

## TECHNICAL INFORMATION T 15xx Dryers

 $\ensuremath{\mathbb{C}}$  2010 Miele USA

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## Technical Information

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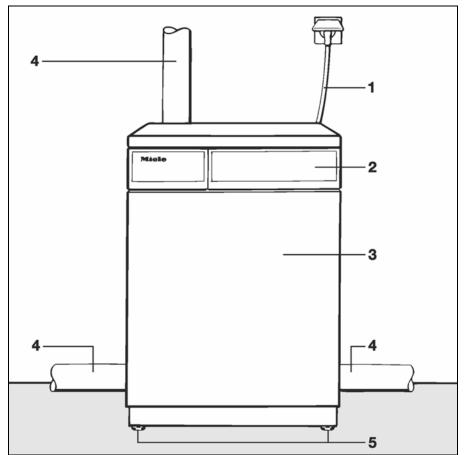
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# 1.0 Construction and Design



## 1.1 Appliance Overview – Vented Models

Figure 1-1: Typical Vented 5K Model

- 1 Power cable/plug
- 2 Control panel
- 3 Drum door
- 4 Exhaust connection (5K vented: right, left & rear; 6K vented: left & rear)
- 5 Adjustable legs

## **1.2** Appliance Overview – Condenser Models

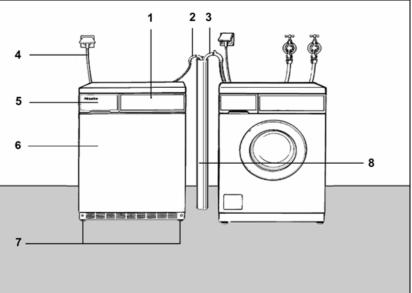


Figure 1-2: Typical Condenser Model Installed Next to Washer

- 1 Control panel
- 2 Condenser drain hose
- 3 Washer drain hose (for clarification only not part of dryer)
- 4 Power cable/plug
- 5 Condensed-water drawer
- 6 Drum door
- 7 Adjustable legs
- 8 Stand pipe

#### Note:

The condenser hose is placed into the same stand pipe as the washer drain hose.

## 1.3 Controls Overview

## 1.3.1 T 1515 (5-Kilogram Vented)

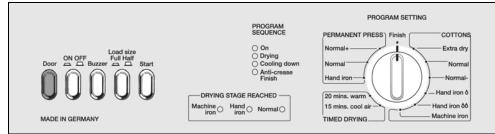


Figure 1-3: T 1515 Controls

## 1.3.2 T 1520 (5-Kilogram Vented)

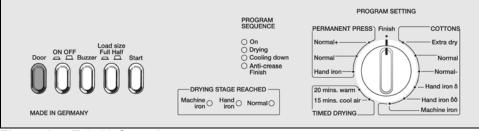


Figure 1-4: T 1520 Controls

## 1.3.3 T 1526 (6-Kilogram Vented)

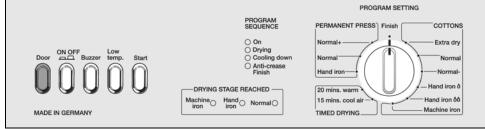


Figure 1-5: T 1526 Controls

#### 1.3.4 T 1565 C

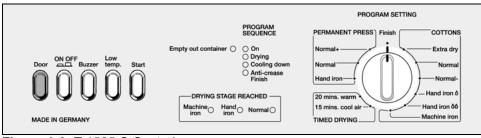


Figure 1-6: T 1565 C Controls

## 1.3.5 T 1570 C

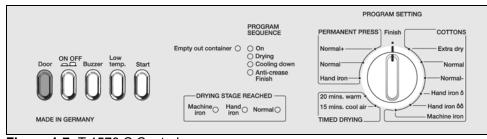


Figure 1-7: T 1570 C Controls



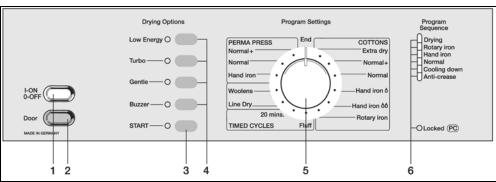


Figure 1-8: T 1576 Controls

#### **Appliance Dimensions** 1.4

#### 1.4.1 **5-Kilogram Vented Models**

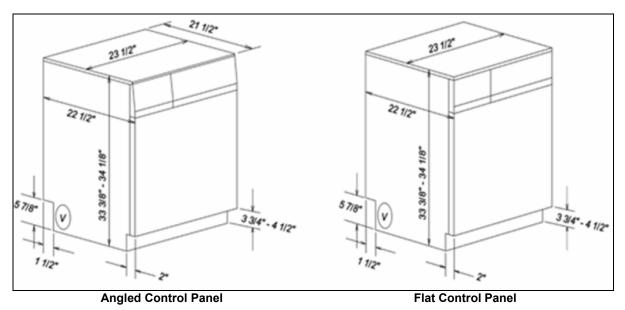


Figure 1-9: Dimensions, 5-Kilogram Vented Models

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#### 1.4.2 5-Kilogram Condenser Models

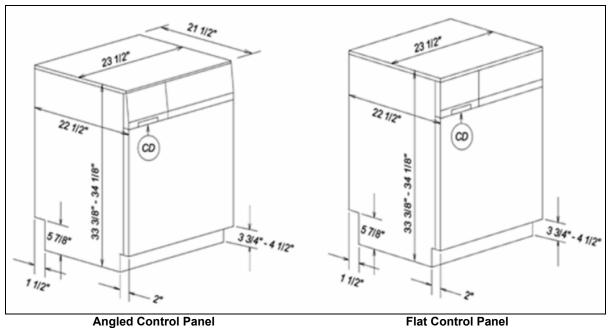


Figure 1-10: Dimensions, 5-Kilogram Condenser Models

#### 1.4.3 6-Kilogram Vented Models

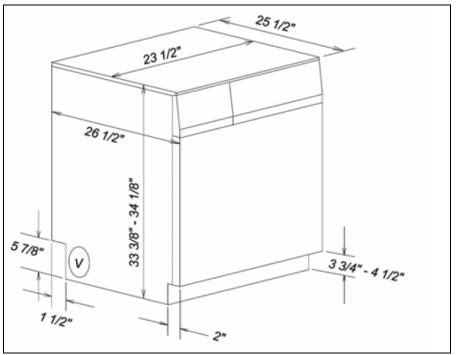


Figure 1-11: Dimensions, 6-Kilogram Vented Models

Note: At the present time, a 6-kilogram condenser model does NOT exist.

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## 1.5 Component Layouts

## 1.5.1 T 1515, T 1520, T 1526, T 1565 C, T 1570 C

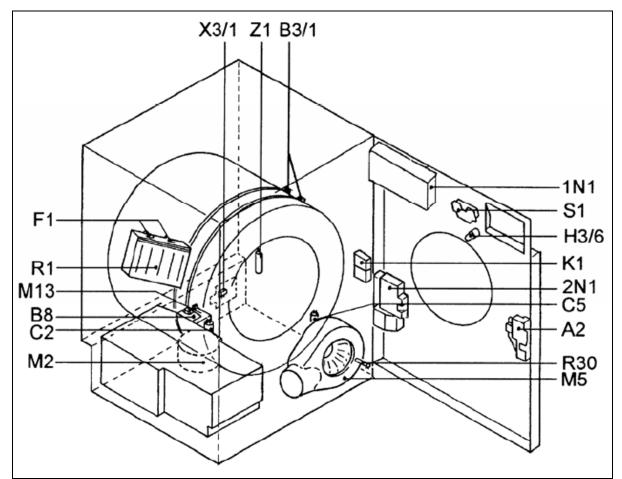


Figure 1-12: Component Layout (All Models except T 1576)

- A2 Door lock
- B3/1 Residual moisture sensor
- **B8** Condensate water float switch (condenser models only)
- C2 Fan capacitor (condenser models only)
- C5 Condensate fan motor capacitor (condenser models only)
- F1 Temperature limiters
- H3/6 Drum interior light
- K1 Heater relays
- M2 Condensate fan motor (condenser models only)
- M13 Condensate pump (condenser models only)
- M5 Drum drive motor
- **1N1** Control electronic
- **2N1** Power electronic
- R1 Heater bank
- R30 NTC temperature sensor
- S1 Selector switch
- X3/1 Terminal block
- Z1 Interference suppression capacitor

#### 1.5.2 T 1576

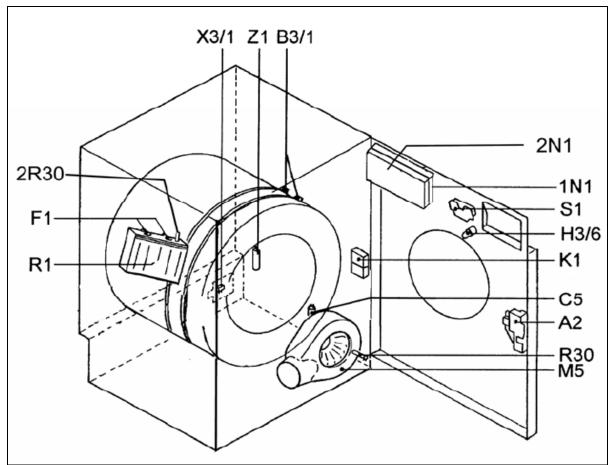


Figure 1-13: T 1576 Component Layout

- Door lock
- A2 B3/1 Residual moisture sensor
- **Temperature limiters** F1
- H3/6 Drum interior light
- Heater relays **K1**
- Drum drive motor Μ5
- Control electronic 1N1
- 2N1 Power electronic (piggybacked to 1N1)
- Heater bank R1
- NTC temperature sensor R30
- 2R30 Heater temperature sensor
- **S1** Selector switch
- X3/1 Terminal block
- **Z1** Interference suppression capacitor

## 2.0 Installation

- Do not drink the condensed water.
- Keep the area around the air intake (toekick) and surrounding areas free from lint, dust and dirt. This area should not be blocked, or it will prevent sufficient intake of air and affect appliance operation.
- Do not reach into the dryer while the drum is moving.
- The appliance should be level to ensure proper operation.
- A dryer can be placed on top of a Miele washer for a stacked installation. An approved Miele stacking kit must be used.

## 2.1 Electrical Requirements

- 120/240 (208) VAC, 60Hz, 15A breaker
- Dryer is equipped with a 4-wire power cord with a NEMA 14-30 plug for connection to a NEMA 14-30 receptacle.

#### Note:

If you do not have a dedicated 15-amp circuit for this appliance, but have a NEMA 14-20 or NEMA 14-30, 240VAC, 30-amp outlet, you may be able to use a Miele Easy Installation Kit to simplify the electrical connection. For further information, refer to the **Electrical information** pages in the installation manual.

• Do not cut off or remove the plug from the power cord.

## 2.2 Plumbing Information – Condenser Models

On condenser dryers, the option exists to have the condensed water exit the appliance via a drain line. A suitable drain system (i.e. stand pipe) is required for this option.

Maximum drain hose length: 10 feet Maximum drain height: 4 feet

All condenser dryers come supplied with the following accessories to add the drain line option. Please do not discard the parts during an installation as they may be used at a later date.

- 6-foot drain hose
- Hose clamp
- Hose elbow

## 2.3 Installation Procedure

- 1. Position dryer at install location and level using the legs on the bottom of the appliance. The metal frame of the appliance provides the ideal location to place a level. Ensure that appliance is level.
- 2. Connect power and perform an operational check.

#### Note:

If the dryer is to be installed in combination with a stacking kit and washer, then the washer must be positioned and installed first.

If an optional laundry stand is to be installed, refer to the **Accessories** section of the installation manual for instructions on installing the stand.

Refer to the installation manual for further installation information and procedures.

## 3.0 Commission and Operation

## 3.1 General Operation: T 1515, T 1520, T 1526, T 1565 C, T 1570 C

- 1. Turn on the dryer.
- 2. Press the door button to open the door.
- 3. Place laundry into the appliance
- 4. Select a program
- 5. Select desired option(s).
- 6. Press the **Start** button.

# 3.2 Additional Function Pushbuttons: T 1515, T 1520 T 1526, T 1565 C, T 1570 C

#### Door

Opens the door; can also be used to cancel a program (does not stay pushed in).

#### ON/OFF

Turns the appliance on/off; can also be used to cancel a program.

#### Buzzer

Enables the buzzer when the anti-crease stage of the program is reached.

#### Load size - Full/Half

To dry a standard-sized load or more at peak efficiency, select this option before starting a program.

#### Low Temperature

Utilizes lower drying temperatures for delicate fabrics.

#### Start

Starts the selected program (does not stay pushed in).

## 3.3 General Operation – T 1576

- 1. Turn on the dryer.
- 2. Press the door button to open the door.
- 3. Place laundry into the appliance
- 4. Select a program
- 5. Select desired option(s).
- 6. Press the **Start** button.

#### Service tip:

The heaters are not powered during the initial start of a program. The heaters are powered after the drum reverses direction.

## 3.4 **Program Option Buttons – T 1576**

#### Low Energy (with Cottons Program)

Normal heater operation with a lower temperature.

#### Turbo (with Cottons Program)

Normal heater operation with a higher temperature.

#### Gentle

Uses a lower temperature and extended program time for care of delicate fabrics.

#### Buzzer

Enables the buzzer when the anti-crease stage of the program is reached.

## 3.5 Condensed-Water Drawer (Condenser Models Only)

#### General information:

Depending on the installation, condensed water is either pumped to an on-site drain or collected in the condensed-water drawer.

The condensed-water drawer holds approximately one gallon of water. The water should be emptied from the drawer after each program completes. Should the container be full (or become filled during operation), the following occurs:

- The "Empty out container" LED lights up
- The buzzer sounds
- The drying program stops and enters the cooldown cycle

#### To empty the condensed-water drawer:

- 1. Hold the cap open while emptying the water drawer.
- 2. Drain all water.
- 3. Install the water drawer back into the appliance. Ensure that it locks into place.

#### Warning!

The condenser water is not suitable for drinking.

## 3.6 Heat Exchanger (Condenser Models Only)

#### Note:

The heat exchanger should be cleaned at least twice a year.

- 1. Open the door. Locate the heat exchanger cover at the bottom left of the appliance.
- 2. Turn the lever so that it is in a vertical position (refer to Figure 3-1).



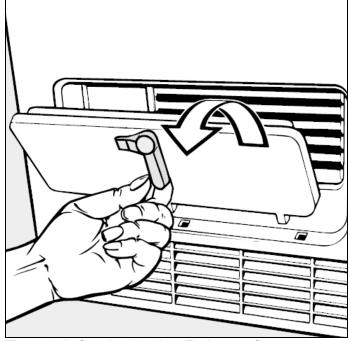


Figure 3-1: Opening the Heat Exchanger Cover

- 3. Remove the cover.
- 4. Turn both levers on the heat exchanger so that they are vertical (see Figure 3-2).

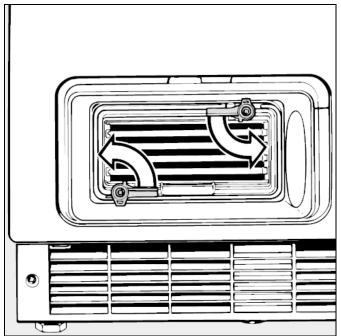


Figure 3-2: Positioning the Heater Exchanger Levers

5. Pull out the heat exchanger. See Figure 3-3.

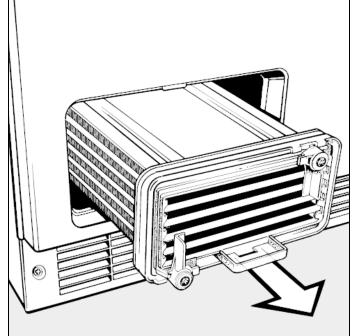


Figure 3-3: Removing the Heat Exchanger

6. Clean the heat exchanger by running water through the louvers to clean the assembly of lint and dust. See Figure 3-4.

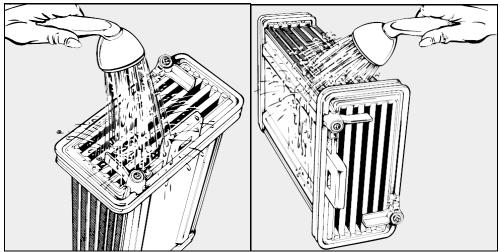
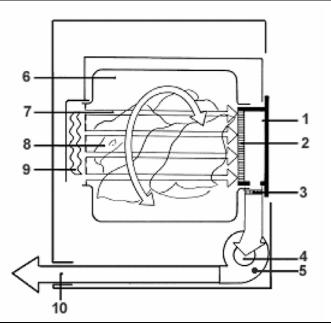


Figure 3-4: Cleaning the Heat Exchanger

- 7. Stand the heat exchanger lengthwise on a towel until it dries.
- 8. Replace the heat exchanger by reversing the steps above.
- 9. Ensure that the heat exchanger is fully seated into position and that the cover is closed and locked.

## 4.0 Description of Function



## 4.1 Vented Dryer – Principle of Operation

Figure 4-1: Vented Dryer Airflow

- 1 Door
- 2 Filter
- 3 Output from filter
- 4 Fan motor
- 5 NTC sensor (13k $\Omega$  @ 75°F)
- 6 Drum
- 7 Warmed drying air
- 8 Drying load
- 9 Heater bank
- 10 Vent output

The fan motor (Figure 4-1, Item 4) is responsible for drawing heated air from the heater bank (Item 6). The heated air passes through the drum (Item 9), where moisture from the drying load (Item 7) is absorbed. The air is filtered as it passes through the filter (Item 2) located in the front door (Item 1). The flow continues through the fan motor (Item 4) and exits via the vent output (Item 5).

## 4.2 Condenser Dryer – Principle of Operation

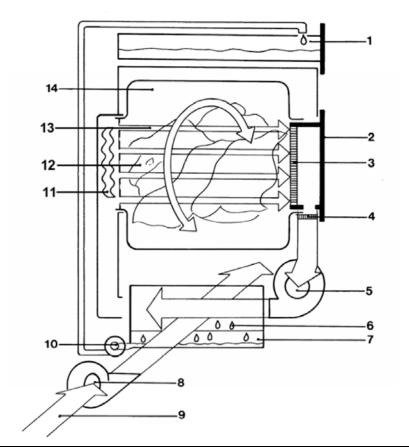


Figure 4-2: Condenser Dryer Airflow

- 1 Condensed-water drawer
- 2 Door
- 3 Filter
- 4 Filter screens
- 5 Fan motor
- 6 Condenser water
- 7 Condenser assembly
- 8 Condensate fan
- 9 Cool-air intake
- **10** Condensate pump
- 11 Heater bank
- 12 Drying load
- **13** Heated dry air
- 14 Drum

The fan motor (Figure 4-2, Item 5) is responsible for drawing heated air from the heater bank (Item 11). The heated air passes through the drum (Item 14), where moisture from the drying load (12) is absorbed. The air is filtered as it passes through filters (Items 3 and 4). Air continues through the fan motor (Item 5) and through the heat exchanger, where the moisture content in the air condenses into water.

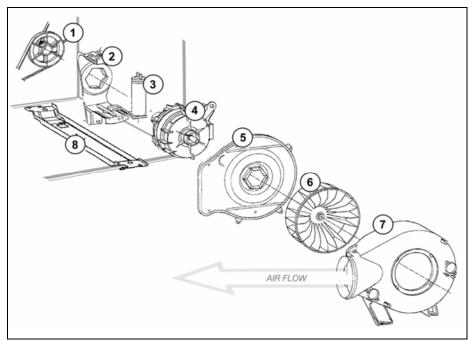
The condenser system draws air from outside the appliance via the condensate fan (Item 8). The outside air passes through the heat exchanger in a 90° direction from the drying air. The temperature difference between the two allows moisture (condensation) to form on the heat exchanger. As the moisture level increases, water droplets collect in a trough.

When the condensed water accumulates to a specific value, the condensate float switch activates. The electronic switches on the condensate pump (Item 10) and the water is pumped to the condensed-water drawer (Item 1). Should the condensed-water drawer become full prior to the end of a cycle, the "Empty out container" LED will light up and the program will stop.

#### Note:

Condenser dryers can be configured with an optional drain line. With this configuration the condensed water is pumped directly into the drain, so emptying the condensed-water drawer is not necessary.

## 4.3 Fan Motor (M5) Assembly





- 1 Pulley/belts
- 2 Motor bracket
- 3 Motor start capacitor
- 4 Fan motor (120VAC)
- 5 Fan housing cover
- 6 Fan impeller
- 7 Fan housing
- 8 Motor assembly slide track

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The fan motor (Figure 4-3, Item 4) is a bi-directional 120VAC motor. Directional switching for the motor is performed within the power electronic. Assistance to the motor during startup is provided by the motor start capacitor (Item 3).

The fan motor provides drive to the drum via a drive belt and reduction pulley (Item 1) mounted on the motor bracket (Item 2).

The fan motor also provides direct drive to the fan impeller (Item 6) within the fan housing (Item 7). As the fan impeller rotates, airflow is created and draws heated air from the heater bank, across the drum and through the filter(s). The air exiting the fan housing is routed to the vent system (or through the heat exchanger on condenser dryers).

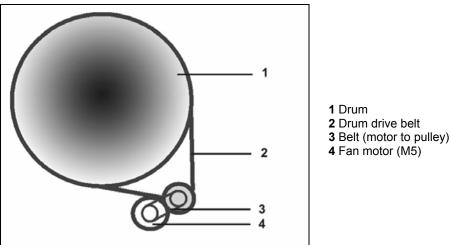


Figure 4-4: Drum Drive Belts and Reduction Pulley

## 4.4 Residual Moisture Setting

There are two variables that determine dryer run time: initial moisture content in the laundry and the program selected.

At the beginning of the cycle, the moisture content within the laundry is measured by the residual moisture sensor. This value is used by the electronic to calculate the approximate program duration.

During drying, the level of moisture within the laundry decreases and is reflected by the status of the drying-stage LEDs. When the moisture within the laundry reaches the selected program value the dryer enters the cooldown phase, followed by the anti-crease mode.

#### Important!

The electronic limits all moisture-sensing programs to a maximum duration of 240 minutes. Should 240 minutes be reached, the cooldown phase is initiated; however, the anti-crease feature is skipped when this occurs. The "Cooling down" LED remains illuminated until the appliance is shut off via the on/off button.

## 4.5 **Temperature Monitoring**

#### 4.5.1 T 1515, T 1520, T 1526, T 1565 C and T 1570 C

Drum temperature is monitored by the NTC (negative thermal coefficient) temperature sensor mounted in the front of the fan housing.

As the temperature within the drum area increases, the resistance of the sensor decreases. The sensor resistance is monitored by the electronic and is used to calculate the drum temperature. The temperature is regulated by the electronic via the two heater relays. When the electronic switches the heater relay(s) on, higher voltage contacts within the relay(s) close and allow power to the heater element(s).

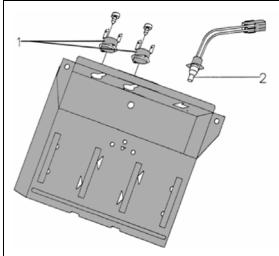
#### 4.5.2 T 1576

Drum temperature is monitored by two NTC (negative thermal coefficient) temperature sensors. One sensor is mounted in the heater bank assembly; the second sensor is mounted in the fan housing. Both sensors are monitored by the electronic and are used to calculate the drum temperature.

The temperature is regulated by the electronic via the two heater relays. When the electronic switches the heater relay(s) on, higher voltage contacts within the relay(s) close and allow power to the heater element(s).

Should the main motor fail to operate, airflow does not occur, resulting in increased temperatures in the heater bank and drum area. Two temperature limiters (see Figure 4-5, Item 1) are attached to the heater bank and electrically interrupt the heating circuit should the temperature exceed a preset threshold. The appliance can no longer produce heat, as the temperature limiters are non-resettable SODs (single-operation devices) in accordance with product approvals.

## 4.6 Heater Bank Assembly



 $1 \ \, Temperature \ \, limiters \ \, (2) \\ 2 \ \, NTC \ \, temperature \ \, sensor \ \, (T \ \, 1576 \ \, only) \\ (100 k\Omega \ \, @ \ \, 75^\circ F)$ 

Figure 4-5: Heater Bank Assembly (T 1576 Shown)

The heater bank assembly is comprised of two electrically isolated heater elements. Temperature limiters are secured to the top of the assembly and are electrically in series with the heater elements. The temperature limiters are nonresettable SODs (single-operation devices) in accordance with product approvals.

#### Note:

The T 1576 dryer has an additional NTC sensor installed at the top of the heater bank assembly, next to the temperature limiters (see Figure 4-5, Item 2). All other 15xx dryers **DO NOT** have a temperature sensor in the heater bank!

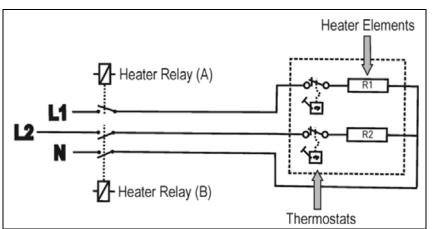


Figure 4-6: Heater Circuit

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## 4.7 Control (Upper) Electronic

The control electronic performs the following functions:

- Program sequence monitoring
- Residual moisture sensing system monitoring
- Air temperature monitoring and control
- Power electronic switching (relay) control

## 4.8 Power (Lower) Electronic

The power electronic supplies power for:

- Relays on the power module
- Residual moisture sensor circuit
- CPU/microprocessor

## 4.9 Electronics Locations by Model Number

## 4.9.1 T 1515, T 1520, T 1526, T 1565 C and T 1570 C

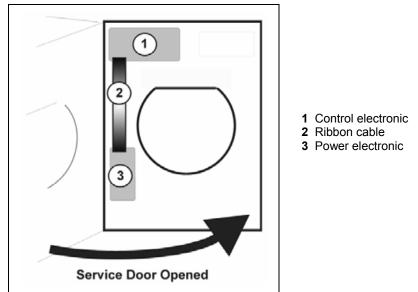


Figure 4-7: Electronics Locations (T 1515, T 1520, T 1526, T 1565 C, T 1570 C)

## 4.9.2 T 1576

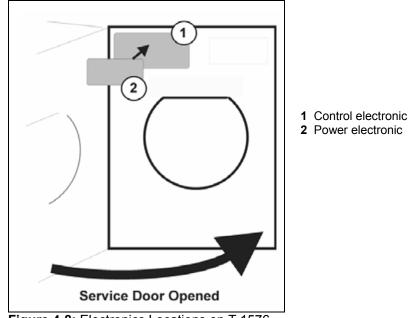


Figure 4-8: Electronics Locations on T 1576

## 5.0 Service and Maintenance

#### Note:

Service and repair work should only be performed by qualified personnel and in accordance with applicable codes.

#### Warning!

The appliance should be unplugged from the power source before any service and/or maintenance procedures are performed.

## 5.1 Lid Removal

- 1. Remove the screws from the side edges of the lid (Figure 5-1, Item 1).
- 2. Lift the lid at the front, slide it towards the rear and lift to remove.

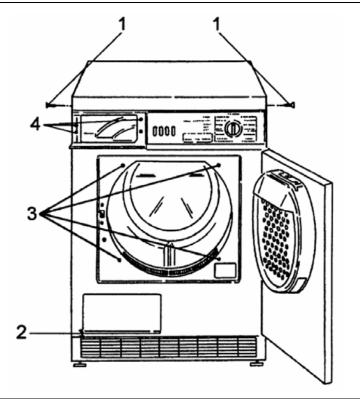


Figure 5-1: Lid Removal and Front Panel Access

## 5.2 Front Panel Opening, Condenser Models

- 1. Remove the four screws (Figure 5-1, Item 3).
- 2. Remove the condensed-water drawer and unscrew the three screws (Figure 5-1, Item 4).
- 3. Press the spring clip (Figure 5-1, Item 2) down with the lid opener and open the front panel.

## 5.3 Front Panel Opening, Vented Models

- 1. Remove the left section of the fascia panel using a lid opener (Figure 5-2, Item 1).
- 2. Remove the four screws (Figure 5-1, Item 3).
- 3. Remove the two screws (Figure 5-1, Item 4)
- 4. Press the spring clip (Figure 5-1, Item 2) down with the lid opener and open the front panel.

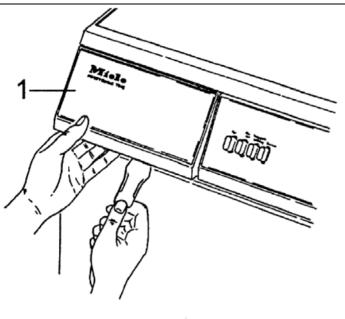
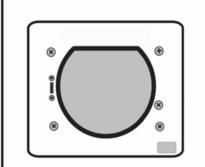


Figure 5-2: Removing the Left Section of the Fascia Panel

## 5.4 **Power Electronic Removal**

## 5.4.1 T 1515, T 1520, T 1526, T 1565 C and T 1570 C

- 1. Open the front door and remove the screw near the 4 o'clock position (see Figure 5-3).
- 2. Open the front panel (see Section 5.2 or 5.3).
- 3. Slide the power electronic upward to release it from its frame.
- 4. Disconnect the electrical connections and remove the electronic.



**Figure 5-3:** Screw Securing Power Electronic (T 1515, T 1520, T 1526, T 1565 C, T 1570 C)

## 5.4.2 T 1576

#### Note:

The power electronic is attached to the back of the control electronic. Should replacement of either electronic be necessary, each electronic is replaced individually.

- 1. Open the front panel; see Section 5.2 or 5.3.
- 2. Disconnect the electrical connections to the power electronic (Figure 5-4, Item 1).
- 3. Remove the retaining screw (Figure 5-4, Item 8).
- 4. Press the retainer (Figure 5-4, Item 2) and slide the power electronic to remove it from the holder (Figure 5-4, Item 5).

#### Service tip:

The retaining screw (Figure 5-4, Item 8) is shorter and should only be used to secure the power electronic.

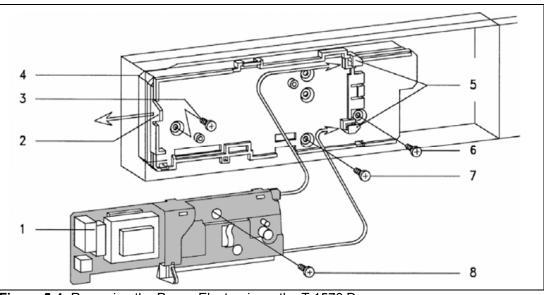


Figure 5-4: Removing the Power Electronic on the T 1576 Dryer

### 5.5 Control Electronic Removal

#### 5.5.1 T 1515, T 1520, T 1526, T 1565 C and T 1570 C

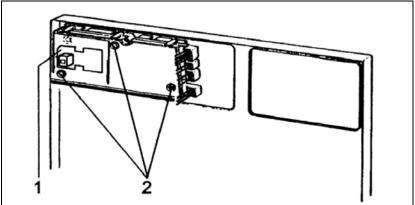


Figure 5-5: Control Electronic Removal: T 1515, T 1520, T 1526, T 1565 C, T 1570 C

- 1. Remove the program selector switch.
- 2. Open the front panel; see Section 5.2 or 5.3.
- 3. Remove the three retaining screws (Figure 5-5, Item 2).
- 4. Disconnect the electrical connections.
- 5. Remove the control electronic.

#### 5.5.2 T 1576

- 1. Remove the program selector switch.
- 2. Open the front panel; see Section 5.2 or 5.3.
- 3. Remove the power electronic; see Section 5.4.2.
- 4. Remove the three screws securing the electronic.
- 5. Disconnect the electrical connections and remove the electronic.

## 5.6 Heater Relay Access

The heater relay bracket is attached to the right-hand vertical section of the frame, and can easily be accessed with the service panel opened.

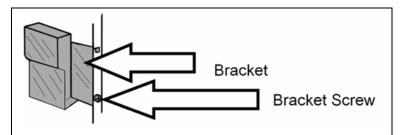


Figure 5-6: Heater Relay Bracket

#### Warning!

Ensure that the appliance is disconnected from main power before attempting to remove the bracket.

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**Technical Information** 

- 1. Open the front panel; see Section 5.2 or 5.3.
- 2. Locate the heater relay bracket on the right-hand vertical section of the frame.
- 3. Remove the securing screw; lift the bracket from the frame.
- 4. Position the bracket to allow access to the relay(s).
- 5. Slide each relay from the bracket to release.

## 5.7 Drum Rear Panel Removal

- 1. Open the front door of the dryer.
- 2. Turn the drum by hand so that the two larger holes are horizontally across from each other; refer to Figure 5-7. This permits access to the drum bearing bolts.
- 3. Place a 5-millimeter Allen wrench through each hole and completely loosen both bolts by turning them counterclockwise, until you feel them release from the threads.

#### Service tip:

The bolts will not fall out even when completely loosened.

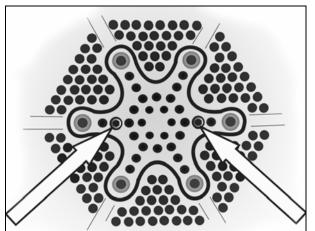


Figure 5-7: Drum Positioned with the Two Largest Holes Horizontal

- 4. Remove the six Allen-head bolts from the perimeter of the rear panel.
- 5. From inside the drum, push the drum upward and pull the rear panel outward to remove.

#### Service tip:

If the panel does not release when the drum is lifted in step 5, ensure that the two bolts in step 3 are completely loosened.

#### Note:

The drum rear panel will not fit through the front door. Reposition the panel within the drum area as needed during servicing. Do not place unnecessary weight or pressure on the panel.

## 5.8 Heater Bank Access

- 1. Remove the drum rear panel; see Section 5.7.
- 2. Remove the three bolts securing the heater bank cover. See Figure 5-8.
- 3. Lift the heater bank cover to remove.

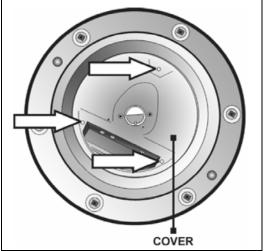


Figure 5-8: Heater Bank Cover Retaining Bolts

- 4. Unscrew the heater bank retainers (Figure 5-9, Items 1 and 2).
- 5. Disconnect the electrical connections (Figure 5-9, Item 3).
- 6. Pull the heater bank upwards out of its duct.

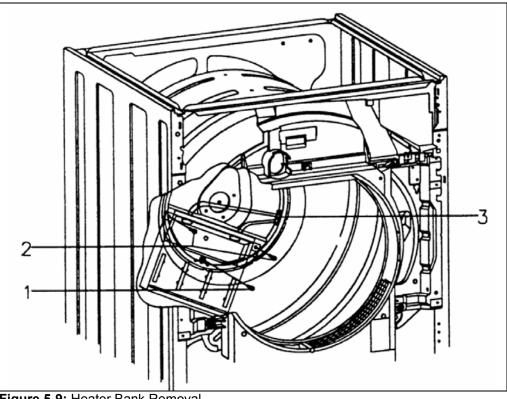


Figure 5-9: Heater Bank Removal

## 5.9 Fan Motor Removal

- 1. Open the front service panel; see Section 5.2 or 5.3.
- 2. Remove the vent-ring assembly (Figure 5-10) and the air duct (on vented models) or coupler (on condenser models).

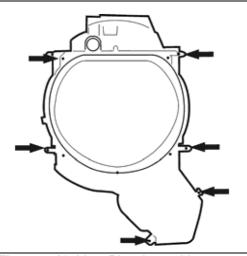


Figure 5-10: Vent Ring Assembly

3. Remove the two fan motor bolts (Figure 5-11).

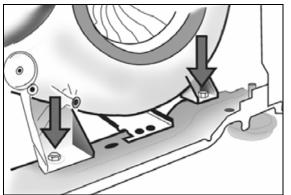


Figure 5-11: Fan Motor Bolts

- 4. Slide the fan motor toward the front of the appliance, out if the locking track.
- 5. Lift the fan motor; tilting it slightly upward toward the back to release it from the belt.
- 6. Position the fan motor toward the front of the appliance; disconnect the electrical connection.

#### Warning!

Before handling the fan motor assembly, ensure that the capacitor is fully discharged of stored energy.

7. Lift the motor from the appliance to remove.

## 5.10 Condenser Assembly Removal

#### Service tip:

To access the condensate pump and/or float switch; the condenser assembly must be removed from the appliance.

- 1. Remove the coupler between the fan motor housing and the condenser assembly.
- 2. Remove the fan motor; see Section 5.9.
- 3. Remove the heat exchanger form the condenser; see Section 3.6.
- 4. Disconnect the electrical connections.
- 5. Slide the condenser assembly toward the front of the appliance and lift to remove.

## 5.11 Condenser Fan Removal

- 1. Lay the appliance on its back.
- 2. Remove the four screws securing the bottom cover (see Figure 5-12) and lift the cover to remove it from the appliance.

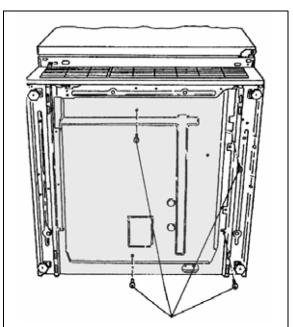


Figure 5-12: Bottom Cover Screws

- 3. Remove the four screws securing the condenser fan to the condenser assembly (see Figure 5-13).
- 4. Disconnect the electrical connection.
- 5. Lift the condenser fan to remove it from the condenser assembly.

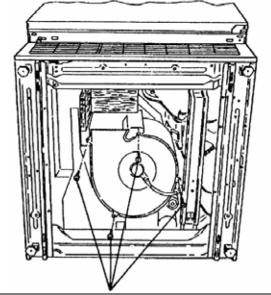


Figure 5-13: Condenser Fan Screws

## 5.12 Residual Moisture Sensor Removal

- 1. Open the front service panel; see Section 5.2 or 5.3.
- 2. Locate the residual moisture sensor (refer to Figure 5-14).
- 3. Remove the screw securing the sensor to the frame.

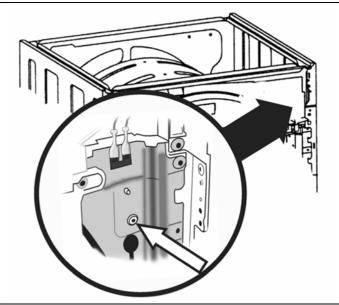


Figure 5-14: Residual Moisture Sensor and Screw

- 4. Lift the sensor assembly (with bracket) from the appliance.
- 5. Note/mark wire positions for re-assembly.
- 6. Disconnect the electrical connections.

## 5.11 Drum Drive Belt

- 1. Remove the lid. See Section 5.1.
- 2. Open the front panel; see Section 5.2 or 5.3.
- 3. Remove the rear panel of the drum. See Section 5.7.
- 4. Remove the heater bank cover; see Section 5.8, Step 2.
- 5. Lift upward on the drum so that a small gap exists between the edge of the drum and the heater duct (refer to Figure 5-15).

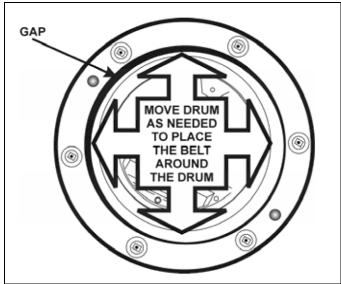


Figure 5-15: Positioning the Drum to Form a Gap

- 6. Route the belt through the gap and onto the drum.
- 7. From the top of the appliance, ensure that the drum belt is positioned and aligned correctly.
- 8. Access the rear of the fan motor through the space below the drum. Lift upward on the fan motor tensioning pulley and place the drive belt onto the pulley. The tensioning pulley should be holding the drum belt in position.
- 9. Ensure that the drum belt is aligned between the motor and the drum.
- 10. Hand-spin the drum <u>slowly</u> (this allows any minor alignment discrepancies to be corrected).

#### Service tip:

Due to the limited space beneath the drum, access to the rear area of the fan motor is via the space along the inner section of the right side panel (above the fan motor housing).

#### Note:

Belt installation can be simplified by using the Miele "installation lever" (part no. 05057330).

## 6.0 Fault Diagnosis

## 6.1 Service Mode

#### 6.1.1 T 1515, T 1520, T 1526, T 1565 C and T 1570 C

#### Accessing:

- 1. Switch the appliance off.
- 2. Release all pushbuttons.
- 3. Turn the program selector switch to the "Finish" (12 o'clock) position.
- 4. Switch the appliance on.
- 5. Press and release the **Load size** button (or **Buzzer** button, depending on model) 3 times in quick succession within 10 seconds.

#### Acknowledgement indicator:

The "Drying" LED flashes to show that service mode is activated.

#### Navigation:

Refer to Table 6-1. Turn the program selector switch to the desired position, then press **Start**.

To exit service mode, switch the appliance off.

Selector Switch Position	Function
Finish	Buzzer pushbutton test
COTTONS Extra dry	Heater on
COTTONS Normal +	Drum drives left (vented models only)
COTTONS Normal	Buzzer activated
COTTONS Hand iron	Drum drives right (vented models only)
COTTONS Hand iron 4	Condenser fan (condenser models only)
COTTONS Machine iron	Condensate pump (condenser models only)
15 mins. cool air	Residual moisture sensor test; see Section 6.4
20 mins. warm air	Residual moisture sensor test; see Section 6.4
PERMANENT PRESS Hand iron	LED test (LEDs illuminated)
PERMANENT PRESS Normal +	Dryer type. Continuous tone = vented; intermittent tone = condenser.

**Table 6-1:** Service Mode Functions (T 1515, T 1520, T 1526, T 1565 C, T 1570 C)

#### 6.1.2 T 1576

#### Accessing:

- 1. Switch the appliance off.
- 2. Turn the program selector switch to 12 o'clock.
- 3. Press and hold the **Gentle** and **Start** buttons.
- 4. Switch the appliance on.
- 5. Release the buttons.

#### Acknowledgement indicator:

The "Drying" LED flashes to show that service mode is activated.

#### Navigation:

Refer to Table 6-2. Turn the program selector switch to the desired position, then press **Start**.

To exit the service mode, switch the appliance **off**.

Selector Switch Position	Press Start to Activate		
COTTONS Extra dry	Main motor operates 10 seconds in each direction		
COTTONS Normal +	Vacant		
COTTONS Normal	One heater and main motor operate		
COTTONS Hand iron 4	Main motor operates		
COTTONS Hand iron 🎂	Both heaters and main motor operate		
COTTONS Rotary iron	otary iron Residual moisture	"Cooling down" lights up = OK	
sensor test	sensor test	"Cooling down" flashes = fault	
Fluff Resid	Residual moisture	"Cooling down" lights up = OK	
	sensor test	"Cooling down" flashes = fault	
20 mins.	LED test		
Line Dry	Button test		
Woolens	Fault codes (see Section 6.2)		
PERMA PRESS Hand iron	Vacant		
PERMA PRESS Normal	Vacant		
PERMA PRESS Normal +	Vacant		

Table 6-2: Service Mode Functions (T 1576)

## 6.2 Fault Codes (T 1576 Only)

#### Initial requirements:

- 1. Switch the appliance on.
- 2. Turn the selector switch to the "COTTONS Extra dry" position.
- 3. Press the **Start** button to begin the program.
- 4. Note the status of the "Anti-crease" LED: The "Anti-crease" LED is lit STEADILY - No faults stored.

The "Anti-crease" LED is FLASHING - Fault stored. Proceed to "Access" steps below.

#### Access (retrieval):

- 1. Access the service mode. See Section 6.1.2.
- 2. Turn the selector switch to "Woolens".
- 3. Press the Start button.
- 4. Note the illuminated LEDs.
- 5. Refer to Table 6-3 to determine the stored fault.
- 6. Switch the appliance off.
- 7. Perform the necessary service steps to rectify the cause of the fault, then proceed to "Delete a Stored Fault Code" below.

LED(s) Lit Steadily	Component	
Rotary iron	Fan NTC open circuit	
Hand iron	NTC at heater bank open circuit	
Normal	NTC at heater bank short circuit	
Rotary iron & Hand iron	Fan NTC short circuit	
Normal and Rotary iron	Maximum drying time (180 minutes) exceeded	

Table 6-3: T 1576 Fault Codes

#### Delete a stored fault code:

- 1. Access the service mode. See Section 6.1.2.
- 2. Turn the selector switch to "Woolens".
- 3. Press the **Start** button.
- 4. Press and hold the Gentle button.
- 5. Press the Start button.
- 6. Release the **Gentle** button. The appropriate LED turns off.
- 7. Switch the appliance off.

## 6.3 **Programming Mode (T 1576 Only)**

#### Accessing:

- 1. Switch the appliance off.
- 2. Turn the program selector switch to 12 o'clock.
- 3. Press and hold the **Gentle** and **Buzzer** buttons.
- 4. Switch the appliance on.
- 5. Release the buttons.

#### Acknowledgement indicator:

The "Drying" and "Cooling down" LEDs flash to indicate that programming mode is active.

#### Navigation:

- 1. Turn the program selector switch to the desired position; press **Start** to activate the function.
- 2. The programmed option is indicated by the status of the "Rotary iron" LED.

Press **Start** to toggle between options. Refer to Table 6-4.

3. To store the selected setting, switch the appliance off while the program selector switch is in the desired position and the "Rotary iron" LED is displaying the desired setting.

Selector Switch Position	Function	Option(s)	Status of "Rotary iron" LED
COTTONS Extra dry	Residual Moisture Level	Standard <sup>1</sup>	Off
		Reduced	On
	Moment Function	No <sup>1</sup>	Off
COTTONS Normal	Memory Function	Yes	On
COTTONS Hand iron	Anti-Crease Action	No <sup>1</sup>	Off
		Yes	On

 Table 6-4: T 1576 Programming Settings

<sup>1</sup> Factory setting (do not adjust)

## 6.4 Residual Moisture Sensor Circuit Test

#### Purpose:

This serves as a test of the complete moisture-sensing circuit between the control module and the moisture sensor.

#### 6.4.1 T 1515, T 1520, T 1526, T 1565 C and T 1570 C Procedure

- 1. Electrically connect one lifter bar and the drum body using clip leads or a wire to simulate wet laundry and high conductivity.
- 2. Select "15 mins. cool air" in the service mode and wait approximately 60 seconds.
  - a. "Cooling down" LED lights up: Circuit is in proper working order.
  - b. "Cooling down" and "Drying" LEDs flash alternately: Resistance of connection between controls and sensors is too high or is open-circuited.
- 3. Disconnect the wires to the drum and lifter bar at the pickup connection plug.
- 4. Jump the wires leading to the electronic (short-circuiting the moisture-sensing circuit).
- 5. Select "15 mins. cool air" in service mode and wait approximately 60 seconds.
  - a. "Cooling down" LED lights up: Check circuit outside of the control electronic (slip rings, wiring, lifter bars, sensor contacts, etc.).
  - b. "Cooling down" and "Drying" LEDs flash alternately: Replace the control electronic.
- 6. Remove the wire jumper from inside the drum.
- 7. Select "20 mins. warm air" in service mode and wait approximately 60 seconds.
  - a. "Cooling down" LED lights up: Circuit is in proper working order.
  - b. "Cooling down" and "Drying" LEDs flash alternately: Circuit defective (lifter bars, drum partially short-circuited). Resistance is < 50 MΩ.

- 8. Disconnect the wires to the drum and lifter bars at the pickup connection plug.
- 9. Select "20 mins. warm air" in service mode and wait approximately 60 seconds.
  - a. "Cooling down" LED lights up: Check circuit outside of the control electronic (slip rings, wiring, lifter bars, sensor contacts, etc.).
  - b. "Cooling down" and "Drying" LEDs flash alternately: Replace the control electronic.

#### 6.4.2 T 1576 Procedure:

- 1. Electrically connect one lifter bar and the drum body using clip leads or a wire to simulate wet laundry and high conductivity.
- 2. Select "Rotary iron" in service mode. Press **Start** and wait approximately 30 seconds.
  - a. "Cooling down" LED lights up: Circuit is in proper working order.
  - b. "Cooling down" and "Drying" LEDs flash alternately: Resistance of connection between controls and sensors is too high or is open-circuited.
- 3. Disconnect the wires to the drum and lifter bar at the pickup connection plug.
- 4. Jump the wires leading to the electronic (short-circuiting the moisture-sensing circuit).
- 5. Select "15 mins. cool air" in service mode and wait approximately 30 seconds.
  - a. "Cooling down" LED lights up: Check circuit outside of the control electronic (slip rings, wiring, lifter bars, sensor contacts, etc.).
  - b. "Cooling down" and "Drying" LEDs flash alternately: Replace the control electronic.
- 6. Remove the wire jumper from inside the drum.
- 7. Select "Fluff" in service mode and wait approximately 60 seconds.
  - a. "Cooling down" LED lights up: Circuit is in proper working order.
  - b. "Cooling down" and "Drying" LEDs flash alternately: Circuit defective (lifter bars, drum partially short-circuited). Resistance is < 50MΩ.
- 8. Disconnect the wires to the drum and lifter bars at the pickup connection plug.
- 9. Select "Fluff" in service mode and wait approximately 30 seconds.
  - a. "Cooling down" LED lights up: Check circuit outside of the control electronic (slip rings, wiring, lifter bars, sensor contacts, etc.).
  - b. "Cooling down" and "Drying" LEDs flash alternately: Replace the control electronic.

## 6.5 Dryer Takes Too Long to Dry Clothes

#### Possible cause:

Lint filter clogged. **Remedy:** Remove and clean filter.

#### Possible cause:

Condenser air path clogged (condenser models only). **Remedy:** Remove and clean heat exchanger.

Possible cause: Vent clogged (vented models only). Remedy: Remove vent; if appliance operates OK, vent needs to be inspected/cleaned. Possible cause:

One heater element is not operating.

#### Remedy:

Ensure that both live (120V) lines are present and that both elements are operating.

#### Possible cause:

Clothes are not spun out enough from washer. **Remedy:** Increase spin speed on the washer.

## 6.6 Residual Moisture Sensing Inoperative

#### Possible cause:

The circuit is not operating normally.

#### Remedy:

Perform the residual moisture sensor test (see Section 6.5). Isolate and repair fault.

## 6.7 Dryer Door Keeps Popping Open (All Models except T 1576)

#### Possible cause:

The temperature monitor (high-temperature cutout) in the heater bank has switched state.

#### **Remedies:**

- 1. Check/clean lint filter.
- 2. Check/clean vent (vented models).
- 3. Check/clean heat exchanger (condenser models).
- 4. Check operational temperature.
- 5. Check heater relay switching circuit.
- 6. Replace the temperature monitor.



## 6.8 Water Leaks in Condenser Dryer

#### Possible cause:

The condensed water is leaking from the appliance.

#### **Remedies:**

- 1. Ensure that the condensed-water drawer is being emptied when needed.
- 2. If the appliance is configured with a drain hose connection, check the hose for sharp bends, kinks, clogs or other abnormalities and ensure that the stopper is installed at the water port above the condensed-water drawer.
- 3. Remove and clean the heat exchanger.
- 4. Ensure that the condenser water path is not clogged.
- 5. Check for proper operation of the condenser water level switch and condenser water pump.

## 6.9 Light, Repetitive Clicking About Every Second While Drum is Turning

#### Possible cause:

Fault in residual moisture sensor pickup/drum path.

#### **Remedies:**

- 1. Check for worn pickup brushes.
- 2. Clean the pickup path around the drum.
- 3. Ensure that the sensor is mounted correctly.
- 4. Check that the sensor assembly has adequate spring tension.

## 6.10 T 1576 Dryer Shuts Down After Less than One Minute of Operation

#### Possible cause:

If the drum does not contain clothes (or only contains dry clothes), the appliance will shut down. This is normal operation.

#### Remedy:

Operate the appliance with a damp load of laundry.

## 6.11 Rumbling Sound during Operation

#### Possible cause:

Excessive lint buildup or foreign object in the fan housing/impeller area.

#### Remedy:

Clean/inspect motor, fan housing and fan impeller.