

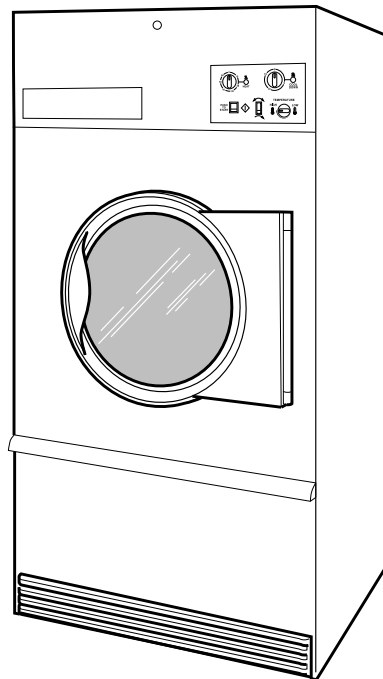
Tumble Dryers

50 Pound Capacity

75 Pound Capacity

Starting Serial No. 0904004427

Refer to Page 5 for Model Identification



TMB795C

Keep These Instructions for Future Reference.

(If this machine changes ownership, this manual must accompany machine.)



Installation must conform with local codes or, in the absence of local codes, with:

In the U.S.A., installation must conform to the latest edition of the American National Standard Z223.1/ NFPA 54 “National Fuel Gas Code” and Standard ANSI/NFPA 70 “National Electric Code.”

In Canada, installation must comply with Standards CAN/CSA-B149.1 or Natural Gas and Propane Installation Code and CSA C22.1, latest edition, Canadian Electric Code, Part I.

In Australia and New Zealand, installation must comply with the Gas Installations Standard AS/NZS 5601 Part 1: General Installations.



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

- 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

FOR YOUR SAFETY

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

W053

The following information applies to the state of Massachusetts, USA.

- This appliance can only be installed by a Massachusetts licensed plumber or gas fitter.
- This appliance must be installed with a 36 inch (91 cm) long flexible gas connector.
- A "T-Handle" type gas shut-off valve must be installed in the gas supply line to this appliance.
- This appliance must not be installed in a bedroom or bathroom.

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Introduction

Model Identification

Information in this manual is applicable to these models:

	Gas			Steam/Thermal Oil		Electric	
50 Pound	CA050L	DR55G2-BT050L	ST050L	CT050S	IPD50S2-IT050S	CT050E	
	CA050N	DR55G2-BT050N	ST050N	CT050T	IPD50S2-IT050T	CU050E	
	CT050L	DR55G2-BU050L	SU050L	CU050S	ST050S	DR50E2-BT050E	
	CT050N	DR55G2-BU050N	SU050N	CU050T	ST050T	DR50E2-BU050E	
	CU050L	HA050L	UA050L	DR50S2-BT050S	SU050S	DR55E2-BT050E	
	CU050N	HA050N	UA050N	DR50S2-BT050T	SU050T	DR55E2-BU050E	
	DR50G2-BA050L	HT050D	UT050L	DR50S2-BU050S	UT050S	HT050E	
	DR50G2-BA050N	HT050L	UT050N	DR50S2-BU050T	UT050T	HU050E	
	DR50G2-BT050D	HT050N	UU050L	DR55S2-BT050S	UU050S	IPD50E2-IT050E	
	DR50G2-BT050L	HU050L	UU050N	DR55S2-BT050T	UU050T	ST050E	
	DR50G2-BT050N	HU050N	YT050L	DR55S2-BU050S	YT050S	SU050E	
	DR50G2-BU050L	IPD50G2-IT050L	YT050N	DR55S2-BU050T	YT050T	UT050E	
	DR50G2-BU050N	IPD50G2-IT050N	YU050L	HT050S	YU050S	UU050E	
	DR55G2-BA050L	SA050L	YU050N	HT050T	YU050T	YT050E	
	DR55G2-BA050N	SA050N		HU050S		YU050E	
	DR55G2-BT050D	ST050D		HU050T			
	75 Pound	CA075L	DR80G2-BT075N	STF75L	CT075S	IPD75S2-IT075S	CT075E
		CA075N	DR80G2-BU075L	STF75N	CT075T	IPD75S2-IT075T	CU075E
CT075L		DR80G2-BU075N	SU075L	CU075S	ST075S	DR75E2-BT075E	
CT075N		HA075L	SU075N	CU075T	ST075T	DR75E2-BU075E	
CU075L		HA075N	UA075L	DR75S2-BT075S	SU075S	DR80E2-BT075E	
CU075N		HT075D	UA075N	DR75S2-BT075T	SU075T	DR80E2-BU075E	
DR75G2-BA075L		HT075L	UT075L	DR75S2-BU075S	UT075S	HT075E	
DR75G2-BA075N		HT075N	UT075N	DR75S2-BU075T	UT075T	HU075E	
DR75G2-BT075D		HU075L	UTF75L	DR80S2-BT075S	UU075S	IPD75E2-IT075E	
DR75G2-BT075L		HU075N	UTF75N	DR80S2-BT075T	UU075T	ST075E	
DR75G2-BT075N		IPD75G2-IT075L	UU075L	DR80S2-BU075S	YT075S	SU075E	
DR75G2-BU075L		IPD75G2-IT075N	UU075N	DR80S2-BU075T	YT075T	UB075E	
DR75G2-BU075N		SA075L	YT075L	HT075S	YU075S	UT075E	
DR80G2-BA075L		SA075N	YT075N	HT075T	YU075T	UU075E	
DR80G2-BA075N		ST075D	YU075L	HU075S		YT075E	
DR80G2-BT075D		ST075L	YU075N	HU075T		YU075E	
DR80G2-BT075L		ST075N					

(see next page for control suffixes)

Introduction

Includes models with the following control suffixes:

3B – reversing DX4 vended	KB – reversing single coin	RD – reversing DMP OPL
3O – DX4 OPL	KC – single coin	RE – reversing OPL electronic
3V – DX4 vended	KW – reversing prep for coin	RM – reversing OPL micro
3W – reversing DX4 prep for coin	KX – prep for coin	RQ – reversing dual digital timer
3X – DX4 prep for coin	KY – prep for card	RU – reversing UniLinc OPL
BB– reversing basic electronic, coin	KZ – reversing prep for card	SD – single drop
BC – basic electronic, coin	LB – reversing network adaptable coin	SX – single drop, prep for coin
BL – basic electronic, central pay	LC – network adaptable coin	UO – UniLinc OPL
BW – reversing basic electronic, prep for coin	LW – reversing network adaptable, prep for coin	WB – reversing network ready coin
BX – basic electronic, prep for coin	LX – network adaptable, prep for coin	WC – network ready coin
BY – basic electronic, prep for card	LY – network adaptable, prep for card	WW – reversing network ready, prep for coin
BZ – reversing basic electronic, prep for card	LZ – reversing network adaptable, prep for card	WX – network ready, prep for coin
DO – DMP OPL	OM – OPL micro	WY – network ready, prep for card
DV – DMP vended	QT – dual digital timer	WZ – reversing network ready, prep for card
DX – DMP prep for coin	R3 – reversing DX4 OPL	
EO – OPL electronic		

Customer Service

If literature or replacement parts are required, contact the source from which the machine was purchased or contact Alliance Laundry Systems at (920) 748-3950 for the name and address of the nearest authorized parts distributor.

For technical assistance, call (920) 748-3121.

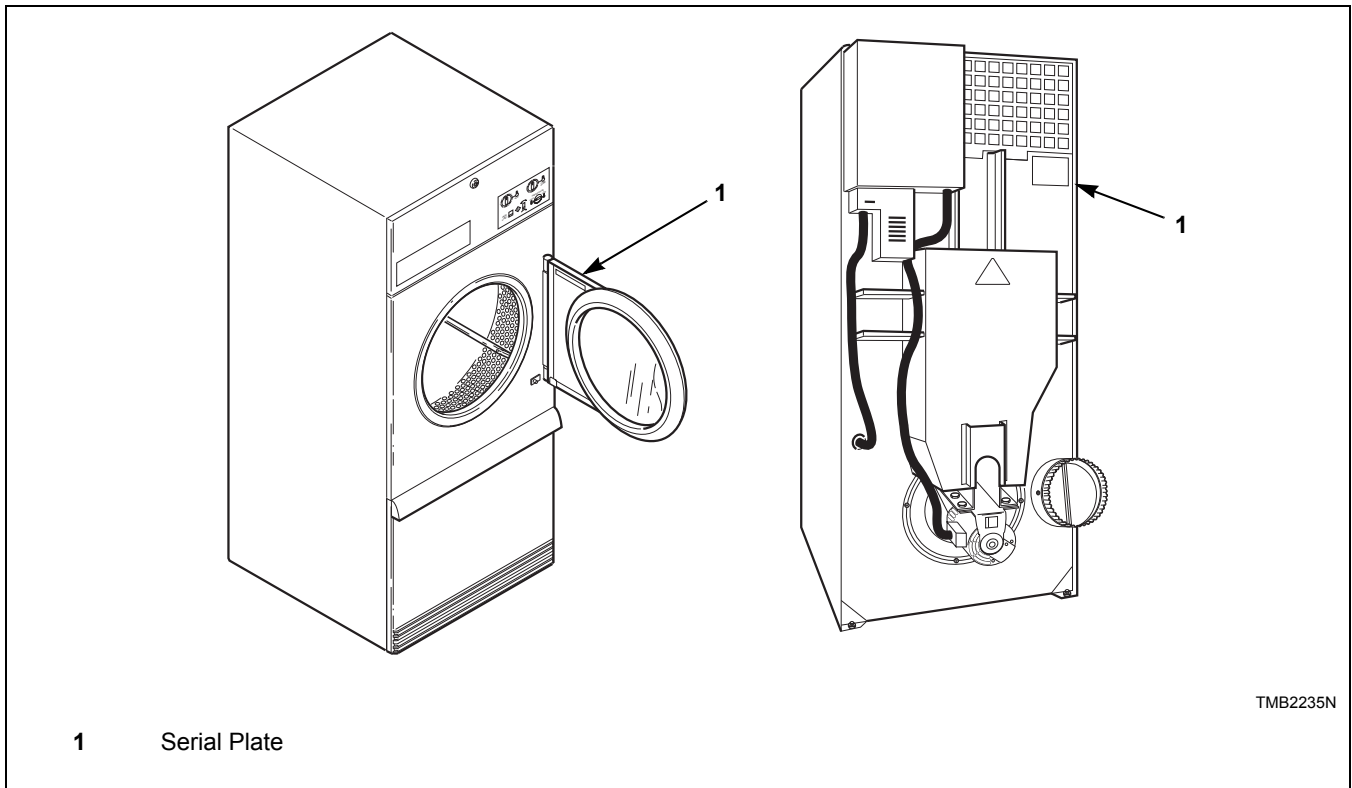
Wiring Diagram

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

The wiring diagram part number is in the lower portion of the electrical data on the serial plate.

Serial Plate Location


When calling or writing for information about your product, be sure to mention model and serial numbers. Model and serial numbers are found on serial plate on the rear of machine and inside door.





Conversion Table						
Multiply	By	To Obtain		Multiply	By	To Obtain
Btu	0.252	kCal		Pounds/sq. inch	0.06895	Bars
Btu	1055	Joules		Pounds/sq. inch	0.070	kg/sq. cm
Inch	25.4	Millimeters		Pounds (lbs.)	0.454	Kilograms
Inches W.C.	0.036	Pounds/sq. inch		Boiler Horsepower	33,479	Btu/hr.
Inches W.C.	0.249	kPa		Boiler Horsepower	34.5	lbs. steam/hr.
lb./inch ² (psi)	6.895	kPa		CFM	0.471	liters/second
ft ³	28.32	Liters		kW	3414	Btu/hr.

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.	
<small>W051R1</small>	

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.

Save These Instructions

Important Safety Instructions

	WARNING
<p>Hazardous Voltage. Can cause shock, burn or cause death. Allow machine power to remain off for two minutes prior to working in and around AC inverter drive.</p>	
W359	

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 on or in the tumble dryer. This appliance is not intended for use by young children or infirm persons without supervision. Young children should be supervised to ensure that they do not play with the appliance.
5. Before the tumble dryer is removed from service or discarded, remove the door to the drying compartment and the door to the lint compartment.
6. Do not reach into the tumble dryer if the cylinder is revolving.
7. Do not install or store the tumble dryer where it will be exposed to water and/or weather.
8. Do not tamper with the controls.
9. 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.
10. Do not use fabric softeners or products to eliminate static unless recommended by the manufacturer of the fabric softener or product.
11. To reduce the risk of fire, **DO NOT DRY** plastics or articles containing foam rubber or similarly textured rubberlike materials.
12. Always clean the lint filter daily.
13. Keep area around the exhaust opening and adjacent surrounding area free from the accumulation of lint, dust and dirt.
14. The interior of the tumble dryer and the exhaust duct should be cleaned periodically by qualified service personnel.
15. If not installed, operated and maintained in accordance with the manufacturer's instructions or if there is damage to or mishandling of this product's components, use of this product could expose you to substances in the fuel or from fuel combustion which can cause death or serious illness and which are known to the State of California to cause cancer, birth defects or other reproductive harm.
16. Tumble dryer will not operate with the loading door open. **DO NOT** bypass the door safety switch to permit the tumble dryer to operate with the door open. The tumble dryer will stop tumbling when the door is opened. Do not use the tumble dryer if it does not stop tumbling when the door is opened or starts tumbling without pressing or turning the START mechanism. Remove the tumble dryer from use and call for service.
17. Tumble dryer will not operate with lint panel open. **DO NOT** bypass lint panel safety switch to permit the tumble dryer to operate with the lint panel open.
18. Do not put articles soiled with vegetable or cooking oil in the tumble dryer, as these oils may not be removed during washing. Due to the remaining oil, the fabric may catch on fire by itself.
19. To reduce the risk of fire, **DO NOT** put clothes which have traces of any flammable substances such as machine oil, flammable chemicals, thinner, etc. or anything containing wax or chemicals such as in mops and cleaning cloths, or anything dry-cleaned at home with dry-cleaning solvent in the tumble dryer.
20. Use the tumble dryer only for its intended purpose, drying fabrics.
21. **ALWAYS** disconnect and lockout the electrical power to the tumble dryer before servicing. Disconnect power by shutting off appropriate breaker or fuse.

Safety Information

22. Install this tumble dryer according to the **INSTALLATION INSTRUCTIONS**. All connections for electrical power, grounding, and gas supply must comply with local codes and be made by licensed personnel when required.
23. Remove laundry immediately after tumble dryer stops.
24. Always read and follow manufacturer's instructions on packages of laundry and cleaning aids. Heed all warnings or precautions. To reduce the risk of poisoning or chemical burns, keep them out of reach of children at all times (preferably in a locked cabinet).
25. 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.
26. Always follow the fabric care instructions supplied by the garment manufacturer.
27. Never operate the tumble dryer with any guards and/or panels removed.
28. **DO NOT** operate the tumble dryer if it is smoking, grinding, has missing or broken parts.
29. **DO NOT** bypass any safety devices.
30. Solvent vapors from dry-cleaning machines create acids when drawn through the heater of the drying unit. These acids are corrosive to the tumble dryer as well as to the laundry load being dried. Be sure make-up air is free of solvent vapors.
31. Failure to install, maintain, and/or operate this machine according to the manufacturer's instructions may result in conditions which can produce bodily injury and/or property damage.



WARNING

To reduce the risk of serious injury, install lockable door(s) to prevent public access to rear of tumble dryers.

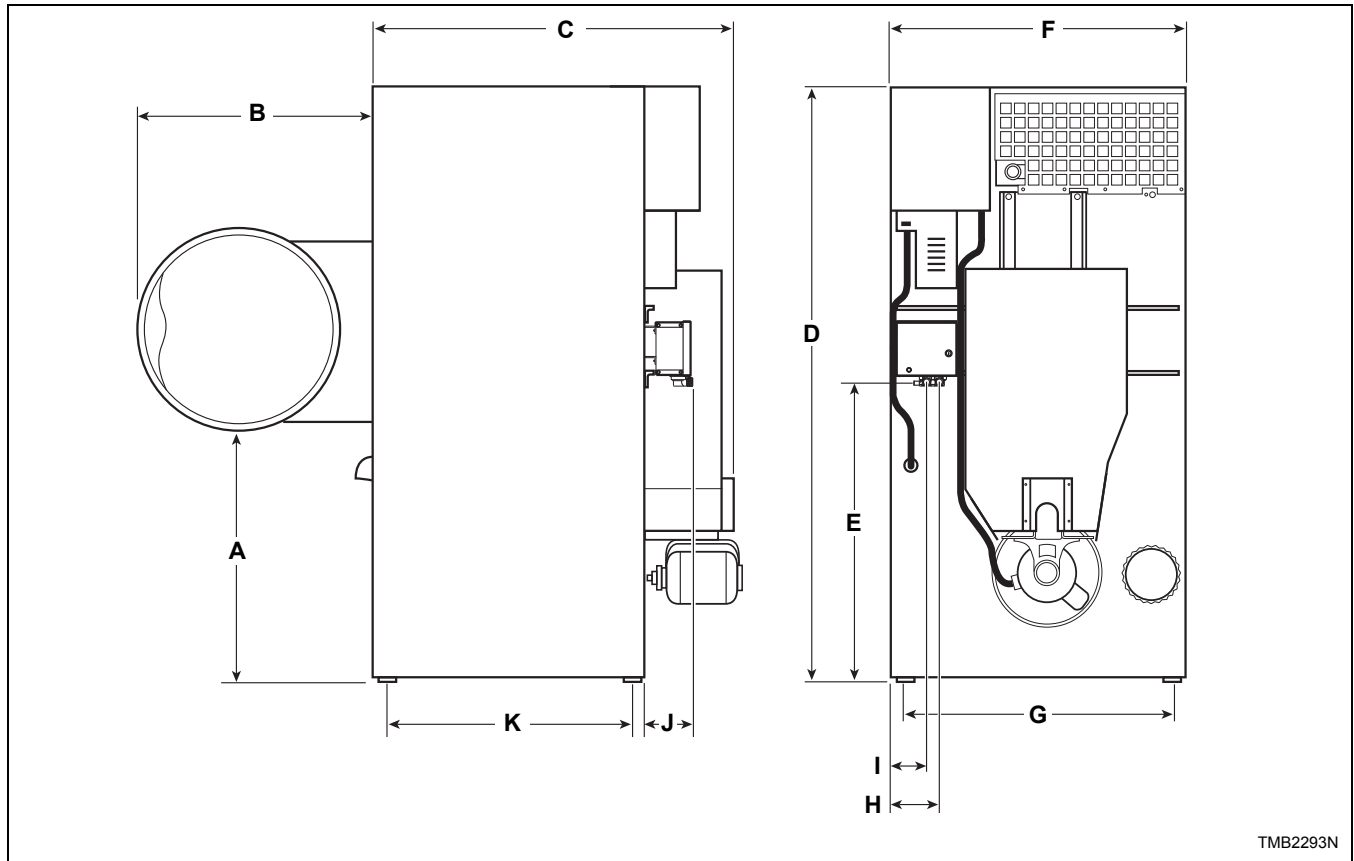
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Specifications and Dimensions

Specifications	50 Pound	75 Pound	F75
Noise level measured during operation at operator position of 3.3 feet (1 meter) in front of machine and 5.2 feet (1.6 meters) from floor.	60 dBA	65 dBA	67 dBA
Net Weight (approximate): Pounds (kg)	545 (247)	615 (279)	710 (322)
Standard Packaging Weight: Pounds (kg)	602 (273)	677 (307)	772 (350)
Standard Packaging Shipping Dimensions: Inch (mm)	41.5 x 52.1 x 81 (1054 x 1323 x 2057)	41.5 x 56.4 x 81 (1054 x 1433 x 2057)	41.5 x 56.4 x 81 (1054 x 1433 x 2057)
Slat Crate Packaging Weight: Pounds (kg)	669 (303)	742 (337)	837 (380)
Slat Crate Shipping Dimensions: Inch (mm)	44.5 x 55 x 87.75 (1130 x 1397 x 2229)	44.5 x 59.25 x 87.75 (1130 x 1505 x 2229)	44.5 x 59.25 x 87.75 (1130 x 1505 x 2229)
Cylinder Size: Inches (mm)	37 x 30 (940 x 762)	37 x 36 (940 x 914)	37 x 36 (940 x 914)
Cylinder Capacity (dry weight): Pounds (kg)	50 (22.7)	75 (34)	75 (34)
Air Outlet Diameter: Inches (mm)	8 (203)	8 (203)	10 (254)
Maximum Static Back Pressure: W.C.I. (mbar)	0.5 (1.3)	0.5 (1.3)	0.5 (1.3)
Maximum Airflow: C.F.M. (L/sec.)	750 (354)	Gas/Steam 60 Hz 920 (434) Gas/Steam 50 Hz 750 (354) Electric 750 (354)	1100 (519)
Motor Horsepower: Nonreversing Reversing Fan Cylinder	1/2 1/3 1/3	3/4 1/3 1/3	Not Applicable 1 1/3
Gas Models			
Gas Connection	1/2 in. NPT	1/2 in. NPT	3/4 in. NPT
Gas Burner Rating: Btu/hr. (Mj/hr.)	130,000 (137.2)	165,000 (174.1)	225,000 (237.4)
Electric Models			
Heating Element Rating: Kilowatts (kW)	21 kW (240 V/50 Hz) 30 kW (other voltages)	30 kW	Not Applicable
Steam Models			
Steam Connection	3/4 in. NPT	3/4 in. NPT	Not Applicable
Steam Coil Rating at 100 psig: Boiler Horsepower (Btu/hr.) (recommended operating pressure 80-100 psig)	5.1 (177,500)	6.1 (210,300)	Not Applicable

Specifications and Dimensions

Cabinet Dimensions



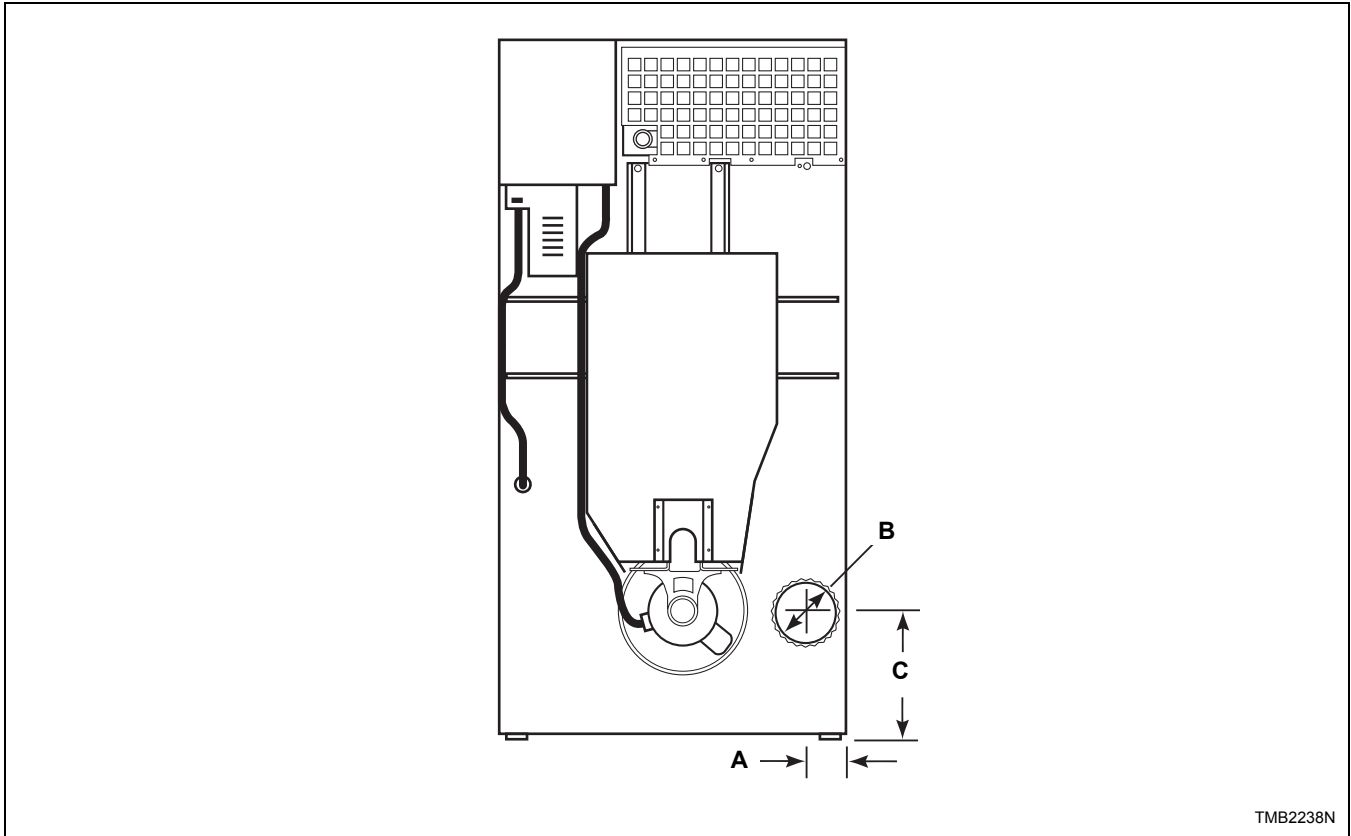
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Models	A	B	C	D	E*	F
50 Pound Gas and Electric	30.75 in. (781 mm)	33.87 in. (860 mm)	48.25 in. (1226 mm)	76.625 in. (1946 mm)	36 in. (914 mm)	38.625 in. (981 mm)
50 Pound Steam	30.75 in. (781 mm)	33.87 in. (860 mm)	48.25 in. (1226 mm)	80 in. (2032 mm)	36 in. (914 mm)	38.625 in. (981 mm)
75 Pound Gas and Electric	30.75 in. (781 mm)	33.87 in. (860 mm)	54.25 in. (1378 mm)	76.625 in. (1946 mm)	36 in. (914 mm)	38.625 in. (981 mm)
75 Pound Steam	30.75 in. (781 mm)	33.87 in. (860 mm)	54.25 in. (1378 mm)	80 in. (2032 mm)	36 in. (914 mm)	38.625 in. (981 mm)
F75 Gas	30.75 in. (781 mm)	33.87 in. (860 mm)	54.25 in. (1378 mm)	76.625 in. (1946 mm)	36 in. (914 mm)	38.625 in. (981 mm)

Models	G	H*	I*	J*	K
50 Pound Gas and Electric	33 in. (838 mm)	7.1 in. (180 mm)	5.5 in. (140 mm)	6.53 in. (166 mm)	29.5 in. (749 mm)
50 Pound Steam	33 in. (838 mm)	7.1 in. (180 mm)	5.5 in. (140 mm)	6.53 in. (166 mm)	29.5 in. (749 mm)
75 Pound Gas and Electric	33 in. (838 mm)	7.1 in. (180 mm)	5.5 in. (140 mm)	6.53 in. (166 mm)	35.5 in. (902 mm)
75 Pound Steam	33 in. (838 mm)	7.1 in. (180 mm)	5.5 in. (140 mm)	6.53 in. (166 mm)	35.5 in. (902 mm)
F75 Gas	33 in. (838 mm)	7.1 in. (180 mm)	5.5 in. (140 mm)	6.53 in. (166 mm)	35.5 in. (902 mm)

* Fire suppression system optional - may not be on machine.

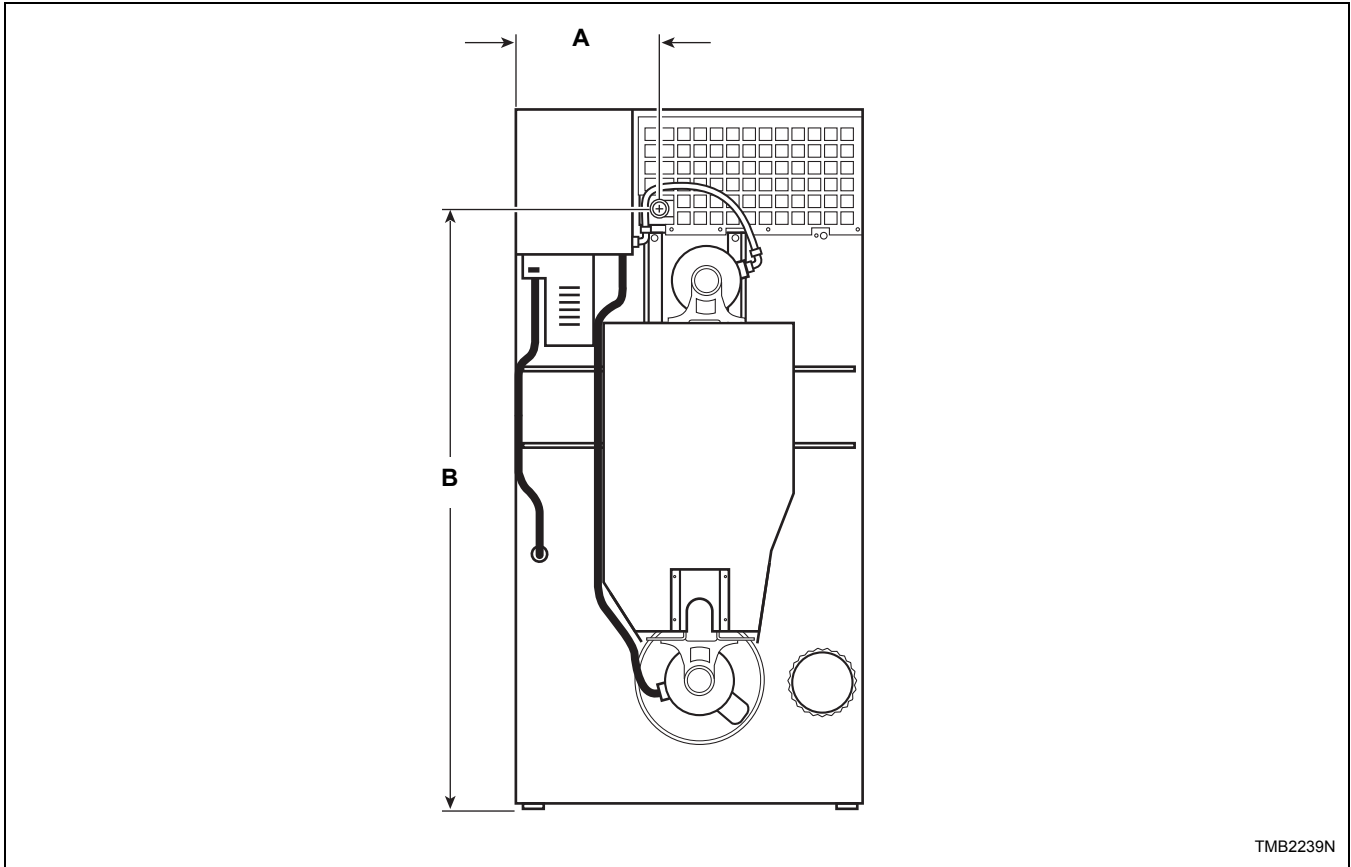
Exhaust Outlet Locations



Models	A	B	C
50/75 Pound	5.375 in. (137 mm)	8 in. (203 mm)	13.375 in. (340 mm)
F75	6.5 in. (165 mm)	10 in. (254 mm)	6.5 in. (165 mm)

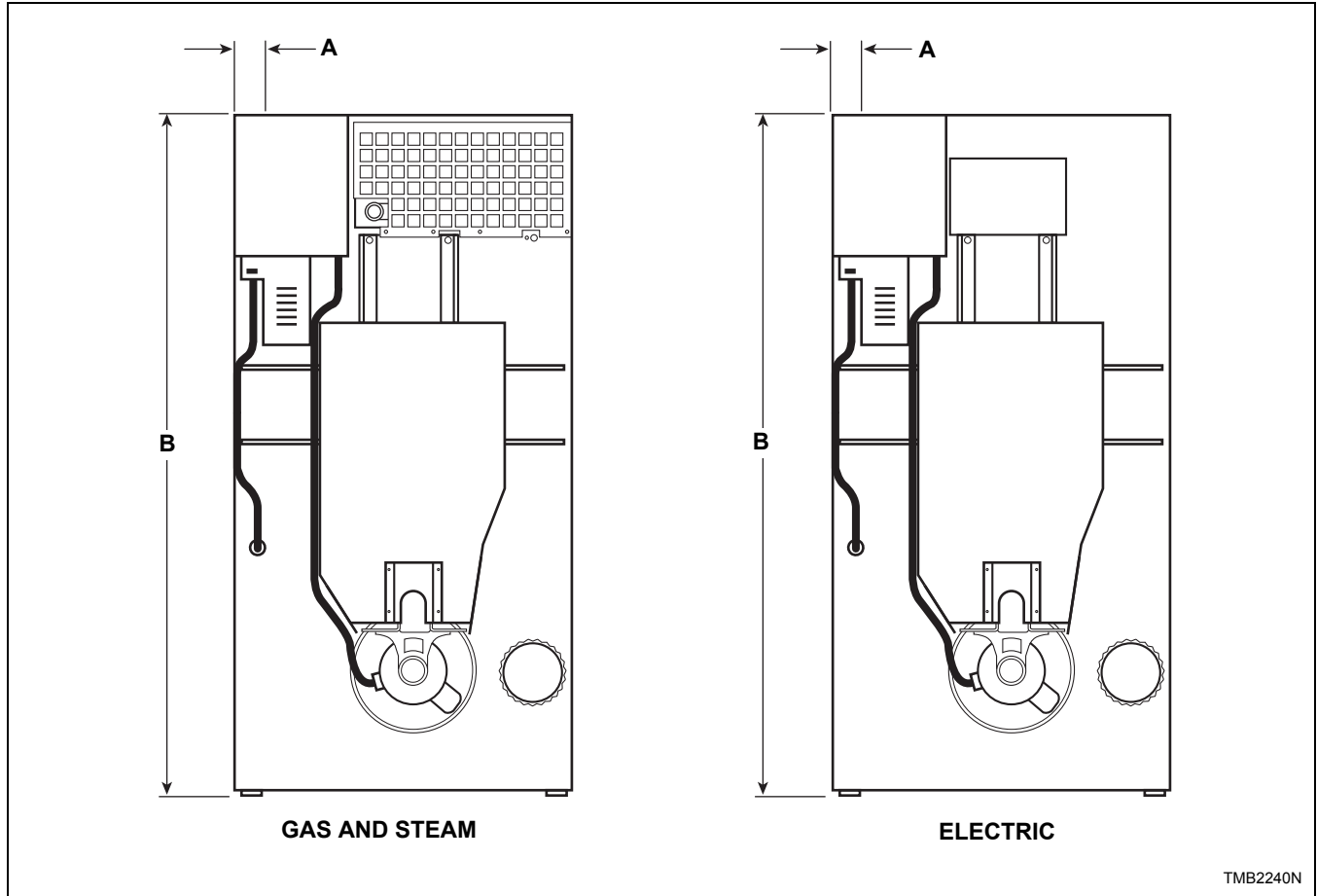
Specifications and Dimensions

Gas Connection Locations



Diameter	A	B
75 – 1/2 in. NPT	14.75 in. (375 mm)	65.75 in. (1670 mm)
F75 – 3/4 in. NPT		

Electrical Connection Locations

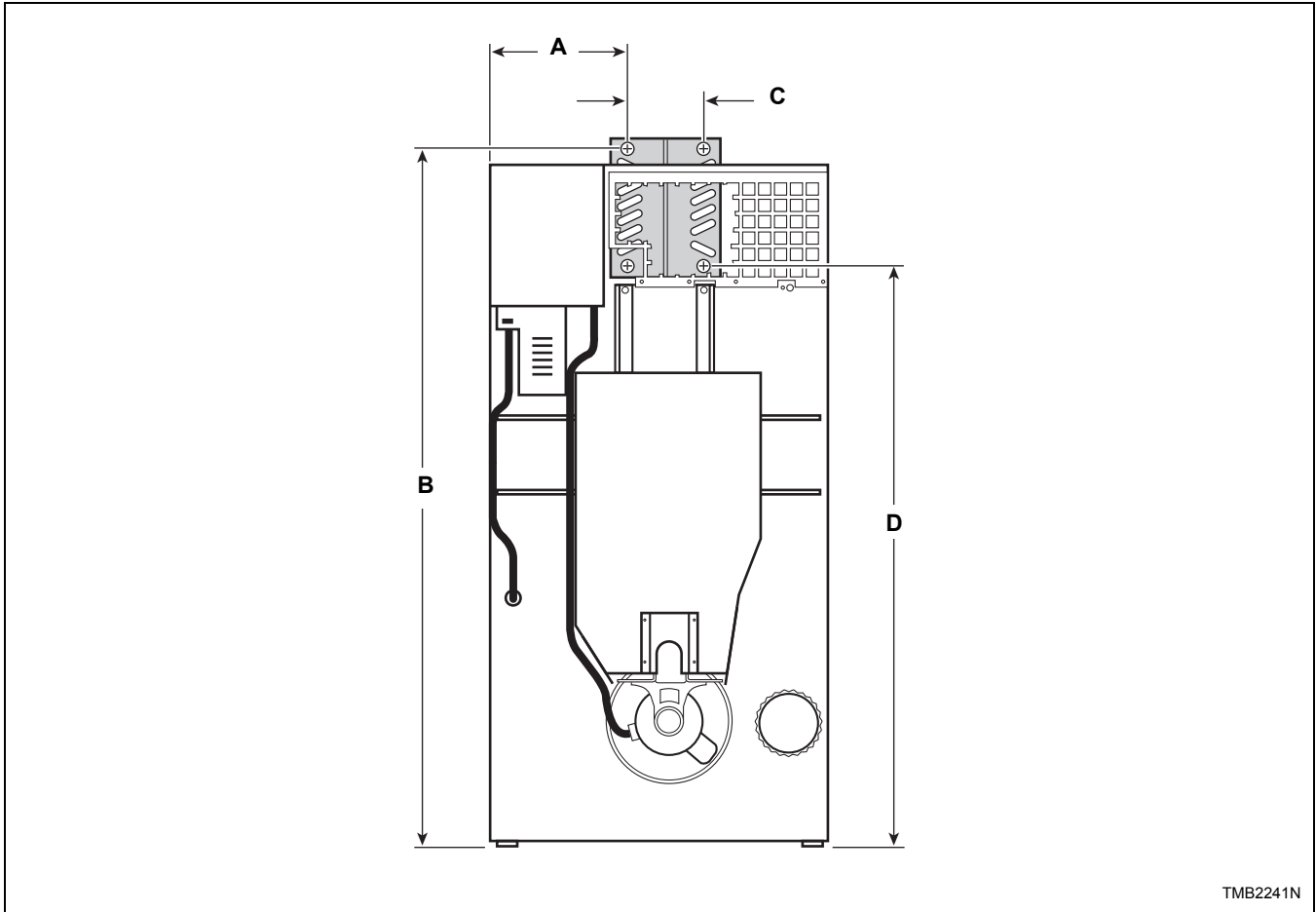


A	B
3.25 in. (83 mm)	75.5 in. (1918 mm)

NOTE: These figures are approximate dimensions only.

Specifications and Dimensions

Steam Connection Locations



Models	Diameter	A	B	C	D
50/75 Pound	3/4 in. NPT	15.5 in. (394 mm)	78.25 in. (1988 mm)	7.5 in. (190 mm)	64.75 in. (1645 mm)

Installation

Pre-Installation Inspection

Upon delivery, visually inspect the crate, carton and parts for any visible shipping damage. If the crate, carton, or cover is damaged or signs of possible damage are evident, have the carrier note the condition on the shipping papers before the shipping receipt is signed, or advise the carrier of the condition as soon as it is discovered.

Remove the crate and protective cover as soon as possible and check the items listed on the packing list. Advise the carrier of any damaged or missing articles as soon as possible. A written claim should be filed with the carrier immediately if articles are damaged or missing.

IMPORTANT: Remove the shipping tape from the two back draft dampers located in the exhaust outlet.

IMPORTANT: Warranty is void unless tumble dryer is installed according to instructions in this manual. Installation should comply with minimum specifications and requirements detailed in this manual and applicable local gas fitting regulations, municipal building codes, water supply regulations, electrical wiring regulations, and any other relevant statutory regulations. Due to varied requirements, applicable local codes should be thoroughly understood and all pre-installation work arranged for accordingly.

Materials Required (Obtain Locally)	
All Models	One Single Pole fused disconnect switch or circuit breaker on 1 Phase models. Circuit breaker on 3 Phase models.
Gas Models	One gas shut-off valve for gas service line to each tumble dryer.
Steam Models	One steam shut-off valve for steam service line to be connected upstream of solenoid steam valve. Two steam shut-off valves for each condensate return line. Flexible steam hoses with a 125 psig (pounds per square inch gauge) (8.79 kg/sq. cm) working pressure for connecting steam coils. Refer to <i>Figure 22</i> for sizing and connection configurations. Two steam traps for steam coil outlets to condensate return line. Optional – Two vacuum breakers for condensate return lines.

IMPORTANT: Keep tumble dryer area clear and free from combustible materials, gasoline and other flammable vapors and liquids.

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).

Installation


Location Requirements

The tumble dryer must be installed on a level floor. Floor covering materials such as carpeting or tile should be removed.

To assure compliance, consult local building code requirements. The tumble dryer must not be installed or stored in area where it will be exposed to water and/or weather.

IMPORTANT: DO NOT block the airflow at the rear of the tumble dryer with laundry or other articles. Doing so would prevent adequate air supply to the combustion chamber of the tumble dryer.

A typical tumble dryer enclosure is shown in *Figure 1*. Note the minimum and maximum dimensions. Local codes and ordinances must be complied with.




WARNING

To reduce the risk of serious injury, install lockable door(s) to prevent public access to rear of tumble dryers.

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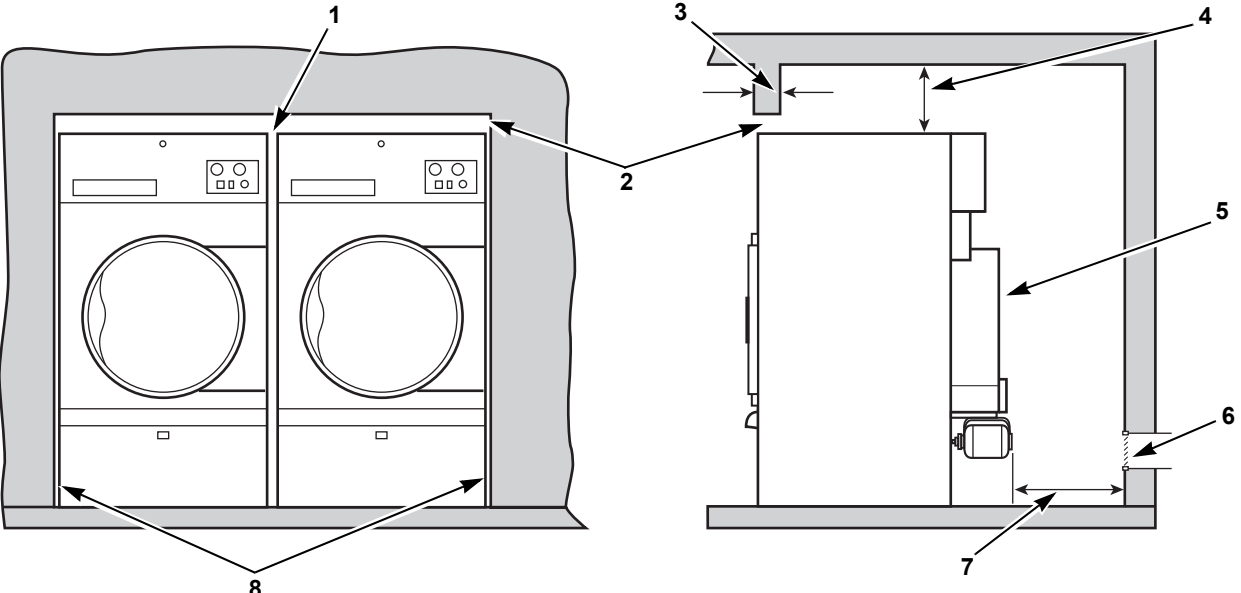
IMPORTANT: Install tumble dryers with sufficient clearance for servicing and operation, refer to *Figure 1*.



WARNING

To reduce the risk of severe injury, clearance of tumble dryer cabinet from combustible construction must conform to the minimum clearances.

W056R1



TMB2242N

NOTE: Shaded areas indicate adjacent structure.

- 1 0.5 in. (13 mm) recommended between machines for removal or installation
- 2 Allow 2-4 in. (51-102 mm) opening at top of machine to aid in removal or installation. A removable trim piece may be used to conceal the opening; zero clearance allowed for trim
- 3 4 in. (102 mm) maximum header thickness
- 4 12 in. (305 mm) minimum clearance permitted for remainder
- 5 Guard
- 6 Provision for make-up air
- 7 24 in. (610 mm) minimum, 36 in. (914 mm) recommended for maintenance purposes
- 8 0.25 in. (6 mm) recommended for removal or installation purposes, zero clearance allowed

Figure 1

Position and Level the Tumble Dryer

Remove lint panel door, and unscrew the four shipping bolts (one at each corner). Remove tumble dryer from skid.

NOTE: Do not throw bolts away – they are the leveling legs.

Remove four nuts from the literature package, and screw one fully on to each leveling leg.

Screw the four leveling legs (bolts) back into the level adjusting fittings from the bottom.

Slide tumble dryer to its permanent location. Adjust the leveling legs until the unit is level, or no more than 0.125 inch (3.18 mm) higher in the front. Refer to *Figure 2*. Tumble dryer must not rock. Lock leveling legs with nuts previously installed.

NOTE: The front of the tumble dryer should be slightly higher than the rear (approximately 0.125 inch, 3.18 mm). This will prevent the clothes, while tumbling, from wearing on the door glass gasket.

IMPORTANT: Keep tumble dryer as close to floor as possible. The unit must rest firmly on floor so weight of tumble dryer is evenly distributed.

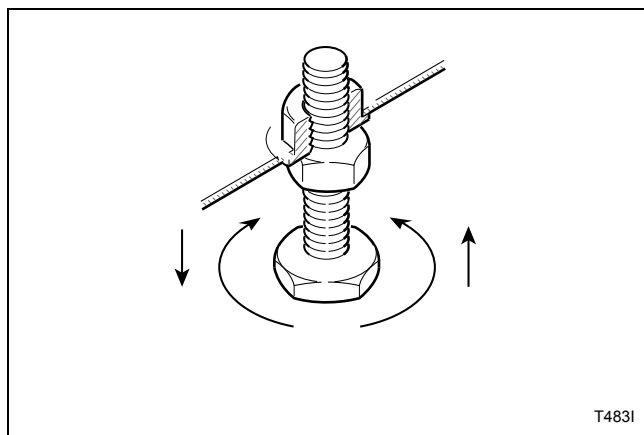


Figure 2

Bolt-On Angle Option

50 Pound Tumble dryers Only

This option allows the tumble dryer depth to be reduced to 34 5/16 inches. The tumble dryer should then fit through a 36 inch door opening (actual 34 1/2 inches).

1. Remove the loading door, access panel, front panel and lint panel. Refer to *Figure 3*.

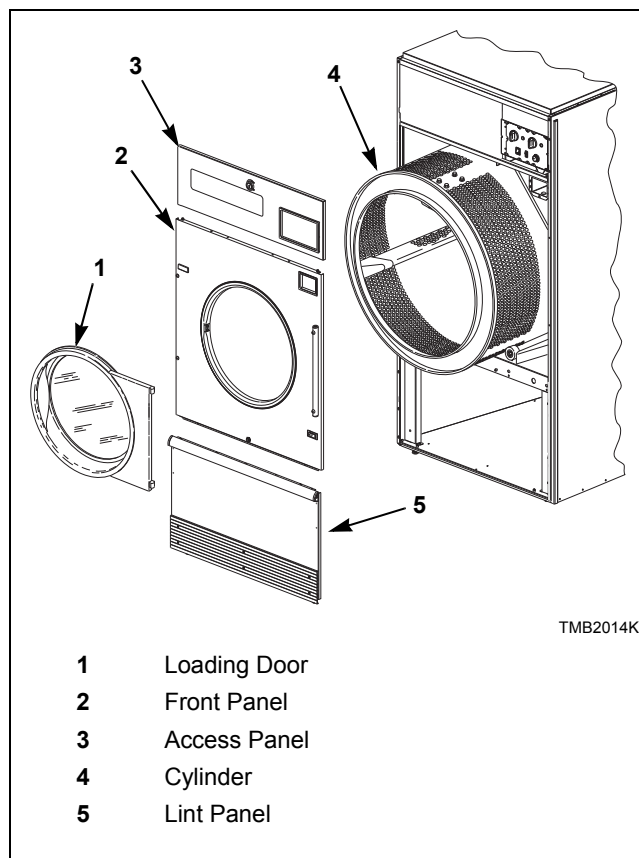


Figure 3

Installation

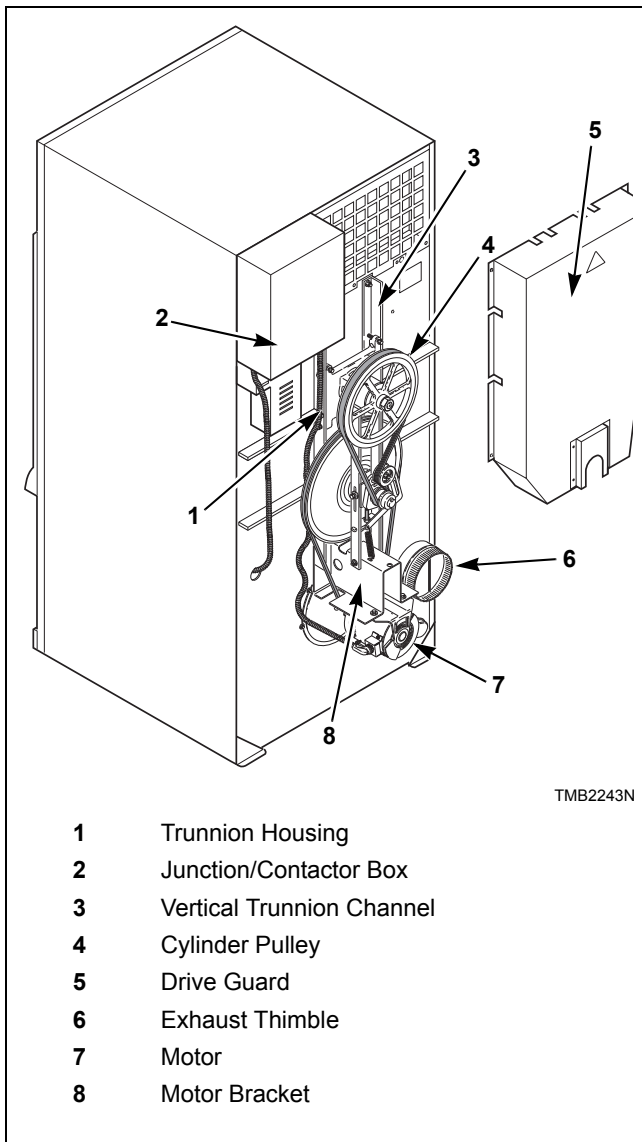


Figure 4

2. Remove the drive guard. Refer to *Figure 4*.
3. Remove the drive belts. Refer to *Figure 4*.
4. Remove the cylinder pulley and shaft key.
5. Pull the cylinder out through the front of the tumble dryer. Refer to *Figure 3*.
6. To ensure proper cylinder balance for reassembly, mark each channel's original location on cylinder head and number of shims for each channel before removal. Refer to *Figure 5*.
7. Remove the complete idler assembly.
8. Remove the trunnion housing. Refer to *Figure 4*.
9. Disconnect the motor harness(s).

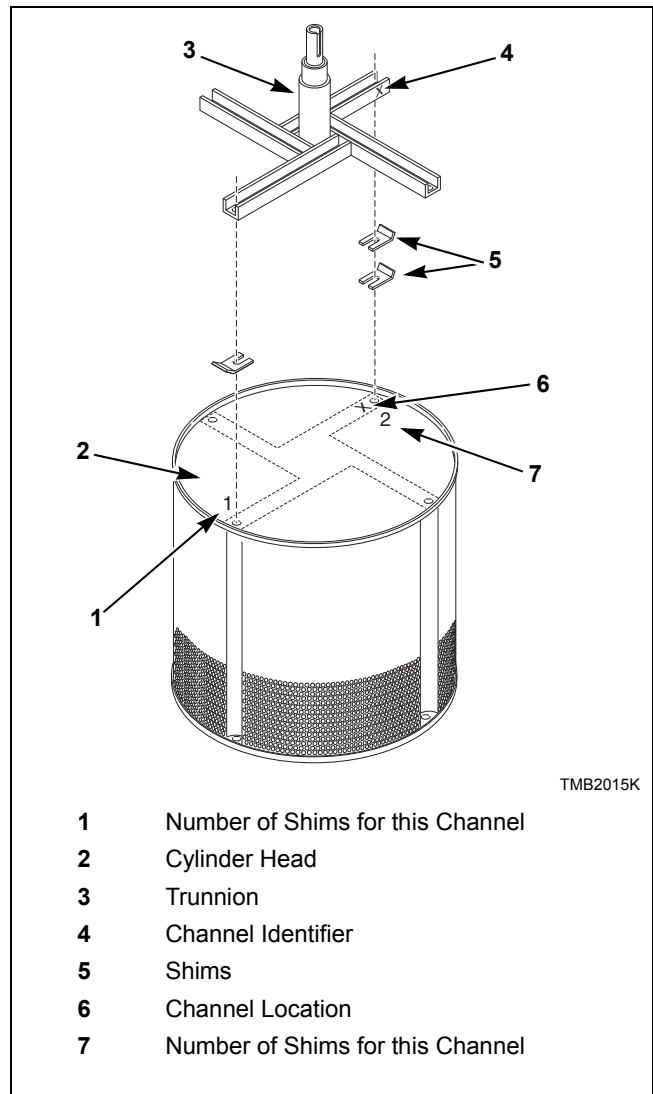


Figure 5

10. Remove the motor(s) and motor bracket(s). Refer to *Figure 4*.
11. Unbolt and remove the two vertical trunnion channels.
12. Remove the junction/contactactor box. Refer to *Figure 4*.
13. Remove the exhaust thimble.
14. The gas supply line may require removal if it extends past the rear panel. If so, disconnect the union located between the gas and shutoff valves and remove the assembly out through the front of the tumble dryer.
15. Remove the tumble dryer from the crate base and slide it through the door, sideways.
16. Refer to the appropriate troubleshooting manual, installation manual and wiring diagram to reassemble and install the tumble dryer correctly.

To Reverse the Loading Door

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

	WARNING
<p>To reduce the risk of electric shock, fire, explosion, serious injury or death:</p> <ul style="list-style-type: none"> • 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. 	
<small>W002R1</small>	

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 to access upper flange right guide lug assembly. 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.

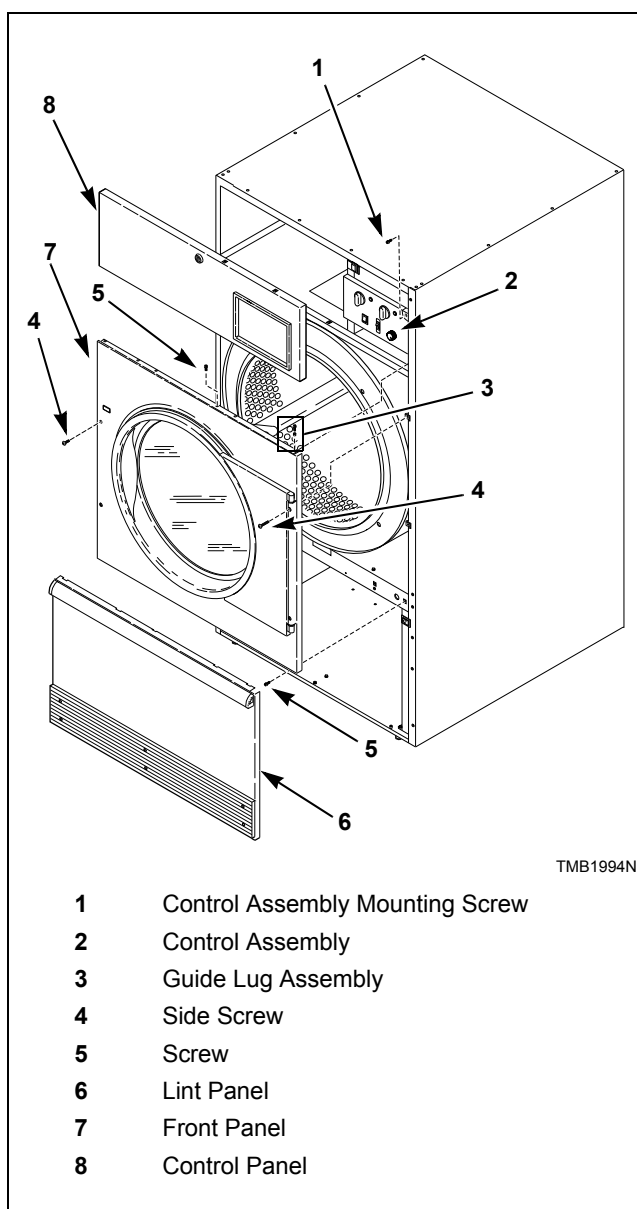


Figure 6

Installation

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, four on the top and four on the bottom. 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*.

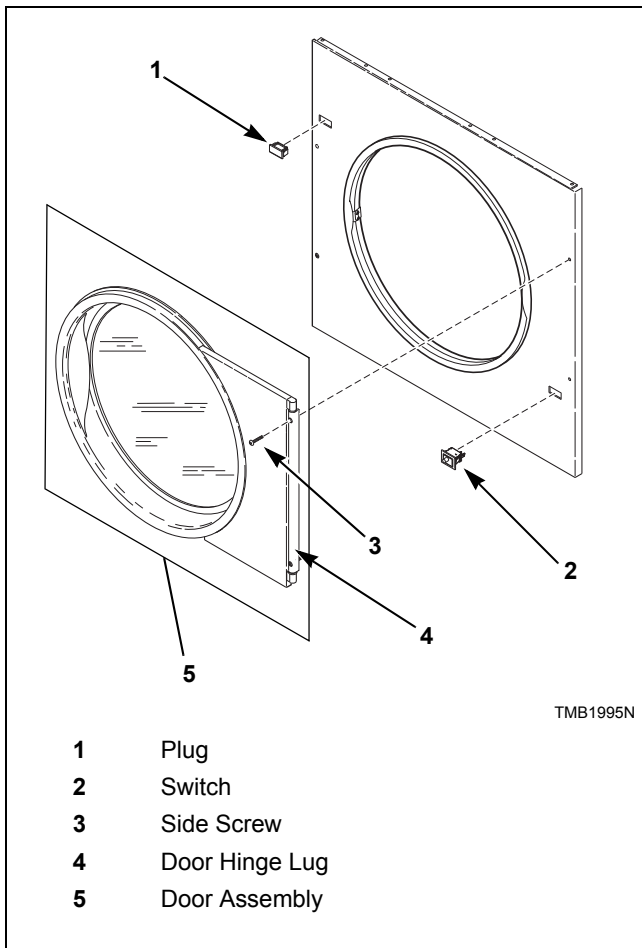


Figure 7

7. Reroute door switch harness up through top panel, along underside of front flange, through screw cable clamp, back down through top panel and into upper left quadrant of cylinder enclosure. Refer to *Figure 8*.

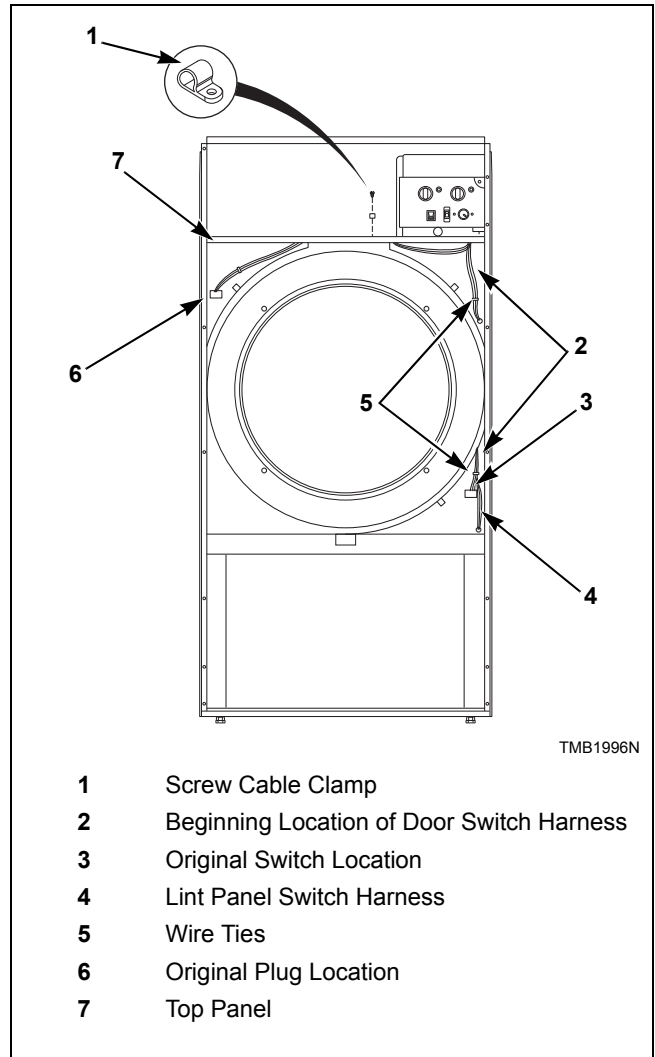


Figure 8

8. Place front panel on machine, loosely attach four bottom screws. Connect door switch harness to switch in new location. Install door assembly and four front panel side screws loosely. Refer to *Figure 9*.
9. 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.
10. Remove lint panel. Fully tighten bottom screws on front panel.
11. Reinstall top screws and guide lugs.
12. Adjust door catch if necessary to allow 7 – 15 pounds pull (0.48 – 1.03 bar) at center of handle.
13. Reinstall control assembly using mounting screws.
14. 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.

NOTE: If machine is converted back to right hand hinge operation, the door switch harness must be rerouted.

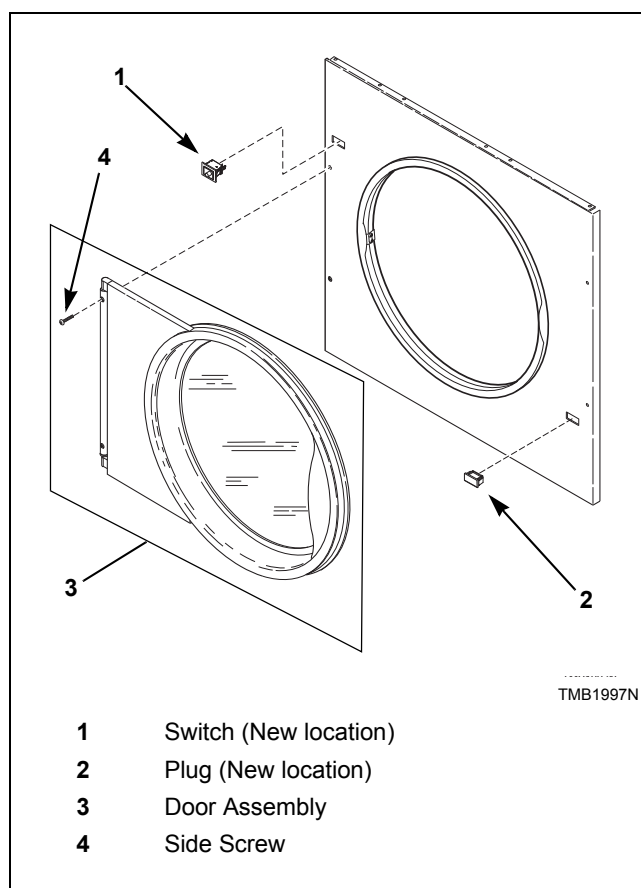


Figure 9

Installation

Before Placing Tumble Dryer into Service

1. Remove or open all panels and check accessible bolts, nuts, screws, terminals and fittings for tightness.
2. Check belt tension and adjust if necessary. Refer to *Adjustments* section.
3. Replace all panels and guards.
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 2 inches (51 mm). 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.

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.

	Prepurge Time (seconds)	Trial for Ignition (seconds)	Reset Lockout Condition By:
Australia	18	10	Press reset button
CE	18	10	Press reset button
All Others	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 1.5 inches (38 mm).

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 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 10*.

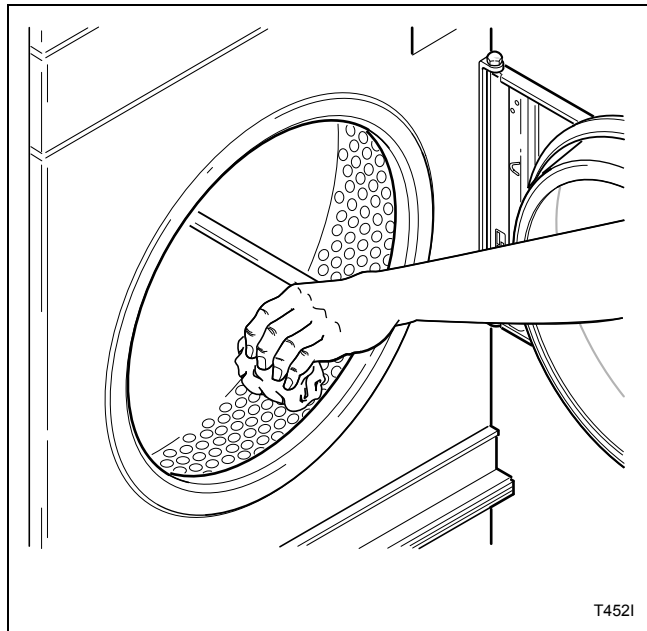


Figure 10


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.

Required for CE Models Only

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).

Installing CE Gas Drying Tumble Dryers

	WARNING
<p>To reduce the risk of electric shock, fire, explosion, serious injury or death:</p> <ul style="list-style-type: none"> • 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. 	
<small>W002R1</small>	

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 1000 Btu/cu. ft. (8914 kcal/m³), or L.P. Gas 2500 Btu/cu. ft. (22,250 kcal/m³), in the countries of GB/IE/PT/ES/IT/GR/LU/CH. 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

Machines configured for Natural Gas (regulator/governor) may be converted to L.P. Gas (not regulated/no governor) with block-open kit, Part No. M400763.

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

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*.

Installation

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	8.9	050 075	3.7 3.6	2 3	M401000 M401014
	L.P. Gas	B/P	30	No Governor	050 075	2.1 2.0	2 3	M401003 M400999
DE**	Natural Gas	E	20	8.9	050 075	3.7 3.6	2 3	M401000 M401014
		LL	25	12.6	050 075	3.7 3.6	2 3	M401000 M401014
	L.P. Gas	B/P	30	No Governor	050 075	2.1 2.0	2 3	M401003 M400999
		B/P	50	28.5	050 075	2.1 2.0	2 3	M401003 M400999
NL	Natural Gas	L	25	12.6	050 075	3.7 3.6	2 3	M401000 M401014
	L.P. Gas	B/P	30	No Governor	050 075	2.1 2.0	2 3	M401003 M400999
BE/FR*	Natural Gas	E+	20/25	No Governor	050 075	3.0 2.9	2 3	M401017 N/A
	L.P. Gas	3+	28/37	No Governor	050 075	2.1 2.0	2 3	M401003 M400999
GB/IE/PT/ES/IT/GR/LU/CH	Natural Gas	H	20	8.9	050 075	3.7 3.6	2 3	M401000 M401014
	L.P. Gas	3+	28/37	No Governor	050 075	2.1 2.0	2 3	M401003 M400999
AT**	Natural Gas	H	20	8.9	050 075	3.7 3.6	2 3	M401000 M401014
	L.P. Gas	B/P	50	28.5	050 075	2.1 2.0	2 3	M401003 M400999
CY/IS/MT	L.P. Gas	B/P	30	No Governor	050 075	2.1 2.0	2 3	M401003 M400999
HU	Natural Gas	H	25	8.9	050 075	3.7 3.6	2 3	M401000 M401014
	L.P. Gas	B/P	30	No Governor	050 075	2.1 2.0	2 3	M401003 M400999
PL	Natural Gas	H	20	8.9	050 075	3.7 3.6	2 3	M401000 M401014
	L.P. Gas	3P	37	No Governor	050 075	2.1 2.0	2 3	M401003 M400999

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

N/A = Part no longer available.

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

** For L.P. Gas, Group B/P with 50 mbar supply pressure, convert using Natural Gas model, M411334 regulator spring kit and burner orifice(s).


Table 1

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

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

- 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
<p>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.</p>	
W430R1	

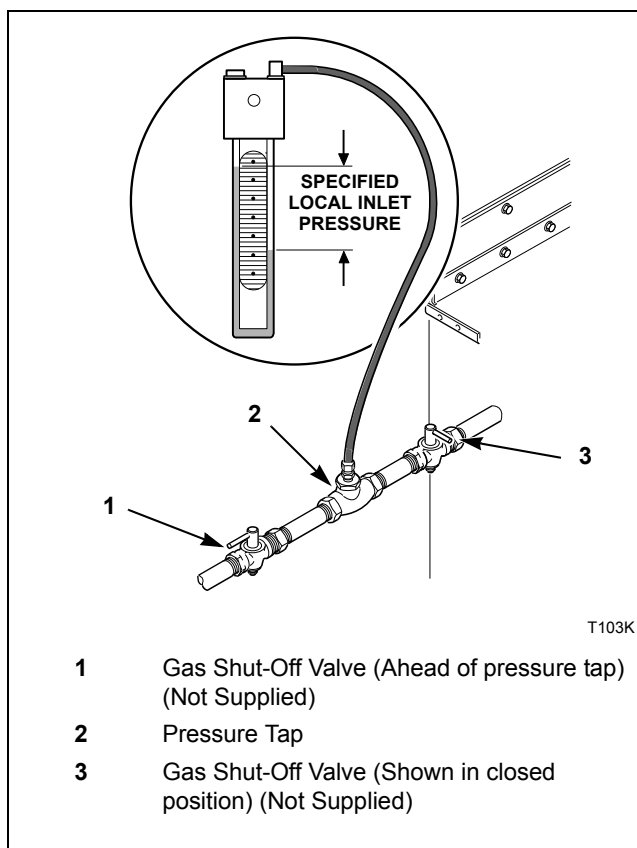


Figure 11

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 11*.
2. Follow instructions in Conversion Kit, Part No. M400763 (Johnson Part No. Y71AA-5C).

NOTE: This kit does not contain any burner orifices.

3. Replace burner orifice(s) as per *Table 1*.
4. Commission tumble dryer for use.

Installation

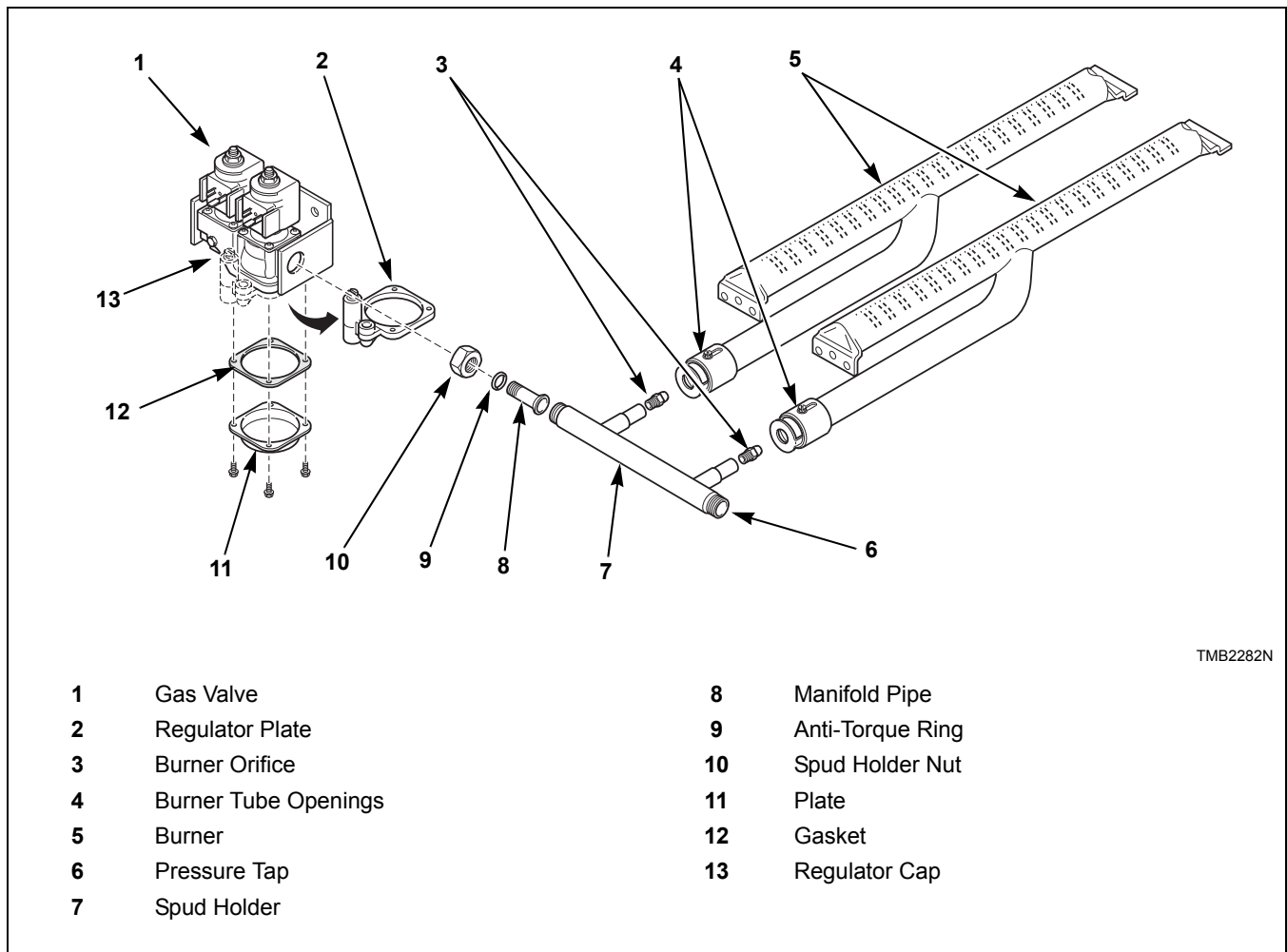


Figure 12

How to Change Burner Orifice Size

1. Disconnect electrical power from tumble dryer. Close gas shut-off valve to tumble dryer. Refer to *Figure 11*.
2. Remove spud holder. Unscrew spud holder nut near gas valve. Remove the burner orifice(s) from spud holder. Refer to *Figure 12*.
3. Install the new, correct burner orifice(s). Refer to *Figure 13* and *Table 1*. Torque each to 9 – 10 Nm.
4. Reinstall spud holder assembly to gas valve, making certain burner orifice(s) are in line with burner tube opening. Refer to *Figure 13*.
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 12*.
2. Remove screw plug from pressure tap.
3. Connect a “U”-tube manometer (or similar pressure gauge) to the burner orifice (manifold) pressure 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 12*.
5. Commission tumble dryer for use.

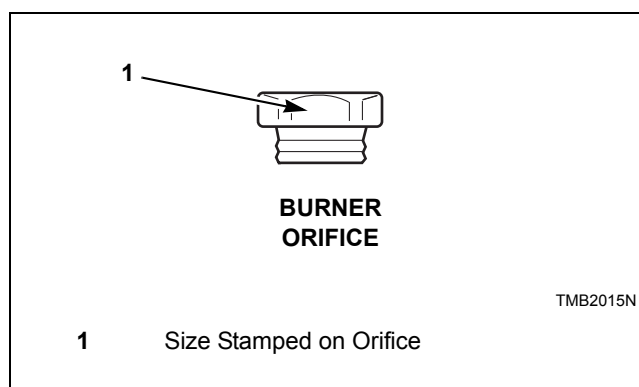



Figure 13

Exhaust Requirements

	WARNING
<p>A drying tumble dryer produces combustible lint. To reduce the risk of fire, the tumble dryer must be exhausted to the outdoors.</p> <p style="text-align: right;">W057R1</p> <p>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.</p> <p style="text-align: right;">W059R1</p>	

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
50 Pound	144 in ² (928 cm ²)
75 Pound	195 in ² (1258 cm ²)
F75	250 in ² (1613 cm 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
<p>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.</p> <p style="text-align: right;">W749</p>	

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 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).

	WARNING
<p>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.</p> <p style="text-align: right;">W355</p>	

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 0.0195 inches (0.495 mm) 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 12 inches (305 mm) 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 14 feet (4.3 m) 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 20 feet (6.1 m). Cross section area of a rectangular duct must be increased by 20% for each additional 20 feet (6.1 m). Refer to *Table 2* to determine equivalent venting.

Duct Diameter	Equivalent Length of Rigid Straight Duct
8 in. (203 mm)	One 90° elbow = 9.3 ft. (2.83 m)
10 in. (254 mm)	One 90° elbow = 11.6 ft. (3.5 m)
12 in. (305 mm)	One 90° elbow = 14 ft. (4.3 m)
14 in. (356 mm)	One 90° elbow = 16 ft. (4.9 m)
16 in. (406 mm)	One 90° elbow = 18.7 ft. (5.7 m)
18 in. (457 mm)	One 90° elbow = 21 ft. (6.4 m)

Equivalent Length (feet) = 1.17 x Duct Diameter (inches)

Table 2

Example: A 12 inch (305 mm) diameter duct’s equivalent length of 14 feet (4.3 m) of duct and two 90° elbows is:

$$\begin{aligned} \text{Equivalent Length} &= 14 \text{ feet} + (2) \text{ } 90^\circ \text{ elbows} \\ &= 14 \text{ feet} + 14 \text{ feet} + 14 \text{ feet} \\ &= 42 \text{ feet (12.8 m)} \end{aligned}$$

With the tumble dryer in operation, airflow at any point in the duct should be at least 1200 feet per minute (366 m/min.) to ensure that lint remains

airborne. If 1200 feet per minute (366 m/min.) cannot be maintained, schedule monthly inspections and cleaning of the ductwork.

NOTE: The maximum length of a flexible metal duct must not exceed 7.87 ft. (2.4 m) as required to meet UL2158, clause 7.3.2A.

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 16* and *Figure 17*. This illustration indicates minimum diameters, and should be increased if the collector length exceeds 14 feet (4.3 m) and two 90° elbows. The diameter of a round duct must be increased by 10% for each additional 20 feet (6.1 m). Cross sectional area of a rectangular or square duct must be increased 20% for each additional 20 feet (6.1 m). 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 12 inches (305 mm) from the exhaust outlet does not exceed the maximum allowable pressure of 0.5 W.C.I. (1.3 mbar) 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 14*. 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 1200 feet per minute (366 m/min.) to ensure that lint remains airborne. If 1200 feet per minute (366 m/min.) cannot be maintained, schedule monthly inspections and cleaning of the ductwork.

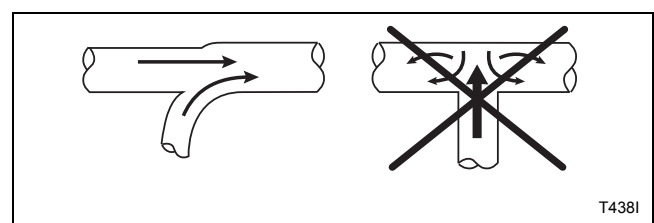


Figure 14

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Exhaust Requirements

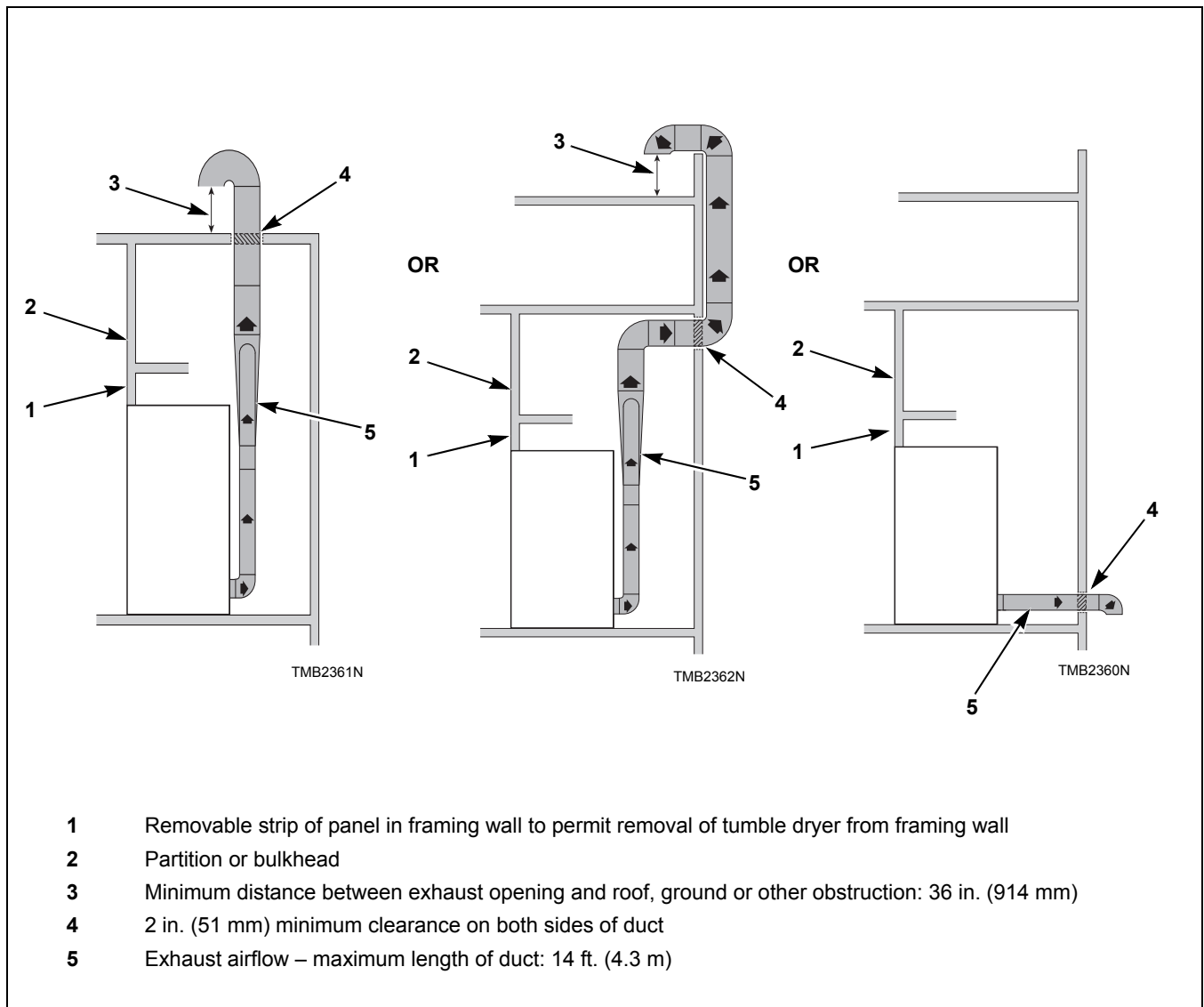


Figure 15

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.

NOTE: Where exhaust duct pierces a combustible wall or ceiling, the opening must be sized per local codes.

NOTE: Inside of duct must be smooth. Do not use sheet metal screws to join sections.

Consult your local building code for regulations which may also apply.

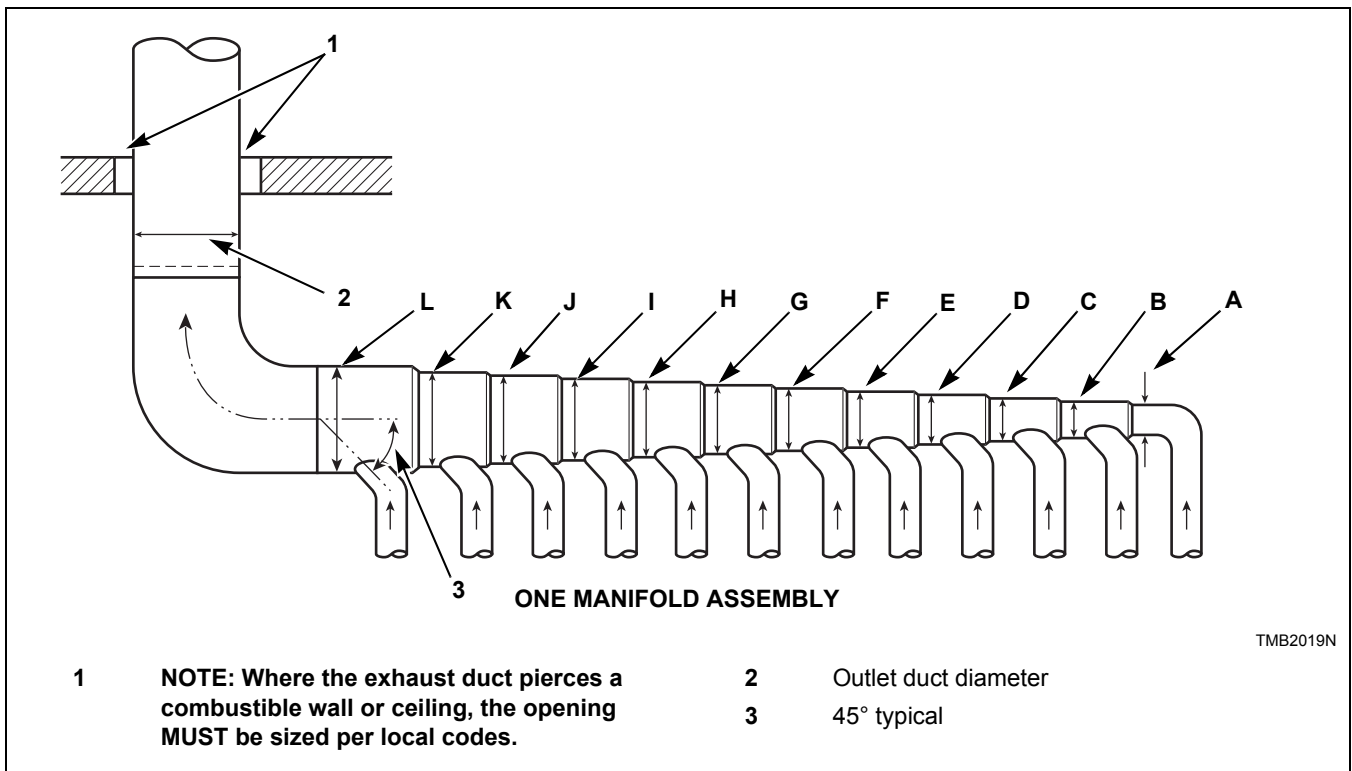


Figure 16

Duct Station	50/75 Pound	F75
	8 in. (203 mm) Duct	10 in. (254 mm) Duct
A	8 in. (203 mm)	10 in. (254 mm)
B	12 in. (305 mm)	15 in. (381 mm)
C	15 in. (381 mm)	18 in. (457 mm)
D	17 in. (432 mm)	21 in. (533 mm)
E	19 in. (483 mm)	24 in. (610 mm)
F	21 in. (533 mm)	26 in. (660 mm)
G	23 in. (584 mm)	28 in. (711 mm)
H	25 in. (635 mm)	30 in. (762 mm)
I	26 in. (660 mm)	32 in. (813 mm)
J	27 in. (686 mm)	33 in. (838 mm)
K	29 in. (737 mm)	35 in. (889 mm)
L	30 in. (762 mm)	36 in. (914 mm)

Table 3

Exhaust Requirements

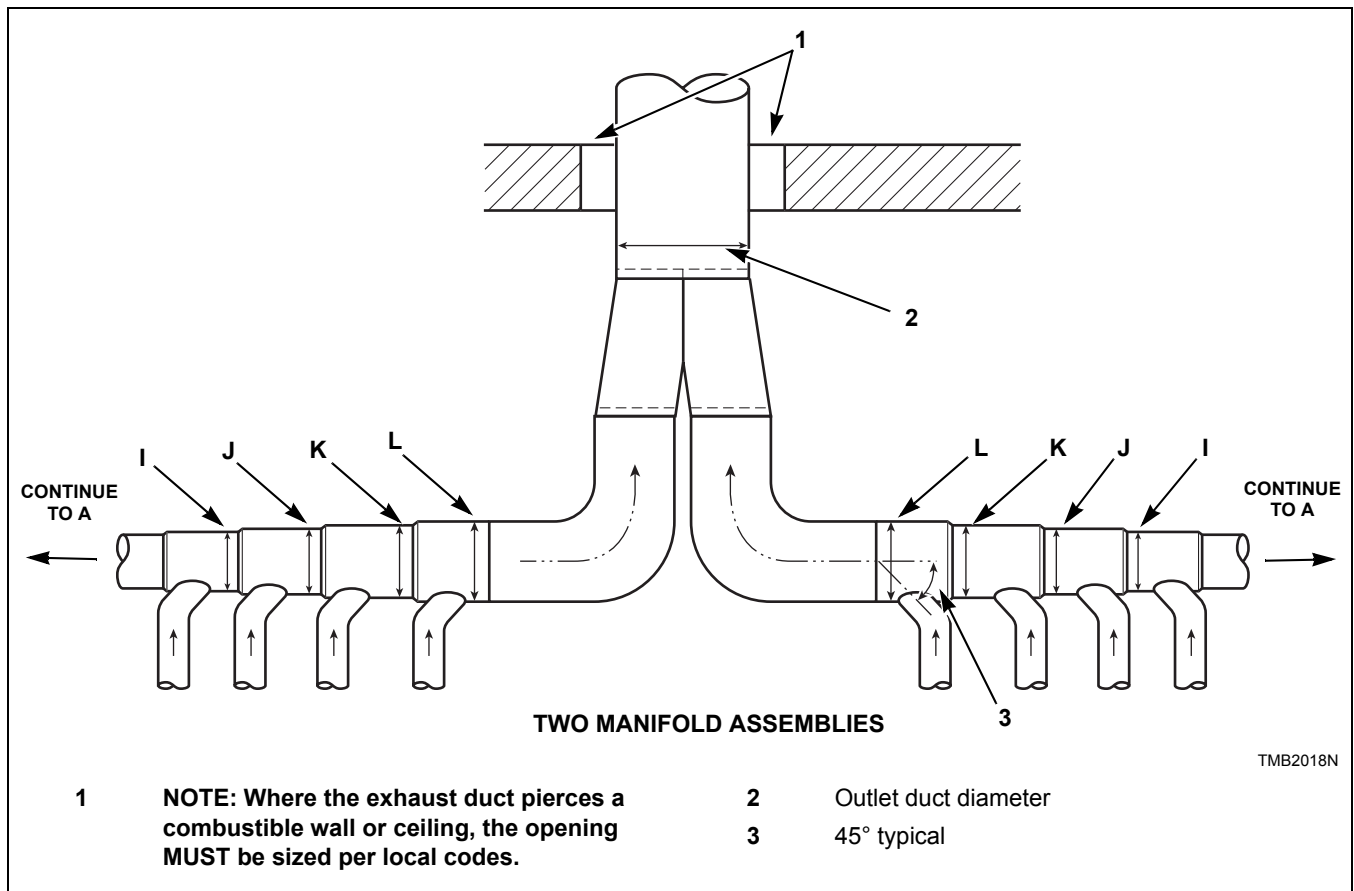



Figure 17

Duct Station	50/75 Pound	F75
	8 in. (203 mm) Duct	10 in. (254 mm) Duct
A	13 in. (330 mm)	15 in. (381 mm)
B	17 in. (432 mm)	22 in. (559 mm)
C	18 in. (457 mm)	26 in. (660 mm)
D	24 in. (610 mm)	30 in. (762 mm)
E	27 in. (686 mm)	34 in. (864 mm)
F	30 in. (762 mm)	37 in. (940 mm)
G	33 in. (838 mm)	40 in. (1016 mm)
H	34 in. (864 mm)	43 in. (1092 mm)
I	37 in. (940 mm)	46 in. (1168 mm)
J	39 in. (991 mm)	47 in. (1194 mm)
K	40 in. (1016 mm)	50 in. (1270 mm)
L	42 in. (1067 mm)	51 in. (1295 mm)

Table 4

Gas Requirements

	WARNING
<p>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.</p>	
<small>W060R1</small>	

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 0.5 psig (3.45 kPa, 34.5 mbar).

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 0.5 psi (3.45 kPa, 34.5 mbar).

IMPORTANT: The installation must comply with local codes or, in the absence of local codes:


- with the latest edition of the "National Fuel Gas Code," ANSI Z223.1/NFPA 54 in the U.S.A.
- with CAN/CSA-B149.1 or Natural Gas and Propane Installation Code in Canada
- In Australia and New Zealand, installation must comply with the Gas Installations Standard AS/NZS 5601 Part 1: General Installations.

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 18*.

- 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 1 inch (25.4 mm) pipe gas loop to maintain equal pressure at all gas connections. Refer to *Figure 19*.

	WARNING
<p>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.</p>	
<small>W062R1</small>	

NATURAL GAS pressures with all gas appliances running (tumble dryers, water heaters, space heaters, furnace, etc.):

Maximum gas pressure – 10.5 water column inches (2.61 kPa)
Recommended gas pressure – 6.5 water column inches (1.62 kPa)
Minimum gas pressure – 5 water column inches (1.24 kPa)

An in-line pressure regulator may be required if the line pressure exceeds 10.5 water column inches (2.61 kPa) with all gas appliances running.

LIQUID PETROLEUM GAS (L.P.) pressures with all gas appliances running (tumble dryers, water heaters, space heaters, furnace, etc.):

Maximum gas pressure – 13 water column inches (3.23 kPa)
Recommended gas pressure – 11 water column inches (2.74 kPa)
Minimum gas pressure – 10 water column inches (2.49 kPa)

Gas Requirements

For converting Non-CE models from Natural Gas to L.P. Gas:


50 Pound - M4979P3

75 Pound - M4454P3

F75 Pound - M4609P3

CE GASES refers to **Installing CE Gas Drying Tumble Dryers** section, the above data does not apply to the CE.

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.**

	<h2>WARNING</h2>
<p>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.</p>	
<small>W635</small>	

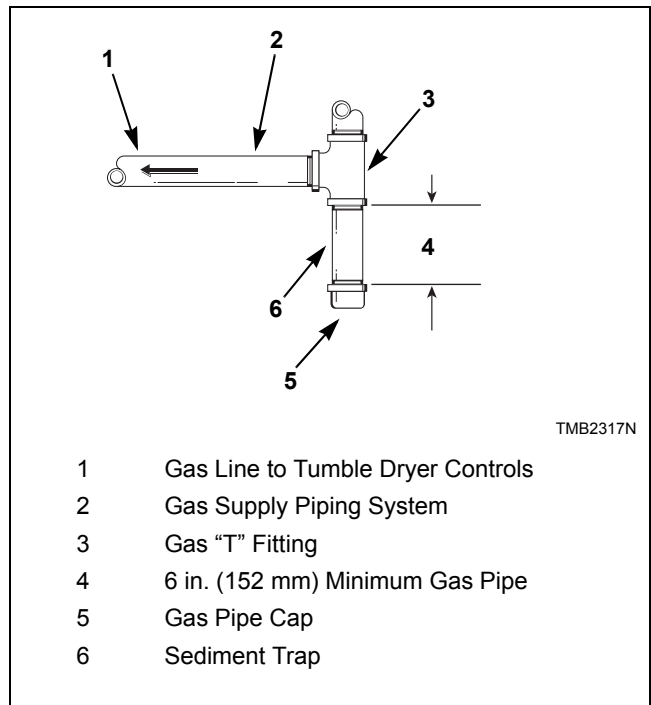
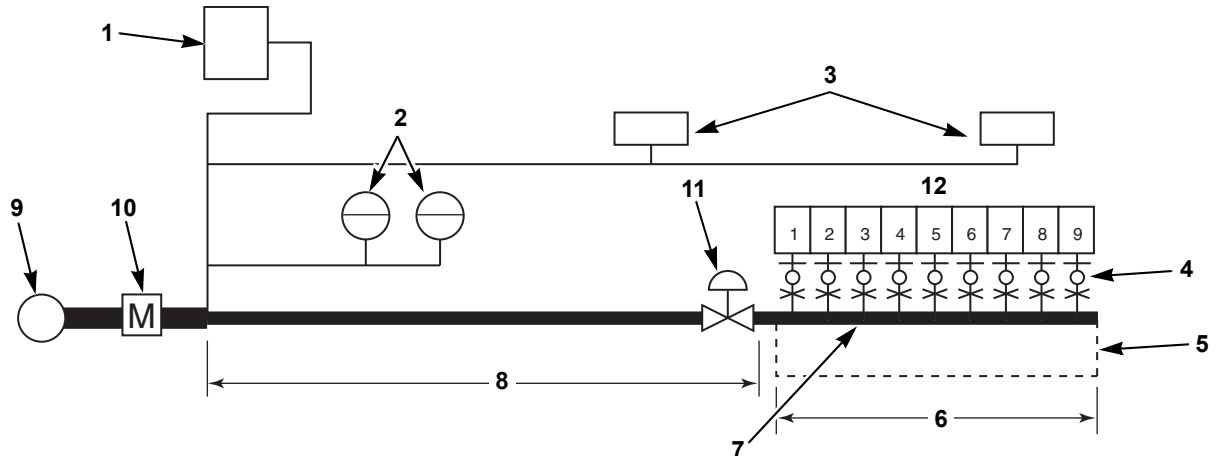


Figure 18

Gas Supply Pipe Sizing and Looping



TMB2126N

- | | | | |
|----------|-------------------------------------------------------------------------------------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Gas furnace (120,000 Btu/hr.) | 7 | Minimum Pipe Size is 0.5 in. (12.7 mm) |
| 2 | Gas water heaters (400,000 Btu/hr. each) | 8 | 25 ft. (7.6 m) |
| 3 | Gas space heaters (70,000 Btu/hr. each) | 9 | Main regulator |
| 4 | Sediment traps, supply pressure taps and shut-off valves. Refer to <i>Figure 18</i> | 10 | Gas meter |
| 5 | 1 in. (25.4 mm) gas pipe loop | 11 | Pressure regulator (if required) |
| 6 | 19 ft. (5.8 m) | 12 | 50 pound tumble dryers (130,000 Btu/hr. each)
75 pound tumble dryers (165,000 Btu/hr. each)
F75 pound tumble dryers (225,000 Btu/hr. each) |

SAMPLE CALCULATIONS:

Equivalent length = Total length of main gas supply pipe to the far end of the tumble dryers
 = 25 ft. + 19 ft. (7.6 m + 5.8 m) gas supply pipe
 = 44 ft. (13.4 m) Total Gas Line

Total Btu/hr. = The sum of the Btu/hr. of all 50 pound tumble dryers being fed by the main gas supply pipe
 = 9 x 130,000
 = 1,170,000 Btu/hr.

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

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 19

Gas Requirements

Gas Pipe Size Required for 1000 Btu Natural Gas — 0.64 Specific Gravity at 7 ± 1.5 inches (17.4 ± 4 mbar, 1.74 ± 0.37 kPa) Water Column Pressure						
Gas Appliances Total Btu/hr.	Equivalent Length					
	25 feet (7.63 m)	50 feet (15.25 m)	75 feet (22.88 m)	100 feet (30.50 m)	125 feet (38.13 m)	150 feet (45.75 m)
	Based on 0.3 in. Water Column Pressure Drop for Length Given Sizes shown in inches (mm)					
100,000	0.75 (19.05)	0.75 (19.05)	1 (25.40)	1 (25.40)	1 (25.40)	1 (25.40)
120,000	0.75 (19.05)	1 (25.40)	1 (25.40)	1 (25.40)	1 (25.40)	1 (25.40)
140,000	0.75 (19.05)	1 (25.40)	1 (25.40)	1 (25.40)	1 (25.40)	1.25 (31.75)
160,000	0.75 (19.05)	1 (25.40)	1 (25.40)	1.25 (31.75)	1.25 (31.75)	1.25 (31.75)
180,000	1 (25.40)	1 (25.40)	1 (25.40)	1.25 (31.75)	1.25 (31.75)	1.25 (31.75)
200,000	1 (25.40)	1 (25.40)	1.25 (31.75)	1.25 (31.75)	1.25 (31.75)	1.5 (38.10)
300,000	1 (25.40)	1.25 (31.75)	1.25 (31.75)	1.5 (38.10)	1.5 (38.10)	1.5 (38.10)
400,000	1.25 (31.75)	1.25 (31.75)	1.5 (38.10)	1.5 (38.10)	1.5 (38.10)	2 (50.80)
500,000	1.25 (31.75)	1.5 (38.10)	1.5 (38.10)	2 (50.80)	2 (50.80)	2 (50.80)
600,000	1.5 (38.10)	1.5 (38.10)	2 (50.80)	2 (50.80)	2 (50.80)	2 (50.80)
700,000	1.5 (38.10)	2 (50.80)	2 (50.80)	2 (50.80)	2 (50.80)	2.5 (63.50)
800,000	1.5 (38.10)	2 (50.80)	2 (50.80)	2 (50.80)	2.5 (63.50)	2.5 (63.50)
900,000	2 (50.80)	2 (50.80)	2 (50.80)	2.5 (63.50)	2.5 (63.50)	2.5 (63.50)
1,000,000	2 (50.80)	2 (50.80)	2 (50.80)	2.5 (63.50)	2.5 (63.50)	2.5 (63.50)
1,100,000	2 (50.80)	2 (50.80)	2.5 (63.50)	2.5 (63.50)	2.5 (63.50)	2.5 (63.50)
1,200,000	2 (50.80)	2 (50.80)	2.5 (63.50)	2.5 (63.50)	2.5 (63.50)	2.5 (63.50)
1,300,000	2 (50.80)	2.5 (63.50)	2.5 (63.50)	2.5 (63.50)	2.5 (63.50)	3 (76.20)
1,400,000	2 (50.80)	2.5 (63.50)	2.5 (63.50)	2.5 (63.50)	3 (76.20)	3 (76.20)
1,500,000	2 (50.80)	2.5 (63.50)	2.5 (63.50)	2.5 (63.50)	3 (76.20)	3 (76.20)
1,600,000	2 (50.80)	2.5 (63.50)	2.5 (63.50)	3 (76.20)	3 (76.20)	3 (76.20)
1,700,000	2 (50.80)	2.5 (63.50)	2.5 (63.50)	3 (76.20)	3 (76.20)	3 (76.20)
1,800,000	2.5 (63.50)	2.5 (63.50)	3 (76.20)	3 (76.20)	3 (76.20)	3 (76.20)
1,900,000	2.5 (63.50)	2.5 (63.50)	3 (76.20)	3 (76.20)	3 (76.20)	3 (76.20)
2,000,000	2.5 (63.50)	2.5 (63.50)	3 (76.20)	3 (76.20)	3 (76.20)	3.5 (88.90)
2,200,000	2.5 (63.50)	3 (76.20)	3 (76.20)	3 (76.20)	3.5 (88.90)	3.5 (88.90)
2,400,000	2.5 (63.50)	3 (76.20)	3 (76.20)	3 (76.20)	3.5 (88.90)	3.5 (88.90)
2,600,000	2.5 (63.50)	3 (76.20)	3 (76.20)	3.5 (88.90)	3.5 (88.90)	3.5 (88.90)
2,800,000	2.5 (63.50)	3 (76.20)	3 (76.20)	3.5 (88.90)	3.5 (88.90)	3.5 (88.90)
3,000,000	2.5 (63.50)	3 (76.20)	3.5 (88.90)	3.5 (88.90)	3.5 (88.90)	4 (101.60)

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

High Altitude Burner Orifice Sizing

For proper operation at altitudes above 2000 feet (610 m), the gas burner orifice size must be reduced to ensure complete combustion. Refer to *Table 6*.


For CE models, consult local gas supplier.

Model	Gas	Altitude		Burner Orifice					New Rate (Btu/hr.)*
		feet	meters	No.	inches	mm	Quantity	Part Number	
50 Pound	Natural Gas	2001-4000	610-1220	27	0.1440	3.7	2	M400998	119,600
		4001-6000	1221-1830	28	0.1405	3.6		M401014	109,200
		6001-8000	1831-2440	29	0.1360	3.4		M400997	98,800
		8001-10,000	2441-3050	30	0.1285	3.3		M401021	88,400
	L.P. Gas	2001-4000	610-1220	43	0.0890	2.3		M406184	119,600
		4001-6000	1221-1830	44	0.0860	2.2		M401011	109,200
		6001-8000	1831-2440	45	0.0820	2.1		M401027	98,800
		8001-10,000	2441-3050	46	0.0810	2.1		M401003	88,400
75 Pound	Natural Gas	2001-4000	610-1220	29	0.1360	3.4	3	M400997	151,800
		4001-6000	1221-1830	30	0.1285	3.3		M401021	138,600
		6001-8000	1831-2440	1/8	0.1250	3.2		M402489	125,400
		8001-10,000	2441-3050	31	0.1200	3.0		M401017	112,200
	L.P. Gas	2001-4000	610-1220	45	0.0820	2.1		M401027	165,000
		4001-6000	1221-1830	47	0.0785	2.0		M400999	138,600
		6001-8000	1831-2440	47	0.0785	2.0		M400999	125,400
		8001-10,000	2441-3050	48	0.0760	1.9		M401001	112,200
F75	Natural Gas	2001-4000	610-1220	22	0.1570	4.0	3	M402996	207,000
		4001-6000	1221-1830	24	0.1520	3.9		M402980	189,000
		6001-8000	1831-2440	26	0.1470	3.7		M401000	171,000
		8001-10,000	2441-3050	28	0.1405	3.6		M401014	153,000
	L.P. Gas	2001-4000	610-1220	41	0.0960	2.4		M401015	225,000
		4001-6000	1221-1830	42	0.0935	2.4		M403017	189,000
		6001-8000	1831-2440	43	0.0890	2.3		M406184	171,000
		8001-10,000	2441-3050	44	0.0860	2.2		M401001	153,000

* Btu/hr. derate of 4% per 1000 feet (305 meters) of altitude.

Table 6


Electrical Requirements

	WARNING
<p>To reduce the risk of electric shock, fire, explosion, serious injury or death:</p> <ul style="list-style-type: none">• 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. <p style="text-align: right;">W002R1</p>	
<p>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.</p> <p style="text-align: right;">W068</p>	
<p>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.</p> <p style="text-align: right;">W069</p>	

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
<p>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.</p> <p style="text-align: right;">W796</p>	


Grounding Instructions

NOTE: To ensure protection against shock, this tumble dryer **MUST** be electrically grounded in accordance with the local codes, or in the absence of local codes, with the latest edition of the National Electrical Code ANSI/NFPA No. 70. In Canada the electrical connections are to be made in accordance with CSA C22.1 latest edition Canadian Electrical Code, or 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
<p>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.</p>	
W409R1	

	CAUTION
<p>Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation. Verify proper operation after servicing.</p>	
W071	

For CE Models Only

All OPL (non-vend) models are factory-equipped with an emergency stop button on the front panel.

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

Electrical Requirements
Service/Ground Location

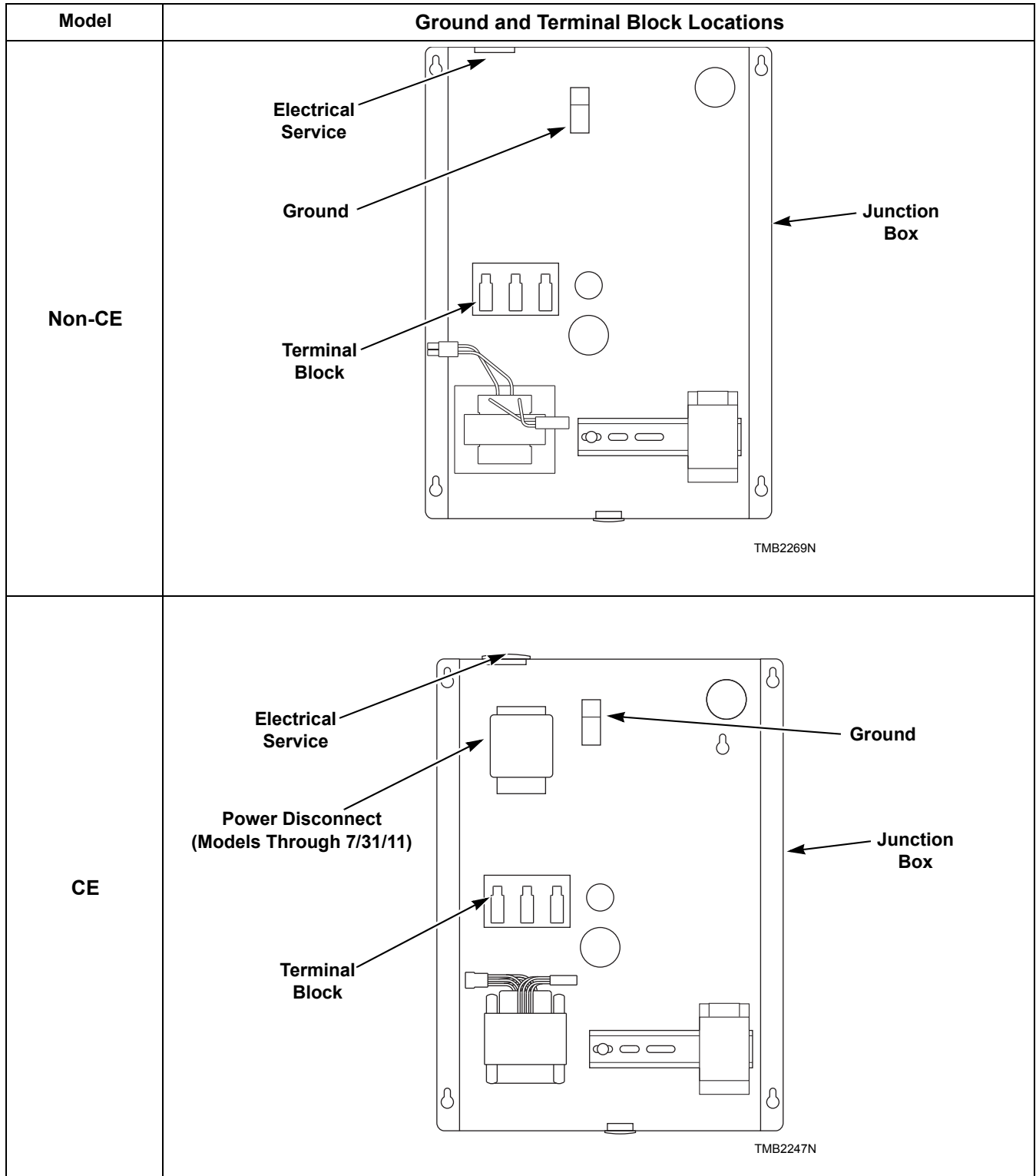


Figure 20

To Connect Electrical Service To The Tumble Dryer

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

NOTE: The wiring diagram is located in the junction box.

1. Install a circuit breaker as close to the tumble dryer as possible. If more than one tumble dryer is being installed, a circuit breaker should be provided for each. This will make it possible to disconnect each tumble dryer for maintenance purposes.
2. Connect the conduit-encased leads to the circuit breaker. Connect the wire leads to the appropriate labeled terminal on the terminal block. The ground wire must be connected to the ground connection as shown in *Figure 20*.

3. Check the electrical service phase sequence (three phase only) as follows:
 - a. Energize the electrical service (on reversing tumble dryers, ensure nonreversing is selected) and momentarily start the tumble dryer. Check the direction of the cylinder rotation. If the cylinder rotates clockwise (viewed from the front), the phase sequence is correct. If the cylinder rotates counterclockwise, proceed with step b.

NOTE: When viewed from the front, the fan should rotate clockwise on 50 and 75 pound models and counterclockwise on F75 models.

- b. Disconnect and reverse any two service leads on the terminal block (example: switch L2 and L3 on terminal block).

Electrical Requirements

Jumper Configuration Instructions

Changing the transformer configuration jumper is required, **PRIOR TO SUPPLYING POWER TO THE MACHINE**, if any of the following apply:

IMPORTANT: Failure to install the proper configuration jumper may result in damage to sensitive electronic controls and may void warranty.

- Location voltage 200 – 208 Volt service and connecting a model rated for 240 Volt operation.

Replace the 240 Volt jumper with the 208 Volt jumper per the conversion label, located on the rear of the tumble dryer, sign and date conversion label to document the conversion.

Ferrite Ring Installation

Gas and Steam Models with OM and RM Control Suffixes 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 21*. 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.

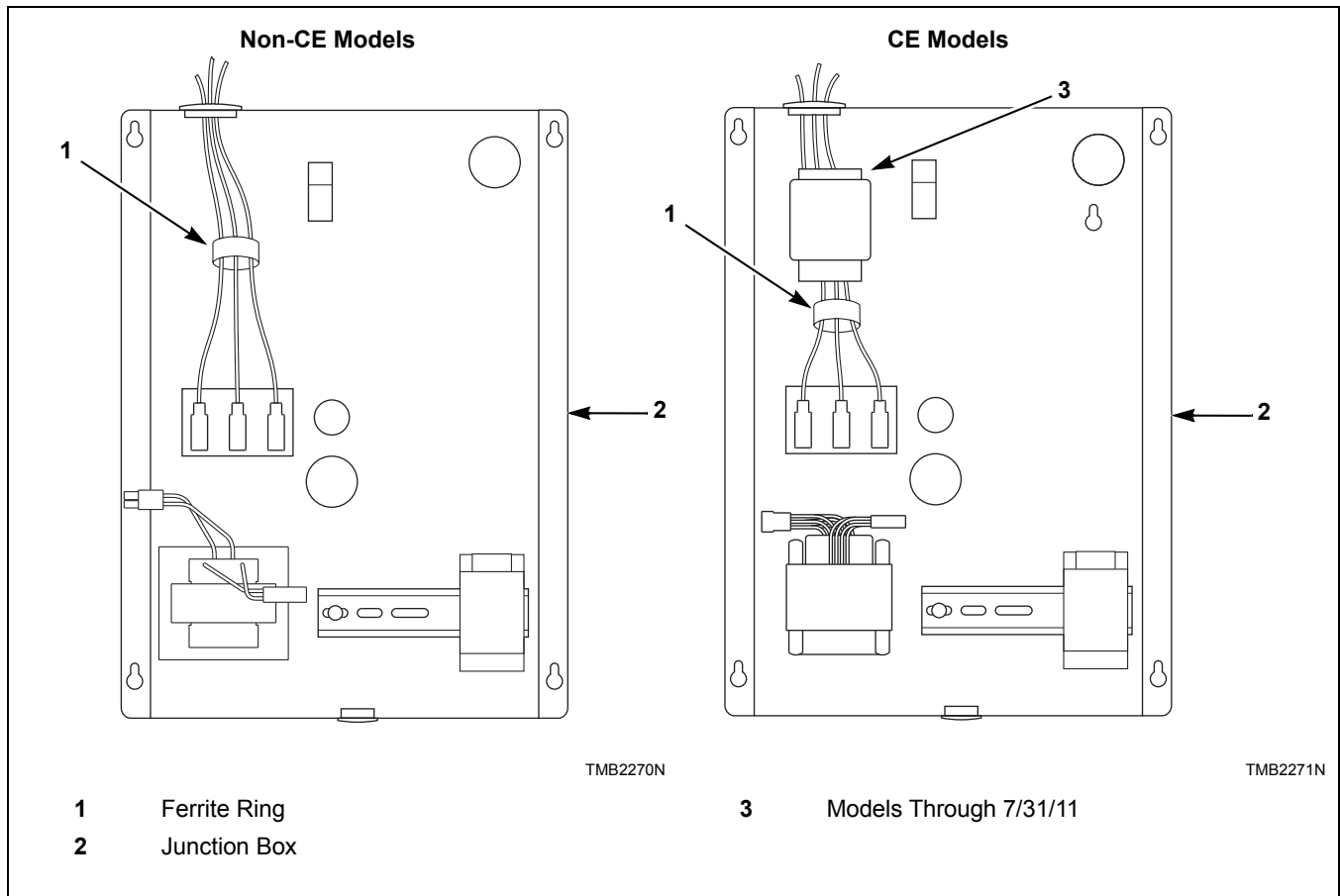


Figure 21

50 Pound Gas and Steam Models

Refer to *Table 7*.

NOTE: Wire sizes were obtained from the Canadian Electrical Code for 75 C. wire and are intended for use as a guideline only. Electrical connections should be made by a qualified electrical contractor in accordance with all applicable local and national requirements.

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).

Serial Plate Rating	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	9.3	N/A	15A – 1 pole	14 (2.08)
200-208V/60Hz/1ph	L1, Neutral and ground	5.1	N/A	10A – 1 pole	14 (2.08)
200-208-240V/60Hz/1ph	L1, L2 and ground	5.1	N/A	10A – 2 pole	14 (2.08)
230-240V/50Hz/1ph	L1, Neutral and ground	6.3	6.9	15A – 1 pole	14 (2.08)
200-208V/60Hz/3ph	L1, L2, L3 and ground	2.8	4.0	10A – 3 pole	14 (2.08)
200V/50Hz/3ph	L1, L2, L3 and ground	3.3	4.2	10A – 3 pole	14 (2.08)
240V/60Hz/3ph	L1, L2, L3 and ground	2.8	4.0	10A – 3 pole	14 (2.08)
230-240V/50Hz/3ph	L1, L2, L3 and ground	3.1	4.3	10A – 3 pole	14 (2.08)
380V/50 or 60Hz/3ph	L1, L2, L3 and ground	1.6	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	1.4	1.9	10A – 3 pole	14 (2.08)
460-480V/60Hz/3ph	L1, L2, L3 and ground	1.4	1.9	10A – 3 pole	14 (2.08)

N/A = Not Applicable

Table 7

Electrical Requirements

75 Pound Gas and Steam Models

Refer to *Table 8* and *Table 9*.

NOTE: Wire size and breaker ratings were obtained from the Canadian Electrical Code for 75 C. wire and are intended for use as a guideline only. Electrical connections should be made by a qualified electrical contractor in accordance with all applicable local and national requirements.

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).

Serial Plate Rating	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	13.8	N/A	20A – 1 pole	12 (3.31)
200-208V/60Hz/1ph	L1, Neutral and ground	7.6	N/A	15A – 1 pole	14 (2.08)
200-208-240V/60Hz/1ph	L1, L2 and ground	7.6	N/A	15A – 2 pole	14 (2.08)
230-240V/50Hz/1ph	L1, Neutral and ground	6.7	7.0	15A – 1 pole	14 (2.08)
200-208V/60Hz/3ph	L1, L2, L3 and ground	3.8	4.3	10A – 3 pole	14 (2.08)
200V/50Hz/3ph	L1, L2, L3 and ground	3.5	4.5	10A – 3 pole	14 (2.08)
240V/60Hz/3ph	L1, L2, L3 and ground	3.8	4.3	10A – 3 pole	14 (2.08)
230-240V/50Hz/3ph	L1, L2, L3 and ground	3.5	4.9	10A – 3 pole	14 (2.08)
380V/50 or 60Hz/3ph	L1, L2, L3 and ground	1.8	2.1	10A – 3 pole	14 (2.08)
400-415V/50Hz/3ph	L1, L2, L3 and ground	1.8	2.1	10A – 3 pole	14 (2.08)
440V/60Hz/3ph	L1, L2, L3 and ground	1.9	2.1	10A – 3 pole	14 (2.08)
460-480V/60Hz/3ph	L1, L2, L3 and ground	1.9	2.1	10A – 3 pole	14 (2.08)

N/A = Not Applicable

Table 8

F75 Gas Models Only

Serial Plate Rating	Terminal Block Connections Required	Serial Plate Amps		Recommended Circuit	
		Nonreversing	Reversing	Breaker Rating	Wire Size AWG (mm ²)
200-208V/60Hz/3ph	L1, L2, L3 and ground	N/A	6.3	15A – 3 pole	14 (2.08)
240V/60Hz/3ph	L1, L2, L3 and ground	N/A	6.3	15A – 3 pole	14 (2.08)
460-480V/60Hz/3ph	L1, L2, L3 and ground	N/A	3.1	10A – 3 pole	14 (2.08)

N/A = Not Applicable

Table 9

50 and 75 Pound Electric Models

Refer to *Table 10*.

NOTE: Wire size and breaker ratings were obtained from the Canadian Electrical Code for 75 C. wire and are intended for use as a guideline only. Electrical connections should be made by a qualified electrical contractor in accordance with all applicable local and national requirements.

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).

Serial Plate Rating	Terminal Block Connections Required	Serial Plate Amps		Recommended Circuit	
		Nonreversing	Reversing	Breaker Rating	Wire Size AWG (mm ²)
240V/50Hz/1ph (50 Pound only)	L1, Neutral and Ground	93	95	125A – 1 pole	1 (42.4)
200-208V/60Hz/3ph	L1, L2, L3 and ground	89	88	125A – 3 pole	1 (42.4)
200V/50Hz/3ph	L1, L2, L3 and ground	84	85	125A – 3 pole	1 (42.4)
230V/50Hz/3ph	L1, L2, L3 and ground	73	75	100A – 3 pole	3 (26.7)
240V/50Hz/3ph	L1, L2, L3 and ground	79	78	100A – 3 pole	3 (26.7)
240V/60Hz/3ph	L1, L2, L3 and ground	79	78	100A – 3 pole	3 (26.7)
380V/50 or 60Hz/3ph	L1, L2, L3 and ground	47	48	60A – 3 pole	6 (13.3)
400-415V/50Hz/3ph	L1, L2, L3 and ground	43	44	60A – 3 pole	6 (13.3)
440V/60Hz/3ph	L1, L2, L3 and ground	41	41	51A – 3 pole	6 (13.3)
480V/60Hz/3ph	L1, L2, L3 and ground	38	38	50A – 3 pole	6 (13.3)

Table 10

Steam Requirements

NOTE: Machines require a constant 80 to 100 psig (5.62 to 7.03 kg/sq cm) steam service for optimum operation. The maximum allowable steam pressure for use with 60 Hertz or 50 Hertz tumble dryers is 125 psig (8.6 bar). In no case may the pressure exceed the above value. Drying performance is significantly reduced at lower steam pressures.

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


- Refer to *Figure 22* for proper steam pipe configurations.
- To prevent condensate draining from headers to tumble dryer, piping should have a minimum 12 inch (305 mm) 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 18 inches (457 mm) 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 4 feet (1.2 m) 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.
- Keep tumble dryer in good working condition. Repair or replace any worn or defective parts.

	WARNING
<p>All system components must have a 125 psig (8.6 bar) 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.</p> <p>All components (solenoid valve, traps) must be supported to minimize loads on the tumble dryer steam coil connections.</p>	
<small>W480R2</small>	

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 22* 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 18 inches (457 mm) below the steam coil outlet connections.

4. Install a shut-off valve to each steam trap.
5. Connect to the condensate return lines.

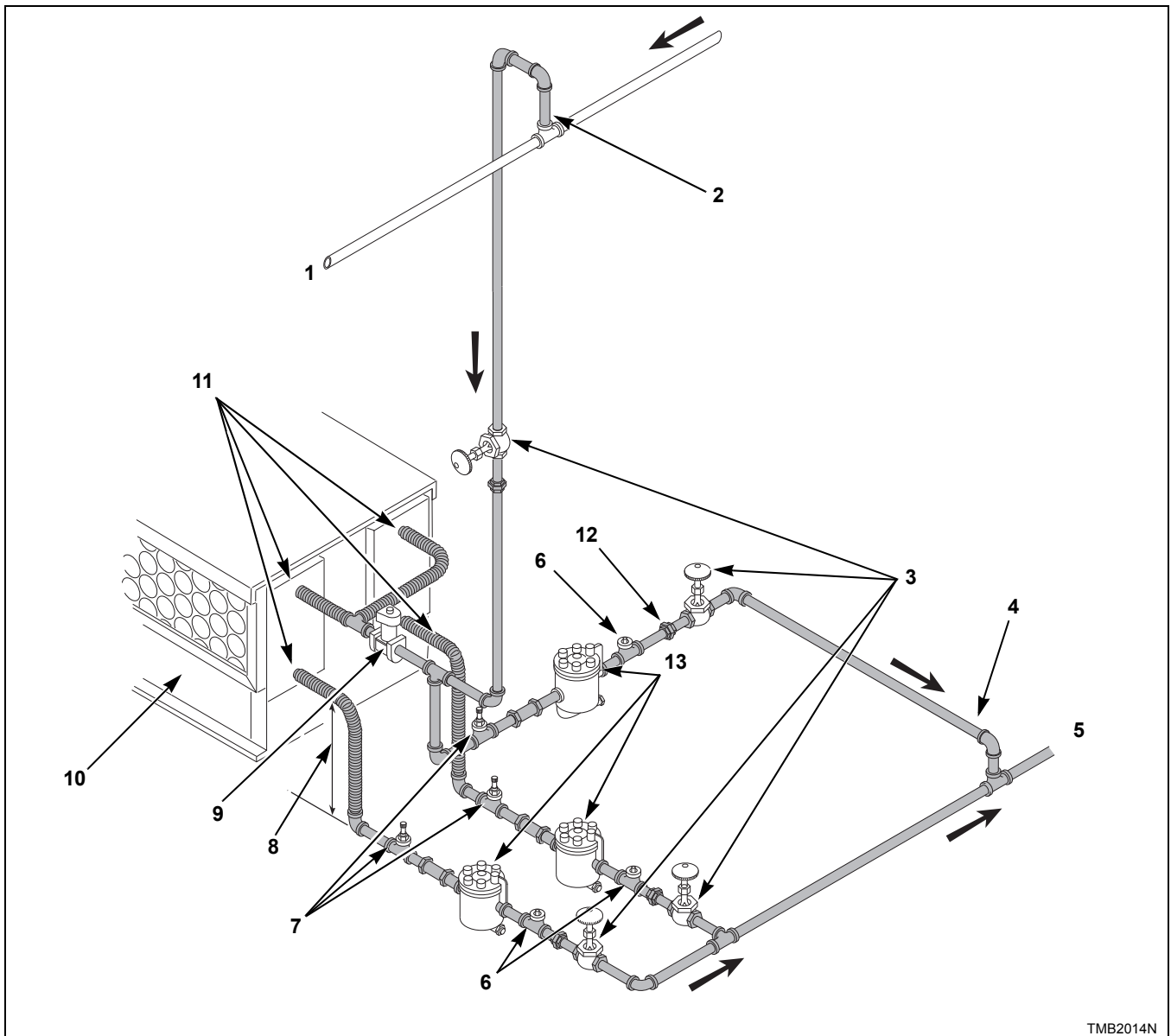
6. For steam solenoid valve wiring connections, refer to Wiring Diagram supplied with tumble dryer.

	WARNING
<p>The flexible steam hoses connecting the coil outlet connections and steam traps must have a minimum of 125 psig (pounds per square inch gauge) (8.79 kg/sq. cm.) working pressure. A shut-off valve must be installed downstream from each steam trap so the condensate return line can be isolated in event a steam trap requires maintenance.</p> <p>Each steam trap must be supported so minimum load is exerted on the coil outlet connection.</p>	
<small>W066</small>	

Thermal Oil Prep

It is the responsibility of the customer to install appropriate coil and heating system for thermal oil prep models. Alliance Laundry Systems, LLC. is not responsible for the performance or safety of the customer installed thermal oil system. To ensure proper operation, refer to the *Specifications and Dimensions* section for the BTU input of equivalent steam models. Thermal oil systems that do not deliver appropriate BTUs will dry slower. For solenoid valve wiring connections, refer to the Wiring Diagram supplied with tumble dryer.

Steam Requirements



TMB2014N

NOTE: Refer to *Table 11* for sizing of steam lines. Piping must also be sized accordingly for length of runs, and number of elbows.

- | | | | |
|---|-----------------------------------------|----|----------------------------------------|
| 1 | Supply | 8 | 18 in. (457 mm) Drop |
| 2 | 12 in. (305 mm) Riser | 9 | Solenoid Valve (Supplied with machine) |
| 3 | Shut-Off Valve | 10 | Steam Bonnet |
| 4 | Condensate Return Line from Supply Line | 11 | Flexible Line |
| 5 | Return | 12 | Union |
| 6 | Check Valve | 13 | Trap with Built-In Strainer |
| 7 | Vacuum Breaker (Optional) | | |

Figure 22

Steam Pressure PSI (bar)	Minimum Supply Pipe Diameter	Steam Trap Size* (Pounds Condensate/Hour)
80 – 100 (5.3-6.9)	3/4 in. NPT	160

*Based on 100 psi.

Table 11

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 value 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 12*.

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 12*.

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.

Single Drop Timer

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 12 (continued)

Table 12 (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	
1 (factory default)	OFF	8
3	ON	OFF
		ON

Total Cycle Time = Heat Time + Cool Down Time

Table 12

Adjustments

	WARNING
<p>To reduce the risk of electric shock, fire, explosion, serious injury or death:</p> <ul style="list-style-type: none">• 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.	
<small>W002R1</small>	

Gas Burner Air Shutter

NOTE: Air inlet shutters on the burner must be adjusted so sufficient air is metered into the system for proper combustion and maximum efficiency. Before adjusting the inlet shutters be sure that all lint is removed from lint compartments and lint screen.

Air shutter adjustments will vary from location to location and will depend on the vent system, number of units installed, make-up air and line gas pressure. Opening the shutter increases the amount of primary air supplied to the burner while closing the shutter decreases the primary air supply. Adjust air shutter as follows:

Refer to *Figure 23*.

1. Open the access panel and remove the burner inspection hole plate.
2. Start the tumble dryer and check the flame pattern. If the flame pattern is straight up, insufficient air is flowing through the tumble dryer. A flame pattern that flares to the right and left indicates no air is flowing through the tumble dryer. Correct air and gas mixture is indicated if the flame pattern is primarily blue, with small yellow tips, and bends to the right of the heater section. Too little air is indicated if the flame is yellow, lazy and smokey.
3. To adjust the air shutter, loosen air inlet shutter adjusting screw.
4. Open or close air shutter as necessary to obtain proper flame intensity.

5. After air shutter is adjusted for proper flame, tighten air shutter adjusting screw securely.

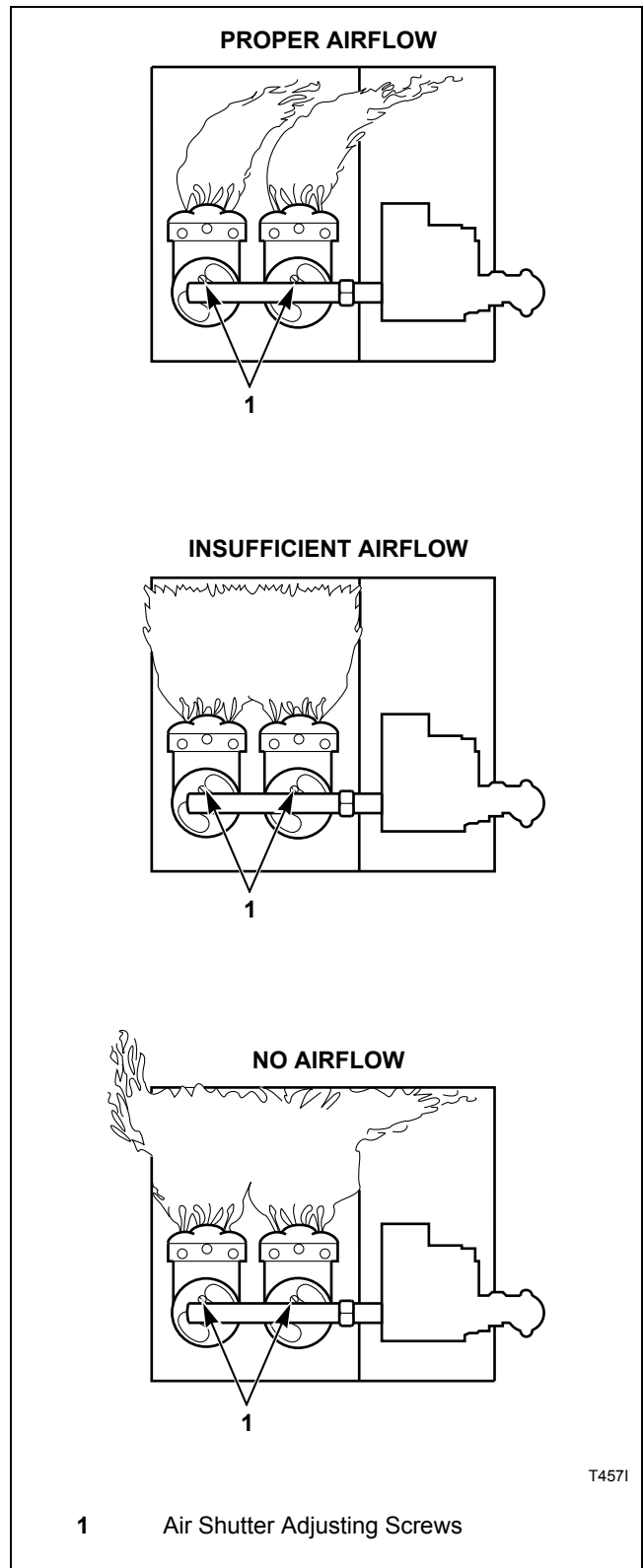



Figure 23

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
<p>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.</p>	
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

Loading door switch is factory preset, no field adjustment is necessary.

Loading Door Catch

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

If adjustment is required, refer to *Figure 24* and proceed as follows:

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

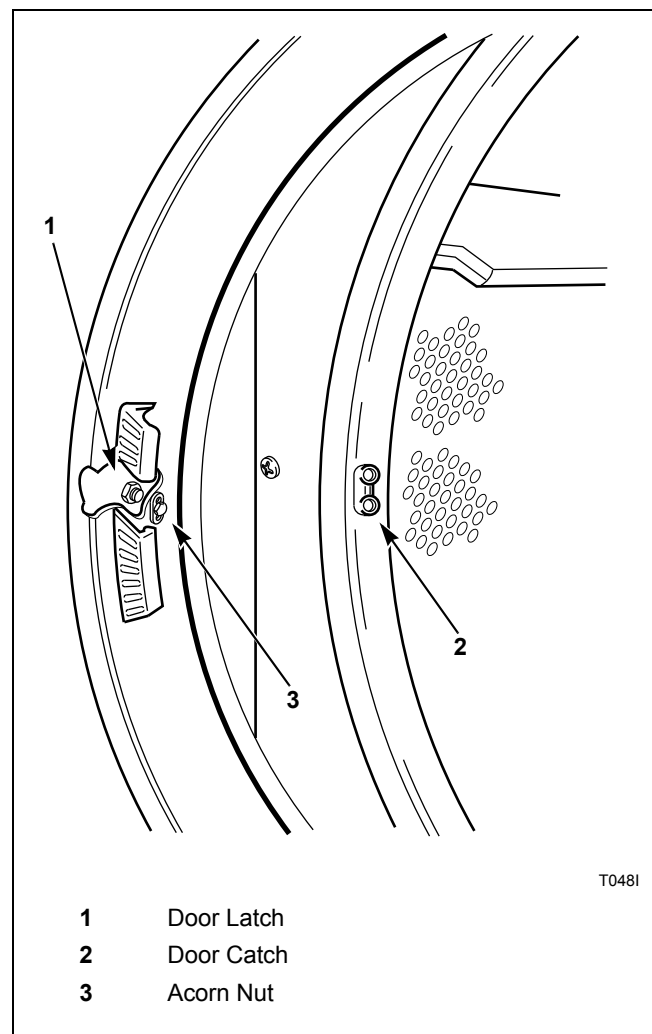


Figure 24

Adjustments

Drive Belt

Nonreversing Models

Refer to *Figure 25*.

Proper tension is when the drive V-belt can be depressed approximately 0.5 inch (13 mm) by applying light thumb pressure at a point midway between the sheave and motor pulley.

1. Remove guard from rear of tumble dryer.
2. To adjust belt tension, loosen idler housing bolts holding idler housing assembly to the guide rails.
3. Position housing assembly by turning adjusting bolt until proper belt tension is reached, then retighten idler housing bolts.
4. Replace the guard on rear of tumble dryer.

Reversing Models

Refer to *Figure 26*.

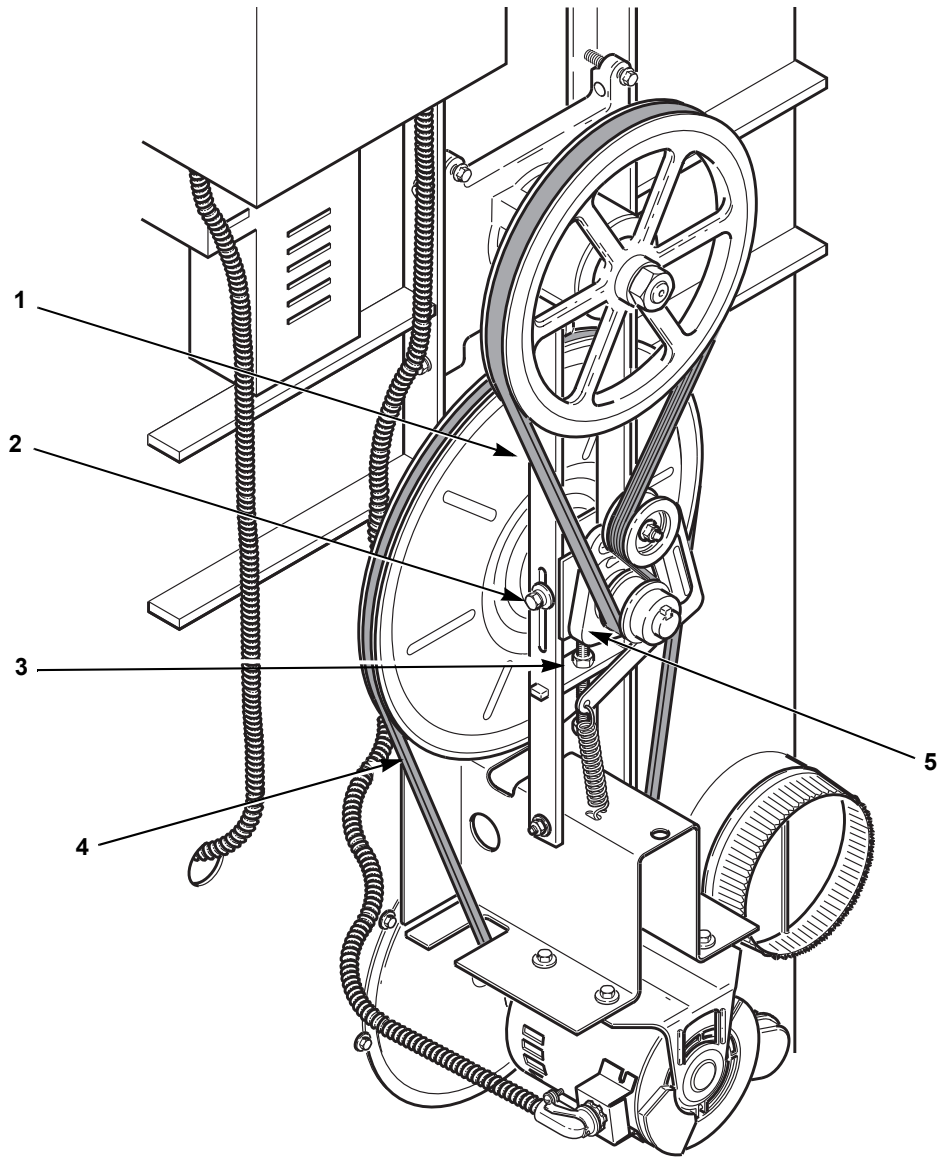
Proper tension is when the drive belt can be depressed approximately 0.5 inch (13 mm) by applying light thumb pressure (approximately 5 pounds [0.35 bar]) at a point midway between the sheave and motor pulley.

Proper tension is when each cylinder belt can be depressed approximately 0.19 inch (5 mm) by applying light thumb pressure (approximately 5 pounds [0.35 bar]) at a point midway between the sheave and the idler.

1. Remove guard from rear of tumble dryer.
2. To adjust cylinder belt tension, loosen idler housing bolts holding idler housing assembly to the guide rails.
3. Position housing assembly by turning adjusting bolt until proper belt tension is reached, then retighten idler housing bolts.

NOTE: Adjusting the cylinder belt tension will change the drive tension. Drive belt tension must also be adjusted.

4. Loosen the locking bolt.
5. Loosen the adjusting nut and use the adjusting screw to move the motor up or down.
6. Once proper belt tension is reached, retighten the adjusting nut and locking bolt.
7. Replace the guard on rear of tumble dryer.



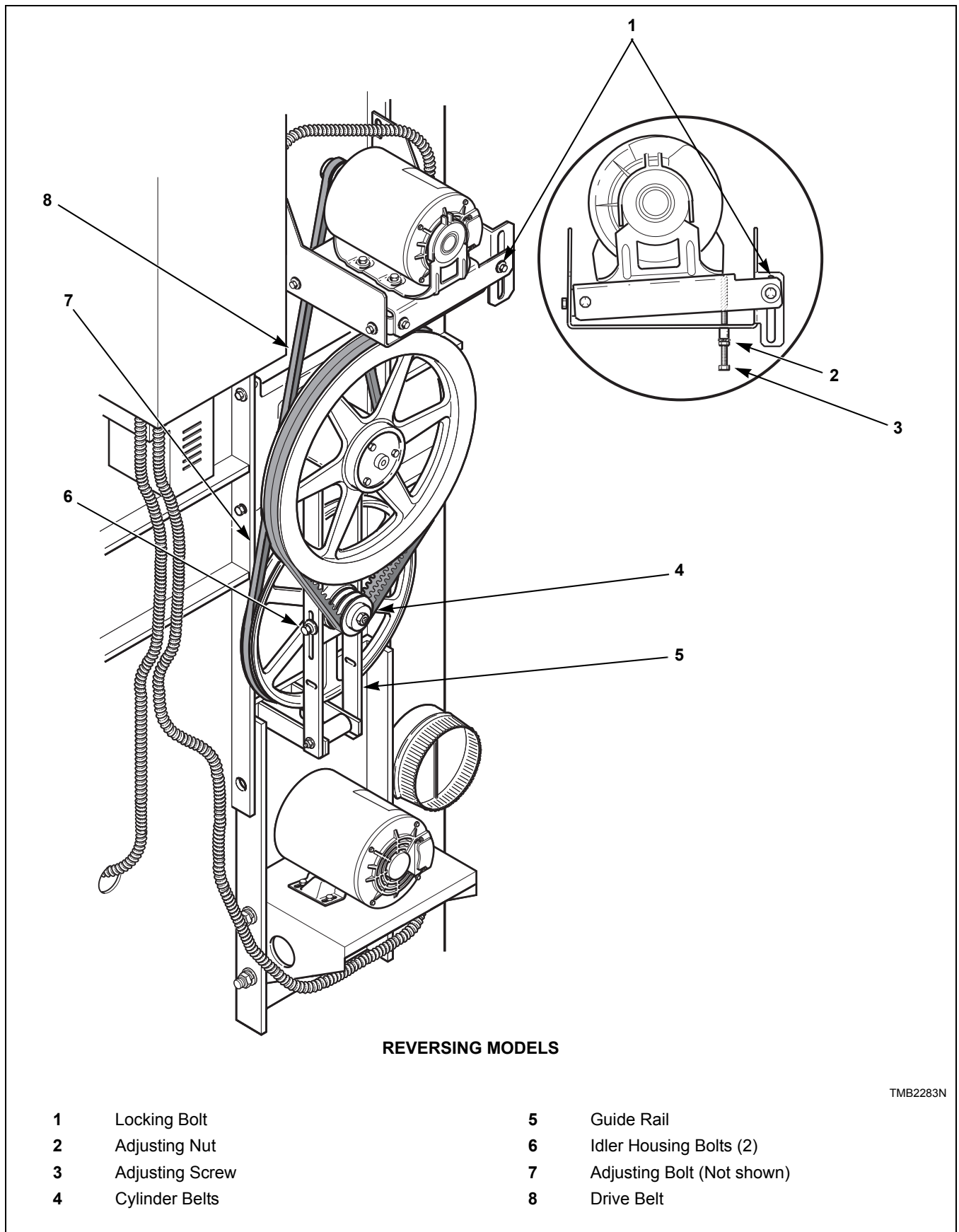
NONREVERSING MODELS

- | | | | |
|---|------------------------------|---|------------------------|
| 1 | Poly V-Belt (Self-Adjusting) | 4 | Drive V-Belt |
| 2 | Idler Housing Bolts (2) | 5 | Idler Housing Assembly |
| 3 | Adjusting Bolt | | |

TMB2244N

Figure 25

Adjustments



TMB2283N

Figure 26

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.