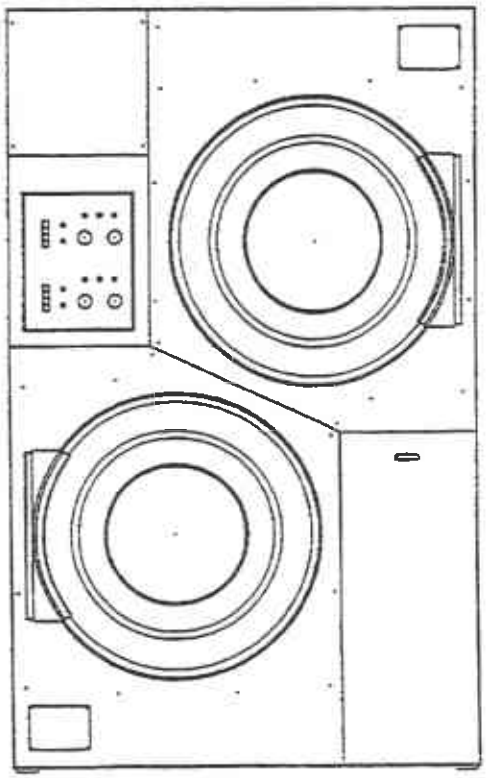
cissell
MANUFACTURING COMPANY

OWNER'S MANUAL

75 lb. Stack Laundry Dryer



MODELS

GAS

L36DRS36G
L36DSS36G

CISSELL MANUFACTURING COMPANY

HEADQUARTERS
631 SOUTH FIRST ST.
P.O. BOX 32270
LOUISVILLE, KY 40232-2270

PHONE: (502) 587-1292
PARTS EXPRESS: 1-800-882-6665
SALES & PARTS FAX: (502) 584-4070

THIS MANUAL MUST BE GIVEN TO THE EQUIPMENT OWNER.

MAN1075ST 5/99 1C WB

D0609

IMPORTANT NOTICES—PLEASE READ

For optimum efficiency and safety, we recommend that you read the Manual before operating the equipment. Store this manual in a file or binder and keep for future reference.

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 loss of life.

- Do not store or use gasoline or other flammable liquids or vapors in the vicinity of this or any other appliance.

- WHAT TO DO IF YOU SMELL GAS

- **Do not try to light any appliances.**
- **Do not touch any electrical switch; do not use any phone in your building.**
- **Clear the room, building, or area of all occupants.**
- **Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.**
- **If you cannot reach the gas supplier, call the fire department.**

Installation and service must be performed by a qualified installer, service agency or the gas supplier.

WARNING: In the event the user smells gas odor, instructions on what to do must be posted in a prominent location. This information can be obtained from the local gas supplier.

WARNING: Wear Safety Shoes to prevent injuries.

WARNING: Purchaser must post the following notice in a prominent location:

FOR YOUR SAFETY
Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

WARNING: A clothes dryer produces combustible lint and should be exhausted outside the building. The dryer and the area around the dryer should be kept free of lint.

WARNING: Be safe, before servicing machine, the main power should be shut off.

WARNING: To avoid fire hazard, do not dry articles containing foam rubber or similar texture materials. Do not put into this dryer flammable items such as baby bed mattresses, throw rugs,undergarments (brassieres, etc.) and other items which use rubber as padding or backing. Rubber easily oxidizes causing excessive heat and possible fire. These items should be air dried.

WARNING: Synthetic solvent fumes from drycleaning machines create acids when drawn through the dryer. These fumes cause rusting of painted parts, pitting of bright or plated parts, and completely removes the zinc from galvanized parts, such as the tumbler basket. If drycleaning machines are in the same area as the tumbler, the tumbler's make-up air must come from a source free of solvent fumes.

WARNING: Do not operate without guards in place.

WARNING: Check the lint trap often and clean as needed but at least a minimum of once per day.

WARNING: Alterations to equipment may not be carried out without consulting with the factory and only by a qualified engineer or technician. Only **Cissell** parts may be used.

WARNING: Remove clothes from dryer as soon as it stops. This keeps wrinkles from setting in and reduces the possibility of spontaneous combustion.

WARNING: Be Safe - shut main electrical power and gas supply off externally before attempting service.

WARNING: Never use drycleaning solvents, gasoline, kerosene, or other flammable liquids in the dryer. ***FIRE AND EXPLOSION WILL OCCUR. NEVER PUT FABRICS TREATED WITH THESE LIQUIDS INTO THE DRYER. NEVER USE THESE LIQUIDS NEAR THE DRYER..***

WARNING: Never let children play near or operate the dryer. Serious injury could occur if a child should crawl inside and the dryer is turned on.

WARNING: Never tumble fiberglass materials in the dryer unless the labels say they are machine dryable. Glass fibers break and can remain in the dryer. These fibers cause skin irritation if they become mixed with other fabrics.

WARNING: Before operating gas ignition system - purge air from Natural Gas or Propane Gas Lines per manufacturer's instructions..

CISSELL DRYER WARRANTY

The Cissell Manufacturing Company (Cissell) warrants all new equipment (and the original parts thereof) to be free from defects in material or workmanship for a period of two (2) years from the date of sale thereof to an original purchaser for use, except as hereinafter provided. With respect to non-durable parts normally requiring replacement in less than two (2) years due to normal wear and tear, and with respect to all new repair or replacement parts for Cissell equipment for which the two (2) year warranty period has expired, or for all new repair or replacement parts for equipment other than Cissell equipment, the warranty period is limited to ninety (90) days from date of sale. The warranty period on each new replacement part furnished by Cissell in fulfillment of the warranty on new equipment or parts shall be for the unexpired portion of the original warranty period on the part replaced.

With respect to electric motors, coin meters and other accessories furnished with the new equipment, but not manufactured by Cissell, the warranty is limited to that provided by the respective manufacturer.

Cissell's total liability arising out of the manufacture and sale of new equipment and parts, whether under the warranty or caused by Cissell's negligence or otherwise, shall be limited to Cissell repairing or replacing, at its option, any defective equipment or part returned f.o.b. Cissell's factory, transportation prepaid, within the applicable warranty period and found by Cissell to have been defective, and in no event shall Cissell be liable for damages of any kind, whether for any injury to persons or property or for any special or consequential damages. The liability of Cissell does not include furnishing (or paying for) any labor such as that required to service, remove or install; to diagnose troubles; to adjust, remove or replace defective equipment or a part; nor does it include any responsibility for transportation expense which is involved therein.

The warranty of Cissell is contingent upon installation and use of its equipment under normal operating conditions. The warranty is void on equipment or parts; that have been subjected to misuse, accident, or negligent damage; operated under loads, pressures, speeds, electrical connections, plumbing, or conditions other than those specified by Cissell; operated or repaired with other than genuine Cissell replacement parts; damaged by fire, flood, vandalism, or such other causes beyond the control of Cissell; altered or repaired in any way that effects the reliability or detracts from its performance, or; which have had the identification plate, or serial number, altered, defaced, or removed.

No defective equipment or part may be returned to Cissell for repair or replacement without prior written authorization from Cissell. Charges for unauthorized repairs will not be accepted or paid by Cissell.

CISSELL MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY, STATUTORY OR OTHERWISE, CONCERNING THE EQUIPMENT OR PARTS INCLUDING, WITHOUT LIMITATION, A WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, OR A WARRANTY OF MERCHANTABILITY. THE WARRANTIES GIVEN ABOVE ARE EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. CISSELL NEITHER ASSUMES, NOR AUTHORIZES ANY PERSON TO ASSUME FOR IT, ANY OTHER WARRANTY OR LIABILITY IN CONNECTION WITH THE MANUFACTURE, USE OR SALE OF ITS EQUIPMENT OR PARTS.

For warranty service, contact the Distributor from whom the Cissell equipment or part was purchased. If the Distributor cannot be reached, contact Cissell.

IDENTIFICATION NAMEPLATE

The Identification Nameplate is located on the rear wall of the dryer. It contains the dryer serial number, product number, model number, electrical specifications and other important data that may be needed when servicing and ordering parts, wiring diagrams, etc. Do not remove this nameplate.

TABLE OF CONTENTS
75 LB. STACK LAUNDRY DRYER

SYMBOLS

The following symbols are used in this manual and/or on the machine. The numbers between () refer to the numbers on the machine surveys.

Symbol	Description	Part/Measurement
	**NOTE!**	
	**Hot! Do Not Touch** **Heib! Nicht Beruhren** **Haute temperature! Ne pas toucher** **Caliente! no tocar** **Heet! Niet Aanraken**	
	**dangerous voltage** **tension dangereuse** **Gafahrliche elektrische Spannung** **tension peligrosa**	
	**on** **marche** **Ein** **conectado**	
	**off** **arrêt** **Aus** **desconectado**	
	**start** **demarrage** **Start** **arranque de un movimiento**	
	**emission of heat in general** **êmission de chaleur en general** **Warmeabgabe allgemein** **emisión de calor**	
	**cooling** **refroidissement** **Kuhlen** **enfriamiento**	

SYMBOLS

The following symbols are used in this manual and/or on the machine. The numbers between () refer to the numbers on the machine surveys.

Symbol	Description	Part/Measurement
	**rotation in two directions** **rotation dans les deux sens** **Drehbewigung in zwei Richtungen** **movimiento rotativo en los dos sentidos**	
	**direction of rotation** **sens de mouvement continu de rotation** **Drehbewegung in Pfeilrichtung** **movimiento giratorio o rotatorio** **en el sentido de la flecha**	
	**End of Cycle**	
	**caution** **attention** **Achtung** **atencion; precaucion**	

UNPACKING

All Cissell dryers are packed in a protective, heavy-duty bag.

Upon arrival of the equipment, any **damage** in shipment **should be reported** to the carrier **immediately**.

Upon selecting permanent location of a unit, **care should be taken in movement and placement of equipment**.

See outline clearance diagrams for correct dimensions.

Remove all packing material such as tape, manuals, skids, etc. Install vent on Gear Reducers.

Leveling: Use spirit level on top of dryer. Adjust leveling bolts on dryer (see *adjustable leveling bolts* in *maintenance section*).

Check voltage and amperes on Rating Plate before installing the dryer.

GENERAL INSTALLATION FOR ALL DRYERS

The construction of Cissell dryers permits installation side-by-side to save space or to provide a wall arrangement. Position dryer for the least amount of exhaust piping and elbows, and **allow free access to the rear of the dryer for future servicing** of belts, pulleys, and motors. Installation clearance from all combustible material is
0" ceiling clearance, 0" left side clearance, 0" right side clearance, and 6" from duct in rear.

Before operating dryer, open basket door and remove blocking between front panel and basket. Read the instruction tags, owner's manual, warnings, etc.

IMPORTANT

- Opening the *clothes loading door* deactivates the door switch to shut off the basket, motor, and gas.
- To restart the dryer, close the door and press in the *push to start button* for approximately 2 seconds.

GENERAL INSTALLATION FOR ALL DRYERS

IMPORTANT

- This dryer is designed for a maximum capacity of 75 lbs. dry weight per pocket.
- Overloading it will result in long drying times and damp spots on some clothes.

IMPORTANT

- Maximum operating efficiency is dependent upon proper air circulation.
- The lint screen must be kept clean daily to insure proper air circulation throughout the dryer.

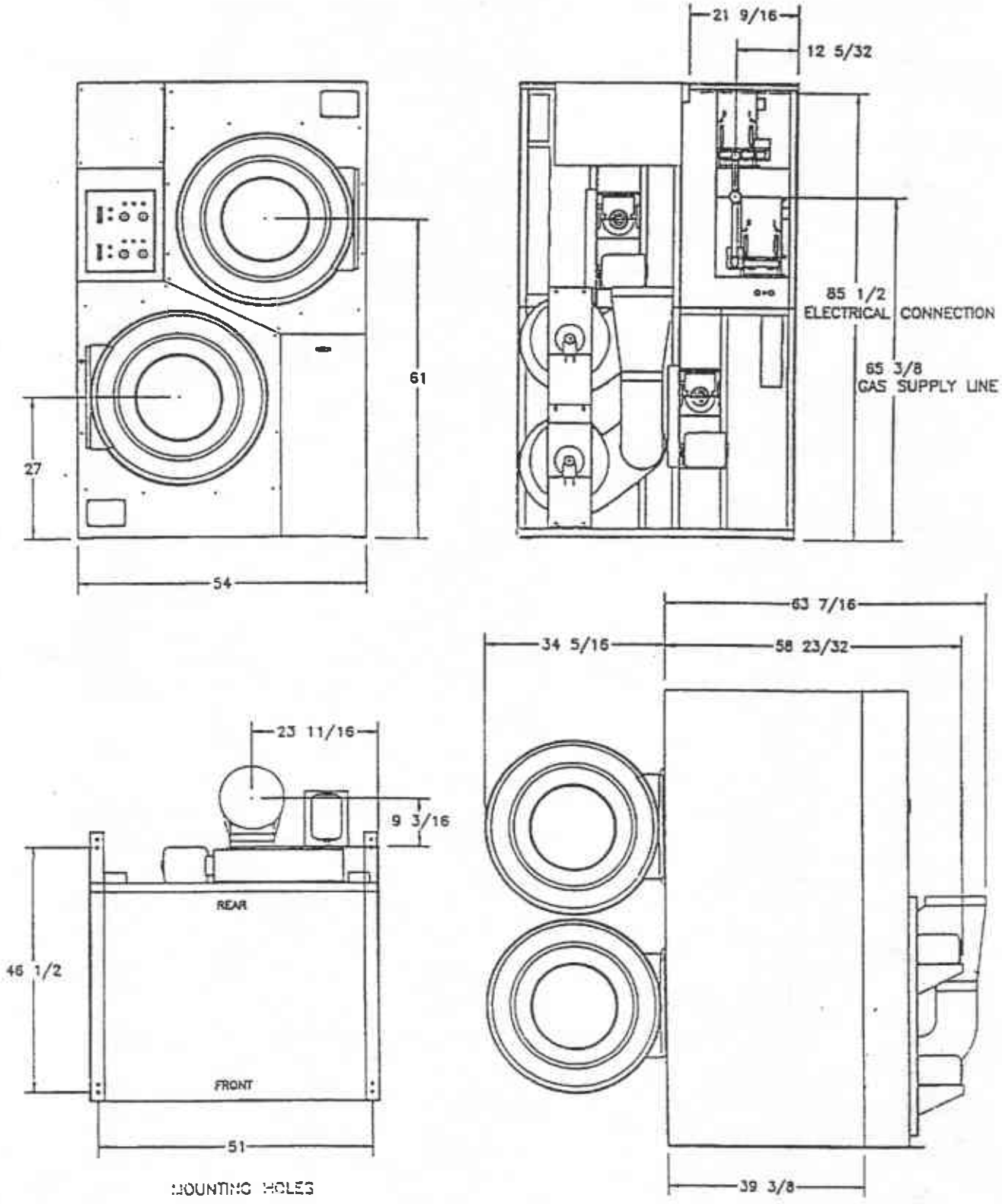
IMPORTANT

- This dryer is equipped with basket reversing switches.
- The switch gives the operator the option of a reversing or non-reversing basket.

IMPORTANT

- Provide adequate clearance for air opening into the combustion chamber, at rear of dryer.

75 lb. STACK DRYER Outline Dimensions



GENERAL SPECIFICATIONS FOR 75 lb. STACK LAUNDRY DRYERS

Basket Load Capacity	75 lbs. (34.0 kg) Dryweight per pocket
Floor Space	87.5" (223 cm) H x 54" (137 cm) W x 63 1/2" (161 cm) Deep
Basket Size	36" (92 cm) Diameter x 36" Deep—21 cu. ft. (0.63 M^3)
Exhaust Duct	12" Diameter (30.48 cm)
Motor Sizes	Fan—1/3 HP; Basket—1 HP
Maximum Air Displacement	2000 CFM (56.63 M^3/Min.) total (both pockets)
Recommended Operating Range	1576-1826 CFM (44.63 - 51.71 M^3/Min.) total (both pockets)
Net Weight (approx.)	1450 lbs. (659 Kg.)
Domestic Shipping Weight (carton)	1980 lbs. (900 Kg.)
Export Shipping Weight (box)	2200 lbs. (1000 Kg.)
Export Shipping Dimensions	93" l (236 cm) x 57" W (145 cm) x 76" H (193 cm)
Export Crating	233 cu. ft. (6.6 M^3)
Basket RPM	Reversing—40 (3.2 reversals per minute) Non-Reversing—40

GAS FIRED MODEL

Gas Supply	1" Pipe Connection (1.91 cm)
Gas Pressure Regulator (Natural Gas)	Set at 3.5" Water Column (8.9 cm)
BTU Input (4 burners)	360,000 BTU/HR (180,000 per pocket) (Natural Gas) 360,000 BTU/HR (180,000 per pocket) (LP Gases)
Electronic Ignition	Hot Surface Ignition **or** Direct Spark Ignition
Drying Time (approx.)	75 lbs. Dryweight per pocket (Indian Head Cloth) 70% Moisture Retention—32 minutes

MOTOR LIST—DOUBLE MOTOR MODELS

Motor No.	Voltage	Hz.	Phase	Basket/Fan	HP	Amps	RPM
MTR212	200/230/460	60	3	B	1	3.8/1.9	1725
MTR104	240/415	50	3	B	1	3.1/1.8	1425
MTR104	220/380	50	3	B	3/4	2.6/1.5	1425
MTR104	220/380	60	3	B	3/4	2.4/1.4	1725
MTR104	200/346	50	3	B	3/4	2.6/1.5	1425
MTR101	575	60	3	B/F	1	1.7	1725
MTR218	208/230/460	60	3	F	1/3	1.6/.80	1725
MTR184	240/415	50	3	F	1/3	1.6/.9	1425
MTR187	220/380	50	3	F	1/3	1.6/.91	1425
MTR187	220/380	60	3	F	1/3	1.5/.80	1725
MTR187	200/346	50	3	F	1/3	1.5/.80	1425

GENERAL INFORMATION

The Cissell Dryer is so designed that when an operator opens the dryer door, the basket stops. You can expect fast drying from a Cissell Laundry Dryer. Hot, dry air is properly and effectively moved through the basket and exhausted through a lint trap to the atmosphere. The Cissell Dryer comes equipped with an inclined, self-cleaning lint screen. In this system, lint accumulates on the underside of the screen until a blanket approximately 1/4" thick is formed. This blanket of lint will fall from the screen to the bottom of the dryer cabinet and should be removed daily, or as required, to prevent an over accumulation.

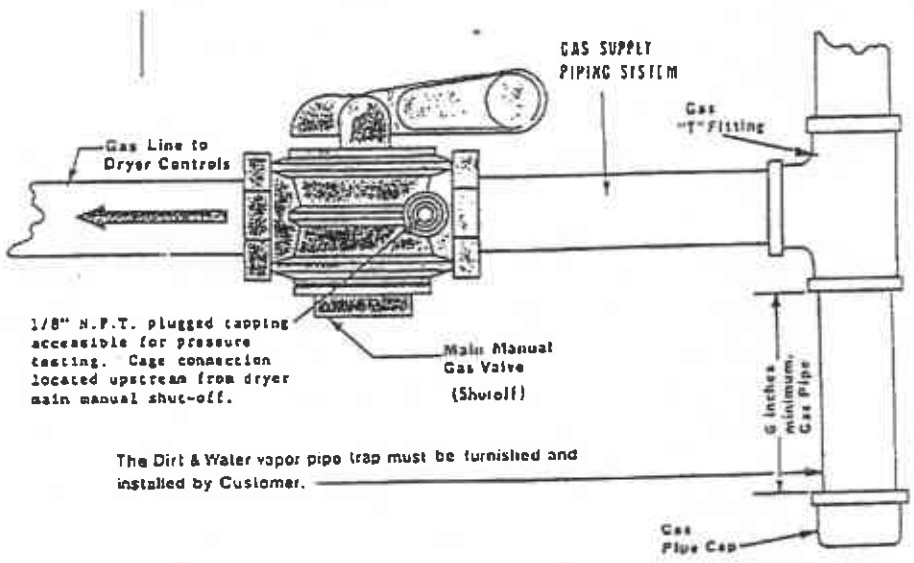
ELECTRICAL CONNECTIONS

Dryers must be electrically grounded by a separate #14 or larger green wire from the **grounding** terminal within the service connection box to a cold water pipe, or through the fourth green wire properly **grounded** and connected to the **grounding terminal. In all cases, the grounding method must comply with local electrical code requirements; or in the absence of local codes, with the National Electrical Code as ANSI/NFPA 70—(Latest Edition).**

See wiring diagram furnished with dryer. Your Cissell Dryer is completely wired at the factory and it is only necessary for the electrician to connect the power leads to the wire connectors within the service connection box on the rear of the dryer. **Do not change wiring without consulting factory as you may void the factory warranty. Do not connect the dryer to any voltage or current other than that specified on the dryer rating plate.** (Wiring diagram is located on rear wall of dryer.)

Gas Pipe Size Chart

TOTAL BTU/HR (for LP Gas correct total BTU/HR below by multiplying by .6)	TOTAL KCAL HOUR	GAS PIPE SIZE FOR 1000 BTU (250 KCAL) NATURAL GAS AT 7" (17.8 CM) W.C. PRESSURE In figuring total length of pipe, make allowance for tees and elbows.					
		(25 ft.) 7,62 m	(50 ft.) 15,24 m	(75 ft.) 22,86 m	(100 ft.) 30,48 m	(125 ft.) 38,1 m	(150 ft.) 45,72 m
60,000	15000	3/4	3/4	3/4	3/4	3/4	3/4
80,000	20000	3/4	3/4	3/4	1	1	1
100,000	25200	3/4	3/4	1	1	1	1
120,000	30200	3/4	1	1	1	1	1
140,000	35200	3/4	1	1	1	1	1 1/4
160,000	40300	3/4	1	1	1 1/4	1 1/4	1 1/4
180,000	45300	1	1	1	1 1/4	1 1/4	1 1/4
200,000	50400	1	1	1 1/4	1 1/4	1 1/4	1 1/2
300,000	75600	1	1 1/4	1 1/4	1 1/2	1 1/2	1 1/2
400,000	100800	1 1/4	1 1/4	1 1/2	1 1/2	1 1/2	2
500,000	126000	1 1/4	1 1/2	1 1/2	2	2	2
600,000	151200	1 1/2	1 1/2	2	2	2	2
700,000	176400	1 1/2	2	2	2	2	2 1/2
800,000	202000	1 1/2	2	2	2	2 1/2	2 1/2
900,000	230000	2	2	2	2 1/2	2 1/2	2 1/2
1,000,000	250000	2	2	2	2 1/2	2 1/2	2 1/2
1,100,000	270000	2	2	2 1/2	2 1/2	2 1/2	2 1/2
1,200,000	300000	2	2	2 1/2	2 1/2	2 1/2	2 1/2
1,300,000	330000	2	2 1/2	2 1/2	2 1/2	2 1/2	3
1,400,000	350000	2	2 1/2	2 1/2	2 1/2	3	3
1,500,000	380000	2	2 1/2	2 1/2	2 1/2	3	3
1,600,000	400000	2	2 1/2	2 1/2	3	3	3
1,700,000	430000	2	2 1/2	2 1/2	3	3	3
1,800,000	450000	2 1/2	2 1/2	3	3	3	3
1,900,000	480000	2 1/2	2 1/2	3	3	3	3
2,000,000	504000	2 1/2	2 1/2	3	3	3	3 1/2
2,200,000	550000	2 1/2	3	3	3	3 1/2	3 1/2
2,400,000	605000	2 1/2	3	3	3	3 1/2	3 1/2
2,600,000	650000	2 1/2	3	3	3 1/2	3 1/2	3 1/2
2,800,000	705000	2 1/2	3	3	3 1/2	3 1/2	3 1/2
3,000,000	750000	2 1/2	3	3 1/2	3 1/2	3 1/2	4
3,200,000	806000	3	3	3 1/2	3 1/2	3 1/2	4
3,400,000	850000	3	3 1/2	3 1/2	3 1/2	4	4
3,600,000	907000	3	3 1/2	3 1/2	3 1/2	4	4
3,800,000	960000	3	3 1/2	3 1/2	4	4	4
4,000,000	1000000	3	3 1/2	3 1/2	4	4	4



GAS PIPING

Check gas rating plate for type of gas to equip the dryer.

Check for altitude elevation of the dryer.

Check utility for proper installation of gas supply line and gas pressure.

NATURAL GAS ONLY

NATURAL GAS ONLY
Check the gas pressure inlet supply to dryer, 11 inches Water Column Pressure maximum. Check the manifold pressure, 3.5 inches Water Column Pressure (Natural Gas).

LP GAS ONLY

LP GAS ONLY
11 inches Water Column Pressure maximum.

CAUTION: Low gas pressure and intermittent gas will cause gas ignition problems. This will cause inadequate drying of the clothes load.

The dryer and its individual shut-off valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 PSIG.

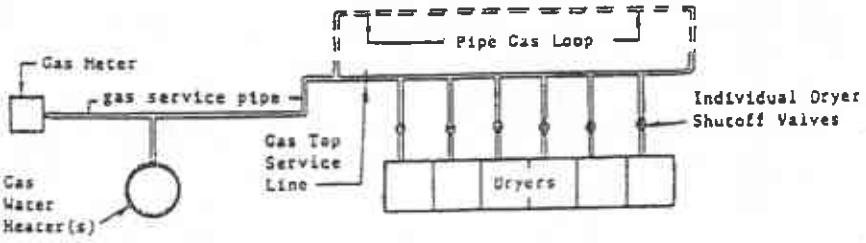
The dryer must be isolated from the gas supply piping system by closing its individual manual shut-off valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 PSIG.

GENERAL INSTALLATION FOR ALL DRYERS

The size of the gas service pipe is dependant upon many variables, such as tees, lengths, etc. Specific pipe size should be obtained from the gas supplier. Refer to the *Gas Pipe Size Chart* in this manual for general gas pipe size information.

CAUTION: Gas loop piping must be installed as illustrated to maintain equal gas pressure for all dryers connected to a single gas service.

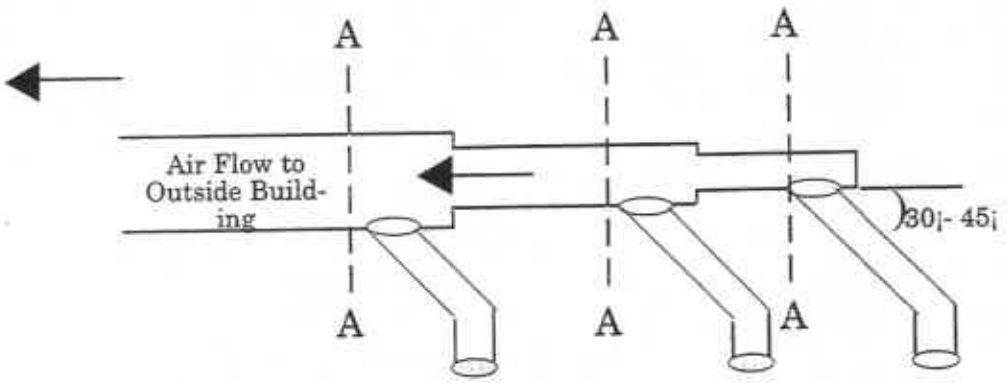
Other gas-using appliances should be connected upstream from the loop.



WARNING:
LIQUIFIED PETROLEUM GASES ONLY

A Gas Pressure Regulator for Liquified Petroleum Gases is not furnished on Cissell Gas Heated Clothes Dryers. This regulator is normally furnished by the installer. In accordance with American Gas Association (AGA) standards, a Gas Pressure Regulator, when installed indoors, must be equipped with a vent limiter or a vent line must be installed from the Gas Pressure Regulator vent to the outdoors.

For Exhaust Duct less than 14 feet and 2 elbows equivalent and less than 0.3 inches static pressure.



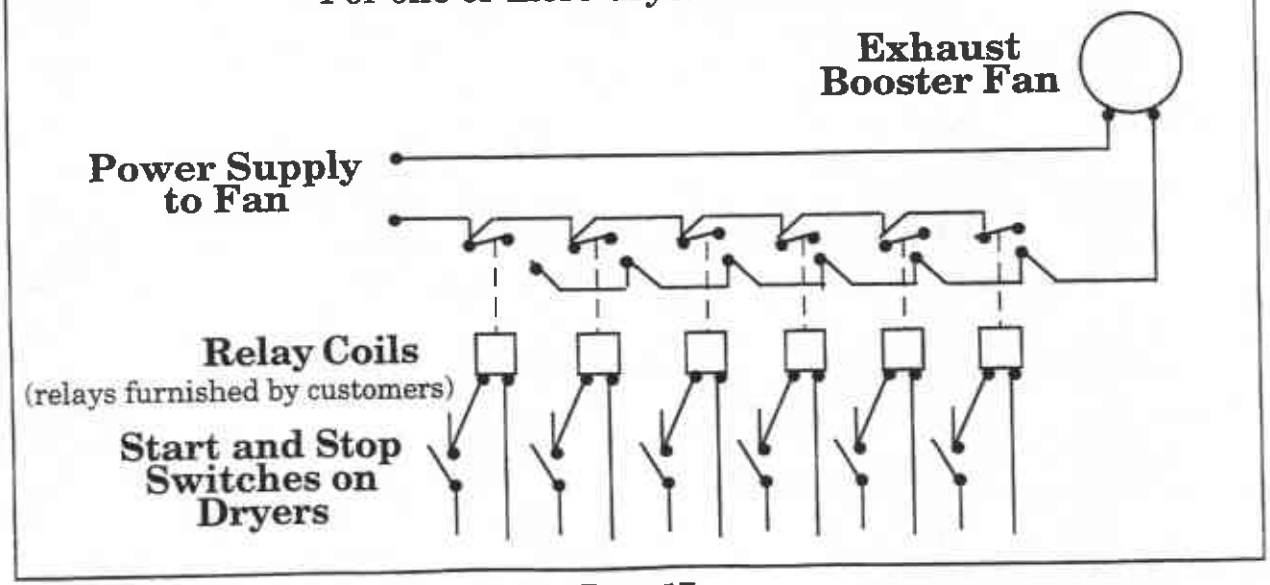
DRYER EXHAUSTS

Area of section "A-A" must be equal to the sum of dryer exhaust pipes entering multiple exhaust pipe. (*See chart below.*)

No. of Dryers	1	2	3	4	5	6	7	8	9	10	11	12
Duct Diameter (in inches)	12	17	21	24	27	30	32	34	36	38	40	42

AUTOMATIC ELECTRICAL CONTROL FOR EXHAUST FAN

For one or more dryers to start fan.



EXHAUST INSTALLATION—MULTIPLE MANIFOLD DUCT

For Exhaust Duct more than 14 feet and 2 elbows equivalent and more than 0.3 inches static pressure.
(See illustration on next page.)

1. Make-up air from outside building may enter enclosure from top or side walls. Area of opening should be equal to 4 to 6 times the sum of dryer duct areas. Provide 4 square feet of air for each 75 lb. Stack Dryer.

2. Use constant diameter duct with area equal to the sum of dryer duct areas.

   EXAMPLE: 3-12 inches diameter duct = 1-20.78 inches diameter duct in area. Use 21 inches diameter duct or diameter to match tube-axial fan.

3. Enclosure (plenum) with service door. This separates the dryer air from room comfort air.

4. Zero inches clearance to combustible material allowed on sides and at points within 4 inches of front on top.

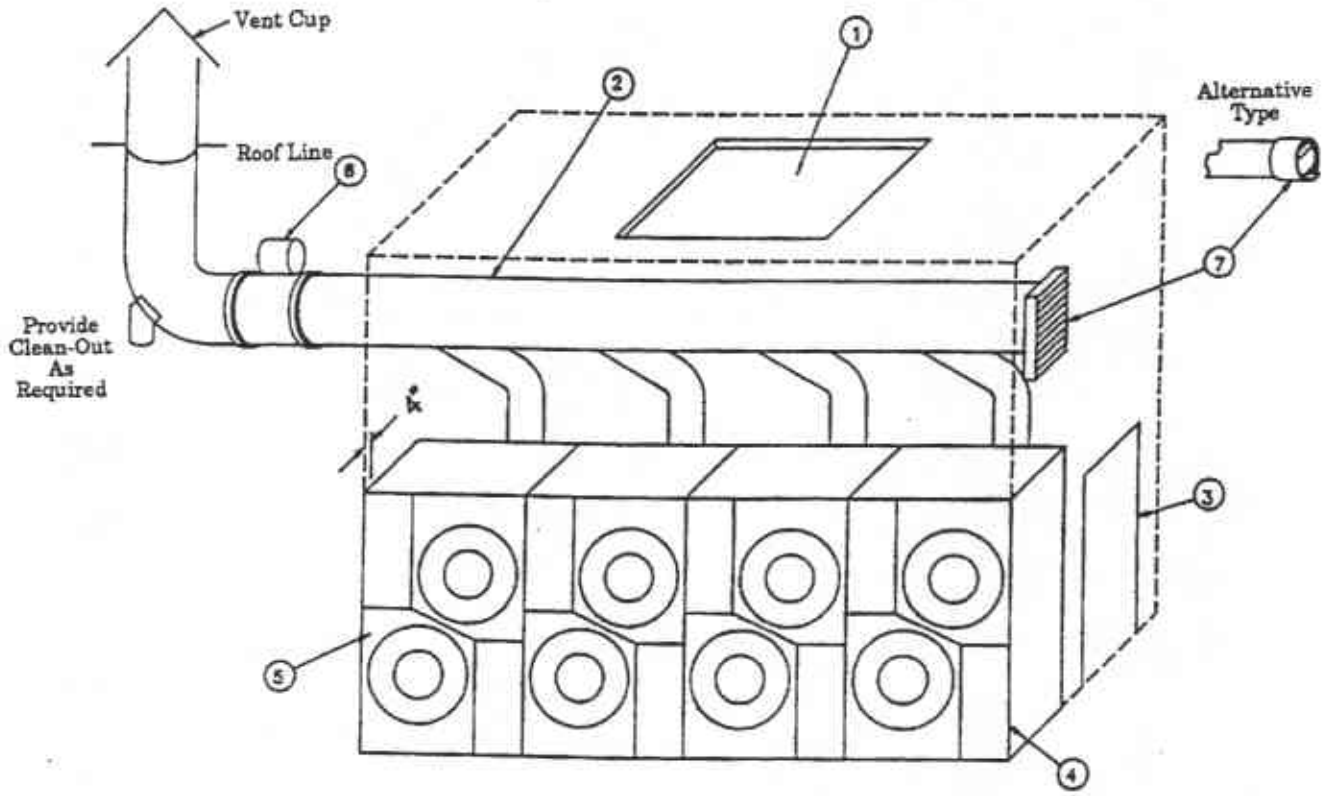
5. Heat loss into laundry room from dryer fronts *only* is about 60 BTU/HR per square foot.

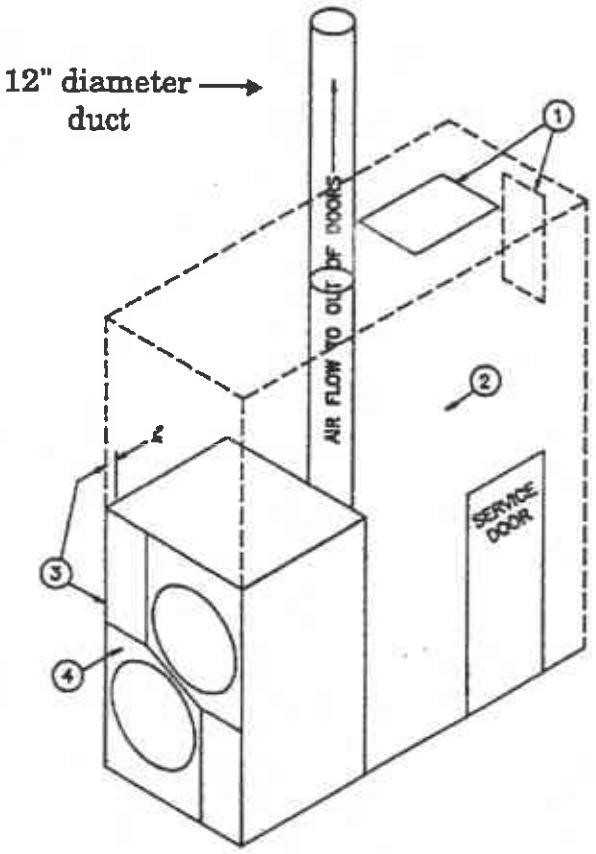
6. Flange mounted, belt driven tube-axial fan. **Fan must run when one or more dryers are running.** *See suggested Automatic Electrical Control Wiring Diagram on previous page.* Must meet local electrical codes. Fan air flow (CFM) is equal to sum of dryer air flows, but static pressure (SP) is dependent on length of pipe and number of elbows.

7. **Barometric Bypass Damper**—Adjust to *closed flutter position* with all dryers and exhaust fan running. **Must be located within enclosure.**

CAUTION: *Never* install hot water heaters or other gas appliances in the same room as dryers. *Never* install cooling exhaust fans in the same room as dryers.

Exhaust Installation—Multiple Manifold Duct (Illustration)





EXHAUST INSTALLATION— SEPARATE DUCTS (PREFERRED)

For ductwork less than 14 feet and 2 elbows equivalent and less than 0.3 inches static pressure.

NEVER exhaust the dryer into a chimney.
NEVER install wire mesh screen over the exhaust or make-up air area.
NEVER exhaust into a wall, ceiling, or concealed space.

1. Make-Up Air opening from outside the building may enter the enclosure from the top or side walls. The area of the opening should be equal to 4 to 6 times the sum of the dryer duct areas. Provide 4 square feet of air for each 75 lb. Stack Dryer.

2. Enclosure (plenum) with service door. This separates the dryer air from the room comfort air.

3. Zero inches clearance to combustible material allowed on sides and at points within 4 inches of front on top.

4. Heat loss into laundry room from dryer front panels is about 60 BTU/HR per square foot.

5. As shown below, separate 12" ducts are recommended for each 75 lb. Stack Dryer.

DRYER AIR FLOW INSTALLATION

Nothing is more important than air flow for the proper operation of a clothes dryer. A dryer is a pump which draws make-up air from the out-of-doors, through the heater, through the clothes and then forces the air through the exhaust duct back to the out-of-doors. Just as in a fluid water pump, there must be a fluid air flow to the inlet of the dryer, if there is to be the proper fluid air flow out of the exhaust duct. In summary, there must be the proper size out-of-doors inlet air opening (4-6 times the combined areas of the air outlet) and an exhaust duct, size and length of which allows flow through the dryer with no more than 0.3 inches water column static pressure in the exhaust duct.

In some instances, special fans are required to supply make-up air, and/or boost exhaust fans.

EXHAUSTING DUCT

FOR BEST DRYING:

1. Exhaust duct maximum length 14 feet of straight duct and maximum of two 90° bends.
2. Use 45° and 30° elbows wherever possible.
3. **Exhaust each 75 lb. Stack Dryer separately.**
4. **Do not** install wire mesh or other restrictions in the exhaust duct.
5. Use clean-outs in the exhaust duct and clean periodically when needed.
6. **Never** exceed 0.3 inches water column static pressure in the exhaust duct.
7. Inside surface of the duct **must be smooth**.
8. Recommend pop rivets for duct assembly.
9. Round ducting recommended.

MAKE-UP AIR

FOR BEST DRYING:

1. Provide opening to the out-of-doors in accordance with the following:
   Each 75 lb. Stack Dryer requires 4 square feet of make-up air.
2. Use barometric shutters in the inlet air opening to control air when dryers are not running.

Other Recommendations

To assure compliance, consult local building code requirements.

Troubleshooting

Hot dryer surfaces, scorched clothes, slow drying, lint accumulations, or air switch malfunction are indicators of exhaust duct and/or make-up air problems.

RULES FOR SAFE OPERATION OF DRYER

1. **Be sure** your dryer is installed properly in accordance with the recommended instructions.
2. **CAUTION**
   Be safe—**shut main electrical power supply and gas supply off externally before attempting service.**
3. **CAUTION**
   Never use drycleaning solvents: gasoline, kerosene, or other flammable liquids **in the dryer.** ***Fire and explosion will occur.***
   Never put fabrics treated with these liquids into the dryer.
   Never use these liquids near the dryer.
   Always keep the lint screen clean.
   Never use heat to dry items that contain plastic, foam or sponge rubber, or rags coated with oils, waxes or paints. The **heat may** damage the material or **create a fire hazard. Rubber easily oxidizes, causing excessive heat and possible fire.**
   Never dry the above items in the dryer.
4. **Never let children play near or operate the dryer. Serious injury will occur if a child should crawl inside and the dryer is turned on.**
5. **Never** use dryer door opening and top as a step stool.
6. **Read** and follow manufacturer's instructions on packages of laundry and cleaning aids. Heed any **warnings** or **precautions.**
7. **Never** tumble fiberglass materials in the dryer unless the labels say they are machine dryable. Glass fibers break and can remain in the dryer and could cause skin irritation if they become mixed into other fabrics.
8. **The dryer must not be installed or stored in an area where it will be exposed to water and/or weather.**

ENERGY-SAVING TIPS

1. Install dryer so that you can use short, straight venting. Turned elbows and long vent tubing tend to increase drying time. Longer drying time means the use of more energy and higher operating costs.
2. Operate dryer using full-size loads. Very large loads use extra energy. Very small loads waste energy.
3. Dry light-weight fabrics separately from heavy fabrics. You will use less energy and get more even drying results by drying fabrics of similar weight together.
4. Clean the lint screen area daily. A clean lint screen helps give faster, more economical drying.
5. Do not open the dryer door while drying, you let warm air escape from the dryer into the room.
6. Unload your dryer as soon as it stops. This saves having to re-start your dryer to remove wrinkles.

OPERATING INSTRUCTIONS—TWO TIMER MODEL

OPERATING INSTRUCTIONS—TWO TIMER MODEL

1. After loading the dryer with water washed clothes, close the loading door.

2. Turn the 60 minute drying (heat) timer to the desired time. The drying cycle light will be on.

3. Turn the 15 minute cooling (air) to the desired time. The cooling light will come on after the drying finishes.

4. Select the temperature desired:

   HIGH—185° exhaust temperature, *heavy fabrics and hard to dry, (cottons and linens).*

   MEDIUM—150° exhaust temperature, *permanent press, synthetic blends.*

   LOW—135° exhaust temperature, *delicate, sheer fabrics.*

5. Turn **"on/off"** toggle switch to **"on"** and press the **"push to start"** button to start the drying and cooling cycles.

6. To shut the dryer off at any time during the cycles, switch the **"on/off"** switch to **"off"**.

TROUBLESHOOTING

To help you troubleshoot the dryer, we list below the most common reasons for service calls and some answers to the problems. **Before you call service**, please review the following items:

DRYER WON'T START

DRYER WON'T START

1. Is the door completely closed?
2. Are the controls set to the **"on"** position?
3. Did you push the **"start"** control?
4. Has a fuse blown or a circuit breaker tripped?
5. Are the fuses tight?
6. Check for low voltage.

DRYER WON'T HEAT

DRYER WON'T HEAT

1. Is the dryer set for **"cooling time"** rather than **"drying time"**?
2. Are the gas valve in the dryer and the valve on the main gas line turned on?
3. Check for low or intermittant **gas pressure**.

CLOTHES ARE NOT SATISFACTORILY DRY

CLOTHES ARE NOT SATISFACTORILY DRY

1. *Timed cycle*—Did you allow enough heating time before the cool-down part of the cycle?
2. Is the lint screen blocked?
3. Is the exhaust duct to the outside clean and not blocked? *(A blocked exhaust will cause slow drying and other problems.)*

GAS DRYER IGNITION

GAS DRYER IGNITION

Refer to the page on "*Instructions for the Direct Ignition System Operation*". Check to see if the manual gas valve is open. Then reset the dryer controls. **All panels, covers, and doors must be in place and closed before starting the dryer.**

VERY IMPORTANT
When calling the factory for service, always refer to the model number and serial number.

TROUBLESHOOTING

CAUTION
To avoid electrical shock, shut off electrical supply before servicing machine.

WARNING
To avoid burns, avoid contact with gas flames in the machine's heating unit. On gas-fired dryers, shut off gas supply.

CAUTION
Be careful of moving mechanical parts such as gears, pulleys, etc. while servicing dryer. Keep fingers and loose articles of clothing free from moving mechanical parts to avoid injury.

IMPORTANT
Refer to *Parts Sheets* for correct Cissell replacement parts.

Troubleshooting Chart

TROUBLE	CAUSE	REMEDY
Motors will not start.	No power.	Check fuses or circuit breakers. Main switch must be on.
	Incorrect power. Low voltage.	Check power source. Voltage, phase, and frequency must match rating plate on rear of dryer.
	Timer off.	Set timer on control panel.
	Loose wire connection.	Check connections in junction box on rear of dryer.
	Start relay defective.	Check coils and contacts.
Motor tripping on thermal overload.	Low voltage.	Check voltage at motor terminals. Voltage must be within 10% (plus or minus) of voltage on rating plate. If not, consult local power company for corrective measures.
	Inadequate wiring.	Check if wire is correctly sized for load.
	Loose wire connections.	Check connections and correct if bad.
	Inadequate air.	Check installation for recommended make-up air.
	Poor housekeeping.	Clean lint accumulation around and on motor.
Basket motor will not run.	Loading door open.	Close door after dryer is loaded with clothes.
	Door switch out of adjustment.	Adjust switch by removing cover and bending the actuator lever to clear switch button 3/8" with cover in place.
	Defective door switch.	Replace door switch.
	Bad basket motor contactor.	Replace contactor.
Basket motor runs, but basket will not revolve.	V-Belt broken.	Replace V-Belt.
	V-Belt loose.	Adjust belt tension.
	Motor pulley loose.	Tighten set screw(s).
	Basket over-loaded.	Lessen load.
Dryer noisy or vibrating.	Not leveled.	Level per instructions on separate page of this manual.
	Fan out of balance.	Accidental damage to fan blades can change dynamic balance. Replace damaged fan.
	Basket rubbing.	Adjust basket clearance.
	V-Belt sheaves.	Align sheaves and tighten set screws.
	Belt.	Adjust belt tension.
	Foreign objects inside dryer.	Occasionally screws, nails, etc., may hang in the basket perforations and drag against the sweep sheets surrounding the basket. Remove such objects immediately.

Troubleshooting Chart

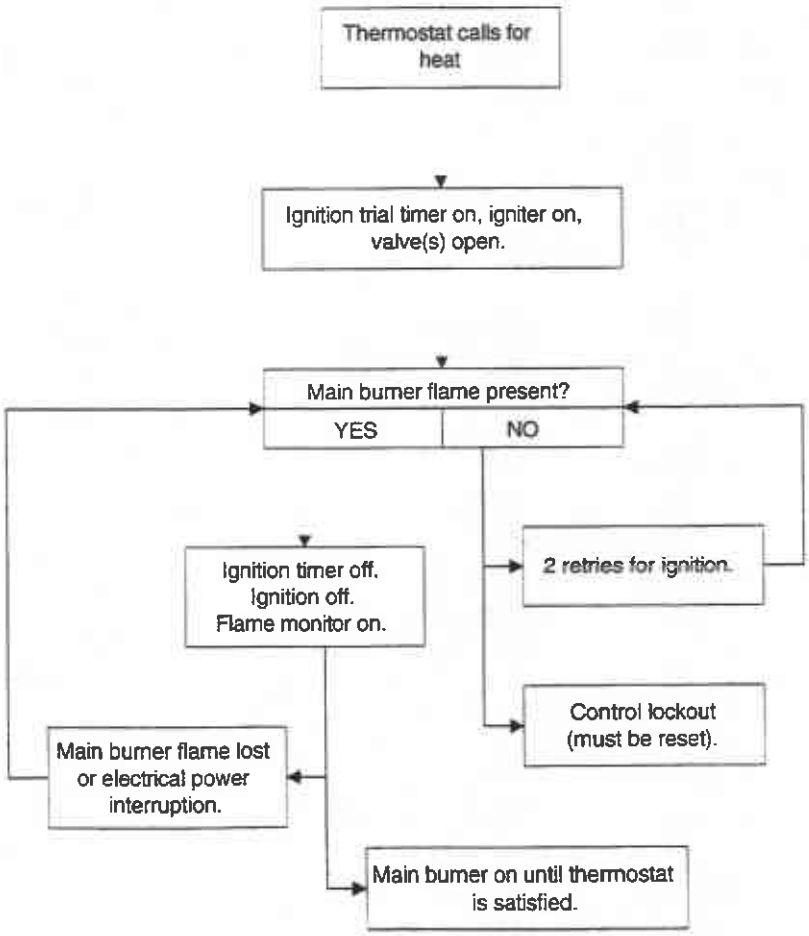
TROUBLE	CAUSE	REMEDY
Dryer runs, but no heat.	Incorrect voltage.	Check for correct voltage at ignition system.
	Igniter will not glow red.	Check voltage to igniter. Check module. Check igniter.
	Lint door open.	Close lint door.
	Defective gas valve.	Replace gas valve.
	Hot Surface Igniter not igniting gas.	Must be 3/16" - 5/16" above burner.
	Air switch not operating.	Clean area around back-draft damper and ductwork of lint. Check make-up air and exhaust installation per instructions. Take a vacuum reading of dryer by removing a screw from panel and inserting the rubber tube of U-gauge into hole. Reading should not fall below 0.3 water column pressure. If so, adjust air flow installation per instructions.
	Air switch out of adjustment.	Adjust per instructions in this manual.
	Air switch defective.	Replace air switch.
	Gas pressure too low.	Check manifold pressure; adjust to rating plate specification. If not, have supplier check main pressure.
	Improper gas orifice.	Gas type on rating plate should match orifice. Check supplier for gas type. If it does not match the rating plate, replace orifice.
	Thermostat(s) bad.	Replace bad thermostat(s).
	Relay bad.	Replace relay.
	Spark Igniter not igniting gas.	Must be 3/16" to 5/16" above burner. Check electrode gap; it must be 1/8".
	Flame cycling on and off repeatedly.	Check Flame Sensor; check Air Switch; check for low or high flame.
	Defective Module.	Replace Module.

Troubleshooting Chart

TROUBLE	CAUSE	REMEDY
Main burners burning improperly.	Burner holes clogged.	Clean burner holes; blow out dirt.
	Gas pressure too high.	Adjust per rating plate specification.
	Orifice too large.	Check with factory for correct orifices.
	Restricted or blocked exhaust.	Clean exhaust of lint or restrictions.
Low or high gas flame.	Incorrect burner orifices.	Check with factory for correct orifice size. Replace if needed.
	Inadequate air flow.	Clean air ducts. Clean air make-up restrictions. Clean burners and remove lint.
Dryer too hot.	Incorrect burner orifices.	Check with factory for correct size, replace if needed.
	Inadequate make-up air flow.	Check air flow installation per instructions in the Instruction Manual.
	Lint accumulation.	Clean dryer of lint.
	Exhaust duct damper.	Must fully open or replace.
	Gas pressure too high.	Adjust per rating plate specification.
	Exhaust system restricted or inadequate sized ductwork.	Clean exhaust system; check installation instructions for duct size recommendations.
	Thermostat defective.	Replace thermostat.
Dryer doesn't stop properly.	Timer defective.	Replace timer.
Basket does not reverse.	Reversing timer.	Check timer; replace if defective.

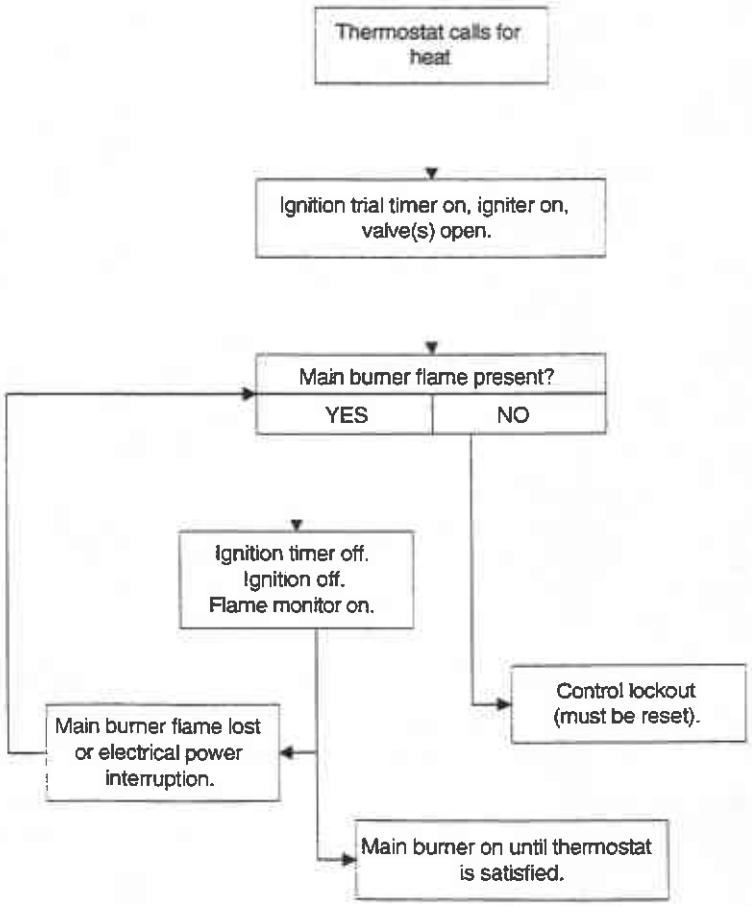
OPERATION OF HOT SURFACE IGNITION (HSI) SYSTEM

1. Thermostat calls for heat.
2. Hot surface ignition control starts ignition trial timing sequence (igniter warm-up then opens gas valves).
3. Burner flame is detected by flame rectification circuit; igniter turned off; gas valves remain open; ignition trial timer is off.
4. Failure to establish a flame within the ignition trial time plus 2 retries will result in safety lockout. A manual reset is necessary. Reset the HSI control by opening and closing the tumbler door.
5. Loss of flame during the heating cycle will result in the control cycling through complete ignition trials. If the flame is still not established or detected, the control will lockout.
6. Main burner flame is continuously monitored throughout the heating cycle.
7. Thermostat is satisfied, shutting off electrical power, ending the heating cycle.



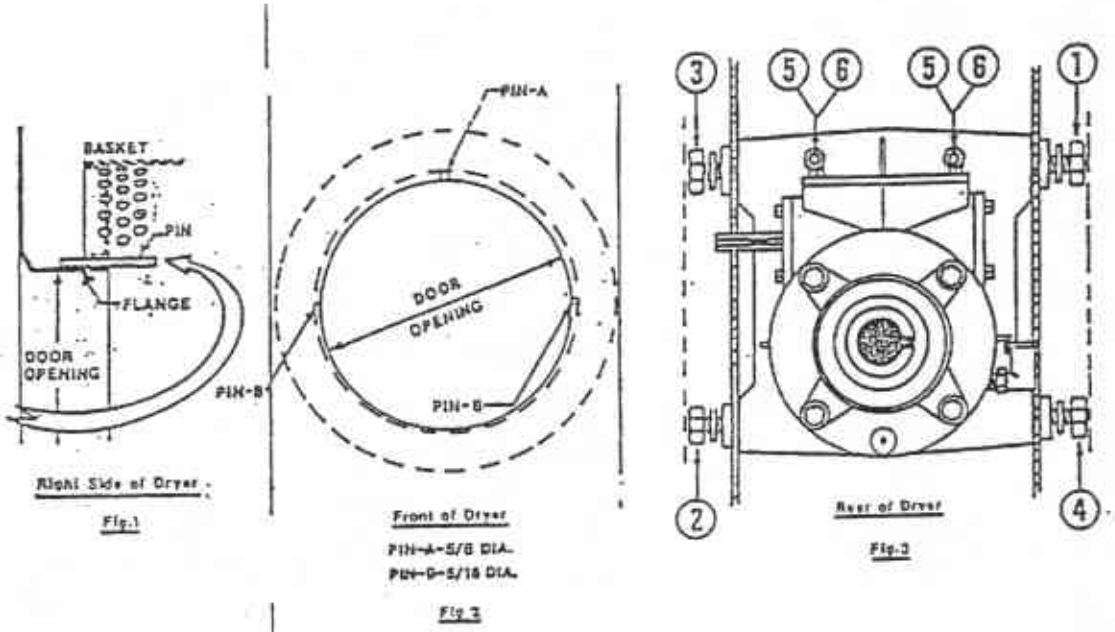
OPERATION OF DIRECT SPARK IGNITION (DSI) SYSTEM

1. Thermostat calls for heat.
2. Direct Spark Ignition Control simultaneously starts ignition trial timer, ignition sparking and opens the gas valve(s).
3. Burner flame is detected by flame rectification circuit; ignition sparking stops; gas valves remain open; ignition trial timer is off.
4. Failure to establish a flame within the ignition trial time will result in safety lockout. A manual reset is necessary. Reset the DSI control by opening and closing the tumbler door.
5. Loss of flame during the heating cycle will result in the control cycling through one complete ignition trial. If the flame is still not established or detected, the control will lockout.
6. Main burner flame is continuously monitored throughout the heating cycle.
7. Thermostat is satisfied, shutting off electrical power, ending the heating cycle.



GENERAL MAINTENANCE

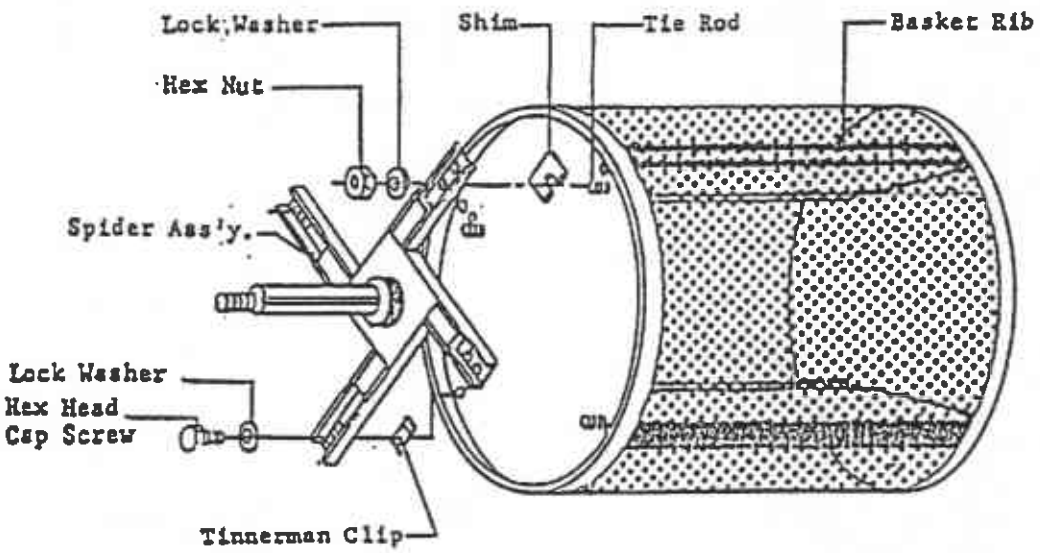
1. **Clean lint trap daily.** Remove lint before or after each day of operation. A clean lint trap will increase the efficiency of the dryer and the moisture-laden air will be exhausted outside more quickly.
2. **Keep basket and sweep sheets clean.** Clean as often as needed. The basket and sweep sheets are accessible by removing the front panel of the dryer.
3. **Gas burners.** Check and clean often.
4. **Pulleys and belts.** Keep clean as oil and dirt will shorten the life of a belt. Check periodically for alignment. Pulley shafts must be parallel and the grooves must be aligned. Check belt tension periodically. Adjust tension by movement of idler bracket. Lubricate idler pulley once every two months using six grams of high temperature grease. Do not over-grease.
5. **Electric motor.** Keep motor clean and dry. Motors are packed with sufficient grease for 10 years normal service. After that, bearings and housing should be cleaned and repacked one third full with Chevron Grease No. SR1-2. See label on motor for further information.
6. **Adjustable leveling bolts.** One at each corner permits accurate alignment of dryer.
   To adjust: Block one corner of dryer up off the floor, loosen hex nut. With wrench, turn bolt clockwise to raise dryer, opposite to lower. Rear bolts are outside of dryer and front bolts are inside lint trap compartment and behind lower left 5 x 7 panel.
7. **Periodically clean** and examine exhaust system.
8. **Keep dryer area clean** and free of gasoline, combustible materials and other flammable liquids or vapors.
9. **Do not obstruct the flow** of combustion (make-up) air and ventilating air.
10. **Check gas pressure** periodically.
11. **Gear reducer.** Maintain oil level at half the depth of oil cup. Change oil every six months.



BASKET ALIGNMENT—DOUBLE MOTOR MODEL

1. Loosen the 4 gear reducer mounting bolts (1, 2, 3 and 4) on rear of dryer, and 2 adjusting bolts #5, on gear reducer housing. (Figure 3)
2. Place one "A" and two "B" diameter pins inside the drying compartment between the rim of the basket opening and the rim of the door opening in the positions shown in Figure 1 and Figure 2. Check the two "B" pins for equal clearance.
3. With the pins in postions, tighten the two #5 bolts until flush against back of dryer. Re-tighten gear reducer mounting bolts in the numerical order incidated in Figure 3. Tighten lock nuts #6 to secure bolts #5 in position. Then remove pins.
4. Check the space between basket and door opening at "A" pin and "B" pin positions (Figure 2). If the gap is not approximately the same on both sides, repeat steps 1, 2, and 3.

NOTE
Use short sections of round steel rod for pins or drill bits may be used in place of round rod.



SHIMMING THE BASKET AND SPIDER ASSEMBLY

This procedure is normally necessary when replacing either the basket or the spider assembly on any Cissell tumbler. The alignment of these two parts are crucial in assuring a true running basket.

1. Align the basket as per instructions in manual.
2. Rotate the basket to determine where the most out of round point is (where the basket scraped or cimes closest to scraping the sweep sheet).
3. Mark this position and the nearest rib to this position.
4. Remove the basket (do not loosen the alignment bolts).
5. With the basket on the floor (spider up), place one or two shims between the spider led and the back of the basket at the marked rib position. (see drawing)
6. Re-insert spider and basket assembly and re-check cylinder.
7. If at this point the basket is still out of round, procedure must be repeated starting with Step 2.
8. Upon completion of shimming process, re-alignment of basket is necessary.

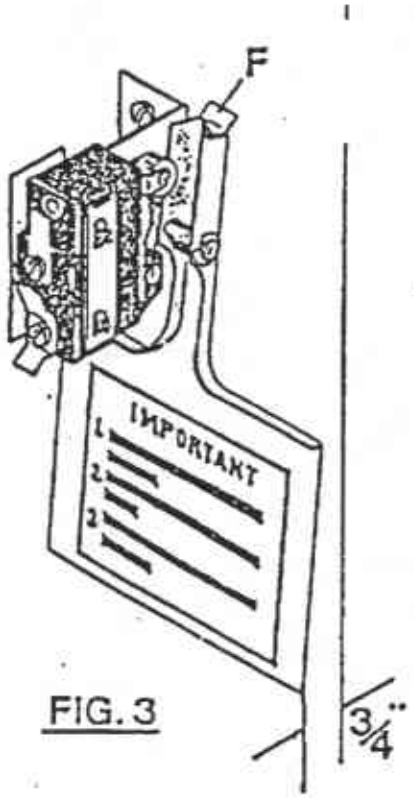


FIG. 3

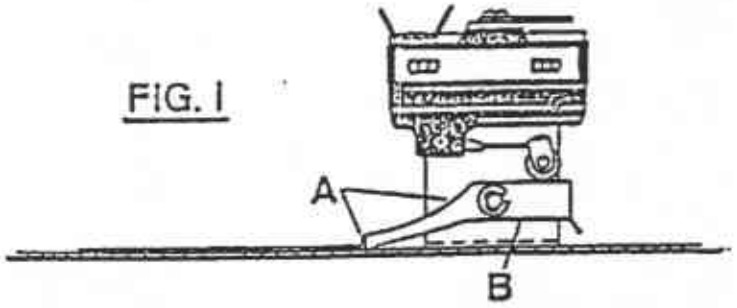


FIG. 1

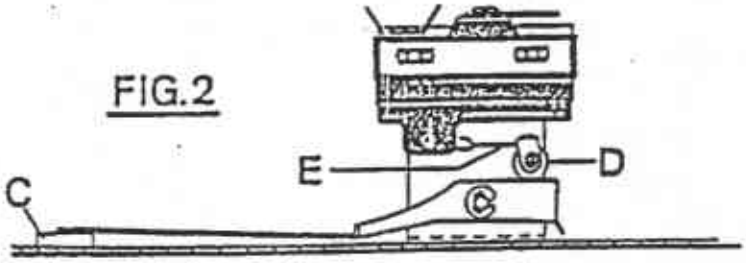


FIG. 2

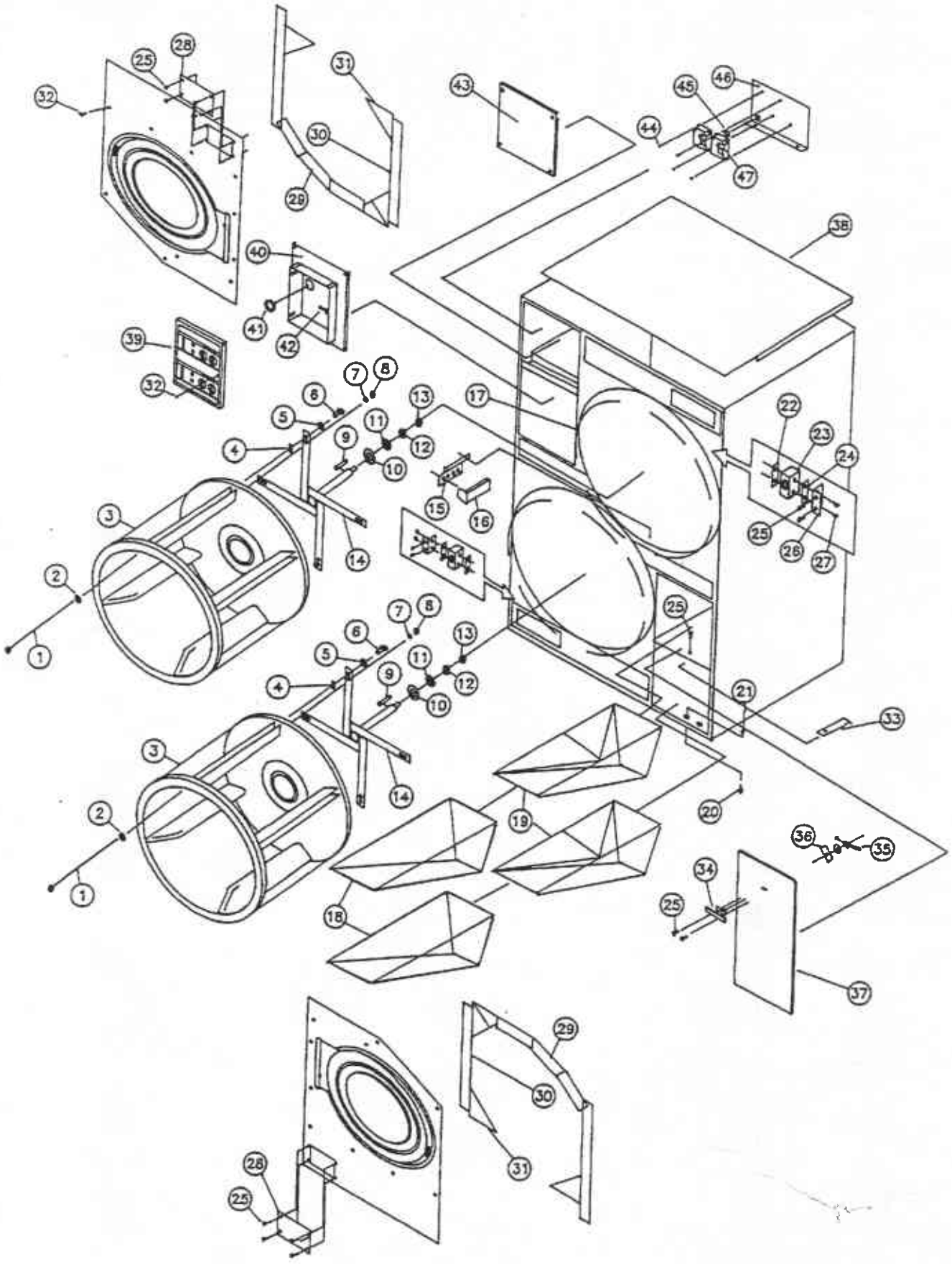
AIR SWITCH ADJUSTMENT

1. Shut off current; disconnect leads and remove air switch.
2. Lay air switch assembly on flat surface. Adjust air blade at "A" (Figure 1) so that air blade lies flat and surface "B" is parallel to the flat surface.
3. Place 3/8" x 5/8" spacer bar or equivalent "C" (Figure 2) under air blade in position shown; hold switch mounting bracket firmly and adjust switch actuator "D" with needle-nose pliers at "E" by twisting actuator right or left whichever is needed so that switch closes when end of air blade engages bar "C".
4. Maximum opening of air switch must be no greater than 3/4" (Figure 3). Bend tab "F" in or out to maintain this dimension.
5. Re-install air switch assembly on rear of dryer.
6. Re-check operation of air blade. Switch must close before air blade engages face of opening and re-open before stop "F" engages.

FAN ROTATION

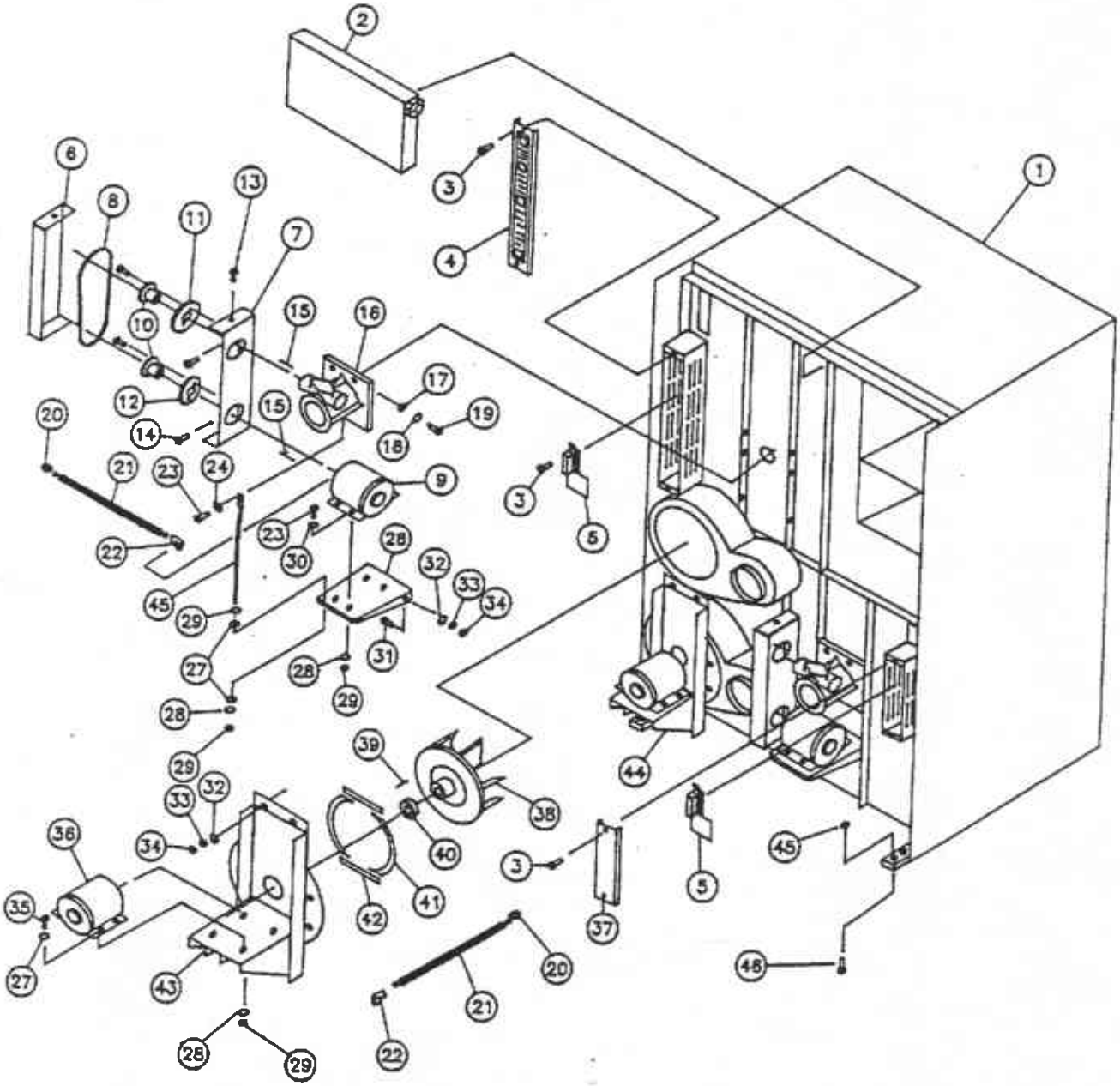
NOTE
Fan rotates counter-clockwise as viewed from back end of motor. See arrow on motor support. To change rotation, reverse power leads L1 and L2.

Illustration (Front View of Dryer)

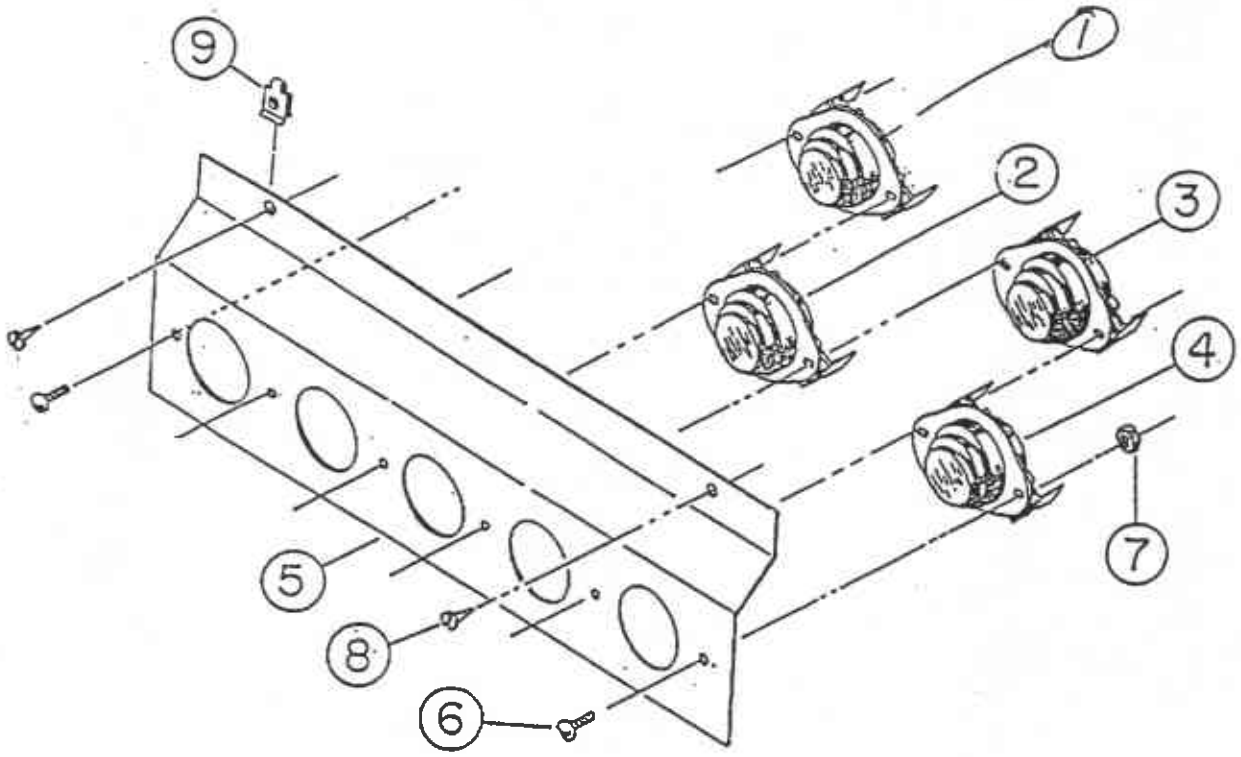


Parts (Front of Dryer)

1.	TU829F	Tie Rod
2.	TU2833	1/2" Cut Washer
3.	TU8293	Basket
4.	TU8365	Tinnermon Nut
5.	TU2814	5/16" Lockwasher
6.	TU3210	5/16" - 18 x 5/8" Hex Head Cap Screw
7.	TU2831	1/2" Split Lockwasher
8.	TU2882	1/2" - 20 Hex Nut
9.	TU5240	8" Large Shaft Key
10.	TU108	Felt Seal
11.	TU2493	Shaft Retainer
12.	TU3537	Full Nut
13.	TU3536	Jam Nut
14.	K108	Spider Replacement
15.	TU8117	Thermostat Assembly
16.	TUT292D	Thermostat Cover W/A
17.	TUT273	Gasket Set, 75 Stack
18.	TUT279	Lint Trap Net Assembly
19.	TUT137D	Lint Trap Frame
20.	TU3211	3/8" - 16 x 2 1/2" Leveling Bolt
21.	TU4937	3/8" - 16 Jam Nut
22.	TU1771	#6 Tinnermen Nut
23.	TU1979	Door Switch
24.	TU1770	Insulator
25.	TU7733	#8 x 1/2" Self-Drill Screw
26.	TU2373	Door Switch Bracket
27.	TU3219	#6 x 1" Sheet Metal Screw
28.	TUT304D	Front Panel Access Cover
29.	TU8108	Insulation 2-1/4 x 9 1/2 2 MIL ALUM
30.	TU8107	Insulation 2-1/4 x 32 2 MIL ALUM
31.	TU7735	Insulation Front Panel Triangle
32.	TU6854	#14 - 3/4" Screw
33.	TUT299C	Lint Trap Clip
34.	TU2504	Handle Assembly w/Cam
35.	TU3811	Cam
36.	TU6025	Cam Stop
37.	TUT338D	Lint Door w/A
38.	TUT254B	Jacket Top Weldment
39.	TUT190D	Control Panel Assembly
40.	TUT222D	Control Panel Mtg. Plate w/A
41.	TU9693	2 1/2" Snap Bushing
42.	LB74	#14 Speed Nut
43.	TUT184D	Upper Left Panel
44.	TU3219	#6 x 1" Sheet Metal Screw
45.	TU5958	1 1/2" Snap Bushing
46.	TUT260D	Ignition Module Panel
47.	TUT206	Hot Surface Ignition Module
	TUT210	Direct Spark Ignition Module

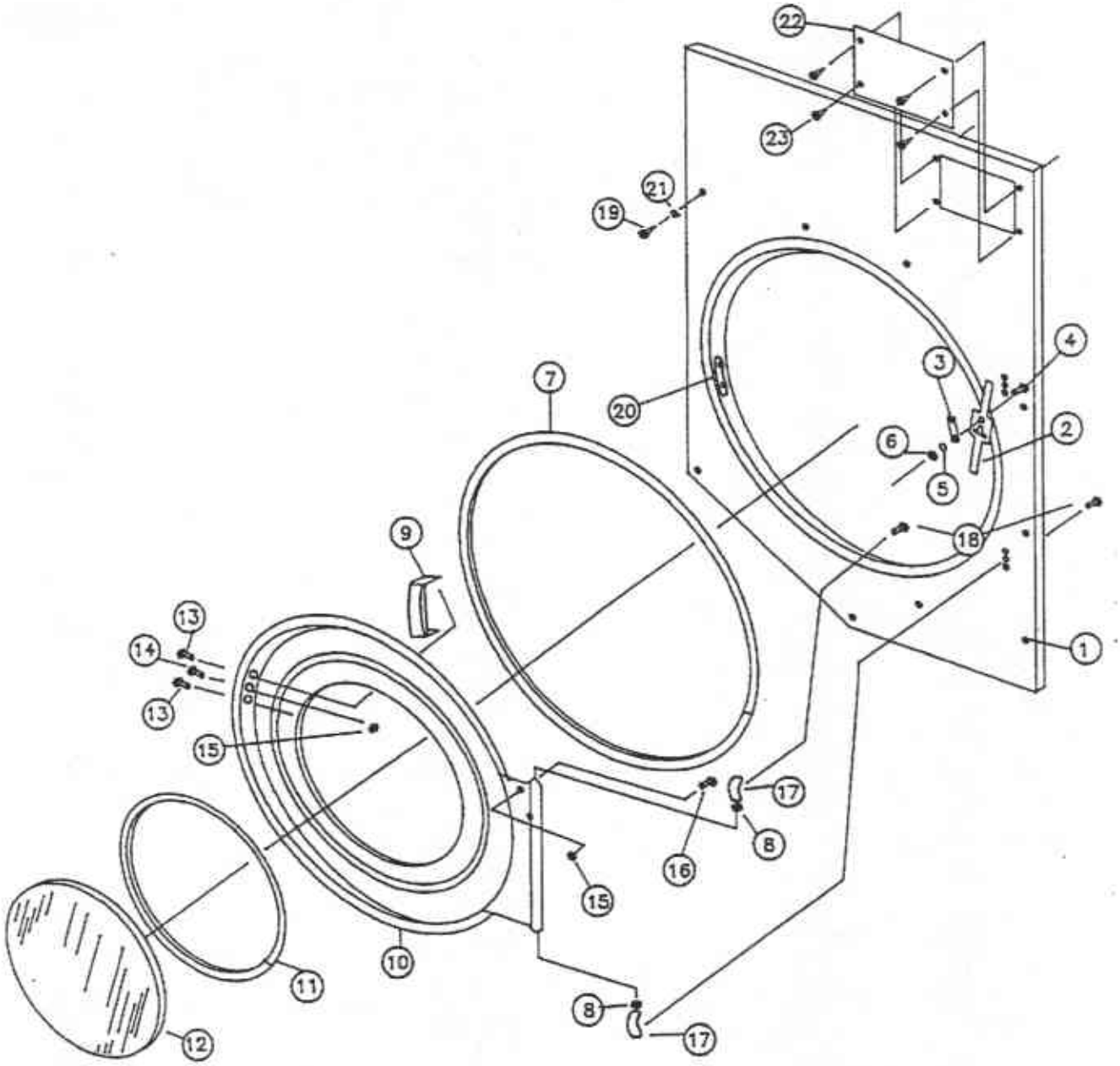


1.	TUT100D	Jacket Welded Assembly
2.	TUT289C	MTR CNTL Box W/A
3.	TU7733	#8 x 1/2" Self-Drill Screw
4.	TUT172C	Left Air Switch Box Cover
5.	TU8206	Air Switch Assembly
6.	TU3857	Belt Guard Cover
7.	TU5254	Belt Guard Mounting
8.	PT87	4L-360 Belt
9.	- - - - - -	Basket Motor (*see Motor List page*)
10.	TU2833	Bushing for Sheave
11.	TU8502	60 cy Gear Sheave (AK49H) w/Bushing
12.	TU7334	60 cy Motor Sheave (AK34H) w/Bushing
13.	TU7733	#8 x 1/2" Self-Drill Screw
14.	FB189	1/4-20 x 1 1/4 Cap Screw
15.	TU5241	Key
16.	TM100	Metric Small Gear Reducer *(See Page)*
17.	TU1851	1/2" Cut Washer
18.	TU2831	1/2" Lock Washer
19.	RC347	1/2"-13 x 1 1/2" Cap Screw
20.	TU4790	Straight Connector
21.	TU4791	Right Angle Connector
22.	504641292	1/2" Greenfield Cable
23.	RC344	1/2"-20 x 3/4 Cap Screw
24.	TU2846	1/2" Lock Washer
25.	TU8608	Belt Adjusting Rod
26.	TU33	Motor Drive Bracket
27.	VSB130	5/16" Cut Washer
28.	TU2814	5/16" Split Lock Washer
29.	C249	5/16" 18 Hex Nut
30.	TU2847	1/2" Cut Washer
31.	TU3124	3/8"-16 x 3/4" Cap Screw
32.	IB140	3/8" Cut Washer
33.	VSB134	3/8" Lock Washer
34.	TU4787	3/8" Hex Nut
35.	TU5439	5/16"-18 x 3/4" Cap Screw
36.	- - - - - -	Fan Motor (*see Motor List page*)
37.	TUT176B	Right Air Switch Box Cover
38.	TU8740	Fan Wheel w/Set Screws
39.	TU4684	Key
40.	TU2476	Felt Seal
41.	TU2473	Side Gasket
42.	TU2474	Top and Bottom Gasket
43.	TUT296B	Upper Blower Mount w/A
44.	TUT163B	Bottom Blower Mount w/A
45.	TU4937	3/8"-16 Jam Nut
46.	TU3211	3/8" - 16 x 2 1/2" Leveling Bolt

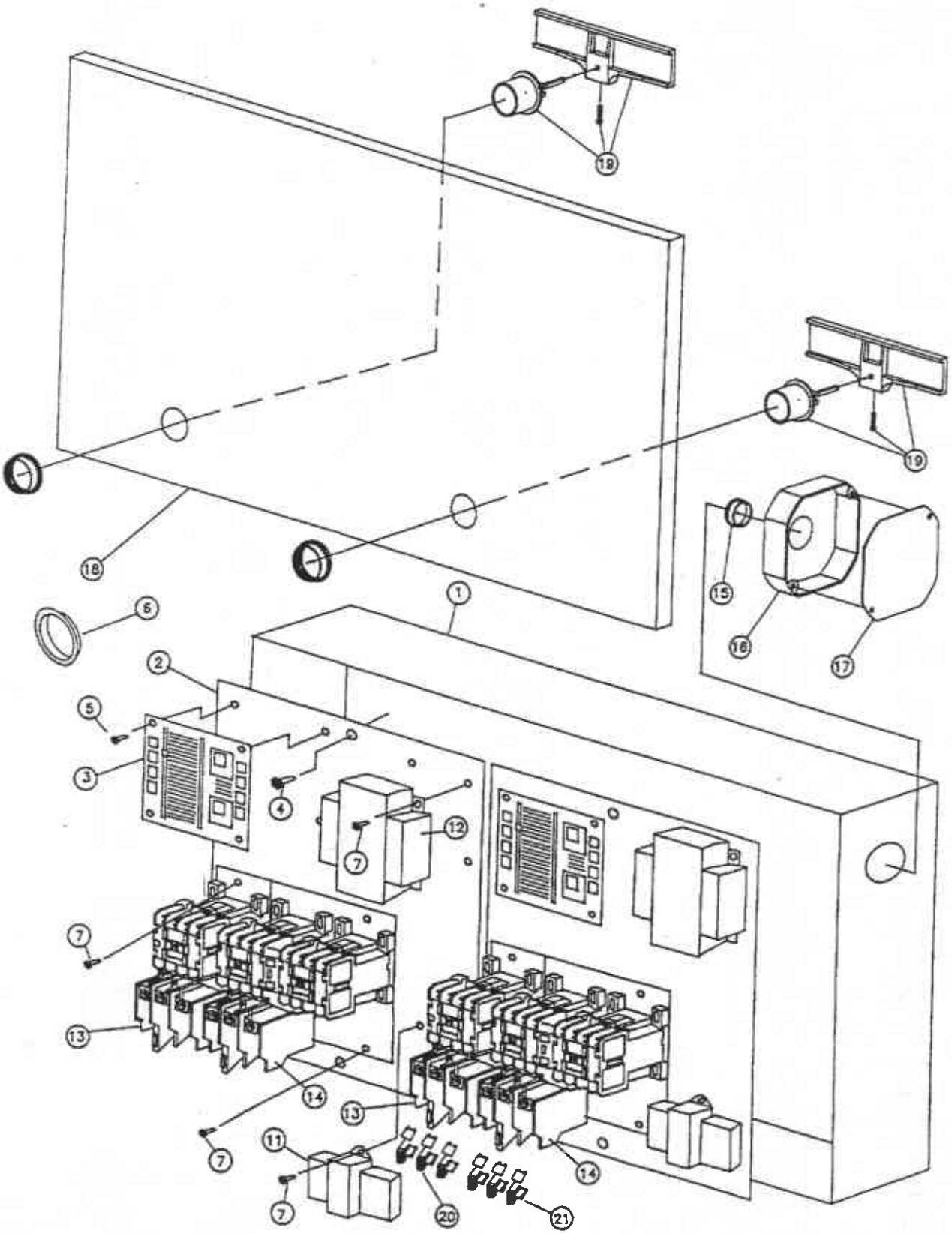


1.	TU3240	Safety High Limit Thermostat
2.	TU3240	185° F Thermostat (High Heat)
3.	TU5150	150° F Thermostat (Medium Heat)
4.	TU7244	135° Thermostat (Low Heat)
5.	TU5143	Mounting Bracket
6.	TU3624	#6-32 x 1/4" Rd. Hd. Machine Screw
7.	TU3400	#6-32 Hex Nut
8.	TU7733	#8 x 1/2" Screw
9.	TU6067	#8 Tinnerman Clip

Illustration (Front Panel and Door Assembly)



1.	TUT149D	Front Panel Weld Assembly	13.	TU3215	#10-32 x 3/8" Taptite Scr.
2.	TU2194	Door Switch Actuator	14.	TU3163	Catch Pin
3.	TU2105	Actuator Spring	15.	TU4840	#10-32 Hex Crown Nut
4.	M262	#8-32 TR. HD. Screw	16.	TU4839	#10-32 x 3/8" Screw
5.	FB187	#8 Split Lock Washer	17.	TU2236	Hinge Posts
6.	TU3266	#8-32 Hex Nut	18.	TU2836	5/16"-18 x 1/2" Hex HD. Cap Screw
7.	TU5288	Basket Door Seal			
8.	PIF172	Delrin Bearing	19.	TU2878	#10 x 5/8" S.M.S.
9.	TU2874	Basket Door Handle	20.	TU7456	Door Catch Assembly with Rivets
10.	TU5859	Basket Door			
11.	TU1692	Rubber Gasket	21.	FB187	#10 Lock Washer
12.	K105	Door Glass (plain)	22.	TUT304D	Front Panel Access Door
	K105C	Door Glass (with Cissell Logo)	23.	TU7733	#8 x 1/2" Self Drill Screw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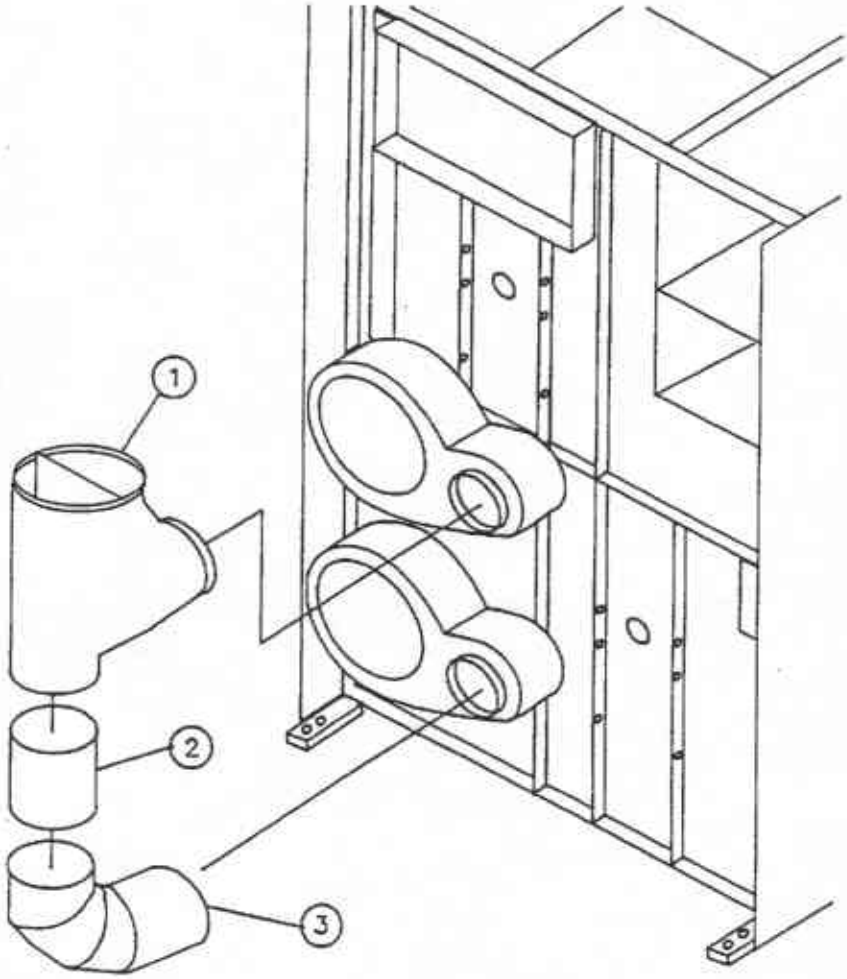
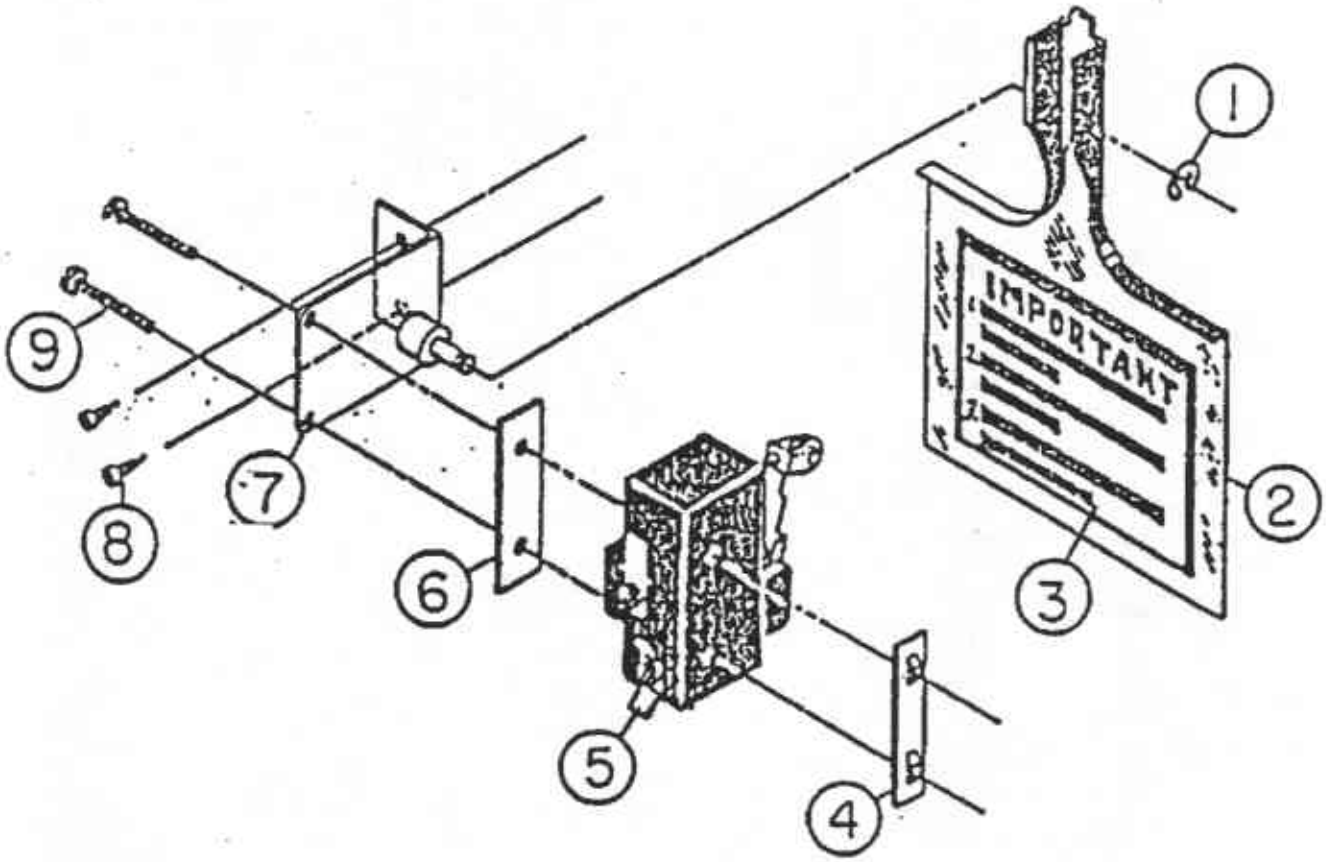
1.	TUT289C	Motor Control Box W/A
2.	TUT194	Motor Control Panel
3.	TU12874	Electronic Rev. Timer
4.	RC344	1/4"-20 x 3/4" Lg. Hex. Hd. Scr.
5.	F540	#6 x 5/8" S.M.S.
6.	TU5958	Heyco Bushing 1 1/2" Dia.
7.	TU7733	#8-18 x 1/2 Self-Drill S.M.S.
11.	TUT204	Transformer 208-240 PRI/24V Sec. 60VA
	TUT307	Transformer 480 PRI/24V Sec. 60VA
12.	TU11622	Transformer 208-220-240 PRI/120V Sec.
	TU11678	Transformer 440-480-575 PRI/120V Sec.
13.	TUT201	Motor Starter
14.	TUT202	Rev. Motor STarter
15.	TU2372	Heyco Bushing 7/8"
16.	500300644	Junction Box
17.	SB170	Junction Box Cover
* * 18.	TUT248D	Control Box Cover
* * 19.	TU6808	Reset Button
20.	- - - - - -	Overload Heater (Fan)
21.	- - - - - -	Overload Heater (Basket)

*** * To order Overload Heaters, see chart.**

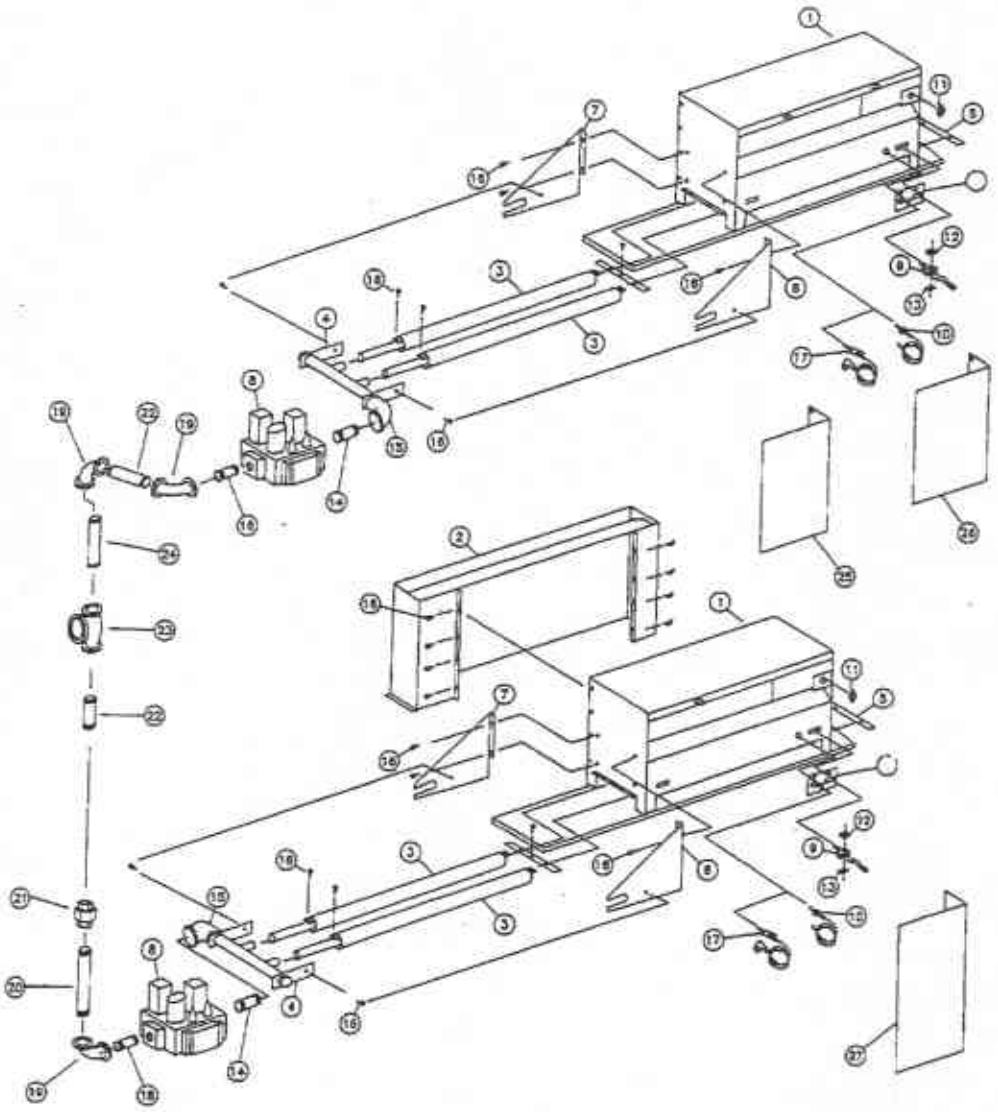


1. TUT343D Exhaust Duct "Tee" (w/Divider)
2. TUT270C Exhaust Duct Connector
3. TU8079 Elbow 8" Std. 24 Ga. Galv.



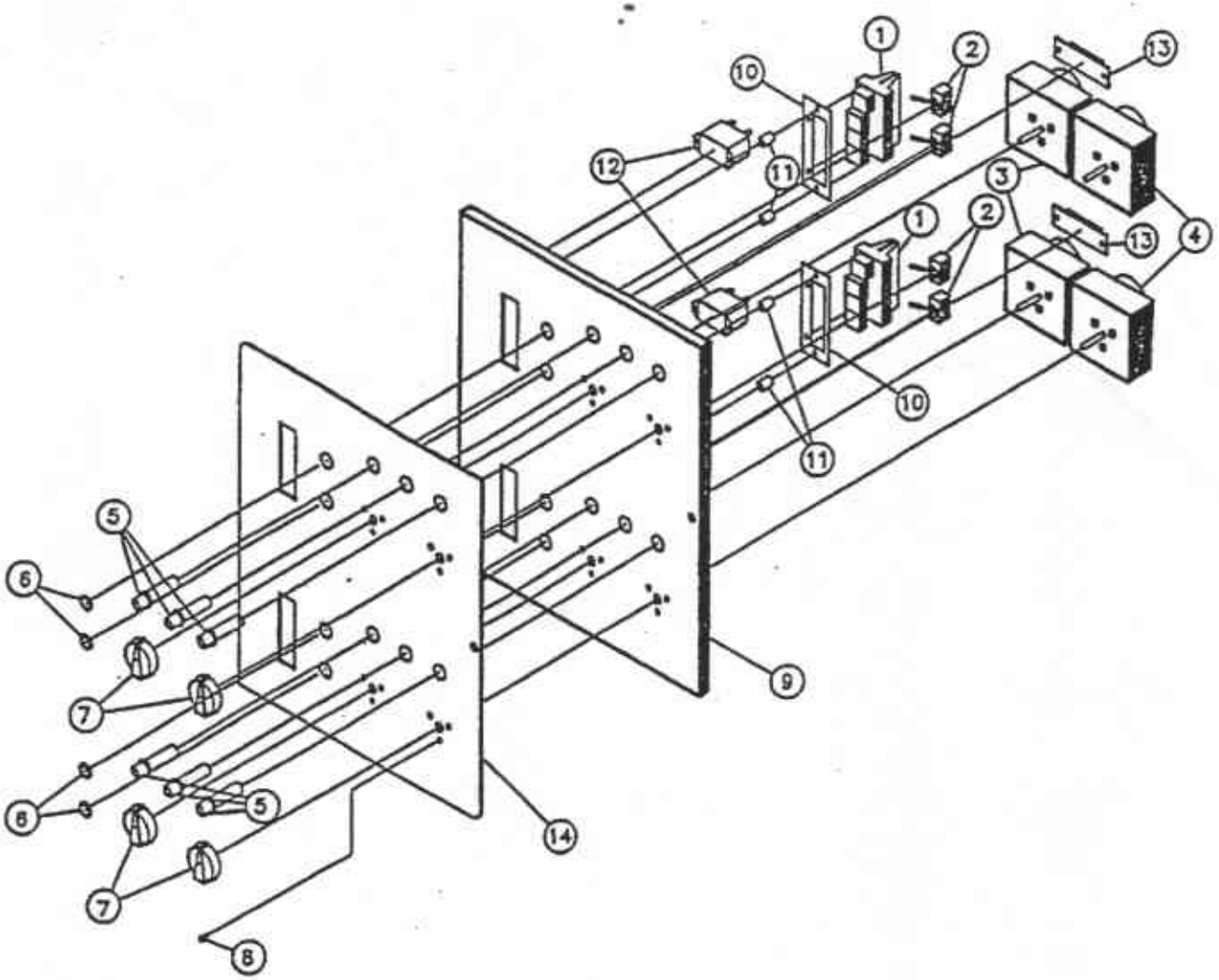
1.	F88	"E" Ring
2.	TU2463	Actuator Arm
3.	TU3476	Air Switch Decal
4.	TU1771	#6 Tinnerman Nut
5.	TU8155	Air Switch
6.	TU1770	Insulator
7.	TU8171	Air Switch Bracket
8.	TU7733	#8-18 x 1/2" Self-Drilling Screw
9.	TU3219	#6 x 1" Round Hd. S.M.S.

Gas Heating Unit Assembly



1.	TUT237D	Bonnet Welded Assembly	12.	TUT240C	Igniter Mount
2.	TUT113D	Bottom Bonnet Duct Weldment	13.	TUT263A	Glow Bar Crush Protector
			14.	TU4607	3/4" x 2 1/2" Lg. Nipple
3.	TUT235B	Burner Assembly	15.	TU4602	3/4" Elbow
4.	TUT125C	Manifold Assembly	16.	TU7733	#8 x 1/2" Self-Drill Screw
5.	TUT121A	Burner Retainer	17.	TUT209	DSI Electrode Assembly
6.	TUT128C	Manifold Support Right	18.	390401021	1/2" x 2 1/2" Lg. Nipple
7.	TUT127C	Manifold Support Left	19.	390501053	1/2" Elbow
8.	TUT261	Gas Control Valve Natural Gas	20.	390401013	1/2" x 7" Lg. Nipple
			21.	OP314	1/2" Union
	TUT297	Gas Control Valve Liquid Petroleum Gas	22.	OP308	1/2" x 4" Lg. Nipple
			23.	TUT269	1/2" x 1/2" x 1" Tee
9.	TU8596	Norton Igniter	24.	TU4651	1/2" x 6" Lg. Nipple
10.	TUT262	Sensor (Hot Surface Ignition ONLY)	25.	TUT321D	Top Rear Intake Deflector
			26.	TUT230D	Top Front Intake Deflector
11.	TU3240	High Temperature Thermostat	27.	TUT232	Bottom Intake Deflector

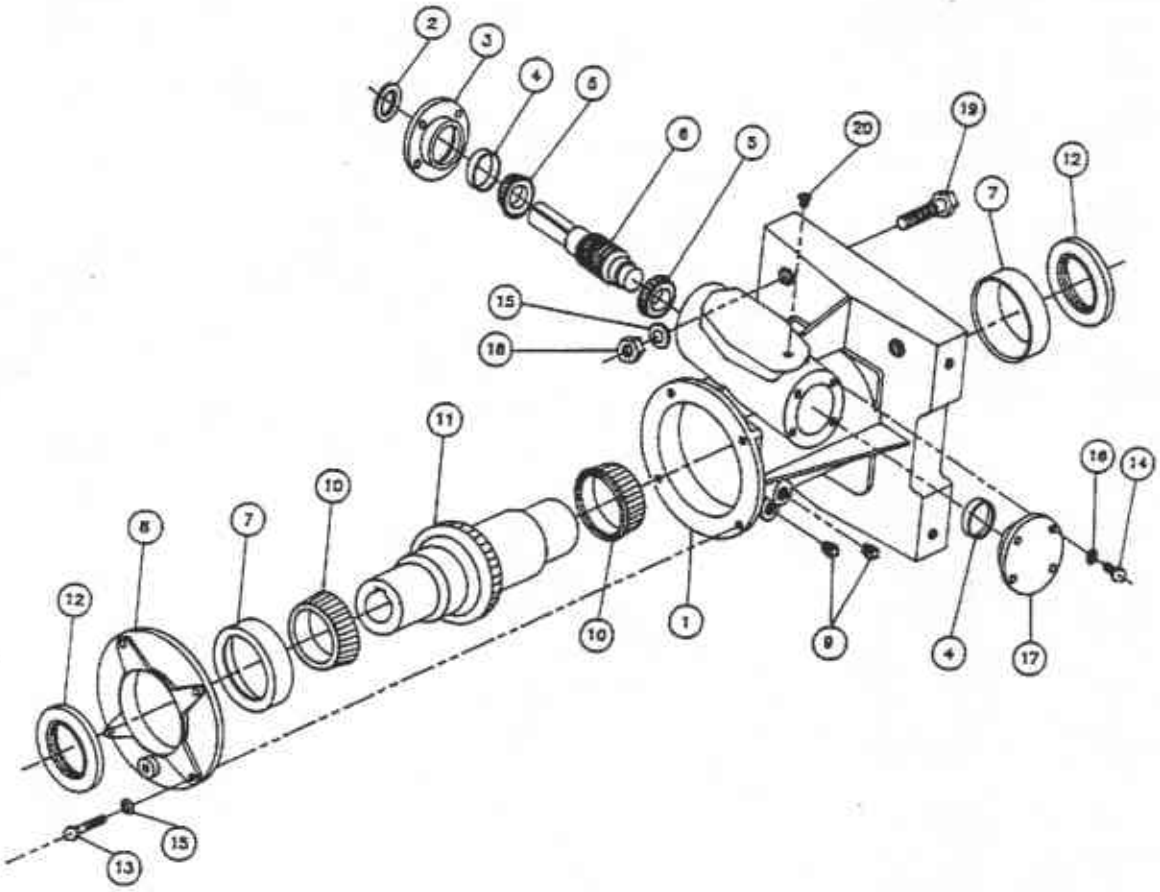
Timer Control Panel Assembly



1.	TU11510	Push Button Switch 4-Pole
2.	FG147	Toggle Switch
3.	TU12932	Timer 60 Min. 24V
4.	TU12933	Timer 15 Min. 24V
5.	TUT316	Light Led. 24V Red
6.	TU3805	Lock Ring
7.	TU2555	Knob
8.	TU7733	#8-18 x 1/2" Self-Drill S.M.S.
9.	TUT185D	Control Panel Complete
10.	TUT191A	Switch Mounting Plate
11.	F943	Spacer
12.	F1300	Relay
13.	TU8629	Terminal Strip
14.	TUT162	Name Plate
*15.	SV136	#6-32 x 15/16" Rd. Hd. Scr.
*16.	TU3400	#6-32 Hex Nut

*** NOT SHOWN**

Small Gear Reducer Assembly —TM100



			Quantity
1	TM103	Housing	1
2	TM104	Small Seal	1
3	TM105	Small Open End Cap	1
4	TM107	Small Bearing Cup	2
5	TM108	Small Bearing Cone	2
6	TM101	Worm 1-1/2" x 7-1/8"	1
7	TM110	Large Bearing Cup	2
8	TM112	Large End Cap	1
9	TM115	1/4" Pipe Plug	1
10	TM117	Large Bearing Cone	2
11	TM102	Worm Gear	2
12	TM120	Oil Seal	2
13	TU2623	Cap Screw 3/8" - 16 x 1-1/2"	4
14	TU2839	Cap Screw 1/4" - 20 x 7/8"	8
15	TU3243	3/8" Internal Tooth Lockwasher	6
16	RC349	1/4" Internal Tooth Lockwasher	8
17	TM118	Small Closed End Cap	1
18	TU4787	3/8" - 16 Hex Nut	2
19	TU3211	3/8" - 16 x 2 1/2" Screw	2
20	TM119	Vent Plug 1/4" NPT	1

Table for Ordering Overload Heaters for Overload Relays

Heater Size	SF = 1.00		SF = 1.15		SF GREATER Than 1.15
	40 Deg. C Amb.	60 Deg. C Amb. or More	40 Deg. C Amb.	60 Deg. C Amb. or More	40 Deg. C Amb. or More
H-6	.69 - .76	.55 - .60	.62 - .68	.50 - .54	.69 - .74
H-7	.77 - .82	.61 - .66	.69 - .74	.55 - .59	.75 - .83
H-8	.83 - .92	.67 - .74	.75 - .83	.60 - .66	.84 - .93
H-9	.93 - 1.03	.75 - .83	.84 - .93	.67 - .74	.94 - 1.02
H-10	1.03 - 1.13	.84 - .91	.94 - 1.02	.75 - .81	1.03 - 1.16
H-11	1.14 - 1.29	.92 - 1.03	1.03 - 1.16	.82 - .93	1.17 - 1.31
H-12	1.30 - 1.46	1.04 - 1.16	1.17 - 1.31	.94 - 1.05	1.32 - 1.45
H-13	1.47 - 1.61	1.17 - 1.29	1.32 - 1.45	1.06 - 1.16	1.46 - 1.63
H-14	1.62 - 1.81	1.30 - 1.45	1.46 - 1.63	1.17 - 1.30	1.64 - 1.80
H-15	1.82 - 2.00	1.46 - 1.60	1.64 - 1.80	1.31 - 1.44	1.81 - 1.96
H-16	2.01 - 2.18	1.61 - 1.74	1.81 - 1.96	1.45 - 1.57	1.97 - 2.22
H-17	2.19 - 2.47	1.75 - 1.97	1.97 - 2.22	1.58 - 1.77	2.23 - 2.43
H-18	2.48 - 2.70	1.98 - 2.16	2.23 - 2.43	1.78 - 1.94	2.44 - 2.55
H-19	2.71 - 2.83	2.17 - 2.27	2.44 - 2.55	1.95 - 2.04	2.56 - 2.81
H-20	2.84 - 3.12	2.28 - 2.50	2.56 - 2.81	2.05 - 2.25	2.82 - 2.99
H-21	3.13 - 3.32	2.51 - 2.66	2.82 - 2.99	2.26 - 2.39	3.00 - 3.43
H-22	3.33 - 3.81	2.67 - 3.05	3.00 - 3.43	2.40 - 2.74	3.44 - 3.90
H-23	3.82 - 4.33	3.06 - 3.49	3.44 - 3.90	2.75 - 3.12	3.91 - 4.28
H-24	4.34 - 4.76	3.48 - 3.80	3.91 - 4.28	3.13 - 3.42	4.29 - 4.86
H-25	4.77 - 5.40	3.81 - 4.32	4.29 - 4.86	3.43 - 3.89	4.87 - 5.45
H-26	5.41 - 6.06	4.33 - 4.84	4.87 - 5.45	3.90 - 4.36	5.46 - 6.13
H-27	6.07 - 6.81	4.85 - 5.45	5.46 - 6.13	4.37 - 4.90	6.14 - 6.79
H-28	6.82 - 7.55	5.46 - 6.03	6.14 - 6.79	4.91 - 5.43	6.80 - 7.72
H-29	7.56 - 8.58	6.04 - 6.86	6.80 - 7.72	5.44 - 6.17	7.73 - 8.48
H-30	8.59 - 9.42	6.87 - 7.54	7.73 - 8.48	6.18 - 6.78	8.49 - 9.65
H-31	9.43 - 10.72	7.55 - 8.58	8.49 - 9.65	6.79 - 7.72	9.66 - 10.70
H-32	10.72 - 11.99	8.59 - 9.59	9.66 - 10.70	7.73 - 8.63	10.80 - 12.30

Properly sized overload heaters provide motor protection to the dryer. Improper heater size may allow the motor to be damaged, or could cause nuisance tripping.

Heater sizes are listed on the Overload Heater Table below. To use the table, refer to the motor rating plate and locate the Full Load Amps (FLA), the Service Factor (SF), and the Ambient Temperature (Amb.).

Example: Motor Rating Plate shows FLA = 3.6, SF = 1.15, and 60 Deg. C Amb. From the table, heater size is M-26. **Order part number "TUT20300-M26".**

CAUTION: Overload Relays do not provide protection from short circuits. Short circuit protection is provided by a device such as a breaker or wall disconnect.