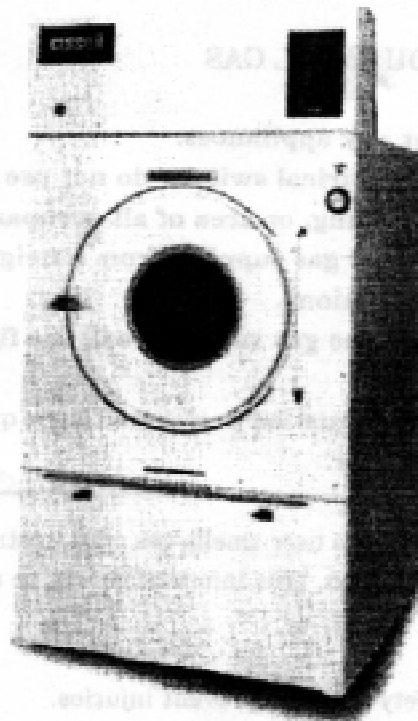


INSTALLATION/OPERATION

110 lb. Laundry Dryer



MODELS

GAS

L44CD42G
L44FD42G
L44KD42G
L44RD42G

STEAM

L44CD42S
L44KD42S

ELECTRIC

L44CD42E
L44KD42E

CISSELL MANUFACTURING COMPANY

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

PHONE: (502) 587-1292
FAX: (502) 585-2333
SALES FAX: (502) 585-3625
SERVICE/PARTS FAX: (502) 584-4070

THIS MANUAL MUST BE GIVEN TO THE EQUIPMENT OWNER.

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








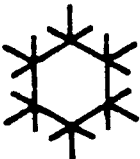
The Identification Nameplate is located on the rear wall of the dryer. It contains the dryer serial number, product number, model number, electrical specifications and other important data that may be needed when servicing and ordering parts, wiring diagrams, etc. Do not remove this nameplate.

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110 LB. LAUNDRY DRYER
INSTALLATION/OPERATION MANUAL



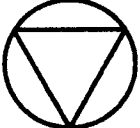

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SYMBOLS

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 Heiß! Nicht Berühren Haute temperature! Ne pas toucher Caliente! no tocar	
	dangerous voltage tension dangereuse Gefährliche elektrische Spannung tension peligrosa	
	on marche Ein conectado	
	off arrêt Aus desconectado	
	start demarrage Start arranque de un movimiento	
	emission of heat in general émission de chaleur en general Warmeabgabe allgemein emisión de calor	
	cooling refroidissement Kühlen enfriamiento	

SYMBOLS

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

Unpacking/General Installation (All Dryers)

UNPACKING

All Cissell dryers are packed in a protective (heavy-duty) plastic bag.

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

Upon locating 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, skid, etc. On gear reducer models, remove screw and insert vent found in basket.

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 (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 dryer for future servicing of belts, pulleys and motors. Installation clearance from all combustable material is 0" ceiling clearance, 0" rear clearance, and 0" side clearance.

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 motors, fan, gas, steam, or electric element. To restart the dryer, close the door and press in the push to start button and hold briefly.

IMPORTANT

This dryer is designed for a capacity maximum load. 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 cleaned daily to insure proper air circulation throughout the dryer.

IMPORTANT

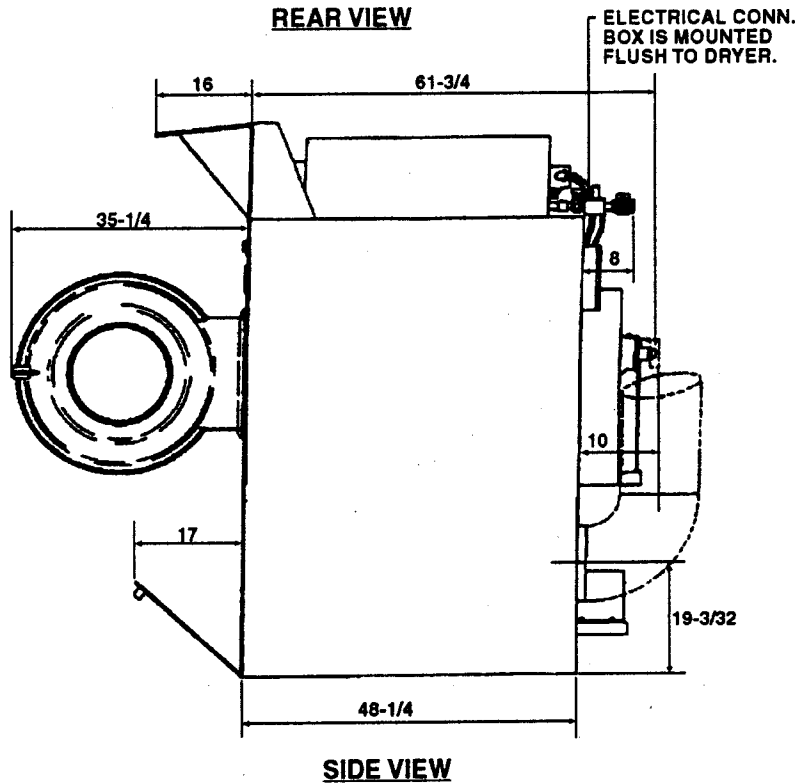
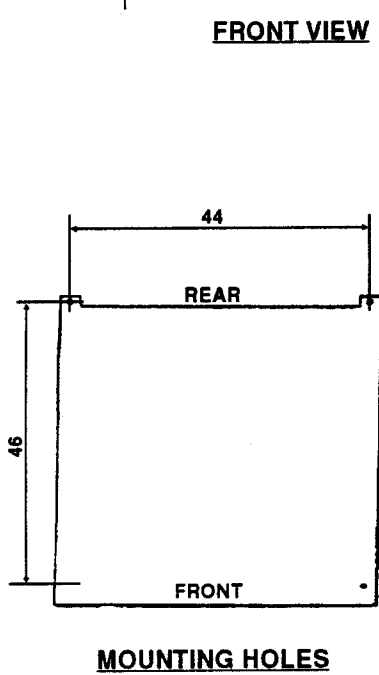
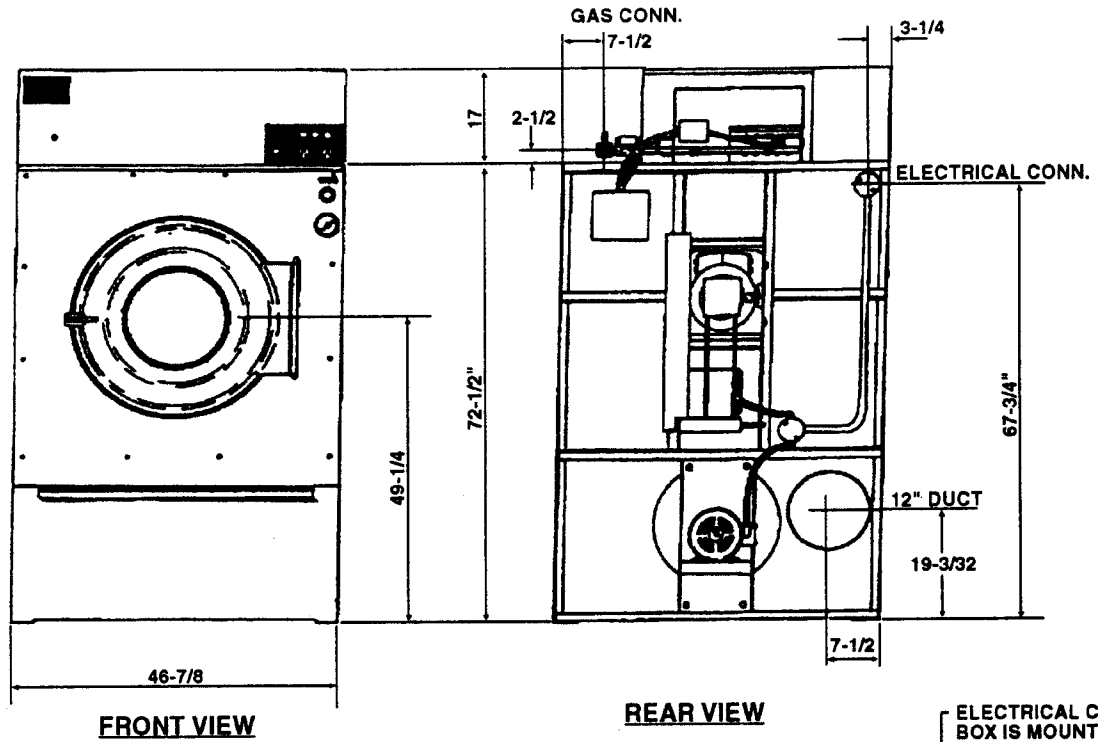
Provide adequate clearance for air opening into the combustion chamber.

Disassembling Top of Dryer

PROCEDURE FOR DISASSEMBLING TOP OF 110 LB. GAS LAUNDRY DRYERS

1. Shut off main gas supply and electrical power. Disconnect bonnet gas supply line at union fitting.
2. Unscrew two (2) top front cover panel hold down screws and open front cover panel. If wires enclosed are not color coded or number matched, match mark before disconnecting or removing.
3. In the left hand control box, disconnect the two (2) multi-wire connector plugs. Unscrew two (2) hold down bolts from the bottom of the box and one (1) bolt outside the rear of the box. Remove the two (2) screws that hold the conduit plate to the control box. Now remove the box.
4. In the right hand control box, unscrew one (1) screw at the top of the control panel and swing panel forward. Disconnect two (2) multi-wire connector plugs. Unscrew two (2) hold down bolts from bottom of box and one (1) bolt outside the box at the rear.
5. Replace two (2) top front cover panel hold down screws and remove entire control panel assembly.
6. Disconnect exhaust duct at bonnet enclosure assembly. (Only applies to *energy-saver models "F" and "R"*.)
7. Unscrew hold down screws from bonnet enclosure assembly (*energy-saver models only*). Unscrew bonnet hold down bolts. Remove air switch box cover on rear of dryer, disconnect one (1) yellow wire from air switch, one (1) black wire at cigarette connector and remove one (1) conduit nut. The entire bonnet and enclosure assembly can now be removed from top of dryer.
8. To reassemble, reverse disassembly procedure.

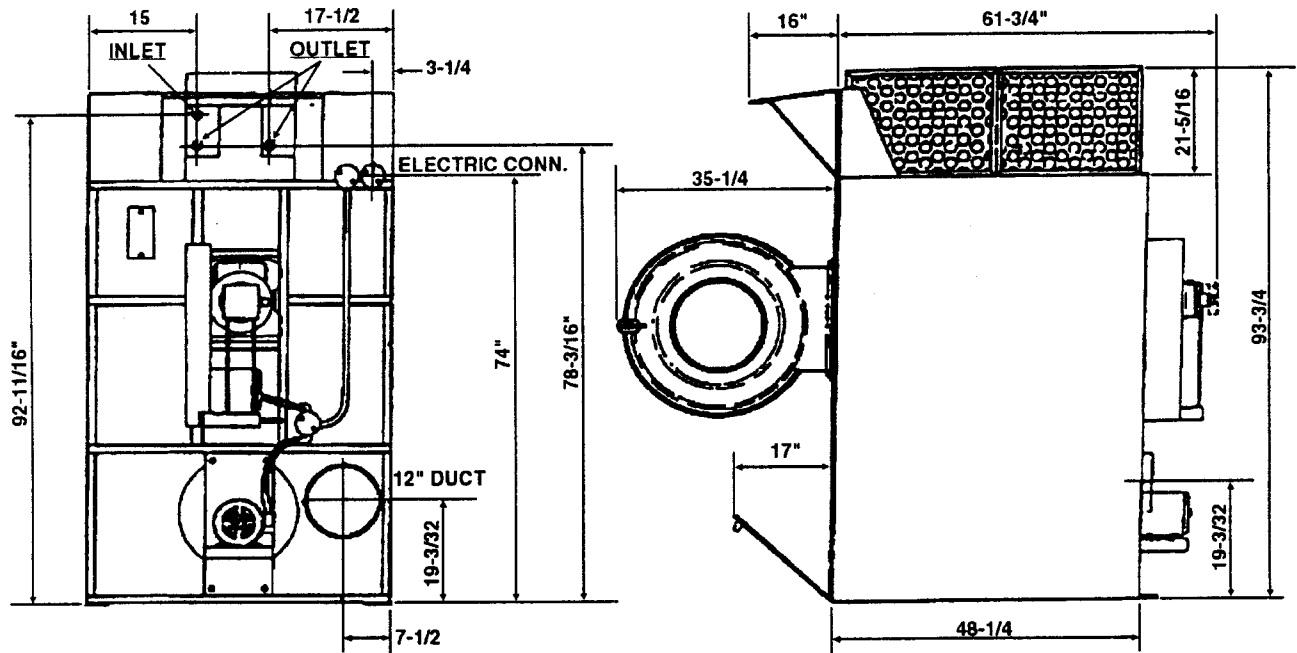
110 lb. Gas Fired Dryer—Models L44CD42G and L44KD42G (Illustration)



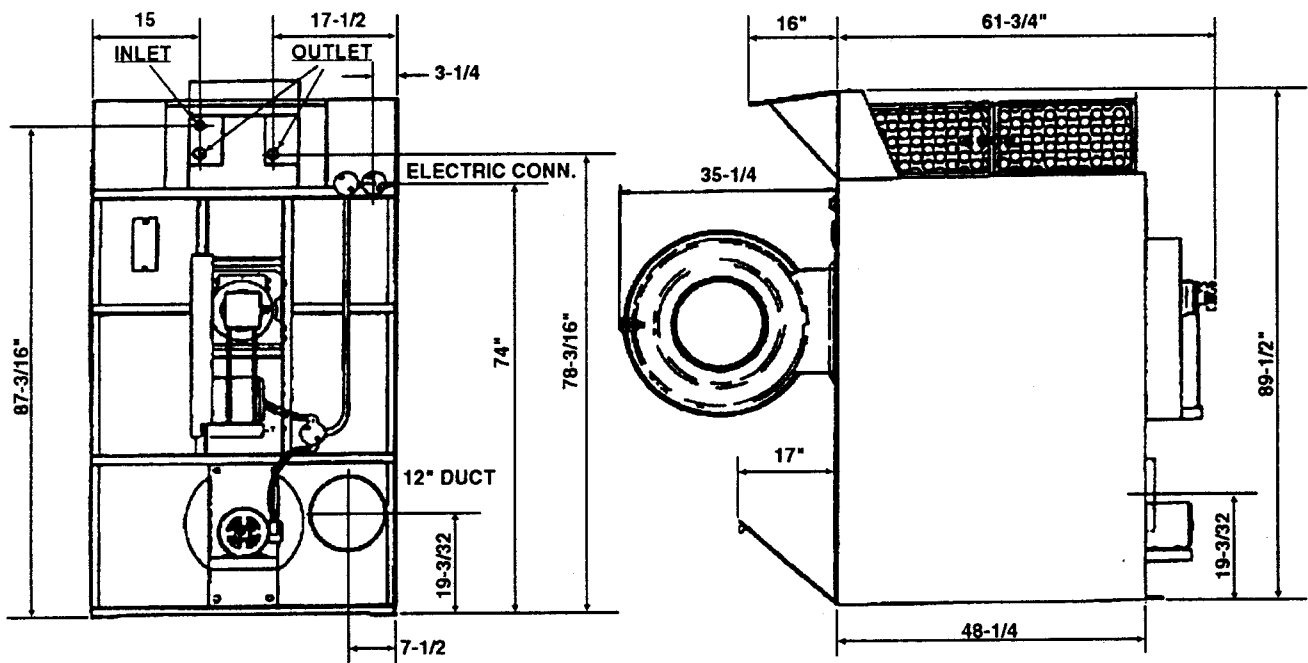
ALL DIMENSIONS GIVEN IN INCHES ± 1.4

110 lb. Steam Heated Dryer—Models L44CD42S and L44KD42S (Illustration)

6 COIL MODEL



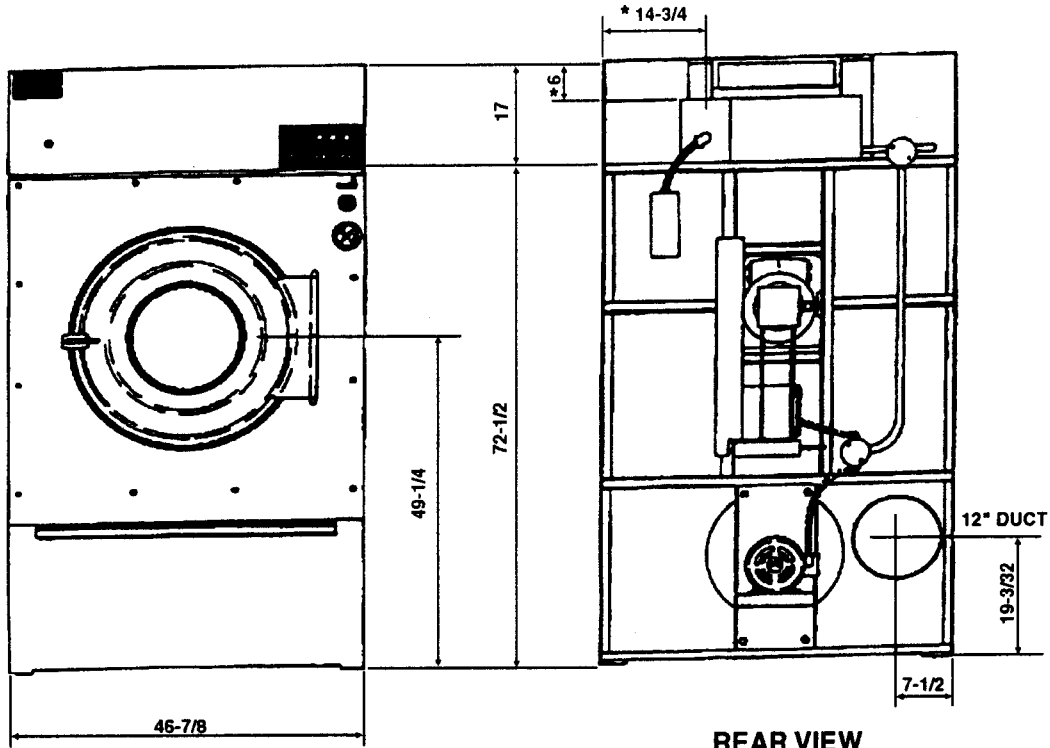
4 COIL MODEL



ALL DIMENSIONS GIVEN IN $\pm 1/4$

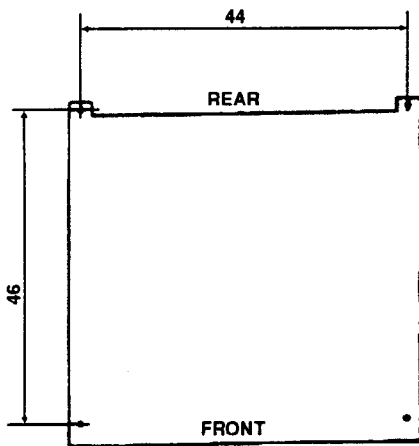
110 lb. Electric Dryer—Model L44CD42E (Illustration)

* ELECTRIC BONNET CONN.

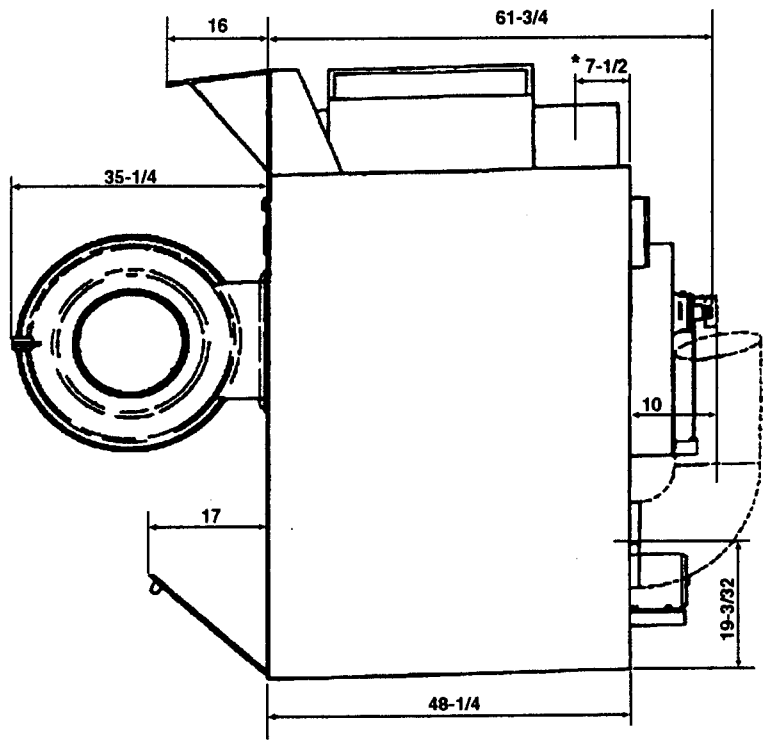


FRONT VIEW

REAR VIEW



MOUNTING HOLES

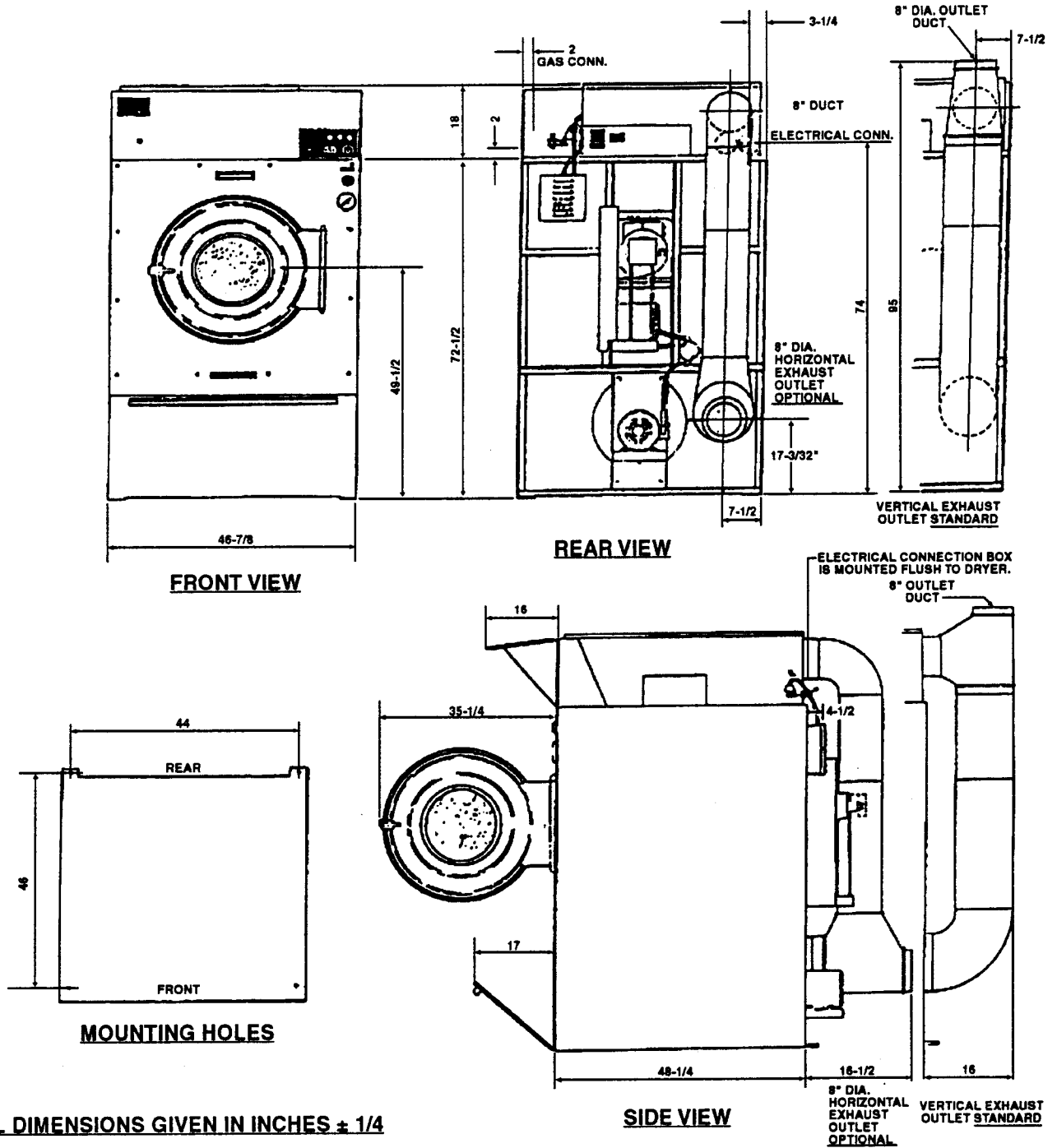


SIDE VIEW

ALL DIMENSIONS GIVEN IN $\pm 1/4$

110 lb. Gas Fired Dryer—Models L44FD42G and L44RD42G (Illustration)

ENERGY-SAVER MODEL



Specifications

**GENERAL
SPECIFICATIONS FOR
110 lb. GAS FIRED, STEAM
HEATED AND ELECTRIC
LAUNDRY DRYERS**

Floor Space	64" Deep x 47" W x 89 1/8" H (<i>Gas, Electric, 4-Coil Steam,</i> (162.56 cm x 119.38 cm x <i>6-Coil Steam</i>) 226.52 cm)
Door	33 3/8" diameter (84.79 cm)
Basket Size	44" diameter x 42" Deep (111.76 cm x 106.68 cm)
Basket Load Capacity	110 lbs. (49.9 kg) dryweight
Basket Motor	1 HP
Fan Motor	1 1/2 HP
Basket RPM	
<i>Reversing</i>	28 (3.2 reversals per minute)
<i>Non-Reversing</i>	34
Exhaust Duct	12" diameter (30.48 cm)
Maximum Air Displacement	
<i>Steam-Gas</i>	2160 CFM (61.16 M ³ /Min.)
<i>Electric</i>	2250 CFM (63.71 M ³ /Min.)
Recommended Operating Range	
<i>Steam-Gas</i>	1900-2100 CFM (53.8-59.47 M ³ /Min.)
<i>Electric</i>	2000-2200 CFM (56.63-62.3 M ³ /Min.)
Net Weight (approximate)	
<i>Steam</i>	1640 lbs. (743.89 kg)
<i>Gas</i>	1590 lbs. (721.21 kg)
<i>Electric</i>	1590 lbs. (721.21 kg)
Domestic Shipping Weight	
<i>Steam - 1 crate (approx.)</i>	2135 lbs. (968.42 kg)
<i>Gas - 1 crate (approx.)</i>	2065 lbs. (936.67 kg)
<i>Electric - 1 crate (approx.)</i>	2034 lbs. (922.61 kg)
Export Shipping Weight	
<i>Steam - 1 box (approx.)</i>	2450 lbs. (111.3 kg)
<i>Gas - 1 box (approx.)</i>	2330 lbs. (1056.87 kg)
<i>Electric - 1 box (approx.)</i>	2300 lbs. (1043.26 kg)
Export Shipping Dimensions	93" L x 53" W x 78" H -232.7 cu. ft. (236.22 cm x 134.62 cm x 198.12 cm) - (6.59 m ³)

**GAS FIRED DRYERS
ONLY**

**CONSULT GAS SUPPLIER
FOR SPECIFIC
GAS REQUIREMENTS**

BTU Input Rating	250,000 BTU per hour (nat., mixed and mfg. gases) 250,000 per hour (propane and butane gases)
Gas Supply	3/4" (1.91 cm) pipe connection
Electric Ignition	Silicon Carbide Gas Ignition System
Manifold Gas Pressure	3.5" WC Max. (Nat. Gas); 11" WC (LP Gas)
Drying Time	110 lbs. (49.9 kg) (Indian Head) dry weight
(<i>Approximate - testing in laboratory</i>)	70% water retention - 38 min. 50% water retention - 28 min.

Specifications

STEAM HEATED DRYERS ONLY

Operating Steam Pressure	
4-Coil	100 PSIG Max.
6-Coil	100 PSIG Max.
Boiler HP (with normal load)	
4-Coil	7.87
6-Coil	9.50
Heat Capacity	
4-Coil	
6-Coil	
Steam Coils	
4-Coil	(2) 40 1/2" L x 6" W x 10 1/4" H (102.87 cm x 15.24 cm x 26.04 cm)
6-Coil	(2) 40 1/2" L x 15 3/4" H x 6" W (2) 102.87 cm x 15.24 cm x 40.01 cm)
Traps for Steam Heating Coils	
4-Coil	3/4" (2)
6-Coil	3/4" (2)
Steam Supply Line	
4-Coil	3/4"
6-Coil	3/4"
Steam Return Line	
4-Coil	3/4"
6-Coil	3/4"
Drying Time	110 lbs. (49.9 kg) dry weight
(Approx. - testing in lab.)	Indian Head cloth
4-Coil	High Pressure (100 PSIG Max.) 70% water retention - 38 min.
6-Coil	High Pressure (100 PSIG Max.) 70% water retention - 31 min.
(Low Pressure requires longer drying time)	
4-Coil	50% water retention - 28 min.
6-Coil	50% water retention - 24 min.

ELECTRIC LAUNDRY DRYER (see Electric Bonnet Sheet)

Drying Time (Dry Weight)	
60 KW	110 lbs. (49.9 kg) Indian Head cloth
80 KW	110 lbs. (49.9 kg) Indian Head cloth
(Approx. - testing in lab.)	
60 KW	70% water retention - 40 min. 50% water retention - 30 min.
80 KW	70% water retention - 31 min. 50% water retention - 23 min.

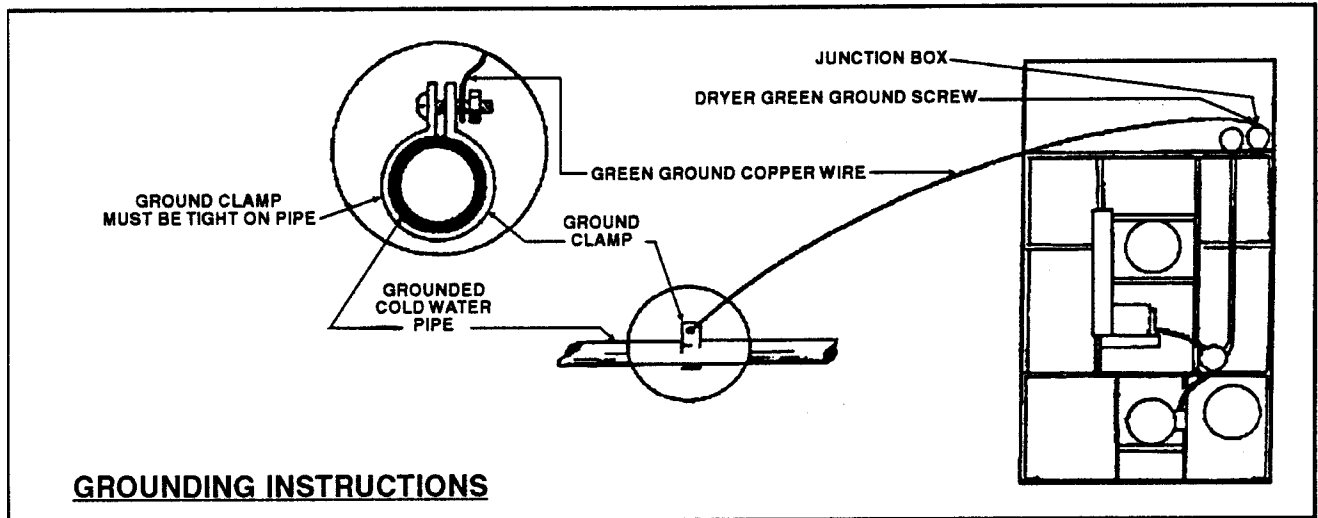
Specifications

ENERGY SAVER GAS DRYERS	Floor Space	66" Deep x 47" W x 89 1/8" H
	(Gas, Electric, 4-Coil Steam,	(167.64 cm x 119.38 cm x
	6-Coil Steam)	226.52 cm)
	Exhaust Duct	8" diameter (20.32 cm)
	Maximum Air Displacement	850 cu. ft. per min. (2407 M ³ /Min)
	Recommended Operating Range	700-800 CFM (198-227 M ³ /Min)
	BTU Input Rating	200,000 per hour (nat., mixed
		and mfg. gases)
		200,000 per hour (propane and
		butane gases)
	Net Weight (approx.)	
	50 Cy.	1720 lbs. (780.18 kg)
	60 Cy.	1670 lbs. (757.5 kg)
	Domestic Shipping Weight	
	(1 crate - approx.)	
50 Cy.	2215 lbs. (780.18 kg)	
60 Cy.	2165 lbs. (982.02 kg)	
Export Shipping Weight		
(1 crate - approx.)		
50 Cy.	2430 lbs. (1102.23 kg)	
60 Cy.	2380 lbs. (1079.55 kg)	
Export Shipping Dimensions	96" L x 49" W x 75" H	
	(24384 cm x 12446 cm x 1905 cm)	
Export Crating	204.2 cu. ft. (5.78 M3)	

MOTORS USED - ALL 110 lb. DRYERS

Motor No.	Voltage	H _z .	Phase	HP	Basket or Fan Motor	Motor Amps
MTR212	208-230/460	60	3	1	Basket	3.8/1.9
MTR101	575	60	3	1	Basket	1.7
MTR104	240/415	50	3	1	Basket	3.0/1.6
MTR192	220/380	50	3	1	Basket	3.3/1.9
MTR192	220/380	60	3	1	Basket	3.1/1.8
MTR192	200/346	50	3	1	Basket	3.3/1.9
MTR215	200-230/460	60	3	1 1/2	Fan	5.6/2.8
MTR100	575	60	3	1 1/2	Fan	2
MTR192	240/415	50	3	1 1/2	Fan	5.8/3.2
MTR61	220/380	50	3	1 1/2	Fan	4.8/2.8
MTR61	220/380	60	3	1 1/2	Fan	4.3/2.5
MTR61	200/346	50	3	1 1/2	Fan	4.9/2.9

Total controls on dryer, other than motors and electric heating elements are 1 to 3 Amperes.



**ELECTRICAL
CONNECTIONS
FOR ALL DRYERS**

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. 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 No. 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 the 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.)*

All panels must be in position before operation of dryer.

Gas Piping

GAS SERVICE INSTALLATION INFORMATION

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 shown in Illustration, 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.

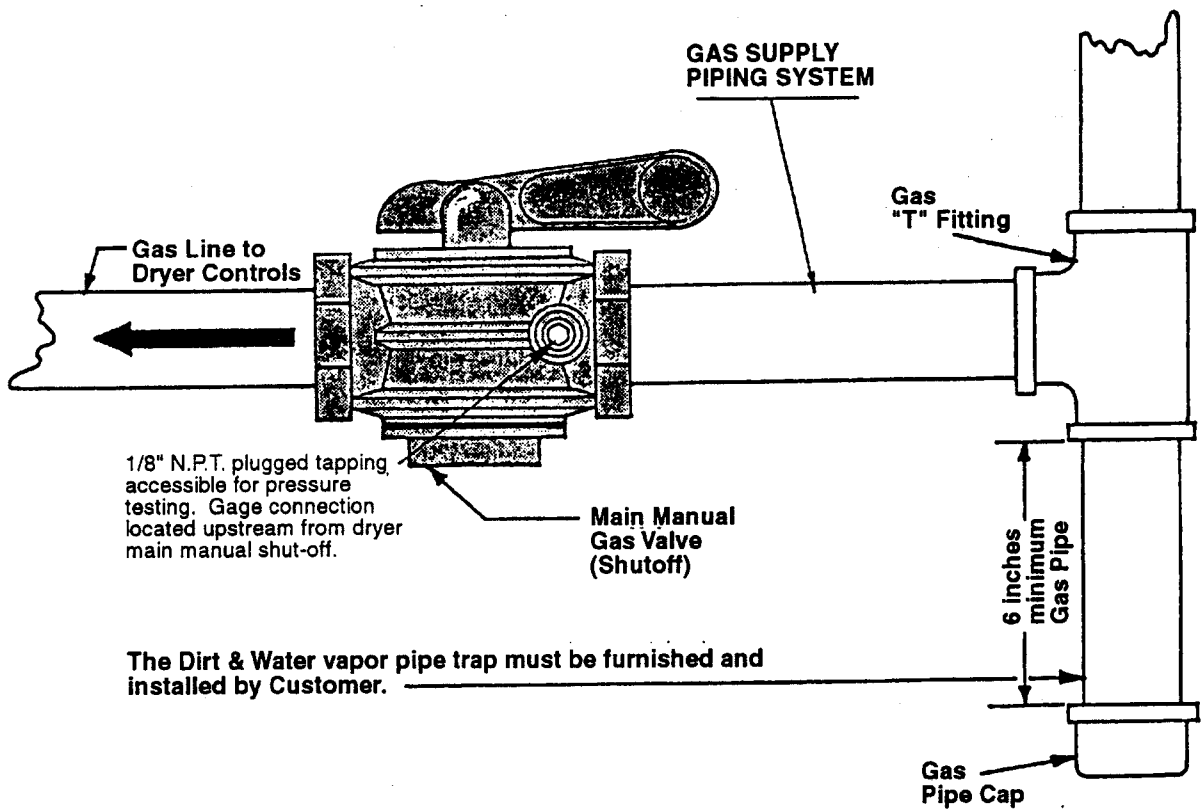
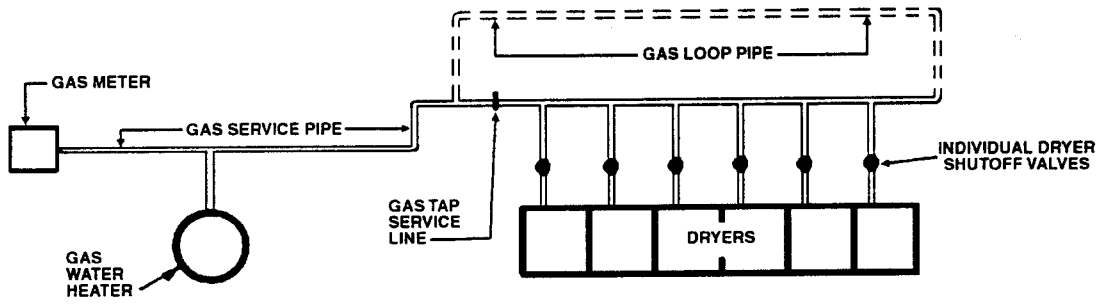


WARNING

(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.

Gas Loop Piping and Gas Supply Piping System (Illustrations)



Gas Pipe Size Chart

TOTAL BTU/HR (for LP Gas correct total BTU/HR below by multiplying by .6)	TOTAL KCAL	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.					
		HOURLY	(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
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 Installation

GAS PIPING INSTALLATION

1. The installation must conform to **local codes** or in absence of local codes, with the **National Fuel Gas Code as ANSI Z223.1—Latest Edition**.
2. Check with utilities for proper gas pressure and gas supply line.
3. Check for altitude elevation of the dryer.
4. The dryer and its individual shut-off valve must be disconnected from the gas supply piping system at test pressures in excess of 1/2 PSIG.
5. 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.



NATURAL GAS ONLY

Check the gas pressure inlet supply to the dryer, 11 inches WC Pressure maximum. Check the manifold pressure, 3.5 inches WC Pressure inside the dryer.



CAUTION

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

Steam Piping Installation

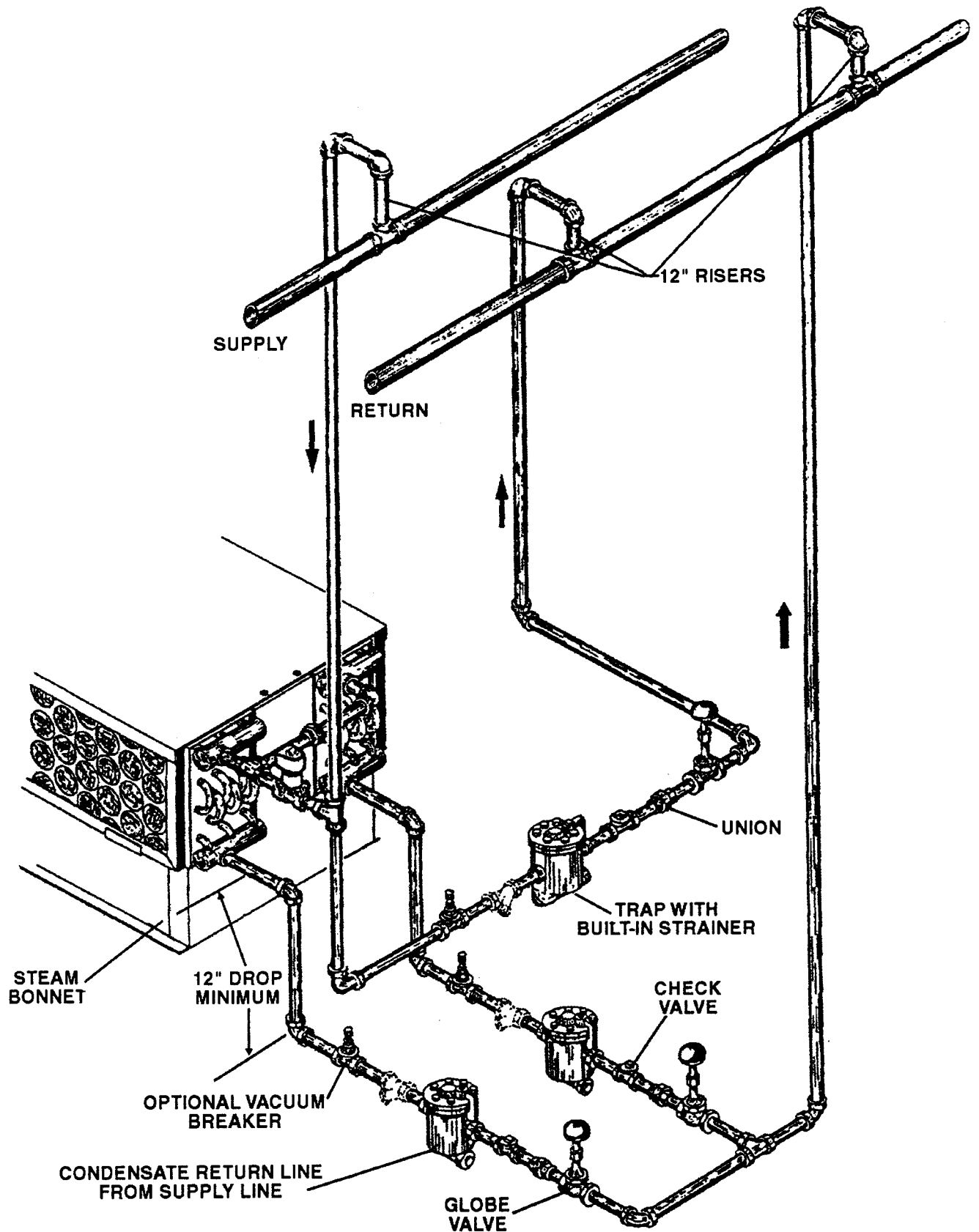
INSTALLATION INSTRUCTIONS

1. Set and anchor dryer in position. **Machine should be level to assure proper steam circulation.**
2. To prevent condensate draining from headers to dryer, piping should have a minimum 12" above respective header. **Do not make steam connection to header with a horizontal or downwardly facing tee or elbow.**
3. Whenever possible, horizontal runs of steam lines must drain, by gravity, to respective steam header. Water pockets, or an improperly drained steam header will provide wet steam, causing improper operation of dryer. If pockets or improper drainage cannot be eliminated, install a bypass trap to drain condensate from the low point in the steam supply header to the return.
4. In both steam supply and steam return line, it is recommended that each have a 3/4" union and 3/4" globe valve. This will enable you to disconnect the steam connections and service the dryer while your plant is in operation.
5. Before connecting trap and check valve to dryer, open globe valve in steam supply line and allow steam to flow through dryer to flush out any dirt and scale from dryer. This will assure proper operation of trap when connected.
6. After flushing system, install bucket trap (with built-in strainer) and check valve. For successful operation of dryer, install trap 18" below coil and as near to the dryer as possible. Inspect trap carefully for inlet and outlet markings and install according to trap manufacturer's instructions. If steam is gravity returned to boiler, omit trap but install check valve in return line near dryer.
7. Install union and globe valve in return line and make final pipe connections to return header.

PIPING RECOMMENDATIONS

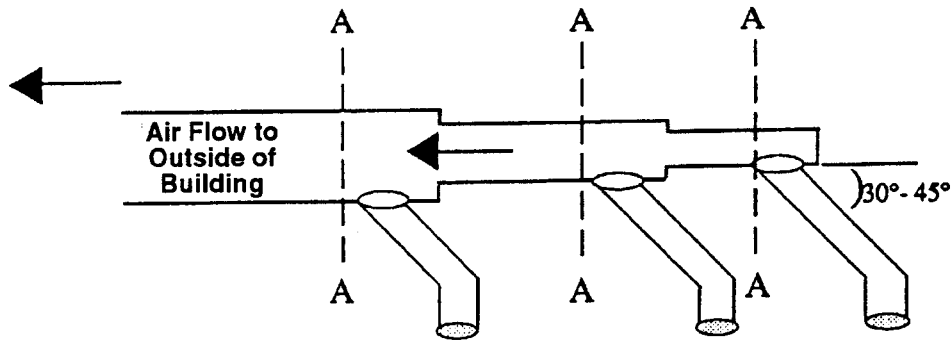
1. Trap each dryer individually. Always keep the trap clean and in good working condition.
2. When dryer is on the end of a line of equipment, extend header at least 4 feet beyond dryer. Install globe valve, union, check valve and bypass trap at end of line. If gravity returned to boiler, omit trap.
3. **Insulate steam supply and return line for safety of operator and safety while servicing dryer.**
4. Keep dryer in good working condition. Repair or replace any worn or defective parts.

Steam Piping Installation (Illustration)



Exhaust Installation—Multiple Manifold Duct

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.)

MODELS: L28FD30G, L28US30G, L36FD30G, L36UR30G, L36CD36G, L44FD42G

No. of Dryers	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Duct Diameter (in inches)	6	9	11	12	14	15	16	17	18	19	20	21	22	23	23	24	25	26	26	27	28	28	29	30
(in cm)	15	23	27	30	35	38	41	43	46	48	51	53	56	58	58	61	63	66	66	68	71	71	73	76

MODELS: L28CD30G, L28UR30G, L36CD30G, L36UR30G, L36CD36G, L44FD42G

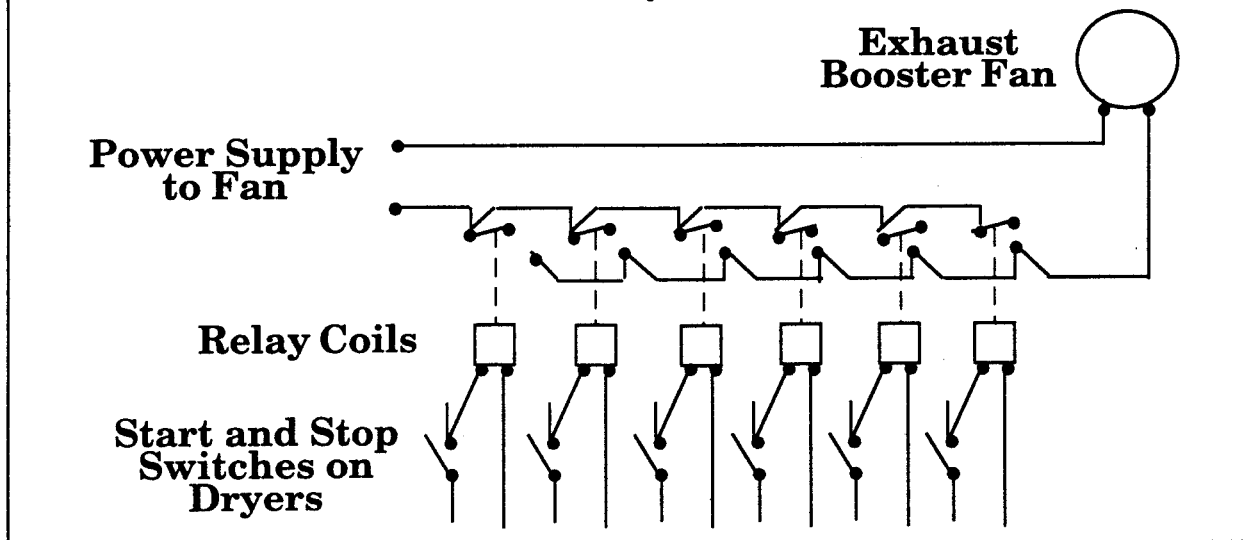
No. of Dryers	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Duct Diameter (in inches)	8	12	14	16	18	20	22	23	24	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
(in cm)	20	30	35	41	46	51	56	58	61	66	68	71	73	76	78	81	84	86	89	91	94	97	99	100

MODELS: L44CD42G, L50CD42G

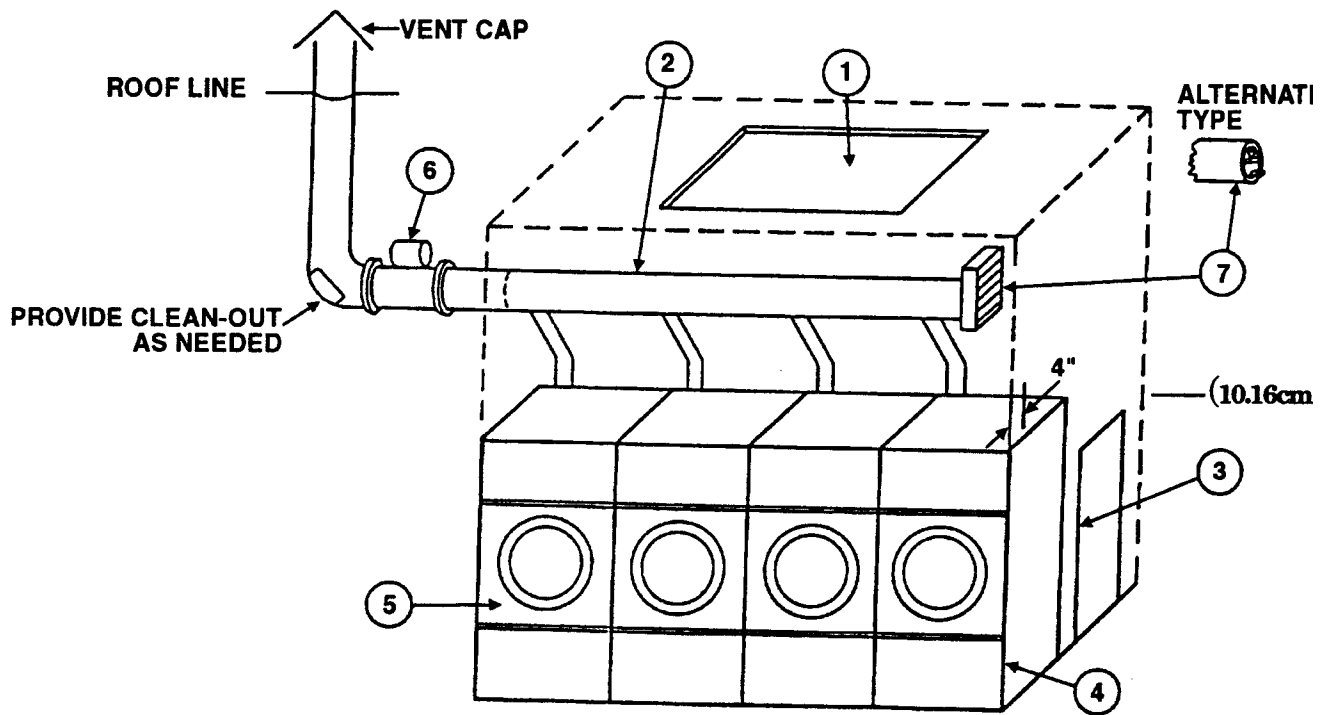
No. of Dryers	1	2	3	4	5	6	7	8	9	10	11	12
Duct Diameter (in inches)	12	17	21	24	27	30	32	34	36	38	40	42
(in cm)	30	43	53	61	68	76	81	86	91	97	100	106

AUTOMATIC ELECTRICAL CONTROL FOR EXHAUST FAN

For one or more dryers to start fan.



Dryer Installation with Multiple Exhaust (Illustration)



Dryer Installation with Multiple Exhaust

EXHAUST INSTALLATION— MULTIPLE MANIFOLD DUCT

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

1. Make-up air from outside building may enter enclosure from top or side walls. Area of opening should be equal to 4-6 times the sum of dryer duct areas. Provide 1 sq. ft. for each 6 in. diameter; 2 sq. ft. for each 8 in. diameter; and 4 sq. ft. for each 12 in. diameter.
2. Use constant diameter duct with area equal to the sum of dryer duct areas.

EXAMPLE: 6-8 in. diameter duct = 1-19.6 in. diameter duct in area. Use 20 in. diameter duct or diameter to match tube-axial fan.

3. Enclosure (plenum) with service door. This separates the dryer air from room comfort air. If dryers use room air instead of outside air, the heat loss can be another 25 BTU/HR for each cubic foot per minute (CFM) used.

EXAMPLE: 110 lb. dryer, 2000 CFM = 50,000 BTU/HR loss.

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 page 23*. 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

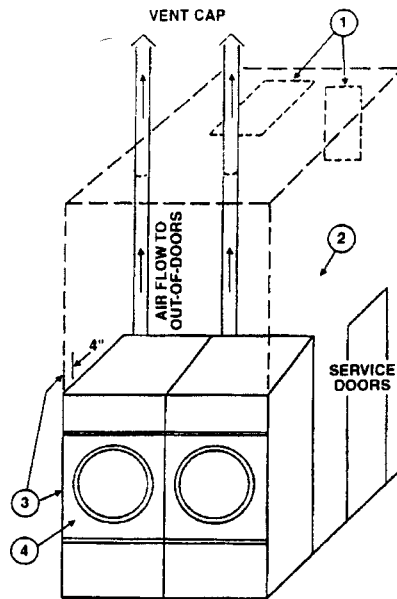
Never install hot water heaters or other gas appliances in the same room as dryers. Never install cooling exhaust fans in the same room as dryers.



CAUTION

Never exhaust dryers with other types of equipment.

Dryer Installation with Separate Exhaust (Preferred) (Illustration)



DRYER INSTALLATION WITH SEPARATE EXHAUST (PREFERRED)



DRYER INSTALLATION WITH SEPARATE EXHAUST (PREFERRED)

For Exhaust Duct 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. Area of opening should be equal to 4-6 times the sum of dryer duct areas. Provide 1 sq. ft. for each 6 in. diameter; 2 sq. ft. for each 8 in. diameter; and 4 sq. ft. for each 12 in. diameter.
2. Enclosure (plenum) with service door. This separates the dryer air from the room comfort air. If dryers use room air instead of outside air, the heat loss can be another 25 BTU/HR for each cubic foot per minute (CFM) used.
EXAMPLE: A 110 lb. dryer with 2000 CFM = heat loss of 50,000 BTU/HR.
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 fronts *only* is about 60 BTU/HR per square foot.

Dryer Air Flow Installation

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 are required for both regular and energy saving models.

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 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.

MAKE-UP AIR

FOR BEST DRYING:

1. Provide opening to the out-of-doors in accordance with the following:
For each dryer—
8 inches diameter exhaust requires 2 square feet make-up air.
12 inches diameter exhaust requires 4 square feet make-up air.
2. Use barometric shutters in the inlet air opening to control air when dryers are not running.

OTHER RECOMMENDATIONS TROUBLESHOOTING

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

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. **Reference**
Lighting and shut-down instructions and wiring diagrams are located on the rear wall of the dryer cabinet.
9. **The dryer must not be installed or stored in an area where it will be exposed to water and/or weather.**
10. 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.
11. Operate dryer using full-size loads. Very large loads use extra energy. Very small loads waste energy.
12. 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.
13. Clean the lint screen area daily. A clean lint screen helps give faster, more economical drying.
14. **Do not** open the dryer door while drying. You let warm air escape from the dryer into the room.
15. Unload the dryer as soon as it stops. This saves having to re-start your dryer to remove wrinkles.

ENERGY-SAVING TIPS

CAUTION

Synthetic solvent *fumes* from dry cleaning machines create acids when drawn through the dryer. These acid fumes cause rusting of painted parts, pitting of bright plated parts and completely removes the zinc from galvanized metal parts, such as the tumbler basket.

If the dry cleaning machines are in the same area as the tumbler, then the tumbler *make-up air* must come from a source free of solvent fumes.

ABOVE 2,000 FEET

ELEVATIONS ABOVE 2,000 FEET

Input ratings shown on the rating plate (serial tag) are for elevations up to 2,000 feet. For elevations above 2,000 feet, rating should be reduced at a rate of 4% for each 1,000 feet above sea level.

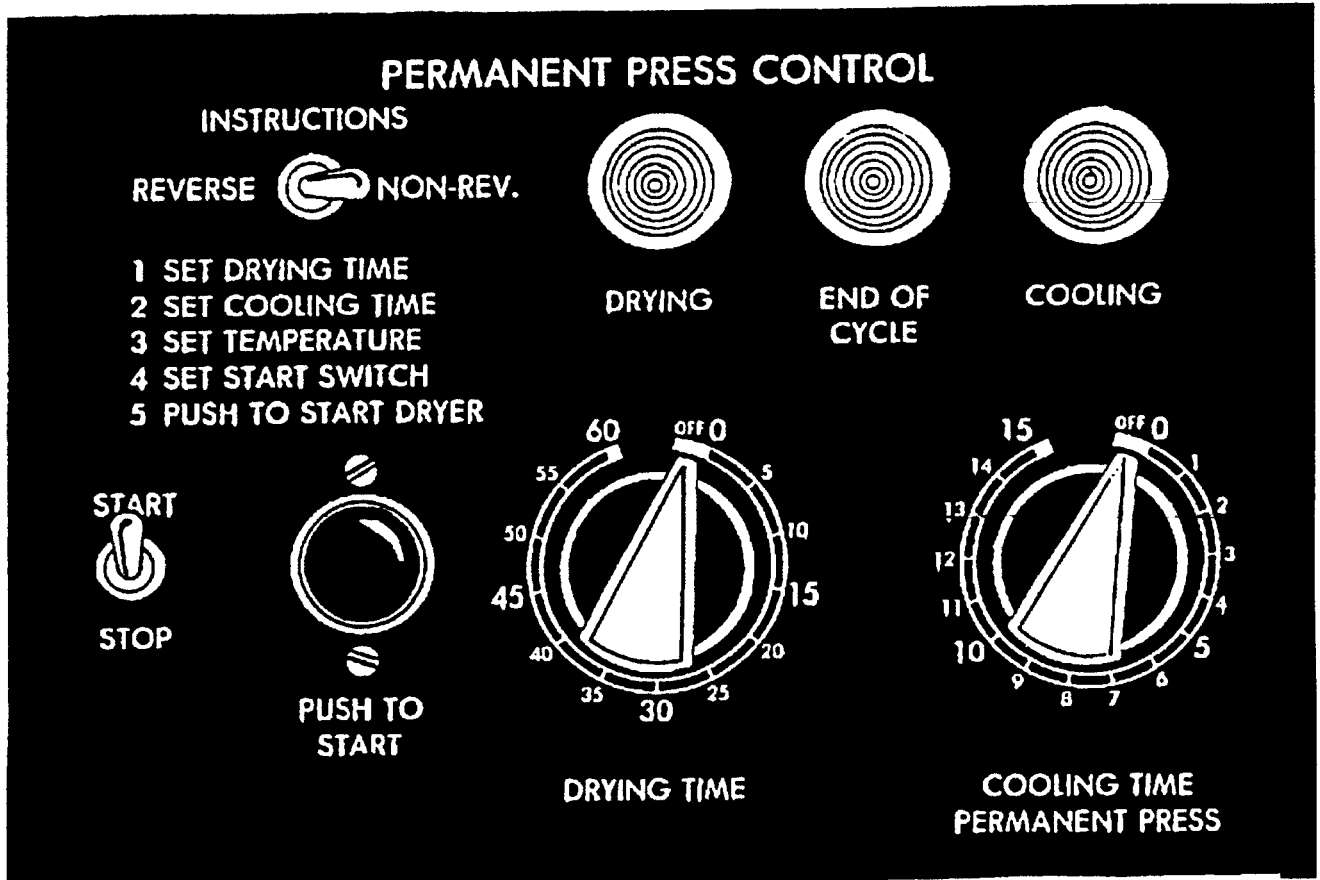


Fig. 1

Fig. 2 Temperature Selection

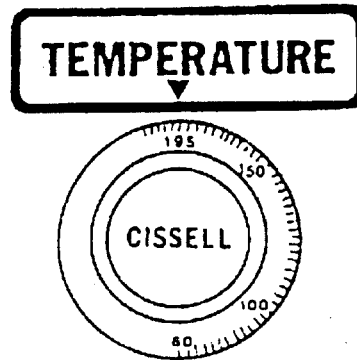
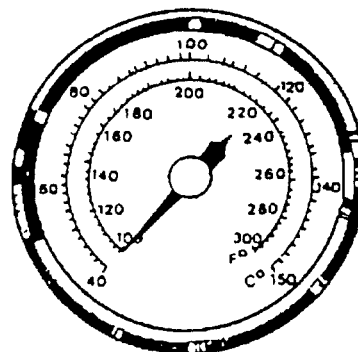


Fig. 3 Thermometer



Operating Instructions—Two Timer Models

OPERATING INSTRUCTIONS—TWO TIMER MODELS

OPERATING INSTRUCTIONS—TWO TIMER MODELS

1. After loading the dryer tumbler with the water washed clothes load, proceed to close the loading door. For better drying, do not load dryer with combination of garments that twist.
2. Turn the 60-minute drying timer to the desired drying time. The drying cycle light will be on and indicate the drying. The light shuts off when drying time is complete. (figure 1 on page 30.)
3. Turn the 15-minute cooling cycle timer to the desired cool down time. After the drying cycle is completed, then the cooling cycle time will automatically operate. The cooling light will be on and indicate the cooling of the clothes load. The light shuts off when cooling time is completed. (figure 1 on page 30.)
4. **Temperature Selector**—Select temperature per type of load being dried in the dryer. (figure 2 on page 30.)
High Heat—Mixed and heavy fabrics, set dial to 195°F.
Normal—Cottons and linens, set dial to 170°F.
Permanent Press Heat—Poly knit synthetics, blends, light-weight fabrics, set dial to 150°F.
Low Heat—Delicate, sheer fabrics, easy-to-dry, set dial to 60°F.
5. **Thermometer**—Use this with your temperature selection. Teach yourself what temperature is too hot or too cold. (figure 3 on page 30.)
6. Turn switch to “start” position. (figure 1 on page 30.)
7. Close the dryer door, but the basket **will not rotate** until the **PUSH-TO-START BUTTON** is pressed. Press in the **PUSH-TO-START BUTTON** (approximately 2 seconds) until the dryer starts running and then release button. (figure 1 on page 30.)

**OPERATING
INSTRUCTIONS—TWO
TIMER MODELS**

**OPERATING INSTRUCTIONS—TWO TIMER MODELS
(continued)**

What is happening to the drying operation:

- a. The fan motor will operate.
- b. The basket will rotate.
- c. The heat source will be energized.
- d. The heated air will mix with the water washed clothes to evaporate the moisture from the garments.
- e. The thermostats will function to maintain a safe temperature throughout the drying cycle.
- f. The heat will be shut off and the motor will continue to run to cool the dry load to a desired handling temperature.

8. When the drying timer completes its time, then the cooling timer will be energized and the cooling light will be "On". When the cooling timer completes its time, the cooling light will stay "On" and the "End-of-Cycle" light will be "On". The "End-of-Cycle" light will go off when the "Start/Stop" switch is turned "Off". At the end of the cool-down cycle, the clothes load is dry.
9. To shut the dryer "Off", move the "Start/Stop" switch to the "Stop" position. This switch is a safety switch to immediately stop the dryer's operation.

Special Reversing Feature—Set the "Reversing/Non-Reversing" switch to "Reversing". See service manual for setting of time of each reversal. Reversing of the basket is designed for loads that twist (**example**—bed sheets and large mixed loads). "Non-Reversing" is for small or medium-size items that don't twist.

Service Savers

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 intermittent 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

The dryer has a safety device which automatically shuts off the gas if the burner fails to light in a short time. If this happens, turn the dryer off. Check and see if the manual gas valve is open. **Wait 5 minutes for the safety device to reset.** Then reset the dryer controls. If the dryer still fails to heat, call for service. **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.

VERY IMPORTANT

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

Troubleshooting Chart—Gas, Steam, and Electric Dryers

TROUBLE	CAUSE	REMEDY
Motor will not start.	No power.	Check fuses on Circuit Breakers. Make sure Main Control Switch is ON.
	Incorrect power.	Check power source; voltage, phase and frequency must be the same as specified on Electrical Rating Plate.
	Time off.	Turn timer clockwise to desired time setting.
	Loose wiring connections.	Check wire connections in electrical box on rear of dryer.
	Defective starting relay.	Check coils and contacts.
Motor tripping on thermal overload.	Low voltage.	Check voltage at motor terminals. Voltage must be within $\pm 10\%$ of voltage shown on Motor Rating Plate. If not, Check with local power company for recommended corrective measures.
	Inadequate wiring.	Check with local power company to insure that wiring is adequately sized for load.
	Loose connections.	Check all electrical connections and tighten any loose connections.
	Inadequate air.	Check Installation Sheet in Service section for recommended make-up air openings.
	Poor housekeeping.	Clean lint accumulation on and around motors.
Basket motor will not run.	Loading door OPEN.	Close door.
	Door Switch out of adjustment.	Adjust switch by removing cover and bend Actuator Lever to clear Switch Button 3/8" with cover in place.
	Defective Door Switch.	Replace switch.
	Defective Basket Motor Contractor.	Replace contactor.
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.
	Basket overloaded.	Remove load.

Troubleshooting Chart—Gas, Steam, and Electric Dryers

TROUBLE	CAUSE	REMEDY
Dryer noisy or vibrating.	Not leveled.	Check manual for proper leveling procedures.
	Fan out of balance.	Accidental damage to the fan blade can change the dynamic balance. Damaged fans should be replaced.
	Basket rubbing.	Adjust basket clearance.
	V-Belt sheaves.	Tighten set screws. Make sure sheaves are in proper alignment.
	Belt.	Adjust belt tension.
	Foreign objects.	Occasionally screws, nails, etc., will hang in the basket perforations and drag against the sweep sheets surrounding the basket. Such foreign objects should be removed immediately.
Dryer runs, but no heat.	Incorrect voltage.	Check for correct control voltage - 120V.
	No voltage.	Check power supply, check secondary voltage on transformer and check wiring and wiring diagram.
	Silicon Carbide Igniter will not glow-red.	Broken or defective igniter. Replace.
	Light Red Silicon Carbide Igniter.	Check for 2.5 minimum amperage. Low amperage not hot enough.
	Defective Igniter Time Delay Relay.	Heater No. 1 and No. 6 open circuit. If above occurs, replace Time Delay Relay.
	Lint Door OPEN.	CLOSE Lint Door.
	Defective Gas Valve.	Replace Coil Assembly.
	Gas turned OFF.	Turn Manual Gas Valve ON.
	Line fuse or heater circuit fuse blown to unit.	Replace fuse.
	Defective Door Switch.	Replace Door Switch.
	Silicon Carbide Igniter not igniting gas.	Must be 3/16" to 5/16" above burner. Replace Radiant Sensor.
	Air Switch not operating.	Clean out lint compartment daily. Check Back Draft Damper for foreign objects, lint accumulation or other causes that may prevent damper from operating. Check duct work for lint build-up. Check installation sheet to insure that duct work and make-up air openings are adequately sized. Check exhaust outlet. If a screen has been improperly installed on the outlet, it may be clogged with lint or frozen over in winter. Never install a screen on the exhaust outlet. Vacuum within dryer drops to .09 inches or water column, or less, for normal operation of dryer, vacuum reading can be made with a Vacuum U-Gauge by removing a sheet metal screw in the front panel of dryer, and inserting the rubber tube of the vacuum gauge into screw opening.

Troubleshooting Chart—Gas, Steam, and Electric Dryers

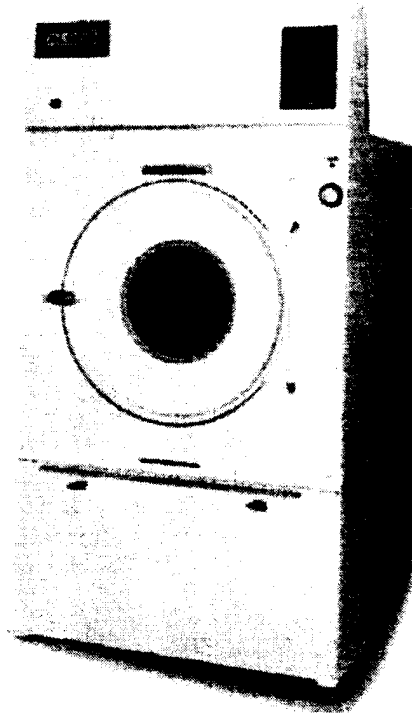
TROUBLE	CAUSE	REMEDY
Dryer runs, but no heat. (continued)	Air Switch out of adjustment.	See Air Switch Adjustment Sheet in Service Manual.
	Air Switch defective.	Replace Air Switch.
	Gas pressure too low.	Check manifold pressure and adjust to pressure specified on Rating Plate. If this pressure cannot be obtained, have gas supplier check main pressure.
	Improper orifice.	Dryer is orificed for type of gas specified on Rating Plate. Check with gas supplier to determine specifications for gas being used. If different from Rating Plate, Contact factory and obtain proper orifices.
	Electric power to heating unit turned OFF.	Turn power ON.
	Defective relay.	Replace relay.
	Defective thermostat.	Replace thermostat.
	Defective Safety	Replace thermostat.
	Overload Thermostat.	
Main Burners burning improperly.	Lint compartment door OPEN.	CLOSE door.
	Burner Air Shutters CLOSED.	OPEN for blue flame.
	Dirt in burner.	Blow out.
	High gas pressure.	Adjust gas pressure per Rating Plate.
	Orifice too large.	Send to factory for correct orifices.
Main Burner cycles ON and OFF.	Restricted or blocked exhaust.	Clean exhaust.
	Radiant Sensor defective.	Replace Radiant Sensor.
Low or high gas flame.	Incorrect Main Burner orifices.	Replace orifices. Check factory for correct size.

Troubleshooting Chart—Gas, Steam, and Electric Dryers

TROUBLE	CAUSE	REMEDY
Dryer too hot.	Incorrect Main Burner orifice.	Replace orifices. Check factory for correct size.
	Inadequate make-up air.	Make-up air must be 4 to 6 times the exhaust area of the dryer.
	Lint accumulated.	Remove lint.
	Exhaust duct dampers.	Must be full OPEN or replace.
	High gas pressure.	Adjust gas pressure as specified on Rating Plate.
	Partially restricted or inadequately sized exhaust system.	Check Service section for recommended sizes. Remove obstructions or lint build up from duct work. NEVER use smaller size exhaust duct. ALWAYS use larger size.
	Defective thermostat.	Replace thermostat.
Dryer does not stop at end of time period (6).	Defective timer.	Replace timer.
Dryer runs no steam to coils.	Valve CLOSED.	Check all valves in steam supply and return. Make sure they are OPEN.
	Steam Trap blocked.	Remove and clean. Replace if defective.
	Solenoid Valve.	On dryers using solenoid temperature control, thermostat controls operation of Solenoid Valve by advancing thermostat.
	Thermostat.	On dryers using solenoid temperature control, thermostat controls operation of Solenoid Valve. If defective, replace thermostat.
	Check Valve installed incorrectly.	Check for inlet and outlet marking on Check Valve and invert if necessary.
	Strainer clogged.	Remove plug and blow down Strainer or remove and clean thoroughly if heavily clogged.
Water in Steam Line.	Steam Piping installed incorrectly.	Check piping per Steam Installation Instructions.
	Trap not functioning.	Check trap for size and capacity. If dirty and sluggish, clean thoroughly or replace. Check return line for high back pressure, or another trap charging against the trap functioning improperly.
Basket does not reverse.	Reversing timer.	Check timer to see if operating.

MAINTENANCE/SERVICE

110 lb. Laundry Dryer



MODELS

GAS

L44CD42G
L44FD42G
L44KD42G
L44RD42G

STEAM

L44CD42S
L44KD42S

ELECTRIC

L44CD42E
L44KD42E

CISSELL MANUFACTURING COMPANY

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

PHONE: (502) 587-1292
FAX: (502) 585-2333
SALES FAX: (502) 585-3625
SERVICE/PARTS FAX: (502) 584-4070

THIS MANUAL MUST BE GIVEN TO THE EQUIPMENT OWNER.

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








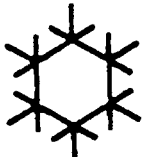
The Identification Nameplate is located on the rear wall of the dryer. It contains the dryer serial number, product number, model number, electrical specifications and other important data that may be needed when servicing and ordering parts, wiring diagrams, etc. Do not remove this nameplate.

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110 LB. LAUNDRY DRYER
MAINTENANCE/SERVICE MANUAL



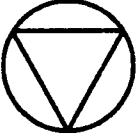

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SYMBOLS

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 Heiß! Nicht Berühren Haute temperature! Ne pas toucher Caliente! no tocar	
	dangerous voltage tension dangereuse Gefährliche elektrische Spannung tension peligrosa	
	on marche Ein conectado	
	off arrêt Aus desconectado	
	start demarrage Start arranque de un movimiento	
	emission of heat in general émission de chaleur en general Warmeabgabe allgemein emisión de calor	
	cooling refroidissement Kühlen enfriamiento	

SYMBOLS

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

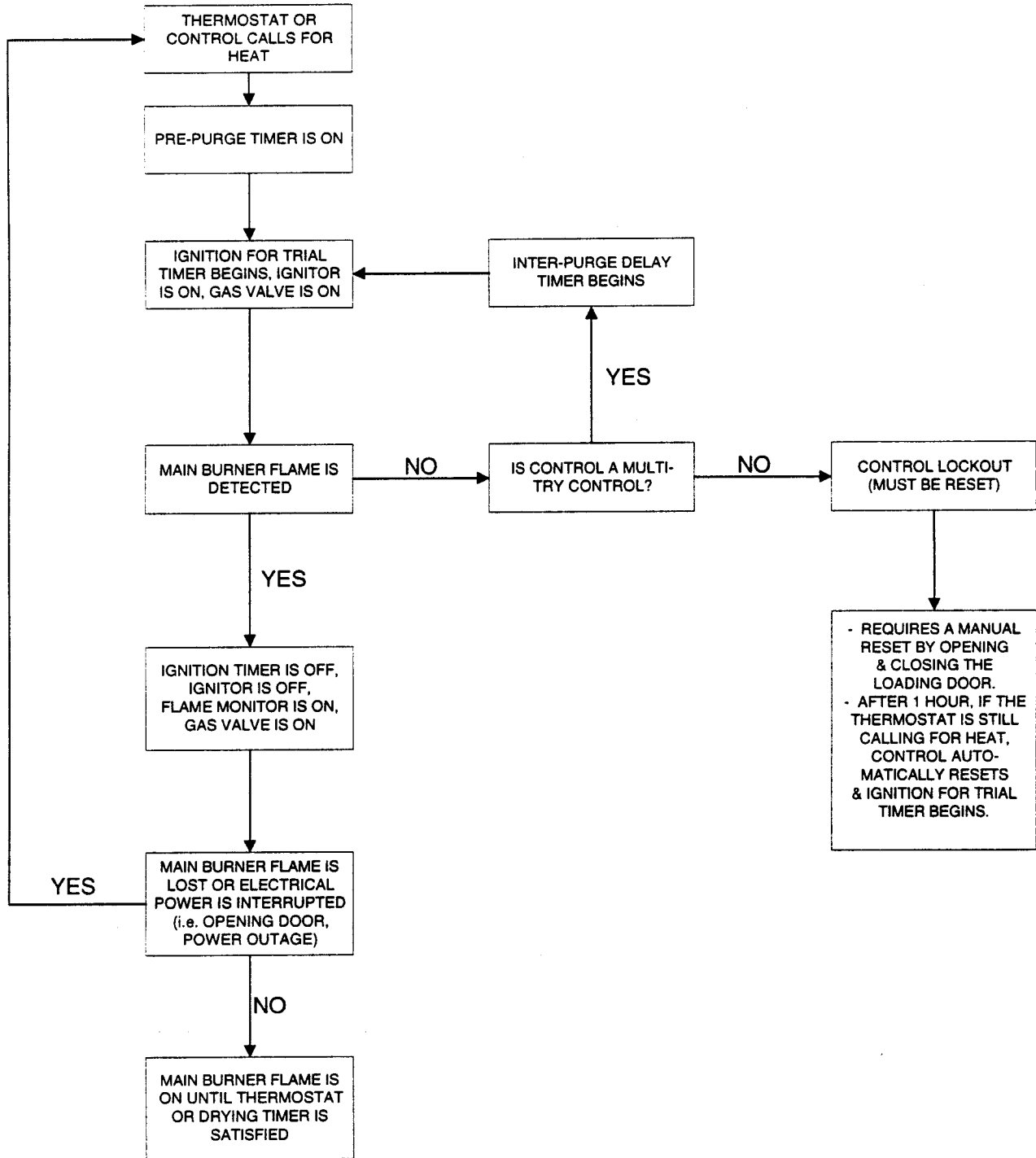
Direct-Spark Ignition Operation

DIRECT SPARK IGNITION OPERATION

NOTE: Some models are equipped with a dual ignition system. The dual ignition system contains two Direct Spark Ignition modules in parallel. Each module has its own Flame Sense circuit and acts independently of the other. If either Bonnet Limit Thermostat opens because of high heat or flame impingement, the entire ignition system will shut down.

1. When a call for heat is received from the control supplying 24VAC to the Ignition Control Module, the pre-purge delay timer begins. This delay time allows any air/sediment to be ejected prior to burner ignition. Following the pre-purge delay period, the gas valve is energized and the spark ignitor sparks for the trial ignition period.
2. When a flame is detected during the trial for ignition period, the spark ignitor shuts off and the gas valve remains energized.
3. If no flame is detected by the Flame Sense Circuit, the Ignition Control Module will go into safety lockout. The valve will be turned off immediately. If the module has multiple retries and no flame is detected, the gas valve is de-energized and the module goes into an interpurge delay. After this delay, the module will attempt another trial for the ignition period. This will continue until the number of retries has been used up. At the time, the module will go into safety lockout.
4. Recovery from safety lockout requires one of the following:
 - a. A manual reset by opening and closing the loading door.
 - b. After one hour if the Control Thermostat is still calling for heat, the module will automatically reset and the trial for ignition period will start over.
5. Opening the loading door will cause the flame to extinguish. Closing the door and starting the dryer will restart the trial for ignition period.
6. Once the Control Thermostat has been satisfied and/or the Drying Timer has been timed out, the Ignition Control Module(s) will be de-energized, the gas valve(s) will be de-energized and the flames will extinguish.
7. The machine will continue to run in a cooldown mode without heat. This process will cool the load to the touch and help to eliminate wrinkling.

DIRECT SPARK IGNITION OPERATION FLOW CHART



Maintenance—General

MAINTENANCE

MAINTENANCE

1. **CLEAN LINT TRAP DAILY.** Remove lint before starting day's operation. A clean lint trap will increase the efficiency of the dryer, as the moisture-laden air will be exhausted more quickly.
2. **CLEAN BASKET AND SWEEP SHEETS.** Clean periodically and/or as often as required. The basket and sweep sheets are easily accessible by removing the front panel of the dryer.
3. **GEAR REDUCER.** Maintain the correct oil level. See separate page on Gear Reducer Operation and Maintenance, for detailed information.
4. **PULLEYS AND BELTS.** Keep belts clean. Oil and dirt will shorten the useful life of the belt. Never allow a belt to run against the belt guard. Check periodically for alignment. Pulley shafts must be parallel and the grooves must be aligned. Check and re-tighten pulley set screws periodically. Check belt tension periodically. Lower motor to increase tension by adjusting the nuts fastening the motor plate to the rod connected to the Gear Reducer.
5. **ELECTRIC MOTORS.** Keep motors clean and dry. Motors having ball bearings are packed with sufficient grease for approximately five years of normal operation. After five years, the bearings and housing should be cleaned thoroughly. Repack each bearing and the cavity in back of the bearing on-third full with Chevron Grease No. SR1-2.

Motors having wool packed sleeve bearings are oiled at the factory for one year of normal operation. After one year, add annually one-half teaspoon of electric motor oil or S.A.E.#10 to each bearing. For 24 hour per day operation, add one teaspoon of oil annually.

If motors overheat, check voltage and wiring. Low voltage, inadequate wiring, and loose connections are the main cause of motor failure.

Maintenance—General

MAINTENANCE (Cont'd)

6. **STEAM HEATING UNITS.** Keep steam coils clean. Check periodically and clean often, as required. Remove lint and dirt build-up from fins. Dirty fins decrease the efficiency of steam heated units.
7. **GAS BURNERS.** Keep burners clean. Check periodically and clean often.
8. **EXHAUST SYSTEM.** Periodically check and clean.
9. **CLEAN OUT PANEL.** (Energy Saver Gas Models) Remove this panel, located on the heating unit, and clean the inside area of lint and dirt on a regular basis.
10. **DRYER AREA.** Keep dryer area clean and free from combustible materials, gasoline and other flammable vapors and liquids.
11. **MAKE-UP AIR.** Do not obstruct the flow of combustion (make-up) air and ventilating air.
12. **GAS PRESSURE.** Periodically check gas pressure.
13. **DRYER VOLTAGE.** Periodically check dryer voltage per dryer Rating Plate.

Burner Air Inlet Shutters Adjustment (with Illustration)

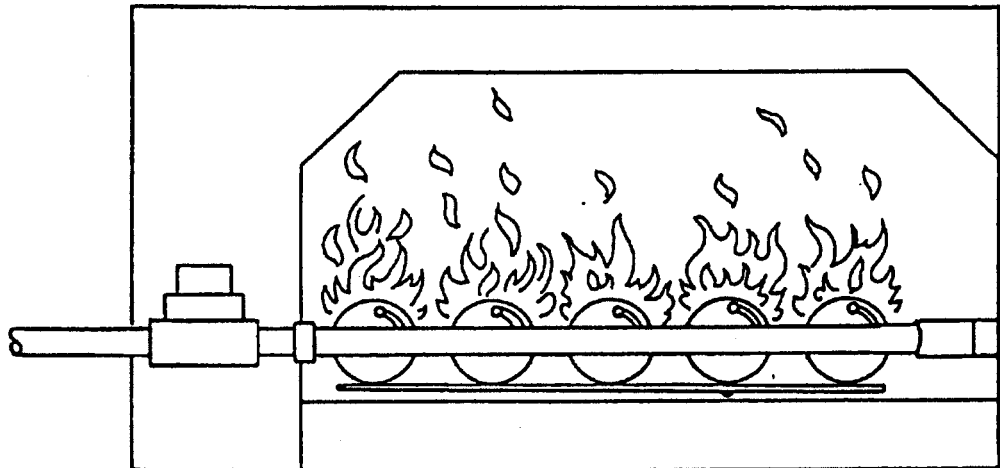
**BURNER AIR INLET
SHUTTERS
ADJUSTMENT**

Type of Gas	Burner Air Inlet Shutters Adjustment
Natural Gas	1/2 Open
Liquid Petroleum	1/4 Open
Manufactured Gas	1/16 Open

Air Shutters Adjustment

Proper Method: Close air shutters to yellow tip, then open air shutters to blue flame tip. Orange tips are impurities in the air such as lint, dust, etc.

Burners Air Inlet Shutters are correctly adjusted when flame is primarily blue.

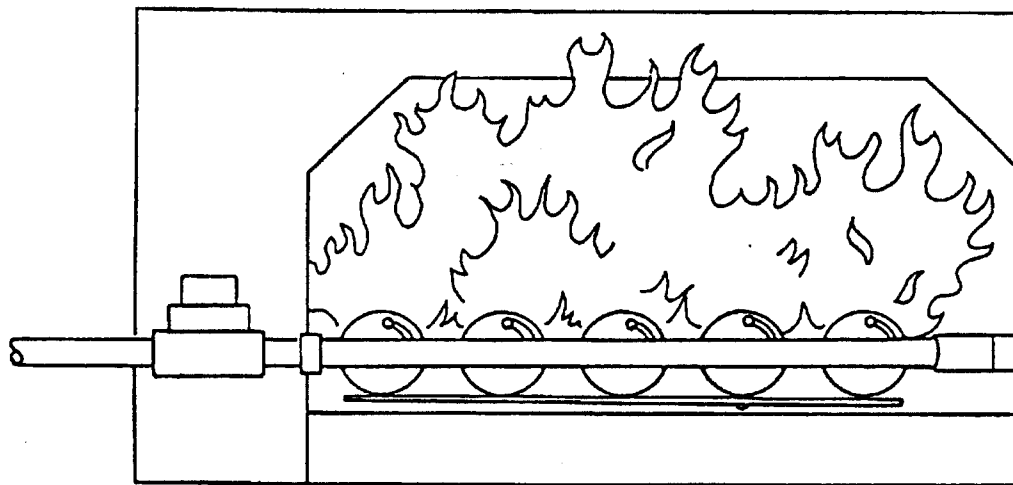


CORRECT

Burner Air Inlet Shutters Adjustment (with Illustration)

**NEED TO PROVIDE
CORRECT AIRFLOW
THROUGH THE
DRYER**

Need to Provide Correct Airflow Through the Dryer
This flame pattern indicates the Burner Air Inlet Shutters are correctly adjusted, but air through the dryer is insufficient. This condition indicates excessive lint in the lint compartment, lack of make-up air in the room, restricted exhaust duct, or a vacuum in the room caused by an exhaust fan.



WRONG

Basket Alignment for 110 lb. Dryers (Illustrations)

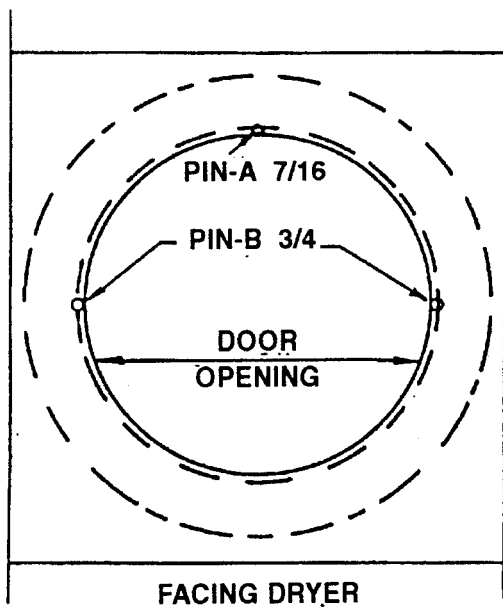
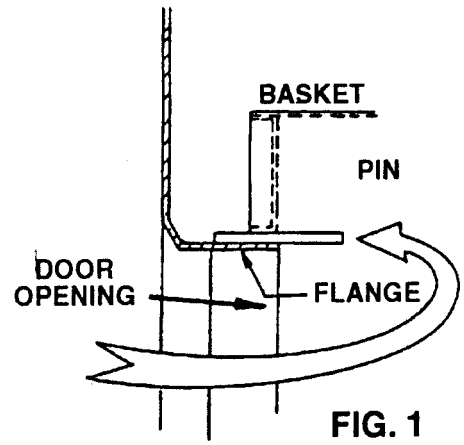
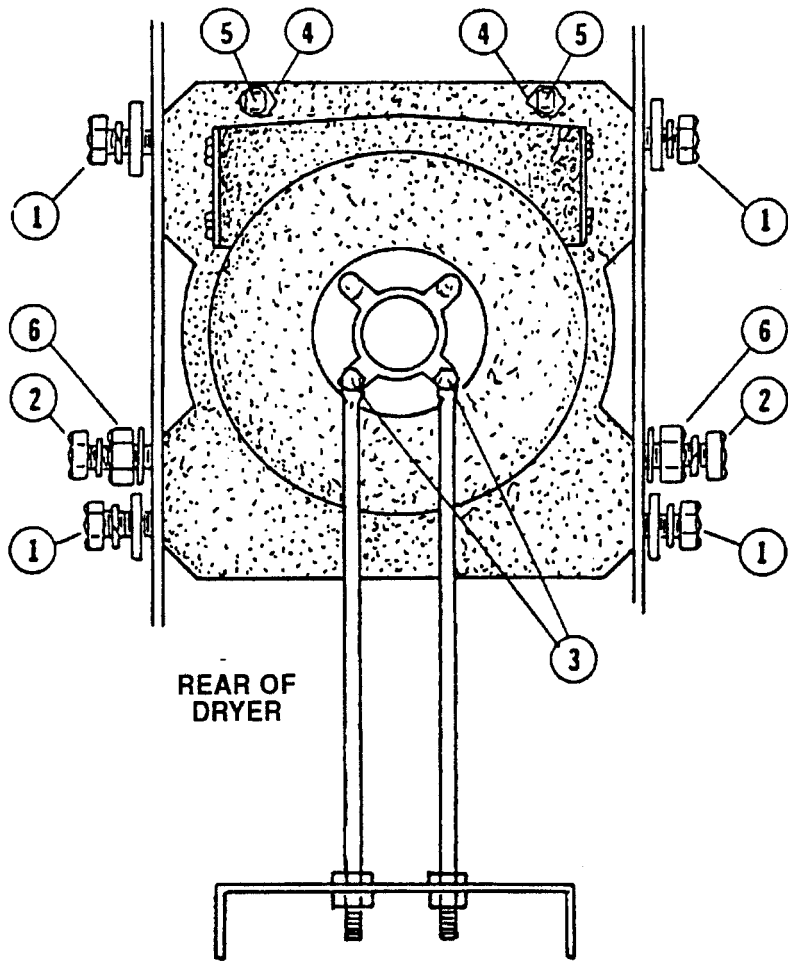


FIG. 2

Basket Alignment for 110 lb. Dryers

INSTRUCTIONS FOR ALIGNING BASKETS ON CISELL 110 LB. DRYERS

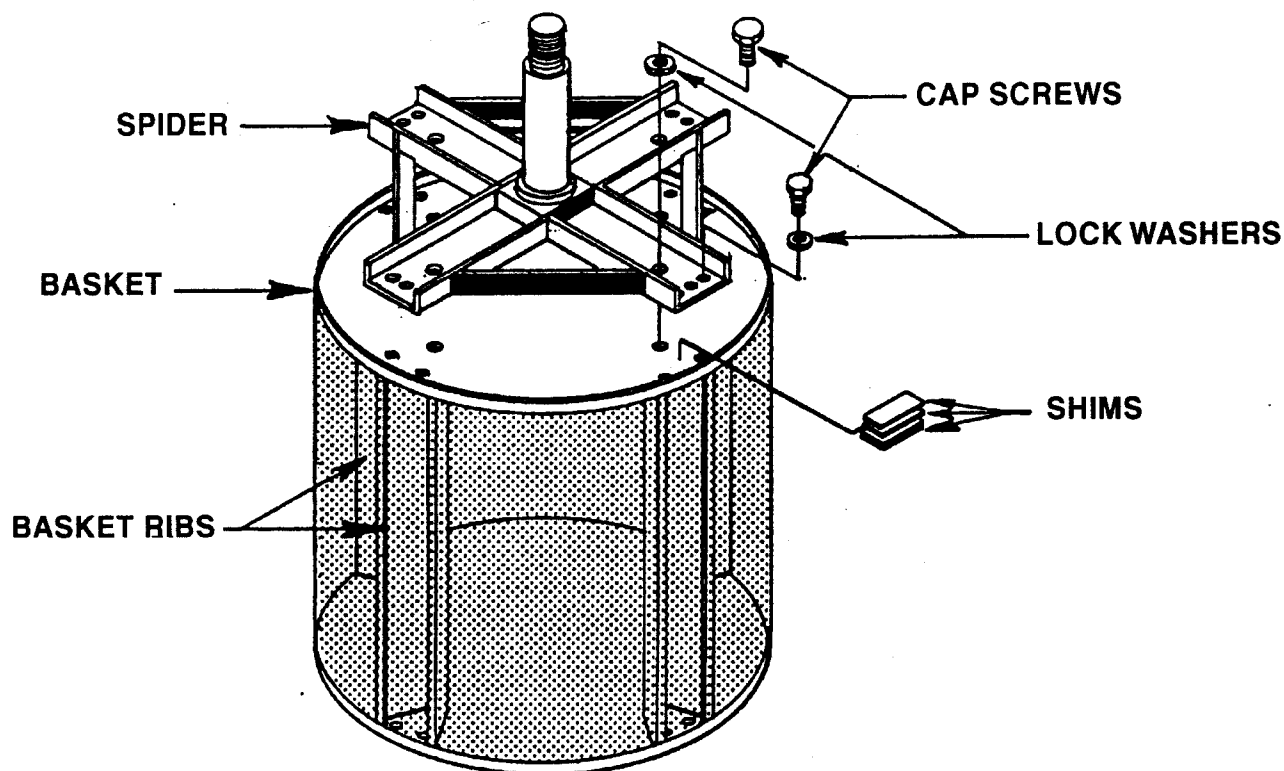
INSTRUCTIONS

1. Loosen bolts number one (1) through five (5).
2. Place pin "A" in position shown in figures 1 and 2.
3. Check pins "B" at position shown in figures 1 and 2 for equal clearance.
4. If pin "B" clearance is unequal, adjust at nut #6.
5. When clearance at pin "B" is correct, tighten bolts #1 in the following order, as viewed from rear of dryer, top right, bottom left, top left and bottom right.
6. Tighten bolts #5 until flush against back of dryer. Tighten lock nut #4 to secure bolt #5 in position.
7. Tighten bolts #2 and #3.
8. Remove pin "A" and check for proper clearance at points "A" and "B". If clearance is incorrect, repeat the above steps.

NOTE

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

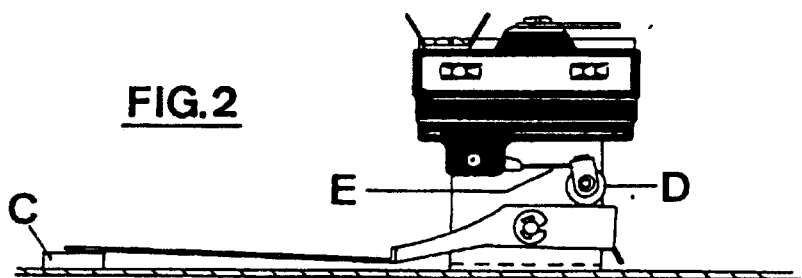
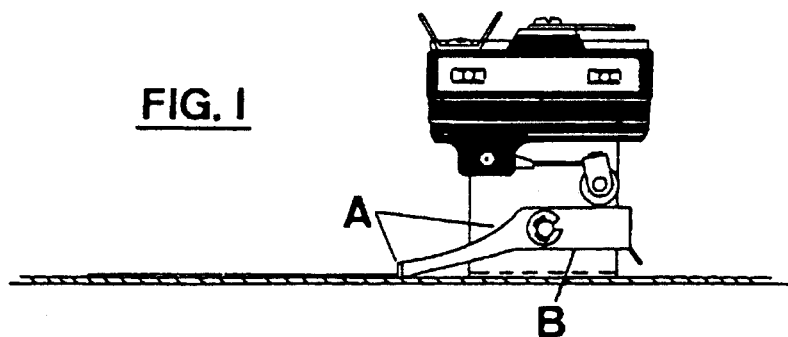
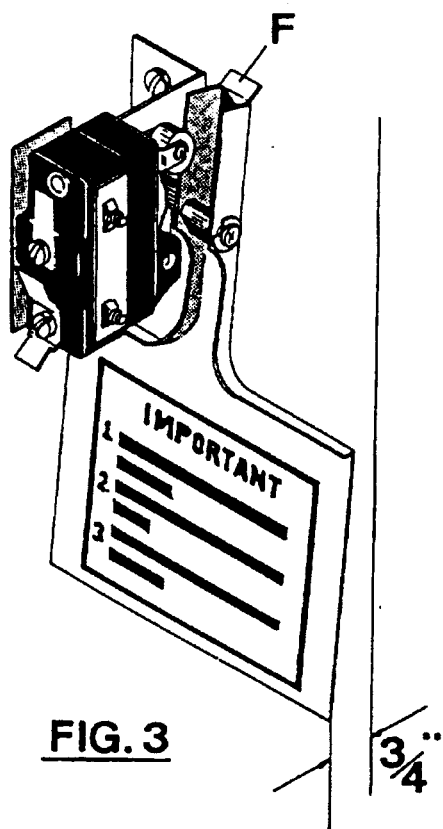
Shimming the Basket and Spider Assembly



INSTRUCTIONS FOR SHIMMING THE BASKET AND SPIDER ASSEMBLY

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

- A. Align the basket as per instructions on the previous page.
- B. Rotate the basket to determine where the most out-of-round point is (where the basket scrapes or comes closest to scraping the sweep sheet).
- C. Mark this position and the nearest rib to this position. If it is between two ribs, both ribs may need to be shimmed.
- D. Remove the basket from the dryer (do not loosen the alignment bolts).
- E. With the basket on the floor (spider up), loosen the cap screws and tie rod nuts enough to insert one or two shims between the spider leg and the basket at the marked position. With shims in place, tighten the screws and nuts.
- F. Install spider and basket assembly and check again.
- G. If basket is still out-of-round, start at *Step B* and repeat procedure.
- H. When shimming is completed, re-align basket.



**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 lays 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.

Dryers with Reversing Control Timer

INSTRUCTIONS FOR DRYERS WITH REVERSING CONTROL TIMER

Instructions

In operation, coasting of basket increases, making it necessary to readjust reversing timer.

CAUTION

Failure to do this will cause the thermal overload units for the basket to cut-out unnecessarily and probably damage the gear reducer.

Adjustment of Reversing Timer Dwell Time

CAUTION

Dryer power supply must be shut off before adjusting timer.

The dwell time is the time from when the motor turns "off", to when it turns "on" again in the opposite direction.

Turning the dwell adjustment knob counter-clockwise increases the dwell time and turning it clockwise decreases the dwell time.

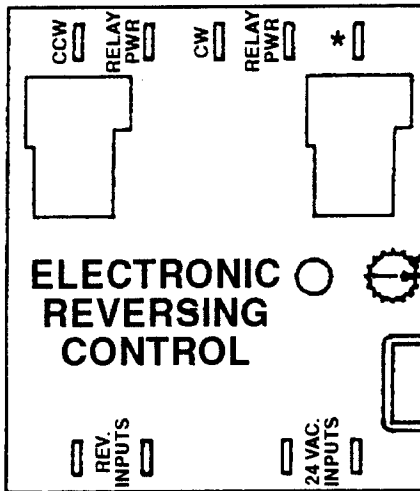
Recommended dwell time for the basket to stop completely is 5 to 7 seconds. Minimum basket stopping time is 4 seconds.

NOTE

Select non-reversing or reversing before starting dryer.

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.



**DWELL TIME
ADJUSTMENT**

**INSTRUCTIONS FOR
DRYERS WITHOUT
REVERSING
CONTROL
FAN AND BASKET
ROTATION**

Instructions

NOTE

Fan rotates counter-clockwise as viewed from back end of motor. See arrow on motor support.

Basket rotates counter-clockwise as viewed from back end of motor. See arrow on motor support.

Basket rotates counter-clockwise as viewed from front of tumbler.

To change rotation of both fan and basket, reverse power leads L1 and L2.

To change rotation of fan only, reverse motor leads F1 and F2.

To change rotation of basket only, reverse motor leads B1 and B2.

Large Gear Reducer Maintenance

**LARGE GEAR
REDUCER
MAINTENANCE**

LARGE GEAR REDUCER MAINTENANCE

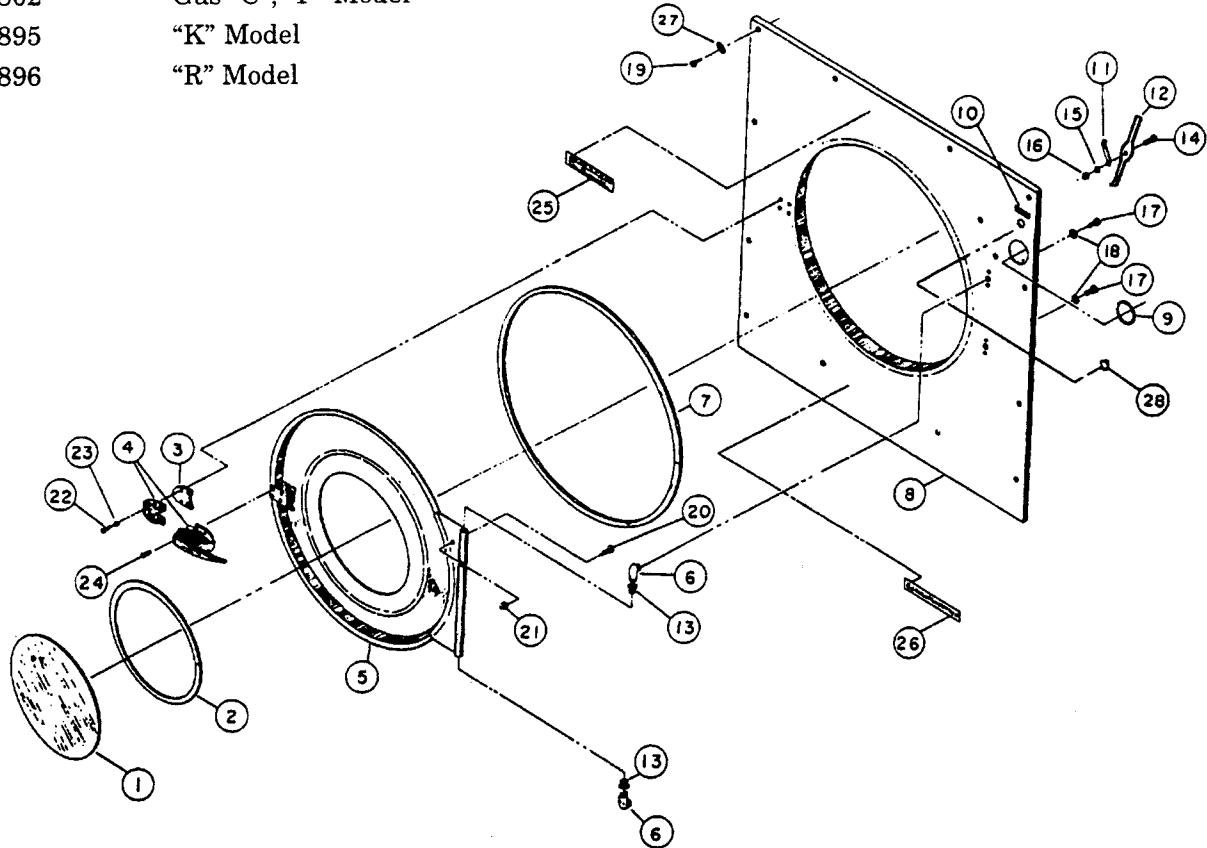
Before placing the dryer in operation, check the oil level. If the oil level is correct, it can be seen through the sight glass on the right hand side of the gear reducer (facing rear).

If oil must be added, remove the pop-off valve at the top of the gear reducer and add as needed.

CHANGE OIL ONCE EVERY 6 MONTHS.

Front Panel and Door Assembly (Illustration)

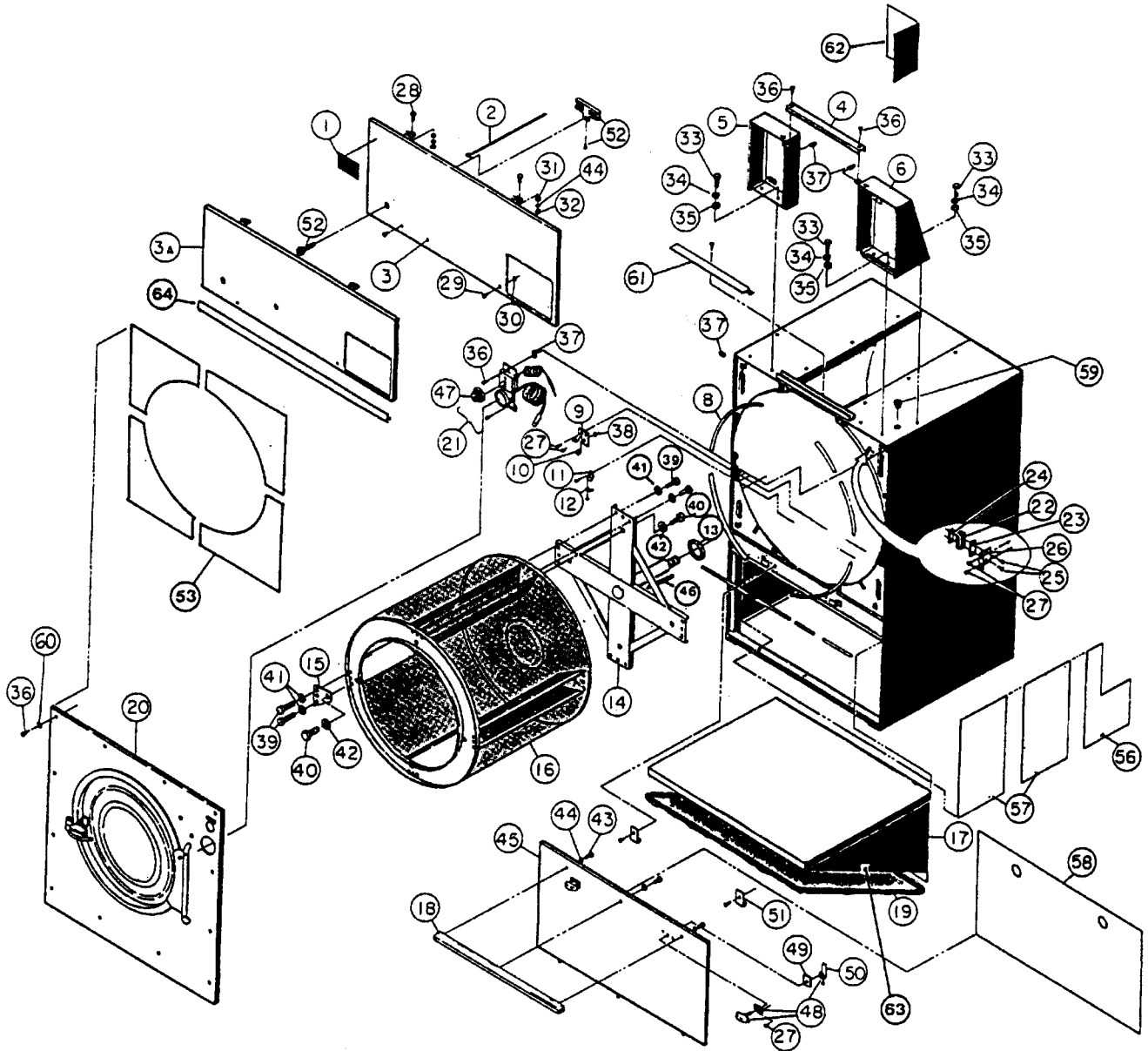
TU5934	Electric, Steam "C", "K" Model (specify color)
TU7802	Gas "C", "F" Model
TU9895	"K" Model
TU9896	"R" Model



1	K105	Door Glass 15 - 3/4" (plain)	14	M262	#8 - 32 x 3/8" Truss Screw
	K105C	Door Glass 15 - 3/4" (with logo)	15	AT368	#8 Split Lockwasher
2	TU1692	Door Glass Gasket	16	TU3266	#10 - 32 Hex Nut (Pkg. of 6)
3	TU5503	Door Latch Spacer (pkg. 6)	17	TU2836	5/16" - 32 x 3/8" Hex Head Screw (Pkg. of 6)
4	TUA2319H	Door Latch with Keeper	18	TU3212	5/16" I.T. Lockwasher
5	TU5500	Door (specify color)	19	TU3209	#14 x 5/8" Pan Head Screw (Pkg. of 6)
6	TU2236	Hinge Post	20	TU4839	#10 - 32 x 3/8" Hex Head Screw (Pkg. of 6)
7	TU5288	Door Seal	21	TU4840	#10 - 32 Crown Nut (Pkg. of 6)
8	TU7801*	Front Panel "F" and "R" Model (specify color)	22	TU2687	#8 - 1/2" Phillips Head Screw
	TU6047	Front Panel "C" and "K" Model (specify color)	23	TU3785	#8 Cup Lockwasher
9	TU2641	Thermometer Gasket	24	TU2686	#8 - 32 x 3/8" Phillips Head Screw
10	TU5458	Temperature Label	25	TU7855	Instruction Nameplate
11	TU2105	Actuator Spring	26	TU7858	"Clean Lint Compartment" Nameplate
12	TU2582	Actuator	27	RC347	1/4" Lockwasher
13	PIF172	Hinge Post Bearing (2 required)	28	TU9894	Plug Button—Promoters ONLY

* Insulation part numbers

110 lb. Laundry Dryer (Front Exploded View) (Illustration)



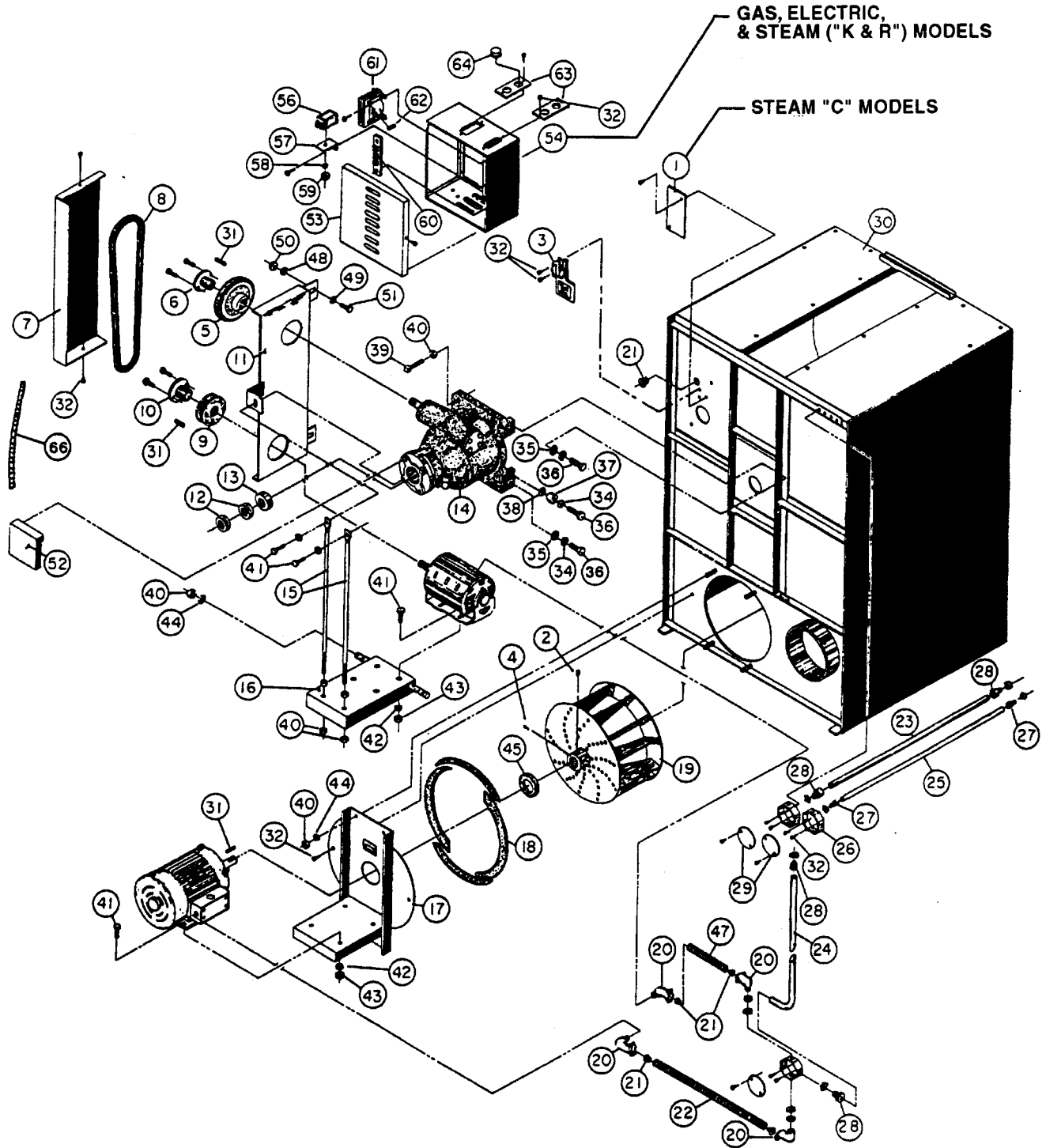
Parts—110 lb. Laundry Dryer (Front Exploded View)

1	TU8013	Cissell Nameplate	32	TU2842	#10 - 32 Hex Nut (Pkg. of 6)	
2	TU5739	Support Rod	33	TU3246	3/8" - 16 x 1" Hex Head Screw (Pkg. of 6)	
3	TU8095	Access Door "C" and "F" (Specify Color)	34	VSB134	3/8" Lockwasher (Pkg. of 6)	
	TU9847	Access Door "K" and "R" (Specify Color)	35	IB140	3/8" Cut Washer	
3A	TU8099	Access Door "Static Steamer" (Specify Color)	36	TU6854	#14 x 3/4" Screw	
	4	TU5674	Control Box Brace	37	LB74	#14 Speed Nut without Barbs
	5	TU7159	Left Control Box		TU7848	#14 Speed Nut with Barbs
	6	TU9866	Right Control Box	38	TU3801	Push On Speed Nut
	8	K118	Gasket Set	39	TU2662	1/2" - 20 x 1 1/2" Cap Screw
	9	TU2486	Thermostat Bracket	40	TU2664	5/8" - 18 x 1 1/2" Cap Screw
10	TU2477	Thermostat	41	OP251	1/2" Lockwasher	
11	TU5337	Thermostat Bulb Support	42	TU5801	5/8" Lockwasher	
12	F646	5/16" Clamp	43	F557	#10 - 24 x 3/8" Screw	
13	TU5290	Felt Seal	44	FB187	#10 Lockwasher	
14	K109	Spider "C" and "F"	45	TU5645	Lint Door (no Insulation) "C" & "K" (specify color)	
	K348	Spider "K" and "R"		TU6257	Lint Door with Handles, Hardware (no Insulation) "C" & "K" (specify color)	
15	TU5397	Outside Rib Plate		TU7803	Lint Door (with Insulation) "R" & "F" (specify color)	
16	TU6469	Basket "C" and "F"		TU7804	Lint Door (with Insulation), Handles, and Hardware, "R" & "F" (specify color)	
	TU9856	Basket "K" and "R"				
	K421	Basket and Spider "C" & "F"	46	TU9975	Basket Shaft Key	
	K383	Basket and Spider "K" & "R"	47	TU490	Thermostat Knob (Fahrenheit)	
17	TU10345	Lint Screen Hood		TU491	Thermostat Knob (Centigrade)	
18	TU7473	Door Handle	48	K169	Handle Assembly	
19	K368	Lint Screen ONLY	49	TU6025	Cam Stop	
	K121	Wire Frame ONLY	50	TU3811	Cam	
20	TU7802	Front Panel Asm. "R" & "F" Gas * (specify color)	51	TU6159	Support Clips (2 required)	
	TU5934	Front Panel Asm. "C" & "K" Electric and Steam * (specify color)	52	TU6808	Reset Button Assembly	
	TU9895	Front Panel Asm. "K" Model * (specify color)	53	TU10673	Front Panel Insulation (4 required)	
	TU9896	Front Panel Asm. "R" Model * (specify color)	56	TU7691	Left Side Insulation "F" & "R"	
21	TU6030	Temperature Control *	57	TU7690	Side Insulation "F" & "R" (9 required)	
22	TU1979H	Door Switch	58	TU7692	Insulation "F" "R" & "C" Gas Model	
23	TU1770	Insulation	59	TU9209	Snap Bushing	
24	TU1771	#6 Twin Speed Nut (Pkg. of 12)	60	RC349	1/4" Lockwasher	
25	TU3219	#6 x 1" Screw	61	TU7719	Conduit Channel Cover	
26	TU2373	Mounting Bracket	62	TU8036	Left Control Box Shield "C"	
27	TU7733	#8 x 1/2" Screw (Pkg. of 6)	63	TU6160	Lint Screen Clip (2 required)	
28	TU3479	#10 - 32 x 7/16" Truss Screw	64	TU11568	Door Trim	
29	FG343	Screw Fastener				
30	FG345	Retaining Washer				
31	P104	1/4" Cut Washer (Pkg. of 6)				

* See Page 56 for Exploded View

110 lb. Dryer (Double Motor Models) (Illustration)

MODELS: L44KD42
 L44CD42 GAS, STEAM or
 L44RD42 ELECTRIC
 L44FG42



Parts—110 lb. Laundry Dryer (Double Motor Models)

1	TU5507	Blanking Plate "C" Model Steam Dryer	37	TU455	Cam Adjustment Nut
2	TU4967	5/16" - 18 x 1/2" Allen Set Screw	38	TU3575	7/8" Internal Tooth Lockwasher
3	TU8206	Air Switch**	39	TU5312	3/8" - 16 x 3" Square Head Set Screw
4	AT304	5/16" - 18 x 1" Set Screw	40	TU4787	3/8" - 16 Hex Nut (Pkg. of 6)
5	TU3806	Gear Sheave	41	TU5439	5/16" - 18 x 3/4" Hex Head Cap Screw (Pkg. of 6)
6	TU3807	Sheave Bushing	42	TU2814	5/16" Split Lockwasher (Pkg. of 6)
7	TU5668	Outside Belt Guard	43	C249	5/16" - 18 Hex Nut (Pkg. of 6)
8	TU2363	"V" Belt 5L500	44	TU2831	3/8" Split Lockwasher (Pkg. of 6)
9	TU2832	Motor Sheave 60 Cy.	45	TU108	Felt Seal
	TU6081	Motor Sheave 50 Cy.	47	CFB0650	1/2" Greenfield Cable (specify 6 1/2")
10	TU2833	Sheave Bushing	48	TU2846	1/4" Split Lockwasher (Pkg. of 6)
11	TU9615	Belt Guard Welded Asm.	49	TU2847	1/4" Flat Washer (Pkg. of 6)
12	TU470	Large Hex Nut (2 required)	50	TU4934	1/4" - 20 x 7/16" Hex Nut (Pkg. of 6)
13	TU6633	2-3/4" O.D. x 1- 13/32" I.D. x 3/4" Thick Washer	51	FB189	1/4" - 20 x 1" Hex Head Screw
14	TM200	Gear Reducer**	52	TU7517	Basket Shaft Cover
15	TU5328	Belt Adjusting Rod		TU10732	Prompter Housing Assembly**
16	TU4626	Basket Motor Mount Asm.	53	TU8194	Air Switch Box Cover
*17	TU5658	Motor and Fan Mount (60 Cycle)	54	TU8550	Air Switch Box
18	TU2473	Self-Sticking Gaskets (4 required)	55	TU2490	Plug Button
*19	TU403	Fan Wheel (60 Cycle)	56	TU8599	Relay (Igniter)
20	TU4791	90 Degree Angle Connector	57	TU8709	Relay Bracket
21	TU2372	Snap Bushing (not used on Steam Dryer)	58	M270	Internal Tooth Lockwasher (Pkg. of 6)
22	CFB2800	1/2" Greenfield Cable (specify 28")	59	TU3400	Hex Nut #6 - 32 x 15/16" (Pkg. of 6)
23	TU6026	Top Motor Conduit	60	TU8629	Terminal Board (Igniter)
24	TU6027	Back Motor Conduit	61	K377	Transformer with Fuse (208, 220, or 240V Primary 120V Secondary)
25	TU6028	Power Lead Conduit	62	TU8738	6 Amp Fuse
Use TU8215 Conduit on Electric Dryers ONLY			63	TU8582	Ignition Control Box Conduit Plate
26	500300644	Junction Box	64	TU2490	Plug Button 7/8"
27	TU7130	1/2" Straight Connector	65	FB187	#10 Lockwasher (Pkg. of 6)
28	TU7131	3/4" Straight Connector	66	CFB3000	1/2" Greenfield Cable - 30"
29	SB170	Junction Box Cover			
30	TU5827	Jacket Welded Assembly			
31	TU4684	Key			
32	TU7733	#8 x 1/2" Self Drinning Screw (Pkg. of 6)			
33	RC347	1/2" - 13 x 1 1/4" Hex Head Cap			
34	TU2831	1/2" Split Lockwasher (Pkg. of 6)			
35	TU1851	1/2" Flat Washer			
36	TU2195	1/2" - 13 x 1 3/4" Hex Head Cap Screw (Pkg. of 6)			

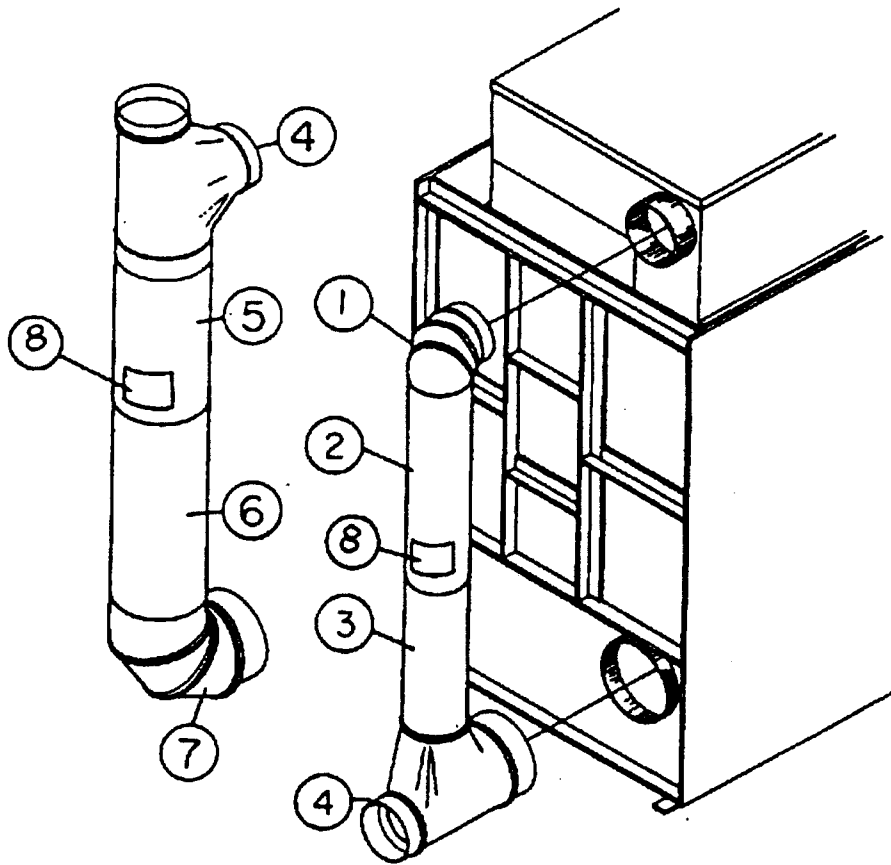
* For 50 Cy. Motor Mount Assembly

** See separate page for parts breakdown

CAUTION

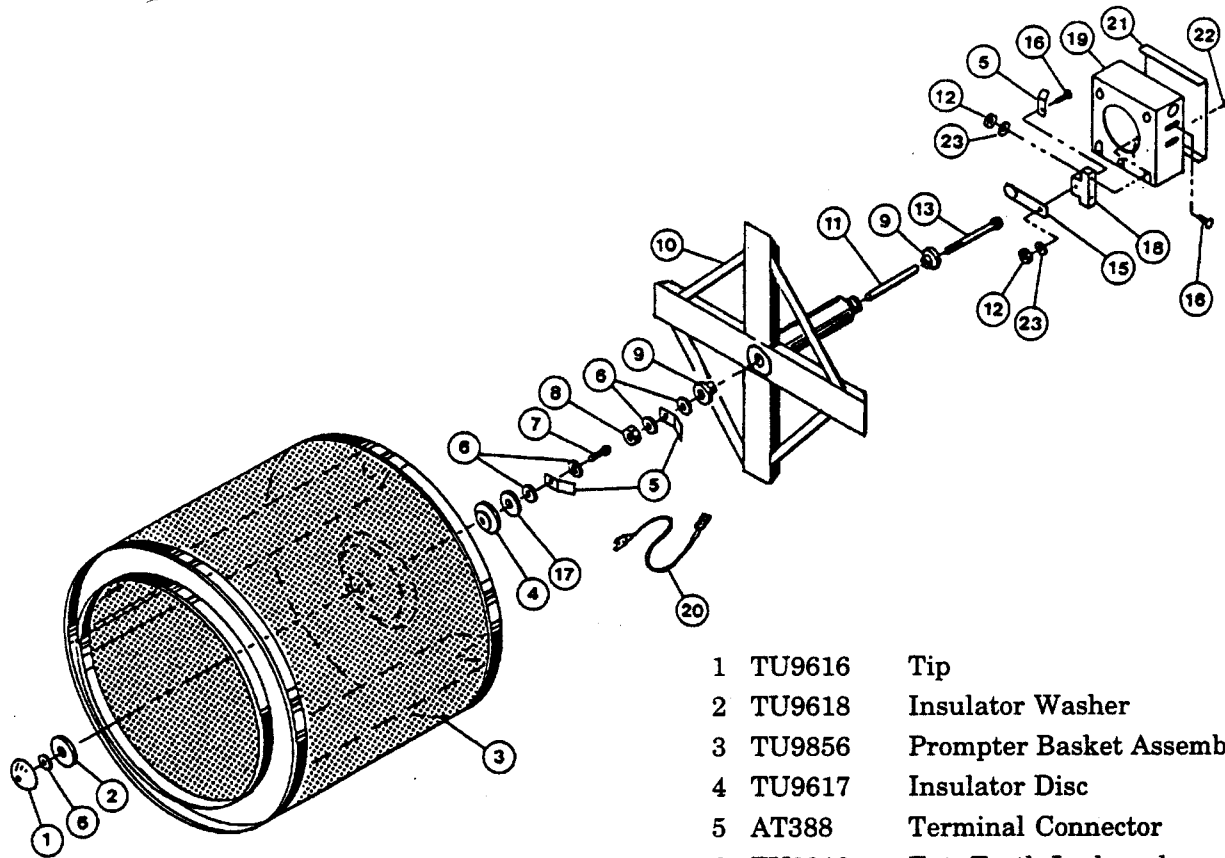
Grease to be applied to all bearing shafts,
#42-032-6015 grease Lubriplate #310, 1 lb.
cans OR 14 1/2 ounce tubes - Lubriplate No.
930-2, multi-purpose grease #10098.

DUCT WORK
HORIZONTAL OR VERTICAL



- | | | |
|---|--------|-------------------------------------------|
| 1 | TU8079 | Duct Elbow |
| 2 | TU8081 | Duct—Long |
| 3 | TU7640 | Duct—Short |
| 4 | TU8228 | Duct Tee |
| 5 | TU7624 | 12" Diameter Duct—24" Long |
| 6 | TU7625 | 12" Diameter Duct—30" Long |
| 7 | TU7626 | 12" Diameter Duct—Elbow |
| 8 | TU8594 | Duct Work Decal ("F" and "K" Models ONLY) |

Basket and Sensor Assembly—"K" and "R" Models (Illustration)

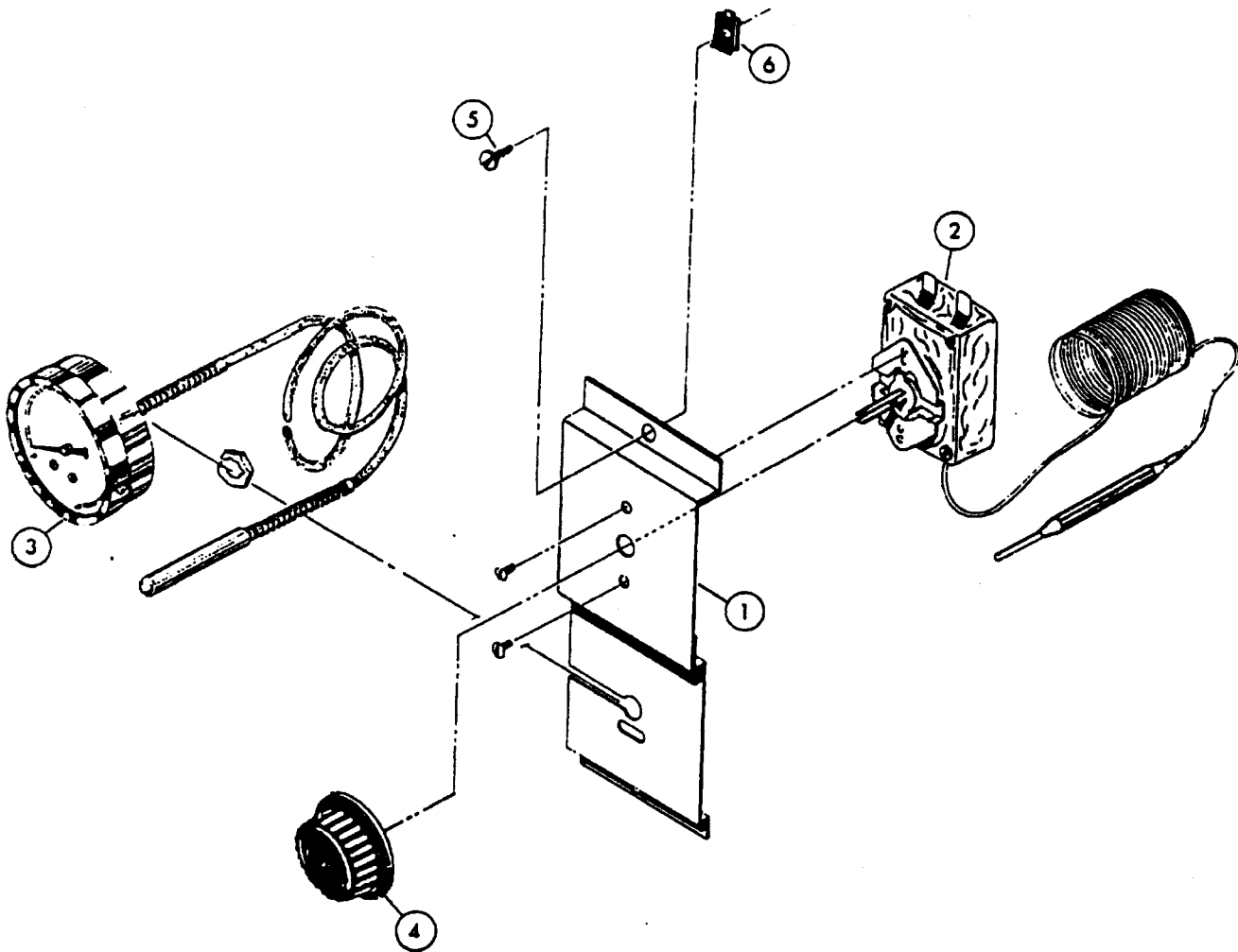


- | | | |
|----|---------|--------------------------------------|
| 1 | TU9616 | Tip |
| 2 | TU9618 | Insulator Washer |
| 3 | TU9856 | Prompter Basket Assembly |
| 4 | TU9617 | Insulator Disc |
| 5 | AT388 | Terminal Connector |
| 6 | TU9910 | Ext. Tooth Lockwasher |
| 7 | TU9949 | Machine Screw |
| 8 | TU3400 | #6 - 32 Brass Hex Nut
(Pkg. of 6) |
| 9 | TU9621 | Rod Insulator |
| 10 | K348 | Prompter Spider Weldment |
| 11 | TU9854 | Sleeve |
| 12 | TU3266 | #8 - 32 Hex Nut (Pkg. of 6) |
| 13 | TU9853 | Conductor Rod |
| 14 | | |
| 15 | TU9660 | Wiper and Button |
| 16 | RC353 | Machine Screw |
| 17 | TU9944 | Washer |
| 18 | TU10915 | Wiper Insulator |
| 19 | TU10916 | Wiper Housing |
| 20 | TU9628 | Jumper Wire |
| 21 | TU10917 | Housing Cover |
| 22 | TU7733 | Self Drilling Screw (Pkg. of 6) |
| 23 | M271 | Int. Tooth Lockwasher
(Pkg. of 6) |

TU10732 consists of Ref. No's. 19, 21, and 22

Temperature Assembly (Illustration)

TU6030—"C" Model—Consists of Ref. No. 1, 2, 3
TU9718—"K" Model—Consists of Ref. No. 1, 3



- | | | |
|---|---------|-------------------------------------------|
| 1 | TU5530 | Mounting Bracket |
| 2 | TU1980 | Thermostat |
| 3 | TU3593 | Thermometer |
| | TU3816 | Lens Replacement (Texas Gage ONLY) |
| | TU8475 | Lens Replacement (Marshaltown Inst. ONLY) |
| | TU11193 | Lens Replacement (Weiss—consult factory) |
| | TU13213 | Lens Replacement (Weiss—consult factory) |
| 4 | TU490 | Thermostat Knob (Fahrenheit) |
| | TU491 | Thermostat Knob (Centigrade) |
| 5 | TU3209 | #14 x 5/8" S.M.S. (Pkg. of 6) |
| 6 | TU7848 | #14 Tinnerman Clip |

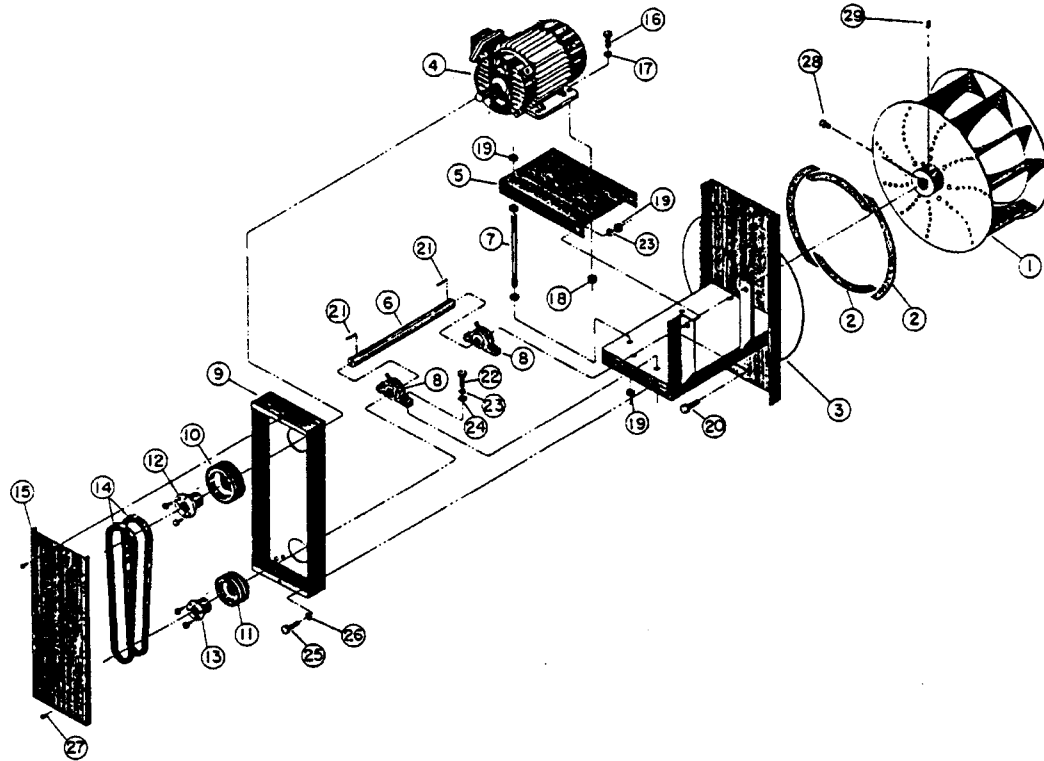
Fan Motor Mount Assembly—50 Hz. Models (Illustration)

TU8826—208 or 440V/50/3

TU6006—240/415V/50/3

TU11609—220/380/50/3

TU10653—200/346/50/3

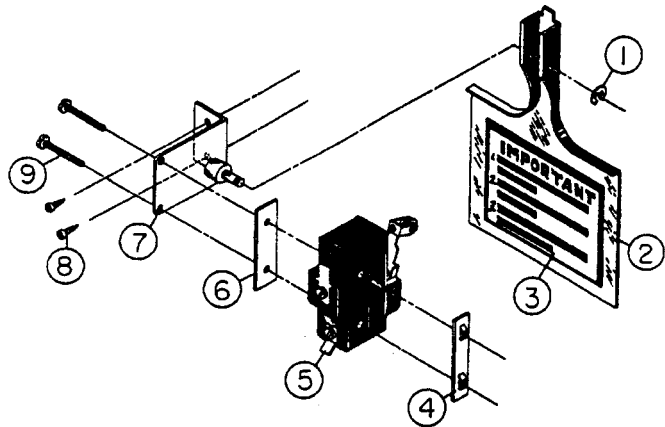


1	TU6086	50 Cycle Fan with Set Screws	17	TU2814	5/16" Split Lockwasher (Pkg. of 6)
2	TU2473	Self Sticking Gaskets (2 Sets required)	18	V56	5/16" - 24 Hex Nut (Pkg. of 6)
3	TU5659	50 Cycle Motor Mount	19	TU4787	3/8" - 16 Hex Nut (Pkg. of 6)
4		Motor: Specify Motor No. and Voltage	20	TU3246	3/8" - 16 x 1" Hex Head Screw (Pkg. of 6)
5	TU4706	Motor Mount Plate	21	TU4684	1 1/2" Key
6	TU1693	Jack Shaft	22	OP380	3/8" - 16 x 1 1/2" Hex Head Screw
7	TU1950	Motor Support Rod (2 required)	23	VSB134	3/8" Split Lockwasher (Pkg. of 6)
8	SB138	Pillow Block (2 required)	24	IB140	3/8" Flat Washer
9	TU4715	Belt Guard Weldment	25	RC344	1/4" - 20 x 3/4" Hex Head Screw
10	TU2008	Sheave 2AK46H	26	TU2847	1/4" Flat Washer (Pkg. of 6)
11	TU2009	Sheave 2AK39H	27	TU7733	#8 x 1/2" Self Drilling Screw (Pkg. of 6)
12	TU2007	H 7/8" Bushing	28	AT304	5/16" - 18 x 1" Set Screw
13	TU3807	H 3/4" Bushing	29	TU4967	5/16" - 18 x 1/2" Allen Set Screw
14	TU3393	4L280 "V" Belt (2 required)			
15	TU4716	Belt Guard Cover			
16	TU4704	5/6" - 24 x 1/4" Hex Head Screw			

Air Switch Assembly and Thermistor Assembly (Illustrations)

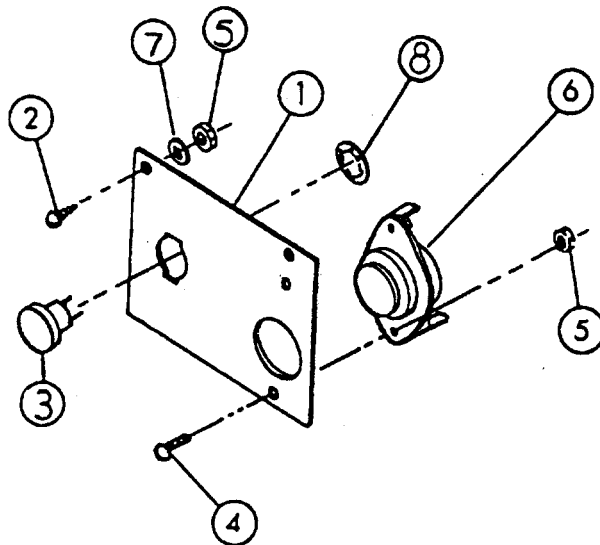
AIR SWITCH ASSEMBLY TU8206

- 1 F888 "E" Ring
- 2 TU2463 Actuator Arm
- 3 TU3476 Air Switch Decal
- 4 TU1771 #6 Tinnerman Nut (Pkg. of 12)
- 5 TU8155 Air Switch
- 6 TU1770 Insulator
- 7 TU8171 Air Switch Bracket
- 8 TU7733 #8 - 18 x 1/2" Self Drilling Screw
(Pkg. of 6)
- 9 TU3219 #6 x 1" Round Head S.M.S.

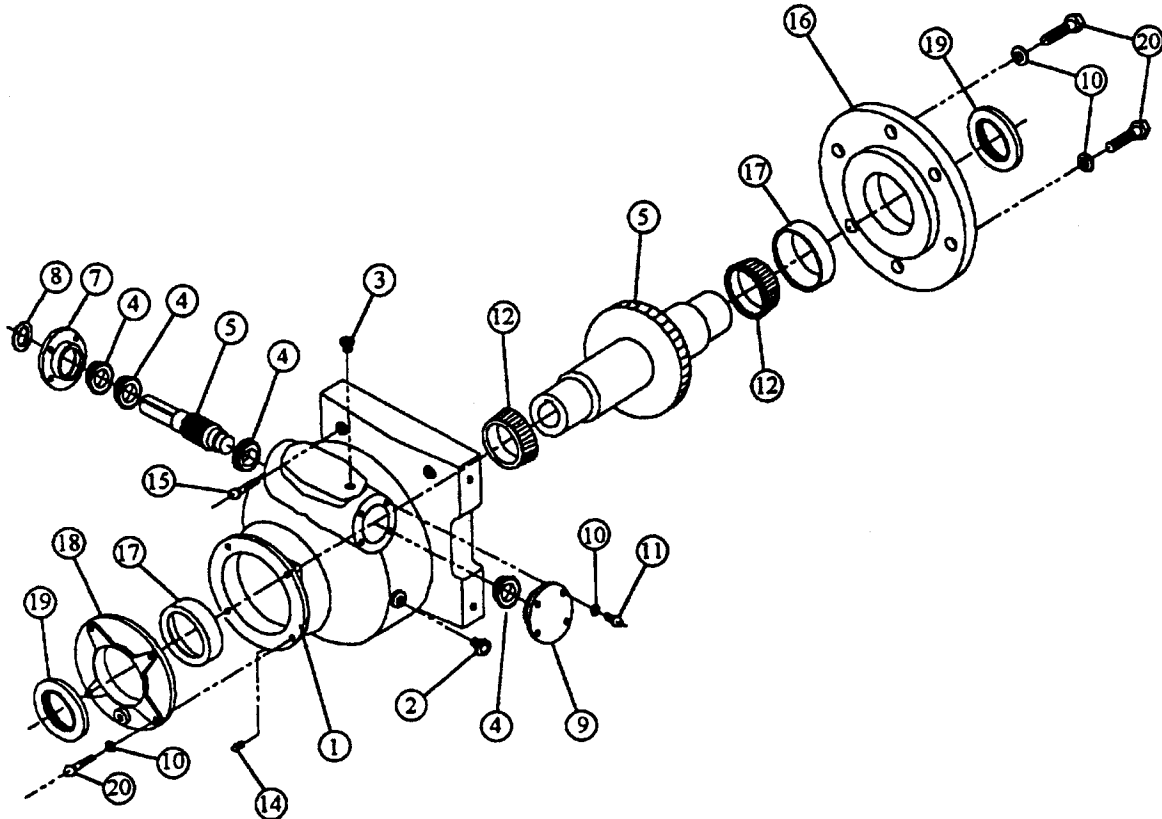


THERMISTOR ASSEMBLY "K" and "R" Models Only TU12582

- 1 TU9720 Bracket
- 2 LB291 #6 - 32 x 3/8" Screw
- 3 TU2477 High Limit Thermostat
- 4 TU3624 #6 Machine Screw
- 5 TU3400 #6 Hex Nut (Pkg. of 6)
- 6 TU11991 Thermistor
- 7 AT368 #8 Lockwasher
- 8 TU3801 Speed Nut



TM200—Large Gear Reducer with Bronze Teeth (Illustration)



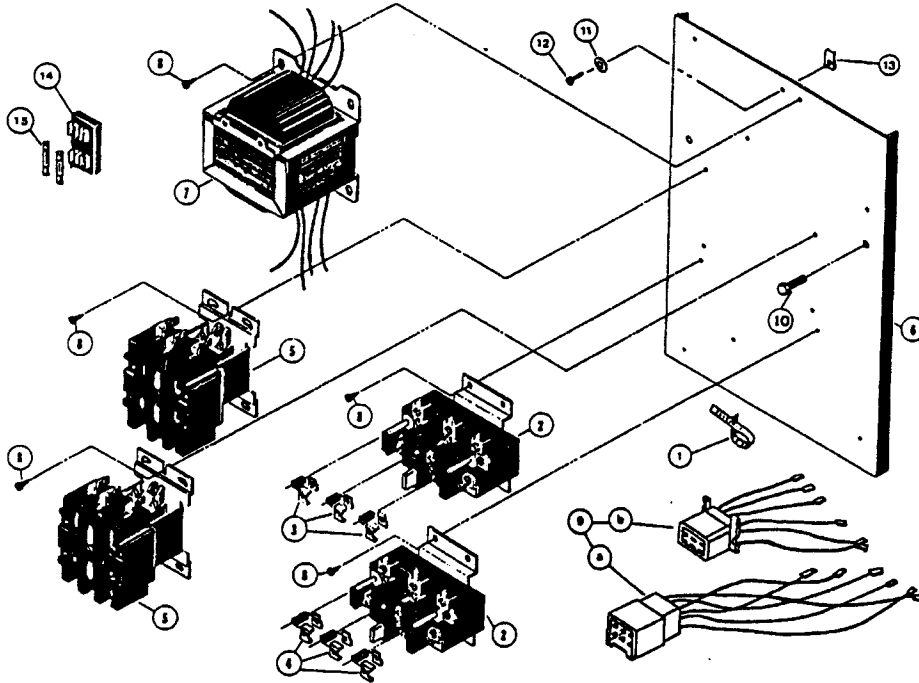
- | | | |
|----|--------|--------------------------------------|
| 1 | TM203 | Housing |
| 2 | TM222 | Oil Level Sight Glass |
| 3 | TM219 | 1/2" Vent Plug |
| 4 | TM208 | Small Bearing Cone |
| 5 | TM201 | Worm |
| 6 | TM207 | Small Bearing Cup |
| 7 | TM205 | Small Open End Cap |
| 8 | TM204 | Small Klozure |
| 9 | TM218 | Small Closed End Cap |
| 10 | VSB134 | 3/8" Split Lockwasher (Pkg. of 6) |
| 11 | TU3246 | 3/8" - 16 x 1" Cap Screw (Pkg. of 6) |
| 12 | TM217 | Large Bearing Cone |
| 13 | TM202 | Worm Gear |
| 14 | TM221 | 1/4" Pipe Plug |
| 15 | TU5312 | 3/8" x 3" Set Screw |
| 16 | TM211 | Large End Cap 10 1/2" Dia. |
| 17 | TM210 | Large Bearing Cup |
| 18 | TM212 | Large End Cap 6 3/4" Dia. |
| 19 | TM220 | Large Klozure |
| 20 | IB139 | 3/8" - 16 x 1 1/4" Cap Screw |

Ref. No's. 5 and 13—TM225 Worm and Worm Gear Set (for TM200 ONLY)

Not Illustrated—TU3465 one pint of Cissell Transmission Oil

Non-Reversing Control Panel Assembly (Illustration)

TU8723	Non-Reversing Control Panel 480/60/3 with 120V Controls
TU8719	Non-Reversing Control Panel 240/415/50/3 with 240V Controls
TU8721	Non-Reversing Control Panel 480/60/3 with 240V Controls
TU8718	Non-Reversing Control Panel 208/240/60/3 with 240V Controls
TU8865	Non-Reversing Control Panel 550/60/3 with 240V Controls



1	TU10579	Harness Clamp	9	TU8713	Wiring-Plug Type (For Dryers without Transformers)	
2	TU6774	Overload Unit		TU8714	Wiring-Plug Type (For Dryers with Transformers)	
3	* TU267900	Overload Heater (Fan)		9a	SC593	Housing-Female
4	* TU267900	Overload Heater (Basket)		9b	SC594	Housing-Male
5	** TU6965	Contactor 120V 60 Hz. (2 required)	10	TU2793	1/4" - 20 x 3/4" Hex Head Screw (Pkg. of 6)	
	*** TU6963	Contactor 208V 60 Hz. (2 required)	11	RC349	1/4" Int. Tooth Lockwasher	
	**** TU8727	Contactor 240V 50 Hz.	12	TU3209	#14 x 5/8" Pan Hd. Machine Screw (Pkg. of 6)	
6	TU6959	Panel Plate	13	LB74	#14 Speed Nut	
7	TU4660	Transformer 480/240 & 240/120	14	TU10596	Fuse Holder	
	TU4659	Transformer 575/240	15	TU10597	Fuses	
	TU9804	Transformer 480/120V				
8	TU7733	#8 - 1/2" Self Drill Screw (Pkg. of 6)				

* To order Overload Heaters, refer to chart.

** TU7281 Contactor Coil ONLY

*** TU7282 Contactor Coil ONLY

**** TU8689 Contactor Coil ONLY

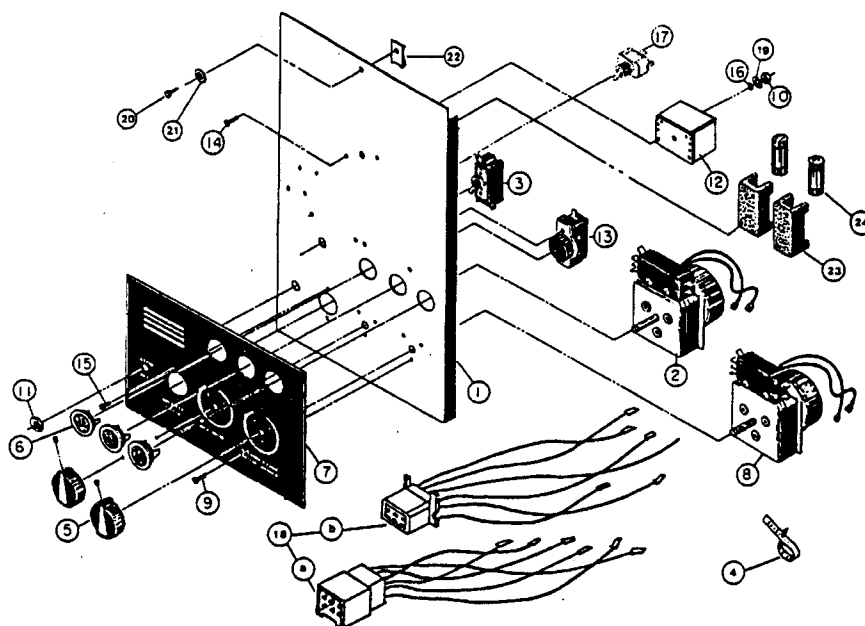
Permanent Press Control Panel Assembly (Illustration)

GAS OR STEAM

TU8730	(60 Hz. 230V) F/208/230-550
TU8731	(60 Hz. 230V) Rev. F/208/230-550
TU8805	(50 Hz. 230V) F/230-415
TU8809	(50 Hz. 230V) Rev. F/230-415
TU8806	(60 Hz. 115V) F/480 Gas ONLY
TU8807	(60 Hz. 115V) Rev. F/480 Gas ONLY
TU8730	(60 Hz. 230V) F/480 Steam ONLY
TU8731	(60 Hz. 230V) Rev. F/480 Steam ONLY

ELECTRIC

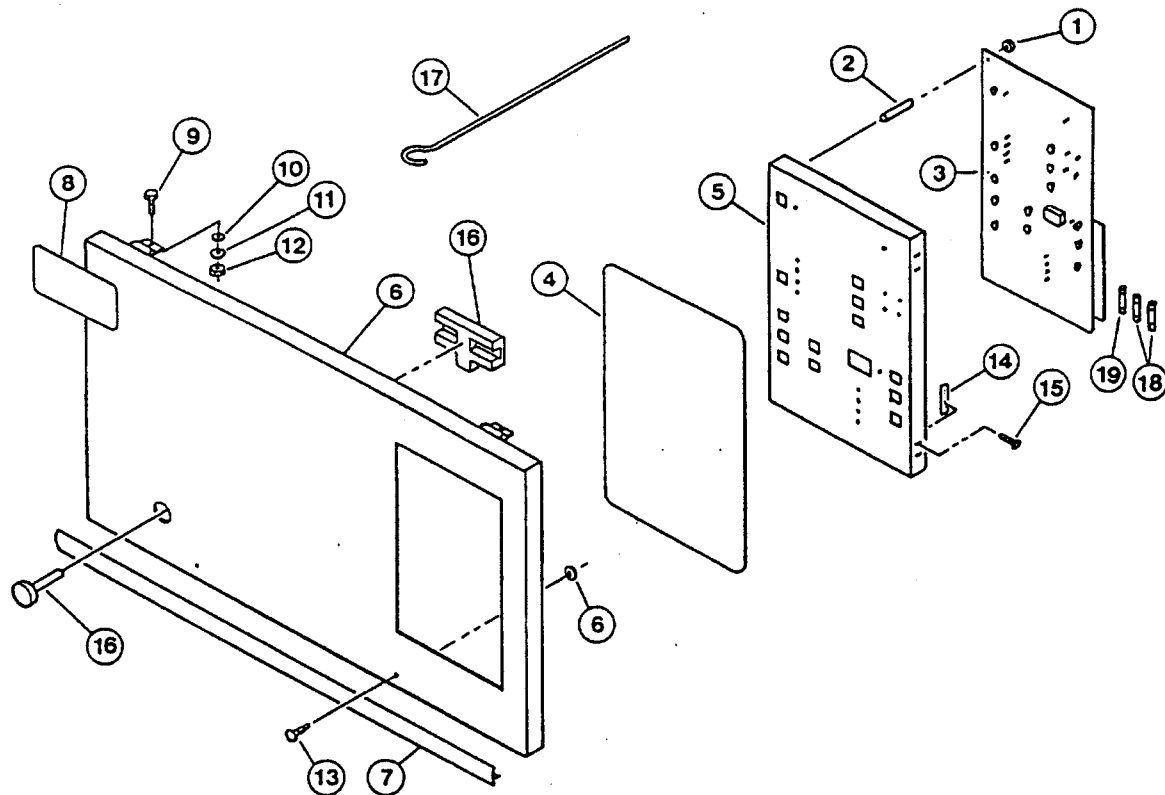
TU8879	(60 Hz. 230V) F/208
TU8880	(60 Hz. 230V) F/230-460-550
TU8881	(50 Hz. 230V) F/230-415
TU8882	(60 Hz. 208V) Rev. F/208
TU8883	(60 Hz. 230V) Rev. F/230-460-550
TU8884	(50 Hz. 230V) Rev. F/230-415



1	TU11950	Control Panel	12	TU13224	Relay 100-120V 50/60 Hz
2	K193	60 Minute Timer 240/60		TU13225	Relay 200-240V 50/60 Hz
	K188	60 Minute Timer 120/60	13	TU9028	Push Button Switch
	K192	60 Minute Timer 240/50	14	AT383	#8 - 32 x 1/2" Truss Head Screw (Pkg. of 6)
3	TU264	Toggle Switch	15	ET208	#6 - 32 x 1/4" Pan Head Screw
4	TU10579	Harness Clamp	16	M271	#8 Internal Tooth Lockwasher (Pkg. of 6)
5	TU2555	Knob Assembly	17	FG147	Toggle Switch (Reversing, Non-Reversing Controls)
6	M454	Amber lamp 240V	18	TU8712	Wiring Harness
	M102	Amber Lamp 120V	18a	SC593	Housing - Female
7	TU7673	Permanent Press Nameplate	18b	SC594	Housing - Male
	TU8154	Permanent Press Nameplate (Reversing, Non-Reversing)	19	FB187	#10 Lockwasher
8	K194	15 Minute Timer 240/60	20	TU3209	#14 x 5/8" P.H.M. Screw (Pkg. of 6)
	K189	15 Minute Timer 120/60	21	RC349	1/4 I.T. Lockwasher
	K190	15 Minute Timer 240/50/60	22	LB74	#14 Speed Nut
9	M262	#8 - 32 x 3/8" Truss Head Screw	23	TU7505	Fuseholder (2) Electric ONLY
10	TU3266	#8 - 32 Brass Hex Nut (Pkg. of 6)	24	TU8279	Fuse (2) Electric ONLY
11	TU3805	15/32" - 32 Hex Head Lock Ring			

Control Panel and Access Door Assembly—"K" and "R" Models (Illustration)

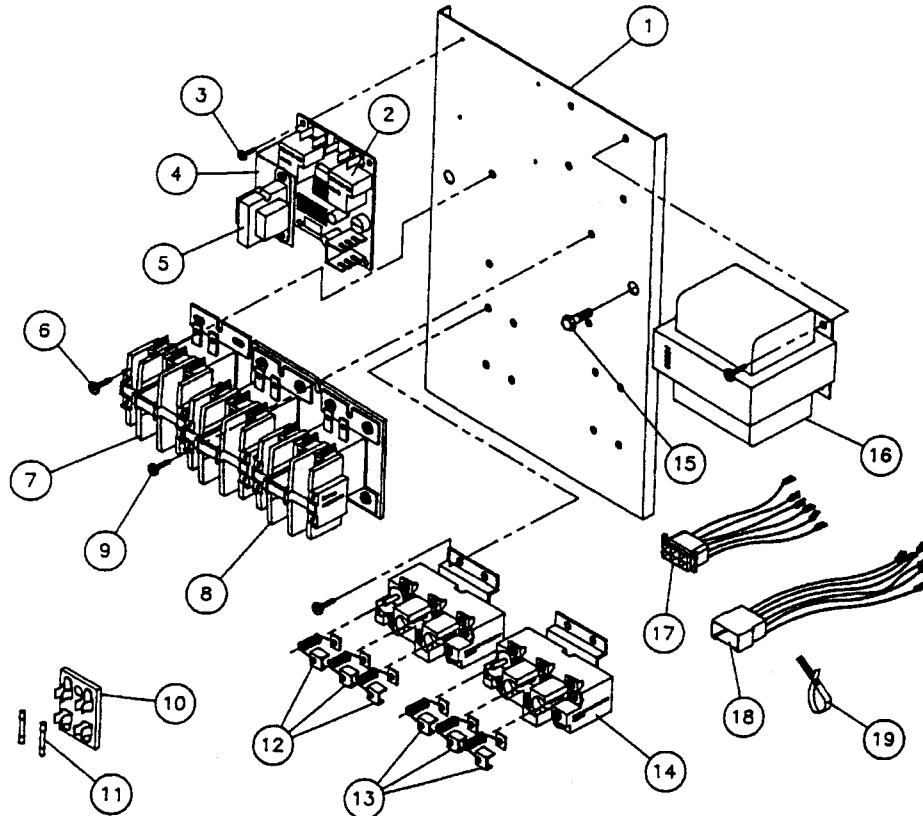
110 lb. Dryers—Reversing and Non-Reversing



- 1 TU3400 #6 - 32 Brass Nut (Pkg. of 6)
- 2 TU12254 Spacer
- 3 TU12105 Reversing Control Board
TU12106 Non-Reversing Control Board
- 4 TU12195 Reversing Panel Label
TU12196 Non-Reversing Panel Label
- 5 TU12842 Control Panel
- 6 TU12841 Access Door
- 7 TU11568 Trim
- 8 TU8013 Cissell Label
- 9 TU3479 #10 - 32 Truss Head Screw
- 10 P104 1/4" Cut Washer (Pkg. of 6)
- 11 FB187 #10 Lockwasher
- 12 TU2842 #10 - 32 Hex Nut (Pkg. of 6)
- 13 FG343 Screw Fastener
- 14 TU1771 Twin Clip Nut (Pkg. of 12)
- 15 TU9524 #6 x 5/16" Screw
- 16 TU6808 Reset Button
- 17 TU5739 Support Rod
- 18 TU12863 Fuse - 5 Amp.
- 19 ET235 Fuse - 3/8 Amp.

Reversing Control Panel Assembly (Illustration)

TU13123	Reversing Control Panel 480/60/3 with 120V Controls
TU13121	Reversing Control Panel 208/240/60/3 with 240V Controls
TU13164	Reversing Control Panel 480/60/3 with 240V Controls
TU13122	Reversing Control Panel 240/415/50/3 with 240V Controls



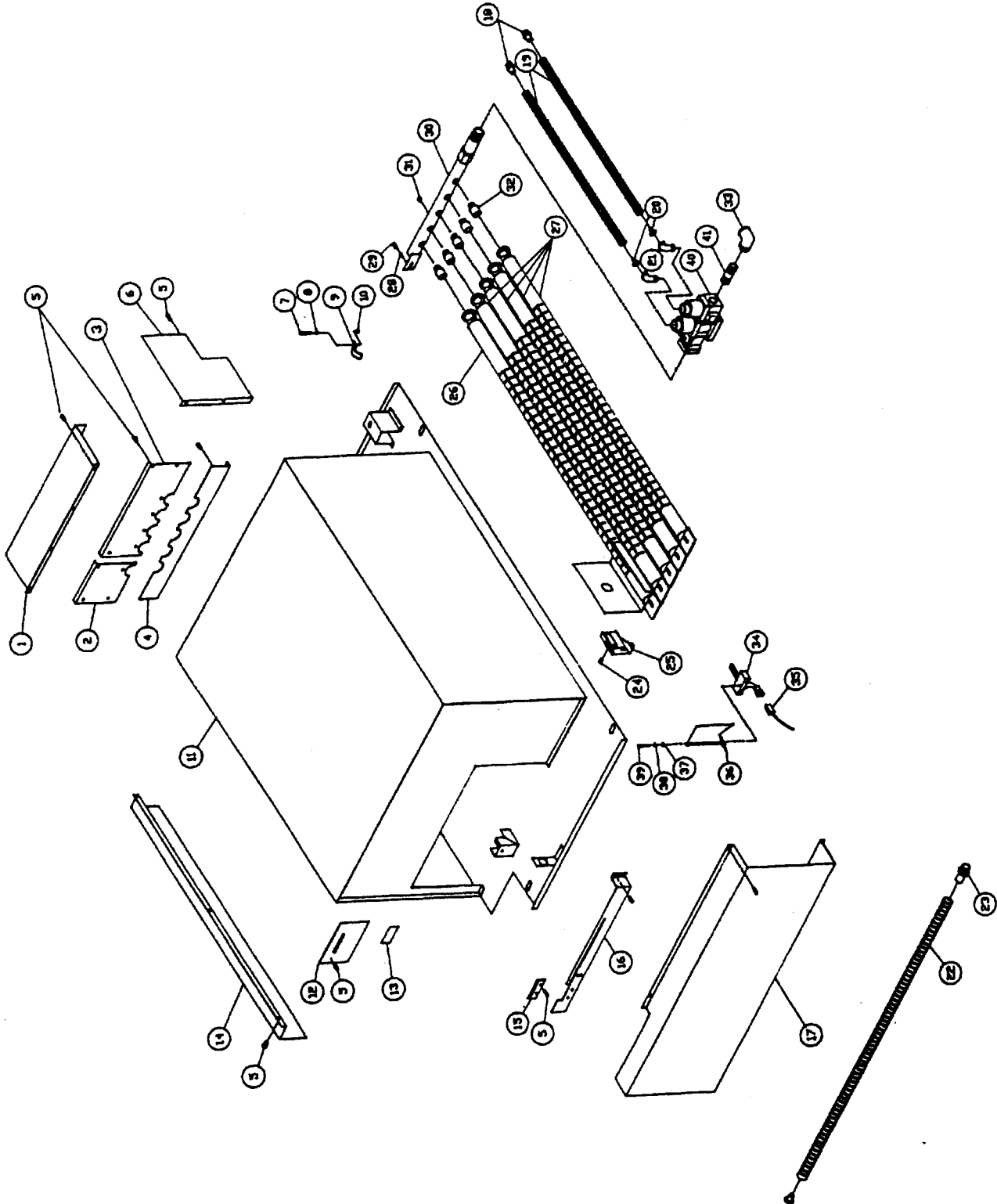
1	TU6959	Control Panel Plate	10	TU10596	Fuse Holder
2	TU12874	Electronic Reversing Timer	11	TU10597	Fuse
3	F540	#6 x 5/8" Sheet Metal Screw	12	**** TU267900	Overload Heater (fan)
4	TU13126	Transformer Mounting Plate	13	**** TU267900	Overload Heater (basket)
5	TU12989	Transformer 120V/24V	14	TU6774	Overload Unit
	TU12990	Transformer 208-240V/24V	15	RC344	1/4" - 20 x 3/4" Large Hex Head Screw
6	TU7733	#8 x 1/2" Large Self Drill Screw (Pkg. of 6)	16	TU4660	Transformer 480-240V/240-120V
7	* TU6965	Contactor 120V 60 Hz		TU4659	Transformer 575/240V
	** TU6963	Contactor 208-240V 60 Hz, 200-220V 50 Hz		TU10579	Transformer 440-480-575V/120V
	*** TU8727	Contactor 240V 50 Hz	17	SC594	Housing—Male
8	* TU7252	Rev. Contactor 120V 60 Hz	18	SC593	Housing—Female
	** TU6964	Rev. Contactor 208V - 240V 60 Hz, 200-220 V 50 Hz	19	TU10579	Harness Clamp
	*** TU8728	Rev. Contactor 240V 50 Hz		* TU7281	Contactor Coil ONLY 120V 60 Hz
9	TU2793	#8 x 3/4" Large Self Drill Screw (Pkg. of 6)		** TU7282	Contactor Coil ONLY 208-240V 60 Hz, 200-220V 50 Hz
				*** TU8689	Contactor Coil ONLY 240V 50 Hz

**** To order Overload Heater, refer to chart

Gas Heating Unit—L44CD42 and L44KD42 (Illustration)

TU11948—Natural Gas Models

TU11949—L.P. Gas Models



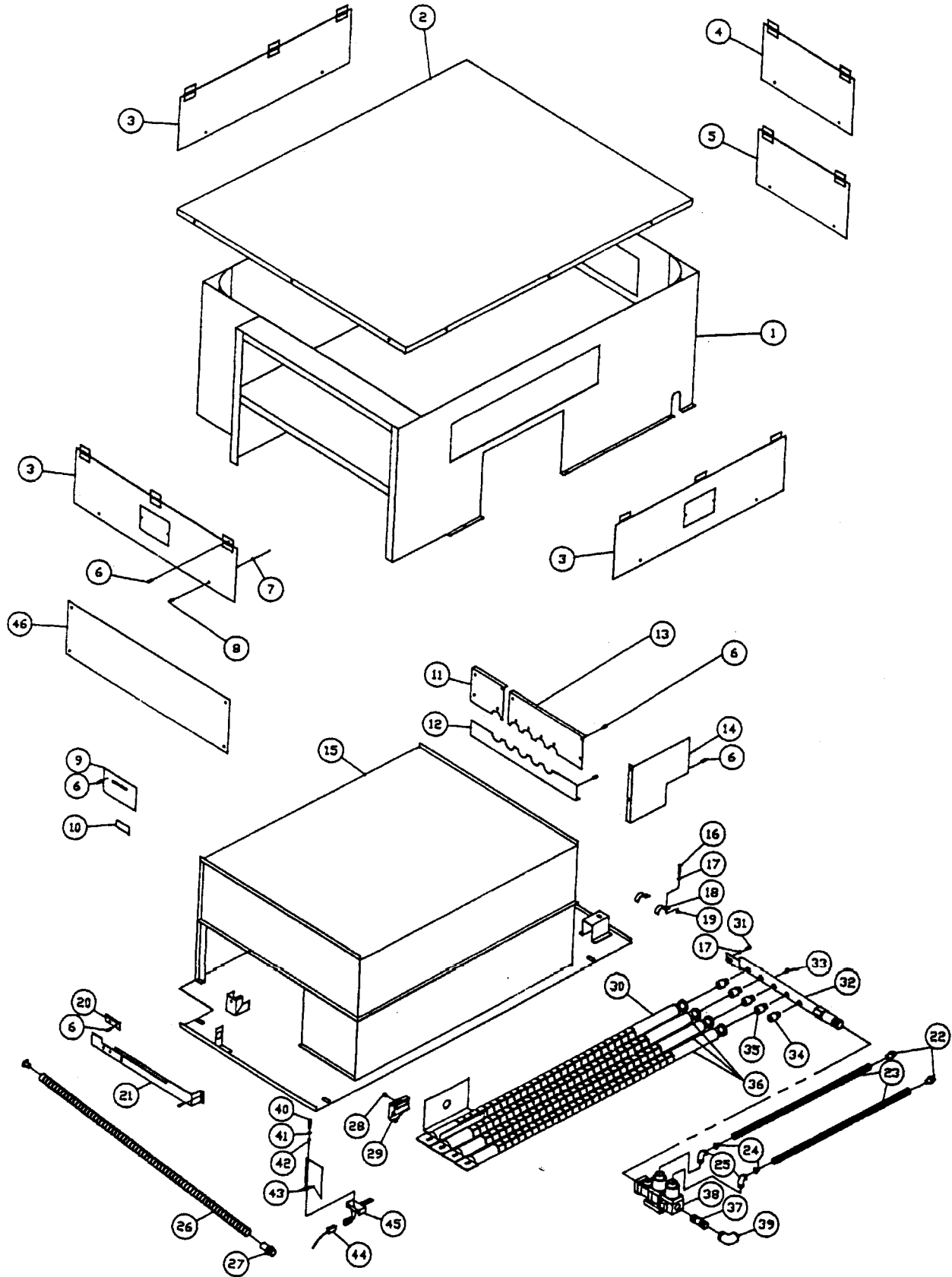
Parts—Gas Heating Unit—L44CD42 and L44KD42

1	TU8020	Rear Shield
2	TU11888	Burner Support Top, Right Side
3	TU11887	Burner Support Top, Left Side
4	TU11886	Burner Support Bottom
5	TU7733	#8 x 1/2" Self Drill Screw (Pkg. of 6)
6	TU8759	Heat Shield
7	RC344	1/4" - 20 x 3/4" Hex Head Screw
8	TU2846	1/4" Split Ring Lockwasher (Pkg. of 6)
9	PT196	3/4" Pipe Strap
10	TU4934	1/4" - 20 Hex Nut (Pkg. of 6)
11	TU11646	Bonnet
12	TU8613	Igniter Instruction Plate
13	TU8645	"Purge Gas Lines" Plate
14	TU11899	Left Side Shield
15	TU10664	Burner Holder
16	TU11827	Front Burner Support
17	TU10692	Front Shield
18	F875	3/8" Straight Connector
19	CFA1600	3/8" Cable - 16" Long
20	C170	3/8" Bushing
21	F876	3/8" - 90° Connector
22	CFB6800	1/2" Cable - 68" Long
23	TU4790	1/2" Straight Connector
24	602102180	#8 x 1/2" Screw
25	TU8598	Radiant Sensor
26	TU11619	Igniter Burner with Bracket
27	TU7881	Gas Burner
28	TU2846	1/4" Lockwasher (Pkg. of 6)
29	CB36	1/4" - 20 x 1/2" Hex Head Screw (Pkg. of 6)
30	TU9614	Gas Manifold
31	TU2224	1/8" Plug
32	TU3539	Burner Orifice (specify Drill Size)
33	TU10623	3/4" x 1/2" 90° Elbow
34	TU8596	Igniter
35	TU8605	Molex Wire Connector
36	TU11851	Burner Shield
37	TU4820	3/16" x 1/2" Cut Washer
38	M271	#8 Lockwasher (Pkg. of 6)
39	TU3416	#8 x 1 1/4" Screw (Pkg. of 6)
40	TU13187	1/2" Combination Gas Valve (Natural Gas)
	TU13188	Kit (Natural Gas to LP Gas)
	TU13373	1/2" Combination Gas Valve (L.P. Gas)
	TU13632	Kit (LP Gas to Natural Gas)
		(Above kits do not include orifices)
41	OP290	1/2" x 2" Nipple

Gas Heating Unit—L44FD42 and L44RD42 (Illustration)

TU11960—Natural Gas Models

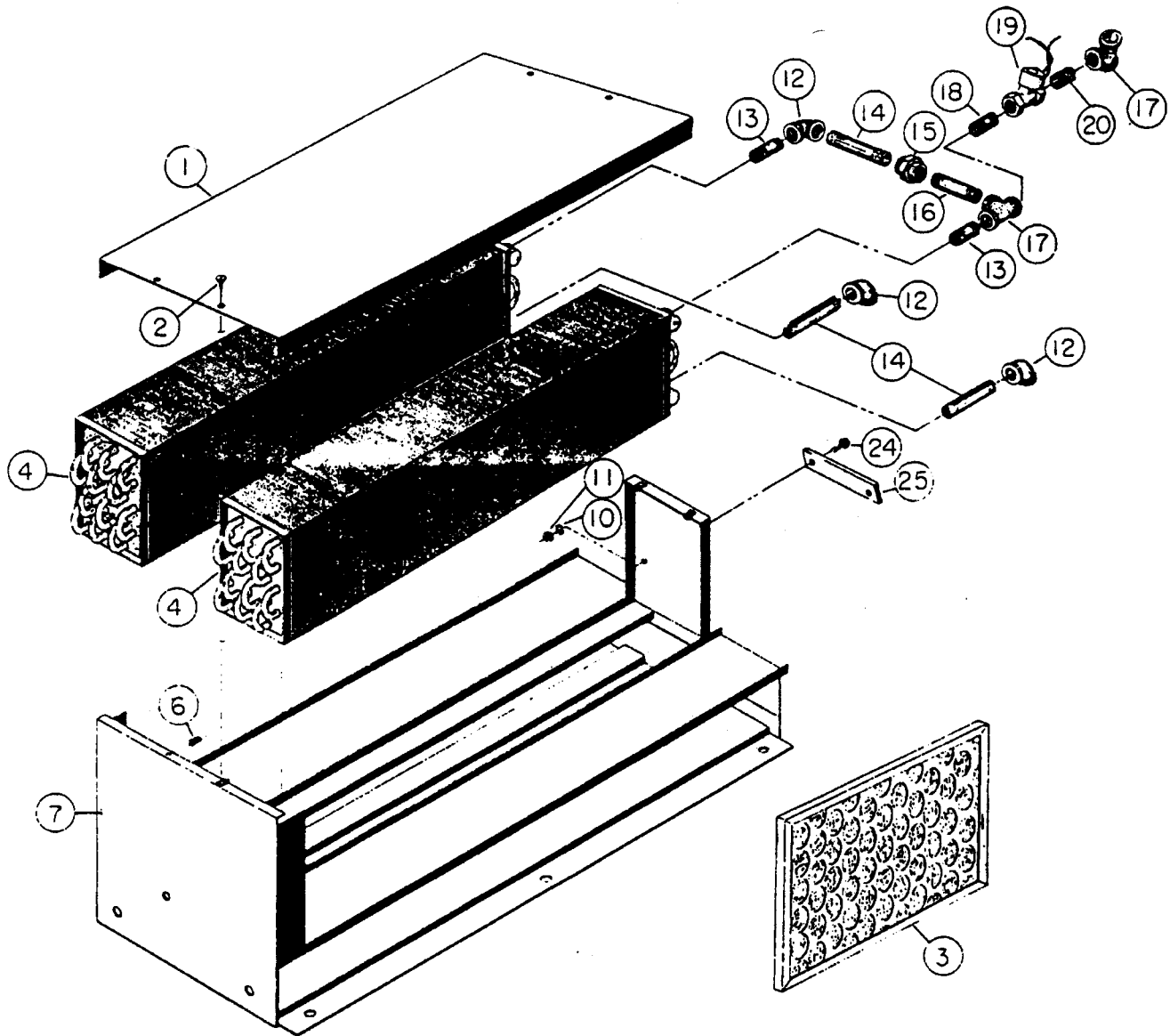
TU11961—L.P. Gas Models



Parts—Gas Heating Unit—L44FD42 and L44RD42

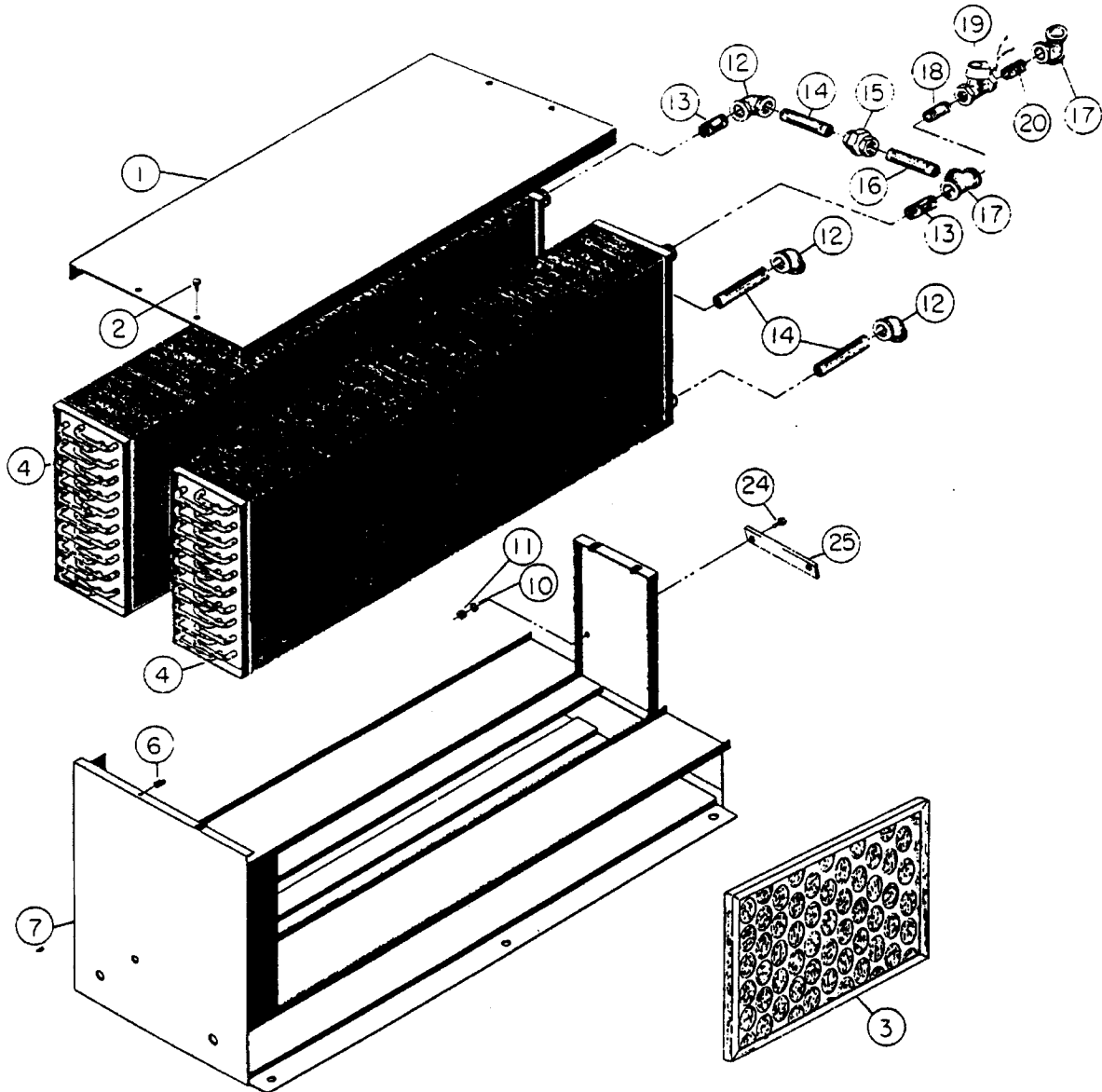
1	TU8156	Bonnet Enclosure
2	TU7555	Enclosure Top
3	TU12042	Cover with Clean Out Label
4	TU12043	Rear Cover with Clean Out Label
5	TU12046	Lower Rear Cover with Label
6	TU7733	#8 - 18 x 1/2" Self Drill Screw (Pkg. of 6)
7	TU8577	#8 Speed Nut
8	602102180	#8 Sheet Metal Screw
9	TU8613	Ignition Instructions Label
10	TU8645	"Purge Gas Line" Label
11	TU11890	Burner Support Top Right Side
12	TU11886	Burner Support Bottom
13	TU11887	Burner Support Top Left Side
14	TU8759	Heat Shield
15	TU11874	Bonnet
16	RC344	1/4" - 20 x 3/4" Hex Screw
17	TU2846	1/4" Lockwasher (Pkg. of 6)
18	PT196	Strap
19	TU4934	1/4" Hex Nut (Pkg. of 6)
20	TU10664	Burner Holder
21	TU11897	Front Burner Support
22	F875	3/8" Straight Connector
23	CFA1600	3/8" Cable - 16" Long
24	C170	3/8" Cable Bushing
25	F876	3/8" Angle Connector
26	CFB6800	1/2" Cable - 68" Long
27	TU4790	1/2" Straight Connector
28	602102180	#8 Sheet Metal Screw (Pkg. of 6)
29	TU8598	Radiant Sensor
30	TU11619	Ignition Burner with Bracket
31	CB36	1/4" - 20 x 1/2" Hex Screw
32	TU9614	Gas Manifold
33	TU2224	1/8" Pipe Plug
34	TU10946	Manifold Plug
35	TU3539	Gas Orifice (specify Drill Size)
36	TU7881	Burner
37	OP290	1/2" x 2" Nipple
38	TU13187	Gas Valve (Natural Gas)
	TU13373	Gas Valve (L.P. Gas)
	TU13188	Kit (Natural Gas to LP Gas)
	TU13632	Kit (LP Gas to Natural Gas)
		(Above kits do not include orifices)
39	TU10623	3/4" x 1/2" 90° Elbow
40	TU3416	#8 x 1 1/4" Screw (Pkg. of 6)
41	M271	#8 Lockwasher (Pkg. of 6)
42	TU4820	Cut Washer
43	TU11851	Burner Shield
44	TU8605	Wire Connector
45	TU8596	Igniter
46	TU7607	Front Lower Cover

TU8134—Steam Bonnet (4 Coil) (Illustration)



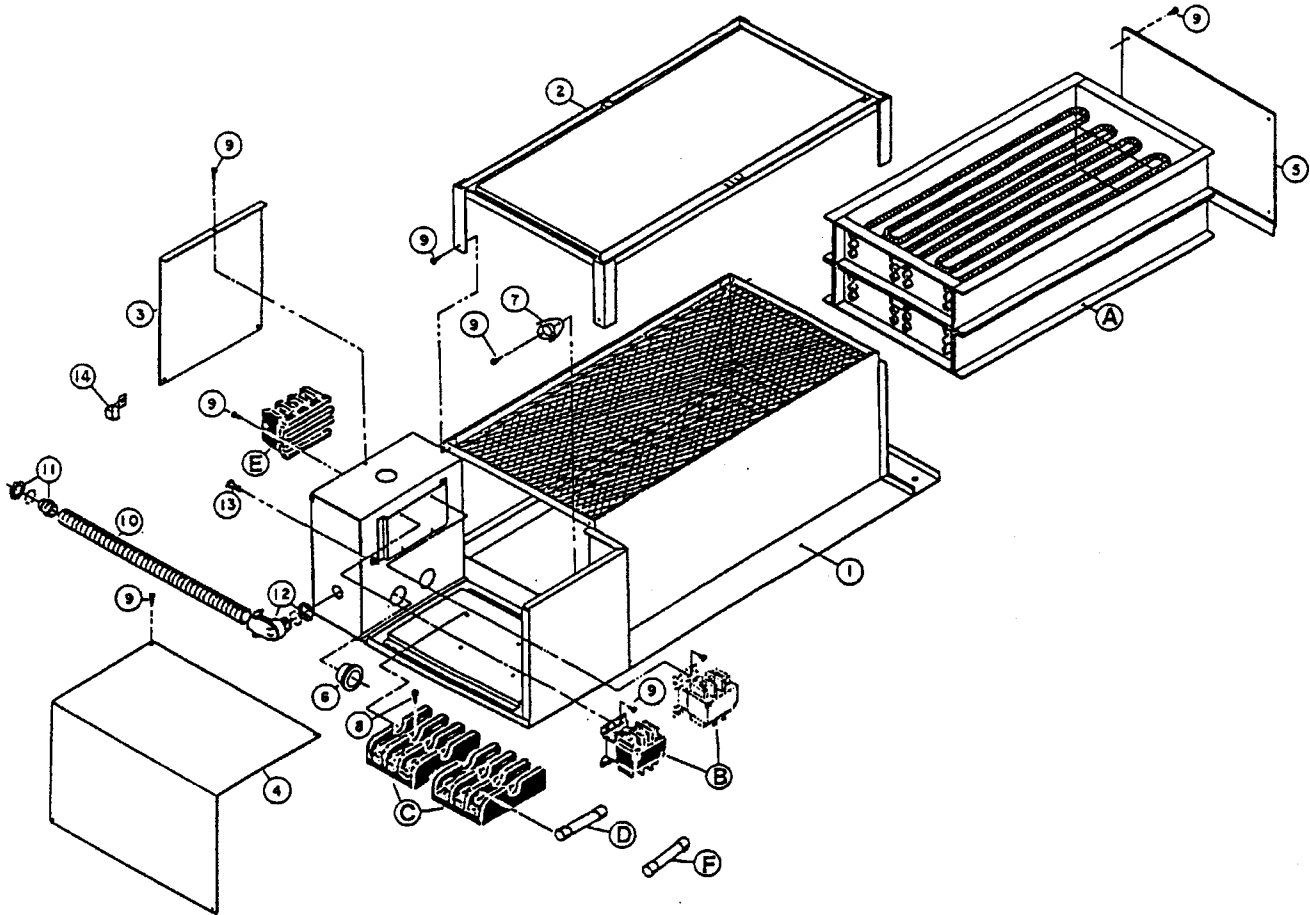
1	TU7393	Top Plate	14	TU4610	3/4" x 5" Nipple
2	TU3209	#14 x 5/8" Sheet Metal Screw (Pkg. of 6)	15	TU4600	3/4" Union
3	TU6458	Air Filter (4 required)	16	TU4620	3/4" x 4 1/2" Nipple
4	TU1699	Steam Coil (4 Coil)	17	TU4597	3/4" Tee
6	LB74	#14 Speed Nut	18	TU5924	3/4" x 3 1/2" Nipple
7	TU8082	Bonnet Weldment	19	TU5924	Solenoid Valve (240V)
10	TU2846	1/4" Lockwasher (Pkg. of 6)		TU6763	240V Coil ONLY
11	TU4934	1/4" - 20 x 7/16" Hex Nut (Pkg. of 6)		TU5939	208V Coil ONLY
12	TU4605	3/4" Elbow		TU10289	200V Coil ONLY
13	TU4608	3/4" x 2" Nipple	20	390401031	3/4" x Close Nipple
			24	FB189	1/4" - 20 x 1" Hex Head Screw
			25	TU5726	Rear Coil Holder

TU8135—Steam Bonnet (6 Coil) (Illustration)



1	TU7393	Top Plate	14	TU4610	3/4" x 5" Nipple
2	TU3209	#14 x 5/8" Sheet Metal Screw (Pkg. of 6)	15	TU4600	3/4" Union
3	TU6080	Air Filter (4 required)	16	TU4620	3/4" x 4 1/2" Nipple
4	TU2808	Steam Coil (6 Coil)	17	TU4597	3/4" Tee
6	LB74	#14 Speed Nut	18	TU5914	3/4" x 3 1/2" Nipple
7	TU8083	Bonnet Weldment	19	TU5924	Solenoid Valve (240V) 240V Coil ONLY
10	TU2846	1/4" Lockwasher (Pkg. of 6)		TU6763	208V Coil ONLY
11	TU4934	1/4" - 20 x 7/16" Hex Nut (Pkg. of 6)		TU5939	200V Coil ONLY
12	TU4605	3/4" Elbow		TU10289	3/4" x Close Nipple
13	TU4608	3/4" x 2" Nipple	20	390401031	1/4" - 20 x 1" Hex Head Screw
			24	FB189	Rear Coil Holder
			25	TU5726	

Electric Heating Unit (Illustration)



1	TU7098	Bonnet Weldment (480V and up)
	TU11785	Bonnet Weldment
2	TU7113	Top Weldment
3	TU7122	Terminal Cover (480V and up)
	TU9908	Terminal Cover
4	TU7121	Rear Cover (480V and up)
	TU9909	Rear Cover
5	TU7118	Front Cover
6	TU5958	Bushing
7	TU7089	Thermostat (300° F)
8	TU2793	#8 x 5/8" Screw (Pkg. of 6)
9	TU7733	#8 x 1/2" Screw (Pkg. of 6)
10	CFB1500	1/2" Greenfield Cable (15" Long)
11	TU4790	Straight Connector
12	TU4791	90° Connector
13	CB36	1/4" - 20 x 1/2" Screw (Pkg. of 6)
14	TU7737	Grounding Lug

A, B, C, D, E, and F see opposite page

110 lb. Dryer Electric Heating Unit

Rated Heater Input	Heater Amps, Motor Amps, Controls Amps, Total Amperes at Rated Voltage	HZ.	Minimum Size Supply Wire Based on 60° C (140° F) Insulated Copper Conductor	Circuit Minimum Conduit Trade Size	Branch Circuit Maximum Fuse Size
60KW @ 208V/3Ph	177 Amps	60	0000 AWG	2 1/2"	200
60KW @ 240V/3Ph	153 Amps	60	00 AWG	2"	175
60KW @ 480V/3Ph	77 Amps	60	3 AWG	1 1/4"	80
60KW @ 240V/415V/3Ph	154/88 Amps	60	000/2 AWG	2/1 1/4"	175/90
60KW @ 575V 3Ph	63 Amps	60	4 AWG	1 1/4"	70
80KW @ 208V/3Ph	232 Amps	60	300 AWG	2 1/2"	250
80KW @ 240V/3Ph	201 Amps	60	250 AWG	2 1/2"	225
80KW @ 480V/3Ph	100 Amps	60	1 AWG	1 1/2"	100
80KW @ 240/415V/3Ph	202/116 Amps	50	250 MCM / 0 AWG	2 1/2"	225
80KW @ 575V/3Ph	84 Amps	60	4 AWG	1 1/4"	90

Electric Bonnet Description	Ref. No. (A) Electric Heater Elements	Ref. No. (B) Contractor	Ref. No. (C) Fuse Holder	Ref. No. (D) Fuses, Heater	Ref. No. (E) Terminal Block	Ref. No. (F) Fuse, Motor and Controls
TU11807, 60KW 208V/60/3	HE10810 (2 each) 40KW/240V	TU6963 (4 each)	TU8201 (5 each)	TU11627 (12 each)	TU8734	TU819712 (3 each)
TU11808, 60KW 240V/50/60/3	HE11080 (2 each) 30KW/240V	TU6963 (4 each)	TU8201 (5 each)	TU11627 (12 each)	TU8734	TU819709 (3 each)
TU11790, 80KW 240V/50/60/3	HE10810 (2 each) 40KW/240V	TU6963 (4 each)	TU11096 (4 each) TU8201 (1 each)	TU7223 (12 each)	TU8734	TU819709 (3 each)
TU7096, 60KW 480V/3	HE11080 (2 each) 30KW/240V	TU9169 (1 each)	TU9141 (1 each)	TU7090 (3 each)	TU8734	
TU7097, 60KW 480V/3	HE10810 (2 each) 40KW/240V	TU9170 (1 each)	TU9141 (2 each)	TU7071 (6 each)	TU8734	
TU11806, 80KW 240/415/50/3	HE10810 (2 each) 40KW/240V	TU6963 (4 each)	TU11096 (4 each) TU8200 (1 each)	TU7223 (6 each)	TU8734	TU819907 (3 each)
TU11809, 60KW 240/415/50/3	HE10810 (2 each) 30KW/240V	TU6963 (4 each)	TU8201 (4 each) TU8200 (1 each)	TU11627 (12 each)	TU8734	TU819907 (3 each)
TU8866, 60KW 550V/3	HE11540 (2 each) 30KW/275V	TU9169 (1 each)	TU9141 (1 each)	TU7090 (3 each)	TU8734	
TU9351, 80KW 550V/3	HE10610 (2 each) 40KW/275V	TU9170 (1 each)	TU9141 (2 each)	TU7071 (6 each)	TU8734	
TU11789, 80KW 208V/60/3	HE10610 (2 each) 40KW/208V	TU6963 (4 each)	TU11096 (4 each) TU8201 (1 each)	TU7224 (12 each)	TU8734	TU819712 (3 each)

Ordering Overload Heaters for Overload Relays

ORDERING OVERLOAD HEATERS FOR OVERLOAD RELAYS

Properly sized Overload Heaters provide motor protection for 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 on page 50. 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 show FLA = 3.8, SF = 1.15, and 60 Deg. C Amb.

From the table, heater size is H-25. Order TU267900 - H25.

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.

OVERLOAD HEATER TABLE
Motor Full Load Amps (FLA)

Heater Size (TU2679) N/REV REV		SF = 1.00		SF = 1.15 OR GREATER	
		40 Deg. C Amb.	60 Deg. C Amb. or more	40 Deg. C Amb.	60 Deg. C Amb. or more
H-6	H-7	.69 - .74	.56 - .61	.62 - .68	.51 - .55
H-7	H-8	.75 - .83	.62 - .68	.69 - .74	.56 - .61
H-8	H-9	.84 - .93	.69 - .74	.75 - .83	.62 - .68
H-9	H-10	.94 - 1.02	.75 - .83	.84 - .93	.69 - .74
H-10	H-11	1.03 - 1.16	.84 - .93	.94 - 1.02	.75 - .83
H-11	H-12	1.17 - 1.31	.94 - 1.02	1.03 - 1.16	.84 - .93
H-12	H-13	1.32 - 1.45	1.03 - 1.16	1.17 - 1.31	.94 - 1.02
H-13	H-14	1.46 - 1.63	1.17 - 1.31	1.32 - 1.45	1.03 - 1.16
H-14	H-15	1.64 - 1.80	1.32 - 1.45	1.46 - 1.63	1.17 - 1.31
H-15	H-16	1.81 - 1.96	1.46 - 1.63	1.64 - 1.80	1.32 - 1.45
H-16	H-17	1.97 - 2.22	1.64 - 1.80	1.81 - 1.96	1.46 - 1.63
H-17	H-18	2.23 - 2.43	1.81 - 1.96	1.97 - 2.22	1.64 - 1.80
H-18	H-19	2.44 - 2.55	1.97 - 2.22	2.23 - 2.43	1.81 - 1.96
H-19	H-20	2.56 - 2.81	2.23 - 2.43	2.44 - 2.55	1.97 - 2.22
H-20	H-21	2.82 - 2.99	2.44 - 2.55	2.56 - 2.81	2.23 - 2.43
H-21	H-22	3.00 - 3.43	2.56 - 2.81	2.82 - 2.99	2.44 - 2.55
H-22	H-23	3.44 - 3.90	2.82 - 2.99	3.00 - 3.43	2.56 - 2.81
H-23	H-24	3.91 - 4.28	3.00 - 3.43	3.44 - 3.90	2.82 - 2.99
H-24	H-25	4.29 - 4.86	3.44 - 3.90	3.91 - 4.28	3.00 - 3.43
H-25	H-26	4.87 - 5.45	3.91 - 4.28	4.29 - 4.86	3.44 - 3.90
H-26	H-27	5.46 - 6.13	4.29 - 4.86	4.87 - 5.45	3.91 - 4.28
H-27	H-28	6.14 - 6.79	4.87 - 5.45	5.46 - 6.13	4.29 - 4.86
H-28	H-29	6.80 - 7.72	5.46 - 6.13	6.14 - 6.79	4.87 - 5.45
H-29	H-30	7.73 - 8.48	6.14 - 6.79	6.80 - 7.72	5.46 - 6.13
H-30	H-31	8.49 - 9.65	6.80 - 7.72	7.73 - 8.48	6.14 - 6.79
H-31	H-32	9.66 - 10.70	7.73 - 8.48	8.49 - 9.65	6.80 - 7.72
H-32	H-33	10.80 - 12.30	8.49 - 9.65	9.66 - 10.70	7.73 - 8.48
H-33	H-34	12.40 - 13.00	9.66 - 10.70	10.80 - 12.30	8.49 - 9.65
H-34	H-35	13.10 - 14.00	10.80 - 12.30	12.40 - 13.00	9.66 - 10.70

