



**Service Procedures  
for the  
Model 20/31 Dryers  
Electric and Hot Surface Ignitor Gas**

**American Dryer Corporation**  
88 Currant Road  
Fall River MA 02720-4781 USA  
Telephone: (508) 678-9000 / Fax: (508) 678-9447  
e-mail: techsupport@amdry.com

[www.amdry.com](http://www.amdry.com)

# Table of Contents

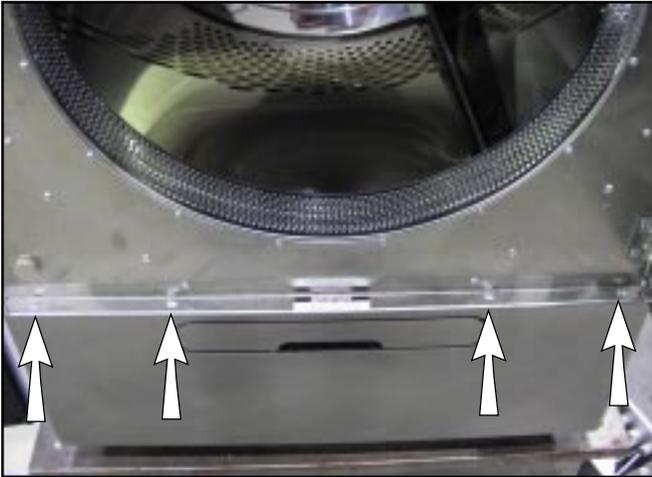
<b>Part Locations and Removal.....</b>	<b>3</b>
Lower Front Panel Removal .....	3
Upper Front Panel Removal .....	3
Top Cover Removal .....	3
Lint Box/Blower Assembly Removal .....	4
Gas Valve/Ignition System Removal .....	5
Oven Chamber Removal .....	5
Gas Valve/Ignition System Components .....	6
Oven Housing Components .....	6
Tumbler Support Wheel Assembly Replacement .....	6
Tumbler Alignment .....	7
Belt Replacement .....	6
Placing the Belt Back on the Motor Sheave .....	9
<b>Electrical Component Locations .....</b>	<b>10</b>
Electrical Panel .....	10
Fire Suppression System Items, Terminal Block, and Axial Temperature Probe .....	11
Sail Switch Assembly .....	11
Exhaust Probe, Exhaust Hi-Limit, and Lint Drawer Switch .....	11
Oven Contactor .....	11

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. The illustrations included in this manual may not depict your particular dryer **exactly**.

# Part Locations and Removal

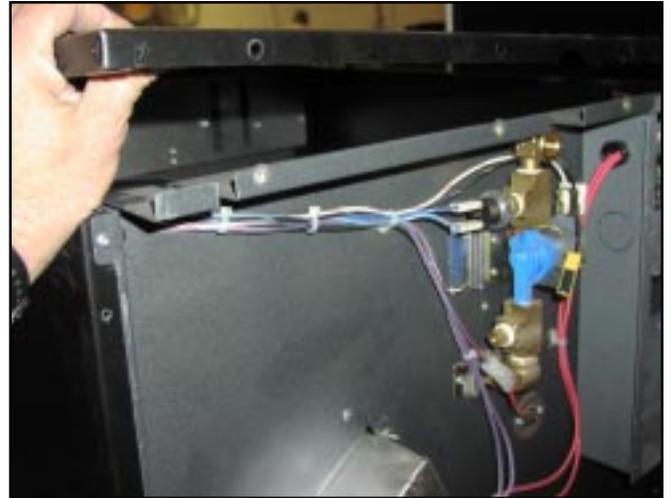
## LOWER FRONT PANEL REMOVAL:

Remove the lint drawer. Remove the four screws located just below the loading door. Tilt the top of the panel out and lift the panel up and away from the dryer.



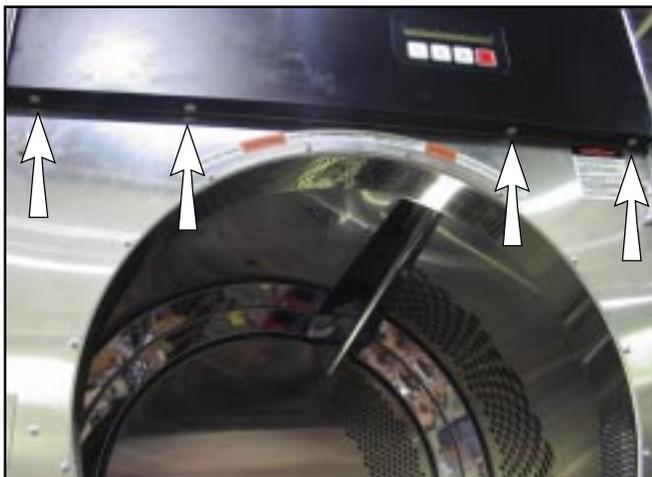
## TOP COVER REMOVAL:

First remove the back guard, then pull top cover toward the rear of the dryer and lift up.



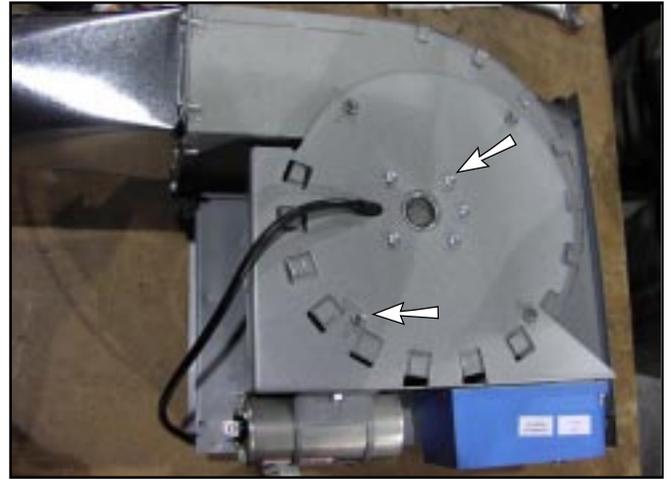
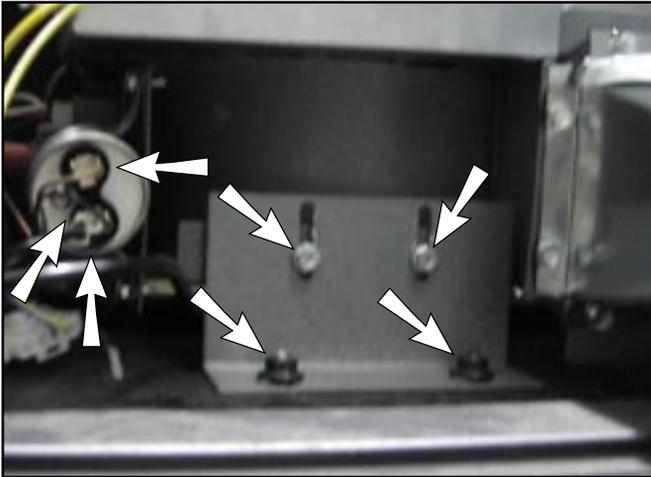
## UPPER FRONT PANEL REMOVAL:

Remove the four screws located just above the loading door. Tilt the bottom of the panel out and lift the panel up and away from the dryer.



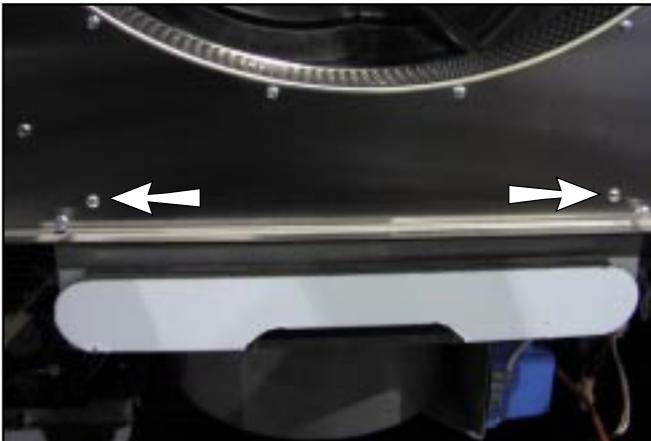
**LINT BOX/BLOWER ASSEMBLY REMOVAL:**

Remove screws and nuts at the rear of the lint box. Unplug wires from the capacitor.

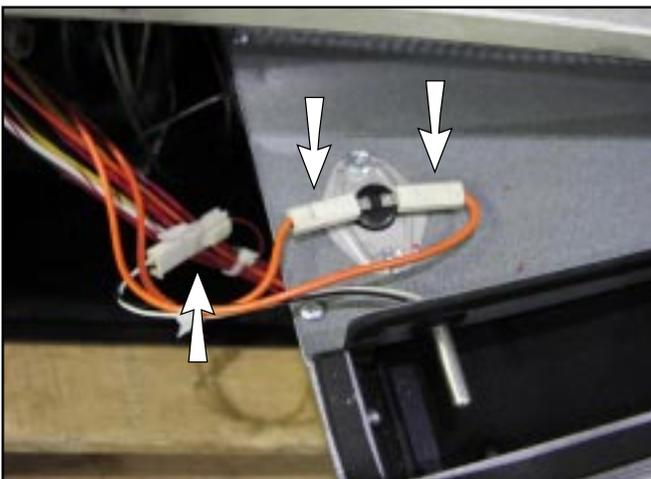


To remove motorized impellor assembly, remove the five screws and four nuts, shown with arrows. Remove cover and pull the motorized impellor assembly out through the opening.

Remove two screws just above the lint drawer and pull the lint box down from the front and out slightly.



Unplug three connections at the left of the lint box. The lint box may now be pulled out through the front of the dryer.



### **GAS VALVE/IGNITION SYSTEM REMOVAL:**

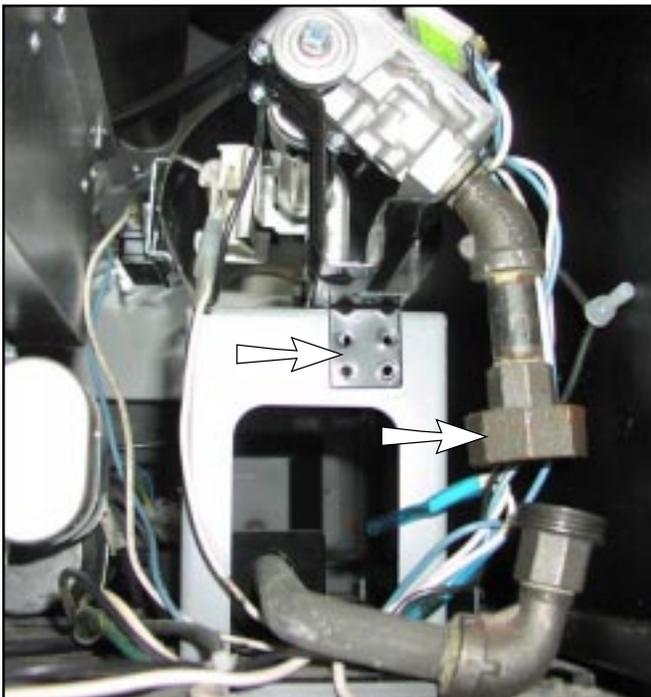
Be sure to shut off the gas main and then proceed to remove electrical connections and screws indicated. Remove lower front panel. Disconnect union and screws noted with arrows.

The gas valve and burner orifice can now be carefully pulled toward the front of the dryer.

Be sure to pull the assembly straight back so as not to strike the very fragile carbon ignitor. With the assembly partly out of the oven, the ignitor and the two gas valve electrical connections can be disconnected. At this point the assembly can be removed from the dryer.

Replace assembly in the reverse order but make sure the tab at the rear of the assembly engages into the oven base slot.

Inspect all wires to be sure all lead directly toward the front of the dryer. Be sure no wires are caught on the burner tube or ignitor.

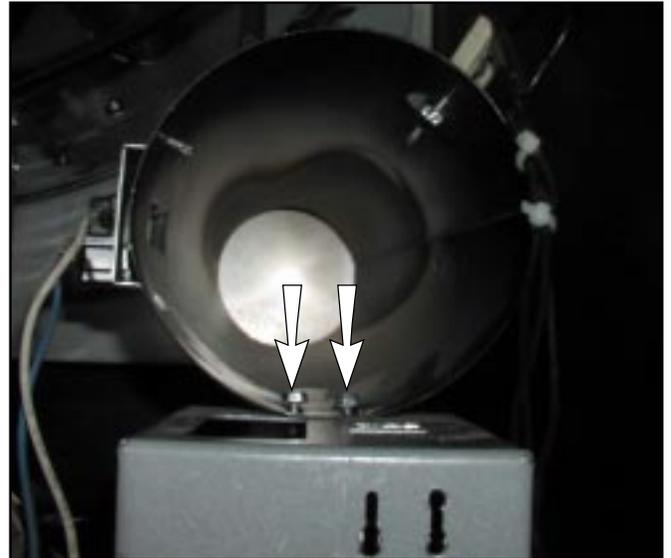


### **OVEN CHAMBER REMOVAL:**

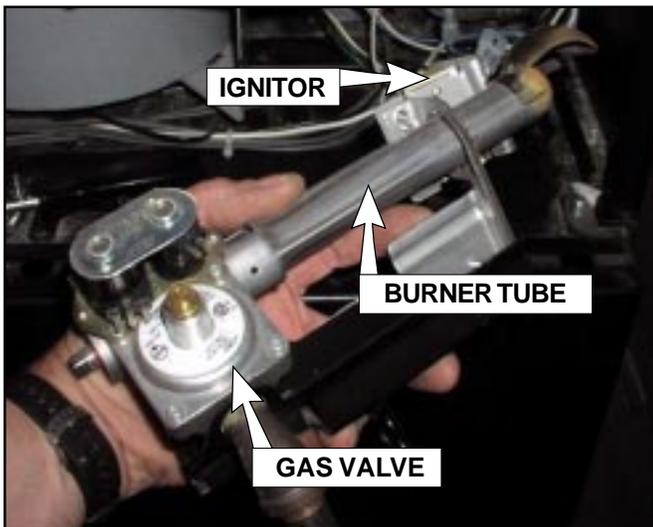
The oven chamber can be removed after the gas valve/ignition system has been removed.

Remove the two screws indicated by the arrows. Pull the oven housing part way out through the front and disconnect all wire connections. The oven housing can now be removed.

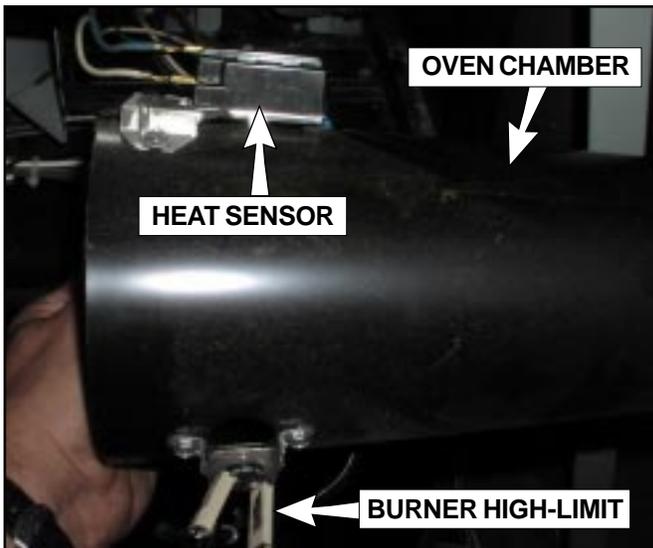
Replace assembly by leading the housing cone into the hole in the rear wall. Replace screws and wire connections.



## GAS VALVE/IGNITION SYSTEM COMPONENTS

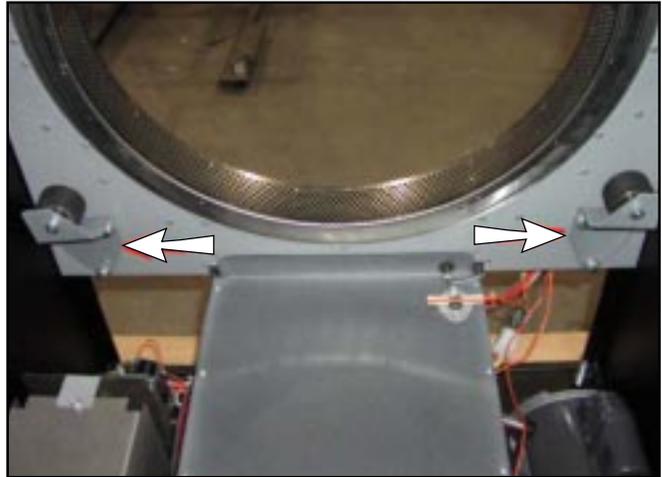


## OVEN HOUSING COMPONENTS



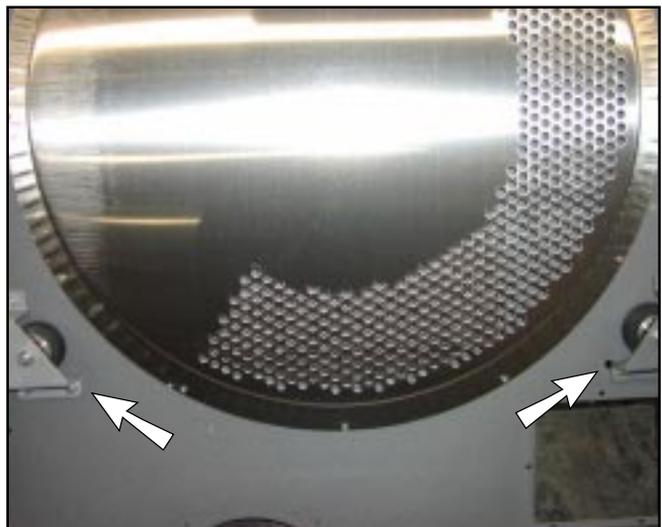
## TUMBLER SUPPORT WHEEL ASSEMBLY REPLACEMENT:

The front wheel assemblies can be replaced with the lower front panel removed. Remove the three bolts by reaching upward with a socket or box wrench. The illustration below is provided to show the location of these wheels as the wheels cannot easily be seen while standing in front of the dryer.



The left rear wheel assembly can be removed with just the back guard removed. The rear right wheel requires removing the back guard, heat duct, and oven. Be sure to mark the position of rear wheel brackets prior to removal (refer to **page 7**).

All wheel assemblies are mounted on slots to allow for alignment of the tumbler. After one or more wheel assemblies are replaced, the tumbler must be realigned.



## TUMBLER ALIGNMENT:

Proper alignment is achieved by making the gap between the tumbler and openings in the front and rear bulkheads equal on all sides.

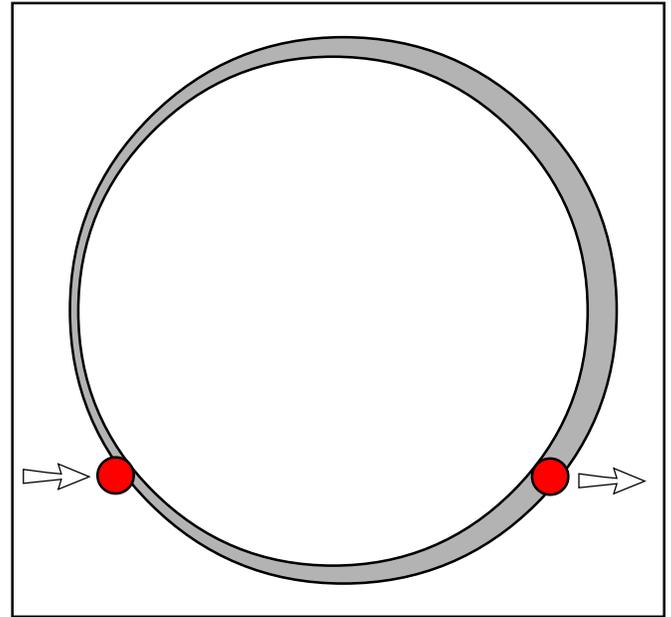
The front to bulkhead may be checked for accuracy by using a thickness gauge. The rear gap is not accessible. Marking the position of the rear wheel brackets before removing the brackets will help in replacing the tumbler back into it's original position when the wheel brackets are reinstalled.



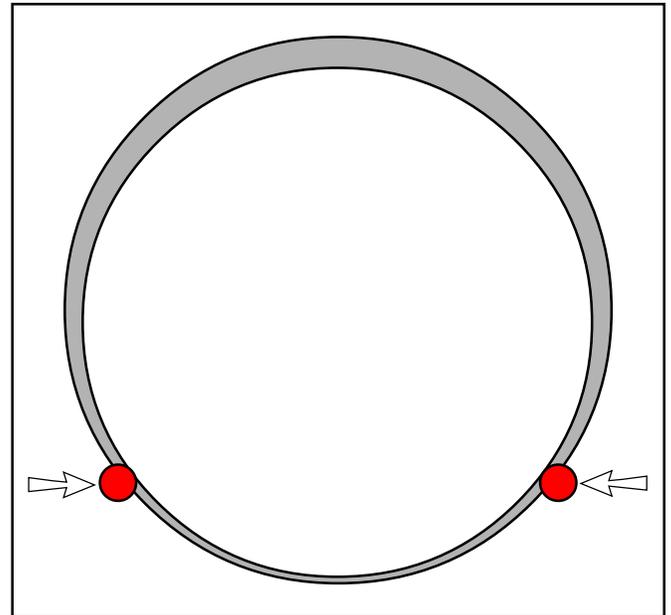
Adjust the tumbler position by loosening the three bolts and forcing the wheel assembly toward the center of the dryer to raise the tumbler and to move it away from the side. A large screwdriver can provide the necessary leverage. Adjustment of the front of the tumbler is made by equalizing the gap on the top, bottom, left and right by moving the wheel assemblies.

## EXAMPLES:

Below, both wheel assemblies must be moved to the right in order to move the tumbler right. The left wheel assembly must move a little more than the right in order to lift the tumbler.



Below, both wheel assemblies must be moved inward in order to move the tumbler straight upward.



## BELT REPLACEMENT

Shut off electrical power. Disconnect wiring leading to the tumbler support panel. Remove the back guard, top, and the exhaust support bracket. Unbolt and remove the thrust washers from the rear of the tumbler shaft. While someone holds the tumbler through the loading door remove all six screws from left and right side of the rear tumbler support panel. Spread the right and left side panels at the top and pull the tumbler support panel off of the dryer. Slip the new belt around the tumbler. Replace the rear tumbler support panel. To maneuver the rear tumbler support panel back into position the rear wheels must be slipped under the tumbler and the oven housing guided into the circular opening on the inner side of the tumbler support panel. Replace the six tumbler support panel screws. Apply a few drops of Loctite 290 to the thrust bearing bolt and bolt the thrust washers back onto the tumbler shaft in the order shown. Place the belt back on the motor sheave before replacing the exhaust support bracket, back guard, and top.



**Note**  
 A woodworker furniture clamp can be used through the loading door to hold the tumbler in place (refer to photo below). This will allow the above procedure to be completed by one person.



## PLACING THE BELT BACK ON THE MOTOR SHEAVE:

### REQUIRED ITEMS:

3 foot Section of 1-1/2" Electrical Tubing

Replacement Belt

To stretch the belt back onto the sheave involves using a two foot length of 1-1/2" electrical tubing (Fig. 1). Preparing the end of the tubing as shown makes it easier to use. Position the belt around the tumbler and directly above the motor sheave. Insert the tubing through the belt and onto the motor sheave (Fig. 2).



FIG. 1



FIG. 2



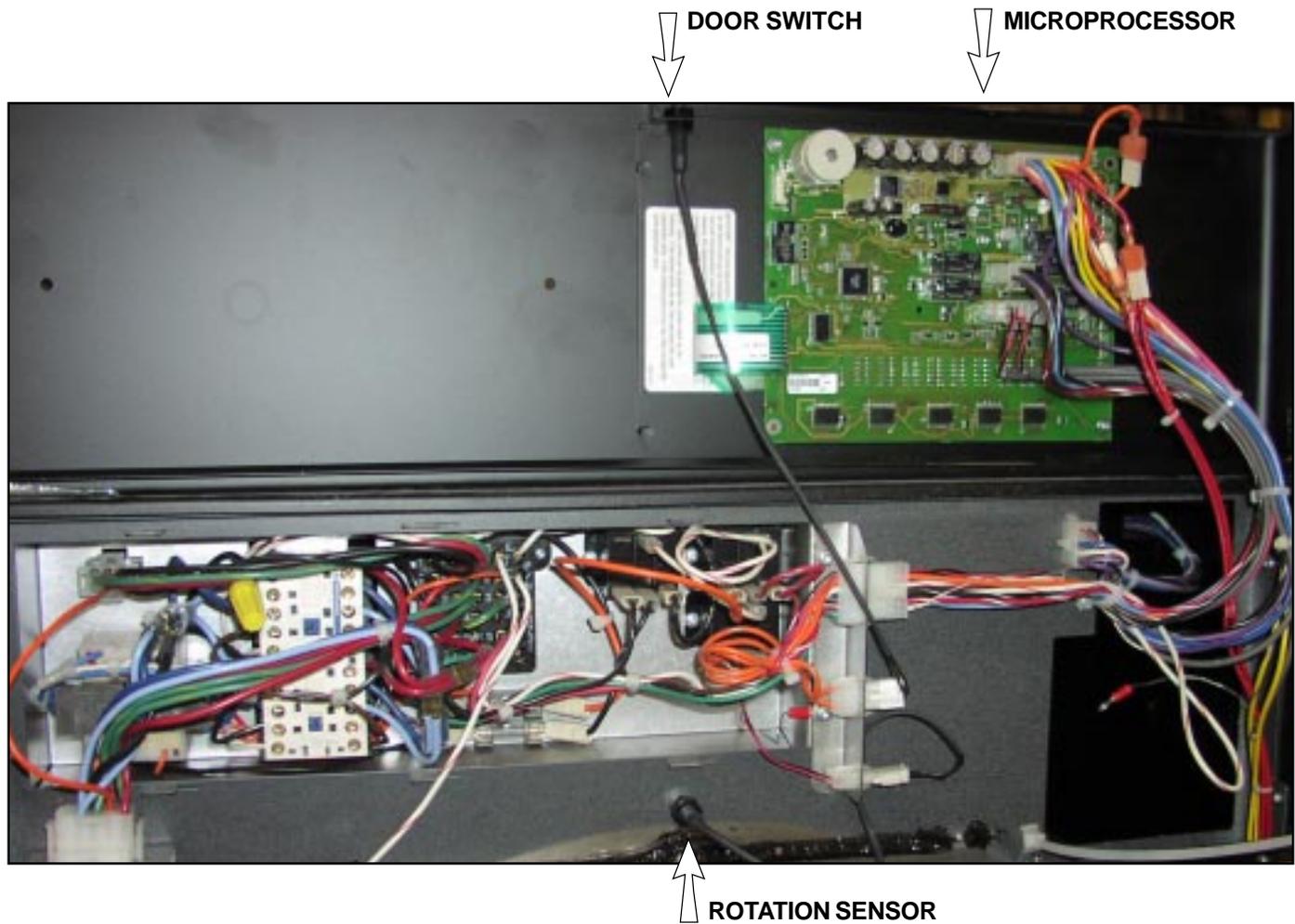
FIG. 3

While pushing the electrical tubing toward the motor, pull the end toward the bottom right corner (Fig. 3). From this position, rotate the tubing clockwise. The belt will move to a position over the motor sheave. Hold the belt against the motor (Fig. 3). Rotate the tubing one more revolution while pulling the tubing out. The belt should drop onto the motor sheave. Rotate the tumbler a few turns while manually preventing the belt from falling off the sheave. This should center the belt on the tumbler and prevent the belt from being thrown off later. Replace all dryer panels.

# Electrical Component Locations

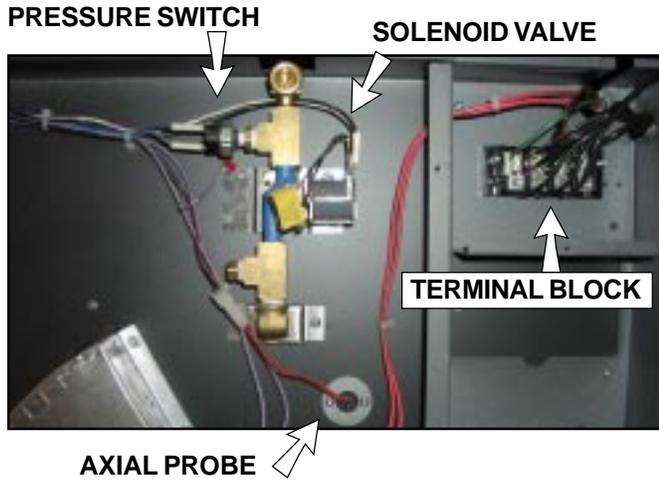
## ELECTRICAL PANEL:

The electrical panel is located behind the front upper panel.



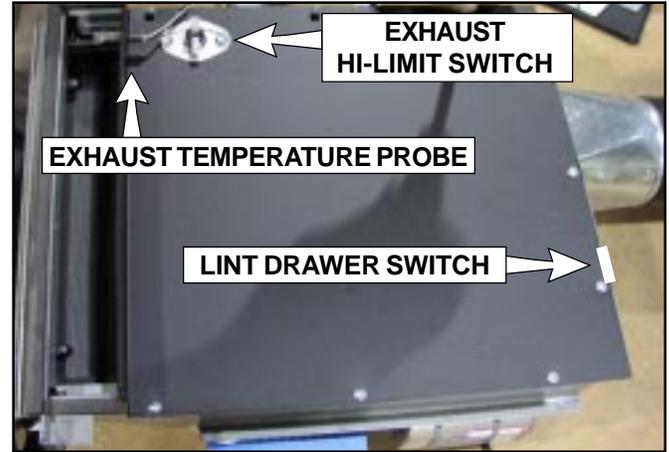
**FIRE SUPPRESSION SYSTEM ITEMS,  
TERMINAL BLOCK, AND AXIAL  
TEMPERATURE PROBE**

Located behind back guard.



**EXHAUST PROBE, EXHAUST HI-LIMIT,  
AND LINT DRAWER SWITCH:**

Temperature probe and exhaust hi-limit are accessible once the lint box is removed. The lint drawer switch can be removed after the cover has been removed.



**SAIL SWITCH ASSEMBLY**

Located behind back guard.



**OVEN CONTACTOR:**

Lower right front of the dryer (electric oven models).

