INDUSTRIAL TUMBLE DRYERS

11kg
13kg
13/13kg
15kg

INSTALLATION, OPERATION, MAINTENANCE

70476301en
Publication date: Aug 2012

Installation must conform with local codes.

WARNING

FOR YOUR SAFETY, the information in this manual must be followed to minimize the risk of fire or explosion or to prevent property damage, personal injury or death.

W033

- **Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.**
- **WHAT TO DO IF YOU SMELL GAS:**
  - **– Do not try to light any appliance.**
  - **– Do not touch any electrical switch; do not use any phone in your building.**
  - **– Clear the room, building or area of all occupants.**
  - **– Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.**
  - **– If you cannot reach your gas supplier, call the fire department.**
- **Installation and service must be performed by a qualified installer, service agency or the gas supplier.**

W052

IMPORTANT: Information must be obtained from a local gas supplier on instructions to be followed if the user smells gas. These instructions must be posted in a prominent location. Step-by-step instructions of the above safety information must be posted in a prominent location near the tumble dryer for customer use.

WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- **Disconnect electric power to the tumble dryer before servicing.**
- **Close gas shut-off valve to gas tumble dryer before servicing.**
- **Close steam valve to steam tumble dryer before servicing.**
- **Never start the tumble dryer with any guards/panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumble dryer is properly grounded.**

W002R1

WARNING

- **Installation of unit must be performed by a qualified installer.**
- **Install tumble dryer according to manufacturer's instructions and local codes.**
- **DO NOT install a tumble dryer with flexible plastic venting materials. If flexible metal (foil type) duct is installed, it must be of a specific type identified by the appliance manufacturer as suitable for use with tumble dryer. Refer to section on connecting exhaust system. Flexible venting materials are known to collapse, be easily crushed, and trap lint. These conditions will obstruct tumble dryer airflow and increase the risk of fire.**

W752R1

© Published by permission of the copyright owner - DO NOT COPY or TRANSMIT

Table of Contents

Introduction 4
Model Identification 4
Contact Information 5

Safety Information 6
Important Safety Instructions 7

Specifications and Dimensions 9
Cabinet Dimensions – 025, 030, 035 and 055 Series 11
Cabinet Dimensions – T30 and T45 Series 12
Exhaust Outlet Locations – 025, 030, 035 and 055 Series 13
Exhaust Outlet Locations – T30 and T45 Series 14
Gas Connection Locations – 025, 030, 035 and 055 Series 15
Gas Connection Locations – T30 and T45 Series 16
Electrical Connection Locations – 025, 030, 035 and 055 Series 17
Electrical Connection Locations – T30 and T45 Series 18
Steam Connection Locations – 025, 030 and 035 Series 19
Steam Connection Locations – T30 Series 20

Installation 21
Pre-Installation Inspection 21
Location Requirements 21
Position and Level the Tumble Dryer 23
Fire Suppression System (025, 030, 035 and 055 Series Only) 24
- Water Requirements 24
- Water Connections 24
- Electrical Requirements 24
- Auxiliary Alarm 25

To Reverse the Loading Door – 025, 030, 035 and 055 Series 25
Before Placing Tumble Dryer into Service 27
Installing Gas Tumble Dryer 29
- General Information 29
- Basic Configuration 33
- Specific Conversion Procedures 33

Exhaust Requirements 36
Layout 36
Make-Up Air 36
Venting 36
- Individual Venting 37
- Manifold Venting 39

Gas Requirements 42
Gas Supply Pipe Sizing and Looping 43

Electrical Requirements 45
Wiring Diagram 45
Grounding Instructions 46
- Service/Ground Location 47

© Published by permission of the copyright owner - DO NOT COPY or TRANSMIT

To Connect Electrical Service To The Tumble Dryer 49
Configuring Your Tumble Dryer for Other Service Voltages 49
Electrical Connections for T30 and T45 Only 49
Ferrite Ring Installation (025, 030, 035 and 055 Series Only) 51
Electrical Specifications 52

Steam Requirements 57
Piping Recommendations 57
Installing Steam Trap and Making Condensate Return Connections 58

Single Drop Timer 60
Power-Up Mode 60
Ready Mode 60
Start Mode 60
Run Mode 60
Setting Dry Time Dipswitches 60
Resetting Cycle Time to Zero 60
Dipswitch Settings 61

Operating Instructions 63
Emergency Stop Button 63
Operating Instructions 63
Control Instructions 65
Dual Digital Timer Control 65
Electronic OPL Micro Control 67
MDC Coin and Card Control 69
LED OPL Control 70
Ignition Control Operation 71

Adjustments 73
Airflow Switch 73
Loading Door Switch 73
Door Strike 74

Maintenance 75
Daily 75
Monthly 76
Quarterly 76
Bi-Annually 76
Annually 76

Before You Call for Service 77

Removing Tumble Dryer from Service 77

Disposal of Unit 78

© Published by permission of the copyright owner - DO NOT COPY or TRANSMIT

Introduction

Model Identification

Information in this manual is applicable to these models:

	Gas			Steam		Electric	
025 Series	GU025L GU025N KU025L	KU025N LU025L LU025N	PU025L PU025N	GU025S KU025S	LU025S PU025S	GU025E KU025E	LU025E PU025E
030 Series	GU030L GU030N KU030L	KU030N LU030L LU030N	PU030L PU030N	GU030S KU030S	LU030S PU030S	GU030E KU030E	LU030E PU030E
T30 Series	GUT30L GUT30 KUT30L	KUT30N LUT30L LUT30N	PUT30L PUT30N	GUT30S KUT30S	LUT30S PUT30S	GUT30E KUT30E	LUT30E PUT30E
035 Series	GU035L GU035N KU035L	KU035N LU035L LU035N	PU035L PU035N	GU035S KU035S	LU035S PU035S	GU035E KU035E	LU035E PU035E
T45 Series	GUT45L GUT45N	KUT45L KUT45N		Not Applicable		Not Applicable	
055 Series	GU055L GU055N	KU055L KU055N		Not Applicable		GU055E KU055E	

Includes models with the following control suffixes:

- BB – reversing basic electronic, coin
- BC – basic electronic, coin
- BG – basic electronic, OPL mode
- BL – basic electronic, central pay
- BW – reversing basic electronic, prep for coin
- BX – basic electronic, prep for coin
- BY – basic electronic, prep for card
- BZ – reversing basic electronic, prep for card
- EO – LED OPL
- OM – OPL micro
- QT – dual digital timer
- RE – reversing LED OPL
- RQ – reversing dual digital timer

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

Contact Information

If service is required, contact the nearest Factory Authorized Service Center.

If you are unable to locate an authorized service center or are unsatisfied with the service performed on your unit, contact the source from which you purchased your unit.

When calling or writing about your unit, PLEASE GIVE THE MODEL AND SERIAL NUMBERS. The model and serial numbers are located on the nameplate. The nameplate will be in the location shown in *Figure 1*.

Date Purchased _____

Model Number _____

Serial Number _____

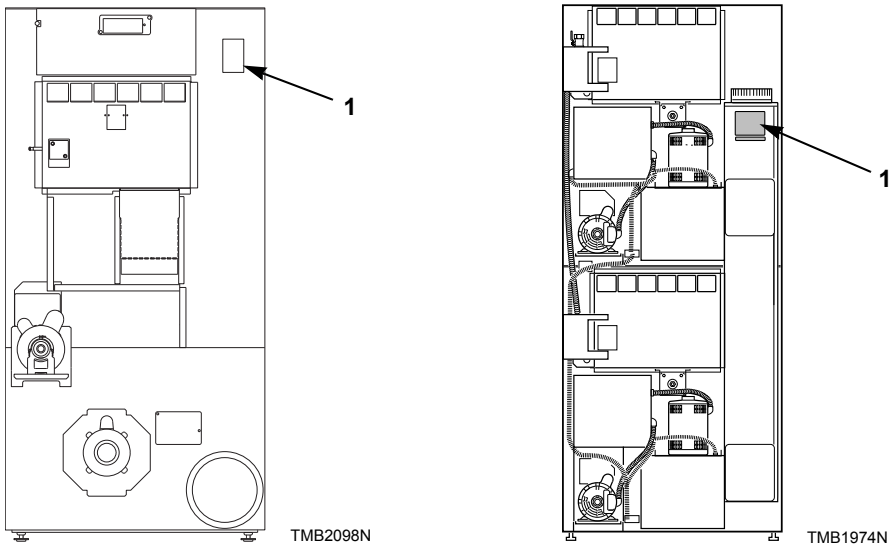
Please include a copy of your bill of sale and any service receipts you have.

WARNING

To reduce the risk of serious injury or death, DO NOT repair or replace any part of the unit or attempt any servicing unless specifically recommended in the user-maintenance instructions or in published user-repair instructions that you understand and have the skills to carry out.

W329

If replacement parts are required, contact the source from where you purchased your tumble dryer.



1 Serial Plate

Figure 1

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

Safety Information

Precautionary statements (“DANGER,” “WARNING,” and “CAUTION”), followed by specific instructions, are found in this manual and on machine decals. These precautions are intended for the personal safety of the operator, user, servicer, and those maintaining the machine.

DANGER

Indicates an imminently hazardous situation that, if not avoided, will cause severe personal injury or death.

WARNING

Indicates a hazardous situation that, if not avoided, could cause severe personal injury or death.

CAUTION

Indicates a hazardous situation that, if not avoided, may cause minor or moderate personal injury or property damage.

Additional precautionary statements (“IMPORTANT” and “NOTE”) are followed by specific instructions.

IMPORTANT: The word “IMPORTANT” is used to inform the reader of specific procedures where minor machine damage will occur if the procedure is not followed.

NOTE: The word “NOTE” is used to communicate installation, operation, maintenance or servicing information that is important but not hazard related.

WARNING

Failure to install, maintain, and/or operate this machine according to manufacturer’s instructions may result in conditions which can produce serious injury, death and/or property damage.

W051R1

NOTE: The WARNING and IMPORTANT instructions appearing in this manual are not meant to cover all possible conditions and situations that may occur. It must be understood that common sense, caution and carefulness are factors which CANNOT be built into this tumble dryer. These factors MUST BE supplied by the person(s) installing, maintaining or operating the tumble dryer.

Always contact your dealer, distributor, service agent or the manufacturer on any problems or conditions you do not understand.

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

Save These Instructions

Important Safety Instructions

1. Read all instructions before using the tumble dryer.
2. Refer to the **GROUNDING INSTRUCTIONS** for the proper grounding of the tumble dryer.
3. Do not dry articles that have been previously cleaned in, washed in, soaked in, or spotted with gasoline, dry cleaning solvents, other flammable or explosive substances as they give off vapors that could ignite or explode.
4. Do not allow children to play on or in the tumble dryer. Close supervision of children is necessary when the tumble dryer is used near children. This is a safety rule for all appliances.
5. This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning the use of the appliance by a person responsible for their safety.
6. Before the tumble dryer is removed from service or discarded, remove the door to the drying compartment and the door to the lint compartment.
7. Do not reach into the tumble dryer if the cylinder is revolving.
8. Do not install or store the tumble dryer where it will be exposed to water and/or weather.
9. Do not tamper with the controls.
10. Do not repair or replace any part of the tumble dryer, or attempt any servicing unless specifically recommended in the user-maintenance instructions or in published user-repair instructions that you understand and have the skills to carry out.
11. Do not use fabric softeners or products to eliminate static unless recommended by the manufacturer of the fabric softener or product.
12. Items such as foam rubber (latex foam), shower caps, waterproof textiles, rubber backed articles and clothes or pillows fitted with foam rubber pads should not be dried in the tumble dryer.
13. Always clean the lint filter daily.
14. Keep area around the exhaust opening and adjacent surrounding area free from the accumulation of lint, dust and dirt.
15. The interior of the tumble dryer and the exhaust duct should be cleaned periodically by qualified service personnel.
16. Tumble Dryer will not operate with the loading

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

Auxiliary Alarm

During tumble dryer installation, you have the option to connect a separate alarm system to this auxiliary output. Use of the auxiliary output is not required for the fire suppression system to operate, but may be used for additional protection.

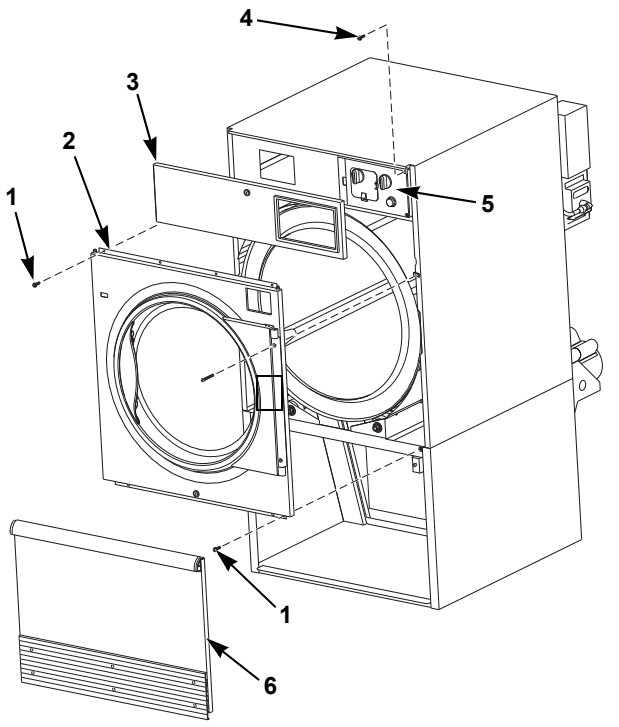
NOTE: The auxiliary output is activated during fire suppression system maintenance test sequence. Consider this fact prior to your system test every three months. (Example: If the external system uses the auxiliary output to call the fire department, inform the fire department before and after the fire suppression system maintenance test.)

To Reverse the Loading Door – 025, 030, 035 and 055 Series

The tumble dryer is delivered with a right hinged door, but the door can be changed to a left hinged position.

1. Disconnect power supply to tumble dryer.
2. Unlock and remove control panel. Remove two control assembly mounting screws from right side. Swing open control. Refer to *Figure 6*.
3. Remove lint panel.

IMPORTANT: Support door and hinge assembly securely to prevent it from dropping once side screws are removed from door hinge lug.

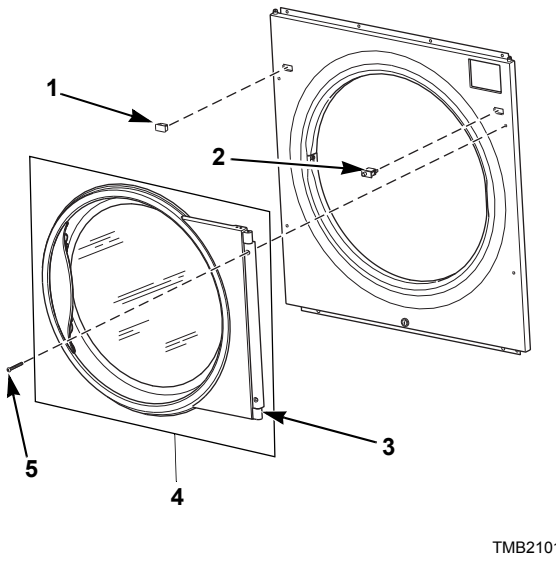


1	Front Panel Screw
2	Front Panel
3	Control Panel
4	Control Assembly Screw
5	Control Assembly
6	Lint Panel

Figure 6

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

4. Remove four front panel screws. Refer to *Figure 6*. Keep door hinge cams in place on door hinge lug. Pull lug and door assembly off as one piece. Refer to *Figure 7*.
5. Remove remaining front panel screws. Refer to *Figure 6*. Disconnect door switch harness from switch. Take off front panel. Refer to *Figure 7*.
6. Exchange switch and plug locations. Depress tabs with an adjustable pliers to remove plug and switch from front panel. Reinstall switch, orienting button toward center of machine. Reinstall plug in switch's previous location. Refer to *Figure 7*.

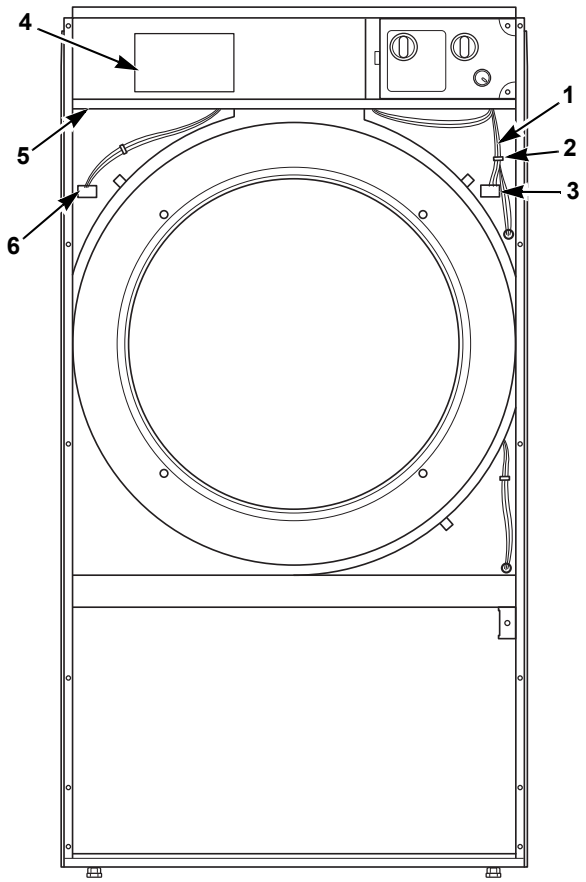


TMB2101N

1	Plug
2	Switch
3	Door Hinge Lug
4	Door Assembly
5	Side Screw

Figure 7

7. Cut wire ties to remove door switch harness bundle. Be careful not to damage harness wires. Refer to *Figure 8*.
8. Reroute door switch harness up through the hole in the right side of the top panel. Use the panel cutout opening to then put harness down through the hole in the left side of the top panel and into the upper left corner of the cylinder enclosure.



TMB2109N

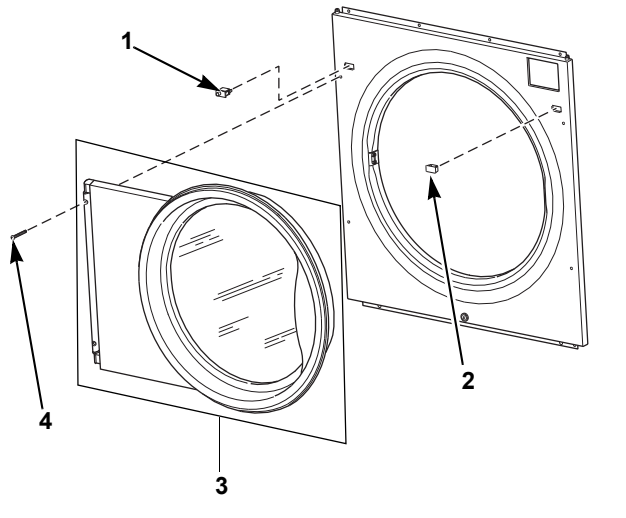
1	Beginning Location of Door Switch Harness
2	Wire Ties
3	Original Switch Location
4	Panel Cutout
5	Top Panel
6	Original Plug Location

Figure 8

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

9. Place front panel on machine, loosely attach four bottom screws. Connect door switch harness to switch in new location.
10. Remove opposite door hinge cam. DO NOT DISCARD CAM AND NUT. Reattach door hinge cam to door hinge assembly securing with screw. Install door assembly and four door hinge side screws loosely. Refer to *Figure 9*.
11. Check lint panel fit, adjusting front panel up or down as required. Tighten four front panel side screws to maintain position of front panel for proper lint panel clearance.
12. Remove lint panel. Fully tighten bottom screws on front panel.
13. Reinstall top screws.
14. Adjust door catch if necessary to allow 0,48 – 1,03 bar (7 – 15 pounds) pull at center of handle.
15. Reinstall control assembly using mounting screws.
16. Reinstall control panel and lint panel.

IMPORTANT: Restore power to tumble dryer and test for proper operation of loading door switch. Tumble Dryer should not start with door open; an operating tumble dryer should stop when door is opened.

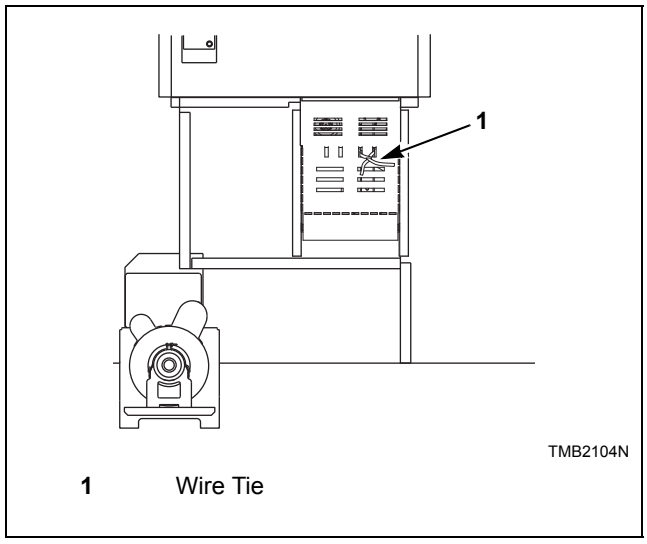


1	Switch (New location)
2	Plug (New location)
3	Door Assembly
4	Side Screw

Figure 9

Before Placing Tumble Dryer into Service

1. Remove or open all panels and check accessible bolts, nuts, screws, terminals and fittings for tightness.
2. Replace all panels and guards.
3. Remove and discard wire tie from the airflow switch so it can swing freely. Refer to *Figure 10*.



1	Wire Tie

Figure 10

4. Turn on electrical supply to tumble dryer.
5. Open the supply valve for gas or steam heated tumble dryers.
6. After performing the previous checks, start the tumble dryer by pressing START. (Refer to the *Operating Manual* for detailed instructions.) Release the start button and open the loading door. The cylinder should stop rotating within seven seconds after the door is opened a maximum of 51 mm (2 inches). If it does not, adjust the loading door switch. Refer to ***Adjustments*** section.
7. **Gas Tumble Dryers:** Start the tumble dryer and check the burner flame. Adjust the air inlet shutter as required. Refer to ***Adjustments*** section.

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

IMPORTANT: The electronic ignition system will attempt to light the gas by sparking for the "trial for ignition" period. If gas does not ignite within this period, the ignition control will go into a safety lockout and the valve will no longer open until the control is reset. It may be necessary to retry several times to bleed air from the gas lines. To reset, open and close the loading door and restart tumble dryer.

Models	Prepurge Time (seconds)	Trial for Ignition (seconds)	Reset Lockout Condition By:
025, 030, 035, 055, T30	18	10	025, 030, 035, 055: Press reset button on rear of machine T30: Press lighted reset button in rear contactor box
T45	1-3	10	Open loading door

If lockout condition persists, check that the manual gas shut-off valve is in the ON position and that the gas service is properly connected. If condition still persists, remove tumble dryer from service.

8. Load the cylinder with a full load of clean rags and run to remove oil or dirt from cylinder.
9. Check the airflow switch operation refer to ***Adjustments*** section. The heating systems should shut off when the lint panel is opened a maximum of 38 mm (1,5 inches).

   The airflow switch operation may be affected by shipping tape still in place, clogged lint screen, failure to remove wire tie, lack of make-up air, or an obstruction in the exhaust duct. These should be checked and the required corrective action taken before attempting to adjust the airflow switch. To adjust the airflow switch, refer to ***Adjustments*** section.

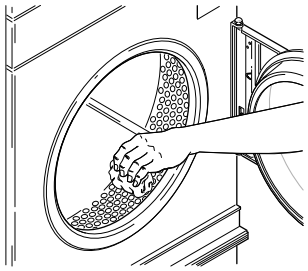
WARNING

Do not operate tumble dryer if airflow switch is faulty. An explosive gas mixture could collect in tumble dryer if airflow switch does not operate properly.

W407R1

10. Wipe out the cylinder using an all-purpose cleaner or detergent and water solution. Refer to *Figure 11*.

IMPORTANT: The use of chlorine bleach for removing any discoloration should be avoided because bleach could damage the finish.



T452I

Figure 11

If the tumble dryer does not meet ANY of the listed requirements, remove tumble dryer from use. Refer to ***Removing Tumble Dryer from Service*** section.

Once machine is installed, please be sure to complete the following items:

- Review and verify machine operation with customer.
- Leave all literature and a signed Declaration of Conformity with customer.
- Review machine warranty information with customer.
- Apply warning sticker on front panel of machine, in language appropriate to country of sale (included in literature packet).

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

Installing Gas Tumble Dryer

General Information

This information is to be used when installing gas tumble dryers in countries and/or on gases different than the machine's factory configuration. Tumble Dryers are supplied from the factory for operation on Natural Gas 8914 kcal/m3 (1000 Btu/cu. ft.), or 22,250 kcal/m3 (L.P. Gas 2500 Btu/cu. ft.), in the countries of GB/IE/PT/ES/IT/GR/LU/CH/BE. To install machines in any other country, or on any other gas, requires some level of modification.

Machines are built in two different configurations:

- **Natural Gas** – regulated/governor
- **Liquefied Petroleum (L.P.) Gas** – not regulated/ no governor

Serial plates supplied from the factory are configured for GB/IE/PT/ES/IT/GR/LU/CH/BE. These instructions pertain to the situations when the country of use or gas supply is different than that on the serial plate.

These instructions are only valid if the following country code is on the appliance: GB/IE/PT/ES/IT/ GR/LU/CH/BE. If this code is not present on the appliance, it is necessary to refer to the technical instructions which will provide the necessary information concerning the modification of the appliance to the condition of use for the country.

Before installation, check that the local distribution conditions, nature of gas and pressure, and the adjustment of the appliance are compatible.

Table 1 describes the different gases that are available in different CE countries, and how the machines need to be configured to operate with those gases. In the CE, there are Natural Gas configurations that do not allow for machine regulation and L.P. Gas configurations that must be regulated. For L.P. Gas, third family B/P at 50 mbar, order Regulated Natural Gas machines and convert according to *Table 1*.

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

Gases and Configurations

Country Code	Gas Type	Group	Supply Pressure, mbar	Burner Orifice Pressure, mbar	Capacity/ Model	Diameter, mm	Quantity	Burner Orifice Part No.
DK/NO/SE/ FI/CZ/EE/ LV/LT/SI/ SK	Natural Gas	H	20	7,6 8,0 8,0 8,0 8,0 8,0	025 030 T30 035 T45 055	3,9 4,0 4,0 4,6 4,6 5,2	1 1 2 1 2 1	M402980 M402992 M402992 M411511 M411371 M402993
	L.P. Gas	B/P	30	No Governor	025 030 T30 035 T45 055	2,1 2,2 2,2 2,5 2,5 3,0	1 1 2 1 2 1	M401003 M401011 M401011 M406361 M401007 M401017
DE	Natural Gas	E	20	7,6 8,0 8,0 8,0 8,0 8,0	025 030 T30 035 T45 055	3,9 4,0 4,0 4,6 4,6 5,2	1 1 2 1 2 1	M402980 M402992 M402992 M411511 M411371 M402993
	L.P. Gas	LL	30	No Governor	025 030 T30 035 T45 055	2,1 2,2 2,2 2,5 2,5 3,0	1 1 2 1 2 1	M401003 M401011 M401011 M406361 M401007 M401017
NL	Natural Gas	L	25	11,0	025 030 T30 035 T45 055	3,9 4,0 4,0 4,6 4,6 4,8	1 1 2 1 2 1	M402980 M402992 M402992 M411511 M411371 M411372
	L.P. Gas	B/P	30	No Governor	025 030 T30 035 T45 055	2,1 2,2 2,2 2,5 2,5 3,0	1 1 2 1 2 1	M401003 M401011 M401011 M406361 M401007 M401017
BE/FR*	Natural Gas	E+	20 or 25	No Governor	025 030 T30 035 T45 055	3,9 3,3 3,3 3,7 3,7 4,0	1 1 2 1 2 1	M402980 M401021 M401021 M400998 M401000 M401012
	L.P. Gas	3+	28 or 37	No Governor	025 030 T30 035 T45 055	2,1 2,2 2,2 2,5 2,5 2,8	1 1 2 1 2 1	M401003 M401011 M401011 M406361 M401007 M411512

Burner orifice information at 0-600 meters (0-2000 feet) altitude.

* For Natural Gas, Group E+ applications, convert using L.P. Gas model and replace burner orifice(s).

Table 1 (Continued)

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

Table 1 (Continued)

Country Code	Gas Type	Group	Supply Pressure, mbar	Burner Orifice Pressure, mbar	Capacity/ Model	Diameter, mm	Quantity	Burner Orifice Part No.
GB/IE/PT/ ES/IT/GR/ LU/CH	Natural Gas	H	20	7,6	025	3,9	1	M402980
				8,0	030	4,0	1	M402992
				8,0	T30	4,0	2	M402992
				8,0	035	4,6	1	M411511
				8,0	T45	4,6	2	M411371
				8,0	055	5,2	1	M402993
	L.P. Gas	3+	28 or 37	No Governor	025	2,1	1	M401003
					030	2,2	1	M401011
					T30	2,2	2	M401011
					035	2,5	1	M406361
					T45	2,5	2	M401007
					055	2,8	1	M411512
AT	Natural Gas	H	20	7,6	025	3,9	1	M402980
				8,0	030	4,0	1	M402992
				8,0	T30	4,0	2	M402992
				8,0	035	4,6	1	M411511
				8,0	T45	4,6	2	M411371
				8,0	055	5,2	1	M402993
	L.P. Gas	B/P	30	No Governor	025	2,1	1	M401003
					030	2,2	1	M401011
					T30	2,2	2	M401011
					035	2,5	1	M406361
					T45	2,5	2	M401007
					055	3,0	1	M401017
CY/IS/MT	L.P. Gas	B/P	30	No Governor	025	2,1	1	M401003
					030	2,2	1	M401011
					T30	2,2	2	M401011
					035	2,5	1	M406361
					T45	2,5	2	M401007
					055	3,0	1	M401017
HU	Natural Gas	H	25	7,6	025	3,9	1	M402980
				8,0	030	4,0	1	M402992
				8,0	T30	4,0	2	M402992
				8,0	035	4,6	1	M411511
				8,0	T45	4,6	2	M411371
				8,0	055	5,2	1	M402993
	L.P. Gas	B/P	30	No Governor	025	2,1	1	M401003
					030	2,2	1	M401011
					T30	2,2	2	M401011
					035	2,5	1	M406361
					T45	2,5	2	M401007
					055	3,0	1	M401017

Burner orifice information at 0-600 meters (0-2000 feet) altitude.

Table 1 (Continued)

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

Table 1 (Continued)

Country Code	Gas Type	Group	Supply Pressure, mbar	Burner Orifice Pressure, mbar	Capacity/ Model	Diameter, mm	Quantity	Burner Orifice Part No.
PL	Natural Gas	H	20	7,6	025	3,9	1	M402980
				8,0	030	4,0	1	M402992
				8,0	T30	4,0	2	M402992
				8,0	035	4,6	1	M411511
				8,0	T45	4,6	2	M411371
				8,0	055	5,2	1	M402993
	L.P. Gas	3P	37	No Governor	025	2,1	1	M401003
					030	2,2	1	M401011
					T30	2,2	2	M401011
					035	2,5	1	M406361
					T45	2,5	2	M401007
					055	2,8	1	M411512

Burner orifice information at 0-600 meters (0-2000 feet) altitude.

Table 1

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

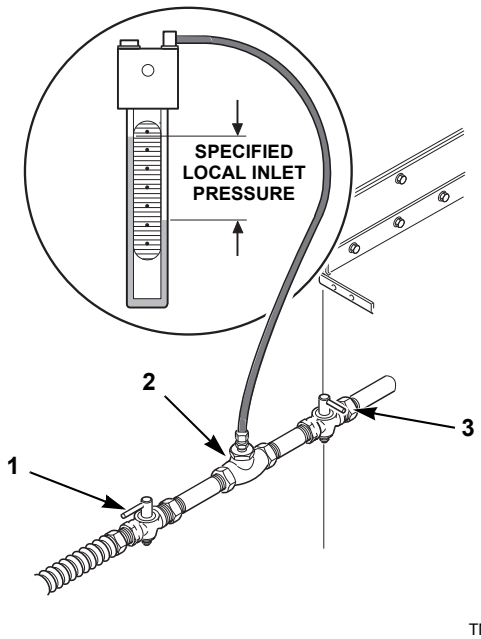
Basic Configuration

1. Determine the necessary conversion operations to convert from the factory-supplied configuration to the desired configuration.
2. Perform the conversions required so the machine is properly configured for the desired country and gas (refer to ***Specific Conversion Procedures*** section):
   - How to Convert Gas Valve from Regulated to Unregulated
   - How to Change Burner Orifice Size
   - How to Adjust Gas Valve Governor/Regulator
3. If applicable, peel off the appropriate country sticker (included with machine) and apply it to the serial plate over the existing country information.
4. If applicable, peel off the appropriate conversion sticker (included with machine) and apply it to the serial plate over the "ADJUSTED FOR _____ GAS: _____" information.
5. Commission tumble dryer for use.

WARNING

When converting the tumble dryer to a different gas or pressure, first verify that the supply inlet pressure is equipped with a pressure regulator (located ahead of the tumble dryer) that will maintain the gas supply at the inlet pressure specified.

W430R1



1	Gas Shut-Off Valve (Ahead of pressure tap) (Not Supplied)
2	Pressure Tap
3	Gas Shut-Off Valve (Shown in closed position) (Not Supplied)

Figure 12

Specific Conversion Procedures

How to Convert Gas Valve from Regulated to Unregulated

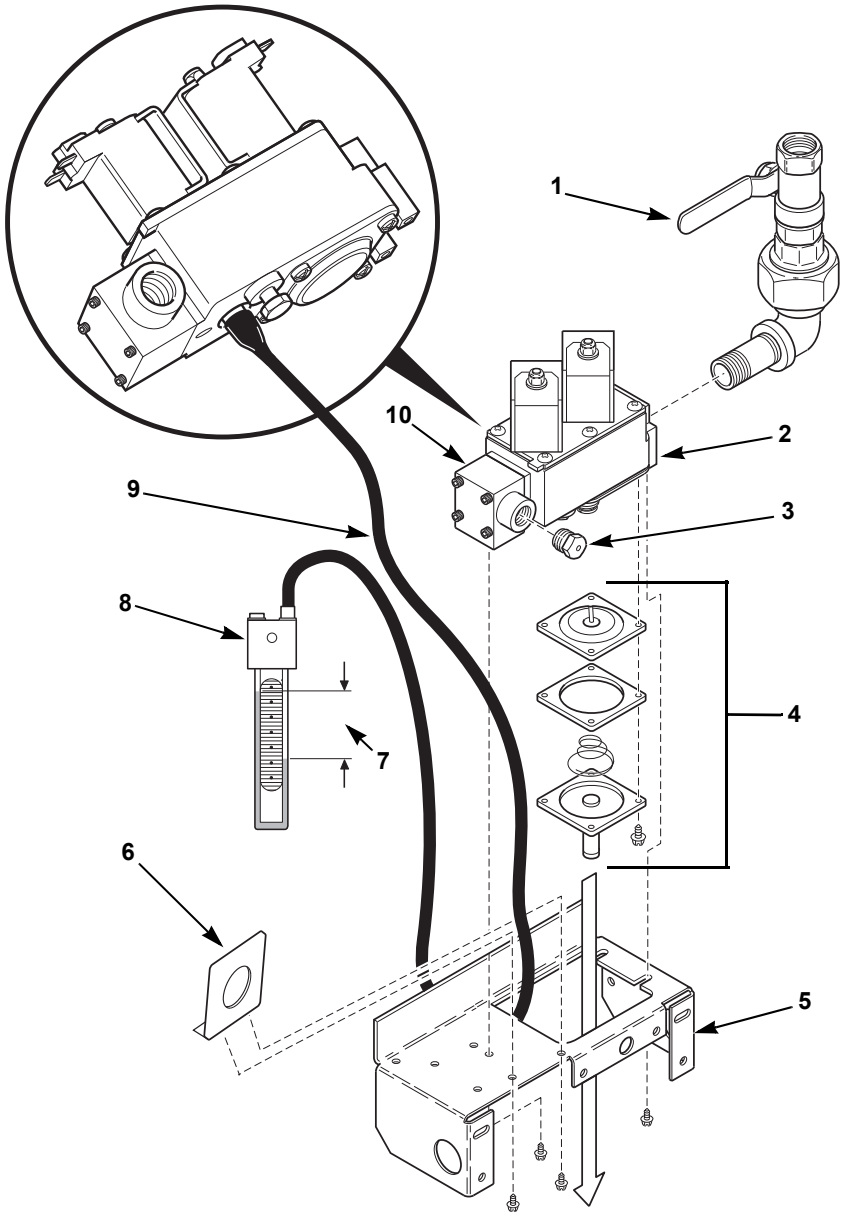
NOTE: Conversion from regulated to unregulated is only needed when regulated tumble dryers were ordered, but unregulated tumble dryers were needed.

1. Disconnect electrical power from tumble dryer. Close gas shut-off valve to tumble dryer. Refer to *Figure 12*.
2. Follow instructions in Conversion Kit, Part No. 431485 (Johnson Part No. GM-70 CBP).

NOTE: This kit does not contain any burner orifices.

3. Replace burner orifice(s) as per *Table 1*.
4. For 025 Series Natural Gas models, L.P. Gas only. Install 025 Series L.P. orifice plate (Part No. 70201901) onto gas valve bracket. Refer to *Figure 13*.
5. Commission tumble dryer for use.

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT



1	Gas Shut-Off Valve (Shown in closed position) (Not Supplied)	**6**	Part No. 70201901 025 Series Natural Gas L.P. Orifice Plate (For use on 025 Series Natural Gas Models L.P. only)
2	Gas Valve	**7**	Required Burner Manifold Pressure
3	Burner Orifice	**8**	Manometer
4	Regulator Adjusting Housing and Gasket (Regulated version shown)	**9**	Connect Over Loosened Slotted Pressure Tap Screw in Bottom of Gas Valve
5	Gas Valve Bracket	**10**	Spud Holder

Figure 13

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

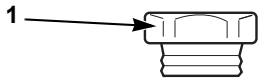
How to Change Burner Orifice Size

1. Disconnect electrical power from tumble dryer. Close gas shut-off valve to tumble dryer. Refer to *Figure 12*.
2. Remove the burner orifice(s) from spud holder. Refer to *Figure 13*.
3. Install the new, correct burner orifice(s). Refer to *Figure 14* and *Table 1*. Torque each to 9 – 10 Nm.
4. Make certain burner orifice(s) are in line with burner tube opening. Refer to *Figure 14*.
5. Commission tumble dryer for use.

NOTE: Blank burner orifices are Part No. M400995.

How to Adjust Gas Valve Governor/Regulator

1. Check gas burner orifice (manifold) pressure as follows. Refer to *Figure 13*.
2. Loosen screw plug inside pressure tap located on underside of valve. Refer to *Figure 13*.
3. Connect a “U”-tube manometer (or similar pressure gauge) to the tap.
4. Start tumble dryer and note pressure once flame is burning. Remove regulator cap and adjust regulator screw until the burner orifice pressure per applicable table is achieved. Replace regulator cap. Refer to *Figure 13*.
5. Commission tumble dryer for use.



BURNER ORIFICE

TMB2015N

1 Size Stamped on Orifice

Figure 14

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

Exhaust Requirements

WARNING

A drying tumble dryer produces combustible lint. To reduce the risk of fire, the tumble dryer must be exhausted to the outdoors.

W057R1

To reduce the risk of fire, DO NOT use plastic or thin foil ducting to exhaust the tumbler.

W773

To reduce the risk of fire and accumulation of combustible gases, DO NOT exhaust tumble dryer air into a window well, gas vent, chimney or enclosed, unventilated area such as an attic wall, ceiling, crawl space under a building, or concealed space of a building.

W059R1

Layout

Whenever possible, install tumble dryers along an outside wall where duct length can be kept to a minimum, and make-up air can be easily accessed. Construction must not block the airflow at the rear of the tumble dryer. Doing so would prevent adequate air supply to the tumble dryer combustion chamber.

Make-Up Air

A tumble dryer is forced air exhausted and requires provisions for make-up air to replace air exhausted by tumble dryer.

IMPORTANT: Do not obstruct flow of combustion and ventilation air.

Required Make-Up Air Opening (to the outside) for Each Tumble Dryer	
Model	**Opening**
025/030 Series	7090 mm^2 (110 $in.^2$)
035/055 Series	9280 mm^2 (144 $in.^2$)
T30 Series	14180 mm^2 (220 $in.^2$)
T45 Series	18560 mm^2 (288 $in.^2$)

Make-up air openings with louvers will restrict airflow. The opening must be increased to compensate for area taken up by louvers.

Make-up air openings in rooms containing tumble dryer(s) and/or gas fired hot water heater or other gravity vented appliances must be increased sufficiently to prevent downdrafts in any of the vents when all tumble dryers are in operation. Do not locate gravity vented appliances between tumble dryer(s) and make-up air openings. If it is necessary to duct make-up air to tumble dryer(s), increase area of duct work by 25% to compensate for restrictions in air movement.

Venting

WARNING

To reduce the risk of fire due to increased static pressure, we do not recommend installation of in-line secondary lint filters or lint collectors. If secondary systems are mandated, frequently clean the system to assure safe operation.

W749

IMPORTANT: Installing in-line filters or lint collectors will cause increased static pressure. Failure to maintain the secondary lint system will decrease tumble dryer efficiency and may void machine warranty.

For maximum efficiency and minimum lint accumulation, tumble dryer air must be exhausted to the outdoors by the shortest possible route.

Proper sized exhaust ducts are essential for proper operation. All elbows should be sweep type. Exhaust ducts must be assembled so the interior surfaces are smooth, so the joints do not permit the accumulation of lint. DO NOT use plastic, thin foil or Type B flexible ducts - rigid metal ducts are recommended. Use exhaust ducts made of sheet metal or other noncombustible material. DO NOT use sheet metal screws or fasteners on exhaust pipe joints which extend into the duct and catch lint. Use of duct tape or pop-rivets on all seams and joints is recommended, if allowed by local codes.

Verify that old ducts are thoroughly cleaned out before installing new tumble dryer(s).

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

WARNING

Improperly sized or assembled ductwork causes excess back pressure which results in slow drying, lint collecting in the duct, lint blowing back into the room, and increased fire hazard.

W355

NOTE: Exhaust ducts must be constructed of sheet metal or other noncombustible material. Such ducts must be equivalent in strength and corrosion resistance to ducts made of galvanized sheet steel not less than 0,495 mm (0,0195 inches) thick.

Where the exhaust duct pierces a combustible wall or ceiling, the opening must be sized per local codes. The space around the duct may be sealed with noncombustible material. Refer to *Figure 15*.

IMPORTANT: For best performance provide an individual exhaust duct for each tumble dryer. Do not install a hot water heater in a room containing tumble dryers. It is better to have the water heater in a separate room with a separate air inlet.

Individual Venting

For maximum efficiency and performance, it is preferred to exhaust tumble dryer(s) individually to the outdoors.

IMPORTANT: At no point may the cross sectional area of installed venting be less than the cross sectional area of the exhaust outlet of the tumble dryer.

The exhaust duct must be designed so the static back pressure measured 305 mm (12 inches) from the exhaust outlet does not exceed the maximum allowable pressure specified on the installation sticker on the rear of the tumble dryer.

NOTE: Static back pressure must be measured with the tumble dryer running.

The maximum allowable length venting is 4,3 m (14 feet) and two 90° elbows or equivalent. If the equivalent length of a duct required for an installation exceeds the maximum allowable equivalent length, the diameter of a round duct must be increased by 10% for each additional 6,1 m (20 feet). Cross section area of a rectangular duct must be increased by 20% for each additional 6,1 m (20 feet). Refer to *Table 2* to determine equivalent venting.

Duct Diameter	Equivalent Length of Rigid Straight Duct
203 mm (8 in.)	One 90° elbow = 2,83 m (9,3 ft.)
254 mm (10 in.)	One 90° elbow = 3,5 m (11,6 ft.)
305 mm (12 in.)	One 90° elbow = 4,3 m (14 ft.)
356 mm (14 in.)	One 90° elbow = 4,9 m (16 ft.)
406 mm (16 in.)	One 90° elbow = 5,7 m (18,7 ft.)
457 mm (18 in.)	One 90° elbow = 6,4 m (21 ft.)

Equivalent Length (meter) = 1,17 x Duct Diameter (mm)

Table 2

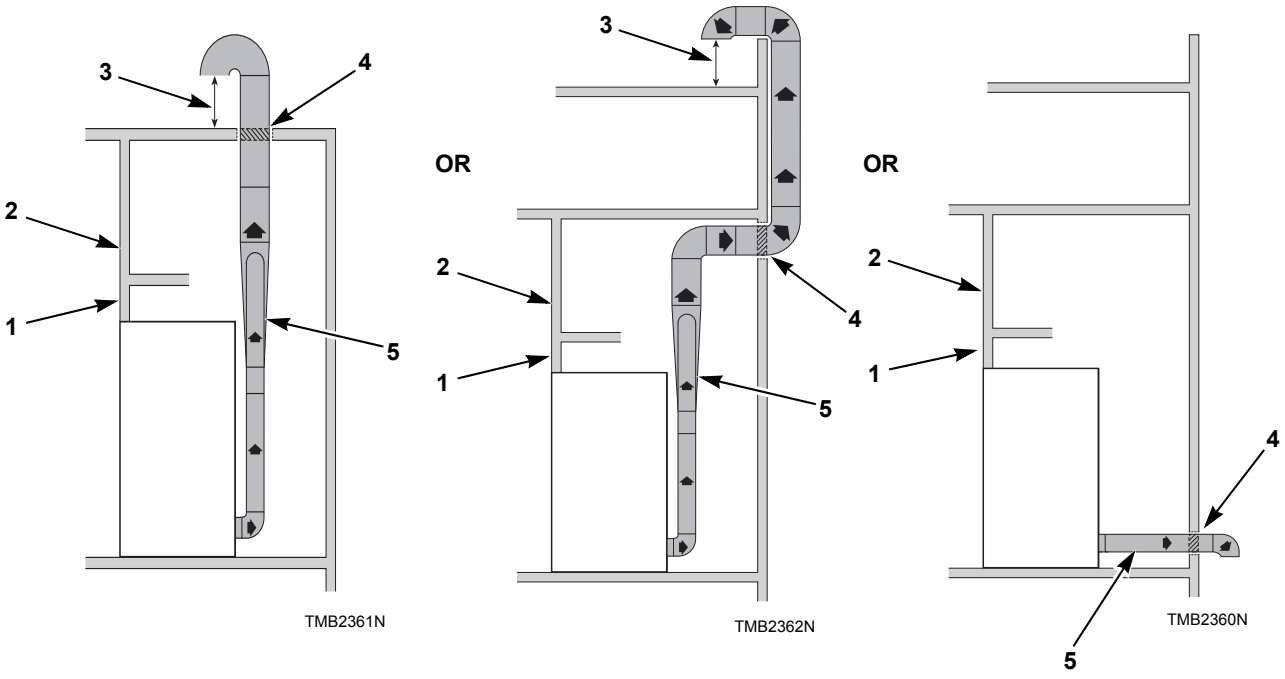
Example: A 305 mm (12 inch) diameter duct's equivalent length of 4,3 m (14 feet) of duct and two 90° elbows is:

Equivalent Length
= 4,3 m + (2) 90° elbows
= 4,3 m + 4,3 m + 4,3 m = 12,8 m

With the tumble dryer in operation, airflow at any point in the duct should be at least 366 m/min. (1200 feet/min.) to ensure that lint remains airborne. If 366 m/min. (1200 feet/min.) per minute cannot be maintained, schedule monthly inspections and cleaning of the ductwork.

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

Exhaust Requirements



1	Removable strip of panel in framing wall to permit removal of tumble dryer from framing wall
2	Partition or bulkhead
3	Minimum distance between exhaust opening and roof, ground or other obstruction: 914 mm (36 in.)
4	51 mm (2 in.) minimum clearance on both sides of duct
5	Exhaust airflow – maximum length of rigid duct 4,3 m (14 ft.) or 2,4 m (7,87 ft.) of flexible metal duct

Figure 15

NOTE: Do not install wire mesh or screen in exhaust duct opening to avoid lint build-up or impacting proper discharge of air from tumble dryers.

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

Manifold Venting

While it is preferable to exhaust tumble dryers individually to the outdoors, a main collector duct may be used if it is sized according to *Figure 17* and *Figure 18.* This illustration indicates minimum diameters, and should be increased if the collector length exceeds 4,3 m (14 feet) and two 90° elbows. The diameter of a round duct must be increased by 10% for each additional 6,1 m (20 feet). Cross sectional area of a rectangular or square duct must be increased 20% for each additional 6,1 m (20 feet). Refer to *Table 3* and *Table 4* to determine equivalent ducting sizing. The collector duct may be rectangular or square in cross section, as long as the area is not reduced. Provisions **MUST** be made for lint removal and cleaning of the collector duct.

The vent collector system must be designed so the static back pressure measured 305 mm (12 inches) from the exhaust outlet does not exceed the maximum allowable pressure of 1,3 bar (0,5 W.C.I.) as specified on the installation sticker on the rear of tumble dryer. Static back pressure must be measured with all tumble dryers vented into the collector operating.

NOTE: Never connect a tumble dryer duct at a 90° angle to the collector duct. Refer to *Figure 16*. Doing so will cause excessive back pressure, resulting in poor performance. Never connect two tumble dryer exhaust ducts directly across from each other at the point of entry to the collector duct.

With the tumble dryer in operation, airflow at any point in the duct should be at least 366 m/min. (1200 feet/min.) to ensure that lint remains airborne. If 366 m/min. (1200 feet/min.) cannot be maintained, schedule monthly inspections and cleaning of the ductwork.

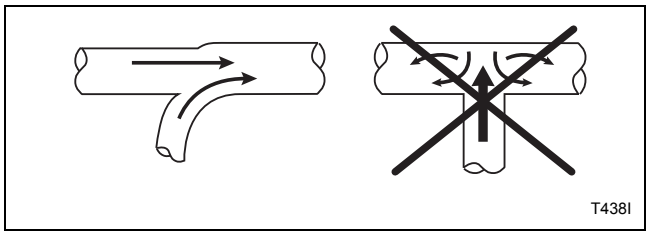
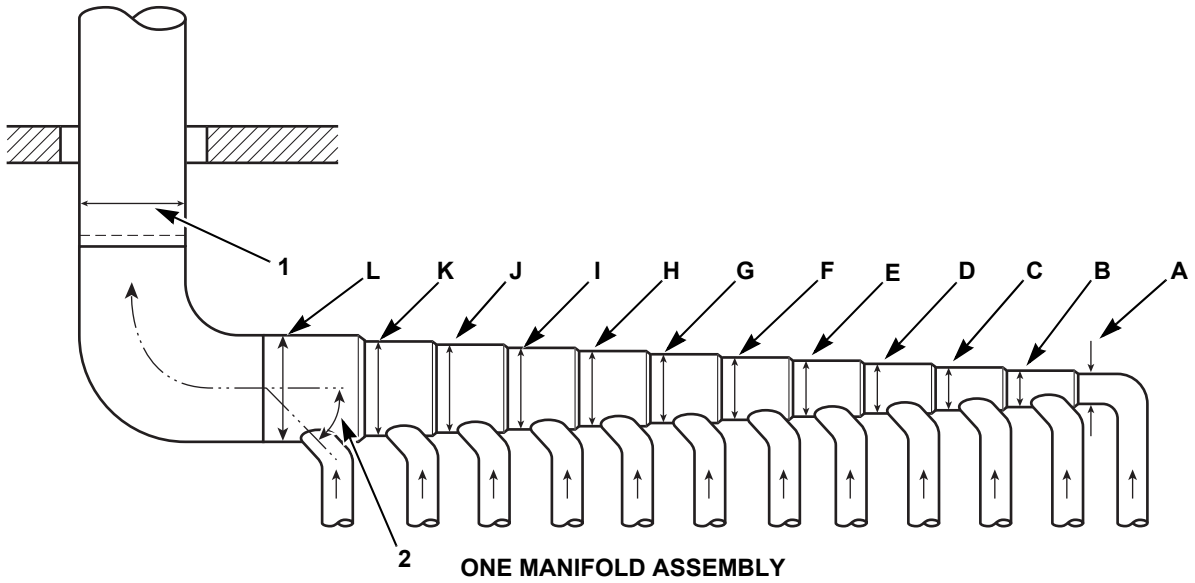


Figure 16

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

Exhaust Requirements



1 Outlet duct diameter

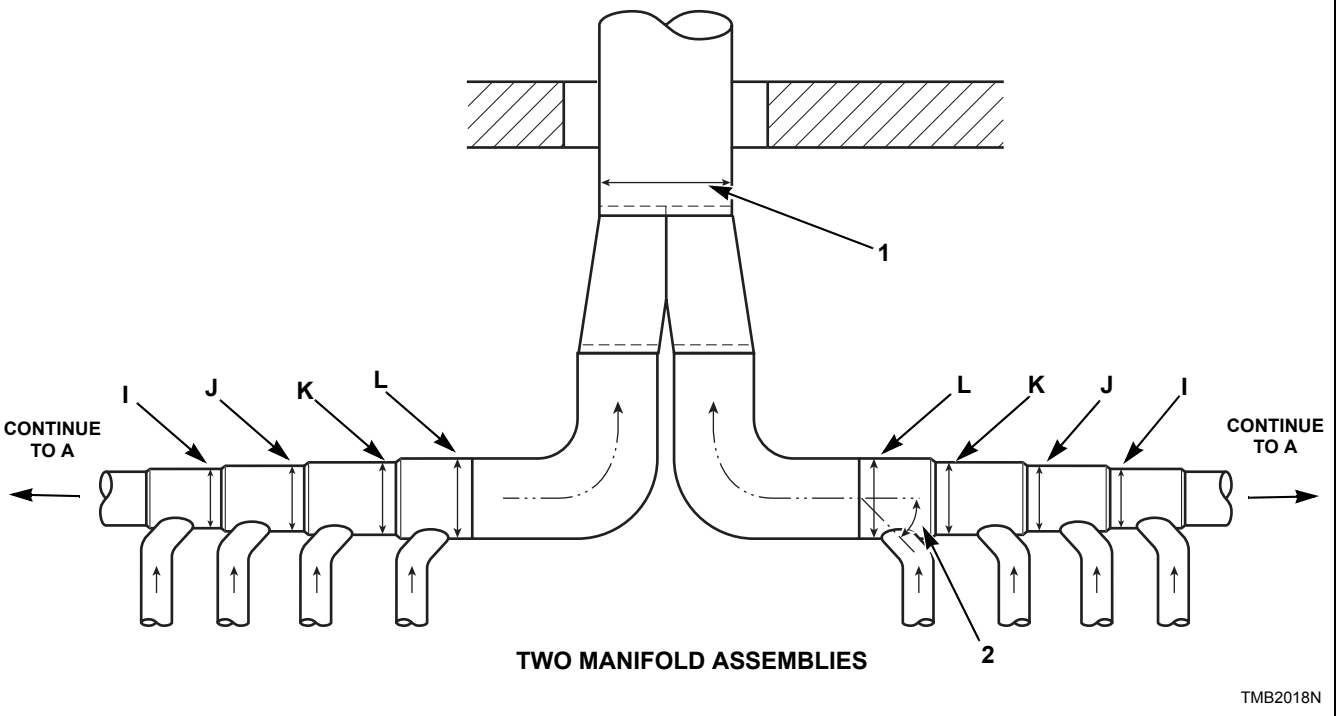
2 45° typical

Figure 17

Duct Station	025 and 030 Series	035, 055 and T30 Series	T45 Series
A	152 mm (6 in.)	203 mm (8 in.)	254 mm (10 in.)
B	254 mm (10 in.)	305 mm (12 in.)	381 mm (15 in.)
C	305 mm (12 in.)	381 mm (15 in.)	457 mm (18 in.)
D	356 mm (14 in.)	432 mm (17 in.)	533 mm (21 in.)
E	406 mm (16 in.)	483 mm (19 in.)	610 mm (24 in.)
F	457 mm (18 in.)	533 mm (21 in.)	660 mm (26 in.)
G	483 mm (19 in.)	584 mm (23 in.)	711 mm (28 in.)
H	508 mm (20 in.)	610 mm (24 in.)	762 mm (30 in.)
I	559 mm (22 in.)	660 mm (26 in.)	813 mm (32 in.)
J	584 mm (23 in.)	686 mm (27 in.)	838 mm (33 in.)
K	610 mm (24 in.)	711 mm (28 in.)	889 mm (35 in.)
L	635 mm (25 in.)	762 mm (30 in.)	914 mm (36 in.)

Table 3

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT



1 Outlet duct diameter

2 45° typical

Figure 18

Duct Station	025 and 030 Series	035, 055 and T30 Series	T45 Series
A	254 mm (10 in.)	305 mm (12 in.)	381 mm (15 in.)
B	381 mm (15 in.)	432 mm (17 in.)	559 mm (22 in.)
C	457 mm (18 in.)	559 mm (22 in.)	660 mm (26 in.)
D	508 mm (20 in.)	635 mm (25 in.)	762 mm (30 in.)
E	584 mm (23 in.)	686 mm (27 in.)	864 mm (34 in.)
F	660 mm (26 in.)	762 mm (30 in.)	940 mm (37 in.)
G	686 mm (27 in.)	838 mm (33 in.)	1016 mm (40 in.)
H	737 mm (29 in.)	864 mm (34 in.)	1092 mm (43 in.)
I	813 mm (32 in.)	940 mm (37 in.)	1168 mm (46 in.)
J	838 mm (33 in.)	991 mm (39 in.)	1194 mm (47 in.)
K	864 mm (34 in.)	1016 mm (40 in.)	1270 mm (50 in.)
L	914 mm (36 in.)	1092 mm (43 in.)	1295 mm (51 in.)

Table 4

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

Gas Requirements

WARNING

To reduce the risk of fire or explosion, DO NOT CONNECT THE GAS LINE TO THE TUMBLE DRYER IF THE GAS SERVICE IS NOT THE SAME AS THAT SPECIFIED ON THE TUMBLE DRYER SERIAL PLATE! It will first be necessary to convert the gas burner orifice and gas valve. Appropriate conversion kits are available.

W060R1

To reduce the risk of gas leaks, fire or explosion, use a new flexible stainless steel connector.

W774

IMPORTANT: Any product revisions or conversions must be made by the Manufacturer's Authorized Dealers, Distributors or local service personnel.

IMPORTANT: The tumble dryer must be isolated from the gas supply piping system by closing its individual manual shut-off valve during any pressure testing of the gas supply piping system at test pressure equal to or less than 3,45 kPa, 34,5 mbar (0,5 psig).

NOTE: For gas valves with a manual shut-off switch on the gas valve, the shut-off switch does not protect the valve from this pressure test. Use the individual manual shut-off valve from the gas supply piping system to protect the gas valve.

IMPORTANT: The tumble dryer and its manually operated appliance gas valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 3,45 kPa, 34,5 mbar (0,5 psig).

Obtain specific gas service pipe size from the gas supplier. Refer to *Table 5* for general pipe size.

The following must be furnished and installed by the customer for the gas service line to each tumble dryer. Refer to *Figure 19*.

- Sediment traps
- Shut-off valves
- Supply pressure taps

It is important that equal pressure be maintained at all tumble dryer gas connections. This can be done by installing a 25,4 mm (1 inch) pipe gas loop to maintain equal pressure at all gas connections. Refer to *Figure 20*.

WARNING

To reduce the risk of fire or explosion, if the tumble dryer is to be connected to Liquefied Petroleum (L.P.) gas, a vent to the outdoors must be provided in the room where the tumble dryer is installed.

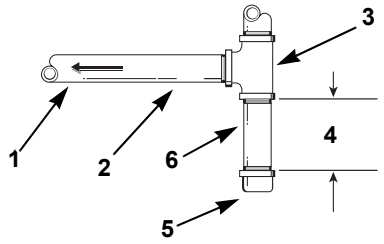
W062R1

Turn on gas and check all pipe connections (internal and external) for gas leaks with a non-corrosive leak detection fluid. Purge air in gas service line by operating the tumble dryers in the drying mode. If burner does not light and unit goes into lockout, open and close the door and restart. Repeat these steps until burner ignites. **Use pipe compound, resistant to actions of L.P. gas, on all pipe threads.**

WARNING

Check all pipe connections, internal and external, for gas leaks using a non-corrosive leak detection fluid. To reduce the risk of explosion or fire, DO NOT USE AN OPEN FLAME TO CHECK FOR GAS LEAKS! Gas connections should be checked twice a year for leakage.

W635



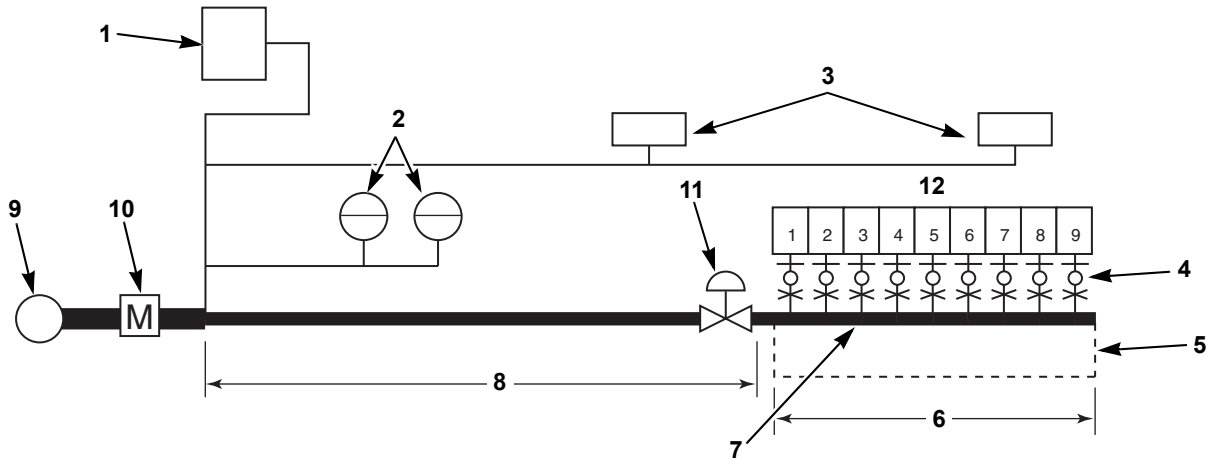
TMB2317N

1	Gas Line to Tumble Dryer Controls
2	Gas Supply Piping System
3	Gas "T" Fitting
4	152 mm (6 in.) Minimum Gas Pipe
5	Gas Pipe Cap
6	Sediment Trap

Figure 19

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

Gas Supply Pipe Sizing and Looping



TMB2126N

1	Gas furnace (120.000 Btu/hr.)	**7**	Minimum Pipe Size is 12,7 mm (0,5 in.)
2	Gas water heaters (400.000 Btu/hr. each)	**8**	7,6 m (25 ft.)
3	Gas space heaters (70.000 Btu/hr. each)	**9**	Main regulator
4	Sediment traps, supply pressure taps and shut-off valves. Refer to *Figure 19*.	**10**	Gas meter
		11	Pressure regulator (if required)
5	25,4 mm (1 in.) gas pipe loop	**12**	11,3 kilogram tumble dryer (64.000 Btu/hr. each) 13,6 kilogram tumble dryer (73.000 Btu/hr. each) 16 kilogram tumble dryer (90.000 Btu/hr. each) Stacked 13,6 kilogram tumble dryer (73.000 Btu/hr. per pocket; 146.000 total Btu/hr. for machine) Stacked 20,4 kilogram tumble dryer (95.000 Btu/hr. per pocket; 190.000 total Btu/hr. for machine) 25 kilogram tumble dryer (112.000 Btu/hr. each)
6	5,8 m (19 ft.)		

SAMPLE CALCULATIONS:

Equivalent length = Total length of main gas supply pipe to the far end of the tumble dryers.
= 7,6 m + 5,8 m (25 ft. + 19 ft.) gas supply pipe
= 13,4 m (44 ft.) Total Gas Line

Total Btu/hr. = The sum of the Btu/hr. of all 13,6 kilogram tumble dryers being fed by the main gas supply pipe.
= 9 x 73.000
= 657.000 Btu/hr.

Using *Table 5*, the main supply pipe diameter should be 51 mm (2 in.).

IMPORTANT: Gas loop piping must be installed as illustrated to equalize gas pressure for all tumble dryers connected to single gas service. Other gas using appliances should be connected upstream from loop.

Figure 20

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

Gas Requirements

Gas Pipe Size Required for 1000 Btu Natural Gas — 17,4 ± 4 mbar, 1,74 ± 0,37 kPa (0,64 Specific Gravity at 7 ± 1,5 inches) Water Column Pressure						
	Equivalent Length					
Gas Appliances Total Btu/hr.	7,63 m (25 feet)	15,25 m (50 feet)	22,88 m (75 feet)	30,50 m (100 feet)	38,13 m (125 feet)	45,75 m (150 feet)
	Based on 7,62 mm (0,3 in.) Water Column Pressure Drop for Length Given Sizes shown in mm (inches)					
100.000	19,05 (0,75)	19,05 (0,75)	25,40 (1)	25,40 (1)	25,40 (1)	25,40 (1)
120.000	19,05 (0,75)	25,40 (1)	25,40 (1)	25,40 (1)	25,40 (1)	25,40 (1)
140.000	19,05 (0,75)	25,40 (1)	25,40 (1)	25,40 (1)	25,40 (1)	31,75 (1,25)
160.000	19,05 (0,75)	25,40 (1)	25,40 (1)	31,75 (1,25)	31,75 (1,25)	31,75 (1,25)
180.000	25,40 (1)	25,40 (1)	25,40 (1)	31,75 (1,25)	31,75 (1,25)	31,75 (1,25)
200.000	25,40 (1)	25,40 (1)	31,75 (1,25)	31,75 (1,25)	31,75 (1,25)	38,10 (1,5)
300.000	25,40 (1)	31,75 (1,25)	31,75 (1,25)	38,10 (1,5)	38,10 (1,5)	38,10 (1,5)
400.000	31,75 (1,25)	31,75 (1,25)	38,10 (1,5)	38,10 (1,5)	38,10 (1,5)	50,80 (2)
500.000	31,75 (1,25)	38,10 (1,5)	38,10 (1,5)	50,80 (2)	50,80 (2)	50,80 (2)
600.000	38,10 (1,5)	38,10 (1,5)	50,80 (2)	50,80 (2)	50,80 (2)	50,80 (2)
700.000	38,10 (1,5)	50,80 (2)	50,80 (2)	50,80 (2)	50,80 (2)	63,50 (2,5)
800.000	38,10 (1,5)	50,80 (2)	50,80 (2)	50,80 (2)	63,50 (2,5)	63,50 (2,5)
900.000	50,80 (2)	50,80 (2)	50,80 (2)	63,50 (2,5)	63,50 (2,5)	63,50 (2,5)
1.000.000	50,80 (2)	50,80 (2)	50,80 (2)	63,50 (2,5)	63,50 (2,5)	63,50 (2,5)
1.100.000	50,80 (2)	50,80 (2)	63,50 (2,5)	63,50 (2,5)	63,50 (2,5)	63,50 (2,5)
1.200.000	50,80 (2)	50,80 (2)	63,50 (2,5)	63,50 (2,5)	63,50 (2,5)	63,50 (2,5)
1.300.000	50,80 (2)	63,50 (2,5)	63,50 (2,5)	63,50 (2,5)	63,50 (2,5)	76,20 (3)
1.400.000	50,80 (2)	63,50 (2,5)	63,50 (2,5)	63,50 (2,5)	76,20 (3)	76,20 (3)
1.500.000	50,80 (2)	63,50 (2,5)	63,50 (2,5)	63,50 (2,5)	76,20 (3)	76,20 (3)
1.600.000	50,80 (2)	63,50 (2,5)	63,50 (2,5)	76,20 (3)	76,20 (3)	76,20 (3)
1.700.000	50,80 (2)	63,50 (2,5)	63,50 (2,5)	76,20 (3)	76,20 (3)	76,20 (3)
1.800.000	63,50 (2,5)	63,50 (2,5)	76,20 (3)	76,20 (3)	76,20 (3)	76,20 (3)
1.900.000	63,50 (2,5)	63,50 (2,5)	76,20 (3)	76,20 (3)	76,20 (3)	76,20 (3)
2.000.000	63,50 (2,5)	63,50 (2,5)	76,20 (3)	76,20 (3)	76,20 (3)	88,90 (3,5)
2.200.000	63,50 (2,5)	76,20 (3)	76,20 (3)	76,20 (3)	88,90 (3,5)	88,90 (3,5)
2.400.000	63,50 (2,5)	76,20 (3)	76,20 (3)	76,20 (3)	88,90 (3,5)	88,90 (3,5)
2.600.000	63,50 (2,5)	76,20 (3)	76,20 (3)	88,90 (3,5)	88,90 (3,5)	88,90 (3,5)
2.800.000	63,50 (2,5)	76,20 (3)	76,20 (3)	88,90 (3,5)	88,90 (3,5)	88,90 (3,5)
3.000.000	63,50 (2,5)	76,20 (3)	88,90 (3,5)	88,90 (3,5)	88,90 (3,5)	101,60 (4)

For L.P. Gas, correct the total Btu/hr by multiplying it by 0,6. The answer is the equivalent Btu on the above chart.

Table 5

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

Electrical Requirements

WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- **Disconnect electric power to the tumble dryer before servicing.**
- **Close gas shut-off valve to gas tumble dryer before servicing.**
- **Close steam valve to steam tumble dryer before servicing.**
- **Never start the tumble dryer with any guards/panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumble dryer is properly grounded.**

W002R1

To reduce the risk of fire and electric shock, check with a qualified serviceman for proper grounding procedures. Improper connection of the equipment grounding conductor may result in a risk of electric shock.

W068

To reduce the risk of fire and electric shock, if electrical supply is coming from a three phase service, DO NOT connect a "High Leg" or "Stinger Leg" to a single phase machine. On a three phase machine, if there is a "High Leg" or "Stinger Leg" it should be connected to L3.

W069

IMPORTANT: Electrical connections must be made by a qualified electrician using data on serial plate, installation manuals and wiring diagram provided with machine and according to local codes. Install a circuit breaker as close to the tumble dryer as possible. If more than one tumble dryer is being installed, a circuit breaker must be provided for each.

NOTE: Connect machine to an individual branch circuit not shared with lighting or other equipment.

NOTE: 3 Phase Machines Only - Do not use fuses to avoid the possibility of "single phasing" and causing premature failure of the motors.

WARNING

In case of servicing (or putting the tumble dryer out of order), disconnect the tumble dryer from the main supply by switching off the circuit breaker.

W796

Wiring Diagram

The wiring diagram is located in the junction or contactor box.

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

Grounding Instructions

NOTE: To ensure protection against shock, this tumble dryer MUST be electrically grounded in accordance with the local codes. Electrical work should be done by a qualified electrician.

This tumble dryer must be grounded. In the event of malfunction or breakdown, grounding will reduce the risk of electric shock by providing a path of least resistance for electric current. This tumble dryer must be connected to a grounded metal, permanent wiring system; or an equipment grounding conductor must be run with the circuit conductors and connected to the appropriate ground location.

- Metal conduit and/or BX cable is not considered ground.
- Connecting the Neutral from the electrical service box to the tumble dryer ground screw does not constitute a ground.
- A dedicated ground conduit (wire) must be connected between the electrical service box ground bar and tumble dryer ground screw.

WARNING

To reduce the risk of electrical shock, de-energize the electrical circuit being connected to the tumble dryer before making any electrical connections. All electrical connections should be made by a qualified electrician. Never attempt to connect a live circuit.

W409R1

CAUTION

Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation. Verify proper operation after servicing.

W071

All OPL (non-vend) models are factory-equipped with an emergency stop button on the front panel. If the emergency stop function is desired on coin-operated models, an external emergency stop button may be installed.

NOTE: Activation of the emergency stop switch stops all machine control circuit functions, but DOES NOT remove all electrical power from machine.

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

Service/Ground Location

Models Through 7/9/12

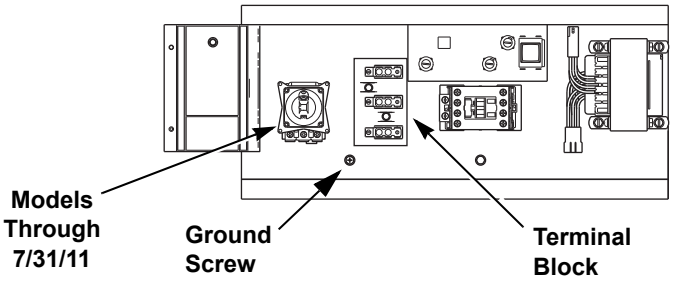
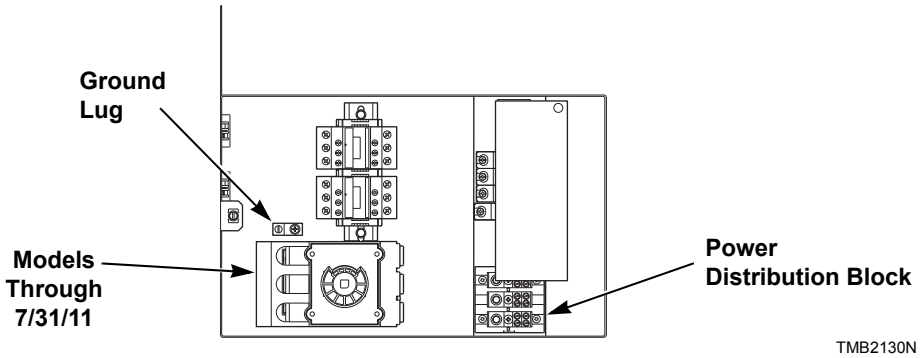
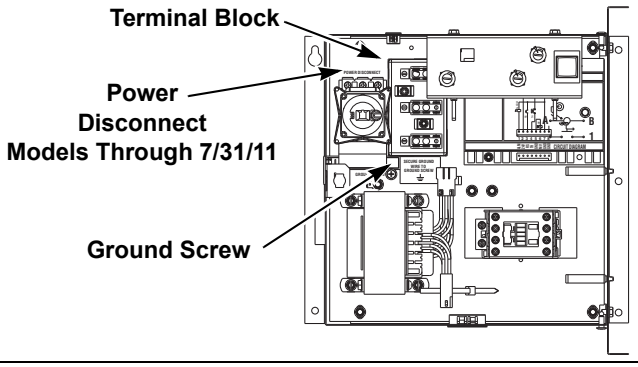
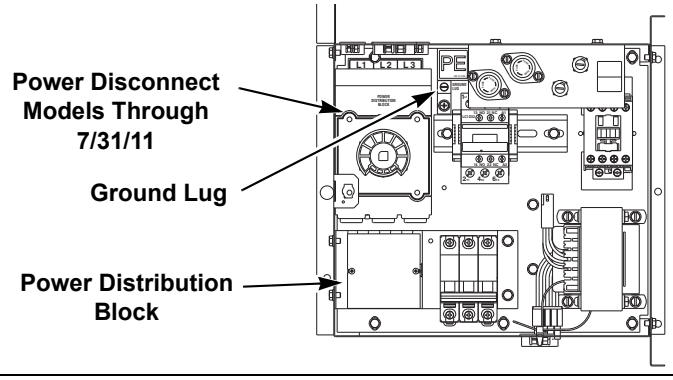
Model	Heat Source	Ground and Terminal Block Locations
025 030 035 055 Series	Gas or Steam	
025 030 035 055 Series	Electric	
T30/T45 Series	T30: Gas or Steam T45: Gas	
T30 Series	Electric	

Figure 21

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

Models Starting 7/10/12

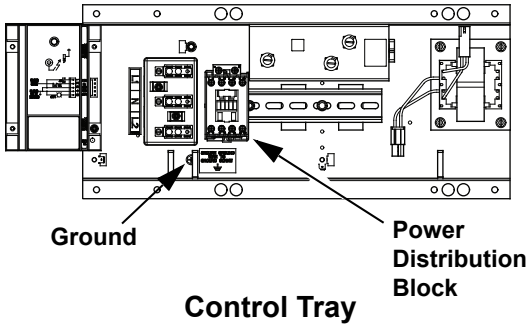
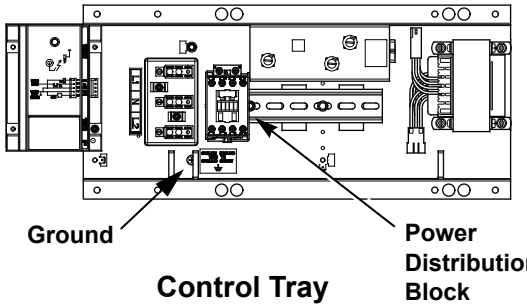
Model	Ground and Terminal Block Locations
Non-CE	
CE	

Figure 22

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

To Connect Electrical Service To The Tumble Dryer

The following steps outline the procedure for connecting electrical service to the tumble dryer.

- **3 Phase Models – Each tumble dryer must be connected to its own individual branch circuit breaker, not fuses, to avoid the possibility of "single phasing" and causing premature failure of the motor(s).**
- **Electrical service must be connected using the appropriate permanent rigid metal conduit system.**
- **Service conductors must be copper only.**

For an existing service, determine your service voltage and conductor amperage. Carefully review the tumble dryer serial plate ratings and ***Electrical Requirements*** section of this manual. If service is inadequate it must be upgraded by a qualified electrical contractor. Never connect an improper or inadequate service to any machine.

Configuring Your Tumble Dryer for Other Service Voltages

Several gas and steam tumble dryer models have been designed to be field convertible to other service voltages. Refer to *Table 6* for these models:

Models	If your Serial Plate voltage is:	Your tumble dryer can be converted to the following voltages:
025, 030, 035, 055, T30	200 Volt/50 Hertz/ 1 Phase	100 Volt/50 Hertz/ 1 Phase
025, 030, 035, 055, T30	380 Volt/50 Hertz/ 3 Phase	400-415 Volt/50 Hertz/ 3 Phase

Table 6

NOTE: Electric models are not field convertible and must be connected to service specified on serial plate.

If tumble dryer requires conversion for use on another service voltage, complete the steps detailed in the ***Conversion Instructions*** section **prior to connecting service to machine**.

If tumble dryer does not require conversion or has been converted according to the ***Conversion Instructions*** section of this manual, continue with step 1.

NOTE: The wiring diagram is located inside the junction or contactor box.

1. For new service, install a circuit breaker of proper voltage and current rating as close to each tumble dryer as possible.
2. Route service conduit from service breaker panel to tumble dryer service connection box. Conduit routing should not obstruct access for maintenance or servicing. Refer to ***Service/ Ground Location***.
3. Pull conductors through conduit and attach to circuit breaker and ground connection. Secure service ground wire to the grounding screw or lug. Attach service conductors to appropriately labeled positions on the terminal block. Make sure all connections are secure.
4. Complete ferrite installation instructions for all gas and steam models with OM control suffix.
5. Check electrical service phase sequence (3 Phase models only) as follows:
   a. Energize the electrical service and momentarily start the tumble dryer. Check the direction of cylinder rotation. If the cylinder rotates clockwise as viewed from the front, the phase sequence is correct. If the cylinder rotates counterclockwise, proceed with step b.
   b. Disconnect power to machine, disconnect and reverse the L1 and L2 connections on the terminal block.

Electrical Connections for T30 and T45 Only

All gas and steam tumble dryers require a single service connection to TB1 of the upper unit junction box only. The serial plate reflects current draw, breaker/fuse size and conductor amperage required for the entire machine.

All electric tumble dryers require separate service connections for each upper and lower unit. Serial Plate ratings reflect current draw, breaker/fuse size and conductor amperage required per unit.

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

If serial plate voltage is:	Tumble Dryer can be converted to the following voltages:
200 Volt/50 Hertz/ 1 Phase **2W&G** **(All models except T45)**	**100 Volt/50 Hertz/1 Phase INTERNATIONAL Models: 2W&G** 1. Prior to connecting electric service, locate transformer configuration jumper in junction box area. 2. Remove the 208 Volt jumper and replace it with the 100 Volt jumper located in the literature packet from cylinder. 3. Remove small access cover from back of the fan motor. Locate the two internal jumper wires, brown and blue connected to motor terminals #6 and #2. Move brown wire from terminal #6 to terminal #2 and blue wire from terminal #2 to terminal #4. Be careful not to confuse light blue motor harness wire with the dark blue internal jumper. 4. Carefully check motor wire connections with wiring diagram and verify that the motors are configured for low voltage operation before replacing covers. 5. Sign and date conversion sticker located on back of tumble dryer. 6. Follow the instructions covered in ***Connecting Electrical Service*** section.
380 Volt/50 Hertz/ 3 Phase **3W&G** **(All models except T45)**	**400-415 Volt/50 Hertz/3 Phase Models: 3W&G** 1. Prior to connecting electric service, locate transformer configuration jumper in junction box area. 2. Remove the 380 Volt jumper and replace it with the 415 Volt jumper located in the literature packet from cylinder. 3. Sign and date conversion sticker located on back of tumble dryer. 4. Follow the instructions covered in ***Connecting Electrical Service*** section.

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

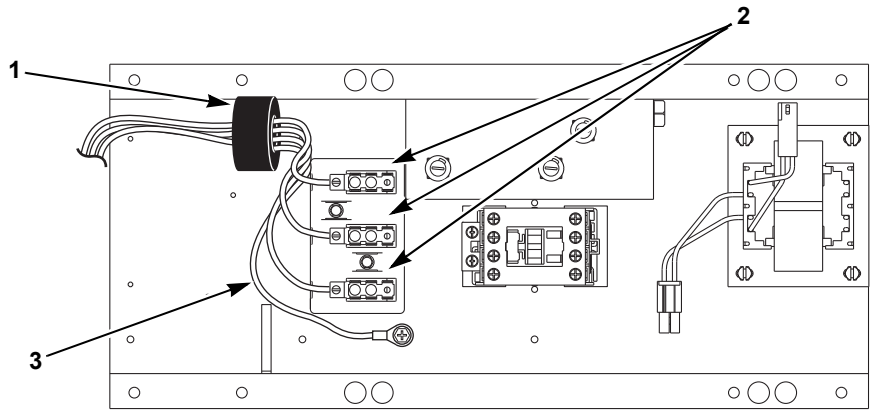
Ferrite Ring Installation (025, 030, 035 and 055 Series Only)

Gas and Steam Models with OM Control Suffix Only (Models Through 7/31/11)

The ferrite ring provided in the literature packet must be installed over the power leads during connection of electrical service. The ferrite protects the sensitive electronic controls from destructive electrical disturbances which may be present on power lines to the machine. Failure to properly install the ferrite ring may result in damage to the electronic controls and will void control warranty.

To install:

1. Immediately after connection of power leads and before applying power to machine, locate each of the incoming service leads including ground.
2. Snap the ferrite ring closed over all the service leads inside of the contactor box as shown. It is important that the ferrite ring be installed inside the contactor box. Refer to *Figure 23*. Do not install the ferrite outside of the box or other area. Make sure that service leads are in the center of the ferrite before closing the ring so as not to pinch or damage leads.



TMB2096N

1 Ferrite Ring
2 Electrical Connections V.A.C.
3 Ground Wire

Figure 23

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

Electrical Specifications

NOTE: Electrical specifications below are subject to change without notice. Always refer to product serial plate for most current specifications of product being installed.

NOTE: Use copper conductors only.

NOTE: Connect to individual branch circuit.

NOTE: 3 Phase Only – Each tumble dryer must be connected to its own individual branch circuit breaker, not fuses, to avoid the possibility of "single phasing" and causing premature failure of the motor(s).

025, 030 and 035 Series Gas and Steam Models

Serial Plate Voltage	Terminal Block Connections Required	Serial Plate Amps		Recommended Circuit	
		Nonreversing	Reversing	Breaker Rating	Wire Size AWG (mm^2)
120V/60Hz/1ph	L1, Neutral, and ground	12,0	N/A	15A – 1 pole	14 (2,08)
208-240V/60Hz/1ph	L1, L2, Neutral, and ground	6,7	N/A	10A – 2 pole	14 (2,08)
120V/60Hz/1ph	L1, Neutral, and ground	7,5**	N/A	10A – 1 pole	14 (2,08)
208-240V/60Hz/1ph	L1, L2, Neutral, and ground	4,5**	N/A	10A – 2 pole	14 (2,08)
100V/60Hz/1ph	L1, Neutral, and ground	11,0	N/A	15A – 1 pole	14 (2,08)
200-220V/60Hz/1ph	L1, Neutral, and ground	5,8	N/A	10A – 1 pole	14 (2,08)
100V/50Hz/1ph	L1, Neutral, and ground	12,1	N/A	20A – 1 pole	12 (3,31)
200V/50Hz/1ph	L1, Neutral, and ground	7,5	N/A	10A – 1 pole	14 (2,08)
230-240V/50Hz/1ph	L1, Neutral, and ground	7,5	N/A	10A – 1 pole	14 (2,08)
200-208V/60Hz/3ph	L1, L2, L3, and ground	3,2	4.0	10A* – 3 pole	14 (2,08)
240V/60Hz/3ph	L1, L2, L3, and ground	3,2	4.0	10A* – 3 pole	14 (2,08)
200V/50Hz/3ph	L1, L2, L3, and ground	2,9	3.5	10A* – 3 pole	14 (2,08)
230-240V/50Hz/3ph	L1, L2, L3, and ground	3,5	N/A	10A* – 3 pole	14 (2,08)
380V/50 or 60Hz/3ph	L1, L2, L3, and ground	1,5	2.0	10A* – 3 pole	14 (2,08)
400-415V/50Hz/3ph	L1, L2, L3, and ground	1,6	2.0	10A* – 3 pole	14 (2,08)
440V/60Hz/3ph	L1, L2, L3, and ground	1,6	N/A	10A* – 3 pole	14 (2,08)
460-480V/60Hz/3ph	L1, L2, L3, and ground	1,6	2.0	10A* – 3 pole	14 (2,08)

* 3 Phase machines should not have fuses, breakers only.
** Special low Amp blower model, 25 Pound only
N/A = Not Applicable

Table 7

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

055 Series Gas Models

Serial Plate Voltage	Terminal Block Connections Required	Serial Plate Amps		Recommended Circuit	
		Nonreversing	Reversing	Breaker Rating	Wire Size AWG (mm^2)
120V/60Hz/1ph	L1, Neutral, and ground	9,2	N/A	15A – 1 pole	14 (2,08)
208-240V/60Hz/1ph	L1, L2, Neutral, and ground	6,5	N/A	10A – 2 pole	14 (2,08)
100V/60Hz/1ph	L1, Neutral, and ground	9,8	N/A	15A – 1 pole	14 (2,08)
100V/50Hz/1ph	L1, Neutral, and ground	10	N/A	15A – 1 pole	14 (2,08)
200V/50Hz/1ph	L1, Neutral, and ground	6,2	N/A	15A – 1 pole	14 (2,08)
230-240V/50Hz/1ph	L1, Neutral, and ground	5,5	N/A	10A – 1 pole	14 (2,08)
200-208V/60Hz/3ph	L1, L2, L3, and ground	4,0	4.0	10A* – 3 pole	14 (2,08)
240V/60Hz/3ph	L1, L2, L3, and ground	4,0	4.5	10A* – 3 pole	14 (2,08)
380V/50Hz/3ph	L1, L2, L3, and ground	2,0	2.5	10A* – 3 pole	14 (2,08)
400-415V/50Hz/3ph	L1, L2, L3, and ground	2,0	2.5	10A* – 3 pole	14 (2,08)

* 3 Phase machines should not have fuses, breakers only.
N/A = Not Applicable

Table 8

T30 Series Gas and Steam Models (Total Machine)

Serial Plate Voltage	Terminal Block Connections Required	Serial Plate Amps	Recommended Circuit	
			Breaker Rating	Wire Size AWG (mm^2)
120V/60Hz/1ph	L1, Neutral, and ground	16,0	20A – 1 pole	12 (3,31)
208-240V/60Hz/1ph	L1, L2, Neutral, and ground	8,0	10A – 2 pole	14 (2,08)
100V/60Hz/1ph	L1, Neutral, and ground	22,0	30A – 1 pole	10 (5,26)
200-220V/60Hz/1ph	L1, Neutral, and ground	11,6	15A – 1 pole	14 (2,08)
100V/50Hz/1ph	L1, Neutral, and ground	24,2	35A – 1 pole	8 (8,37)
200/50Hz/1ph	L1, Neutral, and ground	15,0	20A – 1 pole	12 (3,31)
230-240V/50Hz/1ph	L1, Neutral, and ground	15,0	20A – 1 pole	12 (3,31)
200-208V/60Hz/3ph	L1, L2, L3, and ground	6,4	10A* – 3 pole	14 (2,08)
240V/60Hz/3ph	L1, L2, L3, and ground	6,4	10A* – 3 pole	14 (2,08)
200V/50Hz/3ph	L1, L2, L3, and ground	5,8	10A* – 3 pole	14 (2,08)
230-240V/50Hz/3ph	L1, L2, L3, and ground	7,0	10A* – 3 pole	14 (2,08)
380V/50 or 60Hz/3ph	L1, L2, L3, and ground	3,0	10A* – 3 pole	14 (2,08)
400-415V/50Hz/3ph	L1, L2, L3, and ground	3,2	10A* – 3 pole	14 (2,08)
440V/60Hz/3ph	L1, L2, L3, and ground	3,3	10A* – 3 pole	14 (2,08)
460-480V/60Hz/3ph	L1, L2, L3, and ground	3,3	10A* – 3 pole	14 (2,08)

* 3 Phase machines should not have fuses, breakers only.

Table 9

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

Electrical Requirements

T45 Series Gas Models (Total Machine)

Serial Plate Voltage	Terminal Block Connections Required	Serial Plate Amps	Recommended Circuit	
			Breaker Rating	Wire Size AWG (mm^2)
208-240V/60Hz/1ph	L1, L2, Neutral, and ground	12,0	15A – 2 pole	14 (2,08)
200-208V/60Hz/3ph	L1, L2, L3, and ground	9,6	15A – 3 pole	14 (2,08)
240V/60Hz/3ph	L1, L2, L3, and ground	9,6	15A – 3 pole	14 (2,08)
200V/50 or 60Hz/3ph	L1, L2, L3, and ground	11,2	15A – 1 pole	14 (2,08)
230-240V/50Hz/3ph	L1, Neutral and ground	10,8	15A – 1 pole	14 (2,08)

* 3 Phase machines should not have fuses, breakers only.

Table 10

9 kW 025 Series Electric Models

Serial Plate Voltage	Terminal Block Connections Required	Serial Plate Amps		Recommended Circuit	
		Nonreversing	Reversing	Breaker Rating	Wire Size AWG (mm^2)
400V/50Hz/3ph	L1, L2, L3, and ground	16	N/A	20A* – 3 pole	12 (3,31)

* 3 Phase machines should not have fuses, breakers only.
N/A = Not Applicable

Table 11

12 kW 025 Series Electric Models

Serial Plate Voltage	Terminal Block Connections Required	Serial Plate Amps		Recommended Circuit	
		Nonreversing	Reversing	Breaker Rating	Wire Size AWG (mm^2)
208V/60Hz/1ph	L1, L2, Neutral, and ground	64	N/A	80A – 2 pole	4 (21,2)
240V/60Hz/1ph	L1, L2, Neutral, and ground	57	N/A	80A – 2 pole	4 (21,2)
200V/50Hz/1ph	L1, Neutral, and ground	63	N/A	80A – 1 pole	4 (21,2)
200V/60Hz/1ph	L1, L2 and ground	64	N/A	80A – 2 pole	4 (21,2)
230-240V/50Hz/1ph	L1, Neutral, and ground	58	N/A	80A – 1 pole	4 (21,2)
200-208V/60Hz/3ph	L1, L2, L3, and ground	37	37	50A* – 3 pole	6 (13,3)
200V/50Hz/3ph	L1, L2, L3, and ground	36	36	50A* – 3 pole	6 (13,3)
230-240V/50Hz/3ph	L1, L2, L3, and ground	33	N/A	50A* – 3 pole	6 (13,3)
240V/60Hz/3ph	L1, L2, L3, and ground	33	33	50A* – 3 pole	6 (13,3)
380V/50 or 60Hz/3ph	L1, L2, L3, and ground	20	20	25A* – 3 pole	10 (5,26)
400-415V/50Hz/3ph	L1, L2, L3, and ground	18	18	25A* – 3 pole	10 (5,26)
440V/60Hz/3ph	L1, L2, L3, and ground	17	N/A	25A* – 3 pole	10 (5,26)
460-480V/60Hz/3ph	L1, L2, L3, and ground	16	16	25A* – 3 pole	10 (5,26)

* 3 Phase machines should not have fuses, breakers only.
N/A = Not Applicable

Table 12

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

21 kW 030 Series Electric Models

Serial Plate Voltage	Terminal Block Connections Required	Serial Plate Amps		Recommended Circuit	
		Nonreversing	Reversing	Breaker Rating	Wire Size AWG (mm^2)
208V/60Hz/1ph	L1, L2, Neutral, and ground	108	N/A	150A – 2 pole	1/0 (53,5)
240V/60Hz/1ph	L1, L2, Neutral, and ground	94	N/A	125A – 2 pole	1 (42,4)
200V/60Hz/1ph	L1, Neutral, and ground	108	N/A	150A – 1 pole	1/0 (53,5)
200V/50Hz/1ph	L1, Neutral, and ground	105	N/A	150A – 1 pole	1/0 (53,5)
230-240V/50Hz/1ph	L1, Neutral, and ground	95	N/A	125A – 2 pole	1 (42,4)
200-208V/60Hz/3ph**	L1, L2, L3, and ground	62	62	80A* – 3 pole	4 (21,2)
200V/50Hz/3ph**	L1, L2, L3, and ground	60	60	80A* – 3 pole	4 (21,2)
230-240V/50Hz/3ph**	L1, L2, L3, and ground	55	N/A	70A* – 3 pole	4 (21,2)
240V/60Hz/3ph**	L1, L2, L3, and ground	54	54	70A* – 3 pole	4 (21,2)
380V/50 or 60Hz/3ph**	L1, L2, L3, and ground	33	33	45A* – 3 pole	8 (8,37)
400-415V/50Hz/3ph**	L1, L2, L3, and ground	31	31	40A* – 3 pole	8 (8,37)
440V/60Hz/3ph	L1, L2, L3, and ground	29	N/A	40A* – 3 pole	8 (8,37)
460-480V/60Hz/3ph**	L1, L2, L3, and ground	27	27	35A* – 3 pole	8 (8,37)

* 3 Phase machines should not have fuses, breakers only.
** These serial plate voltages are only options available on the 30 pound electric models.
N/A = Not Applicable

Table 13

21 kW T30 Series Electric Models

Serial Plate Voltage	Terminal Block Connections Required	Serial Plate Amps	Recommended Circuit	
			Breaker Rating	Wire Size AWG (mm^2)
200-208V/60Hz/3ph*	L1, L2, L3, and ground	62**	80A – 3 pole	14 (21,2)
200V/50Hz/3ph*	L1, L2, L3, and ground	60**	80A – 3 pole	14 (21,2)
230-240V/50Hz/3ph*	L1, L2, L3, and ground	55**	70A – 3 pole	14 (21,2)
240V/60Hz/3ph*	L1, L2, L3, and ground	54**	70A – 3 pole	14 (21,2)
380V/50 or 60Hz/3ph*	L1, L2, L3, and ground	33**	45A – 3 pole	8 (8,37)
400-415V/50Hz/3ph*	L1, L2, L3, and ground	31**	40A – 3 pole	8 (8,37)
440V/60Hz/3ph	L1, L2, L3, and ground	29**	40A – 3 pole	8 (8,37)
460-480V/60Hz/3ph	L1, L2, L3, and ground	27**	35A – 3 pole	8 (8,37)

* These serial plate voltages are only options available on the T30 electric models. Current (Amp) is for one pocket only.
** Per heater on T30 electric models, each has two heaters.

Table 14

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

Electrical Requirements

24 kW 035 Series Electric Models

Serial Plate Voltage	Terminal Block Connections Required	Serial Plate Amps		Recommended Circuit	
		Nonreversing	Reversing	Breaker Rating	Wire Size AWG (mm^2)
208V/60Hz/1ph	L1, L2, Neutral, and ground	122	N/A	175A – 2 pole	2/0 (67,5)
240V/60Hz/1ph	L1, L2, Neutral, and ground	107	N/A	150A – 2 pole	1/0 (53,5)
200V/60Hz/1ph	L1, Neutral, and ground	122	N/A	175A – 1 pole	2/0 (67,5)
200V/50Hz/1ph	L1, Neutral, and ground	119	N/A	150A – 1 pole	1/0 (53,5)
230-240V/50Hz/1ph	L1, Neutral, and ground	108	N/A	150A – 1 pole	1/0 (53,5)
200-208V/60Hz/3ph	L1, L2, L3, and ground	71	71	90A* – 3 pole	3 (26,7)
200V/50Hz/3ph	L1, L2, L3, and ground	65	65	90A* – 3 pole	3 (26,7)
230-240V/50Hz/3ph	L1, L2, L3, and ground	62	N/A	80A* – 3 pole	4 (21,2)
240V/60Hz/3ph	L1, L2, L3, and ground	62	62	80A* – 3 pole	4 (21,2)
380V/50 or 60Hz/3ph	L1, L2, L3, and ground	38	38	50A* – 3 pole	6 (13,3)
400-415V/50Hz/3ph	L1, L2, L3, and ground	35	35	45A* – 3 pole	8 (8,37)
440V/60Hz/3ph	L1, L2, L3, and ground	33	N/A	45A* – 3 pole	8 (8,37)
460-480V/60Hz/3ph	L1, L2, L3, and ground	31	31	40A* – 3 pole	8 (8,37)

* 3 Phase machines should not have fuses, breakers only.
N/A = Not Applicable

Table 15

27 kW 055 Series Electric Models

Serial Plate Voltage	Terminal Block Connections Required	Serial Plate Amps		Recommended Circuit	
		Nonreversing	Reversing	Breaker Rating	Wire Size AWG (mm^2)
208V/60Hz/1ph	L1, L2, Neutral, and ground	129	N/A	175A – 2 pole	2/0 (67,5)
240V/60Hz/1ph	L1, L2, Neutral, and ground	115	N/A	150A – 2 pole	1/0 (53,5)
200V/60Hz/1ph	L1, Neutral, and ground	122	N/A	175A – 1 pole	2/0 (67,5)
200V/50Hz/1ph	L1, Neutral, and ground	131	N/A	175A – 1 pole	2/0 (67,5)
230-240V/50Hz/1ph	L1, Neutral, and ground	119	N/A	150A – 1 pole	1/0 (53,5)
200-208V/60Hz/3ph	L1, L2, L3, and ground	79	79	100A* – 3 pole	3 (26,7)
240V/60Hz/3ph	L1, L2, L3, and ground	65	65	80A* – 3 pole	4 (21,2)
380V/50Hz/3ph	L1, L2, L3, and ground	43	43	60A* – 3 pole	8 (8,37)
400-415V/50Hz/3ph	L1, L2, L3, and ground	38	38	50A* – 3 pole	8 (8,37)

* 3 Phase machines should not have fuses, breakers only.
N/A = Not Applicable

Table 16

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

Steam Requirements

NOTE: Machines require a constant 5,3 to 6,9 bar (80 to 100 psig) steam service for optimum operation. The maximum allowable steam pressure for use with 50 Hertz tumble dryers is 8,6 bar (125 psig). In no case may the pressure exceed the above value.

Obtain specific steam service pipe sizes from steam system supplier or a qualified steam fitter.

- Refer to *Figure 24* for proper steam pipe configurations.
- To prevent condensate draining from headers to tumble dryer, piping should have a minimum 305 mm (12 inch) rise above respective header. Do not make steam connection to header with a horizontal or downward facing tee or elbow.
- Whenever possible, horizontal runs of steam lines must drain, by gravity, to respective steam header. Water pockets, or an improperly drained steam header will provide wet steam, causing improper operation of tumble dryer. If pockets or improper drainage cannot be eliminated, install a bypass trap to drain condensate from the low point in the steam header to the return.
- In both steam supply and steam return line, it is recommended that each have a pipe union and shut-off valve. This will enable you to disconnect the steam connections and service the tumble dryer while your laundry facility is in operation.
- Connect the steam solenoid valve to the related steam coil inlet connection with nipples, flex hoses, unions and tees.
- Strainers may require cleaning due to materials from hoses or pipes.
- Install vacuum breaker (optional), bucket trap with built-in strainer and check valve. For successful operation of tumble dryer, install trap 457 mm (18 inches) below coil and as near to the tumble dryer as possible. Inspect trap carefully for inlet and outlet markings and install according to trap manufacturer's instructions. If steam is gravity returned to boiler, omit trap but install vacuum breaker and check valve in return line near tumble dryer. Gravity return requires entire return plumbing be below steam coil outlets.
- Install union and shut-off valve in return line and make final pipe connections to return header.

NOTE: To prevent water hammering, route return lines below outlets of steam coils.

Piping Recommendations

- Trap each steam coil individually. Always keep the trap clean and in good working condition.
- When tumble dryer is on the end of a line of equipment, extend header at least 1,2 m (4 feet) beyond tumble dryer. Install shut-off valve, union, check valve and bypass trap at end of line. If gravity return to boiler, omit trap.
- Insulate steam supply and return lines for safety of operator and safety while servicing tumble dryer.

WARNING

All system components must have a 8,6 bar (125 psig) working pressure. Shut-off valves must be installed upstream of the steam solenoid valve and downstream of each steam trap so components can be isolated for maintenance or emergency purposes.

All components (solenoid valve, traps) must be supported to minimize loads on the tumbler steam coil connections.

W804

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

Installing Steam Trap and Making Condensate Return Connections

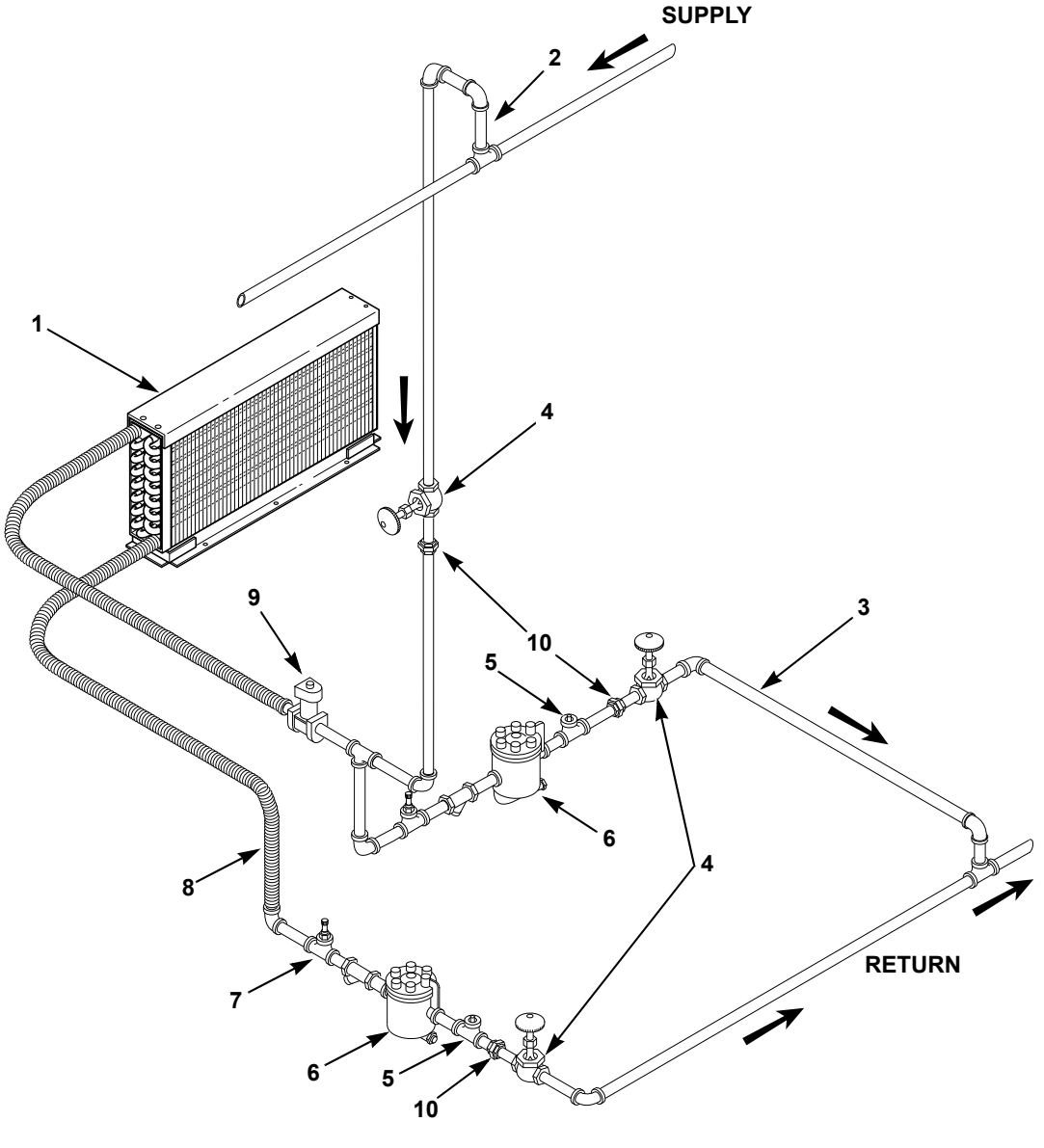
The steam trap must be installed and the coil outlet connections must be connected to the condensate return lines. The following steps outline the procedure for installing the steam trap and connecting the condensate return lines. Refer to *Figure 24* for typical installations.

1. Use flexible lines between steam inlet solenoid and steam coils, as well as outlet between steam coil and traps.
2. If necessary, install a strainer at the end of each flexible hose.
3. Install a steam trap to each strainer.

IMPORTANT: Steam trap must be installed a minimum of 457 mm (18 inches) below the steam coil outlet connections.

4. Install a shut-off valve to each steam trap.
5. Connect to the condensate return lines.
6. For steam solenoid valve wiring connections, refer to Wiring Diagram supplied with tumble dryer.

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT



Note: Refer to *Table 17* for sizing of steam lines. Piping must also be sized accordingly for length of runs, and number of elbows.

1	Steam Coil	**6**	Trap with Built-In Strainer
2	305 mm (12 in.) Riser	**7**	Vacuum Breaker (Optional)
3	Condensate Return Line from Supply Line	**8**	457 mm (18 in.) Drop
4	Shut-Off Valve	**9**	Solenoid Valve (Supplied with machine)
5	Check Valve	**10**	Union

Figure 24

Model	Steam Pressure PSI (bar)	Minimum Supply Pipe Diameter	Steam Trap Size * (Pounds Condensate/Hour)
025/030 Series	5,3-6,9 (80-100)	3/4 BSPT	134
035 Series	5,3-6,9 (80-100)	3/4 BSPT	166
T30 Series	5,3-6,9 (80-100)	3/4 BSPT	110

* Based on100 psi.

Table 17

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

Single Drop Timer

NOTE: The following information is for models with an SD control suffix only.

Power-Up Mode

When power is applied to the tumble dryer, the *IN USE* light flashes factory status information. Following this, the control goes into READY Mode (light off) or RUN Mode if power was interrupted during a cycle (light on, time remaining unchanged).

Ready Mode

In READY Mode (light off), the control waits for the vend to be satisfied. When vend is satisfied the control goes into START Mode.

Start Mode

In START Mode (light on), the vend has been satisfied but the start button has not been pressed. Time remaining in the cycle will not change until the start button is pressed. When the start button is pressed the machine goes into RUN Mode.

Run Mode

In RUN Mode (light on), the machine is running a cycle and the time remaining is counting down. When time remaining counts down to zero, the control goes into READY Mode.

Setting Dry Time Dipswitches

To change the dry time on the tumble dryer, combinations of dipswitches can be set on the control.

There are eight dipswitches on the tumble dryer control. The first six switches are used to program the amount of additional heat time given for each coin pulse. The additional drying time is added to the factory default minimum heat time of one minute. A valve of 1 to 64 minutes of additional drying time is available for each coin drop pulse.

Models Through Serial No. 0908xxxxx

The last two switches are used to program the amount of additional cool down time. The additional cool down time is added to the factory default minimum cool down time of 1 minute. A value of 1 to 3 additional minutes is available. The control is shipped from the factory programmed with 1 minute of minimum heat time, preset with 7 additional minutes of drying time (dipswitches 1, 2 and 3 in ON position) and 1 minute of minimum cool down time for a total time of 9 minutes for a coin pulse. For dipswitch settings refer to *Table 18*.

Models Starting Serial No. 0909xxxxx

The seventh switch is used to program the amount of additional cool down time. The additional cool down time is added to the factory default minimum cool down time of 1 minute. A value of 3 additional minutes is available. The control is shipped from the factory programmed with 1 minute of minimum heat time, preset with 7 additional minutes of drying time (dipswitches 1, 2 and 3 in ON position) and 1 minute of minimum cool down time for a total time of 9 minutes for a coin pulse. For dipswitch settings refer to *Table 18*.

The eight switch is used for the cycle reset. If the switch is OFF (default), the control will save the time left on a cycle in case of a power failure. If the switch is ON, the control will clear the cycle and go back to Ready Mode if there is a power failure.

The control reads the dipswitch settings at power-up. The control must be powered down to change the dipswitch settings.

To change the time for a coin pulse, the desired dry time dipswitches must be set to ON position. All other dipswitches must be in OFF position.

NOTE: The control must be powered down for 10 seconds before the dipswitches can be changed.

Resetting Cycle Time to Zero

(Models Starting Serial No. 0909xxxxx)

To remove any cycle time that may have accumulated on the control during setup, the cycle time on the control can be reset to zero.

To reset the time, unplug the tumble dryer and set dipswitch 8 to ON position. Restore power to the tumble dryer for 10 seconds and once again unplug tumble dryer. Set dipswitch 8 to OFF position and restore power to the tumble dryer.

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

Dipswitch Settings

Heat Time Per Coin Pulse (in minutes)	Heat Switch Number					
	1	2	3	4	5	6
1	OFF	OFF	OFF	OFF	OFF	OFF
2	**ON**	OFF	OFF	OFF	OFF	OFF
3	OFF	**ON**	OFF	OFF	OFF	OFF
4	**ON**	**ON**	OFF	OFF	OFF	OFF
5	OFF	OFF	**ON**	OFF	OFF	OFF
6	**ON**	OFF	**ON**	OFF	OFF	OFF
7	OFF	**ON**	**ON**	OFF	OFF	OFF
8 (factory default)	**ON**	**ON**	**ON**	OFF	OFF	OFF
9	OFF	OFF	OFF	**ON**	OFF	OFF
10	**ON**	OFF	OFF	**ON**	OFF	OFF
11	OFF	**ON**	OFF	**ON**	OFF	OFF
12	**ON**	**ON**	OFF	**ON**	OFF	OFF
13	OFF	OFF	**ON**	**ON**	OFF	OFF
14	**ON**	OFF	**ON**	**ON**	OFF	OFF
15	OFF	**ON**	**ON**	**ON**	OFF	OFF
16	**ON**	**ON**	**ON**	**ON**	OFF	OFF
17	OFF	OFF	OFF	OFF	**ON**	OFF
18	**ON**	OFF	OFF	OFF	**ON**	OFF
19	OFF	**ON**	OFF	OFF	**ON**	OFF
20	**ON**	**ON**	OFF	OFF	**ON**	OFF
21	OFF	OFF	**ON**	OFF	**ON**	OFF
22	**ON**	OFF	**ON**	OFF	**ON**	OFF
23	OFF	**ON**	**ON**	OFF	**ON**	OFF
24	**ON**	**ON**	**ON**	OFF	**ON**	OFF
25	OFF	OFF	OFF	**ON**	**ON**	OFF
26	**ON**	OFF	OFF	**ON**	**ON**	OFF
27	OFF	**ON**	OFF	**ON**	**ON**	OFF
28	**ON**	**ON**	OFF	**ON**	**ON**	OFF
29	OFF	OFF	**ON**	**ON**	**ON**	OFF
30	**ON**	OFF	**ON**	**ON**	**ON**	OFF
31	OFF	**ON**	**ON**	**ON**	**ON**	OFF
32	**ON**	**ON**	**ON**	**ON**	**ON**	OFF
33	OFF	OFF	OFF	OFF	OFF	**ON**
34	**ON**	OFF	OFF	OFF	OFF	**ON**
35	OFF	**ON**	OFF	OFF	OFF	**ON**
36	**ON**	**ON**	OFF	OFF	OFF	**ON**
37	OFF	OFF	**ON**	OFF	OFF	**ON**

Table 18 (continued)

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

Single Drop Timer

Table 18 (continued)

Heat Time Per Coin Pulse (in minutes)	Heat Switch Number					
	1	2	3	4	5	6
38	ON	OFF	ON	OFF	OFF	ON
39	OFF	ON	ON	OFF	OFF	ON
40	ON	ON	ON	OFF	OFF	ON
41	OFF	OFF	OFF	ON	OFF	ON
42	ON	OFF	OFF	ON	OFF	ON
43	OFF	ON	OFF	ON	OFF	ON
44	ON	ON	OFF	ON	OFF	ON
45	OFF	OFF	ON	ON	OFF	ON
46	ON	OFF	ON	ON	OFF	ON
47	OFF	ON	ON	ON	OFF	ON
48	ON	ON	ON	ON	OFF	ON
49	OFF	OFF	OFF	OFF	ON	ON
50	ON	OFF	OFF	OFF	ON	ON
51	OFF	ON	OFF	OFF	ON	ON
52	ON	ON	OFF	OFF	ON	ON
53	OFF	OFF	ON	OFF	ON	ON
54	ON	OFF	ON	OFF	ON	ON
55	OFF	ON	ON	OFF	ON	ON
56	ON	ON	ON	OFF	ON	ON
57	OFF	OFF	OFF	ON	ON	ON
58	ON	OFF	OFF	ON	ON	ON
59	OFF	ON	OFF	ON	ON	ON
60	ON	ON	OFF	ON	ON	ON
61	OFF	OFF	ON	ON	ON	ON
62	ON	OFF	ON	ON	ON	ON
63	OFF	ON	ON	ON	ON	ON
64	ON	ON	ON	ON	ON	ON

Models Through Serial No. 0908xxxxx

Cool Down Per Cycle (in minutes)	Cool Down Switch Number	
	7	8
1 (factory default)	OFF	OFF
2	ON	OFF
3	OFF	ON
4	ON	ON

Models Starting Serial No. 0909xxxxx

Cool Down Per Cycle (in minutes)	Cool Down Switch Number	Cycle Reset Switch Number
	7	8
1 (factory default)	OFF	OFF
3	ON	ON

Total Cycle Time = Heat Time + Cool Down Time

Table 18

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

Operating Instructions

WARNING

To reduce the risk of fire:
- **DO NOT DRY articles containing foam rubber or similarly textured rubberlike materials.**
- **DO NOT DRY plastics, anything containing wax or chemicals such as mops and cleaning cloths, or anything dry-cleaned at home with a dry-cleaning solvent.**
- **DO NOT TUMBLE fiberglass curtains and draperies unless the label says it can be done. If they are dried, wipe out the cylinder with a damp cloth to remove particles of fiberglass.**

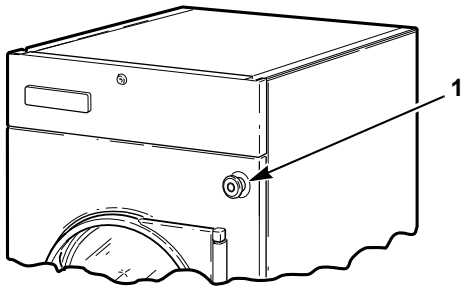
W076

To reduce the risk of serious injury, allow cylinder to stop before cleaning lint screen.

W412

Emergency Stop Button

025, 030, 035 AND 055 SERIES

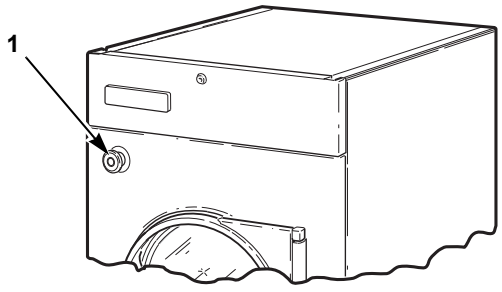


TMB1664N

1 Emergency Stop Button

Figure 25

T30 AND T45 SERIES



TMB2264N

1 Emergency Stop Button

Figure 26

To operate emergency stop button:

a. Press red emergency stop button to stop all action.

b. To restart machine, pull red emergency stop button out and press START pad or button.

NOTE: Activation of the emergency stop button stops all machine control circuit functions, but DOES NOT remove all electrical power from machine.

Operating Instructions

Step 1: Clean Lint Screen/Compartment

Remove any accumulated lint from the lint screen and compartment. Close panel tightly against tumble dryer frame and lock panel securely, if applicable.

IMPORTANT: Clean lint screen and lint compartment daily. Failure to clean the lint screen daily will result in higher than normal temperatures that may damage laundry.

WARNING

To reduce the risk of fire and risk of lint collecting in exhaust duct, do not operate tumbler without lint filter in place.

W772

Step 2: Load Laundry

Open loading door and load cylinder with laundry. DO NOT OVERLOAD.

NOTE: Overloading causes slow drying and wrinkling.

Close loading door. Tumble Dryer will not operate with the door open.

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

Step 3: Determine Control Type and Temperature Setting

Refer to the various control pages and follow instructions for the appropriate control type.

The type of fabric being dried will determine the temperature setting. Consult the fabric care label or fabric manufacturer to determine proper temperature setting.

IMPORTANT: Always follow the fabric care instructions supplied by the garment manufacturer.

Step 4: Remove Laundry

When the cycle is complete, open door and remove the laundry.

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

Control Instructions

Dual Digital Timer Control

QT and RQ Control Suffixes

1. Select HIGH, MED, LOW or NO HEAT by turning the temperature knob.

   HIGH Temperature 88°C (190°F)
   MED Temperature 77°C (170°F)
   LOW Temperature 49°C (120°F)

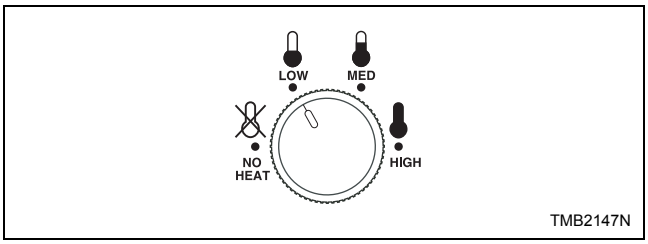


Figure 27

2. Set the HEAT TIME for the number of minutes (from 0 - 60) desired.

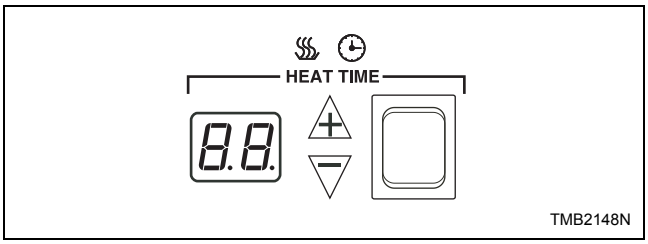


Figure 28

3. Set the COOL DOWN TIME for the number of minutes (from 0 - 15) desired.

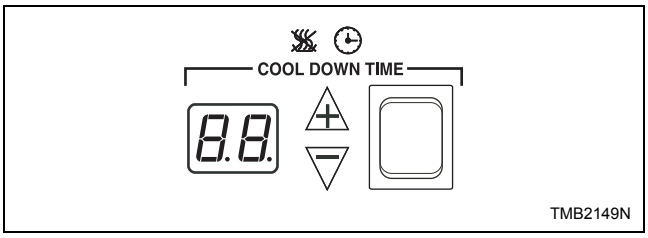


Figure 29

4. Select reversing or nonreversing cylinder rotation setting, if applicable.

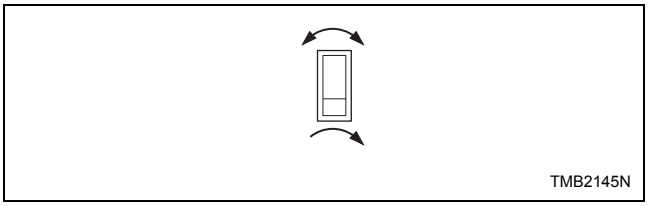


Figure 30

5. Press and release START button to start tumble dryer. Display will show minutes remaining before end of cycle.

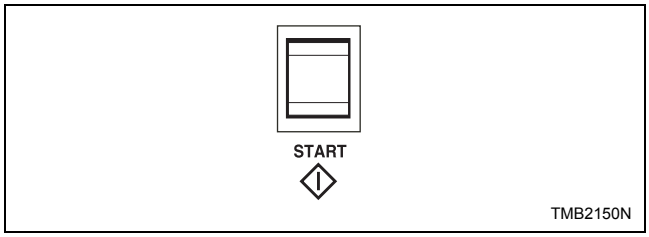


Figure 31

NOTE: One touch drying is available for repetitive loads. If the START button is pressed while the machine is in Idle Mode, when the display is dark, the tumble dryer will repeat the last drying cycle. If the cycle time is adjusted before the cycle is started, the time displayed when the START button was pressed will be used for future cycles.

IMPORTANT: To stop the tumble dryer at any time during the cycle, OPEN DOOR. If the loading door or lint panel door is opened during the cycle, the heating system will shut off and the motor will stop. To restart the cycle, both doors must be closed and the START button must be pressed in.

If the load cools to 32°C (90°F) before cool down time expires, the control will flash "Lr" (load ready) in the heat time display. If the door is not opened, the tumble dryer completes the selected cool down time. If the door is opened after reaching "Lr" temperature, the cycle will be terminated.

NOTE: If display shows an error code, refer to *Error Codes* section.

6. When the cycle is complete, open door and remove the laundry.

WARNING

To prevent the risk of fire, remove laundry immediately in case of power failure.

W779

NOTE: This machine includes an anti-wrinkle/ extended tumble feature. After the drying cycle is complete, the cylinder will tumble without heat every few minutes. The intermittent tumbling will continue for one hour or until the door is opened. Anti-wrinkle feature will tumble the load without heat for 30 seconds every 2 minutes for 1 hour OR until the loading door is opened.

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

Error Codes

Display	Definition	Corrective Action
OP	Open thermistor error	• Check thermistor. Replace if inoperative. • Check wiring diagram between control and thermistor. Refer to wiring diagram for proper wiring. • Check control. Replace if inoperative.
SH	Shorted thermistor error	• Check thermistor. Replace if inoperative. • Check wiring between control and thermistor. Refer to wiring diagram for proper wiring. • Check control. Replace if inoperative.
AF - 1	Airflow switch closed when cycle started	• Check airflow switch. Replace if inoperative.
AF - 2	Airflow switch failed to close after cycle started	• Check airflow switch. Replace if inoperative.
AF (Flashing)	Bouncing Airflow Switch	• Check airflow switch to ensure that it is properly aligned and securely mounted in the mounting bracket. • Make sure airflow switch can open and close freely. • Check installation and make sure there is adequate airflow. • Make sure exhaust is not blocked. • Clean the lint screen. • Replace airflow switch if inoperative.
AF (Solid)	Airflow Switch Closed when Resuming Cycle	• Allow up to 20 seconds for this condition to clear. • Check if airflow switch opens at end of cycle. • Replace airflow switch if inoperative.

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

Electronic OPL Micro Control

L and P Models with OM Control Suffix

1. To use an Automatic Cycle, press an ON/SELECT pad. Select HIGH, MEDIUM, MED LOW, LOW or NO HEAT for items that should not be dried with heat. A light to the left of the selected pad lights up.

   HIGH temperature* 85°C (185°F)
   HIGH temperature** 88°C (190°F)
   MED temperature* 71°C (160°F)
   MED temperature** 74°C (165°F)
   MED LOW temperature* 63°C (145°F)
   MED LOW temperature** 68°C (155°F)
   LOW temperature (025-055) 49°C (120°F)
   * = (025, 030)
   ** = (035, 055)

   To use a Time Dry or Custom Cycle, refer to the ***Programming Manual.***

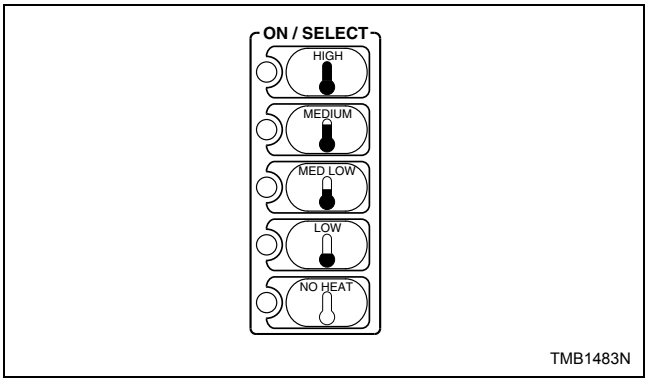


Figure 32

NOTE: Do not press directly on lights or the center of pad. For proper selection, press on pad slightly to the right of center. Refer to *Figure 33*.

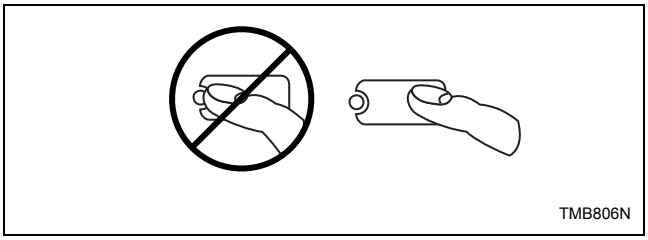


Figure 33

2. Press START pad to start tumble dryer.

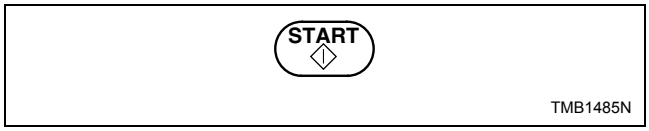


Figure 34

NOTE: All pads can be pressed in any sequence without damaging control or tumble dryer. To stop the tumble dryer at any time, open the door or press STOP/RESET.

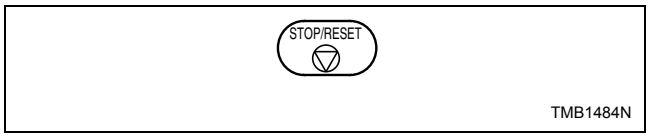


Figure 35

NOTE: The window display will flash. Press STOP/RESET twice (within three seconds) to end the cycle and reset the control to idle status. To restart the tumble dryer, CLOSE door and press START pad.

IMPORTANT: If the loading door or lint panel door is opened during the cycle, the heating system will shut off and the motor will stop. To restart the cycle, both doors must be closed and START pad must be pressed.

3. When the cycle is complete, open door and remove the laundry.

WARNING

To prevent the risk of fire, remove laundry immediately in case of power failure.

W779

NOTE: This machine includes an anti-wrinkle/extended tumble feature. After the drying cycle is complete, the cylinder will tumble without heat every few minutes. The intermittent tumbling will continue for one hour or until the door is opened.

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

G and K Models with OM Control Suffix

1. To use an Automatic Cycle, press a TEMPERATURE pad. Select HIGH, MED, LOW, DELICATE or NO HEAT for items that should not be dried with heat. A light to the left of the selected pad lights up.

   HIGH temperature* 85°C (185°F)
   HIGH temperature** 88°C (190°F)
   MED temperature* 71°C (160°F)
   MED temperature** 74°C (165°F)
   LOW temperature* 63°C (145°F)
   LOW temperature** 68°C (155°F)
   DELICATE temperature (025-055) 49°C (120°F)
   * = (025, 030)
   ** = (035, 055)

   To use a Time Dry or Custom Cycle, refer to the ***Programming Manual.***

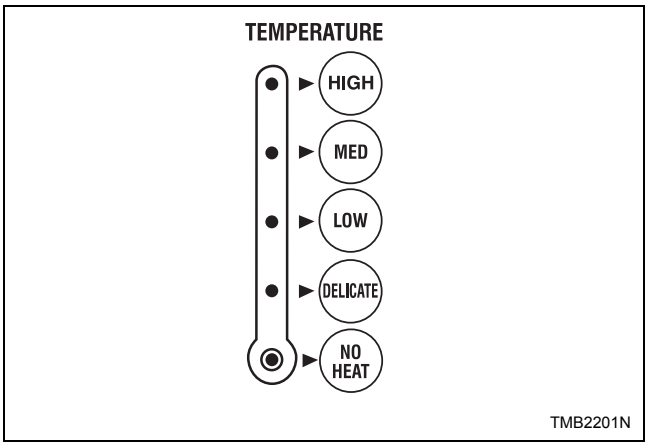


Figure 36

2. Press START pad to start tumble dryer.

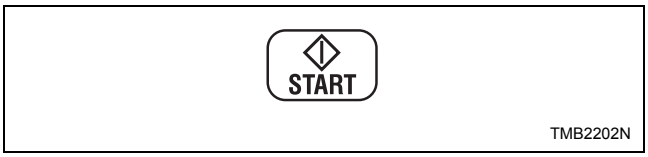


Figure 37

NOTE: All pads can be pressed in any sequence without damaging control or tumble dryer. To stop the tumble dryer at any time, open the door or press STOP.

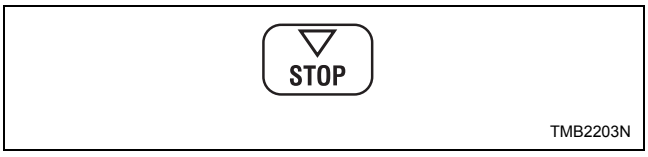


Figure 38

NOTE: The window display will flash. Press STOP twice (within 3 seconds) to end the cycle and reset the control to idle status. To restart the tumble dryer, CLOSE door and press START pad.

IMPORTANT: If the loading door or lint panel door is opened during the cycle, the heating system will shut off and the motor will stop. To restart the cycle, both doors must be closed and the PUSH TO START button must be pressed in.

3. When the cycle is complete, open door and remove the laundry.

WARNING

To prevent the risk of fire, remove laundry immediately in case of power failure.

W779

NOTE: This machine includes an anti-wrinkle/ extended tumble feature. After the drying cycle is complete, the cylinder will tumble without heat every few minutes. The intermittent tumbling will continue for one hour or until the door is opened.

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

MDC Coin and Card Control

BB, BC, BG, BL, BW, BX, BY and BZ Control Suffixes

1. Select temperature by pressing the appropriate temperature pad.

   HIGH Temperature 88°C (190°F)
   MED Temperature 82°C (180°F)
   LOW Temperature 72°C (160°F)
   DELICATES Temperature 54°C (130°F)

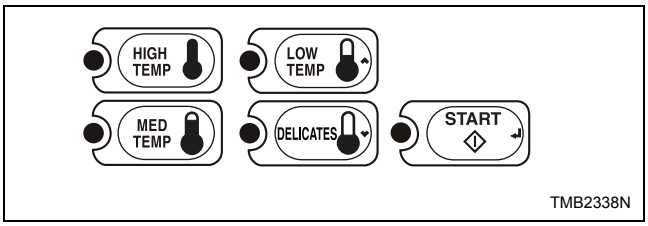


Figure 39

2. Insert the coin(s) in the coin slot, or the card into the opening.

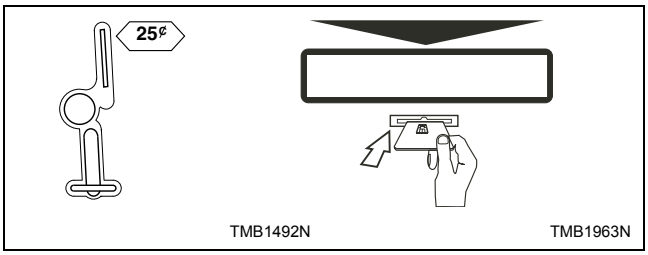


Figure 40

3. Press START pad to start tumble dryer.

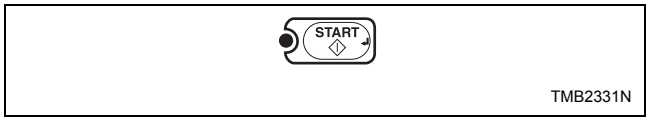


Figure 41

IMPORTANT: To stop the tumble dryer at any time during the cycle, OPEN DOOR. To restart the tumble dryer, CLOSE door and press START pad.

4. When the cycle is complete, open door and remove the laundry.

WARNING

To prevent the risk of fire, remove laundry immediately in case of power failure.

W779

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

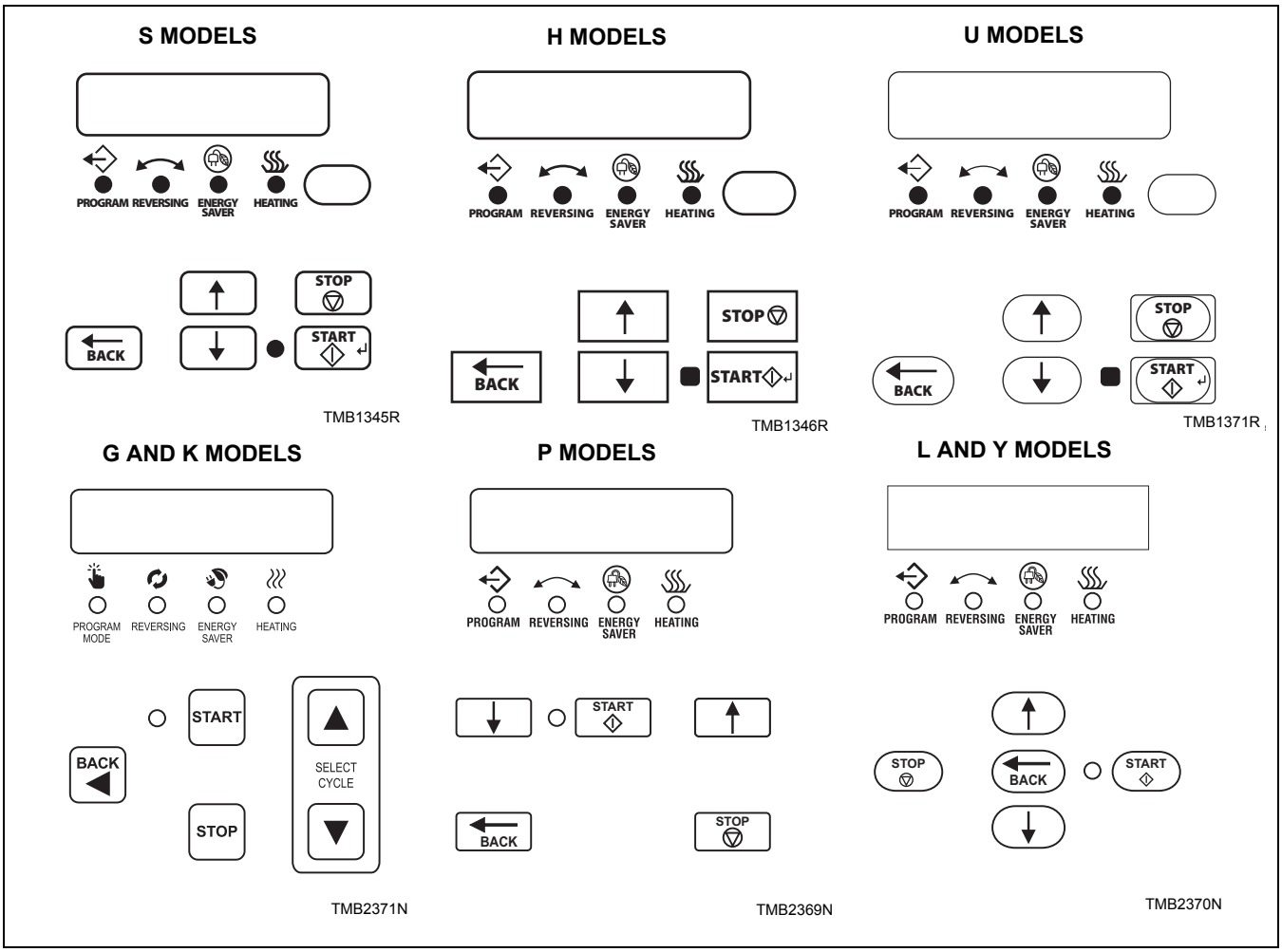


Figure 42

LED OPL Control

EO and RE Control Suffixes

1. Press the Up (↑) or Down (↓) keypad to change cycles.

   To customize a cycle, refer to the ***Programming Manual***.

2. Press START (◇/↵) to Start selected cycle.

IMPORTANT: If the loading door or lint panel door is opened during the cycle, the heating system will shut off and the motor will stop. To restart the cycle, both doors must be closed and the START (◇/↵) pad must be pressed.

3. When the cycle is complete, open door and remove laundry.

WARNING

To prevent the risk of fire, remove laundry immediately in case of power failure.

W779

NOTE: This machine includes an anti-wrinkle/ extended tumble feature. After the drying cycle is complete, the cylinder will tumble without heat every few minutes. The intermittent tumbling will continue for one hour or until the door is opened. After an hour the machine enters delayed tumble and will tumble for two minutes every hour for up to 18 hours or until the door is opened.

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

Ignition Control Operation

Power Up

After 24VAC is applied to the ignition control pins 24V and GND, the Diagnostic LED on the ignition control will turn orange/yellow. If a fault is detected the ignition control will enter Lockout Mode. If no faults are detected, the Diagnostic LED will turn Green and the ignition control will enter Standby Mode.

Standby Mode

While in Standby Mode, the ignition control will continually monitor the system for faults. Once 24VAC is applied to terminals TH and GND on the control, the ignition control will enter Start Up Mode.

Start Up Mode

During Start Up Mode, the ignition control will monitor the system for faults and begin the ignition sequence. If no faults are present, the ignition control will begin the ignition sequence by entering an 18 second waiting period. During this time the Green LED on the ignition control will switch between Red and Green, before maintaining a Green color.

After the waiting period, the ignition control will turn on the igniter and gas valve. The igniter will remain on until a flame is sensed, or up to 10 seconds.

Once a flame has been sensed the ignition control will stop sparking, the gas valve will remain on and ignition control will enter Run Mode.

If a flame is not sensed, the ignition control will then begin two additional retrials for ignition. The ignition control will re-enter the 18 seconds waiting period before the ignition control makes another attempt at ignition. If the three attempts at ignition fail, the ignition control will enter Lockout Mode.

Run Mode

While in Run Mode the ignition control leaves the gas valve on, monitors the flame signal, and leaves the igniter off.

If a flame signal is lost during Run Mode, one additional retrial for ignition will take place within one second. The ignition control will restore the spark for approximately 10 seconds. If the ignition re-attempt fails, the ignition control will enter Lockout Mode.

The ignition control will remain in Run Mode until 24VAC is removed from terminals TH and GND on the control.

Termination of Flame

The flame will go out when power is removed from ignition control. The ignition control will turn off the gas valve and enter Standby Mode.

Lockout Mode

When Lockout Mode is entered, the ignition control will remove power to the gas valve, the igniter will turn off, the Lockout/Reset Light will turn on, and the Diagnostic LED will display the appropriate Error Code.

Lockout Manual Reset

Lockout Mode is cleared by pressing an external reset switch for three seconds. The ignition control will clear all error codes and enter Standby Mode. During Lockout Manual Reset, the Diagnostic LED on the ignition control flashes red and orange, and the Reset Light remains on until the ignition control is reset. After the Reset Light turns off, stop pressing the switch. Holding the reset for three seconds after lockout has been cleared will cause a fault and result in entering Lockout Mode again.

System Tests

The following system tests are performed during normal operation. System tests are performed at a minimum of every 24 hours.

Low Voltage Detection

If the voltage between terminals TH and GND on the control is below 18,75VAC +/- 0,75VAC for more than 3 seconds the ignition control will turn off the gas valve and will not attempt to spark. The Diagnostic LED will display Error Code 5. The ignition control will not enter Lockout Mode if a low voltage condition is detected, but will enter Standby Mode and wait for the low voltage condition to be cleared.

If the voltage between terminals TH and GND on the control rises above 19,75VAC +/- 0,1VAC for at least 3 seconds, the ignition control will then enter Start Up Mode.

Low Voltage Detection test is disabled during Run Mode.

Gas Valve

The ignition control verifies that the gas valve is connected. Failure of this test results in the ignition control entering Lockout Mode with the Diagnostic LED displaying Error Code 2.

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

Flame Probe Tests

Unexpected Presence of Flame

The Unexpected Presence of Flame test is performed when no flame is expected. Failure of this test results in the ignition control entering Lockout Mode with the Diagnostic LED displaying Error Code 3.

Flame Monitoring

During the Flame Monitoring test, the flame is checked to ensure the gas is being burned when the gas valve is on. Failure of this test will result in the ignition control entering Lockout Mode with the Diagnostic LED displaying Error Code 3.

Diagnostic LED (DGN LED)/Error Codes

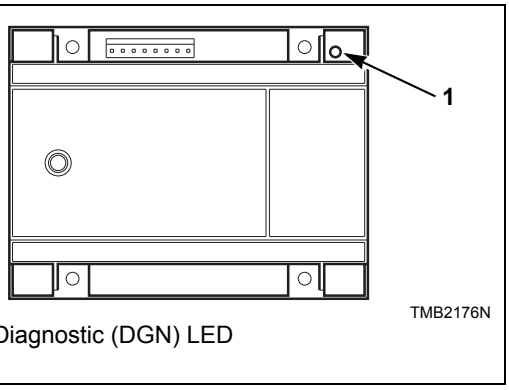
The Diagnostic LED or DGN LED is located by the power connector on the ignition control. Refer to *Figure 43*. The Diagnostic LED will indicate the status of the ignition control. Refer to *Table 19*.

LED Color	Description
Orange-Yellow	Initialization
Green	Standby/Normal Operation
Red	Fault Indication Code

Table 19

The Diagnostic LED will flash error codes one half second on and one half second off. Error codes are separated by a one second pause before the code is repeated.

Error Code	DGN LED status	Fault Type
1	Red	Ignition Control Internal Failure
2	2 Red Flashes	Gas Valve Not Connected
3	3 Red Flashes	Ignition/Flame Sense Failure
4	4 Red Flashes	Reset Switch is Shorted
5	Slow Red and Green Flashes	Low Voltage Detection
6	Fast Red and Orange Flashes	Ignition Control is in Reset Delay



1 Diagnostic (DGN) LED

Figure 43

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

Adjustments

Airflow Switch

The airflow switch is set at the factory for proper operation. No adjustment necessary.

The airflow switch operation may be affected by shipping tape still in place, lack of make-up air, or an obstruction in the exhaust duct. These should be checked and the required corrective action taken.

WARNING

The tumble dryer must not be operated if the airflow switch does not operate properly. Faulty airflow switch operation may cause an explosive gas mixture to collect in the tumble dryer.

W072R1

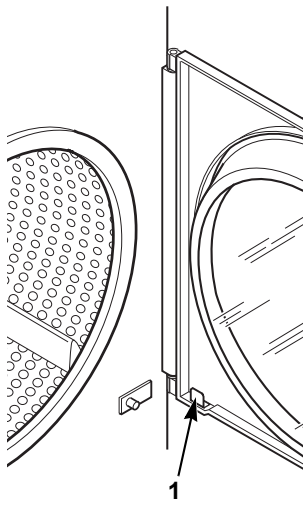
IMPORTANT: Airflow switch vane must remain closed during operation. If it opens and closes during the drying cycle, this indicates insufficient airflow through the tumble dryer. If switch remains open, or pops open and closed during the cycle, the heating system will shut off. The cylinder and fan will continue to operate even though the airflow switch is indicating insufficient airflow.

NOTE: To properly mount the airflow switch bracket, or in case of a load not drying, the airflow switch bracket may need to be checked for proper alignment. Be sure the locator pins are securely in their respective holes before tightening the bracket mounting screws. This will assure proper alignment of the airflow switch arm in the channel of the airflow switch bracket and prevent binding of the arm.

Loading Door Switch

The door switch should be adjusted so the cylinder stops when door is opened 51 mm (2 inches) plus or minus 6 mm (0,25 inch). This switch is a normally open switch and is closed by the hinge cam when the door is closed. If adjustment is required, refer to *Figure 44* and proceed as follows:

1. Close door and start tumble dryer, slowly open loading door. Cylinder and heat system should shut off when door is open 51 mm (2 inches) plus or minus 6 mm (0,25 inch).
2. Slowly close the loading door. When door is 51 mm (2 inches) from being fully closed, the door switch actuating bracket (located on the door) should depress the button and the switch arm with an audible “click.”
3. If the actuating bracket does not operate the switch at the appropriate door closure, bend the actuating switch arm in or out to achieve proper actuation.



TMB2105N

1 Switch Actuator

Figure 44

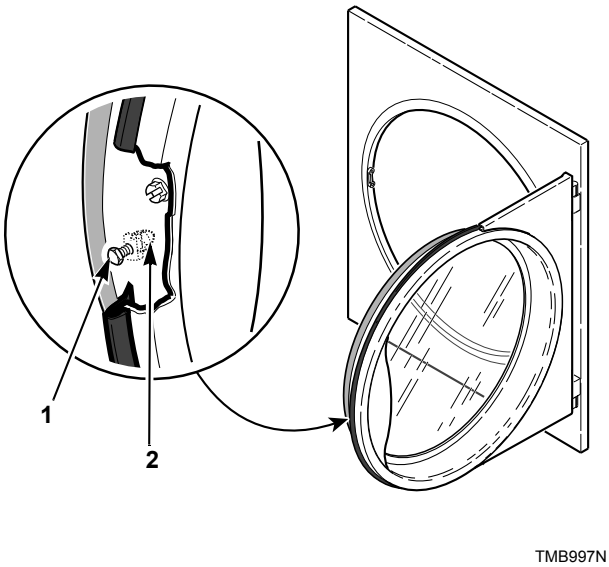
© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

Door Strike

The door strike must be adjusted to have sufficient tension to hold loading door closed against force of the load tumbling against it. There is proper adjustment of pull force when 35.6 N – 66.7 N (8 to 15 pounds) is required to open door.

If adjustment is required, refer to *Figure 45* and proceed as follows:

To adjust, open door, loosen acorn nut, and turn door strike screw in or out as required. Retighten acorn nut.



1 Door Strike Screw
2 Acorn Nut

Figure 45

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

Maintenance

Daily

1. Inspect the area surrounding tumble dryers, remove all combustible materials, including lint, before operating the machines.
2. Check cylinder for foreign objects to avoid damage to clothing and equipment.
3. Clean lint from lint compartment and screen to maintain proper airflow and avoid overheating.

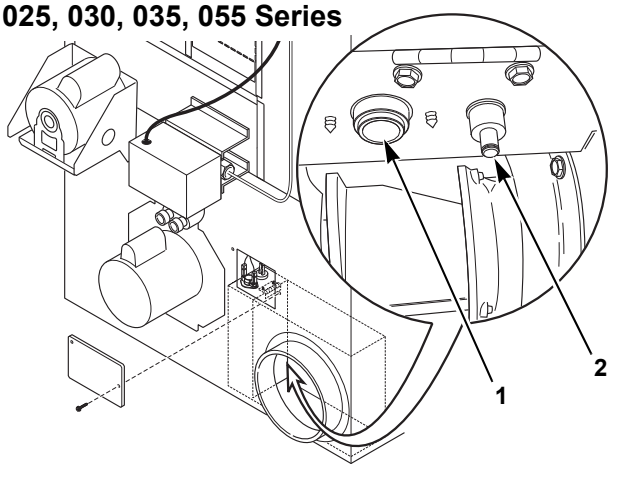
WARNING

To reduce the risk of serious injury, do not open the lint panel while the tumble dryer is in operation. Before cleaning the lint screen, open tumble dryer door and allow cylinder to completely stop.

W410R1

   a. Open the lint panel/lint drawer.
   b. Remove all accumulated lint in the lint compartment area. Lightly brush any lint that may be left on the lint screen.
   c. Be sure the lint screen is not torn.
   d. The lint screen is designed to completely cover the entire opening in the lint screen panel. Be sure that it does so.
   e. Wipe lint off of the cabinet high limit thermostat and thermistor. Refer to *Figure 46*.
   f. Replace the lint compartment panel on the tumble dryer ensuring a tight fit, and lock if applicable.
4. At end of day, clean the machine's top, front and side panels with mild detergent. Rinse with clean water. DO NOT use products that contain alcohol on the control panel.

025, 030, 035, 055 Series

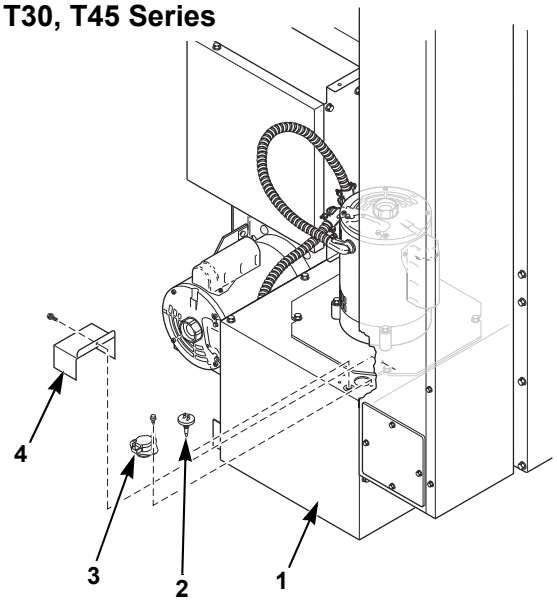


TMB2253N

1	Cabinet High Limit Thermostat
2	Thermistor

Figure 46

T30, T45 Series



TMB2116N

1	Blower Housing
2	Thermistor
3	Cabinet Thermostat
4	Guard

Figure 47

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

Monthly

1. Remove lint and debris from inside exhaust duct to maintain proper airflow and avoid overheating.
   a. Remove external duct and duct access covers, if present.
   b. Clean inside of duct with a vacuum.
   c. Clean dampers and make sure they operate freely.
   d. Replace duct and all access covers before returning tumble dryer to operation.
2. Ensure even lint distribution over lint screen.
3. Carefully wipe any accumulated lint off the cabinet high limit thermostat and thermistor, including perforated cover.
4. Clean lint and debris buildup from blower to maintain proper airflow.

Quarterly

1. Use a vacuum to clean air vents on drive motors.
2. Use a vacuum to clean lint from rear limit thermostat cover.
3. Check and clean steam coils, if applicable.
4. Check flow of combustion and ventilation air.
5. Check belt tension and condition. Replace worn or cracked belts.

Bi-Annually

1. Check mounting hardware for any loose nuts, bolts or screws.
2. Check gas connections for leakage.
3. Check for loose electrical connections.
4. Check steam connections for looseness and leakage.
5. Remove all front panels and vacuum, including coin drop mechanisms.
6. Check cylinder and front panel seals.
7. Inspect cabinet and inner panels for any damage, replace or repair as needed.
8. Clean burner tubes and orifice area of any lint buildup.

Annually

1. Remove cylinder. Use a vacuum to clean lint from area around rear seal and idler assembly and check for wear.
2. Remove burner tubes and clean using water and a brush.

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

Before You Call for Service

Won't Start	Won't Heat	Clothes Not Dry	Possible Reason – Corrective Actions
•			Insert correct coin(s) or valid card if applicable.
•			Close the loading door tightly.
•			Close lint panel tightly.
•			Press the PUSH-TO-START or START pad/button.
•			Be sure power cord is plugged all the way into the electrical outlet.
•			Drying timer is in OFF position.
•			Check the main fuse and circuit breaker.
•			Check fuses located in the machine.
	•		Insufficient airflow.
	•		Gas shut-off valve in OFF position.
	•		Are controls properly set?
	•		Broken drive belt. Call the service person.
	•	•	Tumble Dryer is in Cool Down Mode.
	•	•	Lint screen clogged. Clean lint screen.
	•	•	Exhaust duct to outside is blocked. Clean out.

Removing Tumble Dryer from Service

If the tumble dryer is to be removed from service, perform the following steps where applicable:

- Turn off electrical supply external to machine.
- Turn off electrical disconnect on machine.
- Turn off gas supply external to machine.
- Turn off manual gas shut-off valve on machine.
- Turn off steam supply external to machine.
- Remove all electric, gas and steam connections.

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT

Disposal of Unit

This appliance is marked according to the European directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Refer to *Figure 48*. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. Ensuring this product is disposed of correctly will help prevent potential negative consequences for the environment and human health which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact the local city office, household waste disposal service, or the source from which the product was purchased.

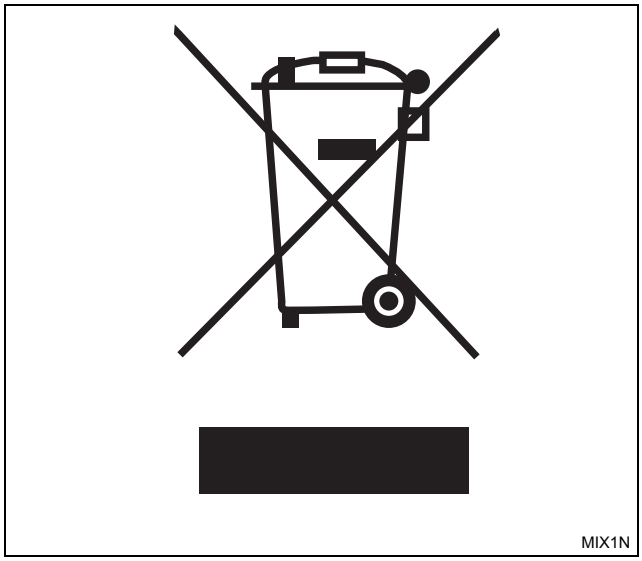


Figure 48

© Published by permission of the copyright owner – DO NOT COPY or TRANSMIT