

Drying Tumblers

120 Pound Capacity

170 Pound Capacity

Refer to Page 3 for Model Identification

— Operation/Programming/Maintenance —

Keep These Instructions for Future Reference.

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



www.comlaundry.com

Part No. 70400401R2
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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 CSA-B149.1 or Natural Gas and Propane Code CSA C22.1, latest edition, Canadian Electric Code, Part I.

In Australia, installation must comply with the Australian Gas Association Installation Code for Gas Burning Appliances and Equipment.

	WARNING
<p>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</p> <ul style="list-style-type: none">• 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:<ul style="list-style-type: none">– 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	
<p>FOR YOUR SAFETY</p> <p>Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance. W053</p>	

	MISE EN GARDE
<p>POUR VOTRE SÉCURITÉ, les informations de ce guide doivent être respectées afin de réduire les risques d’incendie, d’explosion ou d’éviter les dommages matériels, personnels ou blessures mortelles. W033R3QU</p> <ul style="list-style-type: none">• Ne pas entreposer ou utiliser d’essence ou toutes autres vapeurs et liquides inflammables à proximité de cette machine ou de tout autre appareil.• QUE FAIRE EN CAS D’ODEUR DE GAZ :<ul style="list-style-type: none">– Ne pas mettre d’appareil en marche.– Ne pas toucher aux interrupteurs électriques ; ne pas utiliser le téléphone des lieux.– Évacuer la pièce, le bâtiment ou la zone de tous les occupants.– Appeler immédiatement le fournisseur de gaz de la maison d’un voisin. Respecter les instructions communiquées par le fournisseur.– Si vous ne pouvez pas joindre le fournisseur de gaz, appeler le service d’incendie.• L’installation et l’entretien doivent être effectués par un installateur, service d’entretien qualifiés ou par le fournisseur de gaz. W052R5QU	
<p>POUR VOTRE SÉCURITÉ</p> <p>Ne pas entreposer ou utiliser d’essence ou toutes autres vapeurs et liquides inflammables à proximité de cette unité ou de tout autre appareil. W053R2QU</p>	

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 tumbler for customer use.

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Introduction

Model Identification

Information in this manual is applicable to these models.

	Gas		Steam/Thermal Oil	
120 Pound	BA120L	CA120N	BT120S	CU120T
	BA120N	CT120L	BT120T	IT120S
	BT120L	CT120N	BU120S	IT120T
	BT120N	CU120L	BU120T	
	BU120L	CU120N	CT120S	
	BU120N	IT120L	CT120T	
	CA120L	IT120N	CU120S	
170 Pound	BA170L	CA170N	BT170S	CU170T
	BA170N	CT170L	BT170T	IT170S
	BT170L	CT170N	BU170S	IT170T
	BT170N	CU170L	BU170T	
	BU170L	CU170N	CT170S	
	BU170N	IT170L	CT170T	
	CA170L	IT170N	CU170S	

Includes models with the following control suffixes:

R3 – reversing DX4 OPL

RD – reversing DMP OPL

RQ – reversing dual digital timer

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.

Models starting Serial No. 0309____ or later will have the wiring diagram part number in the lower portion of the electrical data on the serial plate.

Introduction

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 rear of machine. Refer to *Figure 1*.

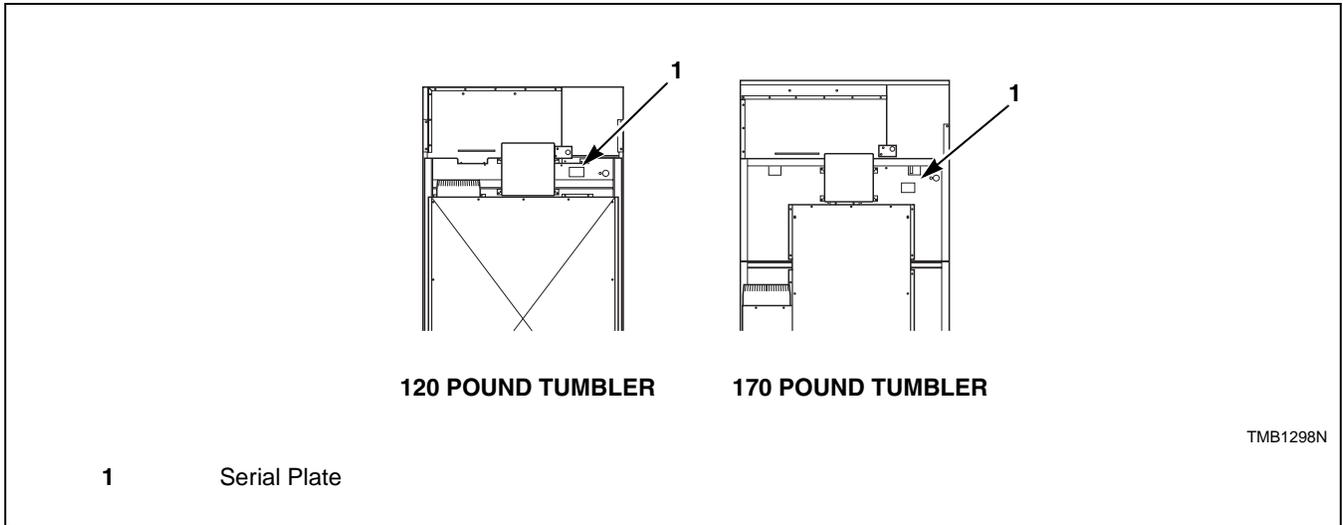


Figure 1

Safety Information

Explanation of Safety Messages

Throughout this manual and on machine decals, you will find precautionary statements (“DANGER,” “WARNING,” and “CAUTION”) followed by specific instructions. 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.

IMPORTANT: Warranty is void unless tumbler is installed according to instructions in the Installation Manual. Compliance with minimum specifications and requirements detailed herein, and with applicable local gas fitting regulations, municipal building codes, water supply regulations, electrical wiring regulations, and any other relevant statutory regulations. Because of varied requirements, applicable local codes should be thoroughly understood and all pre-installation work arranged for accordingly.

	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 tumbler. These factors MUST BE supplied by the person(s) installing, maintaining or operating the tumbler.

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

Important Safety Instructions

Save These Instructions

	WARNING
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.	
W359	

1. Read all instructions before using the tumbler.
2. Refer to the GROUNDING INSTRUCTIONS in the *Installation Manual* for the proper grounding of the tumbler.
3. Do not dry articles that have been previously cleaned in, washed in, soaked in, or spotted with gasoline, dry cleaning solvents, or other flammable or explosive substances as they give off vapors that could ignite or explode.
4. Do not allow children on or in the tumbler. 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 tumbler 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 tumbler if the cylinder is revolving.
7. Do not install or store the tumbler 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 tumbler, 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 tumbler 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. Tumbler will not operate with the loading door open. **DO NOT** bypass the door safety switch to permit the tumbler to operate with the door open. The cylinder will stop rotating when the door is opened. Do not use the tumbler if the cylinder does not stop rotating when the door is opened or starts rotating without pressing or turning the START mechanism. Remove the tumbler from use and call the service person.
17. Tumbler will not operate with lint panel open. **DO NOT** bypass lint panel safety switch to permit the tumbler to operate with the lint panel open.
18. Do not put articles soiled with vegetable or cooking oil in the tumbler, 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 tumbler.
20. Use the tumbler only for its intended purpose, drying water-washed fabrics.
21. **ALWAYS** disconnect the electrical power to the tumbler before servicing. Disconnect power by shutting off appropriate breaker or fuse.
22. Install this tumbler according to the *Installation Manual*. 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 tumbler 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 tumbler with any guards and/or panels removed.
28. **DO NOT** operate the tumbler 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 tumbler 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 tumblers.	
<small>W055</small>	

Operation



WARNING

To reduce the risk of fire:

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

W076

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

W412

Emergency Stop Button on CE Models

All CE approved OPL tumblers are factory equipped with an emergency stop button located on the front panel. Refer to *Figure 2*.

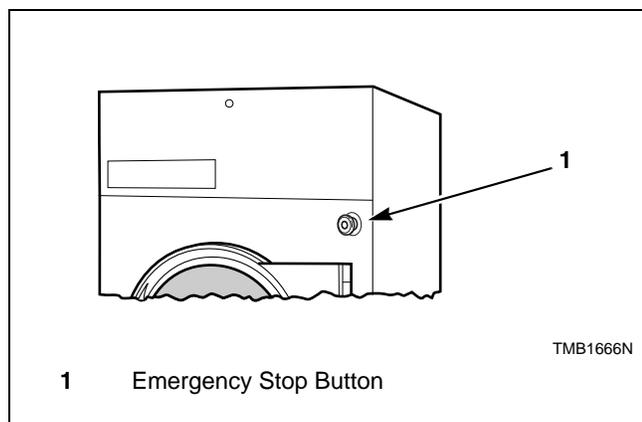


Figure 2

To operate emergency stop button:

- a. Press red emergency stop button to stop all action.
- b. To restart machine, pull red emergency stop button out and press START pad or button.

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

Operating Instructions

Step 1: Clean Lint Screen/Compartment

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

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

Step 2: Load Laundry

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

NOTE: Overloading causes slow drying and wrinkling.

Close loading door. Tumbler will not operate with the door open.

Step 3: Determine Control Type and Temperature Setting

Refer to the various controls, pages 9 - 15, follow instructions for the appropriate control type.

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

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

Step 4: Remove Laundry

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

Control Instructions

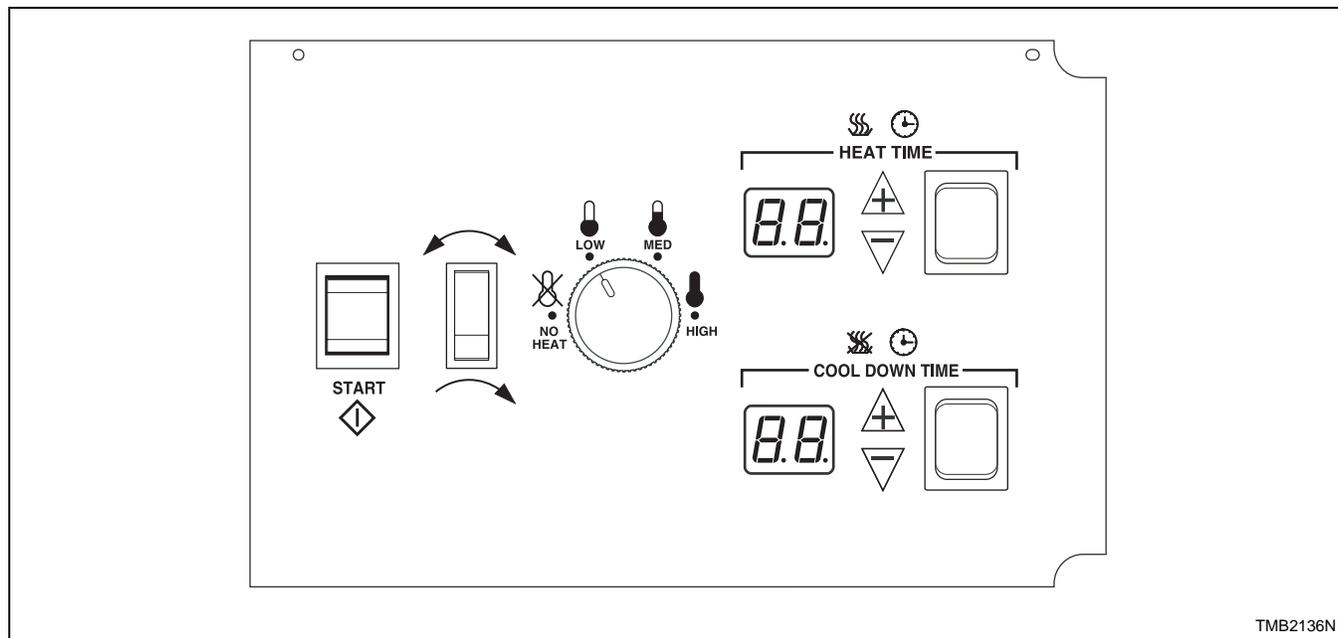


Figure 3

Dual Digital Timer Control

RQ Control Suffix

1. Select HIGH, MED, LOW or NO HEAT by turning the temperature knob.
2. Set the HEAT TIME for the number of minutes (from 0-60) desired.
3. Set the COOL DOWN TIME for the number of minutes (from 0-15) desired.
4. Press and release START button to start tumbler. Display will show minutes remaining before end of cycle.

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

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

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

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

5. When the cycle is complete, open door and remove the laundry. Anti-wrinkle feature will tumble the load without heat for 30 seconds every 2 minutes for 1 hour OR until the loading door is opened.

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

Operation

To Program a Short Test Cycle:

1. Unplug machine power cord.
2. Write down machine control dip switch settings, then set them all to the off position. Refer to *Figure 4*.
3. Plug machine in and start a cycle.

NOTE: With all control dip switches off, the total cycle time will be 1 minute long.

4. Once all testing is complete, unplug machine and re-set dip switches to their original settings.
5. Plug machine in.

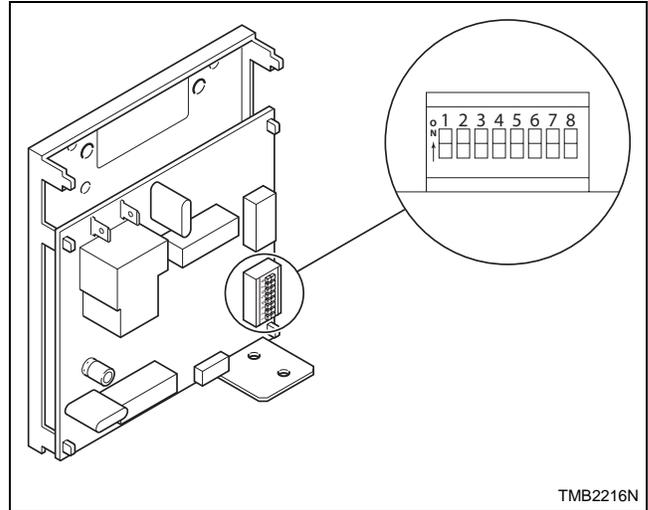


Figure 4

Error Codes

	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 tumbler before servicing. • Close gas shut-off valve to gas tumbler before servicing. • Close steam valve to steam tumbler before servicing. • Never start the tumbler with any guards/panels removed. • Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded. 	
W002	

Display	Definition	Corrective Action
OP	Open thermistor error	<ul style="list-style-type: none"> • Check thermistor. Replace if inoperative. • Check wiring diagram between control and thermistor. Refer to wiring diagram for proper wiring. • Check control. Replace if inoperative.
SH	Shorted thermistor error	<ul style="list-style-type: none"> • Check thermistor. Replace if inoperative. • Check wiring between control and thermistor. Refer to wiring diagram for proper wiring. • Check control. Replace if inoperative.
AF - 1	Airflow switch closed when cycle started	<ul style="list-style-type: none"> • Check airflow switch. Replace if inoperative.
AF - 2	Airflow switch failed to close after cycle started	<ul style="list-style-type: none"> • Check airflow switch. Replace if inoperative.

Diagnostic Microprocessor Control

General Operation

The Diagnostic Microprocessor Control (DMP) is designed to manage the drying and cooling cycles of the tumbler. The controller is also programmed from the factory with five different default programs as described in *Table 1*. The operator has the flexibility to select the time for the drying and the cool down cycles and the drying temperature. The operator may also select either reversing or nonreversing basket action only if the tumbler is equipped for reversing. The operator may also reprogram the default programs. Refer to *Programming*.

Default Programs

Programs	Dry Time (Min.)	Cool Time (Min.)	Temp. Set Point	Reversing
1 – Towels	40	5	185°/195°F (85°/91°C)	No
2 – Sheets	30	5	165°F (74°C)	Yes
3 – Misc-1	30	5	150°F (66°C)	No
4 – Misc-2	25	5	135°F (57°C)	Yes
5 – Extra Dry	5	2	150°F (66°C)	No

NOTE: If an altered program is determined to be corrupted, the default program settings will be used.

Table 1

Features

- Drying time: 0-60 minutes
- Cooling time: 2-60 minutes
- LED display of cycle time, set temperature, and actual temperature
- Thermistor controlled temperature
- Safety tumble cycle
- Buzzer for end of cycle, audible alarm
- Reversing/nonreversing selection
- Five user programmable programs
- RPM display – when equipped with rotational sensor only
- Monitors the lint door switch operation
- Monitors the thermistor for operation

The minimum drying time is 0 minutes, and the minimum cooling time is 2 minutes. The maximum drying or cooling time is 60 minutes. The drying temperature may be set from 100°F (38°C) to 185°/195°F (85°/91°C). The drying time, cooling time, or temperature may be modified during an operating cycle.

If it is necessary to reset the drying and cooling times for the current cycle, press STOP once to stop the tumbler. Press STOP again to cancel the cycle.

If it is necessary to change programs during a current cycle, press STOP once to stop the tumbler and press STOP again to cancel the current cycle.

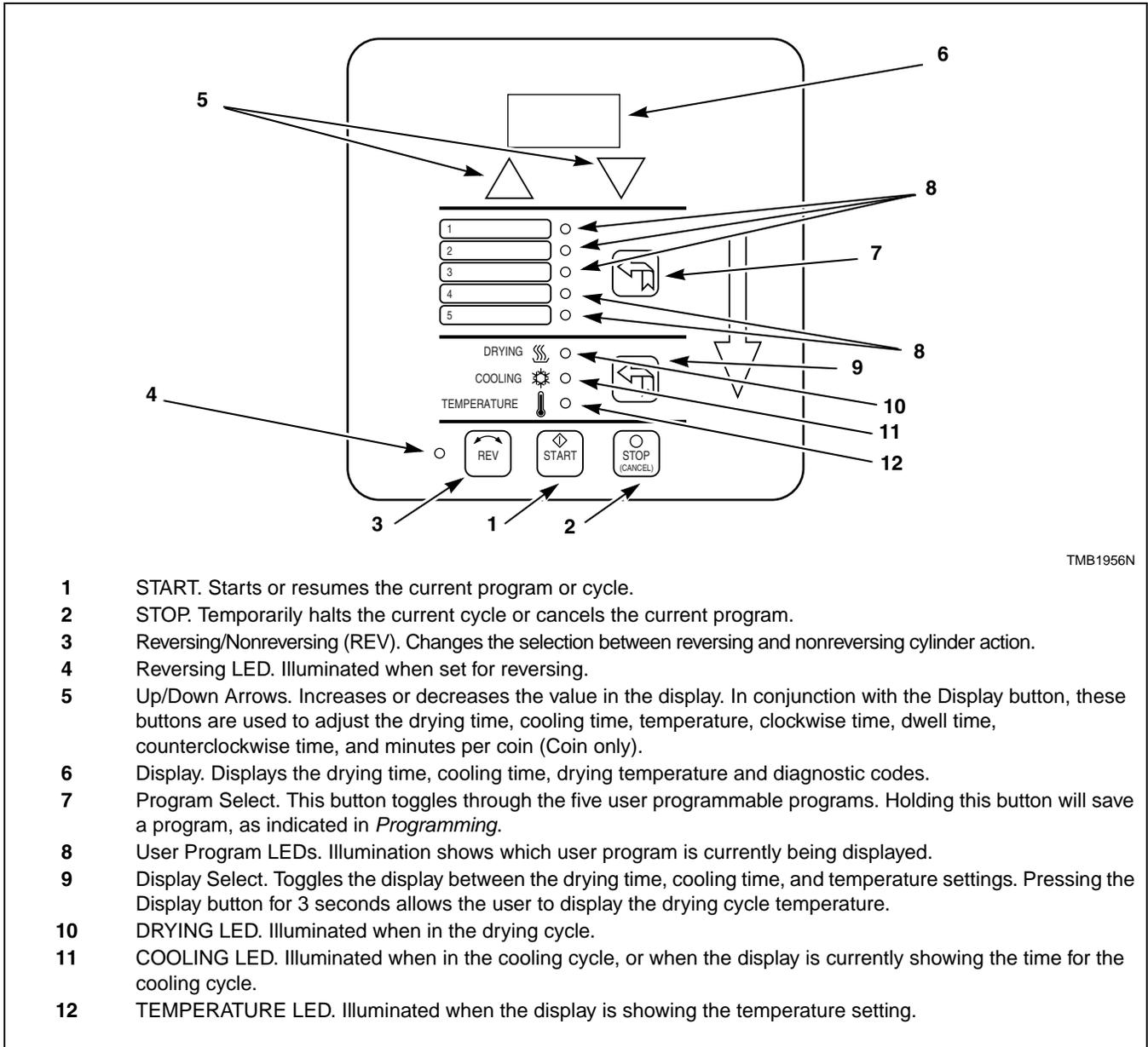
Operation

DMP OPL Models

RD Control Suffix

Description of the OPL Control Panel

Refer to *Figure 5*.



TMB1956N

- 1 START. Starts or resumes the current program or cycle.
- 2 STOP. Temporarily halts the current cycle or cancels the current program.
- 3 Reversing/Nonreversing (REV). Changes the selection between reversing and nonreversing cylinder action.
- 4 Reversing LED. Illuminated when set for reversing.
- 5 Up/Down Arrows. Increases or decreases the value in the display. In conjunction with the Display button, these buttons are used to adjust the drying time, cooling time, temperature, clockwise time, dwell time, counterclockwise time, and minutes per coin (Coin only).
- 6 Display. Displays the drying time, cooling time, drying temperature and diagnostic codes.
- 7 Program Select. This button toggles through the five user programmable programs. Holding this button will save a program, as indicated in *Programming*.
- 8 User Program LEDs. Illumination shows which user program is currently being displayed.
- 9 Display Select. Toggles the display between the drying time, cooling time, and temperature settings. Pressing the Display button for 3 seconds allows the user to display the drying cycle temperature.
- 10 DRYING LED. Illuminated when in the drying cycle.
- 11 COOLING LED. Illuminated when in the cooling cycle, or when the display is currently showing the time for the cooling cycle.
- 12 TEMPERATURE LED. Illuminated when the display is showing the temperature setting.

Figure 5

DMP OPL Features

DIP Switch Settings

The DMP has an 8 position DIP switch bank that is accessible from the back of the control board. By switching these DIP switches, it is possible for the operator to customize the display and some of the operating features of the tumbler.

Function	OPL	Coin				
1	Tumbler Type	OFF	ON	OPL=Off; Coin=On		
2	Temperature Units	OFF	OFF	°F=Off; °C=On		
3	Local/Remote Reversing	ON	ON	Local=On; Remote=Off		
4	Empty	ON	ON	Always ON		
5	Empty	ON	ON	Always ON		
6	Buzzer Timer	ON	ON	5 Sec=Off; Continuous=On		
7	Safety Tumble (OPL) or Coin Count/Pay (Coin)	ON	OFF	#1	#7	DIP SWITCH
				OFF	ON	SAFETY TUMBLE
				OFF	OFF	NO SAFETY TUMBLE
				ON	ON	COIN COUNT
				ON	OFF	PAY
8	Programming	OFF	OFF	Disable=Off; Enable=On		

Table 2

DIP Switch Functions Explained

- 1. Tumbler Type:** This DIP switch selects the type of tumbler, i.e., OPL or Coin.
- 2. Temperature Units:** Selects °F or °C for the temperature display. Factory setting is for °F.
- 3. Local/Remote Reversing:** Preset at the factory; usually for local reversing. Remote reversing for use with Reversing Timer Board only.
- 4. Empty:** Preset at the factory; always ON.
- 5. Empty:** Preset at the factory; always ON.
- 6. Buzzer Timer:** This DIP switch determines the length of time that the end of cycle buzzer will remain on. "OFF" indicates that the buzzer will sound for 5 seconds when the drying cycle is completed. "ON" indicates that the buzzer will sound continuously until the STOP button is pressed, or the loading door is opened.
- 7. Safety Tumble, Display Count, or Pay:** If DIP switch #1 is set for OPL, then DIP switch #7 in the ON position enables the safety tumble. If DIP switch #1 is set for Coin, then DIP switch #7 in the display of "PAY," to indicate that coins are needed to run the tumbler.
- 8. Programming:** This switch enables or disables the programming feature and should normally be in the OFF position.

Operation

Programming

1. Set DIP switch #8 to the ON position.
2. Select the desired program number to change. The LED should be flashing.
3. Select DRY TIME. Set the time with the Up/Down arrows.
4. Select COOL TIME. Set the time with the Up/Down arrows.
5. Select TEMPERATURE. Set the temperature with the Up/Down arrows.
6. Select reversing REV (illuminated) or nonreversing REV (not illuminated). To change basket direction and dwell time, refer to *Reversing Operation*.
7. Press and hold the Program Select button about 3 seconds until the LED stops flashing. The selected program number is now programmed. If the Program button is pressed for less than 3 seconds, the controller will cancel the program and display the next program's settings. If not programmed correctly, the display will flash "E2F" for 4 seconds, and the default settings will be used. Follow steps 4 through 7 to reprogram any program number. When finished, set DIP switch #8 to OFF. The programs are now stored.
8. During the Program Mode, if the Up/Down arrows, REV, or Display button is not pressed within 10 seconds the default program settings will be used.

Temporary Reprogramming of Current Programs (OPL Only)

1. The Drying Time, Cooling Time, Temperature, and Reversing Mode of a program currently in use may be modified simply by adjusting any or all of the program parameters for that program, as needed. Once a modification has been made the current program LED will flash indicating that it has been modified.
2. Use the Up/Down arrows to adjust program time.
3. Use the Display Select button to choose between Drying Time, Cooling Time, and Temperature. Then use the Up/Down arrows to adjust the times and temperature.
4. Toggle between reversing REV (illuminated) or nonreversing REV (not illuminated). (Only for tumblers with the reversing option.)

5. To cancel this temporary programming mode push the STOP button once to stop the current cycle and once more to cancel the modified program settings. The program will revert back to its original settings.

Reversing Operation

1. When the LOCAL reversing operation is selected, the reversing times are stored in the EEPROM which is located on the controller board. If the values stored are determined to be invalid, the clockwise and counterclockwise times will default to 60 seconds, and the dwell time will default to 4 seconds.
2. The reversing time program has the following sequence: (1) clockwise time, (2) dwell time, and (3) counterclockwise time.
3. To program new reversing times DIP switches #3 and #8 must be on.
4. Press and hold the reverse button (REV) for 3 seconds to display the clockwise time.
5. Use the Up/Down arrows to set the clockwise time within the range of 30-120 seconds.
6. Press REV to display the dwell time.
7. Use the Up/Down arrows to change the dwell time within the range of 3-10 seconds.
8. Press the REV button to display the counterclockwise time.
9. Use the Up/Down arrows to change the counterclockwise time within the range of 30-120 seconds.
10. Press the REV button to save these settings and leave DIP switch #3 in the ON position and flip DIP switch #8 to the OFF position.

When the DMP controller is retrofitted to an existing tumbler with the reversing feature, off board reversing will be required and DIP switch #3 on the DMP must be in the OFF position and the DMP must be connected to the Reversing Timer Board for proper operation. The DMP settings for clockwise, dwell, and counterclockwise times are no longer valid when used with the Reversing Board. Instead these settings are made on the Reversing Timer Board.

Rotation Sensor

The rotation sensor must “read” the key on the basket shaft or pulley. The sensor must be set approximately 1/4 inch from the key or pulley. Look for the light on the sensor to come on as the key passes on the sensor; this is a correctly operating sensor. If no light appears, either the sensor is out of range or the key/pulley or the sensor is bad. In addition, if the light stays on continuously, then the sensor is too close to the component or the sensor is bad.

Safety Tumble/Anti-Wrinkle

At the end of the cool down cycle, the tumbler will stop and display “END.” The DMP control will automatically rotate the basket for 5 seconds every 2 minutes for a total of 20 minutes, until some function of the tumbler is activated/deactivated by the user.

Operational Check for the Board Diagnostics

1. “dor” indicates that the loading or lint door is open.
2. Cycle the tumbler to check if the buzzer activates.
3. “P-F” indicates that the thermistor is short circuited or open circuited.
4. “bbt” indicates a broken belt condition or a faulty rotation sensor. (Only available on tumblers with the rotation sensor.)
5. Hold the START button to display the drum RPMs; the display will read “r##” where ## are the RPMs. (Only available on tumblers with the rotation sensor.)

Ignition Control Operation

Power Up

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

Standby Mode

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

Start Up Mode

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

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

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

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

Run Mode

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

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

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

Operation

Termination of Flame

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

Lockout Mode

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

Lockout Manual Reset

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

System Tests

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

Low Voltage Detection

If the voltage between terminals TH and GND on the control is below 18.75VAC +/- 0.75VAC for more than 3 seconds the ignition control will turn off the gas valve and will not attempt to spark. The Diagnostic LED will display Error Code 5. The ignition control will not enter Lockout Mode if a low voltage condition is detected, but will enter Standby Mode and wait for the low voltage condition to be cleared.

If the voltage between terminals TH and GND on the control rises above 19.75VAC +/- 0.1VAC for at least 3 seconds, the ignition control will then enter Start Up Mode.

Low Voltage Detection test is disabled during Run Mode.

Gas Valve

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

Flame Probe Tests

Unexpected Presence of Flame

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

Flame Monitoring

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

Diagnostic LED (DGN LED) / Error Codes

The Diagnostic LED or DGN LED is located by the power connector on the ignition control. Refer to *Figure 6*. The Diagnostic LED will indicate the status of the ignition control. Refer to *Table 3*.

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

Table 3

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

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

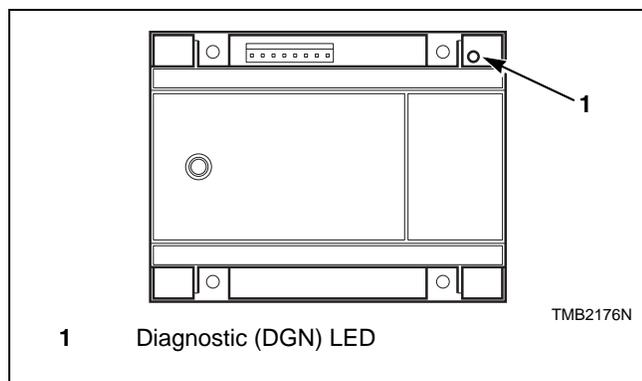


Figure 6

Maintenance



WARNING

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

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

W002

Daily

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



WARNING

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

W410

- a. Open the lint panel.
- b. Remove all accumulated lint in the lint compartment area. Lightly brush any lint that may be left on the lint screen. Lint left in the lint compartment is drawn back onto the lint screen and will restrict proper air circulation.
- c. Be sure the lint screen is not torn. If it is, replace immediately. A torn lint screen allows lint to pass from the tumbler to the ductwork system, thus creating a restriction to air circulation.

- d. The lint screen is designed to completely cover the entire opening in the lint screen panel. Be sure that it does so. Excessive gaps between the lint screen and the lint screen panel allow lint to pass into the ductwork system.
- e. Carefully wipe any accumulated lint off of the cabinet high limit thermostat and thermistor. Failure to do so will allow a buildup of lint in this area to act as an insulator, causing the tumbler to overheat. Refer to *Figure 7*.
- f. Replace the lint compartment panel on the tumbler ensuring a tight fit, and lock if applicable.

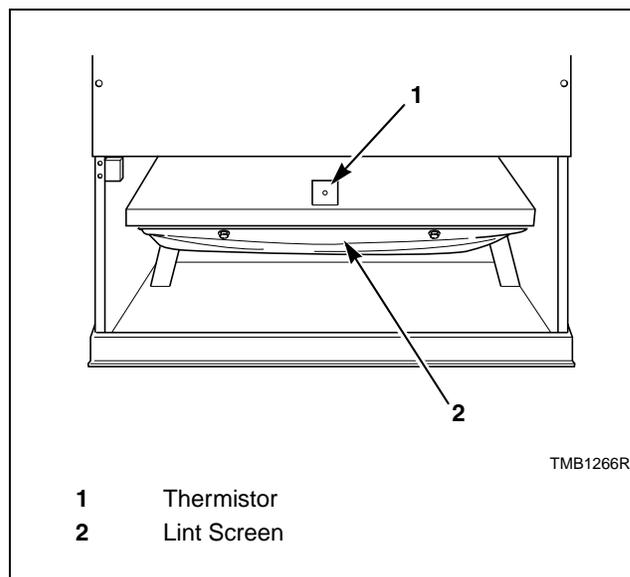


Figure 7



WARNING

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

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

W002

Monthly

1. Remove lint and debris from inside exhaust duct to maintain proper airflow and avoid overheating.
 - a. Remove external duct and duct access covers, if present.
 - b. Clean inside of duct with a vacuum.
 - c. Clean dampers and make sure they operate freely.
 - d. Replace duct and all access covers before returning operation.
2. Ensure even lint distribution over lint screen, replace if distribution of lint is uneven to maintain proper airflow and avoid overheating.
3. Carefully wipe any accumulated lint off the cabinet high limit thermostat and thermistor, including perforated cover. Lint buildup will act as an insulator, causing machine to overheat.
4. Clean lint and debris buildup from blower to maintain proper airflow, to avoid overheating and prevent possible vibration.

Bi-Annually

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

Quarterly

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

	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 tumbler before servicing. • Close gas shut-off valve to gas tumbler before servicing. • Close steam valve to steam tumbler before servicing. • Never start the tumbler with any guards/panels removed. • Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded. 	
W002	

Daily Maintenance

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

Monthly Maintenance

Remove lint and debris from inside exhaust duct to maintain proper airflow and avoid overheating.								
Ensure even lint distribution over lint screen, replace if distribution of lint is uneven to maintain proper airflow and avoid overheating.								
Carefully wipe any accumulated lint off the cabinet high limit thermostat and thermistor, including perforated cover. Lint buildup will act as an insulator, causing machine to overheat.								
Clean lint and debris buildup from blower to maintain proper airflow, to avoid overheating and prevent possible vibration.								



WARNING

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

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

W002

Quarterly Maintenance

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

Bi-Annually Maintenance

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

Before You Call for Service

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

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.