



# **SERVICE MANUAL**

## **28BD30**

# **LAUNDRY DRYER**

**Steam-Gas-Electric**

• **Installation**

• **Operation**

• **Service**

• **Parts**

**W.M. Cissell Manufacturing Company**

Louisville, Kentucky U.S.A.

Trademark<sup>®</sup> Registered  
Marca<sup>®</sup> Registrada

Printed in U.S.A.

D0087

## WARRANTY

The W. M. Cissell Manufacturing Company, Inc. (Cissell) warrants all new equipment (and the original parts thereof) to be free from defects in material or workmanship for a period of one (1) year 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 one (1) year due to normal wear and tear, including, but not limited to, cloth goods, valve discs, hoses and iron cords, and with respect to all new repair or replacement parts for Cissell equipment for which the one (1) 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 trouble; 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 affects the reliability or detracts from its performance, or; which have had the identification plate, or serial number, altered, effaced, 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.

## CAUTION

DO NOT PUT INTO THIS DRYER FLAMMABLE ITEMS SUCH AS:

BABY BED MATTRESSES

THROW RUGS

UNDERGARMENTS (Brassiers, etc.)

AND OTHER ITEMS WHICH USE RUBBER AS A PADDING OR BACKING! RUBBER EASILY OXIDIZES CAUSING EXCESSIVE HEAT AND POSSIBLE FIRE. FLAMMABLE ITEMS SHOULD BE AIR DRIED.

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## GENERAL INFORMATION

The Cissell 28BD30 Double Motor Dryer has a rotating basket 28" diameter and 30" deep and a capacity of 30 pounds dryweight for a maximum moisture retention of 100%. When operator opens dryer door, the basket and exhaust fan stops.

You can expect fast drying from a Cissell 28BD30 Laundry Dryer. Hot, dry air is properly and effectively moved through basket and exhausted through a lint trap to atmosphere.

The Cissell 28BD30 comes equipped with an inclined self-cleaning lint screen. In this system, lint accumulates on the underside of the screen until a blanket approximately 1/4" thick is formed. This blanket of lint will fall from the screen to the bottom of the dryer cabinet, and should be removed daily, or as required, to prevent an over accumulation.

As an alternate, Cissell offers a large full width lint drawer. Lint is collected within the drawer on a large perforated metal area which permits full air flow while reducing the lint problem common to all clothes drying.

## CISSELL "THERM-O-COOL" DRYERS

Permanent press, durable press and other modern day fabrics require the care that your Cissell Therm-o-cool laundry Dryers now provide.

At the end of the drying cycle, determined by the coin meter or timer, a thermostatic control automatically takes over and continues the rotation of the fan and basket without heat until the garment load reaches a safe cool temperature. This function is performed at the end of each drying cycle and because it's controlled by the heat retained in the garments after the normal drying period, its time can extend from 30 seconds up to 5 minutes. The Therm-o-cool cycle is never too long or too short. Always the exact minimum time required to reduce the temperature of the garment load to a safe and cooling handling temperature.

## GAS HEATED

BASKET LOAD CAPACITY ..... 30 LBS. DRYWEIGHT

Electrical .....	115 or 230 V., 60 or 50 Cy., Single Phase 230 V., 60 or 50 Cy., 3 Phase
Motor Size .....	Basket, 1/3 H.P.; Fan 1/4 H.P.
Floor Space .....	68 1/2" High x 45 1/8" Deep x 28 3/4" Wide
Basket Size .....	28" Diameter x 30" Deep
Exhaust Duct .....	8" Diameter
Maximum Air Displacement.....	700 cfm
Recommended Operating Range .....	530-630 cfm
Approximate Drying Time .....	10 Pounds in 10 Minutes (For 70% moisture retention in load)
Net Weight .....	450 Lbs. (approx.)
Domestic Shipping Weight (carton) .....	510 Lbs. (approx.)
Export Shipping Weight (box) .....	840 Lbs. (approx.)
Cu. Ft. Export Crating .....	82.5
Export Shipping Dimensions .....	74" (L) x 35" (W) x 55" (H)
* B. T. U. Input (2 burners) .....	Approx. 120,000 per hr.

\* Input ratings as shown are for elevations up to 2,000 ft. For elevations above 2,000 ft., ratings should be reduced 4% for each 1,000 ft. above sea level.

## ELECTRICALLY HEATED

BASKET LOAD CAPACITY ..... 30 LBS. DRYWEIGHT

Electrical .....	230 V., 60 or 50 Cy., 1 or 3 Phase
Floor Space .....	68 1/2" High x 45 1/8" Deep x 28 3/4" Wide
Basket Size .....	28" Diameter x 30" Deep
Air Exhaust .....	8" Diameter
Motor Size .....	Basket, 1/3 H.P. ; Fan, 1/4 H.P.
Maximum Air Displacement .....	700 CFM
Recommended Operating Range .....	530-630 CFM
Heater Input .....	17 Kilowatts per hour 73.9 Amps total heater current; 1 Phase 42.73 Amps heater current; 3 Phase
Basket Door Opening .....	22 7/16" Diameter
Dry Weight Capacity.....	30 Lbs.
Drying Time (Indianhead, 12 Lbs. dry weight, 70% moisture retention)(approx.) ..	20 Minutes
Net Weight (approximately) .....	450 Lbs.
Domestic Shipping Weight (1 carton).....	510 Lbs (approx.)
Export Shipping Weight (Box) .....	840 Lbs (approx.)
Export Shipping Dimensions (Box) .....	74" Long x 35" Wide x 55" High
Cubic Feet Export (Box) .....	82.5

Electrical Wiring to Dryer must comply with local electrical code requirements. A separate circuit is required for the electrical heater.

## STEAM HEATED

BASKET LOAD CAPACITY ..... 30 LBS. DRYWEIGHT  
(For a Maximum Moisture Retention of 100%)

Electrical .....	110 or 220 V., 60 or 50 Cy., 1 Phase 220 V., 60 or 50 Cy., 3 Phase
Basket Motor.....	1/3 H.P.
Fan Motor .....	1/4 H.P.
Floor Space .....	68 1/2" High x 28 3/4" Wide x 45 1/8" Deep
Exhaust Duct .....	8" Diameter
Maximum Air Displacement .....	700 cfm
Recommended Operating Range .....	530-630 cfm
Net Weight (approx.) .....	500 Lbs.
Domestic Shipping Weight (carton)(approx.) ...	560 Lbs.
Export Shipping Weight (1 box)(approx.) .....	890 Lbs.
Export Shipping Dimensions.....	74" (L) x 35" (W) x 55" (H)
Export Crating (cu. ft.) .....	82.5 Cu. Ft.

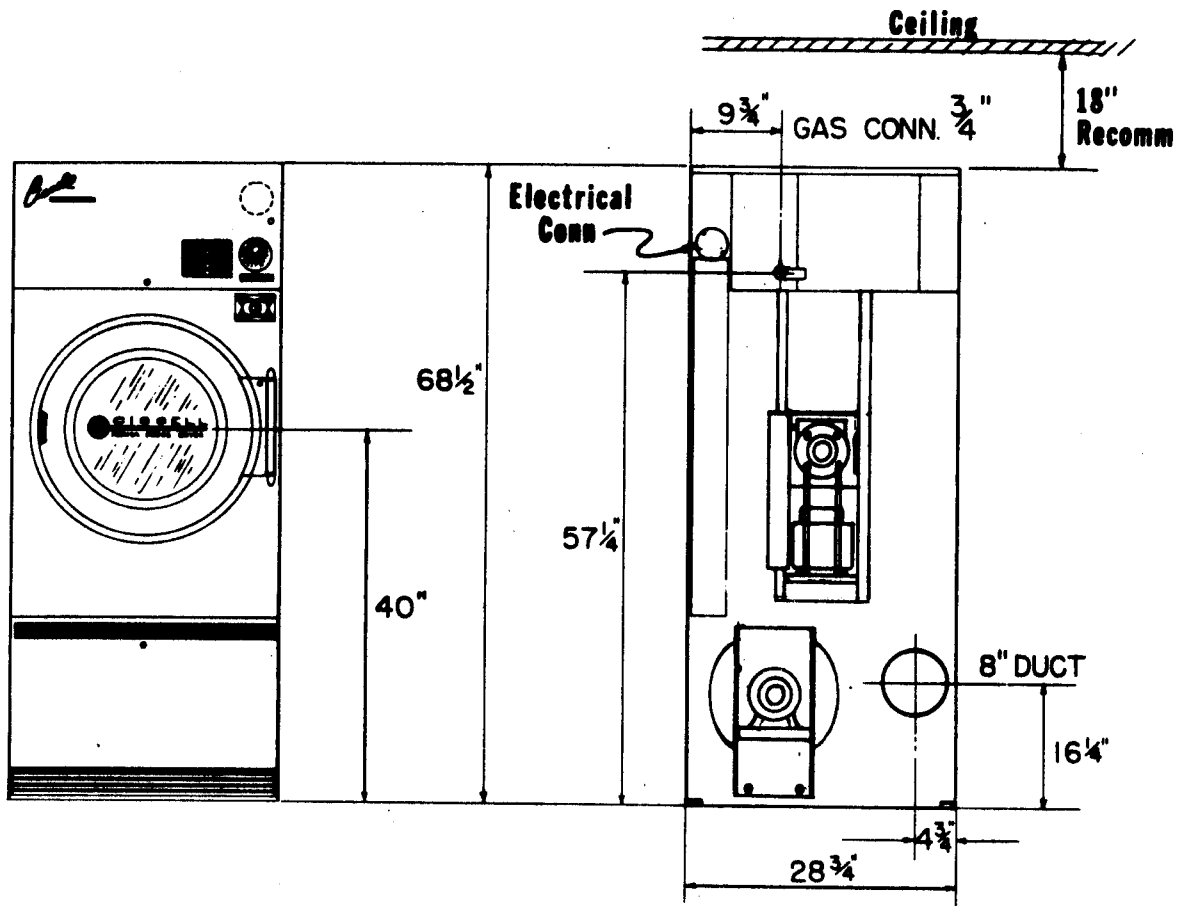
### LOW PRESSURE ONLY

Operating Steam Pressure .....	7 to 15 Pounds
Boiler Horsepower (with normal load) .....	2.6
Heat Capacity .....	9-Section Steam Heating Unit
Steam Consumption .....	72 pounds of condensate per hour
Steam Supply Line .....	1"
Steam Return Line .....	3/4"

### HIGH PRESSURE ONLY

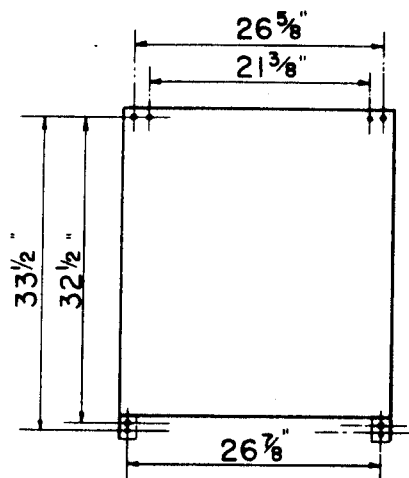
Operating Steam Pressure .....	125 Pounds Maximum
Boiler Horsepower (with normal load) .....	3.4
Heat Capacity .....	9-Section Steam Heating Unit
Steam Consumption .....	108 pounds of condensate per hour
Steam Supply Line .....	1"
Steam Return Line .....	3/4"

# GAS FIRED DRYER

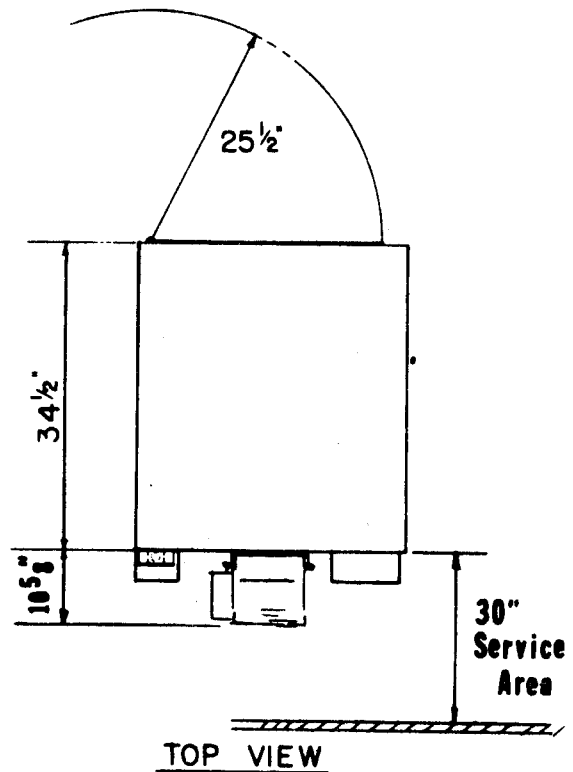


FRONT VIEW

REAR VIEW

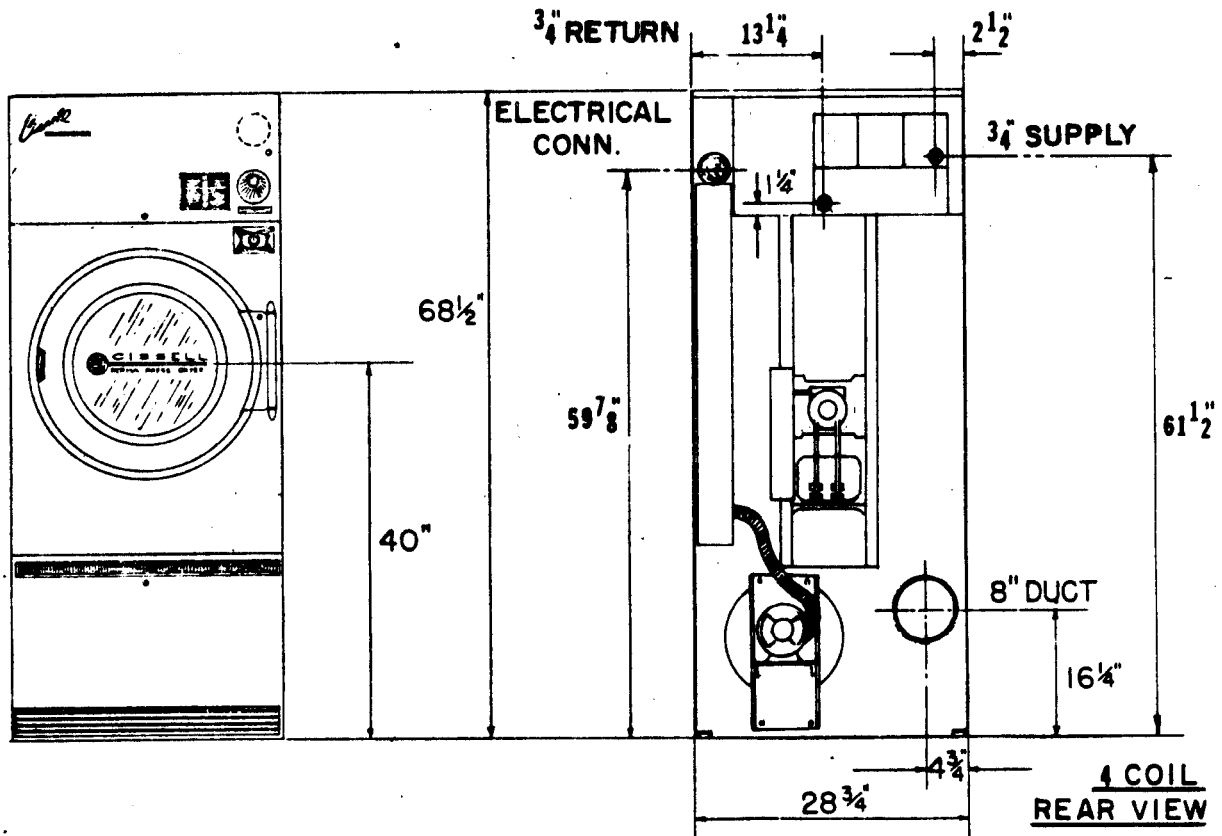


MOUNTING HOLES

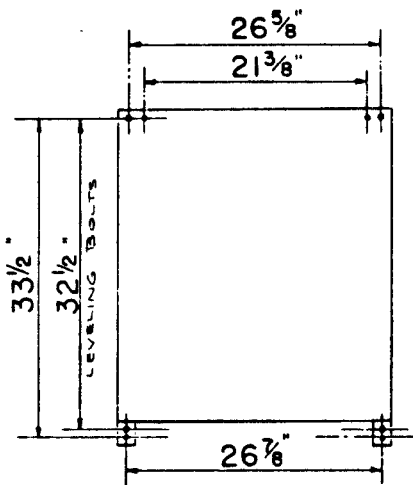


TOP VIEW

# **28BD30 Steam Dryer** **4 Coil & 9 Section**



**FRONT VIEW  
(TYPICAL)**

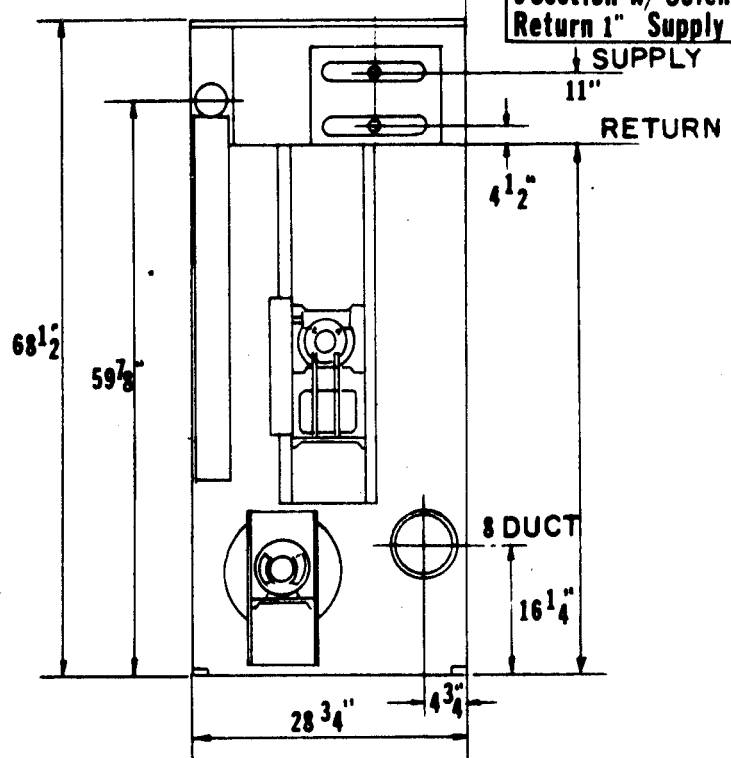


**MOUNTING  
HOLES  
(TYPICAL)**

**9 SECTION**

**ELECTRICAL CONN.**

9 Section w/o Solenoid  
 Return 1" Supply 1"  
 9 Section w/ Solenoid  
 Return 1" Supply 3/4"



## INSTALLATION

### ALL DRYERS

The construction of Cissell Cabinet 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 motor.

Level and anchor dryer into position. A properly leveled dryer will assure proper trap operation and steam flow. Open basket door, remove blocking between front panel and basket; remove all tape used to secure dryer parts during shipment: **IMPORTANT:** Read all tags carefully before attempting to install dryer.

Install all duct work as per instructions on Page 6 & 7.

Install piping as per instructions on Page 8.

Make all wiring connections as per instructions on Page 9.

**NOTE:** On single phase reversing, three phase reversing and three phase nonreversing drycleaning dryers, an auxiliary control box is required. This control box is nonexplosion proof and must be installed in a nonhazardous area. No auxiliary control box is required for the 36BD30 nonreversing single phase dryer.

### DUCTWORK INSTALLATION

Vent the 8 inch diameter exhaust, on rear of dryer, to atmosphere. Do not reduce duct size. If vent is vertical through roof, install two elbows on the discharge end forming a "U" looking down; if vent is horizontal through wall, install one elbow on the discharge end looking down, to prevent wind, rain, snow, sleet, etc., from entering duct and flowing down to dryer.

For multiple dryer installations, it is preferable to vent each dryer individually with a separate duct.

When conditions require the use of a single exhaust duct for several dryers, the piping from each dryer should enter the single duct at an angle of approximately 30°, and in the direction of the air flow. The cross sectional area of the single exhaust duct should equal the combined areas of the dryer ducts connected to it (see chart Page 7). Make all exhaust connections with the least amount of elbows to reduce air resistance to a minimum. Provide cleanout and inspection openings in the horizontal sections of the duct work.

On multiple installations employing a single exhaust duct, there should be no back draft to interfere with the normal free discharge of air from each dryer.

Before approving duct installation, place each dryer in operation; progressively open each dryer door; manually trip door switch, and see that air is drawn into the basket door opening as freely as it is when all other dryers are stopped.

Keep the exhaust ducts clean. Do not install wire mesh or screen in the discharge opening of the duct, as lint will build up and prevent proper discharge of air from dryers.



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 831 S. FIRST STREET • P. O. BOX 1143, LOUISVILLE, KY., U.S.A. 40201  
 Foreign Distributors: Address Correspondence Attention  
 Export Department • Cable Code "CISSELL"  
 Pacific Coast Office, 4823 W. Jefferson Blvd., Los Angeles

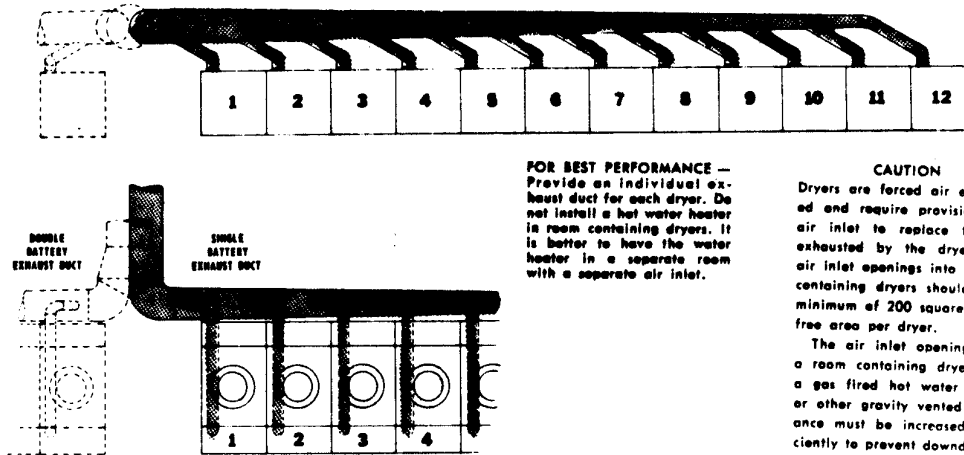
*Ask Your Distributor*

When ordering, specify part number and name.

**CISSELL®**  
**DUCT INSTALLATION**  
**28BS30 28BD30**  
**36BS30 36BD30**  
**DRYERS**

### EXHAUST DUCT INSTALLATION

NUMBER OF DRYERS IN SINGLE BATTERY—REFER TO TABLE FOR DUCT DIAMETER AT EACH DRYER OUTLET CONNECTION. FOR DIAMETER OF EXHAUST, REFER TO TABLE USING TOTAL NUMBER OF DRYERS CONNECTED THERETO. (SINGLE OR DOUBLE BATTERY.)



**FOR BEST PERFORMANCE —**  
 Provide an individual exhaust duct for each dryer. Do not install a hot water heater in room containing dryers. It is better to have the water heater in a separate room with a separate air inlet.

**CAUTION**  
 Dryers are forced air exhausted and require provisions for air inlet to replace the air exhausted by the dryer. The air inlet openings into a room containing dryers should be a minimum of 200 square inches free area per dryer.

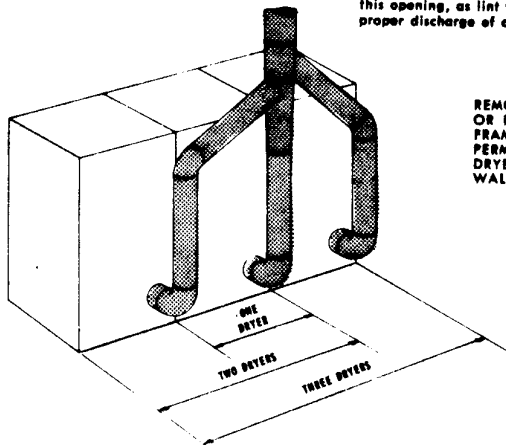
The air inlet openings into a room containing dryers and a gas fired hot water heater or other gravity vented appliance must be increased sufficiently to prevent downdraft in any of the vents when all dryers are in operation. Do not install gravity vented appliances between dryers and air inlet openings.

Consult your local building code requirements.

**NOTE:** Inside of duct shall be smooth. Do not use sheet metal screws to join sections.

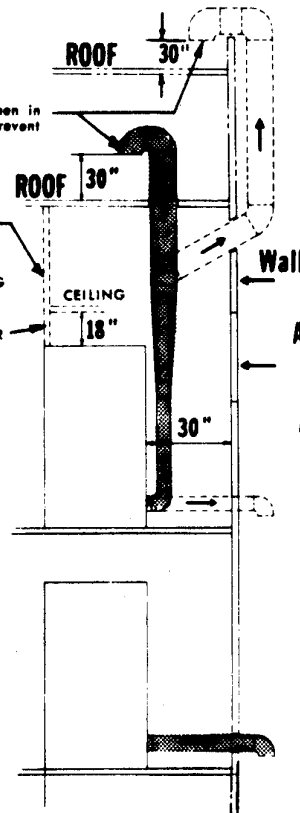
NO. OF DRYERS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
DUCT DIAMETER	8	12	14	16	18	20	22	23	24	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

**Note:** Do not install wire mesh or screen in this opening, as lint will build up and prevent proper discharge of air from dryers.



REMOVABLE STRIP OR PANEL IN FRAMING WALL TO PERMIT REMOVAL OF DRYER FROM FRAMING WALL

PARTITION OR BULKHEAD



**Air Inlet Must Be 4 To 6 Times The Combined Areas Of The Air Outlets**

# PIPING INSTALLATION

## INSTRUCTIONS

**IMPORTANT: INSTALL STEAM PIPING IN ACCORDANCE WITH ALL LOCAL REGULATIONS AND REQUIREMENTS**

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 riser 12" above each respective header as illustrated. 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 by-pass trap to drain condensate from the low point in the steam supply header to the return.
4. In both the steam supply and steam return line, it is recommended that each have a union and 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 (w/built-in strainer) and check valve.  
For successful operation of dryer, install trap 18" below coil and as near to dryer as possible. Inspect trap carefully for inlet and outlet markings and install according to trap manufacturers 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 headers at least 4 ft. beyond dryer. Install globe valve, union, check valve and by-pass trap at end of line. If gravity return 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.

## ELECTRICAL INSTALLATION

DRYERS MUST BE ELECTRICALLY GROUNDED by a separate #14 or larger wire from the grounding terminal within the service connection box to a cold water pipe; or through the grounded neutral of a 3-wire system properly grounded and connected to the grounding terminal. In all cases, the grounding method must comply with local electrical code requirements.

See wiring diagram furnished with dryer. Your Cissell dryer is completely wired at the factory and it is only necessary for the electrician to connect the power leads to the wire connectors within the service connection box on the rear of the dryer. Do not change wiring without consulting factory as you may void the factory warranty. Do not connect the dryer to any voltage or current other than that specified on the tags placed on the power leads of the dryer. Electrically heated dryers require one line circuit for the drive motor and controls, and a separate line circuit for the electrical heating unit.

---

## MAINTENANCE

### INSTRUCTIONS FOR LIGHTING BURNER

Unlock upper front cover; raise cover for access to gas controls.

1. Be sure manual shut-off valve (s) have been shut off for at least five minutes before proceeding.
2. Open Valve (s) in gas line.
3. Depress pilot safety button (Red). Light pilot, keep red button depressed for 30 seconds, then release. If pilot does not remain lighted -- repeat operation.
4. Operate dryer and see that pilot flame ignites burner.

If pilot flame fails, automatic gas valve will close within two minutes. Investigate cause of pilot failure. Correct and relight pilot.

Adjust air mixture to produce a good blue flame on burner by rotating the round disc on air mixer to the right or left.

## 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 to the atmosphere more quickly.
2. KEEP BASKET AND SWEEP SHEETS CLEAN: Clean periodically and clean as often as required. The basket and sweep sheets within the dryer are easily accessible for cleaning by removing the front panel of the dryer.
3. GEAR REDUCER: Maintain oil level in gear reducer 1/2 depth of oil cup. Use Cissell Transmission Oil. (See attached Cissell Gear Reducer sheet).
4. PULLEYS AND BELTS: Keep belts clean. Oil and dirt will shorten the useful life of a belt. Never allow a belt to run against the belt guard. Check belts periodically for alignment. Pulley shafts must be parallel and the grooves must be in alignment. 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 5/16" 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 operation under normal conditions. After five years, the bearings and housing should be cleaned thoroughly. Repack each bearing and the cavity back of the bearing one-third full with Ball Bearing grease.

6. Motors having wool packed SLEEVE BEARINGS are oiled at the factory for one years normal operation. After one years normal operation, add annually 1/2 teaspoon electric motor oil or S.A.E. #10 to each bearing. For 24 hours 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 principle cause of motor failure.

ADJUSTABLE LEVELING BOLTS: One at each corner, front and rear permits accurate alignment of dryer.

TO ADJUST: Block corner of dryer up off floor. Loosen hex nut. With wrench, turn bolt clockwise to raise dryer; counter-clockwise to lower. Rear bolts are on outside rear of dryer. Hex nuts for front bolts are inside lint trap.

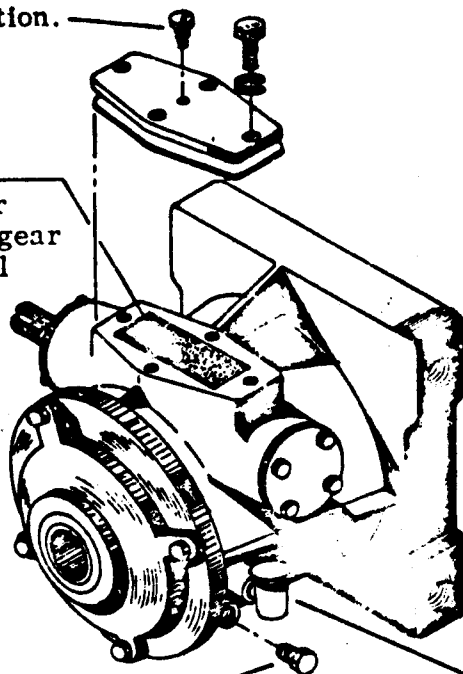
7. STEAM HEATING UNITS: Keep steam coils clean. Check periodically and clean as often as required. Remove lint and dirt accumulation from coil fins periodically as dirty lint laden coil fins decrease the efficiency of steam-heated dryer.

## VENT: IMPORTANT

Remove this screw before placing machine in operation.

### OIL FILL

Remove worm gear cover, pour oil in gear reducer to oil level (one-half depth of oil cup).



TU3465  
Transmission Oil

### OIL LEVEL CUP

Oil level one-half depth of cup. Do not overflow. Remove cork from oil level cup.

**BEFORE PLACING THE DRYER IN OPERATION,** Remove small screw from vent in oil fill atop each Gear Reducer case. Remove the cork from the oil level inspection cup. If the oil level is correct, the oil level inspection cup will be half filled with oil. If not, add oil. Oil may be added to the Gear Reducer by removing the worm gear cover in the top rear of the Gear Reducer case. Do not operate a Gear Reducer unless the drain plug is tight, and the vent screw removed.

If it is necessary to return a Gear Reducer to the factory, either replace the small screw in the vent and plug the oil level inspection cup with a cork, or drain all oil from the reducer by removing the drain plug located in the bottom rear of the Gear Reducer case.

**EACH GEAR REDUCER** is filled with 1 pint of Cissell TU-3465 transmission oil before leaving the factory. Change oil once every 6 months.

**THE LARGE TIMKEN BEARINGS,** which support the worm gear and basket load, must operate in a preloaded condition, that is the worm gear must not have end play. The Gear Reducer is assembled at the factory to provide a 5-8 inch lb. pre-load on these bearings.

**THE SMALL TIMKEN BEARINGS,** which carry the worm must operate in a pre-loaded condition, that is, the worm must not have end play. The Gear Reducer is assembled at the factory to provide a 2-4 inch lb. preload on these bearings.

*Ask Your Distributor*

## REMOVAL AND INSTALLATION of SEALS on GEAR REDUCER OF CISSELL<sup>®</sup> DRYERS

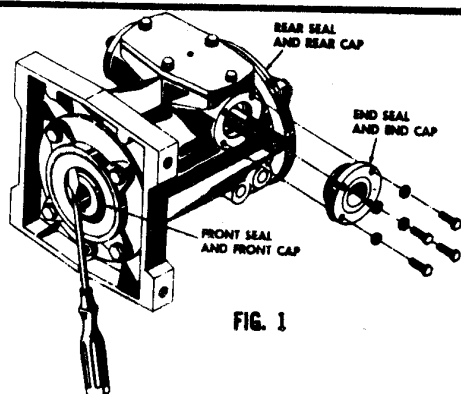


FIG. 1

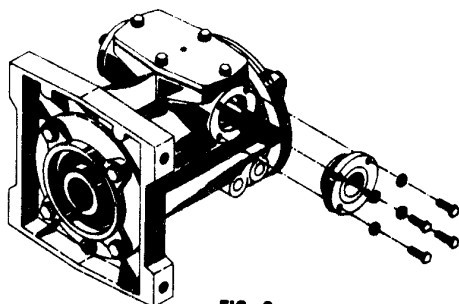


FIG. 2



FIG. 3

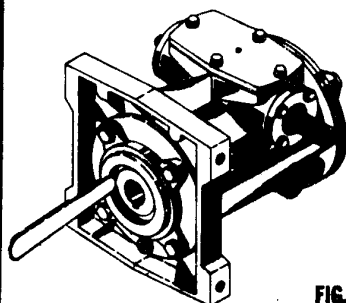


FIG. 4

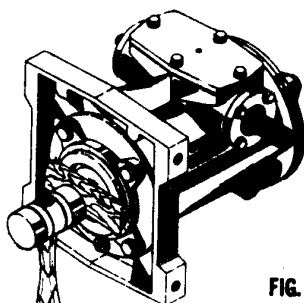


FIG. 5

### CAUTION

Drain oil before removing seals; replace with NEW oil after installing new seals (See Cissell Gear Reducer Sheet).

Remove Gear Reducer from rear of dryer before removing seals.

### TO REMOVE EXISTING FRONT AND REAR SEALS from front and rear caps on Gear Reducer (Fig. 1):

Slip end of screwdriver under seal (front seal illustrated); using end of Gear Shaft as a fulcrum, force seal out. Repeat operation at several different places until seals are removed from gear shaft.

### TO REMOVE EXISTING END SEAL and END CAP from Gear Reducer (Fig. 1):

Remove four cap screws and slip end cap and seal from worm gear. Tap seal out of cap from inside.

Clean inside of front, rear, and end caps. Spread permatrix evenly over area to receive seal. Clean outside end of large and small gear shafts. Spread vasoline evenly over area to receive seal, (Fig. 2).

Spread permatrix evenly over outside rim area, (Fig. 3) of seal. Spread vasoline evenly over inside rim area of seal.

### TO INSTALL NEW FRONT AND REAR SEALS:

Hold front (and rear) seal tightly in place over gear shaft with rubber seal in. Run edge of thin, dull instrument (such as wooden spatula, illustrated against front seal, Fig. 4) carefully around rubber wiping edge of seal and chamfer end of gear shaft so that seal is evenly installed all around gear shaft. DO NOT INJURE RUBBER WIPING EDGE.

### TO INSTALL NEW END SEAL:

Slip seal in end cap. Hold cap and seal tightly in place over small shaft with rubber seal in. Run edge of wooden spatula carefully around rubber wiping edge of end seal and chamfer end of small shaft so that seal is evenly installed all around edge of shaft. DO NOT INJURE RUBBER WIPING EDGE.

### AFTER SEALS ARE EVENLY INSTALLED ALL AROUND EDGES OF SHAFTS:

Place block of wood over front and rear seals and tap all around with a plastic faced mallet, (Fig. 5) until seal is flush into recess of front (or rear) cap.

Slip end seal and cap into position and tighten four bolts; then with a block of wood over end seal, gently tap with plastic faced mallet, until seal is flush into recess of end cap.

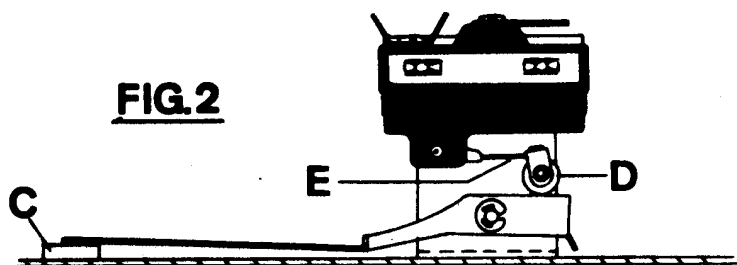
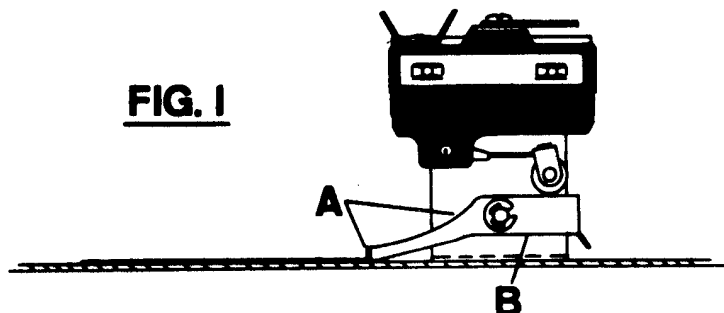
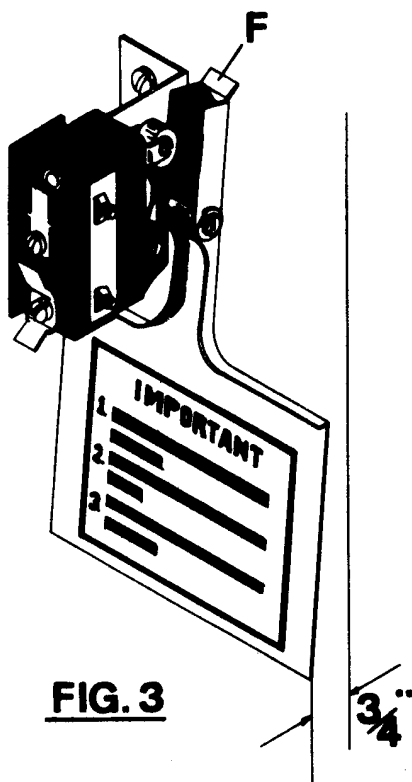
### REINSTALL GEAR REDUCER ON REAR OF DRYER

### IMPORTANT

While the sealing element or packing ring in a seal is not fragile, care must be taken to prevent damage to the wiping edge during mounting. Do not apply pressure to, nor hammer directly on, the sealing ring or spring; make sure that all mounting tools contact only the metal case of the seal.

## AIR SWITCH ADJUSTMENT

1. Shut off current; disconnect leads and remove air switch.
2. Lay air switch assembly on flat surface and stand up on small end of switch mounting bracket. Adjust air blade by bending at "A" (Fig. 1) so that air blade lays flat and surface "B" is parallel to the flat surface.
3. Place  $\frac{3}{16}$ " x  $\frac{5}{8}$ " spacer bar or equivalent "C" (Fig. 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  $\frac{3}{4}$ " (Fig. 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.

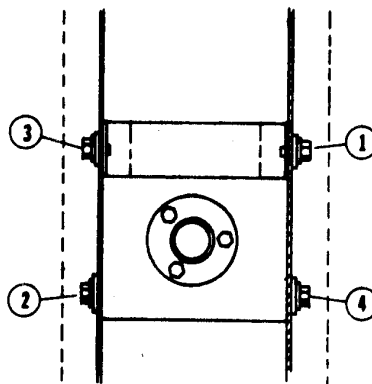
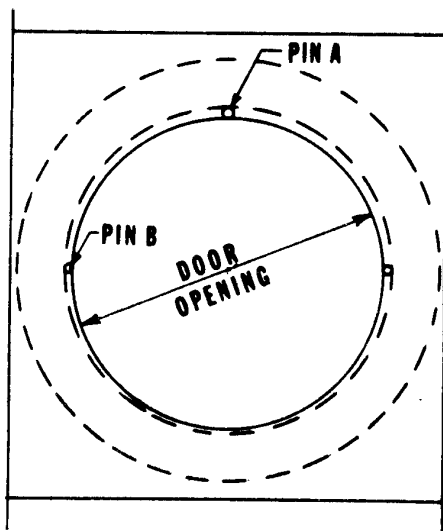
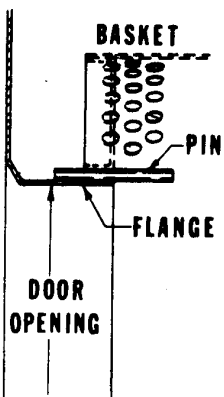


## INSTRUCTIONS FOR ALIGNING BASKETS ON CISSELL DRYERS

1. Loosen four bearing housing mounting bolts (numbers 1, 2, 3 and 4) on rear of dryer, Fig. 3.
2. Place the "A" & "B" diameter pins (see chart for size) inside the drying compartment between the rim of the basket opening and the rim of the door opening in the positions shown in Fig. 1 & Fig. 2.
3. Push the basket to the rear or pull to the front, whichever is required to make the basket approximately flush with the door opening flange, plus or minus 1/8".
4. With the pins in position, retighten bearing housing mounting bolts in the numerical order indicated in Fig. 3, then remove pins.
5. Check the space between basket and door opening at "B" pin position (Fig. 2). If the gap is not approximately the same on both sides, repeat steps 1, 2, 3 and 4.

NOTE: USE SHORT SECTIONS OF ROUND STEEL ROD FOR PINS OR DRILL BITS MAY BE USED IN PLACE OF ROUND ROD.

DRYER	PIN DIA. A	PIN DIA. B
28 BS 30	$\frac{7}{16}$ "	$\frac{5}{16}$ "
28 BD 30	$\frac{3}{8}$ "	
36 BS 30	$\frac{9}{16}$ "	$\frac{5}{16}$ "
36 BD 30	$\frac{7}{16}$ "	



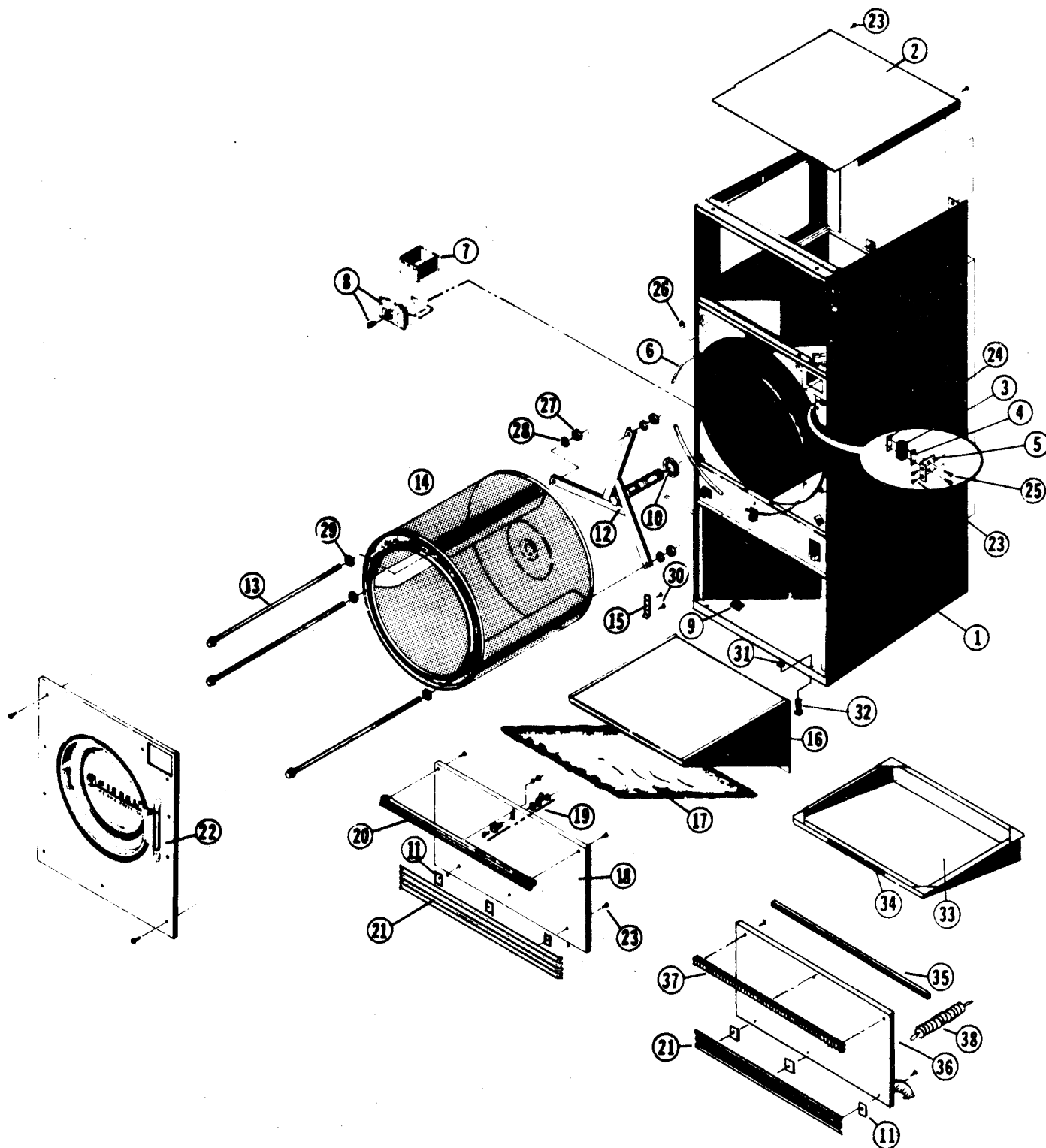


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**CISSELL®**  
**DRYER**  
 28BS30 (Compact) 28BD30  
 Front View  
 Parts



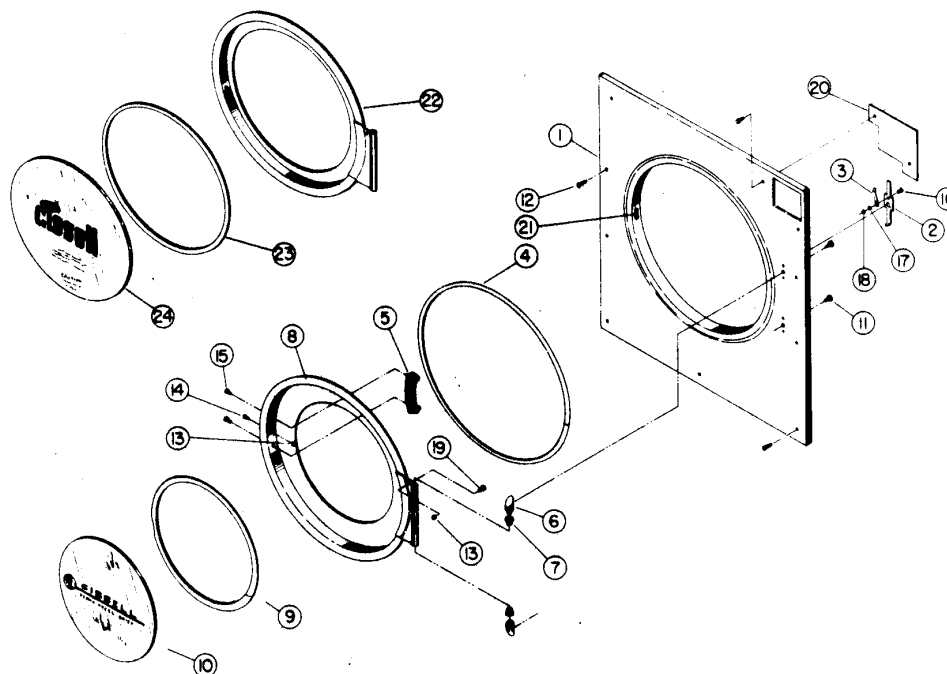
<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	
1.	TU5208	Jacket Welded Assembly	
2.	TU2620	Solid Top (Gas Dryer)	
	TU6129	Solid Top (Elec. Heated Dryer)	
3.	TU1979	Door Switch	
4.	TU1770	Insulator	
5.	TU2373	Door Switch Bracket	
6.	TU2483	Sweep Sheet Gaskets	
7.	CM35	Coin Box	
8.	CM61	Coin Vault with Lock & Key	
9.	TU2144	Serial Number Plate	
10.	TU108	Felt Seal	
11.	TU2710	Trim Holder	
12.	TU5121	Spider Welded Assembly	
13.	TU2313	Tie Rod	
	TU6162	Basket Assembly consists of: Ref. No's. 10, 11, 12, 13, 14, 27, 28 & 29.	
14.	TU2083	Basket Weldment	
15.	TU3205	Lock Plate	
16.	TU6439	Lint Screen Housing	
17.	TU5261	Self-Cleaning Lint Screen	
18.	TU5277	Lint Drawer Door	
19.	TUB1867	Lock & Key (JWC-2)	
20.	TU5222	Lint Door Handle w/Hardware	
21.	TU2384	Bottom Trim	
22.	TU5414 / TU7175	See Page 16	
***23.	M263	#8-3/8" Sheet Metal Screw	
***24.	TU1771	#6 Tinnerman Twin Nut	
***25.	TU3219	#6 x 1" Sheet Metal Screw	
***26.	TU2877	#10 Speed Nut	
***27.	TU2882	1/2"-20 Hex Head Nut	
***28.	TU2831	1/2" Split Lock Washer	
***29.	TU2883	1/2" Cut Washer	
30.	TU1978	#14 x 3/4" Lg. Sheet Metal Screw	
**31.	TU4937	3/8"-16 Jam Nut	
**32.	TU3211	3/8"-16 x 2 1/2" Leveling Bolt	
Optional — {	33.	TU2109	Lint Drawer
	34.	TU1893	Lint Drawer Name Tag
	35.	TU2853	Lint Drawer Seal
	36.	TU2866	Lint Drawer Door
	37.	TU2401	Lint Door Handle
	38.	CB19	Extension Spring

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\*\*\* Sold Only In Multiples Of 12

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**CISSELL  
 28 B30 DRYER  
 FRONT PANELS  
 DOOR ASS'Y.**



**ALL HARDWARE SOLD ONLY IN PACKAGES OF 6**

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
1	TU5420	Front Panel	13	TU4840	#10-32 Hex Crown Nut
2	TU2194	Door Switch Actuator	14	TU3163	Catch Pin
3	TU2105	Door Switch Spring	15	TU3215	#10-32 x 3/8" Taptite Screw
4	TU2090	Basket Door Seal	16	M262	#8-32 x 3/8" Truss Head Screw
5	TU2874	Basket Door Handle	17	FB187	#8 Split Lock Washer
6	TU2236	Hinge Posts (2 req'd.)	18	TU3266	#8-32 Hex Head Nut
7	PIF172	Delrin Bearing (2 req'd)	19	TU4839	#10-32 x 3/8" Machine Screw
8	TU3216	Basket Door Weldment	20	TU6336	Cover Plate (used w/o coin meter & box)
9	TU1692	Rubber Gasket	21	TU2876	Door Catch
10	TU5110	Door Glass	22	TU7171	Basket Door Weldment
11	TU2836	5/16"-18x1/2" Hex Head Cap Screw	23	TU7169	Rubber Gasket
12	TU2878	#10 x 5/8" S. M. S.	24	TU7166	Door Glass
	TU4832	Door Ass'y consists of Ref. No's. 4, 5, 6, 7, 8, 9, 10, 13, 14, 15, 19		TU7172	Door Assembly, consists of Ref. No's. 4, 5, 6, 7, 13, 14, 15, 19, 22, 23, 24
				TU4827	Actuator Assembly, consists of Ref. No's. 2, 3, 16, 17, 18

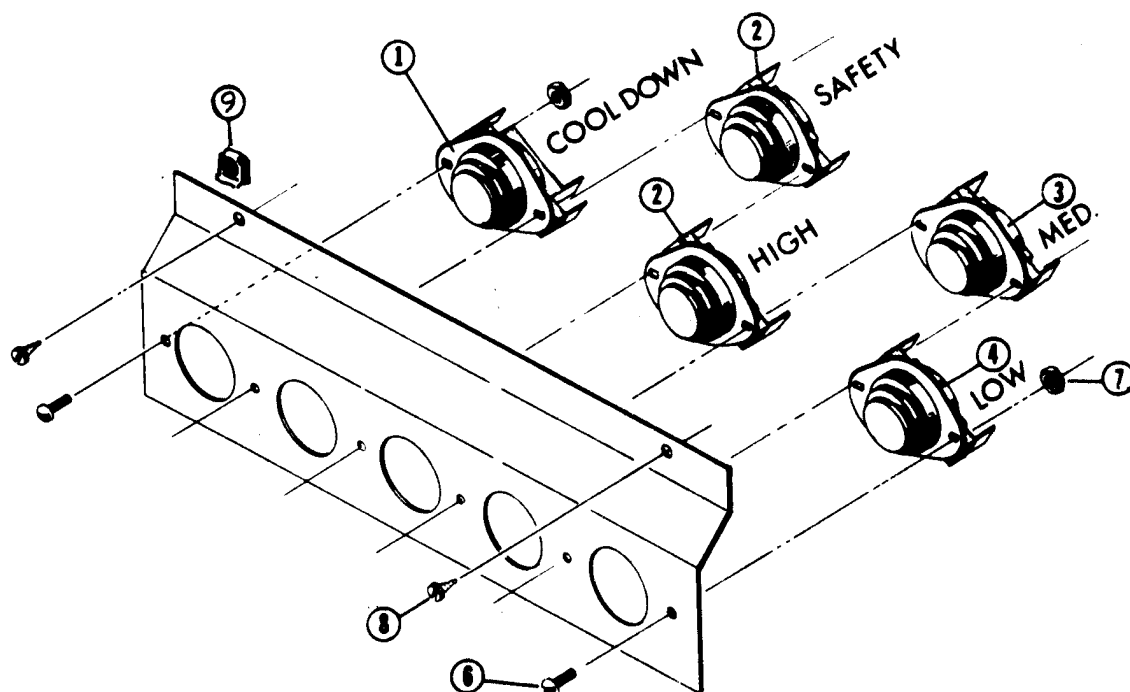
TU5414      PANEL ASSEMBLY WITH SMALL DOOR  
 TU7175      PANEL ASSEMBLY WITH LARGE DOOR

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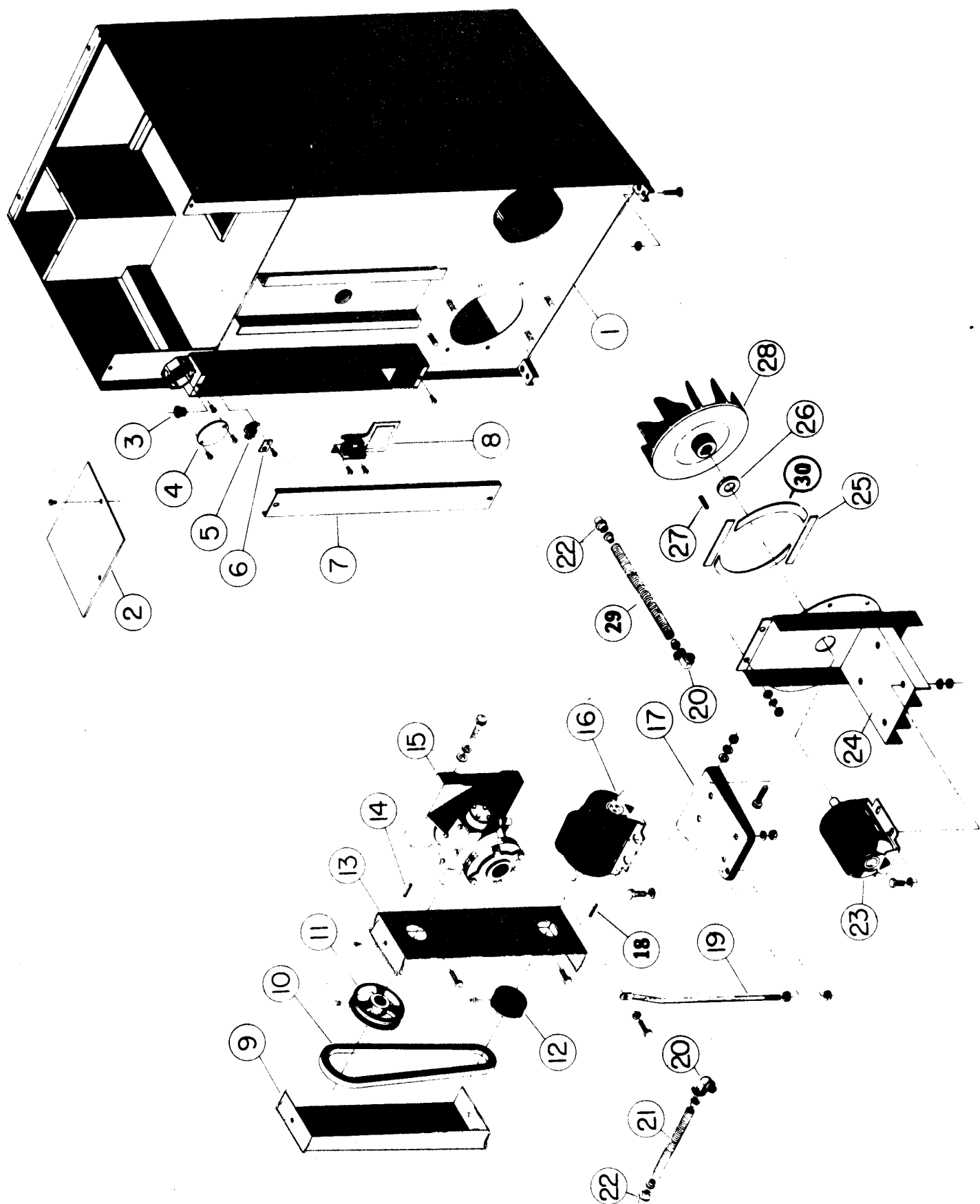
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**DRYERS**  
**28BS30 (Compact) 28BD30**  
**Thermostats**  
**TU5408**



### TU5408 THERMOSTAT AND BRACKET ASSEMBLY

Consists of Ref. No. 1 - 9

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
1	TU2045	Thermostat
2	TU3240	185° Thermostat
3	TU5149	165° Thermostat
4	TU5150	150° Thermostat
5	TU5143	Mounting Bracket
***6	TU3624	#6-32 x 1/4" Round Head Machine Screw (6 req'd.)
***7	TU3400	#6-32 Hex Nut (6 req'd.)
***8	M263	#8 x 3/8" S. M. S.
***9	TU6067	#8 Tinnerman Nut (2 req'd.)
*** SOLD ONLY IN MULTIPLES OF 12		



1.	TU 5208	Jacket Weldment
2.	TU 5730	Mech. Box Cover
3.	TU 2372	Snap Bushing
4.	TU 2335	Electrical Box Cover
5.	M 155	Wire Harness Clamp
6.	TU 2726	Strain Relief Plate
7.	<del>TU 5890</del>	Control Box Cover
8.	TU 2423	See Page 20
9.	TU 3857	Belt Guard Cover
10.	TU 2317	V-Belt, 4L380, 60 Cycle
	TU 6190	V-Belt, 4L390, 50 Cycle
11.	TU 2211	Gear Sheave, AK46 5/8
12.	TU 1952	Motor Sheave, AK 39 5/8", 60 Cycle
	TU 2211	Motor Sheave, AK 46 5/8", 50 Cycle
13.	TU 5254	Belt Guard Mount
14.	TU 5240	Key
15.	TU 1832	Gear Reducer
16.	MTR 14	Basket Motor, 60 Cycle, 115V
	MTR 17	Basket Motor, 50 Cycle, 220V
17.	TU 33	Motor Drive Bracket
18.	TU 5241	Key
19.	TU 34	Belt Adjusting Rod
20.	TU 4791	1/2" Right Angle Connector
21.	50-4641-292	1/2" Greenfield Cable (specify 15")
22.	TU 4790	1/2" Straight Connector
23.	MTR 5	Fan Motor 115V-60 cy, MTR136 Fan Mtr 220V-50 cy
24.	TU 2102	Fan Motor Mount Weldment
25.	TU 2474	Top & Bottom Gaskets
26.	TU 2476	Felt Seal
27.	TU 5241	Key, 7/8" Long
28.	TU 3879	Fan, 60 Cycle
	TU 5253	Fan, 50 Cycle
29.	50-4641-292	1/2" Greenfield Cable (Specify 21")
30.	TU2474	Side Gaskets

NOTE: For motors not listed above, specify motor number, voltage, cycle and horse power. Also specify fan motor or basket motor.

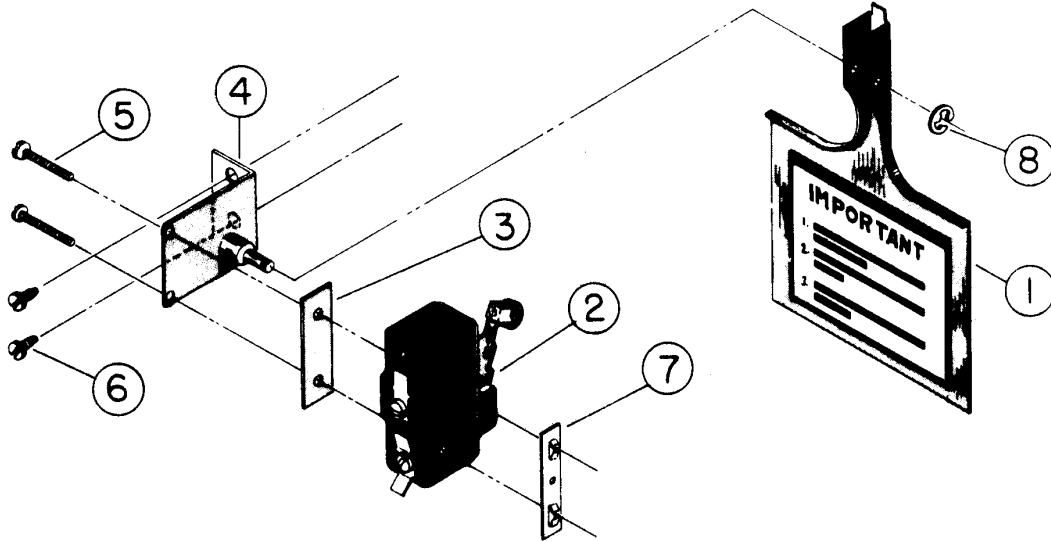
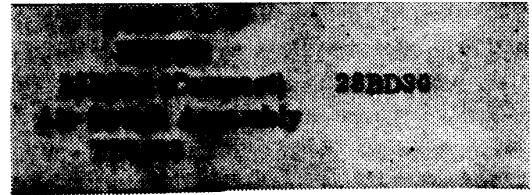
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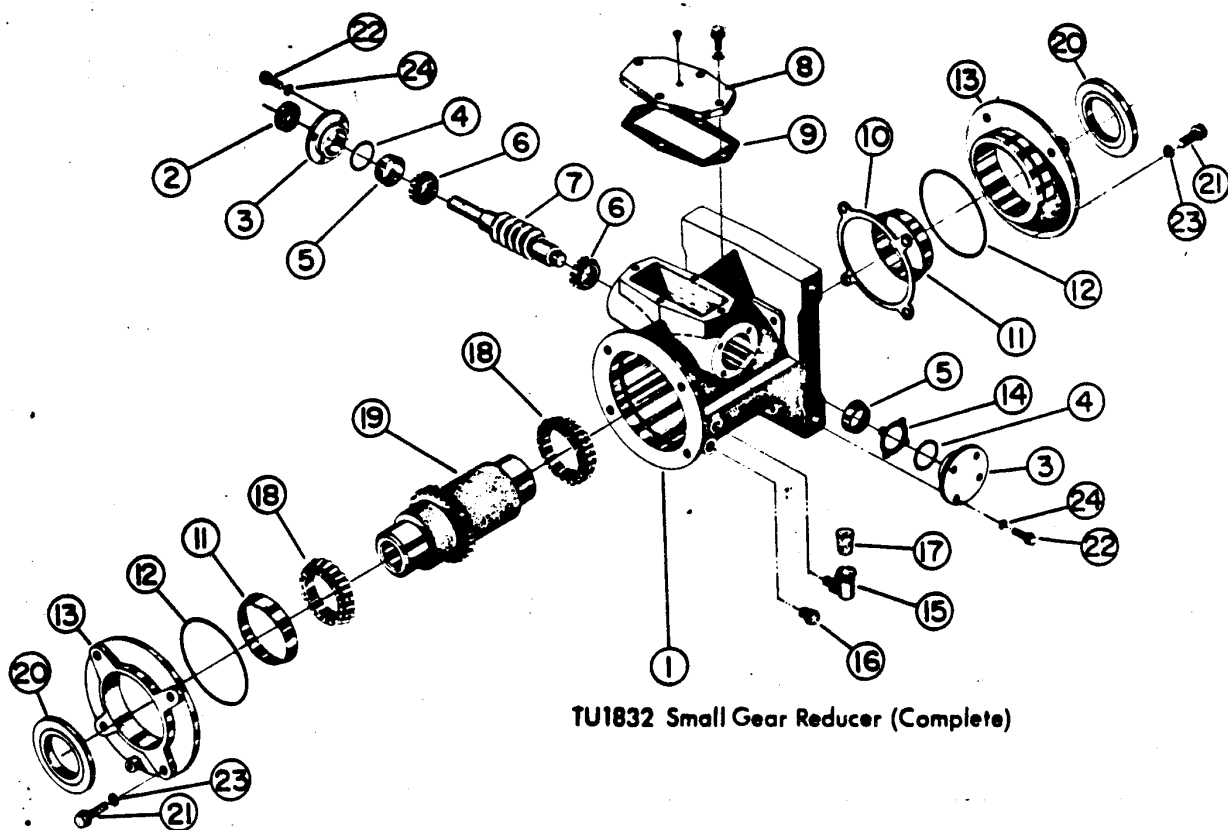
When ordering, specify part number and name.



<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
1	TU2463	Actuator Arm
2	TU1981	Air Switch
3	TU1770	Insulator
4	TU2462	Air Switch Bracket
***5	TU3219	#6 x 1" S. M. S.
***6	M263	#8 x 3/8" S. M. S.
***7	TU1771	#6 Tinnerman Twin Nut
***8	F888	"E" Ring

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For Adjustment of Air Switch See Page 12



TU1832 Small Gear Reducer (Complete)

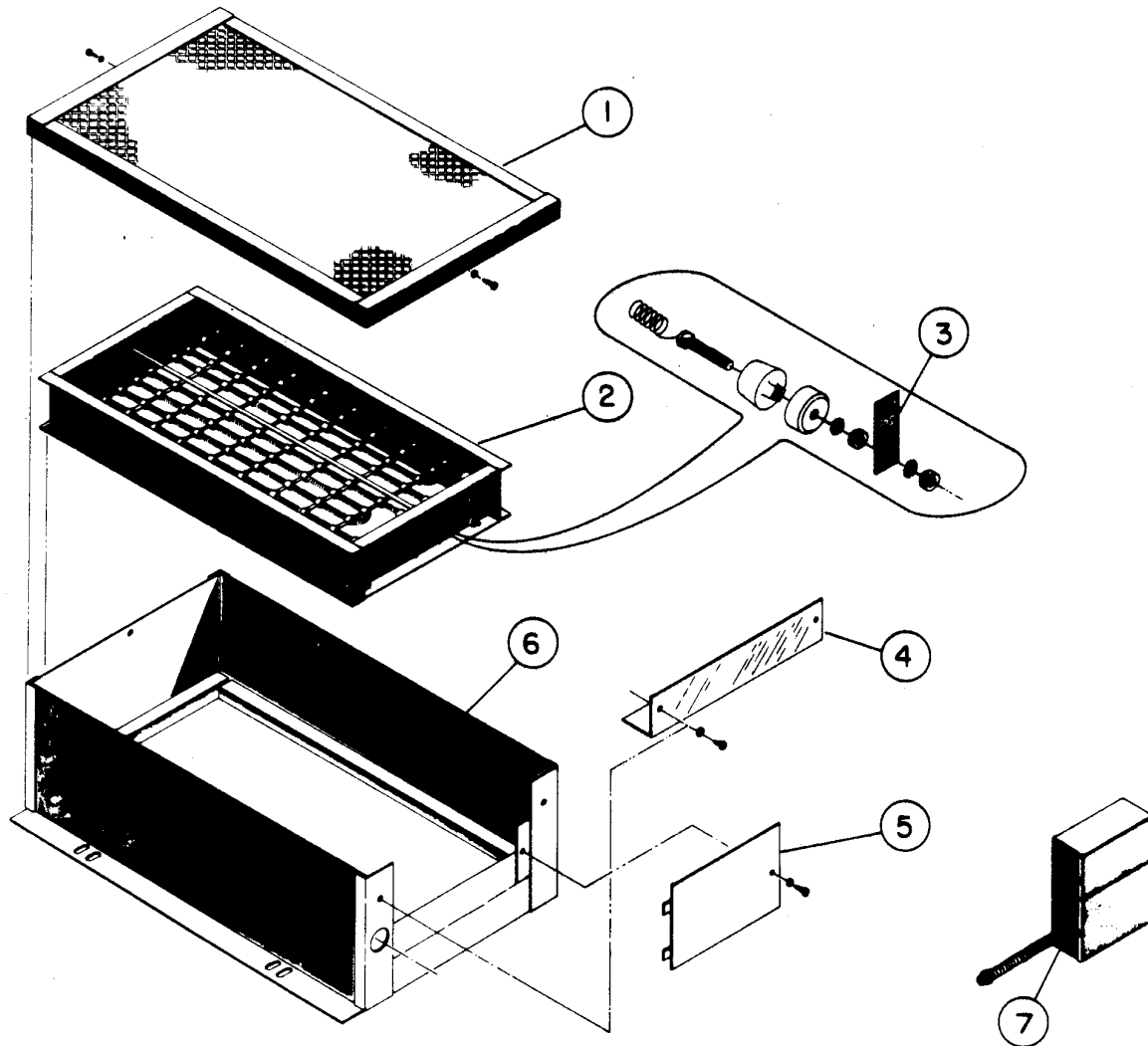
Ref. No.	Part No.	Description
1.	TU27	Housing
2.	TU86	Small Klosure
3.	TU25	Small Open End Cap
4.	TU88	Small 'O' Ring
5.	TU91	Small Bearing Cup
6.	TU90	Small Bearing Cone
7.	TU23	Worm
8.	TU1795	Worm Gear Cover
9.	TU1796	Worm Gear Cover Gasket
10.	TU1828	Large Shims (Set of 4) .005 & .007 2 Of Each
11.	TU93	Large Bearing Cup
12.	TU1830	Large 'O' Ring
13.	TU26	Large End Cap.
14.	TU21	Small Shims (Set of 4)
15.	TU70	Oil Cup
16.	X157	1/4" Pipe Plug
17.	TU3199	#10 Cork
18.	TU92	Large Bearing Cone
19.	TU22	Worm Gear
20.	TU2166	Oil Seal Field Replacement
21.	TU2623	Cap Screw 3/8"-16x1-1/2"
22.	TU2839	Cap Screw 1/4"-20x7/8"
23.	TU3243	3/8" Internal Tooth Lockwasher
24.	RC349	1/4" Internal Tooth Lockwasher



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 28B30 LAUNDRY DRYER  
 ELECTRIC HEATING UNIT**



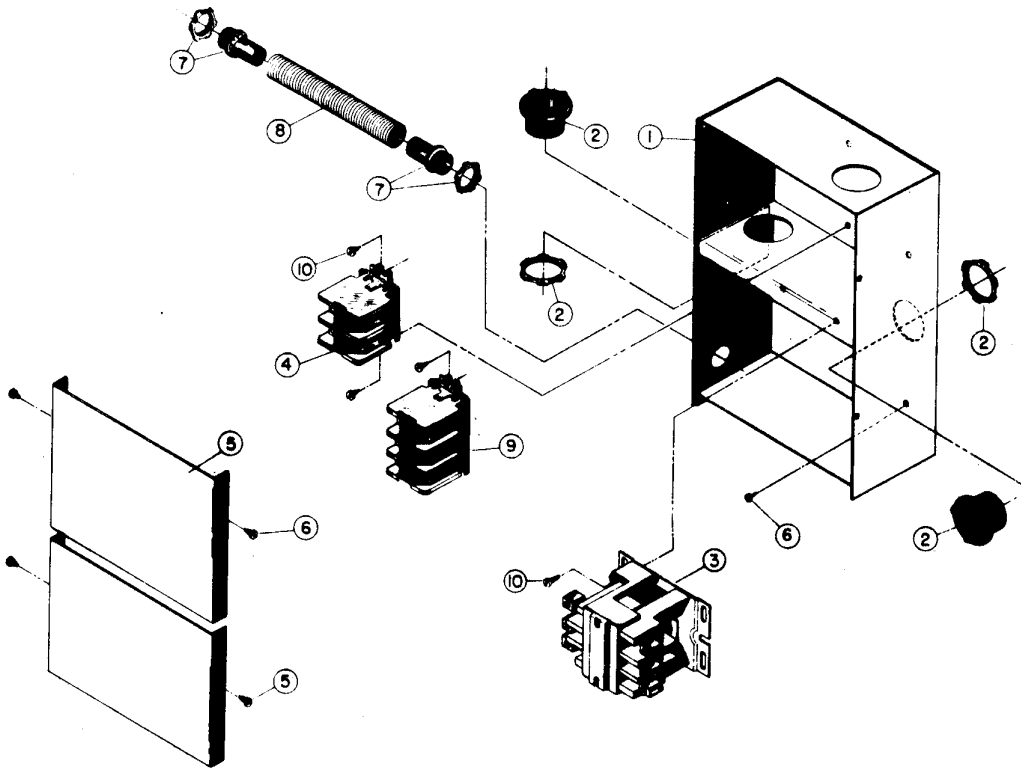
TU6967	21 K.W. ELECTRIC HEATING BONNET COMPLETE 230/460 V.
TU6974	21 K.W. ELECTRIC HEATING BONNET COMPLETE 208/415 V.
TU6975	21 K.W. ELECTRIC HEATING BONNET COMPLETE 380V.

Ref. No.	Part No.	Description
1.	TU3104	Air Inlet Cover
2.	TU6780	3 Bank Heating Coil 21 K.W. 230/460 V.
	TU6968	3 Bank Heating Coil 21 K.W. 208/415 V.
	TU6969	3 Bank Heating Coil 21 K.W. 380 V.
3.	TU3767	Contact Strap
	TU3768	Contact Strap
4.	TU3102	Top Back Retainer
5.	TU3101	Rear Cover Plate
6.	TU3103	Electric Furnace Housing
7.		See Page 22 A

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 LAUNDRY DRYER  
 TERMINAL BOX ASS'Y.**



TU7011

TERMINAL BOX COMPLETE (Single Phase 21 K. W.)

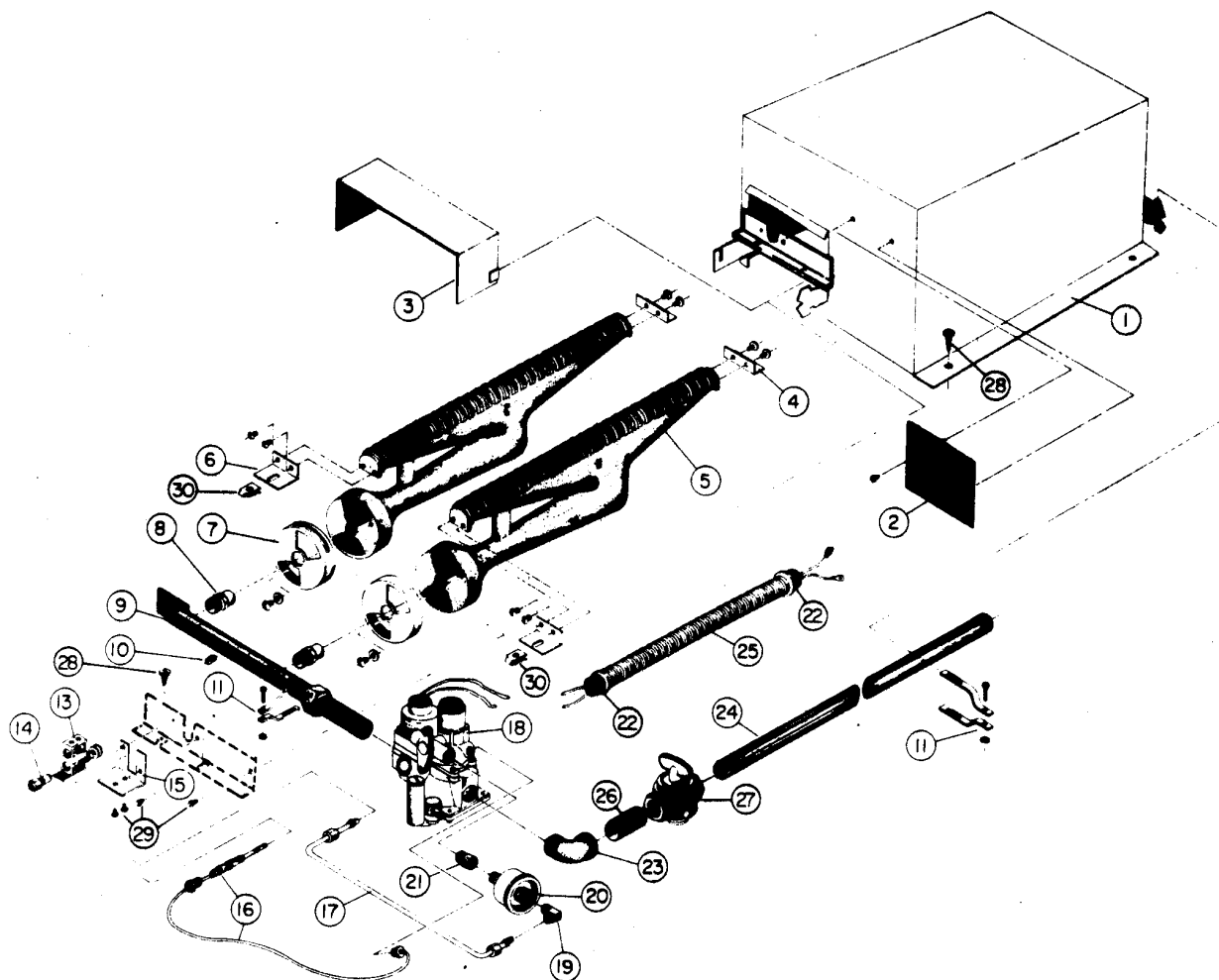
TU7012

TERMINAL BOX COMPLETE (Three Phase 21 K. W.)

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
1.	TU5878	Box Weldment
2.	TU5880	Bushing w/Lock Nut (2 Req'd)
3.	TU6781	Relay 220V. 21 K. W.
4.	TU5881	Terminal Block (Single Phase)
5.	TU5455	COVER PLATES
6.	TU3418	#8-32 x 7/16" Self-Trapping Scr.
7.	TU5002	1/2" Straight Connector (2 Req'd)
8.	50-4641-292	1/2" Cable (8" 36B30) (3 3/8" 28B30)
9.	TU6327	Terminal Block (Three Phase)
10.	M263	#8 x 38" S. M. S.

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**CISSELL®**  
**GAS FIRED UNIT**  
**28BS30, 28BD30, 36BS30 & 36BD30**  
**LAUNDRY DRYER**



**TU2227 GAS-FIRED HEATING UNIT**

Ref. Part No.	Part No.	Description	
1	TU6483	Gas Fired Heating Unit	18 TU157 Thermocouple Lead 18" (87D-18)
2	TU2393	Nameplate	17 TU5567 Gas Line Assembly 16"
3	TU2666	Pilot Shield	18 See Basotrol Valve Sheet
4	TU4687	Rear Bracket W/Mtg. Hardware	19 TU2722 1/8" x 1/4" Compression Ell
5	TU1802	Burner (All Gases)	20 TU2723 Gum Filter
6	TU4688	Front Bracket W/Mtg. Hardware	21 TU4689 Brass Adapter
7	TU4686	Air Shutter	22 F875 Straight Connector
8	TU2169	Gas Orifice (Specify Size)	23 TU4593 1/2" Street Elbow
9	TU6322	Gas Manifold, Natural, Mixed, Propane & Butane	24 TU2724 1/2" x 25" Pipe
10	TU2224	1/8" Plug for Gas Manifold Test Hole	25 TU2425 3/8" Greenfield Cable W/Connectors (12" Long)
11	TU2226	2 Piece Mounting Brackets	26 TU2714 1/2" Close Nipple
13	TU3800	Pilot Burner (G-21)	27 TU8321 Valve 1/2" x 1/2" Gas Cock
14	TU145	Pilot Orifice (Specify Size)	28 TU3209 #14x5/8" S. M. S.
15	TU3799	Pilot Support Bracket	***29 M263 #8x3/8" S. M. S.
			30 LB74 #14 Tinnerman Nut

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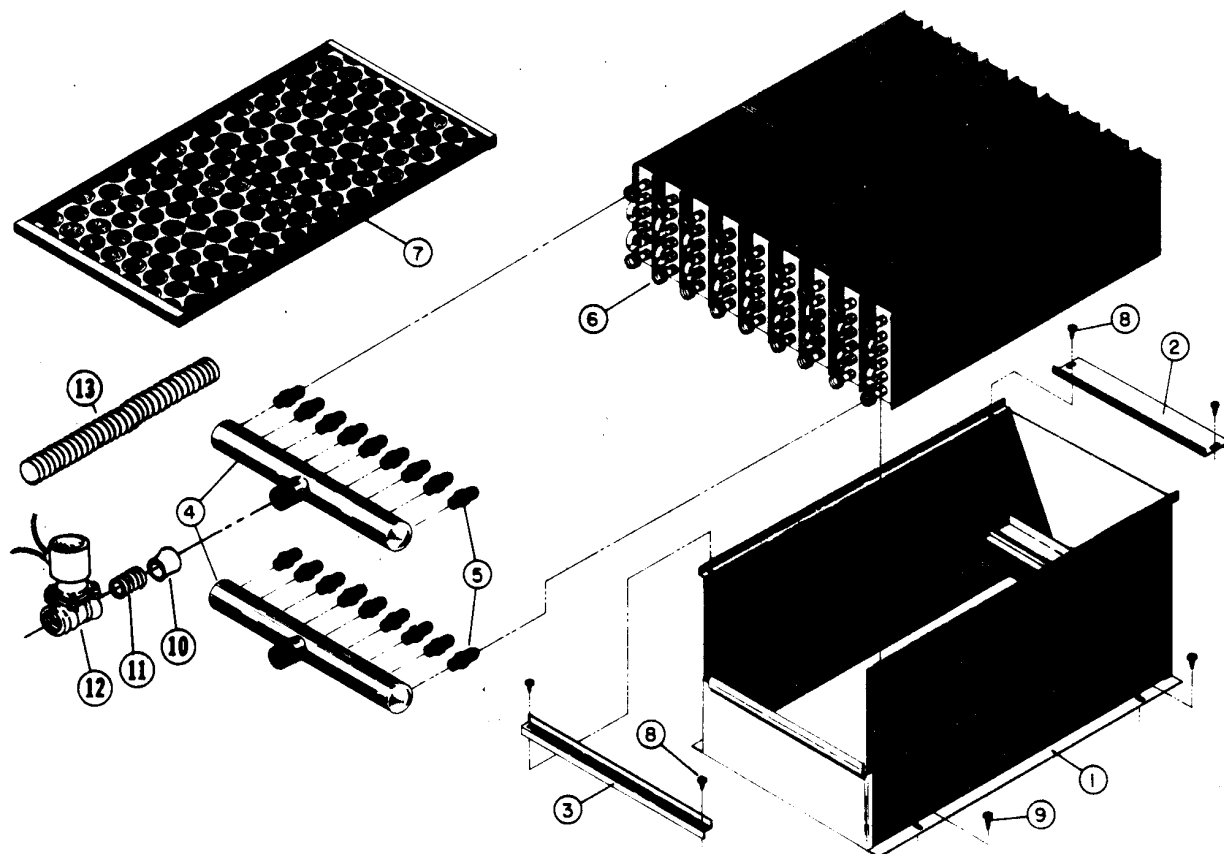
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**DRYER**

**9 SECTION STEAM COIL ASSY  
 PARTS**



**NINE SECTION STEAM BONNET ASSEMBLY**

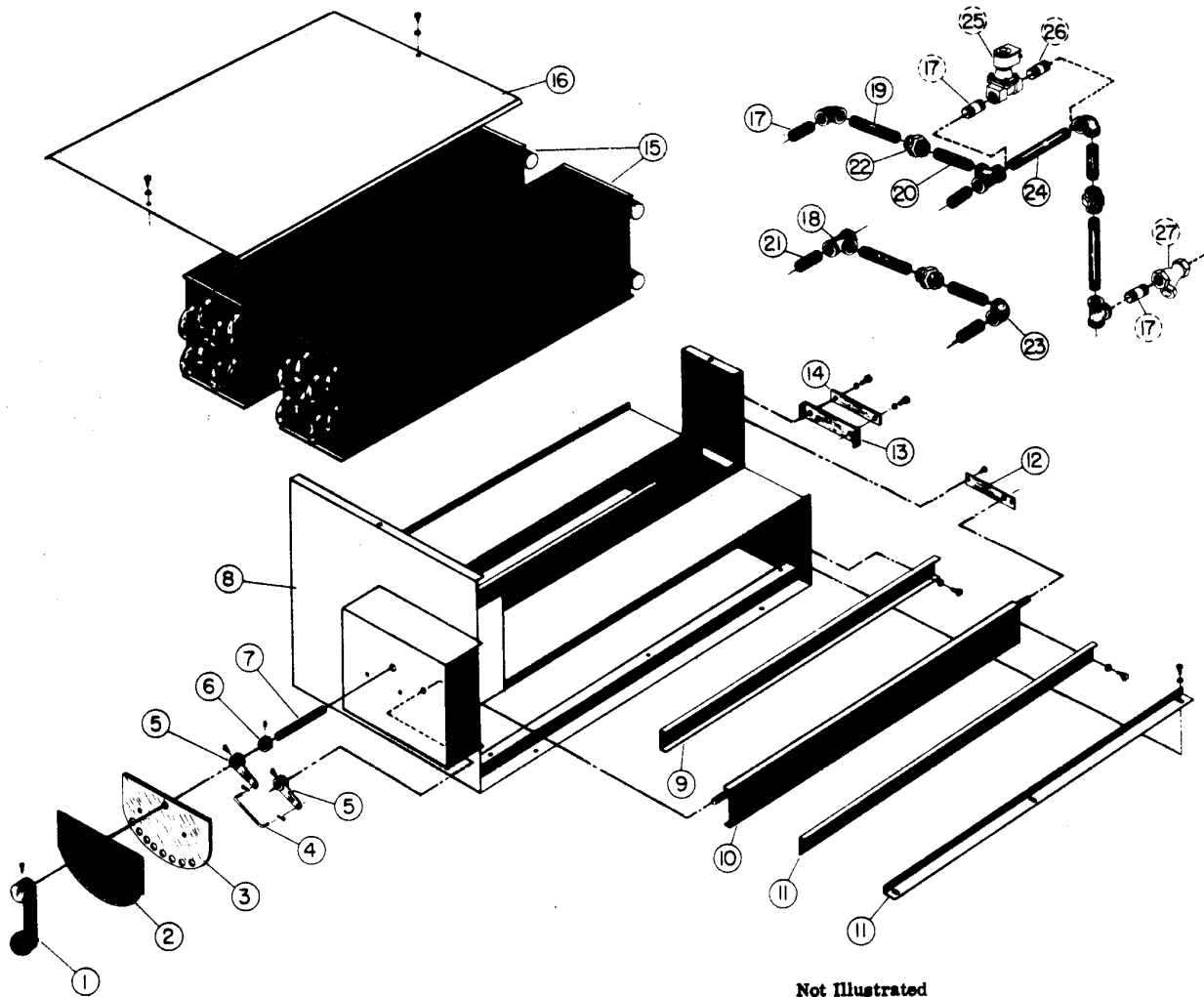
<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
1.	TU2546	Housing Weldment
2.	TU2547	Front Coil Retainer
3.	TU2548	Rear Coil Retainer
4.	TU2413	Steam Coil Manifold
5.	TU2414	3/4"-16 x 3/8" Straight Connector
6.	TU2405	Steam Coil (9 req'd.) 7 3/4" W x 1 5/8" H x 26" Lg.
7.	TU2598	Air Filter (Optional) 16" x 25" x 1"
***8.	M263	#8 x 3/8" S.M.S.
**9.	TU3209	#14 x 5/8" S.M.S.
Optional — {	10.	TU2735 1" x 3/4" Reducer
	11.	TU4596 3/4" close Pipe Nipple
	12.	TU6041 Solenoid Valve 120V, 50 or 60 cycle
	12.	TU5924 Solenoid Valve 240V, 50 or 60 cycle
13.	50-4641-292	Greenfield Cable, 1/2" (Specify 17" long)

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# 4-COIL LAUNDRY BONNET

28-30 36-30



## Not Illustrated

TU5644 Lower Left Filter Guide (Optional)  
 TU5642 TU5646 Lower Right Filter Guide (Optional)  
 TU5590 Top Filter Guide (4 req'd.) (Optional)  
 TU5711 Filter (4 Coil) (4 req'd.) (Optional)

TU 5908 4-Coil Laundry Bonnet Complete With Solenoid Valve (120 V.)  
 TU 5909 4-Coil Laundry Bonnet Complete With Solenoid Valve (240 V.)  
 TU 5910 4-Coil Laundry Bonnet Complete Without Solenoid Valve

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
1	TU6053	Lever Assembly	15	TU1613	4 Coil Steam Coil
2	TU5708	Control Nameplate	16	TU5588	Top Plate
3	TU5730	Control Mounting Plate	17	TU4608	3/4" x 2" Pipe Nipple (2 req'd)
4	TU5587	Connecting Link	18	TU4597	3/4" Pipe Tee (3 req'd)
5	TU4581	Damper Arm	19	TU4601	3/4" x 3" Pipe Nipple (3 req'd)
6	F 215	Set Collar	20	TU5914	3/4" x 3 1/2" Pipe Nipple (2 req'd)
7	TU4578	Control Rod	21	TU4610	3/4" x 5" Pipe Nipple (3 req'd)
8	TU5904	Bonnet Weldment	22	TU4600	3/4" Pipe Union (3 req'd)
9	TU5574	Adjustment Channel	23	TU4605	3/4" Pipe Elbow (3 req'd)
10	TU6054	Damper Weldment	24	TU2862	3/4" x 6 1/2" Pipe Nipple (1 req'd)
11	TU5576	Adjustment Angle	25	TU6041	Solenoid Valve 120V. 50/60 cy.
12	TU5571	Damper Bearing Plate	25	TU5924	Solenoid Valve 240V. 50/60 cy.
13	TU28612	Coil Holder Plate	26	TU6204	3/4" x 2 7/8" Pipe Nipple
14	TU28611	Coil Holder Bar	27	TU2736	3/4" 'Y' Strainer

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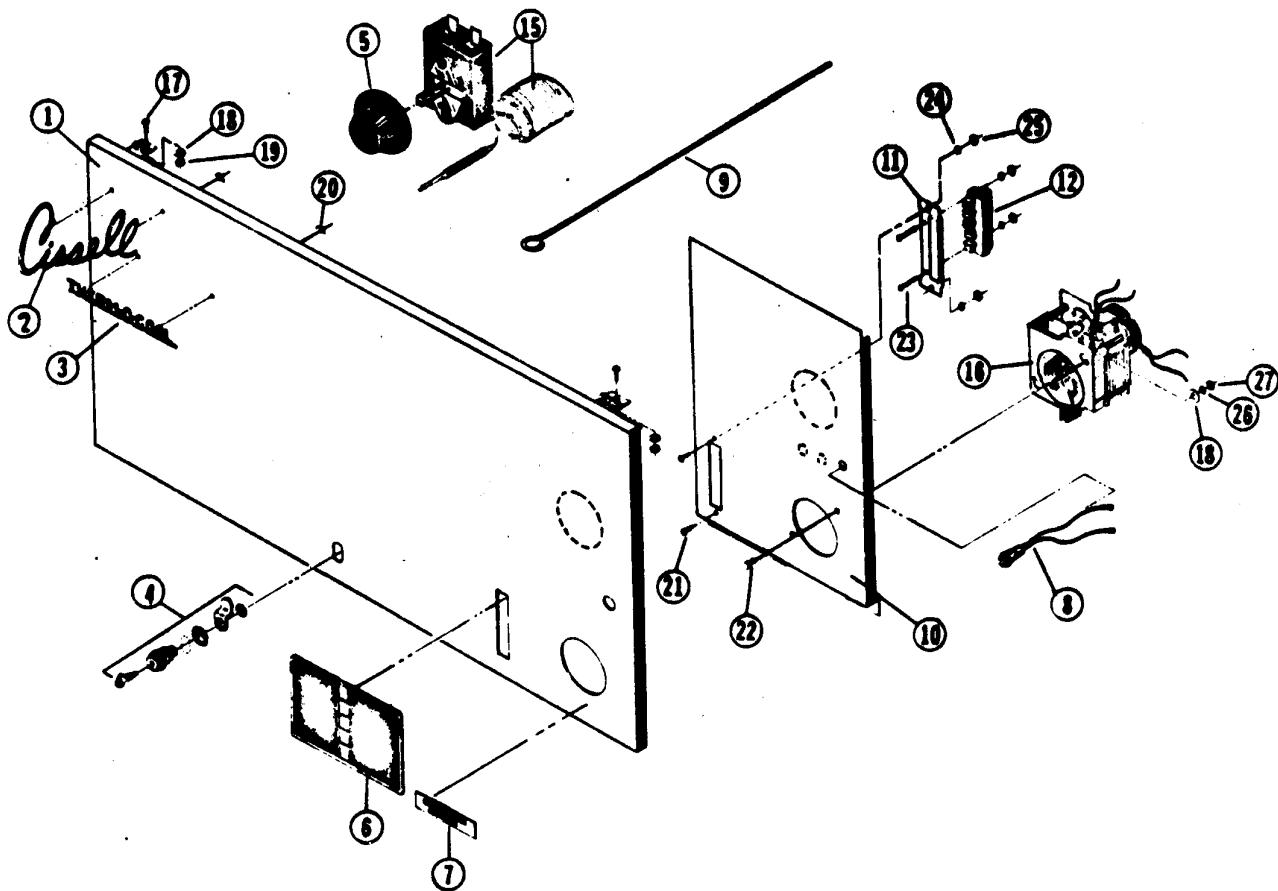
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**CISSELL**

**28BS30 28BD30**

**SINGLE METER & ACCESS PANEL**

**W/PUSHBUTTONS OR REGULATING THERMOSTAT**



Ref. No.	Part No.	Description
1	TU6631	Burner Door Welded Ass'y. (For Regulating Thermostat)
	TU5069	Burner Door Welded Ass'y.
2	TU2610	Cissell Script
3	TU3656	Therm-o-cool Name Plate
4	TUC1867	Lock & Key
5	TU3322	On - Off Knob
6	TU5115	Push Button Control Plate
7	TU2683	Add Coin (Name Plate)
8	TU5421	Pilot Light 110 V.
	TU5639	Pilot Light 220 V.
9	TU2801	Support Rod
10	TU5018	Single Coin Meter Mounting Plate
	TU6016	Coin Meter & Thermostat Mtg. Pl.
11	TU5153	Push Button Plate
12	TU5102	Push Button Switch
***13	FB187	#10 Lock Washer
*14	TU3266	#8-32 Hex. Nut
15	TU1980	Temperature Regulating Thermostat
16		Coin Meter (Specify voltage & coin demonimation)
**17	TU3479	#10-32 x 7/16" Truss Head Screw
***18	P104	1/4" Cut Washer
***19	TU2842	#10-32 Hex Nut
***20	TU3137	Push-On Speed Nut
***21	TU3624	#6-32 x 1/4" Machine Screw
***22	TU4958	#8-32 x 3/8" Machine Screw
**23	M264	#6 x 32 x 7/8" Round Head Screw
***24	M270	#6 Internal Tooth Lock Washer
***25	TU3400	#6-32 Hex Nut

\*\* Sold Only In Multiples Of 6

\*\*\* Sold Only In Multiples Of 12

\* Sold Only In Multiples Of 3

**W. M. CISSELL MANUFACTURING COMPANY**  
 621 S. FIRST STREET • P. O. BOX 1143, LOUISVILLE, KY., U.S.A. 40201  
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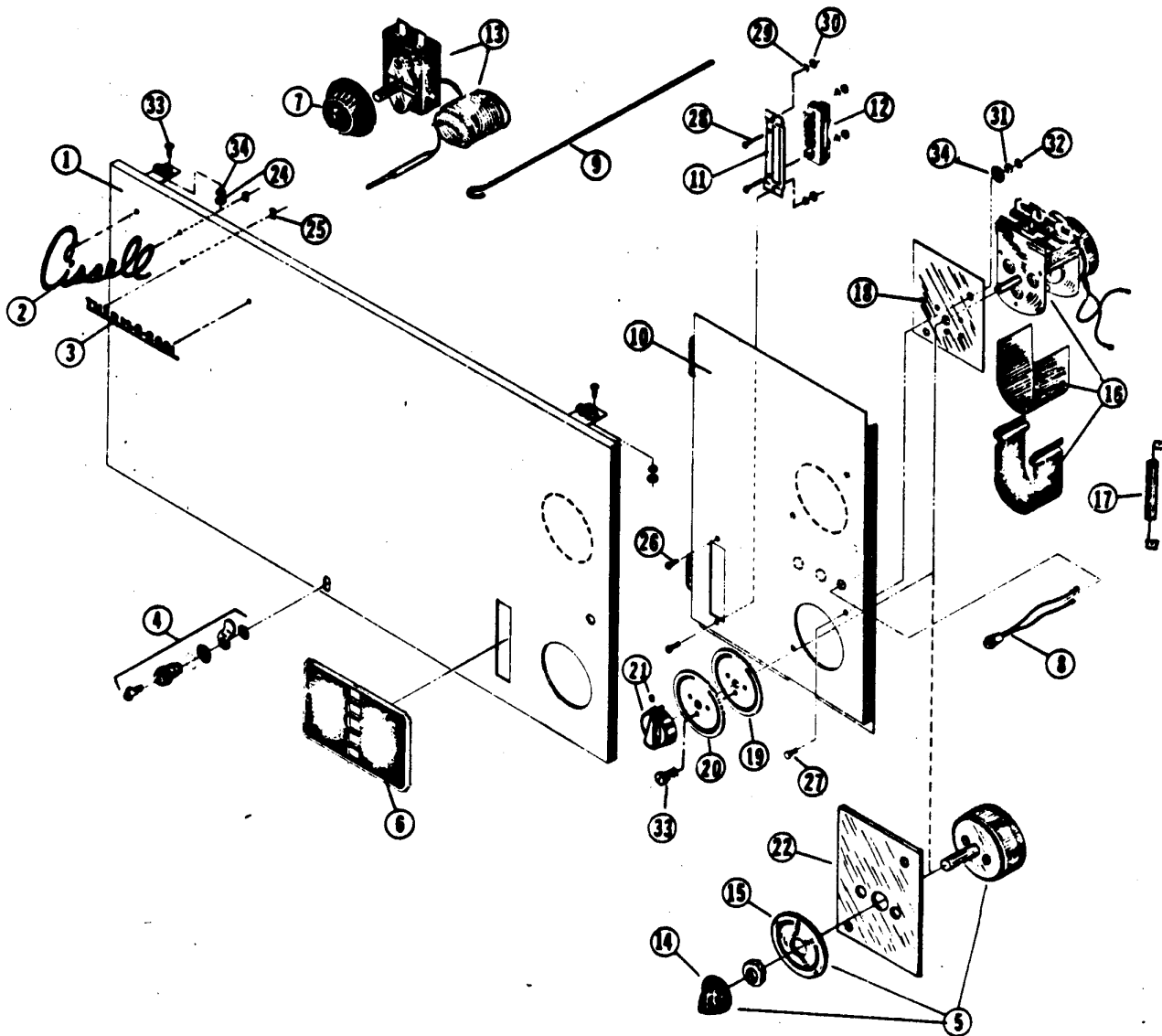
*Ask Your Distributor*

When ordering, specify part number and name.

**CISSELL**

28BS30 28BD30

**SINGLE TIMER & ACCESS DOOR W/PUSHBUTTON OR  
 REGULATING THERMOSTAT**





<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
1.	TU6631	Burner Door Welded Ass'y. (for Regulating Thermostat)
	TU5078	Burner Door Welded Ass'y.
2.	TU2610	Cissell Script
3.	TU3656	Therm-o-cool Name Plate
4.	TUC1867	Lock & Key
5.	TI02	50 Cy. Timer (Complete) 056 Min.
6.	TU5115	Push Button Control Plate
7.	TU3322	On-Off Knob
8.	TU5421	Pilot Light 110 V.
	TU5639	Pilot Light 220 V.
9.	TU2801	Support Rod
10.	TU6018	Single Timer Mtg. Plate
	TU6016	Timer & Thermostat Mtg. Plate
11.	TU5153	Push Button Plate
12.	TU5102	Push Button Switch
13.	TU1980	Temperature Regulating Thermostat
14.	TI48	Knob
15	TU5000	Dial Face
16	TU4864	60 Min. Haydon Timer
		120-60-1 Double Switch
	TU4865	15 Min. Haydon Timer
		120-60-1 Double Switch
	TU4866	15 Min. Haydon Timer
		120-60-1 Single Switch
17.	TU2428	Resistor (Used on 220-60-1 Timer)
18.	TU5661	Timer Mounting Plate(60cy.)
19.	TU3748	60 Min. Dial
20.	TU2554	15 Min. Dial
21.	TU2845	Knob Complete
22.	TU6323	50 Cy. Timer Mtg. Plate
***24.	TU2842	#10-32 Hex Nut
***25.	TU3137	Push-On Speed Nut
***26.	TU3624	#6-32 x 1/4" Round Head Screw
***27.	TU4958	#8-32 x 3/8" Machine Screw
**28.	M264	#6-32 x 7/8" Round Head Screw
***29.	M270	#6 Internal Tooth Lock Washer
***30.	TU3400	#6-32 Hex Nut
***31.	FB187	#10 Lock Washer
*32.	TU3266	#8-32 Hex Nut
**33.	TU3476	#10-32 x 7/16" Truss Hd. Scw.
***34.	PI04	1/4" Cut Washer
***35.	TU3802	#8-32 x 3/8" Flat Hd. Screw

\*\* Sold Only In Multiples Of 6

\*\*\* Sold Only In Multiples Of 12

\* Sold Only In Multiples Of 3

# TROUBLE SHOOTING CHART FOR 28B 30, 36B 30

GAS ----- ELECTRIC ----- STEAM

TROUBLE	CAUSE	REMEDY
Fan Motor Won't Start	Line Fuse Blown	Replace Fuse
	Defective timer	Greenwald series 5900-see Greenwald Service Manual
	Cool Down Thermostat Defective	Replace Thermostat
	Defective Motor	Replace or take to authorized service station for repair
Basket Won't Revolve - Gas Or Electric Heating Unit Does Not Operate	V-Belt Broken	Replace V-Belt
	V-Belt Loose	Adjust belt tension, deflection = 3/4" at 5 lb. force
	Motor Pulley Loose	Tighten Set Screws
	Basket Overloaded	Remove Load
	Defective Basket Motor	Replace or take to authorized service station for repair
	Defective Back Contact In Fan Motor	Replace or take to authorized service station for repair
	Door Switch Defective or not adjusted properly	Replace or Adjust-see door switch adjustment in Manual
Basket Revolves Gas Or Electric Unit Does Not Operate	Elec. Power to heating unit turned off	Turn Power On
	Line Fuse Blown to Heating Unit	Replace Fuse
	Gas Turned Off	Open Manual Gas Valve
	Gas pressure too low	Check manifold pressure & adjust to pressure specified on rating plate. If this pressure cannot be obtained, have gas supplier check main pressure.
	Defective Thermostat	Replace Thermostat
	Defective Safety Overheat thermostat	Replace Thermostat
	Defective Gas Valve	Replace Solenoid Unit
	Defective Power Relay elec. heating unit	Replace Relay

TROUBLE	CAUSE	REMEDY
Basket Revolves Gas or Electric Heating Unit Does Not Operate	Lint Compartment Door Open	Close Door
	Air Switch Not Operating	Clean Lint Drawer. Check back draft damper for foreign objects, lint accumulation or other causes that may prevent damper from opening. Check duct work for lint buildup. 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 the winter.
	Air Switch Out Of Adjustment	See air switch adjustment sheet in Service Manual
	Air Switch Defective	Replace Switch
Main Burners Burning with Yellow Flame	Air Shutter Closed	Open air shutters on front of burners to give sharp blue flame
	Dirt In Burner	Remove burners & blow out w/compressed air
	Gas Pressure Too High	Check manifold pressure and adjust to pressure specified on rating plate.
	Orifices Too Large	Check with gas supplier to insure that gas being used is the same as that specified on the rating plate. If not, contact the factory for new orifices giving proper gas specifications.
Pilot Burner Won't Light	Gas Turned Off	Open Manual Gas Valve
	Pilot Orifice Blocked	Remove and Clean
	Gum Filter clogged	Replace with new filter
Dryer Doesn't Stop At End Of Time Period	Defective Timer	Greenwald Series 5900, see Greenwald service Manual
	Defective Cool Down Thermostat	Replace Thermostat

TROUBLE	CAUSE	REMEDY
Excessive Noise - Or Vibration	Dryer Not Level	Check leveling bolts to make sure of good contact between all four bolts and floor. Adjust bolts to level dryer
	Basket Out Of Adjustment	Adjust basket, see basket adjustment sheet in service manual
	Foreign Object Stuck in Basket Perforation And Dragging On Sweep Sheets	Remove
	Loose Object In Basket	Remove
	V-Belt Too Loose, Too Tight, Or Rubbing Fan Guard	Adjust & Align Belt to Eliminate Rubbing
	Motor Pulley Loose	Tighten Set Screw
	Fan Blade Loose	Check clearance between fan blade and inner edge of inlet ring. Adjust to 1/2" and tighten set screws on fan blade.
No Steam To Steam Bonnet	Trap Installed Incorrectly	Check Trap for inlet and outlet markings. Install Trap according to markings.
	Supply Line Valve Closed	Open Valves in Supply and in the Return lines
	Check Valve Installed Incorrectly	Check for inlet and outlet markings 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.

TROUBLE	CAUSE	REMEDY
Dryer Does Not Heat	Line Fuse Blown To Heating Unit	Replace Fuse
	Power To Heating Unit Turned Off	Turn On Power
	Pilot Burner Out	Relight Pilot Burner
	Main Burners Not Operating	Refer to "Basket Revolves, Gas or Electric Unit Does Not Operate" in this chart for remedy.
	Thermostat Defective	Replace
	Gas Pressure Too Low	Check Manifold pressure and adjust to pressure specified on rating plate
	Gas Turned Off	Open manual gas valve and light pilot burner
	Improper Orifices	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.
Dryer Too Hot	Lint Accumulated	For cleaning see General Maintenance Sheet
	Thermostat Defective	Replace thermostat
	Inadequate Make Up Air	Check installation sheet in service manual for recommended minimum make up air opening
	Gas Pressure Too High	Check manifold pressure and adjust to pressure specified on rating plate.
	Partially Restricted Or Inadequately Sized Exhausting System	Check installation sheet in service manual for recommended sizes. Check for and remove obstructions or lint build up from duct work.

TROUBLE	CAUSE	REMEDY
Pilot Burner Lights But Won't Stay Lit	Defective Thermocouple	Replace Thermocouple
	Pilot Orifice Dirty	Remove and Clean
	Gum Filter Partially Clogged	Replace with new filter
	Defective Power Unit	Replace. See gas valve sheet in service manual for proper specifications
Motor Tripping On Thermal Overload	Low Voltage	Check voltage at motor terminals. Voltage must be within (plus or minus) 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 manual for recommended make up air openings. Poor air movement or high ambient temperatures around the motors decrease the heat dissipation from the motor and can result in "nuisance trips" of the thermal protector.
	Poor Housekeeping	Lint accumulation in the ventilation openings of the motor and insulating blankets of lint on the motor housing will cause a heat build up within the fan motor and result in thermal tripping of the motor.

