All About Servicing

Affinity & Gallery Series 5.8 Cu. Ft. Dryers Gas & Electric

FRIGIDAIRE[™]

White-Westinghouse







Electrolux Major Appliances; North America 250 Bobby Jones Expwy Augusta, GA 30907

Safe Servicing Practices

Avoid personal injury and/or property damage by observing important Safe Servicing Practices. Following are some limited examples of safe practices:

- 1. **DO NOT** attempt a product repair if you have any doubts as to your ability to complete the repair in a safe and satisfactory manner.
- 2. Always Use The Correct Replacement Parts as indicated in the parts documentation. Substitutions may defeat compliance with Safety Standards Set For Home Appliances.
- 3. Before servicing or moving an appliance:
 - Remove power cord from the electrical outlet, trip circuit breaker to OFF position, or remove fuse.
 - Turn off water supply if needed.
 - Turn off gas supply for gas dryers.
- 4. Never interfere with the proper operation of any safety device.
- 5. Use ONLY REPLACEMENT PARTS CATALOGED FOR THIS APPLIANCE. Substitutions may defeat compliance with Safety Standards Set For Home Appliances.
- GROUNDING: The standard color coding for safety ground wires is GREEN, or GREEN with YELLOW STRIPES. Ground leads are not to be used as current carrying conductors. It is EXTREMELY important that the service technician reestablish all safety grounds prior to completion of service. Failure to do so will create a hazard.
- 7. Prior to returning the product to service, ensure that:
 - All electrical connections are correct and secure.
 - All electrical leads are properly dressed and secured away from sharp edges, high temperature components, and moving parts.
 - All non-insulated electrical terminals, connectors, heaters, etc. are adequately spaced away from all metal parts and panels.
 - All safety grounds (both internal and external) are correctly and securely connected.
 - All panels are properly and securely reassembled.
 - Gas and water supplies are turned ON if shut off prior to service.

ATTENTION!!!

This service manual is intended for use by persons having electrical and mechanical training and a level of knowledge of these subjects generally considered acceptable in the appliance repair trade. Electrolux Home Products, Inc. cannot be responsible, nor assume any liability, for injury or damage of any kind arising from the use of this manual.

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Table of Contents

Section 1 Basic Information

Safe Servicing Practices	1-1
Table of Contents	1-2
Warnings and Cautions	1-3
Safety Instructions	1-3
Protect Children	1-4
Prevent Fire	1-4
Specifications	1-5
Model/Serial Number Breakdown	1-6
How the Dryer Works	1-7
Warranty Information	1-8

Section 2 Installation Information

Warnings	2-1
Pre-Installation Requirements	2-2
Affinity Unit Dimensions	2-3
Gallery Unit Dimensions	2-4
Exhaust System Requirements	2-5
Manufactured or Mobile Home Installation	2-6
Clearance Requirements	
Installation in a Recess or Closet	2-7
Electrical System Requirements	2-8
Electrical Installation	2-9
Electrical Connection (non-Canada) 3 Wire Cord	2-10
Electrical Connection (non-Canada) 4 Wire Cord	2-11
Gas Supply Requirements	2-12
Gas Connection	2-12
General Installation	2-13
Reversing the Door (Affinity)	2-14
Removing the Door	2-14
Reversing the Hinge	2-15
Reassembling the Door	2-16
Reattaching the Door	2-17
Accessories	2-18
Pedestal Installation	2-19
Stacking Kits	2-19
Solid Door Reversal Instructions (Gallery)	2-21
Window Door Reversal Instructions (Gallery)	2-21

Section 3 Electronic Control

Affinity Control Panel Layout	3-1
Operating Steps	3-1
Cycle Selection	3-1
Cycle Description	3-2
Drying Temperature	3-3
Dryness Level	3-3
Options	3-4
Dryer Features	3-4
Cycle Options	3-5
Dryer Settings Chart	3-5
Customer Codes	3-5
Reading Error Codes - Affinity Models	3-6
Function Test Sequence	3-6
Error Code Chart	3-7

Section 3 Electronic Control (continued)

Gallery Control Panel Layout	3-8
Operating Steps	3-8
Cycle Selection	3-8
Cycle Description	3-9
Drying Temperature	3-10
Dryness Level	3-10
Options	3-11
Dryer Features	3-11
Dryer Settings Chart	3-12
Reading Error Codes - Gallery Models	3-13
Function Test Sequence	3-14
Error Code Chart	3-15
Electrical Operation (Electric Dryers Models)	3-16
Electronic Control Board Circuits	3-16
Drive Motor Circuit	3-16
Temperature Sensing Circuit	3-16
The Heating Circuit	3-16
Drying Time	3-17
Electrical Operation (Gas Dryers Models)	3-17
Electronic Control Board Circuits	3-17
Drive Motor Circuit	3-17
Temperature Sensing Circuit	3-17
The Heating Circuit	3-18
Drying Time	3-18
Electrical Tests For Electric Dryers Only	3-19
Electrical Tests For Electric and Gas Dryers	3-19
Electrical Tests For Gas Dryers	3-20
Troubleshooting Flowcharts	3-21
Electric Dryer Completely Inoperative	3-22
Gas Dryer Completely Inoperative	3-23
Blower Motor Runs But Drum Does Not Turn	3-24
Longer Than Normal Drying Times	3-24
Electric Dryer Not Heating Properly	3-25
Gas Dryer Not Heating Properly	3-26
Dryer Över Heating	3-26
Blower Motor Runs But Dryer Does Not Heat	3-27
Blower Motor Runs But Dryer Does Not Heat	3-28
Clothes Not Dry In Auto Cycle	3-29
Selector LEDs Do Not Light	3-30

Section 4 Component Teardown

Warnings and Cautions	4-1
Door (Affinity)	4-2
Door Strike and Hinge Assembly (Affinity)	4-3
Door Handle (Gallery)	4-3
Door Assembly (Gallery)	4-3
Hinge (Gallery)	4-4
Door Assembly Breakdown (Gallery)	4-4
Door Gasket (All Models)	4-4
Lint Housing Cover (All Models)	4-4
Top Panel (All Models)	4-5
Top Panel Mounting Bracket (All Models)	4-5
Console Panel (All Models)	4-5
Control Board Housing (Gallery)	4-6
Control Board Housing (Affinity)	4-6

6-4

Section 4 Component Teardown

Light Assembly (All Models)	4-7
Door Switch (All Models)	4-7
Front Panel (All Models)	4-8
Front Air Duct (All Models)	4-8
Outlet (Exhaust) Thermistor (All Models)	4-8
Rear Panel (All Models)	4-9
Moisture Sensing Bar (All Models)	4-9
Belt (All Models)	4-10
Drum Bracket (All Models)	4-10
Front Inner Panel and Drum (All Models)	4-10
Roller Assembly (All Models)	4-11
Exhaust Thermal Limiter (All Models)	4-11
Exhaust Tube (All Models)	4-12
Drum Vane (All Models)	4-12
Rear Heat Duct (All Models)	4-12
Motor and Blower Assembly Separation (All Models)	4-13

Section 5 Troubleshooting

Troubleshooting Chart (Customer Use Related) Troubleshooting Chart	5-1 5-2
Section 6 Wiring Diagrams	
Affinity Series With Electric Heater	6-1
Affinity Series With Gas Heater	6-2
Gallery Series With Electric Heater	6-3

Gallery Series With Gas Heater

Recognize safety symbols, words and labels:

Safety items throughout this manual are labeled with a WARNING or CAUTION based on the risk type as described below:



CAUTION

This symbol alerts you to situations that may cause serious body harm, death or property damage.

This symbol alerts you to situations that may cause bodily injury or property damage.

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.

Read all of the following instructions before installing and using this appliance:

- Destroy the carton and plastic bags after the dryer is unpacked. Children might use them for play. Cartons covered with rugs, bedspreads, or plastic sheets can become airtight chambers causing suffocation. Place all materials in a garbage container or make materials inaccessible to children.
- Clothes dryer installation and service must be performed by a qualified installer, service agency or gas supplier.
- Install the clothes dryer according to the manufacturer's instructions and local codes.
- The electrical service to the dryer must conform with local codes and ordinances and the latest edition of the National Electrical Code, ANSI/NFPA 70, or in Canada, the Canadian electrical code C22.1 part 1.
- The gas service to the dryer must conform with local codes and ordinances and the latest edition of the National Fuel Gas Code ANSI Z223.1, or in Canada, CAN/ACG B149.1-2000.
- The dryer is designed under ANSI Z 21.5.1 or ANSI/UL 2158 CAN/CSA C22.2 No. 112 (latest editions) for HOME USE only. This dryer is not recommended for commercial applications such as restaurants, beauty salons, etc.
- The instructions in this manual and all other literature included with this dryer are not meant to cover every possible condition and situation that may occur. Good safe practice and caution MUST be applied when installing, operating and servicing any appliance.

1-3

WARNING

To prevent personal injury or damage to the dryer, the electrical power cord of a gas dryer must be plugged into a properly grounded and polarized 3-prong outlet. The third grounding prong must never be removed.

Never ground the dryer to a gas pipe.

Do not use an extension cord or an adapter plug.

ALWAYS disconnect the dryer from the electrical supply before attempting any service or cleaning. Failure to do so can result in electrical shock or injury.

Do not use any type spray cleanser when cleaning dryer interior. Hazardous fumes or electrical shock could occur.

To prevent injury, do not reach into the dryer if the drum is moving. Wait until the dryer has stopped completely before reaching into the drum.

To prevent injury and damage to the dryer:

- Use only authorized factory parts.
- Do not tamper with controls.
- Do not install or store the dryer where it will be exposed to the weather.

Protect Children

Do not allow children to play on or in the dryer. Close supervision of children is necessary when the dryer is used near children. As children grow, teach them the proper, safe use of all appliances.

Destroy the carton, plastic bag and other packing materials after the dryer is unpacked. Children might use them for play. Cartons covered with rugs, bedspreads or plastic sheets can become airtight chambers.

Keep laundry products out of children's reach. To prevent personal injury, observe all warnings on product labels.

Before the dryer is removed from service or discarded, remove the dryer door to prevent accidental entrapment.

Failure to comply with these warnings could result in serious personal injuries.

Prevent Fire

Do not dry items that have been previously cleaned in, soaked in, or spotted with gasoline, cleaning solvents, kerosene, waxes, etc. Do not store these items on or near the dryer. These substances give off vapors that could ignite or explode. Do not spray any type of aerosol into, on or near dryer at any time.

Do not place items exposed to cooking oils in your dryer. Items contaminated with cooking oils may contribute to a chemical reaction that could cause a load to catch fire.

To prevent fire, do not use heat to dry items containing plastic, foam rubber or similarly textured rubber-like materials, or items containing feathers or down. Use Air Fluff (No Heat) only.

Clean the lint screen before or after each load. The interior of the dryer, lint screen housing and exhaust duct should be cleaned approximately every 18 months by qualified service personnel. An excessive amount of lint buildup in these areas could result in inefficient drying and possible fire. Do not operate the dryer if the lint screen is blocked, damaged or missing. Fire hazard, overheating and damage to fabrics can occur. If your dryer has a drying rack, always replace the lint screen when finished using the drying rack.

Keep area around exhaust opening and surrounding areas free from the accumulation of lint, dust and dirt.

Do not obstruct the flow of ventilating air. Do not stack or place laundry or throw rugs against front or back of dryer.

Do not use fabric softeners or products to eliminate static unless recommended by the manufacturer of the fabric softener or product.

Failure to comply with these warnings could result in fire, explosion, serious bodily injury and/or damage to the rubber or plastic parts of the dryer.

Specification	Electric Models	Gas Models	
Electrical			_
Volts 120/208 or 120/240	120/208 or 120/240	120	
Amps (Circuit)	30	15	
Motor Wattage	160-350 Watts	160-350 Watts	
Heat Input (Watts@240 VAC)	3200/4500		
Heat Input (BTU/Hr)		20,000	
Auto. Electric Ignition		Yes	
Component Resistance			_
(± 10% @ 77°F)			
Drive Motor (120Volt, 60Hz,			
1/4hp 1725RPM)			
Motor Start Winding	4.5 Ohms	4.5 Ohms	
Motor Run Winding	3.8 Ohms	3.8 Ohms	
Heating Element	12.8 Ohms		
Control Thermistor	50,000 Ohms ± 5% @ 77°F	50,000 Ohms ± 5% @ 77°F	
Burner Assembly			
Ignitor		50-400 Ohms	
Secondary Coil		1200 Ohms	
Booster Coil		1320 Ohms	
Drum Temperatures			
(Max. opening on 3rd cycle)			
Maximum	120° - 160°	120° - 180°	
Medium	110° - 140°	105° - 145°	
Low	95° - 130°	95° - 130°	
Drum Size	5.8 Cu. Ft.	5.8 Cu. Ft.	

Serial Number Breakdown



Model Number Breakdown



Affinity Series Dryer Model Features

5.8 Cu. Ft. Super Capacity Drum 7 Auto Dry Cycles **4 Dryness Level Selections** 90 Minute Timed Dry Auto Shrink Guard Option Control Lock Cycle Status Lights **Electronic Controls** Estimated Time Remaining Display Precision Dry Moisture Sensor **Tumble Care Drying System** Auto Press Saver Option 5 Temperature Options: High Heat, Medium Heat, Medium Low Heat, Low Heat, No Heat Interior Drum Light **Reversible Door Ouick-Clean Lint Screen**

Dimensions

Width: 27" Height: 36" Depth: 28-1/4" Approx. Product Weight (Lbs.): 150 Approx. Shipping Weight (Lbs.): 165

Gallery Series Dryer Model Features

5.8 Cu. Ft. Super Capacity Drum 7 Auto Dry Cycles **4 Dryness Level Selections** 90 Minute Timed Dry Auto Shrink Guard Option Control Lock Cycle Status Lights **Electronic Controls** Estimated Time Remaining Display Precision Dry Moisture Sensor **Tumble Care Drying System** Auto Press Saver Option 5 Temperature Options: High Heat, Medium Heat, Medium Low Heat, Low Heat, No Heat On / Off End-of-Cycle Signal Interior Drum Light **Reversible Door Clean Lint Filter Indicator Quick-Clean Lint Screen**

Dimensions

Width: 27" Height: 36" Depth: 28-1/2" Approx. Shipping Weight (Lbs.): 118





How The Dryer Works

Clothes dryers remove moisture from clothes by pulling air, either warmed or room temperature, through the clothes while they are being tumbled by a turning drum. The moisture from the clothes is exhausted through the dryer vent system to the outside of the house.

The basic components are:

Drum

Heat Source (Gas or Electric) (See Section 3 for details) Drive Motor and Blower (See Section 3 for details) Control Thermistor (See Section 3 for details) Electronic Control Board (See Section 3 for details)

Airflow

Since the moisture in the clothes is removed by air moving through the drum, it is important to understand the complete air flow system.

Airflow Electric Dryers:

Room air enters the dryer through the louvered rear panel of the dryer. Once inside the dryer cavity the air is drawn into the heating assembly. In any cycle, other than Air Fluff, the heating element heats the air as it passes through. The air is then drawn into the drum through a duct mounted to the rear inner panel. The air passes through the drum picking up moisture and is drawn though the lint filter into the duct work at the front of dryer. The air enters the fan housing and is pushed out the exhaust vent to the outside of the house.

Airflow gas dryers:

The air flow in gas dryers is similar to electric dryers except for the heat source. The air enters the cavity through the louvered rear panel. The air is pulled across the gas burner, through the burner chamber and is ducted to the rear of the drum. The air passes through the drum picking up moisture and is drawn though the lint filter into the duct work at the front of dryer. The air enters the fan housing and is pushed out the exhaust vent to the outside of the house.

Short Unrestricted Vents

The venting system in the dryer is designed to operate under some back pressure. This back pressure is needed to slow the airflow and allow the air to be heated before it passes through the clothes.

With short direct vent runs; such as you have when the dryer is installed against an outside wall, use a 2 1/2" vent cap rather than a 4" vent cap.

Airflow problems:

Airflow problems are usually caused by restrictions, leaks or short unrestricted vents resulting in longer drying times, hotter dryer surfaces and in extreme cases, causing the thermal limiter to open on electric dryers.

Restrictions:

Restrictions can occur any place in the airflow system, but the most common are:

- 1. Installing the dryer in a small inclosed area; such as a closet without a louvered door that reduces the intake air.
- 2. Fan problems caused by either a slow running motor, a broken or deformed fan blade or a deformed fan housing.
- 3. A lint restriction in the lint screen area. Operator may not be cleaning the lint screen before using.
- 4. A restriction in the exhaust system in the house caused by the design of the vent, such as; the diameter of the vent pipe being too small, too long, too many right angles, or a collapsed or lint restricted vent pipe.

V NOTE

Problems caused by the vent pipe in the house are not covered under the product warranty.

Air leaks:

Two types of air leaks may occur:

 Air being drawn in around the door opening, between the drum and front panel, or around the foam seal between the front duct and blower housing, replaces some of the air being drawn through the drum and lowers the efficiency of the dryer.

NOTE

An air leak that occurs around the door opening or between the drum and the front panel usually will cause lint to build up on the inner panel of the door.

2. Air being pushed out around the blower housing or vent pipe inside the dryer, allows some of the moisture that has been removed from the clothes to be recirculated.

Major Appliance Warranty Information

Your appliance is covered by a one year limited warranty. For one year from your original date of purchase, Electrolux will pay all costs for repairing or replacing any parts of this appliance that prove to be defective in materials or workmanship when such appliance is installed, used and maintained in accordance with the provided instructions.

Exclusions

This warranty does not cover the following:

- 1. Products with original serial numbers that have been removed, altered or cannot be readily determined.
- 2. Product that has been transferred from its original owner to another party or removed outside the USA or Canada.
- 3. Rust on the interior or exterior of the unit.
- 4. Products purchased "as-is" are not covered by this warranty.
- 5. Food loss due to any refrigerator or freezer failures.
- 6. Products used in a commercial setting.
- 7. Service calls which do not involve malfunction or defects in materials or workmanship, or for appliances not in ordinary household use or used other than in accordance with the provided instructions.
- 8. Service calls to correct the installation of your appliance or to instruct you how to use your appliance.
- 9. Expenses for making the appliance accessible for servicing, such as removal of trim, cupboards, shelves, etc., which are not a part of the appliance when it is shipped from the factory.
- 10. Service calls to repair or replace appliance light bulbs, air filters, water filters, other consumables, or knobs, handles, or other cosmetic parts.
- 11. Surcharges including, but not limited to, any after hour, weekend, or holiday service calls, tolls, ferry trip charges, or mileage expense for service calls to remote areas, including the state of Alaska.
- 12. Damages to the finish of appliance or home incurred during installation, including but not limited to floors, cabinets, walls, etc.
- 13. Damages caused by: services performed by unauthorized service companies; use of parts other than genuine Electrolux parts or parts obtained from persons other than authorized service companies; or external causes such as abuse, misuse, inadequate power supply, accidents, fires, or acts of God.

DISCLAIMER OF IMPLIED WARRANTIES; LIMITATION OF REMEDIES

CUSTOMER'S SOLE AND EXCLUSIVE REMEDY UNDER THIS LIMITED WARRANTY SHALL BE PRODUCT REPAIR OR REPLACEMENT AS PROVIDED HEREIN. CLAIMS BASED ON IMPLIED WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED TO ONE YEAR OR THE SHORTEST PERIOD ALLOWED BY LAW, BUT NOT LESS THAN ONE YEAR. ELECTROLUX SHALL NOT BE LIABLE FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES SUCH AS PROPERTY DAMAGE AND INCIDENTAL EXPENSES RESULTING FROM ANY BREACH OF THIS WRITTEN LIMITED WARRANTY OR ANY IMPLIED WARRANTY. SOME STATES AND PROVINCES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, OR LIMITATIONS ON THE DURATION OF IMPLIED WARRANTIES, SO THESE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU. THIS WRITTEN WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS. YOU MAY ALSO HAVE OTHER RIGHTS THAT VARY FROM STATE TO STATE.

If You Need Service Keep your receipt, delivery slip, or some other appropriate payment record to establish the warranty period should service be required. If service is performed, it is in your best interest to obtain and keep all receipts. Service under this warranty must be obtained by contacting Electrolux at the addresses or phone numbers below.

This warranty only applies in the USA and Canada. In the USA, your appliance is warranted by Electrolux Major Appliances North America, a division of Electrolux Home Products, Inc. In Canada, your appliance is warranted by Electrolux Canada Corp. Electrolux authorizes no person to change or add to any obligations under this warranty. Obligations for service and parts under this warranty must be performed by Electrolux or an authorized service company. Product features or specifications as described or illustrated are subject to change without notice.

USA 1.800.944.9044 Electrolux Major Appliances North America P.O. Box 212378 Augusta, GA 30907



Canada 1.800.668.4606 Electrolux Canada Corp. 5855 Terry Fox Way Mississauga, Ontario, Canada L5V 3E4

1_8

WARNING

To reduce the risk of fire, electrical shock, or injury when using a Frigidaire Dryer, follow basic safety precautions including the following:

- Read all instructions before operating the dryer.
- Before performing any type of service or installation, make sure that electric power to the dryer is disconnected.
- To avoid the possibility of explosion or fire, do not store or use combustible, flammable, or explosive liquids or vapors (such as gasoline) inside or in the vicinity of this or any other appliance.
- This appliance is equipped with a three-prong grounding plug for protection against possible electric shock hazards. Plug it only into a dedicated, grounded electrical outlet. When only a standard two-prong electrical outlet is available, the customer must have it replaced with a dedicated, properly grounded three-prong electrical outlet before using this Appliance.

Do not under any circumstances, cut or remove the third (ground) prong from the power cord.

- Do not use an adapter plug.
- Do not use an extension cord.

Do not use a power cord that is frayed or damaged.

The use of a ground fault interrupter (GFI) is not recommended.

- Do not install or use a damaged appliance. If you receive a damaged appliance, immediately contact your dealer or builder.
- The installer must show the customer the location of the power plug so that they know where and how to disconnect power to the dryer.
- The customer should not install, repair or replace any part of the dryer unless specifically recommended in the literature accompanying it. A qualified service technician should perform all other service.

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.

WARNING

Destroy carton, plastic bags, and any exterior wrapping material immediately after the Dryer is unpacked. Children should never use these items for play. Cartons covered with rugs, bedspreads, plastic sheets or stretch wrap may become air tight chambers and can quickly cause suffocation.

Keep laundry products out of children's reach. To prevent personal injury, observe all warnings on product labels.

Cut Hazard. To prevent serious injury from sharp edges, wear work gloves when handling, unpacking or disassembling unit.

Electrolux cannot be held responsible for damage to property or injury to persons caused by failure to comply with the installation, maintenance and safety instructions contained in this Service Manual.

Pre-Installation Requirements

Tools and materials needed for installation:

- Adjustable pliers
- Phillips, straight, & square bit screwdrivers
- Adjustable wrench
- Pipe wrench for gas supply (gas dryer)
- LP-resistant thread tape (for natural gas or LP supply, gas dryer)
- Carpenter's level
- External vent hood
- 4-inch (10.2 cm), rigid metal or semi-rigid metal exhaust duct work
- 3-wire or 4-wire 240 volt cord kit (electric dryer)
- 4 in. (10.2 cm) clamp
- Gas line shutoff valve (gas dryer)
- 1/2 NPT union flare adapters (x2) and flexible gas supply line (gas dryer)
- Metal foil tape (not duct tape)

Installation Checklist

Doors

- □ Handles are secure and tight
- Door seals completely to cabinet on all sides

Leveling

- Dryer is level, side-to-side and front-to-back
- Cabinet is setting solid on all corners

Electrical Power

- □ House power turned on
- Dryer plugged in

Gas Connections (For Gas Dryers Only)

Test all connections by brushing on a soapy water solution. NEVER test for gas leaks with an open flame.

Final Checks

- □ Shipping material removed
- □ Run dryer through a cycle check for proper operation
- Dryer area is clear and free from combustible materials, gasoline, and other flammable vapors. Verify that nothing obstructs the flow of combustion and ventilation air
- □ Registration card sent in

Before beginning installation, carefully read these instructions. This will simplify the installation and ensure the dryer is installed correctly and safely. Leave these instructions near the Dryer after installation for future reference.

\$ NOTE

The electrical service to the Dryer must conform with local codes and ordinances and the latest edition of the National Electrical Code, ANSI/NFPA 70.

NOTE

The gas service to the Dryer must conform with local codes and ordinances and the latest edition of the National Fuel Gas Code ANSI Z223.1.

NOTE

-2-2

The Dryer is designed under ANSI Z 21.5.1 or ANSI/UL 2158 - CAN/CSA C22.2 (latest editions) for HOME USE only. This Dryer is not recommended for commercial applications such as restaurants or beauty salons, etc.

Affinity Series



*To obtain these minimal depth dimensions, dryer must be vented straight back. Using a quick-turn 90° elbow (right) adds approximately 0.75 in. (2 cm) to installation depth. Upward venting of exhaust on stacked dryer adds approximately 4 in. (10.2 cm) to installation depth. Downward venting of exhaust on stacked dryer adds approximately 2.25 in. (6.5 cm) to installation depth. Leftward venting of exhaust on stacked dryer adds approximately 3.75 in. (9.5 cm) to installation depth.

2-3

Gallery Series



Exhaust System Requirements

Use only 4 inch (10.2 cm) diameter (minimum) rigid or flexible metal duct and approved vent hood which has a swing-out damper(s) that open when the dryer is in operation. When the dryer stops, the dampers automatically close to prevent drafts and the entrance of insects and rodents. To avoid restricting the outlet, maintain a minimum of 12 inches (30.5 cm) clearance between the vent hood and the ground or any other obstruction.

If the present system is made up of plastic duct or metal foil duct, replace it with a rigid or semi-rigid metal duct. In Canada and the United States if metal (foil type) duct is installed, it must be of a specific type identified by the appliance manufacturer as suitable for use with clothes dryers and in the United States must also comply with Outline for Clothes Dryer Transition Duct, UL standard 2158A. Also, ensure the present duct is free of any lint prior to installing dryer duct.

The dryer must be connected to an exhaust outdoors. Regularly inspect the outdoor exhaust opening and remove any accumulation of lint around the outdoor exhaust opening and in the surrounding area. (See Figure 2-2 & 2-3)



Do not allow combustible materials (for example: clothing, draperies and curtains, paper) to come in contact with exhaust system. The dryer MUST NOT be exhausted into a chimney, wall, ceiling, or any concealed space of a building which can accumulate lint, resulting in a fire hazard.

Do not screen the exhaust ends of the vent system, or use any screws, rivets or other fasteners that extend into the duct to assemble the exhaust system. Lint can become caught in the screen, on the screws or rivets, clogging the duct work and creating a fire hazard as well as increasing drying times. Use an approved vent hood to terminate the duct outdoors, and seal all joints with duct tape. All male duct pipe fittings MUST be installed downstream with the flow of air.



Figure 2-2.

	MAXIMUM LENGTH of 4" (10.2cm) Rigid Metal Duct			
Nu	VENT HOOD TYPE			
mbe	(Pre			
er of 90° Turns	4″ (10.2cm)	louvered	2.5″ (6.35cm)	
0	60 ft. (18.3 m)		48 ft. (14.6 m)	
1	52 ft. (15.9 m)		40 ft. (12.2 m)	
2	44 ft. (13.5 m)		32 ft. (9.8 m)	
3	32 ft. (9.8 m)		24 ft. (7.3 m)	
4	28 ft. (9.5 m)		16 ft. (4.9 m)	



Figure 2-3.

Install Male Fittings in Correct Direction:

In installations where the exhaust system is not described in the charts, the following method must be used to determine if the exhaust system is acceptable: (See Figure 2-4)



Exhaust System Requirements

- 1. Connect an inclined or digital manometer between the dryer and the point the exhaust connects to the dryer.
- 2. Set the dryer timer and temperature to air fluff (cool down) and start the dryer.
- 3. Read the measurement on the manometer.
- 4. The system back pressure MUST NOT be higher than 1.0 inch of water column. If the system back pressure is less than 1.0 inch of water column, the system is acceptable. If the manometer reading is higher than 1.0 inch of water column, the system is too restrictive and the installation is unacceptable.

Although vertical orientation of the exhaust system is acceptable, certain extenuating circumstances could affect the performance of the dryer:

- 1. Only the rigid metal duct work should be used.
- 2. Venting vertically through a roof may expose the exhaust system to down drafts causing an increase in vent restriction.
- Running the exhaust system through an uninsulated area may cause condensation and faster accumulation of lint.
- 4. Compression or crimping of the exhaust system will cause an increase in vent restriction.

-2-6

 The exhaust system should be inspected and cleaned a minimum of every 18 months with normal usage. The more the dryer is used, the more often the exhaust system and vent hood should be checked for proper operation.

Exhaust Direction

Directional exhausting can be accomplished by installing a quick-turn 90° dryer vent elbow directly to exhaust outlet of dryer. Dryer vent elbows are available through your local parts distributor or hardware store. (See Figure 2-5)



Figure 2-5.

Manufactured or Mobile Home Installation

- Installation MUST conform to current Manufactured Home Construction & Safety Standard, Title 24 CFR, Part 32-80 (formerly the Federal Standard for Mobile Home Construction and Safety, Title 24, HUD Part 280) or Standard CAN/CSAZ240 MH.
- Dryer MUST be exhausted outside (outdoors, not beneath the mobile home) using metal ducting that will not support combustion. Metal ducting must be 4 inches (10.16 cm) in diameter with no obstructions. Rigid metal duct is preferred.
- 3. If dryer is exhausted through the floor and area beneath the mobile home is enclosed, the exhaust system MUST terminate outside the enclosure with the termination securely fastened to the mobile home structure.
- 4. Refer to previous sections in this guide for other important exhaust venting system requirements.
- When installing a gas dryer into a mobile home, a provision must be made for outside make up air. This provision is to be not less than twice the area of the dryer exhaust outlet.
- 6. Installer MUST anchor this (1) dryer or (2) dryer mounted on pedestal to the floor with approved Mobile Home Installation Kit.

Clearance Requirements Installation in a Recess or Closet

- 1. A dryer installed in a bedroom, bathroom, recess or closet, MUST be exhausted out doors.
- 2. No other fuel burning appliance shall be installed in the same closet as the gas dryer.
- The dryer needs the space around it for proper ventilation. DO NOT install dryer in a closet with a solid door.
- Closet door ventilation required: A minimum of 120 square inches (774.2 cm²) of opening, equally divided at the top and bottom of door, is required. Openings should be located 3 inches (7.6 cm) from bottom and top of door. Openings are required to be unobstructed when a door is installed. A louvered door with equivalent air openings for the full length of door is acceptable. (See Figure 2-6 & 2-7)

IMPORTANT

DO NOT INSTALL THE DRYER:

- 1. In an area exposed to dripping water or outside weather conditions.
- 2. In an area where it will come in contact with curtains, drapes, or anything that will obstruct the flow of combustion and ventilation air.
- 3. On carpet. Floor MUST be solid with a maximum slope of 1 inch (2.54 cm).



Figure 2-6.

MINIMUM INSTALLATION CLEARANCES - Inches (cm)				
	SIDES	REAR	TOP	FRONT
Alcove	0" (0 cm)	0"(0 cm)*	0" (0 cm)	n/a
Under- Counter	0″ (0 cm)	0″(0 cm)*	0″ (0 cm)	n/a
Closet	0" (0 cm)	0"(0 cm)*	0" (0 cm)	1" (2.54 cm)

* For other than straight back venting, a quick-turn 90° dryer vent elbow (vented right or down in free-standing dryer or right on pedestal-mounted dryer) must be installed to achieve 0" (0 cm) installation.



NOTE

To achieve an installation with 0" (0cm) clearance for the back of the dryer (for other than straight back venting), a quick-turn 90° dryer vent elbow must be installed as described previously in this manual.

Figure 2-7.

NOTE

Because of potentially inconsistent voltage capabilities, the use of this dryer with power created by gas powered generators, solar powered generators, wind powered generators or any other generator other than the local utility company is not recommended.

GFI (Ground Fault Interrupter) receptacle is not required.

Electrical System Requirements

Circuit - Individual 30 amp. branch circuit fused with 30 amp. time delay fuses or circuit breakers. Use separately fused circuits for washer and dryer. DO NOT operate a washer and a dryer on the same circuit.

Power Supply - 3-wire or 4-wire, 240 volt, single phase, 60 Hz, Alternating Current.

3-Wire Power Supply Cord Kit (not supplied)

The dryer MUST employ a 3-conductor power supply cord NEMA 10-30 type SRDT rated at 240 volt AC minimum, 30 amp, with 3 open end spade lug connectors with upturned ends or closed loop connectors and marked for use with clothes dryers. For 3-wire cord connection instructions see ELECTRICAL CONNECTIONS FOR A 3-WIRE SYSTEM. (See Figure 2-8)

4-Wire Power Supply Cord Kit (not supplied)

The dryer MUST employ a 4-conductor power supply cord NEMA 14-30 type SRDT or ST (as required) rated at 240 volt AC minimum, 30 amp, with 4 open end spade lug connectors with upturned ends or closed loop connectors and marked for use with clothes dryers. For 4-wire cord connection instructions see ELECTRICAL CONNECTIONS FOR A 4-WIRE SYSTEM. (See Figure 2-8)



2-8

Dryers manufactured for sale in Canada have factoryinstalled, 4-wire power supply cord (NEMA 14-30R).

IMPORTANT

This dryer is internally grounded to neutral unless it was manufactured for sale in Canada. Grounding through the neutral link is prohibited for: (1) new branch circuit installations, (2) mobile homes, (3) recreational vehicles, and (4) areas where local codes do not permit grounding through the neutral.

Outlet Receptacle

NEMA 10-30R or NEMA 14-30R receptacle to be located so the power supply cord is accessible when the dryer is in the installed position.

Electrical Requirements for Gas Dryer:

Circuit - Individual, properly polarized and grounded 15 amp. branch circuit fused with 15 amp. time delay fuse or circuit breaker.

Power Supply - 2-wire, with ground, 120 volt, single phase, 60 Hz, Alternating Current.

Power Supply Cord - The dryer is equipped with a 120 volt 3-wire power cord.

Grounding Connection - See "Grounding requirements" in Electrical Installation section.



Figure 2-8.

WARNING

Do not use an extension cord with this dryer. Some extension cords are not designed to withstand the amounts of electrical current this dryer utilizes and can melt, creating electrical shock and/or fire hazard. Locate the dryer within reach of the receptacle for the length power cord to be purchased, allowing some slack in the cord.

A U.L.-approved strain relief must be installed onto power cord. If the strain relief is not attached, the cord can be pulled out of the dryer and can be cut by any movement of the cord, resulting in electrical shock.

Do not use an aluminum wired receptacle with a copper wired power cord and plug (or vice versa). A chemical reaction occurs between copper and aluminum and can cause electrical shorts. The proper wiring and receptacle is a copper wired power cord with a copper wired receptacle.

Electrical Installation

For a Grounded, Cord-connected Dryer: (U.S.A. Electric Dryer)

- The dryer MUST be grounded. In the event of a malfunction or breakdown, grounding will reduce the risk of electrical shock by a path of least resistance for electrical current.
- 2. After you purchase and install a 3 wire or 4 wire power supply cord having an equipment grounding conductor and a grounding plug that matches your wiring system, the plug MUST be plugged into an appropriate, copper wired receptacle that is properly installed and grounded in accordance with all local codes and ordinances. If in doubt, call a licensed electrician.

DO NOT modify the plug you've installed on this appliance.

For a permanently connected dryer:

 The 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 equipment grounding terminal or lead on the appliance.

For a Grounded, Cord-connected Dryer: (Canada Electric Dryer)

- The dryer MUST be grounded. In the event of a malfunction or breakdown, grounding will reduce the risk of electrical shock by a path of least resistance for electrical current.
- Since your dryer is equipped with a power supply cord having an equipment-grounding conductor and a grounding plug, the plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances. If in doubt, call a licensed electrician.

DO NOT modify the plug provided with the appliance.

Gas Dryer

 The dryer is equipped with a three-prong (grounding) plug for your protection against shock hazard and should be plugged directly into a properly grounded three-prong receptacle.

DO NOT cut or remove ground prong from the plug.

Electrical Connection (non-Canada) 3 Wire Cord

ELECTRICAL SHOCK HAZARD

Failure to disconnect power source before servicing could result in personal injury or even death.

- 1. Turn off power supply to outlet.
- Remove the screw securing the terminal block access cover in the lower corner on the back of the dryer.
- Install a UL-approved strain relief according to the power cord/strain relief manufacturer's instructions in the power cord entry hole below the access panel. At this time, the strain relief should be loosely in place.
- Thread an UNPLUGGED, UL-approved, 30amp. power cord, NEMA 10-30 type SRDT, through the strain relief.
- Attach the power cord neutral (center wire) conductor to the SILVER colored center terminal on the terminal block. Tighten the screw securely. (See Figure 2-9 & 2-10)
- 6. Attach the remaining two power cord outer conductors to the outer, BRASS colored terminals on the terminal block. Tighten both screws securely.

WARNING

ELECTRICAL SHOCK HAZARD

Do not make a sharp bend or crimp wiring/conductor at connections.

- 7. Follow manufacturer's guidelines for firmly securing the strain relief and power cord.
- 8. Reinstall the terminal block cover.

IMPORTANT

If moving dryer from a 4-wire system and installing it in a 3-wire system, move the internal ground from the center terminal back to the GREEN screw next to the terminal block.



Figure 2-9.

NOTE

If a terminal screw falls during cord installation, it can be retrieved in the terminal screw recovery slot below the access panel.



Electrical Connection (non-Canada) 4 Wire Cord

WARNING

ELECTRICAL SHOCK HAZARD

Failure to disconnect power source before servicing could result in personal injury or even death.

- 1. Turn off power supply to outlet.
- 2. Remove the screw securing the terminal block access cover in the lower corner on the back of the dryer.
- Install a UL-approved strain relief according to the power cord/strain relief manufacturer's instructions in the power cord entry hole below the access panel. At this time, the strain relief should be loosely in place.
- 4. Thread an UNPLUGGED, UL-approved, 30 amp. power cord, NEMA 14-30 type ST or SRDT, through the strain relief. (See Figure 2-11)
- Disconnect the internal (BLACK) dryer harness ground wire from the (GREEN) ground screw next to the terminal block. (See Figure 2-12)
- 6. Attach the ground (GREEN) power cord wire to the cabinet with the ground (GREEN) screw. Tighten the screw securely.
- Move the internal dryer harness ground (BLACK) wire to the terminal block and attach it along with the neutral (WHITE) power cord wire conductor to the center, SILVER colored terminal on the terminal block. Tighten the screw securely.
- 8. Attach the RED and BLACK power cord conductors to the outer, BRASS colored terminals on the terminal block. Tighten both screws securely.

ELECTRICAL SHOCK HAZARD

Do not make a sharp bend or crimp wiring/conductor at connections.

- 9. Follow manufacturer's guidelines for firmly securing the strain relief and power cord.
- 10. Reinstall the terminal block cover.

IMPORTANT

If moving dryer from a 4-wire system and installing it in a 3-wire system, move the internal ground from the center terminal back to the GREEN screw next to the terminal block.



If a terminal screw falls during cord installation, it can be retrieved in the terminal screw recovery slot below the access panel.



Gas Supply Requirements

WARNING

EXPLOSION HAZARD

Uncoated copper tubing will corrode when subjected to natural gas, causing gas leaks. Use ONLY black iron, stainless steel, or plastic coated brass piping for gas supply.

- Installation MUST conform with local codes, or in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1 (latest edition).
- 2. The gas supply line should be 1/2 inch (1.27cm) pipe.
- If codes allow, flexible metal tubing may be used to connect your dryer to the gas supply line. The tubing MUST be constructed of stainless steel or plastic-coated brass.
- 4. The gas supply line MUST have an individual shutoff valve.
- 5. A 1/8 inch (0.32 cm) N.P.T. plugged tapping, accessible for test gauge connection, MUST be installed immediately upstream of the gas supply connection to the dryer.
- The dryer MUST be disconnected from the gas supply piping system during any pressure testing of the gas supply piping system at test pressures in excess of 1/2 psig (3.45 kPa).
- The dryer MUST be isolated from the gas supply piping system during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psig (3.45 kPa).
- Connections for the gas supply must comply with the Standard for Connectors for Gas Appliances, ANSI Z21.24.

IMPORTANT

-2-12

The supply line must be equipped with an approved manual shutoff valve. This valve should be located in the same room as the dryer and should be in a location that allows ease of opening and closing. Do not block access to the gas shutoff valve.

Gas Connection

1. Remove shipping cap from gas pipe at rear of dryer.

IMPORTANT

DO NOT connect the dryer to L.P. gas service without converting the gas valve. An L.P. conversion kit must be installed by a qualified gas technician.



Figure 2-13.

- Connect a 1/2 inch (1.27 cm) I.D. semi-rigid or approved pipe from gas supply line to the 3/8 inch (0.96 cm) pipe located on the back of the dryer. Use a 1/2 inch to 3/8 inch (1.27 cm to 0.96 cm) reducer for the connection. Apply an approved thread sealer that is resistant to the corrosive action of liquefied gases on all pipe connections. (See Figure 2-13)
- 3. Open the shutoff valve in the gas supply line to allow gas to flow through the pipe. Wait a few minutes for gas to move through the gas line.



Figure 2-14.

 Check for gas system leaks with a manometer. If a manometer is not available, test all connections by brushing on a soapy water solution.

WARNING

EXPLOSION HAZARD NEVER test for gas leaks with an open flame.

General Installation

- Connect the exhaust duct to the outside exhaust system. Use of a 4" (10.2 cm) clamp is recommended to connect the dryer to the exhaust vent system. Use metal foil tape to seal all other joints. (See Figure 2-15)
- Carefully slide the dryer to its final position. Adjust one or more of the legs until the dryer is resting solidly on all four legs. Place a level on top of the dryer. The dryer MUST be level and resting solidly on all four legs. Rock alternating corners to check for stability. Remove and discard door tape. (See Figure 2-16)

IMPORTANT

Be sure power is off at a circuit breaker/fuse box before plugging power cord into an outlet.

- 3. Plug the power cord into a grounded outlet.
- 4. Turn on power at the circuit breaker/fuse box.

V NOTE

On gas dryers, before the burner will light, it is necessary for the gas line to be bled of air. If the burner does not light within 45 seconds the first time the dryer is turned on, the safety switch will shut the burner off. If this happens, press cancel and wait 5 minutes before making another attempt to light.



Figure 2-15.



Figure 2-16.

Reversing the Door

Removing the door

- 1. Protect flat work surface, such as top of dryer or floor near dryer, with a soft cloth or towel.
- Open dryer door and remove the two hinge screws. Remove lower screw first, then upper screw. (See Figure 2-17)
- Supporting door with both hands, squarely lift door and hinge upward approximately 3/8" (10 mm) so "T" post on back of hinge can slide out through "T" slot on front panel. (See Figure 2-18)
- 4. Gently place dryer door face down on flat, covered work surface.
- Locate the 5 indented head screws (no. 1-5) in the small, circular recesses (at 11, 1, 4, 6, and 8 o'clock positions) of the inner door. Remove and save these 5 screws. (See Figure 2-19)

IMPORTANT

2-14

Do not attempt to remove the 2 "tamper resistant" screws that hold the inner glass in place.

- Locate the 2 pan head screws (no. 6-7) on the inner door nearest the metal strike and center of hinge (9 and 3 o'clock positions). Remove and save these 2 screws. (See Figure 2-19)
- 7. Separate inner door assembly from outer door assembly.



Figure 2-17.



Figure 2-18.



Figure 2-19.

Reversing the Hinge

 Carefully pull out the 2 small round hole plugs from the front panel and save. Remove and save the square "T" slot cover by sliding it up and pulling it out. Move all 3 plugs to the opposite side of the front panel and insert. (See Figure 2-20)



Figure 2-20.

2. Turn inner door assembly over to expose retaining tabs of metal strike. Grip tabs fully with pliers to remove. Discard old metal strike. (See Figure 2-21)





 Turn the inner door assembly back over and locate the 2 pan head hinge screws. Remove and save the 2 screws and separate the hinge from inner door assembly. (See Figure 2-22)



Figure 2-22.

 From the back side of the inner door, pinch the retaining tabs of the plastic square plug to release it. Save square plug for reinstallation. (See Figure 2-23)



Figure 2-23.

 Carefully remove the 2 round plugs from the inner door and move them to the opposite holes and reinstall. (See Figure 2-24)



Figure 2-24.

6. Rotate the hinge and move it to the opposite side of the inner door. Attach it with the 2 pan head screws removed previously. Reinstall plastic plug in the square hole next to the hinge. (See Figure 2-25)



Figure 2-25.

Reassembling the Door

 Locate and remove the hinge cutout gate from the outer door assembly. Rotate and move it to the opposite hole in the outer door. (See Figure 2-26)



Figure 2-26.

 Rest the opening of the inner door at a 90 degree angle on the "shoulders" of the hinge cutout gate. Pivot the inner door down onto the outer door. (See Figure 2-27)



Figure 2-27.

-2-16

- Replace indented head screws (no. 1-5) removed earlier. Take care not to strip out the plastic holes. (See Figure 2-28)
- Replace pan head screws (no. 6-7) removed earlier. Take care not to strip out the plastic holes. (See Figure 2-28)



Figure 2-28.

 Locate new metal strike supplied with dryer manuals. Grip new strike with pliers as shown below. Firmly insert the strike so it is oriented vertically. (See Figure 2-29)



Figure 2-29.

Reattaching the Door

 Holding the door in both hands, squarely insert the "T" post on the back of the hinge into the "T" slot on the front panel and lower it to align the mounting holes. (See Figure 2-30)



Figure 2-30.

 Rest the opening of the inner door at a 90 degree angle on the "shoulders" of the hinge cutout gate. Pivot the inner door down onto the outer door. (See Figure 2-31)





V NOTE

Correctly installed hinge screws will press hinge flush to front panel. Any gap between hinge and front panel will cause misalignment of strike to latch. 3. Close the door and test operation of hinge, strike and latch. (See Figure 2-32)



2-17

Accessories

Matching Storage Pedestal

Arctic White Pedestal - P/N APWD15W Black Diamond Pedestal - P/N APWD15E A storage pedestal accessory, specifically designed for this dryer may be used to elevate the dryer for ease of use. This pedestal will add about 15" (38 cm) to the height of your unit for a total height of 51.25" (130 cm).

Dryer Stacking Kit

P/N 134700600

A kit for stacking this dryer on top of matching washer came with the initial purchase of this dryer. If you desire another stacking kit, you may order one.

LP Conversion Kit

P/N PCK4200

Gas dryers intended for use in a location supplied with LP must use a conversion kit prior to installation.

Mobile Home Installation Kit

P/N 137067200

Installations in mobile homes require use of Mobile Home Installation Kit

Drying Rack

P/N 137067300

Depending on the model you purchased, a drying rack may have been included in the initial purchase of your dryer. If your model did not include a drying rack or you desire another drying rack, you may order one.

Universal Appliance Wrench

P/N 137019200

A Universal Appliance Wrench is available to aid in dryer/washer/pedestal feet adjustment.

Touch Up Paint Pens

Arctic White Touch Up Pen - P/N 5303321319 Black Diamond Touch Up Pen - P/N 5304458932

-2-18

Failure to use the accessories manufactured by (or approved by) the manufacturer, could result in personal injury, property damage or damage to the dryer.



Figure 2-33.

Washer and Dryer 15" Drawer Pedestal Installation

The Affinity Series washers and dryers use the same pedestal.

Tools needed:

Level 9/16" open end wrench #2 Phillips screwdriver Washer/Dryer Installation Kit

V NOTE

This kit is intended to be installed by persons having electrical and mechanical training and a level of knowledge considered acceptable in the appliance repair trade.

Pedestal Installation

- Attach the rear brackets to the pedestal with (4)- #10 screws (2 per bracket).
- 2. Attach the front brackets and spacer plates to the pedestal with (4)- #10 screws (2 per bracket).
- 3. Tilting the dryer back slightly to engage the slots in the rear of the dryer with the tabs of the rear brackets on the pedestal.

V NOTE

If dryer was previously installed, disconnect power cord and vent hose. Also, make sure the leveling legs are adjusted fully into the dryer.

4. Using two or more people, carefully lift the dryer onto the pedestal, tilting the washer back slightly to align the holes in the rear of the dryer with the slots of the rear brackets on the pedestals.

V NOTE

If the mounting holes do not align, make sure dryer leveling legs are adjusted fully into dryer. Turn each leg tight to the base.



Figure 2-34.

NOTE

Do not remove the foam in the middle of the pedestal. It reduces vibration noise.



Figure 2-35.

Pedestal Installation

- 5. Set the dryer down onto the pedestal making sure the dryer base is behind the front brackets of the pedestal.
- Align the sides of the dryer with the sides of the pedestal and attach the dryer to the rear brackets using four #10 screws (2 per bracket) as shown in Figure 2-36.
- With pedestal drawer open for better access, install the two #10 screws through the front brackets in the pedestal into the dryer base as shown in Figure 2-37.
- 8. After closing the pedestal drawer, carefully move the dryer/pedestal assembly into position.

NOTE

Because of the increased weight caused by the addition of the pedestal, two or more people may be required.

9. Excessive noise and vibration can be prevented by properly leveling the dryer/pedestal assembly on a SOLID floor and tightening the leveling leg lock nuts. With dryer/pedestal assembly in its final position, place a level on top of dryer. Adjust pedestal leveling legs so the dryer/pedestal assembly is level front-to-rear and side-to side, and stable corner-tocorner.

Press down on alternate corners and sides and feel for the slightest movement. Adjust the appropriate leg so the dryer/pedestal assembly is SOLID on the floor on ALL four pedestal legs. After leveling the dryer/pedestal assembly, adjust the lock nut on each pedestal leveling leg against the pedestal base and tighten with a wrench. Keep the leg extension at a minimum to prevent excessive vibration.

10. Complete the installation following the procedures at the beginning of this section.



Figure 2-36.



Figure 2-37.

The Gallery Series dryers are designed so the door swing may be reversed at any time without additional parts. Conversion is accomplished by transferring hinges to the opposite side of the cabinet.

"Solid Door" Reversal Instructions:

1. Open the dryer door. Remove the four hinge hole plugs from the left side of the door opening. Retain the plugs for use later.

NOTE

A plastic knife may be needed to help pull out the plugs. Use caution not to scratch the paint.

 Remove the four screws that secure the door hinges to the dryer front panel (see below). Hold the door firmly before removing the last two screws. (See Figure 2-38)

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Remove one screw from each of the two hinges first.

- 3. Rotate the door 180° and reinstall the door hinges to the dryer front panel with the four screws.
- 4. Install the four hinge hole plugs in the open screw holes on the right side of the door opening.

Window Door Reversal Instructions:

- 1. Follow steps 1 and 2 from above.
- 2. Install the plugs from Step 1 into the holes left by removing the door in Step 2.
- 3. Remove the two handle hole plugs from the door. Retain the plugs for use later. (See Figure 2-39)

ΝΟΤΕ

A plastic knife may be needed to help pull out the plugs. Use caution not to scratch the paint.

- 4. Remove the two handle screws and remove the handle by pulling straight out from door.
- 5. Install the plugs from Step 3 into the holes left by removing the handle screws in Step 4.
- Lay the door on a flat surface and support the edges of the door to keep it from turning. Apply moderate downward pressure on the lens with both hands and rotate it 180°. Align the handle holes in the lens with the handle holes in the transition ring. (See Figure 2-40)
- 7. Install the handle and screws removed in Step 4.







Figure 2-39.



Figure 2-40.



- 7. Install the handle and screws removed in Step 4.
- 8. Remove the two hinges and reinstall the four screws. Note the installation orientation of the hinges. (See Figure 2-41)
- 9. Remove the screws from the opposite side of the door and use them to reinstall the hinges.
- 10. Install the door assembly on the left side of the door opening using the four screws removed in Step 1.



Figure 2-41.

Affinity Series

Affinity Control Panel Layout



Operating Steps

Figure 3-1. Affinity Control Panel

- 1. Prepare items for drying.
- 2. Check that lint filter is clean and in place.
- 3. Load the dryer. If desired, add a dryer fabric softener sheet. Close the door.
- 4. Select the appropriate cycle and settings for each load.
 - Turn the Cycle Selector knob to select the cycle. The estimated drying time will be displayed.
 - A suitable drying temperature, dryness level and options will automatically be indicated for each cycle. See the "Dryer Setting Chart" for more details.
 - To change the temperature and dryness level, press TEMPERATURE or DRYNESS until desired selections are made.
 - To select or delete an option, press OPTIONS; then, while indicator is blinking, press SELECT. The indicator will light when the option has been selected. The indicator will no longer be lit when the option has been deleted.
 - If a temperature, dryness level or option is not available for a cycle, it will not light.
 - Adjustments to the cycle will be remembered each time that cycle is selected in the future.
 - To return to factory settings, press START/PAUSE and SELECT at the same time and hold until signal sounds.
- 5. Press Start/Pause to begin the cycle.
 - To pause the cycle press START/PAUSE. To resume the cycle, press START/PAUSE again.
 - To stop or change the cycle, press CANCEL.
- 6. A signal will sound at the end of the cycle and periodically during Extended Tumble when the Signal option is selected. When the cycle ends, remove items immediately and hang or fold.
- 7. Clean the lint screen after every load.

Cycle Selection

Turn the Cycle Selector knob to the desired cycle. For best results, follow the fabric care label instructions on items to be dried. If the selection is changed after the cycle starts, the indicator lights will blink, the signal will beep and "Err" will be displayed. To change the selection after the cycle has begun, press CANCEL before making another choice. Just turning the knob to another selection will not change the cycle. The signal will beep and the status lights will flash, but the original cycle will continue.

3-1

Section 3 Electronic Control

Cycle Description

Auto Dry

Loads dried using the Towels, Heavy Duty, Normal, Perm Press, and Delicates cycles will dry automatically at the selected temperature to the desired dryness level. The dryer uses sensing bars to sense the moisture level of the load as it tumbles through heated air. Auto Dry cycles save time and energy and protect fabrics. The estimated drying time will be displayed for about 5 minutes, then the outside of the display will light up in a circular track to indicate the drying time is automatically being determined by the sensors. When the load has reached the selected dryness level, it will continue to tumble, unheated, during a Cool Down period. This helps reduce wrinkling and makes items easier to handle during unloading. The estimated Cool Down time will be displayed.

Drying time varies depending on size and dampness of load and fabric type. If the load is too small or almost dry, the sensing bars may not detect enough moisture to continue the cycle and the cycle may end after a few minutes. Select a Timed Dry setting to dry such loads.

Room temperature and humidity, type of installation and electrical voltage or gas pressure can also affect drying time.

For cycle selection turn the knob on the front of the dryer control panel. The light will illuminate next to the cycle selected. The following is a brief description for what cycles should be chosen for certain items and materials to be dried. (See Figure 3-2)

Towels

Select this Auto Dry cycle for towel loads.

Heavy Duty

Select this Auto Dry cycle for sturdy work clothes.

Normal

Select this Auto Dry cycle for cotton items.

Perm Press

Select this Auto Dry cycle for cottons and blends with a no-iron finish.

Delicates

3-7

Select this Auto Dry cycle for knits and delicate items.



Figure 3-2. Cycle Selection

Touch Up

Select Touch Up to help remove wrinkles from clean dry items that may have been left in the dryer, have been stored in crowded closets or drawers or unpacked from luggage following a trip. The load will tumble for 15 minutes at low heat.

Timed Dry

To manually select the drying time for any load, turn the knob to Timed Dry. Drying times from 15 to 90 minutes can be selected by continuing to turn the knob. The drying time will be displayed. You will not be able to select a dryness level. Timed Dry is recommended when using the Air Fluff/No Heat setting.

Sanitize Your Laundry with Timed Dry

Select 90 minute timed dry with Maximum heat to remove harmful bacteria from your laundry. Use this cycle to clean heavily soiled, colorfast fabrics including towels, bedding, children's clothing or other items where sanitization is desired.

This cycle has been certified by NSF International, an independent third-party testing and certification organization dedicated to public health, safety and environmental protection.



NSF Protocol P154 Sanitization Performance of Residential Clothes Dryers

This Timed Dry cycle will kill 99.9% of bacteria with no carry over of bacteria between loads. Since higher temperatures are required, the fabric care labels must be checked to prevent damage.

Affinity Series

Section 3 Electronic Control

Drying Temperature

For best results, follow fabric care label instructions on items to be dried. To change the drying temperature, press the TEMPERATURE button to scroll to the desired heat. To protect your wardrobe, not all temperatures are available with every cycle. (See Figure 3-3)

Maximum heat is recommended for sturdy fabrics.

High heat is recommended for most cotton fabrics.

Medium heat is recommended for wrinkle free, permanent press and lightweight fabrics.

Low heat is recommended for delicate fabrics.

Air Fluff/No Heat should only be used with a Timed Dry setting to dry items containing feathers, down, foam rubber, plastics or rubber-like materials; to freshen clothing, pillows or blankets; or to dust draperies.

NOTE

Using Air Fluff/No Heat in any Auto Dry cycle will result in long drying times and/or wet loads at the end of the cycle.



Figure 3-3. Drying Temperature

Dryness Level

To change the dryness level, press the DRYNESS button until the desired selection is made. Select Normal for most loads. (See Figure 3-4)

Occasionally a load may seem too damp or over-dried at the end of the cycle. To increase drying time for similar loads in the future, select More Dry. For loads requiring less drying time, select Less Dry.

Select Damp Dry for items you wish to partially dry before hanging or ironing.

V NOTE

To prevent over-drying, not every dryness level is available with every cycle.





Section 3 Electronic Control

Options

To select an option, press OPTIONS until the indicator for the desired option flashes, then press SELECT. If an option is not available for a cycle, the indicator will not light. Follow the same steps to delete an option. (See Figure 3-5)

Select Shrink Guard to lower the initial drying temperature to protect fabrics from over dying.

Select Extended Tumble if the dried load might not be removed promptly at the end of the cycle. The dry load will continue tumbling without heat for 30 minutes to help reduce wrinkling.

When the Signal is selected, a beep will be heard periodically and at the end of the cycle. The signal has an adjustable volume level or can be turned off. The load may be removed any time during Extended Tumble.

Dryer Features

Control Lock

To avoid having someone accidentally start or stop the dryer, press OPTIONS and SELECT at the same time and hold for 10 seconds. "LOC" will be displayed. To remove the control lock, press OPTIONS and SELECT again. (See Figure 3-6)

Start/Pause

Press START/PAUSE to start, pause or restart a cycle. "PAU" will be displayed alternately with the estimated time remaining when the cycle is paused.

Cancel

Press CANCEL to stop the cycle.

Status Lights

The following indicators may be lighted during the cycle:

- Drying
- Cool Down

3-4

• Extended Tumble



Figure 3-5. Options



Figure 3-6. Control Lock


Affinity Series

Cycle Options

Appropriate drying Temperature, Dryness Level and Options will automatically be displayed for each cycle. The settings can be changed before the cycle is started.

Those adjustments will automatically be remembered each time that cycle is selected. If a temperature, dryness level or option is not recommended for a cycle, the indicator will not light. If changes are attempted after the cycle starts, the lights will blink, the signal will beep and "Err" will be displayed. To change a setting after the cycle starts, press START/PAUSE, adjust the setting and press START/PAUSE to resume the cycle. See the Dryer Settings Chart below for more details.

Available Cycle Settings - These temperatures, dryness levels and options areavailable with the following cycles:							
	Towels	Heavy Duty	Normal	Perm Press	Delicate	Touch Up	Timed Dry
Estimated Drying Time **	60 minutes	45 minutes	50 minutes	40 minutes	20 minutes	30 minutes	15 to 90 minutes
Temperatures							
Maximum	* 🗸	* 🗸	* 🗸				\checkmark
High	\checkmark	✓	\checkmark	✓			* 🗸
Medium		✓	\checkmark	* 🗸	\checkmark		~
Low		✓	\checkmark	~	* 🗸	* 🗸	\checkmark
Air Fluff/No Heat							✓
Dryness Level		-					
More Dry	* 🗸	✓	\checkmark				
Normal Dry	\checkmark	* 🗸	* 🗸	* 🗸	\checkmark		
Less Dry		~	~	~	* 🗸		
Damp Dry		~	√	~	✓		
Options		-					
Shrink Guard		✓	✓	~	* 🗸		~
Extended Tumble		~	~	* 🗸	* 🗸	\checkmark	~
Signal Volume	* 🗸	* 🗸	* 🗸	* 🗸	* 🗸	* 🗸	* 🗸
* Factory Setting	✓ Available Settings	-		** Estimated dryness l	cycle duration	n is based on no ry settings.	ormal

Dryer Settings Chart

A sellable Cash Calling Th cc lovels and option waa wilahla with the following

Customer Codes

During normal operation, the display may show:

"ad" - dryer is in an auto dry cycle.

"dn" - cycle is done in auto dry.

"PF" - a power failure to the board has occurred.

"Err" - an error has been detected.

"LOC" - control lock is activated.

"PAU" - cycle has been interrupted.

Section 3 Electronic Control

Reading Error Codes - Affinity Models

- 1. Press and hold the SELECT and CANCEL buttons simultaneously for 6 seconds to reset control. The buzzer will sound 1 time and "rES" will be shown briefly in the display.
- 2. Immediately after, rotate cycle selector knob 2 turns counter-clockwise to the third position from the top, and then press and hold the SELECT and CANCEL buttons simultaneously for 6 seconds. The control will enter Field Test Mode, the buzzer will sound 3 times, and the digital display will alternate between "Fld" and the firmware revision number (ex. "r03").
- 3. Rotate the cycle selector knob 2 turns counterclockwise. The error code will appear in the digit display.

Troubleshoot problem by using chart on next page.

To move on to the next code, press the OPTIONS button.

To clear code, press the SELECT button. Code will be cleared when mode is exited.

To exit this mode, simultaneously press and hold the SELECT and CANCEL buttons for 6 seconds.

Function Test Sequence

- 1. Press and hold SELECT and CANCEL buttons simultaneously for 6 seconds to reset the control. The buzzer will sound and "rES" will be shown briefly in the display.
- Immediately after, rotate cycle selector knob 5 turns counter-clockwise to the second position from the bottom. Press and hold the OPTIONS and CANCEL buttons simultaneously for 2 seconds. The control will enter test mode, the buzzer will sound 3 times and all LED's will rapidly flash.

After entering the test mode, the cycle selector knob can now be rotated to select the following tests:

Rotate the cycle selector knob clockwise from the starting position:

- 0 turns: All LED's will flash.
- 1 turn: Drive motor runs; heat source is on. Drying LED is lit. "H" and the control thermistor reading will toggle back and forth in the display.
- 2 turns: Drive motor runs; heat source is off. Cool Down LED is lit and "AF" (Air Fluff) is displayed.
- 3 turns: Drive motor runs; heat source is off. Drying and Cool Down LED's are lit and numbers appear in the display showing moisture sensor readings. Opening the door (press in on door switch plunger) and placing a finger on the both moisture sense bars at the same time will make the numbers decrease. In controls that do not have a digit display, the More Dry LED should be ON. Opening the door (press in on door switch plunger) and placing a finger on the both moisture sense bars at the same time will make the numbers decrease. In controls that do not have a digit display, the More Dry LED should be ON. Opening the door (press in on door switch plunger) and placing a finger on the both moisture sense bars at the same time will make the Damp LED come on.

4 turns: Drive motor runs; heat source is off.

Key test:

- a. When the TEMPERATURE key is pressed, all the temperature LED's should light.
- b. When the DRYNESS key is pressed, all the dryness level LED's should light.
- c. When the OPTIONS or SELECT key is pressed, all the Option LED's should light.
- d. When the START/PAUSE key is pressed, all the cycle status LED's should light.
- e. When the CANCEL key is pressed, all the cycle status LED's should light.
- 5 turns: Drive motor runs; heat source is off. Cool Down LED is lit. Control thermistor reading is displayed.

6 turns: Drive motor runs; heat source is on. Drying LED is lit. Control thermistor reading is displayed.

7-11 turns: All LED's will flash

-3-6

To EXIT test mode, press and hold the SELECT and CANCEL buttons simultaneously for 6 seconds or disconnect power from dryer. Dryer will be reset for regular operation.

Affinity Series

Error Code	Label	Description	Solution
E10	General EEPROM Fault	Problem with communication between EEPROM and the microprocessor.	Clear code, exit mode and start dryer. If problem persists, replace electronic control.
E11	Checksum Error	Problem with communications or memory did not check, one has become corrupted.	Clear code, exit mode and start dryer. If problem persists, replace electronic control.
E12	Non fatal R/W error	Problem reading or writing to the memory or input/output.	Clear code, exit mode and start dryer. If problem persists, replace electronic control.
E24	Control NTC Short Circuit	Control thermistor or its wir- ing is shorted.	Remove wires from control thermistor. Measure resistance of thermistor. If reading is not 50 K (\pm 10%), replace thermistor. If reading is within 50 K (\pm 10%), check wiring between thermistor and electronic control. If good, replace electronic control.
E25	Control NTC Open Circuit	Control thermistor or its wiring is open.	Remove wires from control thermistor. Measure resistance of thermistor. If reading is not 50 K (\pm 10%), replace thermistor. If reading is within 50 K (\pm 10%), check wiring between thermistor and electronic control. If good, replace electronic control.
E4A	Program Time out Fault	The drying time has exceeded program time for that cycle.	Press PAUSE CANCEL and SELECT buttons for 6 seconds to exit test modes. Position cycle selector to NORMAL, temperature selector to HIGH HEAT and touch START. Check for anything that would extend dry times such as: no heat, restricted vent, blower fan blade broken or loose, dryer installed in closet with solid door, or bad connection in moisture sensor bar circuit or dirty bars. If dryer operates normally but code returns, replace electronic control.
E5B	Heater Fault (no heating)	Temperature reading of control thermistor has not changed in a certain amount of time.	Position cycle selector to NORMAL, temperature selector to HIGH HEAT and touch START. Measure voltage across terminals on relay RL2 (heater relay) on electronic control. If meter reads 240V on electric models and 120V on gas models, replace electronic control. If meter reads zero, remove power from dryer. Disconnect wire going to NO terminal on the relay RL2. Reconnect power and measure voltage drop between terminal COM on relay RL2 and neutral. If meter reads zero, wire between incoming line and relay RL2 is open. If meter reads 120V, check the rest of the heater circuit.
E68	Key (button) Struck Fault	One of the keys (buttons) is stuck closed (active).	Enter function test mode and perform key (button) test to determine which button is at fault. Carefully free the key (button) and perform the test again. If button is free but the key struck code still exists, replace electronic control.
E8C	Too many trips in a period of time.	The safety (high limit) thermostat has tripped too many times within a certain period of program time.	Check for blocked lint filter, blocked exhaust, air leaks around air duct, broken blower fan blades, worn or loose drum seals, dryer installed in closet with solid doors or door seal not correctly seated.
EAF	Watch Dog Reset	Microcontroller has been reset by internal Watchdog timer	Clear code, exit mode and start dryer. If problem persists, replace electronic control.

Section 3 Electronic Control

Gallery Series Control Panel Layout



Operating Steps

Figure 3-7. Gallery Control Panel

- 1. Prepare items for drying.
- 2. Check that lint filter is clean and in place.
- 3. Load the dryer. If desired, add a dryer fabric softener sheet. Close the door.
- 4. Select the cycle and drying temperature for each load. To change the temperature, turn the TEMP knob to the desired temperature.
- 5. A suitable drying temperature, dryness level and options will automatically be displayed for each cycle. To change the temperature or dryness level, press TEMP or DRYNESS until the desired selection is made. To select an option, press OPTIONS until the indicator for a desired option flashes, then press SELECT.
- 6. The changes you make will be remembered the next time that cycle is selected. See the "Dryer Settings Chart" for more details.
- 7. Press START to begin the cycle.
 - To pause the cycle or change settings, press PAUSE/CANCEL once. To resume the cycle, press START again.
 - To stop or change the cycle, press PAUSE/CANCEL twice.
- 8. A signal will sound at the end of the cycle and periodically during Press Saver when the Cycle Signal option is selected. When the cycle ends, remove items immediately and hang or fold.
- 9. Clean the lint screen after every load.

Cycle Selection

A suitable combination of drying temperature, dryness level and options will automatically be displayed for each cycle. The settings can be changed before the cycle is started. Those adjustments will automatically be remembered each time that cycle is selected. If a temperature, dryness level or option is not recommended for a cycle, the indicator will not light. See the "Dryer Settings Chart" for more details.

If changes are attempted after the cycle starts, the status lights will blink and the signal will beep 3 times. The cycle must be paused before the settings can be changed. Press PAUSE/CANCEL once to pause the cycle and change settings.

Gallery Series

Section 3 Electronic Control

Cycle Descriptions

Auto Dry

Applies to Towels, Bulky, Normal, Perm Press, Sport and Delicate cycles. Auto Dry cycles take the guesswork out of drying time. The load will automatically be dried at the selected temperature to the desired dryness level. The dryer senses the moisture level of the load as it tumbles through heated air.

Auto Dry cycles save time and energy and protect fabrics. When the load has reached the selected dryness level, it will continue to tumble, unheated, during a Cool Down period. This helps reduce wrinkling and makes items easier to handle during unloading. Drying time varies depending on size and dampness of load, weight and fabric type. Room temperature and humidity, type of ventilation system, electrical voltage or gas pressure can also affect drying time.

For cycle selection turn the knob on the front of the dryer control panel. The light will illuminate next to the cycle selected. The following is a brief description for what cycles should be chosen for certain items and materials to be dried. (See Figure 3-2)

Towels

Select this Auto Dry cycle for towel loads.

Normal

Select this Auto Dry cycle for cotton items.

Perm Press

Select this Auto Dry cycle for cottons and blends with a no-iron finish.

Delicate

Select this Auto Dry cycle for knits and delicate items.

Quick

Select this cycle to quickly dry a small load made up of just a few items. It provides approximately 20 minutes of tumbling followed by a 10 minute cool down period.



Figure 3-8. Cycle Selection

To avoid fire hazard, do not use heat to dry items containing feathers or down, foam rubber, plastic, or similarly textured, rubber-like materials. Use the No Heat setting only.

NOTE

To change cycles, press PAUSE/CANCEL twice.

Bulky

Select this cycle to dry a comforter, blanket, sleeping bag or similar item. Cool Down is approximately 10 minutes.

Timed Dry

To manually select the drying time for any load, turn the knob to Timed Dry. Drying times from 15 to 90 minutes can be selected by continuing to turn the knob. The drying time will be displayed. You will not be able to select a dryness level. Timed Dry is recommended when using the No Heat setting.

Section 3 Electronic Control

Gallery Series

Drying Temperature

For best results, follow fabric care label instructions on items to be dried. To change the drying temperature, press the TEMP button to scroll to the desired heat. To protect your wardrobe, not all temperatures are available with every cycle. (See Figure 3-3)

High heat is recommended for sturdy fabrics.

Medium High heat is recommended for most cotton fabrics.

Medium heat is recommended for wrinkle free, permanent press and lightweight fabrics.

Low heat is recommended for delicate fabrics.

No Heat should only be used with a Timed Dry setting to dry items containing feathers, down, foam rubber, plastics or rubber-like materials; to freshen clothing, pillows or blankets; or to dust draperies.

NOTE

Using No Heat in any Auto Dry cycle will result in long drying times and/or wet loads at the end of the cycle.



Figure 3-9. Drying Temperature



Figure 3-10. Dryness Level

Dryness Level

To change the dryness level, press the DRYNESS button until the desired selection is made. Select Normal for most loads. (See Figure 3-4)

Occasionally a load may seem too damp or over-dried at the end of the cycle. To increase drying time for similar loads in the future, select More Dry. For loads requiring less drying time, select Less Dry.

Select Damp Dry for items you wish to partially dry before hanging or ironing.

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3-10

To prevent over-drying, not every dryness level is available with every cycle.

Gallery Series

Options

To select an option, press OPTIONS until the indicator for the desired option flashes, then press SELECT. If an option is not available for a cycle, the indicator will not light. Follow the same steps to delete an option. (See Figure 3-5)

The Cycle Signal will sound at the end of the cycle and periodically during Press Saver.

Select SHRINK GUARD to lower initial drying temperature to protect fabrics from over-drying.

Select Press Saver if the dried load might not be removed promptly at the end of the cycle. The dry load will continue tumbling without heat for 30 minutes to help reduce wrinkling. When Cycle Signal is selected, a beep will be heard periodically. The load may be removed any time during Press Saver.

Section 3 Electronic Control





Figure 3-12 . Dryer Features

Dryer Features

Control Lock

To avoid having someone accidentally start or stop the dryer, press OPTIONS and SELECT at the same time until the Control Lock indicator is lit. To remove the control lock, press OPTIONS and SELECT again. (See Figure 3-6)

Start/Pause

Press START/PAUSE to start, pause or restart a cycle. "PAU" will be displayed alternately with the estimated time remaining when the cycle is paused.

Cancel

Press CANCEL to stop the cycle.

Status Lights

The following indicators may be lighted during the cycle:

- Drying
- Cool Down
- Press Saver
- Clean Lint Filter
- Control

Section 3 Electronic Control

Dryer Settings Chart

Available Cycle Settings - These temperatures, dryness levels and options areavailable with the following cycles:

	Towels	Normal	Perm Press	Delicate	Quick	Bulky	Timed Dry
Estimated drying time ***	60 minutes	50 minutes	40 minutes	20 minutes	30 minutes	45 minutes	15 to 90 minutes
Temperatures							
High	* 🗸	✓			~		~
Medium-High	✓	* 🗸	✓		\checkmark	\checkmark	* 🗸
Medium		✓	* 🗸	\checkmark	* 🗸	* 🗸	\checkmark
Low		~	\checkmark	* 🗸	~	\checkmark	\checkmark
No Heat	**	**	**	**	_		\checkmark
Dryness Level	-			-	-		
More Dry	~	~					
Normal Dry	* 🗸	* 🗸	* 🗸	~			
Less Dry		✓	✓	* 🗸			
Damp Dry		✓	~	~			
Options				-			
Shrink Guard		✓	✓	* 🗸			~
Press Saver		✓	* 🗸	* 🗸	\checkmark	\checkmark	\checkmark
Cycle Signal	* 🗸	* 🗸	* 🗸	* 🗸	* 🗸	* 🗸	* 🗸
* Factory setting	✓Available settings	** Not recomm	nended	*** Estimate drvness	d cycle duration level and factor	on is based on orv settings.	normal

Error Codes - Gallery Series

Section 3 Electronic Control

3-13

Reading Error Codes - Gallery Series

- 1. Non-Digital Readout Display Models: Rotate cycle selector knob to the 3 O'clock position.
- Digital Readout Display Models: Rotate cycle selector knob clockwise (3) settings from the Normal cycle option. 2. Press and hold the Select and Pause Cancel buttons simultaneously for six seconds.
- 3. Immediately after, press and hold the START and Pause Cancel buttons simultaneously for 4 seconds.
- 4. Digital Readout Display Models: rotate the timer knob (1) click counterclockwise. The error code will appear in the digital display.

Non-Digital Readout Display Models: rotate the cycle selector knob to the 2 O'clock position. The four indicator lights of Drying, Cool Down, Wrinkle Rid (Press Saver), and Clean Lint Filter will flash the number of times for the first digit of the code and the START indicator light will flash the number of times for the second digit. Take separate counts of each indicator light, then repeat to confirm in order to be accurate in identifying the proper error code. The code is obtained by counting the number of times the lights flash.

Example E24: The four indicator lights would flash twice indicating the 2 and the START indicator light will flash four times indicating the 4. The four indicator lights and the START indicator light start flashing at the same time. The control will pause for 2 seconds, then repeat the code.

NOTE

A letter appearing in the code stands for a number higher than nine. A = 10, B = 11, C = 12, D = 13, E = 14, F = 15. Example Code E4A: the first digit would be 4 and the second digit would be 10. If this code would appear on a washer in the Non-Digital Readout Display Models, the four indicator lights would blink four times and the START indicator light would blink ten times.

Troubleshoot the problem by using the chart on page 3-15.

To move on to the next code, press the OPTIONS button.

To clear code, press the Select button. Code will be cleared when mode is exited.

To exit this mode, simultaneously press and hold the Select and Pause Cancel buttons for six seconds.

Section 3 Electronic Control

Function Test Sequence

- 1. Non-Digital Readout Display Models: Position the cycle selector knob to the 12 O'clock position. Digital Readout Display Models: Position the cycle selector knob to the Normal cycle option.
- 2. Press and hold the SELECT and PAUSE CANCEL buttons simultaneously for six seconds.
- 3. Immediately after, press and hold the START and PAUSE CANCEL buttons simultaneously for 4 seconds. The control will enter test mode, the buzzer will sound 3 times and all LED'S will rapidly flash.

After entering the test mode, the program knob can now be rotated to select the following tests:

Rotate the program knob clockwise from the start position:

- 1 turn: Drive motor runs; heat source is on. Drying LED is lit. "H" and the control thermistor reading will toggle back and forth in the display.**
- 2 turns: Drive motor runs; heat source is off. Cool Down LED is lit and "AF" (Air Fluff) is displayed.
- 3 turns: Drive motor runs; heat source is off. Drying and Cool Down LED's are lit and numbers appear in the display showing moisture sensor readings. Opening the door (press in on door switch plunger) and placing a finger on the both moisture sense bars at the same time will make the numbers decrease. In controls that do not have a digit display, the More Dry LED should be ON. Opening the door (press in on door switch plunger) and placing a finger on the both moisture sense bars at the same time will make the Damp LED come on.
- 4 turns: Drive motor runs; heat source is off.

Key test:

-3-14

- a. When the TEMP button is pressed, all the Temp LED's should light. If the Temp selector is the rotary knob, and the knob is rotated, there should be a key beep with each setting.
- b. When the DRYNESS button is pressed, all the dryness level LED's should light.
- c. When the OPTION or Select button is pressed, all the Option LED's should light.
- d. When the START button is pressed, all the cycle status LED's should light.
- e. When the PAUSE CANCEL button is pressed, all the Cycle status LED's should light.
- 5 turns: Drive motor runs; heat source is off. Cool Down LED is lit. Control thermistor reading is displayed.**
- 6 turns: Drive motor runs; heat source is on. Drying LED is lit. Control thermistor reading is displayed.**

**For models that do not have a digital display, the dryness LED'S could be used to determine the control thermistor temperature reading. The number of flashes of the bottom three LED'S will determine the value of the temperature as follows.

EXAMPLE: Normal flashes 1 time (Normal = HUNDRED'S) Less Dry flashes 2 times (Less Dry = TEN'S) Damp flashes 6 times (Damp = ONE'S) Temperature = 126°F

To EXIT the test mode, press and hold the SELECT and Pause Cancel buttons simultaneously for six seconds or disconnect power from dryer. Dryer will be reset for regular operation.



Figure 3-13. Thermistor Temperature

Error Codes - Gallery Series

Error Code	Label	Description	Solution
E10	General EEPROM Fault	Problem with communication between EEPROM and the microprocessor.	Clear code, exit mode and start dryer. If problem persists, replace electronic control.
E11	Checksum Error	Problem with communications or memory did not check, one has become corrupted.	Clear code, exit mode and start dryer. If problem persists, replace electronic control.
E12	Non fatal R/W error	Problem reading or writing to the memory or input/output.	Clear code, exit mode and start dryer. If problem persists, replace electronic control.
E24	Control NTC Short Circuit	Control thermistor or its wir- ing is shorted.	Remove wires from control thermistor. Measure resistance of thermistor. If reading is not 50 K (\pm 10%), replace thermistor. If reading is within 50 K (\pm 10%), check wiring between thermistor and electronic control. If good, replace electronic control.
E25	Control NTC Open Circuit	Control thermistor or its wir- ing is open.	Remove wires from control thermistor. Measure resistance of thermistor. If reading is not 50 K (\pm 10%), replace thermistor. If reading is within 50 K (\pm 10%), check wiring between thermistor and electronic control. If good, replace electronic control.
E4A	Program Time out Fault	The drying time has exceeded program time for that cycle.	Press PAUSE CANCEL and SELECT buttons for 6 seconds to exit test modes. Position cycle selector to NORMAL, temperature selector to HIGH HEAT and touch START. Check for anything that would extend dry times such as: no heat, restricted vent, blower fan blade broken or loose, dryer installed in closet with solid door, or bad connection in moisture sensor bar circuit or dirty bars. If dryer operates normally but code returns, replace electronic control.
E5B	Heater Fault (no heating)	Temperature reading of control thermistor has not changed in a certain amount of time.	Position cycle selector to NORMAL, temperature selector to HIGH HEAT and touch START. Measure voltage across terminals on relay RL2 (heater relay) on electronic control. If meter reads 240V on electric models and 120V on gas models, replace electronic control. If meter reads zero, remove power from dryer. Disconnect wire going to NO terminal on the relay RL2. Reconnect power and measure voltage drop between terminal COM on relay RL2 and neutral. If meter reads zero, wire between incoming line and relay RL2 is open. If meter reads 120V, check the rest of the heater circuit.
E68	Key (button) Struck Fault	One of the keys (buttons) is stuck closed (active).	Enter function test mode and perform key (button) test to determine which button is at fault. Carefully free the key (button) and perform the test again. If button is free but the key struck code still exists, replace electronic control.
E8C	Too many trips in a period of time.	The safety (high limit) ther- mostat has tripped too many times within a certain period of program time.	Check for blocked lint filter, blocked exhaust, air leaks around air duct, broken blower fan blades, worn or loose drum seals, dryer installed in closet with solid doors or door seal not correctly seated.
EAF	Watch Dog Reset	Microcontroller has been reset by internal Watchdog timer.	Clear code, exit mode and start dryer. If problem persists, replace electronic control.

Section 3 Electronic Control Testing

Electrical Operation (Electric Dryers Models)

When the dryer is connected to electrical power, line 1 is connected to one side of the thermal limiter and the COM terminal of the heater relay RL2 that is mounted on the electronic control board. (See Section 6 Wiring Diagrams or Wiring Schematic provided with the unit) Power is applied to the control board through thermal limiter to pin 1 of the eight pin plug. The electronic control board controls the operating temperature of the dryer and the length of the cycle by either sensing the amount of moisture in the

clothes or a fixed amount of time when timed dry is used.

Electronic Control Board Circuits:

Line 1 is applied to the control board at pin 1 of the eight pin plug and neutral on pin 2 of the eight pin plug. The control board receives inputs from the selector knob and push buttons which programs the control, the contact sensors that senses the amount of moisture in clothes and the control thermistor which senses temperature in the dryer. The control board uses these inputs to signal the interface board, control the drive motor circuit by opening and closing the contacts of relay RL1 and the heater circuit by opening and closing the contracts of relay RL2.

Drive Motor Circuit:

When the door is closed, the COM terminal is connected to terminal NO of the door switch. From terminal NO, power is applied to terminal J4-2 of the motor relay RL1 on the control board. When the control board closes relay RL1, power is applied through terminal J4-1 to terminal M4 of the drive motor.

Terminal M4 is connected inside the motor to one side of the thermal overload (The thermal overload protects the motor from being damaged by overheating.) The other side of the thermal overload is connected to one end of both the run winding and the start winding of the drive motor. When the motor is not turning, the other end of the startwinding is connected internally to terminal M5 of the motor through the NC contact of the motor centrifugal switch. The other end of the run winding is also connected internally to terminal M5 which is connected to neutral.

When the motor is not turning, the start winding and the run winding are connected in parallel. When the contacts of relay RL1 are closed, with the dryer door closed, line 1 and neutral voltage are applied across both the start and run windings of the drive motor. With power applied to both the start and run windings, the motor starts to turn.

When the speed of the motor reaches about 80% of its normal run speed, the contacts of the centrifugal switch remove power from the start winding thus removing the start winding from the circuit.

The drive motor performs two tasks in the dryer. A pulley, attached to one end of the motor shaft, uses a belt to drive the dryer drum. The blower wheel is attached to the other end of the motor shaft to pull the air through the clothes and force it out the exhaust vent.

Temperature Sensing Circuit:

The temperature in the dryer is controlled by the control thermistor and the electronic control board. The control thermistor, mounted in the blower fan housing, is a negative coefficient thermistor that decreases in resistance as the temperature increases.

The electronic control board reads the resistance of the thermistor and converts it into temperature. It compares the reading from the thermistor to the temperature setting for the cycle.

The Heating Circuit:

The electronic control board applies power to the heating circuit through the contacts of heater relay RL 2. When the electronic control senses the temperature in the drum is below the programmed temperature, it closes the contact of RL 2. This applies line 1 power through the high limit thermostat that is mounted on the heating element assembly.

The high limit thermostat is a safety device that prevents the dryer from overheating if the contacts of the RL 2 fail closed. The contacts of the high limit thermostat, normally closed and are set to open at a temperature above the preset temperature specifications of the electronic control board. From the output terminal of the high limit thermostat, line 1 is connected to one side of the element and to pin 3 of the eight pin plug. The other side of the heating element is connected to line 2 through the contacts of the second centrifugal switch in the drive motor. This switch prevents power from being applied to the element if the motor is not running. The connection to pin 3 allows the control to monitor the contacts of the high limit thermostat. An error code will show if contacts open above a preset number of times in a cycle.



Drying Time:

The amount of drying time is determined in one of two ways:

- A fixed amount of drying time may be set by turning the SELECTOR knob to one of the fixed drying times.
- The AUTO DRY cycles a variable amount of time by the size of the load, the amount of moisture in the clothes and the dryness setting selected.

In the AUTO DRY cycles, the electronic control reads the capacitance between the two sensor bars located in the drum.

When wet clothes are placed in the dryer, the clothes touch the sensor bars, and the moisture lowers the capacitance between the sensor bars. As the dryer runs, moisture is removed from the clothes and capacitance between the bars increases. When the increase in capacitance satisfies the electronic control, the cycle status will change from "Auto Dry" to "Cool Down" and the load is tumbled without heat. At the end of cycle, the electronic control will turn the dryer off and the end of cycle signal will sound.

Electrical Operation (Gas Dryers Models)

When the dryer is connected to electrical power, line 1 is connected to pin (1) of the eight pin plug of the control board, the terminal marked COM on the door switch and the COM terminal of the heater relay that is mounted on the electronic control board. (See Section 6 Wiring Diagrams or Wiring Schematic provided with the unit) Pin 1 of the eight pin plug provides power to the electronic control board. The electronic control board controls the operating temperature of the dryer and length of the cycle by either sensing the amount of moisture in the clothes or a fixed amount of time when time dry is used.

Electronic Control Board Circuits:

Line 1 is applied to the control board at pin (1) of the eight pin plug and neutral is connected on pin 2 of the eight pin plug. The control board receives inputs from the selector knob and push buttons which program the control, the contact sensors that senses the amount of moisture in the clothes and the control thermistor which senses the temperature in the dryer. The control board use these inputs to signal the interface board, control the drive motor circuit by opening and closing the contacts of relay RL1 and the heater circuit by opening and closing the contracts of relay RL2.

Drive Motor Circuit:

When power is connected to the dryer, line 1 is applied to the COM terminal of the door switch. When the door is closed, the COM terminal is connected to terminal NO of the door switch. From terminal NO, power is applied to terminal J4-2 of the control board to the motor relay RL1 on the control board. When the control board closes relay RL1, power is applied through terminal J4-1 to terminal M4 of the drive motor.

Terminal M4 is connected inside the motor to one side of the thermal overload (The thermal overload protects the motor from being damaged by overheating.) The other side of the thermal overload is connected to one end of both the run winding and the start winding of the drive motor. When the motor is not turning, the other end of the start winding is connected internally to terminal M5 of the motor through the NC contact of the motor centrifugal switch. The other end of the run winding is also connected internally to terminal M5 which is connected to neutral.

When the motor is not turning, the start winding and the run winding are connected in parallel. When the contacts of relay RL 1 are closed, with the dryer door closed, line 1 and neutral voltage are applied across both the start and run windings of the drive motor. With power applied to both the start and run windings, the motor starts to turn.

When the speed of the motor reaches about 80% of it's normal run speed, the contacts of the centrifugal switch remove power from the start winding thus removing the start winding from the circuit.

The drive motor preforms two tasks in the dryer. A pulley, attached to one end of the motor shaft, uses a belt to drive the dryer drum. The blower wheel, attached to the other end of the motor shaft, pulls the air through the clothes and forces it out the exhaust vent.

Temperature Sensing Circuit:

The temperature in the dryer is controlled by the control thermistor and the electronic control board. The control thermistor is mounted in the blower fan housing. The thermistor is a negative coefficient thermistor that decrease in resistance as the temperature increases.

The electronic control board reads the resistance of the thermistor and converts it into temperature. The electronic control compares the reading from the thermistor to the temperature setting for the cycle and cycles the heating circuit accordingly.

Section 3 Electronic Control Testing

The Heating Circuit:

The electronic control board applies power to the heating circuit through the contacts of relay RL 2. When the electronic control senses that the temperature in the drum is below the programmed temperature, it closes the contact of heater relay RL2 applying line 1 to the high limit thermostat. The high limit thermostat is a safety device that prevents the dryer from overheating if the contacts of the relay RL2 fail closed. The contacts of the high limit thermostat, normally closed, are set to open at a temperature above the preset temperature specifications of the electronic control board. From the output terminal of the high limit thermostat, line 1 is connected to pin 3 of the eight pin plug, one side of the holding coil of the gas valve, the secondary coil of the gas valve and the sensor that is mounted on the burner chamber.

The connection to pin 3 allows the control to monitor the contacts of the high limit thermostat and An error code will show if contacts open above a preset number of times in a cycle.

The holding coil, secondary coil, booster coil, sensor and igniter circuits interact with one another to assure safe operation of the dryer gas burner.

The gas valve has two chambers in series, both must be opened before gas will flow into the burner. The solenoid that controls the gas flow through the first chamber has two coils: the booster coil and the holding coil. The solenoid that controls the second chamber has one coil, the secondary coil. (See Figure 3-14)

The other side of the holding coil, booster coil and igniter are connected to neutral through the second centrifugal switch in the motor (closed when the motor is running). When power is applied across these circuits, current flows through the holding coil, but the holding coil does not have enough magnetic force to open the solenoid by itself. At the same time, current flows through sensor contacts providing power to the booster coil and the igniter. When current flows through both the holding and booster coils, the first chamber opens. The contacts of the sensor are in parallel with the secondary coil. As long as the contacts of the sensor remain closed, current flow bypasses the secondary coil, and gas is prevented from flowing through the second chamber of the valve to the burner.



Figure 3-14. Gas Valve Operation

It is necessary to raise the temperature above 1100° F to ignite gas. As current flows through the igniter, the temperature of igniter raises from room temperature to approximately 1800° F within 30 seconds. The contacts of the sensor are heat sensitive and set to open above the ignition temperature of gas. When the sensor contacts open, current flows through the secondary coil, opening the second chamber, allowing gas to the burner, and is ignited by the heat of the igniter. When the contacts of the sensor are open, the parallel circuit formed by the igniter and the booster coil are in series with the secondary coil which lowers the current flow through the igniter and booster coil. Since it takes less magnetic force to hold a solenoid open than it does to open it, the first solenoid remains open when current through the booster coil is reduced. The reduction of current flow through the igniter reduces heat from the igniter but the sensor contacts are held open by the heat of the burner flame.

Drying Time:

The amount of drying time is determined in one of two ways:

- A fixed amount of drying time may be set by turning the SELECTOR knob to one of the fixed drying times.
- The AUTO DRY cycles a variable amount of time by the size of the load, the amount of moisture in the clothes and the dryness setting selected.

In the AUTO DRY cycles, the electronic control reads the capacitance between the two sensor bars located in the drum.

Electrical Tests For Electric Dryers Only

High Limit Thermostat Cycle Time

Trip: Run the following test at room temperature. Set the Time Dry cycle for 30 minutes and the heat selection at maximum setting. Place a 100% exhaust block on the exhaust pipe. The dryer door should be open for this test and the door switch held closed by tape or similar means. The thermostat must open (heater off) between 35 to 120 seconds.

Reset: When the exhaust block is removed and the door closed (keep tape over door switch), the thermostat must reset (heat on) within 120 seconds.

Thermal Limiter Trip Time

Run the following test at room temperature. Set the Time Dry cycle for 30 minutes and the heat selection at maximum setting. Place a 100% exhaust block on the exhaust pipe. The dryer door should be open for this test and the door switch held closed. The thermal limiter should trip and shut off the heaters after 1 to 5 minutes of operation. To enable this test, the High Limit Thermostat must be bypassed and NTC2 should be removed from the heat duct.

NOTE

This test renders the thermal limiter inoperative, a new thermal limiter must be installed after this test.

Drum Temperatures

The following tests should be run with an unrestricted exhaust. The location of the thermal couple is to be the square in the lint grill which is 12 squares left from the right edge of the lint blade and (2) squares forward. The tip should extend 1.25" into the air grill. Set the dryer timer as needed for each test. The recordable temperature is to be the maximum temperature following the heater off of the 3rd cycle.

No load is to be used for following heat settings:

Heat Setting	Thermistor Status	Temperature °F
Max*	Satisfied/Heater Off	120 to 160
Medium*	Satisfied/Heater Off	110 to 140
Low*	Satisfied/Heater Off	95 to 130

* Each opening temperature should be equal to or higher than the opening temperature for the next lower temperature setting.

Electrical Tests For Electric and Gas Dryers

Continuity

When measured by an Ohm meter, there should be no more than .1 Ohms resistance between the terminal block ground and any exposed metal dryer cabinet component including control shafts and switches when probed through or in any unpainted area.

Check continuity between motor frame and motor support bracket using a continuity light. Test light must illuminate when probing the motor frame with one end of the test light and the motor bracket with the other. If dryer fails continuity with a low voltage tester, check continuity using 120 VAC.

Insulation Dielectric Strength

Disconnect ground link from the neutral of the terminal block on the dryer. With dryer completely assembled and with door closed, apply 120 VAC or more for one second to the terminal block terminals or service cord. Connect one probe to all three terminals and the other probe to the back sheet. There shall be no more than 5mA of current during the one second test interval. During the 1 second test, no drop in voltage below 120 VAC is permissible.

Motor Power

Audit - (power required after 20 seconds with no load, motor CW direction, and no heat) 200 - 280 watts. Line Test - (power required after 1-5 seconds with no load, motor CW direction, and no heat) 210 - 290 Watts

Low Voltage Start

Dryer motor should start and operate at 100 volts (200 volts for 230 VAC, 50Hz dryers). The power will be set to not dip below this voltage during any part of the cycle. Increase voltage to allow for meter error and line fluctuations. Test run with a 50 pound clothes load (25 pounds at 100% moisture) at "Maximum" heat setting.

Section 3 Electronic Control Testing

Motor Protector Trip Time

When the motor is locked, the thermal protector must open to shut off motor within 3 to 10 seconds. This test also applies to the 50/60 Hz Motor when test is conducted at 230VAC 60 Hz. Tests must be run at 120VAC (line voltage not to sag below this value when the rotor is locked), unless specified otherwise.

NOTE

Tests must be run with a cold (ambient) motor. When tested in the unit, a jumper harness will be needed to bypass the software alarm for the motor not starting. Without the jumper, the software will stop the cycle within 3 seconds (before the thermal protector opens) if motor movement is not detected.

Electrical Tests For Gas Dryers

Manifold Pressure

Connect manometer to pressure tap on gas valve. During burner operation, manometer reading should be between 2.9 and 4.0 inches of gage oil.

Flames Entering Drying Chamber

Block exhaust and inspect flame length. The flames should not be entering the drying chamber.

Flash Back Into Burner

With exhaust blocked, inspect for flash back into burner during ignition.

Flame Failure

Shut off manual gas valve to extinguish flame. Sensor must shut off gas valve within 90 seconds.

Power Interruption

Interrupt power momentarily for 2 seconds, motor should not continue to run when power is restored. Valve should not open when power is restored until ignition device is re-energized.

Carbon Deposit

Inspect heater housing and burner tube for carbon deposits after testing.

Ignition Time

-3-20

Time required for glow bar to light gas: 50 sec. max.

Ignition Power

Power required for glow bar to light gas: 550 - 850 Watt

Minimum Operating Voltage

Dryer and gas valve to function properly at 100 Volts.

Reduced Gas Pressure

Reduce gas pressure to 1.0 inch in gage oil. Stop and then restart dryer. Allow gas ignition system to recycle and check to see that ignition is obtained.

Static Pressure

Static pressure at the exhaust exit (when using a 100% exhaust block), as measured by a manometer, shall be 1.6 inch of gage oil, minimum.

High Limit Thermostat Cycle Time Trip

Trip: Run the following test at room temperature. Set the control board cycle time for 30 minutes and the heat selection for regular fabrics (max heat setting). Place a 100% exhaust block on the exhaust pipe. The dryer door should be open for this test and the door switch held closed by tape or similar means. The thermostat must open (heater off) between 25 to 110 seconds. **Reset:** When the exhaust block is removed and the door slowed (keep tape or switch) the thermostat

door closed (keep tape over door switch), the thermostat must reset (heat on) within 120 seconds.

Thermal Limiter Trip Time

Run the following test at room temperature. Set the Time Dry cycle for 30 minutes and the heat selection at maximum setting. Place a 100% exhaust block on the exhaust pipe. The dryer door should be open for this test and the door switch held closed. The thermal limiter should trip and shut the dryer off after 1 to 5 minutes of operation. To enable this test, the High Limit Thermostat must be bypassed and NTC2 should be removed from the heat duct.

NOTE

This test renders the thermal limiter inoperative, a new thermal limiter must be installed after this test.

3-21

Drum Temperatures

The following tests should be run with an unrestricted exhaust. The location of the thermal couple is to be the square in the lint grill which is 12 squares left from the right edge of the lint blade and (2) squares forward. The tip should extend 1.25" into the air grill. Set the dryer timer as needed for each test. The recordable temperature is to be the maximum temperature following the heater off of the 3rd cycle.

No load is to be used for following heat settings:

Heat Setting	Thermistor Status	Temperature °F
Max*	Satisfied/Heater Off	120 to 180
Low*	Satisfied/Heater Off	95 to 130

* Each opening temperature should be equal to or higher than the opening temperature for the next lower temperature setting.

Troubleshooting Flowcharts

The following pages are flowcharts for diagnosing and troubleshooting gas and electric dryers.

Gas dryer completely inoperative.3-23Electric and Gas dryers; blower motor runs but drum does not turn3-24Electric and Gas dryers; longer than normal drying times3-24Electric dryer not heating properly.3-25Gas dryer not heating properly.3-26Electric and Gas dryers; dryer over heating.3-26Electric dryers; blower motor runs but dryer does not heat.3-27Gas dryers; blower motor runs but dryer does not heat.3-28Electric and Gas dryers; clothes not dry in auto cycle.3-29Electric and Gas dryers; selector LEDs do not light.3-30	Electric dryer completely inoperative	3-22
Electric and Gas dryers; blower motor runs but drum does not turn3-24Electric and Gas dryers; longer than normal drying times3-24Electric dryer not heating properly.3-25Gas dryer not heating properly.3-26Electric and Gas dryers; dryer over heating.3-26Electric dryers; blower motor runs but dryer does not heat.3-27Gas dryers; blower motor runs but dryer does not heat.3-28Electric and Gas dryers; clothes not dry in auto cycle.3-29Electric and Gas dryers; selector LEDs do not light.3-30	Gas dryer completely inoperative	3-23
Electric and Gas dryers; longer than normal drying times3-24Electric dryer not heating properly3-25Gas dryer not heating properly3-26Electric and Gas dryers; dryer over heating3-26Electric dryers; blower motor runs but dryer does not heat3-27Gas dryers; blower motor runs but dryer does not heat3-28Electric and Gas dryers; clothes not dry in auto cycle3-29Electric and Gas dryers; selector LEDs do not light.3-30	Electric and Gas dryers; blower motor runs but drum does not turn	3-24
Electric dryer not heating properly.3-25Gas dryer not heating properly.3-26Electric and Gas dryers; dryer over heating.3-26Electric dryers; blower motor runs but dryer does not heat.3-27Gas dryers; blower motor runs but dryer does not heat.3-28Electric and Gas dryers; clothes not dry in auto cycle.3-29Electric and Gas dryers; selector LEDs do not light.3-30	Electric and Gas dryers; longer than normal drying times	3-24
Gas dryer not heating properly	Electric dryer not heating properly	3-25
Electric and Gas dryers; dryer over heating	Gas dryer not heating properly	3-26
Electric dryers; blower motor runs but dryer does not heat	Electric and Gas dryers; dryer over heating	3-26
Gas dryers; blower motor runs but dryer does not heat	Electric dryers; blower motor runs but dryer does not heat	3-27
Electric and Gas dryers; clothes not dry in auto cycle	Gas dryers; blower motor runs but dryer does not heat	3-28
Electric and Gas dryers; selector LEDs do not light 3-30	Electric and Gas dryers; clothes not dry in auto cycle	3-29
	Electric and Gas dryers; selector LEDs do not light	3-30

Section 3 Electronic Control Testing

Electric dryer completely inoperative.

Note: Always check wiring to the components. Note: If a fault code is displayed, the dryer will not operate.



Gas dryer completely inoperative.

Note: Always check wiring to the components. Note: If a fault code is displayed, the dryer will not operate.



Electric and Gas dryers; blower motor runs but drum does not turn. Note: Always check wiring to the components.



Electric and Gas dryers; longer than normal drying times. (Possible E 4A) Note: Always check wiring to the components.



Electric dryers not heating properly (Possible E 5b) Note: Always check wiring to the components.



Section 3 Electronic Control Testing

Gas dryers not heating properly. (Possible E 5b)

Note: Always check wiring to the components.



Electric and Gas dryers; dryer over heating. (Possible E 8C) Note: Always check wiring to the components.



Electric dryers; drive motor runs but dryer does not heat. Note: Always check wiring to the components.



Gas dryers; drive motor runs but dryer does not heat. Note: Always check wiring to the components.



Electric and Gas dryers; clothes not dry in auto cycle. Note: Always check wiring to the components.



Electric and Gas dryers; selector LEDs do not light.

Note: Always check wiring to the components.



Component Teardown

This section explains how to access and remove components from a Frigidaire Affinity or Gallery Series Dryer, and has been arranged in such a way as to simulate which components would need to be removed first in order to gain access to other components. When following a component removal procedure, it may be necessary to reference another component removal procedure listed earlier in this section.



IMPORTANT

Before continuing, please take note of the WARNINGS and CAUTIONS below.

WARNING

Before servicing or moving an appliance:

- Remove the power cord from the electrical outlet, trip the circuit breaker to the OFF position, or remove the fuse.
- Turn off the gas supply for Gas Dryers.
- If it is necessary to remove a Dryer unit from its installation, use proper lifting techniques as units are heavy and could fall resulting in serious injury or death. Pulling a unit from its installation should only be performed by a trained authorized service technician or installer.
- After service is completed, be sure all safety-grounding circuits are complete, all electrical connections are secure, and all access panels are in place.
- If unit was used prior to service, the heater assembly will be hot. Wear protective gloves and the appropriate safety gear when working with heating assemblies.
- If removing a door from a unit, remember that the doors are heavy. If they were to fall, they could cause serious personal injury.

- Metal edges may be sharp. Use caution and wear appropriate safety equipment when servicing dryers to avoid personal injury.
- If working in the motor area, remember that the heater element and tubing may be hot if used prior to service and during testing.

This section will describe how to access and remove serviceable components from the dryer. Unless stated, the procedure will be the same on all models. Unless stated, reverse the procedure to reinstall the component.

Removing the Door (Affinity Models)

- 1. Protect a flat work surface, such as top of dryer or floor near dryer, with a soft cloth or towel.
- Open dryer door and remove the two hinge screws with a Phillips screwdriver. Remove lower screw first, then upper screw. (See Figure 4-1)
- Supporting door with both hands, squarely lift door and hinge upward approximately 3/8" (10 mm) so "T" post on back of hinge can slide out through "T" slot on front panel. (See Figure 4-2)
- 4. Gently place dryer door face down on flat, covered work surface.
- Locate the 5 indented head screws (no. 1-5) in the small, circular recesses (at 11, 1, 4, 6, and 8 o'clock positions) of the inner door. Remove and save these 5 screws. (See Figure 4-3)

IMPORTANT

Do not attempt to remove the 2 "tamper resistant" screws that hold the inner glass in place.

- Locate the 2 pan head screws (no. 6-7) on the inner door nearest the metal strike and center of hinge (9 and 3 o'clock positions). Remove and save these 2 screws. (See Figure 4-3)
- 7. Separate inner door assembly from outer door assembly.



Figure 4-1.



Figure 4-2.



Figure 4-3.

Removing the Door Strike and Hinge Assembly (Affinity Models)

To access the door strike and hinge assembly, the door must be removed from the unit and the inner and outer panels separated.

- Turn inner door assembly over to expose retaining tabs of metal door strike. Grip tabs with pliers, compress and push through door panel. (See Figure 4-4)
- Turn the inner door assembly back over and locate the 2 pan head hinge screws. Extract the 2 screws and separate the hinge from inner door assembly. (See Figure 4-5)

Door Handle Removal (Gallery Models)

The door handle is secured with two screws that pass through the dryer door and fasten into the door handle.

To remove the door handle:

- 1. Open dryer door.
- Extract the two handle screws with a #2 square bit, and remove the handle by pulling straight out from door. (See Figure 4-6)

Door Assembly Removal (Gallery Models)

The door assembly is secured to the front panel by screws that pass through two hinges and fasten into the front panel.

To remove the door assembly:

- 1. Open dryer door.
- Extract the four screws using a Phillips head screwdriver that secure the door hinges to dryer front panel. Hold the door firmly before removing the last two screws. (See Figure 4-7)







Figure 4-5.









Hinge Removal (Gallery Models)

The hinges are removed by extracting the two screws using a Phillips head screwdriver that secure each hinge to the door assembly. (See Figure 4-8)

Door Assembly Breakdown (Gallery Models)

The door assembly consists of two panels, the outer lens, the inner glass with adapting mounting bracket and the door strike. The door assembly must be removed to access the door assembly components.

To disassemble the door assembly: (See Figure 4-8)

- 1. Remove door assembly and lay on a clean surface.
- 2. Extract the Phillips head screws securing the hinges.
- 3. Extract the Phillips head screws from the opposite side securing the two panels together.
- 4. From edge opposite the hinges, lift inner door panel upwards then pull out from under lip of outer door panel.
- The door strike is removed by using a pliers and compressing the door strike and then pushing it through the inner panel. (See Figure 4-8)
- 6. The outer door glass is removed by pushing back the retaining clips and lifting the outer door glass off the adapter ring.

Door Gasket Removal (All Models)

The door gasket is secured to the inner door panel by expandable tabs pushed through slots in the liner. (See Figure 4-9)

If the seal is to be replaced, open the door and pull the seal from the liner. If the seal is to be reused, separate the panels and use a small screwdriver to push the tabs through the liner.

Lint Housing Cover Removal (All Models)

The lint housing cover is secured to the dryer inner front panel with two screws that pass through the lint housing cover and fasten into the dryer inner front panel. The lint trap must be removed before removing the lint housing cover.

To remove the lint housing cover:

1. Remove lint trap.

4-4

 Extract the two screws with a #2 square bit from each side of the lint housing cover. Pull cover from unit. (See Figure 4-10)



Figure 4-8.







Figure 4-10.

Top Panel Removal (All Models)

The top panel is removed by extracting the two #2 square bit screws located along the rear edge of the top panel. (See Figure 4-11) With the screws removed, slide the top panel towards the rear until free of the retaining clips located at the front of the side panels.

Top Panel Mounting Bracket Removal (All Models)

The top panel mounting bracket is removed by first removing the top panel, then extract the three #2 square bit screws located along the rear edge of the bracket. (See Figure 4-12)

NOTE

The top panel mounting bracket may be removed with the top panel attached. Do not remove the two screws as shown in figure 4-11.

Console Panel Removal (All Models)

The console panel is secured to the unit frame with a screw that passes through a mounting bracket on each side of the console panel, which then fastens into the cabinet frame. The mounting bracket also has a tab that locates into a slot in the cabinet frame face. The bottom of the console panel has tabs that locate in slots cut in the top of the front inner panel.

To remove the console panel:

- 1. Disconnect the dryer from electrical supply and remove the top panel.
- Disconnect the electrical leads of console panel from the wire harness at the three Molex connectors. Remove grounding clip from top of front inner panel.
- Extract the two screws with a #2 square bit that secure the console to the cabinet frame. (See Figure 4-13)
- 4. Lift the console panel upwards until the locating tabs releases from the slot in the cabinet frame face. then tilt the console panel away from the face of the cabinet and remove from the unit.



Figure 4-11.







Figure 4-13. Console Removal Wiring not shown.

Control Board Housing Removal (Gallery Models)

The control board housing is secured to the console panel with five screws and five retaining tabs.

To remove the control board housing:

- 1. Disconnect the dryer from electrical supply and remove the top panel and console panel.
- 2. Disconnect all wire leads from console panel. (See Figure 4-14)
- 3. Extract the five Phillips head screws securing the control board housing to the console panel.
- Release the two tabs at the bottom and the three tabs at the top, and lift the control board out. (See Figure 4-15)

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When handling and or replacing a control board it is important the a technician have a wrist ground strap on and connected to the cabinet or another grounding position to prevent static electricity from damaging the board.

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Be careful not to lose the springs for the button assemblies.

- The temperature selection knob is removed by lifting the program knob pin and knob flange bezel from the inside of the console panel. (See Figure 4-16)
- 6. Using a pliers squeeze the lock rim of the knob shaft and pull the knob out the front of the console panel.

Control Board Housing Removal (Affinity Models)

- 1. To remove an Affinity series control board, follow steps 1-3 above then lift the control housing off of the console.
- 2. Release the two locking tabs and roll cover off of the control.
- 3. With the control board removed, the interface board will lift out. (See Figure 4-17)
- 4. Using a pair of needle-nose pliers, squeeze the shaft of the selector knob and pull it out the front of the console.



Figure 4-14. Affinity Control Shown



Figure 4-15. Gallery Control Shown



Figure 4-16. Gallery Series



Figure 4-17. Affinity Series

Light Assembly Removal (All Models)

The light assembly is secured with a retaining tab to the inner front panel. A plastic lens is secured to the light assembly with three retaining clips which provides light to the drum. The light assembly is only accessible by removing the console panel.

To remove the light assembly:

- 1. Disconnect the dryer from electrical supply and remove the top panel and console panel.
- 2. Disconnect the electrical leads from the light assembly terminals.
- 3. Press in the retaining tab and push light assembly through inner panel, rotate 90 degrees to pull out through hole in inner panel. (See Figure 4-18)
- Remove the lens by pressing in on the sidewall of the housing until the retaining latch releases, then lift up and remove lens. (See Figure 4-19)
- 5. Remove the lamp by pressing in on the retaining clip and pushing the light socket into the housing.
- 6. The lamp may now be removed from the fixture by turning counterclockwise.

Door Switch Removal (All Models)

The door switch is secured behind the front door panel with two retaining clips.

To remove the control board housing:

1. Disconnect the dryer from electrical supply and remove the top panel and console panel.

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The door switch for the Affinity Series has limited access between the inner and outer front panels. If unable to access the door switch retaining clips, the outer front panel will need to be removed first. See next page for details.

- 2. Press in on the two retaining latches and push door switch through front panel. (See Figure 4-20)
- 3. Disconnect electrical leads from door switch. Switch can now be tested and/or replaced.



Figure 4-18. Light Assembly Removal



Figure 4-19.



Figure 4-20. Gallery Series Shown

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Front Panel Removal (All Models)

The front panel is secured with four screws, two screws at each top corner and two along the bottom flange. Two guide clips mounted to the inner edge of the front panel slide into slots cut in the cabinet frame.

To remove the front panel:

- 1. Remove the door assembly and air duct cover.
- 2. Remove top panel and console, then disconnect door switch wire leads from drum light and wire harness.
- 3. Using a #2 square bit screwdriver, extract the top screw from the front air duct that is visible once the air duct cover is removed. (See Figure 4-21)
- Using a #2 square bit screwdriver, extract the two screws from the bottom of the front panel, then the two screws at the top of the front panel. (See Figure 4-21)
- 5. Lift the front panel upwards then pull away from the cabinet frame.

Front Air Duct Removal (All Models)

The front air duct is secured with two screws that pass through the inner front panel and fasten into the front air duct.

To remove the front air duct:

- 1. Remove the front panel.
- From the front of the front panel, use a #2 square bit screwdriver and extract the two screws securing the front air duct to the inside of the front panel. (See Figure 4-21)

Outlet (Exhaust) Thermistor Removal (All Models)

The outlet thermistor is mounted with a screw to the front of the exhaust side of the blower outlet ducting.

To remove the outlet thermistor:

- 1. Remove the top panel, rear panel, console, front panel, front inner panel and drum.
- 2. Disconnect the wire leads from the outlet thermistor terminals.
- Using a #2 square bit screwdriver, extract the two screws securing the outlet thermistor to the blower outlet duct. (See Figure 4-22) To remove the grounding clip, extract the screw securing the blower assembly to the unit base.



Figure 4-21. Gallery Series Shown



Figure 4-22.

Rear Panel Removal (All Models)

The rear panel is secured with 17 screws to the unit frame. The exhaust duct will need to be removed prior to removing the rear panel. The electrical connections must be disconnected from the unit behind the access cover located on the rear panel. Electric heater models require that the power cord is disconnected from the terminals as shown in Figure 4-24. Gas models require disconnecting the power cord at the Molex connector located behind the access cover. Gas models do not have a terminal block.

To remove the rear panel:

- 1. Disconnect the dryer from home electrical supply, trip the circuit breaker to the OFF position, or remove the fuse.
- 2. Pull the unit from its installation position and remove the top panel and rear top brace.
- Using a #2 square bit screwdriver, extract screw "B" securing access cover. Remove access cover. Disconnect electrical leads from the dryer terminal block (electric) or disconnect the molex connector from 120 Volt power cord (gas).
- Using a #2 square bit screwdriver, extract the 17 screws (Labeled "A" in Figure 4-24) securing the rear panel to the rear of the unit. Remove the rear panel from unit.

Moisture Sensing Bar Removal (All Models)

The moisture sensing bar is mounted to the lower back wall of the drying compartment and secured with a screw. The electrical connections are accessible only with the rear panel removed.

To remove the moisture sensing bar:

- 1. Disconnect the dryer from electrical supply and remove top panel, top rear brace and rear panel.
- 2. Disconnect the electrical leads from the sensor bar terminals. (See Figure 4-24)

VNOTE

The electrical connection can be disconnected at the molex connector and with the removal of the ground wire screw as shown in Figure 4-24.

- 3. From inside the drying compartment, extract the #2 square bit screw securing the moisture sensing bars to the back wall. (See Figure 4-25)
- 4. Lift the screw end of the moisture sensing bars up and away from back wall of drying compartment until tab is free, then pull from unit.



Figure 4-23.



Figure 4-24. Electric Dryer Models



Figure 4-25.



Belt Removal (All Models)

The belt circles the drum and has tension applied to it by a spring mounted between the idler arm assembly and the motor mount.

To remove the belt:

- 1. Disconnect the dryer from electrical supply, then remove the top panel, rear panel, console and front panel.
- From the rear of the unit, reach under the drum and pull the idler arm assembly to the right and release the belt from the roller guides and motor pulley. (See Figure 4-26)

Drum Bracket Removal (All Models)

The drum bracket is secured by two retaining tabs and two screws at the front and rear inner panels.

To remove the top bracket:

- 1. Disconnect the dryer from electrical supply, then remove the top panel, rear panel, console and front panel.
- From both ends of the bracket, use a #2 square bit screwdriver and extract the four screws securing the bracket to the inner front and inner rear panels. (See Figure 4-27)
- 3. Lift upwards to release tabs, then pull out of unit.

Front Inner Panel and Drum Removal (All Models)

The front inner panel, which is secured to the unit frame with four screws and two retaining tabs at the top, must be removed to replace or remove a belt.

- 1. Disconnect the dryer from electrical supply, then remove top panel, rear panel, console and front panel, then release belt from motor.
- Using a #2 square bit screwdriver, extract the two screws securing the inner front panel to unit frame. (See Figure 4-27)
- 3. Lift the front inner panel up to release the retaining tabs, then outward. The drums front edge will fall from the ledge of the inner front panel and guide rollers unless otherwise supported.
- 4. Remove drum from unit by pulling the side panels outward, then pulling the drum from the unit.

4-10



Figure 4-26.



Figure 4-27.

NOTE

It is recommended to have a second person to help remove the drum as the front inner panel is removed from the unit.
Roller Assembly Removal (All Models)

There are five roller assemblies that the dryer drum rides upon. The roller shafts are secured to the outside of the inner panels by a 9/16" nut. The rollers slide onto roller shafts and are secured with triangular retainers.

To remove the roller assemblies:

- 1. Disconnect the dryer from electrical supply, then remove the top panel, rear panel, console, front panel, front inner panel and drum.
- Using a 9/16" socket or wrench, remove the nut from the roller shaft securing it to the inner panel. A 3/8" wrench can be used on the opposite end of the shaft to stop the shaft from turning while loosening and tightening the

nut. (See Figure 4-28)

NOTE

With the drum removed, all roller assemblies are accessible. Figure 4-28 illustrates the front roller assemblies.

- 3. Pull roller assembly from inner panel.
- 4. Use a small flat bladed screwdriver and remove the triangular retainer from the roller shaft. Pull the roller from the roller shaft.

Exhaust Thermal Limiter Removal (All Models)

The exhaust thermal limiter is mounted with screws to the right side of the exhaust tube and is accessible from the rear of the machine.

To remove the exhaust thermal limiter:

- 1. Disconnect the dryer from electrical supply, then remove the top panel, rear top brace and rear panel.
- 2. From the rear of the unit, disconnect the wire leads from the exhaust thermal limiter terminals.
- Using a #2 square bit screwdriver, extract the two screws securing the exhaust thermal limiter to the exhaust tube. (See Figure 4-29)



Figure 4-28.



Figure 4-29.

Exhaust Tube Removal (All Models)

The exhaust tube is secured at the rear of the unit with a screw to the unit base. A rubber seal slides over the connection between the exhaust tube and the blower assembly.

To remove the exhaust tube:

- 1. Disconnect the dryer from electrical supply, then remove the top panel, rear panel, console, front panel, front inner panel and drum.
- 2. Disconnect the wire leads from the exhaust thermal limiter terminals. Slide rubber seal onto the exhaust tube.
- Using a #2 square bit screwdriver, extract the screw securing exhaust tube to the unit base. Pull tube out of blower assembly outlet. (See Figure 4-30)

Drum Vane Removal (All Models)

The drum vanes are secured with screws that pass through the drum and fasten into the vanes.

To remove the drum vanes:

- 1. Disconnect the dryer from electrical supply, then remove the top panel.
- Rotate the drum to access the screws on the exterior of the drum. While supporting the drum vane, use a #2 square bit screwdriver and extract the screws securing drum vanes to interior of the drum. (See Figure 4-31)

Rear Heat Duct Removal (All Models)

The rear heat duct is secured with four screws to the rear inner panel.

To remove the rear heat duct:

- 1. Disconnect the dryer from electrical supply, then remove the top panel, rear panel, console, front panel, front inner panel and drum.
- From the inside of the inner panel, using a #2 square bit screwdriver and extract the screws securing the rear air duct to the rear inner panel. From the back of the unit, pull the rear air duct from the rear inner panel. (See Figure 4-32)



Figure 4-30.



Figure 4-31.



Figure 4-32.

Motor and Blower Assembly Removal and Separation (All Models)

To remove the motor and blower assemblies:

- 1. Disconnect the dryer from electrical supply, then remove the top panel, rear panel, console, front panel, front inner panel and drum.
- Disconnect wire harness connection from the motor. (See Figure 4-33)
- Using a 7/8" extended socket and while holding the motor shaft from turning, loosen the blower wheel from the shaft by turning clockwise. Spin blower wheel clockwise until free of motor shaft. (See Figure 4-34)
- Using a small flat bladed screwdriver, lift the blower housing lock over the tab and pull out of slot. (See Figure 4-35)
- Using a pliers, grab the motor clip at its outer edge, then push down and away from the motor mounting bracket until free of retaining tab. Remove motor clip from motor assembly. (See Figure 4-36)
- Using a #2 square bit screwdriver, extract the two screws securing motor assembly to unit base. (See Figure 4-33)
- Disconnect blower outlet thermistor from wire harness. Then, using a #2 square bit screwdriver, extract the two screws securing blower assembly to the unit base. (See Figure 4-34)
- 8. Lift the motor off the motor mounting bracket and pull motor out from the blower assembly.
- Push the rubber seal covering off the exhaust tube and blower assembly connection. Pull the blower assembly towards the front of the unit until the tabs on the blower assembly release from the unit base and exhaust tube.





Figure 4-34.



Figure 4-35.



Heat Shield Removal (All Electric Models)

V NOTE

If unit was used prior to service, the heater assembly may be hot. Refer to Warnings and Cautions at the beginning of this section.

The heat shield is secured with a screw to the mounting bracket for the heater assembly.

To remove the heat shield:

- 1. Disconnect the dryer from electrical supply, then remove the top panel, rear panel, console, front panel, front inner panel and drum.
- Using a #2 square bit screwdriver, extract the screw securing the heat shield to the heater mounting bracket. (See Figure 4-37)

Electric Heater Function

The electric heater assembly consists of three 5500 Watt elements that are energized as needed by the electronic control. Under normal circumstances where the unit is starting at ambient temperature (below 100°F), all heating elements should turn on. Above 100°F (in the exhaust), any number of heating elements may be on depending on selected cycle, temperature settings, options and previous state of elements. Unless there is a high vent restriction or faulty thermistor, the heater element conditions will be controlled by an exhaust NTC.

Heater Assembly Removal (All Electric Models)

NOTE

If unit was used prior to service, the heater assembly may be hot. Refer to Warnings and Cautions at the beginning of this section.

The heater assembly is secured to a mounting bracket in the front and secured with two screws. The rear of the heater slides into the heat duct and is secured with a screw to the right rear of the heater assembly.

- 1. Remove the top panel, rear panel, console, front panel, front inner panel, drum and heat shield.
- 2. Disconnect all wire leads from the components mounted to the heater assembly, labeling as needed to assure proper connection.
- 3. Using a #2 square bit screwdriver, extract the two screws at the front of the heater assembly and the single screw at the right rear. (See Figure 4-38) Pull the heater assembly from heat duct.



Figure 4-37.



Figure 4-38.

Thermal Limiter and Safety Thermostat Removal (All Electric Models)

The thermal limiter and safety thermostat are mounted to the left side of the heater assembly and secured in position with screws.

To remove the thermal limiter and safety thermostat:

- 1. Disconnect the dryer from electrical supply, then remove the top panel, rear panel, console, front panel, front inner panel and drum.
- 2. Disconnect the electrical leads from the thermistor that is to be checked or replaced.
- Using a #2 square bit screwdriver, extract the two screws securing thermistor mounting bracket to the heater assembly. (See Figure 4-39)

Gas Heater Assembly Breakdown

The gas heater assembly consists of supply manifold pipe, gas valves and coils, ignitor, burner and combustion tube with sensors.

WARNING

Always shut off the gas supply before servicing an gas dryer.

Thermal Limiters Removal (All Gas Models)

The thermal limiter and safety thermistor are mounted to the upper left hand side of the combustion tube assembly.

To remove the thermal limiter and safety thermistor:

- 1. Disconnect the dryer from electrical supply, then remove the top panel, rear panel, console, front panel, front inner panel and drum.
- 2. Disconnect the electrical leads from the thermal limiter and safety thermistor.
- Using a #2 square bit screwdriver, extract the screws securing the sensors to the combustion tube. (See Figure 4-40)



Figure 4-39.



Figure 4-40.

Gas Valve Wire Harness Connections (All Gas Models)

To remove the wire harness connections:

- 1. Disconnect the dryer from electrical supply, then remove the top panel, rear panel, console, front panel, front inner panel and drum.
- 2. Label the connections as needed prior to disconnecting.
- Disconnect at the Molex connectors for the ignitor, sensor and main wire harness. (See Figure 4-41)
- 4. Disconnect wire leads from gas valve coil terminals.

Gas Valve Coil Removal (All Gas Models)

The gas valve coils are secured by a bracket that has two screws fastened into the gas valve body. Small plastic pins locate the coils for proper alignment.

To remove the gas valve coils:

- 1. Disconnect the dryer from electrical supply, then remove the top panel, rear panel, console, front panel, front inner panel and drum.
- 2. Disconnect the two wire harness leads from the gas valve coil terminals.
- Using a #2 Phillips head screwdriver, extract two screws securing the coil bracket to the valve body. Remove bracket from valve body. (See Figure 4-42)
- 4. Pull coils from valve body.

4-16



Figure 4-41.



Figure 4-42.

Manifold and Burner Assembly Breakdown (All Gas Models)

In order to separate the manifold from valve body, the burner assembly must be removed from the valve body. A screw at the rear of the unit secures the manifold to rear frame as well as two screws securing the manifold to unit base. All electrical connections must be disconnected prior to removing the manifold.

To remove the manifold and burner assembly:

- 1. Shut off gas supply to dryer.
- 2. Disconnect the dryer from electrical supply, then remove the top panel, rear panel, console, front panel, front inner panel and drum.
- 3. Disconnect all electrical connections from gas valve, coils, ignitor and wire harness. (See Figure 4-41)
- Using a #2 square bit screwdriver, extract the screw from the rear of the unit base securing the manifold mount to the unit base. (See Figure 4-43)
- Extract the two screws from the manifold mount located beneath the combustion tube. (See Figure 4-43)
- 6. Extract the screw from the bent down tab at the entrance of the combustion tube. (See Figure 4-43)
- 7. The gas valve and burner assembly with the manifold attached, can now be pulled out of the combustion tube.
- Using a #2 square bit screwdriver, extract the screws securing the burner assembly to the gas valve mounting bracket. (See Figure 4-44)
- Extract the three screws securing the gas valve mounting bracket to the gas valve and manifold. Remove the gas valve mounting bracket from the assembly. (See Figure 4-43)
- Extract the screw securing ignitor to the gas valve mounting bracket. Lift ignitor off the tab and remove from bracket. (See Figure 4-44)
- Separate the manifold from gas valve by using a 1-3/16" open end wrench or a large adjustable wrench, and grabbing the gas valve body on the square section directly above the manifold. Turn gas valve body counter clockwise to remove. (See Figure 4-45)



Figure 4-43.



Figure 4-44.



Figure 4-45.

Combustion Tube Removal (All Gas Models)

The combustion tube is secured to a mounting bracket in the front and secured with two screws. The rear of the combustion tube slides into the heat duct and is secured with a screw to the right rear of the combustion tube.

To remove the combustion tube:

- 1. Remove the top panel, rear panel, console, front panel, front inner panel and drum.
- 2. Remove burner and gas valve assembly.
- 3. Disconnect the safety and thermal limiters from wire harness.
- 4. Using a #2 square bit screwdriver, extract the two screws at the front of the combustion tube and the single screw at the right rear. (See Figure 4-46)
- 5. Pull the combustion tube from heat duct.



Figure 4-46.

The following troubleshooting chart involves problems arising from improper drying techniques and are not valid service issues. Many drying problems involve poor cleaning results, poor soil and stain removal, residues of lint and scum, and fabric damage. For satisfactory drying results, follow these suggestions provided by The Soap and Detergent Association.

For Troubleshooting the electronic control and error codes, See Section Three Electronic Control.

Problem	Cause	Correction
Greasy, oily stains	1. Fabric softener sheet.	 Rub fabric softener stains with bar soap. Rinse and rewash. Place fabric softener sheet on top of load before start- ing the dryer. Some "silk-like" fabrics should be air dried. Add a few bath towels to small loads for proper tumbling. Use proper drying temperature.
Lint	 Overloading. Over dying causes static electricity. Lint screen not clean when cycle began. Lint is attached to "pills." 	 Reduce load size and rewash using liquid fabric softener in the final rinse. Or, add a fabric softener sheet and tumble without heat. Use lint brush or roller to remove lint. Check that lint filter is clean and in place.
Pilling (Fibers break off, ball up and cling to fabric.)	1. Over dying.	 Use a lint brush or shaver to remove pills. Use fabric softener to lubricate fibers. Turn items inside out to reduce abrasion. When ironing, use spray starch or fabric finish on collars and cuffs.
Shrinking	 Temperature too high. Over dying. 	 Irreversible condition. Follow fabric care label directions. If shrinking is a concern, check load often. Remove items while slightly damp and hang or lay flat to complete drying. Block knits into shape.
Wrinkling	 Overloading. Leaving items in dryer after cycle ends. 	 Reduce load size and tumble at medium or low heat for 5-10 minutes. Remove items immediately. Hang or fold.

The following troubleshooting chart involves common concerns that are not the result of defective workmanship or materials in this dryer. Some problems below involve improper installation and issues arising from the users household water supply. See the Use and Care guide for the unit in question and the Installation Section in this manual.

Problem	Cause	Correction
Dryer does not start.	 Electrical power cord is not securely plugged in or plug may be loose. 	1. Make sure the plug fits tightly in wall outlet.
	2. House fuse blown or circuit breaker tripped	2. Reset circuit breaker or replace fuse.
	3. Thermal limiter tripped.	3. Test and replace thermal limiter.
LCD displays DEMO mode.	 Dryer has been programmed to temporarily perform a repeating demo cycle. 	 To return to the factory default settings, press and hold the temperature and dryness buttons at the same for 5 seconds.
Dryer runs but won't heat.	 There are 2 house fuses in the dryer circuit. If 1 of the 2 fuses is blown, the drum may turn but the heater will not operate. (Electric models) Gas supply valve is not open (gas models). Dryer does not have enough air supply to support the burner flame (gas models). LP gas supply tank is empty or there has been a utility interruption of natural gas (app.) 	 Replace fuse. Check to make sure supply valve is open. See Installation Instructions for procedure. See Installation Instructions. Refill or replace tank. Dryer should heat when utility service is restored.
	models).	
Drying cycle takes too long, outside of the dryer feels too hot or smells hot.	 Lint filter is clogged with lint. Exhaust duct requirements have not been met. Electric dryer is connected to a 208 volt circuit. Drying procedures have not been 	 Make sure all lint has been removed from dryer lint filter before starting each cycle. Exhaust duct must be at least 4 inches in diameter and made of rigid or semi-rigid metal. When in place, the duct must have no more than two 90° bends and must not exceed length listed in Installation Instructions. Drying time will be 20% longer than drying on a 240 volt circuit. See "Operating Instructions."
	followed.	5 Clean out any obstruction
	duct may be clogged or restricted.	
	6. High humidity.	6. Use a dehumidifier near the dryer.

Problem	Cause	Correction
Scratching or chipping of the drum finish.	 Foreign objects such as coins, pins, clips or buttons are inside the dryer.* Permanently attached items such as belt buckles, zippers and fasteners may be hitting the inside of the drum.* 	 Always remove foreign objects from pockets before laundering. Remove objects from drum and restart dryer. It may be necessary to sew a scrap of material securely around ornaments before drying to prevent scratching and damage to the dryer. *Drum damage caused by foreign objects or permanently attached items is not covered by the warranty.

Electrical Tests For Electric and Gas Dryers

Continuity

When measured by an Ohm meter, there should be no more than .1 Ohms resistance between the terminal block ground and any exposed metal dryer cabinet component including control shafts and switches when probed through or in any unpainted area.

Check continuity between motor frame and motor support bracket using a continuity light. Test light must illuminate when probing the motor frame with one end of the test light and the motor bracket with the other. If dryer fails continuity with a low voltage tester, check continuity using 120 VAC.

Insulation Dielectric Strength

Disconnect ground link from the neutral of the terminal block on the dryer. With the dryer completely assembled and with the door closed, apply 120 VAC or more for one second to the terminal block terminals or service cord. Connect one probe to all three terminals and the other probe to the backsheet. There shall be no more than 5mA of

Connect one probe to all three terminals and the other probe to the backsheet. There shall be no more than 5mA of current during the one second test interval. During the 1 second test, no drop in voltage below 120 VAC is permissible.

Motor Power

Audit - (power required after 20 seconds with no load, motor CW direction, and no heat) 200 to 280 watts. Line Test - (power required after 1-5 seconds with no load, motor CW direction, and no heat) 210 to 290 watts.

Low Voltage Start

The dryer motor should start and operate at 100 volts (200 volts for 230 VAC, 50Hz dryers). The power will be set to not dip below this voltage during any part of the cycle. Increase the voltage to allow for meter error and line fluctuations. Test the run with a 50 pound clothes load (25 pounds at 100% moisture) at "Maximum" heat setting.

Motor Protector Trip Time

When the motor is locked, the thermal protector must open to shut off motor within 3 to 10 seconds. This test also applies to the 50/60 Hz Motor when test is conducted at 230VAC 60 Hz. Tests must be run at 120VAC (line voltage not to sag below this value when the rotor is locked), unless specified otherwise.

NOTE

Tests must be run with a cold (ambient) motor. When tested in the unit, a jumper harness will be needed to bypass the software alarm for the motor not starting. Without the jumper, the software will stop the cycle within 3 seconds (before the thermal protector opens) if motor movement is not detected.

Electrical Tests For Electric Dryers Only

High Limit Thermostat Cycle Time

Trip:

Run the following test at room temperature. Set the Time Dry cycle for 30 minutes and the heat selection at maximum setting. Place a 100% exhaust block on the exhaust pipe. The dryer door should be open for this test and the door switch held closed by tape or similar means. The thermostat must open (heater off) between 35 to 120 seconds.

Reset :

When the exhaust block is removed and the door closed (keep tape over door switch), the thermostat must reset (heat on) within 120 seconds.

Thermal Limiter Trip Time

Run the following test at room temperature. Set the Time Dry cycle for 30 minutes and the heat selection at maximum setting. Place a 100% exhaust block on the exhaust pipe. The dryer door should be open for this test and the door switch held closed. The thermal limiter should trip and shut off the heaters after 1 to 5 minutes of operation. To enable this test, the High Limit Thermostat must be bypassed and NTC2 should be removed from the heat duct.

NOTE

This test renders the thermal limiter inoperative, a new thermal limiter must be installed after this test.

Drum Temperatures

-5-4

The following tests should be run with an unrestricted exhaust. The location of the thermal couple is to be the square in the lint grill which is 12 squares left from the right edge of the lint blade and (2) squares forward. The tip should extend 1.25" into the air grill. Set the dryer timer as needed for each test. The recordable temperature is to be the maximum temperature following the heater off of the 3rd cycle.

No load is to be used for the following heat settings:

Heat Setting	Thermistor Status	Temperature (°F)
Max*	Satisfied/Heater Off	120 to 160
Medium*	Satisfied/Heater Off	110 to 140
Low*	Satisfied/Heater Off	95 to 130

* Each opening temperature should be equal to or higher than the opening temperature for the next lower temperature setting.

Electrical Tests For Gas Dryers

Manifold Pressure

Connect manometer to pressure tap on gas valve. During burner operation, manometer reading should be between 2.9 and 4.0 inches of gage oil.

Flames Entering Drying Chamber

Block exhaust and inspect flame length. The flames should not be entering the drying chamber.

Flash Back Into Burner

With exhaust blocked, inspect for flash back into burner during ignition.

Flame Failure

Shut off manual gas valve to extinguish flame. Sensor must shut off gas valve within 90 seconds.

Power Interruption

Interrupt power momentarily for 2 seconds, motor should not continue to run when power is restored. Valve should not open when power is restored until ignition device is re-energized.

Carbon Deposit

Inspect heater housing and burner tube for carbon deposits after testing.

Ignition Time

Time required for glow bar to light gas: 50 sec. max.

Ignition Power

Power required for glow bar to light gas: 550 - 850 W

Minimum Operating Voltage

Dryer and gas valve to function properly at 100 Volts.

Reduced Gas Pressure

Reduce gas pressure to 1.0 inch in gage oil. Stop and then restart dryer. Allow gas ignition system to recycle and check to see that ignition is obtained.

Static Pressure

Static pressure at the exhaust exit (when using a 100% exhaust block), as measured by a manometer, shall be 1.6 inch of gage oil, minimum.

High Limit Thermostat Cycle Time Trip

Trip:

Run the following test at room temperature. Set the control board cycle time for 30 minutes and the heat selection for regular fabrics (max heat setting). Place a 100% exhaust block on the exhaust pipe. The dryer door should be open for this test and the door switch held closed by tape or similar means. The thermostat must open (heater off) between 25 to 110 seconds.

Reset:

When the exhaust block is removed and the door closed (keep tape over door switch), the thermostat must reset (heat on) within 120 seconds.

Electrical Tests For Gas Dryers

Thermal Limiter Trip Time

Run the following test at room temperature. Set the Time Dry cycle for 30 minutes and the heat selection at maximum setting. Place a 100% exhaust block on the exhaust pipe. The dryer door should be open for this test and the door switch held closed. The thermal limiter should trip and shut the dryer off after 1 to 5 minutes of operation. To enable this test, the High Limit Thermostat must be bypassed and NTC2 should be removed from the heat duct.

VNOTE

This test renders the thermal limiter inoperative, a new thermal limiter must be installed after this test.

Drum Temperatures

-5-6

The following tests should be run with an unrestricted exhaust. The location of the thermal couple is to be the square in the lint grill which is 12 squares left from the right edge of the lint blade and (2) squares forward. The tip should extend 1.25" into the air grill. Set the dryer timer as needed for each test. The recordable temperature is to be the maximum temperature following the heater off of the 3rd cycle.

No load is to be used for the following heat settings:

Heat Setting	Thermistor Status	Temperature (°F)
Max*	Satisfied/Heater Off	120 to 180
Medium*	Satisfied/Heater Off	105 to 145
Low*	Satisfied/Heater Off	95 to 130

* Each opening temperature should be equal to or higher than the opening temperature for the next lower temperature setting.

Affinity Series With Electric Heater



CAUTION: DISCONNECT ELECTRIC CURRENT BEFORE SERVICING.

Section 6 Wiring Diagrams

Affinity Series With Gas Heater



! CAUTION: DISCONNECT ELECTRIC CURRENT BEFORE SERVICING. LABEL ALL WIRES PRIOR TO DISCONNECTION WHEN SERVICING CONTROLS.

Gallery Series With Electric Heater



CAUTION: DISCONNECT ELECTRIC CURRENT BEFORE SERVICING.

Section 6 Wiring Diagrams

Gallery Series With Gas Heater



! CAUTION: DISCONNECT ELECTRIC CURRENT BEFORE SERVICING. LABEL ALL WIRES PRIOR TO DISCONNECTION WHEN SERVICING CONTROLS. WIRING ERRORS CAN CAUSE IMPROPER AND DANGEROUS OPERATION.