INDIOT CARBORUNDUM. (THER Tu-2682 STARTED T PILOT ON 62 ENERGY SAVERS 7-12-77 STARTED weld pine on ES dayers on order #35 SER. # 2700 28 ES SPOTWELDED BONNET, WELD PINS ON LINT TRAP 8-10-77 44 FRONT PANEL 8-8-97 15 L28 = # 2040 started putting scrube to seal SERVICE MA ST 36ED WELDED BONNET PL 9297 **28ES30** JUNE-78 REMOVED PERPENDICULAR GAS COEK. LAUNDRY DRYER

GAS

Installation

Service

Operation

Parts

W.M. Cissell Manufacturing Company

Louisville, Kentucky U.S.A.

Printed in U.S.A.

D0088R1 2/07 4.26.76 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.

SPECIFICATIC	PN	Page 2-4			
INSTA LLATIO	N	Page 5-9			
SERVICE AND	MAINTENANCE	Page 10-13			
PARTS AND H	PARTS AND HARDWARE Page				
TROUBLE SHO	OOTING	Page 28-32			
NOTE	NOTE	NOTE			
<u>BE SAFE</u> -	SHUT MAIN POWER OFF EXT BEFORE SERVICING	ERNALLY TO MACHINE			

GENERAL INFORMATION

The Cissell 28E30 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 28E30 Laundry Dryer. Hot, dry air is properly and effectively moved through basket and exhausted through a lint trap to atmosphere.

The Cissell 28E30 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.

Specify Cissell part number and manufacturer's motor number

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
MTR120	208/60/3

28ES30 DRYER GAS-HEATED

BASKET LOAD CAPACITY	
Floor Space	68 1/2" High x 50 1/2" Deep x 28 3/4" Wide
Basket Size	28" Dia. x 30" Deep
Exhaust Duct	6" 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	300 C.F.M.
*B.T.U. Input (2 Burners)	80,000 Per Hour - Natural Gas and (LP) Liquid Petroleum Gases
Gas Supply	1/2" Pipe Connection
Approximate Drying Time 10 Lbs. D	ryweight (Indian Head) 70%
	Retention 10 Minutes
Net Weight (Approx.) Domestic Shipping Weight	500 Lbs.
(Approx.) 1 Carton	550 Lbs.
Export Shipping Weight	
(Approx.) 1 Box	890 Lbs.

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*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.

Electrical Wiring to Dryer Must Comply With Local Electrical Code Requirements

TOTAL BTU/HR Add requirements of dryers and	GAS PIPE SIZE REQUIRED FOR 1000 BTU NATURAL GAS AT 7" W.C. PRESSURE					
all other gas ired equipment.)	In figurii	ng total lengt	h of pipe, m	ake allowanc	e for Tees a	nd Elbows
	25 FT.	50 FT.	75 FT.	100 FT.	125 FT.	150 FT.
60,000	$\frac{1}{2}$	3/4	3/4	3/4	3/4	3/4
80,000	3/4	3/4	3/4	1	1	1
100,000	3/4	3/4	1	1	1	1
120,000	3/4	1	1	1	1	1
140,000	3/4	1	1	1	1	$1\frac{1}{4}$
160,000	3/4	1	1	$1\frac{1}{4}$	$1\frac{1}{4}$	$1\frac{1}{4}$
180,000	1	1	1	$1\frac{1}{4}$	$1\frac{1}{4}$	$1\frac{\overline{1}}{4}$
200,000	1	1	$1\frac{1}{4}$	$1\frac{1}{4}$	$1\frac{1}{4}$	1 1 1 1 1 2 1 2
300,000	1	$1\frac{1}{4}$	$1\frac{1}{4}$ $1\frac{1}{2}$	1 <u>1</u> 1 <u>1</u> 1 <u>1</u> 1 <u>5</u>	$1\frac{1}{4}$ $1\frac{1}{2}$	$1\frac{1}{2}$
400,000	11/1	$1\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{\overline{1}}{2}$	$1\frac{1}{2}$	$2^{}$
500,000	$\begin{array}{c}1\frac{1}{4}\\1\frac{1}{4}\end{array}$	11/2 11/2	$\frac{-2}{1\frac{1}{2}}$	2^{-2}	2^{-2}	$\frac{-}{2}$
600,000	$1\frac{1}{2}$	$1\frac{1}{2}$	2^{-2}	2	2	2
700,000	$1\frac{1}{2}$	2	2	2	2	$2\frac{1}{2}$
800,000	$1\frac{1}{2}$	2	2	2	$2\frac{1}{2}$	$2\frac{1}{2}$
900,000	2	2	2	$2\frac{1}{2}$	$2\frac{1}{2}$	$2\frac{1}{2}$
1,000,000	2	2	2	$2\frac{1}{2}$	$2\frac{1}{2}$	$2\frac{1}{2}$
1,100,000	2	2	$2\frac{1}{2}$	$2\frac{\overline{1}}{2}$ $2\frac{1}{2}$	$2\frac{1}{2}$	$2\frac{1}{2}$
1,200,000	2	2	$2\frac{1}{2}$	$2\frac{1}{2}$	$2\frac{1}{2}$	$2\frac{1}{2}$
1,300,000	2	$2\frac{1}{2}$	$2\frac{1}{2}$	$2\frac{1}{2}$	$2\frac{1}{2}$	3
1,400,000	2	$2\frac{1}{2}$	$2\frac{1}{2}$	$2\frac{1}{2}$	3	3
1,500,000	2	$2\frac{1}{2}$	$2\frac{1}{2}$	$2\frac{1}{2}$	3	3
1,600,000	2	$2\frac{1}{2}$	$2\frac{1}{2}$	3	3	3
1,700,000	2	$2\frac{1}{2}$	$2\frac{1}{2}$	3	3	3
1,800,000	$2\frac{1}{2}$	$2\frac{1}{2}$	3	3	3	3
1,900,000	$2\frac{1}{2}$	$2\frac{1}{2}$	3	3	3	3
2,000,000	$2\frac{1}{2}$	$2\frac{1}{2}$	3	3	3	$3\frac{1}{2}$
2,200,000	$2\frac{1}{2}$	3	3	3	$3\frac{1}{2}$	$3\frac{1}{2}$.
2,400,000	21/2	3	3	3	$3\frac{1}{2}$	$3\frac{1}{2}$
2,600,000	$2\frac{1}{2}$	3	3	$3\frac{1}{2}$	$3\frac{1}{2}$	$3\frac{1}{2}$
2,800,000	$\begin{array}{c} 2\frac{1}{2} \\ 2\frac{1}{2} \\ 2\frac{1}{2} \\ 2\frac{1}{2} \\ 2\frac{1}{2} \end{array}$	3	3	$\frac{52}{3\frac{1}{3}}$	$3\frac{1}{2}$	$3\frac{1}{2}$
3,000,000	$2\frac{1}{2}$	3	$3\frac{1}{2}$	312 312 312 312 312 312	$3\frac{1}{2}$	4
3,200,000	3	3	$3\frac{1}{2}$	31	$3\frac{1}{2}$	4
3,400,000	3	$3\frac{1}{2}$	$3\frac{1}{2}$	3 <u>1</u>	$\frac{52}{4}$	4
3,600,000	3	$3\frac{1}{2}$	$3\frac{1}{2}$	$3\frac{1}{2}$	4	4
3,800,000	3	$3\frac{1}{2}$	$3\frac{1}{2}$	4	4	4
4,000,000	3	$3\frac{1}{2}$	$3\frac{1}{2}$	4	4	4
	BASEI		_	RE DROP FO)R LENGTH	GIVEN

the equivalent BTU on the above chart.

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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 <u>O</u> 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 6-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 earth ground; 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.

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, pressure, 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 operation and shutting down direct Ignition Pilot

- 1. Turn on manual gas valve, handle should be lined up with pipe.
- 2. Start machines drying cycle. Control will automatically supply gas to the pilot and direct spark ignites pilot when heat is required. Pilot sensing probe will detect flame and open main burner valve.
- 3. Opening tumbler door will cause main burner valve and pilot flame to go out.
- 4. To shut dryer down, turn off manual gas supply valve, handle should be at right angle to pipe.
- 5. Turn off main electrical power switch.

Main Burner Air Shutter Adjustment

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

Gas Piping Installation

For the installation, operation and maintenance of gas piping and gas appliances, refer to the "National Fuel Gas Code, "ANSI, A223.1-1974.

INSTRUCTIONS TO INSTALL

ENERGY SAVER DUCT ON REAR OF DRYER BEFORE INSTALLATION .

- I. REMOVE DUCT FROM SHIPPING POSITION.
- 2. REMOVE BAG OF FASTENERS.
- 3. FASTEN DUCT ASSEMBLY TO REAR OF DRYER AS SHOWN BELOW:



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,)



OVERALL DIMENSIONS TYPICAL For All 28E30 Gas Dryers

(28ES30 GAS DRYER ILLUSTRATED)



MOUNTING HOLES TOP VIEW

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. <u>Clean lint from</u> <u>thermostats</u> as often as needed.
- 2. <u>CLEAN OUT PANEL</u>: Clean out the inside area of the bonnet of lint and dirt regularly. (Located behind the burner access door.)
- 3. <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.
- 4. <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.
- 5. <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.

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.

<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.



- 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.



INSTRUCTIONS FOR ALIGNING BASKETS ON CISSELL DRYERS

- 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 1

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 basketbearing 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 28E30 DRYER TOP FRONT VIEW



Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
1	TU7287	Jacket Welded Ass'y.	12	TU7296	Side Air Deflector
2	TU7300	Right Wall Welded Ass'y	13	TU7284	Bonnet Welded Ass'y. *
3	TU7313	Right Rear Air Deflector	14	TU7336	Front Plate
4	TU7312	Jacket Rear Plate	15	TU2877	#10 Tinnerman Nut
5	TU7376	6" Extended Collar	16	TU2878	#10 x 5/8" S.M.S. (3 Req'd)
6	TU3218	#8-32 x 7/16"Self-Drill Screw	v 17	TU7305	Upper Left Bonnet Insulation
		(25 Req'd)	18	TU7306	Lower Left Bonnet Insulation
7	TU7292	Rear Divider	19	TU7291	Front Divider
8	TU7293	Right Side Divider	20	TU7350	Gas Fired Unit Name Plate
9	TU7294	Upper Rear Air Deflector	21	TU7373	Clean Out Panel Instruction Plate
10	TU7295	Left Rear Air Deflector			
11	TU7290	Left Side Divider			

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Foreign Distributors: Address Correspondence Attention Export Department ● Cable Code ''CISSELL'' Pacific Coast Office, 4823 W. Jefferson Blvd., Los Angeles



When ordering, specify part number and name.

CISSELL 28ES30 & 28ED30 DRYER FRONT VIEW



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Ref. No.	Part No.	Description
1	TU 7287	Jacket Welded Ass'y.
2	TU 2620	Solid Top (Gas Dryer)
- 3	TU 1979	Door Switch
4	TU 1770	Insulator
5	TU 2373	Door Switch Bracket
6	TU 2483	Sweep Sheet Gaskets
7	CM 35	Coin Box
8	CM 61	Coin Vault Lock Ass'y.
9	TU 3167	Кеу
10	TU 108	Felt Seal
11	TU 2710	Trim Holder
12	TU 7182	Spider Welded Ass'y.
13	TU 2313	Tie Rod
14	TU 2083	Basket Weldment
15	TU 3205	Lock Plate
16	TU 6439	Lint Screen Housing
17	TU 5261	*Self-Cleaning Lint Screen Ass'y
18	TU 5277	Lint Drawer Door
19	TUB1867	Lock & Key
20	TU 5222	Lint Door Handle w/Hardware
21	TU 2384	Bottom Trim
22	T U 7175	See Page <u>17</u>
23	TU 3218	#8 x 7/16" Self-Drill Screw
24	TU 1771	#6 Tinnerman Twin Nut
25	TU 3219	#6 x 1" Sheet Metal Screw
26	TU 2877	#10 Speed Nut
27	TU 2882	1/2"-20 Hex Nut
28	TU 2831	1/2" Split Lock Washer
29	TU 2883	1/2" Cut Washer
30	TU 1978	#14 x $3/4$ " Lg. Sheet Metal Screw
31	TU 4937	3/8"-16 Jam Nut
32	TU 3211	3/8"-16 x 2 1/2" Leveling Bolt
33	TU 2109	Lint Drawer
34	TU 1893	Lint Drawer Name Tag
35	TU 2853	Lint Drawer Seal
36	TU 4819	Lint Drawer Door
37	CB 19	Extension Spring
38 39	TU 6418 TU 7311	Clearance Nameplate
39	10 /311	Lint Trap Door Insulation (Used on
40	TTT 7907	TU 5277 & TU 4819) Side Insulation
40 41	TU 7307 TU 7268	
71	TU 7268 TU 7269	Transformer (120V-24V) Transformer (240V-24V)
42	TU 7395	
74		Lockout Switch (LP Gas Only)
	*TU 6956 *TU 5225	Screen Only Frame Only
	· I U 0440	Frame Only

W. M. CISSELL MANUFACTURING COMPANY CISSELL 831 S. FIRST STREET . P. O. BOX 1143, LOUISVILLE, KY., U.S.A. 40201 28E30 DRYER Foreign Distributors: Address Correspondence Attention Export Department © Cable Cade "CISSELL" Pacific Coast Office, 4823 W. Jefferson Blvd., Los Angeles FRONT PANEL Ask Your Distributor DOOR ASSY. When ordering, specify part number and name. (22) (20) 1 3 10) (II 2 10 18 14 (13) (10) 6 (13)

ALL HARDWARE SOLD ONLY IN PACKAGES OF 6

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
1	TU5420	Front Panel	14	TU3163	Catch Pin
2	TU2194	Door Switch Actuator	15	TU3215	#10-32 x 3/8" Taptite Screw
3	TU2105	Door Switch Spring	16	M262	#8-32 x 3/8" Truss Head Screw
4	TU2090	Basket Door Seal	17	FB187	#8 Split Lock Washer
5	TU2874	Basket Door Handle	18	TU3266	#8-32 Hex Nut
6	TU2236	Hinge Post (2 Req ¹ d)	19	TU4839	#10-32 x 3/8" Machine Screw
7	PIF 172	Delrin Bearing (2 Req'd)	20	TU6336	Cover Plate (Used W/O Coin
8	TU7171	Basket Door Weldment			Meter & Box)
9	TU7169	Rubber Gasket	21	TU7456	Door Catch Assy (W/Rivets)
10	TU7166	Door Glass	22	TU7310	Front Panel Insulation
11	TU2836	$5/16''-18 \ge \frac{1}{2}''$ Hex Head Cap		TU7172	Door Ass'y. consists of Ref. Nos.
		Screw			4,5,7,8,9,10,13,14,15, & 19
12	TU2378	#10 x 5/8" Sheet Metal		TU4827	Actuator Ass'y. consists of Ref.
		Screw			No's. 2,3,16,17, & 18
13	TU4840	#10-32 Hex Crown Nut			

TU- 5158 close cetch asably.

CISSELL LAUNDRY DRYER THERMOSTAT ASS'Y. TU5408



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 ⁰ Thermostat (Low)
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	TU3218	#8 x 7/16" Self-Drill Screw (2 req'd)
9	TU6067	#8 Tinnerman Clip (2 req'd)

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When ordering, specify part number and name.

CISSELL · 28ES30 DRYER REAR VIEW

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Ref. No.	. Part No.	Description	Ref. No.	Part No.	Description
1	TU7287	Jacket Welded Ass'y.	30	TU4937	3/8"-16 Jam Nut
2	TU2335	Electrical Box Cover	31	TU3211	$3/8$ "-16 x $2\frac{1}{2}$ Leveling Bolts
3	M155	Wire Harness Clamp	32	F819	5/16"-18 x 5/8" Square Head
4	TU2726	Strain Relief Plate			Set Screw
5	TU2423	See Page 22	33	TU3282	5/16"-18 x 3/8" Nylok Set Scr.
6	TU7184	Bronze Bushing (2 Req'd)	34	TU5439	5/16"-18 x 3/4" Hex Head Scr.
7	TU6220	Relay Mounting Plate (For	35	VSB130	5/16" Cut Washer
		Dryers With 2 Or More	36	TU2814	5/16" Split Lock Washer
		Relays)	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 2	43	IB140	3/8" Cut Washer (4 Req'd)
13	TU5241	Кеу	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	F1116	S.N. Plate
16	TU5850	Motor Mount Weldment	48	TU3246	3/8"-16 x 1" Hex Hd. Screw
17	TU2474	Top & Bottom Gasket			(4 Req'd)
18	TU2473	Side Gasket	49	TU2372	Snap Bushing
19	TU2476	Felt Seal	50	TU5682	Blanking Plate
20	TU4684	Кеу	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.		TU3496	Relay 115V 50 or 60 Cy. (3 Pole)
22	TU5079	Rear Guard Ass'y.		TU3495	Relay 208 or 230V 50 or 60 Cy.
		(Complete)			(3 Pole) 🌲
	TU7468	Rear Guard Ass'y.	52	TU7018	Bearing Housing
		(W/O Cover Plate)	53	TU7019	Bearing & Collar Ass'y.
23	TU7016	15" Basket Sheave	54	TU7162	Basket Bearing Bracket
24	TU5887	Кеу	55	TU7467	Cover Plate
25	TU7021	V-Belt (4L570)			
26	TU4794	V-Belt (4L590)			
27	TU5217	14" Idler Sheave			
28	TU5213	Idler Bracket (W/Grease			
		Fitting)			
29	TU3218	#8 x 7/16" Self-Drill Screw			

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

When ordering, specify part number and name.

CISSELL -28ES30 DRYER REAR DUCT & INTAKE VIEW



4

REF NO.	PART NO.	DESCRIPTION
1.	TU7375	8"-90 ⁰ Extended Elbow
2.	TU7265	8" Dia. 37 <u>1</u> " Duct
3.	TU7276	Tee & Damper Ass'y. (TU7261 Tee Only)
4.	TU7297	Rear Air Guide Welded Ass'y.
5.	TU3218	#8-7/16" Self-Drill Screw
6.	TU7277	Riveted Duct Assembly
7.	TU7272	Damper Shaft
8.	TU7275	Damper Ring Welded Ass'y.
9.	TU7274	Damper Flap (2 Req'd)

CISSELL 28B30 36B30 LAUNDRY DRYER 28E30 36E30 AIR SWITCH ASSY. TU2423



REF. NO.	PART NO.	DESCRIPTION
1	TU2463	Actuator Arm
2	TU1981	Air Switch
3	ŤU1770	Insulator
4	TU2462	Air Switch Bracket
5	TU3219	#6 x 1" S.M.S.
6	TU321 8	#8 x 7/16" Self–Drill Screw
7	TU1771	#6 Tinnerman Twin Nut
8	F888	"E" Ring

ADJUSTMENT OF AIR SWITCH SEE PAGE _____1



TU7345 GAS HEATING UNIT ALL HARDWARE SOLD ONLY IN PACKAGES OF 6

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description	
1	TU7284	Gas Bonnet Welded Ass'y.	13	SU65	$\frac{1}{4}$ " ODT Compression Nut	
2	CB36	$\frac{1}{4}$ -20 x $\frac{1}{2}$ " Hex Hd Screw	14	PU8	$\frac{1}{4}$ " Compression Bead	
3	TU1802	Burner (All Gases)	15	TU7266	Sensor Lead 15"	
4	TU2169	Gas Burner Orifice (Specify	16	TU7340	Pilot Gas Line	
		Size)	17	TU7417	Natural Gas Pilot Orifice	
5	TU6322	Gas Manifold Ass'y.		TU7418	LP Gas Pilot Orifice	
6	TU2224	1/8" Plug For Gas Manifold		TU7419	Manufactured Gas Pilot Orifice	
		Test Hole	18	TU7279-	Sensing Probe TU7269	
7	TU2226	2 Piece Mounting Bracket	19	TU7267 >>	Pilot Burner Assy. (Nat. Gas) TUTETO	
8	TU7358	¹ / ₂ '' x 34'' Pipe Nipple (28E30 &		PU7420	Pilot Burner Assy. (LP Gas) 707870	
		36E30)		TU742T	Pilot Burner Assy. TU7870	
	TU7437	¹ / ₂ " x 28" Pipe Nipple (28B30 &	20	LB74	#14 Tinnerman Nut	
		36B30)	21	TU3209	#14 x 5/8" Slotted Pan Hd Scr.	
9	TU7357	Gas Cock	22	TU3218	#8-32 x 7/16" Self-Drill Screw	
10	TU7258	Gas Valve 24V	23	TU4915	#10-32 x 3/16" Rd. Hd. Mach.	
	TU7394	Gas Valve 24V (LP Gas Only)			Screw	
11	FG142	1/8" Elbow 90 ⁰ Street	24	TU7342	Pilot Mounting Bracket	
12	TU7337	Gas Filter	25	TU7395	Lock Out Switch (LP Gas Only)	
			26	TU7268	Transformer (120V-24V)	
				TU7269	Transformer (240V-24V)	



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 240-60-1
		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	LB68	#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	4" Cut Washer
5	TS1021	50 Cy. Timer (56 Min.)	24	TU2842	#10-32 Hex Nut
6	TU6619	Push Button Control Plate	25	TU3137	Push On Speed Nut
7	TU2844	4 Key JWC2		TU3624	#6-32 x $\frac{1}{4}$ " Round Head Screw
8	TU5421	Pilot Light 120V	27	TU7241	#8 x ¼" S. M. S.
	TU5639	Pilot Light 240V	28	SV136	#6-32 x 15/16" Round Head
9	TU5739	Support Rod			Screw
10	TU6018	Single Timer Mtg. Plate	29	M270	#6 Int. Tooth Lock Wash.
11	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)			



Ref. No.	Part No.	Description	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 0-15 240/60 Cy.
		36E30)		TU5842	Timer 0-60 240/60 Cy.
	TU6314	Top Access Panel W/8 Stage		TU6082	Timer 0-15 240/50 Cy.
4		Steam (36B30 Only)		TU6083	Timer 0-60 240/50 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	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 Scr.
10	FG147	Toggle Switch	22	TU3624	#6-32 x $\frac{1}{4}$ " Rd Head Scr.
11	TU5421	Pilot Light 1 2 0V	23	M270	#6 Int. Tooth Lock Washer
	TU5639	Pilot Light 240V	24	TU3400	#6-32 Hex Nut
12	TU6019	Timer Adapter Plate	25	TU7241	#8 x ¼" S. M. S.
			26	TU3805	15/32"- 32 Locking Hex Nut
			27	TU5739	Support Rod

28B30	CISSE	$\mathbf{L}\mathbf{L}$	36B30
28E30			36E30
SINGLE COI	METE:	R CONTR	OL PANEL
	AND		
ACCESS	DOOR	PARTS	



<u>Ref. No.</u> 1	<u>Part No.</u> TU5069	Description Access Door (28B30 & 28E30)	<u>Ref. No.</u> 13	Part No.	<u>Description</u> Coin Meter (Specify Voltage &
	TU5078	Access Door (36B30 & 36E30)			Coin Denomination)
2	TU2610	Cissell Script	14	TU3479	#10-32 x 7/16" Truss Head Scr.
3	TU3656	Therm-o-cool Name Plate	15	$\mathbf{P104}$	¼" Cut Washer 🔹 ❤
4	TU4822	Lock Knob #3186	16	TU2842	#10-32 Hex Nut
5	TU2844	Key JWC2	17	TU3137	Push-On Speed Nut
6	TU6619	Push Button Control Plate	18	TU3624	#6–32 x $\frac{1}{4}$ " Machine Screw
7	TU2683	Add Coin (Name Plate)	19	TU4958	#8-32 x 3/8" Machine Screw
8	TU5421	Pilot Light 1 2 0V	20	SV136	#6-32 x 15/16" Rd Head Scr.
	TU5639	Pilot Light 240V	21	M270	#6 Int. Tooth Lock Washer
9	TU5739	Support Rod	22	TU3400	#6-32 Hex Nut
10	TU 601 8	Single Coin Meter Mtg. Plate	23	TU3266	#8-32 Hex Nut
11	TU5153	Push Button Plate	24	FB187	#10 Lock Washer
12	TU5106	Push Button Switch			



Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
1	TU5752	Top Access Panel (28B30 &	13	TU5739	Support Rod
- A		28E30)	14	TU5286	Coin Chute Mtg. Bracket
	TU6093	Top Access Panel (36B30 & 36E30) 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	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 Int. Tooth Lockwasher
		Weldment	22	SV136	#6-32 x 15/16" Rd Head Scr.
9	TU5421	Pilot Light 120V	23	TU3400	#6-32 Hex Nut
	TU5639	Pilot Light 240V	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

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OPERATION AND TROUBLE SHOOTING ON THE ELECTRONIC PILOT IGNITION SYSTEM

- 1. Energize the dryer & system by coins or by timer.
- 2. The igniter probe will draw a spark and ignite the pilot gas. The pilot flame heats the sensing probe which turns on the main gas flame.
- 3. The above is the pilot & main burner complete cycle. It occurs when the timer is energized and the push to start switch activated & basket rotating.

TROUBLE SHOOTING THE SYSTEM

- 1. Make sure all <u>wire</u> connections are correct to the wiring diagram.
- 2. Make sure the power is <u>off</u> when checking the high voltage igniter probe & lead wire.
- 3. Observe presence of spark. If spark is not present, determine if power is available to the control. The G60 control should be replaced if, with power applied, sparking does not occur. If pilot gas does not light even though a spark is present, gas is not available at the pilot burner or the gas pressure is excessively low or high.
- 4. If pilot gas ignites, but burner does not, check probe lead connections to the sensing probe and control.

Trouble	Cause	Remedy
	Power Off	Turn Power On
	Line Fuse Blown	Replace Fuse
	Defective Timer	Greenwald Series 5900 - See Greenwald Service Manual
Fan Motor Won't Start	Defective Motor	Replace or Take To Authorized Service Station For Repairs
	Door Switch Out Of Adjustment	Adjust Door Switch For Proper Operation
	Door Switch Defective	Replace Switch
	Cool-Down Thermostat Defective	Replace Thermostat
	Loose Or Broken Wire	Check for Continuity
	V-Belt Broken	Replace V-Belt
Basket Won't – Revolve – Gas	V-Belt Loose	Adjust Belt Tension
Heating Unit Does Operate	Motor Pulley Loose	Tighten Set Screws
	Basket Overloaded	Remove Load
*	Gas Turned Off	Open Manual Gas Valve
Basket Revolves Gas Does Not	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
Operate	Defective Thermostat	Replace Thermostat
	Defective Safety Over- heat Thermostat	Replace Thermostat
+	Defective Gas Valve	Replace Solenoid Unit
+	Electronic Pilot Does Not Operate	Make sure all connections are proper - Make sure power is off when checking high voltage connections

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TRO	UBLE	CAUSE	REMEDY		
		Pilot burner does not ignite	Check all connections are proper. <u>Caution</u> : Be sure power is off when checking high voltage connections.		
		Flame too low	Replace with new and clean orifice		
	-	Burners do not ignite but pilot does light	Replace gas valve (Make sure sensing probe is installed)		
Dryer d not heat	1	Main burners not operating	Refer to section in this chart covering this problem and pilot problem		
		Thermostat defective	Replace		
		Gas pressure too lowCheck manifold pressure and adjust to pressure specified on rating plate or call gas utilities.			
		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.		
		Improper main burner orifices	Check for proper orifice size.		
Dryer to hot	00	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.		

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TROUBLE	CAUSE	REMEDY
Basket won't revolve- Gas	Push to start switch not operating	Replace switch
Heating Unit	Loading door open	Close door
won't 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
	Door Switch out of adjustment	See Door Switch Adjustment Sheet in Service Manual
	Door Switch	
	defective Defective relev	Replace Switch
	Defective relay	Replace Relay
	Air Shutter Closed	Open air shutters on front of burners to give sharp blue flame.
Main burners	Dirt in burner	Remove burners and blow out with compressed air
burning with yellow flame	Gas pressure too high	Check manifold pressure and adjust to pressure specified on rating plate.
yellow flame	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.
	Restricted or blocked exhaust	Clean Exhaust
	Gas turned off	Open manual gas valve
Pilot burner won't light	Pilot orifice blocked	Remove and clean
	Gum Filter clogged	Replace with new filter
	Electrode does not spark	Replace pilot

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

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