SERVICE MANUAL
COMPACT DRYERS

Model:
DE40F56AW1, DE50F56AW1, DE50F56EW1
DE40F56A2 & DE50F56A2

427939

The specifications and servicing procedures outlined in this manual are subject to change without notice.

The latest version is indicated by the reprint date and replaces any earlier editions.

Fisher & Paykel Appliances Ltd
78 Springs Road, East Tamaki
PO Box 58-546, Greenmount
Auckland, New Zealand
Telephone: 09 273 0600
Facsimile: 09 273 0656

Fisher & Paykel Australia Pty Ltd
A.C.N. 003 335 171
19 Enterprise Street
P O Box 798
Cleveland, Queensland 4163
Telephone: 07 3826 9100
Facsimile: 07 3826 9164

Fisher & Paykel Singapore Pte Ltd
150 Ubi Avenue 4
Sunlight Building #02-00
Singapore 408825
Telephone: 65 65470100
Facsimile: 65 65470123

COMPACT DRYERS

Covering the following models		
Model Number	**Product Code**	**Market**
DE40F56AW1	92212	New Zealand
DE40F56A2	92188	New Zealand
DE40F56AW1	93212	Australia
DE40F56A2	93188	Australia
DE40F56A2	94143	HK
DE40F56AW1	95212	India
DE50F56AW1	92216	New Zealand
DE50F56A2	92234	New Zealand
DE50F56AW1	93216	Australia
DE50F56A2	93234	Australia
DE50F56AW1	94216	HK/SGP
DE50F56A2	94234	HK/SGP
DE50F56AW1	95216	India
DE50F56EW1	92218	New Zealand
DE50F56EW1	93218	Australia
DE50F56EW1	94101	HK/SGP
DE50F56EW1	95218	India

CONTENTS

1 SPECIFICATIONS

1.1 Model Information

DE40F56AW1		DE50F56AW1		DE50F56EW1	
DE	Dryer Electric	**DE**	Dryer Electric	**DE**	Dryer Electric
40	Capacity - 4 kg	**50**	Capacity - 5 kg	**50**	Capacity - 5 kg
F	Front Loading	**F**	Front Loading	**F**	Front Loading
56	Width - 565 mm	**56**	Width - 565 mm	**56**	Width - 565 mm
A	Feature - Analogue	**A**	Feature - Analogue	**E**	Feature - Electronic
W	Finish - White	**W**	Finish - White	**W**	Finish - White
1	Version	**1**	Version	**1**	Version

1.2 Dimensions

Height		810mm
Width		565mm
Depth	DE40F56	540mm
	DE50F56	560mm

1.3 Packed Dimensions DE40F56

Height	889mm
Width	577mm
Depth	473mm

1.4 Packed Dimensions DE50F56

Height	874mm
Width	577mm
Depth	583mm

1.5 Ducting Dimensions DE50F56

	Hose (Corrugated)
Maximum Length	2.0m

Less (deduct length from Maximum)	Hose (Corrugated)
1 x 45° elbow	- 0.8m
1 x 90° elbow	- 1.0m

1.5.1 Vent Size DE50F56

Vent Diameter	93mm

1.6 Maximum Load Capacity

DE40F56	4 kg
DE50F56	5 kg

1.7 Weights

1.7.1 DE40F56 Model

Packed	27.8kg
Unpacked	26kg

1.7.2 DE50F56 Model

Packed	32.4kg
Unpacked	30.6kg

1.8 Technical Specifications

Voltage (V/Hz)	220 – 240V / 50Hz
Power	2.0 – 2.2 kW
Current	10 Amps

1.9 Power Supply Cord

Type	3 Core flexible mains cable to AS 3191, round, 10Amp, 250V
Sheath	PVC, 75 °C, 7.15+/-0.08mm Dia, 0.8mm thickness, colour 8606 light grey
Plug	3pin right angle NZ/Aus plug head to AS3112, colour 8606 light grey, phase and neutral pins insulated in accordance to AS3112 standard
Conductors	1.0mmsq, 32/0.2, plain annealed copper
Length	1605mm

1.10 Motor

1.10.1 Fasco

Type	Split Phase Reversing
Power (Max)	130 W
Voltage / Frequency	230 – 240V 50Hz
Main Winding	65Ω ± 5%
Auxiliary Winding	65Ω ± 5%
Run Capacitor	7uF ± 5% 400 Volts 50-60Hz P2 Safety Class

1.10.2 WITC

Type	Split Phase Reversing
Power (Max)	130 W
Voltage / Frequency	230 – 240V 50Hz
Main Winding	73Ω ± 5%
Auxiliary Winding	73Ω ± 5%
Run Capacitor	7uF ± 5% 400 Volts 50-60Hz P2 Safety Class

1.11 Heating Element

1.11.1 DE40F56A & DE50F56A

Type	Sheathed 6.35 T304L stainless
Total Nominal Power @ 240V	1750W
Resistance	31.95Ω +/- 1.28Ω
Insulation Test @ 500V DC	Must be > 200 MegΩ

1.11.2 DE50F56EW

Type	Sheathed 6.35 T304L stainless
Total Nominal Power @ 240V	875W
Resistance	63.85Ω +/- 1.28Ω
Insulation Test @ 500V DC	Must be > 200 MegΩ

1.12 Thermostat

Voltage		240v 50Hz
Current		10Amps
Trips open	@	73+/- 3°C
Resets	@	58+/- 5°C

1.13 Exhaust Sensor DE50F56EW

Resistance	2KΩ @ 25°C
	1.64 KΩ @ 0°C

1.14 Cabinet

Material Pre-painted Steel

1.15 Drum

1.15.1 DE40F56A

Material	Pre-painted Steel White
Volume	72.8 litres or 0.0728 cubic meters
Drying Speed	53 RPM
Door maximum dimension	320 mm
Process air flow rate	127 m^3/h

1.15.2 DE50F56A

Material	Pre-painted Steel White
Volume	87.8 litres or 0.0878 cubic meters
Drying Speed	53 RPM
Door maximum dimension	320 mm
Process air flow rate	127 m^3/h

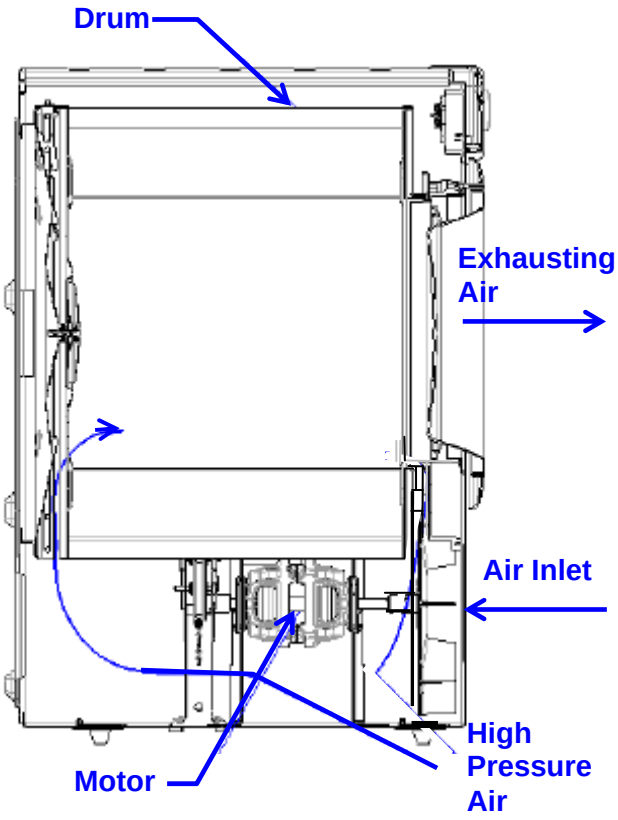
1.15.3 DE50F56E

Material	Stainless Steel
Volume	87.8 litres or 0.0878 cubic meters
Drying Speed	53 RPM
Door maximum dimension	320 mm
Process air flow rate	127 m^3/h

2 PRINCIPLES OF OPERATION

2.1 Vented Dryer

The ambient air is drawn into the cabinet by the fan which is attached to the motor. This air pressurises the cabinet and is forced over the heating element and heated. The heated air then enters from the rear of the drum and meets with the clothes, with the humid hot air exiting through the lint filter and exhaust duct.



3 COMPONENTS

3.1 Mechanical Parts (Dynamic System)

The main motor is attached to the motor brackets by 2 spring clips. In order to drive the drum, a poly-v belt is used between the motor pulley and drum. The drum is made of pre-painted or stainless sheet steel. The drum group is mounted into the front bearing housing and the rear bearing is fixed to the inside rear of the drum by 4 screws and mounted to the heater plate. The heater is mounted to the rear plate which is held in place by 2 brackets which are mounted to the wrapper.

3.2 Temperature Sensors & Thermostat

3.2.1 Thermostats

There are 2 thermostats used, with both being located and mounted to the heater plate. These measure heater temperatures, and thereby control the heater's ON/OFF periods.
These will trip open when they reach 73°C +/- 3°C and will close when they get to 58°C +/- 5°C

3.2.2 Exhaust Sensor ED50F56EW

This is located in the exhaust and sensors the exhaust temperature.

3.3 Heater

A 1750-watt, 2-circuit or 1 circuit, tubular stainless steel element is used which is driven by the timer for the analogue and by 2 relays in the electronic dryers, with the elements being energized after the motor has started to run.

.

3.4 Door Lock

The locking and unlocking mechanism of the door used in the dryers is a mechanical type. When the door is pushed closed, the strike is locked into the catch and holds the door shut.

3.5 Door Micro Switch

3.5.1 DE40F56AW & DE50F56AW

The main power via the active line is connected to the door switch and then to the timer control. When the door is open, the contacts are opened, so the active supply is cut from the timer with the motor and heater stopped.

3.5.2 DE50F56EW

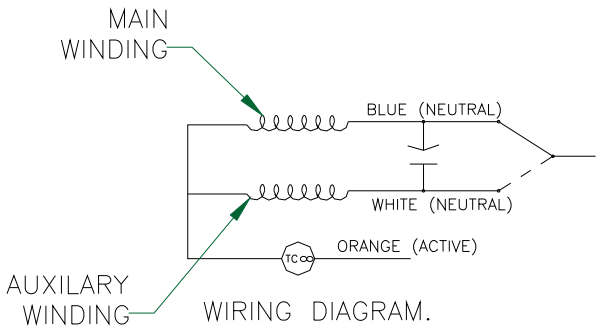
The door switch is connected to the electronic control module which when closed allows the start pause button to be activated starting the motor and heater element. When the door is opened the switch becomes open and stops the controller from driving the motor or heater.

3.6 Electronic Module DE50F56EW

The electronic module controls the dryers main motor at a constant speed. It also manages the program steps, reads the temperature of the NTC's and activates or deactivates the heater.

3.7 Main Motor

The main motor is a single phase permanent split capacitor motor which runs at approximately 1400 rpm and is equipped with a 7uF run capacitor. The motor is controlled by relays in the DE50F56EW and by the timer in the DE50F56AW which reverse the directions of the drum. The DE40F56AW has only one direction and does not reverse.



WIRING DIAGRAM.

4 PROGRAM STEPS

5 COMPONENT TESTING PROCEDURES

5.1 Motor Testing

5.1.1 Testing at the Control Panel

5.1.1.1 DE50F56AW1

Measuring at the timer terminals, between terminal 2 the Orange wire and terminal 5 the Blue wire the resistance should be between 65-73Ω depending which motor is fitted.
Then measure between terminal 2 the Orange wire and terminal 3 the White wire the resistance should be between 65-73Ω depending which motor is fitted.
Note: the timer must be in the off position.

5.1.1.2 DE50F56A2 Push to Start.

Measuring at the timer terminals, between terminal B3 the Orange wire and terminal D1 the Purple wire the resistance should be between 65-73Ω depending which motor is fitted.
Then measure between terminal B3 the Orange wire and terminal D2 the White wire the resistance should be between 65-73Ω depending which motor is fitted.
Note: the timer must be in the off position.

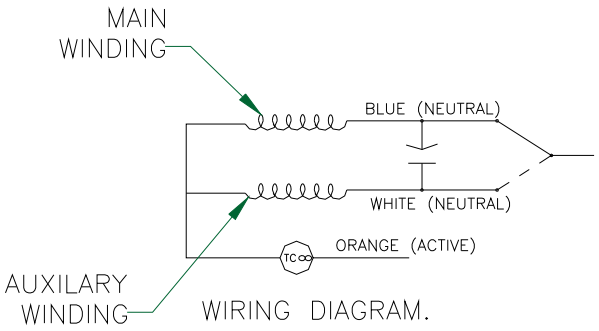
5.1.1.3 DE50F56EW

Measuring at the controller module terminals, between terminal P201 the Orange wire and terminal P203 the Blue wire the resistance should be between 65-73Ω depending which motor is fitted.
Then measure between terminal P201 the Orange wire and terminal p204 the White wire the resistance should be between 65-73Ω depending which motor is fitted.

5.1.2 Testing – At Motor

Orange – White = 65-73Ω ± 7%
Orange – Blue = 65-73Ω ± 7%
Blue – White = 130-146Ω ± 7%

Measurements dependent on which motor is fitted.



WIRING DIAGRAM.

5.2 NTC Testing / Door Switch / Heater & Thermostat Testing at the Control Panel

5.2.1 NTC Located in Exhaust Duct DE50F56EW:

Measure at the PCB across P103-3 and P103-4 on the PCB edge connector with the harness connected. The resistance should be 19.5kΩ @ 25 ^{O}C.

5.2.2 DE50F56EW Door Switch DE50F56EW:

Measure at the PCB across P103-1 and P103-2 on the PCB edge connector with the harness connected. The resistance should be 0Ω with the door closed and infinite with the door open.

5.2.3 Door Switch DE40F56A & DE50F56A:

Measure across the Phase pin of the mains plug and terminal 1 the red wire of the timer, the resistance should be 0Ω with the door closed and infinite with the door open.

5.2.4 Door Switch DE40F56A2 & DE50F56A2 Push to Start

Measure across the Phase pin of the mains plug and terminal B4 the brown wire of the timer, the resistance should be 0Ω with the door closed and infinite with the door open.

5.2.5 Heater / Thermostat Testing DE50F56EW

Measuring at the control module terminals, between terminal P201 the Orange wire and terminal P205 the Violet wire the resistance should be 63.85Ω ± 1.28Ω, and measuring at the control module terminals, between terminal P201 the Orange wire and terminal P208 the Violet wire the resistance should be 63.85Ω ± 1.28Ω

Note: With this measurement, the entire element circuit is being tested, including the thermostat. If there is no circuit detected, then the element, thermostat and connections at the rear of the cabinet will need to be checked.

5.2.6 Heater / Thermostat Testing DE40F56AW & DE50F56AW

Measuring at the timer terminals, between terminal 10 the Yellow wire and terminal 4 the Black wire the resistance should be 31.32Ω ± 1.28Ω

Note: the timer must be in the off position.

Note: With this measurement, the entire element circuit is being tested, including the thermostat. If there is no circuit detected, then the element, thermostat and connections at the rear of the cabinet will need to be checked

5.2.7 Heater / Thermostat Testing DE40F56A2 & DE50F56A2 Push to Start

Measuring at the timer terminals, between terminal B2 the Yellow wire and terminal A2 the Black wire the resistance should be 31.32Ω ± 1.28Ω

Note: the timer must be in the off position.

Note: With this measurement, the entire element circuit is being tested, including the thermostat. If there is no circuit detected, then the element, thermostat and connections at the rear of the cabinet will need to be checked

6 DISASSEMBLY PROCEDURES

6.1 Timer Knob Removal DE40F56A & DE50F56A

1. Grip firmly and pull forward. Note: Push fit only
2. Replace by matching flat on the timer shaft to corresponding flat in knob insert. Push firmly into place.

6.2 Control Panel Removal DE40F56, DE50F56

1. Remove the timer knob; refer to sec 6.1 for the DE40F56A & DE50F56A only.
2. With the door closed, remove one screw from either side of control panel.
3. Tilt panel forward from top edge and lift gently upwards to release the locking clips.

Reassemble in the reverse order

6.3 Top Panel removal

1. Remove the control panel, refer to sec 6.2
2. Remove 4 screws from the front edge of panel.
3. Remove the 3 screws from the rear edge of the panel
4. The panel can now be removed.

Reassemble in reverse order

6.4 Rear Panel Removal

1. Remove the 16 screws from around the edge of the panel.

Note: It is not necessary to remove the exhaust flange when fitted

Reassemble in the reverse order

6.5 Drum Removal

1. Remove the top panel and the rear panel Refer to sec 6.3 & sec 6.4
2. Remove the wires connected to the element.
3. Remove the thermostats by unscrewing the bracket holding them
4. Provide a suitable floor covering to protect door and front of cabinet from being marked. Then lay dryer on its front.
5. Take off the belt tension from the drum at the jockey pulleys – remove belt from motor pulley.
6. Remove the earth wire screw from the heater plate.
7. Remove the 4 screws that hold the element plate brackets to the sides of the cabinet.
8. Pull the drum away from the front of the cabinet.

Reassemble in the reverse order. Ensure that the drum belt is over the drum before assembly. Check felt seal.

6.6 Replacing Front Drum Bearings DE50F56

NOTE: This can only be done with the drum removed, refer to sec 6.5, once removed stand the cabinet upright.

1. Remove 7 screws that hold the bearing support ring to the air duct.
2. The bearing ring can be removed from the air duct.
3. There are 6 drum bearings fitted to this ring which are removed by pushing them out.
4. When fitting the replacement drum bearings, check the surface on the front edge of the drum that the bearings' run on to ensure it is free from grease and rough surfaces etc.

Reassemble in reverse order.

NB. Ensure that the chamfer along the long edge is fitted facing toward the rear of the machine.

6.7 Replacing Front Drum Bearings DE40F56

1. Remove the drum refer to sec 6.5.
2. Push the 6 existing bearings out
3. When fitting the replacement drum bearings, check the surface on the front edge of the drum that the bearings' run on to ensure it is free from grease and rough surfaces etc.

Reassemble in reverse order.

NB. Ensure that the chamfer along the long edge is fitted facing toward the rear of the machine.

6.8 Replacing the Rear Drum Bearing

1. Remove the drum refer to sec 6.5
2. Remove the drum bolt, cap and spacers from inside the drum.
3. Remove the outer screws holding the bearing housing to the drum rear.
4. Remove the screws holding each half of the bearing housing together.

Reassemble in reverse order. Ensure that the bearing housing clamps the outer ball race shell securely (across the bearing face not on the diameter) and that the correct drum spacer is fitted to the inside as the outside spacer is recessed.

6.9 Bearing Holder, Air Duct Assy and Felt Seal Removal DE50F56

1. Remove the Drum refer to sec 6.5
2. Remove air duct tube from front air duct assy. Just pulls off.
3. Remove 7 screws that hold air duct assy to the front of the cabinet.
4. Duct can be pulled away from the front of the cabinet.

Reassemble in reverse order, taking care to ensure that the air duct gasket fits around the edge of the duct and does not fold over when fitted to the cabinet.

6.10 Fan Removal DE40F56

1. Remove the rear panel refer to sec 6.4.
2. Remove the 4 screws from the steel plate clamping the fan to the motor shaft.
3. Pull the fan off.

Reassemble in reverse order aligning the plates each side of the fan. DO NOT USE solvents, cleaning fluids, oil or grease near the plastic fan. Use only a clean cloth.

6.11 Motor Removal

1. Remove the top panel, refer to sec 6.3, the rear Panel, refer to sec 6.4, and the fan (DE40F56A only), refer to sec 6.10
2. It is easier if the drum is also removed refer to sec 6.5.
3. Remove the drive belt from jockey pulley and vee pulley on the motor shaft.
4. Remove the 2 motor mounting spring clips at each end of the motor using service tool P/No 479349
5. The motor can then be lifted away from the motor mounts enabling access to the motor wiring
6. Disconnect the harness from the motor and remove.

Reassemble in reverse order. Take care to route the wires away from sharp edges on the motor mounting brackets.

6.12 Fan Removal DE50F56

The fan is held on to the motor shaft by a fan boss to which the fan is clamped.

1. Remove the motor, refer to sec 6.11
2. Remove 4 screws that hold the fan flange disc to the clamping disc behind the fan.
3. The fan may now be removed from the boss.
4. The fan boss can then be removed from the motor shaft by loosening the Allen key set screw on the fan boss.
5. Then withdraw the boss from the shaft of the motor.

Reassemble in reverse order.

6.13 Motor Driving Pulley Removal

The motor driving pulley is held on the shaft by a role pin through the pulley and motor and also by an Allen key set screw.

1. Remove the motor, refer to sec 6.11
2. Drive out the roll pin that fits through the pulley and shaft. This may be done with a pin punch.
3. Loosen the Allen set screw of the motor pulley.
4. The pulley can then be withdrawn from the motor shaft.

Reassemble in reverse order.

6.14 Jockey Pulley Removal DE40F56

1. Remove the rear panel, refer to sec 6.4.
2. Remove the tension from the belt.
3. Remove the tension spring from the jockey pulley to the motor mounting bracket.
4. Push the arm away to lift out one side of the pulley, and then push the pulley away.

Reassemble in reverse order. The spring goes in between the top and second slots of the jockey pulley arm.

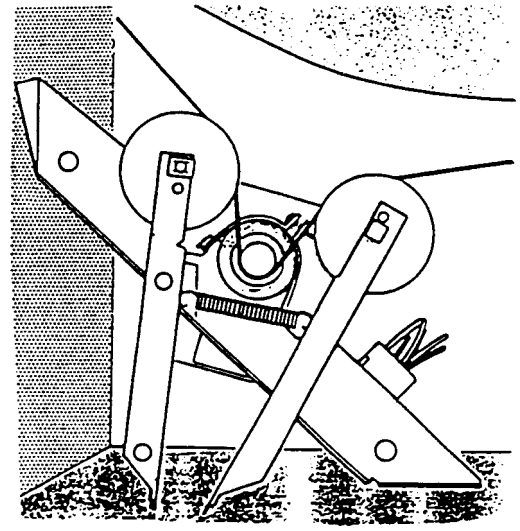
6.15 Jockey Pulley Removal DE50F56

1. Remove the rear panel, refer to sec 6.4.
2. Remove the tensioning spring between the two jockey pulley arms.
3. The jockey pulley arms can be removed from the base of the cabinet by straightening the bent tabs on each arm.
4. Access to these tabs is under the base of the cabinet.
5. After straightening, the arms can then be withdrawn by holding them to one side of the slot and lifting the other edge from the slot.

Reassemble in reverse order.

NOTE: The jockey pulley arms and rollers are at two different heights. The longer of the two arms/rollers fit closest to the cabinet side.

427939



6.16 Timer Removal DE40F56A & DE50F56A

1. Remove the timer knob refer to sec 6.1
2. Remove the top panel refer to sec 6.3.
3. Remove the 2 small screws adjacent to the timer shaft on the outside front of the cabinet.
4. Remove all the screws holding the door hinge assembly such that the wiring shield is free.
5. Move the timer away from the cabinet
6. Disassemble timer cover from the wiring shield
7. Remove the wires from the timer.

Reassemble in the reverse order. **Do not** use longer screws into the timer other than those provided or the timer will be damaged.

6.17 Electronic Controller Removal DE50F56EW

Use wrist strap and take standard ESD precautions.

1. Remove the front panel refer to sec 6.2
2. Disconnect sensor and door switch connector.
3. Disconnect the remaining wiring harness.
4. Release the lower retaining clips holding module to control panel.
5. Module can now be removed from the front panel.

Reassemble in reverse order.

6.18 Door Assembly removal

1. Open door fully.
2. Remove the 2 screws that retain the door hinge cover and remove the cover.
3. Support the door with one hand, then remove the screw retaining lower hinge.
4. The door assembly can now be lifted off the top hinge. Note the location of spacer washers.

Reassemble in reverse order.

6.19 Door Switch removal DE40F56

1. Remove the drum assembly refer to 6.5
2. Open the door fully and remove the 2 screws holding the door switch housing.
3. Move the housing away from the cabinet.
4. Remove the wires from the switch.
5. Remove the switch from the housing.

Reassemble in the reverse order. **Do not** use longer screws into the door switch housing other than those provided or the housing will be damaged.

6.20 Door Switch removal DE50F56

1. Remove the top panel assembly refer to 6.3
2. Remove the control module housing for the DE50F56EW refer to sec 6.17.
3. Unclip the switch from the duct assembly.
4. Remove the harness wires from the switch.

Reassemble in the reverse order.

6.21 Tools & Equipment

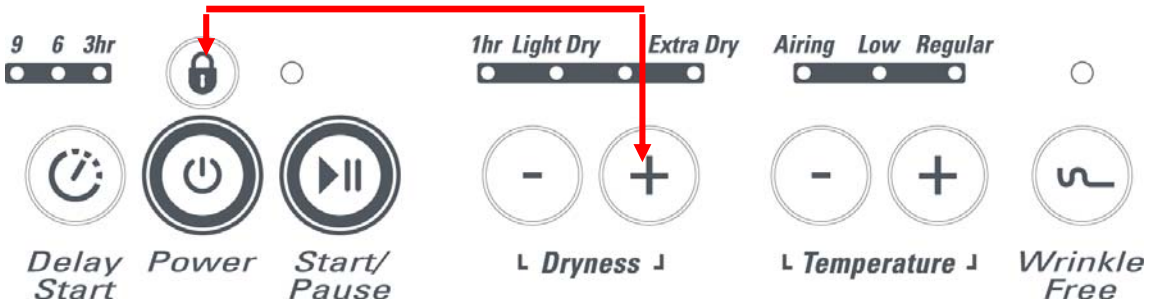
- Ampere Meter (10-amp max) or Watt meter. (2000 watt max)
- Multi Meter with voltage range up to 250 V ac and resistance range up to 300 ohm.
- Philips No.2 screwdriver.
- 6mm socket.
- 6mm Allen key
- 8mm Allen key
- Long nose pliers.
- Anti static wrist strap.

7 ELECTRONIC MODULE CONNECTION CHECK

The following is a quick test procedure to check that the electronic module is correctly wired to the dryer and that the dryer is operating correctly

7.1 Led & Button Test

1. Press and hold the **LOCK**, button, and then press the **DRYNESS** + up button so that both buttons are pressed down at the same time.
   All LEDs should be on:



2. Press the **POWER** button to turn the LEDs off.
3. Press the **POWER** button and check all the other buttons are working. Check that the buzzer is sounding.

7.2 Drum Rotation & Element Check

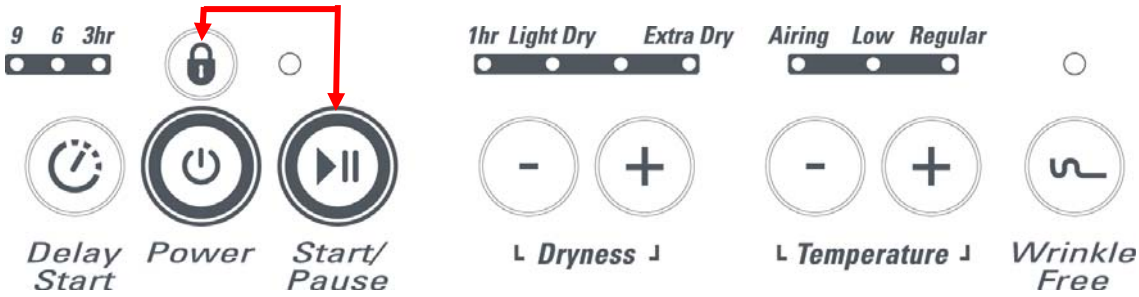
1. Connect an amp meter or watt meter in the mains supply to the dryer.
   Turn the dryer on and set the temperature to Regular, then press the **START/PAUSE** button to start.
   Amp meter should read approx 8.5 amps OR watt meter should read 2000 watts.
   Note 1: If the dryer does not start, check the door switch adjustment (for other faults refer to the ***FAULT CODES*** section).

   Note 2: A failure on the control module will cause a fault code to be displayed on the Dryness LEDs. This happens approximately 12 seconds after the initial pressing of the **START/PAUSE** button and overwrites the operational display (refer to the ***FAULT CODES*** section).

2. Press the **START/PAUSE** button twice.
   - The dryer should stop and reverse direction.
   - Amp meter should again read approx 8.5 amps or the watt meter should read 2000 watts.
3. Press the **START/PAUSE** button and use the **TEMPERATURE** down button to set the temperature to airing.
4. Press the **START/PAUSE** button the Amp meter should read approximately 0.5 amps or the watt meter 130 watts.

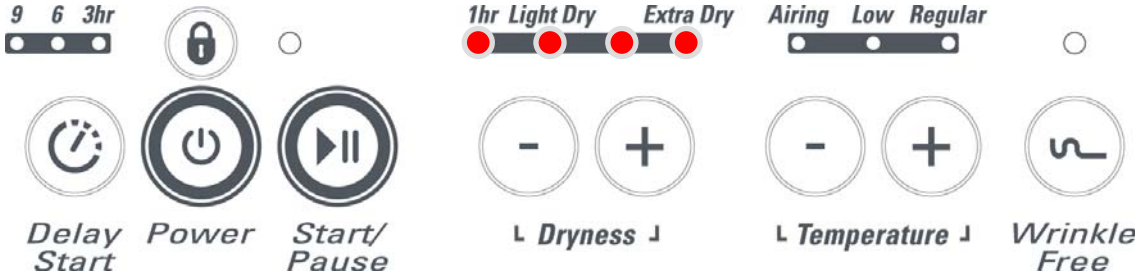
7.3 Exhaust Sensor & Door Switch Test

1. Start the dryer running in Low or Regular Temperature mode; then press and hold the **LOCK** button, and then press the **START/PAUSE** button.



Note: This advances the drying cycle so that a shorted temperature sensor can be detected. (Refer to ***Faulty Exhaust Sensor*** section).

2. Press and hold the **LOCK** button; then press the DRYNESS button. Release these buttons and press the **START/PAUSE** button.



- If there is a fault with the exhaust sensor, the fault code will be immediately displayed, with the beeper sounding (Refer to ***FAULT CODES*** section).

3. Open the door and the machine should pause. The three delay LEDs will turn on with the door opened.

8 FAULT MODES

Should a fault develop in the Electronic Control system of the dryer, the control panel will display a particular pattern on the Dryness LEDs as well as a continuous sounding of the buzzer.
If this occurs, first turn the dryer off at the mains socket or unplug the dryer, then reconnect to the mains and retry the dryer.

8.1 FAULT CODES

If a fault should develop in the temperature measurement system of the dryer control system, a fault code will be displayed on the front panel.

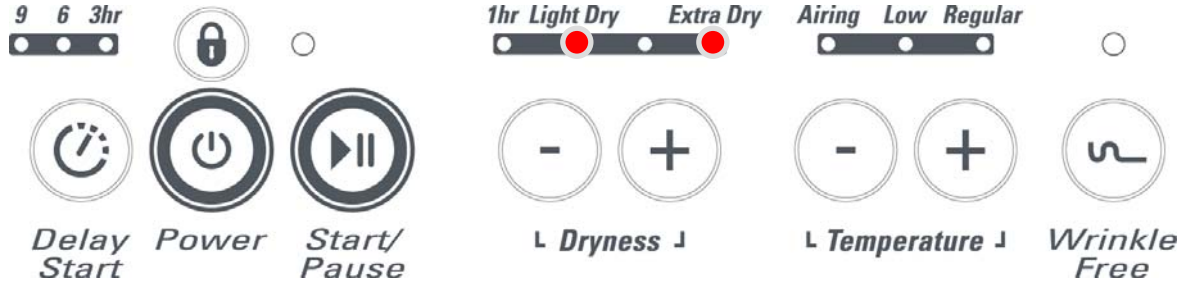
Fault codes are distinguished from the normal display in that only a combination of the 4 dryness LEDs will be on and with the beeper sounding on and off.

If a fault code should appear, first switch the dryer off at the wall socket or remove the plug. Switch on again. If the fault re-occurs, use the following codes to diagnose the fault.

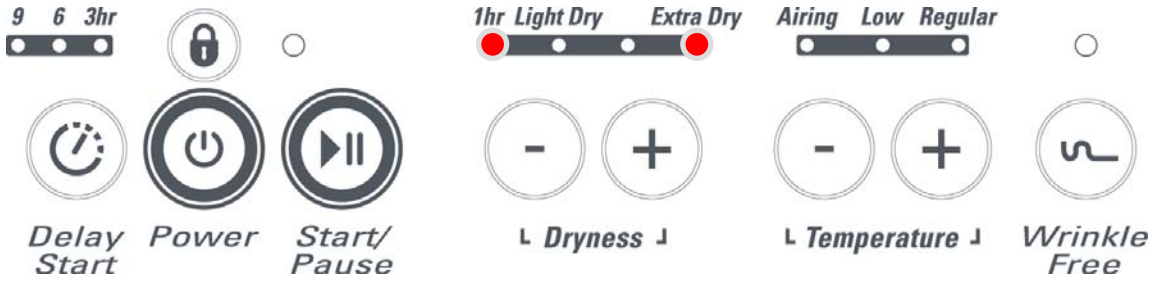
The faults and their respective fault codes are as follows:

8.2 Faulty Exhaust Sensor

Code: 0101



OR 1001



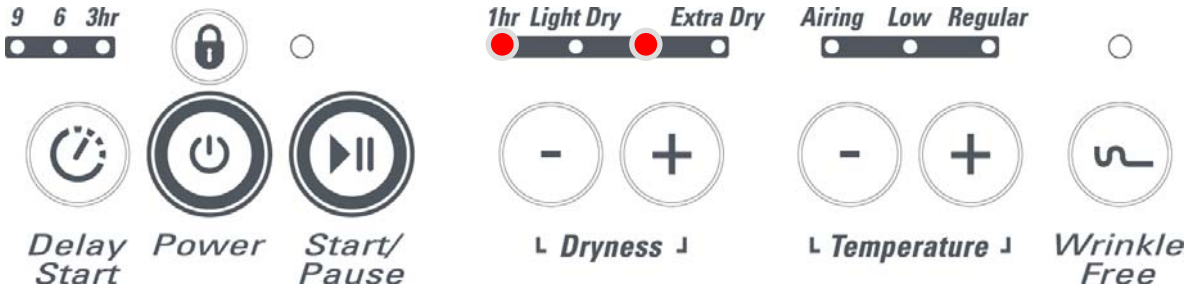
Action: Unplug the exhaust sensor harness at the control module and check the resistance of the sensor (refer to ***Testing the Exhaust Sensor*** section)**.** If faulty replace it.

NOTE: A shorted exhaust sensor can also be sensed by the Temperature Measurement System as a very low temperature reading. Remember the sensor decreases in resistance as the temperature decreases. To stop a fault code showing at very low temperatures (below 0^{o}), this fault code will not show until 5 minutes after the dryer has started. This allows the sensors time to be heated up by the exhaust air.

Refer **EXHAUST SENSOR AND DOOR SWITCH TEST** to eliminate this delay.

8.3 Exhaust Sensor Shorted to Cabinet

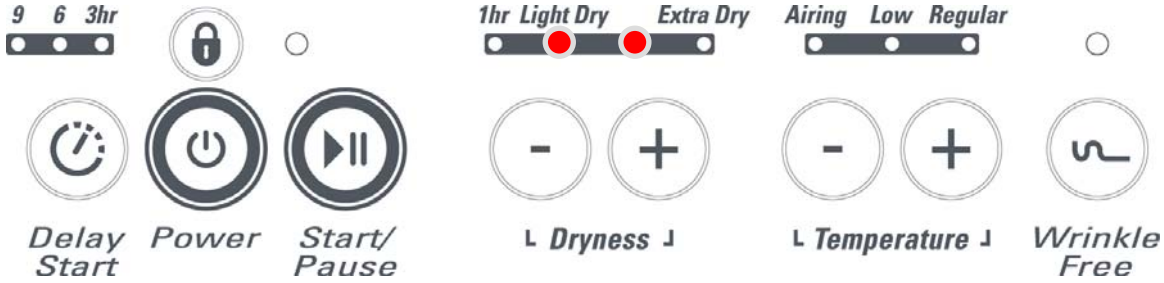
Code: 1010



Action: Unplug the exhaust sensor harness at the control module and check for continuity between each of the sensor wires and the dryer cabinet. There should be no connection between the wires and the cabinet.
If there is a short, replace the exhaust sensor and harness

8.4 Faulty Exhaust or Ambient Sensor

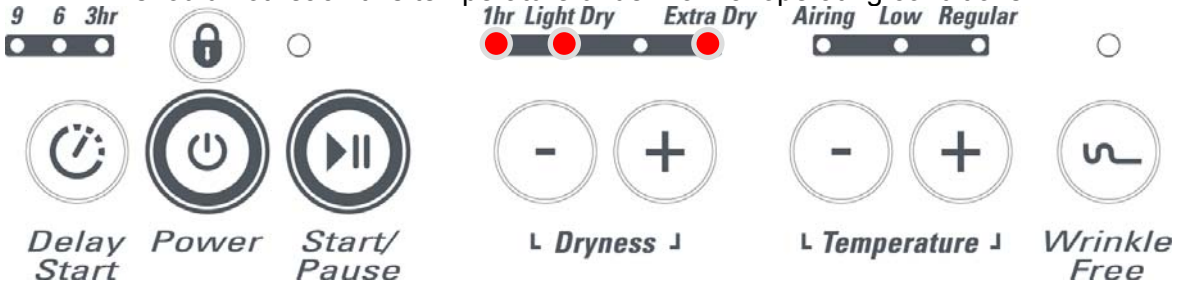
Code: 0110
Cause: The sensors are either open circuit or shorted.



Action: Unplug the exhaust sensor harness at the control module and check the resistance of the sensor. (Refer to ***Testing the Exhaust Sensor***). If faulty, replace it. If the ambient sensor is faulty, the electronic module will have to be replaced.

8.5 Over Temperature

Code: 1101
Cause: If the exhaust air temperature is above 90°C a fault code is given as the dryer should not reach this temperature under normal operating conditions.

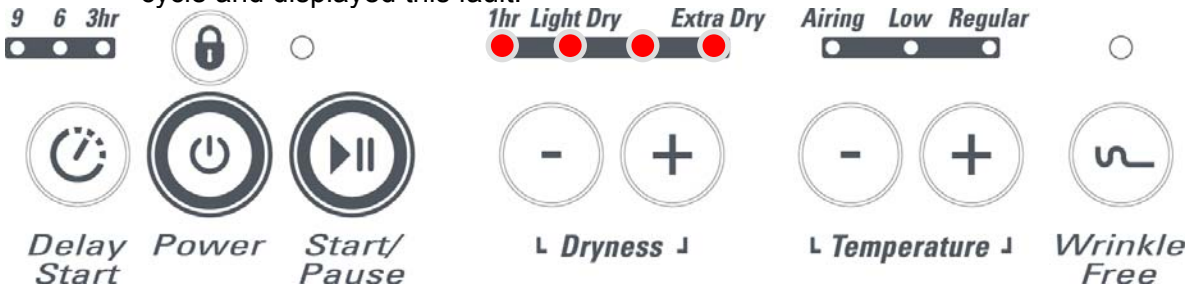


Action: Check the lint filter and exhaust duct for any blockage or restriction to the airflow.

8.6 Brown Out

Code: 1111

Cause: The product has experienced 8 brown outs within 60 seconds and has aborted the cycle and displayed this fault.



Action: Check the supply voltage. When the supply voltage drops below 180 volts brown out will occur.

8.7 Other Fault Codes

There are many other fault codes. These refer to faults on the PCB assembly itself which will require the PCB assembly to be replaced.

9 TESTING THE EXHAUST SENSOR

The Exhaust Sensor consists of a device called a thermistor, which is mounted on a small PCB which is attached to the wiring harness.

The thermistor is a device that changes its electrical resistance according to the temperature, the higher the temperature, the higher the resistance of the thermistor.

Use a multi meter to test the resistance of the sensor.

At normal room temperature (25^{o}C) the resistance of the thermistor will be approximately 2KΩ and at 0^{o}C 1.64KΩ.

10 DOOR SWITCH ADJUSTMENT

The door switch should be adjusted so that the door has opened no more than 40mm – 65mm before the PAUSE mode is activated and the dryer stops.

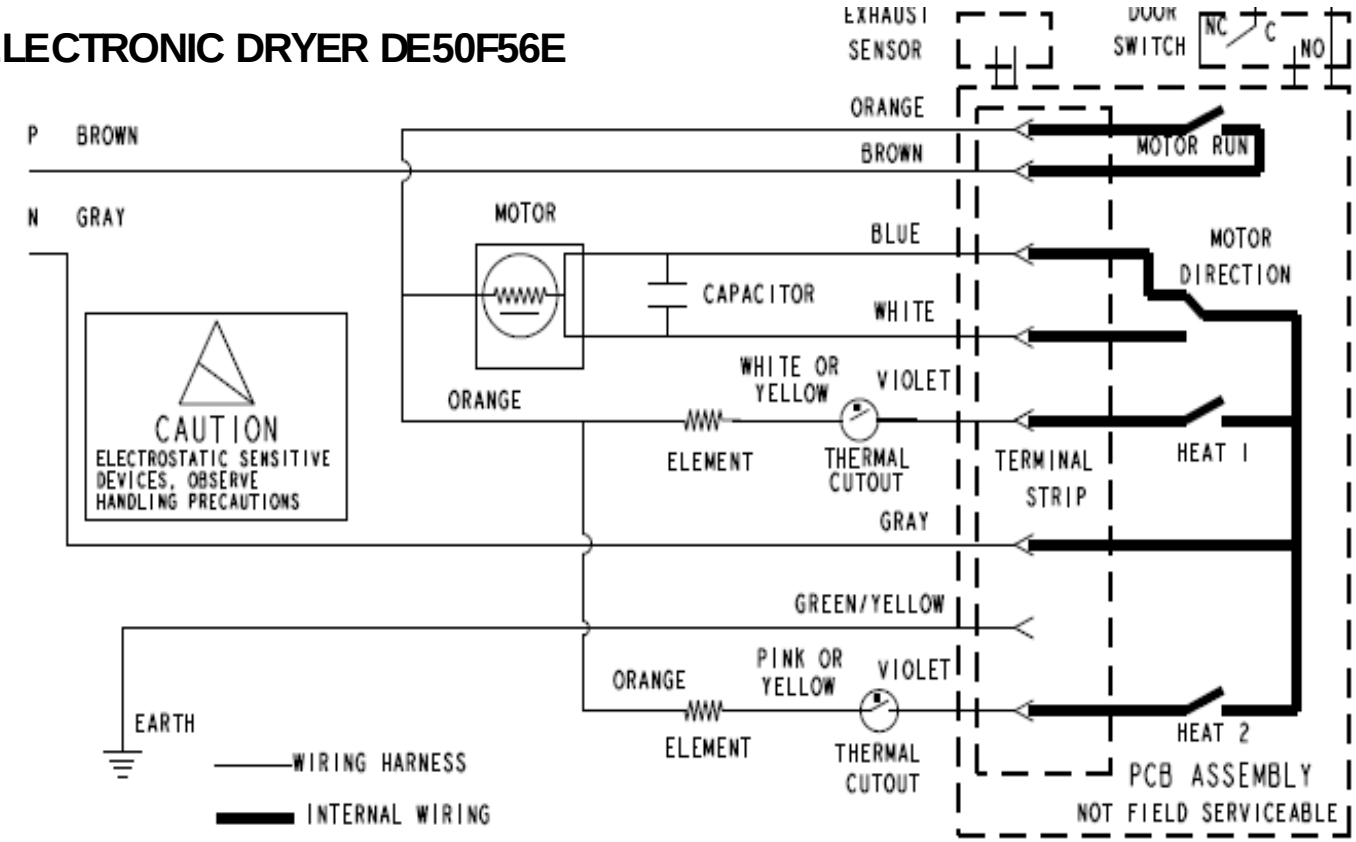
If the door switch is not activated the dryer will sound a warning tone when the **START/PAUSE** ⏯ button is pressed.

11 BROWN OUT

If the mains voltage falls below a certain voltage, even for a short period of time, it is known as a brown out.
When the mains voltage falls below this minimum voltage, the Electronic Control System will not be able to function correctly and will automatically turn the dryer off. This happens when the mains voltage is between 165 and 170 volts.
The dryer can be restarted by pressing the **POWER** ⏻ button.

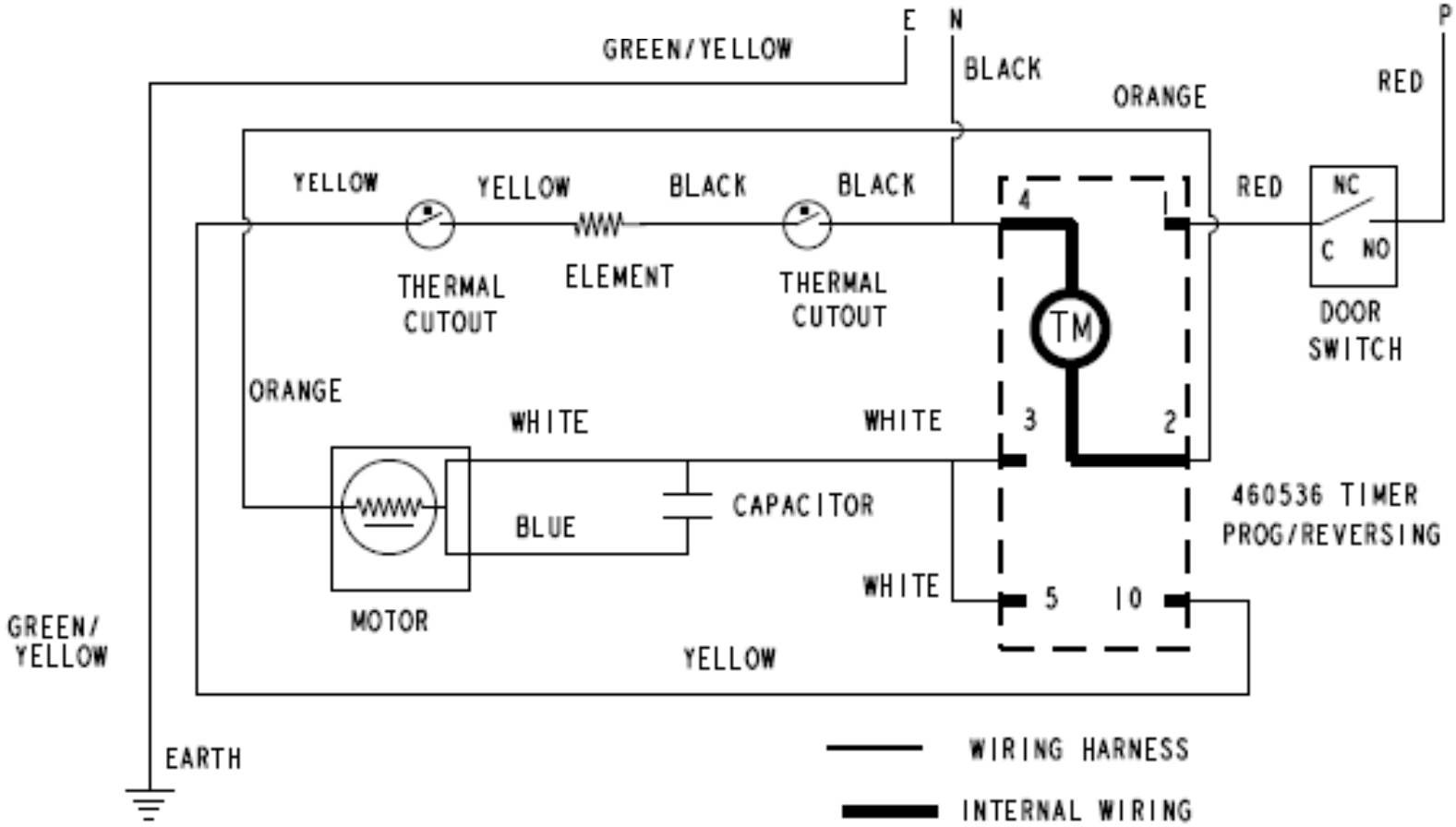
12 WIRING DIAGRAMS

ELECTRONIC DRYER DE50F56E



Resistance Table	
Element	63.85+/-1.28 Ω
Capacitor	7uF+/-5%
Exhaust Sensor	2k Ω @ 25°C
Motor	
Fasco	65 Ω
WTIC	73 Ω

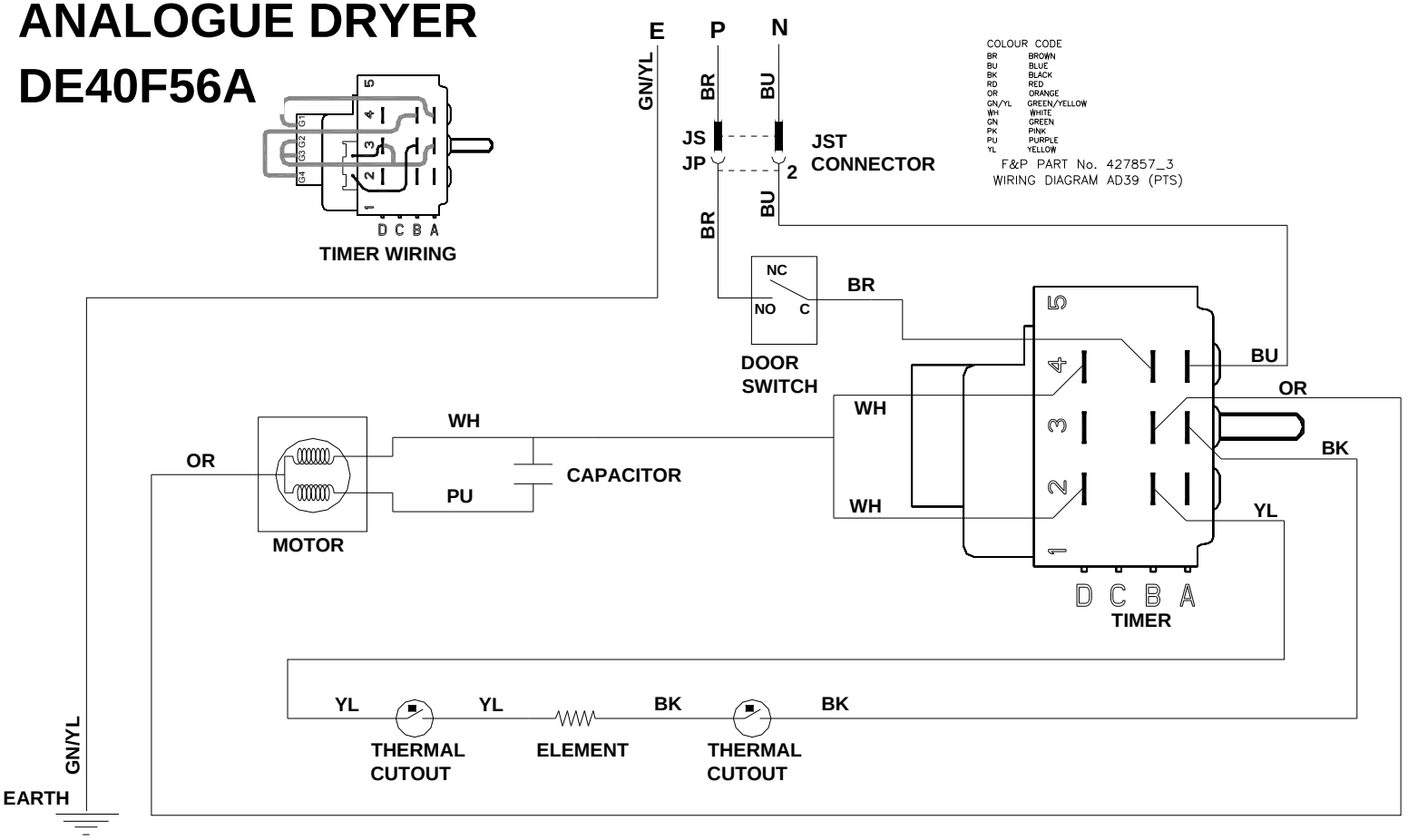
ANALOGUE DRYER DE40F56AW



Resistance Table	
Element	31.32+/-1.28 Ω
Capacitor	7uF+/-5%
Motor	
Fasco	65 Ω
WTIC	73 Ω

ANALOGUE DRYER
DE40F56A

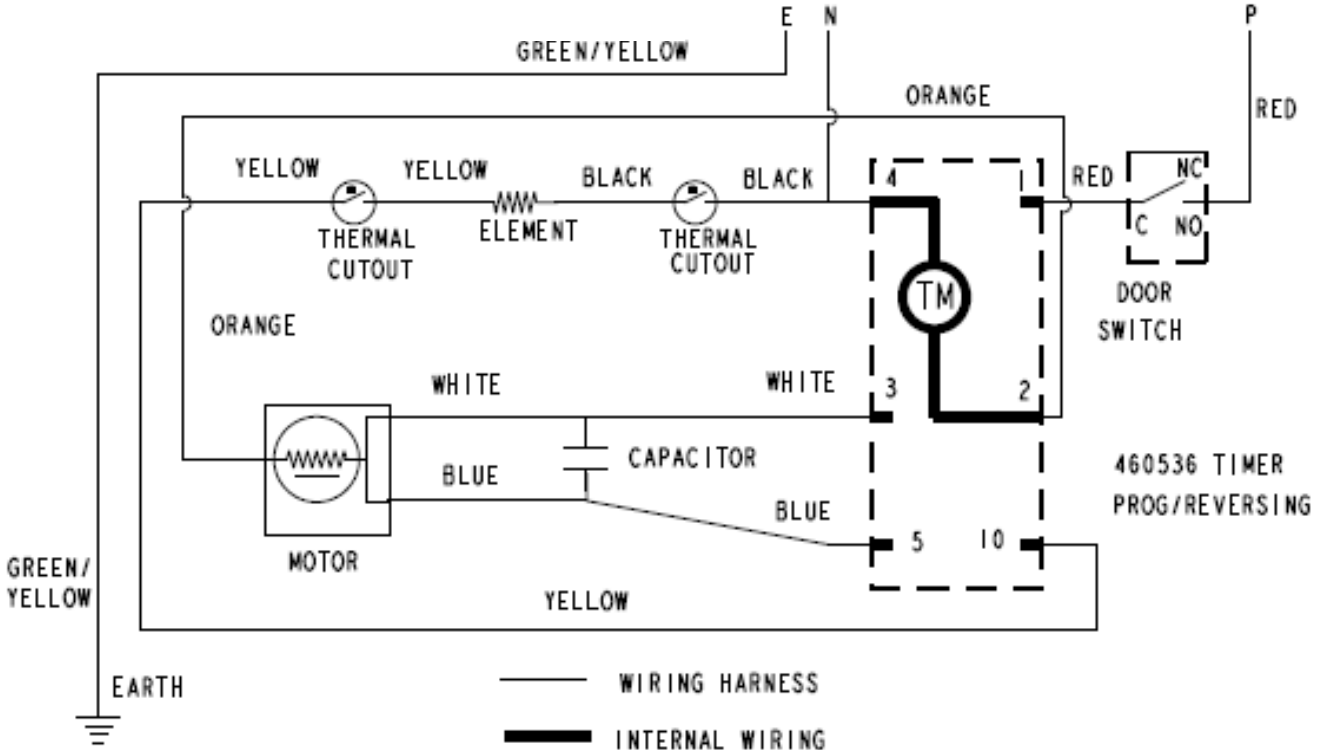
TIMER WIRING



Resistance Table	
Element	31.32+/-1.28 Ω
Capacitor	7uF+/-5%
Motor	
Fasco	65 Ω
WTIC	73 Ω

Push to Start Timer

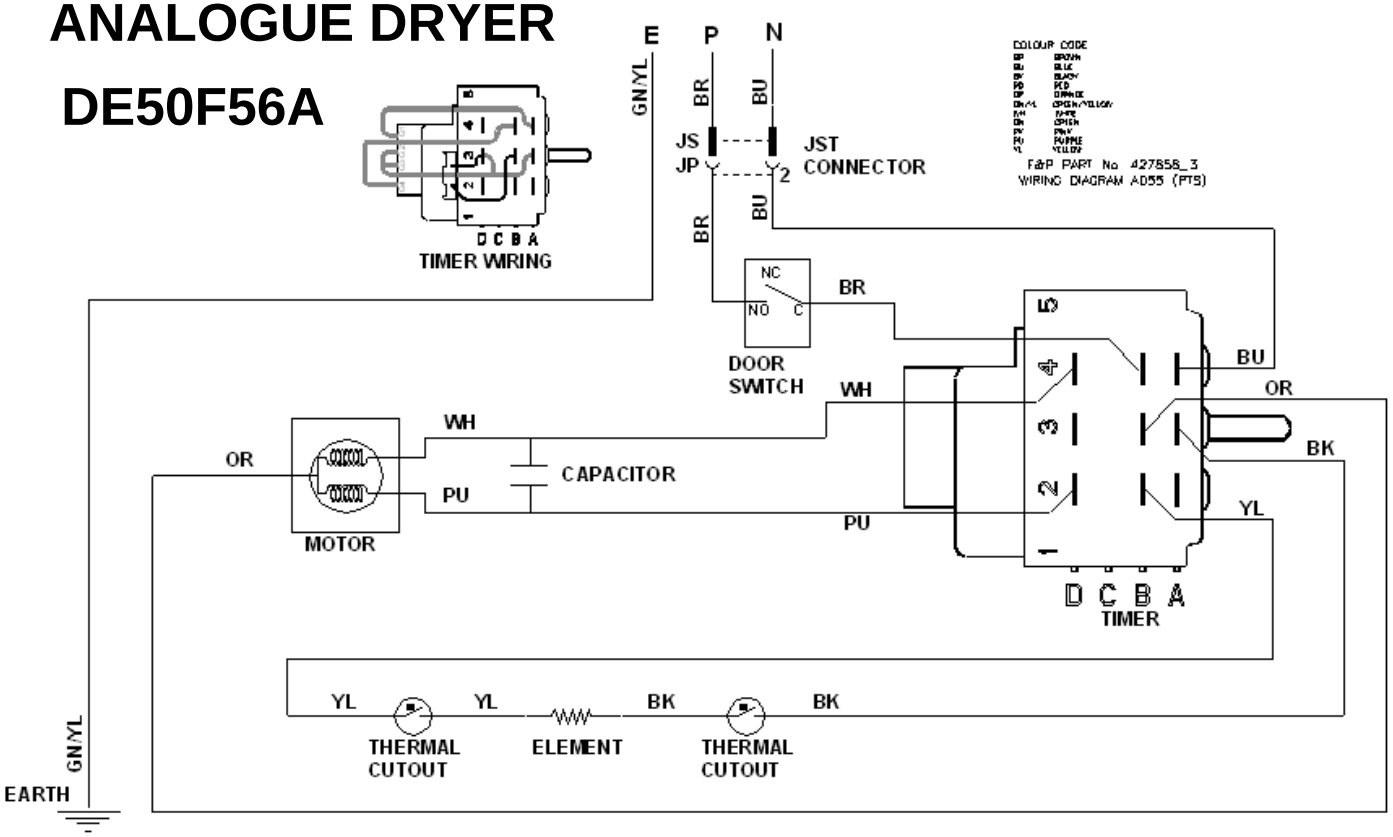
ANALOGUE DRYER DE50F56AW



Resistance Table	
Element	31.32+/-1.28 Ω
Capacitor	7uF+/-5%
Motor	
Fasco	65 Ω
WTIC	73 Ω

ANALOGUE DRYER

DE50F56A

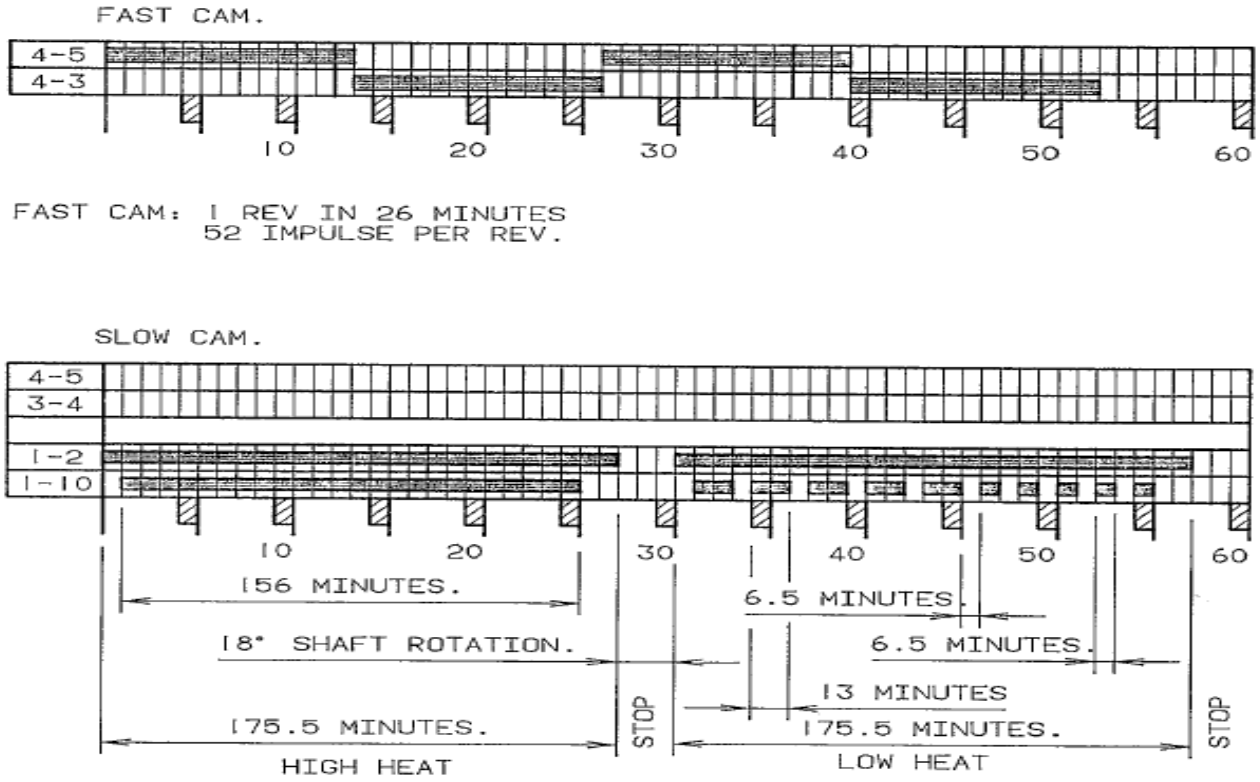


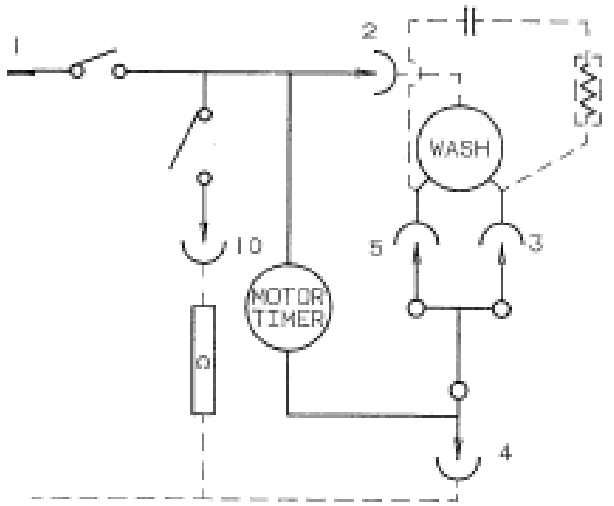
Push to Start Timer

Resistance Table	
Element	31.32+/-1.28 Ω
Capacitor	7uF+/-5%
Motor	
Fasco	65 Ω
WTIC	73 Ω

13 DRYER SEQUENCE CHART

13.1 DE40F56AW DE50F56AW





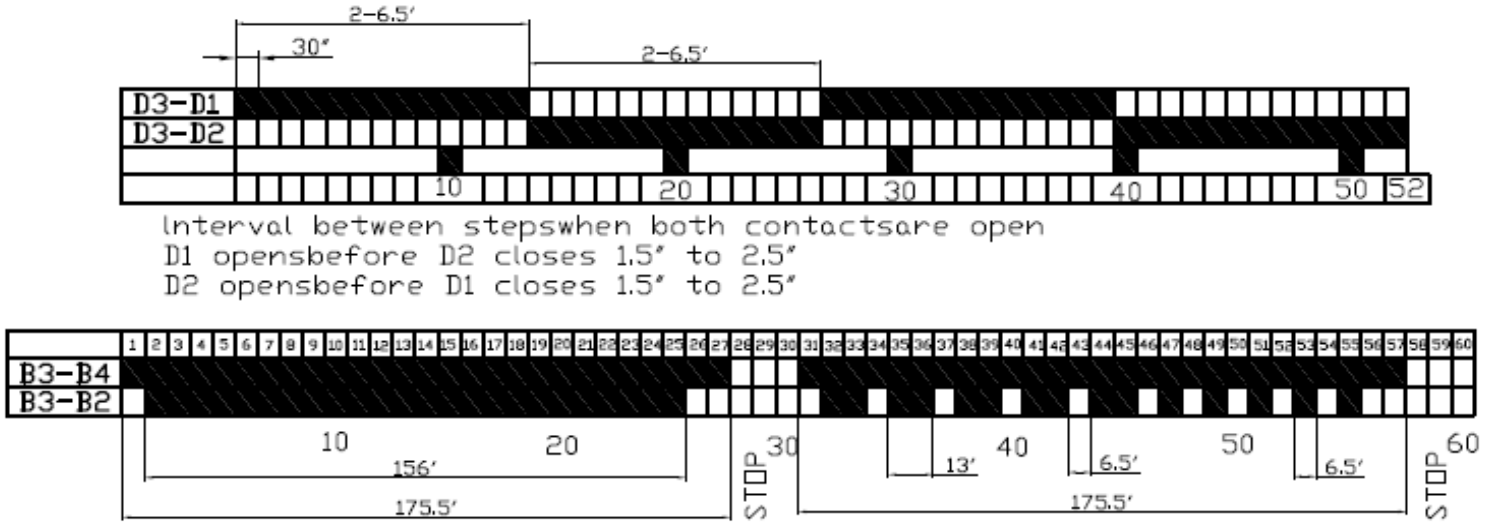
Timer Wiring diagram

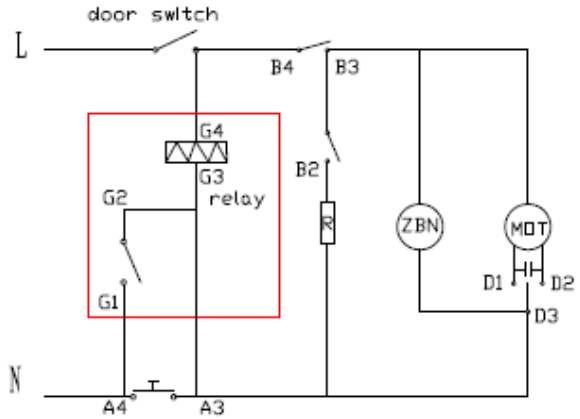
Clockwise shaft rotation

Slow Cam: 1Rev in 6.5Hours
60 Impulse per Rev

Contacts 3-4, 4-5 must change over with a pause of 2+/- 0.5 seconds

13.2 Push to Start DE40F56A2 & DE50F56A2





Timer Wiring Diagram

14 COMMON DRYING PROBLEMS

PROBLEM	POSSIBLE CAUSE	SOLUTION
Creasing	Overloading	Ensure clothes have sufficient room to tumble freely.
	Leaving load in the dryer	Try to be there to remove clothes from the dryer as soon as the cycle has finished.
Lint Transfer	Inappropriate sorting	Try to dry items that produce lint eg towelling, separately from synthetics. Dry dark items together.
	Blocked lint filter	Clean your lint filter every time you use your dryer.
	Too much static	Use a fabric softener or tumbler pad.
Tangling	Poor loading	Load each item separately
	Drying stockings, ties & belts	Try placing these items in a net wash bag or pillowcase when tumble drying them.
Uneven drying	Inappropriate sorting	Separate heavier items, e.g.: towels, t-shirts, etc from lighter garments, e.g. cotton/polyester shirts, sheets etc.
	Overloading	Always allow enough room for the clothes to tumble freely.
Stiff fabrics	Overdrying	Try selecting a shorter drying time.
	Inadequate rinse	Ensure clothes are properly rinsed.
Shrinkage	Inappropriate sorting	The combination of heat and tumbling action of a dryer can cause shrinkage in some garments, particularly woollens. Check your care labels before drying items in your dryer.
	Inappropriate cycle or time	If in doubt always dry garments on the “Delicate” cycle where they will be subjected to lower temperatures. Try to dry for the minimum time possible.

15 NOTES