Electrolux

ELECTROLUX HOME PRODUCTS PTY LTD

ABN 51 004 762 341

Technical Publication Nº DR110

Issue: 2
Date: 11/2010

WEB SITE ADDRESS: www.partnship.com.au

SIMPSON

TUMBLE DRYERS

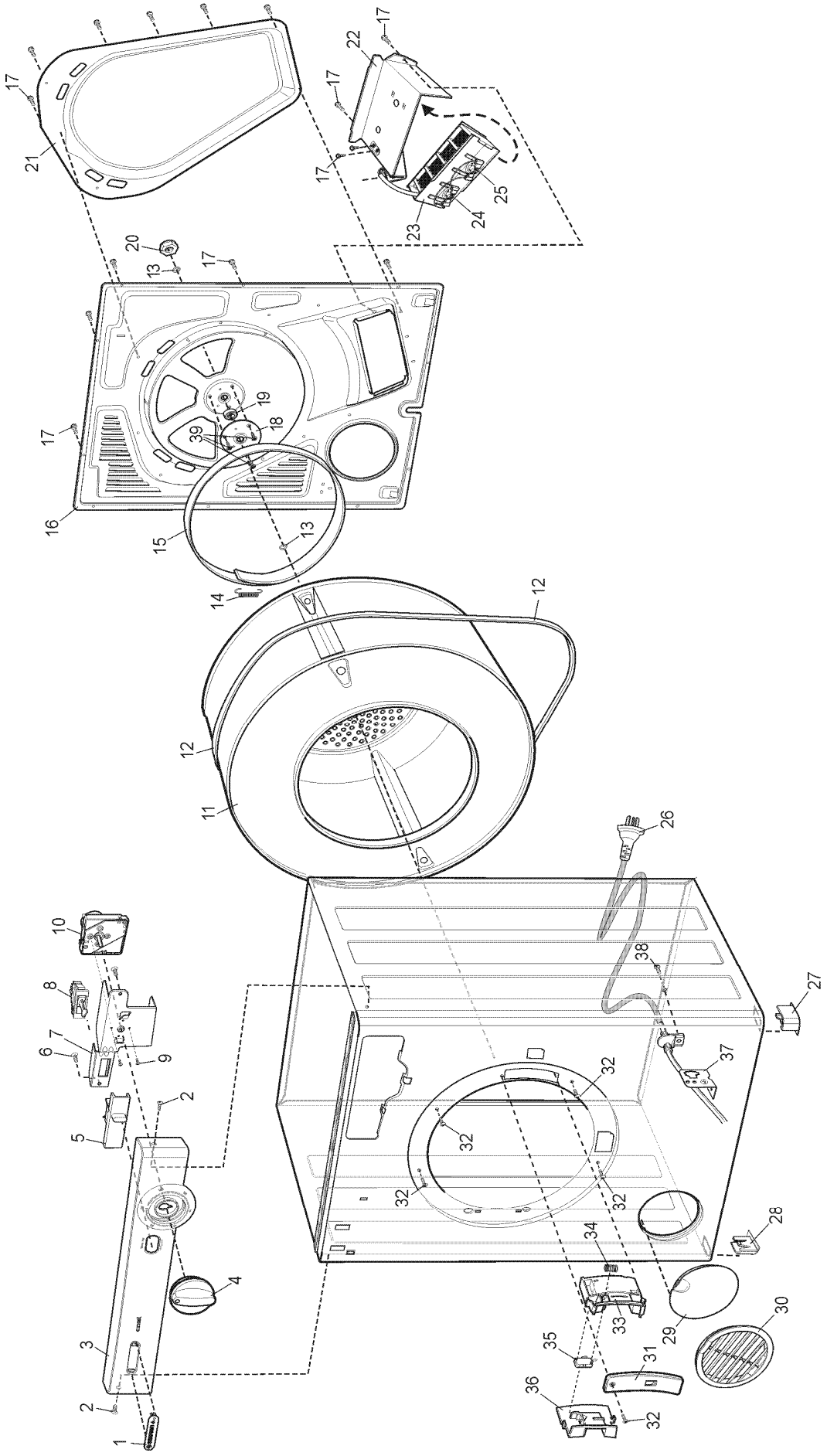
EZIloader

First Build Date: 03/06

MODELS:
39P400M*00
39S500M*00
39S600M*00
NZ only
39S505EM*00

MODELS: 39P400M*00
39S500M*00
39S600M*00

EX. VIEW DRAWING 5236
GENERAL ASSEMBLY

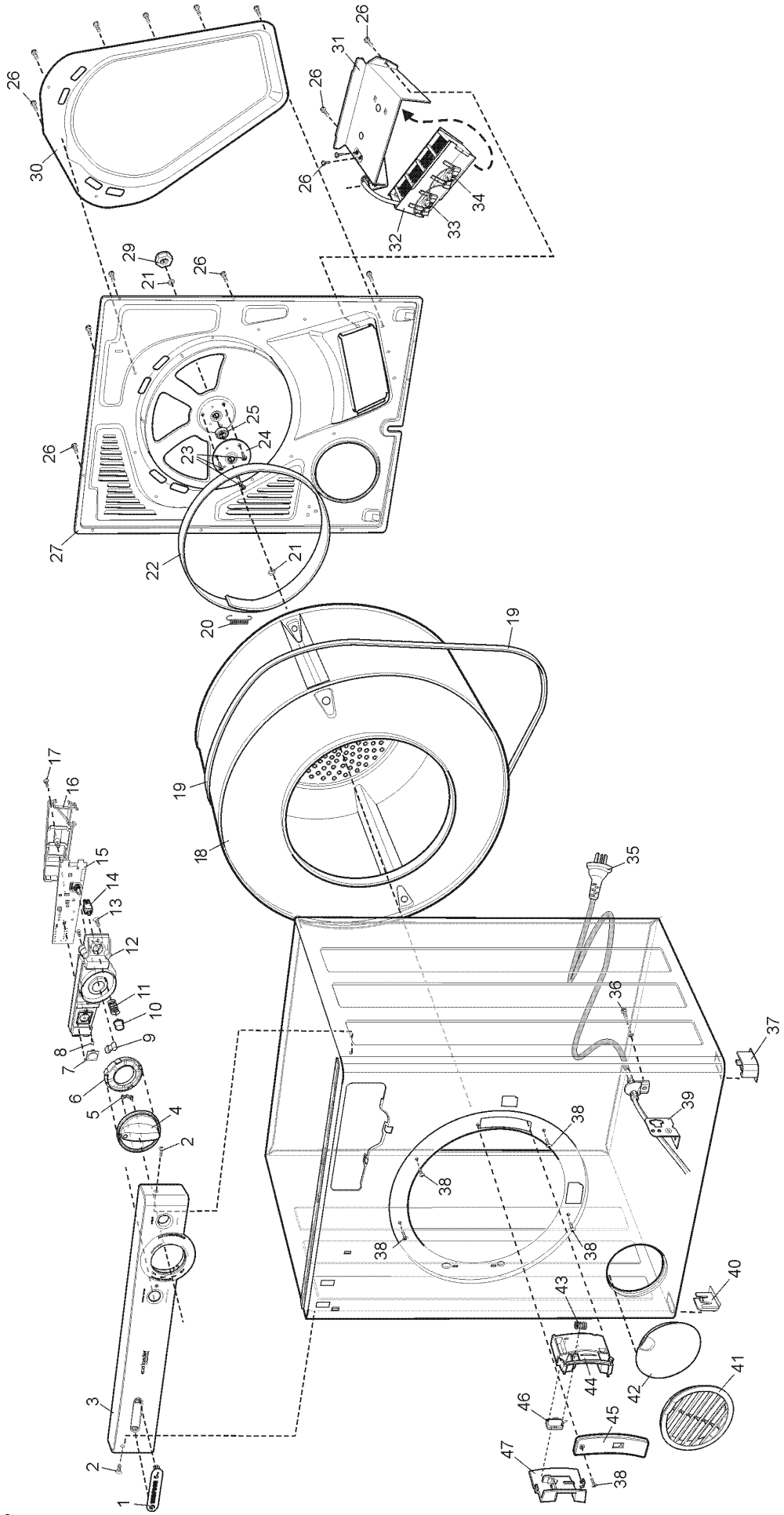


ITEM	PART Nº	DESCRIPTION Ex. 5236	400	500	600
1	**0278 308 001**	Badge, Name, 4kg	1		
	0278 308 002	Badge, Name, 5kg		1	
	0278 308 003	Badge, Name, 6kg			1
2	**0150 300 026**	Screw, Nº 8 x 1/2", R CSK	2	2	2
3	**0545 300 540**	Panel Control	1	1	1
4	**0019 309 001**	Knob, Timer	1	1	1
5	**0612 311 001**	Button, Slide	1	1	1
6	**0150 300 005**	Screw, Nº 6 x 12mm, Hex HD	2	2	2
7	**0030 300 190**	Bracket, Timer & Switch Mounting	1	1	1
8	**0534 300 048**	Switch, Heat Selector, 2 Position	1	1	1
9	**22371012**	Screw, Timer Securing	2	2	2
10	**0574 300 031**	Timer	1	1	1
11	**0157 300 146**	Drum Assy, White (4kg)	1		
	0157 300 148	Drum Assy, S.S. (5kg)		1	
	0157 300 149	Drum Assy, S.S. (6kg)			1
12	**0198 300 010**	Belt, Drum Drive	1	1	1
13	**21311129**	Spacer	2	2	2
14	**0120 300 025**	Spring, Drum Seal	1	1	1
15	**0208 300 047**	Seal Assy, Drum Rear	1	1	1
16	**0038 300 571**	Panel, Back	1	1	1
17	**0150 300 014**	Screw, Nº 8 x 3/8", Hex W/HD.	30	30	30
18	**32184401**	Housing Drum Bearing	1	1	1
19	**24142010**	Bearing, Drum, Rear	1	1	1
20	***0065 300 015**	Nut, M8	1	1	1
21	**0028300026**	Cover Assy, Back Panel	1	1	1
22	**N.P.A.**	Bracket, Heater	1	1	1
23	**0353 300 002**	Heater Assy (Inc. Items 24 & 25)	1	1	1
24	**Refer Item 23**	Thermostat, Thermal Cutout	1	1	1
25	**Refer Item 23**	Thermostat, Safety, Fusible	1	1	1
26	**0215 300 059**	Service Cord	1	1	1
27	**0049 300 016**	Plug, Corner, RH	1	1	1
28	**0049 300 015**	Plug, Corner, LH	1	1	1
29	**0028 306 001**	Cover, Exhaust	1	1	1
30	**0488 303 001**	Grille, Exhaust	1	1	1
31	**0028 300 024**	Cover, Door Switch Assy	1	1	1
32	**0150 300 046**	Screw, M4 Plastite x 14mm, Pan HD	5	5	5
33	**0030 300 158**	Bracket, Door Switch	1	1	1
34	**0120 300 024**	Spring, Door Switch	1	1	1
35	**28353067**	Switch, Door	1	1	1
36	**0563 300 007**	Striker, Door Switch	1	1	1
37	**N.P.A.**	Bracket, Service Cord & Harness	1	1	1
38	**0150 300 027**	Screw, Nº 8 x 12.7mm, Hex HD.	1	1	1
39	**0150 200 084**	Screw, Bearing Housing Securing	3	3	3
N.I.	**0173 300 735**	Harness, Wiring	1	1	1
N.I.	**0271 300 002**	Spacer	2	2	2
N.I.	**0030 377 193**	Bracket Kit, Wall (Inc. Spacers & Instructions)	1	1	1
N.I.	**0616 301 001**	Instruction, Wall Bracket	1	1	1

NOTE: *Some machines have been built with a different nut and washers, use the above part and discard the washers. DO NOT discard the spacer.

MODEL: 39S505EM*00 **EX. VIEW DRAWING 5516**

GENERAL ASSEMBLY

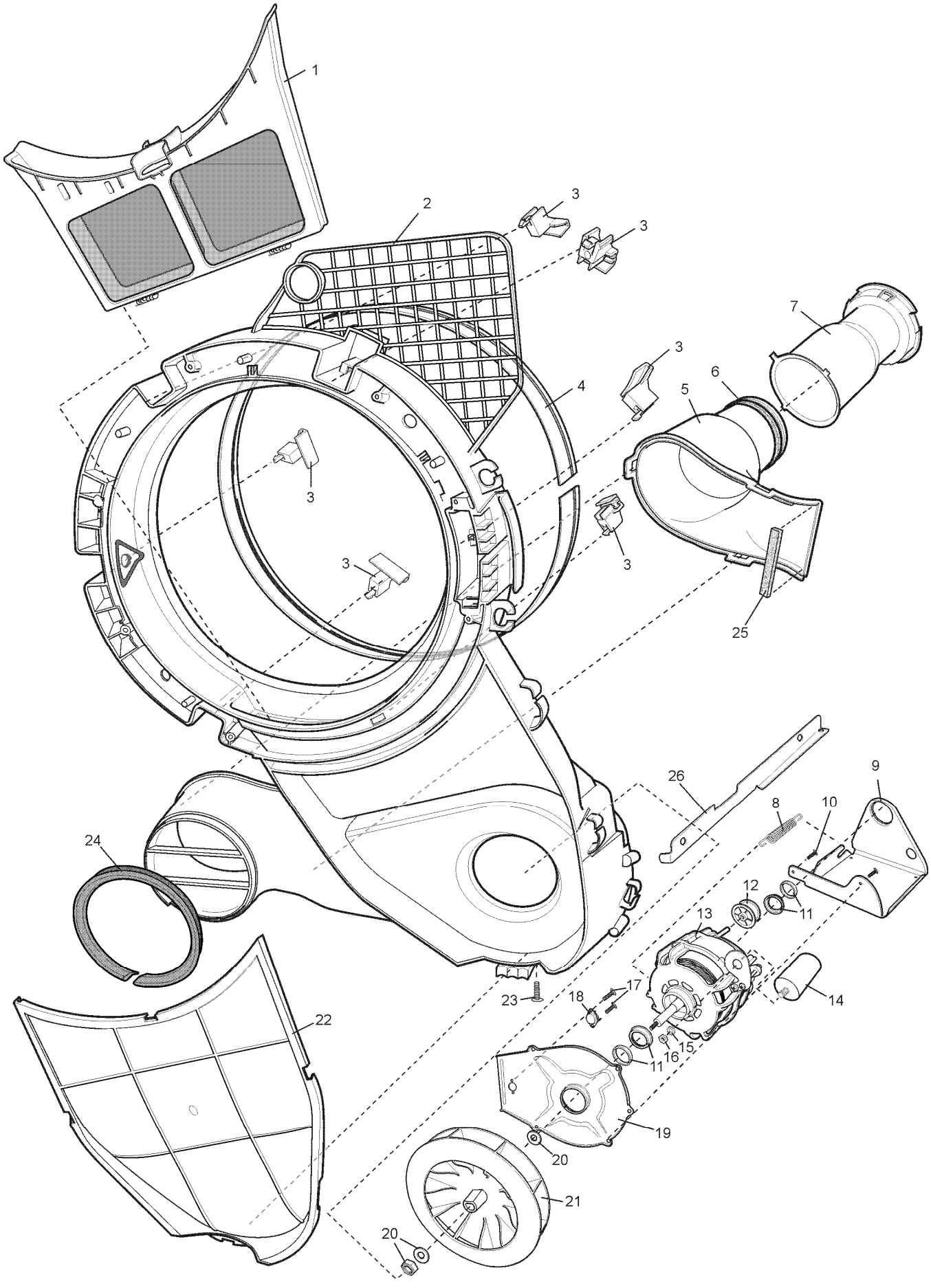


ITEM	PART Nº	DESCRIPTION Ex. 5516	QTY
1	**0278 308 002**	Name Badge, 5kg	1
2	**0150 300 026**	Screw, Nº 8 x 1/2", R CSK	2
3	**0545 300 541**	Panel Control	1
4	**0019 308 001**	Knob, Control	1
5	**0120 200 043**	Spring, Control Knob Detent	1
6	**0063 300 001**	Cam, Index Ring	1
7	**0612 300 026**	Button, Start/Pause	1
8	**0060 300 004**	Lens, Power On	1
9	**Refer Item 15**	Drive Flange, Encoder	1
10	**0612 220 001**	Button, On-Off	1
11	**0120 300 023**	Spring, On-Off Button	1
12	**Refer Item 15**	Housing, Control Board	1
13	**0701 002 012**	Screw, Nº 6 x 3/8", Pan HD	2
14	**0534 300 042**	Switch, On-Off	1
15	**0628 300 024**	Board Assy, Control (Inc Items 9, 12, 14, 16 & 17)	1
16	**Refer Item 15**	Cover, Housing	1
17	**Refer Item 15**	Screw, Cover Retaining	1
18	**0157 300 148**	Drum Assy, S.S. (5kg)	1
19	**0198 300 010**	Belt, Drum Drive	1
20	**0120 300 025**	Spring, Drum Seal	1
21	**21311129**	Spacer	2
22	**0208 300 047**	Seal Assy, Drum Rear	1
23	**0150 200 084**	Screw, Bearing Housing Securing	3
24	**32184401**	Housing Drum Bearing	1
25	**24142010**	Bearing, Drum, Rear	1
26	**0150 300 014**	Screw, Nº 8 x 3/8", Hex W/HD.	30
27	**0038 300 571**	Panel, Back	1
29	***0065 300 015**	Nut, M8	1
30	**0028 300 026**	Cover Assy, Back Panel	1
31	**N.P.A.**	Bracket, Heater	1
32	**0353 300 002**	Heater Assy (Inc. Items 33 & 34)	1
33	**Refer Item 32**	Thermostat, Thermal Cutout (92ºC)	1
34	**Refer Item 32**	Thermostat, Safety, Fusible (160ºC)	1
35	**0215 300 059**	Service Cord	1
36	**0150 300 027**	Screw, Nº 8 x 12.7mm, Hex HD.	1
37	**0049 300 016**	Plug, Corner, RH	1
38	**0150 300 046**	Screw, M4 Plastite x 14mm, Pan HD	5
39	**N.P.A.**	Bracket, Service Cord & Harness	1
40	**0049 300 015**	Plug, Corner, LH	1
41	**0488 303 001**	Grille, Exhaust	1
42	**0028 306 001**	Cover, Exhaust	1
43	**0120 300 024**	Spring, Door Switch	1
44	**0030 300 158**	Bracket, Door Switch	1
45	**0028 300 024**	Cover, Door Switch Assy	1
46	**28353067**	Switch, Door	1
47	**0563 300 007**	Striker, Door Switch	1
N.I.	**0173 300 737**	Harness, Wiring (Inc. Thermistor & Grommet)	1
N.I.	**0271 300 002**	Spacer	2
N.I.	**0030 377 193**	Bracket Kit, Wall (Inc. Spacers & Instructions)	1
N.I.	**0616 301 001**	Instruction, Wall Bracket	1

NOTE: *Some machines have been built with a different nut and washers, use the above part and discard the washers. DO NOT discard the spacer.

MODELS: 39P400M*00; 39S500M*00
39S600M*00

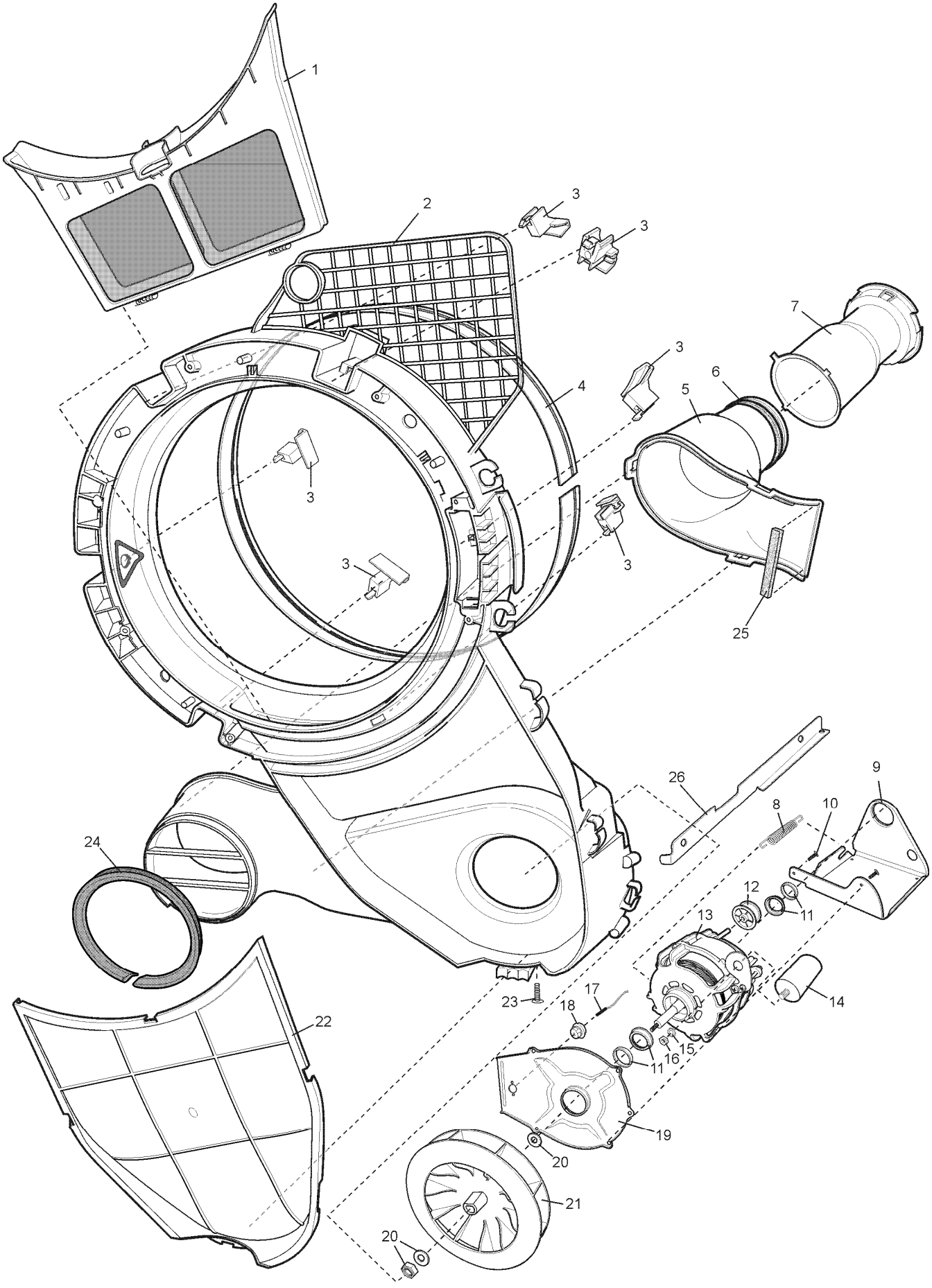
EX. VIEW DRAWING 5246
HOUSING ASSEMBLY



ITEM	PART Nº	DESCRIPTION Ex. 5246	QTY
1	**0144 300 021**	Filter Assy	1
2	**0133 300 173**	Housing & Cover Assy (Inc Item 22)	1
3	**0542 377 022**	Bearing Kit (Inc. Item 4) (Kit of 7)	1
4	**0208 300 046**	Seal, Drum Front	1
5	**0028 300 017**	Cover, Housing Duct	1
6	**0208 300 052**	Seal, Housing Duct Cover	1
7	**0559 300 017**	Duct, Extension	1
8	**0120 300 016**	Spring, Belt Tension	1
9	**N.P.A.**	Bracket, Motor Support, Rear	1
10	**0150 300 056**	Screw, M4 x 14mm, Plastite Hex HD	5
11	**0023 377 021**	Ring Assy, Motor Mount (Kit of 2)	1
12	**0197 300 040**	Pulley, Idler	1
13	**0214 377 106**	Motor Kit (Inc. Items 11, 14, 15, 16 & 20)	1
14	**0588 400 004**	Capacitor, 8 µF (Inc. Items 15 & 16)	1
15	**Refer Item 14**	Washer, 8 mm Ext Shakeproof	1
16	**Refer Item 14**	Nut, M8 Hex	1
17	**0701 002 012**	Screw, Nº 6 x 3/8", Pan HD	2
18	**0541 300 033**	Thermostat, Exhaust (55ºC)	1
19	**N.P.A.**	Plate, Motor Mounting	1
20	**0065 377 014**	Nut & Washers Kit	1
21	**0026 377 002**	Fan, Blower (Inc. Item 20)	1
22	**Refer Item 2**	Cover, Blower Housing	1
23	**0150 300 046**	Screw	1
24	**0208 300 051**	Seal, Blower Housing	1
25	**0208 300 052**	Seal, Housing Duct Cover (Cut to Suit)	1
26	**N.P.A.**	Bracket, Wrap Stiffening	1

MODEL: 39S505EM*00

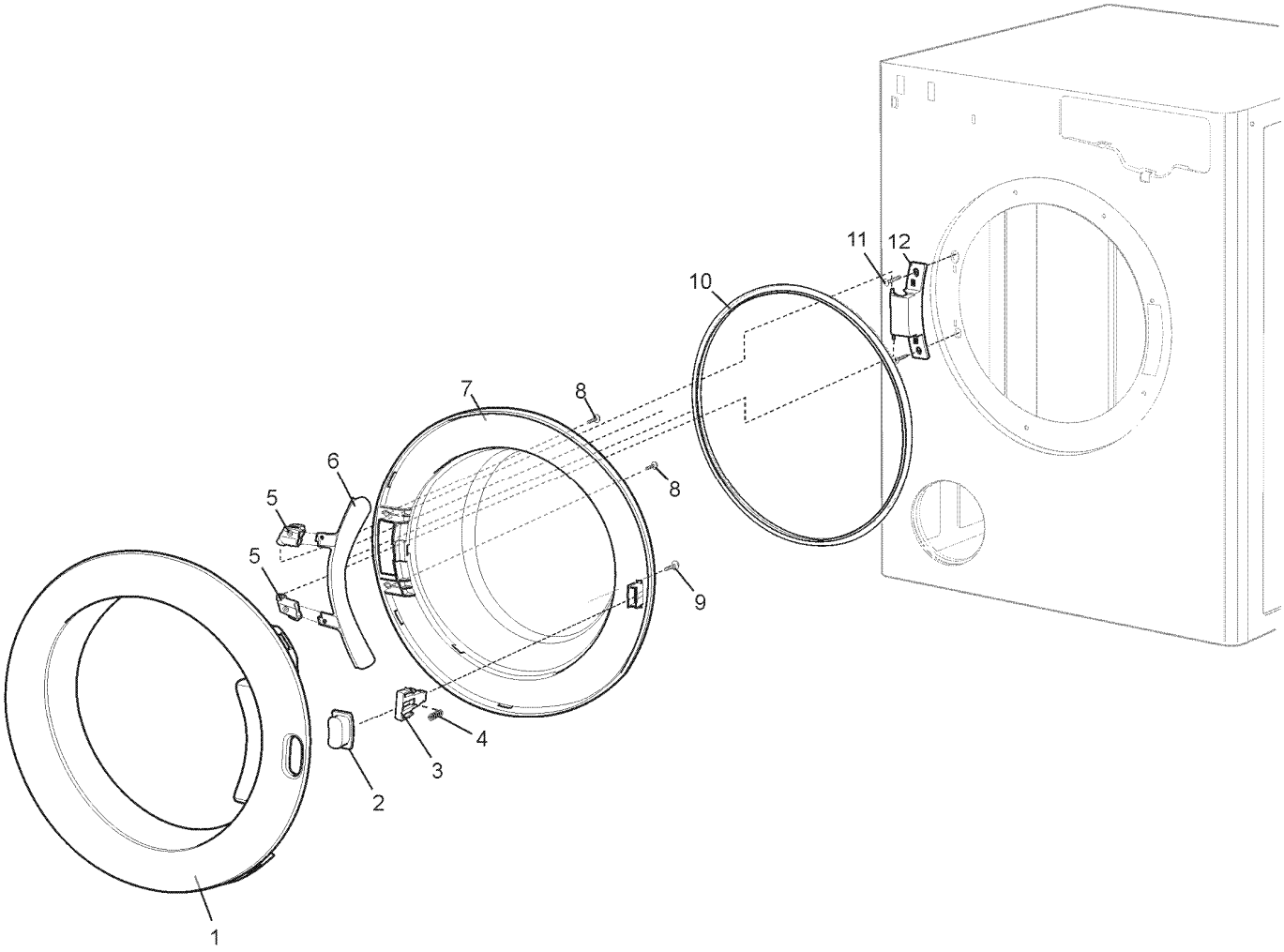
EX. VIEW DRAWING 5556
HOUSING ASSEMBLY



ITEM	PART Nº	DESCRIPTION Ex. 5556	QTY
1	**0144 300 021**	Filter Assy	1
2	**0133 300 173**	Housing & Cover Assy (Inc Item 22)	1
3	**0542 377 022**	Bearing Kit (Inc. Item 4)	1
4	**0208 300 046**	Seal, Drum Front	1
5	**0028 300 017**	Cover, Housing Duct	1
6	**0208 300 052**	Seal, Housing Duct Cover	1
7	**0559 300 017**	Duct, Extension	1
8	**0120 300 016**	Spring, Belt Tension	1
9	**N.P.A.**	Bracket, Motor Support, Rear	1
10	**0150 300 056**	Screw, M4 x 14mm, Plastite Hex HD	5
11	**0023 377 021**	Ring Assy, Motor Mount (Kit of 2)	1
12	**0197 300 040**	Pulley, Idler	1
13	**0214 377 106**	Motor Kit (Inc. Items 11, 14, 15, 16 & 20)	1
14	**0588 400 004**	Capacitor, 8 µF (Inc. Items 15 & 16)	1
15	**Refer Item 14**	Washer, 8 mm Ext Shakeproof	1
16	**Refer Item 14**	Nut, M8 Hex	1
17	**0173 300 737**	Wiring Harness Assy (Inc. Themistor & Item 18)	1
18	**Refer Item 17**	Grommet	1
19	**N.P.A.**	Plate, Motor Mounting	1
20	**0065 377 014**	Nut & Washers Kit	1
21	**0026 377 002**	Fan, Blower (Inc. Item 20)	1
22	**Refer Item 2**	Cover, Blower Housing	1
23	**0150 300 046**	Screw	1
24	**0208 300 051**	Seal, Blower Housing	1
25	**0208 300 052**	Seal, Housing Duct Cover (Cut to Suit)	1
26	**N.P.A.**	Bracket, Wrap Stiffening	1

MODELS: 39P400M*00; 39S500M*00
39S505EM*00; 39S600M*00

EX. VIEW DRAWING 5241
DOOR ASSEMBLY



ITEM	PART Nº	DESCRIPTION Ex. 5241	QTY
1	**0028 304 001**	Cover, Door	1
2	**0612 307 001**	Button, Door	1
3	**0563 300 005**	Striker, Door	1
4	**0120 300 017**	Spring, Door Striker	1
5	**0045 300 028**	Hinge Bearing	2
6	**0030 300 204**	Bracket, Door Hinge Brace	1
7	**0009 307 001**	Door Window	1
8	**0150 300 060**	Screw, M4 Taptite x 18mm, Pan HD	2
9	**21479212**	Screw	1
10	**0208 300 029**	Seal, Door	1
11	**0150 300 059**	Screw, M4 Plastite x 20mm, Pan HD	2
12	**0045 300 029**	Hinge, Door	1

SPECIFICATIONS – 39P400M; 39S500M & 39S600M

POWER SUPPLY	240 volt a.c., 50 Hz, 10 amp
HEATER	Dual Element
Total	2100W
Red to Black Wire	750W – 68Ω (approx)
White to Black Wire	1350W – 38Ω (approx)
TIMER	Electro-Mechanical
Maximum Drying Time	150 minutes
Cool Down	9 minutes
MOTOR	PSC Reversing with a self resetting overload
Red to White Wire	29Ω (approx)
Blue to White Wire	30Ω (approx)
Red to Blue Wire	59Ω (approx)
Locked Rotor Current	2 amp (approx)
Capacitor	8μF
THERMOSTATS	
Exhaust	Opens 55ºC, Closes 45ºC – Located motor mounting plate
Thermal Cutout	Opens 92ºC – Part of the heater assy
Safety	One Shot Fusible 160ºC – Part of the heater assy
DRYING CAPACITY (to ASNZS 2442.1)	
39P400M	4kg
39S500M	5kg
39S600M	6kg
ENERGY LABEL RATING	1.5 Stars
DIMENSIONS	
39P400M	H 800mm x W 602mm x D 515mm
39S500M	H 800mm x W 602mm x D 555mm
39S600M	H 800mm x W 602mm x D 595mm
ACCESSORIES	
Stacking Kit	DKSK03
Vent Kit – Thru the Wall	DVK005
Vent Kit – Flexi Duct	DVK006

SPECIFICATIONS – 39S505EM

POWER SUPPLY	240 volt a.c., 50 Hz, 10 amp
HEATER	Dual Element
Total	2100W
Red to Black Wire	750W – 68Ω (approx)
White to Black Wire	1350W – 38Ω (approx)
PROGRAMS	Rotary Control Selection
Autosensing	Hot
	Hot + Anti-crease
	Warm
	Warm + Anti-crease
Manual	120
	90
	60
	30
	Airing 30
MOTOR	PSC Reversing with a self resetting overload
Red to White Wire	29Ω (approx)
Blue to White Wire	30Ω (approx)
Red to Blue Wire	59Ω (approx)
Locked Rotor Current	2 amp (approx)
Capacitor	8µF
TEMPERATURE CONTROL	
Exhaust Sensor	NTC Thermistor – Located on the motor mounting plate
Thermal Cutout	Opens 92ºC – Part of the heater assy
Safety	One Shot Fusible 160ºC – Part of the heater assy
DRYING CAPACITY (to ASNZS 2442.1)	5kg
ENERGY LABEL RATING	2 Stars
DIMENSIONS	H 800mm x W 602mm x D 555mm
ACCESSORIES	
Stacking Kit	DKSK03
Vent Kit – Thru the Wall	DVK05
Vent Kit – Flexi Duct	DVK06

SAFETY FIRST

HE CONTROL BOARD ARE AT 240 VOL
WHEN THE CONTROLLER HAS POWE

DUTY OF CARE

Under the **"Duty of Care"** obligation all appliances must be checked to ensure they are Electrically and Mechanically safe.

Insulation and Earth Continuity Testing should be performed before and after performing service and adjustments on any product. Use a **reliable** and **tested** insulation tester (Megger) for these procedures.

EARTH CONTINUITY TEST.

Set the testing meter to a **"Low Ohms"** scale and zero the meter.

Test between the earth pin on the power cord and the appliance frame to ensure continuity of the earth circuit. (Reading should be less than **1 Ohm**).

INSULATION TEST

Set the testing meter to the **500 volts D.C**. scale.

Bridge out the **ACTIVE** and **NEUTRAL** Pins on the appliance power cord.

Test between the **ACTIVE/NEUTRAL** bridge and the **EARTH** pin on the power cord, the resistance is to be above **1 Meg-Ohm**.

Caution: Do not apply this test unless the Active and Neutral pins have been bridged, as damage to electronic components may occur.

Any product that fails either of the electrical tests should be made in-operable, a **"Must Not Operate**" tag fitted and the customer advised the reasons for that action. In the case of a power point (GPO) that lacks correct earthing or the polarity is incorrect the customer should be advised to have an Electrician correct it before using that power point (GPO).

CONTROL DESCRIPTION

1. Start/Pause Button

Used to start & pause programs. Also used to access the service maintenance mode.

NOTE: It will not start or restart a program unless the door safety button has also been pushed in. If the safety button is not pushed in a door switch fault (refer page 15) will be indicated.

2. Rotary Dial

Used to select the desired program. The buzzer will beep each time a program is selected to confirm the selection.

A new program can be selected when the dryer is running, the drying process will continue using the settings from the new program.

If the program is changed from a Manual program to an Autosensing program then an ambient check (refer Hot & Warm program description on page 15) may occur.

3. Power Button

A push button switch in the incoming active line that isolates the whole dryer when turned off.

NOTE: The neutral line is not switched/isolated.

PROGRAM DESCRIPTION

1. Manual Programs

1.1. 120; 90; 60 & 30

Consists of two phases; Heating - which is the selected time less 10 minutes
Cool Down - a 10 minute no heat period at the end of the cycle

Initially the motor runs using a reversing timing of;
58 sec on
2 sec off
58 sec opposite direction
2 sec off
repeated.

After this period it will then use a 4 minute on time and 2 sec pause time. As the load dries the motor on time will gradually decrease until it reaches 58 seconds.

The full power of the heater is used during the heating phase, with it cycling off during the motor pause stages. The heater will also be cycled off if the exhaust air reaches 55ºC, and will cycle back on when the exhaust air temperature drops to 50ºC.

At the end of the Cool Down period the buzzer will sound to indicate the end of the program. If the door is not opened within 15 minutes the buzzer will sound again, the buzzer will not sound again after this point.

Airing 30

A 30 minute no heat cycle using motor reversing times of 58 sec with a 2 sec pause between changes in direction.

2. Autosensing Programs

2.1. Hot & Warm

Consists of three basic stages; Ambient check
Heating
Cool Down

The ambient check is used to stabilise any temperature difference between the dryer and room temperature. This stage consists of the dryer running without the heater being on using a maximum 12.5 minute reversing timing with a 2 sec pause between change of direction, i.e once the dyer has established the ambient temperature it will discontinue this stage and proceed to the heating stage. Under normal conditions this process will take about 4 to 6 minutes.

During the heating stage whenever the heater both elements are energised at the same time. The heater may be cycled on and off during this period. The on & off times will vary depending on the program selected, ambient temperature, drying rate of the load etc. It is also turned off during the 2 sec motor reversing pause. Similarly the motor reversing times will vary depending on what is selected & what is being sensed. The motor on times can vary anywhere between 4 minutes and 58 seconds, with a 2 second pause between direction changes.

NOTE: If the ambient temperature sensed is above 29ºC, then after an initial heating period the dryer will do another ambient check as per above, then return to heating.

The Cool Down period will commence when all the necessary criteria have been met and consists of the dryer operating with no heater and using 58 sec motor on times. It will stay in this mode until the exhaust air temperature drops to 30ºC, at which time the dryer will stop and the buzzer sound to indicate the end of the program. If the door is not opened within 15 minutes the buzzer will sound again, the buzzer will not sound again after this point.

2.2. Hot + Anti-crease & Warm + Anti-crease

The same as the Hot & Warm Programs above except at the end of cool down the buzzer will sound once and then the motor will run for 5 seconds of every minute until the door is opened or 3 hours has elapsed. If the 3 hour limit is reached then the buzzer will sound to indicate the end of the anti-crease period. If the door is not opened within 15 minutes the buzzer will sound again, the buzzer will not sound again after this point.

FAULT MESSAGES

1. Exhaust Sensor Fault

The buzzer will give 5 beeps every 30 seconds and the dryer will continue with the cycle.

On Manual programs it will run for the time remaining and in Autosensing programs it will run for 90 minutes. As the exhaust air temperature can not be sensed the element will be cycled on and off at a preset amount. The cycling time of the element will vary depending on the amount of time remaining.

NOTE: When this fault exists the dryer can still be used but regardless of the Autosensing program selected on the dial the dryer will use the 90 minute manual program. Manual programs will use the selected program, and with both types of programs the element will cycle as above. The buzzer will also still be sounding.

2. Door Switch Fault

If an open circuit is sensed the dryer will stop and beep 6 times. After the beeps the LED will flash for 30 seconds if in an Autosensing program or 60 seconds if in a Manual program, after which it will stop flashing and remain on. There are no further indications as this is the same indication as if the door is opened while the dryer is running.

MAINTENANCE MODE

There are two basic test modes available in the maintenance mode:

Service Test
Factory Test (not required for service)

To exit the maintenance mode at any time power down the dryer.

1. Access the maintenance mode by:

   1.1. Ensuring the dryer is powered down

   1.2. Press & hold the Start/Pause button and power the dyer up. The buzzer will beep on the LED will come on.

   1.3. Press the Start/Pause button twice within 5 seconds of power up.

   NOTE: If the button is not pressed twice within the 5 second period the dryer will go to standby mode waiting to start a program.

   The dryer is now in maintenance mode ready to start the service test.

2. Press and Hold the Start/Pause button to start the test. After approx 2 sec the test will start and consists of the following :

   2.1. The LED being illuminated and the motor running for 5 seconds in each direction with a 2 second pause between direction changes.

   During this time the door switch can be checked to ensure the motor stops when the door is opened. Once the door is opened the test can be continued by, closing the door and pressing the door safety button.

   2.2. Rotary Dial – Turn the knob to each position but wait for a beep at each one to indicate the selection has been successful before moving onto the next.

   There will be a one second beep when all positions have been checked and the next test will be started.

   2.3. Door Switch - is now checked, if the door switch/circuit is open the LED will flash and the buzzer will beep continuously.

2.4. Heater & Exhaust Sensor

NOTE This is the last test and will time out after sixty seconds, at which point the dryer will go to the standby mode waiting to start a program.

Once the door switch test has occurred the motor and heater will be turned on. The heater will be at full power and the motor will run 10 seconds in each direction with a 2 second pause between direction changes.

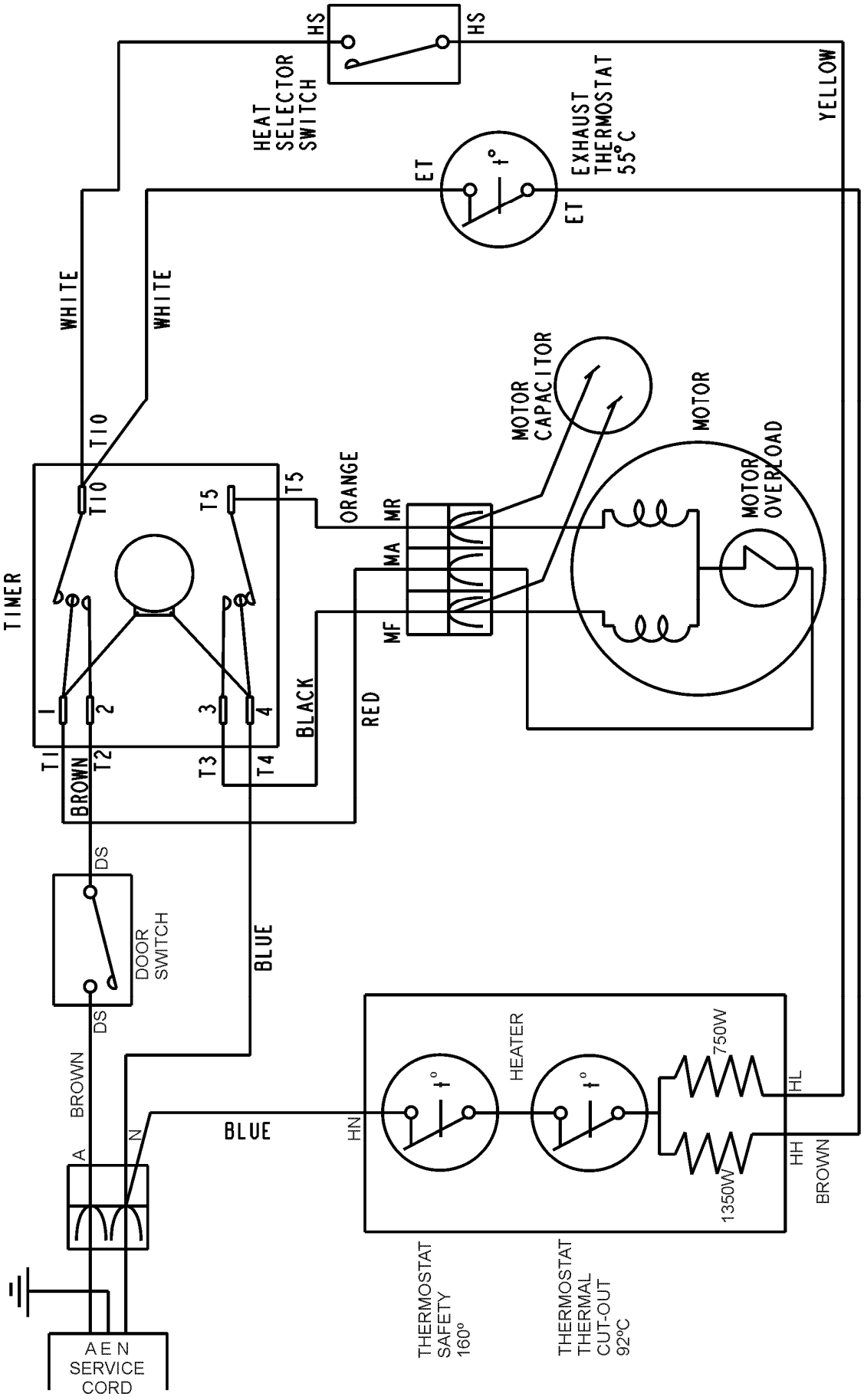
If an exhaust sensor fault is detected the buzzer will beep and the LED will flash. The LED flashes at different rates depending what is wrong with the sensor –
Fast (4 per second) = open circuit senor, broken wiring or multi pin plug not correctly fitted to the control board
Slow (2 per second) = Short circuit in sensor or wiring.

The sensor resistance at different temperatures is as per the table below.

TEMP (ºC)	Resistance (Ohms)
55	2957
50	3566
45	4326
40	5281
35	6489
30	8026
25	10000
20	12553
15	15882
10	20261
5	26076
0	33871

MODELS: 39P400M*00; 39S500M*00
39S600M*00

WIRING DIAGRAM
173 300 736



MODEL: 39S505EM*00

WIRING DIAGRAM
173 300 734