

Maytag Customer Service

Maytag

1998 Square Front Dryers

16023086

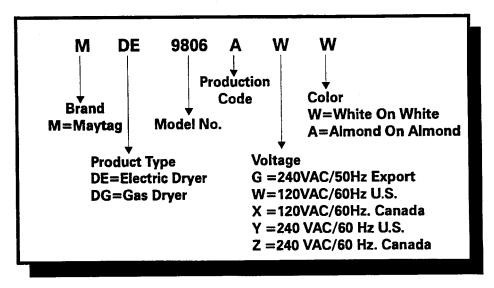
INTRODUCTION

Each model will be covered separately in a section pertaining only to its control system and internal components. Because the basic structure for all dryers is the same, they will be generally covered without regard to model.

Models covered in this manual:

MDE9806
MDG9206
MDG9306
MDG9606
MDG9806
MDE/MDG2301
MDE/MDG2600
MDE/MDG3600

Model Number Breakdown:



For additional information on material covered in this manual, including safety issues, contact:

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SAFETY PRECAUTIONS

This manual, as well as the information contained in it, is to be used only by a Maytag Authorized Service Technician familiar with and knowledgeable of proper safety and servicing procedures and possessing high quality testing equipment associated with microwaves, gas, and electrical appliance repair.

All individuals who attempt repairs by improper means or adjustment subject themselves and others to the risk of serious or fatal injury.

USE ONLY GENUINE MAYTAG APPROVED FACTORY REPLACEMENT COMPONENTS.

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SECTION 1 - GENERAL INFORMATION



Warning - Always shut off electrical power to the dryer before beginning any service repair procedures.

PRE-INSTALLATION CONSIDERATIONS

NOTE: Proper installation is the responsibility of the purchaser.

However, service calls performed as a result of improper setup, adjustment and connection are the responsibility of the installer.

Checkpoints for proper installation

• Gas Dryers - Properly grounded electrical outlet is required. Use a 15 amp fuse or comparable circuit breaker for electrical service for gas dryers. DO NOT USE AN EXTENSION CORD unless the cord has met all requirements for proper grounding, polarizing (3 wire) and, is at least 14 gauge wire.

1/2" gas supply line is recommended and must be reduced to connect to the 3/8" gas line of the dryer.

The National Fuel Gas Code requires an acceptable, approved manual shut off valve to be installed within six feet of the dryer.

 Electric Dryers - Properly grounded electrical outlet is required. Use a 30 amp fuse or comparable circuit breaker for electrical service for an electric dryer.

Location Considerations

The dryer should be located to permit adequate room in front for loading and sufficient room behind for the exhaust system.

The dryer is factory-ready for rear exhaust. Exhausting out the bottom or left side requires accessory vent kit, part number **33001881**.

It is important that the room has adequate makeup air. The area where the dryer is located must not obstruct the flow of combustion or ventilating air.

On gas dryers, adequate clearance as noted on the data plate, must be maintained to ensure adequate air for combustion and proper operation of the dryer.

THE DRYER MUST NOT BE INSTALLED OR STORED IN AN AREA WHERE IT WILL BE EXPOSED TO WATER AND/OR WEATHER. THE DRYER IS TO BE KEPT CLEAR AND FREE FROM COMBUSTIBLE MATERIALS, GASOLINE AND OTHER FLAMMABLE VAPORS AND LIQUIDS. A DRYER PRODUCES COMBUSTIBLE LINT. THE AREA AROUND THE DRYER SHOULD BE KEPT FREE OF LINT.

Alcove or Closet Installation

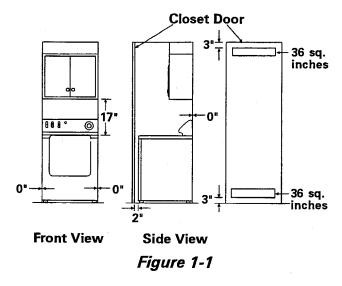


Warning - The dryer must be exhausted to the outside to reduce the risk of fire when installed in an alcove or closet.

An appliance installed in a closet should not have another fuel-burning appliance installed in the same closet.

Each opening area in the door must have a minimum of 36 square inches. These openings must not be obstructed. (Louvered door with equivalent air opening is acceptable.)

Manufactured Homes



The installation of the dryer in manufactured homes must conform to the Manufactured Home Construction and Safety Standard Title 24 CFR, Part 32-80 (formerly the Federal Standard for Mobile Home Construction and Safety, Title 24, HUD (Part 280), 1975) for the United States, or C.S.A. Standards Z240 (for Canada).

All manufactured home installations must be exhausted to the outside with the exhaust duct termination securely fastened to the manufactured home structure using materials that will not support combustion. The exhaust duct may not terminate beneath the manufactured home, (See EXHAUSTING).

INSTALLATION

Exhausting

Exhausting the dryer to the outside will prevent large amounts of lint and moisture from being blown into the room.

In the United States:

- -all gas dryers must be exhausted to the outside.
- electric dryers located in a confined area such as a bedroom, bathroom, or closet must be exhausted to the outside.
- -electric dryers not located in a confined area may be exhausted to the inside (see nonexhausted installations).

In Canada:

-all gas and electric dryers must be exhausted to the outside.



Warning - Plastic or nonmetal flexible duct presents a potential fire hazard.

NEVER USE PLASTIC OR NON METAL FLEXIBLE DUCT.

If your existing ductwork is plastic, nonmetal or combustible, replace it with metal. Use only metal exhaust duct that will not support combustion to ensure the containment of exhaust air, heat and lint.

Plastic flexible duct can kink, sag, be punctured, reduce airflow, extend drying times, and affect dryer operation.

If flexible metal duct must be used, use the type with a stiff sheet metal wall. Do not use flexible duct with a thin foil wall. Serious blockage can result if flexible metal duct is bent too sharply. Never install any type of flexible duct in walls, ceilings, or other concealed spaces.

Once location of the exhaust outlet is determined, a 4 1/4" hole should be cut into the outside wall to accept the exhaust hood to the outside. The exhaust duct should end with an exhaust hood with a swing out damper to prevent backdrafts and entry of wildlife. Never use an exhaust hood with a magnetic damper. The hood should have at least 12 inches of clearance between the bottom of the hood and the ground or other obstruction. The hood opening should point down. Never install a screen over the exhaust outlet.

When possible, do not exhaust the dryer directly into a basement window well to avoid lint build-up. Do not exhaust under a house or porch.

If exhaust ductwork must run through an unheated area, the duct should be insulated and sloped slightly down towards the exhaust hood to reduce condensation and lint buildup.

Keep exhaust duct as straight and short as possbile. Exhaust systems longer than recommended can extend drying times, affect machine operation, and may collect lint. Secure joints with duct tape. Do not use screws.

EXHAUST CHECK LIST:

- Exhaust system meets all local codes and exhaust requirments.
- Plastic flexible duct is not used.
- Completely inspected and cleaned all lint accumulation from the interior of the duct run.

NOTE: Whenever hooking up a new dryer to an existing duct system, always inspect the ductwork for any lint accumulations or restrictions. Failure to do so will hinder the performance of the new dryer.

- Duct is not kinked or crushed.
- The exhaust hood damper opens and closes freely.

Also, the smoother the inside surface of the duct, the less friction and the greater

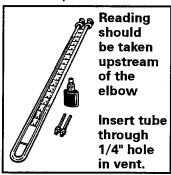


Figure 1-2

the air flow.
Friction loss can be measured with a manometer, at the point where the exhaust duct connects to the dryer, *Figure 1-2*, and should never exceed

.92" of water column. Select Air Fluff, then check to ensure the dryer tumbler is empty and the lint filter is clean.

A 4" round duct has an area of approximately 12.57 square inches. The area of the duct should never be reduced below this figure.

All exhaust duct joints should be taped to prevent lint and moistened laden air from being expelled into the building. Inspect and clean the interior or the exhaust system at least once a year. Disconnect electrical service prior to cleaning. Check the gas line on gas dryers anytime the dryer is moved.

Frequently check to be sure the exhaust hood damper opens and closes freely.

EXHAUST HOOD TYPE			
Number of 90° Turns		21/2	
Maximum tength of 4-inch diameter rigid metal duct.			
0	65 ft.	59 ft.	
1	54 ft.	48 ft.	
2	44 ft.	38 ft.	
3	36 ft.	30 ft.	
4	28 ft.	22 ft.	
Maximum length of 4-inch diameter flexible stiff walled metal duct.			
0	36 ft.	28 ft.	
1	32 ft,	24 ft.	
2	28 ft.	20 ft.	
3	25 ft.	17 ft.	
4	23 ft.	15 ft.	

Non-Exhausted Installations (U.S. Electric Dryers Only)

If the U.S. electric dryer is not exhausted to the outside, an exhaust deflector should be installed along with a dacron mesh lint bag. Maintain a 6" clearance between the back of the control panel and the wall. Although the lint screen and lint bag will retain most of the lint, a certain amount will be expelled into the laundry area.

WARNING: IF THE DRYER IS NOT EXHAUSTED TO THE OUTSIDE, SOME FINE LINT WILL BE EXPELLED INTO THE LAUNDRY AREA. AN ACCUMULATION OF DUST OR LINT IN ANY AREA OF THE HOME CREATES A FIRE HAZARD. ANY LINT ACCUMULATIONS MUST BE CLEANED FREQUENTLY.

Gas Requirements

THE INSTALLATION MUST CONFORM WITH LOCAL CODES, OR IN THE ABSENCE OF LOCAL CODES, WITH THE NATIONAL FUEL GAS CODE ANSI/Z223.1 LATEST REVISION (FOR THE UNITED STATES), OR WITH THE CAN/CGA-B149.

Installation Codes

A 1/2" gas supply line is recommended and must be reduced to connect to the 3/8" gas line on the dryer. The National Fuel Gas Code requires an approved manual shut off valve be installed within six feet of the dryer. Also a 1/8" N.P.T. (National Pipe Thread) plugged tapping should be installed immediately upstream of the gas supply connection to the dryer for test gauge connections.

The dryer must be disconnected from the gas supply piping system during any pressure testing of the gas supply lines.

DO NOT reuse old flexible metal gas line.

Flexible gas line must be design certified by American Gas Association (CGA in Canada). **NOTE:** Any pipe joint compound used must be resistant to the action of any liquefied petroleum gas.

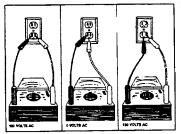
The dryer uses an automatic ignition system to ignite the burner. There is no constant burning pilot.

Gas dryers are eqipped with a burner orifice for operation on NATURAL gas. If the dryer is to be operated on LP (liquid propane) gas, it must be converted for safe and proper performance by a qualified service technician. Conversion kits from NATURAL to LP, or LP to NATURAL are available through your local Maytag dealer. If other conversions are required, check with the local gas utility for specific information concerning conversion requirements.

Electrical Requirements

Gas Dryer: The dryer is supplied with a power cord, which must be plugged into a grounded 120 volt approved electrical service protected by a dedicated 15 amp fuse or circuit breaker.

GROUNDING POLARITY CHECKS



WARNING: For your safety and to protect the test equipment, be sure that the wall outlet is properly polarized and grounded.

Electric Dryer: U.S. electric model dryers are not supplied with a power cord. Check the data plate of the dryer to determine correct voltage requirements for the dryer.

IMPORTANT: The dryer frame is grounded to the neutral conductor at the terminal block. If the dryer is installed in a manufactured home, or if local codes do not permit grounding through the neutral, refer to Four Wire System Connections on page 1-5.

NOTE: A U.L. listed strain relief must be used with all electrical cable or power cords inserted through the hole provided in the cabinet near the terminal block.

Three-Wire System Connections

The neutral (white or center wire on the power cord) conductor must always be connected to the center (silver colored) post of the terminal block.

The other two leads of the electrical cable or power cord should be connected to the remaining two posts on the terminal block. Check all terminal nuts for proper tightness.

Four-Wire System Connections

The ground strap should be removed

from the terminal block bracket and folded back over the center (silver colored) post of the terminal block. The neutral (white or center wire on the power cord) is connected to the center (silver colored) post of the terminal block. The green ground wire is attached to the terminal block mounting bracket by the ground strap screw removed earlier. The other two leads of the electrical cable or power cord should be connected to the remaining two posts on the terminal block.

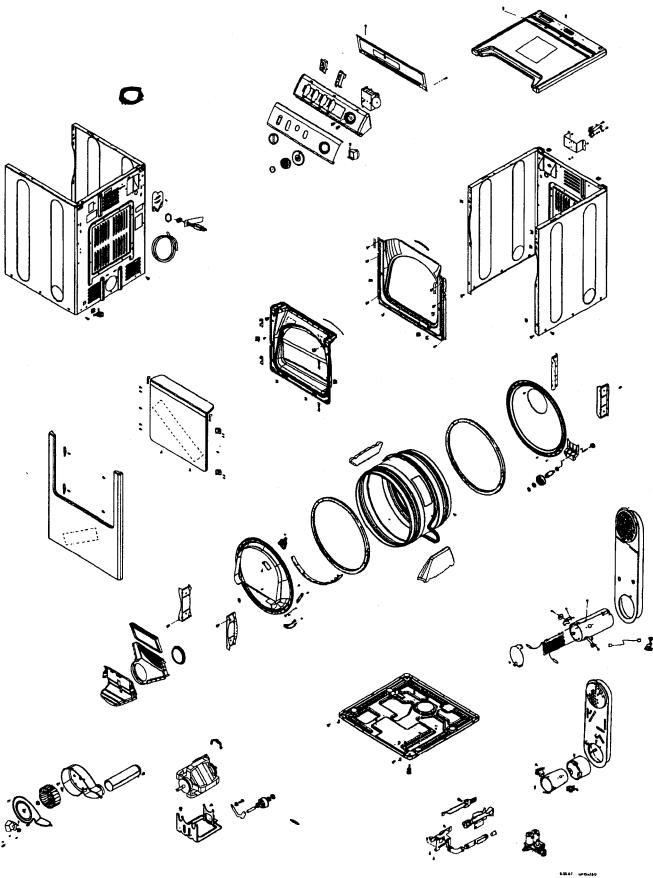
Check all terminal nuts for proper tightness.

WARNING: If the dryer is being converted from a four-wire system connection to a three-wire system connection, the ground strap folded over the center terminal post must be reconnected to the terminal mounting bracket ground screw. This will ensure the dryer frame is grounded to the conductor of the terminal block.

SPECIFICATIONS

AIR FLOW	220 cubic feet per minute	
CAPACITY	6.0 cubic feet	
ELECTRICAL	GAS DRYER-120 Volts, 60 Hz; Requires 15 amp circuit breaker or fused electrical supply, ELECTRIC DRYER-240 Volts, 60 Hz; Requires 30 amp circuit breaker or fused electrical supply. Power cord must be connected to a properly grounded outlet.	
MOTOR	1/4 H.P. rated; 120 Volt AC; 60 Hz; Thermoprotected against overload; auto-reset.	
•ELECTRIC: 240 Volt AC 3-wire; 5300 Watts; 30 Amp fuse/circuit breaker •GAS: Single port burner; 22,000 BTU/HR; Electric ignition; Automatic shut-off.		
TUMBLER SPEED	D 52 RPM	
DIMENSIONS	27"W (68.6CM) x 27.5"D (72.4CM) x 43.25"H (109.9CM)	
WEIGHT (Approx.)	Crated - 144lbs. (65 kg); Uncrated - 126lbs. (57kg)	

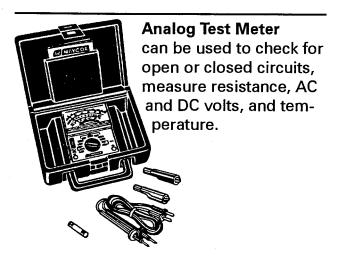
General Component Exploded View



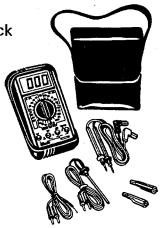
SECTION 2 - ELECTRICAL COMPONENTS & TESTING

TEST EQUIPMENT

The equipment required to service Maytag products depends largely upon the condition you encounter. Locating a malfunction will often require the use of electrical testing equipment such as:



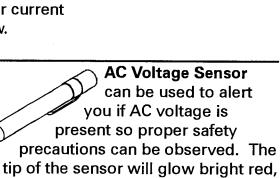
Digital Test Meter can be used to check for open or closed circuits, measure resistance, AC and DC volts, and temperature.



DESCRIPTION	PART NUMBER
Analog Test Meter	20000005
Digital Test Meter	20001001
Clamp-on Ammeter	20000002
AC Voltage Sensor	20000081
Air Test Meter	20000029
Water Column Manometer	038205

Clamp-On Ammeter can be used to detect shorts. Overloads on the circuit breaker or fuse can be traced to either the dryer or circuit breaker by checking the dryer current draw.

AC.



Air Test Meter
can be used to
check back pressure in the exhaust
duct. Vent restriction can cause
back pressure
and disrupt normal
operations of the
dryer.

Water Column Manometer can be used to check gas pressure being supplied to the dryer and at the outlet tap pressure on the gas valve.

if voltage is between 110-600 volts

Manometers

An insufficient gas flow can cause problems. Therefore, checking the gas pressure at the time service calls are performed may prevent a call back.

Gas pressure can be checked with an instrument called a "manometer." This device can tell you if there is a "low" LP tank, restricted gas flow, bad gas valve, a malfunctioning pressure regulator, too many gas appliances operating off of a small supply line, or an improperly converted appliance from Natural to LP gas.

Other types of manometers exist; however, the type of manometer we will discuss in this manual is a "U" shaped tube in which weight is added. Both ends are open so the water can equalize and seek its own level, which will be the same in both arms of the "U" shaped tube.

A flexible rubber hose is connected to the lower open end of the manometer and to the gas source. Gas pressure is exerted on one of the water columns, pushing it down. The water level then rises in the other column. A measurement of the differential in water levels is then taken as the measure of gas pressure.

The water column (W.C.) for a Maytag dryer is 3.5" W.C. for Natural gas and 11" W.C. for LP gas.

How to Use:

- Unplug dryer.
- 2. Remove front panel.
- 3. Shut off the gas to the dryer.
- 4. Install a 5/16" tapered fitting at the gas valve pressure tap. Use thread seal tape or compound on fitting, (See figure 2-1).

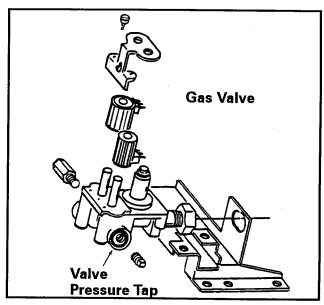


Figure 2-1

- Fill the manometer tube with water until each side equalizes at "0" water column.
- 6. Push the end of the manometer hose onto the 5/15" fitting, located on the gas valve.
- 7. Connect hose to one end of the manometer.
- Turn on the gas and reconnect dryer to power. Run the dryer in a heat cycle. Read the manometer with the burner ON, (check for gas leaks).
- The amount of water column present is equal to the total amount of deflection shown in the manometer, when the gas is turned on.

NOTE: Once the test is completed, make sure the tapered fitting is removed from the gas valve and the plug is repositioned into the gas valve and resealed with pipe seal. Check for gas leaks again. This should be done with a soap or bubble solution. NEVER USE OPEN FLAME TO CHECK FOR GAS LEAKS.

HIGH WATER COLUMN PRESSURE can be caused by the wrong orifice, improper air mixture or high gas pressure. If pressure is as high as suspected, contact the local gas utilities company to check the outside regulator.)

ELECTRICAL TESTS



Warning - Always shut off electrical power to the dryer before beginning any service repair procedures.

Voltage Checks

Generally, these checks will consist of taking readings at the wall receptacle in order to determine the availability of voltage to the product. Voltage checks on individual components of a product are NOT recommended due to the possibility of electrical shock. Component part testing is accomplished through continuity checks with an appliance test meter.

NOTE: Use of the meter on voltage higher than the indicated range may cause permanent damage to the meter. To prevent damage, first select the highest range and then lower the range for readings which fall within the lower scale.

Set up meter for use as follows:

- 1. Turn selector knob to desired meter function and appropriate range.
- Plug black lead into socket marked
 negative.
- 3. Plug red lead into socket marked (+) positive.

4. Place test leads into receptacle in order to determine voltage available.

Voltage Check with Voltmeter

Voltage readings may be taken by using the leads supplied with the meter. The meter is preset to read on the 0-300 VAC scale but can be dropped down to 0-150 VAC range by depressing the red button on the side of the meter.

Using Voltmeter as a Continuity Tester

Continuity testing is usually an ohmmeter function, but a voltmeter can also be used, particularly when testing switch contacts. The primary difference is that power is applied to the circuit under test and appropriate caution **MUST** be exercised.

The voltmeter is connected across the component terminals with the wires still in place and with power disconnected. The meter is set for the 300 volt range and power is reconnected. A voltage reading indicates a voltage drop across the component. There should be no voltage drop across closed switch contacts or fuses.

The voltmeter connected across thermostat terminal, as an example, will show no reading when the thermostat is calling for heat and will show line voltage when the thermostat cycles, if the timer is in heat cycle.

This type of continuity testing is an excellent method of locating questionable switch contacts. Any voltage drop across closed switch contacts indicates poor electrical contact. The resulting internal heating can shorten component life.

Door Switch

The door switch is in series with both the motor and the inner tumbler light. When the door is closed, the switch completes a neutral circuit to the motor and opens the circuit to the tumbler light. With the door open, the light circuit is completed

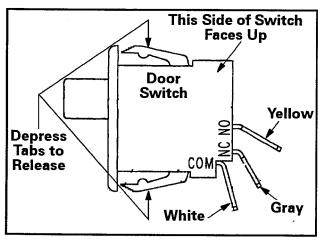


Figure 2-2

and the neutral circuit to the motor is discontinued, thus shutting down, the motor.

To test the door switch, use an ohm meter and check for continuity from the COM terminal to the NO and the NC terminals. "NO" means normally OPEN and with the door switch button not depressed there should not be any continuity until the button is pushed. By having the switch button out, such as having the door OPEN, the dryer cannot be started.

The "NC" means there should be continuity across the terminals without depressing the button. This occurs when the door is opened, turning the tumbler light ON. When the door is closed, the switch will turn OFF the tumbler light.

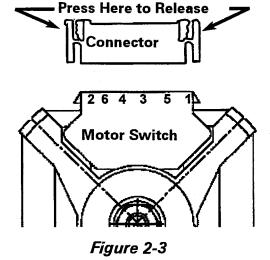
Timer & Console Switches

The timer is a series of switches driven by an electric motor. The timer motor rotates a pinion gear which in turn rotates internal cams. As the cams rotate, they lift and drop various switch contacts which ride on the cam. The internal switches control power flow to the motor and the heating element. A timing chart is illustrated on the electrical schematic, found in the control console of the dryer.

Using the timer chart at the top of the electrical schematic, you can identify the timer terminals on the back of the timer, which are involved in various parts of the dryer cycle. With the power OFF and placing the terminals of the ohm meter across the terminals, you can check for continuity across the internal timer contacts.

Drive Motor Check

The motor features a leadless motor connection, comprised of a quick connector wire harness which connects directly to the motor. The connector has two locking tabs securing the connector to the motor switch. Press on both locking tabs to release the connector from the motor switch. (See Figure 2-3)



With the wire harness connector removed press inward on the brown actuator disc in the motor. The start and run winding can now be checked for proper ohms. Place the leads from an ohm meter on the proper terminals as listed in the following chart, (See Figure 2-4).

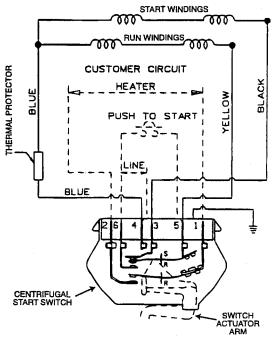


Figure 2-4

Winding	Terminal	Terminal	Ohms
Start	3	4	3.00
Run	5	4	2.25

Using an ohm meter, you can also check the wiring harness for continuity from the timer to the motor.

Motor Test Cord

A motor test cord may be used to electrically check operation of the various electrical components without removing them from the unit. Testing in this manner determines whether or not the part will function independently of other electrical components. In order to make an accurate test, proper connection of the motor test cord is important.

Drive Motor Test

The motor may be checked in the dryer or removed and checked.

Two test leads are required to check operation of the dryer drive motor. To check the motor for operation, hook up the test cord to terminals 4 and 5, (**See Figure 2-4**).

Centrifugal Switch

Checking heater/gas valve-motor:

- Disconnect the wire harness from the motor.
- Place ohm meter leads to terminals 1 and 2, (See Figure 2-4).
- 3. With your thumbs, depress the BROWN disc located behind the motor switch on the motor shaft, (See Figure 2-5). The BROWN disc actuates the lever of the motor switch when the motor is at rest. At optimum motor speed, the disc moves away from the switch lever. When the disc is pressed inward toward the windings, the actuator arm of the centrifugal switch will be relaxed. This allows the contacts to close, completing the heater circuit. If no continuity is found when the disc is depressed, change the centrifugal switch.

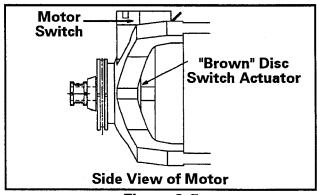


Figure 2-5

SECTION 3 - TROUBLESHOOTING GUIDE

FUNDAMENTAL CHECKS

Will Not Run

If dryer will not start or run, check the following:

- All wires are hooked up to their corresponding terminals.
- · Dryer is plugged in.
- · Blown fuse or circuit breaker.
- Door switch functional...door closed.
- Push-to-start switch functional.
- Timer functional...set in a cycle.
- Drive motor functional.
- Blown thermal fuse.

If drive motor runs, but the tumbler will not turn, check the following:

- Belt off or broken/damaged.
- Idler tension spring too weak or stretched.
- · Idler pulley jammed or stuck.

If dryer runs a few minutes and then stops - motor overload protector opens, check the following:

- · Lint buildup around drive motor.
- Low voltage present.
- Blower impeller blocked in blower housing.
- Drive motor start switch contacts stuck closed.

If dryer blows fuses or trips circuit breaker, check the following:

Electric Models

 The amperage readings are at 240 volts. One line will be 24 amps and other line will be 21 amps. The neutral line will be at 3 amps. If the above amperages are present, then the house

- wiring, fuse box or circuit breaker should be suspected.
- · Shorted heating element to housing.
- Incorrect wiring or a wire shorting to ground.
- Drive motor winding shorting to ground.

Gas Models

- During ignition, the dryer will draw 7 amps. With the burner ON, the dryer will draw 3 amps. If the dryer is drawing amperages above this, then the house wiring, fuse box or circuit breaker are suspected to be at fault.
- Igniter harness loose and shorted to base.
- Incorrect wiring or wire shorted to ground.
- Drive motor winding shorting to ground.

Will Not Dry

If dryer will not heat (motor runs), check the following:

- Restricted exhaust caused by plastic or thin foil flexible duct.
- Open heating element.
- Hi-Limit thermostat trips too soon or is open.
- Cycling thermostat trips too soon or is open.
- Temperature selector switch mis-wired or contacts open.
- · Timer functional.
- Cycle selector switch mis-wired or contacts open.
- Drive motor centrifugal start switch not allowing voltage to gas valve or heating element.

If improper drying/clothes wrinkled/ rough texture/taking too long to dry, check the following:

- Restricted exhaust caused by plastic or thin foil flexible duct.
- · Lint filter is not clean.
- Restriction in exhaust.
- Outside exhaust hood damper door stuck closed.
- Exhaust too long, too many elbows, flex ductwork installed.
- Poor makeup air available for the dryer.
- Incorrect tumbler speed. Tumbler belt slipping.
- Blower impeller bound; check for foreign material in blower area.
- · Customer overloading dryer.
- Check clothing labels for fabric content and cycle selected.
- Gas valve coil opens weak point in coil opens when stressed under heated conditions.
- Clothes too wet due to insufficient spin out by washer.

Will Not Shut-Off

On time dry settings check the following:

- · Timer motor receiving proper voltage.
- Check timer motor connections.
- Timer functional.

On Intelli-Dry settings, check the following:

Note: The Intelli-Dry dryer incorporates a new "simplified" electronic control system using a PTC (Positive Temperature Control) thermistor. A PTC is a thermistor that will change resistance at predictable temperatures and induce variable current flows.

<u>Function of dryer's electronic control unit</u> with a:

Wet Load- Wet clothes making contact across sensor bars allows current path to ground. This allows current to pass through the PTC thermistor on the electronic control unit. Current passage through the thermistor heats the thermistor and raises the resistance of the thermistor, in turn creating a voltage drop through the thermistor. This leaves less than the required voltage available for the timer motor. The timer motor stops and cannot run.

<u>Dry Load</u> - Since dry clothes do not conduct electricity, current path to ground is inhibited and voltage across the thermistor is dropped. In turn, the thermistor cools and the resistance drops, reducing the amount of voltage drop across the thermistor, resulting in more voltage drop across the timer motor. Timer will now run.

<u>Troubleshooting the electronic</u> control circuit:

- Check for mis-wiring of the edge board connector at the electronic control board.
- If the dryer does not shut off, the problem is in the electronic control unit.
 Disconnect the sensor wire from the sensor bar. If the dryer runs for about 20 minutes then shuts down or the timer advances, the electronic control unit is good and the problem lies in the sensor bar.
- Check sensor for continuity. If found, replace sensor bar or clean with alcohol. Some fabric softener sheets will coat the sensor bars.

Noisy and/Or Vibration

- Thumping. Check for loose tumbler baffle, rear tumbler roller(s) worn or misaligned, out-of-round tumbler or high weld seam on tumbler.
- Ticking. Check for loose wire harness or object caught in blower wheel area.
- Scraping. Check for front or rear bulkhead felt seal out of position or worn tumbler front Rulon™ bearings.
- · Popping or squealing sound. Check for a sticky or frayed belt.

DIRECT IGNITION SYSTEM

Testing and observation of the gas controls system can be performed with the front panel removed and the door assembly mounted and secured to the front shroud.

When the dryer is operated on a heat setting, the igniter should be energized and burner shall fire within 45 seconds at 120 VAC. Check for a flame. De-energize the gas control and reenergize. The flame should reappear within one minute.

The failure of a component in this system will usually be indicated by one of three symptoms:

- 1. The igniter does not glow. If the igniter does not heat up, remove power and using an ohmmeter, check the following:
 - · Open radiant sensor
 - Open igniter
 - Shorted booster coil
 - Open wiring

- 2. Igniter glows No gas ignition. If the igniter heats but the main burner flame is not ignited, remove power and using an ohmmeter, check the following:
 - Open secondary coil
 - Open holding coil
 - Open wire harness
- 3. If a normal ignition takes place and after a short while the flame goes out, check for the following:
 - · Radiant sensor contacts opening prematurely.
 - · Weak gas valve coil may lose continuity when stressed by higher temperatures.

SECTION 4 - CONSOLE ASSEMBLY



Warning - Always shut off electrical power to the dryer before beginning any service repair procedures.

REMOVAL

- 1. Disconnect power to the machine.
- 2. Remove the three screws securing the console rear cover plate across the rear top edge of the console, (See Figure 4-1).



Figure 4-1

- 3. Lay a dropcloth across the top cover of the dryer.
- 4. Grasp the top of the console and gently rock the top of the console forward, (See Figure 4-2).

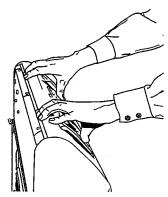


Figure 4-2

5. Roll the top of the console forward, (See Figure 4-3).

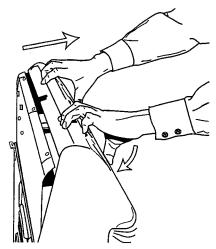


Figure 4-3

 Carefully lift and roll the console forward onto the top cover. You now have access to the console components and wiring, (See Figure 4-4).

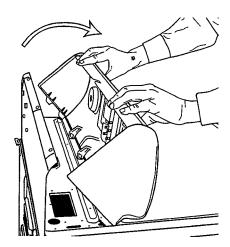


Figure 4-4

7. **To Reinstall:** Roll the console back into an upright position, engaging the locking feet into the slots in the top cover. Replace the three screws to attach console back to console rear panel.

VERTICAL SWITCHES (Push Button)

- To remove Depress the tab at the top of the switch with a screwdriver to disengage the tab from the console. Pivot the switch away from the console to remove, (See Figure 4-5).
- 2. To replace Align the rib on the bottom of the switch with the slot in the console. Pivot the switch up into the console until the tab engages the console securely. Check the locating tabs on either side of the switch's lower alignment rib are in position to properly center and lock the switch into the lower part of the console switch opening.

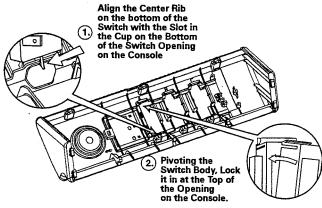


Figure 4-5

HORIZONTAL SWITCHES (Push-to-Start & Rotary)

- To remove Depress the locking tab on the switch to disengage the switch from the locking tab on the console. Pivot the switch from the console, (See Figure 4-6).
- To replace Position one side into the console and pivot the other tab into the console. Apply enough pressure to engage the tab into the console.

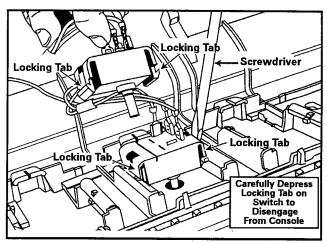


Figure 4-6

TIMER REMOVAL

- 1. Disconnect power to the machine.
- 2. Carefully lift the timer knob and dial off the timer shaft by pulling the knob away from the face of the control console, (See Figure 4-7).

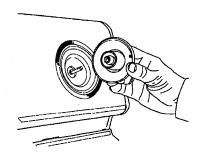


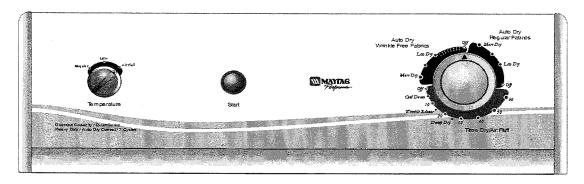
Figure 4-7

- Remove the two timer mounting screws (now exposed on the control console) when the timer dial skirt is removed.
- 4. Disengage the console assembly from the top cover and roll forward, (See Console Assembly).

CONTROL FACIA

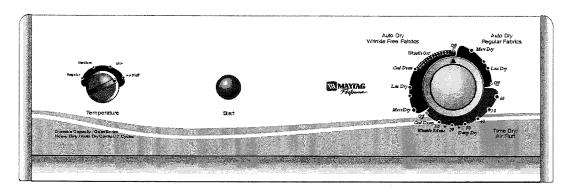
All models have the standard features: Oversize Capacity Plus Tub, Automatic Dry Control, Damp Dry, Time Dry/Air Fluff Option, Wrinkle Release, End-of-Cycle Signal, 4-Point Suspension and an Electronic Ignition with Safety Shut-Off Valve (Gas Only).

MD2300



Standard features plus 3 temperature selections.

MD2500



Standard features plus 4 temperature selections.

MDE/MDG2301



MDE/MDG2600



MDE/MDG3600



SECTION 5 - CABINET ASSEMBLY COMPONENTS



Warning - Always shut off electrical power to the dryer before beginning any service repair procedures.

DOOR ASSEMBLY & HINGES

The door assembly is reversible.

Removal

 Open the door and remove the center screw of each hinge secured to the inner flange of the front panel in the door opening, (See Figure 5-1).

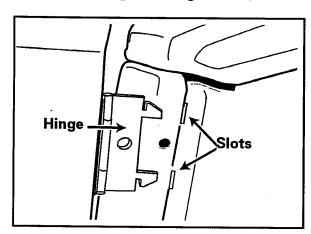


Figure 5-1

2. Grasp the door with both hands and lift the door in the hinge area. Draw the door assembly away from the machine. This will disengage the hinges from the slots in the front shroud.

Reversal

 Remove the door assembly from the dryer. Remove the plastic hinge hole covers on the opposite side of the door opening.

- 2. Remove the hinges from the door itself and relocate them to the other side of the door.
- 3. Remount the door into the slots on the opposite side of the door opening in the front shroud. Secure with one screw into each hinge.
- Mount the plastic hinge hole covers onto the side where the hinges were previously on to cover the slots in the front shroud.

Door Disassembly

 Remove ten screws located across the bottom and along either side of the door panel. The top edge of the outer door is folded over the inner door plug.

FRONT PANEL

Removal

 Open the door and remove the four screws along the inside lip of the door opening, (See Figure 5-2). Two screwsare located vertically on either side of the door opening. These screws secure the front panel to the front shroud assembly.

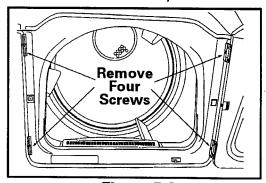


Figure 5-2

2. The front panel is held to the cabinet by clips secured to the cabinet front flange. Small slots in the front panel engage the clips and hold the front panel in place, (See Figure 5-3). To remove the front panel, grasp the sides of the front panel 3/4 of the way down and pull the front panel away from the dryer.

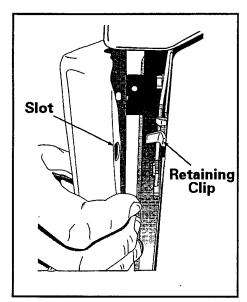


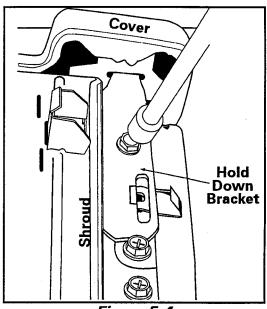
Figure 5-3

3. Tilt the top of the front panel away from the machine and lift the panel off two clips, retaining the front panel to the base frame. Set the front panel away from the machine.

TOP COVER

Removal

- 1. Remove the front panel, (See Front Panel Removal)
- 2. Locate and remove two 5/16" hex head screws securing the two hold down brackets for the top cover, (See Figure 5-4).



Fiaure 5-4

 To remove the hold down brackets, swing the bracket to the outside and unhook the bracket from the slot in the top cover lip, (See Figure 5-5).

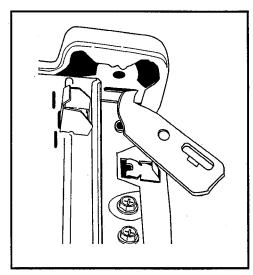


Figure 5-5

4. If the door is still positioned on the front shroud, open the door prior to lifting the front of the top cover and tilt the top cover toward the rear of the machine.

SECTION 6 - TUMBLER & BULKHEADS



Warning - Always shut off electrical power to the dryer before beginning any service repair procedures.

SHROUD & TUMBLER FRONT ASSEMBLY

The shroud and tumbler front assembly holds the front of the tumbler in the correct position and provides support for the *Rulon*™ bearing surfaces for the front of the tumbler to ride on. The air outlet duct with lint filter is located in the assembly and channels the air from the tumbler into the blower assembly.

Removal

- 1. Disconnect power to the machine.
- 2. Remove front panel and door assembly.
- 3. Remove hold down brackets.
- 4. Remove wires from door switch, sensor bar and lamp holder. Unsnap the lamp holder wire harness from the front shroud wire retaining clip.
- 5. Remove four outer screws holding shroud and tumbler front assembly to the cabinet. NOTE: Remove the lowest outside screw at each corner and then the top screw on each side. Leave the two inner screws and the two lower middle screws in place, (See Figure 6-1).
- Pull shroud and tumbler front assembly out and away from tumbler, while partially lifting the top cover.

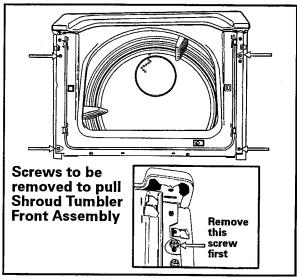


Figure 6-1

Reinstall

1. Reverse the previous steps.

Note: When reinstalling the shroud and tumbler front assembly, lift the front inner edge of the tumbler to allow the front of the tumbler to rest on the teflon (Rulon™) bearings on the shroud and tumbler front assembly. Also, check the front felt seal to ensure the felt seal is outside the lip of the tumbler.

Disassembly of the Outlet Duct, Shroud and Tumbler Front

- Remove the shroud and tumbler front assembly from the dryer.
- Remove the two screws securing the shroud to the tumbler front and the two screws securing the shroud to the outlet duct. Pull the shroud free from the assembly, (See Figure 6-2).

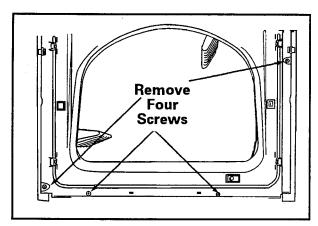


Figure 6-2

3. Remove the four 1/4" hex head screws and the one cross recess countersunk screw securing the outlet duct to the tumbler front. Note: Two of the hex head screws are hidden under the felt seal. Pull the outlet duct free from the tumbler front, (See Figure 6-3).

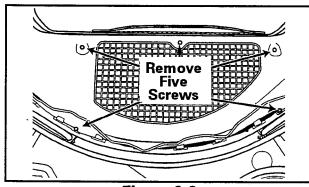


Figure 6-3

4. When reattaching the outlet duct assembly to the tumbler front, install the center screw (found above the grid area) first, followed by the four outside screws in any order. (See Figure 6-4)

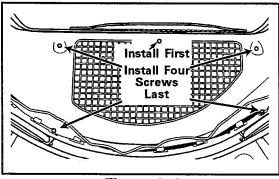


Figure 6-4

LINT FILTER

The lint filter is one piece and can be removed for cleaning, (See Figure 6-5).

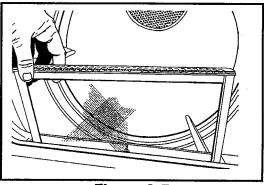


Figure 6-5

BEARING & PADS

At the bottom inside of the shroud and tumbler front assembly there are two teflon (Rulon™) bearings which rest on cork pads. These bearings provide a surface for the front of the tumbler to ride.

Removal & Replacement:

- 1. Disconnect power to the machine.
- Remove the front panel and shroud/ tumbler front assembly.
- 3. Drill out the old rivets and rivet new bearings in place. In positioning the bearing and cork pad, the face of the bearing should ride against the tumbler, (See Figure 6-6).

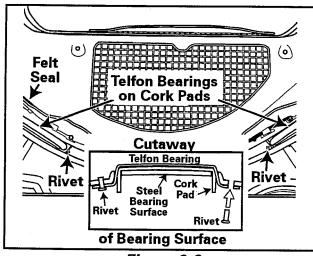


Figure 6-6



The seal fits around the back circumference of the shroud/tumbler front assembly. It is a natural felt seal which is doubled over in order to spring load the seal against the tumbler. The surface which comes in contact with the revolving tumbler is coated with a layer of teflon to provide a slick durable wear surface.

Removal

- 1. Disconnect power to the machine.
- Remove the front panel and shroud/ tumbler front assembly.
- Remove the old felt seal by prying the locking tabs up with a flat blade screwdriver, (See Figure 6-7).

NOTE: Pay close attention to the location of the seal overlap. This will be important as you reinstall the new seal.

Reinstall

The seal will be mounted to the tumbler front in a counter clockwise rotation.

Start at the 3:00 position and place under the locking tabs. The seal will overlap 1

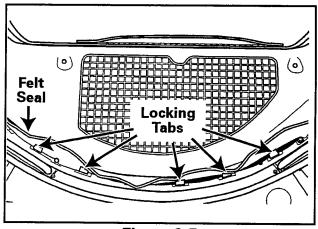


Figure 6-7

1/4". The coated side (which is the lighter of the two colors) goes against the tumbler. The felt seal is then looped in a "U" shape so that the lighter colored side is against the tumbler front as it is slid in place under the tabs.

Bend tabs back over the felt seal with a flat blade screwdriver.

TUMBLER & BELT

The tumbler is a cylinder with no attached front or back. Tumbler speed is 52 R.P.M. Installation can be made without regard to which way it came out of a dryer.

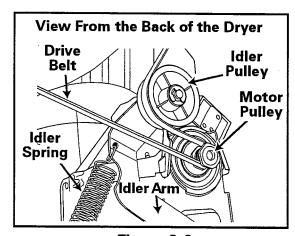


Figure 6-8

Tumbler and Drive Belt Removal

- 1. Disconnect power to the machine.
- 2. Remove front panel and door.
- 3. Remove shroud/tumbler front assembly.
- Insert left hand along side of tumbler at the 8 o'clock position. Insert right arm under tumbler (as close to blower as possible).
- 5. Grasp the idler pulley in left hand, pull idler upward and to the left. Note:

 There is a built-in stop to prevent overstressing of the idler arm spring.

 Slip belt off the motor pulley, (See Figure 6-9).

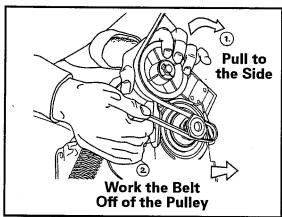


Figure 6-9

- 6. Slip the belt off the back of the tumbler.
- 7. Pull tumbler out of cabinet while lifting top cover.

Installing Drive Belt

- 1. Disconnect power to the machine.
- 2. Place belt onto the outside of the tumbler and position the belt 1 1/2" in front of rear baffle mounting screws with ribbed side against tumbler. (See Figure 6-10)

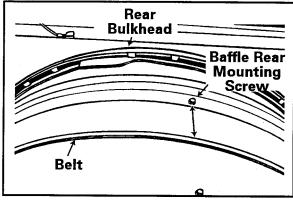


Figure 6-10

- Position tumbler into the rear felt seal, resting the tumbler onto the rear rollers. Lower the front of the tumbler onto the blower housing.
- Insert left hand along side of tumbler at 8 o'clock. Insert right arm under tumbler (as close to blower as possible).
- 5. Locate the belt and create a small loop with your right hand, ensuring the belt is free of twist.
- 6. Position the open end of the loop (ribbed side down) onto the motor pulley with your right hand.
- 7. To clear the drive belt, grasp the idler pulley in left hand, pull idler upward and to the left. **NOTE**: *There is a built-in stop to prevent overstressing of the idler arm spring.*
- Relax your left hand and allow the idler pulley to rest down onto the belt.
- 9. Grasp baffles with both hands and rotate tumbler 1 or 2 turns clockwise to allow the belt to align itself.

BAFFLES

There are three tumbler clothes baffles used to aid in tumbling the clothes. Two of the baffles are 1" higher than the other. Location makes no difference.

Removal

- 1. Disconnect power to the machine.
- 2. Remove door and front panel.
- 3. Lift the top cover.
- Rotate the tumbler until the baffle screws of the baffle to be removed appear at the top of the tumbler.
- 5. Remove two screws holding the baffle to the tumbler.

TUMBLER BACK ASSEMBLY

The inner wall of the tumbler back or rear bulkhead is coated with an epoxy powder coat which is a very smooth surface, resistant to scratches and abrasion.

The tumbler back assembly acts as a support for two roller assemblies which support the tumbler and weight of the load.

Removal

- 1. Disconnect power to the machine.
- 2. Remove front panel and door.
- 3. Remove shroud/tumbler front assembly.
- 4. Remove tumbler and belt.
- Remove burner and igniter on gas models. (Be careful, the igniter is fragile.)

- 6. Remove heat enclosure.
- 7. From back of dryer, remove four screws holding tumbler back assembly and remove assembly, (See Figure 6-11).

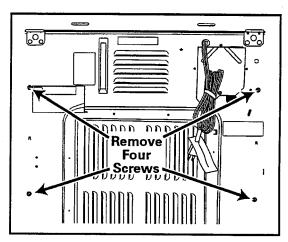


Figure 6-11

TUMBLER BACK SEAL

The felt seal fits around the front circumference of the tumbler back. It is a natural felt seal which is doubled over in order to spring load the seal against the tumbler. The surface which comes in contact with the revolving tumbler is coated with a layer of teflon to provide a slick, durable wear surface.

Removal

- 1. Disconnect power to the machine.
- 2. For ease in servicing, we recommend removal of the tumbler back assembly from the dryer. This will ensure the felt seal is secured properly.
- Remove the old felt seal by prying the locking tabs out with a flat blade screwdriver. Pay close attention to the location of the seal overlap. This will be important as you install the new seal.

Reinstall

The seal will be mounted to the tumbler back in a clockwise rotation. Start at the 11:00 position and place under the locking tabs. The seal will overlap 1 1/4". The coated side (which is the lighter of the two colors) goes against the tumbler. The seal is then looped in a "U" shape so the lighter colored side is against the tumbler back as it is slid in place under the tabs. Bend tabs back over seal with a flat bladed screwdriver, (See Figure 6-12).

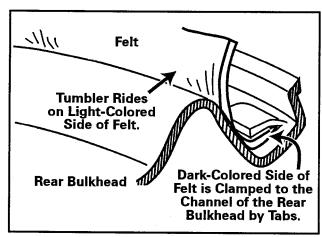


Figure 6-12

ROLLER AND BEARING ASSEMBLY

The tumbler roller consists of a rubber tire bonded to a plastic hub. There are two roller and bearing assemblies attached to the tumbler rear. If the rollers are riding up on the tumbler radius, check for bent rear roller brackets. If a bracket is bent, replace the tumbler back assembly. Rear rollers have self lubricated sintered bearings (lubricate using Maytag SBL oil, **P/N 055975**).

Removal

- 1. Disconnect power to the machine.
- 2. Remove front panel and door.
- Remove shroud/tumbler front assembly.
- 4. Remove tumbler.
- 5. Remove retaining ring from groove in shaft.
- 6. Remove fiber washer.
- 7. Remove roller.
- 8. Remove roller shaft by removing nut on back.

NOTE: There is a spacer washer behind the roller. When replacing parts be certain of the order of the replacement, (See Figure 6-13).

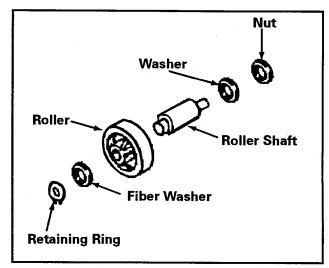


Figure 6-13

SECTION 7 - BLOWER & MOTOR DRIVE SYSTEM



Warning - Always shut off electrical power to the dryer before beginning any service repair procedures.

CYCLING THERMOSTATS

The cycling temperature thermostat is located on the blower housing cover. This thermostat cycles at approximately 150° F. (See Figure 7-1)

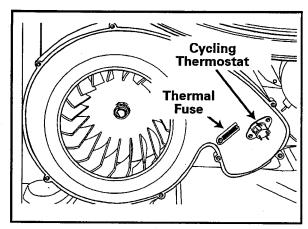


Figure 7-1

Removal

- 1. Disconnect power to the machine.
- 2. Remove front panel and close the door.
- 3. Remove the screws securing the thermostat to the cover.
- 4. Remove wires from thermostat.
- 5. Remove thermostat and replace with new part.

HI-LIMIT THERMOSTAT

The Hi-limit thermostat in the dryer is located on the heater enclosure. The thermostat is located close to the heating source and in the event of an over heating condition, will shut off heat quickly. If the dryer is found to be cycling on the hilimit, check for an air flow restriction. (Gas hi-limit thermostats are rated at 220°F and the electric dryer hi-limit is rated at 200°F.)

Removal

- 1. Disconnect power to the machine.
- 2. Remove front panel.
- 3. Remove wires from the thermostat.
- 4. Loosen the rear mounting screw and remove the front screw. The mounting tabs of the thermostat are open slotted for easy replacement.
- 5. Slide thermostat out and replace.

THERMAL FUSES

The function of the thermal fuse is to stop the dryer in an overheating condition. The electric dryer has two thermal fuses; one mounted on the blower cover is rated at approximately 180°F (84°C) and the other fuse, mounted on the left side of the heater enclosure, is rated at approximately 240°F (117°C). The gas dryer has one thermal fuse rated at approximately 180° F (84°C) and mounts to the blower cover. The thermal fuses for both dryer types are placed in series with the drive motor. If any of the fuses should open, the drive motor will stop and the circuit through the centrifugal

switch for the gas valve/heating element will also open breaking the heat circuit. The fuses will not reset and must be replaced after the overheating problem is corrected. Check for welded contacts in either the cycling or hi-limit thermostats.

Removal

- 1. Disconnect power to the machine.
- 2. Remove front panel.
- 3. Disconnect the wires from the fuse.
- 4. Remove the screw, attaching the fuse to the blower cover.
- 5. For the fuse mounted on the heater enclosure, (Electric dryer only).
 - Remove the screw that secures the fuse bracket to the heater enclosure.
 - Remove wires and the two screws that attach the fuse to the bracket.

Checking the Thermal Fuse

- 1. Disconnect power to the machine.
- 2. Remove front panel.
- 3. Remove wires from the thermal fuse.
- Check for continuity. Attach meter across the terminals of the fuse. If there is no continuity, replace fuse.

BLOWER ASSEMBLY

Seal for Blower

This rubber seal is secured to the outlet duct opening. The seal is fitted around the outer circumference lip of the outlet duct with the flange of the seal facing the blower cover. When installing the shroud/tumbler front assembly, be sure the seal is in place, (*See Figure 7-2*).

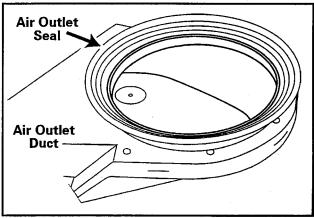


Figure 7-2

Cover for Blower

Removal

- 1. Disconnect power to the machine.
- 2. Remove eight screws holding cover to blower housing, (See Figure 7-3).

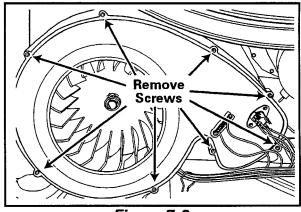


Figure 7-3

- 3. Remove one screw holding cover to base.
- It is not necessary to remove wires from thermostats to gain access to blower wheel. Lay the blower cover aside.

Installing Blower Cover

- 1. Disconnect power to the machine.
- 2. Set the blower cover in place.
- Install the first screw closest to the exhaust duct (right most screw), (See Figure 7-4).

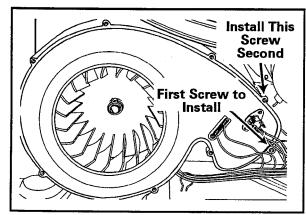


Figure 7-4

- Continue to assemble, moving to the next screw in a counter clockwise motion around the blower.
- 5. Install the screw for the blower cover tab to the base frame last.

Blower Wheel

The blower wheel is attached directly to the motor shaft behind the blower cover. Whenever replacing a blower wheel, always replace the clamp, (See Figure 7-5).

Removal

- 1. Disconnect power to the machine.
- 2. Remove front panel and close door.
- Remove shroud/tumbler front assembly.

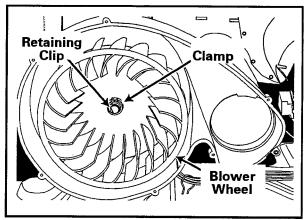


Figure 7-5

- 4. Remove blower cover.
- 5. Remove clip retaining ring.
- 6. Compress and remove clamp around hub of impeller.
- Work blower wheel back and forth while pulling off shaft. It may require considerable effort to remove the blower wheel.

Exhaust Duct Pipe

One end of the exhaust duct pipe is held to the back of the cabinet by one screw. It fits over the blower housing on the opposite end, (See Figure 7-6).

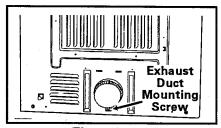


Figure 7-6

DRIVE MOTOR & IDLER ASSEMBLY

Motor Switch

A switching device in the motor is used to change the path of electricity from both start and run windings to run windings only. It also completes the circuit to the heat source when the motor reaches proper speed. The external motor switch is secured to the motor with two screws.

- 1. Disconnect power to the machine.
- 2. Remove front panel and door.
- 3. Remove shroud/tumbler front assembly.
- 4. Remove belts.
- 5. Remove tumbler.
- 6 Remove wire harness from motor switch by depressing tabs on either side of the harness connector and lift the connector from the switch.
- 7. Remove two screws holding switch to drive motor.
- 8. Disengage the thermal protector switch from the motor switch body. This can be done by either inserting a small flat blade screwdriver into the slot near the switch terminals or breaking the switch body. The thermal protector switch is not replaceable and is part of the motor assembly.

Biower & Motor Assembly

The entire blower and drive motor assembly can be removed for servicing.

Removal of Assembly

- 1. Disconnect power to the machine.
- 2. Remove front panel and door.
- 3. Remove shroud/tumbler front assembly.
- 4. Remove the belt.
- 5. Disengage the idler pulley spring from the base.
- 6. Remove tumbler.
- 7. Remove the screw in front of the blower assembly that secures the assembly to the base frame.
- 8. Remove wire harness from drive motor and thermostats on blower cover.
 - Remove two screws securing motor to base frame. An extension is required to reach the screws. Screws are located directly behind the blower housing, (See Figure 7-7).

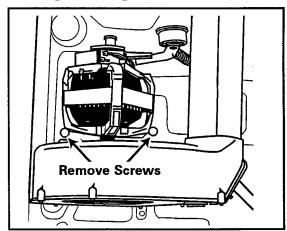


Figure 7-7

10. Carefully lift the front half of the blower assembly and slide the assembly forward to disengage the motor base rear tab from the slot in the base frame.

Assembly Breakdown

- 1. Remove blower cover screws.
- 2. Remove blower wheel.
- Remove retaining ring clip from motor shaft, positioned behind the blower impeller.
- 4. Remove the motor support clips which retain the motor to the motor base. Use a nut driver large enough to accept the hook end of the clip. With a downward push of the driver onto the clip, tilt the driver handle toward the motor to unhook the clip from the support.
- 5. Remove motor from motor base.



The motor turns clockwise as viewed from the front. The sleeve for the idler arm acts as a spacer so that the idler can float and aid in alignment of the belt. The idler arm spring maintains proper belt tension keeping it in alignment with the drive pulley.

Removal

- 1. Disconnect power to the machine.
- 2. Remove front panel and door.
- Remove shroud/tumbler front assembly.
- 4. Remove belt and tumbler.
- 5. Unhook idler spring from the base frame and remove screw securing the assembly to motor support bracket, (See Figure 7-8).

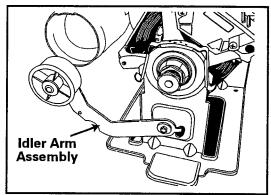


Figure 7-8

Disassembly

- 1. Remove retaining clip from groove in shaft.
- 2. Remove fiber washer.
- 3. Remove idler pulley and bearing.
- Remove second fiber washer.

NOTE: There is a fiber washer between the pulley and the idler arm. When replacing parts, be certain the order of replacement is correct, (See Figure 7-9).

IMPORTANT: The position of the flange of the idler pulley is important. The flange should be positioned on the side opposite the idler arm.

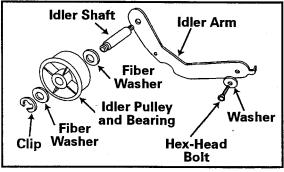


Figure 7-9

SECTION 8 - HEATING COMPONENTS



Warning - Always shut off electrical power to the dryer before beginning any service repair procedures.

GAS VALVE ASSEMBLY

The gas controls utilize a hot surface ignition system. The three major components of the gas ignition system are: Igniter, Radiant Sensor and Gas Valve, (See Figure 8-1).

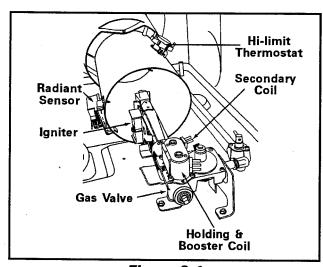


Figure 8-1

Igniter - When the controls call for heat, line voltage is applied to the igniter. This causes the igniter to heat up and glow. It can reach a temperature of approximately 2200° F in about 30 seconds. Gas contacting the igniter at this temperature will ignite immediately.

Radiant Sensor - The radiant sensor operates much like a regular thermostat. It is mounted to the side of the combustion cone over an opening which exposes the sensor to the heat of the igniter and burner flame.

In its normal condition, the contacts in the radiant sensor are closed and the circuit is completed to the igniter. The igniter glow causes the radiant sensor contacts to open, thus breaking the circuit to the igniter.

<u>Gas Valve</u> - The gas valve is actually two gas valves, one in series with the other, (See Figure 8-2).

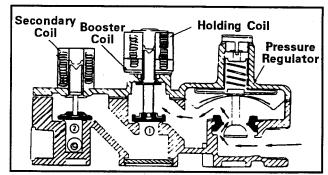


Figure 8-2

The first valve is opened by a solenoid which has two separate coils built into one solenoid. This solenoid uses what is termed a split coil. The coils are referred to as the **Holding Coil** and the **Booster Coil**.

Both coils are needed to lift the armature and open the valve. The holding coil is strong enough to keep the valve open once the armature has been lifted.

The second of the two valves is operated by a one coil solenoid. This is called a **Secondary Coil**.

Function of Gas Valve System

The sensor, igniter and gas valve are interrelated and function as ignition and heat source. At the start of the cycle, the radiant sensor contacts are closed, the igniter is at room temperature and the gas valve is closed, blocking the flow of

gas. NOTE: On the wiring diagram the radiant sensor contacts are wired in parallel with the secondary coil, (See Figure 8-3). This bypasses current around the secondary coil when the radiant sensor contacts are closed. Valve 2 cannot open with the radiant sensor contacts closed.

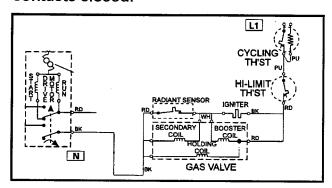


Figure 8-3

The booster coil and the igniter are wired in parallel. **NOTE**: While these two components are in parallel with each other, they are wired in series with both the radiant sensor and secondary coil combination.

When the radiant sensor contacts are closed, full line voltage is available to the booster coil and to the igniter.

When the radiant sensor contacts open, current has to flow through the secondary coil on Valve 2 in order to get to the booster coil and igniter. A significant voltage drop develops across the secondary coil. While the parallel booster coil and igniter are still in the circuit, they become ineffective due to their low resistance and the resulting reduced voltage available to them.

Step 1: Operation: Dryer Controls calling for heat:

The red wire in the gas valve harness is normally the "hot" side of the line. Voltage is routed to the gas valve assembly through the cycling thermostat located on the blower cover and the hi-limit thermostat on the heater cone. The black wire to the gas valve is normally the neutral side of the line and is completed through the motor centrifugal switch.

Radiant Sensor Contact Closed

The holding coil, booster coil and igniter all receive line voltage, (See Figure 8-4). The holding coil and booster coil open Valve 1. Valve 2 is still closed, prohibiting gas flow to the burner. The igniter, operating at line voltage, begins to get very hot. (As the igniter gets hotter, the resistance of the igniter drops.) The igniter glow radiates heat to the radiant sensor. The secondary coil on Valve 2 is bypassed by the radiant sensor contacts.

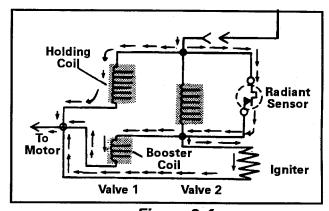


Figure 8-4

Step 2: Radiant Sensor Contact Open:

The igniter is now hot and valve one (1) is open. The heat from the igniter causes the radiant sensor switch contacts to open.

With the radiant sensor contacts open, the secondary coil is no longer bypassed. The secondary coil is now in series with the parallel circuit combination of the booster coil and the igniter.

Because of the relatively low resistance of the hot igniter, most of the line voltage is dropped across the secondary coil. The remaining voltage is dropped across the booster coil and igniter.

The secondary coil now opens Valve 2 releasing gas across the still extremely hot igniter. The burner flame is ignited.

NOTE: Since the igniter will cool, the tip is positioned in the burner flame which keeps it hot and resistance low.

The ignition cycle is now completed and the drying cycle begins.

Gas Conversions

The gas valve is set for use with natural gas when shipped from the factory. Because of differences in operating pressure and heat content of gases, the valve must be converted to use fuels other that natural gas.

Conversion kits are available to convert from natural to L.P. and back to natural. Check parts catalog for correct part number.

Air Shutter Adjustment

The air shutter has been stamped "LP" and "N" (for Natural). Loosen the screw holding the shutter, rotate the shutter until the end of the slot (labeled for the gas to be used) contacts the screw. Tighten the screw to lock the shutter in place, (See Figure 8-5).

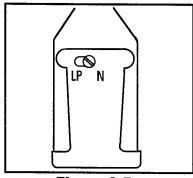


Figure 8-5

Gas Chart

Gas Type	Natural	L.P.
BTU Per Cu. Ft.	1025	2500
Pressure Inches	3.5	11
Specific Gravity	0.65	1.53
Size	43	54

Coil Replacement

To replace the coils on this valve, disconnect electrical power supply. Remove the front panel and unplug the wire harness from the gas valve coils. Once the coils have been unplugged, remove the two screws that secure the coil holding bracket.

Remove the bracket and lift the coils off, (See Figure 8-6). Replace coils, bracket and wire harness.

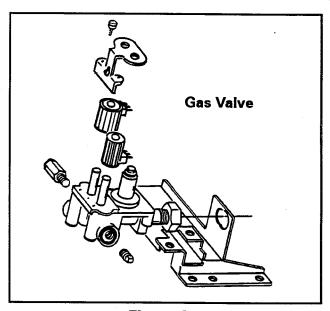


Figure 8-6

NOTE: When repositioning the coils onto the valve, align the coil positioning tabs and matching holes in the coil holding bracket for each coil.

Igniter

The igniter is used to ignite the gas as it comes from the gas valve. It is located on the left side of the burner (as viewed from the front of the dryer). The igniter is very fragile and must be handled carefully. Should you find a broken igniter, replace it. Operate dryer and see if igniter stays ON. If igniter stays ON longer than 40 seconds, replace radiant sensor.

- Disconnect power to the machine.
- 2. Remove front panel and close the door.
- 3. Unplug igniter from gas valve.
- 4. Remove screw holding igniter to burner.

Gas Valve Removal

- 1. Disconnect power to the machine.
- Remove front panel and close the door.
- 3. Shut off gas supply and disconnect supply line to valve.
- Disconnect wire harness at valve coils.
- 5. Disconnect wires from radiant sensor.
- 6. Loosen brass nut attaching angle connector to gas valve.
- 7. Remove two screws holding valve and burner assembly to base.
- 8. Slide valve bracket out of slot in base and remove valve and burner assembly.

9. Remove two screws holding gas valve to bracket on underside.

Orifice Removal

Remove the burner assembly. The orifice can be removed with a 3/8" wrench.

Combustion Cone Removal

- 1. Disconnect power to the machine.
- 2. Remove front panel and close the door.
- 3. Remove burner and igniter. Be careful, igniter is fragile.
- 4. Remove wires from high limit thermostat.
- 5. Remove screw in front of cone holding it to base.
- 6. Remove screw at back of combustion cone holding cone tab to inlet duct.
- 7. Pull combustion cone out of dryer.

Inlet Duct

This duct serves to channel heated air into dryer tumbler. (See Figure 8-7).

- 1. Disconnect power to the machine.
- 2. Remove front panel and the door.
- Removal shroud/tumbler front assembly, tumbler and belt.
- 4. Remove screws securing heat cone to base and to inlet duct.
- 5. Remove tumbler back assembly.

 NOTE: Four screws are accessible from behind dryer.

 Remove three screws securing inlet duct to the tumbler back assembly. The two lower screws are under the felt seal of the tumbler back assembly.

NOTE: For proper inlet duct to tumbler back assembly alignment when reinstalling, align inlet duct to large hole in the tumbler back assembly and fasten top screw first.

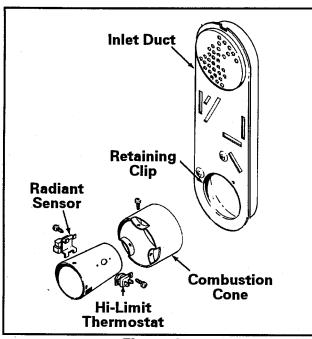


Figure 8-7

HEATING ELEMENT & RELATED COMPONENTS

Heating Element

The heater on electric dryers is equipped with a heating element to provide approximately 5300 watts when operated on 240 volts, (*See Figure 8-8*). The element is divided into six segments on each side of a support plate. This design exposes the element to more airflow and results in a lower maximum coil temperature.

Terminal insulators are used on each end of the element which attaches to spade connectors. These spade connectors are "crimped" to the wire and held in the insulator by small barbs on each side of the terminal. The barbs must be bent parallel with each terminal before element package can be removed from the enclosure. Three screws hold the element package to the enclosure.

Heater Enclosure

- 1. Disconnect power to the machine.
- 2. Remove front panel and door.
- Remove screw holding heater enclosure shield to base. Remove shield from dryer.
- 4. Remove screw in back of enclosure holding tab to inlet duct.
- Remove wires from the thermal fuse and heater terminal on left side of enclosure. Remove purple wire from high-limit thermostat.
- 6. Pull heater assembly out of dryer.

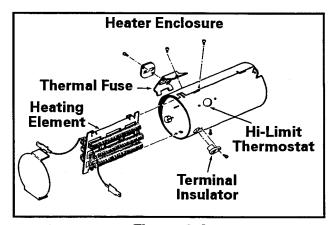
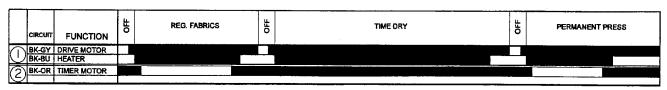
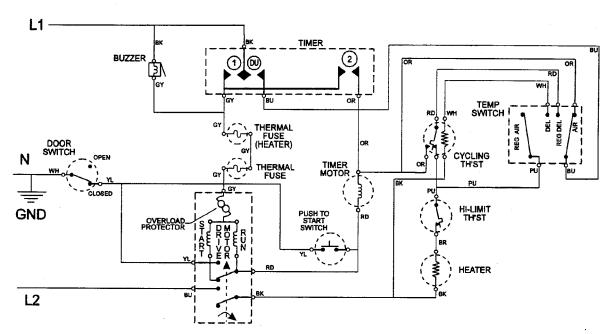


Figure 8-8

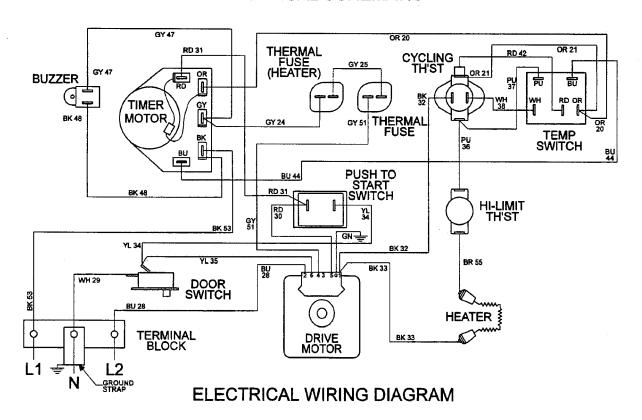
SECTION 9 - WIRING DIAGRAMS

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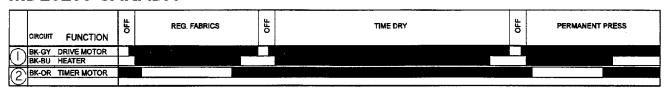


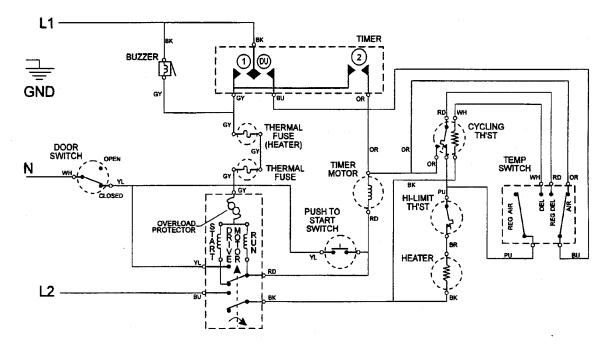


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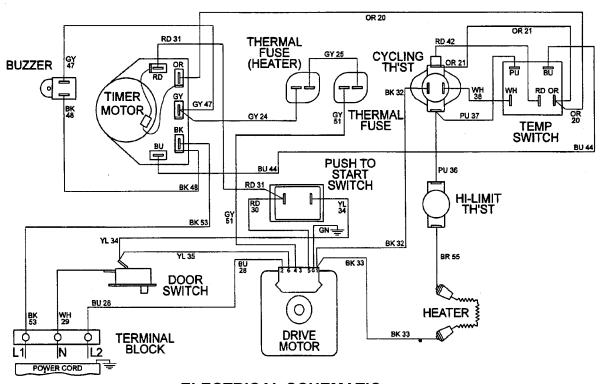


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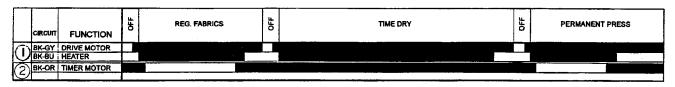


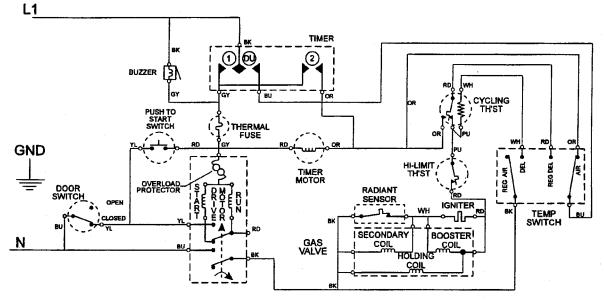


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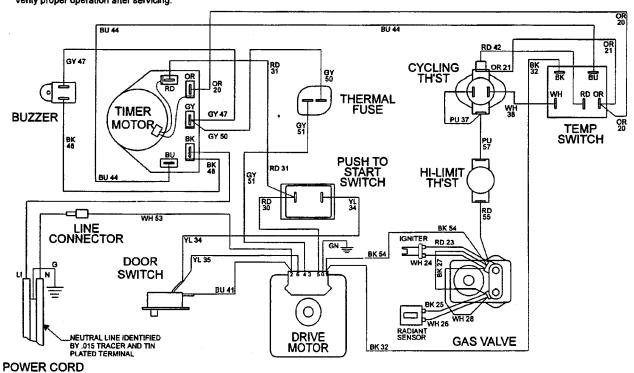




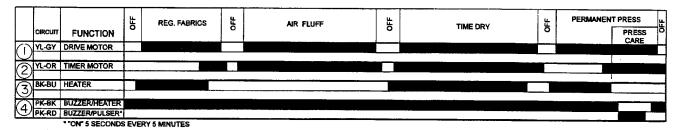
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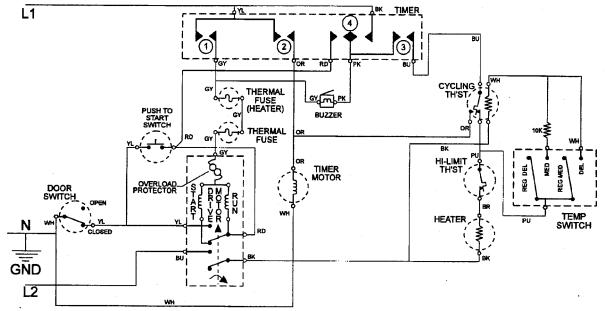
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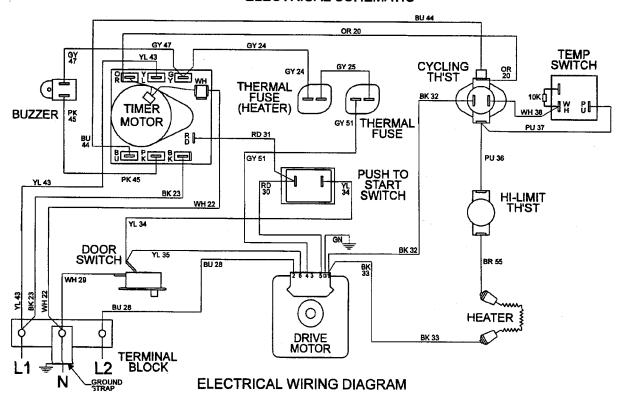
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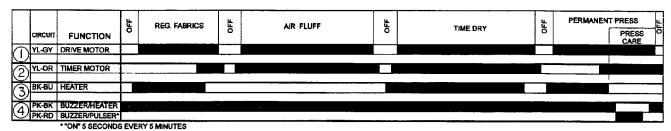
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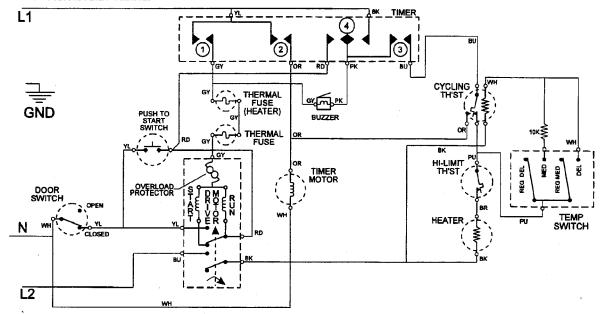


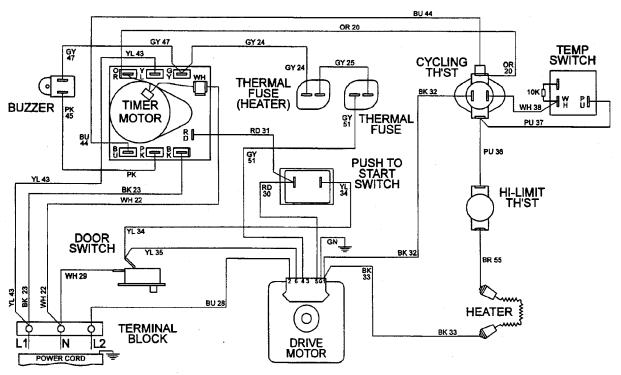




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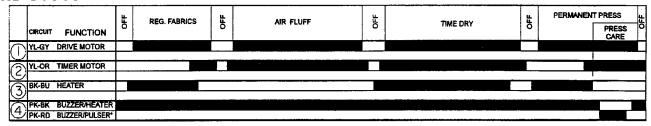




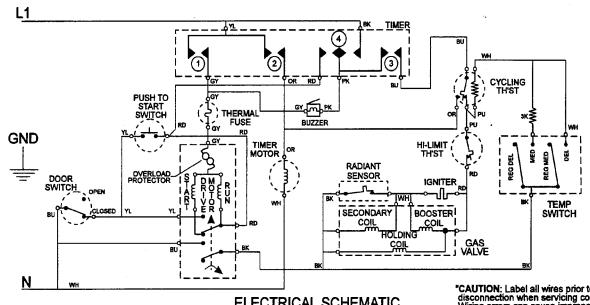


ELECTRICAL WIRING DIAGRAM

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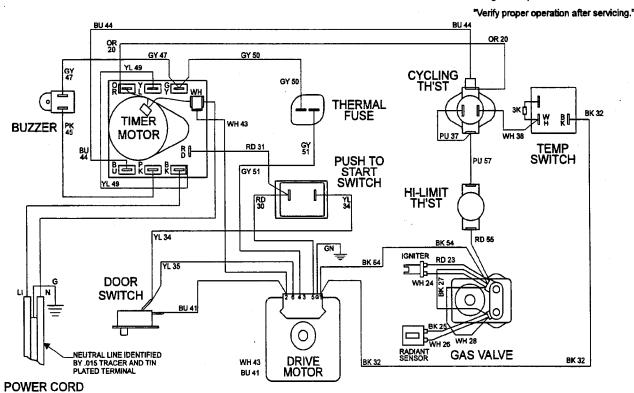


"ON" 5 SECONDS EVERY 5 MINUTES



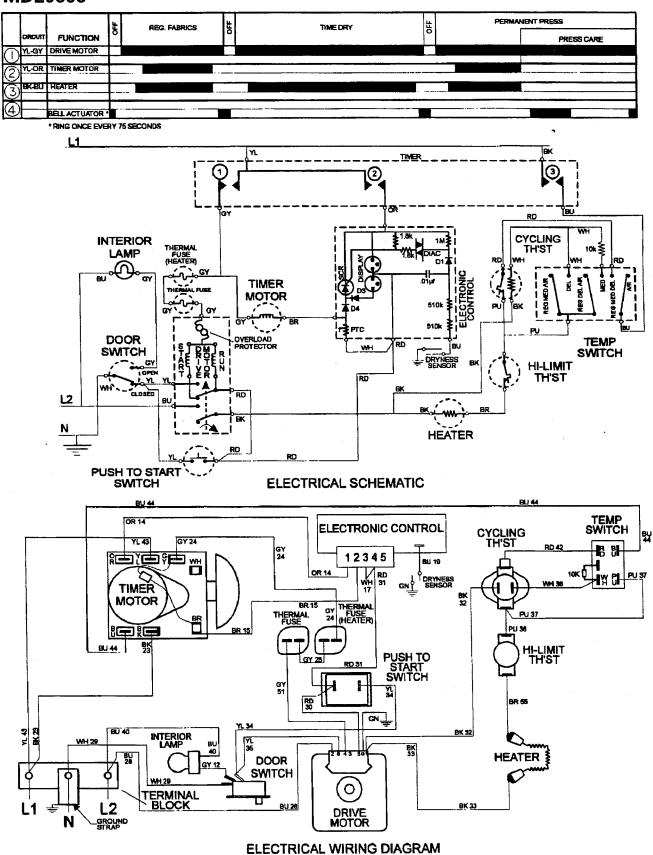
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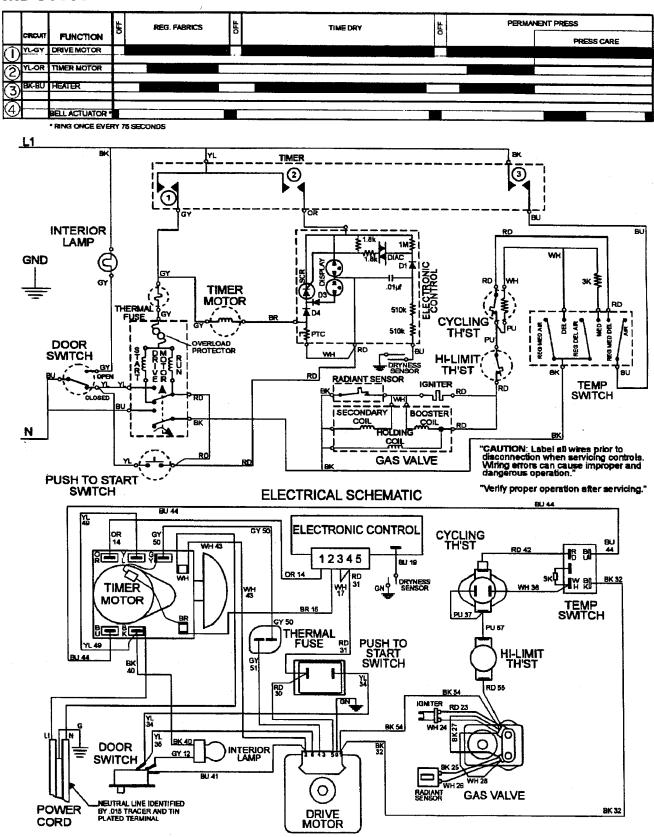


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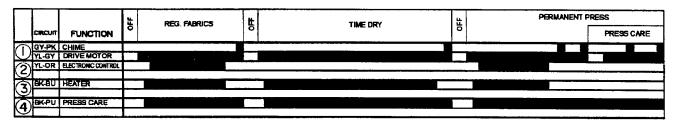
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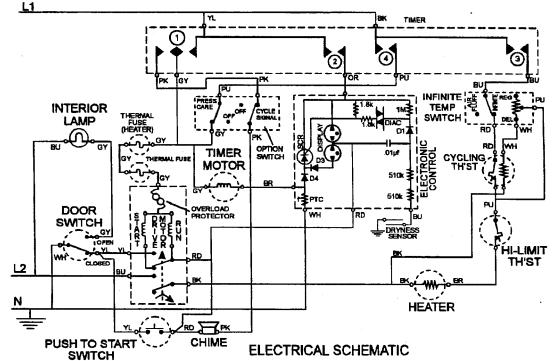


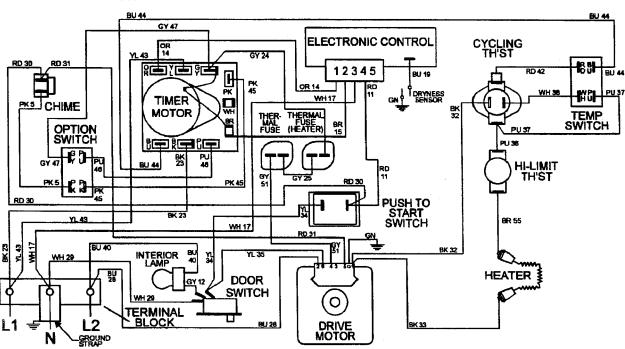
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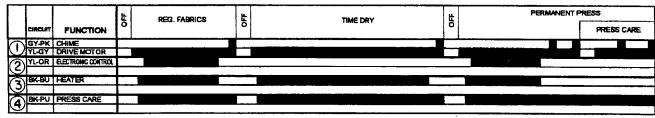


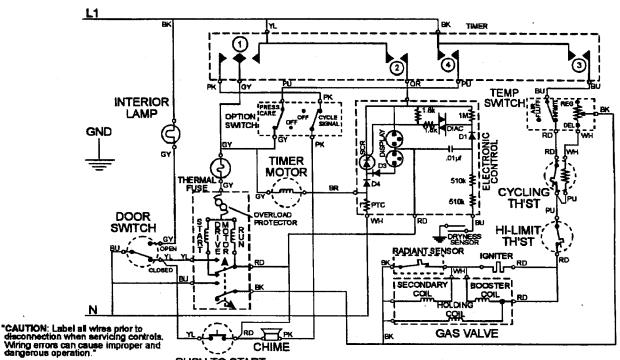


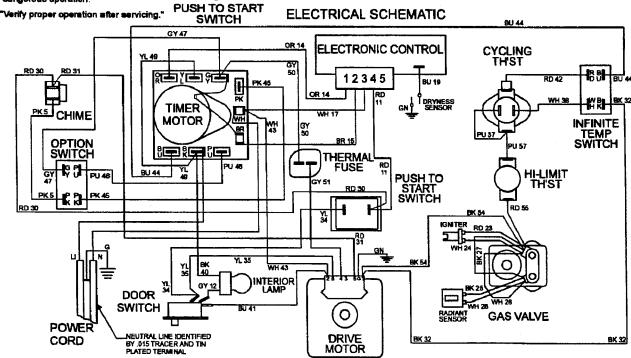


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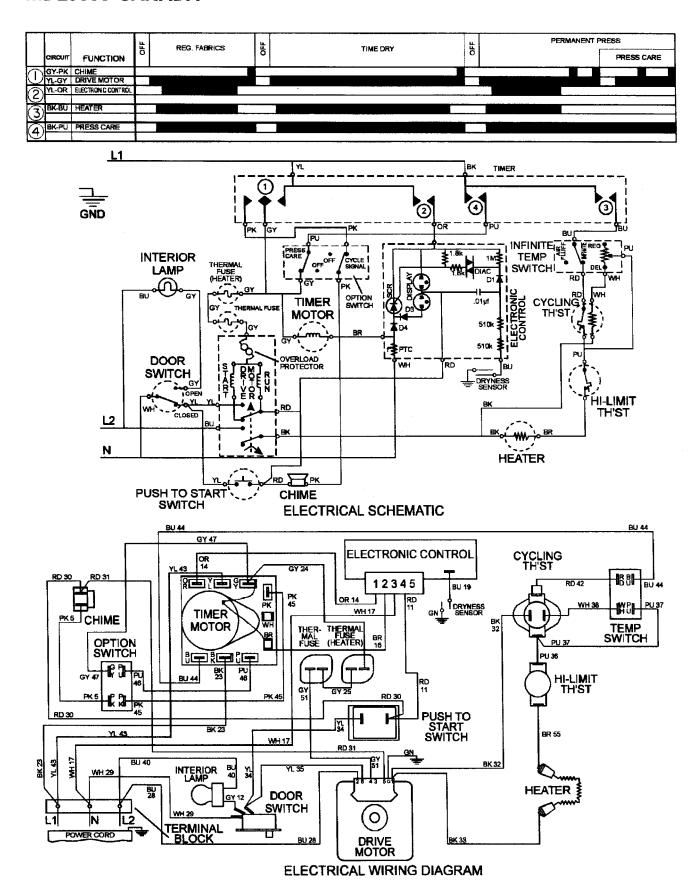




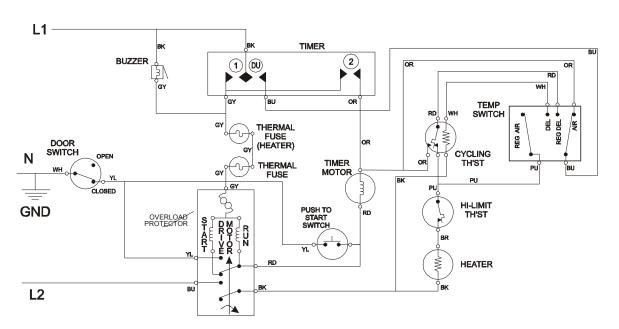


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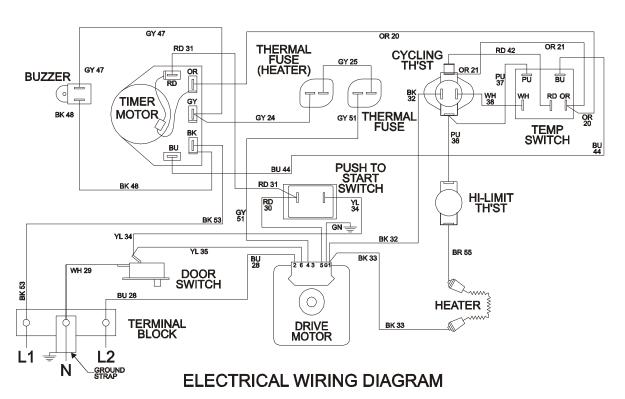
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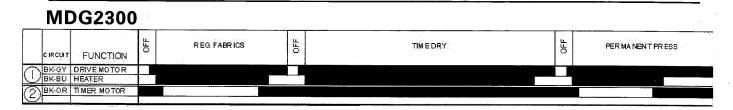


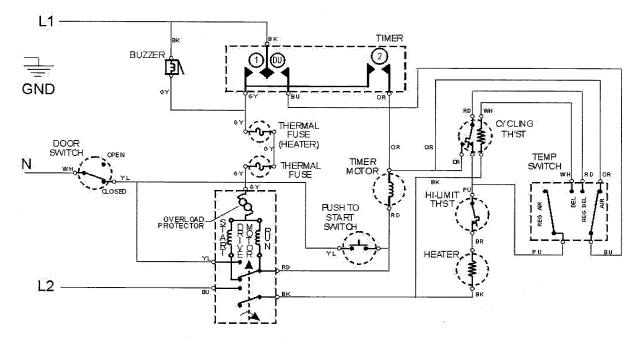


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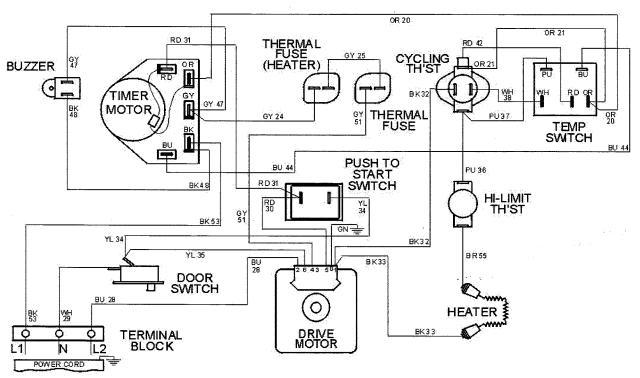


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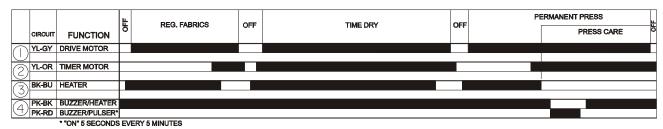


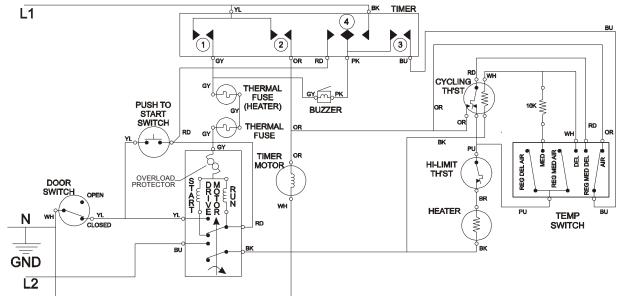
ELECTRICAL SCHEMATIC

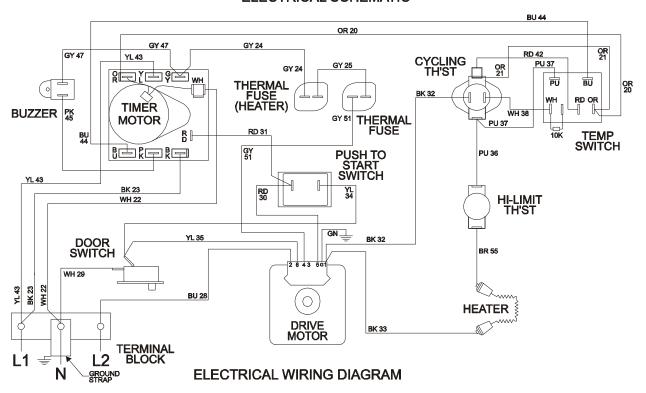


ELECTRICAL WIRING DIAGRAM

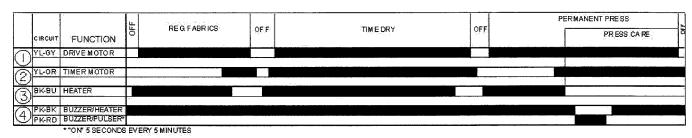
6 3704550-0497

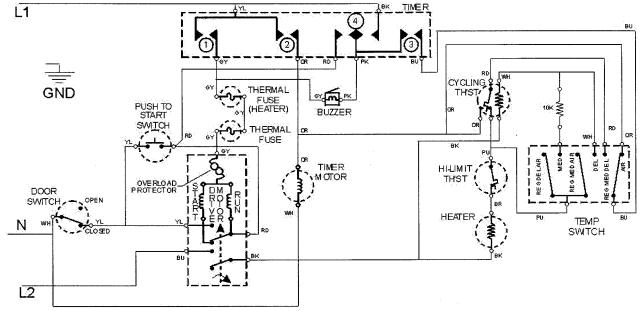




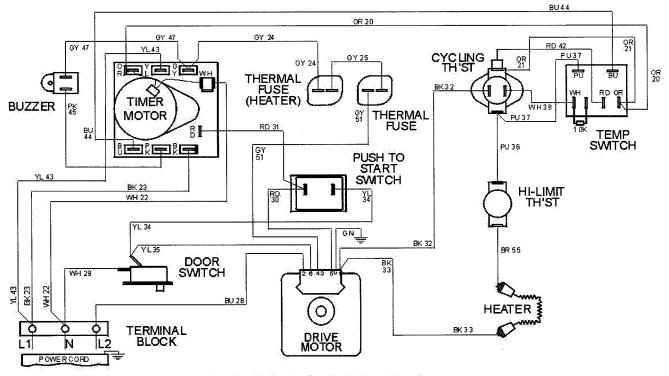


MDE2500 CANADA



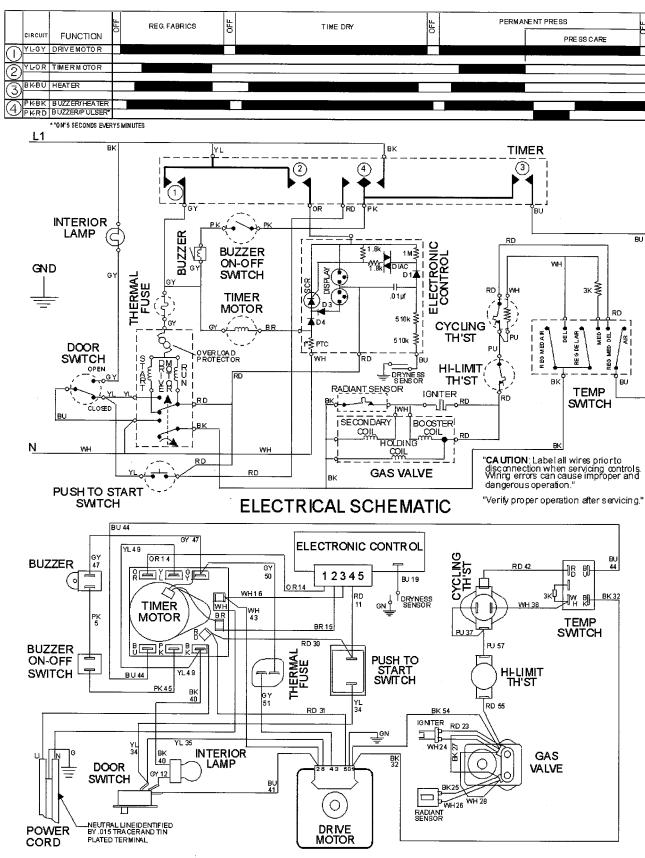


ELECTRICAL SCHEMATIC



ELECTRICAL WIRING DIAGRAM

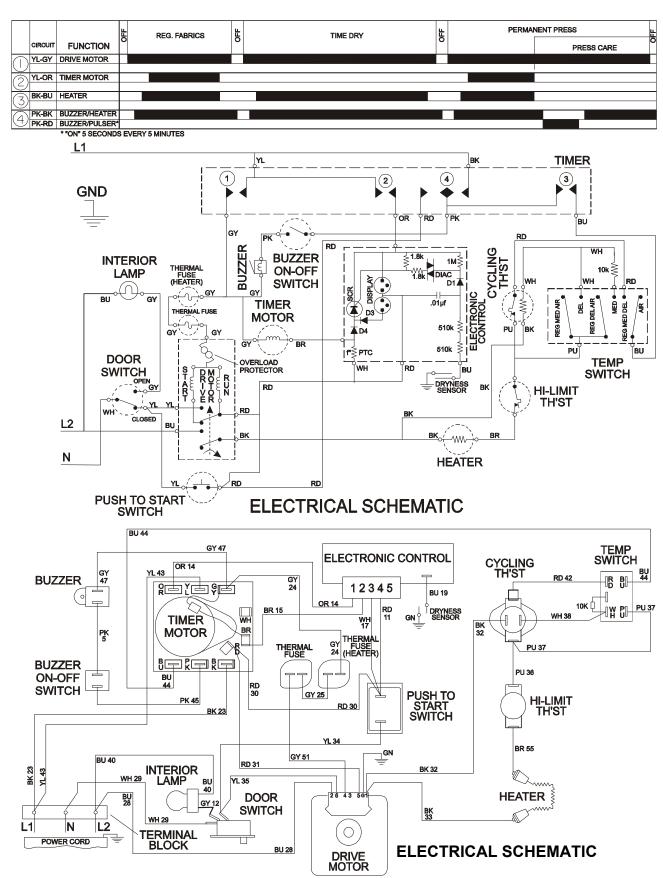
6 3401270

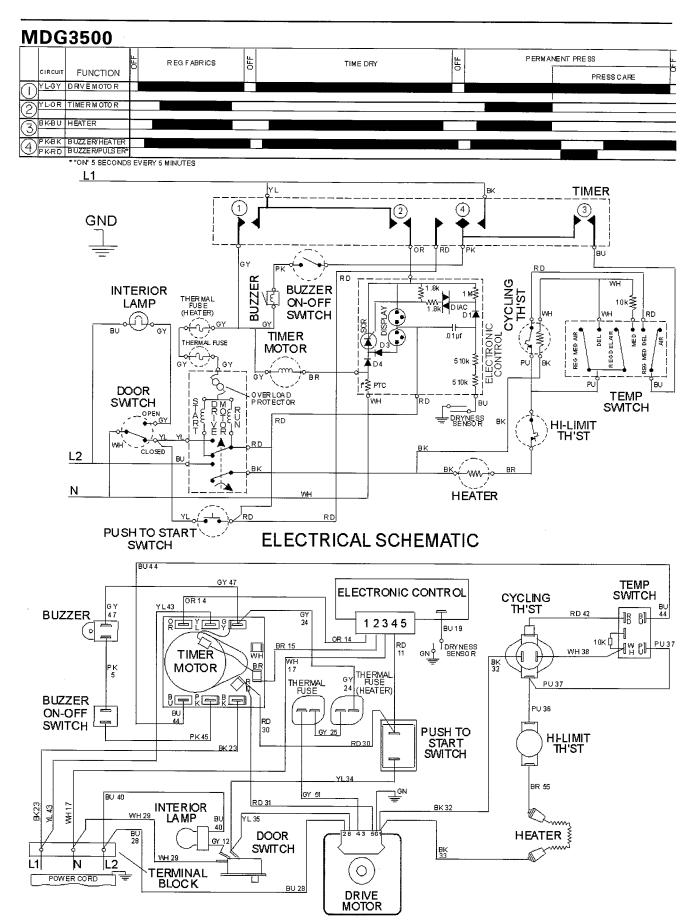


63710910-1098

ELECTRICAL WIRING DIAGRAM

MDE3500 CANADA



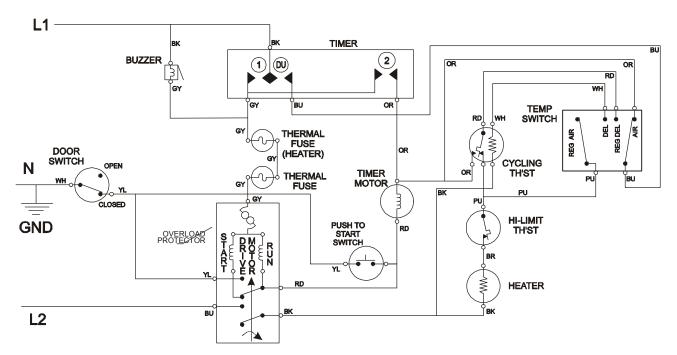


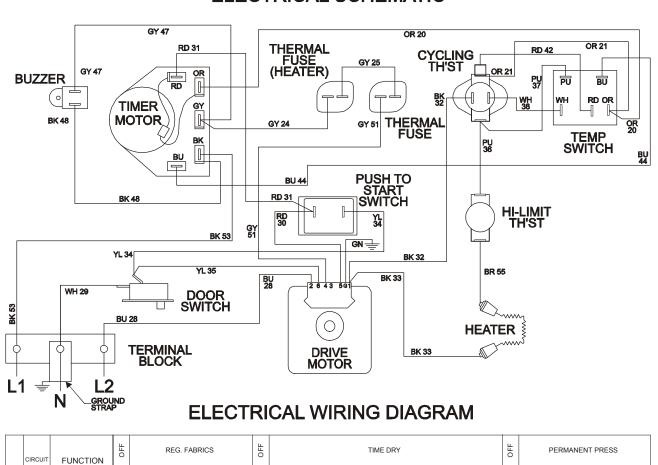
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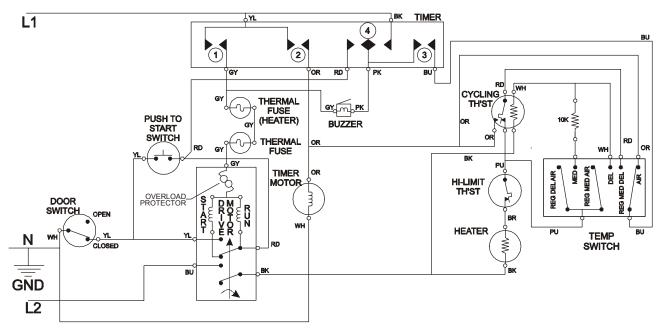
ELECTRICAL WIRING DIAGRAM

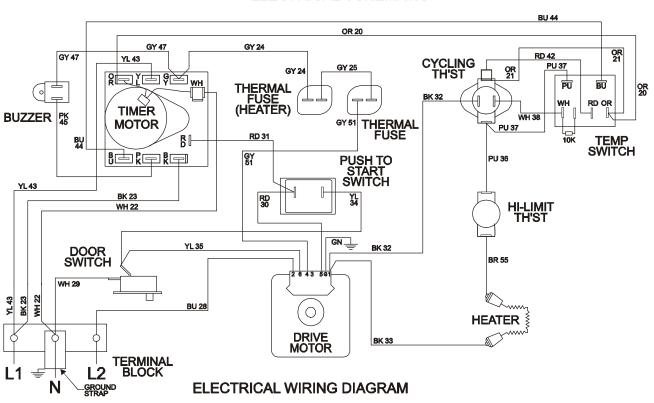
BK-GY DRIVE MOTOR
BK-BU HEATER

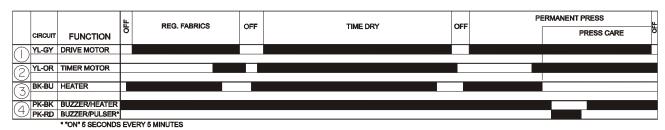
BK-OR TIMER MOTOR

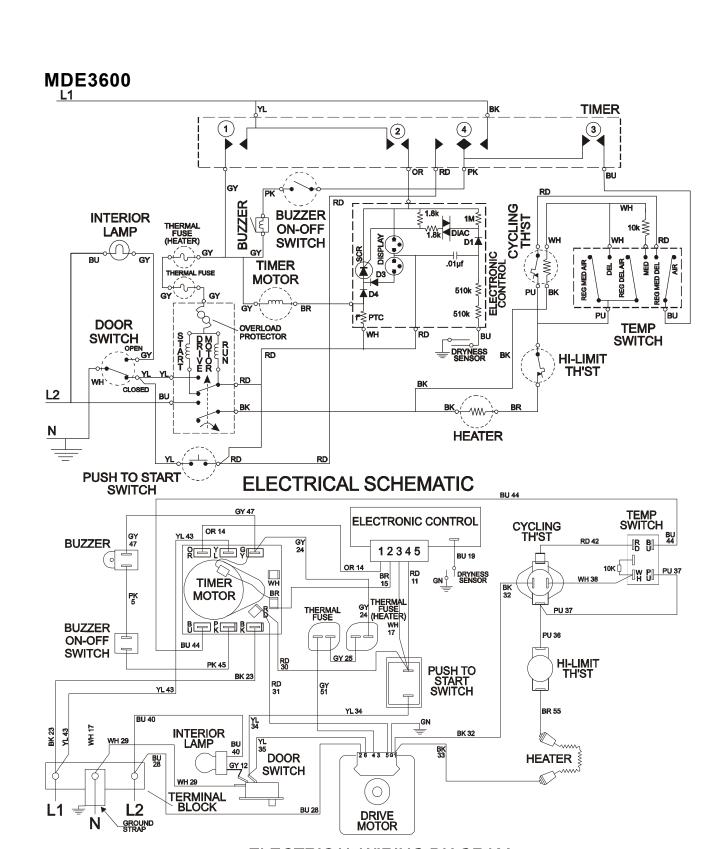


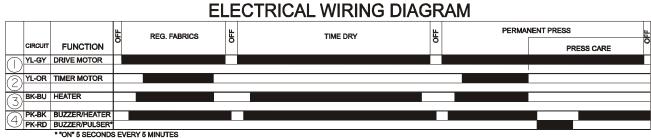




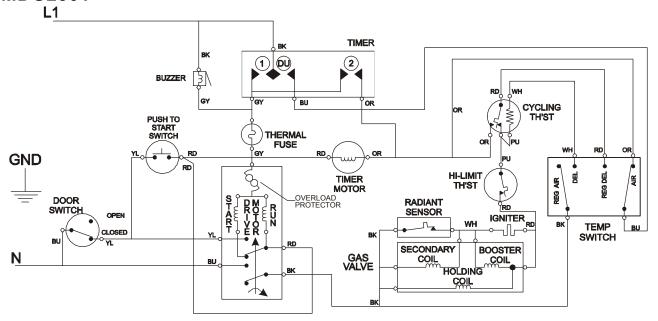




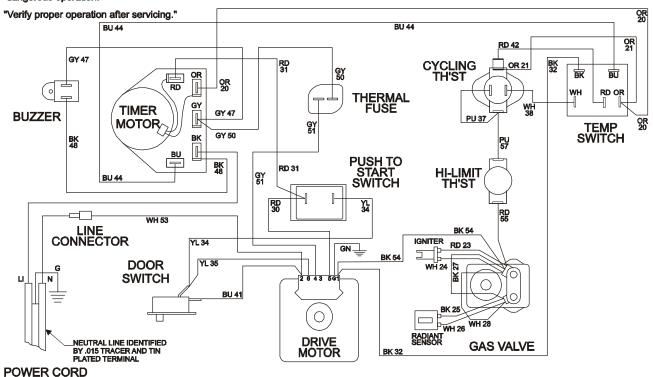




MDG2301



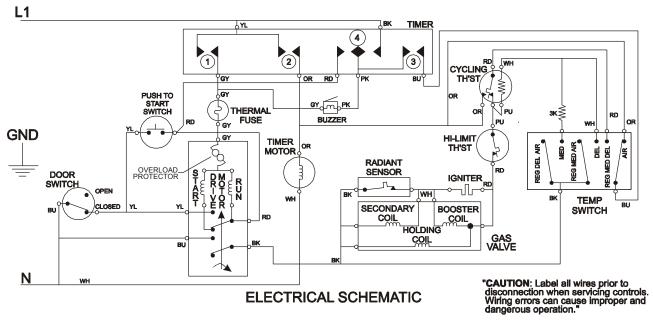
"CAUTION: Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation."



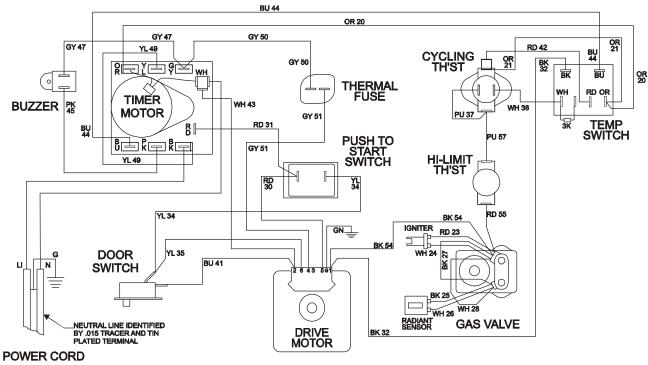
ELECTRICAL WIRING DIAGRAM



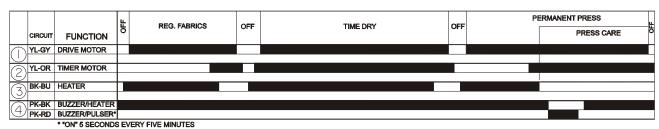
MDG2500/2600



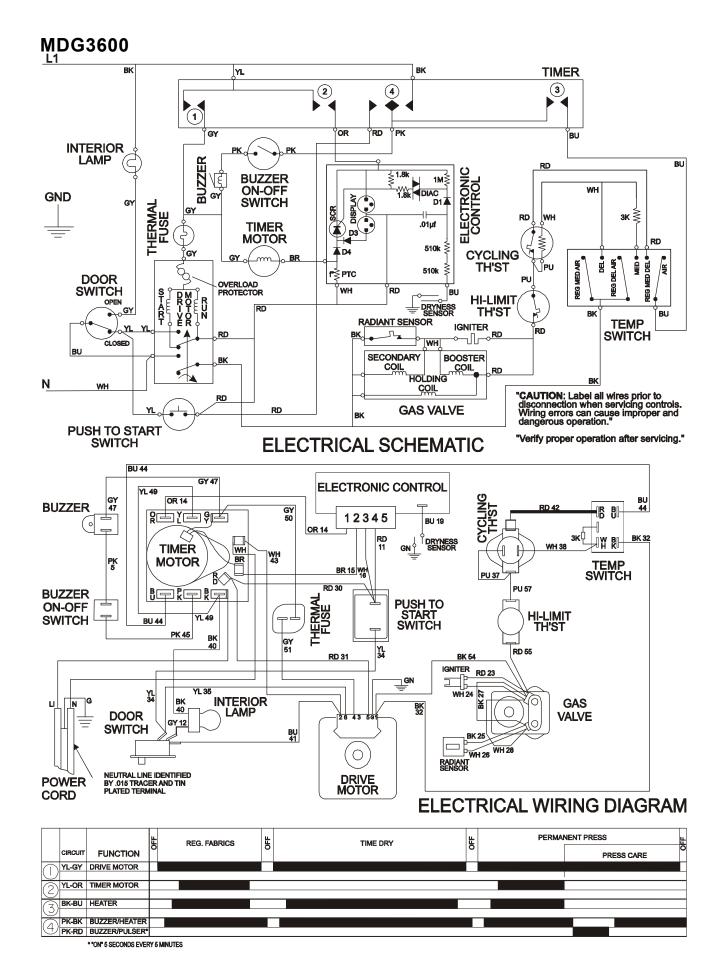
"Verify proper operation after servicing."



ELECTRICAL WIRING DIAGRAM



16023086



MAYTAG

Customer Service 240 Edwards St. Cleveland, TN 37311