

# AD-15 thru AD-75 Coin Service Manual

Microprocessor Controls (Phase 4.1)  
and  
Mechanical Coin Meter  
(for models mfd. between 1989 and 1991)

American Dryer Corporation  
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Telephone: (508) 678-9000 / Fax: (508) 678-9447

# Retain This Manual In A Safe Place For Future Reference

American Dryer Corporation products embody advanced concepts in engineering, design, and safety. If this product is properly maintained, it will provide many years of safe, efficient, and trouble-free operation.

*ONLY properly licensed technicians should service this equipment.*

**OBSERVE ALL SAFETY PRECAUTIONS** displayed on the equipment or specified in the installation/operator's manual included with the dryer.

**WARNING: UNDER NO CIRCUMSTANCES should the door switch or the heat circuit devices ever be disabled.**

**WARNING: The dryer must never be operated with any of the back guards, outer tops, or service panels removed. PERSONAL INJURY or FIRE COULD RESULT.**

We have tried to make this manual as complete as possible and hope you will find it useful. ADC reserves the right to make changes from time to time, without notice or obligation, in prices, specifications, colors, and material, and to change or discontinue models.

## Important

For your convenience, log the following information:

DATE OF PURCHASE \_\_\_\_\_ MODEL NO. \_\_\_\_\_

DISTRIBUTOR'S NAME \_\_\_\_\_

Serial Number(s) \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Replacement parts can be obtained from your distributor or the ADC factory. When ordering replacement parts from the factory, you can FAX your order to ADC at (508) 678-9447 or telephone your orders directly to the ADC Parts Department at (508) 678-9010. Please specify the dryer **model number** and **serial number** in addition to the **description** and **part number**, so that your order is processed accurately and promptly.

The illustrations on the following pages may not depict your particular dryer exactly. The illustrations are a composite of the various dryer models. Be sure to check the descriptions of the parts thoroughly before ordering.

**INSTRUCTIONS TO BE FOLLOWED IN THE EVENT THE USER SMELLS GAS MUST BE POSTED IN A PROMINENT LOCATION. THE INSTRUCTIONS TO BE POSTED SHALL BE OBTAINED FROM THE LOCAL GAS SUPPLIER.**

## **IMPORTANT**

**YOU MUST DISCONNECT and LOCKOUT THE ELECTRIC SUPPLY and THE GAS SUPPLY BEFORE ANY COVERS or GUARDS ARE REMOVED FROM THE MACHINE TO ALLOW ACCESS FOR CLEANING, ADJUSTING, INSTALLATION, or TESTING OF ANY EQUIPMENT per OSHA (Occupational Safety and Health Administration) STANDARDS.**

## **FOR YOUR SAFETY**

**DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPORS AND LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.**

**DO NOT DRY MOP HEADS IN THE DRYER.**

**DO NOT USE DRYER IN THE PRESENCE OF DRY CLEANING FUMES.**

## **WARNING**

**CHILDREN SHOULD NOT BE ALLOWED TO PLAY ON OR IN THE DRYER(S).**

**CHILDREN SHOULD BE SUPERVISED IF NEAR DRYER(S) IN OPERATION.**

## **CAUTION**

**DRYER(S) SHOULD NEVER BE LEFT UNATTENDED WHILE IN OPERATION.**

## **IMPORTANT**

**Please observe all safety precautions displayed on the equipment and/or specified in the installation/operators manual included with the dryer.**

**Dryer(s) must not be installed or stored in an area where it will be exposed to water and/or weather.**

**The wiring diagram for the dryer is located in the front electrical control box area.**

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The American Dryer embodies advanced concepts in engineering, design and safety. If this product is properly maintained it will provide many years of safe, efficient, and trouble-free operation. **American Dryer Corporation** is concerned about the future use of this high-quality dryer and the safety of the user. Read this manual to familiarize yourself with the proper installation, operation, and service of your dryer. Note that safety, mechanical, and some general information in this manual is emphasized.

| **CAUTION or WARNING:** Identifies safety information.

| **IMPORTANT:** Identifies special mechanical information.

| **NOTE:** Identifies general information worthy of special attention.

For a more detailed installation procedure and for necessary installation specifications refer to the Coin Installation Manual. For a detailed introduction to the computer control system refer to the Coin User's Manual.

### **Retain this manual in a safe place for future reference.**

Specifications and installation requirements are included in this manual as a guide to assist in performance complaint diagnosis. As on other dryer models the importance of proper installation cannot be overemphasized as it relates to adequate make-up air and minimum exhaust duct restrictions. Pay particular attention to gas supply pipe sizing, as many of the drying performance complaints can be directly linked to gas supply pressure drops when more than one dryer is operating on an undersized supply line.

We have tried to make this manual as complete as possible and hope you will find it useful. However, since the time of printing some of the information contained here may have been updated. ADC reserves the right to make changes from time to time, without notice or obligation, in prices and specifications and to change or discontinue models.

# SECTION I

## IMPORTANT INFORMATION

### A. SAFETY PRECAUTIONS

**WARNING:** For your safety, the information in this manual **must be followed to minimize the risk of fire or explosion or to prevent property damage, personal injury or lose of life.**

1. **DO NOT** store or use gasoline or other flammable vapors and liquids in the vicinity of this or any appliance.
2. Purchaser/ user should consult the local gas supplier for proper instructions to be followed in the event the user smells gas. The instructions **should be posted** in a prominent location.
3. Dryer(s) **must be exhausted** to the outdoors.
4. Although the American Dryer is a very versatile machine there are some articles that, due to fabric composition or cleaning method, **should not be dried** in it.

**WARNING:** Dry only water washed fabrics. **DO NOT** dry articles spotted or washed in dry cleaning solvents, a combustibile detergent or "all purpose cleaners." **FIRE OR EXPLOSION COULD RESULT.**

**WARNING:** **DO NOT** dry rags or articles coated with gasoline, kerosene, paint, wax, oil, or grease. **FIRE OR EXPLOSION COULD RESULT.**

**WARNING:** **DO NOT** dry mopheads. Contamination by wax or flammable solvents will create a fire hazard.

**WARNING:** **DO NOT** use heat for drying articles that contain plastic, foam or sponge rubber, or similarly textured rubber like materials. Drying in a heated tumbler may damage plastics or rubber and also may be a fire hazard.

5. A program **should be established** for the inspection and cleaning of the lint in the burner area and exhaust duct work. The frequency of inspection and cleaning can best be determined from experience at each location.

**WARNING:** The collection of lint in the burner/oven area and exhaust duct work can create a potential fire hazard.

6. For personal safety, the dryer must be electrically grounded in accordance with local codes and or the national electric code ANSI/NFPA NO. 70-LATEST EDITION.
7. Under no circumstances should the dryer door switch or heat circuit safety devices ever be disabled.

**WARNING: PERSONAL INJURY OR FIRE COULD RESULT.**

8. This dryer is not to be used in the presence of dry cleaning solvents or fumes.
9. Remove articles from the dryer as soon as the drying cycle has been completed.

**WARNING:** Articles left in the dryer after the drying and cooling cycles have been completed can create a fire harard.

10. **DO NOT** operate steam dryers with more than 125 PSI steam pressure. Excessive steam pressure can damage the steam coil and/or harm personal.
11. Replace leaking flexible steam hoses or other steam fixtures immediately. **DO NOT** operate the dryer with leaking flexible hoses. **PERSONAL INJURY MAY RESULT.**
12. **READ and FOLLOW ALL CAUTION and DIRECTION LABELS ATTACHED TO DRYER.**

## SECTION II

### MAINTENANCE

#### A. CLEANING

A program or schedule should be established for periodic inspection, cleaning and removal of lint from various areas of the dryer, as well as, throughout the duct work system. The frequency of cleaning can best be determined from experience at each location. Maximum operating efficiency is dependent upon proper air circulation. The accumulation of lint can restrict this air flow. If the guidelines in this section are met, an American Dryer will provide many years of efficient, trouble free, and most importantly, safe operation.

**WARNING:** Lint from most fabrics is highly combustible. The accumulation of lint can create a potential fire hazard.

*DAILY (beginning of each work shift)*

Clean lint from the lint screen. Inspect lint screen and replace if torn.

## 90 DAYS

Remove lint accumulation from lint chamber thermostats and sensors.

**WARNING:** To avoid the hazard of electrical shock, discontinue electrical supply to dryer.

Remove lint from the motor air vents and surrounding area.

**IMPORTANT:** Lint accumulation will restrict internal motor air flow, causing overheating and irreparable motor damage. Motor failure due to lint accumulation will VOID THE WARRANTY.

## 120 DAYS

### *GAS and ELECTRIC MODELS*

Remove lint from gas burner area with a dusting brush or vacuum cleaner attachment.

### *STEAM DRYERS*

On steam dryers clean coil. Proper cleaning of the steam coils is necessary to prevent lint build-up between the fins. When cleaning the coil, be extremely careful not to bend the aluminum fins, which will also reduce airflow. If the fins are bent, straighten them by using a comb. Fin combs are available from local air conditioning supply houses. Regular cleaning will prevent lint build-up and blockage of the coil.

## 6 MONTHS

Inspect and remove lint accumulation in the customer-furnished exhaust duct work system. Inspect exhaust draft dampers to insure they are not binding. Inspect and remove **ALL** lint accumulation from in and around control box area including coin acceptors. Clean lint accumulation from around tumbler wrapper area.

### *AS REQUIRED*

In the cleaning and care of the cabinet, avoid using harsh abrasives. A product intended for the cleaning of appliances is recommended.

## B. ADJUSTMENTS

### 6 MONTHS

Motor and drive belts should be examined. Cracked or seriously frayed belts should be replaced. Tighten loose belts when necessary, and check belt alignment.

| **NOTE:** V-Belts should be replaced in matched pairs.

**6 MONTHS**

Complete operational check of controls and valves.

Complete operational check of **ALL** safety devices (door switches, sail switch, burner and lint chamber thermostats.)

**12 MONTHS**

Inspect bolts, nuts, screws, non permanent gas connections, (unions orifices, etc.) electrical terminals, and grounding connections.

**C. LUBRICATION**

The motor bearings, idler bearings and tumbler bearings are permanently lubricated. **NO LUBRICATION IS NECESSARY.**

**SECTION III**  
**INSTALLATION REQUIREMENTS**

Installation should be performed by competent technicians in accordance with local and state codes. In the absence of these codes, installation must conform to applicable American & National Standards.

ANSI Z223.1 (LATEST EDITION) NATIONAL FUEL GAS CODE  
or  
ANSI/NFPA NO. 70 (LATEST EDITION) NATIONAL ELECTRIC CODES

**A. ENCLOSURE, AIR SUPPLY, and EXHAUST REQUIREMENTS**

| **NOTE:** The following information is very brief and general. For a detailed description refer to the Installation Booklet for Coin Machines.

Bulkheads and partitions around the dryer should be made of non-combustible materials. Allowances should be made for the opening and closing of the control door and lint door. Also, allowances should be made in the rear for ease of maintenance. (Refer to Installation Manual for recommended distances and minimum allowances required.)

When the dryer is operating, it draws in room air, heats it, passes this air through the tumbler, and exhausts it out the building. Therefore, the room air **must** be continually replenished from the outdoors. If the make up air is inadequate, drying time and drying efficiency will be adversely affected. Ignition problems and sail switch "fluttering" problems on gas dryers may result, and you also could have premature motor failure from overheating. On electric dryers, premature electric element failure may result. Air supply **must** be given careful consideration to insure proper performance of each dryer.

**IMPORTANT:** Make up air **must** be provided from a source free of dry cleaning fumes. Make up air that is contaminated by dry cleaning fumes will result in irreparable damage to motors and other dryer components.

Exhaust duct work **should** be designed and installed by a competent technician. Improperly sized duct work will create excessive back pressure, which will result in slow drying, increased use of energy, and shut down of the burner by the air flow (sail) switch. (Refer to Installation Manual for more detail.)

**CAUTION: IMPROPERLY SIZED, INSTALLED, or MAINTAINED (cleaned) EXHAUST DUCT WORK CAN CREATE A POTENTIAL FIRE HAZARD.**

## B. ELECTRICAL and GAS REQUIREMENTS

It is your responsibility to have **ALL** electrical connections made by a properly licensed and competent electrician to assure that the electrical installation is adequate and conforms with local and state regulations or codes. In the absence of such codes, **ALL** electrical connections, material, and workmanship **must conform** to the applicable requirements of the National Electric Code ANSI/NFPA NO. 79-LATEST EDITION.

**IMPORTANT:** Failure to comply with these codes or ordinances, and or the requirements stipulated in this manual, can result in personal injury or component failure.

The gas dryer installation **must meet** the American National Standard, National Fuel Gas Code ANSI Z223.1 (latest edition), as well as, local codes and ordinances and must be done by a qualified technician.

**NOTE:** Undersized gas piping will result in ignition problems and slow drying and can create a safety hazard.

The dryer **must be** connected to the type of gas (natural or L.P.) indicated on the dryer data label. If this information does not agree with the type of gas available, contact the distributor who sold the dryer or contact the factory.

The gas input ratings shown on the dryer data label are for elevations up to 2,000 feet, unless elevation requirements of over 2,000 feet were specified at the time the dryer order was placed with the factory. The adjustment for dryers in the field for elevations over 2,000 feet are made by changing the burner orifices. If this adjustment is necessary, contact the distributor who sold the dryer or contact the factory.

| **NOTE:** Any burner changes **must be** made by a qualified technician.

### C. OPERATIONAL SERVICE CHECK PROCEDURE

After performing any service or maintenance function, an operational check **should be** performed to insure that **ALL** components are performing properly.

1. Make a complete operational check of **ALL** the operating controls to assure that the timing is correct, temperature selection switches are functioning, etc.
2. Make a complete operational check of **ALL** safety related circuits, door switch (s), hi-limit thermostat, sail switch, cycling thermostats, etc.
3. On gas models, gas pressure test **should be** taken at the gas valve pressure tap of each dryer to assure that the water column pressure is correct and consistant.

| **NOTE:** Water column pressure requirements: (measured at the pressure tap on the gas valve body.)

Natural Gas --- 3.5 to 4 inches W.C.

L.P. Gas --- --- 10.5 to 11 inches W.C.

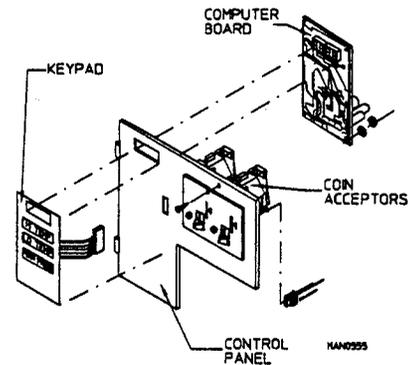
4. The dryer **should be** operated through one complete cycle to assure that no future adjustments are necessary and that **ALL** components are functioning properly.
5. For 3-phase (3Ø) motor models; check the electric service phase sequence while the dryer is operating. Check to see if the blower wheel(impellor/ fan) is rotating in the proper direction. Looking from the front of the dryer, the blower wheel (impellor/ fan) should spin in the clockwise (CW) direction. If so, the phasing is correct. If the phasing is incorrect, reverse two (2) leads at connections L1, L2, or L3 of power supply to the dryer.

# SECTION IV

## DESCRIPTION OF PARTS

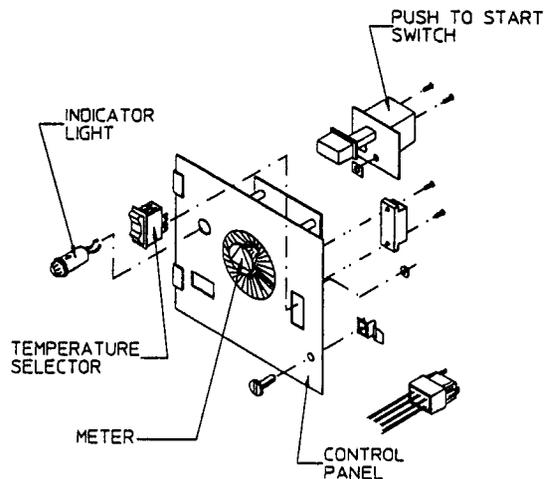
### A. Control Panel (Microprocessor)

Lifting the control door will reveal the control panel assembly. Opening the control panel will allow access to the major components which include the coin acceptors, computer board, and keypad. The coin acceptor sends the signal to the computer that a coin has been inserted. The keypad inputs to the computer what temperature has been selected. The computer controls the entire operation of the machine. It accepts inputs and gives outputs to various parts throughout the machine. The illustration to the right is a dual coin control panel. Some models are shipped as single coin models, however, the basic operation remains the same.



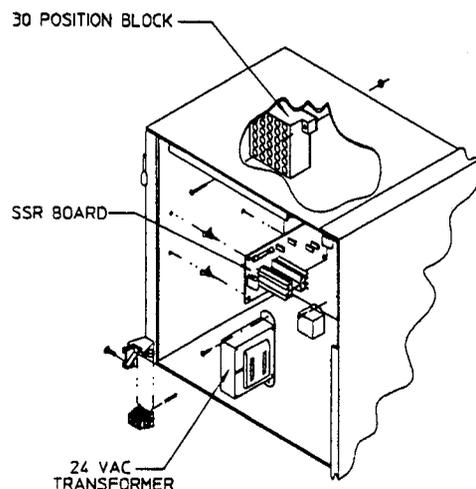
### B. Control Panel (Non-Microprocessor)

On models without microprocessors, a rotary meter is used to accept the coins. A rotary meter acknowledges that a coin has been inserted when the knob has been turned. This meter is also a timer that will shut off the dryer at a specific time. The time is determined by a cam located in the meter. The temperature selector switch selects the "HI," "PERM PRESS", or "LO TEMP." The "Push To Start" relay activates the machine which starts the drying cycle.



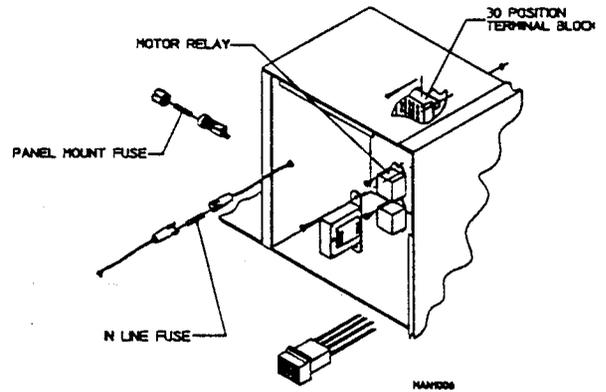
### C. Control Box (Computer Controls)

The computer control box is made up of a relay board, 24 VAC transformer (gas models), and a 30-position terminal block. The relay board accepts the signal from the computer board and then transfers the voltage down to the motor. The 24 VAC transformer is used to break down the incoming voltage to 24 VAC for the Direct Spark Ignition (DSI) system. The 30-position terminal block is used to combine the various common wires throughout the machine for simplicity and ease of service.



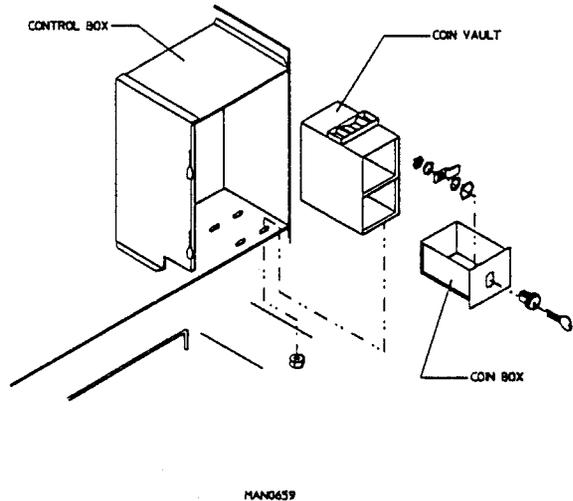
## D. Control Box (Non-Computer Control)

The non-computer control box is made up of a motor control relay, a 30 position terminal block, fuses, and possibly a 24vac transformer, depending which model, the transformer may be mounted in a different place. The motor relay transfers the voltage from the meter down to the motor, the fuses are to protect certain circuits through-out the machine. The 30 position terminal block is used to combine the various common wires throughout the machine for simplicity and ease of service.



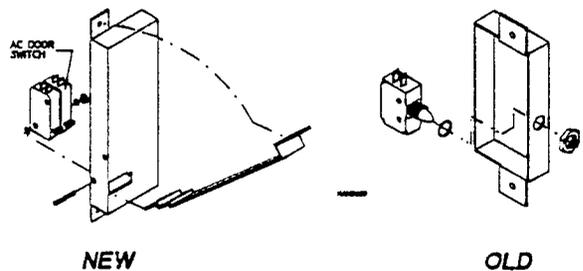
## E. Coin Box and Vault

The coin box and vault are located in the control box. When a coin passes the coin sensor, it drops into the coin vault. Lifting the control doors reveals the coin box. To remove the coin box turn the key and pull.



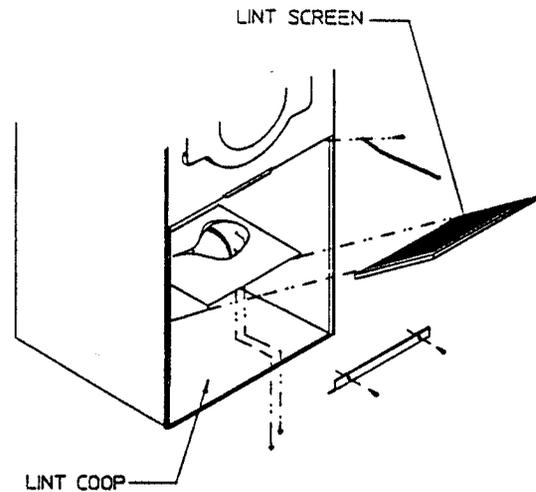
## F. Main Door Switch

There are two types of door switches, an old style and a new style (see illustration). Both operate in basically the same way (both switches are normally open). The main door switch is located behind the main door on the right hand side. When the main door is opened, the switch will also open preventing the dryer from operating. The main door switch is a safety device and should never be disabled. On the new style door switch, microprocessor models have two (2) switches and non-microprocessor models have one (1) switch.



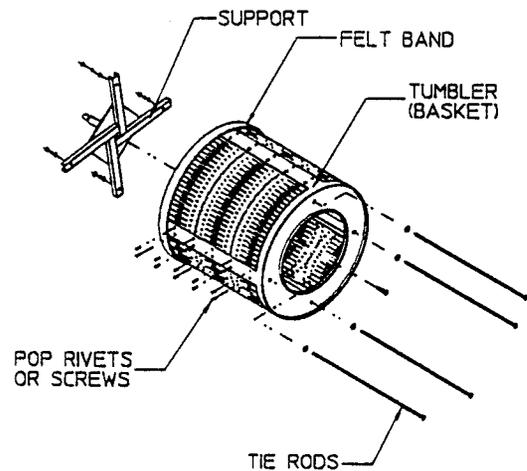
## G. Lint Coop

The lint coop is the bottom portion of the dryer behind the lint door. Inside the lint coop is the lint screen which prevents lint from entering the exhaust system. The lint screen should be kept clean at all times. On AD-15 and AD-25 models there are two (2) lint screens. The lint screens should be cleaned on a daily basis. Lint screens with tears or holes should be replaced immediately.



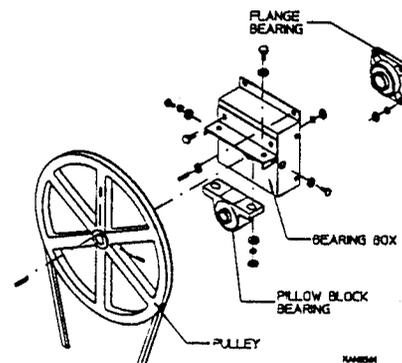
## H. Tumbler

The tumbler consists of three or four ribs and a perforated basket along with a front and back which are riveted or screwed together as an assembly. The tumbler also consists of tie rods which support the tumbler from front to back. The tumbler support is used to mate the tumbler to the drive system in the rear. Some models also have a felt band which helps to keep lint from accumulating behind the basket.



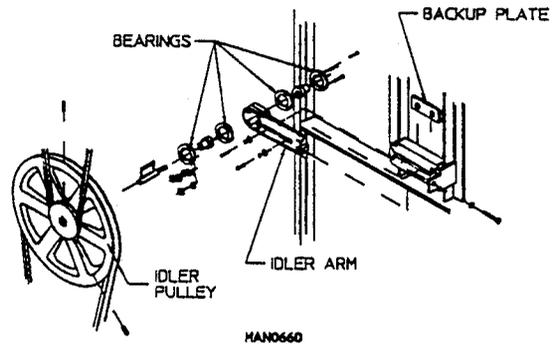
## I. Tumbler bearing and Pulley Arrangement

The tumbler bearing and the pulley arrangement is located (viewing from the rear of the dryer) approximately at the upper center of the dryer. The arrangement consists of a pulley, bearing box, and bearing which serve to adjust, drive, and support the tumbler. The AD-15 and AD-25 have a different bearing than illustrated but serve the same purpose. The Bearing box has various nuts and bolts that are made to adjust the basket vertical and horizontally.



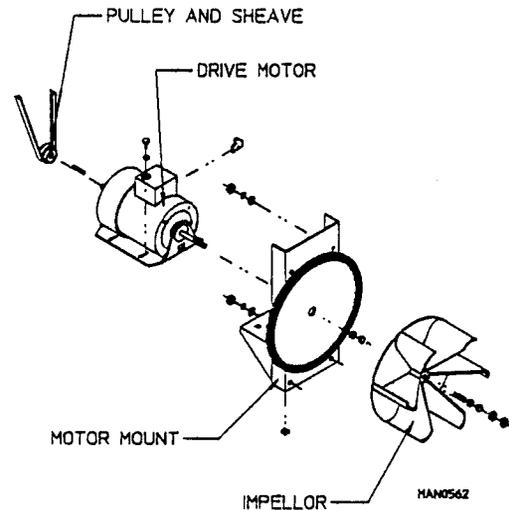
## I. Idler Bearing

(Viewing from the rear of the dryer) The idler assembly is located approximately on the lower left hand side of the dryer. The idler assembly consists of one (1) compound pulley. The idler's main purpose is to reduce the speed and increase torque provided to the tumbler bearing. Also, the idler assembly belt tension can be adjusted. AD-15 thru AD-30 requires a 9" x 2 1/2" pulley. AD-50 thru AD-75 requires a 14" x 3" pulley.



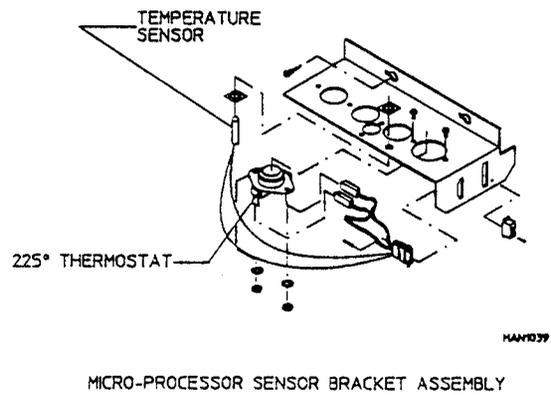
## K. Drive Motor and Blower Motor

The drive motor is located on the back, approximately lower center of the dryer. It sits on an adjustable base so that the motor can be easily adjusted to the left or right, up or down. The blower end of the motor is connected to the impellor, a backward curved paddlewheel. The impellor provides air flow in the dryer. It creates a vacuum which pulls the hot air from the burner into the basket through the lintscreen and out the exhaust.



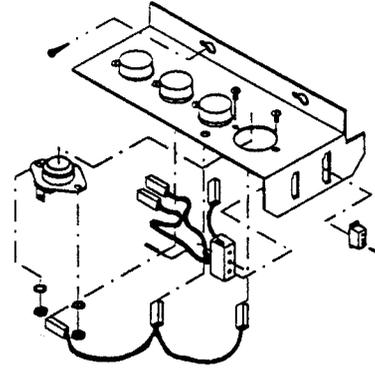
## L. Temperature Sensors (Computer Controls)

The temperature sensor used is a transducer that converts heat into microamps that the computer board then uses to calculate the temperature.



## M. Temperature Sensors (Non-Computer)

The non-computer machines uses thermostats located on the bracket under the basket. These thermostats shut the heat off at their rated temperature.

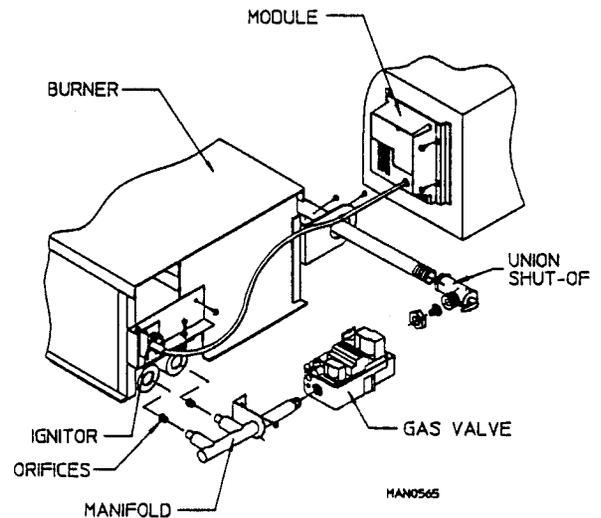


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NON-COMPUTER SENSOR BRACKET ASSEMBLY

## N. Gas Burner

Gas heated dryers are equipped with a gas burner located behind the control door. The gas burner assembly consists of the burner tubes, orifices (the orifices have a hole in them to allow gas to flow through. The hole size varies with different elevations, and different BTU's), gas valve (which can be set up for natural gas or L.P.), spark ignitor, probe assembly, sail switch, and hi-limit thermostat. Gas burners will vary from model to model in size, shape and relative location. Some models are equipped with heat reclaimer systems in which some of the exhaust air is recovered and introduced back into the drying process.

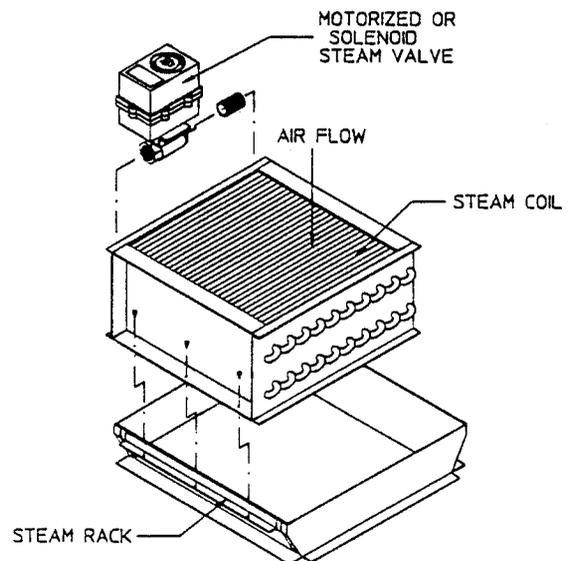


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## O. Steam Coil

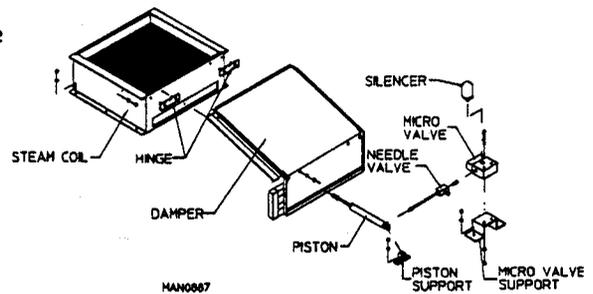
Steam heated dryers are equipped with a steam coil located behind the control door. The steam coil assembly consists of a steam coil, steam rack, and steam valve. The steam valve allows steam to flow through the coils which in turn heats the air flowing into the tumbler.

We have used two (2) kinds of steam valves, the motorized valve and the solenoid valve.



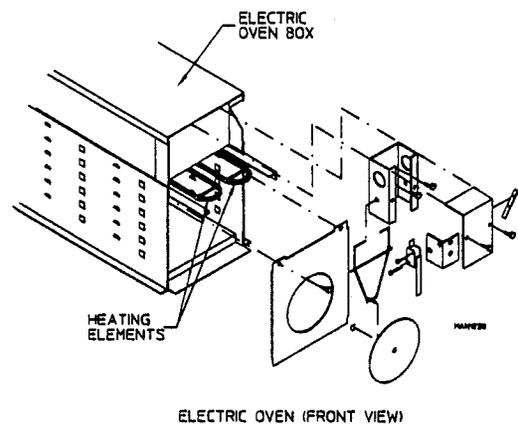
## P. Steam Damper System

The newest type system is called the air operated steam damper system. It uses compressed air to open and close the steam damper. This system requires a clean, dry, regulated 80 PSI (+/-10 PSI) air supply.



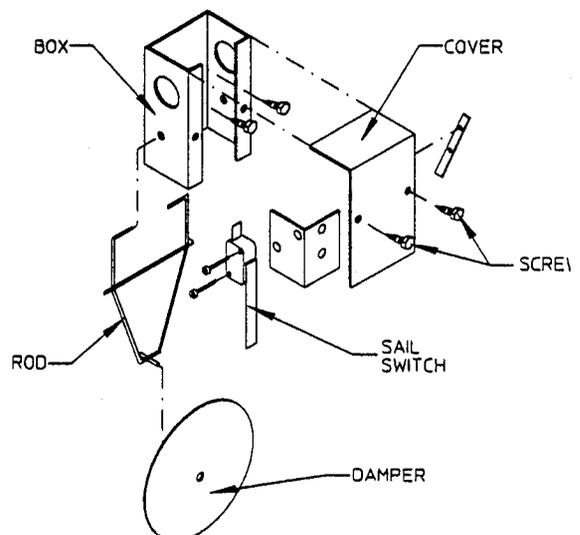
## Q. Electric Oven

Electric dryers are equipped with an electric oven located behind the control door. The electric oven assembly consists of the electric oven box, contactor, and heating elements. In an electric oven the elements heat the passing air flow entering the tumbler. All ovens have Kw ratings. This is the rating of how much heat the oven can produce. The higher the rating the more heat.



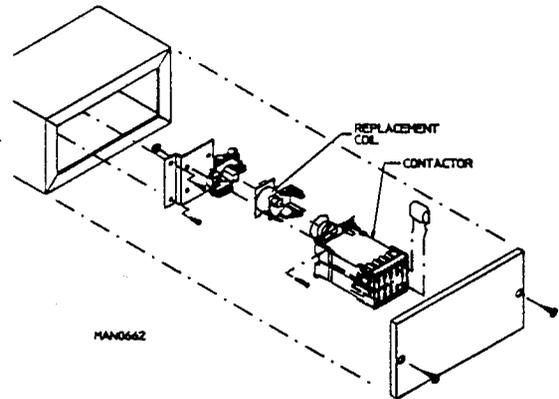
## R. Sail Switch (Electric and Gas Models)

The sail switch consists of a round damper plate on a lever arm which is a contact with an electric switch. When the air blower comes on, it draws air through the burner. This creates a negative pressure inside the burner box, and this negative pressure pulls in the round damper which activates the sail switch. If there is improper air flow, the damper will not pull in, preventing the burner from coming on. Improper air flow can be caused by improperly designed exhaust ducting, where the duct run is too long or has too many sharp bends on it. It can also be caused by a lack of make up air. Sail switch is located in front of the oven on electric machines and in the back of the burner on gas models.



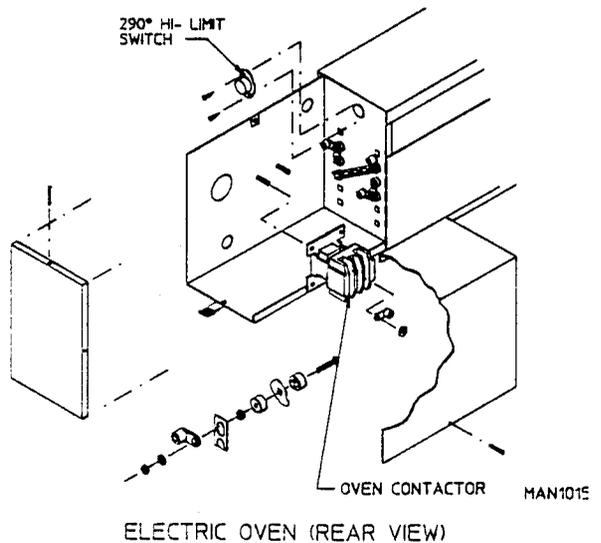
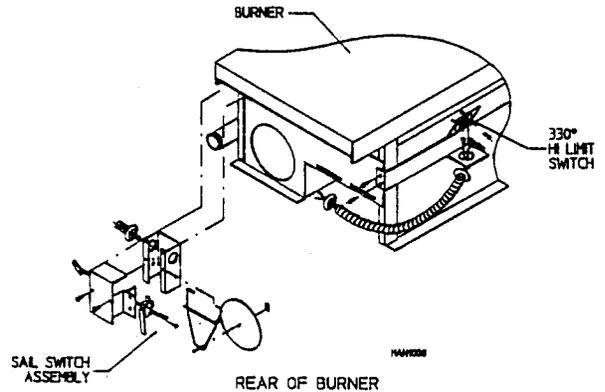
## S. Non-Reversing Contactor ( 3Ø Motor)

The non-reversing contactor is used on 3 phase non-reversing dryers and is located on the upper left hand side of the dryer (view from the rear). It is through the contactor that the voltage input are fed.



## T. Hi-Limit Thermostat

The hi-limit thermostat is another safety device that we use on gas and electric models. The hi-limit is located in the burner or oven area. The hi-limit switch cuts off the heat if the temperature exceeds 290° for electric models or 330° for gas models.



# SECTION V

## SERVICING

**IMPORTANT:** YOU MUST DISCONNECT and LOCKOUT THE ELECTRIC SUPPLY and THE GAS SUPPLY BEFORE ANY COVERS or GUARDS ARE REMOVED FROM THE MACHINE TO ALLOW ACCESS FOR CLEANING, ADJUSTING, INSTALLATION, or TESTING OF ANY EQUIPMENT per OSHA (Occupational Safety and Health Administration) STANDARDS.

**WARNING:** Personal injury could result.

The information provided in this section should not be misconstrued as a device for use by untrained persons making repairs. Service work should be performed by competent technicians on accordance with local state and federal codes. When contacting the factory for assistance, always have the dryer model and serial numbers available.

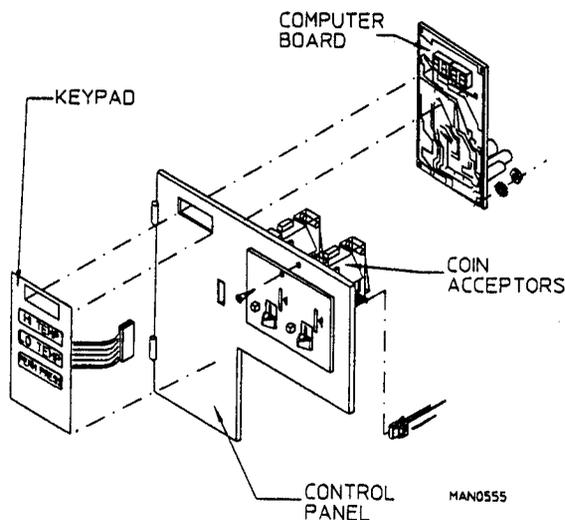
**CAUTION:** Observe all safety precautions displayed on the dryer or specified in this manual before and while making repairs.

Before considering replacement make sure that all connectors are in place and making proper contact. Check input voltages and temperature sensor. After replacing any parts or performing adjustments or service run through a complete cycle

### A. CONTROLS (COMPUTER)

#### TO REPLACE CONTROL PANEL ASSEMBLY

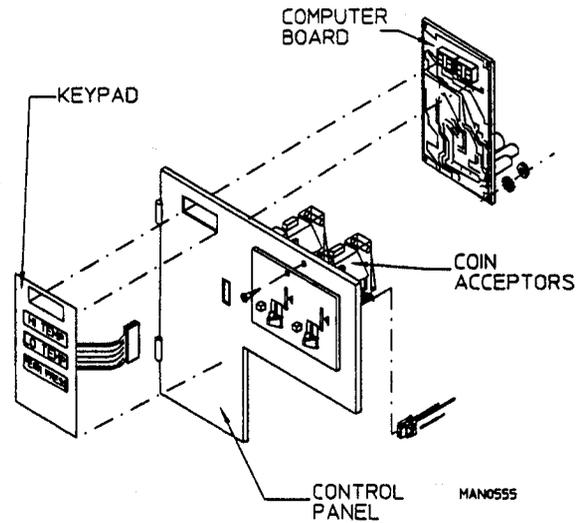
1. Disconnect power to the dryer.
2. Disconnect main power harness from rear of computer by squeezing locking tabs and pulling connector straight back.
3. Disconnect the green ground wire from the computer
4. Disconnect the two (2) wires from the hi and ho terminals of the computer.
5. To remove control panel assembly from the control box, gently tap the bottom of the control panel upward and lift off the hinges.
6. Install new control panel assembly by reversing the procedure.
7. Be sure to check or reset programs.



**NOTE:** Use caution when handling the Microprocessor Controller (computer). It is easily damaged by static electricity.

### TO REPLACE COMPUTER

1. Discontinue power to dryer.
2. Disconnect main power harness from the rear of the computer by squeezing locking tabs and pulling connector straight back.
3. Disconnect the green ground wire from the computer.
4. Disconnect the two (2) wires from the hi and ho terminals of the computer.
5. Disconnect the keyboard ribbon from the computer.
6. Remove the four (4) hex nuts securing the computer to the control panel and remove computer from panel.
7. Install new computer by reversing this procedure.
8. Be sure to check or reset programs.



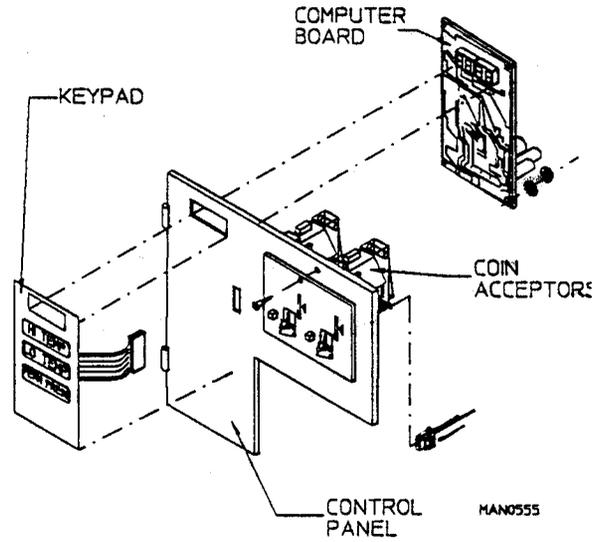
**NOTE:** Use caution when handling Microprocessor Controller (computer). It is easily damaged by static electricity.

### TO REPLACE KEYPAD

1. Discontinue power to dryer.
2. Swing control panel open and unplug keypad ribbon from computer board.
3. Peel the keypad from the front of the control panel taking care to avoid scratching the panel.
4. Clean any adhesive residue from the panel.
5. Align the display window on the keypad with the cutout in the control panel and press in place.
6. Connect keypad ribbon to the board and reconnect power to the dryer.
7. Test for operation by pressing each temperature selection.

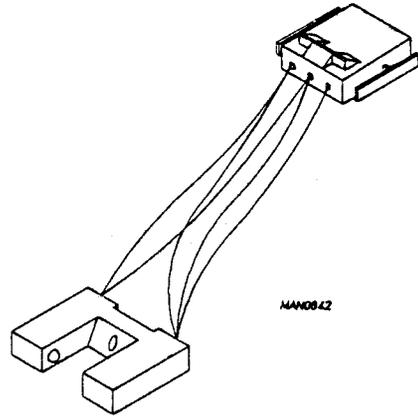
### TO REPLACE COIN ACCEPTOR

1. Discontinue power to dryer.
2. Swing control panel open.
3. Unplug optic switch harness connector.
4. Remove one (1) screw holding coin acceptor in place.
5. Pull coin acceptor out gently.
6. Reverse procedure for installing new acceptor.



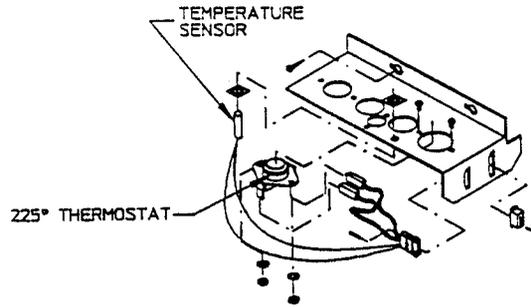
### TO REMOVE OPTIC SWITCH

1. Unplug optic switch connector.
2. Remove screw and washer holding optic switch to the coin acceptor and pull optic switch away.
3. Reverse procedure for installing new optic switch.



## TO REPLACE COMPUTER TEMPERATURE SENSOR PROBE

1. Discontinue power to dryer.
2. Remove M.P. sensor bracket assembly from the dryer.
  - A. Disconnect sensor bracket harness connector.
  - B. Loosen the two (2) phillips head screws securing the bracket assembly to the dryer and remove the bracket from the dryer.



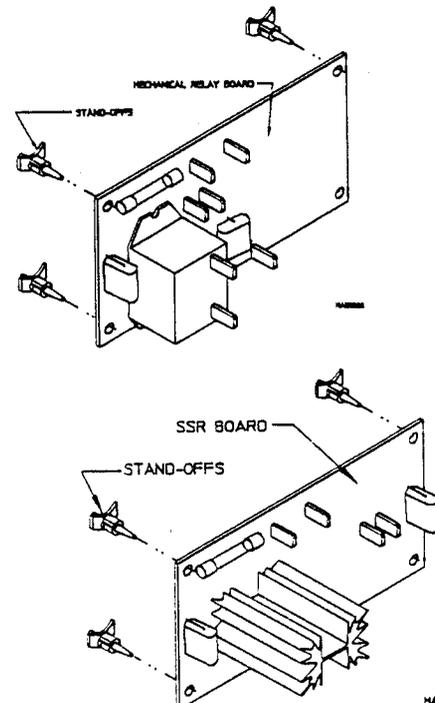
**NOTE:** Do not remove screws

3. Dissassemble sensor probe from bracket assembly by removing the top push-on fastener securing the probe to the bracket. Use a small screwdriver to slowly pry the fastener off.
4. Disconnect the two (2) orange wires from the high heat (225 degrees) temperature thermostat. Remove modular bracket connector, wires, and probe from bracket assembly.
5. Install new sensor probe assembly (p/n 880251) by reversing the procedure.
6. Re-establish power to dryer.

**NOTE:** If, when power is re-established the computer display reads "dsfl," check for a loose connection on the wiring.

## TO REPLACE MECHANICAL OR SOLID STATE RELAY BOARD

1. Discontinue power to dryer.
2. Remove one (1) wire at a time off the faulty board on to the new board.
3. Replace fuse(s) from faulty board, if good, to new board.
4. Remove faulty board from machine by squeezing the plastic nylon standoff and pulling that corner of the board off the nylon standoff. Repeat for three (3) remaining corners.
5. Replace new board on the nylon standoffs.
6. Re-establish power to dryer.



HAN1025

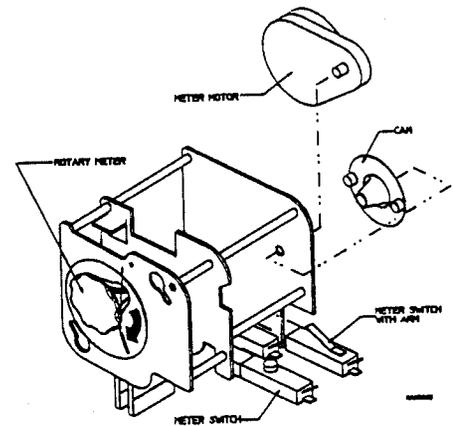
## B. CONTROLS (METER)

### TO REPLACE ROTARY METER

1. Discontinue power to dryer
2. Swing control panel open.
3. Remove two (2) freespin washnuts and disconnect obstructive wiring. The two (2) freespin washnuts are located as follows: one is on top of the meter and the 2<sup>nd</sup> is on the bottom right hand corner of the meter. Remove wiring from the meter switches (note: be sure to check wiring diagram for proper installation of new meter.) also remove the one (1) yellow meter motor wire from the 30 position block
4. Pull rotary meter out.
5. Reverse procedure to install new rotary meter assembly.

### TO REPLACE METER MOTOR

1. Disconnect power to dryer.
2. Swing control panel open.
3. Remove two (2) screws holding meter motor.
4. Remove the yellow wire of the meter motor from switch "A". Remove the other yellow meter motor wire from 3 position terminal block.
5. Pull meter motor away and reverse procedure to install new meter motor.



### TO REPLACE METER SWITCHES

1. Disconnect power to dryer.
2. Swing control panel open.
3. Disconnect wiring at the meter switches.

NOTE: Be sure to check wiring diagram for correct wiring of switches.

4. Remove two (2) screws holding switches in place.
5. Remove switches.
6. Reverse procedure for installing new switches.

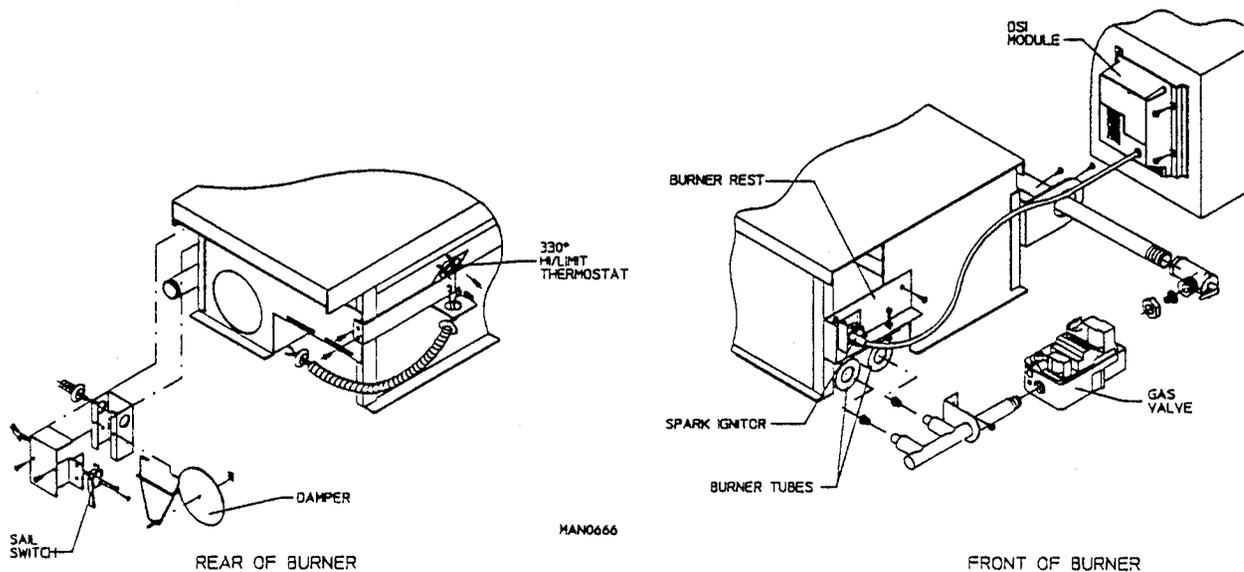
## TO REPLACE CAM

1. Disconnect power to dryer.
2. Remove control panel from dryer
  - A. Swing control panel open and remove main power harness.
  - B. Lift panel off of hinges and remove.
3. With a small screw driver pry the cam and brass fixture off of motor shaft.
4. Reverse procedure for installing new cam.

**NOTE:** When installing new cam place fixture on cam first. Align flat side of the hold on the fixture with the flat surface of the shaft.

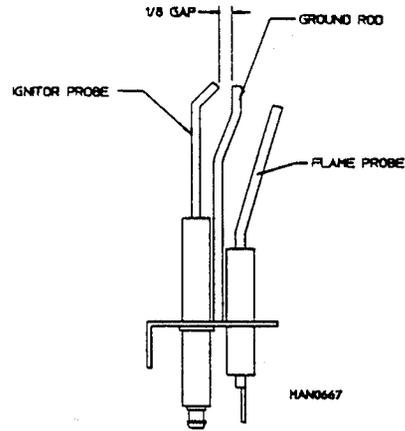
## C. BURNER CONTROLS (Gas)

This illustration is typical of all gas burners, but they are not all exactly alike. Your particular model may have some differences.



### TO REPLACE SPARK IGNITOR

1. Discontinue power to dryer.
2. Disconnect hv connector and flame probe connection from ignitor.
3. Disassemble ignitor from burner by removing the two (2) self-tapping screws.
4. Reverse procedure for installing new ignitor probe.

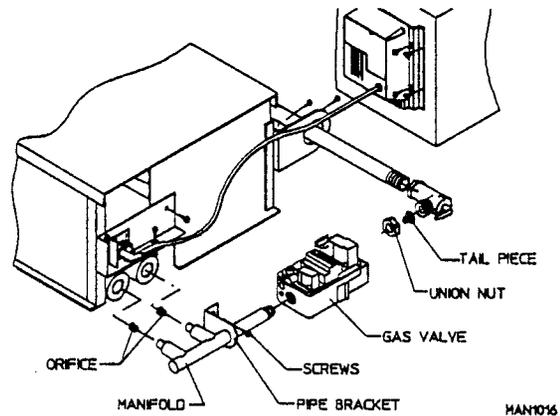


**NOTE:** Before re-establishing power to dryer, visually check the following: (see illustration)

1. The flame probe, ignitor probe, and ground rod are all on the same line of axis.
2. There should be a 1/8" gap (+/-, 1/32) between the ignitor probe and ground rod.
3. Do not wrap the red hv wire and flame probe wire together. (improper operation may result.) They may run along side each other.

### TO REPLACE GAS VALVE

1. Discontinue power to dryer.
2. Close shut off valve in gas supply line.
3. Disconnect gas valve wiring.
4. Break union connection before gas valve.
5. Loosen and remove two (2) screws securing pipe bracket to the burner.
6. Remove gas valve/manifold assembly from the dryer.
7. Remove manifold from output of the gas valve.
8. Remove union tail piece from valve. Use a 1/2" allen wrench (ADC P/N: 410001)
9. Reverse procedure for installing new gas valve.



**NOTE:** Replacement valves are natural gas. See page 23 for L.P. Kit Listing.

**WARNING:** Test all connections for leaks by brushing on a soapy water solution "never test for leaks with a flame."

### TO REPLACE MAIN BURNER ORIFICES (See Chart On Following Page)

1. Refer to "TO REPLACE GAS VALVE" and follow steps one through six.
2. Unscrew main burner orifices and replace.

NOTE: Use extreme care when removing and replacing orifices. These orifices are made of brass and are easily damaged.

3. Reverse the removal procedure for re-installing.

WARNING: Test all connections for leaks by brushing on a soapy water solution. "never test for leaks with a flame".

### TO TEST AND ADJUST GAS (WATER COLUMN) PRESSURE

There are two (2) types of devices commonly used to measure water column pressure. They are spring/mechanical type gauges and manometers. The spring/mechanical type gauge is not recommended because it is easily damaged and not always accurate. A manometer is simply a glass or transparent plastic tube with a scale in inches, which when filled with water and pressure is applied, the water in the tube rises, showing the exact water column pressure.

NOTE: Manometers are available from the factory by ordering part number 122804.

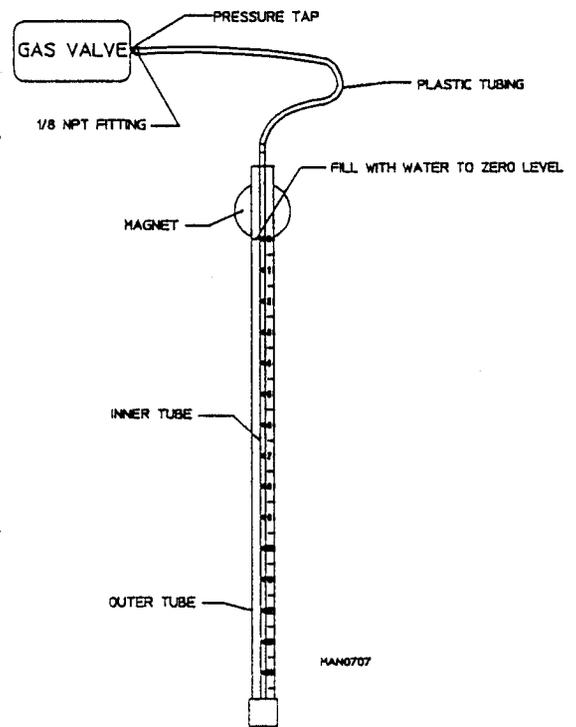
1. To test gas water column (w.c.) pressure.

- A. Connect water column test gauge connection to gas valve pressure tap (1/8 NPT). This pressure tap is located on the outlet (downstream) side of the valves.
- B. Start the dryer. With burner on, the correct water column reading in inches would be:

NATURAL GAS: 3.5-4 INCHES W.C.  
L.P. GAS: 10.5-11 INCHES W.C.

2. To adjust water column pressure: For Natural gas models remove vent cap. Turn the slotted adjustment screw located on top of the valve next to the terminals. Turn clockwise to increase manifold pressure and counter clockwise to decrease. For L.P. gas models there is no regulator on valve.

NOTE: If correct w.c. pressure cannot be achieved, problem may be due to an undersized gas supply line, a faulty or underrated gas meter, etc.



## DSI Burner Orifice Conversion Listing\*

Models Number	Btu Per Hour Rating	Natural Gas			L.P. Gas			L.P. Conversion Kit
		Qty.	D.M.S.	P/N	Qty.	D.M.S.	P/N	
ADG-15D	50,000	2	#42	140810	2	#54	140848	874051
ADG-15DH	47,000	2	#43	140809	2	#54	140848	874051
ADG-24D	60,000	2	#37	140815	2	#52	140800	874058
ADG-25D	78,000	2	#32	140851	2	#50	140802	874052
ADG-25DH	70,000	2	#34	140852	2	#51	140801	874053
ADG-26D	60,000	1	#26	140823	1	#43	140809	874061
ADG-215D	100,000**	2	#29	140820	2	#46	140806	874055***
ADG-215DH	100,000**	2	#29	140820	2	#46	140806	874055***
ADG-220D	120,000**	2	#26	140823	2	#43	140809	874056***
ADG-220DH	120,000**	2	#26	140823	2	#43	140809	874056***
ADG-230D	144,000**	2	#20	140828	2	#41	140811	874057***
ADG-230DH	144,000**	2	#20	140828	2	#41	140811	874057***
ADG-235D	144,000**	2	#20	140828	2	#41	140811	874059***
ADG-285D	72,000	2	#33	140855	2	#51	140801	874054
ADG-30D	90,000	2	#30	140819	2	#46	140806	874050
ADG-30DH	80,000	2	#1/8	140843	2	#49	104803	874049
ADG-50D	150,000	2	#21	140827	2	#40	140854	874044
ADG-50DH	130,000	2	#26	140823	2	#43	140809	874045
UDG-50D	160,000	3	#29	140820	3	#48	140804	874046
UDG-50DH	140,000	2	#23	140856	2	#42	140810	874047
ADG-75D	200,000	1	#H	141153	1	#21	141152	874042
ADG-75DH	200,000	1	#H	141153	1	#21	141152	874042

\* Consult factory for elevations over 2,000 feet for correct burner orifice size(s).

\*\* BTU PER HOUR rating is total for both baskets.

\*\*\* L.P. Conversion Kit includes orifices for both baskets.

**IMPORTANT:** This listing supersedes any other listing and/or information previously issued on the DSI system.

## TO CONVERT FROM NATURAL TO L.P. GAS

1. Disconnect electrical power to dryer.
2. Close all shut-off valves in dryer gas supply line.
3. Disconnect gas valve wiring.

| NOTE: Identify location of each wire for correct re-installation.

4. Break union connection (nut) between union shut off and gas valve.
5. Loosen and remove screws from bracket holding the gas valve/manifold assembly to burner box.
6. Remove gas valve/manifold assembly from dryer.
7. Unscrew main burner orifices and replace with L.P. orifices supplied.

| NOTE: Use extreme care when removing and replacing orifices. These orifices are made of brass which are easily damaged.

8. To convert gas valve for use with L.P. gas, refer to instructions included in kit envelope (#F92-0737) supplied.
9. Reverse procedure for reinstalling valve manifold assembly to dryer.

| IMPORTANT: External regulation of a consistent gas pressure of between 10.5 and 11.0 inches water column must be provided.

10. Open all shut off valves and test for leaks.

| IMPORTANT: Do not test for leaks with an open flame. Use soapy water solution or product intended for that purpose.

11. Operate dryer through one complete cycle to insure proper operation.

| IMPORTANT: Conversion should be performed by competent technicians in accordance with local and state codes. Improper assembly or adjustments can cause hazardous condition.

| NOTE: There is no regulator provided in an L.P. dryer. The water column pressure must be regulated at the source (L.P. tank), or an external regulator must be added to each dryer.

12. Call American Dryer Corp. for L.P. conversion kits or the proper orifices for natural or L.P. gas.

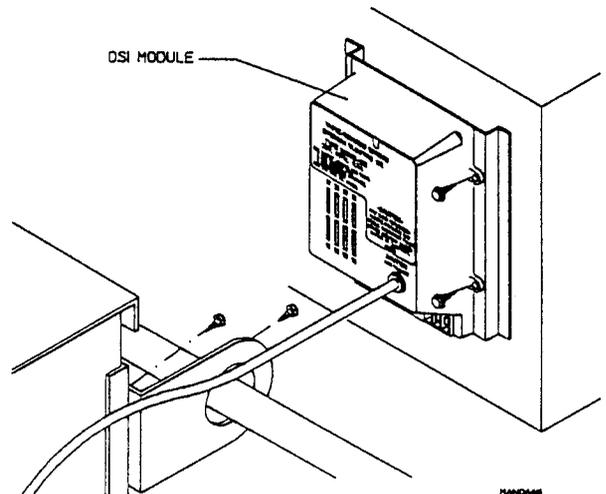
## TO REPLACE BURNER TUBES

1. Discontinue power to dryer.
2. Close shut off valve in gas supply line.
3. Disconnect gas valve wiring
4. Break union connection before gas valve.
5. loosen and remove two (2) screws securing pipe bracket to the burner.
6. Remove gas valve/manifold assembly from the dryer.
7. Remove the screws securing the front flanges of the burner tubes to the burner rest.
8. Remove burner tubes by sliding them out.
9. Replace by reversing procedure.

**WARNING:** Test all connections for leaks by brushing with a soapy water solution. "never test for leaks with a flame."

## TO REPLACE DSI MODULE

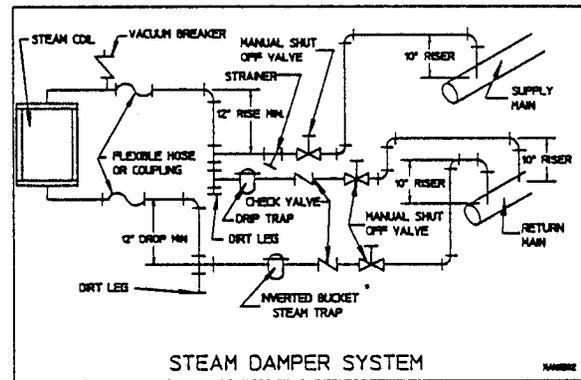
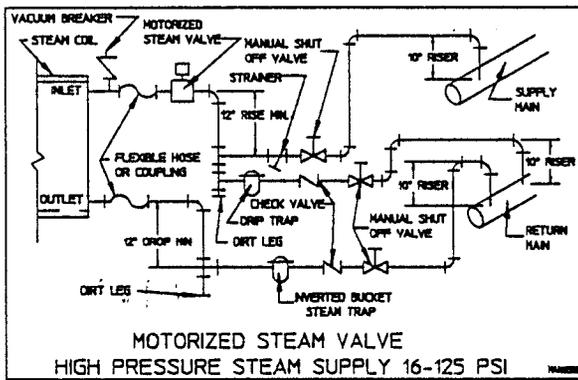
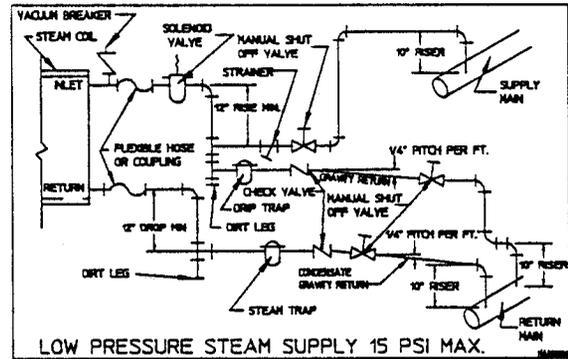
1. Discontinue power to the dryer.
2. Remove the wires connected to the terminal strip at the bottom of the module.
3. Remove the soft orange high voltage wire from the module.
4. Remove the four (4) screws securing the module to the ignition control panel.
5. Replace module by reversing process.



## D. STEAM CONTROLS

### INSTALLATION

Piping must be installed in accordance with good commercial steam system practice. See the illustration below and to the right for a typical pipe arrangement. A steam valve is supplied with each dryer and is shipped separate from the steam coil. The steam valve is located on the rear of the dryer on the right hand side (view from rear) of the base.

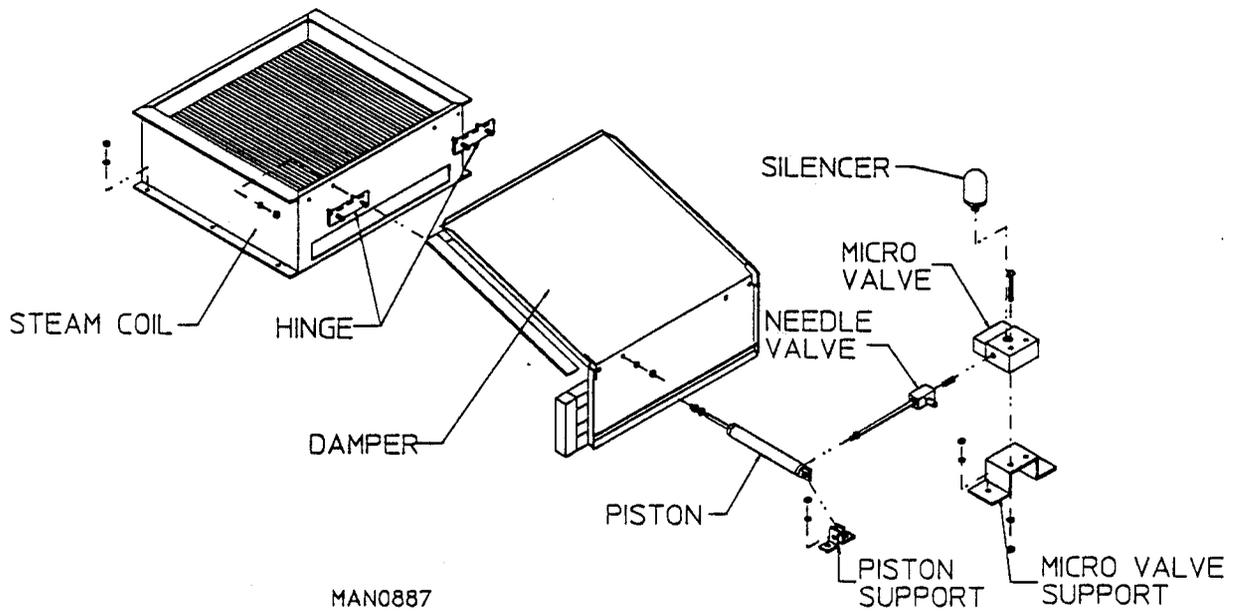


### TO REPLACE STEAM VALVE

1. Shut off steam supply line to the dryer.
2. Discontinue power to dryer.
3. For suggested piping arrangement, break union at the flexible hose just after the steam valve.

CAUTION: Steam and/or piping may be hot, allow time to cool.

4. Disconnect wiring to the valve and remove valve from the piping arrangement.
5. Reverse procedure for installing new steam valve.



#### TO REPLACE STEAM COIL (DAMPER SYSTEM)

1. Discontinue power to dryer.
2. Remove the four (4) lock washers and hex nuts securing the hinges to steam coil.
3. Remove hinges from steam coil housing ( these will be used on new assembly ).
4. Remove six (6) washers and hex nuts securing steam coil to dryer.
5. Remove steam coil assembly.
6. Reverse procedure for new steam coil assembly.

#### TO REPLACE PISTON

1. Discontinue power to dryer.
2. Remove left and right piston supports by removing two (2) washers and hex nuts and slide pin out.
3. Remove 1/8" MPT connector from the piston and remove acorn nut on the end of piston shaft ( this will be used on new piston ).
4. Reverse procedure for installing new piston.

#### TO REPLACE THE NEEDLE VALVE

1. Discontinue power to dryer.
2. Discontinue the air to the dryer.
3. Remove the 1/8" brass close nipple from the needle valve.
4. Remove the 1/8" MPT connector from the needle valve.
5. Remove the needle valve.
6. Reverse procedure to install new needle valve.

#### TO REPLACE THE 3-WAY MICROVALVE

1. Discontinue power to dryer.
2. Discontinue the air to the dryer.
3. Remove inlet side of air the the 3-way valve.
4. Remove the two (2) 1" machine bolts and mounting hardware holding the 3-way valve to the bracket.
5. Remove the 1/8" brass close nipple from the output side of the valve.
6. Remove valve.
7. Reverse procedure to install new microvalve.

### TO REPLACE STEAM COIL (Motorized or Solenoid Valve)

1. Shut off steam supply line to the dryer and run dryer to remove any condensation.
2. Discontinue power to dryer.
3. Break union at flexible hose just before the steam coil at both inlet and outlet.

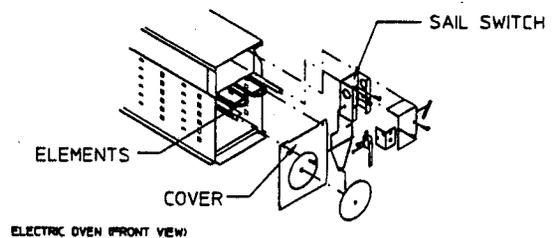
CAUTION: Steam coil and/or piping may be hot, allow time to cool.

4. Remove remaining piping from steam coil.
5. Remove six (6) screws holding coil to steam rack and lift core out.
6. Reverse procedures for installing new core.

## E. ELECTRICAL OVEN CONTROLS

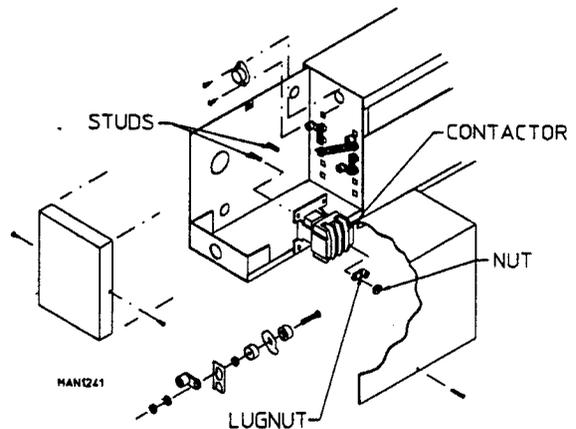
### TO REPLACE ELECTRICAL ELEMENTS

1. Discontinue power to dryer.
2. Remove cover by removing two (2) screws and lifting the cover.
3. Remove the screws and wiring holding the element in place at the rear of the oven.
4. From the front of the oven, slide out element.
5. Reverse procedure for installation of new element.



### TO REPLACE OVEN CONTACTOR

1. Discontinue power to dryer.
2. Remove wiring from contactor.
3. Remove three (3) nuts and lugnut from the studs.
4. Pull contactor off.
5. Reverse procedure for installing new contactor.



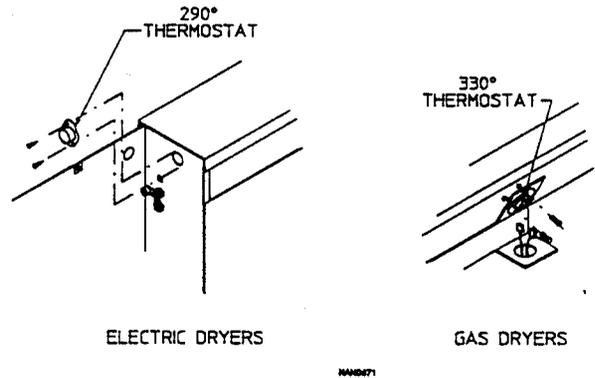
## F. THERMOSTATS AND TEMPERATURE SENSOR

### TO REPLACE HI-LIMIT THERMOSTAT (330 DEGREES GAS, 290 DEGREES ELECTRIC)

This thermostat is an important safety device serving as an added protection against failure of the air sail switch to open in the event of motor failure or reduced air flow condition.

**IMPORTANT:** Under no circumstances should heat circuit safety devices ever be disabled.

1. Discontinue power to dryer.
2. Disconnect wires from hi-limit thermostat.
3. Remove screw, washer, and nut securing thermostat to the bracket, remove thermostat.
4. Reverse procedure for installing new thermostat.

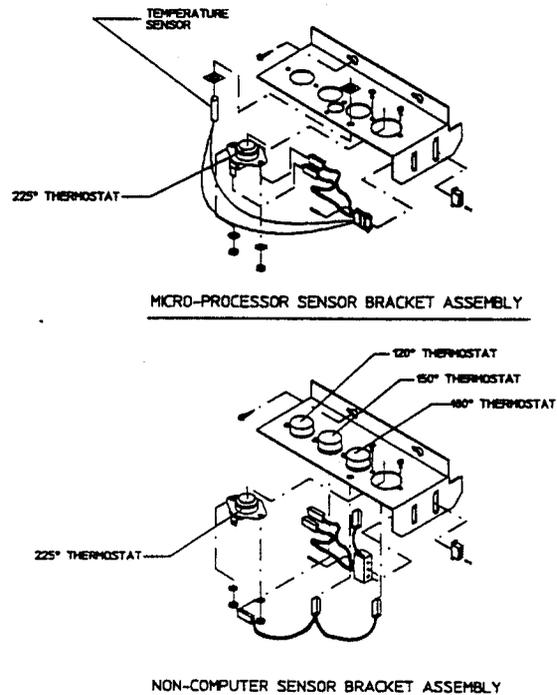


### TO REPLACE LINT COMPARTMENT HI-HEAT PROTECTOR AND THERMOSTATS (NON-MICROPROCESSOR MODELS)

These thermostats are part of the "Sensor Bracket Assembly" and are secured to the underside of the tumbler wrapper in the lint compartment. as safety devices, these thermostats will open (shut off) the heating unit circuit if an excessive temperature occurs. The dryer motor will remain on, even if thermostat is open.

**IMPORTANT:** Under no circumstances should heat safety devices be disabled.

1. Discontinue power to dryer.
2. Open and remove the lint door.
3. Locate Sensor bracket assembly under basket. Loosen the two phillips head screws holding the bracket to the machine, disconnect connector.



4. Slide bracket to the rear of the dryer and remove from machine.
5. See diagram for location and identification of which thermostat you need to change.
6. Remove the two (2) screws and washers and nuts accompanying the proper thermostat.
7. Remove the two (2) connectors on the thermostat.
8. Remove thermostat.
9. Reverse procedure for installing new thermostat.

**TO REMOVE THE TEMPERATURE SENSOR OR HIGH HEAT PROTECTOR ( MICROPROSSOR MODELS)**

**A. HIGH HEAT PROTECTOR**

1. Discontinue power to dryer.
2. Open and remove lint door.
3. Locate temperature sensor bracket assembly under the basket. Loosen the two phillips head screws. Disconnect the connector.
4. Slide bracket toward the rear of the machine and remove the bracket assembly from the dryer.
5. At this point you have access to remove either the hi heat protector or the temperature sensor.
6. To remove the hi heat protection remove the two (2) screws, washers, and nuts holding the hi heat protector in place.
7. Remove the hi heat protector.
8. Reverse procedure for installation of new hi heat protector.

**B. TEMPERATURE SENSOR ( MICROPROSSER MODELS)**

1. Discontinue power to dryer.
2. Open and remove lint door.
3. Disconnect sensor bracket harness connector.
4. Loosen the two (2) phillips head screws securing bracket assembly to dryer and remove by sliding bracket towards the rear of the dryer.

5. Disassemble sensor probe from bracket assembly by removing the top push-on fastener securing the probe to the basket.
6. Disconnect the two (2) orange wires from the high heat temperature thermostat remove the four (4) position connector, wires, and probe from the bracket assembly.
7. Install new probe assembly (ADC P/N: 880251) by reversing procedure.

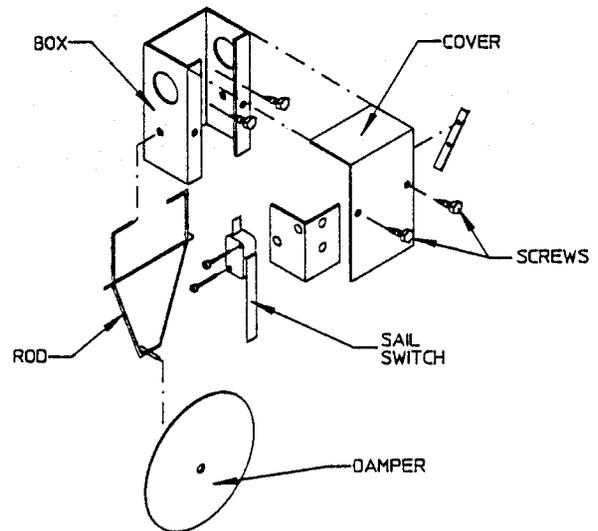
## G. SAIL SWITCH ASSEMBLY (Gas and Electric Models)

The sail switch is a heat circuit safety device which controls the heat circuit only. When the dryer is operating and there is proper air flow the sail switch damper pulls in and closes the sail switch. Providing all the other heat-related circuits are functioning properly. If an improper air flow occurs, the sail switch damper will release, and the circuit will open.

**IMPORTANT:** Under no circumstances should heat circuit safety devices ever be disabled.

### TO REPLACE SAIL SWITCH

1. Discontinue power to the dryer.
2. Remove the two (2) screws which hold the sail switch box.
3. Disconnect the two (2) wires from the switch.
4. Disassemble sail switch from mounting bracket by removing the two (2) screws securing the switch in place.
5. Reverse this procedure for installing new sail switch. adjust sail switch as described in the next section.



HAND569

## TO ADJUST SAIL SWITCH

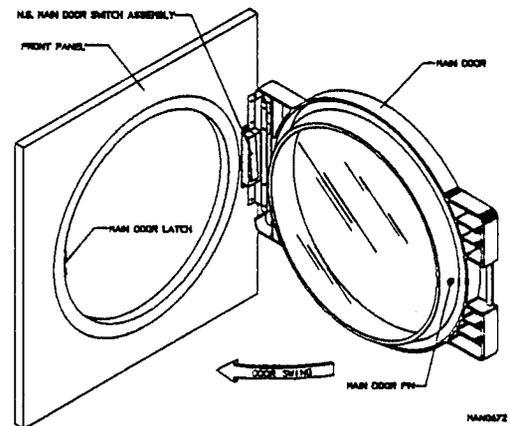
1. Operate the installed dryer normally to verify that the heat system is fully operational.
2. Open the main dryer door.
3. Manually depress the door switch actuator.
4. While continuing to depress the door switch actuator, and with the door open, start the dryer.
5. If the heat system is not activated in 15 seconds, the sail switch is properly adjusted.
6. If the heat system is activated, the sail switch is improperly adjusted and must be readjusted by bending the actuator arm of the sail switch toward the front of the dryer. If the actuator arm is bent too far toward the front of the dryer, the dryer may not have heat when needed. After any adjustments of the sail switch, the above procedure must be repeated to verify proper operation.

**CAUTION:** Do not abort this switch by taping or screwing sail switch damper to burner. personal injury or fire could result.

## H. FRONT PANEL AND MAIN DOOR ASSEMBLIES

### TO REPLACE MAIN DOOR SWITCH (ES)

1. Discontinue power to dryer.
2. Open main door.
3. Remove the two (2) phillips head screws holding the main door switch in place.
4. Remove door switch bracket and disconnect wiring from switch (es).



**NOTE:** Identify location of each wire for correct reinstallation.

5. Disassemble door switch bracket by removing the two (2) screws holding the door switch (es) in place and assemble onto new door switch (es).
6. Reverse this procedure for installing new door switch (es).

**NOTE:** When reconnecting wires to door switch (es), be sure wiring sequence is correct.

**IMPORTANT:** Under no circumstances should the door switch be disabled.

## TO REPLACE MAIN DOOR ASSMBLY

1. Remove screws holding main door to main door hinge.
2. Reverse this procedure for reinstalling new main door assembly.

## TO INSTALL NEW MAIN DOOR GLASS

1. Remove main door assembly from dryer (follow main door removal procedure).
2. Lay main door on a flat surface with front of door face down.
3. Remove glass and clean all old sealant off main door. This area must be completely cleaned for correct bonding.
4. Apply a narrow bead of silicone (ADC P/N: 170730 for plastic type doors or ADC P/N: 170725 for cast type doors) all around main door area where glass will rest.
5. Install glass on to door/adhesive and slightly press glass in place.

**IMPORTANT:** Do not press hard or silicone thickness between the glass and door will be reduced resulting in poor bonding.

6. The door assembly should now be put in an area where it will not be disturbed for at least 24 hours. Depending on the conditions, the curing time of the adhesive is 24 to 36 hours.
7. After 24 hour curing period, install main door on dryer by reversing step 1.

## TO REPLACE FRONT PANEL

1. Discontinue power to dryer.
2. Disconnect main door switch wiring from inside control wire box.

**NOTE:** Identify location of each wire for correct reinstalltion.

3. Follow procedure for removal of main door assembly.
4. Open control (service) door.
5. Open lint door.

6. Remove the screws securing the front panel to the dryer.
7. Gently remove front panel assembly from dryer.

**IMPORTANT:** When removing front panel assembly be careful not to damage main door switch wires disconnected in step 2.

8. Reverse this procedure for installing new front panel.

#### **TO REPLACE MAIN DOOR HINGE**

1. Discontinue power to dryer.
2. Follow procedure for removal of main door assembly.
3. Follow procedure for removal of front panel assembly.
4. Disassemble hinge from front panel by removing the nuts located on the back side of the front panel, which hold the hinge to the front panel.

**IMPORTANT:** When removing hinge assembly from front panel be careful you do not damage main door switch wires.

5. Remove main door switch assembly.
6. Re-assemble by reversing removal procedure.

**NOTE:** When connecting wires to door switch, be sure wiring sequence is correct.

#### **TO REPLACE THE NYLON CATCH**

1. Open main door .
2. Drill out two (2) pop rivots holding nylon catch to front panel using a #21 (.1590) drill bit.
3. Using two (2) pop rivots (part number 154215) install nylon catch (part number 170330) to front panel.

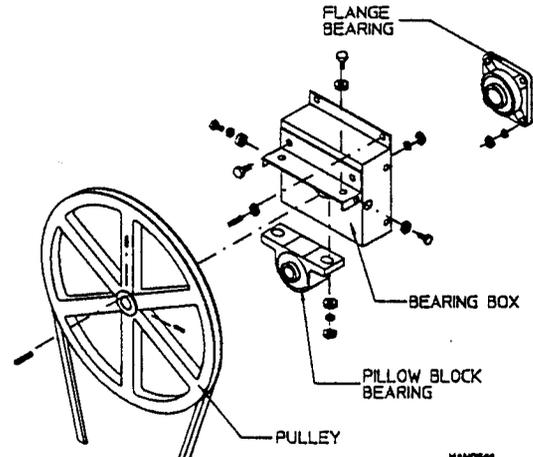
## I. TUMBLER AND BEARING ASSEMBLY

(Remove backguard to access assembly)

### TO REPLACE TUMBLER PULLEY

1. Remove backguard.
2. Loosen v-belts, then rotate pulley and roll v-belts out of grooves.
3. Loosen two (2) set screws on the pulley and pull the pulley off the shaft.
4. Reverse procedure for installing new tumbler pulley.

NOTE: Check belt alignment before operating dryer.



### TO REPLACE THE REAR TUMBLER BEARING

NOTE: Illustration represents models Ad-30 through Ad-50. models ad-15 and Ad-25 use a 1" diameter flange bearing. the same procedure applies to both.

1. Remove tumbler pulley (follow tumbler pulley removal procedure).
2. Remove the four (4) bolts securing the bearing box to the back of the dryer.
3. Loosen screws securing bearing to shaft.
4. Pull bearing box and bearing off of shaft.

NOTE: If any rust has developed, use an emery cloth to polish the shaft.

5. Remove bolts securing bearing to bearing box and remove tumbler bearing.
6. Reverse procedure for installing new tumbler bearing.

NOTE: Check alignment of pulleys before operating dryer.

## TO REPLACE THE FRONT TUMBLER BEARING

NOTE: Illustration represents models AD-30 through AD-50. models AD-15 and AD-25 use a 1 1/4" diameter flange bearing. The same procedure applies to both.

1. Remove tumbler pulley and bearing box (follow "TO REPLACE THE REAR TUMBLER BEARING" steps 1 through 4)
2. Loosen set screws on rear tumbler bearing.

NOTE: Check tension of belts and alignment of tumbler before operating dryer.

3. Using a wheel puller gently push the tumbler shaft towards the front through the front tumbler bearing.

NOTE: An alternate method would be to place a block of wood on the end of the tumbler shaft and strike it with a heavy hammer. to prevent damage to the shaft the wheel puller method is preferred.

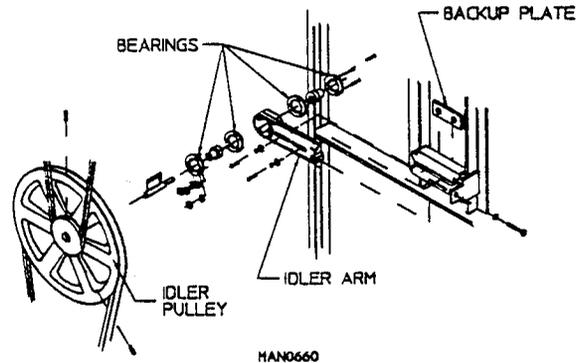
4. Remove the three (3) nuts securing the bearing to the dryer back and remove the bearing.
5. Reverse procedure for installing new tumbler bearing.
6. Replace backguard.

## I. IDLER AND BEARING ASSEMBLY

(Remove backguard to access assembly.)

### TO REPLACE IDLER PULLEY

1. Remove backguard.
2. Loosen v-belts, then rotate pulley and roll v-belts out of grooves.
3. Loosen the two (2) set screws on the pulley and pull off the shaft.
4. Reverse procedure for installing new idler pulley.



NOTE: Check tension and alignment of belts before operating dryer.

### TO REPLACE IDLER BEARING

1. Remove idler pulley (follow "TO REPLACE IDLER PULLEY")
2. Remove idler arm.
  - A. Remove two (2) bolts securing idler arm to the idler backup plate
  - B. Remove idler arm assembly.
  - C. Loosen set screws on both the front and rear bearing and remove the idler shaft.
  - D. Remove 3 bolts securing the bearing to the idler arm and remove bearings.
3. Reverse procedure for installing new idler bearings.

NOTE: Check tension and alignment of belts before operating dryer.

## K. DRIVE PULLEY

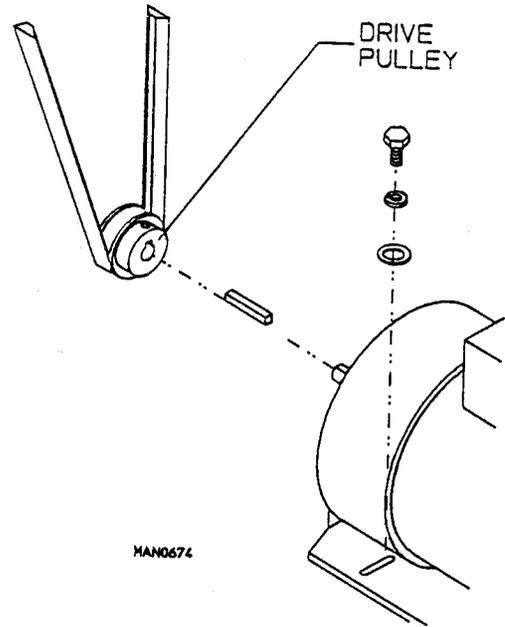
(Remove backguard to access assembly)

1. Remove backguard.
2. Loosen v-belts then rotate pulley and roll v-belts out of grooves.
3. Loosen set screws and pulley motor pulley out.

**NOTE:** If rust has developed on the shaft use an emery cloth to polish the shaft.

4. Reverse procedure for installing new drive pulley.

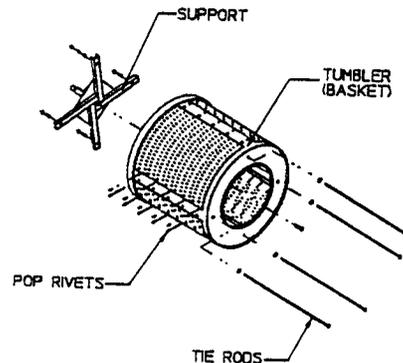
**NOTE:** Check tension and alignment of belts before operating dryer.



## L. TUMBLER (BASKET)

### TUMBLER ALIGNMENT (VERTICAL)

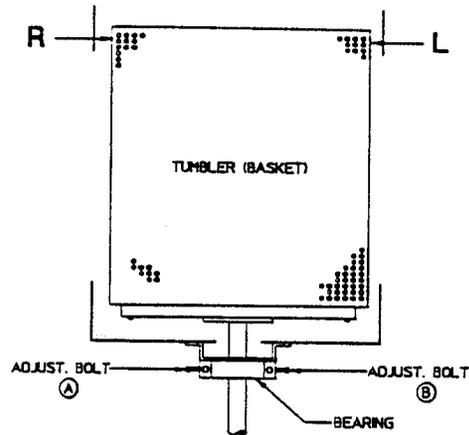
1. Discontinue power to dryer.
2. Remove backguard.
3. Loosen the four (4) hex head bolts on the sides of the bearing box (2 on each side).
4. Back off jam nuts on the two (2) allen head adjustment screws.
5. Turn the screws clockwise evenly to raise the tumbler or counter clockwise evenly to lower the tumbler.
6. Rotate the tumbler from the front and check alignment with the main door opening.
7. Leave a large gap from the inside ring on the top of the front panel opening to the tumbler, and a smaller gap on the bottom to compensate for the weight of the clothes drying.



8. Tighten the four (4) hex head bolts on the sides of the bearing box, and the two (2) allen head adjustment screws.
9. Replace backguard.
10. Reconnect power to dryer.

#### TUMBLER ALIGNMENT (LATERAL)

1. Discontinue power to the dryer.
2. Remove backguard.
3. Loosen the two (2) hex head bolts, (one turn is enough), that holds the pillow block bearing to the bearing box.
4. Back off the two (2) jam nuts on the side adjustment bolts. Now rotate the tumbler from the front of the dryer, checking the space between the tumbler and the front panel. This should be equal on the left hand and right hand side.
5. Lateral adjustment (viewing from the rear)
  - A. Loosening (by turning counter clockwise) the left hand adjustment bolt and tightening (by turning clockwise) the right hand adjustment bolt will shift the basket to the right.
  - B. Loosening (by turning counter clockwise) the right hand adjustment bolt and tightening (by turning clockwise) the left hand adjustment bolt will shift the basket to the left.
6. Tighten and secure both adjustment bolts and jam nuts.
7. Tighten the bearing box bolts.
8. Replace backguard and re-establish power to the dryer.



**REAR OF DRYER**

## TO REPLACE THE TUMBLER AND/OR TUMBLER SUPPORT

1. Remove tumbler pulley and bearing box (follow " TO REPLACE THE REAR TUMBLER BEARING" steps 1 through 4)

2. Remove front panel assembly.

A. Discontinue power to dryer.

B. Disconnect main door switch wiring from inside control wire box.

| NOTE: Identify location of each wire for correct re-installation.

C. Open control (service) door.

D. Open lint door.

E. Remove the screws securing the front panel to the dryer.

F. Gently remove front panel assembly from the dryer.

| IMPORTANT: When removing front panel assembly be careful not to damage door switch wires.

3. Loosen set screws on rear tumbler bearing.

| NOTE: Check tension of belts and alignment of tumbler before operating dryer.

4. Using a wheel puller gently push the tumbler shaft towards the front through the front tumbler bearing.

| NOTE: An alternate method would be to place a block of wood on the end of the tumbler shaft and strike it with a heavy hammer. To prevent damage to the shaft, the wheel puller method is preferred.

5. Remove the tumbler and support through the front of the dryer.

A. Remove the bolt in the center of the tumbler back wall.

B. Loosen and remove the nuts and washers from the tumbler tie rods. Remove the rods.

C. Replace either tumbler or tumbler support by reversing the procedure.

6. Reassemble components into dryer by reversing steps 1 through 4.

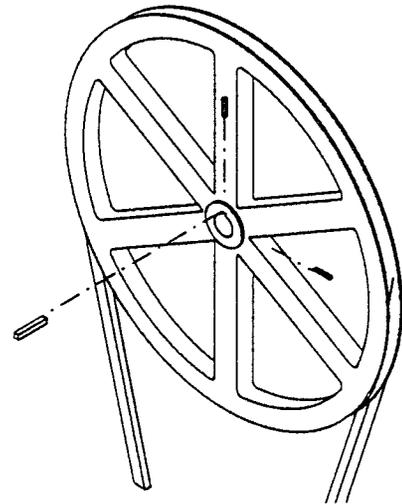
7. Check tumbler lateral and vertical alignment. also, check belt tension and alignment.
8. Replace backguard and re-establish power to dryer.

## M. V-BELTS (REFER TO ILLUSTRATIONS IN SECTIONS I, J, AND K)

V-Belts should have proper tension. If too loose, they will slip, if too tight excessive wear on the bearing will result. If the pulleys are not properly aligned, excessive belt wear will result. Proper belt tension will allow 1/2" displacement under normal thumb pressure at mid span of the belt.

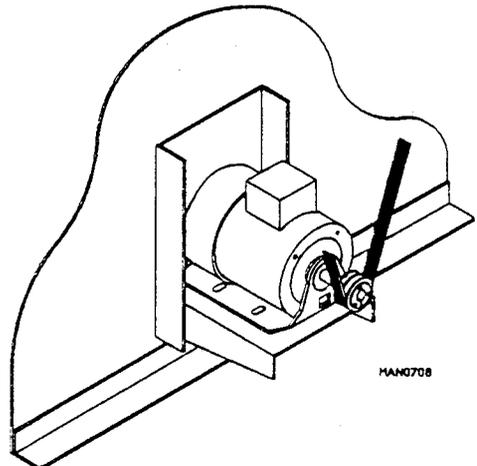
### **V-BELT TENSION ADJUSTMENT-TUMBLER TO IDLER**

1. Loosen two (2) bolts connecting to back-up plate.
2. Back off jam nut on the adjustment bolt.
3. Tighten belts by turning adjustment bolt clockwise.  
(turn counterclockwise to loosen belts)
4. Tighten both bolts connecting to back up plate.
5. Check vertical plane of idler pulley for parallel alignment with tumbler pulley.
6. If realignment is required, loosen tumbler pulley and move tumbler pulley to proper position.
7. Re-tighten jam nut.



### **V-BELT TENSION ALIGNMENT - MOTOR TO IDLER**

1. Loosen two (2) bolts connecting idler arm to back-up plate.
2. Back-off on jam nut(s) on the adjusting bolt.
3. Loosen/tighten adjustment bolt to relax/increase belt tension.
4. Tighten adjustment bolt jam nut(s).
5. Tighten the two (2) bolts loosened in Step 1.



## TO REPLACE V-BELTS

1. Loosen tension on v-belts, so that they can easily be rolled off pulleys.
2. Replace V-Belts.
3. Re-tighten V-Belts and adjust tension and alignment per previous instructions.

## N. MOTOR

### TO REPLACE MOTOR

1. Discontinue power to dryer.
2. Remove drive belt.
3. Disconnect wiring harness from motor.
4. Remove nuts and washers holding the motor mount to the rear of the dryer and pull motor mount away.
5. Remove the two (2) left hand nuts on the motor shaft retaining the impeller. Work the impeller free from the motor shaft by means of a puller to prevent damage to the motor shaft.
6. Remove the bolts holding the motor to the motor mount and replace it with a new motor.
7. Remove pulley from old motor and install on new motor.
8. Align motor with impeller face in plane with the motor mount at no less than 3/16" clearance.

## O. IMPELLER

| NOTE: Follow steps 1 through 5,8 in "Section V, Part N."

## P. LINTSCREEN

### TO REPLACE LINTSCREEN

1. Open lint door and remove.
2. Remove the two (2) hex head screws securing lint screen, hold down in place and remove hold down from trap.
3. Slide lintscreen out along the lint coop track.
4. Reverse procedure for installing new lint screen.
5. Close lint door.

# SECTION VI

## TROUBLESHOOTING

The information provided will help isolate the most probable components associated with the difficulty described. The experienced technician realizes, however, that a loose connection or broken or shorted wire may be at fault where electrical components are concerned.... not necessarily the suspect component itself.

**Electrical parts should always be checked for failure before being returned to the factory.**

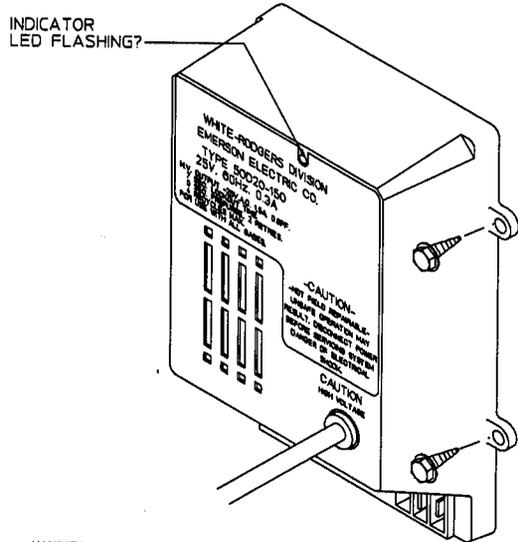
The information provided should not be construed as a device for use by an untrained person in making repairs. Only properly licensed technicians should service the equipment.

**Observe all safety precautions displaced on the equipment or specified in this manual while making repairs.**

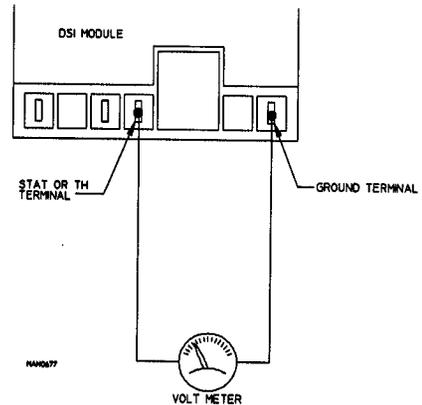
## A. NO HEAT CONDITION

The following procedure must be performed with the microprocessor controller display in the normal operating mode, and the heat indicator dot on.

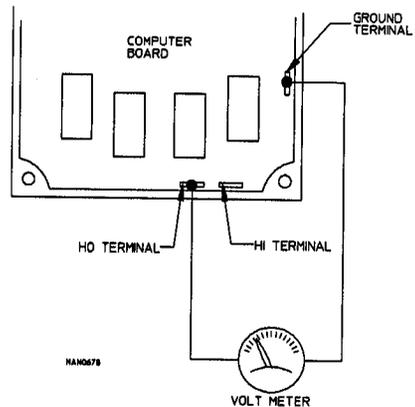
1. Check to see if DSI module fault indicator led is on or flashing. if yes, refer to "DSI" Troubleshooting Booklet.



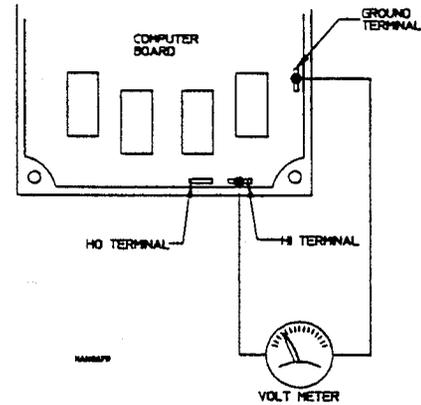
2. Check for voltage (approx. 25VAC) across DSI module terminals "STAT" or "TH" and "GND." If voltage is evident, refer to "DSI" Troubleshooting Booklet.



3. Check for voltage (approx. 25VAC) across microprocessor controller "HO" (heat out) terminal and "GND" terminal. if voltage is evident, problem is break in wire or termination between microprocessor controller "HO" (heat out) terminal and DSI module "STAT" or "TH" terminal.

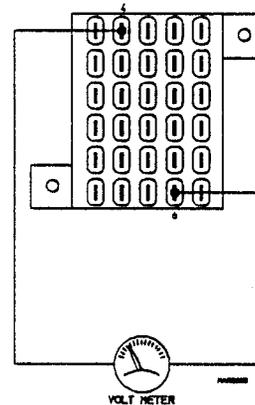


4. Check for voltage (approx. 25v) across microprocessor controller "HI" (heat in) terminal and DSI module GND terminal. If voltage is evident, problem is defective microprocessor controller.



5. Check for primary voltage (\*) to DSI transformer across TB#4 and TB#6. If voltage is evident problem is.....

- A. Defective DSI transformer
- B. Break in wire or termination between DSI transformer and TB#4 and/or TB#6

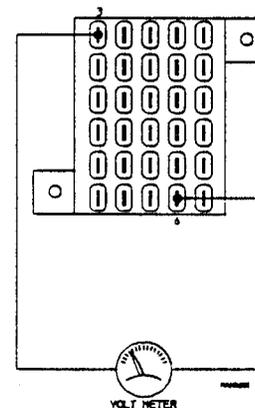


6. Check for voltage (\*) across TB#3 and TB#6

- A. If voltage is evident, problem is.....

1. Sail switch is not closing.....out of proper adjustment, exhaust restriction ..... check exhaust all the way to outside for obstruction.

NOTE: For models with a 3-phase motor, check rotation direction of impellor (fan) as noted on label at rear or dryer.



\* What your incoming voltage is.

2. Defective burner hi-limit. check for continuity. if no continuity hi-limit is defective.
3. Defective sail switch. check for continuity with switch pushed in if no continuity, sail switch is defective.
4. Break in wire or termination in sail switch/hi limit circuit some- where between TB#3 and TB#4.

B. If no voltage (\*) is evident, problem is.....

1. Defective 225 degrees thermostat in lint compartment. check for continuity. if no continuity thermostat is defective.

2. Break in wire or termination between TB#7 and TB#3

**| IMPORTANT: Discontinue power to dryer before checking for continuity**

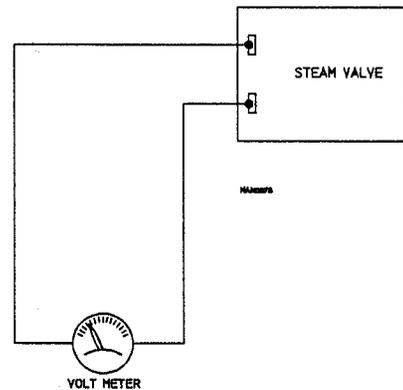
A. Check continuity of wire between sensor bracket and TB#7. If no continuity, problem is break in wire or termination.

B. Check continuity of wire between sensor bracket and TB#3. If no continuity, problem is break in wire or termination.

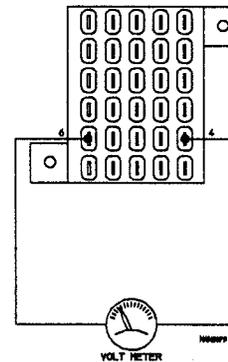
## B. NO HEAT CONDITION (STEAM MODELS)

The following procedure must be performed with the microprocessor controller in the normal operating mode, and the heat dot on. Your check for voltages should be 110v, 208v, or 230v unless otherwise specified.

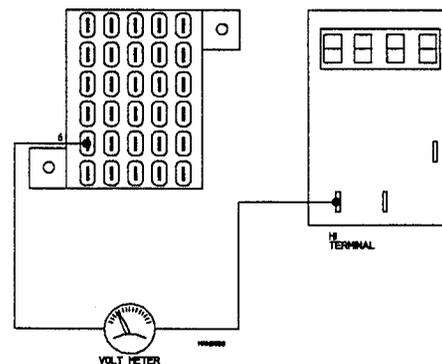
1. Check for voltage across the steam valve (motor, solenoid) (110v, 208v, 230v). If voltage replace steam valve otherwise continue. If checking for voltage on the damper type system. Check for 24Vac across the two black leads of the 3 position microvalve. If voltage replace the microvalve.



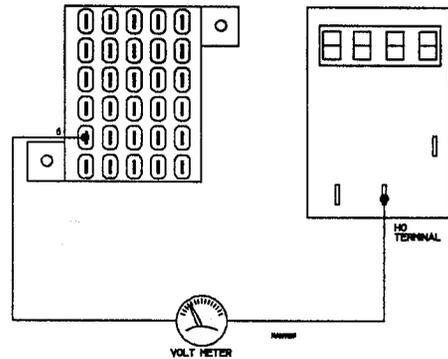
2. Check for voltage between terminal block or strip #4 and #6 (110v, 208v, 230v). If no voltage, replace protective thermostat under the basket on the temperature sensor bracket. If voltage continue.



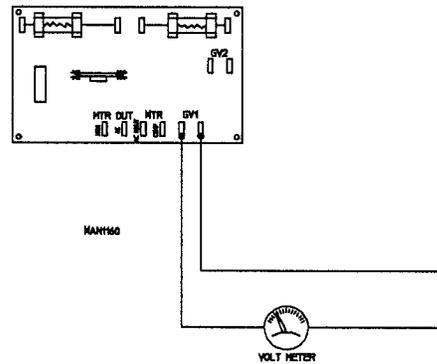
3. Check for voltage across the "HI" terminal on the computer board and terminal block or strip #6. If no voltage, replace wire from terminal block or strip #4 to HI terminal on computer. If voltage continue.



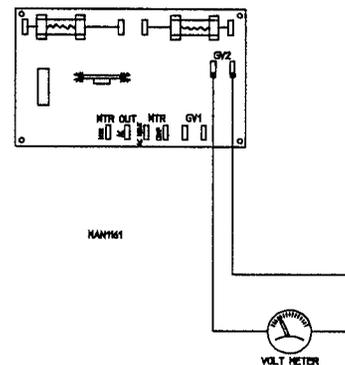
4. Check for voltage across the "HO" terminal on the computer and terminal block or strip #6. If no voltage computer is bad. If voltage continue.



5. Check for voltage across the two (2) GV1 terminals on the relay board. If no voltage, problem is bad wire or termination between terminal block or strip #6 and one of the GV1 terminals, or problem is the wire or termination between the other GV1 terminal and HO on the computer. If voltage continue.



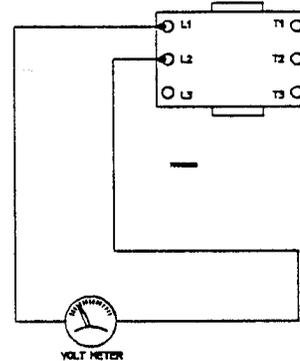
6. Check voltage on the two GV2 terminals on the relay board. If no voltage relay board is bad. If voltage replace the wire harness from the GV2 terminals to the steam valve.



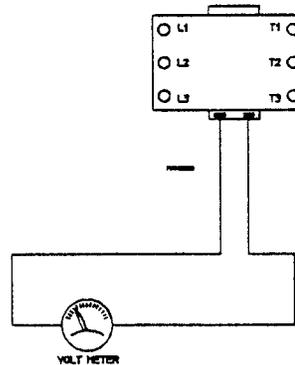
## C. NO HEAT CONDITION (ELECTRIC DRYERS)

The following procedure must be performed with the microprocessor controller display in the normal operating mode and the heat indicator dot is on. Your check for voltages should be 110v, 208v, or 230v unless otherwise specified.

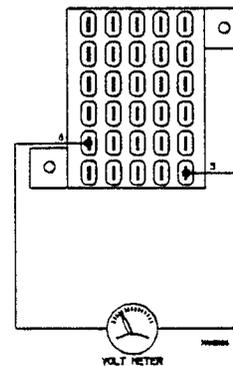
1. Check to see if voltage is present across the top of the oven contactor. If no voltage is present, problem is incoming voltage to machine. Check circuit breaker or protection fuses.



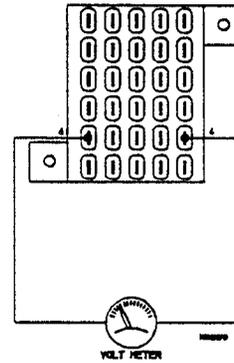
2. Check for voltage across the coil of oven contactor. If voltage is present replace the contactor. If no voltage continue.



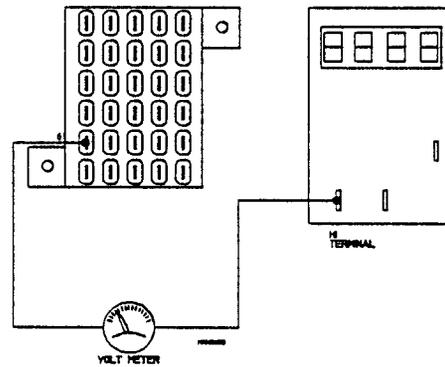
3. Check for voltage across terminal block #6 and #3. If voltage is present, thermostat is OK. If no voltage continue.



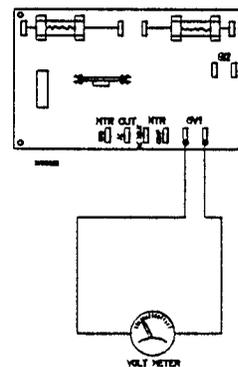
4. Check for voltage between #6 and #4. If voltage the sail switch is OK. In some cases the hi-limit is tied into circuit #6 and #4. If this is the case both the sail switch and hi-limit are OK. If no voltage at the above points the sail switch and/or its wiring and/or hi-limit (if hi-limit is tied into circuit) is bad. If voltage procede to step 6.



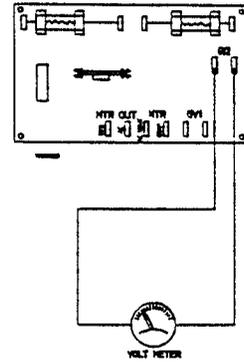
5. Check for voltage across the HI terminal on the computer and the terminal block #6. If no voltage, hi-limit and/or its wiring is bad. If voltage continue.



6. Check for voltage across the two (2) GV1 terminals on the relay board. If no voltage, replace computer board. If voltage continue.



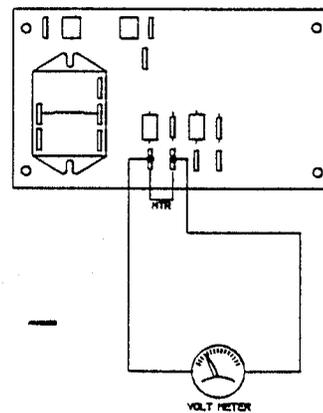
7. Check for voltage across the two (2) GV2 terminals on the relay board. If no voltage, replace relay board. If voltage, problem is the two (2) wires from the GV2 terminals down to the contactor coil.



## D. NO START CONDITION (MODELS WITH ELECTROMECHANICAL RELAYS ONLY)

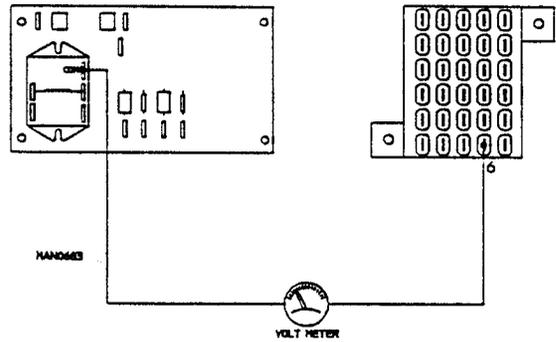
Follow this test procedure, providing that the microprocessor controller is functioning where the display is in the normal operating mode and the motor indicator dot is on.

1. Check for voltage (\*) across ASB MTR terminals if no voltage, proceed to step 5.

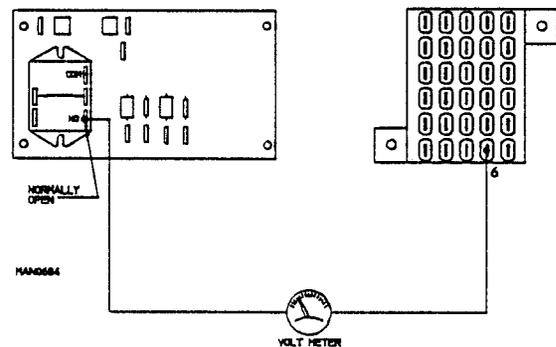


\* The voltage your machine is rated at. (110, 208, 240v)

2. Check for voltage (\*) across TB#6 and ASB motor relay "COM" (common) terminal if no voltage, problem is break in wire or termination between relay "COM" (common) terminal and TB#8.

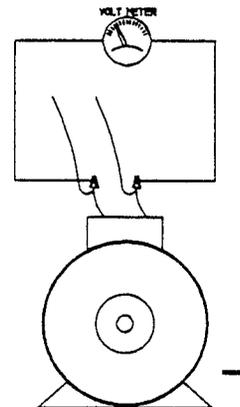


3. Check for voltage (\*) across TB#6 and ASB motor relay "NO" (normally open) terminal. If no voltage, problem is defective A.S. board.



4. Check for voltage (\*) at motor. If voltage, problem is defective motor. If no voltage, problem is a break in wiring or termination between motor and controls (A.S. board or L2/N connections)

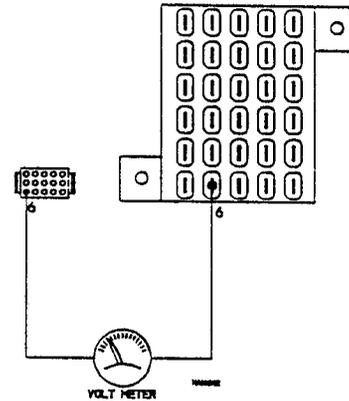
NOTE: For models with a 3 phase motor  
proceed to step 6.



5. Disconnect microprocessor 15-position connector from microprocessor controller and locate connector hole no. 6. Check for voltage across microprocessor 15-position connector hole no. 6 and TB#6.

A. If voltage is evident, problem is.....

1. Defective microprocessor or controller
2. Microprocessor 15-position connector terminal no. 6 and microprocessor controller pin terminal not mated properly.



3. Break in wire or termination between microprocessor 15-position connector terminal no. 15 and ASB MTR terminal or TB#6 and MTR terminal.

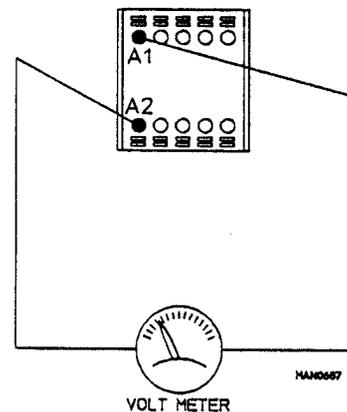
B. If no voltage, check for voltage across TB#6 and TB#5. If voltage is evident between TB#6 and TB#5, problem is break in wire or termination between microprocessor connector hole no.6 and TB#5. If voltage is not evident, refer to A.C. door switch circuit trouble shooting section.

6. Models with 3-phase motors only. Check for voltage across 3-phase contactor coil terminals.

A. If no voltage, problem is break in wiring terminations between controls (motor relay NO (normally open) terminal and L2)

B. If voltage is evident, and.....

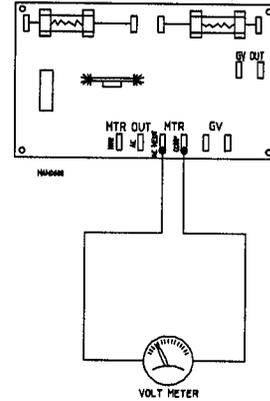
1. Contactor is not closing, problem is coil contactor
2. Contactor is closing, but no power out. problem is power line connections to contactor itself.



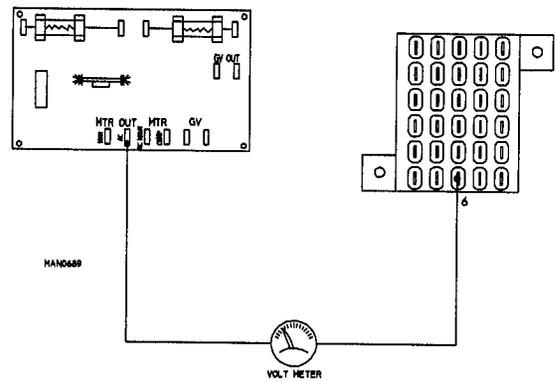
## E. NO START CONDITION (models with solid state relay boards only)

Follow this test procedure, providing that the microprocessor controller is functioning where the display is in the normal operating mode and the motor indicator dot is on.

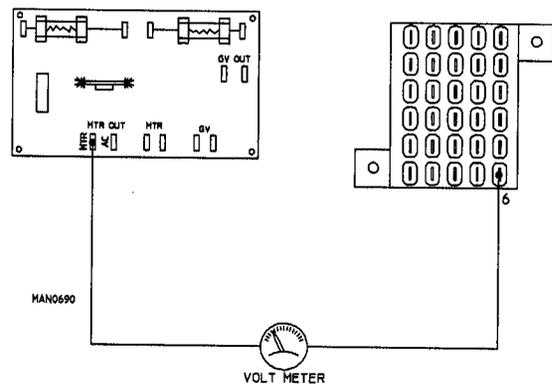
1. Check for voltage across SSR board MTR (AC, NEUT AND COMP) terminals. if no voltage, proceed to step 5.



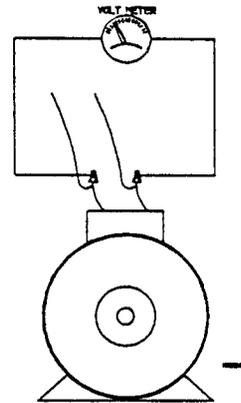
2. Check for voltage across TB#6 and SSR board MTR OUT AC HOT TERMINAL. If no voltage, problem is a break in the wire of termination between SSR board MTR AC HOT TERMINAL and TB#8.



3. Check for voltage across TB#6 and SSR BOARD MTR OUT MOTOR TERMINAL. If not voltage, problem is defective SSR board.



4. Check for voltage at motor. if voltage, problem is defective motor if not voltage, problem is break in wiring or termination between motor and controls (SSR board or L2/N connections.)



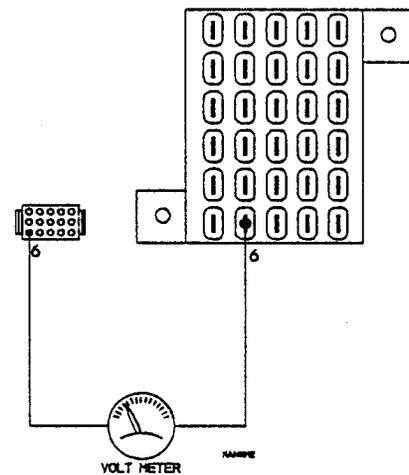
5. Disconnect microprocessor 15-position connector from microprocessor controller and locate connector hole no. 6. Check for voltage across microprocessor 15-position connector hole number 6 and TB#6.

A. If voltage is evident, problem is.....

1: Defective microprocessor or controller

2. MP 15-Position connector terminal no. 6 and microprocessor controller pin terminal not mated properly.

3. Break in wire or termination between microprocessor 15 position connector terminal no. 15 and SSR board MTR COMP. terminal or TB#6 and SSR board MTR AC neut terminal.



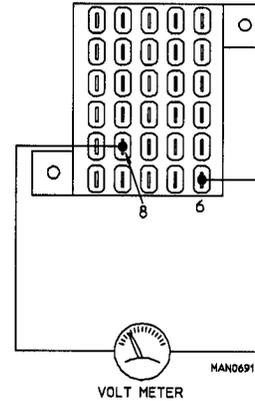
- B. If no voltage, check for voltage across TB#6 AND TB#5. If voltage is evident between TB#6 and TB#5, problem is break in wire or termination between microprocessor connector hole no. 6 and TB#5. If voltage is not evident, refer to A.C. door switch circuit trouble shooting section.

**IMPORTANT:** SSR boards cannot be used on models with 3 phase motors. For this application Electromechanical type relay boards are used.

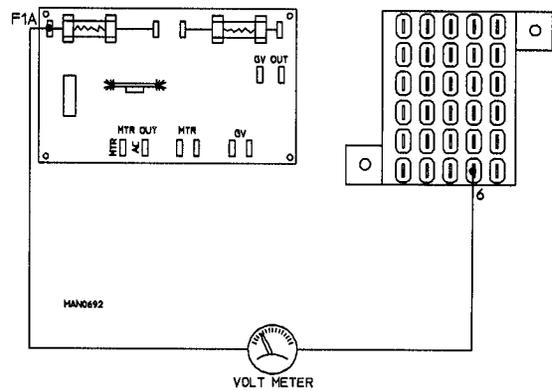
## E. NO DISPLAY CONDITIONS

1. Check power supply.

2. Check for voltage across TB#8 (L1) and TB#6 (L2 or N). If no voltage problem is break in wire or termination between TB and power supply.



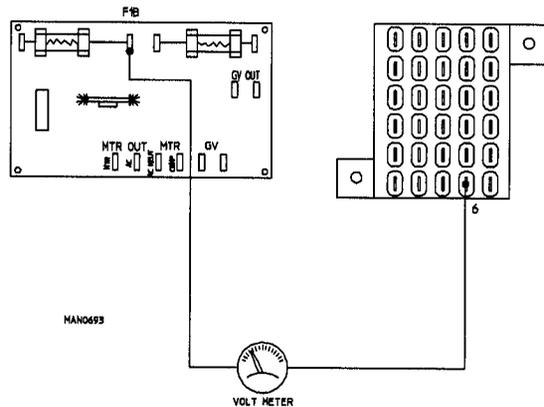
3. Check for voltage across SSR board F1A and TB#6. If no voltage problem is a break in wire or termination between SSR board and F1A and TB#8.



4. Check for voltage across SSR board F1B and TB#6. If no voltage, problem is.....

A. Blown fuse.

B. Defective SSR board (check for burn spots on underside or SSR board F1A and F1B area).

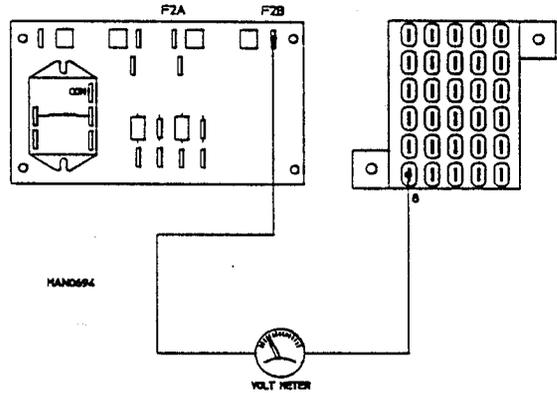


5. 208/230 volt control models only. For 115 volt models, proceed to step no. 6.

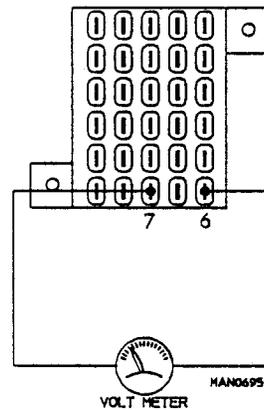
A. Check for voltage across SSR board F2A and TB#8. If no voltage, problem is break in wire or termination between SSR board F2A and TB#6.

B. Check for voltage across SSR board F2B and TB#8. If no voltage, problem is.....

1. Blown fuse
2. Defective SSR board (check for burn spots on underside of SSR board F2A and F2B area.)



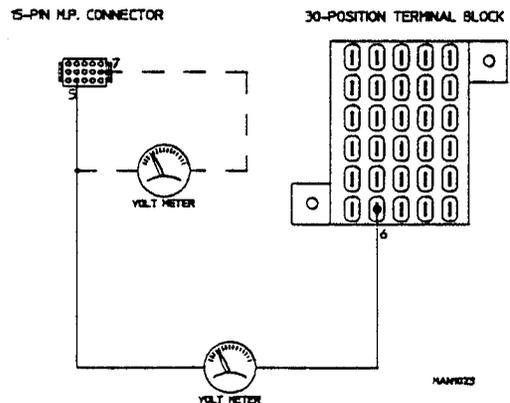
6. Check for voltage across TB#7 and TB#6. If no voltage, problem is break in wire or termination between SSR board F1B and TB#7.



7. Disconnect microprocessor 15-position connector and locate holes no. 5 and 7. check for voltage across holes no. 5 and 7.

A. If no voltage....

1. Check for voltage across microprocessor connector hole no. 5 and TB#6. If no voltage, problem is break in wire or termination between TB#7 and microprocessor connector hole no. 5.



2. Check for voltage across microprocessor connector hole no. 7 and TB#8. If no voltage problem is break in circuit (Wire or termination) between TB#6 and microprocessor connector hole no. 7.

B. If voltage is evident, problem is.....

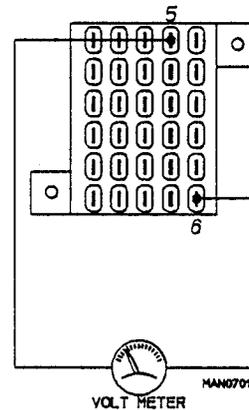
1. Microprocessor 15 position connector terminals and microprocessor controller terminals are no mated properly.
2. Defective microprocessor controller.

## G. AC DOOR SWITCH CIRCUIT

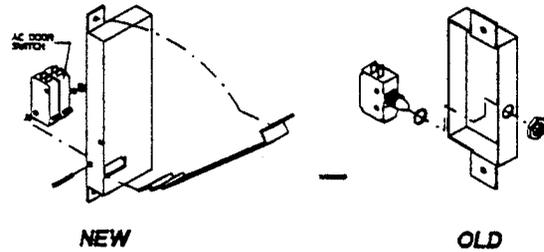
The following test procedure must be performed with the microprocessor controller display in the normal operating mode and the indicator dot (s) on, unless otherwise indicated.

1. Check for voltage across TB#6 and TB#5. If voltage is evident, door switch circuit (door switch and wiring) is okay, proceed to step no. 4.

Continued on next page.

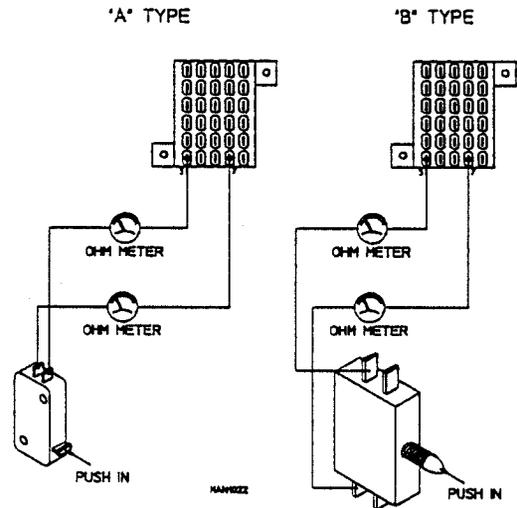


2. Discontinue power to dryer. Open main door and remove door switch box assembly from dryer front panel... do not disconnect wires from door switch (es). On the "Old" type switch, Locate A.C. door switch terminals common (COM) and normally open (NO). On the "New" type located the switch with the yellow wires going to it. With door switch plunger pushed in, check for continuity across these two (2) terminals. If no continuity, door switch is defective.



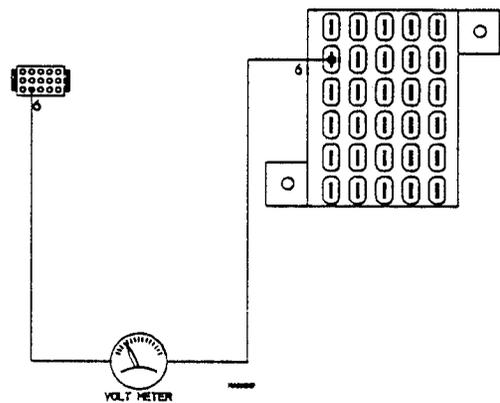
3. Check for continuity across each AC door switch terminal and the appropriate door switch wire to TB#5 and TB#7. If there is no continuity in any of these two (2) wires, problem is break in wire or termination.

**IMPORTANT:** When reassembling door switch box to front panel assembly, after pushing A.C. and D.C. door switch wires back into hole in front panel, pull slack up through hole in base of control box. Failure to do so may result in wires being damaged during normal operation of the dryer.



4. Disconnect and check voltage between microprocessor 15- position connector hole no. 6 and TB#6.

- A. If no voltage, problem is a break in wire or termination between microprocessor connector hole no. 6 and TB#5.
- B. IF Voltage Is Evident, Refer To "NO START CONDITION" in the trouble shooting section.

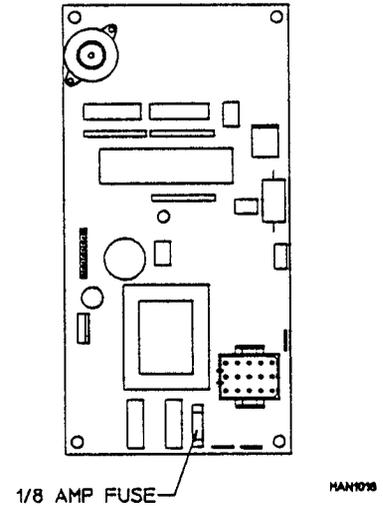


## H. "dSFL" DISPLAY CONDITION

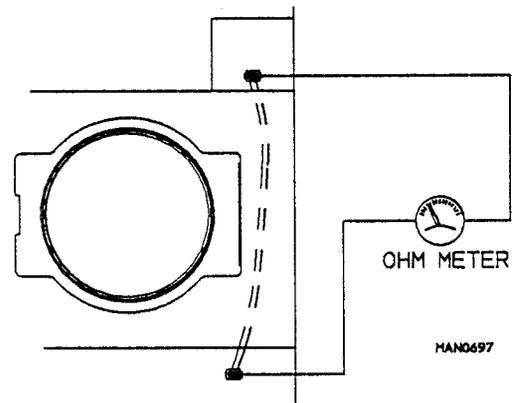
When the display reads "dSEL" this condition indicates a fault in the microprocessor controllers heat circuit. This circuit includes the microprocessor controller, microprocessor temperature sensor (located in lint compartment) and wires to and from these two (2) points.

1. Check to see if microprosser controller has 1/8 amp fuse on the board, if it does check with out ohm meter.  
If no continuity replace with ADC P/N: 136048.  
If no fuse on board continue.

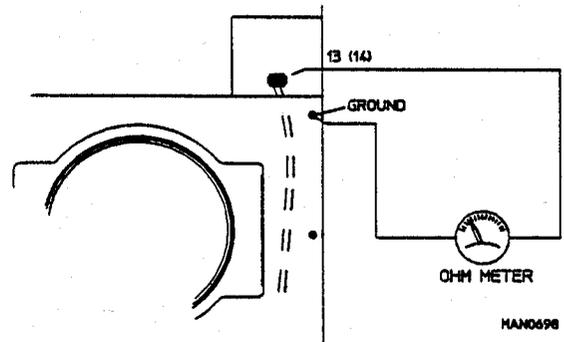
2. Check for loose connection at the microprocessor sensor bracket harness connector (located in lint compartment), and the microprocessor 15 position connector at the microprocessor controller.



3. Discontinue power to the dryer. Disconnect the microprocessor 15 position connector from microprocessor controller and locate connector holes no. 13 and 14. Disconnect sensor harness from sensor bracket assembly (locate in the lint compartment). Check for continuity across each wire from harness connector in lint compartment to appropriate microprocessor 15 position connector hole (13 and 14). If no continuity, problem is break in wire or termination.



4. Check for continuity across each microprocessor sensor wire (microprocessor 15-position connector hole no. 13 and 14) to ground. If continuity is evident, problem is wire pinched to ground somewhere behind the front panel area.



5. If above procedures check out okay, problem is.....

- A. Defective microprocessor temperature sensor
- B. Defective microprocessor controller.

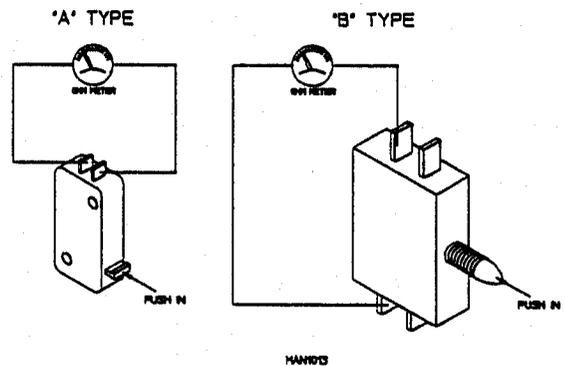
## I. "door" DISPLAY CONDITION

When the display reads "door," this indicates that there is a fault (open circuit) somewhere in the microprocessor controller's DC door switch circuit includes the door switch, microprocessor controller and the wires to and from these two points. Before following this test procedure, check the door switch to insure that:

- A. The door switch is adjusted properly where the plunger is being pushed in when the main door is closed.
- B. The door switch plunger is not damaged.

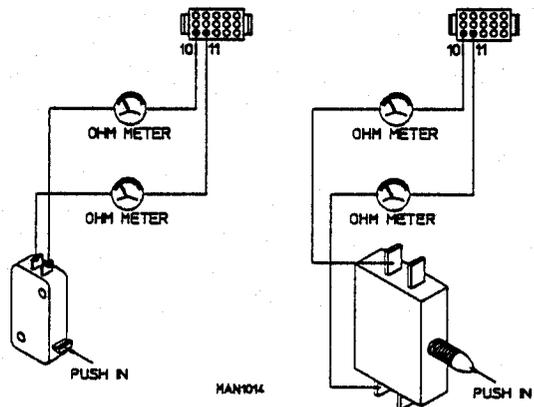
The following procedure must be performed with the power discontinued to the dryer.

1. Open main door and disassemble door switch box assembly from dryer. Do not disconnect wires to door switch. On the "B" type door switch push door switch plunger in and check for continuity across the "COM" (common) and "NO" (normally open) DC contacts (smaller terminals of the plunger type door switch) if no continuity door switch is defective. On the "A" type door switch locate the switch with the gray wires going to it. Check for continuity across those terminals, while you push in the actuator of the switch. If no continuity switch is defective.



2. Disconnect microprocessor 15-position connector from microprocessor controller and locate holes no. 10 and 11. Check for continuity across each D.C. door switch terminal and appropriate door switch wire to microprocessor 15-position connector holes no. 10 and 11. If no continuity, problem is break in wire or termination.

**NOTE:** Be sure to check the two in-line connectors in control box area for loose connection or termination.



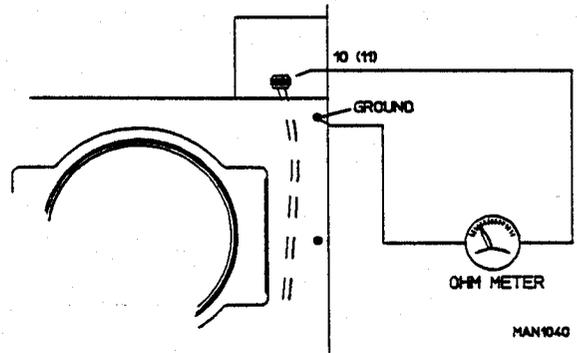
3. Check for continuity across each D.C. door switch wire to ground. If continuity, wire is pinched to ground somewhere behind front panel area.

4. If all the above procedures check out okay, problem is.....

A. Microprocessor 15-position connector terminals and microprocessor controller terminals are not mated properly.

B. Defective microprocessor controller.

**IMPORTANT:** When reassembling door switch box to front panel assembly after pushing A.C. and D.C. door switch wires back into hole in front of panel, pull slack up through hole in base of control box. Failure to do so may result in wires being damaged during normal operation of the dryer.

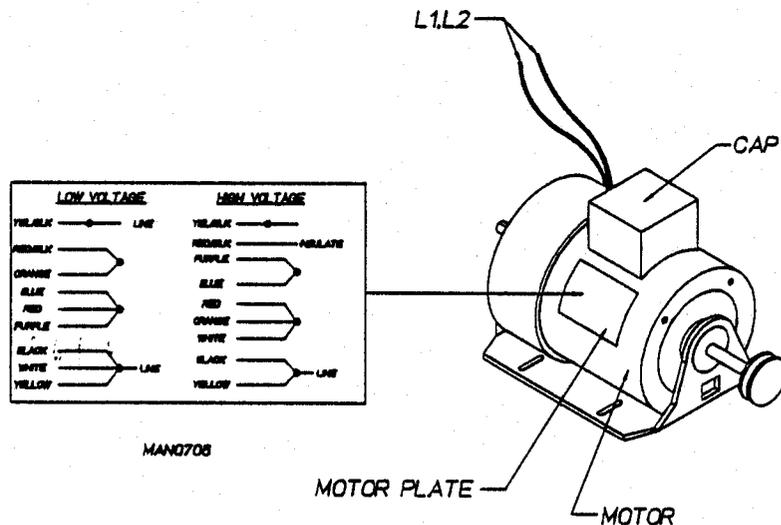


# SECTION VII

## TECHNICAL INFORMATION

The following section contains various technical information important to the servicing and maintaining of the dryer.

### A. MOTOR LABEL (LOW AND HIGH VOLTAGE)



The motor label is located on the side of the drive motor (see illustration) and contains a graphical representation of the motor wiring for both low voltage rating and high voltage rating.

Removing the cap reveals the wiring to the motor. The wires are color coded and correspond to the colors on the motor label. Depending on whether the dryer is operating on low voltage or high voltage the wiring should match the motor plate as follows:

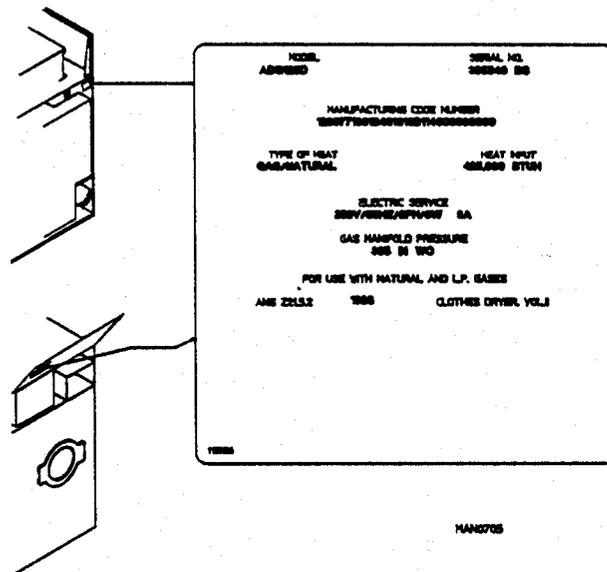
The Dots And Lines Represent Connections (See Illustration)

FOR EXAMPLE: ON LOW VOLTAGE — blue, red and purple are connected together  
 — yellow/black is connected to line voltage.

ON HIGH VOLTAGE — red, orange, and white are connected together  
 — red/black is insulated  
 — yellow/black is connected to line voltage.

### B. DATA LABEL

Contact American Dryer Corporation



When contacting American Dryer Corporation certain information is required to insure proper service/parts information from American Dryer. This information is on the data label located on the control door for models 24,27,285 and 75, and on the back of the dryer on all other models. When contacting American Dryer please have the model number and serial number handy.

#### THE DATA LABEL

1. MODEL NUMBER— The model number is an ADC number which describes the size of the dryer and the type of heat (gas or steam).
2. SERIAL NUMBER— The serial number allows ADC to gather information on your particular dryer.
3. MANUFACTURING CODE NUMBER— The manufacturing code number is a number issued by ADC which describes all possible options on your particular model.
4. TYPE OF HEAT— Describes the type of heat; gas (natural or L.P.) or steam or electric.
5. HEAT INPUT— (For gas dryers) describes the heat input in british thermal units.
6. ELECTRIC SERVICE— Describes the electric service for your particular models.
7. GAS MANIFOLD PRESSURE— Describes the manifold pressure as taken at the gas valve pressure tap. (see HOW TO USE A MANOMETER)

## C. USING A MANOMETER

### HOW TO USE A MANOMETER

1. With dryer in non-operating mode remove plug on the gas valve pressure tap.
2. Attach plastic tubing to pressure tap. (fitting is supplied with manometer see illustration.)
3. Attach manometer to dryer using magnet.

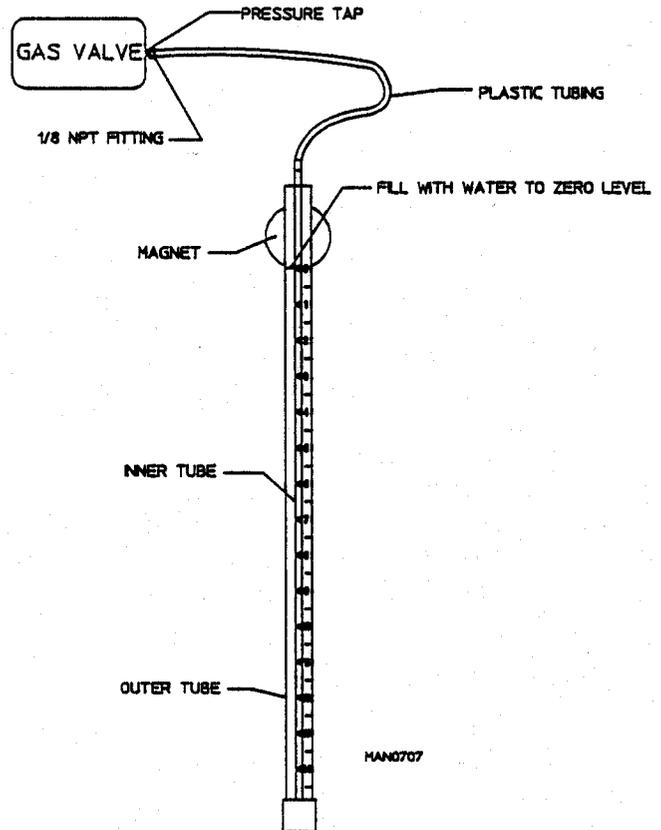
**NOTE:** Place manometer in a position so that readings can be taken at eye level.

4. Fill manometer as shown in illustration to the zero level.
5. Start dryer. With burner on take a reading.
  - A. Read water level at the inner tube. readings should be taken at eye level.

B. Correct readings should be:

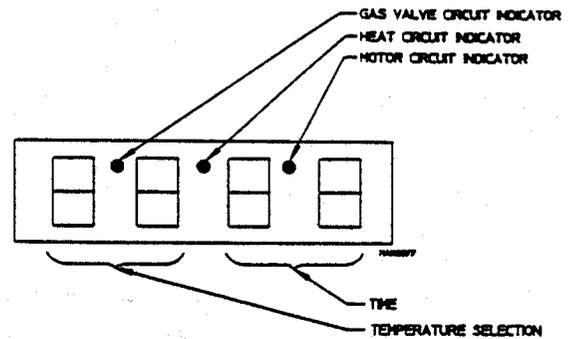
NATURAL GAS: 3.5 inches w.c.  
L.P. GAS: 11 inches w.c.

6. If water column pressure is incorrect refer to "TO ADJUST GAS PRESSURE"
7. Reverse procedure for removing manometer.



## D. L.E.D. DISPLAY CODES

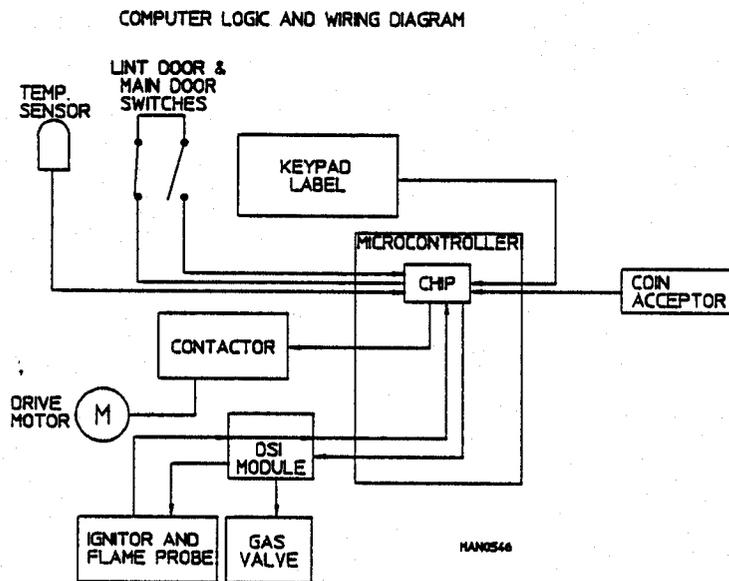
### L.E.D. DISPLAYS



ACOn	Accumulative Coin	LCC	Left Coin Count
Adrt	Maximum Auto Dryness Time	LCdE	Left Coin Denomination
AFAt	Amount for Additional Time	LOCd	Low Cool Down
AGt	Active Anti-wrinkle Guard Time	nBUZ	No Buzzer (Tone)
AtIn	Accumulative Time	nFLS	No Flash Display
AtSt	Amount to Start	nGRD	No Anti-wrinkle
AUto	Automatic Mode	OFF	Bad Coin Lockout Tripped
bCLO	Bad Coin Lockout	PL	Program Location
bCrS	Bad Coin Reset	PPCd	Perm Press Cool Down
bUZ	Buzzer (Tone)	PUSH	Amount to Start has been Inserted, Make Temperature Selection
°CEL	Degress in Celcius	rCC	Right Coin Count
CLCC	Clear Left Coin Count	rCdE	Right Coin Denomination
Coin	Coin Mode	tInE	Time Mode
CrCC	Clear Right Coin Count	tPLC	Time Per Left Coin
donE	Drying and cooling cycles complete or Dryer is in Anti-wrinkle Cycle		
door	Door Circuit is Open		
drYL	Dryness Level		
dSFL	Dryer Sensor Circuit Failure		
°FAr	Degress in Fahrenheit		
FILL	No cycle in progress		
FLS	Flash Display Active		
FrEE	Free Dry Mode		
GdLY	Anti-wrinkle Delay Time		
Gont	Anti-wrinkle On Time		
Grd	Anti-wrinkle Program Active		
HICd	High Cool Down		

## E. COMPUTER LOGIC AND WIRING DIAGRAM

1. Operator inserts coin.
2. Operator enters desired selection (s)...
3. Information Entered Is Sent To The Micro-Controller Via The Keyboard Ribbon.
4. The input information is sorted/processed and executed by the micro-computer chip.



5. The micro-computer output signal activates the contactors and DSI module which control machines functions.

**NOTE:** When contacting american dryer corporation with electrical questions, please have on hand the correct wiring diagram number for your particular machine.

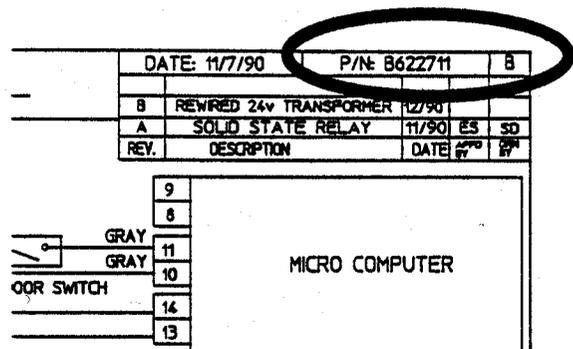
This number is located on the top right hand corner of the diagram. It is a six (6) digit number followed by a letter to distinguish the version dates (see illustration).

The wiring diagram on the next page is specifically for dryers manufactured at the time of publishing. Your particular model will be different depending on the date of manufacturing and options available.

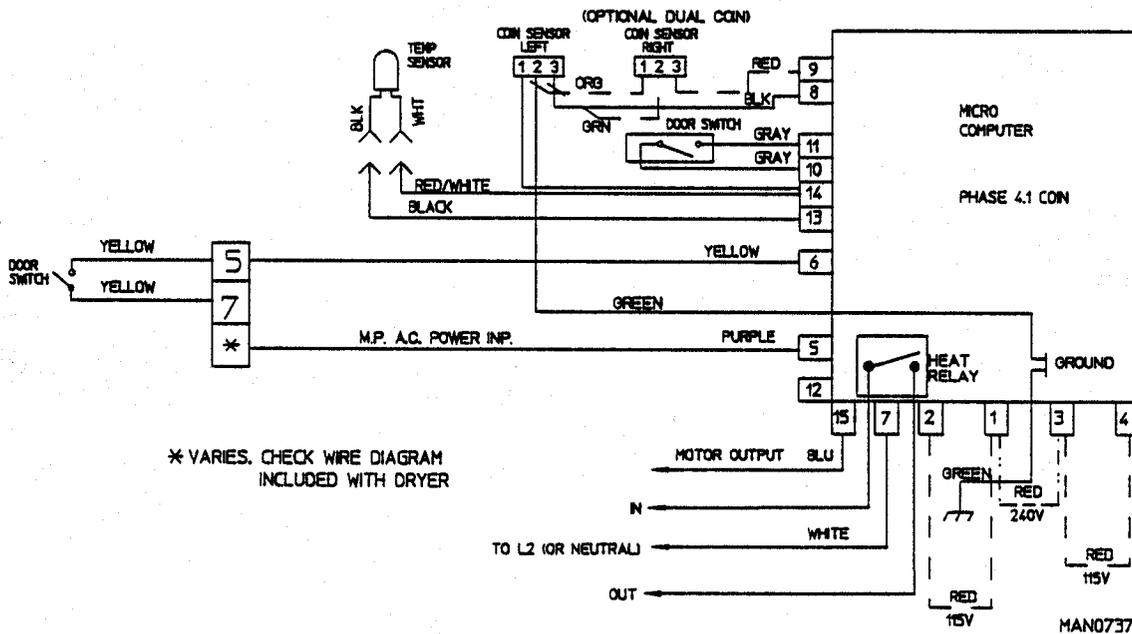
The correct wiring diagram and number is taped to the rear of the control door on each dryer.

Diagrams for this book are as follows:

- 531880A, B, C, D, E, F
- 531780A, B, C, D, E
- 532800A, B, C
- 431880A
- 571880A



PHASE 4.1 COIN CONTROLLER CIRCUITS



ADC 450109 1 - 12/31/92-50 2 - 04/23/93-100 3 - 10/26/93-200  
4 \* 06/30/94-200 5 \* 03/20/96-200

