

SERVICE MANUAL

28BS30

LAUNDRY DRYER

STEAM-GAS-ELECTRIC

Installation

Operation

Service

Parts

Cissell Manufacturing Company

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DO NOT DRY ITEMS CONTAINING FOAM RUBBER OR ANY RUBBER-LIKE MATERIALS IN THIS DRYER.

RUBBER EASILY OXIDIZES CAUSING EXCESSIVE HEAT AND POSSIBLE FIRE. ALL ITEMS CONTAINING RUBBER SHOULD BE AIR DRYED.

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<u>BE SAFE</u> -	SHUT MAIN POWER OFF EXT BEFORE SERVICING	CERNALLY TO MACHINE	

GENERAL INFORMATION

The Cissell 28BS30 Single 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 28BS30 Laundry Dryer. Hot, dry air is properly and effectively moved through basket and exhausted through a lint trap to atmosphere.

The Cissell 28BS30 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.

BASKET LOAD CAPACITY	
Floor Space	68 1/2" High x 45 1/8" Deep x 28 3/4" Wide
Basket Size	28" Dia, x 30" Deep
Exhaust Duct	8" Dia.
Motor Size (one motor for basket & fan)	1/2" H.P.
Amps Required for Motor and Controls	120V @ 14 Amps
	240V @ 7 Amps
Maximum Air Displacement	700 C.F.M.
Recommended Operating Range	700 C.F.M. Liquid Petroleum (LP) 530-630 C.F.M. 110,000 per hour
*B.T.U. Input (2 Burners)	120,000 Per Hour - Nat, Mixed & Mfg.
Gas Supply	1/2" Pipe Connection
Approximate Drying Time10 Lbs. Dr	yweight (Indian Head) 70%
Moisture F	Retention10 Minutes
Net Weight (Approx.)	500 Lbs.
Domestic Shipping Weight	
(Approx.) 1 Carton	550 Lbs.
Export Shipping Weight	
(Approx.) 1 Box	890 Lbs.

*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.

28BS30 DRYER ELECTRICALLY HEATED

BASKET LOAD CAPACITY	
Electrical (Motor and Controls)	120V or 240V., 50 or 60 Cycle, 1 Phase 50 or 60 Cycle, 3 Phase
Amps Required for Motor and Controls	120V @ 14 Amps 240V @ 7 Amps
Floor Space	68 1/2" High x 45 1/8" Deep x 28 3/4" Wide
Basket Size	28" Dia. x 30" Deep
Exhaust Duct	8" Dia.
Motor Size (one motor for basket & fan)	1/2" H.P.
Maximum Air Displacement	700 C.F.M.
Recommended Operating Range	530-630 C.F.M.
Heater Input	21 Kilowatt
Total Heater Current	See
	Electric
	Heating Unit
	Data Sheet
A Separate Circuit is Required for	the Electrical Heater
Approximate Drying Time 12 Lbs. I)ryweight (Indian Head)
	ture Retention12 Minutes
Net Weight	
Export Shipping Weight (Approx.) 1 Box	
Domestic Shipping Weight (Approx.) 1 C	arton550 Lbs.

Electrical Wiring to Dryer Must Comply With Local Electrical Code Requirements

28BS30 DRYER STEAM-HEATED

Floor Space	68 1/2" High x 45 1/8" Deep x 28 3/4" Wide		
Basket Size	28" Dia. x 30" Deep		
Exhaust Duct	8" Dia.		
Motor Size (one motor for basket & fan)	1/2 H.P.		
Amps Required for Motor and Controls	120V @ 14 Amps		
1 1	240V @ 7 Amps		
Maximum Air Displacement	700 C.F.M.		
Recommended Operating Range	530-630 C.F.M.		
Steam Supply Connection	3/4"		
Steam Return Connection	3/4"		
Domestic Shipping Weight	540 Lbs.		
Export Shipping Weight	890 Lbs.		
Net Weight	500 Lbs.		
LOW PRESSURE ONLY (9 Section Steam H	leating Unit)		
Operating Steam Pressure	7 to 15 Lbs.		
	ight (Indian Head)		
-			
HIGH PRESSURE ONLY (9 Section Steam	Heating Unit)		
Operating Steam Pressure	125 Lbs. Max.		
	ight (Indian Head)		
Approximate Drying Time 25 Lbs. Dryweight (Indian Head) 70% Moisture Retention 30 Minutes Steam Consumption2.6 B.H.P 89.7 Pounds Per Hour With Normal Load <u>HIGH PRESSURE ONLY</u> (9 Section Steam Heating Unit)			

Steam Consumption----3.4 B.H.P. ----117.3 Pounds Per Hour ----With Normal Load

HIGH PRESSURE ONLY --- 8 Stage Heat Control

Operating Steam Pressure...... 125 Lbs. Max. 4 Coil Heat Capacity (two double coils) ---2.8 B.H.P. --- 96.6 Pounds Per Hour --- With Normal Load Approximate Drying Time --- 25 Lbs. Dryweight (Indian Head) 70% Moisture Retention---27 Minutes

GENERAL INSTALLATIONS ____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. Installation clearances from all combustible material is O clearance.

Before operating dryer, open basket door, remove blocking between front panel and basket; remove all tape used to secure dryer parts during shipment; level dryer; and read all instruction tags, etc.

EXHAUST DUCT

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. 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. <u>Do not install wire mesh or screen in the discharge</u> <u>opening</u> of the duct, as lint will build up and prevent proper discharge of air from dryers.

ELECTRICAL CONNECTIONS (ALL DRYERS)

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. <u>Electrically heated dryers require one line circuit for the drive motor and controls, and a</u> separate line circuit for the electrical heating unit.

GAS-FIRED DRYER INSTALLATION

Efficient operation of Gas-Heated dryers depends upon the use of the proper orifice in both gas pilot and main burner to suit the type of gas and its pressure. When measuring gas pressure, place all gas equipment in operation, and measure the gas pressure in the burner manifold with the main burner operating. Be sure that the gas service is adequate, and that the piping connecting the gas meter and dryer is sufficiently large to keep the gas pressure drop in the piping as low as possible.

For proper gas specifications, pressures, size of meter service and size of the gas line connecting the gas meter and dryer, consult your gas company. If gas performance is unsatisfactory, request the gas company to make an actual pressure test with the dryer and all other gas equipment in operation. If the pressure is different from that specified on the name plate of Gas-Heating unit, write the Cissell factory, giving the correct gas pressure, the B.T.U. specifications of the gas in BTU's per cubic foot, and the specific gravity of the gas and correct orifices will be sent you. Do not operate a gas dryer with incorrect orifice sizes.

The main burner has a fixed orifice to provide a rated BTU input, only when operated on the type of gas and pressure specified. Lower pressures will increase drying time... higher pressures will require closer attention to avoid scorching. Connect gas supply line to gas inlet line of dryer with a union and gas cock so that gas to dryer can be shut off when necessary.

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.

PART NUMBER	DESCRIPTION
MTR113	120/60/1
MTR114	240/60/1
MTR115	120/50/1
MTR116	240/50/1
MTR117	240/60/3
MTR118	240/50/3
MTR119	208/60/1
MTR220	208/60/3

Specify Cissell part number and manufacturer's motor number

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 gravityreturned 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.

STEAM 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.

W. M. CISSELL MANUFACTURING COMPANY

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 Pacific Coast Office, 4823 W. Jefferson Blvd., Los Angeles

Ask Your Distributor

When ordering, specify part number and name.

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.





CISSELL DUCT INSTALLATION 28BS30 28BD30 36BS30 36BD30 DRYERS Pacific Coost Office, 4823 W. Jefferson Blvd., Los Angele Ask Your Distributor CISSE LL DIMENSIONA L DRAWING 28B30 DRYER

OVERALL DIMENSIONS TYPICAL FOR ALL 28B30 STEAM, GAS & ELECTRIC DRYER



MAINTENANCE

- 1. <u>CLEAN LINT COMPARTMENT</u>: 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. Clean lint from thermostat as often as needed.
- 2. <u>KEEP BASKET AND SWEEP SHEETS CLEAN:</u> 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. <u>PULLEYS AND BELTS</u>: 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. Grease idler pulley bearing periodically with high temperature water resistant grease.
- 4. <u>ELECTRIC MOTORS</u>: 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.

5. 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.

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

<u>TO ADJUST</u>: 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.

6. <u>STEAM HEATING UNITS</u>: 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.

AIR SWITCH ADJUSTMENT

(GAS & ELECTRIC DRYER ONLY)

- 1. Shut off current; disconnect leads and remove air switch.
- 2. Lay air switch assembly on flat surface. 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 3/16" x 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 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.



- 1. Loosen four basket bearing bracket bolts (numbers 1, 2, 3 and 4) on rear of dryer, and 3 bolts (5, 6, 7) holding the rear bearing housing also loosen the basket bearing collars.
- 2. Place the "A" & "B" diameter pins inside the drying compartment between the rim of the basket opening and the rim of the door opening in the positions shown in 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 bracket bolts and bearing housing bolts .
- 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.







FIG 3

INSTRUCTIONS FOR REPLACING BEARING



VIEW FROM REAR OF DRYER

- 1. Remove belt guard, V belt and basket sheave.
- 2. Loosen and remove set screws in bearing collar.
- 3. Release bearing collar by rotating as indicated in illustration. If necessary, use punch and mallet to break collar loose. Rotate in direction indicated until bearing collar can be moved away from bearing.
- 4. Loosen three bolts in rear bearing housing. Remove four bolts in basket bearing bracket and remove bracket.
- 5. Remove three nuts on front bearing housing. Remove old bearing and replace with new bearing and bearing collar.
- 6. Remove old bearing in basket bearing bracket and replace with new bearing and bearing collar. Place basket bearing bracket on shaft and lightly tighten four mounting bolts.
- 7. Align per instructions on page 12 of this manual.



CISSELL

28BS30 DRYER

FRONT VIEW

ALL HARDWARE SOLD ONLY IN PACKAGES OF 6

Re	ef. No.	Part No.	Description	Ref. No.	Part No.	Description
	1	TU5208	Jacket Welded Assy.	20	TU5 2 22	Lint Door Hand w/hardware
	2	TU2620	Solid Top (Gas Dryer)	21	TU2384	Bottom Trim
		TU6129	Solid Top (Electric Heated Dryer)	22	M263	#8-3/8" Sheet Metal Screw
	3	TU1979	Door Switch	23	TU1771	#6 Tinnerman Twin Nut
	4	TU1770	Insulator	24	TU3219	#6 x 1" Sheet Metal Screw
	5	TU2373	Door Switch Bracket	25	TU2877	#10 Speed Nut
	6	TU2483	Sweep Sheet Gaskets	26	TU2882	$\frac{1}{2}$ "-20 Hex Head Nut
	7	CM35	Coin Box	27	TU2831	¹ / ₂ " Split Lock Washer
	8	CM61	Coin Vault W/Lock & Key	28	TU2883	¹ / ₂ " Cut Washer
	9	TU3167	Key	29	TU1978	#14 x 3/4"Lg.Sheet Metal
	10	TU108	Felt Seal			Screw
	11	TU2710	Trim Holder	30	TU4937	3/8''-16 Jam Nut
	12	TU5103	Spider Welded Ass'y.	31	TU3211	$3/8$ "-16 x $2\frac{1}{2}$ " Leveling Bolt
		TU7182	Spider Welded Ass'y.	32	TU2109	Lint Drawer
	13	TU2313	Tie Rod	33	TU1893	Lint Drawer Name Tag
	14	TU2083	Basket Weldment	34	TU2853	Lint Drawer Seal
_	15	TU3205	Lock Plate	35	TU4819	Lint Drawer Door
	16	TU6439	Lint Screen Housing	36	TU2401	Lint Door Handle
	17	TU5261	#Self-Cleaning Lint Screen Ass'y.	37	CB19	Extension Spring
	18	TU5277	Lint Drawer Door	38	TU641 8	Clearance Nameplate
	19	TUB1867	Lock & Key (JWC-2)		*TU6956	Screen Only
					*TU5225	Frame Only

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ALL HARDWARE SOLD ONLY IN PACKAGES OF 6

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
1	TU5420	Front Panel	17	FB187	#8 Split Lock Washer
2	TU2194	Door Switch Actuator	18	TU3266	#8-32 Hex Head Nut
3	TU2105	Door Switch Spring	19	TU4839	#10-32 x 3/8" Machine Screw
4	TU2090	Basket Door Seal	20	TU6336	Cover Plate (Used w/o Coin
5	TU2874	Basket Door Handle			Meter & Box)
6	TU2236	Hinge Posts (2 Req'd)	21	TU2876	Door Catch
7	PIF172	Delrin Bearing (2 Req'd)	22	TU7171	Basket Door Weldment
8	TU3216	Basket Door Weldment	23	TU7169	Rubber Gasket
9	TU1692	Rubber Gasket	24	TU7166	Door Glass
10	TU5110	Door Glass		TU4832	Door Ass'y. consists of Ref. Nos
11	TU2836	$5/16''-18 \ge \frac{1}{2}''$ Hex Head Cap			4, 5, 7, 8, 9, 10, 13, 14, 15 & 19
		Screw	rew TU7172		Door Ass'y. consists of ref. nos
12	TU2878	#10 x 5/8 Sheet Metal Screw			4, 5, 7, 13, 14, 15, 19, 22, 23, & 24
· 13	TU4840	#10-32 Hex Crown Nut		TU4827	Actuator Ass'y. consists of ref.
14	TU3163	Catch Pin			no's 2,3,16,17, & 18
15	TU3215	#10–32 x 3/8" Taptite Screw			
16	M262	#8-32 x 3/8"Truss Head			
		Screw			

Ask Your Distributor

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CISSELL LAUNDRY DRYER THERMOSTAT ASS'Y. TU5408



ALL HARDWARE SOLD IN PACKAGES OF 6

Ref. No.	Part No.	Description
1	TU2045	Thermostat (Cool-Down)
2	TU3240	185 ⁰ Thermostat (Safety & High)
3	TU5149	165 ⁰ Thermostat (Medium)
4	TU5150	150 ^o Thermostat (Low)
5	TU514 3	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. 2 Req'd.
9	TU6067	#8 Tinnerman Clip (2 Req'd.)

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ALL HARDWARE SOLD	ONLY IN PACKAGES OF 6
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<u>Ref.</u>]	No. Part No.	Description	Ref. No.	Part No.	Description_
1	TU5208	Jacket Welded Ass'y.	32	F819	5/16"-18 x 5/8" Square Head Set
2	TU2335	Electrical Box Cover			Screw
3	M155	Wire Harness Clamp	33	TU3282	5/16"-18 x 3/8" Nylok Set Screw
4	TU2726	Strain Relief Plate	34	TU5439	5/16"-18 x 3/4" Hex Head Screw
5	TU2423	See Page 19	35	VSB130	5/16" Cut Washer
6	TU3481	Capacitor (Optional)	36	TU2814	5/16" Split Lock Washer
7	TU5135	Capacitor Strap (Optional)	37	C249	5/16''-18 Hex Nut
8	TU5890	Control Box Cover	38	TU4787	3/8''-16 Hex Nut
9	TU4790	Straight Connector	39	VSB134	3/8" Lock Washer
10	5046 - 41 - 292	Greenfield Cable (Specify	40	TU1851	$\frac{1}{2}$ " Cut Washer
		22" Lg.)	41	TU4936	3/8''-16 x 3/4'' Carriage Bolt
11	TU4791	Right Angle Connector	42	TU7178	3/8''-16 x 3/4'' Rib Neck Bolt
12		See Motor List Page 6	43	IB140	3/8" Cut Washer (4 Req'd)
13	TU5241	Key	44	TU3188	3/8''-16 Hex Nut (Nylok)
14	TU5218	Motor Sheave 60 Cy.	45	TU3247	Retaining Ring
	TU5873	Motor Sheave 50 Cy.	46	TU3273	Retaining Ring
15	TU6484	Cable Strap	47	F116	S.N. Plate
16	TU5850	Motor Mount Weldment	48	TU5732	Mech. Box Cover (Used Only W/
17	TU2474	Top & Bottom Gasket			Steam Heated Dryer)
18	TU2473	Side Gasket	49	TU2372	Snap Bushing
19	TU2476	Felt Seal	50	TU5682	Blanking Plate
20	TU4684	Key	51	TU1984	Relay 110V 50 or 60 Cy. (2 Pole)
21	TU3879	Fan 60 Cy.		TU1985	Relay 220V 50 or 60 Cy. (2 Pole)
	TU5253	Fan 50 Cy.		TU3495	Relay 115V 50 or 60 Cy. (3 Pole)
22	TU5079	Rear Guard Ass'y.		TU3496	Relay 208 or 230V 50 or 60 Cy.
23	TU7016	15" Basket Sheave			(3 Pole)
24	TU5887	Key	52	TU7018	Bearing Housing
25	TU7021	V-Belt (4L570)	53	TU7019	Bearing & Collar Ass'y.
26	TU4794	V-Belt (4L590)	54	TU7162	Basket Bearing Bracket
27	TU5217	14" Idler Sheave	55	TU3246	3/8"-16 x 1" Hex Hd. Unit
28	TU5213	Idler Bracket			(4 Req'd)
29	M263	#8 x 3/8" Sheet Metal	56	TU7184	Bronze Bushing (2 Req'd)
		Screw			
30	TU4937	3/8''-16 Jam Nut			
31	TU3211	$3/8"-16 \ge 2\frac{1}{2}"$ Leveling			
		Bolts			· ·

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CISSE LL 28B30 36B30 LAUNDRY DRYER AIR SWITCH ASS'Y TU2423

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Ref. No.	Part No.	Description
1	TU2463	Actuator Arm
$\frac{1}{2}$	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

For Adjustment of Air Switch See Page 11

W. M. CISSELL MANUFACTURING COMPANY 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

CISSELL 28B30 & 36B30 LAUNDRY DRYER ELECTRIC HEATING UNIT



- (1) TU3103 Electric Furnace Housing
- (2) TU3102 Hold Down Plate
- (3) TU7138 Electric Box Welded Ass'y.
- (4) TU7149 Fuse Section Door Welded Ass'y.
- (5) TU7145 Terminal Section Cover Welded Ass'y.
- (6) TU7148 Top Cover
- (7) TU3104 Air Inlet Cover
- (8) TU3767 Contact Strap (4-Req'd)
- (9) TU3768 Contact Strap (1-Req'd)
- (10) TU3253 Insulators (Pkg of 6)
- A-E _____ See Separate Sheet.

SEE SEPARATE SHEET FOR PICTURE

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Α.	TU6968 TU6971 TU6946	3 Bank Heating U3 Bank Heating U3 Bank Heating U	nit 21 KW 240-480V nit 21 KW 208-415V nit 30 KW 208-415V nit 30 KW 208-415V nit 30 KW 240V nit 30 KW 550V	V V 36B30's Only 36B30's Only
в.	TU7004 TU3496 TU6781 TU3495	Relay 208-240V v Relay 208-240V v Relay 415-480V v Relay 208-240V v Relay 415-480V v Relay 208-240V v	With 120V Coil With 120V Coil With 240V Coil With 240V Coil	
с.		Terminal Block (Terminal Block (
D.	TU7076 TU7256	Fuse Holder 415- Fuse Holder 250V	240V (Triple Pole) 480V (Single Pole) 7 or less (Triple Po 7 or less (Triple Po	ole)
E.	TU7224 TU7073 TU7074 TU7071	Fuse 35 AMP 250 Fuse 40 AMP 250 Fuse 50 AMP 250 Fuse 60 AMP 250 Fuse 35 AMP 250 Fuse 50 AMP 250	OV or less Non OV or less Non OV or less Non O-600V Nos	
Rated	I	Input	Amperage	Minimum Size Supply Wire Based on 90 ⁰ C Insulated Copper Conductor AWG/MCM
$21 \mathrm{KW}$	7	@ 240 - 1 Phase	88 AMPS	2
21KW	7	@ 208 - 1 Phase	101 AMPS	2
$21 \mathrm{KW}$,	@ 240 - 3 Phase	51 AMPS	6
21KW		@ 208 - 3 Phase	58 AMPS	6
21KW		@ 415 - 3 Phase	29 AMPS	8
21KW		@ 480 - 3 Phase	25 AMPS	10
30KW		@ 240 - 3 Phase	72 AMPS	4
30KW		@ 208 - 3 Phase	83 AMPS	2
30KW 30KW		 @ 415 - 3 Phase @ 480 - 3 Phase 	42 AMPS 36 AMPS	6 8
DUIXW		w tov - 5 Phase	30 AMPS	O

Maximum wire size which terminal will accept 240 Volt - #1/0 AWG, 480 Volt - #1/0 AWG.

Dryer is to be connected to two separate circuits - one for the <u>heaters</u> and one for the <u>motor and controls</u>. See nameplate for rated voltage. Circuits are to be fused to agree with local electrical codes.



ALL HARDWARE SOLD ONLY IN PACKAGES OF 6

TU2227 GAS-FIRED HEATING UNIT

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Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
1	TU6483	Gas Fired Heating Unit	15		See Basotrol Valve Sheet
2	TU2393	Name Plate	16	OP291	$\frac{1}{2}$ " Street Elbow
3	TU1802	Burner (All Gases)	17	TU2714	¹ / ₂ " Close Nipple
4	TU2169	Gas Orifice (Specify Size)	18	TU6321	Valve $\frac{1}{2}$ " x $\frac{1}{2}$ " Gas Cock
5	TU6322	Gas Manifold, Natural, Mixed,	19	TU2724	¹ / ₂ " x 25" Pipe
		Propane, & Butane	20	LB74	#14 Tinnerman Nut
6	TU2224	1/8" Plug For Gas Manifold	21	TU3209	#14 x 5/8 S.M.S.
		Test Hole	22	CB36	$\frac{1}{4}$ -20 x $\frac{1}{2}$ Hex Hd Screw
7	TU2226	2 Piece Mounting Brackets	23	F875	Straight Connector
8	TU3799	Pilot Support Bracket	24	TU2425	3/8" Greenfield Cable W/
9	TU3800	Pilot Burner (G-21)			Connectors (12" Long)
10	TU157	Thermocouple Lead 18"	25	SU65	$\frac{1}{4}$ " Compression Nut
		(87D-18)	26	PU8	$\frac{1}{4}$ " Compression Bead
11	TU145	Pilot Orifice (Specify Size)	27	TU7337	Gum Filter
12	TU3218	8-32 x 7/16 S.M.S.	28	FG142	90 ⁰ Street Elbow
13	TU4915	10-32 x 3/16 Rd. Hd. Machine			
		Screw			
14	TU6377	Gas Line $17\frac{1}{2}$ "			

BASOTROL GAS VALVES FOR ALL CISSELL GAS FIRED DRYERS

	COMPLETE BASOTROL VALVE				REPLACEMENT ELECTRIC OPERATOR		REPLACEMENT POWER UNIT		
		CISSELL PART NO.	BASOTROL PART NO.	TYPE GAS	VOLTAGE	CISSELL NUMBER	BASOTROL NUMBER	CISSELL NUMBER	BASOTROL NUMBER
	PETITE DRYERS	TU3701	G92YAA-1	LIQUID PETROLEUM	120V	TU3705	R54889-122A	TU3707	R54319-38
	TI	TU3702	G92YBA-1	LIQUID PETROLEUM	240V	TU3711	R54889-122B	TU3707	11
23	DR	TU3703	G93YAA-1	NATURAL, MIXED	120V	TU3705	R54889-122A	TU3707	11
		TU3704	G93YBA-1	NATURAL, MIXED	240V	TU3711	R54889-122B	TU3707	**
ſ		TU3818	G93AAA-8	NATURAL, MIXED	120V	TU3832	R54889-144A	TU3838	R54319-59
		TU3819	G93ABA-6	NATURAL, MIXED	240V	TU3833	R54889-143A	TU3838	17
	RS	TU3821	G92GAA-6	MANUFACTURED	120V	TU3834	R56799-64A	TU3839	R54319-60
	KE	TU3822	G92GBA-2	MANUFACTURED	240V	TU3835	R56799-63B	TU3839	11
	OTHER DRYERS	TU3817	G92CAA-11	LIQUID PETROLEUM	120V	TU3836	R54889-151A	TU3838	R54319-59
		TU3820	G92CBA-8	LIQUID PETROLEUM	240V	TU3837	R54889-150B	TU3838	11



TU2359 THERMAC REGULATOR

(3/4" - T-11-L)

Use with Basotrol Gas Valve for Manufactured Gases less than 800 BTU per cubic feet. W. M. CISSELL MANUFACTURING COMPANY 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 Bivd., Los Angeles



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CISSELL 28B30 DRYER 9 SECTION STEAM COIL ASSY PARTS



NINE SECTION STEAM BONNET ASSEMBLY

Ref. No.	Part No.	Description
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.
10.	TU4596	3/4" close Pipe Nipple
11.	TU2735	1" x 3/4" Reducer
12.	TU6041	Solenoid Valve 120V, 50 or 60 cycle
	TU5924	Solenoid Valve 240V, 50 or 60 cycle
13.	50-4641-292	Greenfield Cable, 1/2" (Specify 21" long)
14.	TU4790	1/2" Straight Conn. (2 req'd)
15.	TU5939	240V. coil for TU5924
	TU7151	120V. coil for TU6041



4 - COIL BONNET (36-30, 2830)

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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	20	TU5914	3/4" x 3 1/2" Pipe Nipple (2 req'd)
2	TU5708	Control Nameplate	21	TU4610	3/4" x 5" Pipe Nipple (3 req'd)
3	TU5731	Nameplate and Mounting Plate Ass'y.	22	TU4600	3/4" Pipe Union (3 req'd)
4	TU5587	Connecting Link	23	TU4605	3/4" Pipe Elbow (3 req'd)
5	TU4581	Damper Arm	24	TU2862	3/4" x 6 1/2" Pipe Nipple (1 req'd)
6	F 215	Set Collar	25	TU6041	Solenoid Valve 120V. 50/60 cy.
7	TU4578	Control Rod		TU5924	Solenoid Valve 240V. 50/60 cy.
8	TU5904	Bonnet Weldment	26	TU6204	3/4" x 2 7/8" Pipe Nipple
9	TU5574	Adjustment Channel	27	TU2736	3/4" 'Y' Strainer
10	TU6054	Damper Weldment	28	50-4641-292	Greenfield Cable (21" long)
11	TU5576	Adjustment Angle	29	TU4790	1/2" straight connector (2 req'd)
12	TU5571	Damper Bearing Plate			
13	TU28612	Coil Holder Plate		Not Illustra	ted
14	TU28611	Coil Holder Bar		TU5644	Lower Left Filter Guide (Optional)
15	TU1613	4 Coil Steam Coil		TU5676	Lower Right Filter Guide (Optional)
16	TU5588	Top Plate		TU5590	Top Filter Guide (4 req'd.) (Optional)
17	TU4608	3/4" x 2" Pipe Nipple (2 req'd)		TU5711	Filter (4 Coil) (4 req'd) (Optional)
18	TU4597	3/4" Pipe Tee (3 req'd)		TU5939	240V. Coil For TU5924
19	TU4601	3/4" x 3" Pipe Nipple (3 req'd)		TU7151	120V. Coil For TU6041



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Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
1	TU5759	Top Access Panel (For 28B30	15	TU4864	60 Min. Haydon Timer
		W/8 Stage Control)			120-60-1 Double Switch
	TU5069	Top Access Panel (28B30 &	16	TU2428	Resistor (Used On 220-60-1
		28E30)			Timer)
	TU5078	Top Access Panel (36B30 &	17	TU6019	Timer Mounting Plate (60 Cy.)
		36E30)	18	TU5444	60 Min. Dial
	TU5821	Top Access Panel (36B30 W/	19	TU3802	#8-32 x 3/8" Flat Hd. Screw
		8 Stage Control)	20	TU2555	Knob Complete
2	TU2610	Cissell Script	21	TU6323	50 Cy. Timer Mtg. Plate
3	TU3656	Therm-O-Cool Name Plate	22	TU3479	#10-32 x 7/16" Truss Hd
4	TU4822	Lock #3186	23	P104	$\frac{1}{4}$ " Cut Washer
5	T102	50 Cy. Timer	24	TU2842	#10-32 Hex Nut
6	TU6619	Push Button Control Plate	25	TU3137	Push On Speed Nut
7	TU2844	Key JWC2	26	TU3624	#6-32 x $\frac{1}{4}$ " Round Head Screw
8	TU5421	Pilot Light 110V	27	TU7241	#8 x $\frac{1}{4}$ " S. M. S.
	TU5639	Pilot Light 220V	28	SV136	#6-32 x 15/16" Round Head
9	TU2801	Support Rod			Screw
10	TU6018	Single Timer Mtg. Plate	29	M270	#6 Internal Tooth Lock Washer
1 1	TU5153	Push Button Plate	30	TU3400	#6-32 Hex Nut
12	TU5106	Push Button Switch	31	FB187	#10 Lock Washer
13	T148	Knob	32	TU3266	#8-32 Hex Nut
14	TU5000	Dial Face (For 50 Cy. Timer)			



ALL HARDWARE SOLD ONLY IN PACKAGES OF 6

Ref. No.	Part No.	<u>Description</u>	Ref. No.	Part No.	Description
1	TU5753	Top Access Panel (28B30 &	13	TU6110	Timer 0-15 120/60 Cy.
		28E30)		TU6109	Timer 0-60 120/60 Cy.
	TU5819	Top Access Panel (36B30 &		TU5843	Timer 0-15 220/60 Cy.
		36E30)		TU5842	Timer 0-60 220/60 Cy.
	TU6314	Top Access Panel W/8 Stage		TU6082	Timer 0-15 220/50 Cy.
		Steam (36B30 Only)		TU6083	Timer 0-60 220/50 Cy.
2	TU2610	Cissell Script	14	TU5153	Push Button Plate
3	SV136	#6-32 x 15/16" Rd Head Screw	15	TU5106	Push Button Switch
4	TU4822	Lock #3186	16	TU6619	Push Button Control Plate
5	TU2844	Key JWC2	17	TU3479	#10-32 x 7/16'' Truss Head
6	TU2555	Knob Assy.			Screw
7	TU5445	Dial 0-15	18	P104	$\frac{1}{4}$ " Cut Washer
8	TU5444	Dial 0-60	19	TU2842	#10-32 Hex Nut
9	TU6016	Double Control Panel	20	TU3137	Push On Speed Nut
		Weldment	21	LB68	#8-32 x 3/8" Flat Head Screw
10	FG147	Toggle Switch	22	TU3624	#6-32 x $\frac{1}{4}$ " Rd Head Screw
11	TU5421	Pilot Light 110V	23	M270	#6 Internal Tooth Lock Washer
	TU5639	Pilot Light 220V	24	TU3400	#6-32 Hex Nut
12	TU6019	Timer Adapter Plate	25	TU7241	$#8 \times \frac{1}{4}$ " S. M. S.
			26	TU3805	15/32" Locking Hex Nut
			27	TU2801	Support Rod



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- 6 31-	Part <u>No.</u>	Description	<u>Ref. No.</u> 13	Part No.	Description Coin Meter (Specify Voltage &
Ref. No.	1	Access Door (28B30 & 28E30)	-		Coin Denomination)
$ \begin{array}{r} 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 7 \\ 8 \\ 9 \\ 10 \\ 11 $	TU5069 TU5078 TU2610 TU3656 TU4822 TU2844 TU6619 TU2683 TU5421 TU5639 TU2801 TU5018 TU5153 TU5106	Access Door (26050 & 26267) Access Door (36B30 & 36E30) Cissell Script Therm-o-cool Name Plate Lock Knob #3186 Key JWC2 Push Button Control Plate Add Coin (Name Plate) Pilot Light 110V Pilot Light 220V Support Rod Single Coin Meter Mtg.Plate Push Button Plate Push Button Switch	15 16 17 18 19 20 21 22	TU3479 P104 TU2842 TU3137 TU3624 TU4958 SV136 M270 TU3400 TU3266 FB187	Coin Denomination, #10-32 x 7/16" Truss Head Scr. 1/4" Cut Washer #10-32 Hex Nut Push-On Speed Nut #6-32 x 1/4" Machine Screw #8-32 x 3/8" Machine Screw #6-32 x 15/16" Rd Head Screw #6 Internal Tooth Lock Washer #6-32 Hex Nut #8-32 Hex Nut #10 Lock Washer
12	1 00100				



ALL HARDWARE SOLD ONLY IN PACKAGES OF 6

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
1	TU5752	Top Access Panel (28B30 &	13	TU2801	Support Rod
		28E30)	14	TU5286	Coin Chute Mtg. Bracket
	TU6093	Top Access Panel (36B30)	15	TU5125	Coin Meter Chute
2	TU2610	Cissell Script	16	TU3479	#10-32 x 7/16" Truss Head
3	TU3656	Therm-o-cool Name Plate			Screw
4	TU4822	Lock #3186	17	P104	$\frac{1}{4}$ " Cut Washer
5	TU2844	Key JWC2	18	TU2842	#10-32 Hex Nut
6	TU6619	Push Button Control Plate	19	TU3137	Push-In Speed Nut
7	TU2683	Add Coin (Name Plate)	20	TU3624	#6-32 x $\frac{1}{4}$ " Rd Head Screw
8	TU6016	Double Control Panel	21	M270	#6 Internal Tooth Lockwasher
		Weldment	22	SV136	#6-32 x 15/16" Rd Head Screw
9	TU5421	Pilot Light 110V	23	TU3400	#6-32 Hex Nut
	TU5639	Pilot Light 220V	24	TU4958	#8-32 x 3/8" Machine Screw
10		Coin Meter (Specify Voltage	25	TU3266	#8-32 Brass Nut
		& Coin Denomination)	26	M262	#8-32 x 3/8" Truss Head
11	TU5153	Push Button Plate			Screw
12	TU5106	Push Button Switch	27	FB187	#10 Split Lockwasher

TROUBLE SHOOTING CHART FOR 28BS30, 36BS30

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

Trouble	Cause	Remedy			
	Power Off	Turn Power On			
	Line Fuse Blown	Replace Fuse			
	Defective Timer	Greenwald Series 5900 - See Greenwald Service Manual			
Fan Motor	Defective Motor	Replace or Take To Authorized Service Station For Repairs			
Won't Start	Door Switch Out Of Adjustment	Adjust Door Switch For Proper Operation			
	Door Switch Or Push Button Switch Defective	Replace Switch			
	Cool-Down Thermostat Defective	Replace Thermostat			
	Loose Or Broken Wire	Check for Continuity			
Basket Won't	V-Belt Broken	Replace V-Belt			
Revolve – Gas or Electric	V-Belt Loose	Adjust Belt Tension			
Heating Unit Does Operate	Motor Pulley Loose	Tighten Set Screws			
	Basket Overloaded	Remove Load			
	Elec. Power To Heating Unit Turned Off	Turn Power On			
-	Line Fuse or Heater Circuit Fuse To Heating Unit	Replace Fuse			
Basket Revolves	Gas Turned Off	Open Manual Gas Valve			
Gas or Electric Unit Does Not Operate	Gas Pressure Too Low	Check manifold pressure & adjust to pressure specified on rating plate. If this pressure cannot b obtained, have gas supplier check main pressure			
	Defective Thermostat	Replace Thermostat			
	Defective Safety Over- heat Thermostat	Replace Thermostat			
	Defective Gas Valve	Replace Solenoid Unit			
	Defective Power Relay For Elec. Heating Unit	Replace Relay			

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TROUBLE	CAUSE	REMEDY
Basket won't	Loading door open	Close door
revolve- Gas or Electric Heating Unit	Lint compartment door open	Close door
won't operate	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 defec- tive	Replace Switch
	Door Switch out of adjustment	See Door Switch Adjustment Sheet in Service Manual
	Door Switch defec- tive	Replace Switch
	Defective relay	Replace Relay
Main burners burning with	Air shutter closed	Open air shutters on front of burners to give sharp blue flame
yellow flame	Dirt in burner	Remove burners and blow out with compressed air
	Gas pressure too high	Check manifold pressure and adjust to pressure specified on rating plate.
	Orifice 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	Gas turned off	Open manual gas valve
won't light	Pilot orifice blocked	Remove and clean.
	Gum filter clogged	Replace with new filter

TROUBLE	CAUSE	REMEDY		
Excessive noise or	Dryer not level	Check leveling bolts to make sure of good contact between all four bolts and floor. Adjust bolts to level Dryer.		
vibration	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 and 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 inc orrectly	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 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.		

TROUBLE	CAUSE	REMEDY
	Line Fuse or Heater Circuit Fuse Blown To Heating Unit	Replace Fuse
	Power to Heating Unit turned off	Turn on Power
	Pilot burner out	Relight pilot burner
Dryer does not heat	Main burners not operating	Refer to section in this chart covering this problem
	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		
	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 restrict- ed 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