10:15 MACHINE STOP

This message is shown if input for MACHINE STOP is activated.

This is not an error code but is handled in the same way.

Recommended actions:

1. Reset the Machine Stop Button.
2. Press the control knob to confirm machine stop. Machine will revert to Idle mode.

10:16 EMERGENCY STOP

This message is shown if input for EMERGENCY STOP is activated. This is not an error code but is handled in the same way.

Recommended actions:

1. Reset the Emergency Stop Button.
2. Press the control knob to confirm emergency stop. Machine will revert to Idle mode.

MAIN DRYER

12:1 O.H. THERMOSTAT - INLET AIR

This error code is shown if the input O.H. INLET AIR is deactivated.

Normally this is due to that protection thermostat for inlet air has trigged due to overheating.

The overheating thermostat for inlet air needs to be mechanically restored.

Cut power and turn off gas supply (if gas heated) and check contactors/heat relays before restoring the thermostat.

When the overheating thermostat for inlet air has been restored and the machine is powered up again, the error code is cleared automatically.

The error code can be trigged if:

- The inlet air sensor has stopped operating correctly.
- The fan has stopped operating.
- The airflow is obstructed, by lint, overload, etc.
- The contactor or heat relay has got welded.

If the overheating thermostat for inlet air is not trigged, but there still is an error code:

1. Check the harness, connectors and functions by reading the electrical schematic and by using the `SHOW INPUTS` menu when the machine is in service mode.

12:2 O.H. THERMOSTAT - OUTLET AIR

This error code is shown if the input O.H. OUTLET AIR is deactivated.

Normally this is due to that protection thermostat for outlet air has trigged due to overheating.

The overheating thermostat for outlet air needs to be mechanically restored.

Cut power and turn off gas supply (if gas heated) and check contactors/heat relays before restoring the thermostat.

When the overheating thermostat for outlet air has been restored and the machine is powered up again, the error code is cleared automatically.

The error code can be trigged if:

- The outlet air sensor has stopped operating correctly.
- The contactor or heat relay has got welded.

If the overheating thermostat for outlet air is not trigged, but there is still an error code:

1. Check the harness, connectors and functions by reading the electrical schematic and by using the `SHOW INPUTS` menu when the machine is in service mode.

12:3 INLET AIR SENSOR - OPEN

The error code is shown if the analog input INLET AIR TEMP (PT100) is reading a resistance of more than approximately 185 Ω. Probably caused by broken PT100 sensor or wiring.

If the inlet air temperature in the `SHOW INPUTS` menu show a temperature of 222°C the inlet air sensor is considered open.

When the inlet air sensor is restored the error code is automatically reset and the ongoing program will continue.

A long press on the control knob/start/pause button will make the control system reset and ongoing program will be ended.

The error code can be trigged if:

- The sensor, harness or connector is broken. The sensor shall measure around 110 Ω in room temperature, see table. (Measure direct over the sensor connectors).

If the measure of inlet air sensor is OK, but there is still an error code:

- Check the harness, connectors and functions by reading the electrical schematic and by using the `SHOW INPUTS` menu when the machine is in service mode.

Temp - Sensor resistance

0°C / 32°F - 100 Ω

20°C / 68°F - 107 Ω

30°C / 86°F - 112 Ω

200°C / 392°F - 176 Ω

12:4 INLET AIR SENSOR - SHORT-CIRCUITED

The error code is shown if the analog input INLET AIR TEMP (PT100) is reading a resistance of less than 100 Ω.

Probably caused by broken PT100 sensor or damaged wiring.

If the inlet air temperature in the SHOW INPUTS menu show a temperature of 0℃ the inlet air sensor is shorted.

When the inlet air sensor is restored the error code is automatically reset and the ongoing program will continue.

A long press on the control knob/start/pause button will make the control system reset and ongoing program will be ended.

The error can be trigged if:

- The sensor, harness or connector is shorted. The sensor shall measure around 110 Ω in room temperature, see table. (Measure direct over the sensor connectors).

If the measure of inlet air sensor is OK, but there is still an error code:

- Check the harness, connectors and functions by reading the electrical schematic and by using the SHOW INPUTS menu when the machine is in service mode.

Temp - Sensor resistance

0℃ / 32℉ - 100 Ω

20℃ / 68℉ - 107 Ω

30℃ / 86℉ - 112 Ω

200℃ / 392℉ - 176 Ω

12:5 OUTLET AIR SENSOR - OPEN

The error code is shown if the analog input OUTLET AIR TEMP (NTC) is reading a resistance of more than approximately 26.7 kΩ. Probably caused by broken NTC sensor or wiring.

If the outlet air temperature in the SHOW INPUTS menu shows a temperature of -10℃ the outlet air sensor is open.

When the outlet air sensor is restored the error code is automatically reset and the ongoing program will continue.

A long press on the control knob/start/pause button will make the control system reset and ongoing program will be ended.

The error code can be trigged if:

- The sensor, harness or connector is broken. The sensor shall measure around 5 kΩ in room temperature, see table. (Measure direct over the sensor).

If the measure of outlet air is OK, but there is still an error code:

- Check the harness, connectors and functions by reading the electrical schematic and by using the SHOW INPUTS menu when the machine is in service mode.

Temp - Sensor resistance

-10℃ - 26.7 kΩ

15℃ - 7.6 kΩ

20℃ - 6.0 kΩ

25℃ - 4.8 kΩ

30℃ - 3.9 kΩ

100℃ - 0.33 kΩ

12:6 OUTLET AIR SENSOR - SHORT-CIRCUITED

The error code is shown if the analog input OULET AIR TEMP (NTC) is reading a resistance of less than 330 Ω.

Probably caused by broken NTC sensor or damaged wiring.

If the outlet air temperature in the SHOW INPUTS menu shows a temperature of 100℃ the outlet air sensor is shorted.

When the outlet air sensor is restored the error code is automatically reset and the ongoing program will continue.

A long press on the control knob/start/pause button will make the control system reset and ongoing program will be ended.

The error code can be trigged if:

- The sensor, harness or connector is broken. The sensor shall measure around 5 kΩ in room temperature, see table. (Measure direct over the sensor).

If the measure of outlet air sensor is OK, but there is still an error code:

- Check the harness, connectors and functions by reading the electrical schematic and by using the SHOW INPUTS menu when the machine is in service mode.

Temp - Sensor resistance

-10℃ - 26.7 kΩ

15℃ - 7.6 kΩ

20℃ - 6.0 kΩ

25℃ - 4.8 kΩ

30℃ - 3.9 kΩ

100℃ - 0.33 kΩ

12:11 Drying / Drying error with RMC program

The error code is shown if the analog input RMC does not register the STOP VALUE FOR RMC PROGRAM reached within the maximum drying time (normally 90 minutes). When the error is trigged the machine will automatically go to the cooling module before the program ends.

The program is ended and the error code is reset by opening the door.

If the clothes are still wet after maximum drying time and the dryer is not overloaded, check that the heating system is working correct by using the ACTIVATE OUTPUTS menu when the machine is in service mode.

Note!

Make sure that the fan is active before turning on the heat.

If the clothes are dry, check the RMC system and harness, connectors and functions by reading the electrical schematic and by using the SHOW INPUTS menu when the machine is in service mode.

RMC value no load = 0%

RMC value 100 kΩ between lifter and drum = approximately 24% (Putting your hand over the lifter onto the drum will result in approximately 20% RMC value).

RMC value system short circuit = 50%

12:12 Drying / Drying error with Autostop program

The error code is shown if the analog input OULET AIR TEMP (NTC) does not register the STOP VALUE FOR AUTOSTOP PROGRAM reached within the maximum drying time (normally 90 minutes).

When the error is trigged the machine will automatically go to the cooling module before the program ends.

The program is ended and the error code is reset by opening the door.

If the clothes are still wet after maximum drying time and the dryer is not overloaded, check that the heating system is working correct by using the ACTIVATE OUTPUTS menu when the machine is in service mode.

Note!

Make sure that the fan is active before turning on the heat.

If the clothes are dry, check the outlet air sensor and harness, connectors and functions by reading the electrical schematic and by using the SHOW INPUTS menu when the machine is in service mode.

12:13 DRYING ERROR WITH TIME PROGRAM

The error code is shown if a time program has continued longer than the maximum drying time (normally 90 minutes) without the door has been opened.

When the error is trigged the machine will automatically go to the cooling module before the program ends.

The program is ended and the error code is reset by opening the door.

12:14 Gas error, press gas reset button

The error code is shown if input GAS ERROR is activated. This means that no flame has been detected by the gas control box.

The metal probe of the flame sensor generates an electrical current when exposed to the burner's flame. This signal is detected by the ignition control module which, in turn, cuts off the gas valve immediately if the sensor does not indicate flame within 3 attempts at each 10 seconds. The integrity of the sensor's electrical connection is, therefore, critical to proper operation of this system. When the gas control box is in error mode, a red LED is active on the gas control box. The gas control box also trigs input GAS ERROR on the control system, which generates the error code.

The control system sends a reset signal to the gas control box via output GAS ERROR RESET by a short press on the control knob/start/pause button or service button (depending on market and segment). When the gas control box receive a reset command it removes the error. The control system will automatically restart the program when the error is removed from the gas control box and when heat is allowed (vacuum needed) the gas control box will try to ignite the gas again.

A long press on the control knob/start/pause button will make the control system reset and ongoing program will be ended.

The gas error can also be reset at the gas control box. The machine will automatically restart when the error is restored.

The error code can be trigged if:

- The gas control box fails to ignite. Check the gas supply and nozzle pressure.
- If the gas control box do not have a gas error but the control system does, check the harness, connectors and functions by reading the electrical schematic and by using the SHOW INPUTS menu when the machine is in service mode.

12:15 No vacuum

The error code is shown if the input VACUUM is not activated within set time in parameter TIMEOUT VACUUM.

The error code is reset from the control system by a short press on the control knob/start/pause button. A long press on the control knob/start/pause button will make the control system reset and ongoing program will be ended.

The time is defined in Config. 1 parameter TIMEOUT VACUUM.

The error code can be trigged if:

- The fan is not operating or blows in the wrong direction.
- The airflow is obstructed. (Cleaning of evacuation channel/chimney and air flaps).
- The vacuum switch sensor or hose is disconnected.
- The lint drawer is open, etc.

Check the harness, connectors and functions by reading the electrical schematic and by using the SHOW INPUTS and ACTIVATE OUTPUTS menus when the machine is in service mode.

12:16 Vacuum switch shorted

The error code is shown if the input VACUUM was already activated when a program was started.

The error code is reset from the control system by a short press on the control knob/start/pause button. A long press on the control knob/start/pause button will make the control system reset and ongoing program will be ended.

Recommended actions:

1. Check the vacuum switch/pressure sensor, harness, connectors and functions by reading the electrical schematic and by using the SHOW INPUTS menu when the machine is in service mode.

12:17 Airflow / Airflow obstructed, contact responsible

The error code is shown if input INTERNAL FILTER is activated.

The error code can be trigged by clogged internal filter, damaged vacuum switch or harness.

Recommended actions:

1. Check and clean internal filters, see Maintenance manual.
2. Check the harness, connectors and functions by reading the electrical schematic and by using the SHOW INPUTS menu when the machine is in service mode.
3. If permanent, clean the heat pump box.

12:18 Airflow / Redistribution of load needed

The error code is shown if the input VACUUM has deactivated several times during program run and the function to handle vacuum error during program run has failed to recreate vacuum in the machine. The error code is reset from the control system by a short press on the control knob/start/pause button. A long press on the control knob/start/pause button will make the control system reset and ongoing program will be ended.

The error code can be trigged if the load is blocking the airflow, or if lint screen or airflow path is partly blocked.

Recommended actions:

1. Check the load and redistribute it in the drum.
2. Check the lint screen and remove lint.

If problem persists:

- Check and clean internal and external air flow paths.

12:19 ERROR CLOGGED FILTER CLEAN THE FILTER / CONTACT THE TECH.IF ERROR REMAINS

This error is triggered if the airflow inside the machine doesn’t enough to complete drying cycle.

Error can be triggered by mostly by clogged filter, or air blockage in the heat pump unit.

Recommended action:

1. Check and clean internal filters, see maintenance manual, replace if necessary.
2. If permanent, clean the heat pump unit.

12:20 ANALOGUE AIRFLOW SENSOR IS SHORTED OR NOT CONNECTED

The error code is shown if the analog airflow sensor reading value more than the maximum range "500 pascal”.

Probably caused by broken sensor or damaged wiring.

1. Check or replace the harnesses.
2. Check or replace the sensor.

12:21 THE VACUUM SWITCH TURN ON/OFF FREQUENTLY

This error code is shown because the vacuum switch toggles between ON & OFF many times during a certain time.

1. Check the installation of the exhaust pipe, that there is proper air flow and right installation, check the air flow according to the installation manual.
2. Check the harness and connectors between the I/O board and the vacuum switch.
3. Check the position of the vacuum switch and air pipes.

12:22 NO AIRFLOW

The error code is shown if the analog airflow sensor isn't detecting any airflow at the start of a program.

1. Check that the fan and airflow sensor are functional.
2. Make sure there are not any obstructions in air flow channels.

12:253 JUMPER 1

The error code is shown if input JUMPER 1 is not activated.

Jumpers are a by-pass of inputs not used in the machine. How many jumpers used is depending on configuration.

When the jumper is restored the error code is automatically reset and the ongoing program will continue. A long press on the control knob/start/pause button will make the control system reset and ongoing program will be ended.

Recommended actions:

- Check the harness, connectors and functions by reading the electrical schematic and by using the SHOW INPUTS menu when the machine is in service mode.

12:254 JUMPER 2

The error code is shown if input JUMPER 2 is not activated.

Jumpers are a by-pass of input not used in the machine. How many jumpers used is depending on configuration.

When the jumper is restored the error code is automatically reset and the ongoing program will continue. A long press on the control knob/start/pause button will make the control system reset and ongoing program will be ended.

Recommended actions:

1. Check the harness, connectors and functions by reading the electrical schematic and by using the SHOW INPUTS menu when the machine is in service mode.

12:255 JUMPER 3

The error code is shown if input JUMPER 3 is not activated.

Jumpers are a by-pass of input not used in the machine. How many jumpers used is depending on configuration.

When the jumper is restored the error code is automatically reset and the ongoing program will continue. A long press on the control knob/start/pause button will make the control system reset and ongoing program will be ended.

Recommended actions:

1. Check the harness, connectors and functions by reading the electrical schematic and by using the SHOW INPUTS menu when the machine is in service mode.

HEAT PUMP

For more detailed information about the error codes for the heat pump, please refer to the section: Error handling of the heat pump unit.

17:20 HEAT PUMP CRITICAL ERROR

The heat pump "Carel µPC3 controller" reports high severity error(s) which can damage the heat pump system.

This error code is shown with a minor error code ALxxx. Please refer to the section “Error handling of the heat pump unit” for more information.

17:21 HEAT PUMP INTERNAL ERROR

The heat pump "Carel µPC3 controller" reports Normal severity error(s) which can be reset by the user.

This error code is shown with a minor error code ALxxx. Please refer to the section “Error handling of the heat pump unit” for more information.

17:22 LOST HEAT PUMP COMMUNICATION

The communication over modbus "RS485" with the heat pump lost during the normal operation.

Possible causes:

- Faulty connector/cable between I/O16 <=> µPC3 or Compass Pro <=> I/O16.
- Faulty I/O16.
- Faulty µPC3.
- Faulty Compass Pro.

Recommended actions:

1. Check the I/O16 functionality and communication cables.
2. Check the Carel µPC3 functionality and green LED should be blinking.
3. Restart the machine.

17:23 NO HEAT PUMP COMMUNICATION

The communication over modbus "RS485" with the heat pump didn't initilize correctly during the bootup:

Possible causes:

- Faulty connector/cable between I/O16 <=> µPC3 or Compass Pro <=> I/O16.
- Faulty I/O16.
- Faulty µPC3.
- Faulty Compass Pro.

Recommended actions:

1. Check the I/O16 functionality and communication cables.
2. Check the Carel µPC3 functionality and green LED should be blinking.
3. Restart the machine.

17:24 HEAT PUMP FW MISMATCH

The software inside the µPC3 is different from heat pump compressor type.

Possible causes:

- For some reason, for example: Receiving new µPC3 for replacement and it still has the original software which is not compatible with the compressor.

Recommended actions:

1. Go to the service menu and trigger `H.P. SW UPGRADE`.
2. Replace the µPC3 with compatible one.

17:25 HEAT PUMP FW VERSION MISMATCH

The version of the µPC3 firmware is not supported with the current Compass Pro firmware.

Recommended actions:

1. Upgrade both µPC3 firmware and Compass Pro firmware with latest available.

DRUM MOTOR COMMON

20:1 Motor / Overheat drum motor

This error code will be shown if the control system detects that the input OH DRUM MOTOR is deactivated during program run.

The overheating protection is automatically restored. When the overheating protection is restored the error code is automatically reset and the ongoing program will continue. A long press on the control knob/start/pause button will make the control system reset and ongoing program will be ended.

The error code can be trigged if:

1. The motor is very warm. Check that the vent holes in the motor are not covered.

If the overheating protection is not trigged, but there is still an error code:

- Check the harness, connectors and functions by reading the electrical schematic and by using the SHOW INPUTS menu when the machine is in service mode.

20:2 NO MOTOR COMMUNICATION

This error code occurs if the first message sent from the CPU to the inverter was not replied to during start up.

Recommended actions:

1. Check that there is power reaching the inverter. Check the fuses in the protection cable. If one of the components in the protection cable is damaged, the cable must be replaced.
2. Check that the green power indication LED on the inverter is on. The LED can be seen by looking down by the inverter edge connections.
3. Check that the communication cable between the CPU board and the inverter is intact and not damaged. Measure also with a reference instrument to see whether there is contact between all the leads in the communication cable.

20:3 LOST MOTOR COMMUNICATION

This error code occurs if the communication between the CPU and the inverter has stopped working.

Recommended actions:

1. Check that there is power reaching the inverter. Check the fuses in the protection cable. If one of the components in the protection cable is damaged, the cable must be replaced.
2. Check that the indicator LED on the inverter is on. The LED can be seen by looking down by the inverter edge connections.
3. Check that the communication cable between the CPU board and the inverter is intact and not damaged. Measure also with a reference instrument to see whether there is contact between all the leads in the communication cable.

INVERTER CONTROLLED DRUM MOTOR

23:1 HEATSINK TOO HOT

This error code is generated by the inverter for drum motor.

There is a temperature sensor (NTC) mounted on the inverter cooling flange next to the power transistors in the output stage. If the temperature of the cooling flange gets too high (> 100℃) the error code will be set to protect the transistors.

The cause of high cooling flange temperature can be e.g. a stiff drum in combination with intensive use and high ambient temperature. There may also be an error in the motor (sticking bearings or short circuit in windings, which impairs the efficiency of the motor). When temperature has decreased below 85℃, the error can be reset on the control knob/start/pause button.

Recommended actions:

1. Check that the drum can be rotated easily.
2. Check the value on the error code counter for the error code.
3. Check the last 8 inverter error codes.
4. Start a 90℃ normal program with load on continuous operation and measure the temperature of the motor and inverter.
5. Replace the defective part.

23:2 MOTOR TOO HOT

This error code is generated by the inverter for the drum motor.

The inverter monitors the motor temperature in two ways.

1. The inverter calculates the motor winding resistance by measuring current and voltage. The winding resistance can then be converted to a temperature, since the winding resistance at 20℃ and the temperature coefficient are known. If the average value of the four latest temperature readings is higher than the maximum motor temperature (e.g. 130℃), the error code will be shown. When temperature has decreased below 130℃, the error can be reset on the control knob/start/pause button.
2. The inverter monitors the input from motor overheat protection. If this input is open circuit, the error will be shown. When input is closed again, the error can be reset on the control knob/start/pause button.

Possible causes:

- The cause of high motor temperature can be a stiff drum, possibly in combination with intensive use and high ambient temperature. There may also be an error in the motor (sticking bearings or short circuit in windings, which impairs the efficiency of the motor). There could also be a contact error in the connectors between the inverter and the motor or an error in the motor cable. An error in inverter temperature measurement circuits can also occur.

Recommended actions:

- Check that the drum can be rotated easily.
- Check the status of motor over heat protection.
- Check the value on the error code counter for the error code.
- Check the last 8 inverter error codes.
- Measure the three phases to the phase resistors on the inverter motor connector (disconnect inverter and take the reading in the cable connector) to make sure they are the same.
- Start a 90℃ normal program with load on continuous operation and measure the temperature of the motor and inverter.
- Replace the defective part.

23:3 NO INTERLOCK

This error code is generated by the inverter for drum motor.

The inverter must be powered with 230V / 50 or 60 Hz on the interlock input in order to drive the motor. This signal is a confirmation that the door is closed and locked.

The inverter receives its commands to rotate the drum from the CPU via a serial communication link between the inverter and the CPU. Since the CPU also has access to the interlock signal, the CPU must never send a run command to the inverter if the interlock signal is missing. If this does happen, this error code will be shown.

Possible causes:

- The cause of this error code being activated can be e.g. a break in the cable leading the interlock signal to the inverter.
- There may also be an error in the connector in the door lock, which connects 230V / 50 Hz to the interlock signal. An error in the interlock circuits of the inverter can also set this error code.

Recommended actions:

1. Use a multimeter to check that there is 230V present on the inverter interlock input when the door lock is activated.
   Read also bit 1 in the second byte under INVERTER STATUS in the service program (the bits are numbered from 0 to 7 where bit 0 is on the far right). If bit 1 in the second byte is 1 then the lock is open, while a 0 indicates that the lock is closed.
2. Replace the defective part.

23:4 NO MOTOR COMMUNICATION

This error code is generated by the inverter for drum motor.

The inverter detects that there is a problem in communication with CPU.

Possible causes:

- Bad contact in harness or connectors between CPU and inverter.

Recommended actions:

1. Check wiring, connections between CPU and inverter.

23:5 MOTOR SHORT CIRCUIT

This error code is generated by the inverter for drum motor.

The inverter reads the power consumption of the motor continuously. If the current for some reason exceeds a predetermined limit, the inverter will cut the current to the motor, and the error code will be shown.

Possible causes:

- This error code can be activated for a number of reasons:
  - Short circuit in motor. Measure motor windings with a motor tester.
  - Short circuit internally in motor winding (impaired efficiency, higher current consumption).
  - Short circuit in motor cables.
  - Short circuit in connectors.
  - Drops of water causing short circuits in the motor connector.
  - Short circuit in the inverter output transistors.
  - Bad contact in interlock signal.

Recommended actions:

1. If the error is a stable one, it is generally not difficult to locate the defective unit through resistance measurement and testing with the service program. Measure motor windings with a motor tester.
2. Further information can be obtained by studying the contents of INVERTER ERROR LOG 1 and INVERTER ERROR LOG 2.
3. Review following:
   SHORT CIRCUIT 1 (specifies how many times the current limit has been exceeded).

23:6 INTERLOCK HARDWARE ERROR

This error code is generated by the inverter for drum motor.

The inverter must be powered with 230V / 50 or 60 Hz on the interlock input in order to drive the motor. The interlock circuits in the inverter have been split into two channels so that a component error in the inverter cannot give a false confirmation that the door is locked. These two channels are checked against each other. If this check gives an incorrect result this error code will be shown.

Possible cause:

- The reason for this error code being activated can be attributed to an error in the interlock circuits in the motor control.

Recommended actions:

1. Replace the inverter.

23:7 LOW DC VOLTAGE

This error code is generated by the inverter for drum motor.

The inverter constantly measures the voltage over the mains input. If the voltage drops below a predefined limit, the inverter will shut off the current to the motor and the error code will be shown.

The error can be reset by pressing the control knob/start/pause button when voltage is within range again.

The reason for this error code being activated can be low mains voltage or that the machine's on/off switch has been operated in an unsuitable manner. Further information can be obtained by studying the contents of INVERTER ERROR LOG 1 and INVERTER ERROR LOG 2:

- UNDERVOLTAGE 1 (specifies how many times the voltage has dropped below the limit).
- LAST FAULT CODE N/8 (shows the 8 latest error codes). Undervoltages can be registered even during normal operation.

Consequently, a small number of registrations need not mean that there is an error in the inverter.

Recommended action:

1. Check that the supply voltage is stable and never drops below nominal voltage - 10%.
2. Check the fuses and cables.
3. Check the supply voltage in the network cabling and at the inverter in the machine.

23:8 HIGH DC VOLTAGE

This error code is generated by the inverter for drum motor.

The inverter constantly measures the voltage over the mains input. If the voltage exceeds a predefined limit, the inverter will shut off the current to the motor, and the error code will be shown.

The error can be reset by pressing the control knob/start/pause button when voltage is within range again.

Possible causes:

- Fluctuating mains voltage.

Recommended action:

1. Check that the supply voltage is stable and never exceeds nominal voltage + 6%.

23:12 NO PARAMETER SET IN THE INVERTER

This error code is generated by the inverter for drum motor.

The inverter contains several different parameter sets for different motors. During power up the control system checks that the correct parameter set digit is written into the inverter. If not, the control system will write down the parameter set digit defined in fixed configuration.

If the inverter discovers that no parameter set value is written down into the inverter, the error code will be shown.

Possible causes:

- This can be caused by wrong software in the CPU or wrong inverter for the current machine.

Recommended actions:

1. Make sure correct machine software and correct inverter are used.

23:15 MOTOR NOT FOLLOWING

This error code is generated by the inverter for drum motor. The inverter continuously estimates the motor speed. If the estimated speed is less than 180 rpm 10 seconds after drive command, or higher than 180 rpm 60 seconds after stop command, the error will be shown.

Possible causes:

- Break in one of the phases to the motor (cables or connectors). This error can be suspected if the motor does not rotate for 10 seconds (the motor will not start with only two phases).
- Check that the drum can be rotated easily.
- Check motor windings for open circuit using a motor tester.

Further information can be obtained by studying the contents of INVERTER ERROR LOG 1 and INVERTER ERROR LOG 2. Study the following:

- MOTOR NOT FOLLOW (specifies how many times this error code has occurred).
- LAST ERROR CODE N/8 (shows the 8 latest error codes).

Recommended action:

1. Replace the defective part.

23:255 UNDEFINED ERROR

This error code is generated by the inverter for drum motor. The inverter reports an error that is not defined.

Switch the power off for 30 seconds and then try again.

FAN MOTOR COMMON

30:1 Motor / Overheat fan motor

This error code will be shown if the control system detects that the input OH FAN MOTOR is deactivated during program run.

The overheating protection is automatically restored. When the overheating protection is restored the error code is automatically reset and the ongoing program will continue. A long press on the control knob/start/pause button will make the control system reset and the ongoing program will be ended.

The error code can be trigged if:

- The motor is very warm. Check that the vent holes in the motor are not covered.

If the overheating protection is not trigged, but there is still an error code:

- Check the harness, connectors and functions by reading the electrical schematic and by using the `SHOW INPUTS` menu when the machine is in service mode.

30:2 NO MOTOR COMMUNICATION

This error code occurs if the first message sent from the CPU to the inverter was not replied to during start up.

Recommended actions:

1. Check that there is power reaching the inverter. Check the fuses in the protection cable. If one of the components in the protection cable is damaged, the cable must be replaced.
2. Check that the green power indication LED on the inverter is on. The LED can be seen by looking down by the inverter edge connections.
3. Check that the communication cable between the CPU board and the inverter is intact and not damaged. Measure also with a reference instrument to see whether there is contact between all the leads in the communication cable.

30:3 LOST MOTOR COMMUNICATION

This error code occurs if the communication between the CPU and the inverter has stopped working.

Recommended actions:

1. Check that there is power reaching the inverter. Check the fuses in the protection cable. If one of the components in the protection cable is damaged, the cable must be replaced.
2. Check that the indicator LED on the inverter is on. The LED can be seen by looking down by the inverter edge connections.
3. Check that the communication cable between the CPU board and the inverter is intact and not damaged. Measure also with a reference instrument to see whether there is contact between all the leads in the communication cable.

INVERTER CONTROLLED FAN MOTOR

33:1 HEATSINK TOO HOT

This error code is generated by the inverter for fan motor.

There is a temperature sensor (NTC) mounted on the inverter cooling flange next to the power transistors in the output stage. If the temperature of the cooling flange gets too high (> 100℃) the error code will be set to protect the transistors.

The cause of high cooling flange temperature can be e.g. a stiff drum in combination with intensive use and high ambient temperature. There may also be an error in the motor (sticking bearings or short circuit in windings, which impairs the efficiency of the motor). When temperature has decreased below 85℃, the error can be reset on the control knob/start/pause button.

Recommended actions:

1. Check that the drum can be rotated easily.
2. Check the value on the error code counter for the error code.
3. Check the last 8 inverter error codes.
4. Start a 90℃ normal program with load on continuous operation and measure the temperature of the motor and inverter.
5. Replace the defective part.

33:2 MOTOR TOO HOT

This error code is generated by the inverter for the fan motor.

The inverter monitors the motor temperature in two ways.

1. The inverter calculates the motor winding resistance by measuring current and voltage. The winding resistance can then be converted to a temperature, since the winding resistance at 20℃ and the temperature coefficient are known. If the average value of the four latest temperature readings is higher than the maximum motor temperature (e.g. 130℃), the error code will be shown. When temperature has decreased below 130℃, the error can be reset on the control knob/start/pause button.
2. The inverter monitors the input from motor overheat protection. If this input is open circuit, the error will be shown. When input is closed again, the error can be reset on the control knob/start/pause button.

Possible causes:

- The cause of high motor temperature can be a stiff drum, possibly in combination with intensive use and high ambient temperature. There may also be an error in the motor (sticking bearings or short circuit in windings, which impairs the efficiency of the motor). There could also be a contact error in the connectors between the inverter and the motor or an error in the motor cable. An error in inverter temperature measurement circuits can also occur.

Recommended actions:

- Check that the drum can be rotated easily.
- Check the status of motor over heat protection.
- Check the value on the error code counter for the error code.
- Check the last 8 inverter error codes.
- Measure the three phases to the phase resistors on the inverter motor connector (disconnect inverter and take the reading in the cable connector) to make sure they are the same.
- Start a 90℃ normal program with load on continuous operation and measure the temperature of the motor and inverter.
- Replace the defective part.

33:3 NO INTERLOCK

This error code is generated by the inverter for fan motor.

The inverter must be powered with 230V / 50 or 60 Hz on the interlock input in order to drive the motor. This signal is a confirmation that the door is closed and locked.

The inverter receives its commands to rotate the drum from the CPU via a serial communication link between the inverter and the CPU. Since the CPU also has access to the interlock signal, the CPU must never send a run command to the inverter if the interlock signal is missing. If this does happen, this error code will be shown.

Possible causes:

- The cause of this error code being activated can be e.g. a break in the cable leading the interlock signal to the inverter.
- There may also be an error in the connector in the door lock, which connects 230V / 50 Hz to the interlock signal. An error in the interlock circuits of the inverter can also set this error code.

Recommended actions:

1. Use a multimeter to check that there is 230V present on the inverter interlock input when the door lock is activated.
   Read also bit 1 in the second byte under INVERTER STATUS in the service program (the bits are numbered from 0 to 7 where bit 0 is on the far right). If bit 1 in the second byte is 1 then the lock is open, while a 0 indicates that the lock is closed.
2. Replace the defective part.

33:4 NO MOTOR COMMUNICATION

This error code is generated by the inverter for fan motor.

The inverter detects that there is a problem in communication with CPU.

Possible causes:

- Bad contact in harness or connectors between CPU and inverter.

Recommended actions:

1. Check wiring, connections between CPU and inverter.

33:5 MOTOR SHORT CIRCUIT

This error code is generated by the inverter for fan motor.

The inverter reads the power consumption of the motor continuously. If the current for some reason exceeds a predetermined limit, the inverter will cut the current to the motor, and the error code will be shown.

Possible causes:

- This error code can be activated for a number of reasons:
  – Short circuit in motor. Measure motor windings with a motor tester.
  – Short circuit internally in motor winding (impaired efficiency, higher current consumption).
  – Short circuit in motor cables.
  – Short circuit in connectors.
  – Drops of water causing short circuits in the motor connector.
  – Short circuit in the inverter output transistors.
  – Bad contact in interlock signal.

Recommended actions:

1. If the error is a stable one, it is generally not difficult to locate the defective unit through resistance measurement and testing with the service program. Measure motor windings with a motor tester.
2. Further information can be obtained by studying the contents of INVERTER ERROR LOG 1 and INVERTER ERROR LOG 2.
3. Review following:
   SHORT CIRCUIT 1 (specifies how many times the current limit has been exceeded).

33:6 INTERLOCK HARDWARE ERROR

This error code is generated by the inverter for fan motor.

The inverter must be powered with 230V / 50 or 60 Hz on the interlock input in order to drive the motor. The interlock circuits in the inverter have been split into two channels so that a component error in the inverter cannot give a false confirmation that the door is locked. These two channels are checked against each other. If this check gives an incorrect result this error code will be shown.

Possible cause:

- The reason for this error code being activated can be attributed to an error in the interlock circuits in the motor control.

Recommended actions:

1. Replace the inverter.

33:7 LOW DC VOLTAGE

This error code is generated by the inverter for fan motor.

The inverter constantly measures the voltage over the mains input. If the voltage drops below a predefined limit, the inverter will shut off the current to the motor and the error code will be shown.

The error can be reset by pressing the control knob/start/pause button when voltage is within range again.

The reason for this error code being activated can be low mains voltage or that the machine's on/off switch has been operated in an unsuitable manner. Further information can be obtained by studying the contents of `INVERTER ERROR LOG 1` and `INVERTER ERROR LOG 2`:

- `UNDERVOLTAGE 1` (specifies how many times the voltage has dropped below the limit).
- `LAST FAULT CODE N/8` (shows the 8 latest error codes). Undervoltages can be registered even during normal operation.

Consequently, a small number of registrations need not mean that there is an error in the inverter.

Recommended action:

1. Check that the supply voltage is stable and never drops below nominal voltage - 10%.
2. Check the fuses and cables.
3. Check the supply voltage in the network cabling and at the inverter in the machine.

33:8 HIGH DC VOLTAGE

This error code is generated by the inverter for fan motor.

The inverter constantly measures the voltage over the mains input. If the voltage exceeds a predefined limit, the inverter will shut off the current to the motor, and the error code will be shown.

The error can be reset by pressing the control knob/start/pause button when voltage is within range again.

Possible causes:

- Fluctuating mains voltage.

Recommended action:

1. Check that the supply voltage is stable and never exceeds nominal voltage + 6%.

33:12 NO PARAMETER SET IN THE INVERTER

This error code is generated by the inverter for fan motor.

The inverter contains several different parameter sets for different motors. During power up the control system checks that the correct parameter set digit is written into the inverter. If not, the control system will write down the parameter set digit defined in fixed configuration.

If the inverter discovers that no parameter set value is written down into the inverter, the error code will be shown.

Possible causes:

- This can be caused by wrong software in the CPU or wrong inverter for the current machine.

Recommended actions:

1. Make sure correct machine software and correct inverter are used.

33:15 MOTOR NOT FOLLOWING

This error code is generated by the inverter for fan motor. The inverter continuously estimates the motor speed. If the estimated speed is less than 180 rpm 10 seconds after drive command, or higher than 180 rpm 60 seconds after stop command, the error will be shown.

Possible causes:

- Break in one of the phases to the motor (cables or connectors). This error can be suspected if the motor does not rotate for 10 seconds (the motor will not start with only two phases).
- Check that the drum can be rotated easily.
- Check motor windings for open circuit using a motor tester.

Further information can be obtained by studying the contents of INVERTER ERROR LOG 1 and INVERTER ERROR LOG 2. Study the following:

- MOTOR NOT FOLLOW (specifies how many times this error code has occurred).
- LAST ERROR CODE N/8 (shows the 8 latest error codes).

Recommended action:

1. Replace the defective part.

33:255 UNDEFINED ERROR

This error code is generated by the inverter for fan motor. The inverter reports an error that is not defined.

Switch the power off for 30 seconds and then try again.

INTERNAL COM.

40:1–40:10 I/O INTERLOCK Axxx

The error code is shown if the control system detects that the input I/O INTERLOCK is not active. I/O unit designation, Axxx, that is shown in the error description is according to electric schematics and electrical component list.

Recommended actions:

1. Check that door is actually locked.
2. Check DLCU status in service mode for more information on possible causes.
3. Check P-bus connectors on I/O board for present interlock signal.
4. Check that D-bus connector is fitted correctly with regards to the rib on the connector and the slot in the plastic cover of the I/O board.

40:11–40:20 I/O COMMUNICATION Axxx

The error code is shown if the control system can not communicate with one or several I/O units on D-bus. I/O unit designation, Axxx, that is shown in the error description is according to electric schematics and electrical component list. Errors are related to the D-Bus communication port between CPU and the different I/O units in the machine. The error code is shown if the control system has lost communication with one or more I/O units for a certain time.

If there is communication between the I/O unit and control system the LED next to the service button will flash.

If there is no communication to the I/O unit but power, the LED will light when the button is pressed on the I/O board (all I/O boards except for I/O unit type 6).

Possible causes:

- Mistake when configurating I/O unit adress at set up. Button on wrong I/O unit pressed during config.
- Two or more I/O units have got the same address.
- Bad or intermittent contact in D-Bus wiring between I/O units and CPU or between I/O units.
- Squeezed or shorted D-bus cables (shorted to ground).
- An old version of an I/O unit is fitted in the machine that do not support Compass Pro. Check part number compared to original I/O board or Spare parts list.

Recommended actions:

1. Check that all I/O units are configured in `I/O CONFIGURATION` menu when the machine is in service mode. Alternatively use Common Service Tool to get an overview of the I/O unit configuration. Use the electric schematic to find correct I/O board to address.
2. If all I/O units are present in the list, check the LED as above, harness, connectors and functions by reading the electrical schematic.
3. Check that the I/O units fitted in the machine supports Compass Pro. Check part number compared to original I/O board or Spare parts list.
4. Update the machine software to latest available version.

40:22 I/O BOARD MISHMASH

The error code is shown if wrong type of I/O unit is fitted.

Could also occur if addressing of the I/O units is made in an incorrect way.

After addressing of I/O units the CPU reads the type of each unit.

If there is a mismatch between what the type of I/O unit the CPU finds, and what the I/O unit type the software configuration expects, the error will be shown.

Machine will not run until problem is solved. There are two exceptions: I/O type 1 can be used when I/O type 11 is expected, but not opposite. I/O type 8 can be used when I/O type 81 is expected, but not opposite.

Possible causes:

- When addressing the I/O units the operator has pressed the button on the wrong I/O unit.
- Wrong type of I/O unit if fitted in the machine.
- Two I/O units have got the same address.

Recommended actions:

1. Readdress all I/O units.
   Use `I/O CONFIGURATION` function in service mode.
   Alternatively use Common Service Tool, I/O addressing function.
2. Use the electric schematic to find correct I/O board to address.
3. Use Common Service Tool, I/O addressing function to get best overview/visualization of the problem.

EXTERNAL COM. PAYMENT

51:22 NO CBT COMMUNICATION PRESS TO RETRY

Machine connected to payment system using serial communication to machine.

Cause:

- Communication has been established once and then interrupted.

Recommended actions:

1. Check electrical connections between CPU and payment system.
2. If running in a network, check network cables between machine and payment system.
3. Check that payment system is operational.
4. Check that payment system and machine is configured to the same machine address (Config 1).
5. To reset machine to working state without repairing payment system, use `RESET CBT` communication in service mode. (Requires password).

EXTERNAL COM. CMIS

52:1 CMIS COMMUNICATION ERROR

Communication between machine and CMIS computer has been interrupted.

The warning will be shown at program start for 5 seconds, the next 5 programs. It is then removed automatically.

After the warning message has dissapeared the machine will start, but no CMIS statistics/data will be logged.

Possible causes:

- If using ELS Common Service Tool process viewer and cable has been unplugged before process viewer has been stopped.
- If running with ELS CMIS and communication is interrupted to PC.

Recommended actions:

1. If using ELS CST, reconnect, enter Process viewer and select function "Reset MIS communication".
2. If using ELS Network and CMIS:
   - Check ELS network cable between machine and PC.
   - Check that CMIS application is active and running normally.
   - For CMIS: The machine can operate but statistics will be affected and data will be lost.

INTERNAL

60:5 FATAL ERROR INVALID RUNNING MODE

The control system has an internal error during memory read.
Recommended actions:

1. Press the control knob/start/pause button to retry.
2. If problem persists, upload new software.

60:11 FATAL ERROR EXTERNAL FLASH WRITE

The control system has an internal error during memory read.
Recommended actions:

1. Press the control knob/start/pause button to retry.
2. If problem persists, upload new software.

60:17 FATAL ERROR INVALID OPTION

The control system has an internal error during memory read.
Recommended actions:

1. Press the control knob/start/pause button to retry.
2. If problem persists, upload new software.

60:18 FATAL ERROR INVALID MODULE

The control system has an internal error during memory read.
Recommended actions:

1. Press the control knob/start/pause button to retry.
2. If problem persists, upload new software.

60:28 FATAL ERROR INVALID COIN INPUT

The control system has an internal error during memory read.
Recommended actions:

1. Press the control knob/start/pause button to retry.
2. If problem persists, upload new software.

60:29 FATAL ERROR INVALID FONT

The control system has an internal error during memory read.
Recommended actions:

1. Press the control knob/start/pause button to retry.
2. If problem persists, upload new software.

15 Maintenance

15.1 Maintenance to be carried out by qualified service personnel

After 800 hours of operation or once a year, whichever comes first, contact qualified service personnel to perform the following maintenance. If neglected performance will decrease and the machine can be damaged.

For original spare parts please contact your local authorized dealer.

15.1.1 Clean the glide surface for the RMC graphite collector

At regular basis, wipe off/clean drum and lifters with citric acid (Acidum citricum). If soap/softener residue remains, it is recommended also to use a coarse sponge.

Lack of cleaning can reduce the automatic residual moisture control which will make the load being moister than requested when the program has ended.

Clean the glide surface for the RMC graphite collector (A) and on the outside of the drum (B) all the way around the drum.

Clean the graphite collector (C) and washer (D) under the cover bearing.

Use sand paper No. 100–400 to clean.

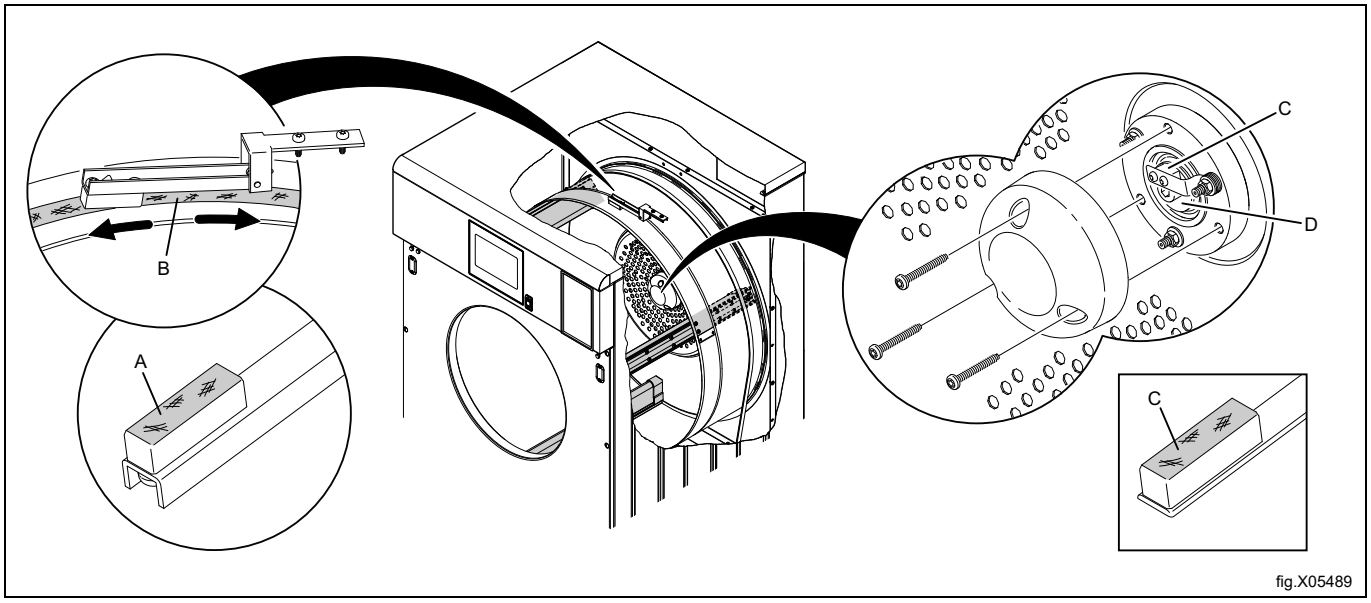


fig.X05489

15.1.2 Clean the area around the drum

Disconnect the power to the machine.

Demount the top panel.

Make sure that the area around the drum and the area over the drum are clean and that there is no lint. Clean with a vacuum cleaner if necessary.

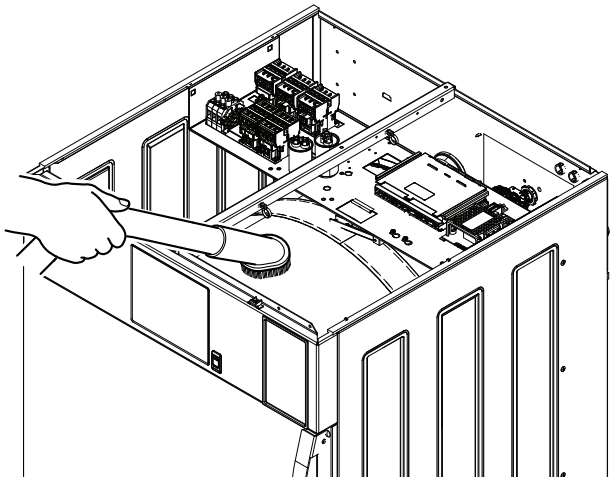


fig.X05490

15.1.3 Clean the motor and the area around the motor

Disconnect the power to the machine.
Demount the rear panel.
Disconnect the motor cable (A).
Demount the spring and the drum belt (B).
Demount the two screws and remove the motor with console and pulley.

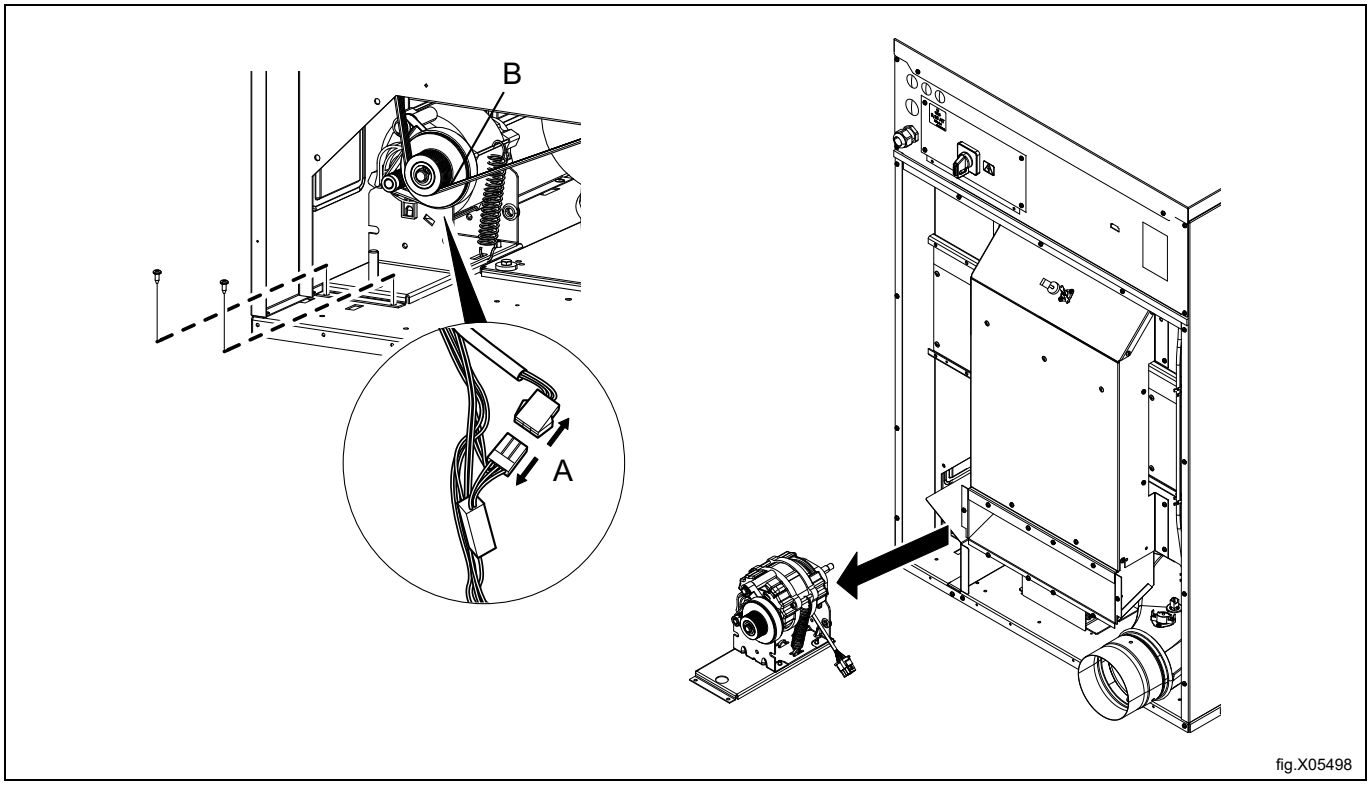


fig.X05498

Make sure that the motor is clean and that there is no lint. Clean with a vacuum cleaner if necessary. Make sure that there is no lint around the air cooling inlets (C).

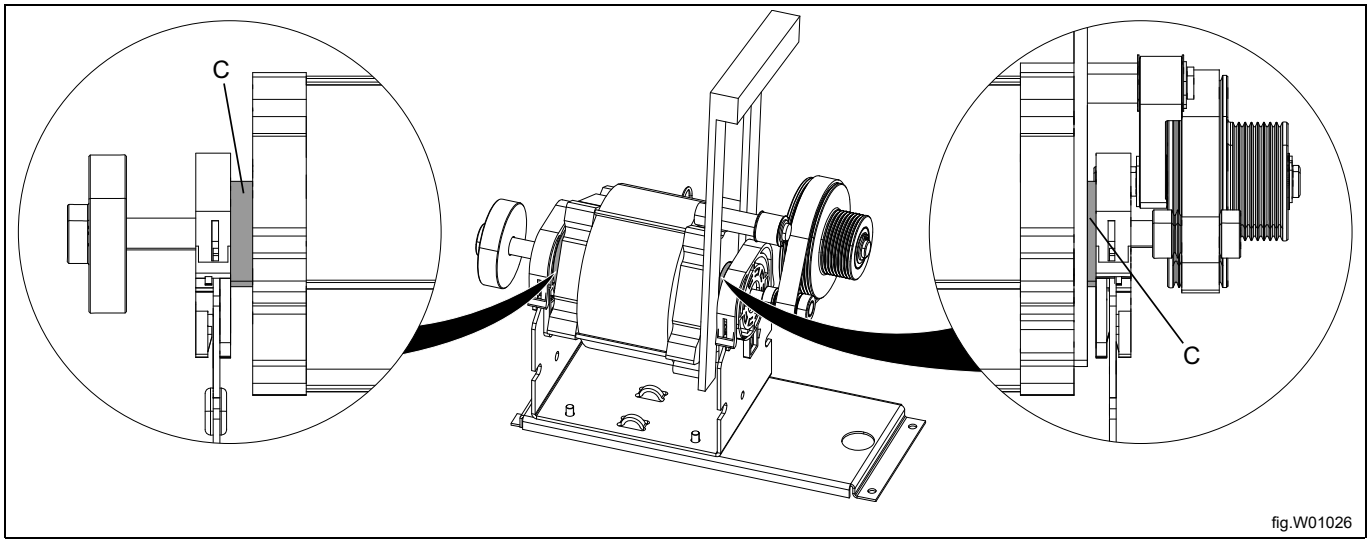


fig.W01026

Make sure that the areas around the motor inside the machine are clean and that there is no lint. Clean with a vacuum cleaner if necessary. Make sure that all lint has been removed and that all areas are clean before remounting.

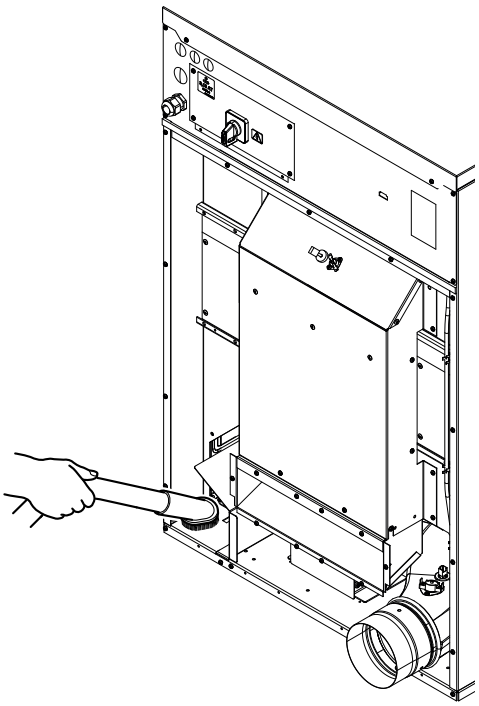


fig.X05492

Remount the motor, the spring and the drum belt.

Connect the motor cable and remount the rear panel.

15.1.4 Air intake, fan house and fan motor

At regular basis, check that the air intake on the front of the machine is not clogged by lint and dust or otherwise blocked.

Disconnect the power to the machine.

Demount the back panel.

Remove the screws to the filter (A) and pull out the filter (B).

Clean the fan house from the front of the machine with a vacuum cleaner.

Clean the motor both from the front and back of the machine with a vacuum cleaner.

Be careful not to damage the parts.

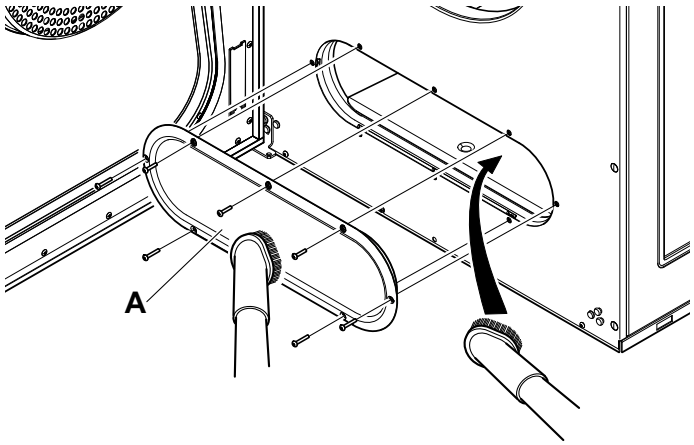


fig.X05491

Push the filter (B) back into position and remount the filter (A).

Note!

Before remounting the filter (A), please note the following:

Start from serial numbers 5242030401 there are two lengths of screw to secure the lint filter.

- 3 pcs of MRT 4x20 screws (PN: 471834116) are used in zone A.
- 5 pcs of MRT 4x25 screws (PN: 471834117) are used in zone B.

Make sure to remount the screws correctly to the zones A and B according to the illustration.

Warning

The MRT4x25 screws (PN: 471834117) should not be used in zone A. If so, this longer screw will scratch the drum and make noise.

Tip for mouthing:

Pre-mount all the screws and then fasten them as a second step.

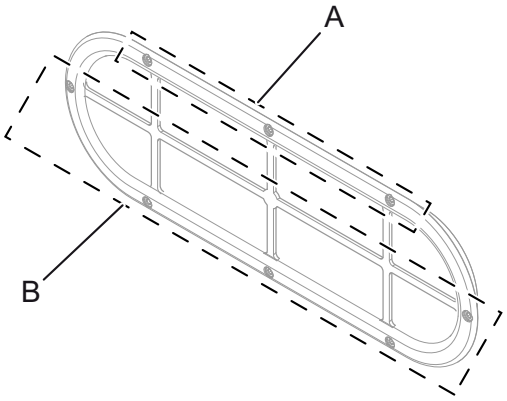


fig.X04851

Remount the back panel.

Electrolux Professional AB
341 80 Ljungby, Sweden
www.electroluxprofessional.com