

SERVICE MANUAL

T4300S, TD30x30

487 03 29 81.02
EN

WARNING

WARNING: For your safety the information in this manual must be followed to minimize the risk of fire or explosion or to prevent property damage, personal injury or death.

– Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

– **WHAT TO DO IF YOU SMELL GAS:**

- Do not try to light any appliance.
- Do not touch any electrical switch; do not use any phone in your building.
- Clear the room, building or area of all occupants.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.

– Installation and service must be performed by a qualified and authorized installer, service agency or the gas supplier.

Safety rules

This machine is only intended for drying water-washed garments.

Clothes that have been cleaned with chemicals/flammable liquids, must NOT be dried in the machine.

Remove clothes from the tumble dryer as soon as they are dry. This prevents them from becoming creased, and reduces the risk of spontaneous ignition.

The machine must not be used for drying foam rubber or foam-like materials.

The machine must not be used for drying floor mops. (This applies only to floor mops containing polypropylene).

The machine must not be used by children.

The machine must not be hosed down with water.

Mechanical, electrical and gas installations must only be carried out by qualified, licensed personnel.

Report machine malfunctions to qualified service personnel immediately. This is important for your own safety and for the safety of others.

Gas dryers only:

The machine is not to be installed in rooms containing cleaning machines with PERCHLORETHYLENE, TRICHLOROETHYLENE or CHLOROFLUOROCONTAINING HYDROCARBONS as cleaning agents.

What to do if you smell gas:

Do not try to light any appliance.

Do not touch any electrical switch; do not use any phone in your building.

Evacuate the room, building or area.

Contact appropriate authorities.

Servicing the dryer

Refer servicing to qualified personnel.

Improper servicing can result in hazardous conditions, fire, explosion, property damage, and personal injury.

Some components may have sharp edges!

Wear gloves when handling mechanical components.

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Technical data, type 4300S

Heating		Electric	Gas
Drum volume:		2 x 300 litres	2 x 300 litres
Weight:	Net	282 kg	282 kg
Drum:	Diameter	760 mm	760 mm
	Depth	660 mm	660 mm
	Revolutions per minute	45 rpm	45 rpm
Capacity:		2 x 13.6 kg	2 x 13.6 kg
Motor:	Effect without reverse	2 x 1 kW	2 x 1 kW
	Effect with reverse	2 x 1 kW	2 x 1 kW
	Revolutions per minute		
	Motor 50 Hz	2700 rpm	2700 rpm
	Motor 60 Hz	3200 rpm	3200 rpm
Heat effect:	Electric	2x9 kW/2x13.5 kW/2x18 kW	
	Gas		2 x 21 kW
Air consumption:		2 x 600 m ³ /h	2 x 600 m ³ /h
Piping:	Exhaust	Ø 200	Ø 200
Pressure drop:	Exhaust (max.)	400 Pa	400 Pa
Gas piping:			ISO 7/1-R1/2
Gas pressure:	See page regarding pressure section 40 Gas		
Sound pressure level:		< 70 dB (A)	< 70 dB (A)

Technical data, TD30x30, Gas heating

Drum volume:		2 x 10.6 cu.ft.
Weight:	Net	620 lb
Cylinder:	Diameter	29 15/16"
	Depth	26"
	Revolutions per minute	45 rpm
Capacity:		2 x 30 lb
Motor single phase:	Effect of vent motor	1 x 0.54 hp
	Effect of cylinder motor	1 x 0.7 hp
Revolutions per minute:	Motor 60 Hz	3200 rpm
Heat effect:	Gas heating	2 x 71600 BTU/h
Air consumption:	Gas 2x 21 kW	2x353 cu.ft/min
Piping:	Exhaust	ø8"
Pressure drop:	Exhaust (max.)	1.57"W.C
Gas piping:		1/2" NPT
Gas pressure:	See page regarding pressure section 40 Gas	
Sound pressure level:		< 70 dB (A)

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Glossary

Auto Stop	The tumble dryer stops automatically when the clothes are dry.
AHL	A partment H ouse L aundry - Communal laundries / Housing block laundries.
GN	Natural gas.
LPG	Bottle gas.
OPL	O n P remises L aundry - Institutional laundries.
PCB	P rinted C ircuit B oard.
RMC	R esidual M oisture C ontrol - The tumble dryer has residual moisture control.

Description

Dryer T4300S or TD30x30 is a stack dryer.

The dryer has 2 independent pockets.
Each pocket has a drum volume of
300 litres (10.6 cu.ft).

Motors

The dryer has 2 motors per pocket - one to
run the drum and one to run the blower.

Programs, Selecta Control ver. 4.xx (Non-Coin version)

Each pocket has an independent operating
panel and an independent PCB.

The dryer's control provides diagnostic error
codes which offer guidance in troubleshooting.

OPL with RMC

On OPL with RMC (non-coin operated) models,
there are nine factory-provided drying programs
in the dryer control memory.

It is also possible to directly select the desired
drying time.

The dryer stops automatically when the clothes
have the chosen residual moisture.

OPL with Auto Stop

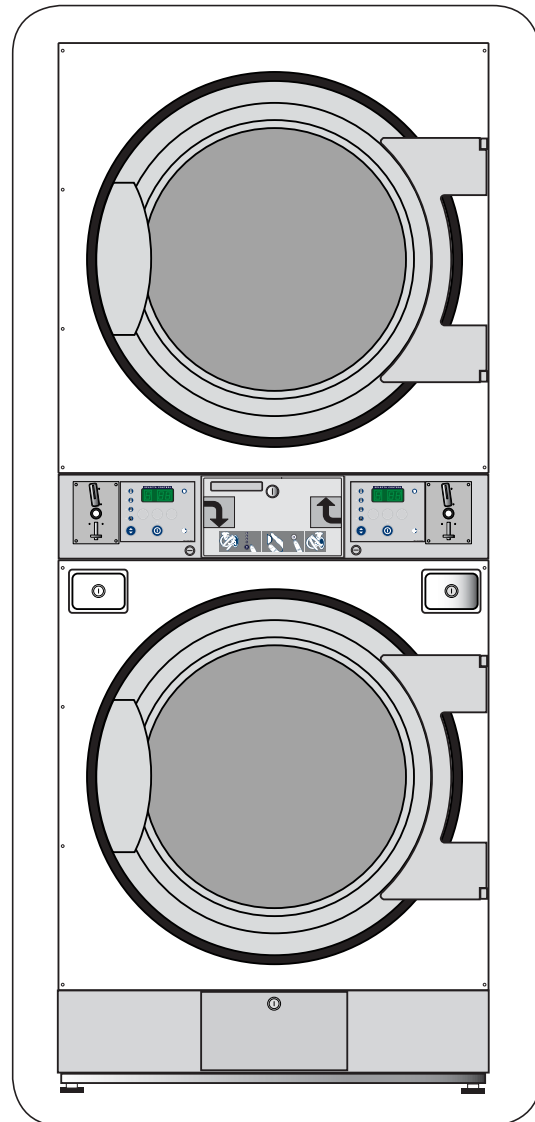
On OPL (non-coin operated) models, there are
five factory-provided drying programs in the
dryer control memory.

It is also possible to directly select the desired
drying time.

The dryer stops automatically when the clothes
are dry (Auto Stop).

Coin drop/card reader

The dryer is available with a factory-installed
coin drop, a factory-installed card-start system,
or it can be prepared for field installation of a
card start system. On vending models, insertion
of a coin or card vends an owner- programmed
drying time.



Loading door

The dryer is delivered with a right-hinged door or a left-hinged door.

The door is not reversible.

A door switch ensures that the dryer stops automatically if the dryer is opened during the program sequence, see section 29.

Operating panel

The operating panel is equipped with:

- Buttons for setting programs, temperatures, and drying time.
- Start/stop button.
- Display showing program selection, remaining drying time and error code, if any.
- Heating indicator, lamp lights when heating is on.

Heating

The standard configuration is equipped for natural gas.

An LPG conversion kit is available see section 40.

Use

The dryer is designed for coin-operated laundries or on premises laundries.

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Function check

Check that the drum is empty and the loading door is closed.

Checking the magnet switches

Start the dryer.

Check if the magnet switches are working properly:

- The dryer **must** stop if the loading door is opened.

If the dryer operates with the loading door open, go to section 29.

- The dryer **must** stop when the lint drawer is opened.

If the dryer operates with the lint drawer open, go to section 29.

Correct direction of rotation

For dryers with a 3-phased motor the direction of rotation must be checked.

Check the direction of rotation of the **blower motor**:

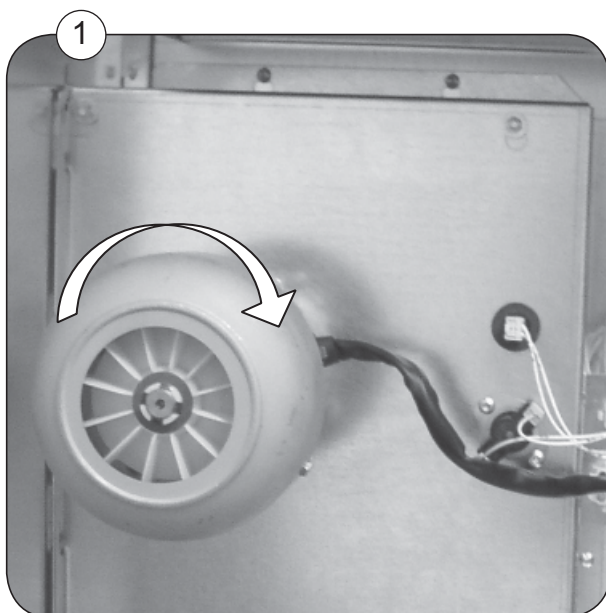
1. Dismount the back panel.
2. **Fig. 1** Correct direction of rotation must be **clockwise** when viewed on the blower motor on the rear of the dryer.

If the direction of rotation is not correct, swap two phases on the power input connection terminal block.

Final test

1. Start the dryer and allow it to operate for 5 minutes on a program that requires heat.
2. Check whether the heating is working by opening the loading door and feeling the heat.

If the above test points have been carried out and the dryer is operational, the dryer is ready for use.



Maintenance

The table below shows the frequency of maintenance of the external parts and the internal wearing parts.

	Frequency	Page
External parts		
Lint drawer	daily	11.5
Lint drawer tracks	once a week	11.5
Door gasket	daily	11.6
Lifters in the drum (RMC only)	quarterly	11.6
Air inlet screen	semi-annually	11.6
Internal wearing parts		
Cleaning around the drum	semi-annually	11.7
Exhaust plenum	semi-annually	11.8
Backdraft dampers	semi-annually	11.8
Blower compartment	semi-annually	11.8
Blower wheel	semi-annually	11.8
Gas burner	semi-annually	11.9
Control compartment	every year	11.9

Maintenance

Lint drawer

Check (at least once daily) that the lint screen in the drawer is clean and in good condition.

Clean the drawer in both the top and bottom dryers. Use a vacuum cleaner.

Clean the gasket with a damp cloth. Do not use solvents that may damage sensitive plastics or painted finish.

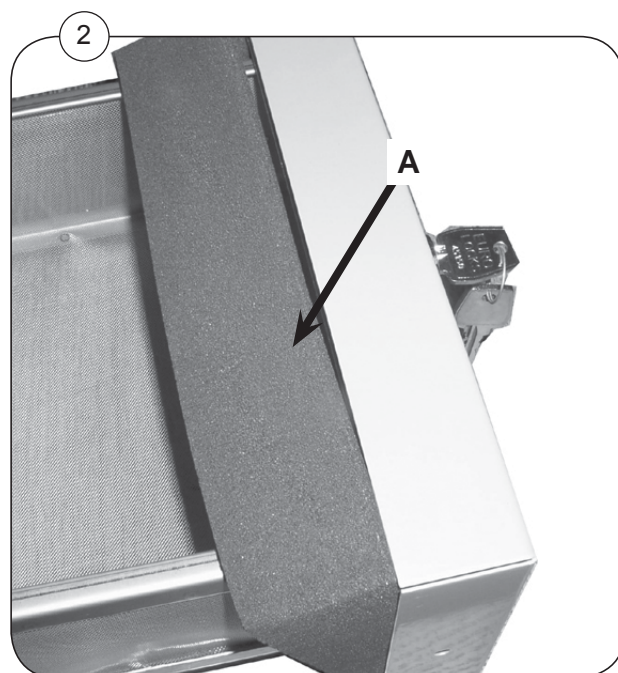
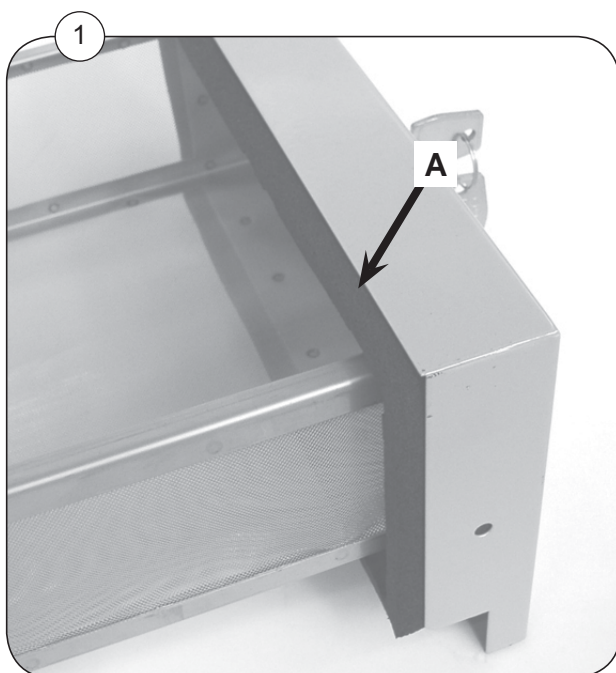
Fig 1 and 2 Replace the gasket **A** by a new one if it is defective. Do not use glue on the gasket.

Lint drawer tracks

Check with a minimum of once a week the lint drawer tracks.

1. Remove the drawer and clean the tracks with a stiff brush.

Remember to clean the lint drawer tracks in both the top and bottom dryers.



Door gasket

Check at least daily that the loading door gasket is clean and in good condition.

Clean with a damp cloth. Do not use solvents that may damage sensitive plastics or painted finish.

Lifters in the drum (Dryer with RMC only)

To ensure that the moisture tracing is always working optimally it is important to clean the lifters.

Lack of cleaning the lifters can reduce the automatic residual moisture control in the clothes resulting in the clothes being moister than requested when the program has ended.

Cleaning

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.

The frequency of cleaning should depend on the operating frequency - with a minimum of once a week.

Air inlet screen

Check every semi-annually that the air inlet screen in the lower back panel has not become blocked with lint or other debris.

Maintenance - Internal wearing parts

Maintenance should be conducted to an extent related to operation frequency and the conditions on the premises, or at least once a semi-annually.

Cleaning around the drum

1. Disconnect the power supply from the dryer.
2. **Fig. 1** Dismount the front panel (See section 42: Replacing support rollers).
3. Remove the lint using a vacuum cleaner.
4. Inspect the two support rollers and replace them if necessary.
5. Re-assemble the dryer.
6. Connect the power supply - remember to carry out a **function check** as described earlier in this section.



Exhaust plenum

Check every semi-annually that the exhaust plenum on the rear of the dryer has not become blocked with lint or other debris.

Dismounting

1. Dismount both rear panels.
2. Dismount the 4 screw in the top panel to the left-hand side.
3. The exhaust plenum can now be lifting away.
The inside part of the exhaust plenum can be cleaned.
4. Reassemble the dryer.

Back draft dampers

Check every semi-annually the Back draft dampers.

Fig. 1 The back draft dampers is located in the exhaust plenum. To dismount the exhaust plenum see Exhaust plenum.

Blower compartment

Check every semi-annually that the blower compartment has not become blocked with lint or other debris.

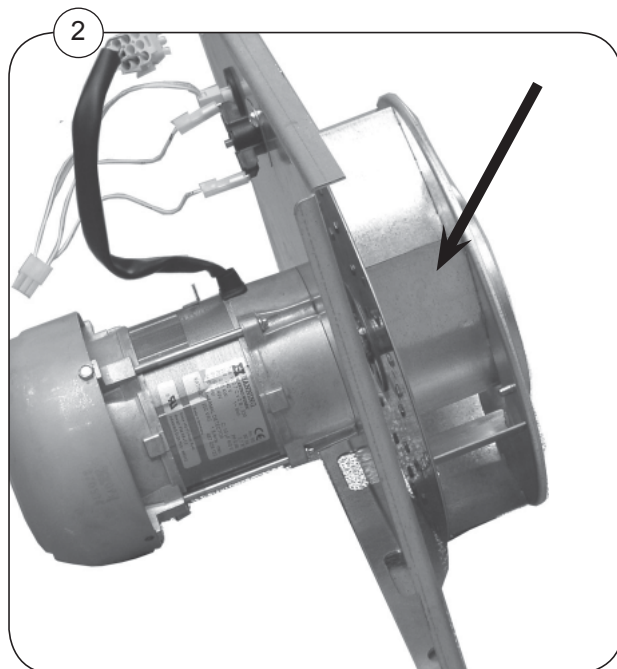
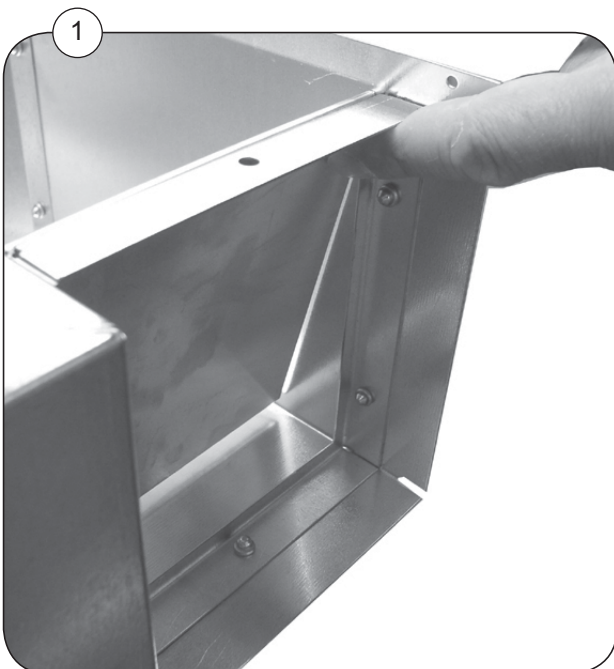
Dismounting the blower to get to the blower compartment, see section 30.

Blower wheel

Check every semi-annually that the blower wheel has not become blocked with lint or other debris.

Fig. 2 Dismount the blower motor to get access to the blower wheel to clean, see section 30.

NOTE Be careful not to damage the blower wheel.



Control compartment

Check every year that the control compartment has not become blocked with lint or other debris.

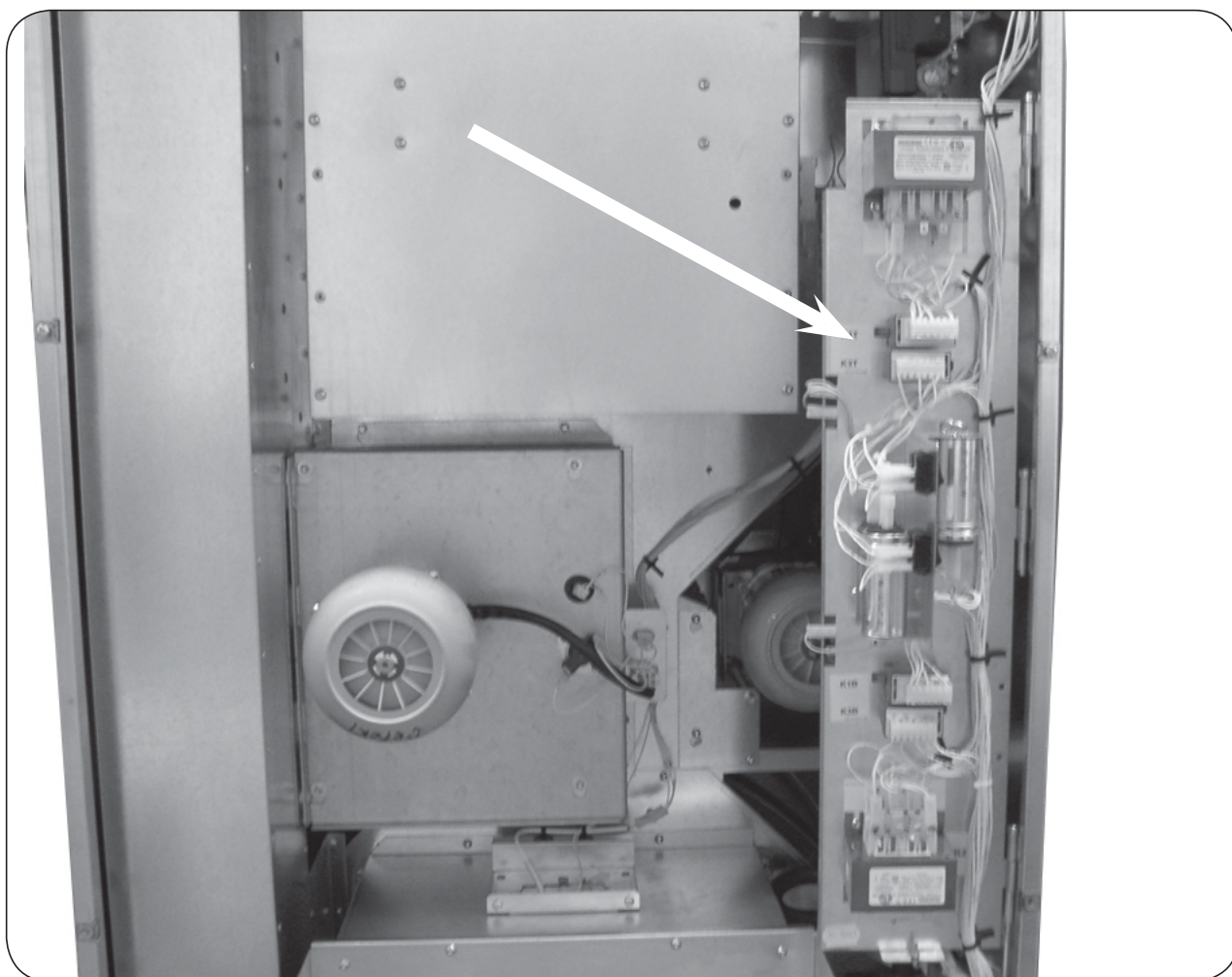
The control compartment is located behind the rear panel.

1. Disconnect the power supply to the dryer.
2. Remove the back plate.
3. Check the control compartment for dust and carefully vacuum clean if necessary.
4. Reassemble the dryer.
5. Connect the power supply - remember to carry out a **function check** as described earlier in this section.

Control of the gas burner

Check every semi-annually that the gas is burning evenly and with a bluish flame.

See test run section 40



The area surrounding the dryer

Fresh-air intake to the room

Check that the fresh-air intake to the room and the exhaust ducts/pipes from the room are not clogged by lint/dust or blocked in any other way.

Dryer area

Check that the dryer area is clear and free from combustible materials, gasoline and other flammable vapours and liquids.

Safety and warnings signs (US and Australia only)

Product safety signs or labels should be replaced when they no longer meet the legibility requirements for safe viewing.

Check that all the safety and warning signs are located on the dryer as shown in the installation manual supplied with the dryer. A copy of this manual is available from your dealer.

Replacement of safety signs or labels should be in accordance with the installation manual.

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**Circuit boards MUST be protected
from static electricity!**



Remember!

- Always use an earthed wrist strap.
- Without the antistatic wrapping, the board is unprotected.
- Keep all items that can cause static discharge (such as plastic bags, fabric, and the like) away from the circuit board.
- Items like plastic, foam plastic, nylon, or cellophane wrapping are all big generators of static electricity.
- Static electricity can not be felt, heard or seen till the voltage reaches 2500V.
- Board components can be damaged by static electricity under 100V.

Printed circuit board

The PCB is placed behind the operating panels to the left and right side of the top lint drawer, fig. 1.

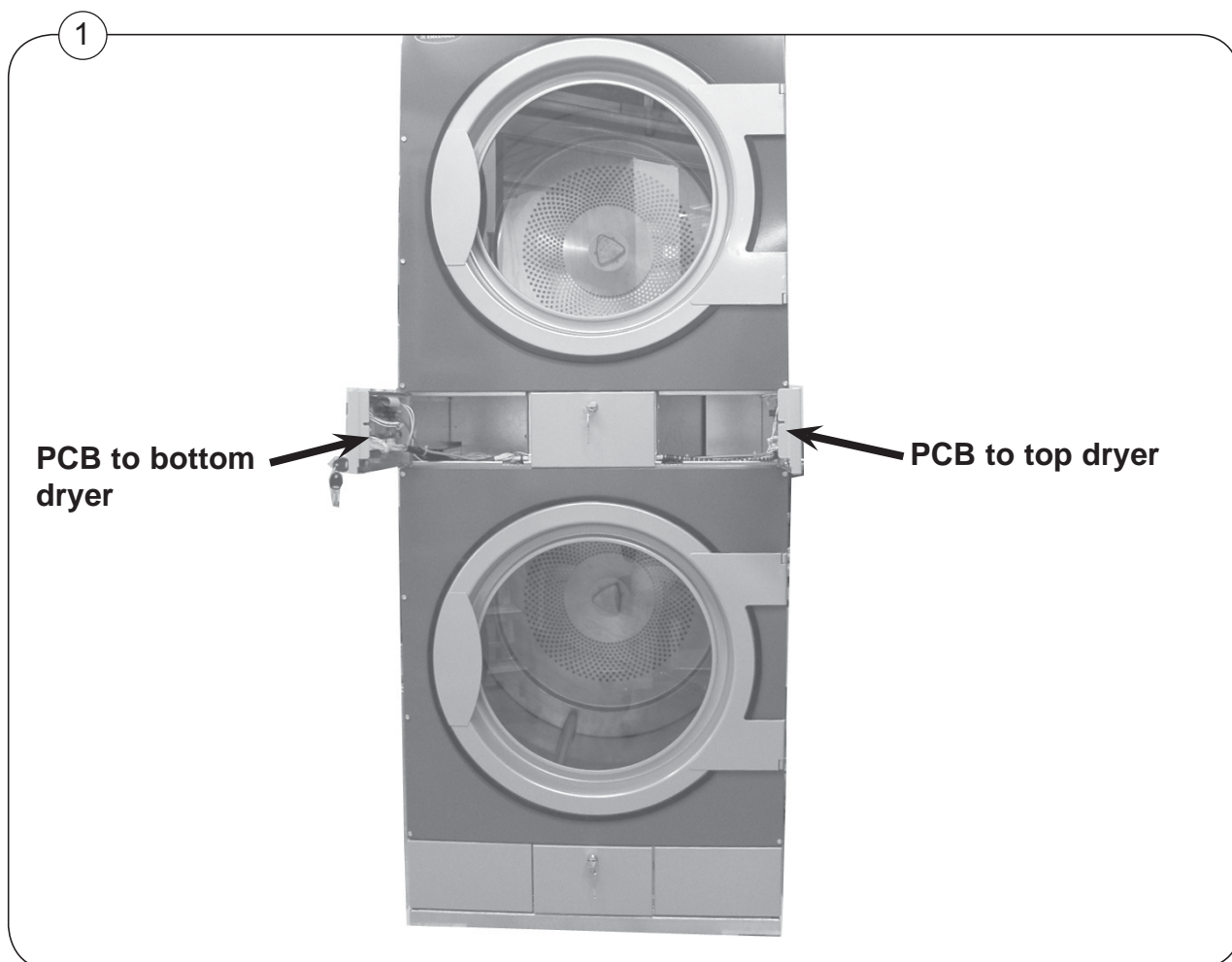
The PCB contains a board with display, indicator lamps.

The PCB contains a button **A** for Switching to Programming mode, see section 3: **Description** in Service Manual for Selecta II Control

The PCB contains a button **B** for gas reset (Only activated on gas dryer) see later in this section.

Connecting accessory systems

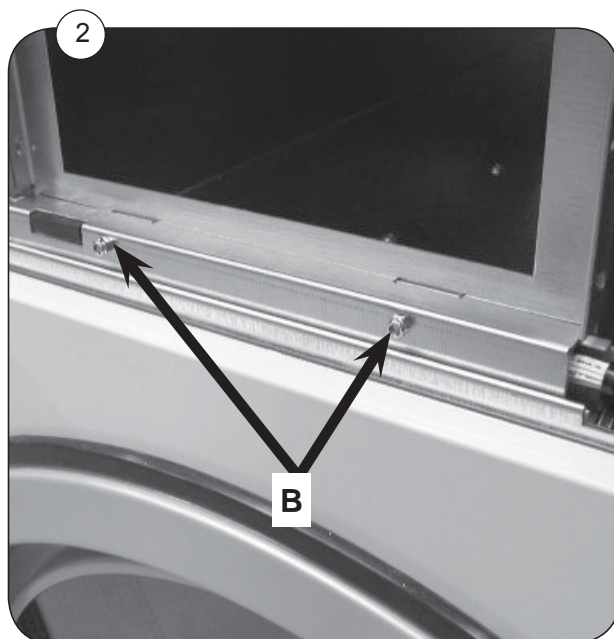
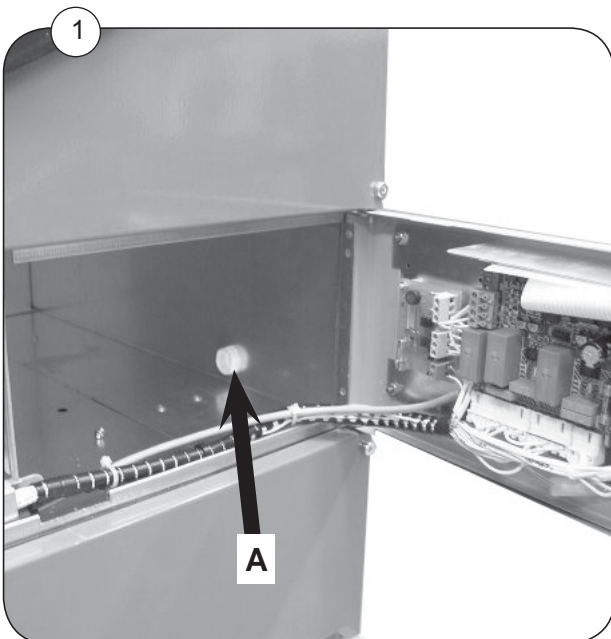
Different payment systems can be connected to the PCB, see section 41: **Machine Access**



Connection to network

Fig. 1 If several dryers are to be connected to a network a bushing for network cables are installed in the both side panels of the dryer. See the installation manual enclosed the dryer.

1. Disconnect the power supply.
2. Remove the lint drawer.
3. Unscrew the 2 screws and remove the cover.
4. Pull the network cable through the bushing and connect the cable to the PCB.
5. The network cable can now be installed.
6. After installing mount the cover again.



Programming

To enter the programming mode press service button **A**.

After pressing the service button **A** the display shows:

0 -- = Group 0.

Program the dryer, see Service Manual for Selecta Control from ver. 4.xx for programming details.

Gas reset button

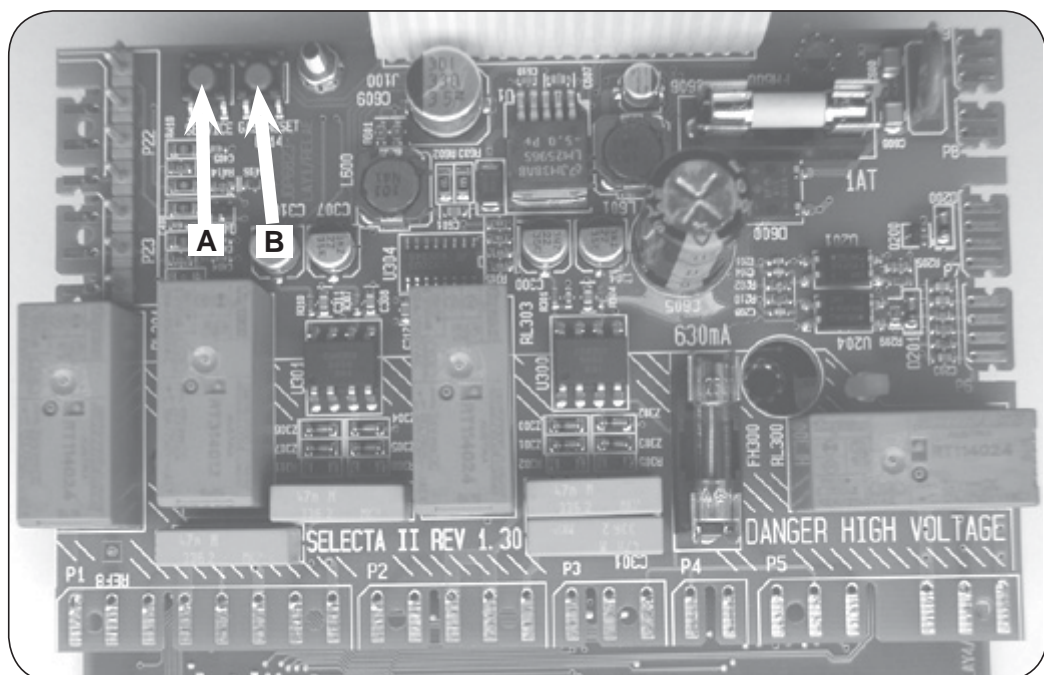
The button **B** is the gas reset button.

See Section 40: Heating, gas.

High voltage on the printed circuit board

Do not touch the printed circuit board.

The shaded areas indicate high voltage.



Replacement of PCB

The PCB is not serviceable. It must be replaced if it fails.

The PCB can be ordered as a spare part.

The spare part consists of: Printed circuit board with fuses in anti-static packing and instructions.

The PCB Selecta Control software from version 4.01 is pre-programmed with specific features and may need to be "post-programmed" after installation.

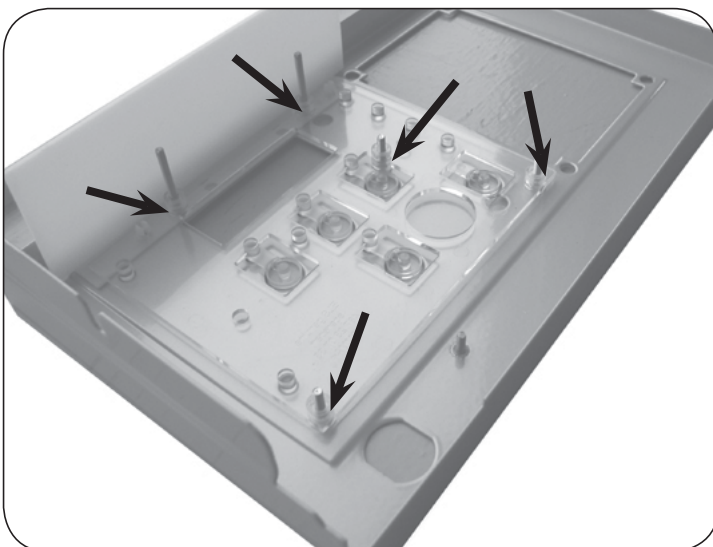
Installation

1. Disconnect the power supply to the dryer.
2. Open the operating panel to the defected print board. (See earlier in this section).
3. Remove the defected print board, but keep the 5 nuts for later use.
4. Mount the new print board from the kit.
5. Mount the nuts where shown and tighten.

Follow the instructions from the kit when programming.

Following settings have to be programmed:

- Reversing (Yes or No). (Parameter 4 01).
- Heating type. (Parameter 4 02).
- Payment settings (Time per coin, standby display value, display flashing). (Parameter 4 03).
- Panel type. (Parameter 4 04).
- Program type. (Parameter 4 05).



Service Manual for Selecta Control software version from 4.01

Certain parameters need to be set after installation, according to the characteristics of the dryer and the preferences of the owner.

See Service Manual for Selecta Control software version from version 4.xx for further details.

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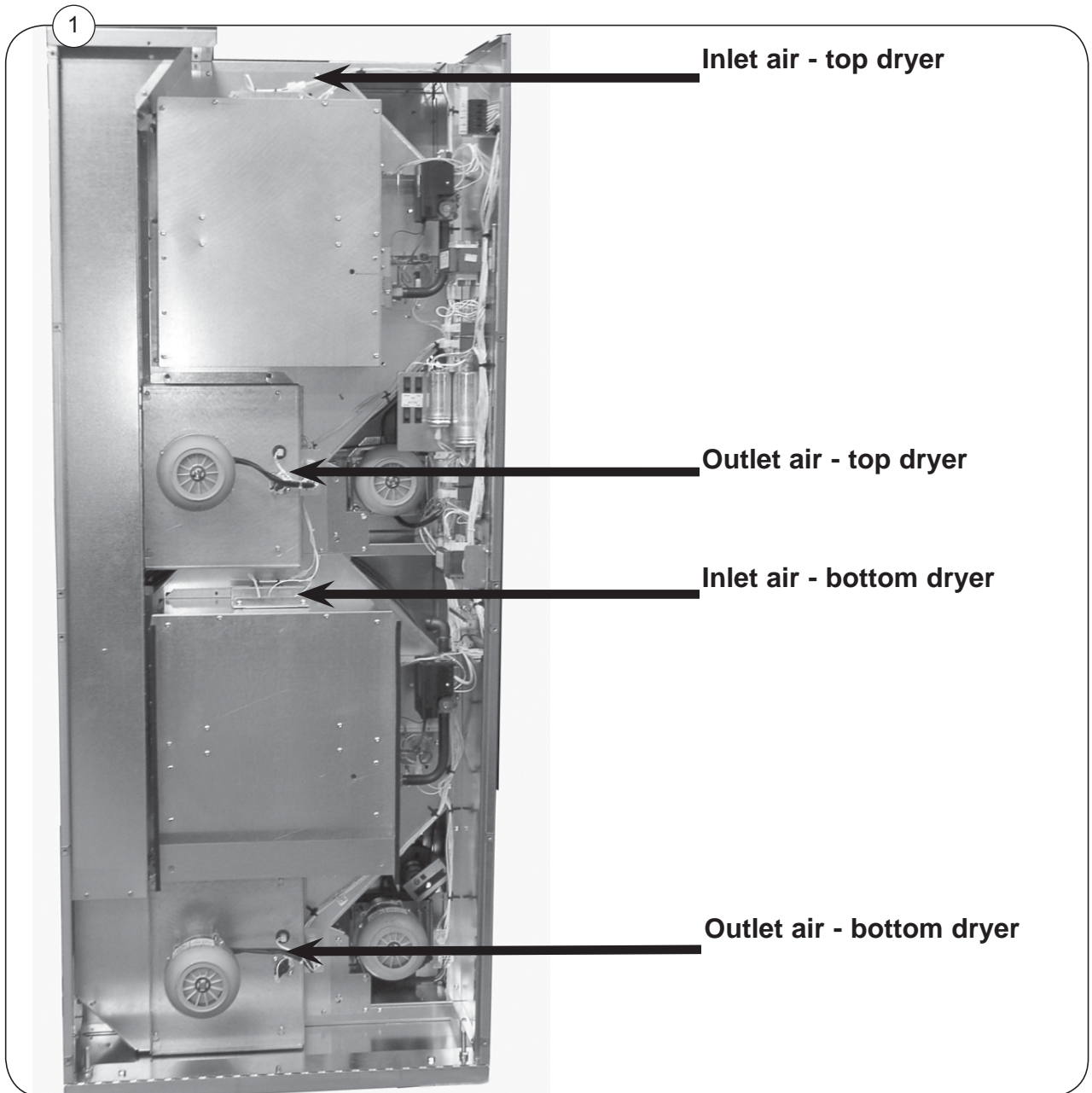
Gas heated dryer - Overview

Overheating thermostats and thermistor elements are located behind the rear panels.

- **Overheating thermostats** can be manual reset or replaced.
- **Thermistor elements** can only be replaced.

On following pages the overheating thermostat and thermistor element are described. Replacement and manual resetting is described later in this section.

Fig.1 Positioning of **Thermistor elements** and **Overheating thermostats** in inlet- and outlet air.



Inlet air - Overheating thermostat

Function

The inlet overheating thermostat opens in the event of overheating, and shuts off the dryer.

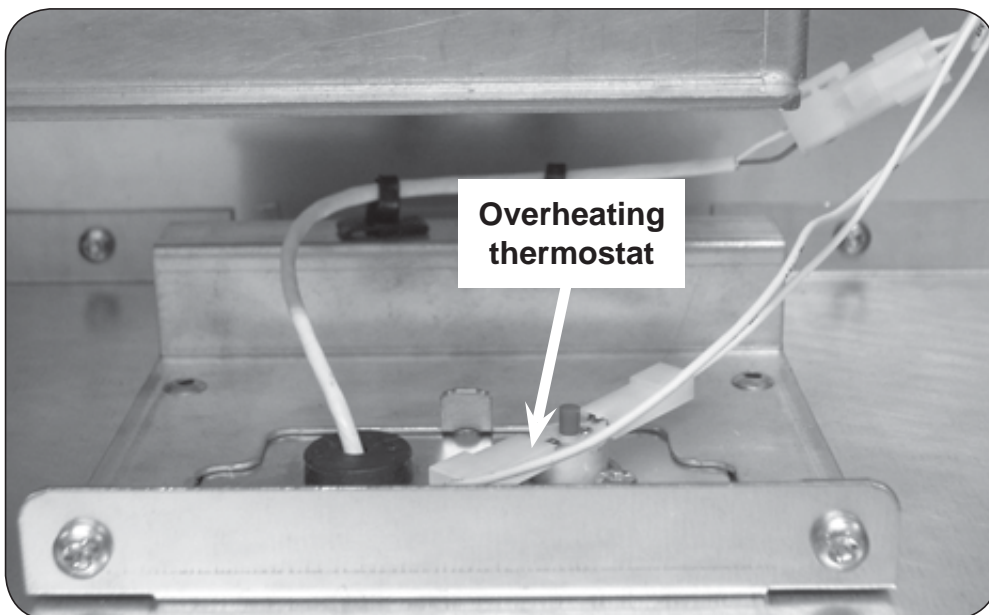
The thermostat has to be reset manually.

Error code

The following error code is related to this section.

E08

See Service Manual for Selecta Control from ver. 4.xx, section 12 for more information.



Inlet air - Thermistor element (PT100 sensor)

Function

The thermistor element measures the temperature of the heated air entering the drum. The resistance of this device is normally 110 Ohms at 20°C (68°F) and increases as the temperature rises.

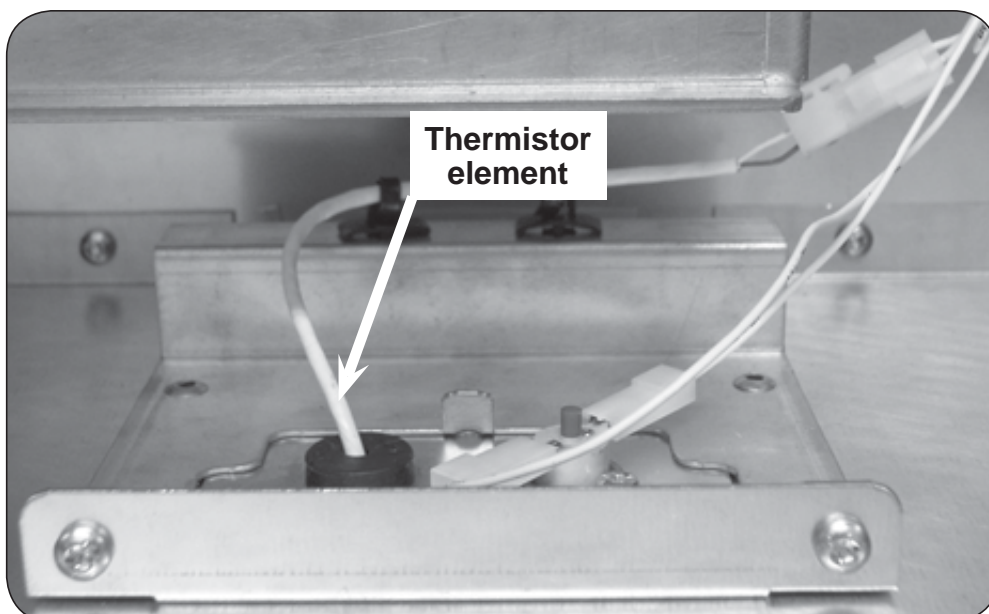
The signal is returned to the PCB and this ensures that the inlet air does not become excessively hot, thus preventing scorching of garments.

Error codes

The following error codes are related to this section:

E03, E17

See Service Manual for Selecta Control from ver. 4.xx, section 12 for more information.



Inlet air - Overheating thermostat and thermistor element

In order to replace

1. Fig. 1 Disconnect the power supply.
2. Remove the top rear panel.
3. Loosen wires **A**.
4. Remove wires at points **B**.
5. Remove screws **C** and pull out the panel.

Now the overheating thermostat or the thermistor element can now be replaced.

In order to reset the thermostat

1. Fig. 1 Disconnect the power supply.
2. Remove the back panels.
3. Reset on button **D**.

Replacing the overheating thermostat

1. Remove 2 screws.

Replacing the thermistor element

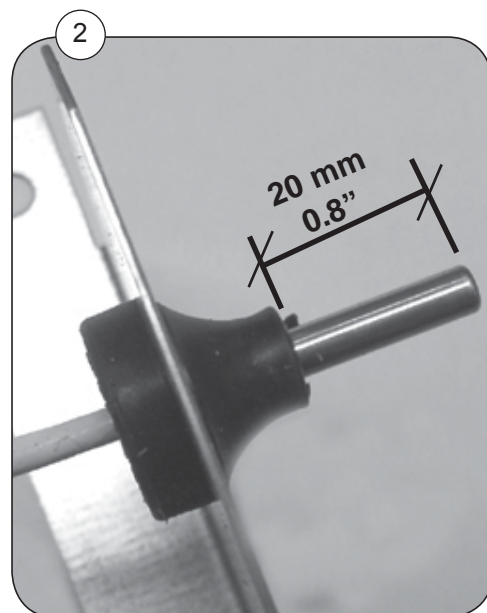
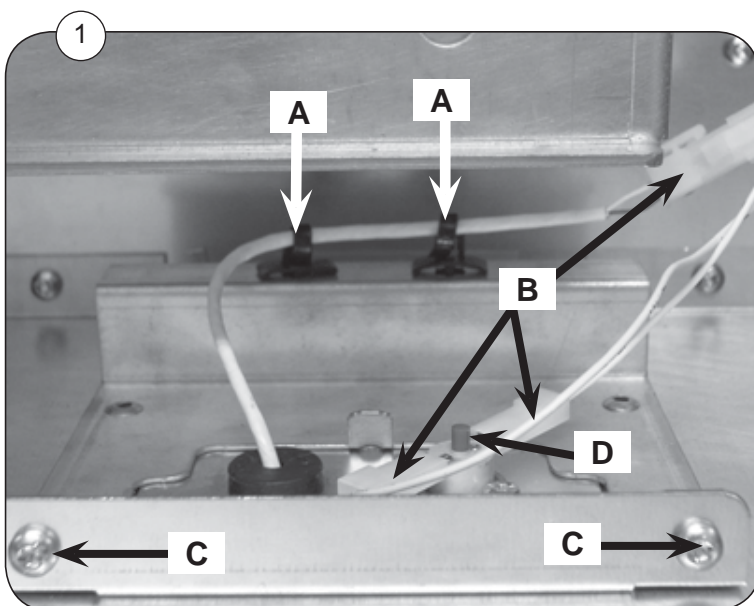
1. Fig. 2 Mount the element as shown.

After replacement / resetting

1. Remount the top rear panel and wires
2. Reassemble the dryer.

Function check

Test the dryer see section 11: **Function check**.



Outlet air - Overheating thermostat

Function

The outlet air overheating thermostat is located in the outlet air flow.

The overheating thermostat ensures that the dryer does not overheat during program operation.

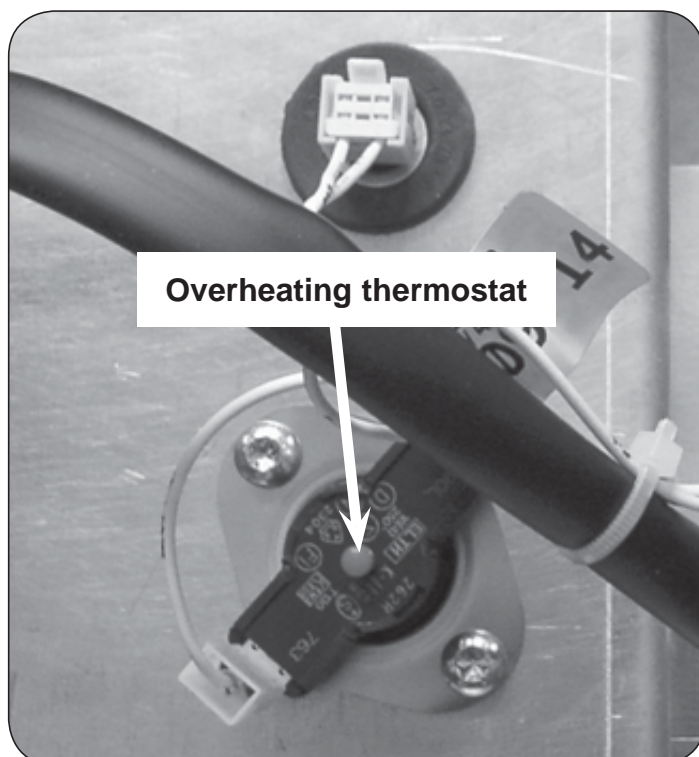
The thermostat opens automatically and has to be reset manually.

Error code

The following error code is related to this section.

E08

See Service Manual for Selecta Control from ver. 4.xx, section 12 for more information.



Outlet air - Thermistor element (NTC sensor)

Function

The sensor measures the temperature in the outlet air and the signal is returned to the main circuit board.

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

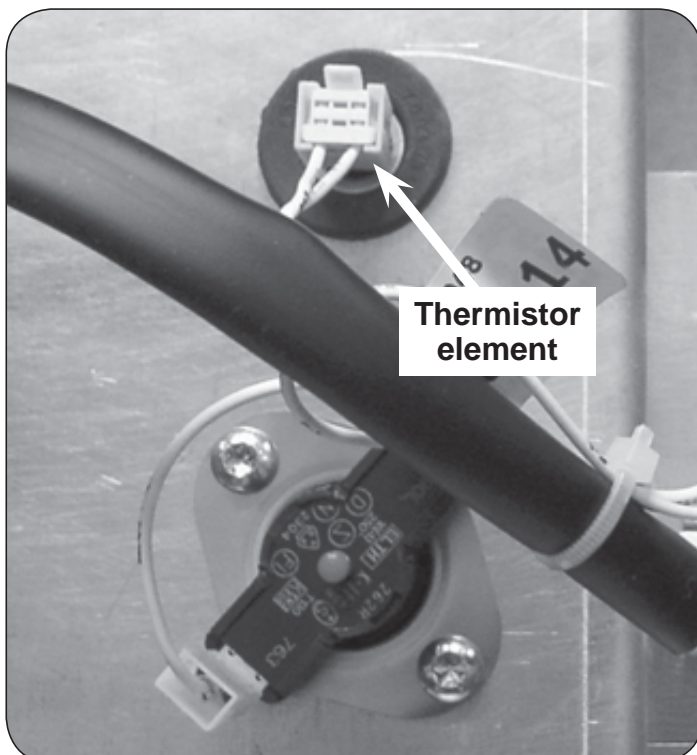
The resistance of this device is normally 4 to 6 kOhms at 20°C (68F) and it drops as its temperature increases.

Error codes

The following error codes are related to this section.

E04, E18

See Service Manual for Selecta Control from ver. 4.xx0 , section 12 for more information.



Outlet air - Overheating thermostat and thermistor element

Replacing overheating thermostat (B)

1. Fig. 1 Disconnect the power supply.
2. Remove the rear panels.
3. Loosen wires **A**.
4. Remove the 2 screws and replace the thermostat.

In order to reset the thermostat (B)

1. Fig. 1 Disconnect the power supply.
2. Remove the rear panels.
3. Reset on button.

Replacing the thermistor element (C)

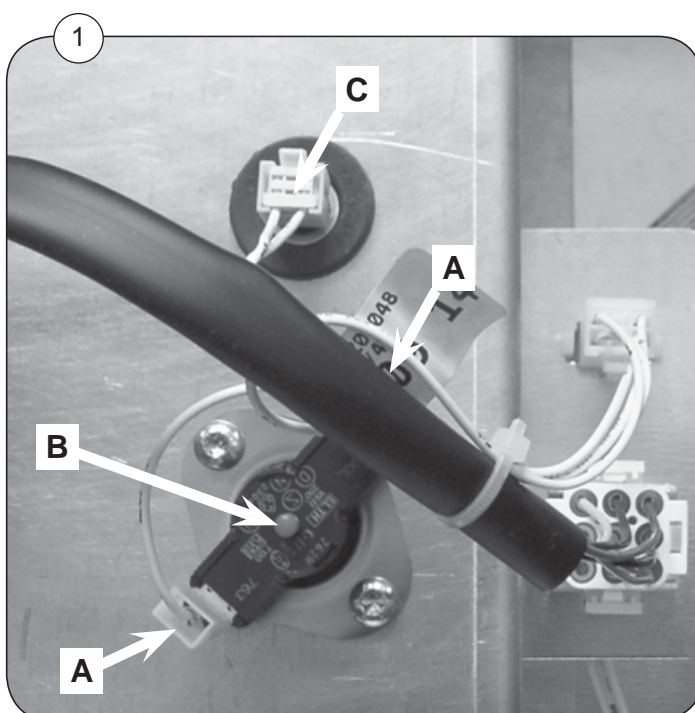
1. Fig. 1 Remove the element and loosen plug **C**.
2. Replace sensor.

After replacement / resetting

1. Remount wires.
2. Reassemble the dryer.

Function check

Test the dryer see section 11: **Function check**.



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Loading door magnet switch

Fig. 1 A magnet switch **A** is mounted below the snap catch at the loading door.

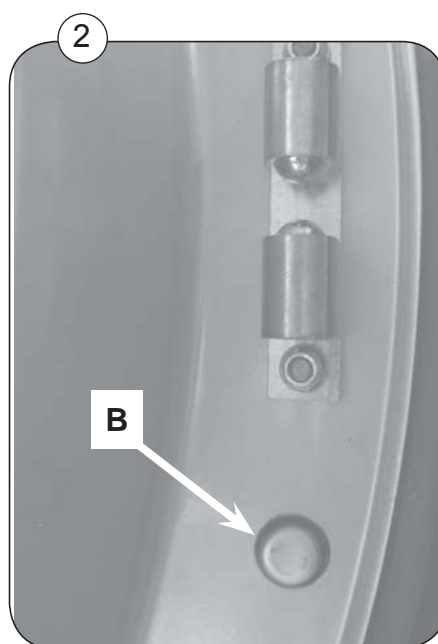
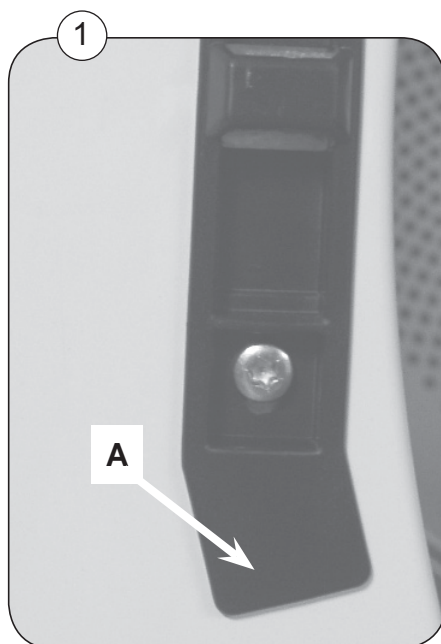
Fig. 2 A magnet **B** is mounted on the loading door under the snap lock.

The switch ensures that the dryer stops automatically if the loading door is opened during operation.

If the dryer does not stop when the loading door is opened, following has to be checked

After replacement

1. Reassemble and test, as follows:
2. Connect the power supply.
3. Start the dryer.
4. Check that the fan, drum and heat all stop when the loading door is opened.



Testing door lock on loading door

It must be possible to open the door lock on the loading door from the inside with a force not exceeding 70N (7,1Kp).

The door must be strained with a force corresponding to the above 70N (7,1Kp).
The strain must be done as far from the door hinge as possible.

Fig. 1 The lock is adjustable.



Lint drawer magnet switch

Function

The lint drawer magnet switch ensures that the dryer will not operate when the drawer is open.

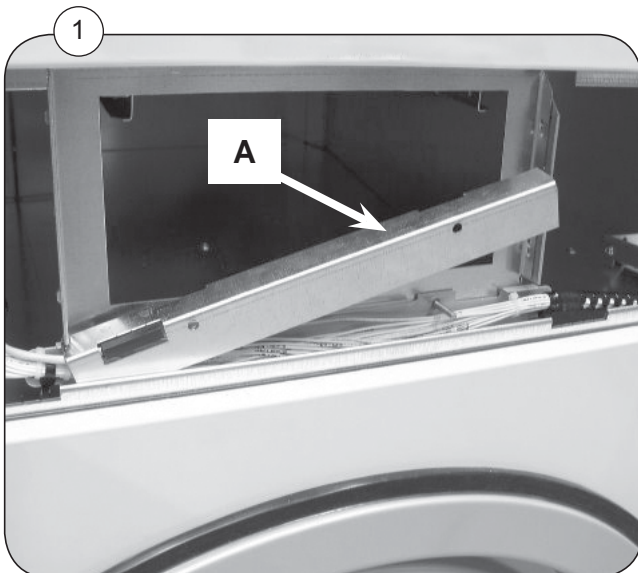
If the dryer does not operate with the lint drawer closed, the lint drawer switch may need to be replaced.

Replacement

1. Disconnect the power supply.
2. Remove the lint drawer.
3. Open the left operating panel.
4. Unscrew the 2 nuts and remove the cover **A**.
5. Disconnect the wires from the switch.
6. Mount the new switch.
7. Connect wires to the new switch.
8. Remount the cover with the new switch.

Testing the lint drawer switch

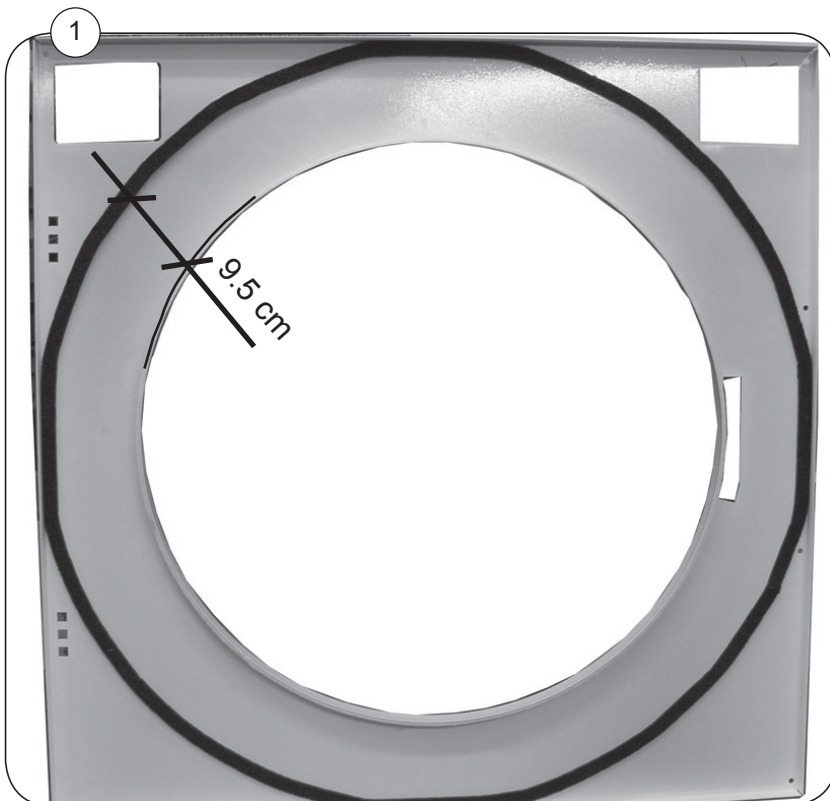
1. Connect the power supply.
2. Start the dryer.
3. Confirm that the fan, drum and heat all stops when the lint drawer is opened while the dryer is operating.



Replacement of rubber packing at the front

Inspect the rubber packing at the front and if necessary remove and replace it.

Clean any residual adhesive from the panel before installing a new packing.
Shown at fig 1.



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Replacement of drum motor and transmission parts	30.9
Replacement of transmission belt.	30.11
Replacement of transmission pulley	30.12
Replacement of drum motor or pulley.	30.13

Motors

Fig 1 The dryer has 2 motors per pocket.

The motors features a thermal overheat protection device.

If the motor overheats, the control current is switched off and an error code is displayed.

The overhear protection switch inside the motor windings recloses automatically when the motor cools sufficiently. The dryer can then be restarted.

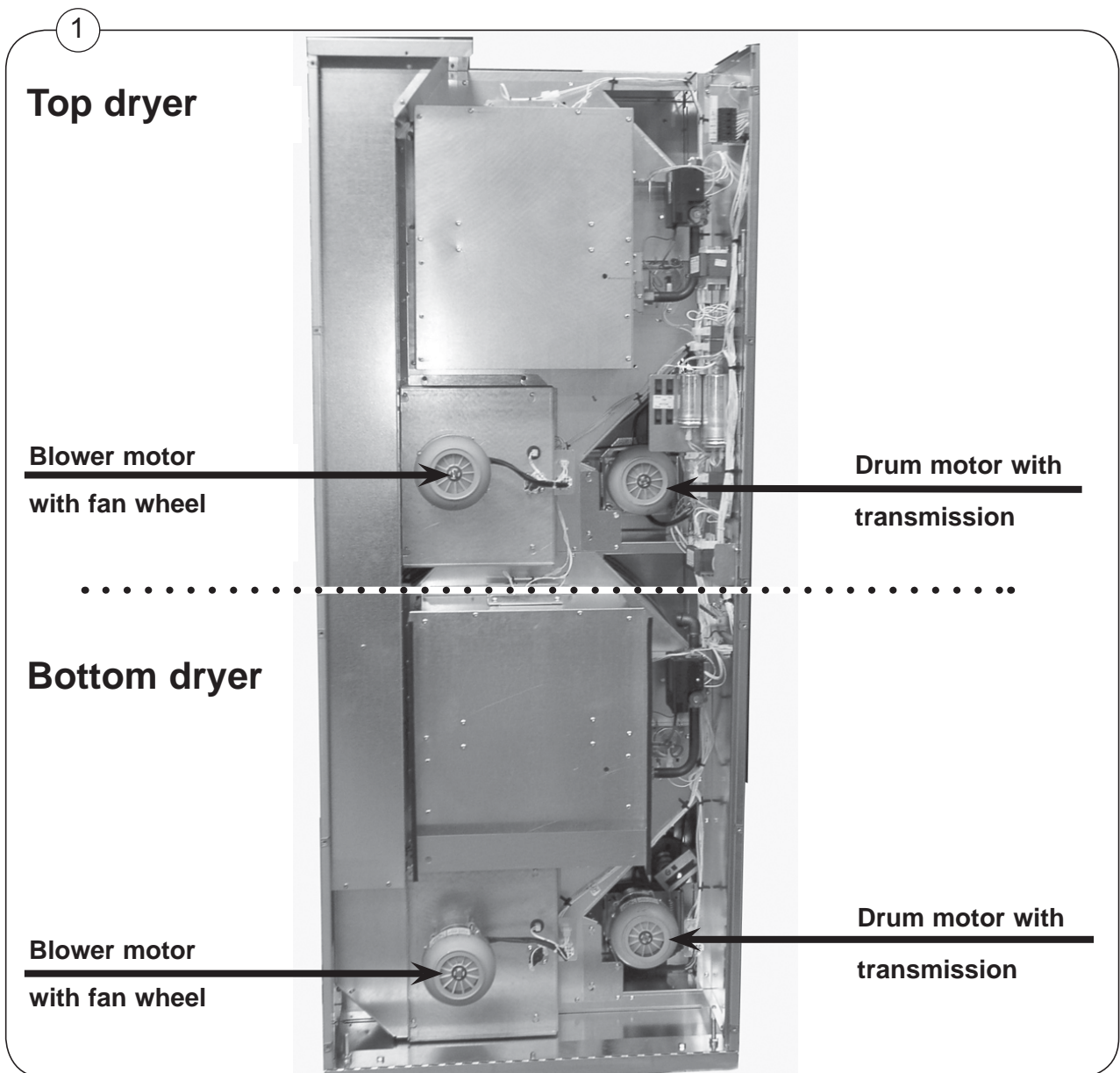
Error codes

The following error codes are related to the motors:

E05 = Blower motor overheated

E06 = Drum motor overheated

See Service Manual for Selecta Control from ver. 4.xx, section 12 for more information.



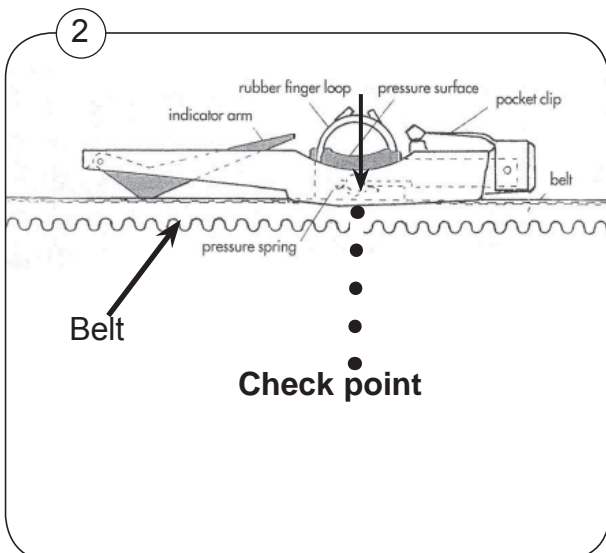
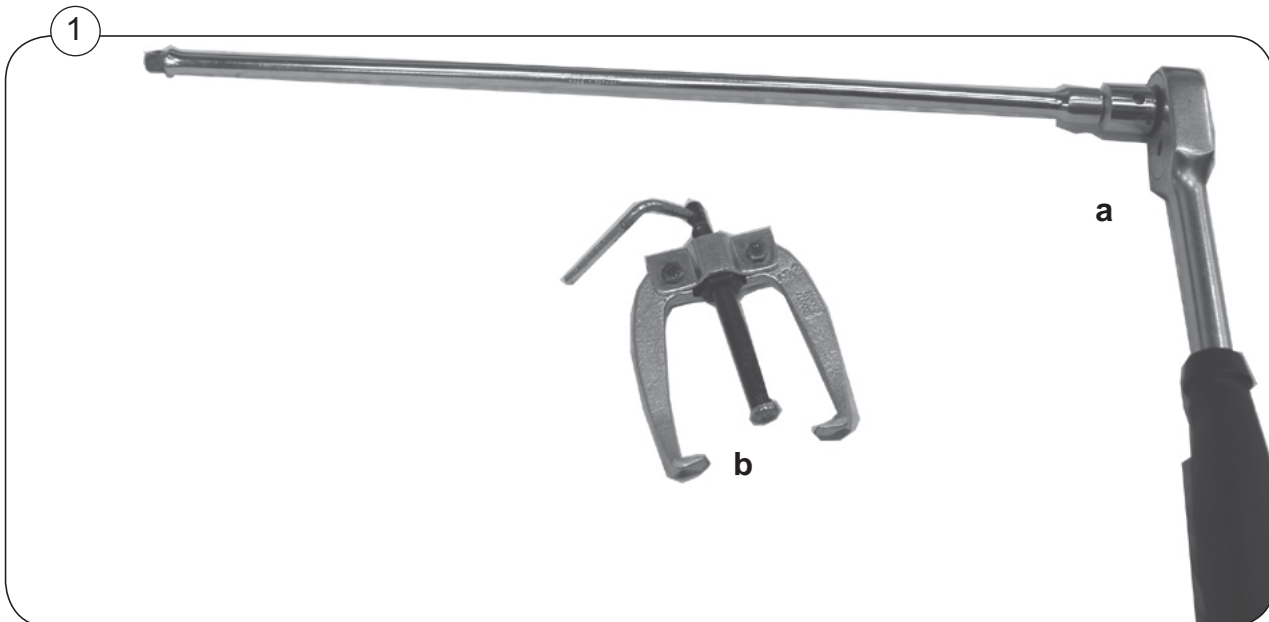
Necessary tools

In order to replace the transmission belt, the pulleys or the motors it is necessary, besides ordinary tools, also to have the following tools:

Fig. 1 **a** = 3/8" torque wrench with extension but without a socket.

b = Puller

Fig. 2 and 3 A gauge from Optibelt or a frequency meter or similar instrument.



Dismounting of blower motor and fan wheel

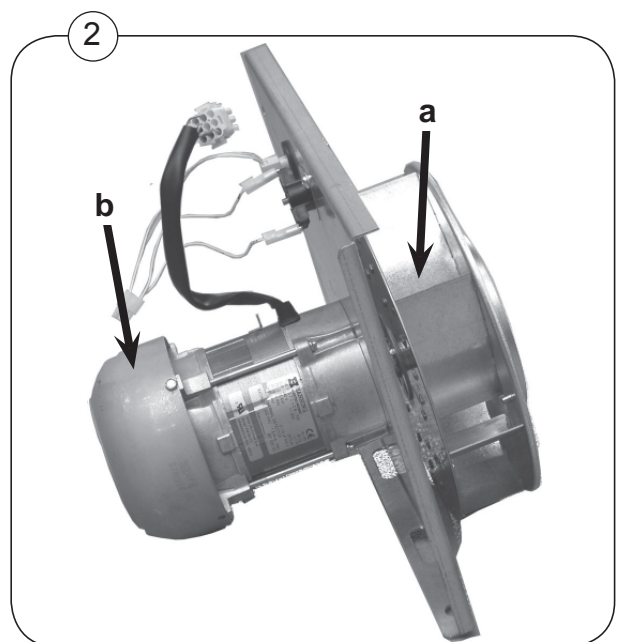
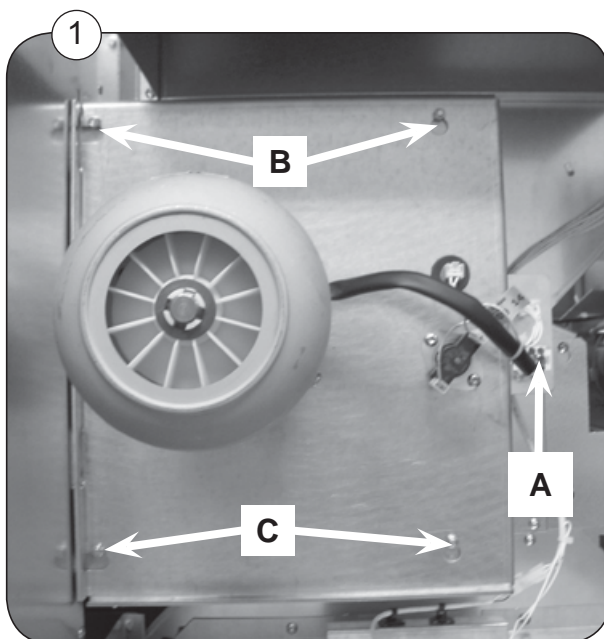
1. Disconnect the power supply to the dryer.
2. Remove the rear panels.
3. Fig. 1 Unplug the blower motor **A**.
4. Fig. 1 Loosen the 2 screws **B**.
5. Fig. 1 Dismount the 2 screws **C**.
6. Fig. 2 Carefully release blower motor with fan wheel. (The fan wheel is easily damaged).

After dismounting, it is possible to replace:

a = Fan wheel.

b = Blower motor.

See next page: **Separating fan wheel from blower motor**



Separating fan wheel from blower motor

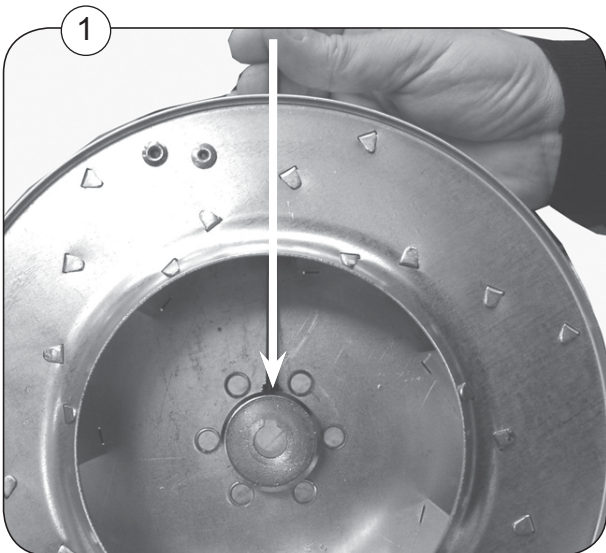
1. Dismount the slotted set screw from the shaft, you can get access to the set screw through a hole in one of the blades, see principle fig.1.
2. Carefully release the fan of the motor shaft using a puller.
3. Replace the fan wheel.

If the replacement is done see: **Mounting blower motor and fan wheel**

Replacing blower motor

1. Unscrew the 4 screws in the panel which secure the blower motor.
2. Remove the panel.
3. The blower motor can now be replaced.

After replacing the blower motor see: **Mounting blower motor and fan wheel.**



Mounting blower motor and fan wheel

Note! By reassembling it is important **not** to damage the blower motor or the fan wheel.

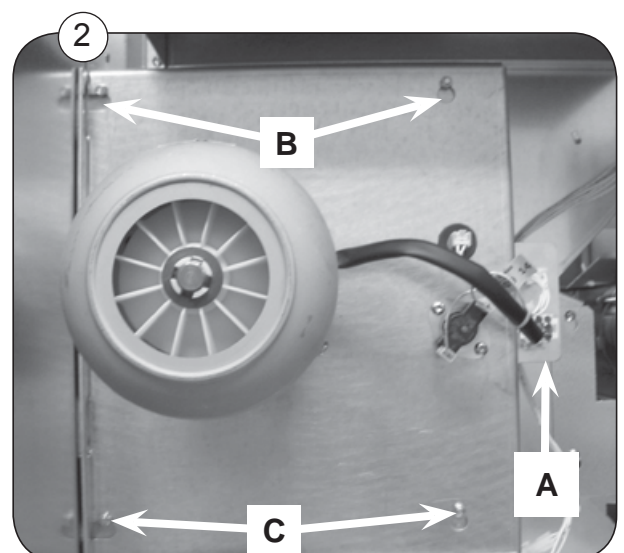
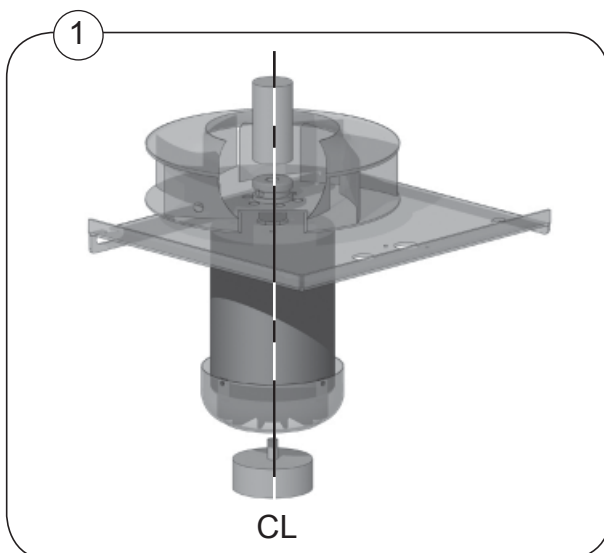
1. Fig. 1 It is important to place the motor as shown fig 1.
2. Mount the panel on the motor, and tighten the 4 screws with 5Nm.
3. Lubricate the motor shaft with Antifret G1 LGAF 3E or similar quality.
4. Mount the fan wheel.

Fig. 1 **Pressure must only be exerted to the center of the fan wheel.**

5. Mount the slotted set screw and apply the screw with a screw securing product such as Omnifet Seal 40M or similar quality and tighten with 10Nm/ 7.4 lbf ft.
6. Carefully place the blower motor with fan wheel in the dryer.
7. Hang the module on the screws **B**.
8. Mount screws **C** and tighten all 4 screws.
9. Connect the motor plug **A**.

Finishing replacement

1. Assemble the dryer.
2. Connect the power supply.
3. Check the dryer, see section 11: **Function check.**



Loosening the belt tensioner of the drum motor

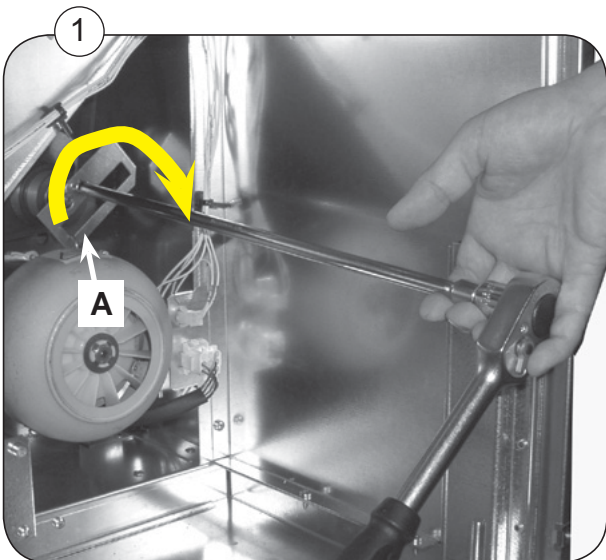
If the drum, drum belt or the drum motor has to be replaced it is necessary to loosen the belt tensioner.

1. Disconnect the power supply to the dryer.
2. Remove the rear panels.
3. Unplug the drum motor.
4. Fig. 1 Loosen the spring holder **A** at the belt tensioner, see arrow.

After loosening the belt tensioner the following items can be replaced:

Drum motor or transmission, see next pages

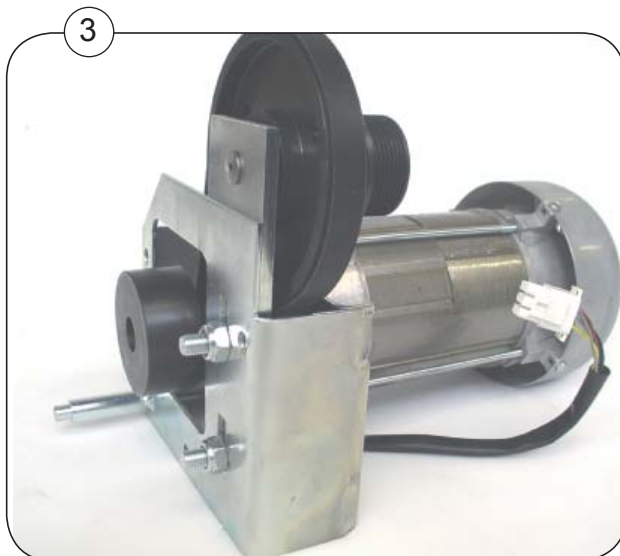
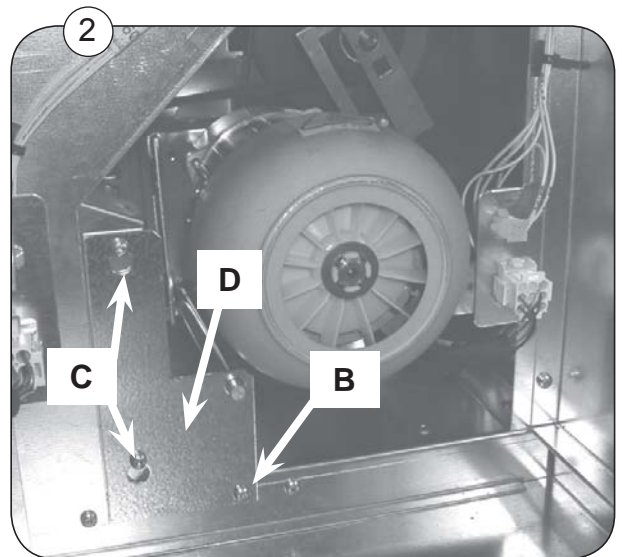
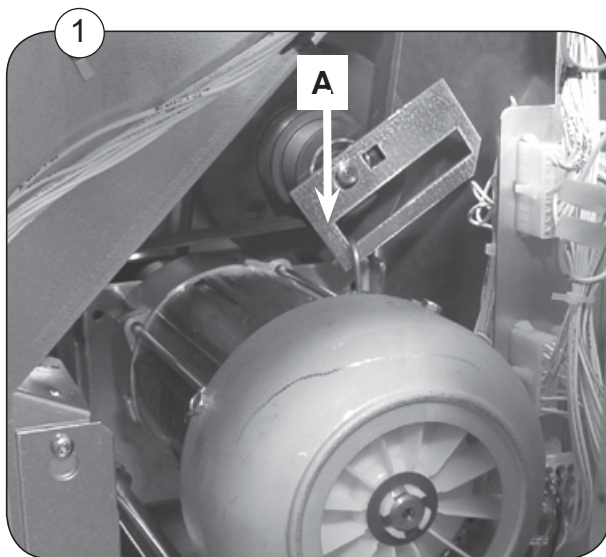
Drum or drum belt, see section 42.



Replacement of drum motor and transmission parts

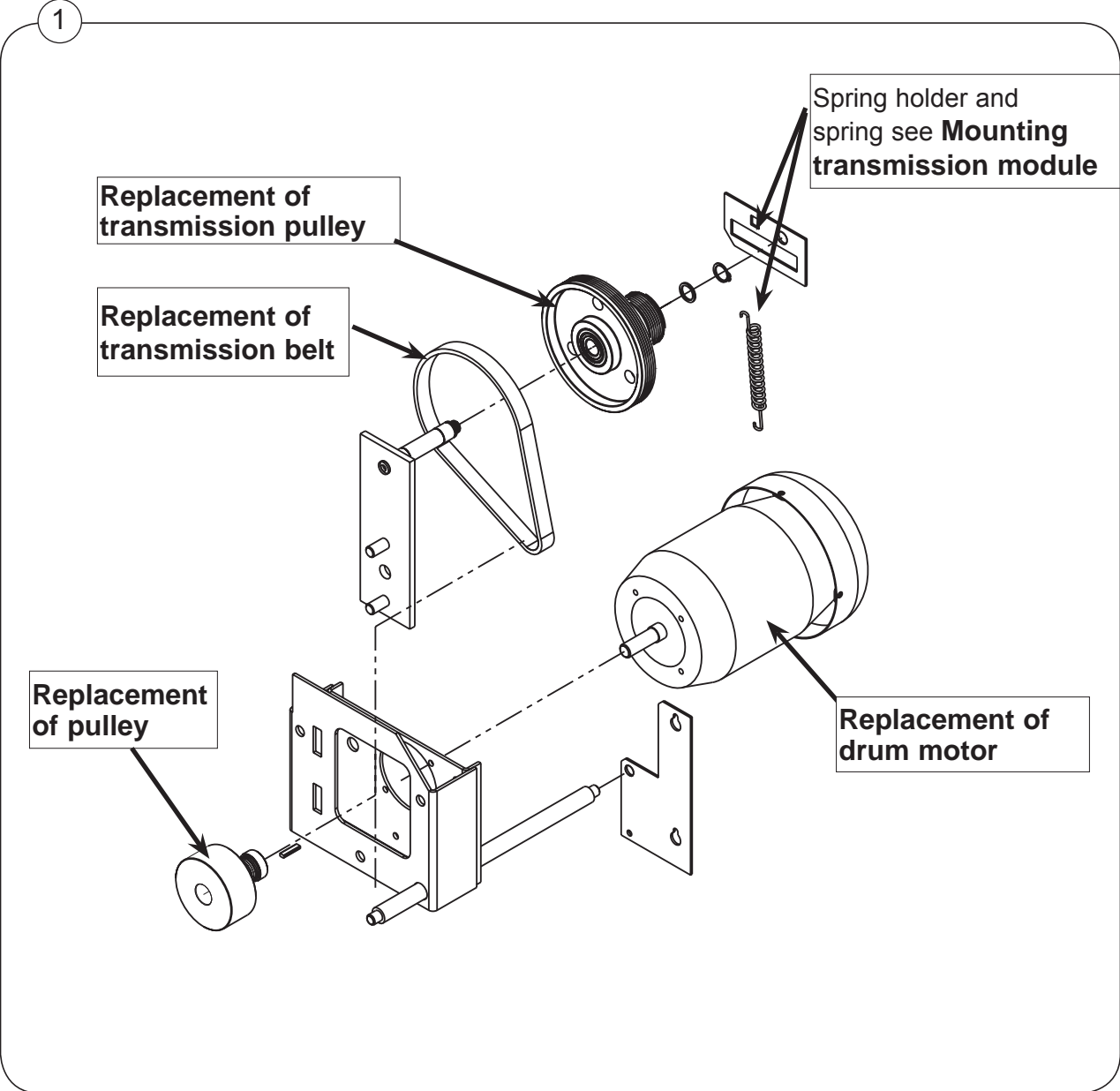
1. Loosen the transmission belt, see: **Loosening the belt tensioner**
2. Fig.1 Remove the spring holder **A** at the belt tensioner, the spring is released.
3. Lift the drum belt off the pulley.
4. Fig. 2 Remove screw **B**
5. Fig. 2 Loosen the 2 screws **C**.
6. Fig. 2 Remove the bracket **D**.
7. Fig. 3 Lift off the drum motor and the transmission.

After dismounting the drum motor and the transmission several items can be replaced, see **Replacement overview** next page.



Replacement overview

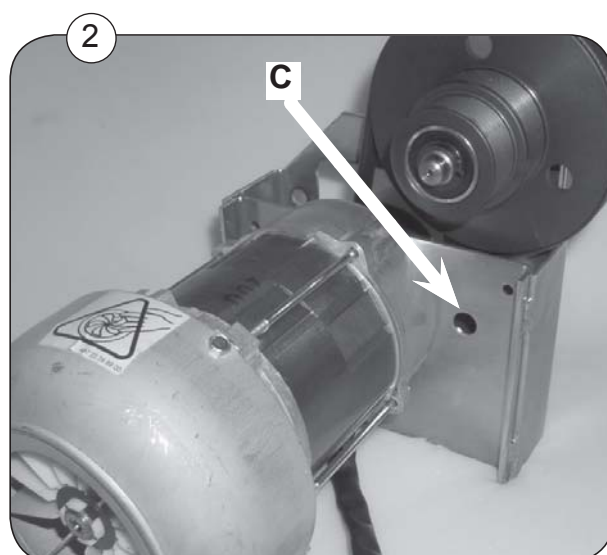
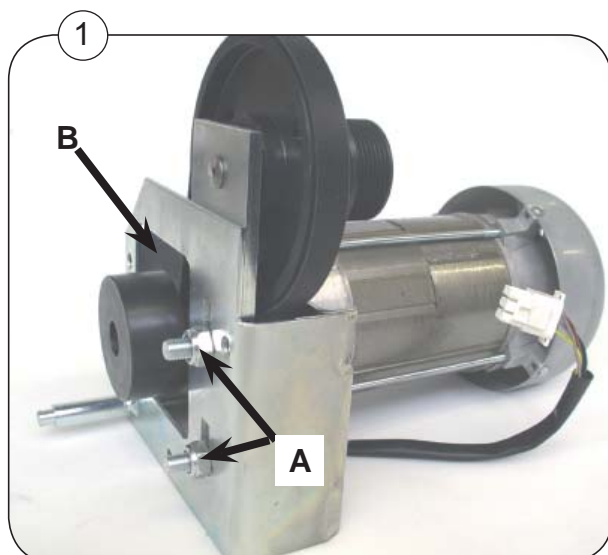
Fig. 1 The boxed text referring to the description later in this section
All the parts which are not mentioned can be replaced as well.



Replacement of transmission belt

1. Dismount the transmission module, see section: **Replacement of drum motor and transmission parts**
2. Fig. 1 Loosen the 2 nuts **A**.
3. Remove the old belt.
4. Fig. 1 Push the new belt through the hole **B**. Remember to turn the belt so that the tracks are facing the pulley.
5. Pull the belt over the transmission bearing.
6. Fig. 2 Put a screw driver through the hole **C** and into the opposite hole.
7. Press the screw driver upwards.
8. Tighten the belt to $225 \pm 25\text{Hz} / 65\text{N}$.

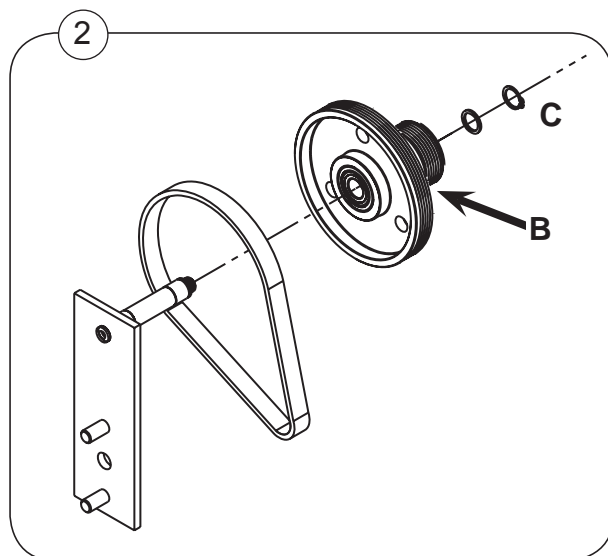
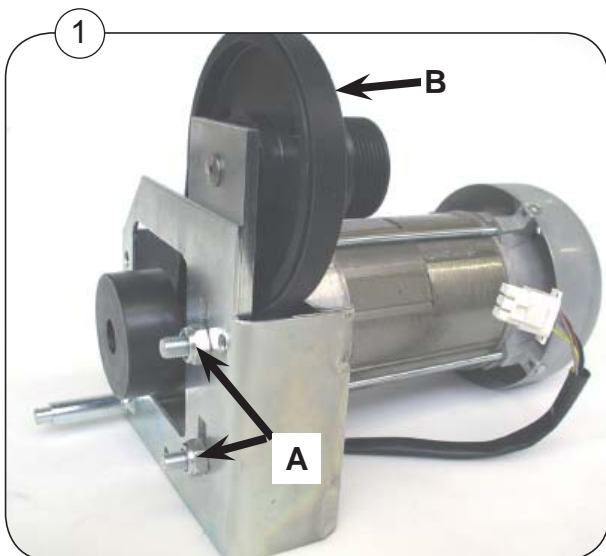
If the replacement is done see section **Mounting the drum motor and the transmission**.



Replacement of transmission pulley

1. Dismount the transmission module see section: **Replacement of drum motor and transmission parts**
2. Fig 1 Remove the 2 nuts **A**.
3. Fig. 2 Remove the retaining ring **C** and 1 washer at **B**.
5. Pull the pulley **B** off and replace.
6. Mount the washer and the retaining ring.
7. Mount the bracket and the two nuts - do not tighten the nuts too much.
8. Put the transmission belt around the pulley.
9. Tighten the belt, see **Replacement of belt**
10. Fig. 1 Tighten the 2 nuts **A** with 30NM.

If the replacement is done see section **Mounting the drum motor and the transmission**.



Replacement of drum motor or pulley

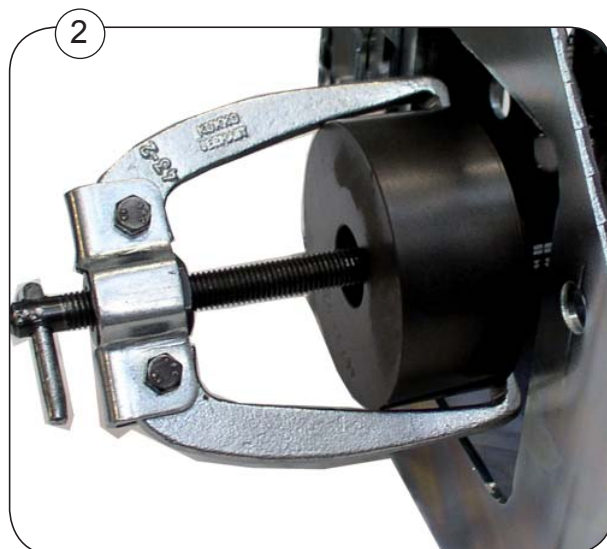
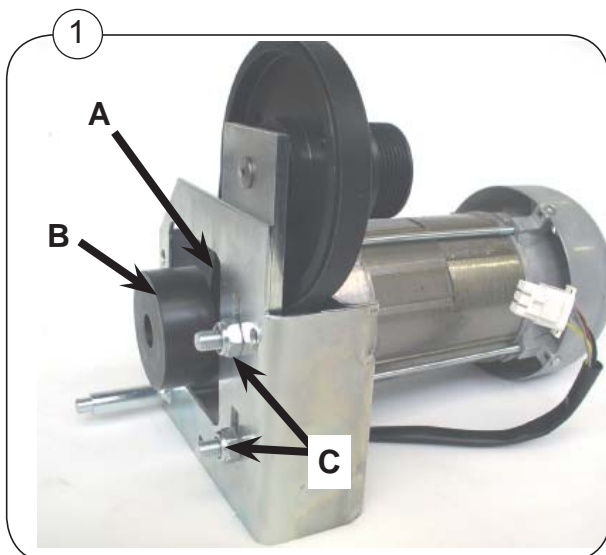
1. Loosen the transmission belt, see **Replacement of transmission belt**
2. Fig. 1 Dismount the 2 slotted set screws **A** in pulley.
3. Fig. 2 Pull off the pulley, use a puller.
4. Before mounting the pulley it is important to lubricate the motor shaft with anti-fretting paste G1 LGAF 3E or similar quality.
5. Replace the drum motor or the pulley.

Pressure must only be exerted to the center of the motor.

See the principle fig. 1 Mounting blower and fan wheel.

6. Apply the 2 slotted set screws with a screw securing product such as Omnifit Seal 40M or similar quality.
7. Put the transmission belt around the transmission pulley.
8. Tighten the belt, see **Replacement of transmission belt**
9. Fig. 1 Tighten the 2 nuts **C** with 30NM.

After replacement see next page: **Mounting the drum motor and the transmission.**



Mounting the drum motor and the transmission

1. Mount the transmission module in the dryer.
2. Fig. 1 Mount bracket **D** and screw **B** and tighten all screws **B+C**.
3. Put the drum belt around the pulley.

Note! It is important to fit the belt at the right place of the pulley.

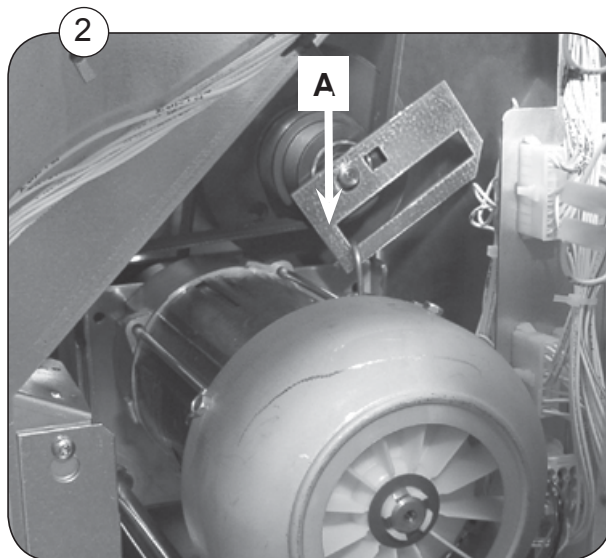
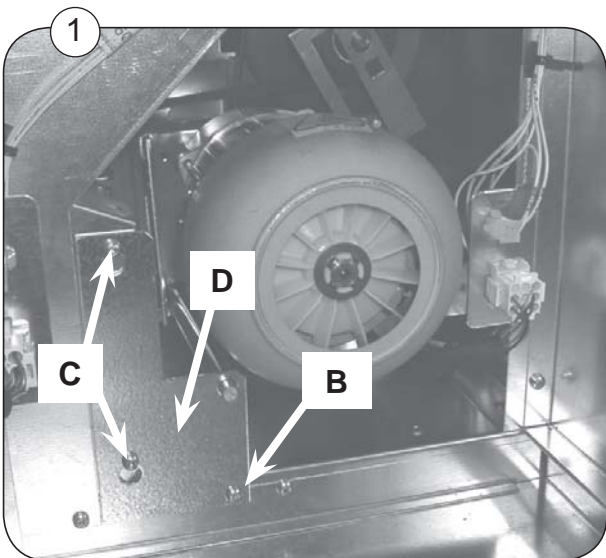
The small diameter of the pulley is used for **60 Hz**.

The large diameter of the pulley is used for **50 Hz**.

4. Fig. 2 Mount the bracket **A** on the shaft of the pulley.
5. Mount the spring in the spring holder.
6. Tighten the belt tensioner reverse order of loosening the belt.

Finishing replacement

1. Assemble the dryer.
2. Connect the power supply.
3. Check the dryer, see section 11: **Function check**.



Contents

Electric heated dryer

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Gas heated dryer

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Tables of pressure and adjustments	40.12
Replacement of gas burner tube	40.14
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**WARNING !
FIRE AND / OR EXPLOSION HAZARD!**

**Gas heating system service procedures
must be carried out by qualified
service personnel!**

DO NOT OPERATE THIS MACHINE WITH IMPROPER SUPPLY OR NOZZLE PRESSURES, AS THIS CAN CAUSE FIRE AND/OR EXPLOSION!

Improper installation, adjustment or operation of this gas-heated appliance may result in the risk of fire and/or explosion, damage to property, serious injury, or death.

Electric heated dryer

Description

The heating units are placed behind the back plates of the dryer.

The heating units have 2 or 3 heating elements depending on voltage and effect.

Heating unit types

Heating effect	Voltage	Number of elements
2x9 kW	230V	2 + 1 dummy
2x9 kW	400 - 480V	2 + 1 dummy
2x13.5 kW	400 - 480V	3
2x18 kW	400 - 480V	3

Spare part number, effect, and voltage are printed on the heating elements.

Before replacement

1. Check that effect and voltage on the new elements are corresponding with the old ones.
2. Mark up the heating element wires.

Note! It is important to mount the dummy correctly on a 9 kW dryer. It must be placed closest to the drum.

Replacing heating element

If the heating elements are to be replaced it is unnecessary to dismantle the whole heating unit.

Dismounting

1. Switch off the power to the dryer.
2. Dismount outer back plates:
Top dryer: only remove the top back plate
Bottom dryer: remove both back plates
3. Dismount heating box back plates:
Top dryer: Dismount the bottom back plate **A, Fig 1**
Bottom dryer: Dismount the back plate **B, Fig. 2.**
4. Top dryer: Dismount the fitting **C, Fig. 3.**
5. Dismount all wires.
6. Remove the heating elements, **Fig 4.**
7. Mount the new heating elements.
8. Mount all wires as before, see diagram supplied with the dryer.

Refer to the pictures on the following page.

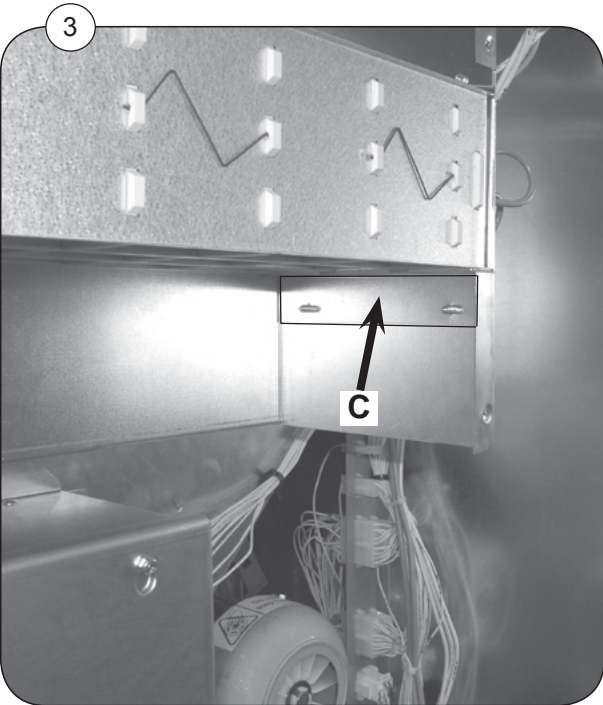
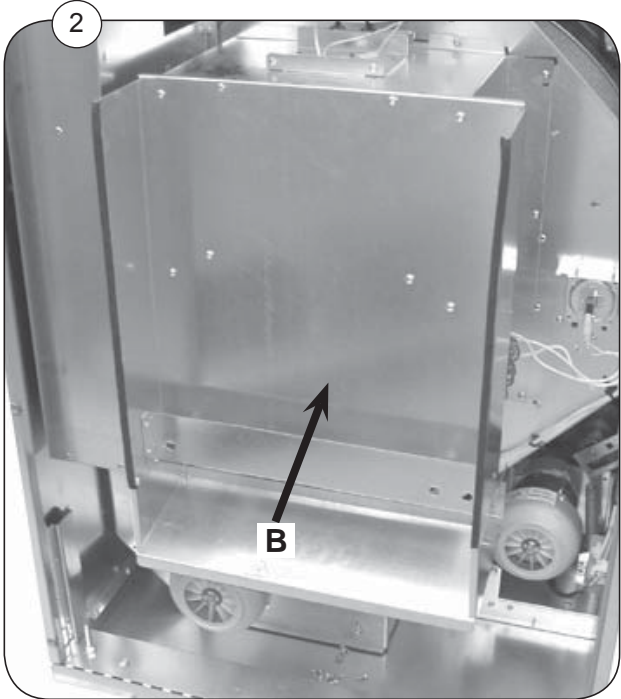
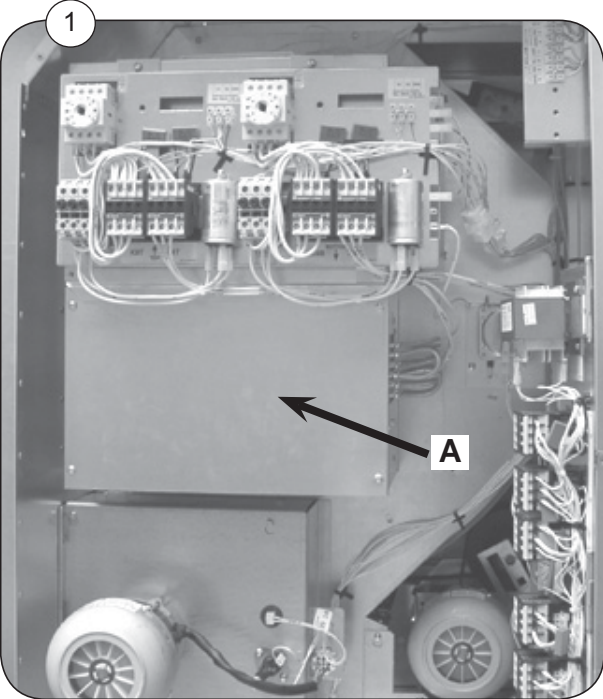
Finishing replacement

1. Re-assemble the dryer.
2. Connect the power supply.

Function check

Test the dryer, see section 11: **Function check.**

Replacing heating element



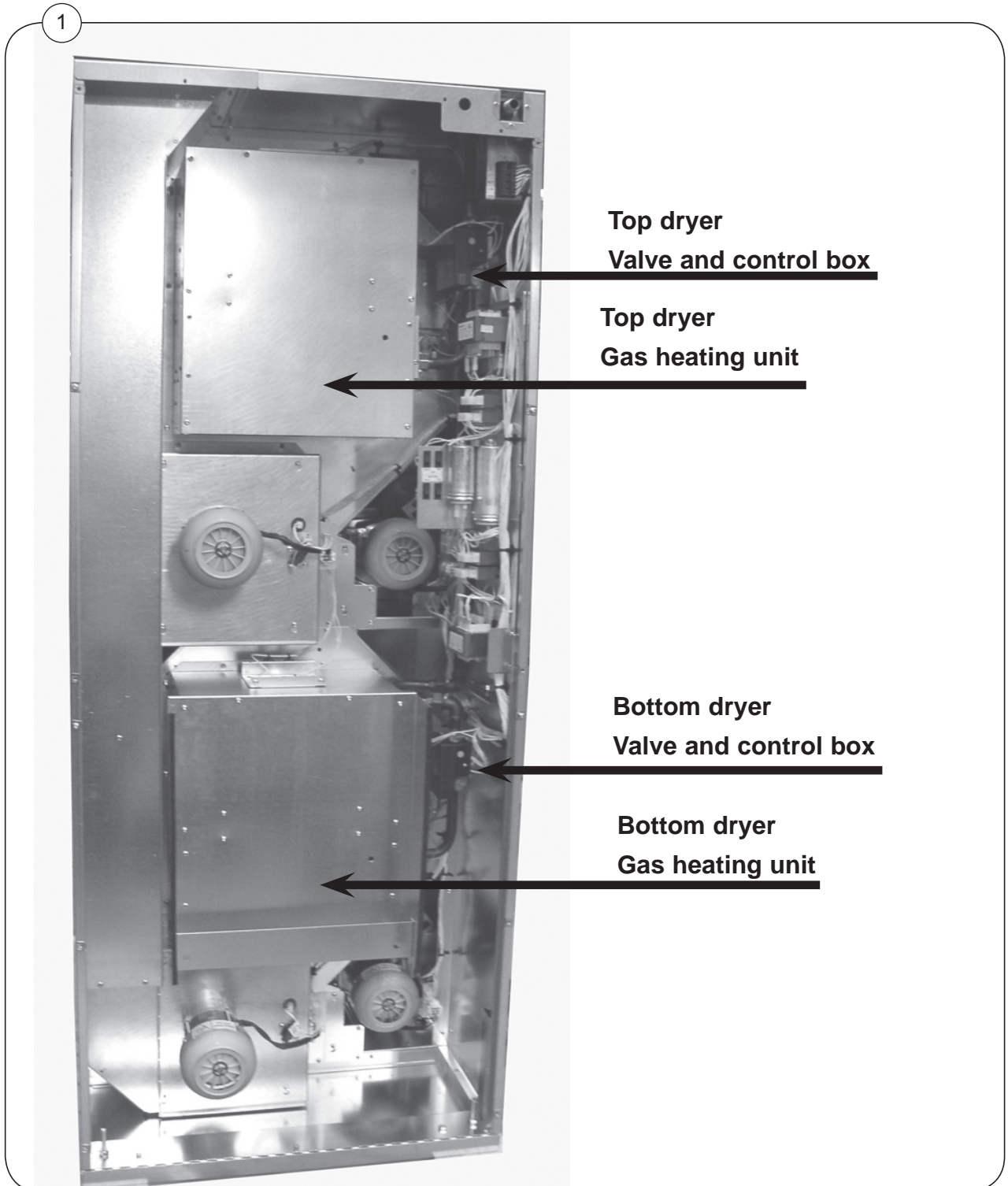
Gas heating unit, overview

Description

The gas heating unit for top or bottom dryer contains a gas burner, see fig. 1.

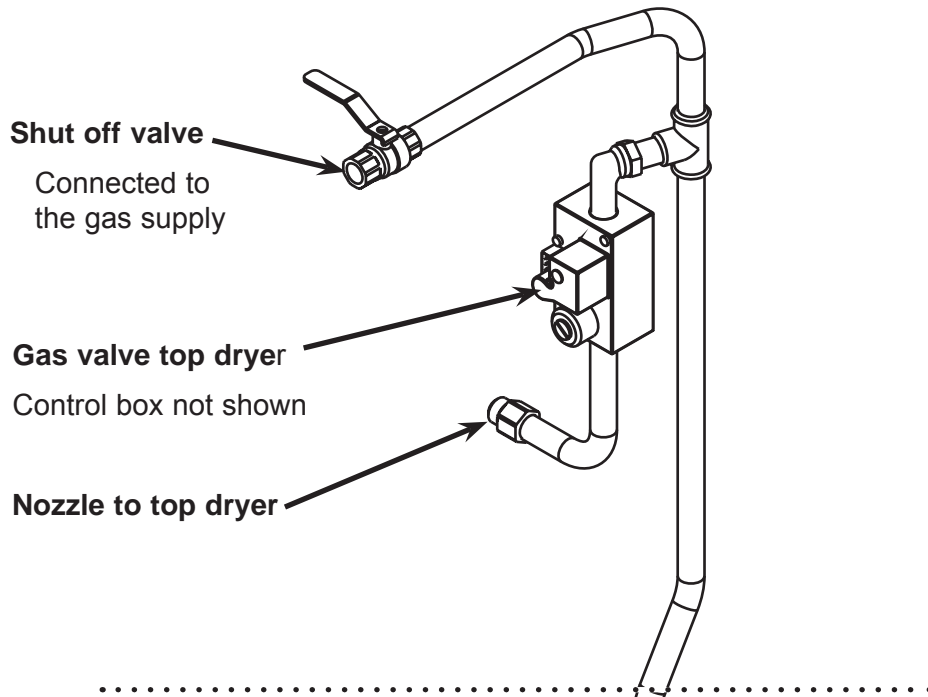
The gas system contains gas valve, control box and nozzle for top or bottom dryer, see overview next page.

The gas system and heating units are located at the back of the dryer.

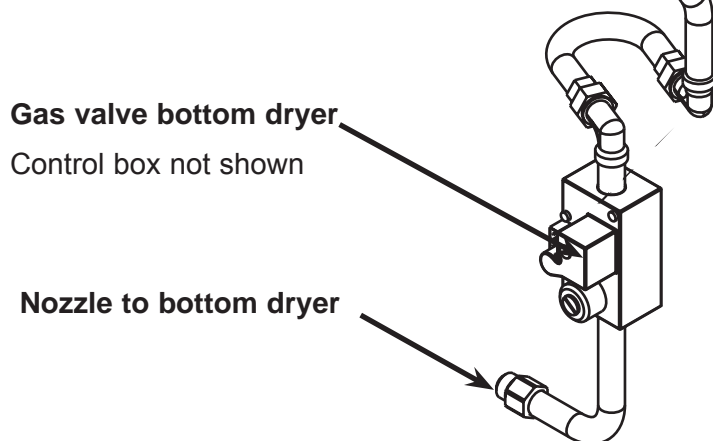


Gas system, overview

Top dryer



Bottom dryer



Gas valve, overview

Fig. 1: Nozzle (1)

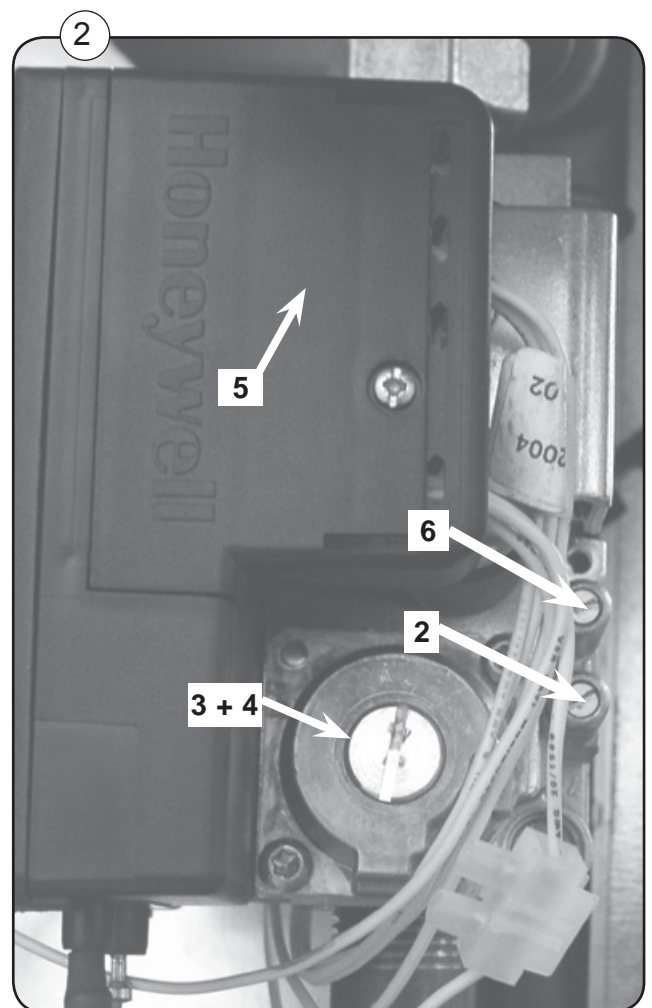
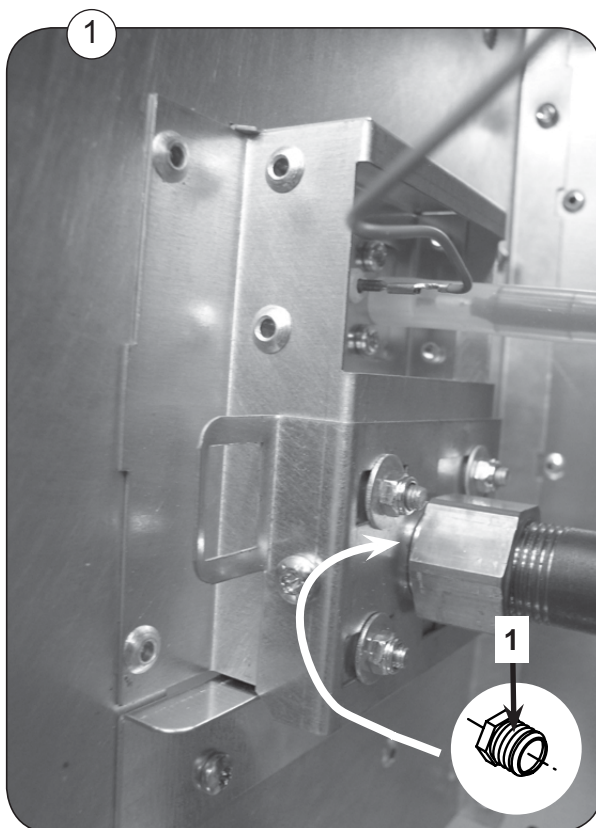
Fig. 2: Measuring tap, nozzle pressure (2)

Adjusting screw cap (3)

Adjusting screw, nozzle pressure (4)

Ignition control box (5)

Measuring tap, supply pressure (6)



Gas valve, nozzle pressure

The numbers in brackets refer to the page regarding the gas valve.

Nozzle (1)

The nozzle orifice size must be correct for the type of gas being used.

The nozzle orifice size must be correct for the installation altitude (US and Canada only).

Refer to the Tables of pressure and adjustments to determine proper orifice size.

Measuring tap, nozzle pressure (2)

1. With the dryer off, loosen the gas pressure tap (2) one-quarter of a turn and connect a manometer to the tap.

2. Start the dryer with High heat selected.

After a few seconds, the ignition control will energise the gas valve.

Check that the nozzle pressure reading on the manometer is within the allowable range for the gas type being used, specified in the tables later in this section .

Too high or too low nozzle pressure

If the nozzle pressure is too high or low, adjust it by removing the cap (3) and turning the screw (4) beneath this cap until the nozzle pressure is correct.

Clockwise = **higher pressure.**

Counter-clockwise = **lower pressure.**

Too low nozzle pressure

If the nozzle pressure is still too low, it may be due to limited gas flow (and pressure) on the supply side of the valve.

1. Close the nozzle pressure measuring tap (2) and measure the supply pressure tap.

Continue next page: **Supply pressure**

Gas valve, supply pressure

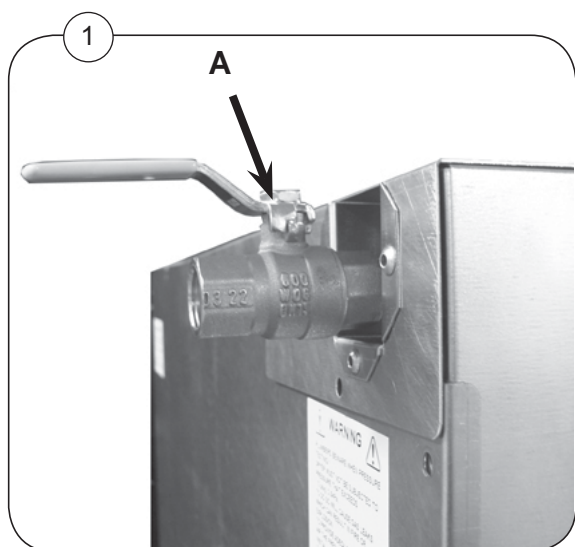
Measuring tap, supply pressure (6)

1. Turn off the manual gas valve to the machine and the dryer started on High heat.
2. Loosen the gas pressure tap (6) one-quarter of a turn and connect a manometer to the tap.
3. Fig. 1 Turn on the manual gas supply valve **A**.
4. Start the dryer on High heat and check that the supply pressure is within the allowable range.

Note: If the pressure is not within the range specified in the Tables of pressure and adjustments:

DO NOT OPERATE THE DRYER. Contact your gas supplier.

NOTE that the gas supply **MUST** be turned off before loosening tap pos. 6 (SUPPLY) or gas will escape.



Tables of pressure and adjustments, Except US and Canada

Heat effect: 2 x 21kW

	a	b mbar	c mbar	d mm
Denmark	LPG	30	30	2.20
Norway	GNH	20	10.5	3.80
Sveden				
Finland				
Italy	LPG	28 / 37	28 / 37	2.20
England	GNH	20	10.5	3.80
Spain				
Portugal				
Ireland				
Greece				
France	LPG	28 / 37	28 / 37	2.20
Belgium	GN	20 / 25	20 / 25	3.30
Germany	LPG	30 , 50	30	2.20
	GNH	20	10.5	3.80
	GNL	20	15.5	3.80
Holland	LPG	30	30	2.20
	GNL	25	15.5	3.80
Austria	LPG	50	30	2.20
	GNH	20	10.5	3.80
Japan	LPG	30	30	2.20
Australia	Propane			
New Zealand	GN			
The rest of the world except: USA	LPG	30	30	2.20
	GNH	18	10.5	3.80
	GNL	18	15.2	3.80

a Gas type

c Nozzle pressure

b Connection pressure

d Nozzle

Tables of pressure and adjustments, US and Canada only

Heat effect: 2 x 21kW

Propane gas

Altitude	Heat effect per pocket Btu/h	Heat effect total Btu/h	Upper calorific MJ/m ³	Gas pressure				Dim. Nozzle mm
				Inlet			Nozzle pressure Measuring tap (2) Inch W.C	
				Min.	Nom.	Max.		
0 - 1999 ft.	71600	143200	93.7	10	11	13	11	2.4
2000 - 3999 ft.	71600	143200	93.7	10	11	13	11	2.3
4000 - 5999 ft.	71600	143200	93.7	10	11	13	11	2.2
6000 - 8000 ft.	71600	143200	93.7	10	11	13	11	2.1

Natural gas

Altitude	Heat effect per pocket Btu/h	Heat effect total Btu/h	Upper calorific MJ/m ³	Gas pressure				Dim. Nozzle mm
				Inlet			Nozzle pressure Measuring tap (2) Inch W.C	
				Min.	Nom.	Max.		
0 - 1999 ft.	71600	143200	37.78	6	7	10	4.2	3.8
2000 - 3999 ft.	71600	143200	37.78	6	7	10	4.2	3.7
4000 - 5999 ft.	71600	143200	37.78	6	7	10	4.2	3.6
6000 - 8000 ft.	71600	143200	37.78	6	7	10	4.2	3.4

Replacement of gas burner tube

Dismounting

The gas burner can be replaced without dismantling the gas unit.

1. Shut off the manual valve at the back of the dryer.
2. Disconnect the electrical power supply.
3. Dismount the back panels on the dryer.
4. Unscrew 12 screws in the back panel on the defected gas heating unit.
5. Remove the panel
6. Fig. 1 Unscrew 2 nuts and washers **A**.
7. Push the burner to point **B**.
8. Lift the burner free, be careful not to bend the ignition electrode.

Mounting

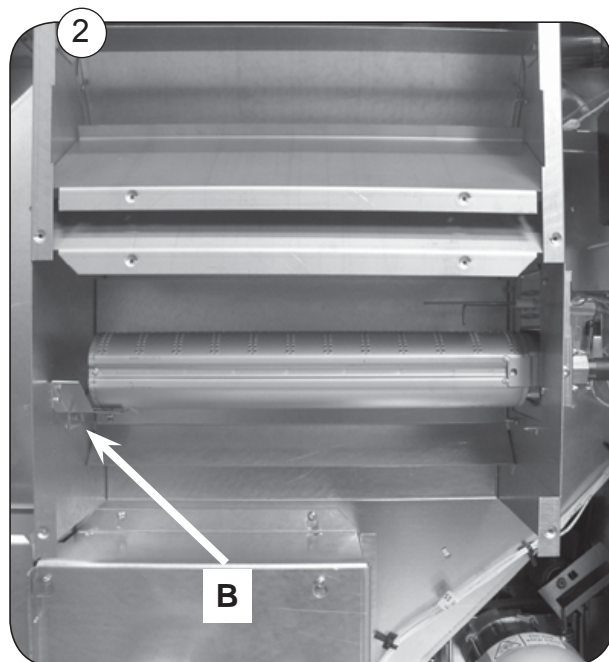
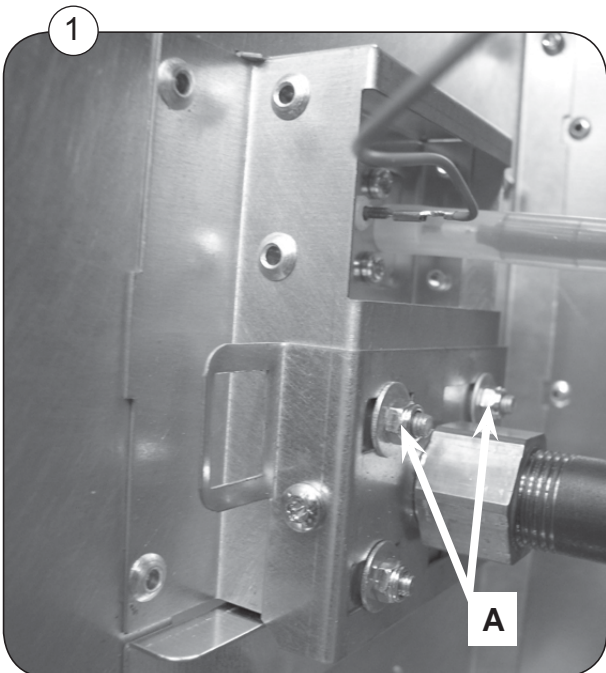
1. Mount the new burner.
2. Mount screws **A** and **B**.
3. Check the distance from the electrode to the burner, see later in this section.
4. Mount the back panel of the heating unit.
5. Mount the back panels of the dryer.

Test run

Before operating the dryer with heat on, test the dryer, see later in this section.

Function check

Test the dryer, see section 11: **Function check**.



Adjustment / measuring

Adjustment of ignition electrode

Fig. 1 Illustrates proper ignition electrode adjustment.

The distance from the electrode to the burner tube **a** must be 5 mm (13/ 64 inch).

The spark gap **b** must be 2.5 mm (0.1 inch).

Control measuring the ionisation current

1. Fig. 2 Dismount wire with quick connector **A**
 2. Measure the current between the quick connector and the ionisation connector.
- The current must be at least 0,9 μ A DC.

Resetting gas error

When the ignition control fails to detect a flame a error code E14 is displayed.

When this condition occurs, the gas valve is shut off and the ignition control must be reset manually.

Resetting

Open the operating panel and press the gas reset button on the back of the user module board for one second.

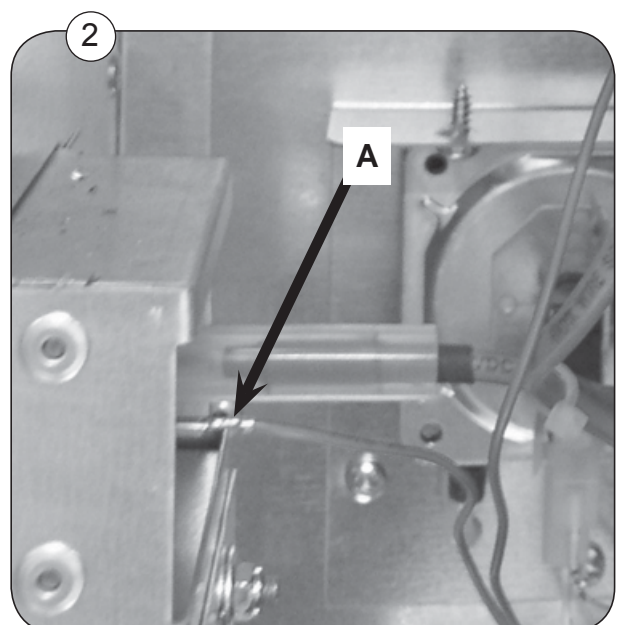
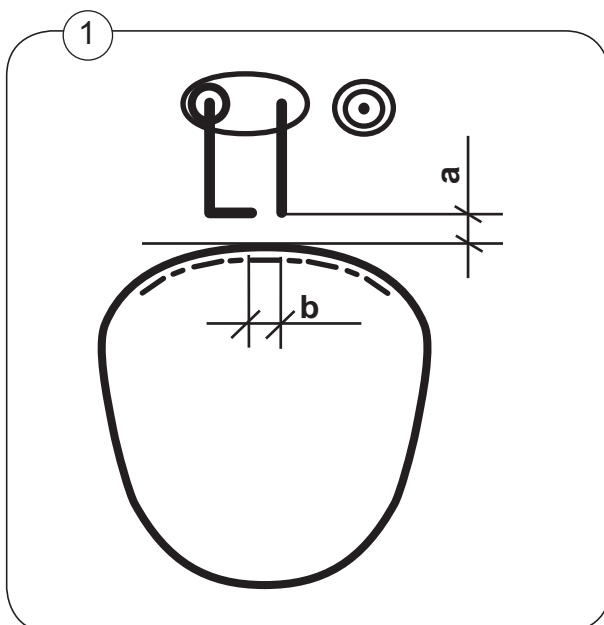
See the picture of the gas reset button section 21

NOTE! When resetting the system the dryer **must** operate on a program with heat and when the heat indicator is on.

Error code

Error code 14 is a normal occurrence when first starting up a dryer, since air in the gas line must be purged.

If the problem persists, refer to Service Manual Selecta Control ver. 4.xx section 12 **Error code 14** for more information.



Replacement of gas valve

To replace the gas valve follow the procedure below:

1. Shut off the manual valve at the back of the dryer.
2. Disconnect the electrical power supply.
3. Dismount the back panels on the dryer.
4. Fig. 1. Unscrew screw **A** from the control box.
5. Pull the control box out of the valve.
6. Fig. 2 or fig. 3. Take the union joint **B1 = top dryer** or **B2 = bottom dryer** apart.
7. Fig. 4. Remove the screw **C** on the side of the nozzle retaining plate.
8. Pull the retaining plate toward the rear of the dryer to release gas pipe with nozzle.
9. Remove nozzle and keep it for later mounting.
10. Replace the valve.
11. Remount nozzle.
12. Tighten the union joint **B1** or **B2** (50Nm).
13. The nozzle retaining plate must be pushed back in the right position and firmly be secured with the screw **C**.
14. Push the control box back into place. Be careful not to bend the terminals.
15. Install the control box retaining screw removed in step 4.

Testing for leaks

After replacement all the joints which were taken apart have to be leak tested.

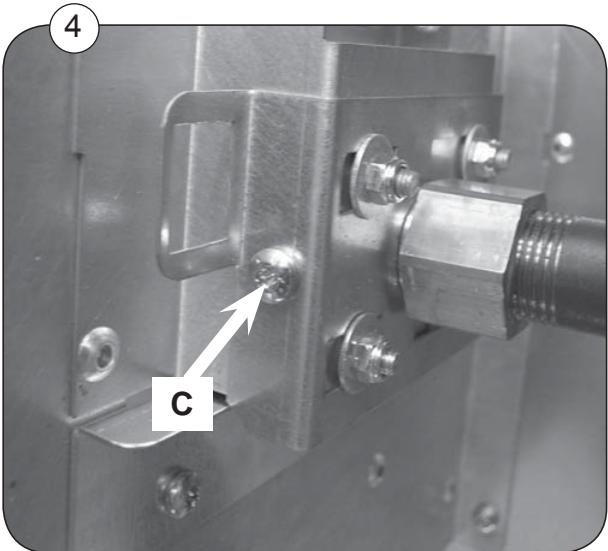
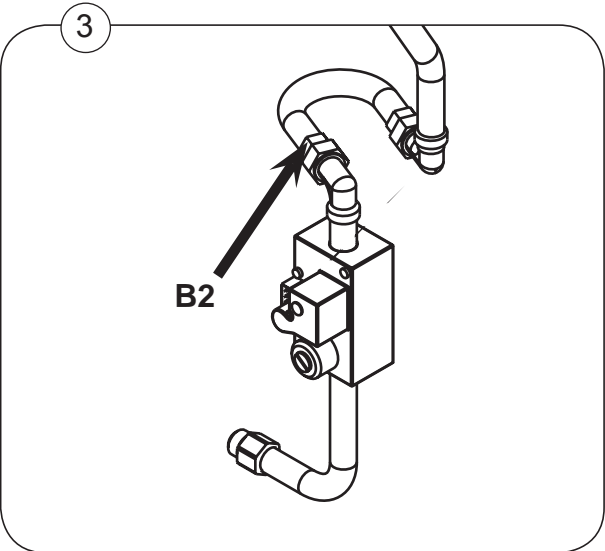
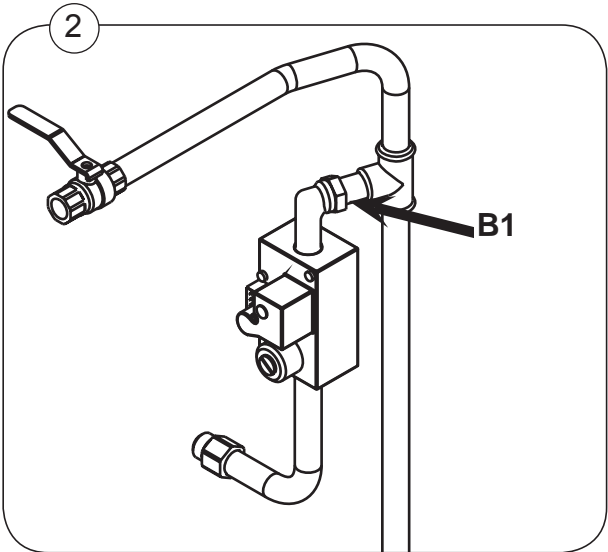
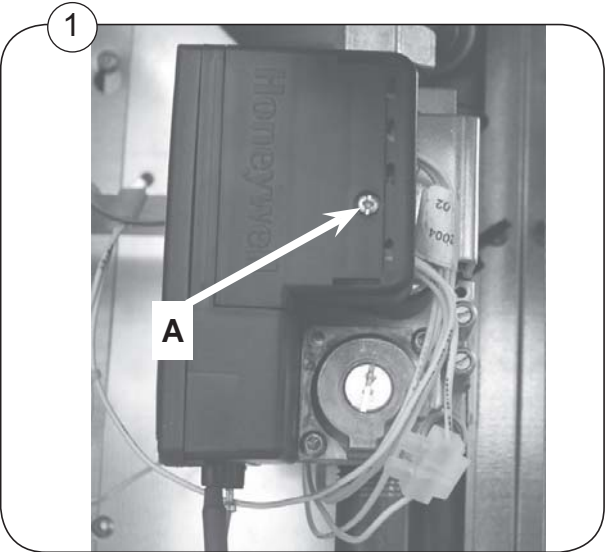
Use approved leak testing materials and techniques.

Adjusting the gas valve

The new gas valve has to match the machine.

Adjustment see section earlier in this section.

Replacement of gas valve



Conversion to another type of gas

All countries except US and Canada

If the machine is to be converted to another type of gas, the gas nozzles must be replaced.

Referring to the installations manual supplied with the dryer.

US and Canada only

The standard configuration is equipped for natural gas.

If the machine is to be converted to another type of gas, the gas nozzles must be replaced.

The current nozzles can be ordered separately in a conversion kit.

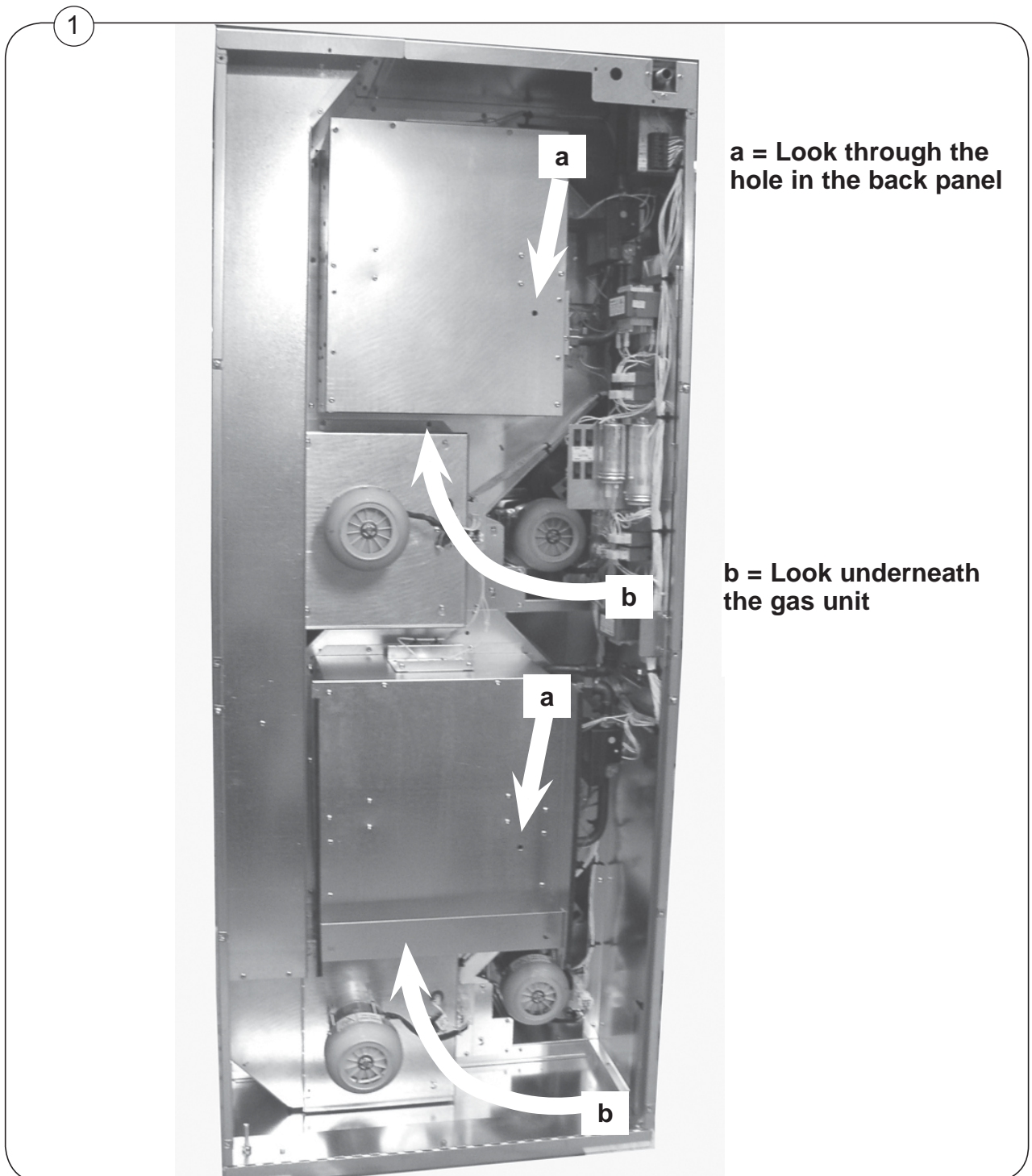
Contact your dealer, or Wascomat, for the part number of the LP conversion kit appropriate for your altitude.

The conversion kit contains 2 nozzles as well as instructions.

Follow the instructions supplied with the kit.

Test run

1. Test all joints for leaks.
2. Before operating the dryer with heat on, check the supply and nozzle pressures as described earlier in this section.
3. Fig. 1 Check **a + b** that the gas is burning evenly and with a bluish flame. If the above tests points are in order, the dryer is ready for use.
4. Mount the back panels.

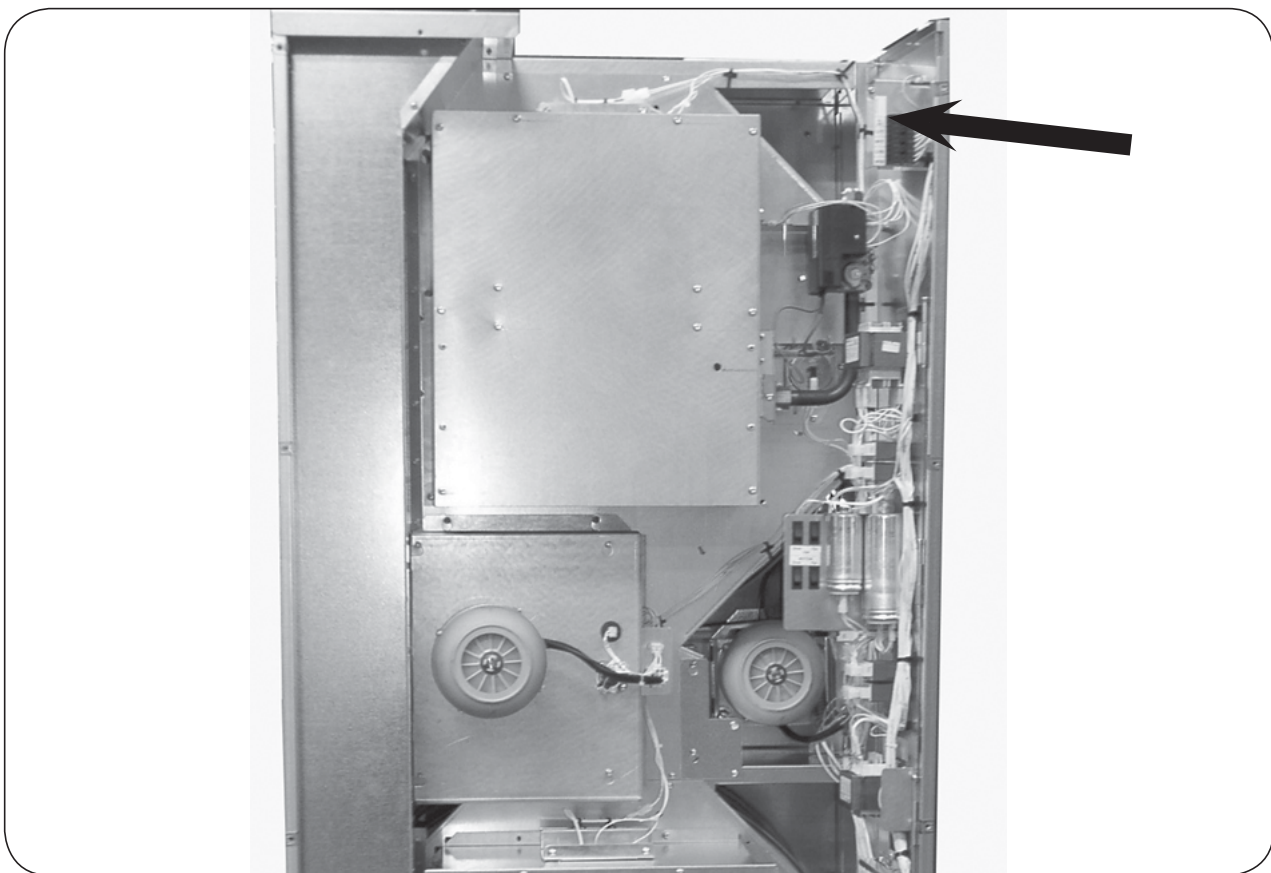


Contents

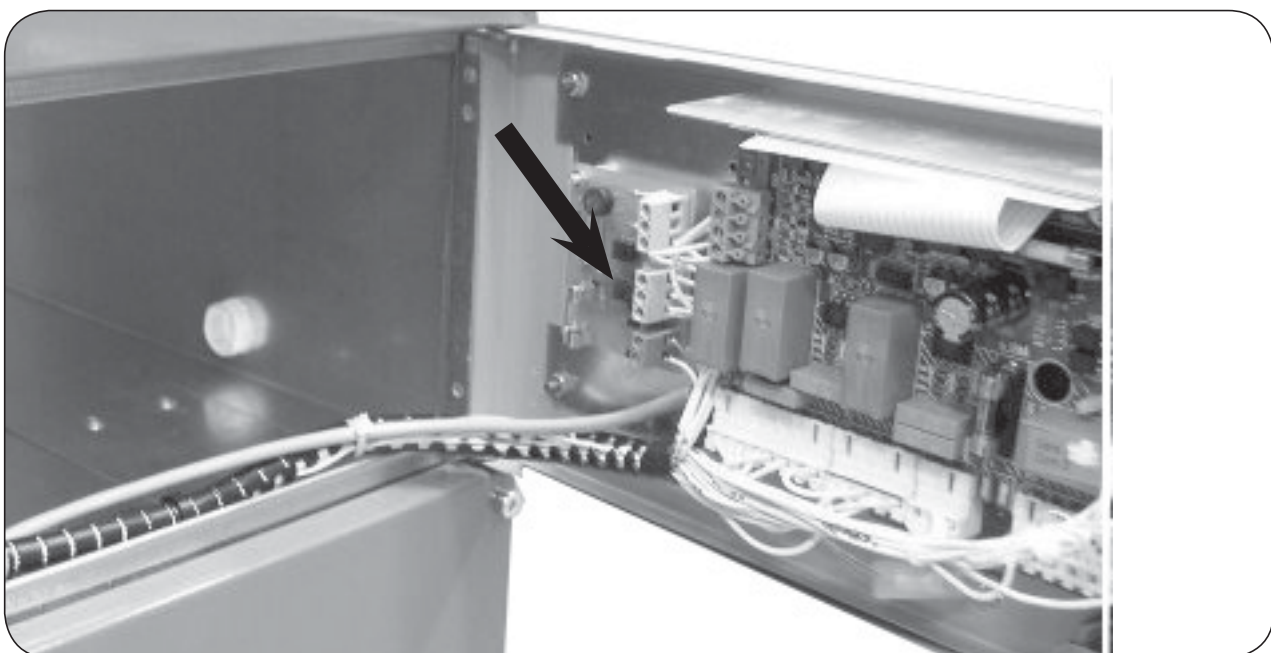
Overview - Connections	41.3
Central Payment Coin	41.4
Central Payment Time	41.5
Coin Meter Single	41.6
Coin Meter No Coin Box	41.6
Electrolux Single System	41.7
Prepared for Card reader	41.7

Overview - Connections

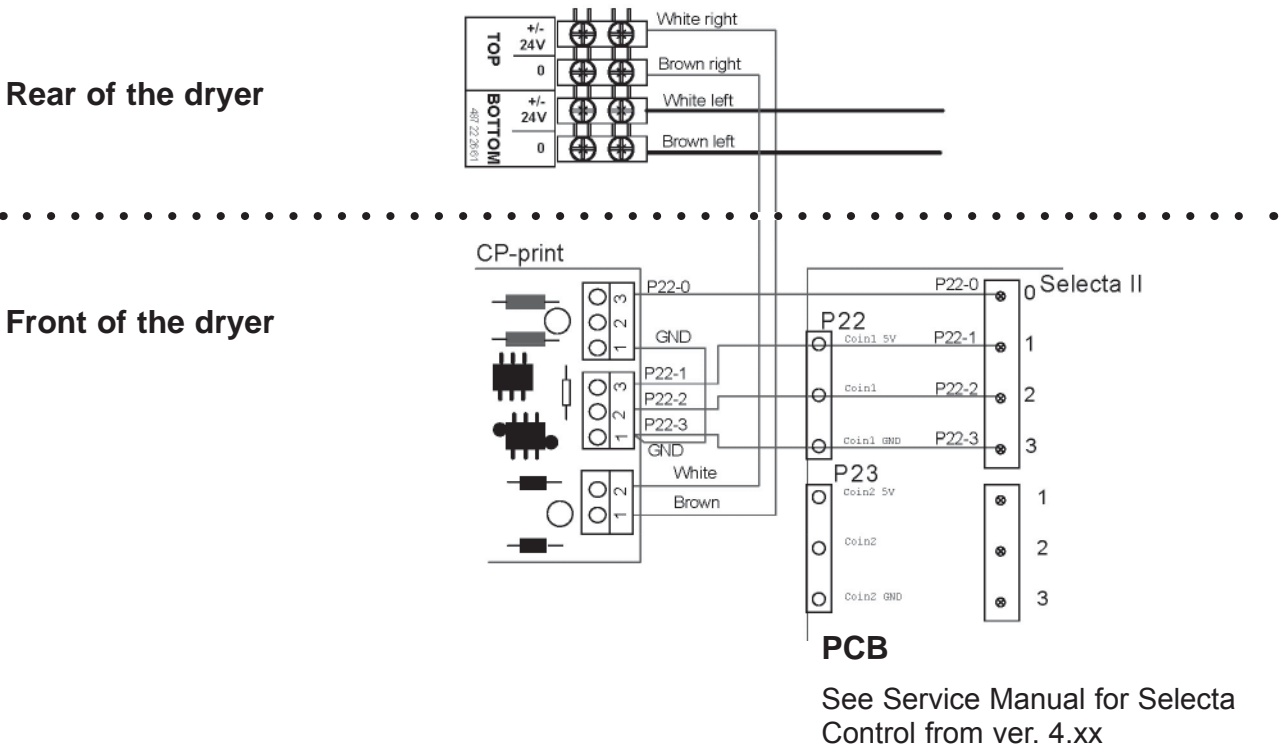
Connection - rear of the dryer



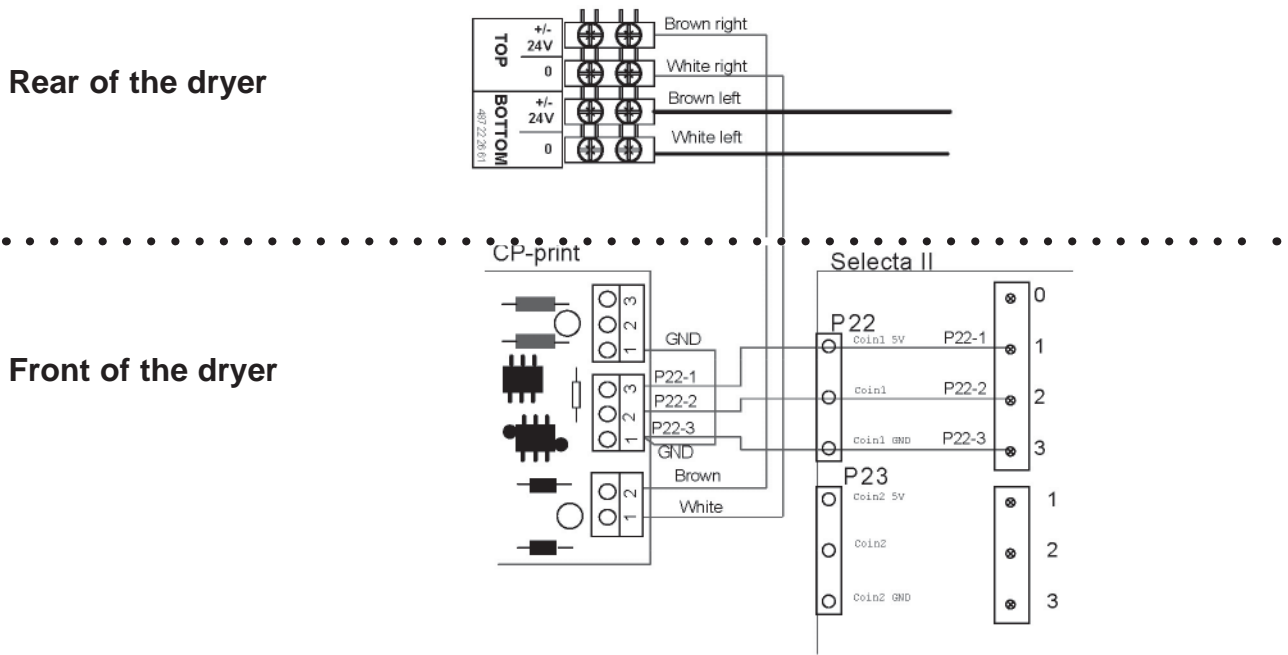
Connection - front of the dryer



Central Payment Coin - CPC



Central Payment Time - CPT



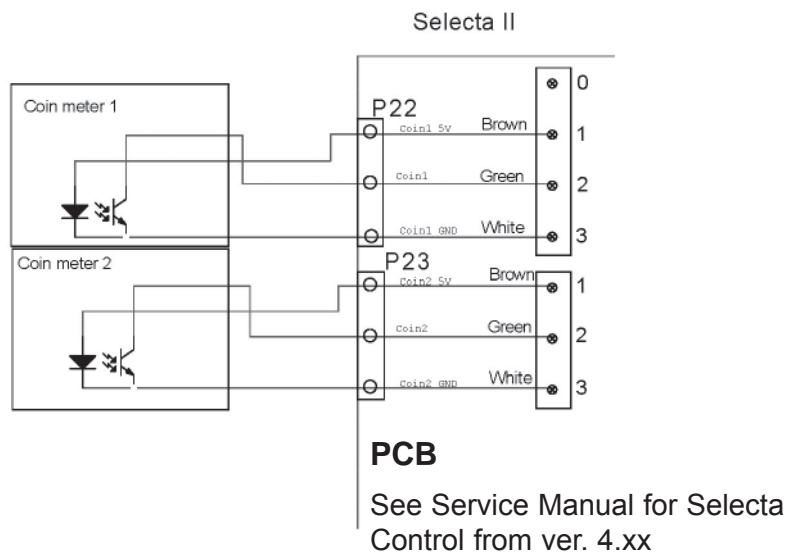
PCB

See Service Manual for Selecta Control from ver. 4.xx

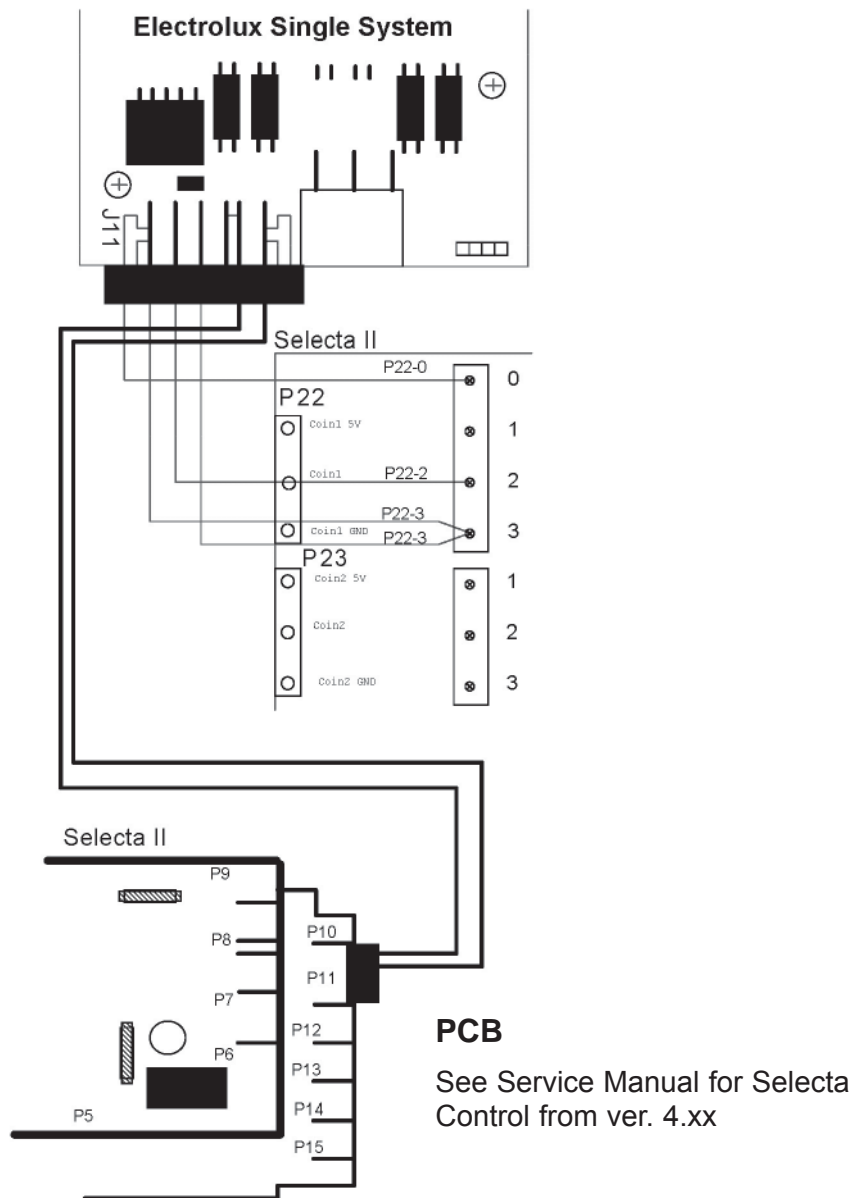
Coin Meter Single - CMS

Coin Meter Single No Box - CMSNB

Front of the dryer



Electrolux Single System - ESS
Prepared for Card reader - PCR



Contents

Dismounting of drum/ drum belt 42.3
Replacement of internal sealings 42.3
Replacement of drum / drum belt 42.4
Mounting of drum 42.5
Replacing bearing house 42.6
Replacement of support rollers 42.7

Dismounting of drum / drum belt

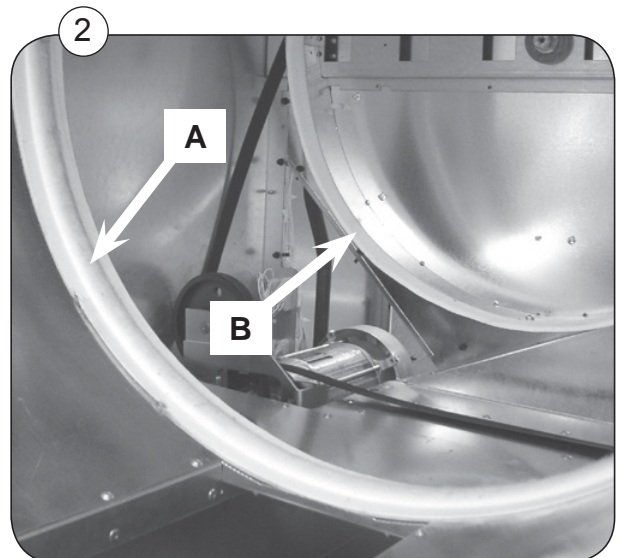
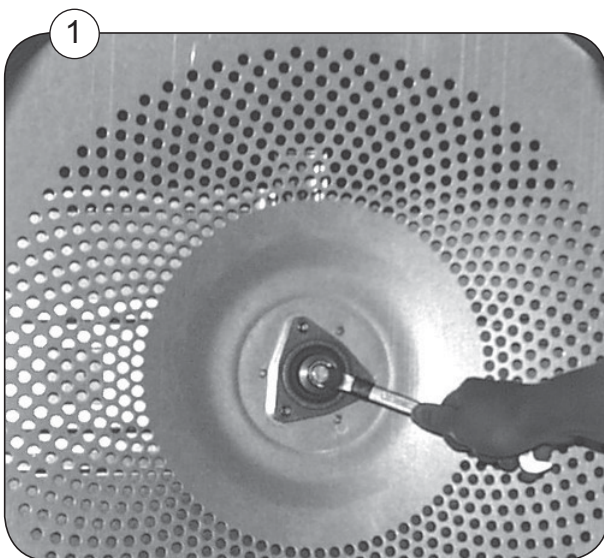
1. Disconnect the power supply to the dryer.
2. Remove the rear panels.
3. Loosen the belt, see **Loosening the belt tensioner of the drum motor** section 30.
4. Remove the top door hinge.
5. Lift the door off the bottom hinge; remove the bottom hinge.
6. Remove the front panel fastening screws and remove the panel.
7. Unplug the wire to the door switch.
8. Loosen the fastening nut in the top of the door switch panel and remove the panel with door switch mounted.
9. Unscrew the 3 screws of the bearing cover and remove the cover.
10. Fig.1 Unscrew and remove bolt and washer from the main drum bearing.
11. Pull out the drum.

The drum, internal sealings or the belt can now be replaced.

Replacement of internal sealings

1. Inspect both sealings **A + B** and replace if defective.
2. Remove the defected sealing **A** or **B**, clean any residual adhesive before installing a new sealing.
3. Replace the sealing **A** or **B**.
4. If replacing sealing **A** remove the fastening screws in the sealing joint. The same screws are used to fasten the new sealing.

Note! If seal **A** has been replaced it is necessary to put a thin coating of silicone oil on the drum in a distance of 40mm from the perforation for air out. In the position where the sealing **A** is running.



Replacement of drum / drum belt

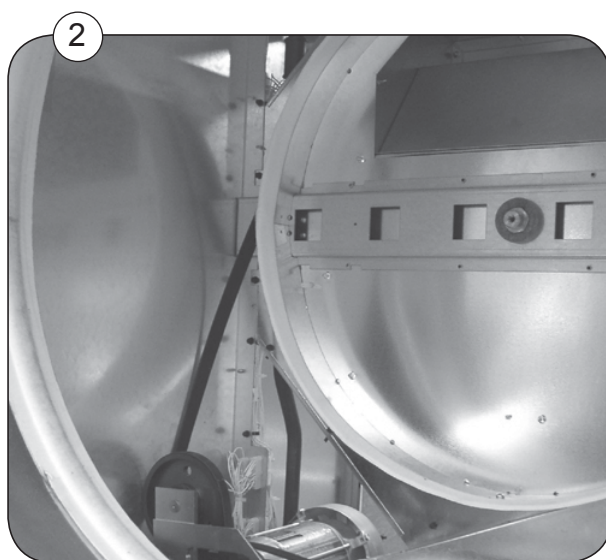
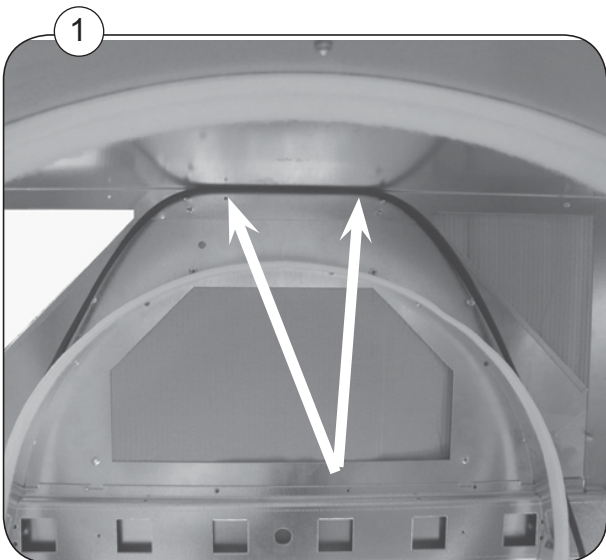
1. Replace the belt, if defective.
2. Fig. 1 Hang the belt on 2 of the screws at the back of the drum compartment.
3. Fig. 2 Inspect the felt seals in the drum compartment.
4. Carefully push the drum into the dryer.
Be careful not to damage the felt seal in the drum compartment.
5. Fig. 3 next page Reinstall the bolt and washer into the drum.
Tighten the bolt to 20Nm (15ft lbs)
6. Fig. 4 next page Reinstall the bearing cover **A** and mount the 3 screws **B**.
7. Use the hole in the top of the drum compartment to put the belt around the drum.
8. Place the belt around the transmission pulley.

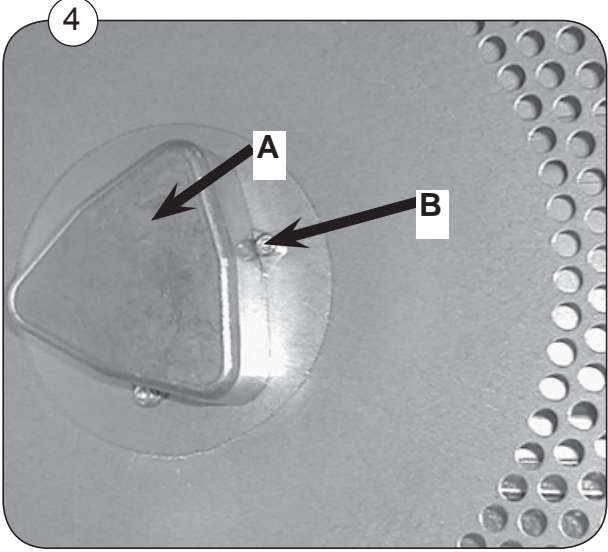
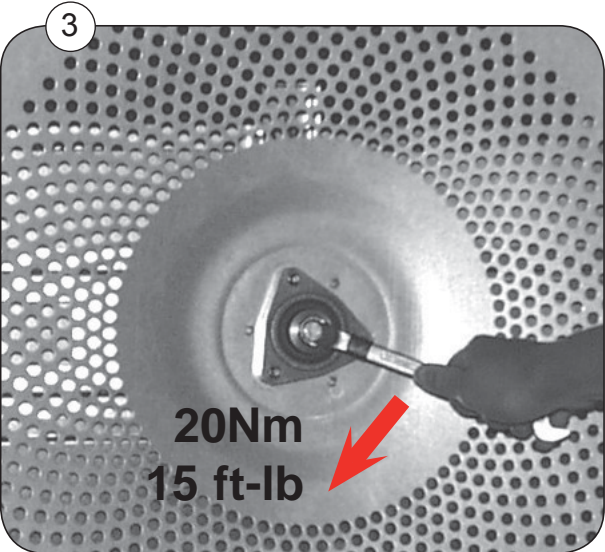
Note! It is important to fit the belt at the right place of the pulley, see section 30: **Mounting the drum motor and the transmission.**

9. Rotate the drum manually until the belt is in the proper position on drum and pulley.
10. Tighten the belt, see section 30: **Loosening the belt tensioner of the drum motor.**
11. Inspect the rubber gasket at the front, see section 29: **Replacement of rubber gasket.**
12. Mount the panel with door switch mounted. Fasten the nut in the top of the panel
13. Connect the wire to the door switch.
14. Reassemble the front panel, door hinges, and door.
15. Connect the power supply

Function check

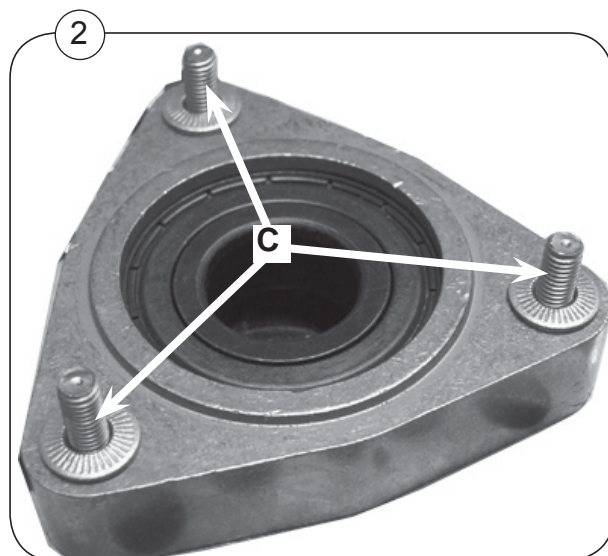
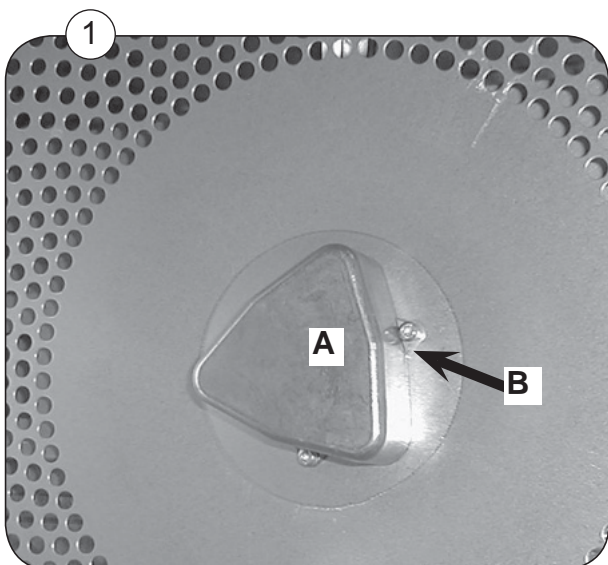
Test the dryer, see section 11: **Function check.**





Replacing bearing house

1. Loosening the belt tensioner of the drum motor, see section 30: **Motors**
1. Fig. 1 Dismount the 3 screws **B** that secures the bearing house cover.
2. Remove cover **A**.
3. Unscrew and remove bolt and washer from the main drum bearing
3. Remove the 3 nuts at **C**.
4. Fig. 2 Remove the bearing house with bearing.
6. Lubricate the shaft with an anti-fretting paste (G1 LGAF 3E or similar quality with a temperature resistance above 160°C).
7. Fig. 3 and 4 Replace bearing house and bearing. **Remember** when mounting new bearing house to mount the 3 Rip lock washers under the nuts with the grooves upwards.
8. Secure the bearing house by tightening the 3 nuts **C** with 5Nm and mount cover.

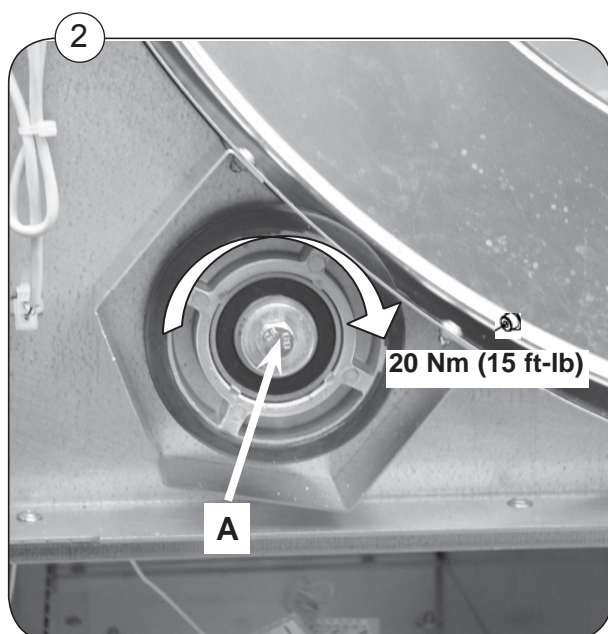


Replacement of support rollers

1. Disconnect the power to the dryer.
2. Remove the top door hinge.
3. Lift the door off the bottom hinge; remove bottom hinge.
4. Remove the screws that hold the front panel on the dryer and remove the panel.
5. Fig. 1 Unscrew bolts **A** of the support rollers.
6. Fig. 1 Replace support rollers and tighten bolts **A** with 20 Nm (15 ft-lb).
7. Reassemble the front panel, door hinges, and door.
8. Connect the power.

Function check

Test the dryer, see section 11: **Function check**.



Contents

Air pressure switch 46.3

Air pressure switch

Function

The air pressure switch ensures the necessary airflow in the dryer.

Adjustment

The pressure switch is not adjustable. If it fails it has to be replaced.

Error code E15 or E16 general

If the error code E15 or E16 is displayed it is important first to check the under pressure in the drum compartment. The under pressure that is needed to operate the switch is 90Pa.

Measuring the under pressure in the drum compartment

1. Start the dryer.
2. Remove the rubber tube **A** and measure the under pressure in the drum compartment.
3. After measuring the under pressure go to the specific error code for further trouble shooting.

Error code E15

If the under pressure is below 90Pa.

1. Check the rubber tube **A** for lint-obstruction.
2. See the troubleshooting in the Service Manual Selecta Control from ver. 4.xx section 12 for more information.

Error code E16

Troubleshoot the pressure switch when the dryer is not operating:

1. Check that the normal state for the switch is normally open. Measure between **a** (common) and **b** (NO).
2. If the normal state for the switch is not open check the rubber tube **A** for lint-obstruction.
3. Is there no problem with the rubber tube, see the troubleshooting in the Service Manual Selecta Control from ver. 4.xx section 12 for more information.

