TECHNICAL INFORMATION
T300 Clothes Dryer Series (Condenser)

This document is adapted from existing information that is used internationally and is provided for general guidance and informational purposes only. Information may contain omissions and/or additional data for some USA models.

If you have any questions, require clarification or need assistance – contact the Miele Technical Support Center at: 1-888-529-8790.

T300 Series Clothes Dryer (Condenser) – Table of Contents

T300 Series Clothes Dryer (Condenser) – Table of Contents (cont.)

T300 Series Clothes Dryer (Condenser) – Table of Contents (cont.)

T300 Series Clothes Dryer (Condenser) – Table of Contents (cont.)

T300 Series Clothes Dryer (Condenser) – List of Figures

T300 Series Clothes Dryer (Condenser) – List of Tables

1.0 Construction and Design

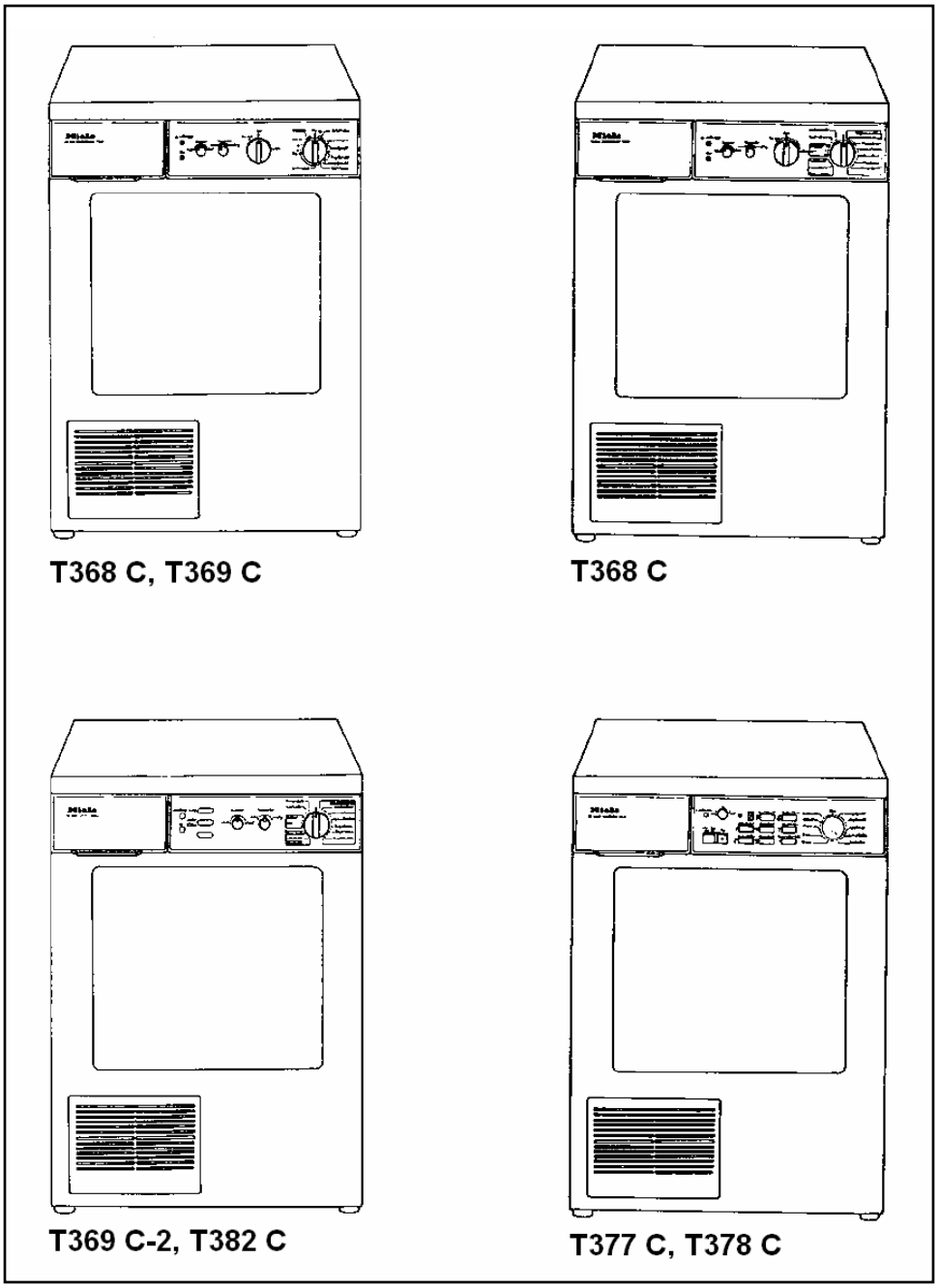


Figure 1-1: Overview of Model Numbers (Continued on Figure 1-2)

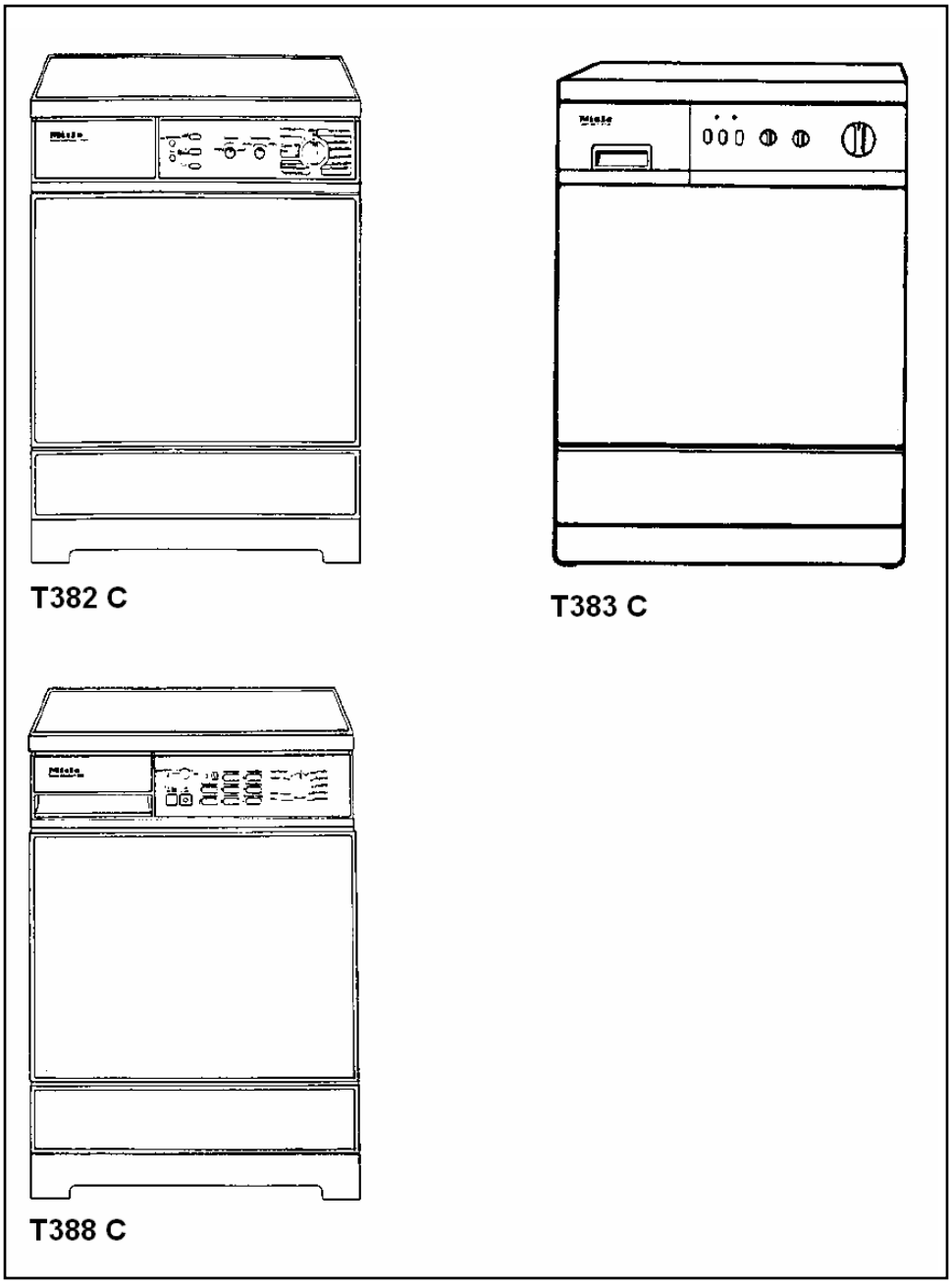


Figure 1-2: Overview of Model Numbers (Continued from Figure 1-1)

1.1 Features

- Air-cooled condenser dryer with reversing motion
- Cool air drawn in at the rear
- Warm air discharged at the front
- Free-standing appliance with laminated worktop
- Can be built under with additional kit
- Fully opening front panel

1.2 Dimensions

(Values in brackets exclude worktop)

Height:	85cm (82cm) +/- 1
Width:	59.5 cm
Depth:	60 cm (57cm)

Table 1-1: Product Dimensions

1.3 Weight

Approx. 60kg

1.4 Capacity

5.0kg dry laundry

1.5 Drum/Volume

Stainless Steel / 103 l

1.6 Casing

MIELE single coat direct enameled

1.7 Electrical Connection

(German standard models only!)

Voltage:	220V, 50Hz
Connection Load:	3.3 kW
Heater Rating:	2.94 kW
Fuse Rating:	16 A
Supply Lead:	3-core with Plug

Table 1-2: Electrical Connection

1.8 Drive Motor

180 W, with fan 240 W

1.9 Air Circulation Fan

160 W, 130 m^3 / h

1.10 Cooling Air Fan

110 W, 320 m^3 / h

1.11 Condensate Pump

Condensate may be drained to the rear. Refer to Section 1.12 – Rear Drainage.

1.11.1 T 368 C

20 W, Rear drainage not possible until Machine no. 700201 From Machine no. 7100202 as Section 1.11.2

1.11.2 T 352 C, T 358 C, T 359 C, T 367 C, T 368 C, T 369 C, T 369 C-2, T 377 C, T 378 C, T 382 C, T 383 C, T 388 C

20 W, Rear drainage possible.
Max. head height 1.5 m
Max. hose length 6.0 m

1.12 Rear Drainage

External outlet connection Φ 10.0mm
Outlet connection with non-return valve

- T 368 C from Machine no. 8285211
- T 369 C from Machine no. 8285737
- T 377 C from Machine no. 8285935
- T 378 C from Machine no. 8303664

1.12.1 T 352 C, T 358 C, T 359 C, T 367 C, T 369 C, T 369 C-2, T 377 C, T 378 C, T 382 C, T 383 C, T 388 C

Spares: Drainage Hose 1.5m
Hose holder
Hose spout

1.12.2 T 368 C

Condensate drainage kit available from the Spares Department.

1.13 Condensate Container Drawer

Volume: Approx. 3.7 or 4.0 l

1.14 Condenser Box

Volume: Approx. 0.6 l

1.15 Controls

1.15.1 T 368 C, T 369 C

Timer: MTA 2123
Electronic Module: EF 102

1.15.2 T 368 C, T 369 C-2, T 382 C

Timer: EBR 9701
Electronic Module: EF 202

1.15.2.1 T 352 C, T 358 C, T 359 C, T 367 C, T 383 C

Timer: EBR 9820/9821
Electronic Module: EF 202

1.15.3 T 377 C, T 378 C, T 388 C

Timer: MTA 605
Sensor-Electronic Module: EPW 304

1.15.4 T 352 C, T 358 C, T 359 C, T 367 C, T 368 C, T 369 C, T 369 C-2, T 382 C, T 388 C

Temperature Selector: "**Normal**" or "**Low**"

1.15.5 T 377 C, T 378 C

Selector pad: "**Low Temperature**"

1.16 Buzzer

Variable: "**Min**" – "**Max**"

1.16.1 T 352 C, T 357 C, T 358 C, T 359 C, T 383 C

Selectable: "**On/Off**"

1.17 Drum Lightning

1.17.1 T 358 C, T 359 C, T 367 C, T 369 C-2, T 378 C, T 382 C, T 383, T 388 C

Bulb: E 14, 15 W, 220 V, 300°C

1.18 Drying Programs

1.18.1 T 368 C, T 369 C, T 377 C, T 378 C, T 388 C

- Extra Dry
- Normal +
- Normal
- Hand Iron (1 drop)
- Hand Iron (2 drops)
- Machine Iron
- Cooling Down
- Anti-Crease

1.18.2 T 368 C, T 369 C

"**Timed drying 30, 20, and 15 minutes**"

1.18.3 T 377 C

"**Timed drying 30 and 40 minutes**" or "**Timed drying 20 and 30 minutes**"

1.18.4 T 378 C, T 388 C

"**Timed drying 20 and 30 minutes**"

1.18.5 T 352 C, T 358 C, T 359 C, T 367 C, T 368 C, T 369 C-2, T 382 C, T 383 C

Cottons
- Extra Dry
- Normal +
- Normal
- Hand Iron (1 drop)
- Hand Iron (2 drops)
- Machine Iron

Minimum Iron
- Normal +
- Normal

Timed Drying
30, 20, and 15 min

All programs have "**Cooling Down**" and "**Anti-Crease**" phases.

1.19 Consumption Data

Values determined in accordance with DIN 0044986. (Laundry spun at 1200 rpm reduces consumption by approx. 25 %).

	Load 4.5 kg	Load 5.0kg
Drying Time (minutes)	76	83
Energy Consumption (kWh)	3.6	4.0

Table 1-3: Consumption Data

2.0 Installation

T 352 C, T 358 C, T 359 C, T 367 C, T 368 C, T 369 C, T 369 C-2, T 377 C, T 378 C, T 382, T 383 C, T 388 C

2.1 Installation as a Free-Standing Unit

To ensure fault-free operation, the appliance should be installed perfectly level.

Any unevenness in the floor can be compensated for by adjusting the screw-in feet at all four corners.

2.2 Installation under a Continuous Worktop

To correctly install the appliance under a continuous worktop, a “building under” kit is required. Fitting instructions, Part no. 1508041, are included with the kit.

Building a machine under can slightly increase drying times but does not, though, affect energy consumption.

2.2.1 Models with Half Closed Base Plate (Initial Production Models)

These models can be built-in under certain conditions. It is essential to ensure that sufficient air can be taken in at the rear of the machine.

They may be installed next to a washing machine. However, if the washing machine has a décor panel front then the service panel sealing strip should not be fitted so that air intake can also take place in this area.

If the dryer is built-in alone, gaps for air intake must total at least 100 cm^2.

The approx. 10mm gap along the machine’s lower front edge should never be reduced or blocked by deep pile carpets, skirting strips or tiles, etc.

2.2.2 Models with Fully Closed Base Plate

These models can be built-in. It is essential to ensure that sufficient air can be taken in at the front of the machine.

The approx. 10 mm gap along the machine’s lower front edge should never be reduced or blocked by deep pile carpets, skirting strips or tiles, etc.

2.3 Installation as a Washer-Dryer Stack

If the appliance is to be installed as a stack, together with a washing machine, one of the following stacking kits will be required:

Washing Machine	Tumble Dryer	Stacking Kit	Instructions Part No.
e.g. W 760	T 368 C or similar	WTV 310 * WTV 311 **	1487500
e.g. W 436	T 368 C or similar	WTV 302	1313950

Table 2-1: Stacking Kits

* without shelf between units
** with pull-out shelf between units

2.4 Draining Condensate to the Rear

T 352 C, T 358 C, T 359 C, T 367 C, T 369 C, T 369 C-2, T 377 C, T 378 C, T 382 C, T 383 C, T 388 C (T 368 C from Machine no. 7100202)

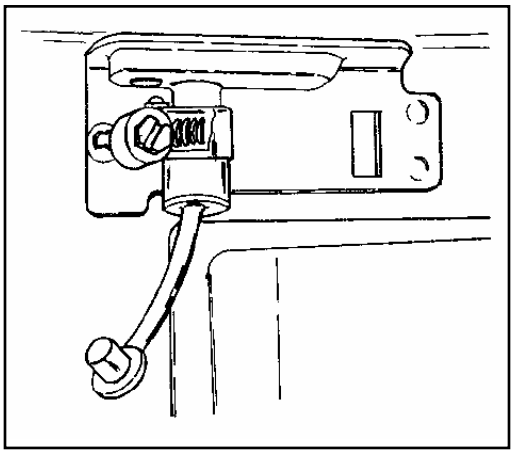


Figure 2-1: Draining Condensate to the Rear

1. Unscrew the clip from the outlet connection and remove the rubber seal (refer to Figure 2-1 – Draining the Condensate to the Rear).
2. Fit the drain hose supplied (not with T 368 C) or other suitable hose and affix it with the clip (refer to Section 1.12.1 Rear Drainage).

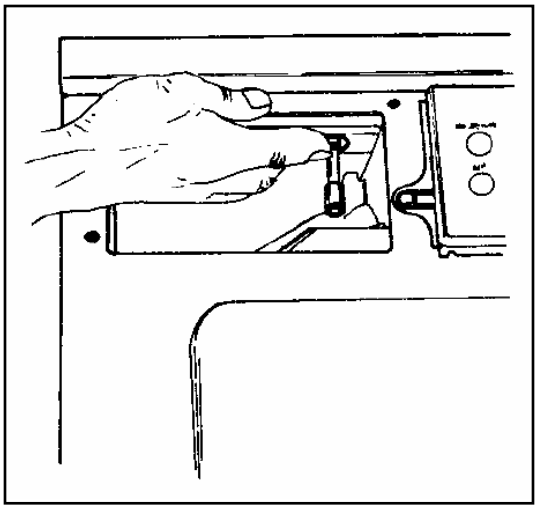


Figure 2-2: Opening the Condenser Drawer

3. Use the stopper to close the water inlet opening to the condenser drawer (refer to Figure 2-2 – Opening the Condenser Drawer).

4.0 Description of Function

T 352 C, T 358 C, T 359 C, T 367 C, T 368 C, T 369 C, T 369 C-2, T 377 C, T 378 C, T 382 C, T 383 C, T 388 C

4.1 Electronic Residual Moisture Detection Unit EF 102

As with most other Miele household dryers, the drying stages of this appliance are electronically monitored and controlled. As can be seen in the block diagram, the desired level of dryness (i.e. the desired residual moisture level) set at the timer is passed via the printed circuit and the pulse generator stage to the residual moisture comparator.

The 4 minute time stage prevents the timer from advancing to the next stage too early after switching on if the level switch has not reset.

The stainless-steel drum body and its internal ribs serve as sensor contacts to monitor the residual moisture content of the load. Once the required dryness level has been detected, a control stage lasting 1 minute begins. The timer will not advance to the next stage of the program unless the correct moisture level is maintained throughout this control stage.

The level switch closes when the condensate collector becomes too full. This switches a relay which then sends step impulses to the timer, until it has advanced to the "**Stop**" position, and also switches an LED indicator on.

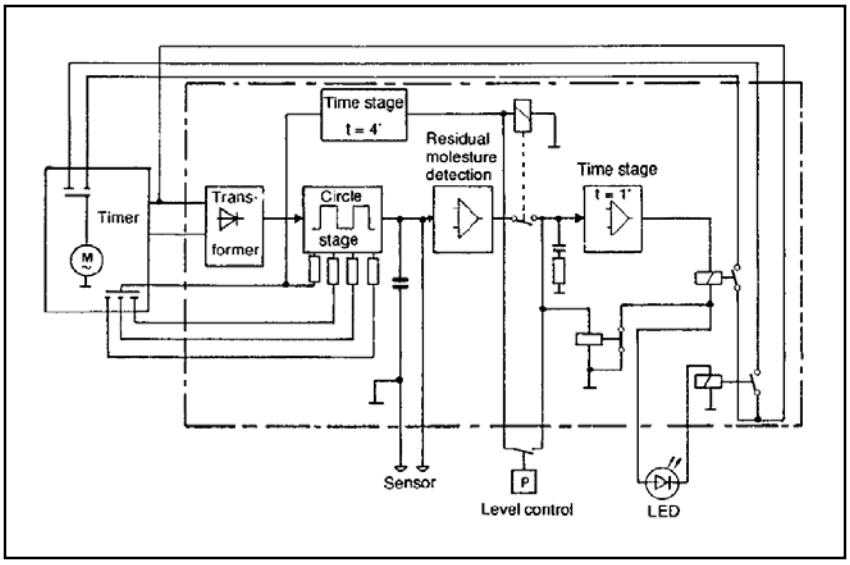


Figure 4-1: Electronic Residual Moisture Detection Unit EF 102

4.2 Electronic Residual Moisture Detection Unit EF 202

A low voltage signal (approx. 33 V) is passed from the electronic unit transformer to the timer. From there, it is returned, via the timer contacts, to the electronic unit.

This signal then charges the capacitor C1, which is in turn discharged, via the sensors, by the damp (conductive) load in the drum.

During the drying process, the load becomes less conductive and the capacitor C1 is charged until the desired value (Udesired) of the first residual moisture stage is reached. At this point, charging of capacitor C2 begins. After a further minute has elapsed, this capacitor is also fully charged, providing that no discharge has occurred due to damp items of laundry coming into contact with the sensors.

4.2.1 Level Control

If, either due to a fault or operator error, the condensed water container is too full, then the level switch is activated.

The level switch sends a DC signal to the second residual moisture stage. After approx. 3.5 seconds, this switches both the stepping relay on, which advances the timer to the “Cool Air” cycle, and also the LED warning light. The transistor switching stage retains this state until the machine is switched off.

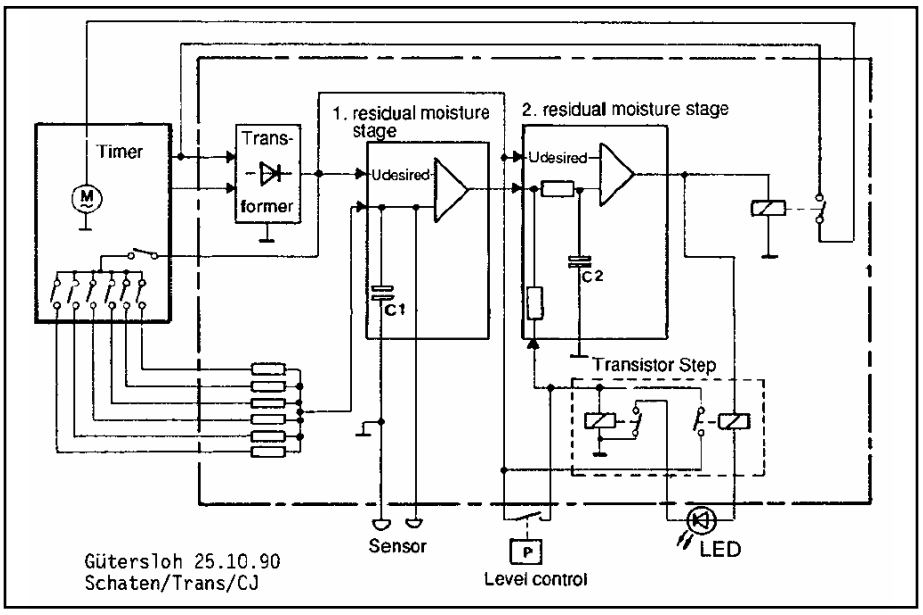


Figure 4-2: Electronic Residual Moisture Detection Unit EF 202

5.0 Service and Maintenance

T 368 C, T 369 C, T 369 C-2, T 377 C, T 378

General Information
Service and repair work should **only** be carried out by qualified persons in accordance with local and national safety regulations.

The appliance should be disconnected from the mains before work is commenced.

5.1 Appliance Lid

5.1.1 Removal

1. Remove the 2 screws, (refer to Figure 5-1 – Opening the Front Panel, Item 1), from the left and right lid edges.
2. Pull the lid forwards, lift up slightly along the front edge, slide it towards the rear and remove.

5.2 Front Panel

5.2.1 Opening the Front Panel

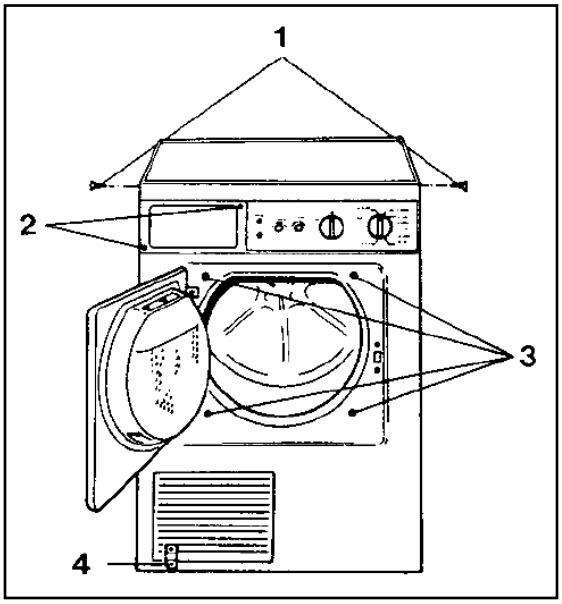


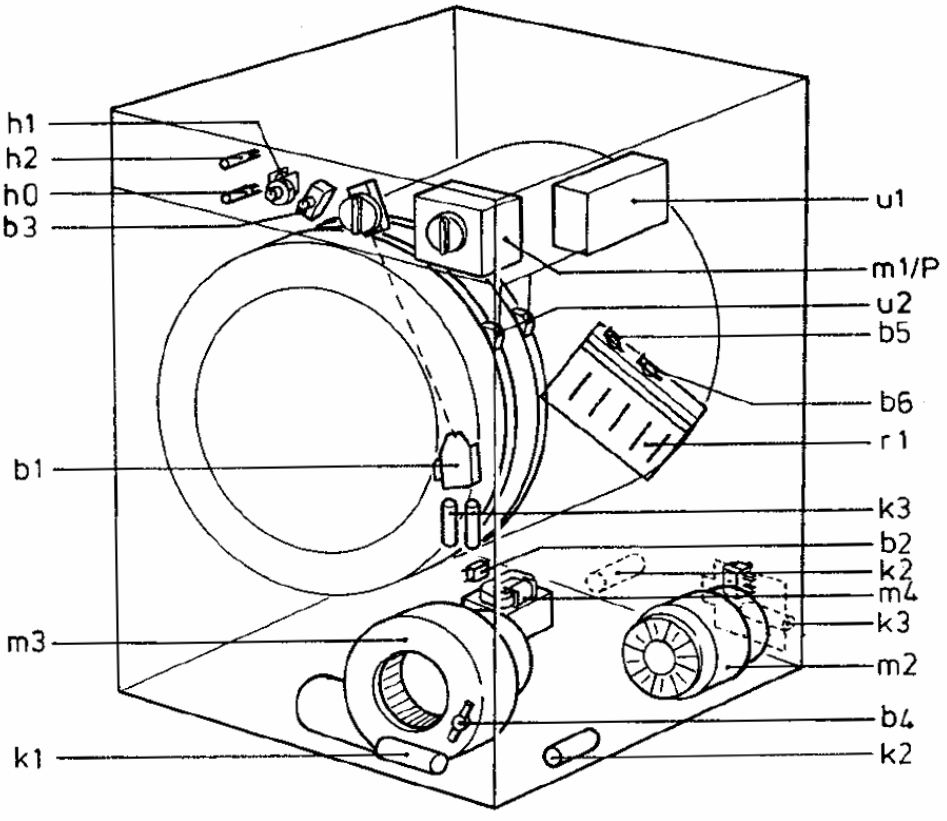
Figure 5-1: Opening the Front Panel

1. Refer to Figure 5-1 – Opening the Front Panel.
2. Remove the condensate container drawer to reveal 2 screws (Item 2), and unscrew them.
3. Remove the 4 screws (Item 3).
4. Open the air grid.
5. Press the spring clip (Item 4) down with the lid opener and open the front panel.

All components are easily accessible once the front panel has been opened.

5.3 Electrical Components

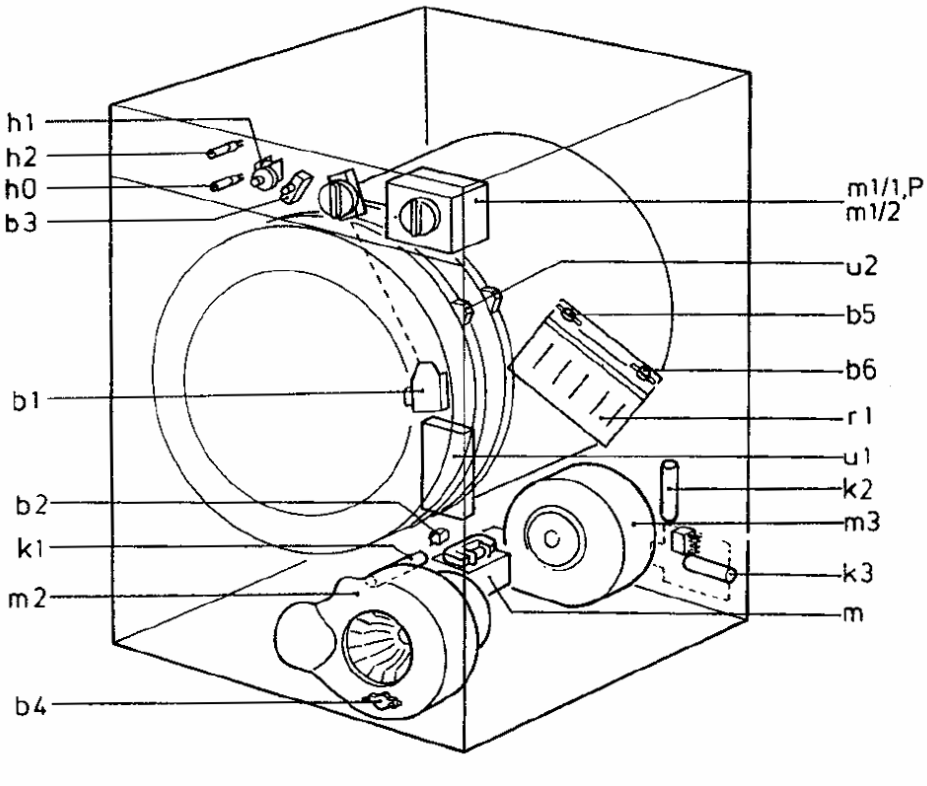
5.3.1 T 368 C, T 369 C



b1	On/Off Switch	k2	Capacitor for m3
b2	Level Switch	k3	Suppressor
b3	Temp. Selector Switch	m1	Timer Motor
b4	Temp. Regulator	m2	Drum Drive Motor
b5	Temperature Limiter	m3	Fan Motor
b6	Temperature Limiter	m4	Condensate Pump
h0	Indicator Lamp	P	Timer
h1	Buzzer	r1	Heater Bank
h2	Level Indicator Lamp	u1	Electronic Unit
k1	Capacitor for m2	u2	Residual Moisture Sensor

Figure 5-2: Electrical Components (T 368 C, T 369 C)

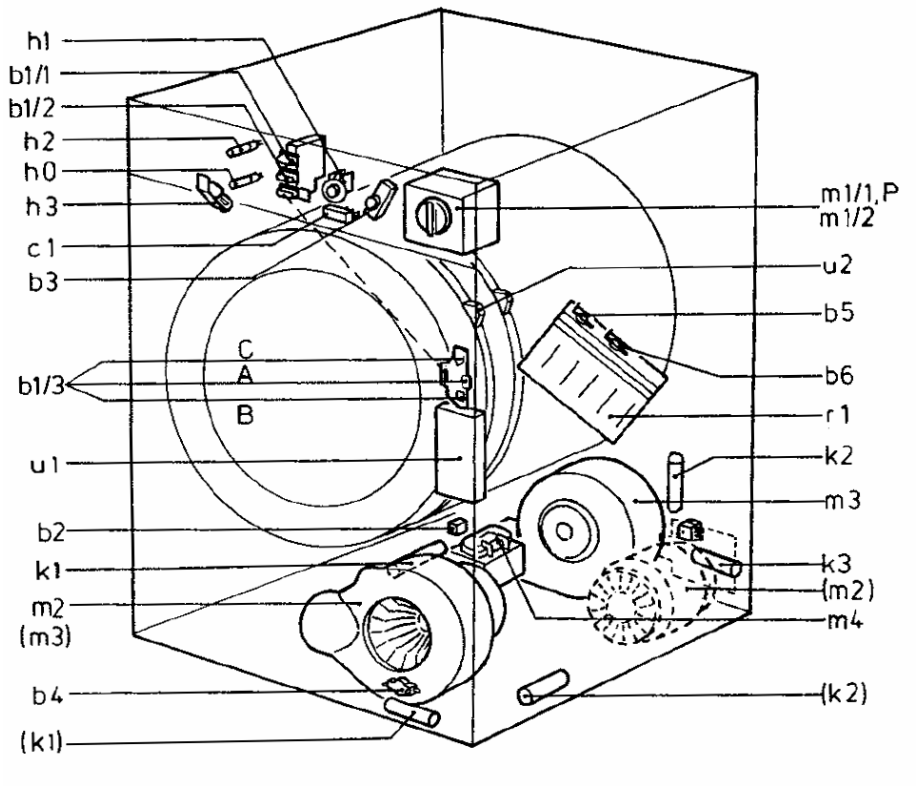
5.3.2 T 368 C (from Machine no. Prefix 11/…)



b1	On/Off Switch	k2	Capacitor for m3
b2	Level Switch	k3	Suppressor
b3	Temp. Selector Switch	m1/1	Timer Motor
b4	Temp. Regulator	m1/2	Timer Motor - Reversing
b5	Temperature Limiter	m2	Drum Drive Motor
b6	Temperature Limiter	m3	Fan Motor
h0	Indicator Lamp	m4	Condensate Pump
h1	Buzzer	P	Timer
h2	Level Indicator Lamp	r1	Heater Bank
k1	Capacitor for m2	u1	Electronic Unit
		u2	Residual Moisture Sensor

Figure 5-3: Electrical Components (T 368 C from Machine no. Prefix 11/…)

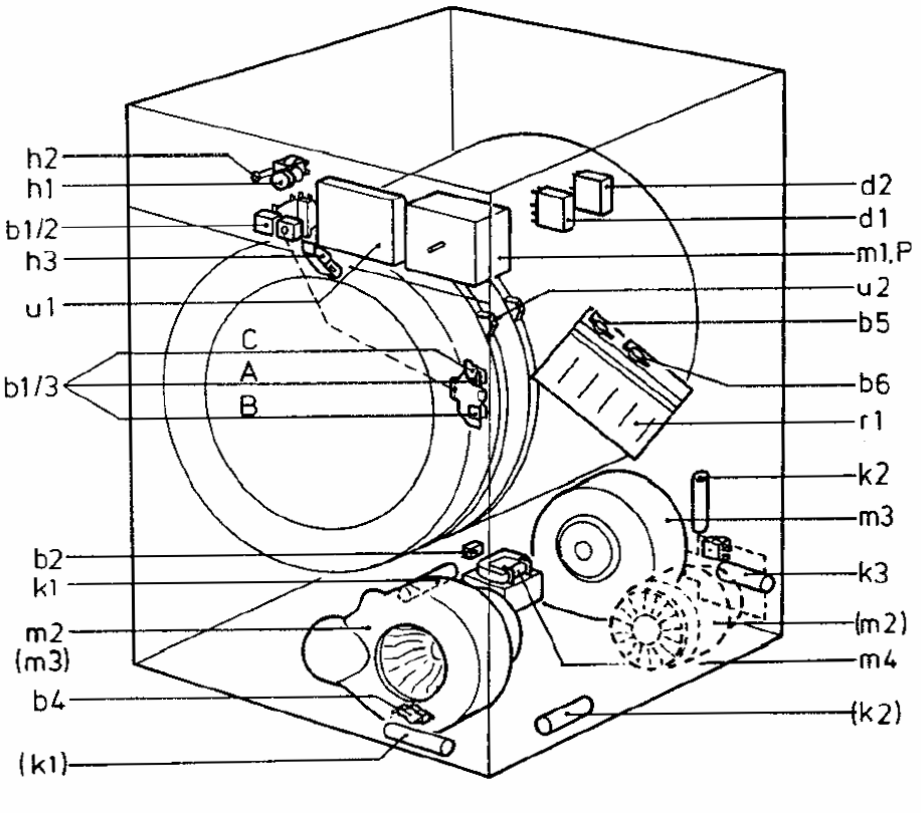
5.3.3 T 369 C-2



b1/1	Switch Light	h3	Drum Lighting
b1/2	On/Off Switch	k1	Capacitor for m2
b1/3	Door Contact – Switch A	k2	Capacitor for m3
b1/3	Door Contact – Lock B	k3	Suppressor
b1/3	Door Contact – Light C	m1/1	Timer Motor - Transport
b2	Level Switch	m1/2	Timer Motor - Reversal
b3	Temp. Selector Switch	m2	Drum Drive Motor
b4	Temp. Regulator	m3	Fan Motor
b5	Temp. Limiter	m4	Condensate Pump
b6	Temp. Limiter	P	Timer
c1	Door Lock Relay	r1	Heater Bank
h0	Indicator Lamp	u1	Electronic Unit
h1	Buzzer	u2	Residual Moisture Sensor
h2	Level Indicator Lamp		

Figure 5-4: Electrical Components (T 369 C-2)

5.3.4 T 377 C, T 378 C



b1/2	On/Off Switch	k1	Capacitor for m2
b1/3	Door Contact – Switch A	k2	Capacitor for m3
b1/3	Door Contact – Lock B	k3	Suppressor
b1/3	Door Contact – Light C	m1	Timer Motor
b2	Level Switch	m2	Drum Drive Motor
b4	Temp. Regulator	m3	Fan Motor
b5	Temp. Limiter	m4	Condensate Pump
b6	Temp. Limiter	P	Timer
d1	Relay – Step/Level	r1	Heater Bank
d2	Relay – Cutout	u1	Electronic Unit
h1	Buzzer	u2	Residual Moisture Sensor
h2	Level Indicator Lamp		
h3	Drum Lighting		

Figure 5-5: Electrical Components (T 377 C, T 378 C)

5.4 Heater Bank

5.4.1 Heater Bank – Removal (Machine Nos. without a Prefix)

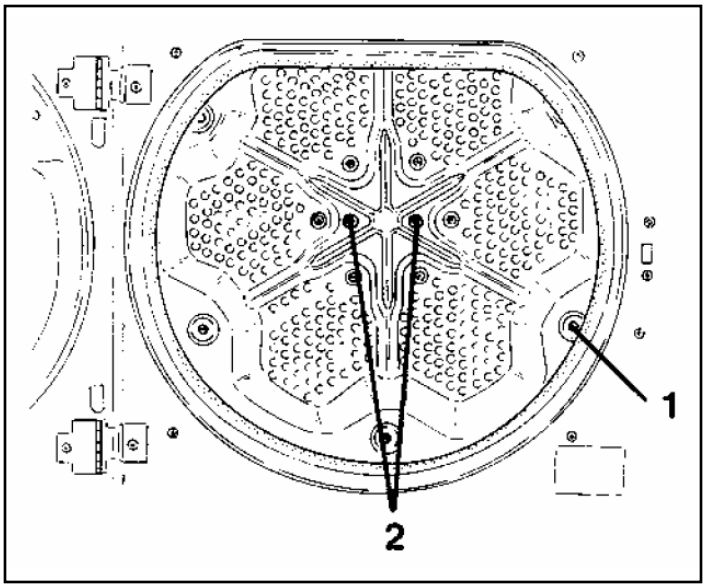


Figure 5-6: Heater Bank Removal 1

1. Remove the six screws on the rear inside panel of the drum (refer to Figure 5-6 – Heater Bank Removal 1, Item 1).
2. Unscrew the two screws in the central bearing, (refer to Figure 5-6 – Heater Bank Removal 1, Item 2).
3. Open the rear panel of the drum and lay it against the side. Refer to Figure 5-7 – Heater Bank Removal 2.
4. Turn the retaining screws, refer to Figure 5-7 – Heater Bank Removal 2, Item 1, one turn to release the heater bank and remove it by pulling upwards.

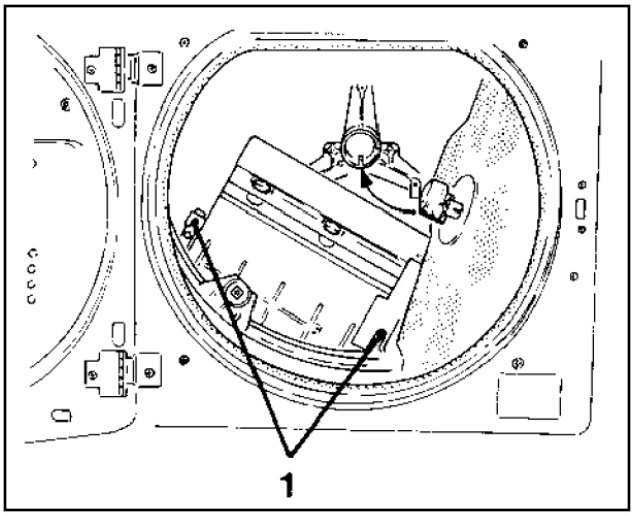


Figure 5-7: Heater Bank Removal 2

Note:
When refitting the drum rear panel, it is important to ensure that the bearing housing is correctly aligned at the position indicated by the arrow in Figure 5-7 and lightly screwed into place.

Then, align a hole in the drum rear panel with one of the captive nuts, insert a screw and tighten by hand. Turn the drum by hand and fit all the other screws in the same way one by one, then tighten them.

5.4.2 Heater Bank - Removal from Machine Nos. Prefix 10/… or 11/…

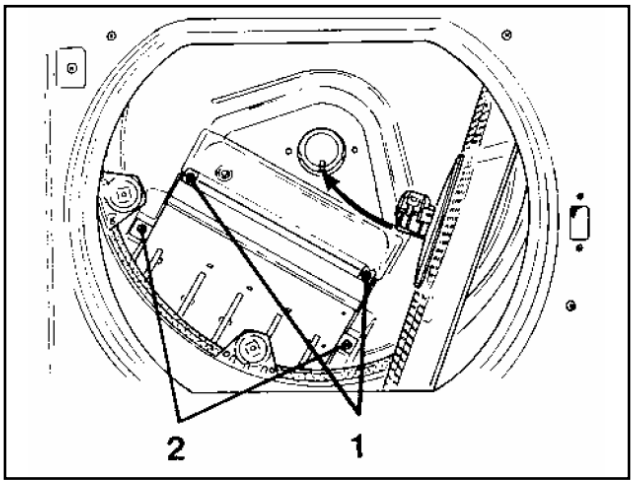


Figure 5-8: Heater Bank Removal (from Machine Nos. Prefix 10/… or 11/…)

1. Carry out steps 1-3 of Section 5.4.1 – Heater Bank Removal (Machine Nos. without a Prefix).
2. Remove the two screws, refer to Figure 5-8 – Heater Bank Removal, Item 1, and take off the heater cover.
3. Disconnect the wiring.
4. Turn the retaining screws, refer to Figure 5-8 – Heater Bank Removal, Item 2, one turn to release the heater bank and remove it by pulling upwards.

5.5 Heater Bank Thermostat

5.5.1 Replacement

1. Carry out the procedures described in Sections 5.4.1 or 5.4.2 depending on the type of the heater bank.
2. Change the thermostat.

Note:
Until the following Machine nos., if one thermostat should fail, all units must have both thermostats replaced and wired according to Conversion Instruction 12-7.7:

T 368 C – Machine no. 7633263
T 369 C – Machine no. 7632736
T 377 C – Machine no. 7650601
T 378 C – Machine no. 7642779

5.6 Fan Unit

5.6.1 Removal (Machine Nos. without Prefix)

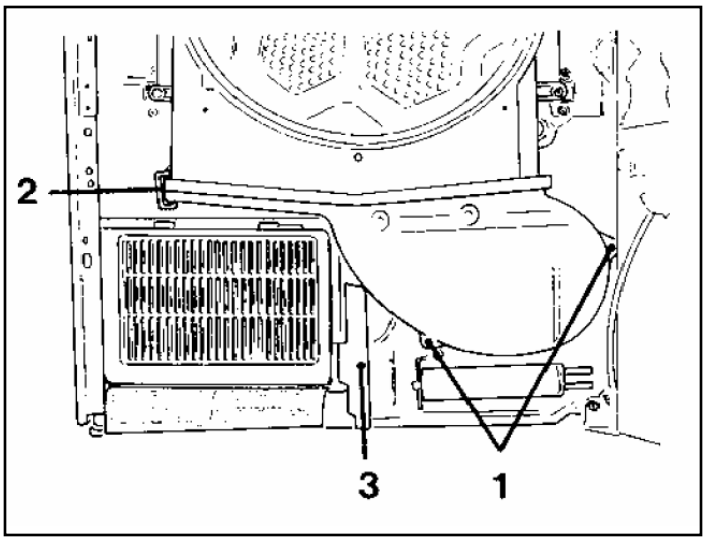


Figure 5-9: Fan Unit Removal 1

1. Open the Front Panel – refer to Section 5.2.1.
2. Remove the Plastic Plate (refer to Figure 5-9 – Fan Unit Removal 1, Item 1).
3. Release the clip (refer to Figure 5-9, Item 2).
4. Remove the two screws on the vent duct (refer to Figure 5-9, Item 3).
5. Remove the exhaust vent duct by sliding it forward and down.
6. Loosen the two screws; refer to Figure 5-10 – Fan Unit Removal 2, Item 1, by one turn.
7. Remove the two screws (refer to Figure 5-10, Item 2).
8. Loosen the clip; refer to Figure 5-10, Item 3, disconnect the hose and remove the pump.

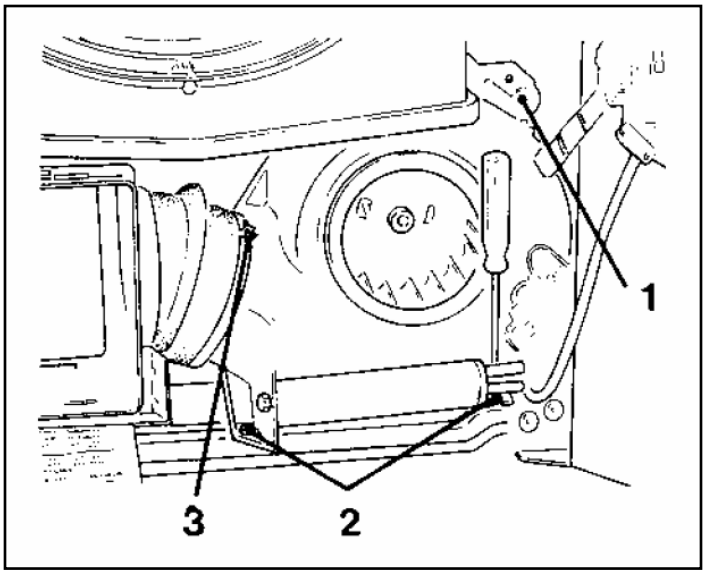


Figure 5-10: Fan Unit Removal 2

Note:
When refitting the fan unit, ensure that the wiring harness is correctly located in the retaining clip on the fan housing. Also ensure that the connecting hose between the condensate pump and the collection vessel is laid and, if necessary, fixed so that it does not come into contact with the drum.

5.6.2 Fan Unit with Drum Drive Motor – Removal (Machine Nos. with Prefix 10/… or 11/…)

From Machine no: 11/8285912 T 368 C
10/8273006 T 369 C-2
10/8341291 T 377 C
10/8341312 T 378 C

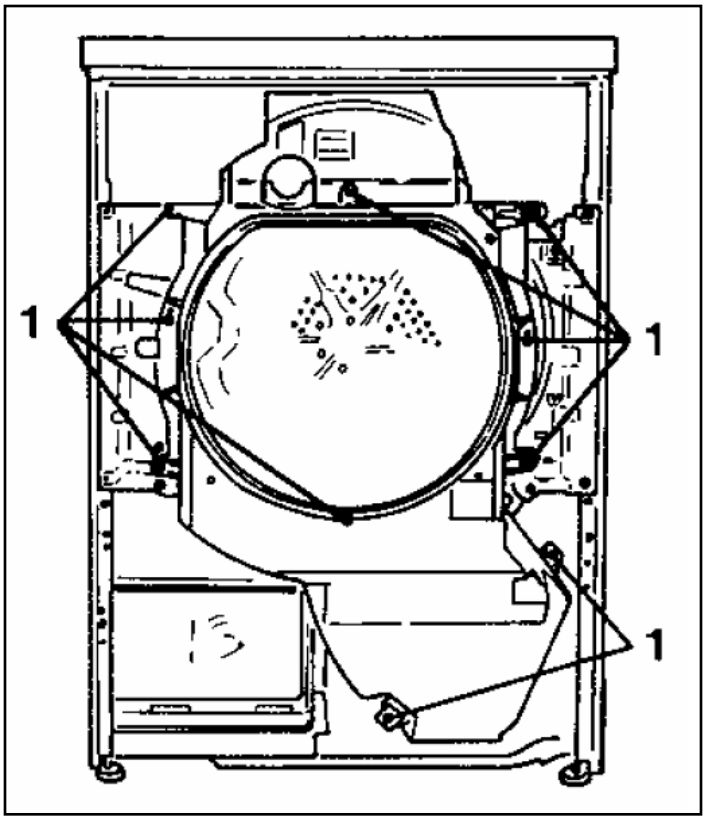


Figure 5-11: Fan Unit with Drum Drive Motor Removal

1. Open the front panel.
2. Remove the Plastic Plate (refer to Figure 5-9 – Fan Unit Removal 1).

Note:
If the vent duct is mounted separately from the fill ring, proceed as in Section 5.6.1 – Fan Unit Removal (Machine nos. without Prefix), Steps 3-5

3. Unscrew the fill ring and exhaust duct cover; refer to Figure 5-11 – Fan Unit with Drum Drive Motor Removal, Item 1, and remove them.

4. Use the long fixing lever, Part no. C 2627, or a long screwdriver to slacken the drive belt as in Figure 5-12 and remove it from the drive pulley.

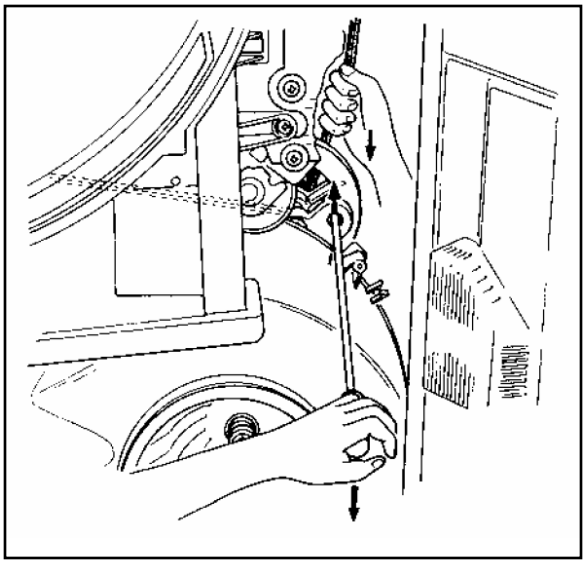


Figure 5-12: Removing the Drive Belt

5. Remove the two screws (refer to Figure 5-13 – Removing the Pump).
6. Loosen the clip; refer to Figure 5-13, Item 2, disconnect the hose and remove the pump.

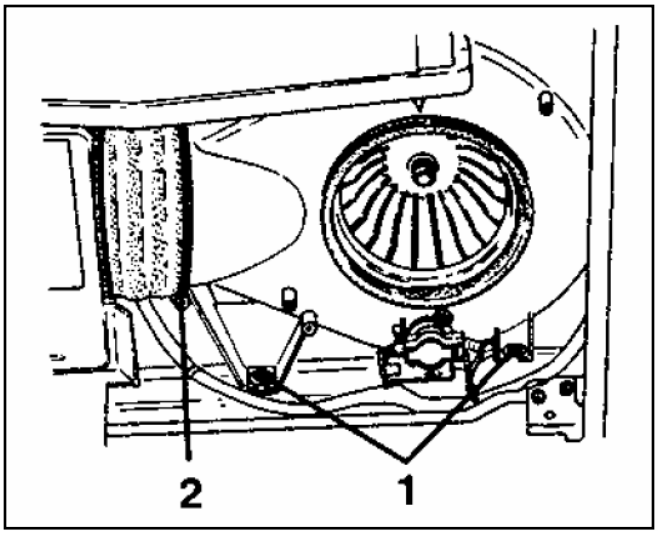


Figure 5-13: Removing the Pump

7. Pull the fan forward by about 2 cm and, by tilting it, lift the rear support bracket; refer to Figure 5-14 – Removing the Unit, Item 1, to the left over the U traverse. Remove the unit.

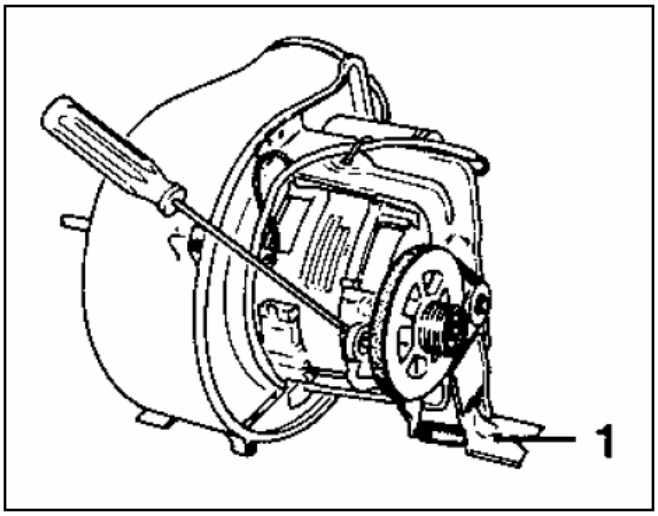


Figure 5-14: Removing the Unit

5.7 Cooling Fan – Circulation Fan Belt

5.7.1 Replacement

1. Open the front panel – Refer to Section 5.2.1.
2. Remove fill ring/exhaust vent duct (refer to Section 5.6.1 – Fan Unit Removal, Steps 2-5).
3. With the left hand, hold the belt on the pulley of the cooling fan.
4. Turn the circulation fan by hand and ease the belt onto the circulation fan pulley.

5.8 Condensate Pump

5.8.1 Replacement

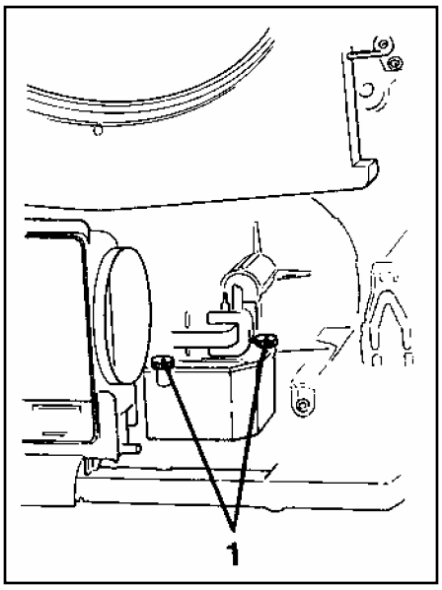


Figure 5-15: Condensate Pump Replacement

1. Open the front panel – Refer to Section 5.2.1.
2. Remove the fan unit – Refer to Section 5.6.1 or 5.6.2.
3. Unscrew the knurled knobs; refer to Figure 5-15 – Condensate Pump Replacement, Item 1, and lift out the pump complete with its cover.

5.9 Microswitch

5.9.1 Replacement

1. Open the front panel – Refer to Section 5.2.1.
2. Remove the fan unit – Refer to Section 5.6.1 or 5.6.2.
3. Unscrew the knurled knobs; refer to Figure 5-15 – Condensate Pump Replacement, Item 1, and lift out the pump complete with its cover.
4. Change the microswitch.

5.10 Drum Drive Motor

5.10.1 Removal

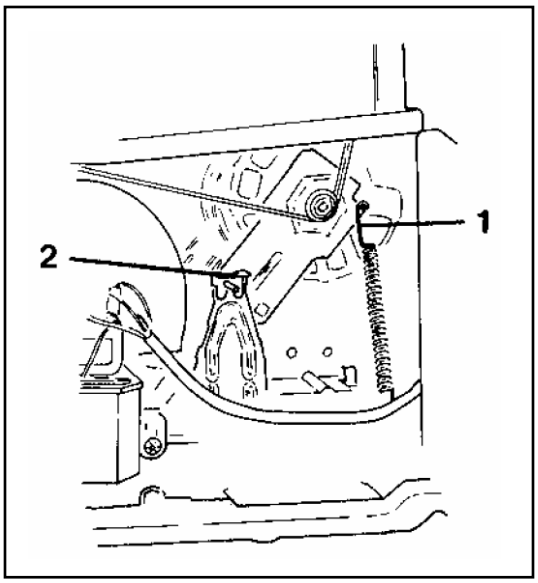


Figure 5-16: Drum Drive Motor Removal

1. Open the front panel – refer to Section 5.2.1.
2. Remove the fan unit – refer to Section 5.6.1.
3. Unclip the spring; refer to Figure 5-16 – Drum Drive Motor Removal, Item 1, and release the drive belt from the pulley.
4. Remove the pivot bolt retainer (refer to Figure 5-16, Item 2).
5. Lift the motor slightly and withdraw the bolt.

5.11 Cooling Fan

5.11.1 Removal (Machine Nos. without Prefix)

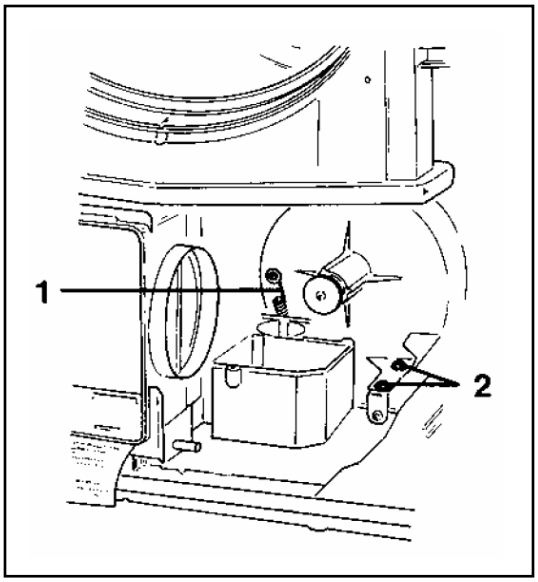


Figure 5-17: Cooling Fan Removal 1 (Machine Nos. without Prefix)

1. Open the front panel – Refer to Section 5.2.
2. Remove the fan unit – Refer to Section 5.6.1.
3. Remove the drum motor – Refer to Section 5.13.1.
4. Remove the condensate pump if necessary – Refer to Section 5.8.1.
5. Release the spring (refer to Figure 5-17 – Cooling Fan Removal 1, Item 1.
6. Remove the screws (refer to Figure 5-17, Item 2).
7. Turn the fan to the right; refer to Figure 5-18 – Cooling Fan Removal 2, and then tilt it to the front, refer to Figure 5-19 – Cooling Fan Removal 3.

Note:
When refitting the fan, ensure that the lower edge of the seal is correctly located and projects in the condenser box.

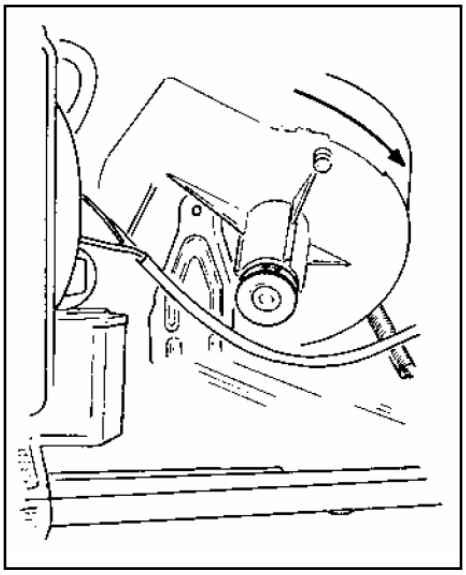


Figure 5-18: Cooling Fan Removal 2 (Machine Nos. without Prefix)

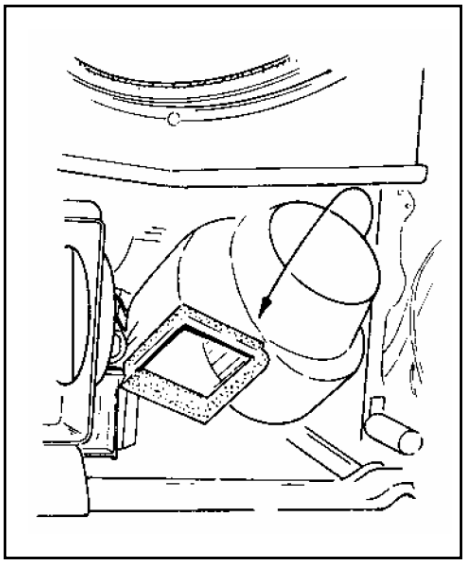


Figure 5-19: Cooling Fan Removal 3 (Machine Nos. without Prefix)

5.11.2 Cooling Fan Removal (Machine Nos. with Prefix 10/… or 11/…)

From Machine no: 11/8285912 T 368 C
10/8273006 T 369 C-2
10/8341291 T 377 C
10/8341312 T 378 C

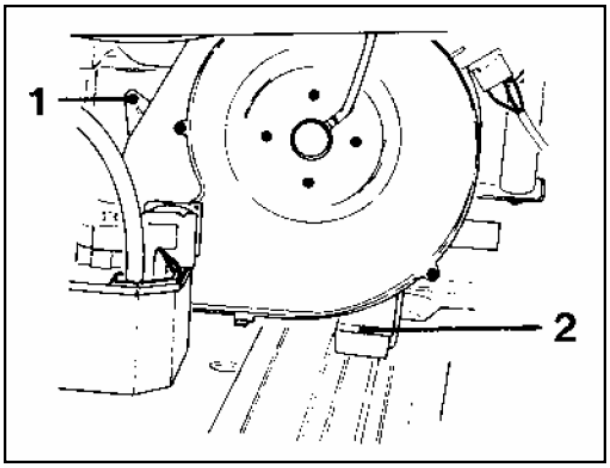


Figure 5-20: Cooling Fan Removal (Machine Nos. with Prefix 10/… or 11/…)

1. Open the front panel – Refer to Section 5.2.1.
2. Remove the fan unit – Refer to Section 5.6.1.
3. Remove screws (refer to Figure 5-20 – Cooling Fan Removal, Items 1 and 2).
4. Remove the fan.

Note:
When refitting the fan, ensure that the lower edge of the seal is correctly located and projects in the condenser box.

5.12 Drum Drive Belt

5.12.1 Replacement

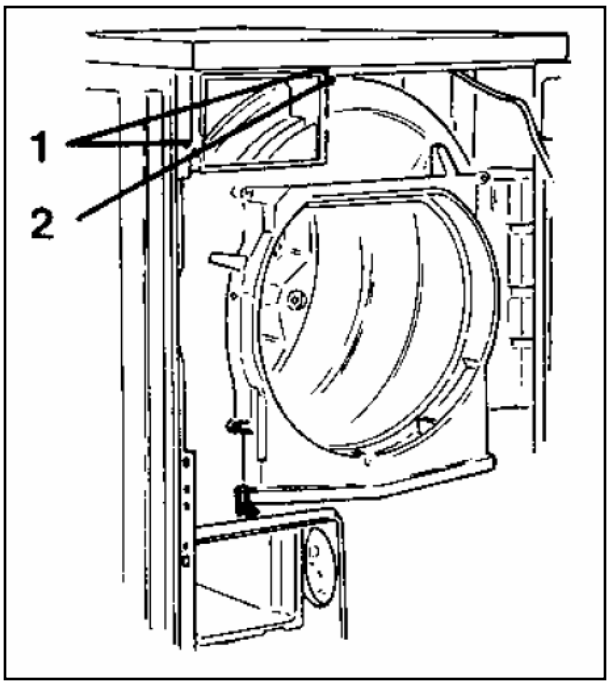


Figure 5-21: Drum Drive Belt Replacement 1

1. Open the front panel – Refer to Section 5.2.1.
2. Units without a Machine no. prefix, remove the fan unit – Refer to Section 5.6.1.
3. Units without a Machine no. prefix, release the spring (refer to Section 5.10.1 – Drum Drive Motor Removal, Step 3).
4. Units with a Machine No. prefix, 10/.. or 11/.. remove belt from pulley as in Figure 5-12 – Removing the Drive Belt.
5. Unscrew the collector drawer frame (refer to Figure 5-21 – Drum Drive Belt Replacement 1, Item 2, and lay it with its hose connection in the condenser box.
6. Cut through the damaged belt and remove it.
7. Remove the screws (refer to Figure 5-22 – Drum Drive Belt Replacement 2, Item 1) and ease open the bearing ring panel.
8. Slide the new belt through the gap between the bearing ring panel and the appliance casing (refer to Figure 5-22, Item 2). Refit the bearing ring panel and screw it tightly into place.
9. Where fitted, disconnect the electrical connection plugs (refer to Figure 5-22, Item 3).
10. Unscrew the slip ring brush holder (refer to Figure 5-23 Drum Drive Belt Replacement 3, Item 1).

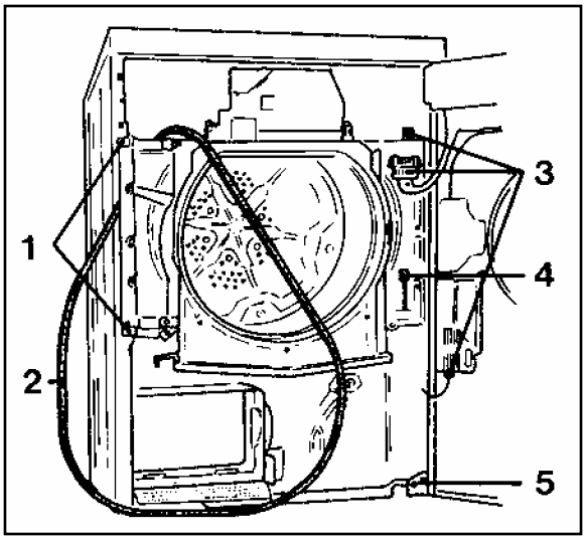


Figure 5-22: Drum Drive Belt Replacement 2

11. Disconnect the earthing wire (refer to Figure 5-22, Item 4).
12. Unscrew the lower hinge (refer to Figure 5-22, Item 5) and remove the front panel.

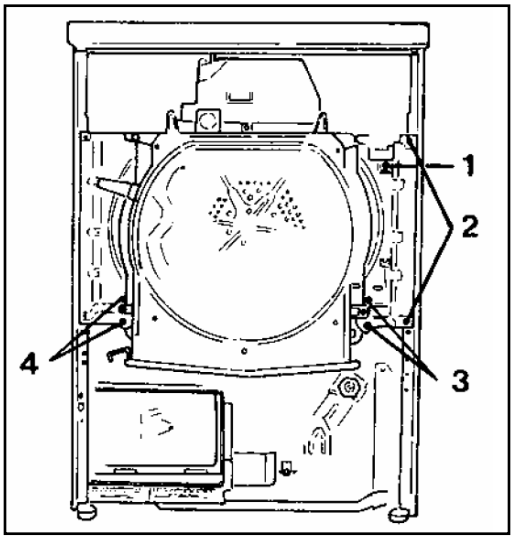


Figure 5-23: Drum Drive Belt Replacement 3

13. Remove the screws (refer to Figure 5-23 – Drum Drive Belt Replacement 3, Item 2) and ease open the bearing ring panel.
14. Slide the new belt through the gap between the bearing ring panel and the appliance casing. Refit the bearing ring panel and screw it tightly into place.
15. Slide the belt into position on the drum and then onto the drive pulley.
16. Replace removed parts in reverse order.

5.13 Drum

5.13.1 Removal

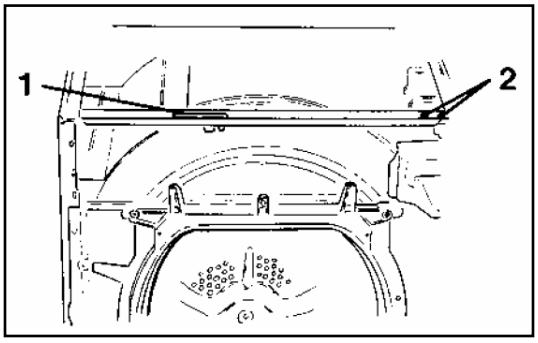


Figure 5-24: Drum Removal

1. Carry out Steps 1-5 of Section 5.12.1 – Drum Drive Belt Replacement.

Note:
From Machine no. 7034881, Step 2 is not required.

2. Models up to Machine no. 7034880, remove the lid or pull the machine forward slightly out of its recess if built-in.
   - Unscrew the fixing bracket (refer to Figure 5-24 – Drum Removal, Item 1) and remove the inlet hose.
   - Remove the upper hinge piece (refer to Figure 5-24, Item 2) and lift off the front panel.
3. Carry out Steps 8-11 of Section 5.12.1 – Drum Drive Belt Replacement.
4. If the drum type is shown in Figure 5-25 – Simple, Folded Drum Edge (see arrow), slacken the bearing screws (Figure 5-23 – Drum Drive Belt Replacement 3, Items 3 and 4) by one turn.

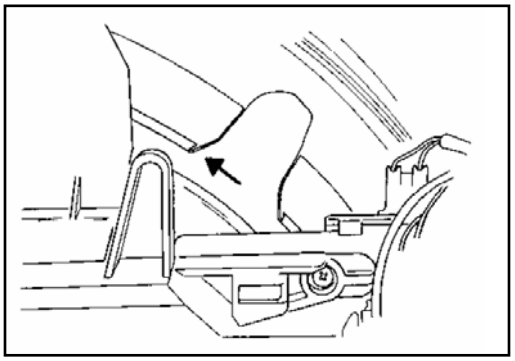


Figure 5-25: Simple, Folded Drum Edge

5. If the drum type is as shown in Figure 5-26 – Rolled Drum Edge (see arrow), do not loosen the bearing.
6. Unscrew the bearing ring (refer to Figure 5-22 – Drum Drive Belt Replacement 2, Items 1 and 2) and remove it.
7. Unscrew the two central bearing screws (refer to Figure 5-6 – Heater Bank Removal 1, Item 2) and remove the drum.

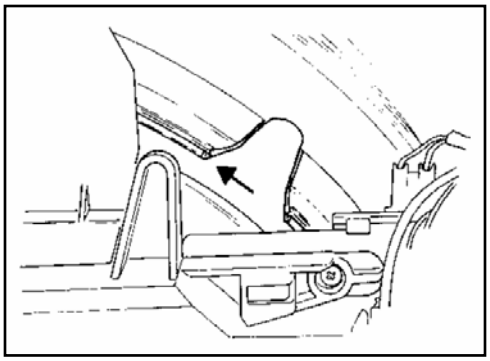


Figure 5-26: Rolled Drum Edge

Note:
When re-assembling the drum, read the first paragraph of Section 5.4.1 – Heater Bank Removal (Machine Nos. without a Prefix).

Note:
Adjust the support rollers (refer to Figure 5-23 – Drum Drive Belt Replacement 3, Items 3 and 4) in such a way as to ensure that the gap between the neck of the drum and the bearing is uniform all the way around.

5.14 Rear Drum Seal

5.14.1 Replacement

1. Proceed as in Section 5.13.1 – Drum Removal.
2. Fit the new seal so that the felt faces towards the rear of the appliance and the rubber groove for the clamp ring faces the front. The drum is sealed axially.

5.15 Front Drum Seal

5.15.1 Replacement

1. Open the front panel – Refer to Section 5.2.1.
2. Remove the fill ring/exhaust vent duct (refer to Section 5.6.1 – Fan Unit Removal - Machine Nos. without Prefix, Steps 2-5 or Section 5.6.2 – Fan Unit Removal – Machine Nos. with Prefix, Steps 2 and 3).
3. Remove the bearing ring (Refer to Section 5.12.1 – Drum Drive Belt Replacement, Steps 4, 6 and 12).

5.16 Bearing Shells

5.16.1 Replacement

1. Unscrew the drum rear panel (Refer to Section 5.6.1 – Fan Unit Removal - Machine Nos. without Prefix, Steps 1-3).
2. Lever off the upper section of the bearing shell with a screwdriver and remove the bearing.
3. Grease the new bearing shells and fit onto the ball pin. (A 6gm grease sachet with “Unisilicone TK 572 6 G”, Part no. 2338790, is supplied with the bearing shell).

Note:
Assemble the rear drum panel as described by the **Note** in Section 5.4.1 – Heater Bank Removal (Machine Nos. without a Prefix).

5.17 Condenser Box

5.17.1 Removal

1. Carry out the work listed in Section 5.13.1 – Drum Removal.
2. Remove the Condensate Pump (refer to Figure 5-15 – Condensate Pump Replacement, Item 1).
3. Release the cooling pump spring (refer to Figure 5-17 - Cooling Fan Removal 1).
4. Remove the screw below the condenser box and lift out the box.

Note:
When refitting, ensure that the seal is first inserted; recess down, in the air duct before fitting the condenser box. Also ensure that the lower edge of the seal from the cooling fan is correctly located and projects in the condenser box.

5.18 Fill Ring Seal

5.18.1 Replacement

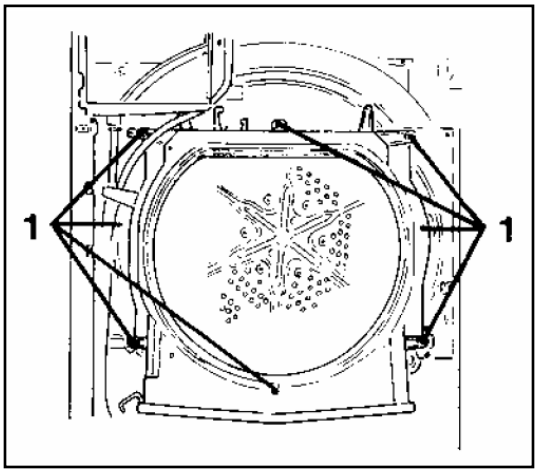


Figure 5-27: Fill Ring Seal Replacement

1. Open the front panel – Refer to Section 5.2.1.

Note:
If the fill ring and duct are combined to form one piece, remove the screws indicated in Figure 5-11 – Fan Unit with Drum Drive Motor Removal, then change the seal.

2. Remove the vent duct (refer to Section 5.6.1 – Fan Unit Removal - Machine Nos. without Prefix, Steps 3-5).
3. Remove the 8 screws (refer to Figure 5-27 – Fill Ring Seal Replacement, Item 1) and remove the fill ring.
4. Replace the seal.

5.19 Door Seal

5.19.1 Replacement

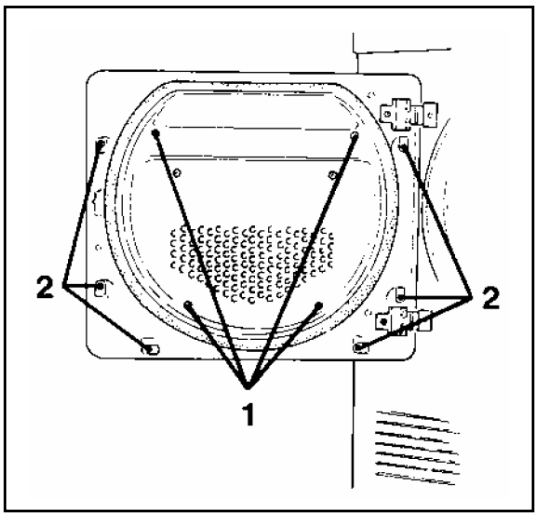


Figure 5-28: Door Seal Replacement

1. Remove the filter unit by unscrewing the 4 screws (refer to Figure 5-28 – Door Seal Replacement, Item 1).
2. Replace the seal.

5.20 Outer Door Panel

5.20.1 Replacement

1. Turn the 6 tensioning levers (refer to Figure 5-28 – Door Seal Replacement, Item 2) a quarter turn.
2. Pull the bottom edge of the panel away from the inner door cap slightly and lift off towards the top.

5.21 Electronic Modules

5.21.1 Replacement

The electronic module is easily accessible after opening the front panel (refer to Section 5.2 – Front Panel). The location of the module can be seen on the relevant “Electrical Components” figure in Section 5.3.

5.21.2 Electronic Module EF 102

On a very few models in the initial production of the T 368 C machines, the Roman numerals I – IV were printed in reverse order. This does not affect operation as all connections and plugs are coded and connected correctly.

6.0 Fault Diagnosis

T 368 C, T 369 C, T 369 C-2, T 377 C, T 378 C

6.1 Checking the Sensor Controls T 377 C, T 378 C

Type of fault / Electronic connection points		Timer overruns stop (progr. indicator diminated)	Timer skips start position	Timer only skips moisture control	No selection possible	Programme cannot be erased	Timer performs no steps	Scrambled programme sequence	Washing is overdried	Washing is too wet	Consumers (motor, heater, etc.) are not switched on			Tumble dryer sensor controls: Possible fault causes	
Supply voltage 220 V	I + III				●		●							No supply voltage	Check function of mains isolator
Step impulse	IV						●		●					Defective step relay in electronic unit	220 V on timer connection 37 ? Note return voltage approx. 90 V!
Address inputs	1 - 5	●	●	●			●	●	●	●				Incorrect address	Check correct closing and opening of timer contacts (PCB)
EK impulse	6	●	●					●		●				EK impulse missing or permanently applied	Check function of EK contact. A 12 V pulse must be available with each step.
12 V output	7				●		●							If 220 V applied to electronic unit input, electr. defekt	Voltage between 7 and 12
Programme erase	8					●								Frame contact of mains isolator or door switch not energized	Check negative (frame) ptential of plug point 14 through mains isolator
Negative pole for moisture control	9									●				Timer contact I of printed circuit board defective	Check timer contact and connection cables of 12 - 1 - 2 - 9
Locking relay	10 + 11										●			Locking relay not energized	Disconnect 2 pole plug from relay and check voltage
Negative (frame) pole for 12 V output	12			●						●				Fork plug in multiple plug has no contact	Check correct plug strip mounting
	13														
Negative (frame) pole for housing	14				●	●								No connection between electronic unit and housing	Check current traverse between electronic unit and housing
Negative pole for moisture sensor	15								●	●				Connection cables to (or) moisture sensor interrupted or short circuited	Disconnect connections 15 and 16 and check voltage (approx. 35 V-) No voltage = electronic defective
Positive pole for moisture sensor	16								●	●					

Table 6-1: Checking the Sensor Controls T 377 C, T 378 C

6.2 Checking Residual Moisture Stages

6.2.1 T 368 C, T 369 C with EF 102 / EF 202 (Tester, Part no. A5300)

1. Open front door panel or remove the appliance lid - – Refer to Section 5.2 or 5.1.1.
2. Connect the 7-pole plug of the test module to the 7-pole socket (service connection) on the electronic unit.
3. Connect the multimeter to the test module by plugging into the sockets near the rotary knob.
4. Carry out tests according to the test chart.

Test Module Setting: 1			
Program Setting	**Selector Position**	**Current EF 202**	**EF 202 from Part no. 1752331**
Extra Dry	2	2 µA	-
Normal +	10	2 µA	-
Normal	11-14	0.018 mA	-
Hand Iron (1 drop)	18	0.44 mA	-
Hand Iron (2 drops)	21-22	1.50 mA	-
Machine Iron	26-29	3.2 mA	-
Normal +	32-35	2 µA	-
Normal	37-40	0.12 mA	0.40 mA

Table 6-2: Test Module Setting 1

6.2.1.1 Test Chart

Test device setting	Programme setting	Check the	Normal function	Comments
1 Fix text cable to rib and drum back panel using magnets and close door	"Machine iron"	Slide contacts	Voltage approx.	If no voltage is applied, disconnect sensor cables from the electronic unit. Voltage = electronic unit defective. Voltage applied = check sensor cables.
2 Remove test cable and close door again	Machine iron	Residual moisture, detection stage	Voltage must increase within 1 min from 1 V to approx. 30 V-	No voltage = electronic unit defective
1	"Normal +" "Normal" "Hand iron" "Machine iron"	Timer contacts	Voltage cycles Cycle approx.: 1:10 Cycle approx.: 1:1 Voltage unchanged	Depending on the measuring device, the voltage cycles between 0 V and 30 V or remains unchanged. If no voltage is applied in one of the programme settings, the timer contacts require checking.
			Do not switch dryer off	
3	"Machine iron"	4 min. time step	After 3 to 6 min. voltage reduces from 0.7 V- to 0 V.	If no change of the measured values occurs, the electronic unit is defective.
			After further approx. 1,5 min. the programme skips up to the "Cooling area"	No step impulse = el. unit defect. If the light "empty" is illuminated and the programme skips to the "stop" setting, the electronic unit is defective.
4		Level monitoring	Within up to approx. 3 min. the programme skips to stop setting	As soon as the LED for the level monitor lights up, the skipping cycle starts. If no step is carried out (and the LED is OK) the electronic unit is defective.

Table 6-3: Test Chart

6.2.2 T 377 C, T 378 C with EPW 304

Prior to testing ensure that the address inputs are correct. For measuring, connect one magnetic lead to the rear panel and the other to one of the ribs.

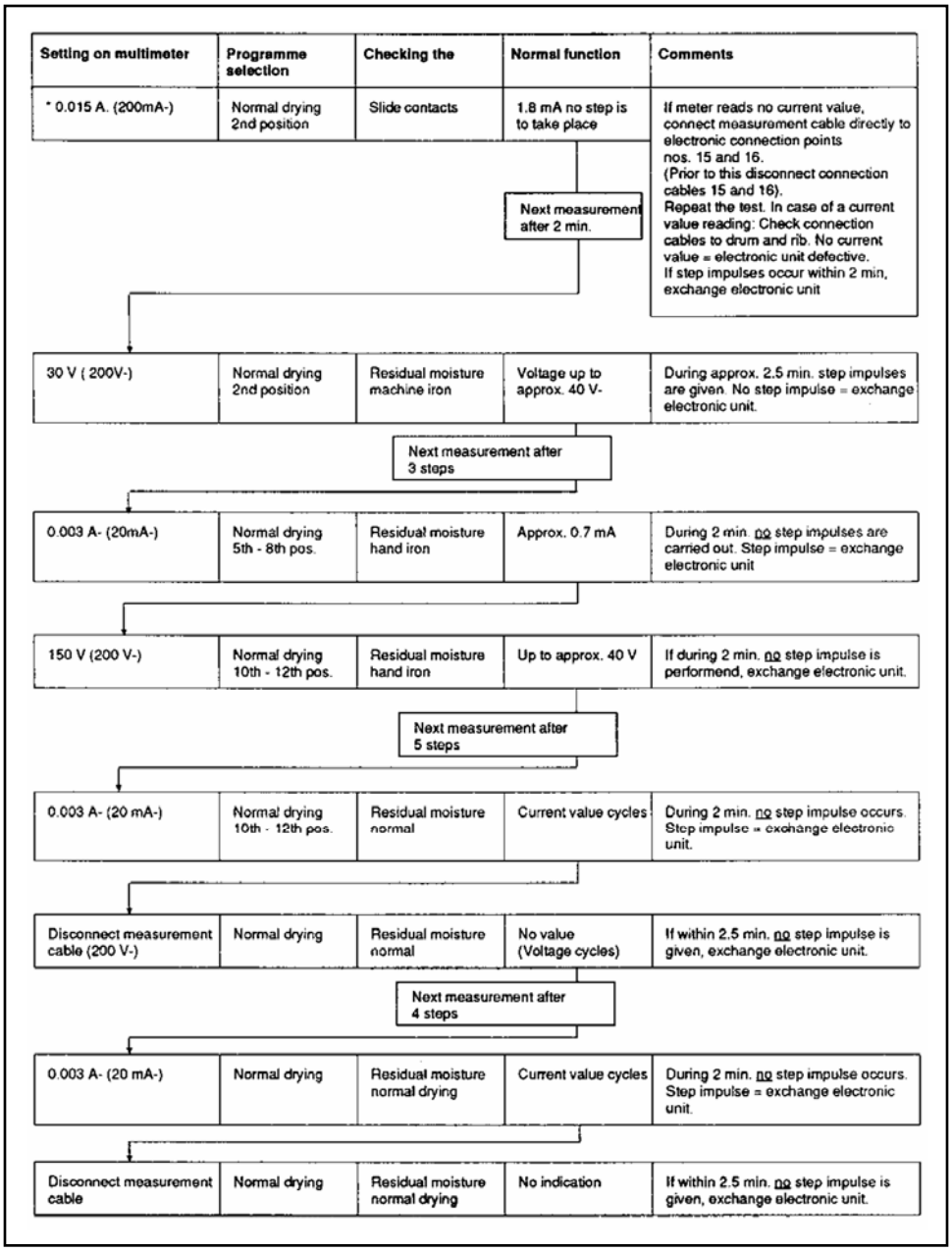


Table 6-4: T 377 C, T 378 C with EPW 304

* Measuring device. Elavi 5 (Measured values in brackets refer to Metrawatt)

6.2.3 T 368 C, T 369 C-2 with EF 202 (Tester A5300)

1. Open the front panel – Refer to Section 5.2.
2. Connect the 7-pole plug on the test module to the 7-pole socket (service connection) on the electronic unit (refer to Figure 6-1 – Connecting the 7-Pole Plug, Item 1). If necessary, remove the electronic unit's top retaining screw (Figure 6-1, Item 2), but ensure that the connections are not loosened.

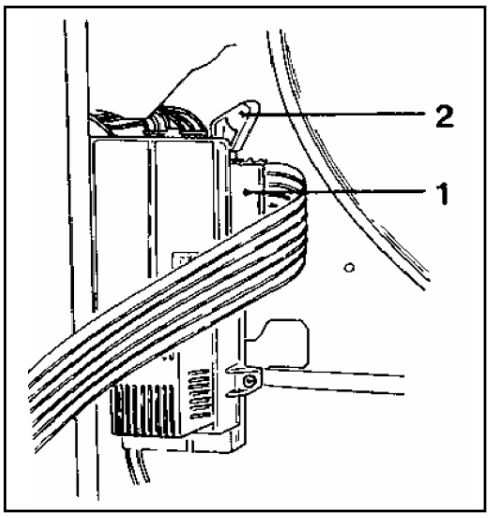


Figure 6-1: Connecting the 7-Pole Plug

3. Connect a multimeter to the test module by plugging into the sockets near the rotary knob (refer to Figure 6-2 – Connecting a Multimeter).
4. Refer to Table 6-5 – Test Chart when carrying out the tests.

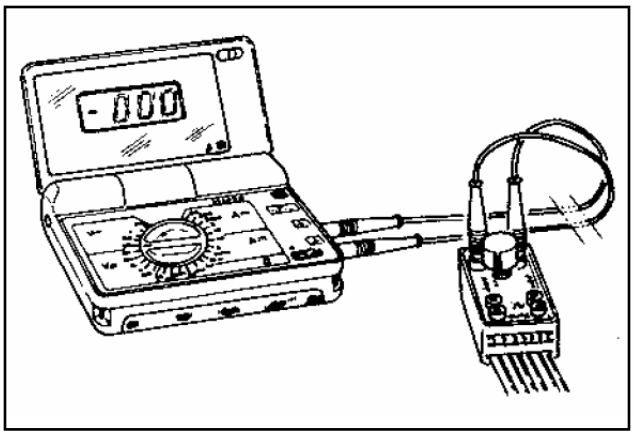


Figure 6-2: Connecting a Multimeter

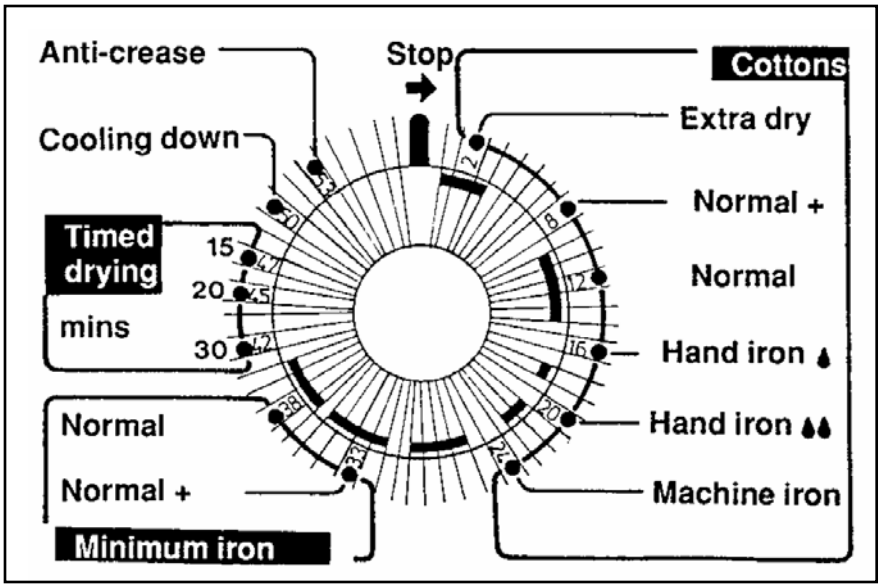


Figure 6-3: Setting the Drying Program

5. When setting the drying program, note that all voltages shown in the chart are only present at the positions indicated.

6.2.3.1 Test Chart

Test device setting	Programme setting	Check the	Normal function	Comments
1 Fix text cable to rib and drum back panel using magnets. Close door and front panel	Machine iron	Slide contact and the 1. residual moisture stage	Voltage approx. 35 V- as soon as the test cable ends come into contact, the voltage must reduce to 0 V	If no voltage is applied a) correct programme setting? b) timer contact (e.g. P5 and P11 in programme 'machine iron) OK? c) disconnect plug from sensor conductors and repeat measurement. No voltage = electronic unit defective
			Remove test cable from drum	
2	a) Close door b) "machine iron" (or set a different programme to be tested) c) switch on appliance	Residual moisture	Depending upon programme setting, voltage is applied time dependent (Voltage approx. 30 - 35 V-)	Apply voltage at e.g. Machine iron: approx. 10 sec. e.g. Normal: up to approx. 90 sec. No function = electronic unit defective
			Do not perform any circuit changes	
			During 1.5 min. the timer skips to the cooling air range	If no skip impulse is generated from the electronic unit, the unit is defective.

Table 6-5: Test Chart

Note:
In the "**Extra Dry**" program, the timer skips to "**Normal +**" and then switches onto "**Cooling Down**" after a maximum of 6 min.

6.2.4 Testing the Level Switch Function

1. Connect the residual moisture tester.
2. Open the condenser collector drawer (in the case of direct drainage, close the drain outlet).

Test Device Setting	Program Setting	Test Run	Comments
2	"30" Drying time	Fill max. 1.0 l water in the condensed water overflow. As soon as the level control closes, the voltage changes with: Elavi: from approx. 1 – 2 V- to 3 – 6 V- Metrawatt: from approx. 1 V- to approx. 15 V- (clear voltage jump recognizable)	If no voltage jump takes place, check level control and cable connections.
		Following the voltage jump, remove cable from measuring device. Within a period of up to 3 min. the lamp "empty" lights up and the timer skips to cool air operation.	If lamp does light up, check LED. If the timer does not skip, check timer or connections.

Table 6-6: Testing the Level Switch Function

6.3 Temperature Measurements

6.3.1 Temperature Measurements Using a Maximum Thermometer

Simple temperature measurement is possible in an unloaded machine using a maximum thermometer as follows:

Allow the appliance to run for about 10 minutes to allow the correct air temperature to be reached and so that the thermostat in the fan starts operating. Place the thermometer in the fluff filter recess in the door, fastening it with adhesive tape if necessary and allow the appliance to run for a further 5 minutes.

Temperature Range	
Normal:	90 – 100 °C
Low:	84 – 94 °C

Table 6-7: Temperature Range

Note:
On sensor-controlled dryers even with the temperature set at “Low”, the normal temperature is always reached at Step 1 (6 minute timed step).

6.4 Leaks

6.4.1 At the Front Door of the Condenser Box

Possible Cause
Bad join in seal. Seal too soft or thin resulting in insufficient sealing pressure.

Fault Rectified
From Machine no. 6867167.

Remedy
Fit new seal, Part no. 2396050.

6.4.2 At the Rear of the Condenser Box

Possible Cause
Poor seal between the rear of the heat exchanger and the condenser box.

Fault Rectified
From Machine no. 6867167.

Remedy
Fit new seal, Part no. 1290482.

Note:
The seal must be fitted so as to ensure that the seal lips face towards the heat exchanger.

6.4.3 Connecting Hose (Condensate Pump)

Possible Cause
Unprotected hose worn through by abrasive action from the drum as its wire retainer is missing.

Fault Rectified
From Machine no. 7048138.

Remedy
Replace the hose and fix it with a retaining clip, Part no. 1418830, to the condenser box – fan connection hose.

6.4.4 Condensate Container Drawer with Snap Closure. Water Runs Down the Machine Front.

Possible Cause
Water container overflow.

Fault Rectified
From water container Part no. 1653362.

Remedy
Fit water container with drip edge, Part no. 1670212.

6.4.5 At Outlet Connection

Possible Cause
The non-return valve does not seal correctly.

Fault Rectified
From Machine no. 9066712.

Remedy
Replace complete outlet connection, Part no. 1670181.

6.5 Noises

6.5.1 At the Sensor Brushes, Especially when Running Counterclockwise

Possible Cause
Weak spring does not give sufficient pressure.

Fault Rectified
From Machine no. 6963883.

Remedy
Fit new sensor brush unit, Part no. 1553823.

6.5.2 At the Bearing Rollers

Possible Cause
The rubber rollers can become flattened by pressure from the drum if the machine is not used for a long period.

Fault Rectified
From Machine no. 7004974.

Remedy
Replace the bearings:

Up to Machine no. 6769295	Left bearing	Part No. 1353672
	Right bearing	Part No. 1641982
From Machine no. 6769296	Left/Right Bearing	Part No. 1482841

Table 6-8: Replacement Bearing Part Numbers

6.6 Laundry is Not Dried

6.6.1 Inoperative Heating

Possible Cause
Thermostat failure.

Fault Rectified
From Machine Nos. 7633263 T 368 C, 7650601 T 377 C,
7632736 T 369 C, 7642779 T 378 C

Remedy
If there is a thermostat failure on a model with Machine no. prior to those listed, then both thermostats should be changed and rewired in accordance with Conversion Instruction 12-7.7.

6.6.2 Fan Operates but the Drum Fails to Turn

Possible Cause
Capacitator for drum motor and fan is defective.

Fault Rectified
As from Machine no. 9414823, the capacitator for the drum motor is situated on the housing of the cooling fan.

Remedy
If this fault occurs on appliances with a Machine no. lower than that mentioned above, Conversion Kit, Part no. 2330870, should be used in accordance with Conversion Instruction 12-7.8.

6.7 Water Container Drawer

6.7.1 Drawer Cannot be Fully Closed

Possible Cause
The container spout snap closure is too strongly sprung and does not open sufficiently to allow the drawer to close.

Fault Rectified
From Water container, Part no. 1653361.

Remedy
Fit a weaker spring, Part no. 1670291.

6.7.2 Water Container Does Not Locate Correctly When Pushed In and Opens Again

Possible Cause
Container hook does not click into place on the front panel.

Fault Rectified
Stronger hook on water container from the following Machine nos:
T 368 C 11/8340290
T 369 C 10/8327806
T 377 C 10/8351834
T 378 C 10/8351854
T 382 C 11/8307042
T 388 C 10/8307367

Remedy
Prior to the above models a retaining clip, Part no. 1928830, should be fitted with the screw supplied and in accordance with the instructions provided to the rear left side of the container runner.

Fitting procedure:
1. Remove the machine lid.
2. Remove the container runner fitting screw.
3. Fit the clip.

6.8 Dryer Fails to Operate

6.8.1 Control Lamp Lights Up But Dryer Fails to Operate

Possible Cause
Relay (door safety relay) damaged or charred.

Fault Rectified
From Machine no. 9587769 – Condenser dryer.
From Machine no. 9597965 – Vented dryer.

T 369 C from Machine no. 8399820 until 9542308.
Relays without plug housing used.

Remedy
On appliances prior to the above listed Machine nos. the plug housing and connector cover should be removed. The protective sleeve, Part no. 1227280 must be fitted onto the 2.5mm^2 black wire before it is connected to the middle contact on the relay.

6.9 Faulty Program Sequence

6.9.1 Program Skips and Advances Too Quickly

Faulty switching in the timer may occasionally cause the relay reed contacts to burn and weld together. This leads to the program advancing to the "**Cool Air**" position.

From the following Machine Nos.:
8968136 – T 366
8968640 – T 368 C
8969380 – T 369 C
9010901 – T 380
9013368 – T 382

A 1 kΩ protective resistor has been connected between contacts P7a of the timer and 6/4 of the electronic unit and combined in the wiring harness.

Electronic modules delivered to Spares Depts. Have had this resistor added either retrospectively or during production. In this case there is no resistor integrated in the wiring harness.

Electronic module EF 201 with protective resistor has Part no. 1752311.
Electronic module EF 202 with protective resistor has Part no. 1752331.

Electronic modules with this additional resistor can be used with wiring harnesses where it is also present.

6.9.2 Drying Stops in Mid-Program

If the timer motor has too low a resistance then it may draw too much current resulting in the protective resistor (combined in the wiring harness or situated on the electronic module) burning through and causing an open circuit.

Desired timer motor impedance ≥ 4 kΩ

Solution:
Change the timer and possibly also the electronic module.

6.9.3 Dryer e.g. T 368 C (With Timer MTA 2123)

Interference Suppressor BV 5900/7, Part no. 1742800

New legislation means that this interference suppressor, fitted to many models, is no longer required either in new or old machines.

If it becomes faulty, it should be removed and not replaced.

If, during any service work on a washing machine or a tumble dryer, it is noted that an interference suppressor with this Part no. is fitted then, to avoid possible faults occurring, it should be removed.

6.10 Loud Running Noises at Drum Brushes

Possible Cause
Loud noises caused by the brushes rubbing on the drum slip rings.

Fault Rectified
Modified brush unit has been fitted as standard since September 1995.

Remedy
Fit the modified brush unit, Part no. 1553825.

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