



OWNER'S MANUAL

75 Lb. Laundry Dryer



MODELS

<u>GAS</u>		<u>STEAM</u>	<u>ELECTRIC</u>
L36USS36G	L36URD36G	L36URS36S	L36URS36E
L36USD36G	L36URS36G	L36URD36S	L36URD36E

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

PHONE: (502) 587-1292
SALES FAX: (502) 585-3625
SERVICE/PARTS FAX: (502) 681-1275

THIS MANUAL MUST BE GIVEN TO THE EQUIPMENT OWNER.

IMPORTANT NOTICES—PLEASE READ

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



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



WARNING: For your safety, the information in this manual must be followed to minimize the risk of fire or explosion or to prevent property damage, personal injury or death.

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

- WHAT TO DO IF YOU SMELL GAS

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

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



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



WARNING: Wear safety shoes to prevent injuries.



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



FOR YOUR SAFETY

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



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



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



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



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



WARNING: Do not operate without guards in place.



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



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



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



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



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



WARNING: Do not place items exposed to cooking oils in your dryer. Items contaminated with cooking oils may contribute to a chemical reaction that could cause a load to catch fire.



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



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



WARNING: Before operating gas ignition system - purge air from natural gas or propane gas lines per manufacturer's instructions.



WARNING: To reduce the risk of electric shock, disconnect this appliance from the power supply before attempting any user maintenance other than cleaning the lint trap. Turning the controls to the OFF position does not disconnect this appliance from the power supply.

**ATTENTION: L'ACHETEUR DOIT PLACER L'AVERTISSEMENT
SUIVANT DANS UN ENDROIT CLAIR ET VISIBLE:**

AVERTISSEMENT. Assurez-vous de bien suivre les instructions donnees dans cette notice pour reduire au minimum le risque d'incendie ou d'explosion ou pour eviter tuot dommage materiel, toute blessure ou la mort.

— Ne pas entreposer ni utiliser d'essence ni d'autres vapeurs ou liquides inflammables dans le voisinage de cet appareil ou de tout autre apparell.

— **QUE FAIRE SI VOUS SENTEZ UNE
ODEUR DE GAZ:**

- Ne pas tenter d'allumer d'apparell.
- Ne touchez a aucun interrupteur. Ne pas vous servir des telephones se trouvant dans le batiment ou vous vous trouvez.
- Evacuez la piece, le batiment ou la zone.
- Appelez immediatement votre fournisseur de gaz depuis un voisin. Suivez les instructions du fournisseur.
- Si vous ne pouvez rejoindre le fournisseur de gaz, appelez le service des incendies.

— l'installation et l'entretien doivent etre assures par un installateur ou un service d'entretien qualifie ou par le fournisseur de gaz.

**ATTENTION: L'ACHETEUR DOIT PLACER L'AVERTISSEMENT
SUIVANT DANS UN ENDROIT CLAIR ET VISIBLE:**

POUR VOTRE SECURITE

Ne pas entreposer ni utiliser d' essence
ni d'autres vapeurs ou liquides
inflammables dans le voisinage de cet
appareil ou de tout autre appareil.

CISSELL DRYER WARRANTY

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

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

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

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

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

CISSELL MAKES NO OTHER EXPRESSED 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, EXPRESSED OR IMPLIED. CISSELL NEITHER ASSUMES, NOR AUTHORIZES ANY PERSON TO ASSUME FOR IT, ANY OTHER WARRANTY OR LIABILITY IN CONNECTION WITH THE MANUFACTURE, USE OR SALE OF ITS EQUIPMENT OR PARTS.

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

IDENTIFICATION NAME PLATE

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









TABLE OF CONTENTS

75 LB. LAUNDRY DRYER





PAGE	PAGE
Model Numbers & Company Address	1
Important Notices	2-4
Dryer Warranty	5
Table of Contents	6
Warnings, Cautionary Notes and Symbols	7-8
Unpacking and General Installation	9
Dryer Outline Dimension (Illustration)	10-11
Specifications	12-14
Motor List	15
General Information	16
Grounding Instructions	17
Piping Recommendations	18
Gas Piping and Gas Loop Piping Installation	19-21
Gas Pipe Size Chart	22
Steam Piping Installation	23-24
Exhaust Installation-Multiple Manifold Duct	25-26
Exhaust Installation with Separate Exhaust	27
Dryer Make-Up Air Requirements	28
Exhaust and Venting	29
Rules for Safe Operation	30
Operating Instructions-Coin Meter Model	31-34
Operating Instructions-Double Timer Model	35-36
Service Savers	37
Troubleshooting	38-41
Spark Ignition System	42-43
General Maintenance	44-45
Burner Air Inlet Shutters Adjustment	44-45
Replacing Bearings and Collars Instructions	48
Basket Alignment	49-50
Shimming the Basket and Spider Assembly	51
Air Switch Adjustment	52
Dryers with Reversing Control Timer	53
Gear Reducer Information	54
Front Panel and Door Assembly	55
Dryer - Front View	56-57
Single Motor Model - Rear View	58-59
Double Motor Model - Rear View	60-61
Duct Work and Air Switch Assembly	62
Bearings and Related Parts	63
Small Gear Reducer	64
Reversing Control Box Assembly	65
Control Panel and Access Door - Double Timer	66
Control Panel and Access Door - Coin Meter	67
Thermostat Assembly	68
Standard Gas Bonnet	69
Steam Heating Unit	70
Electric Heating Unit	71-72
Wire Size of Power Supply for Electric Heating Circuit	73

SYMBOLS

The following symbols are used in this manual and/or on the machine.

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

SYMBOLS

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

Unpacking/General Installation (All Dryers)

UNPACKING

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

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

See outline clearance diagrams for correct dimensions.

Remove all packing material such as: tape, manuals, skid, etc.

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

Check voltage and amperes on rating plate before installing the dryer.

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

GENERAL INSTALLATION (ALL DRYERS)

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

IMPORTANT

Opening the clothes loading door deactivates the door switch to shut off the motors, fan, gas, steam, or electric element. To restart the dryer, close the door and press in the push to start button and hold briefly.

IMPORTANT

This dryer is designed for a capacity maximum load. Overloading it will result in long drying times and damp spots on some clothes.

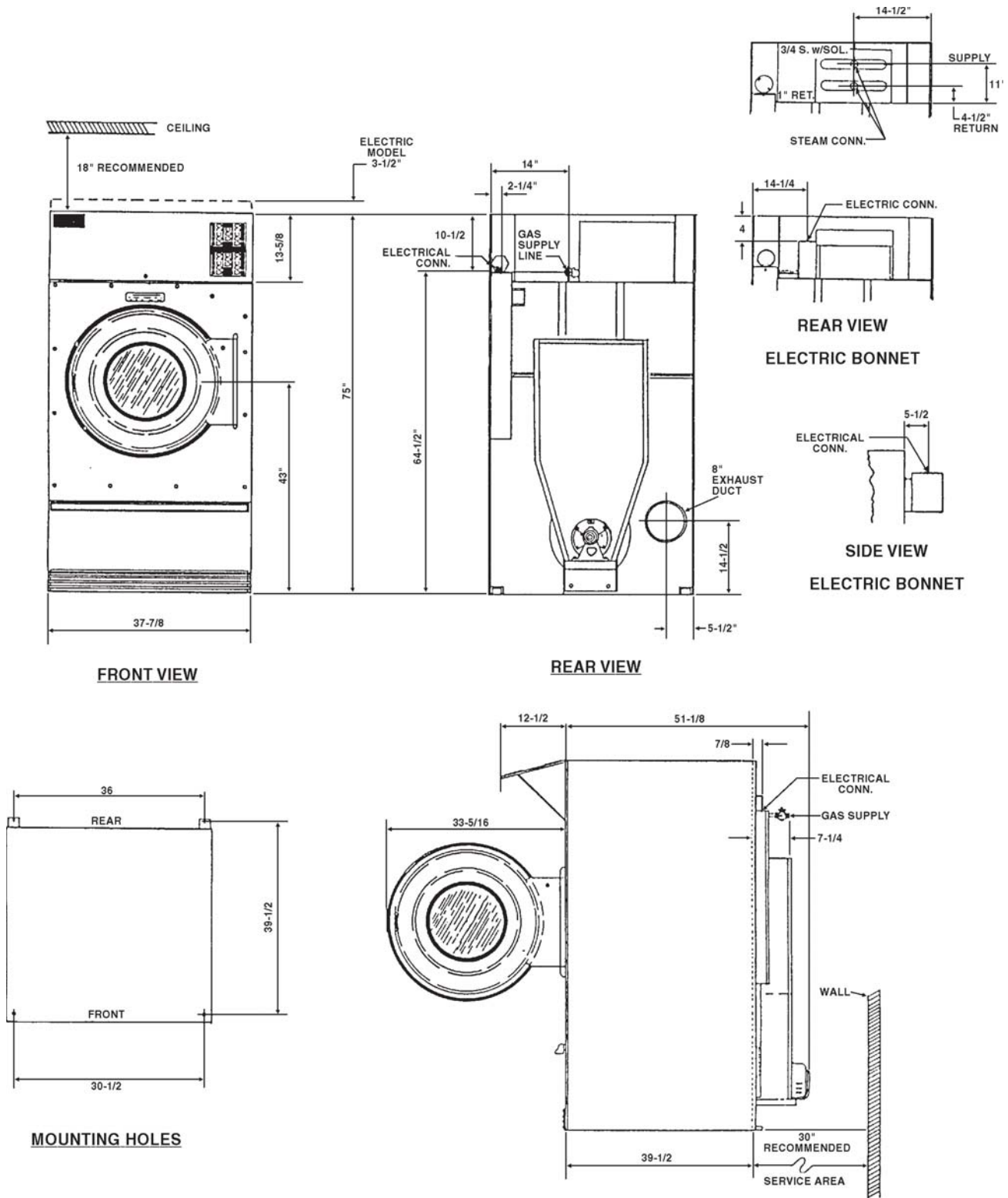
IMPORTANT

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

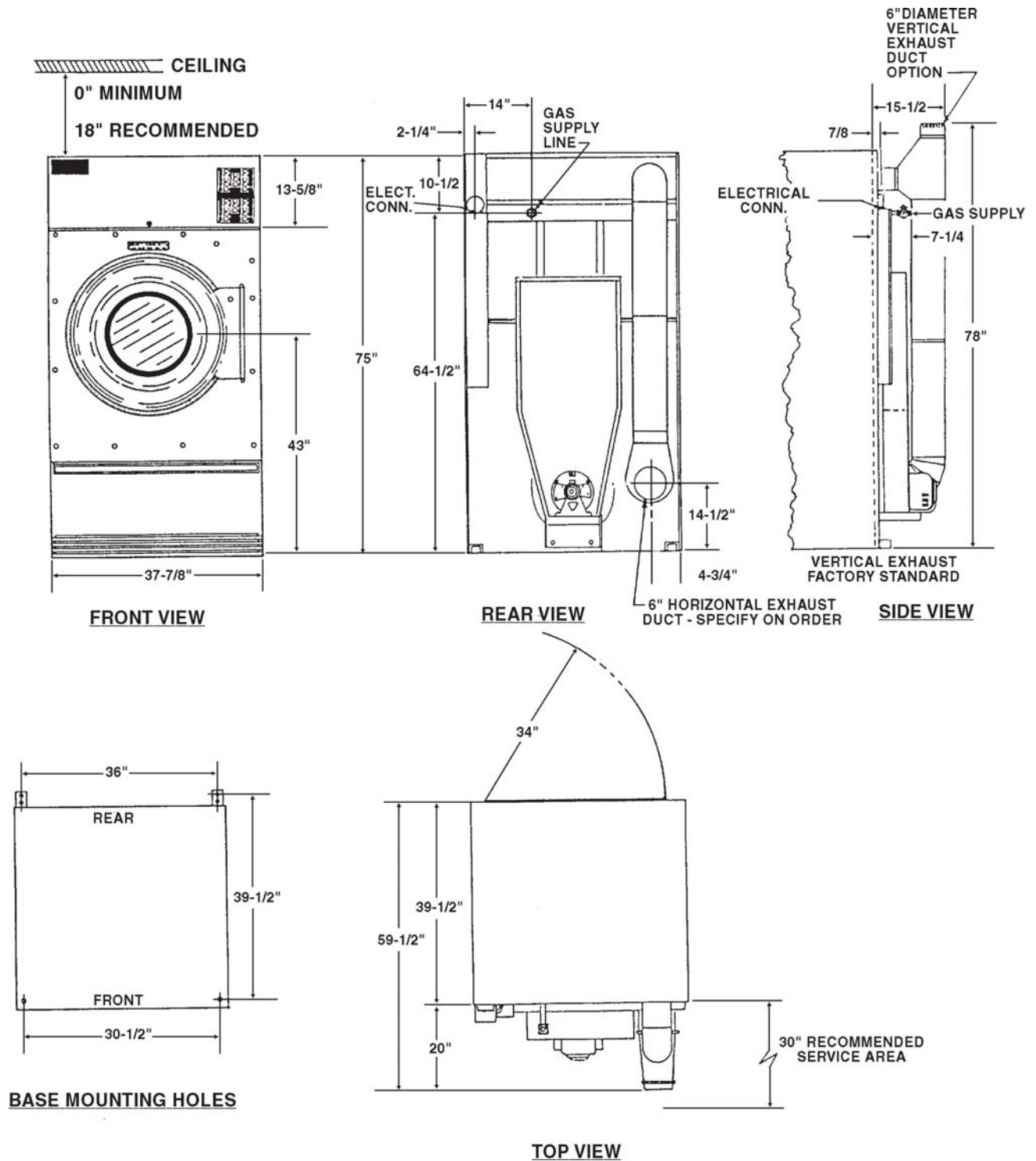
IMPORTANT

Provide adequate clearance for air opening into the combustion chamber.

75 lb. "UR" Dryer Outline Dimensions (Illustration)



75 lb. "US" Dryer Outline Dimensions (Illustration)



Specifications

GENERAL SPECIFICATIONS NON-ENERGY SAVER MODELS	Basket Load Capacity	75 lb (34 kg) dryweight
	Floor Space	75" (1905 Mm) H x 38" (965 mm)W x 51" (1295 mm) Deep
	Basket Size	36" (914 mm) diameter x 36" (914 mm) Deep - 21 cu. ft. (0.63 m ³)
	Exhaust Duct	8" diameter (203 mm)
	Motor Sizes	Fan - 1/3 Hp; Basket—1 Hp Single Motor Dryer—1 Hp
	Maximum Air Displacement	1000 cfm (28.31 m ³ /min.)
	Recommended Operating Range	788-913 cfm (22.31 - 25.85 m ³ /min.)
	Net Weight (approximate)	601 lb (272 kg) - Single Motor 621 lb (282 kg) - Double Motor
	Domestic Shipping Weight	636 lb. (289 kg) - Single Motor (carton) 656 lb (298 kg) - Double Motor
	Export Shipping Weight	645 lb (293 kg) - Single Motor (box) 621 lb (282 kg) - Double Motor
GAS FIRED MODEL	Export Shipping Dimensions	83" (2108 mm)H x 45" (1143 mm)W x 61" (1549 mm) L
	Export Crating	99.3 ft ³ (3.73 m ³)
	Basket rpm	Reversing 40-3.2reversals per minute. Non-reversing - 40.
	Gas Supply	1/2" pipe connection (DN15)
	Gas Pressure Regulator	Set at 3.5" water column (8.9 cm) (natural gas)
	*Btu Input (4 burners)	180,000 Btu/h (natural & LP gas)
	Electronic Ignition	Direct spark ignition system
	* Input ratings as shown are for elevations up to 2000 ft. (610 m). For higher elevations, ratings should be reduced 4% for each 1000 feet (305 m) above sea level.	

Specifications

ENERGY SAVER GAS MODEL

Basket Load Capacity	75 lb (34 kg) dryweight
Floor Space	78" (1981 mm) H x 59 1/2" (1511 mm) Deep x 38" (965 mm) W
Basket Size	36" (914 mm) diameter x 36" (914 mm) Deep - 21 cu. ft. (0.63 m ³)
Exhaust Duct	6" diameter (152 mm)
Motor Sizes	Fan - 1/3 Hp; Basket - 1 Hp Single Motor Dryer - 1 Hp
* BTU Input (3 burners)	144,000 Btu/h natural and LP gases
Maximum Air Displacement	536 cfm (15.18 m ³ /min.)
Recommended Operating Range	436-536 cfm (12.35 - 15.18 m ³ /min.)
Gas Supply	1/2" pipe connection (DN15)
Gas Pressure Regulator	Set at 3.5" (89 cm) water column (natural gas)
Manifold Pressure (LP Gas)	11" (279 mm) water column
Net Weight (approximate)	675 lb (306 kg)
Domestic Shipping Weight (approximate)	725 lb (329 kg) 1 carton
Export Shipping Weight (approximate)	1215 lb (551 kg) 1 box
Export Shipping Dimensions	83" (2108 mm) L x 45" (1143 mm) W x 61" (1549 mm) H
Export Crating	131.8 cu. ft. (3.73 m ³)
Basket rpm	Reversing 40-32 reversals per minute. Non-reversing - 40.
* Input ratings as shown are for elevations up to 2000 ft. (610 m). For higher elevations, ratings should be reduced 4% for each 1000 feet (305m) above sea level.	

Specifications

STEAM HEATED MODEL	Operating Steam Pressure	15 psi (low pressure) 100 psi (high pressure)
	Supply Connection to Solenoid	3/4" (DN20)
	Return Connection	1" (DN25)
	Steam Consumption	214, 265 Btu/h - 6.4 BHP - 221 lb of condensate
	Heat Capacity	6 Coils
	Net Weight (approximate)	705 lb (320 kg) - Single Motor 733 lb (333 kg) - Double Motor
	Domestic Shipping Weight	730 lb (331 kg) - Single Motor (carton) 769 lb (349 kg) - Double Motor
	Export Shipping Weight	740 lb (336 kg) - Single Motor (box) 778 lb (353 kg) - Double Motor
	Export Shipping Dimensions	83" (2108 mm) H x 45" (1143 mm) W x 61" (1549 mm) L
	Export Crating	99.3 ft ³ (3.73 m ³)
	Heater Input	40 kW/h (34,416 K/Cal)
	Net Weight (approximate)	639 lb (290 kg) - Single Motor 674 lb (306 kg) - Double Motor
	Domestic Shipping Weight	674 lb (306 kg) - Single Motor (carton) 686 lb (311 kg) - Double Motor
	Export Shipping Weight	686 lb (311 kg) - Single Motor (box) 700 lb (318 kg) - Double Motor
	Export Shipping Dimensions	83" (2108 mm) H x 45" (1143 mm) W x 61" (1549 mm) L
	Export Crating	99.3 ft ³ (3.73 m ³)
ELECTRIC HEATED MODEL		

Motor List

DOUBLE MOTOR MODELS

Motor No.	Voltage	Hz.	Phase	Basket/Fan	HP	Amps	RPM
MTR203	115/200/230	60	1	B	1	10.4/5.2	1725
MTR303	200-240/460	60	3	B	1	3.2/1.6	1725
MTR303	220/380	60	3	B	1	3.2/1.6	1725
MTR301	115/200-240	50	1	B	1	9.0/4.9	1425
MTR303	200/346	50	3	B	1	3.2/1.6	1425
MTR303	220/380	50	3	B	1	3.2/1.6	1425
MTR303	240/415	50	3	B	1	3.2/1.6	1425
MTR101	575	60	3	B/F	1	1.7	1725
MTR300	115/200-240	60	1	F	1/2	6.2/3.1	1725
MTR302	200-240/460	60	3	F	1/2	1.8/0.9	1725
MTR302	220/380	60	3	F	1/2	1.8/0.9	1725
MTR300	115/200-240	50	1	F	1/2	6.2/3.1	1425
MTR302	200-220/346-380	50	3	F	1/2	1.8/0.9	1425
MTR184	240/415	50	3	F	1/3	1.6/.90	1425

SINGLE MOTOR MODELS

Motor No.	Voltage	Hz.	Phase	HP	Amps	RPM
MTR301	115/208-230	60	1	1	9.0/4.9	1725
MTR303	208-230/460	60	3	1	3.2/1.6	1725
MTR303	220/380	60	3	1	3.2/1.6	1725
MTR248	575	60	3	1	1.8	1725
MTR250	240	50	1	1	7.3	1425
MTR303	200-240/346-415	50	3	1	3.2/1.6	1425

General Information

GENERAL INFORMATION

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

Permanent press, durable press and other modern day fabrics require the care that your laundry dryers now provide.

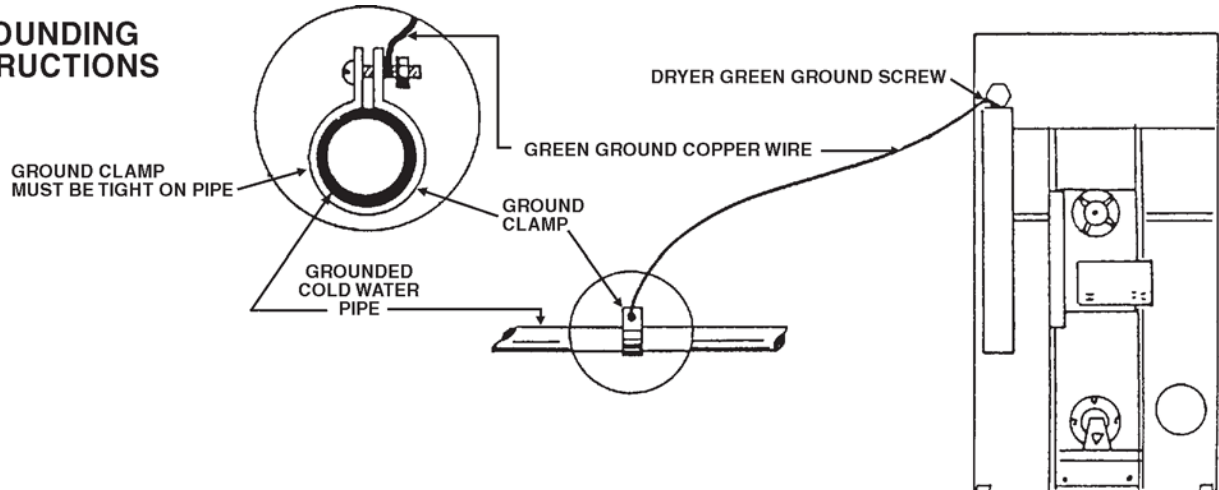
DRYER COOL-DOWN

At the end of the drying cycle, a timed "cool-down" control automatically takes over and continues the rotation of the fan and basket without heat until the garment load reaches a safe cool temperature (single timer models only). This function is performed at the end of each drying cycle and continues for two minutes.

Dryers must be electrically grounded by a separate #14 or larger

Grounding Instructions (Illustration)

GROUNDING INSTRUCTIONS



ELECTRICAL CONNECTIONS

green wire from the grounding terminal within the service connection box to a cold water pipe, or through the fourth green wire properly grounded and connected to the grounding terminal. In all cases, the grounding method must comply with local electrical code requirements; or in the absence of local codes, with the *National Electrical Code, ANSI/NFPA 70 or the Canadian Electrical Code, CA C22.1*.

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

ELECTRICAL CONTROLS SERVICING

Caution: Label all wire prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation.

Verify proper operation after servicing.

«Attention. Lors des opérations d'entretien des commandes, étiqueter tous les fils avant de les déconnecter. Toute erreur de câblage peut être une source de danger et de panne»

Piping Recommendations

PIPING RECOMMENDATIONS

1. Trap each dryer individually. Always keep the trap clean and in good working condition.
2. When dryer is on the end of a line of equipment, extend header at least 4 feet beyond dryer. Install globe valve, union, check valve and 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.

STEAM HEATING UNITS

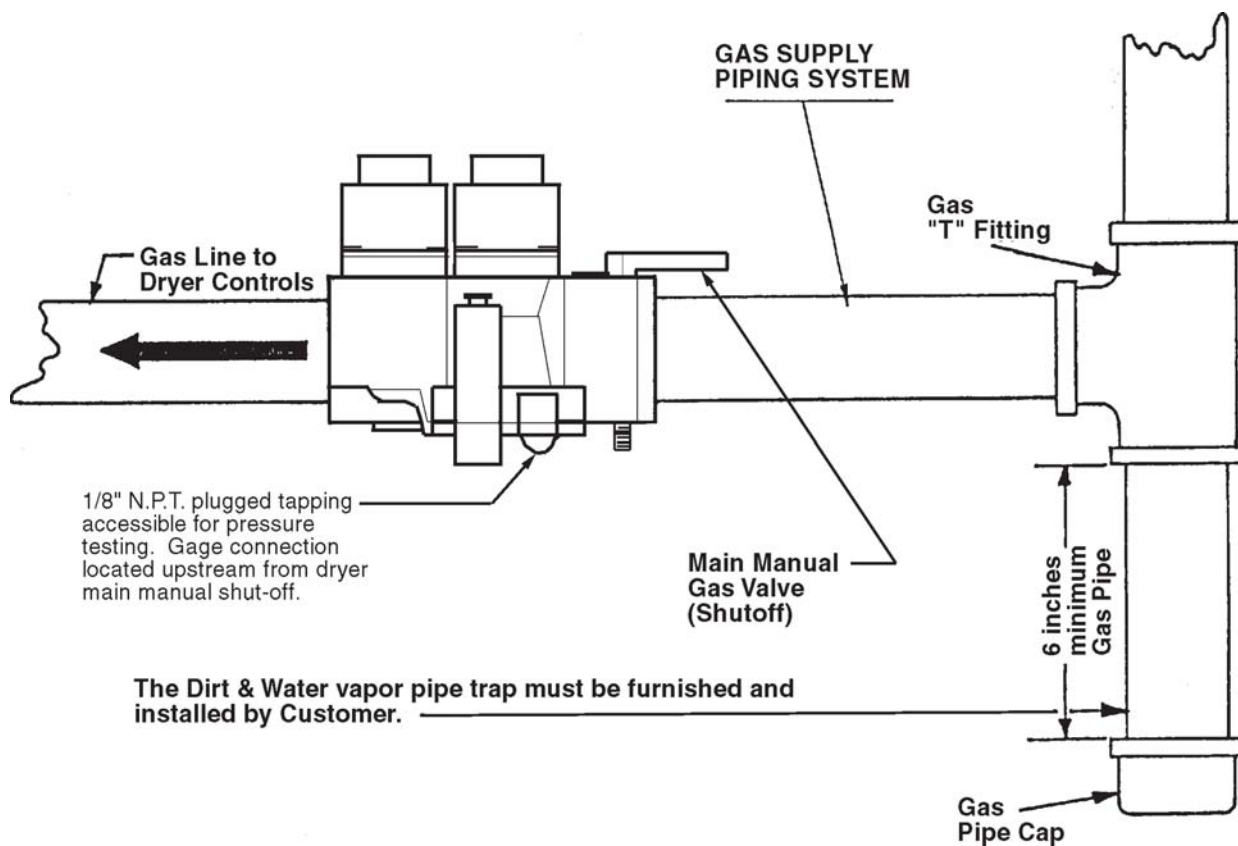
1. Keep steam coils clean.
2. Check periodically and clean as often as required.
3. Remove lint and dirt accumulation from coil fins periodically as dirty lint-laden coil fins decrease the efficiency of steam-heated dryers.

**GAS PIPING
INSTALLATION**

1. The installation must conform with local codes, or in the absence of local codes with the *National Fuel Gas Code, ANSI Z223.1* or the *CAN/CGA-B149, Installation Codes*.
2. Check identification nameplate for type of gas for dryer.
3. Check for altitude elevation of dryer.
4. Check with utilities company for proper gas pressure and gas supply line.
5. Natural gas only—check the gas pressure inlet supply to dryer, 11 inches water column maximum. Manifold pressure—3.5 inches water column pressure.
6. L.P. gas only—check the gas pressure inlet supply to dryer, 13 inches water column maximum. Manifold pressure—11 inches water column pressure.

CAUTION: Low gas pressure and intermittent gas will cause gas ignition problems and inadequate drying of laundry.

Gas Piping Installation (Illustration)



The dryer and its individual shutoff valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psi (3.5 kPa).

The dryer must be isolated from the gas supply piping system by closing its individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psi (3.5 kPa).

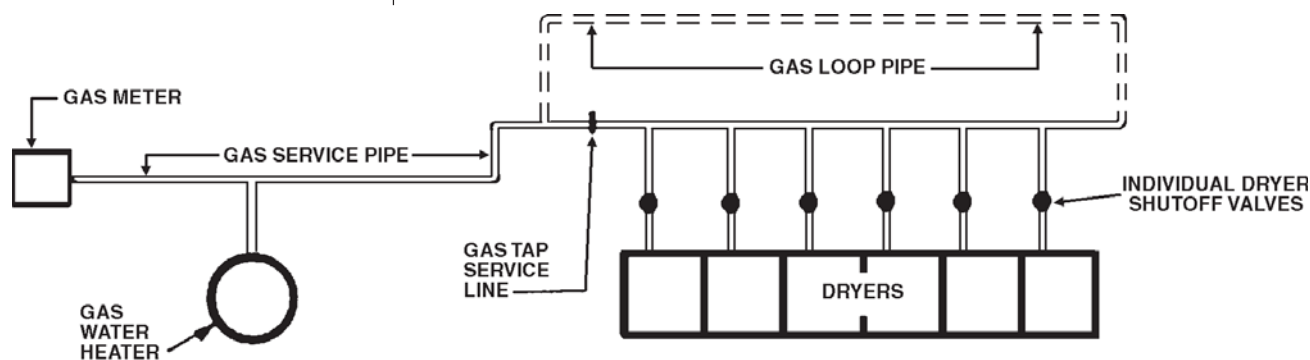
Gas Service Installation Instructions

GAS SERVICE INSTALLATION INSTRUCTIONS

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

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

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



WARNING:
LIQUIFIED PETROLEUM GASES ONLY!

GAS PRESSURE REGULATOR FOR LIQUIFIED PETROLEUM GASES

A gas pressure regulator for liquified petroleum gases is not furnished on gas heated clothes dryers. This regulator is normally furnished by the installer. In accordance with American Gas Association (AGA) standards, a gas pressure regulator, when installed indoors, must be equipped with a vent limiter or a vent line must be installed from the gas pressure regulator vent to the outdoors.

Gas Pipe Size Chart

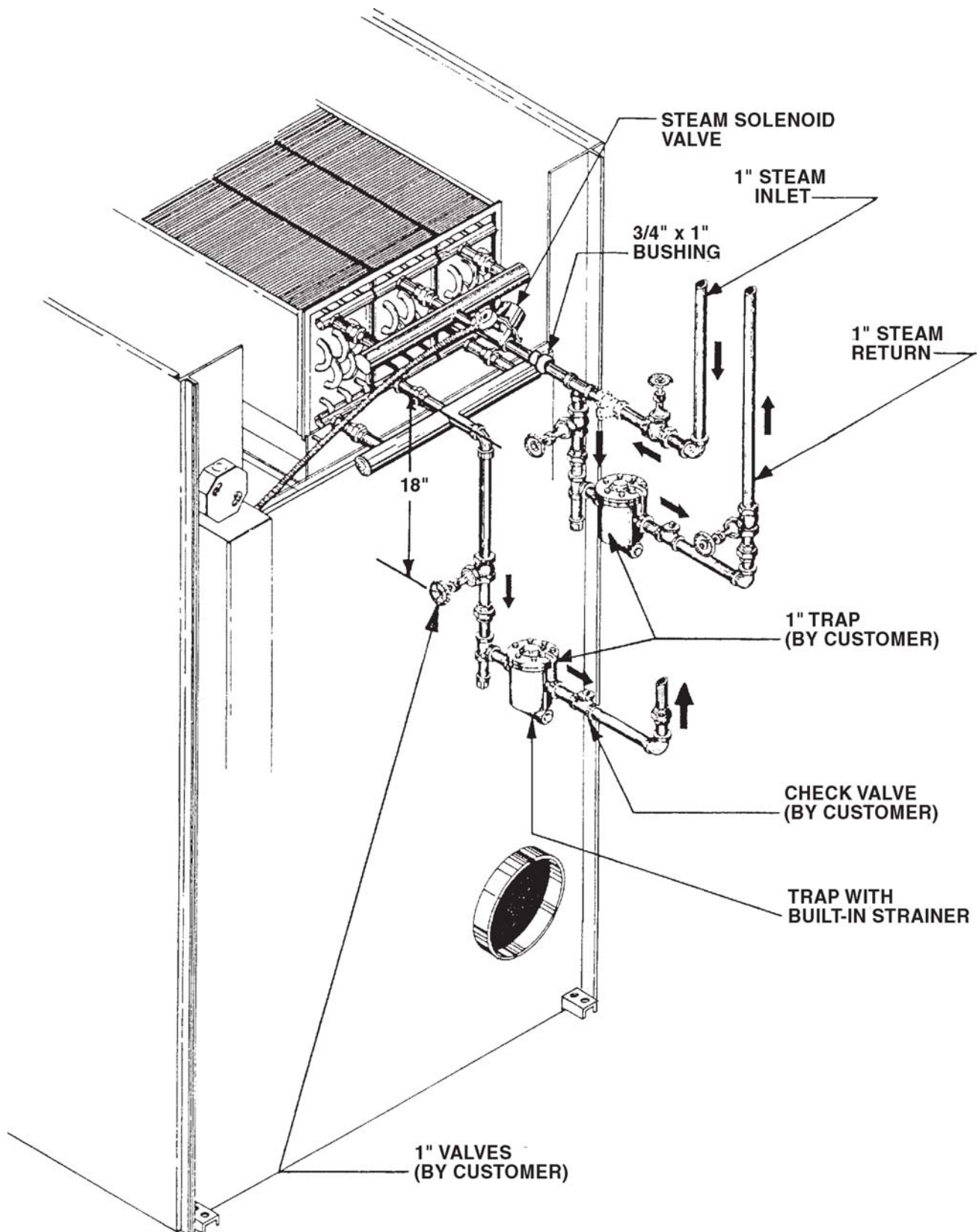
TOTAL BTU/HR (for LP Gas correct total BTU/HR below by multiplying by .6)	TOTAL KCAL	GAS PIPE SIZE FOR 1000 BTU (250 KCAL) NATURAL GAS AT 7" (17.8 CM) W.C. PRESSURE					
		In figuring total length of pipe, make allowance for tees and elbows.					
		(25 ft.) 7,62 m	(50 ft.) 15,24 m	(75 ft.) 22,86 m	(100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

Steam Piping Installation Instructions

STEAM PIPING INSTALLATION INSTRUCTIONS

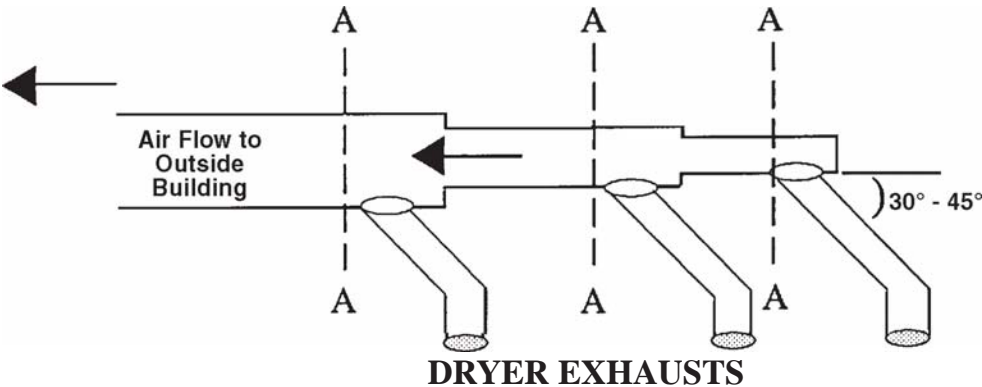
1. Set and anchor dryer in position. Machine should be level to assure proper steam circulation.
2. To prevent condensate draining from headers to dryer, piping should have a minimum 12" above respective header. Do not make steam connection to header with a horizontal or downwardly facing tee or elbow.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

Steam Piping Installation (Illustration)



Dryer Installation With Multiple Exhaust

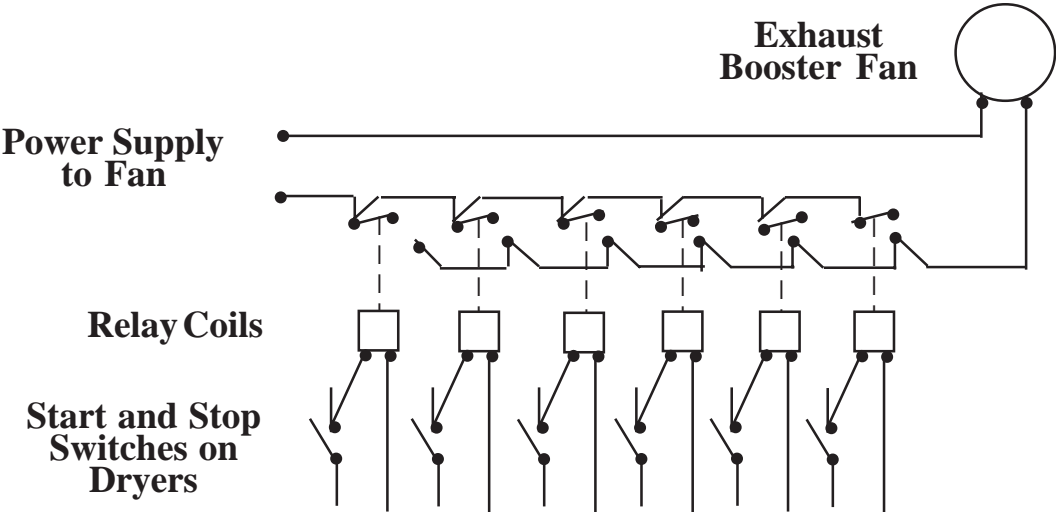
For Exhaust Duct less than 14 feet and 2 elbows equivalent and less than 0.3 inches static pressure.



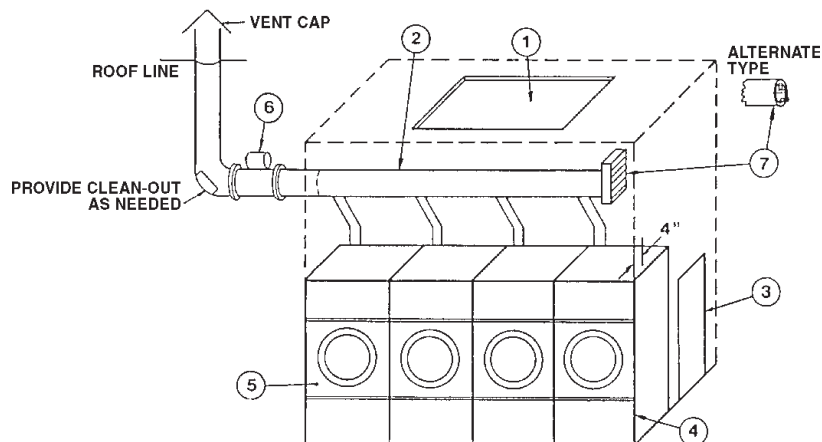
Area of section “A-A” must be equal to the sum of dryer exhaust pipes entering multiple exhaust pipe. (See chart below.)

No. of dryers Duct diameter (in inches)	MODELS: L28FD30, L28US30, L36FD30, L36US30, L36US36, L44FD42																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
	6	9	11	12	14	15	16	17	18	19	20	21	22	23	23	24	25	26	26	27	28	28	29	30
(in cm)	15	23	27	30	35	38	41	43	46	48	51	53	56	58	58	61	63	66	66	68	71	71	73	76
No. of dryers Duct diameter (in inches)	MODELS: L28CD30, L28UR30, L36CD30, L36UR30, L36UR36, L36AR36, L44FD42																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
	8	12	14	16	18	20	22	23	24	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
(in cm)	20	30	35	41	46	51	56	58	61	66	68	71	73	76	78	81	84	86	89	91	94	97	99	100
No. of dryers Duct diameter (in inches)	MODELS: L44CD42, L50CD42																							
	1	2	3	4	5	6	7	8	9	10	11	12												
	12	17	21	24	27	30	32	34	36	38	40	42												
(in cm)	30	43	53	61	68	76	81	86	91	97	100	106												

AUTOMATIC ELECTRICAL CONTROL FOR EXHAUST FAN
For one or more dryers to start fan.



Dryer Installation with Multiple Exhaust



DRYER INSTALLATION WITH MULTIPLE EXHAUST

**For Exhaust Duct more than 14 (5 m) feet and 2 elbows equivalent and more than 0.3 inches (8 mm) static pressure.
(See illustration on next page.)**

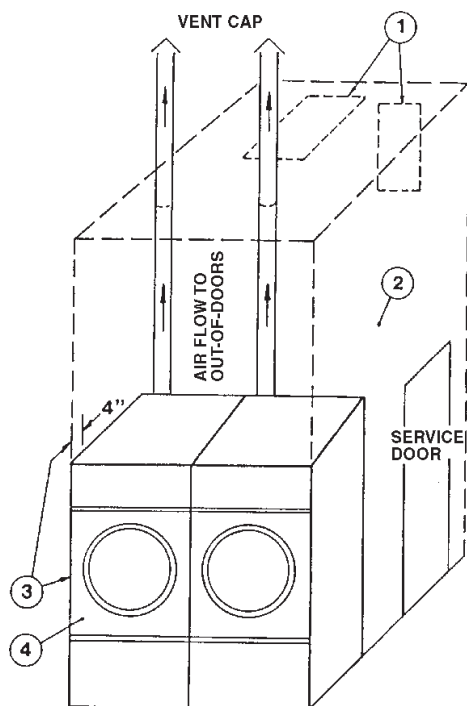
1. Make-up air from outside building may enter enclosure from top or side walls. (See Dryer Make-up Requirements Chart)
2. Use constant diameter duct with area equal to the sum of dryer duct areas.
EXAMPLE: 6-8 inch (203 mm) diameter duct = 1-19.6 inch (498 mm) diameter duct in area. Use 20 inch (508 mm) diameter duct or diameter to match tube-axial fan.
3. Enclosure (plenum) with service door. This separates the dryer air from room comfort air. If dryers use room air instead of outside air, the heat loss can be another 25 Btu/h (6.3 kcal/h) for each cubic foot per minute (cfm) used.
4. Zero inches clearance to combustible material allowed on sides and at points within 4 inches (100 mm) of front on top.
5. Heat loss into laundry room from dryer fronts *only* is about 60 Btu/h per square foot (15 kcal/h per 0.1m²).
6. Flange mounted, belt driven tube-axial fan. Fan must run when one or more dryers are running. *See suggested Automatic Electrical Control Wiring Diagram on previous page.* Must meet local electrical codes. Fan air flow (cfm) (m³/min.) is equal to sum of dryer air flows, but static pressure (SP) is dependent on length of pipe and number of elbows.
7. Barometric bypass damper—Adjust to *closed flutter position* with all dryers and exhaust fan running. Must be located within enclosure.



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

CAUTION: *Never exhaust dryers with other types of equipment.*

Dryer Installation With Separate Exhaust (Preferred)



DRYER INSTALLATION WITH SEPARATE EXHAUST (PREFERRED)



For ductwork less than 14 feet (5 m) and 2 elbows equivalent and less than 0.3 inches (8 mm) static pressure:

NEVER exhaust the dryer into a chimney.

NEVER install wire mesh screen over the exhaust or make-up air area.

NEVER exhaust into a wall, ceiling, or concealed space.

1. Make-up air opening from outside the building may enter the enclosure from the top or side walls. (See Dryer Make-up Air Requirements Chart.)
2. Enclosure (plenum) with service door. This separates the dryer air from the room comfort air. If dryers use room air instead of outside air, additional heat loss can be another 25 Btu/h (6.3 kcal/h) for each cubic foot per minute (cfm) (.03m³/min.) used.
3. Zero inches (mm) clearance to combustible material allowed on sides and at points within 4 inches (100 mm) of front on top.
4. Heat loss into laundry room from dryer front panels is about 60 Btu/h per square foot (15 kcal/h per 0.1m²).

Suggested Minimum Dryer Make-up Air Requirements

Dryer Model	Dryer Pocket Capacity		Maximum Air Flow Rate per Pocket		Duct Size For Service Connection		Required Make-up Air Area per Pocket	
	lb	kg	cfm	m3/h	inch	mm	sq. inch	cm2
C 30	30	13.6	700	1190	8	203	135	871
C 30 E/S	30	13.6	400	680	6	153	77	497
C 30 ST	30	13.6	450	765	6	153	87	561
C 50	50	22.7	800	1360	8	203	154	994
C 50 E/S	50	22.7	450	765	6	153	87	561
C 75	75	34	1000	1700	8	203	192	1239
C 75 E/S	75	34	536	911	6	153	103	665
C 75 ST	75	34	1000	1700	12	305	192	1239
HD80	80	36.3	1465	2490	10	254	282	1819
C 110	110	50	2200	3740	12	305	422	2723
C 110 E/S	110	50	850	1445	8	203	163	1052
C 125	125	56.7	2000	3400	12	305	384	2477
C 150	150	68	2250	3825	12	305	432	2787
HD175	175	79.4	2780	4726	12	305	534	3445
HD190	190	86.2	3000	5100	12	305	576	3716
HD20	20	9.1	450	765	6	153	87	561
HD30	30	13.6	625	1063	8	203	120	774
HD50	50	22.7	700	1190	8	203	135	871
HD75	75	34	750	1275	8	203	144	929

Notes:

- 1) The Model C 30 ST has 2 pockets per dryer, each pocket has the above listed characteristics; each pocket is exhausted separately with a 6" (153mm) duct.
- 2) The Model C 75 ST has 2 pockets per dryer, each pocket has the above listed characteristics; both pockets have one 8" (203mm) exhaust manifolded into one 12" (305mm) exhaust duct for exhaust connection.
- 3) For the C 30 ST and the C 75 ST Models, the Required Make-up Air Area shown in the table should be doubled since it is shown per pocket, only.
- 4) E/S indicates an Energy Saving Model.

Exhaust and Venting

DRYER AIR FLOW INSTALLATION

Nothing is more important than air flow for the proper operation of a clothes dryer. A dryer is a pump which draws make-up air from the out-of-doors, through the heater, through the clothes and then forces the air through the exhaust duct back to the out-of-doors. Just as in a fluid water pump, there must be a fluid air flow to the inlet of the dryer, if there is to be the proper fluid air flow out of the exhaust duct.

In summary, there must be the proper size out-of-doors inlet air opening (4-6 times the combined areas of the air outlet) and an exhaust duct, size and length of which allows flow through the dryer with no more than 0.3 inches water column static pressure in the exhaust duct.

In some instances, special fans are required to supply make-up air, and/or boost exhaust fans are required for both regular and energy saving models.

EXHAUST DUCT

FOR BEST DRYING:

1. Exhaust duct maximum length 14 feet (4.3 mm) of straight duct and maximum of two 90° bends.
2. Use 45° and 30° elbows wherever possible.
3. Exhaust each dryer separately.
4. Use 2 feet (0.6 m) of straight duct on dryer before installing an elbow on energy-saver models only.
5. **Do not** install wire mesh or other restrictions in the exhaust duct.
6. Use clean-outs in the exhaust duct and clean periodically when needed.
7. **Never** exceed 0.3 inches (7.6 mm) water column static pressure in the exhaust duct.
8. Inside surface of the duct must be smooth.
9. Recommend pop rivets for duct assembly.

MAKE-UP AIR

FOR BEST DRYING:

1. Provide opening to the out-of-doors in accordance with the following:
For each dryer—
6 inch (152 mm) diameter exhaust requires a 1 square feet (0.1 m²) opening for make-up air.
8 inch (203 mm) diameter exhaust requires a 2 square feet (0.2 m²) opening for make-up air.
12 inch (305 mm) diameter exhaust requires a 4 square feet (0.4 m²) opening for make-up air.
2. Use barometric shutters in the inlet air opening to control air when dryers are not running.

OTHER RECOMMENDATIONS

Other Recommendations

To assure compliance, consult local building code requirements.

TROUBLESHOOTING

Troubleshooting

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

Rules for Safe Operation of Dryer

RULES FOR SAFE OPERATION OF DRYER

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

ENERGY-SAVING TIPS

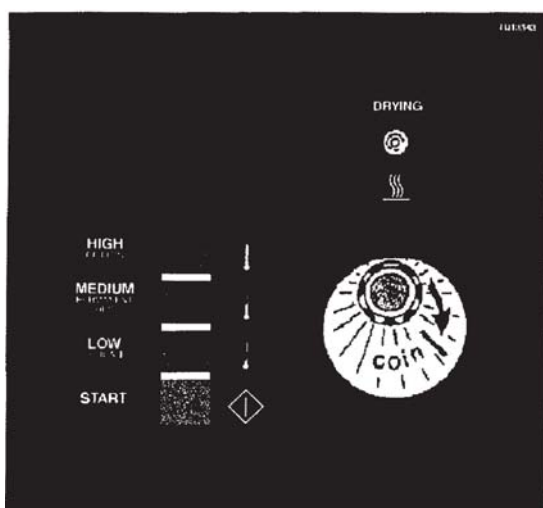
1. Install dryer so that you can use short, straight venting. Turned elbows and long vent tubing tend to increase drying time. Longer drying time means the use of more energy and higher operating costs.
2. Operate dryer using full-size loads. Very large loads use extra energy. Very small loads waste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

Operating Instructions—Coin Meter Models

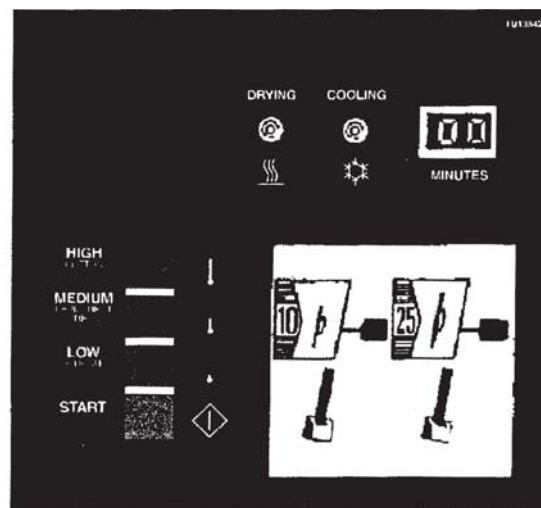
OPERATING INSTRUCTIONS—COIN METER MODELS

OPERATING INSTRUCTIONS—COIN METER MODELS

1. After loading the dryer with water washed clothes, close the loading door.
2. **ELECTRO-MECHANICAL COIN METER:** Insert proper coin(s) in slot and turn knob until it stops.
COMPUTERIZED COIN METER: Insert coin. Amount of drying time will appear on the digital display. Maximum time is 99 minutes. Additional coins may be vended any time during the cycle.
3. Select temperature setting using proper push button.
HIGH—185° F exhaust temperature, *heavy fabrics and hard to dry, (cottons and linens).*
MEDIUM—150°F exhaust temperature, *permanent press, synthetic blends.*
LOW—135°F exhaust temperature, *delicate, sheer fabrics.*
4. Press the “Start” button to start the drying and cooling cycles.



ELECTRO-MECHANICAL COIN METER



COMPUTERIZED COIN METER

WHAT IS HAPPENING AFTER STEP 4:

1. Digital Display will count down time remaining in cycle (Computerized Coin Meter).
2. The fan motor and basket will revolve.
3. The heat source will be energized.
4. The heated air will mix with the wet clothes and evaporate the moisture.
5. The thermostats will operate at a safe temperature.
6. The heat will shut off and the cooling cycle will begin.

IMPORTANT

IMPORTANT

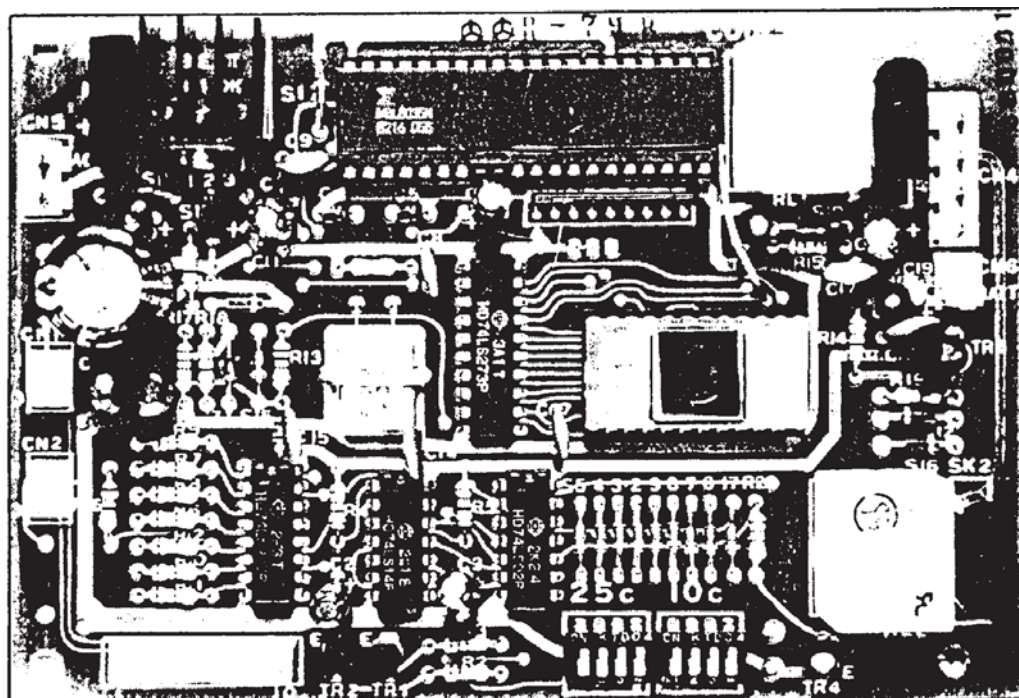
If the tumbler door is opened during the drying cycle, the fan and heat will shut off. Press **“START”** button to resume the cycle.

This dryer is designed for a capacity maximum load. Overloading it will result in longer drying time and damp spots on some of the load.

Maximum operating efficiency depends on proper air flow. The lint screen must be kept clean daily to insure proper circulation of air throughout the dryer.

This commercial dryer has keys for the lint door and access door to burners and controls. This is for the safety of the user.

INSTRUCTIONS FOR SETTING TIME ON “COMPUTERIZED COIN METER”

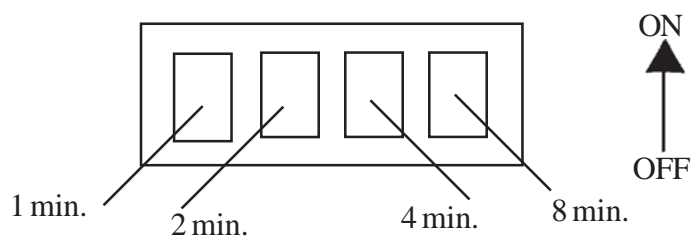


DIP Switch Banks are located here

Setting Time On Computerized Coin Meter

INSTRUCTIONS FOR SETTING TIME ON COMPUTERIZED COIN METER

1. This dryer is equipped with two banks of four DIP switches each.
2. Each DIP switch bank consists of 4 small switches each with a specified amount of time (minutes), as shown:

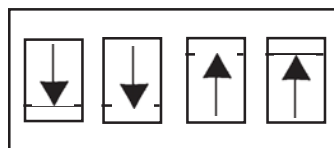


3. To set the time on the DIP bank simply set the appropriate switch to the **ON** (up) position to total the desired amount of time.

NOTE

OFF (down) position equals 0 minute.

EXAMPLE: 25¢ for 12 minutes



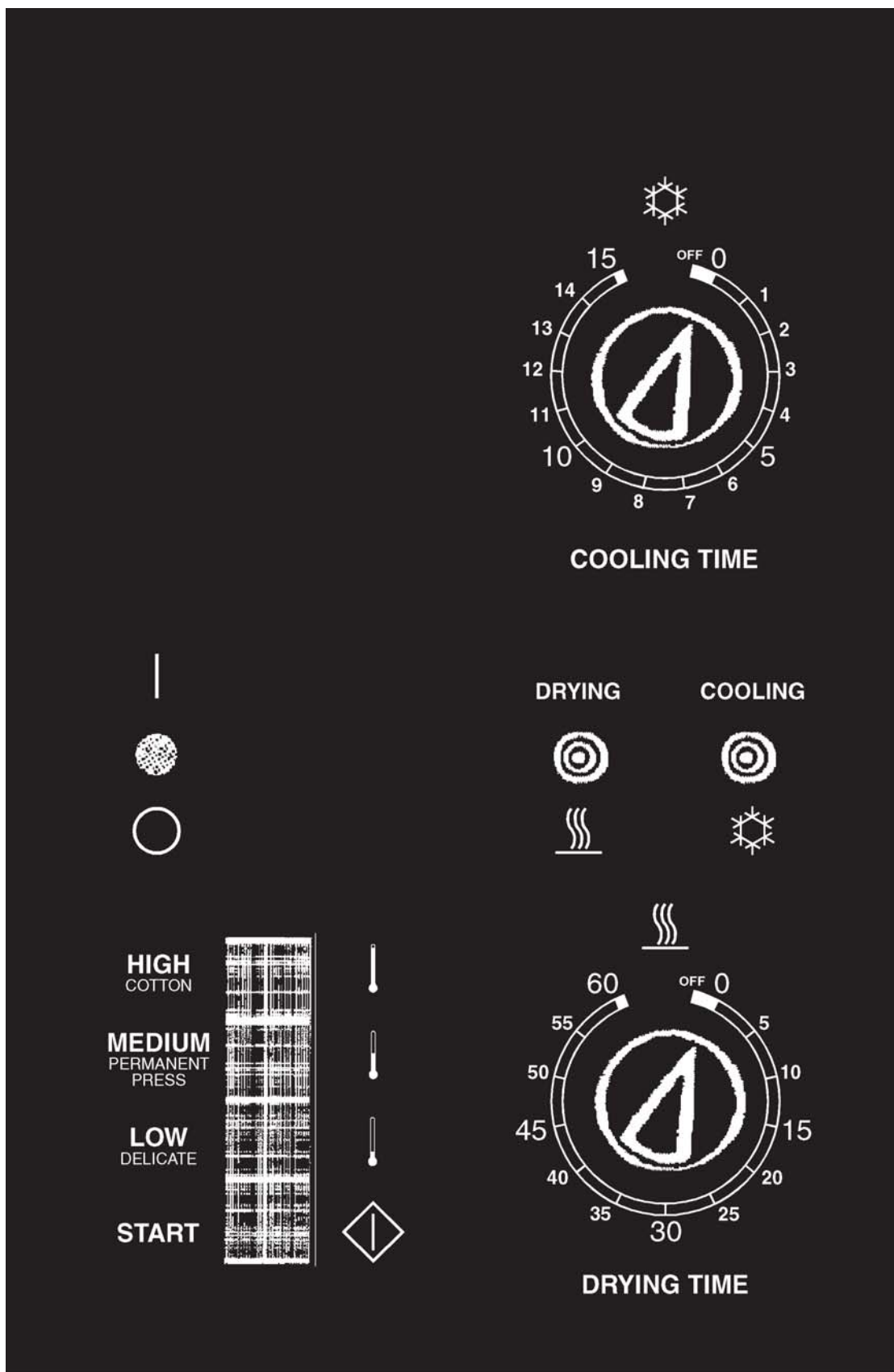
MINUTES: 0 + 0 + 4 + 8 + = 12 min.

Operating Instructions—Double Timer Models

**OPERATING
INSTRUCTIONS—
DOUBLE TIMER
MODELS**

OPERATING INSTRUCTIONS—DOUBLE TIMER MODELS

- Step 1. After loading the dryer with water washed clothes, close the loading door.
- Step 2. Turn the 60 minute drying (heat) timer to the desired time. The drying cycle light will be on.
- Step 3. Turn the 15 minute cooling (air) to the desired time. The cooling light will come on after the drying finishes.
- Step 4. Select the temperature desired:
- High Heat**
185° F exhaust temperature, heavy fabrics and hard to dry.
- Normal**
185° F exhaust temperature, cottons and linens.
- Permanent Press**
150° F exhaust temperature, synthetic blends.
- Low Heat**
135° F exhaust temperature, delicate, sheer fabrics.
- Step 5. Turn “**on/off**” toggle switch to “**on**” and press the “**push to start**” button to start the drying and cooling cycles.
- Step 6. To shut the dryer off at any time during the cycles, switch the “**on/off**” switch to “**off**”.



Service Savers

TROUBLESHOOTING

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

DRYER WON'T START

DRYER WON'T START

1. Is the door completely closed?
2. Are the controls set to the “**on**” position?
3. Did you push the “**start**” control?
4. Has a fuse blown or a circuit breaker tripped?
5. Are the fuses tight?
6. Check for low voltage.
7. Has the Bonnet thermostat (Gas only) tripped? If so, push to reset.

DRYER WON'T HEAT

DRYER WON'T HEAT

1. Is the dryer set for “**cooling time**” rather than “**drying time**”?
2. Are the gas valve in the dryer and the valve on the main gas line turned on?
3. Check for low or intermittent **gas pressure**.
4. Check Spark Ignition Module diagnostic light.

CLOTHES ARE NOT SATISFACTORILY DRY

CLOTHES ARE NOT SATISFACTORILY DRY

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

GAS DRYER IGNITION

GAS DRYER IGNITION

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

VERY IMPORTANT

VERY IMPORTANT

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

Troubleshooting Chart

Troubleshooting Chart

TROUBLE	CAUSE	REMEDY
Motor will not start.	No power.	Check fuses on circuit breakers. Make sure main control switch is "on". Check bonnet thermostat (gas only).
	Incorrect power.	Check power source; voltage, phase and frequency must be the same as specified on electrical rating plate.
	Time off.	Check timer for proper setting or check coin meter for properly vending.
	Loose wiring connections.	Check wire connections in electrical box on rear of dryer.
	Loading door open.	Close door.
	Door switch out of adjustment.	Adjust switch by removing front panel and bend actuator lever to clear switch button 3/8" with front panel in place.
	Defective door switch.	Replace switch.
	Defective basket motor contactor.	Replace contractor.
	Tripped/defective safety thermostat on gas bonnet.	Reset/replace thermostat.
Motor tripping on thermal.	Low voltage.	Check voltage at motor terminals. Voltage must be within $\pm 10\%$ of voltage shown on motor rating plate. If not, check with local power company for recommended corrective measures.
	Inadequate wiring.	Check with local power company to insure that wiring is adequately sized for load.
	Loose connections.	Check all electrical connections and tighten any loose connections.
	Inadequate air.	Check installation sheet for recommended make-up air openings.
	Poor housekeeping.	Clean lint accumulation on and around motors.
Dryer does not stop at end of time period.	Defective timer.	Replace timer.
Motor runs but basket will not revolve.	V-belt broken.	Replace V-belt.
	V-belt loose.	Adjust belt tension.
	Motor pulley loose.	Tighten set screw.
	Basket overloaded.	Remove load.

Troubleshooting Chart

Troubleshooting Chart

TROUBLE	CAUSE	REMEDY
Dryer noisy or vibrating.	Not leveled.	Check manual for proper leveling procedures.
	Fan out of balance.	Accidental damage to the fan blade can change the dynamic balance. Damaged fans should be replaced.
	Basket rubbing.	Adjust basket clearance.
	V-belt sheaves.	Tighten set screws. Make sure sheaves are in proper alignment.
	Belt.	Adjust belt tension.
	Foreign objects.	Occasionally screws, nails, etc, will hang in the basket perforations and drag against the sweep sheets surrounding the basket. Such foreign objects should be removed immediately.
Dryer runs, but no heat.	Incorrect voltage.	Check for correct control voltage - 120V.
	No voltage.	Check power supply, check secondary voltage on transformer and check wiring and wiring diagram.
	Direct spark ignition module defective.	Replace direct spark ignition module.
	Defective gas valve.	Replace coil assembly.
	Gas turned off.	Turn manual gas valve on.
	Defective door switch.	Replace door switch.
	Air switch not operating.	Clean out lint compartment daily. Check back draft damper for foreign objects, lint accumulation or other causes that may prevent damper from opening. Check duct work for lint build-up. Check installation sheet to insure that duct work and make-up air openings are adequately sized. Check exhaust outlet. If a screen has been improperly installed on the outlet, it may be clogged with lint or frozen over in winter. NEVER install a screen on the exhaust outlet. Vacuum within dryer drops to .09 inches of water column, or less, for normal operation of dryer. Vacuum reading (in inches of water) should range between .15 and .3 inches. Vacuum reading can be made with a vacuum U-gauge by removing a sheet metal screw in the front panel of dryer and inserting the rubber tube of the vacuum gauge into screw opening.

Troubleshooting Chart

Troubleshooting Chart

TROUBLE	CAUSE	REMEDY
Dryer runs, but no heat. (continued)	Air switch out of adjustment.	See air switch adjustment sheet.
	Air switch defective.	Replace air switch.
	Gas pressure too low.	Check manifold pressure and adjust to pressure specified on rating plate. If this pressure cannot be obtained, have gas supplier check main pressure .
	Improper orifice.	Orifices have been sized for type of gas specified on rating plate. Check with gas supplier to determine specifications for gas being used. If different from rating plate, contact factory and obtain proper orifices.
	Electric power to heating unit turned off.	Turn power on.
	Line fuse or heater circuit fuse blown to unit.	Replace fuse.
	Defective relay.	
	Defective electric elements.	Replace relay.
	Defective thermostat.	Replace elements.
	Defective safety overload thermostat.	Replace thermostat. Replace thermostat.
	Lint compartment door open.	Close door.
Main burners burning improperly.	Burner air shutters closed.	Open for blue flame.
	Dirt in burner.	Blow out.
	High gas pressure.	Adjust gas pressure per rating plate.
	Orifice too large.	Send to factory for correct orifices.
	Restricted or blocked exhaust.	Clean exhaust.
Main burner cycles on and off.	Direct spark ignition defective.	Replace direct spark igniter.
Low or high gas flame.	Incorrect main burner orifices.	Replace orifices. Check factory for correct size.

Troubleshooting Chart

Troubleshooting Chart

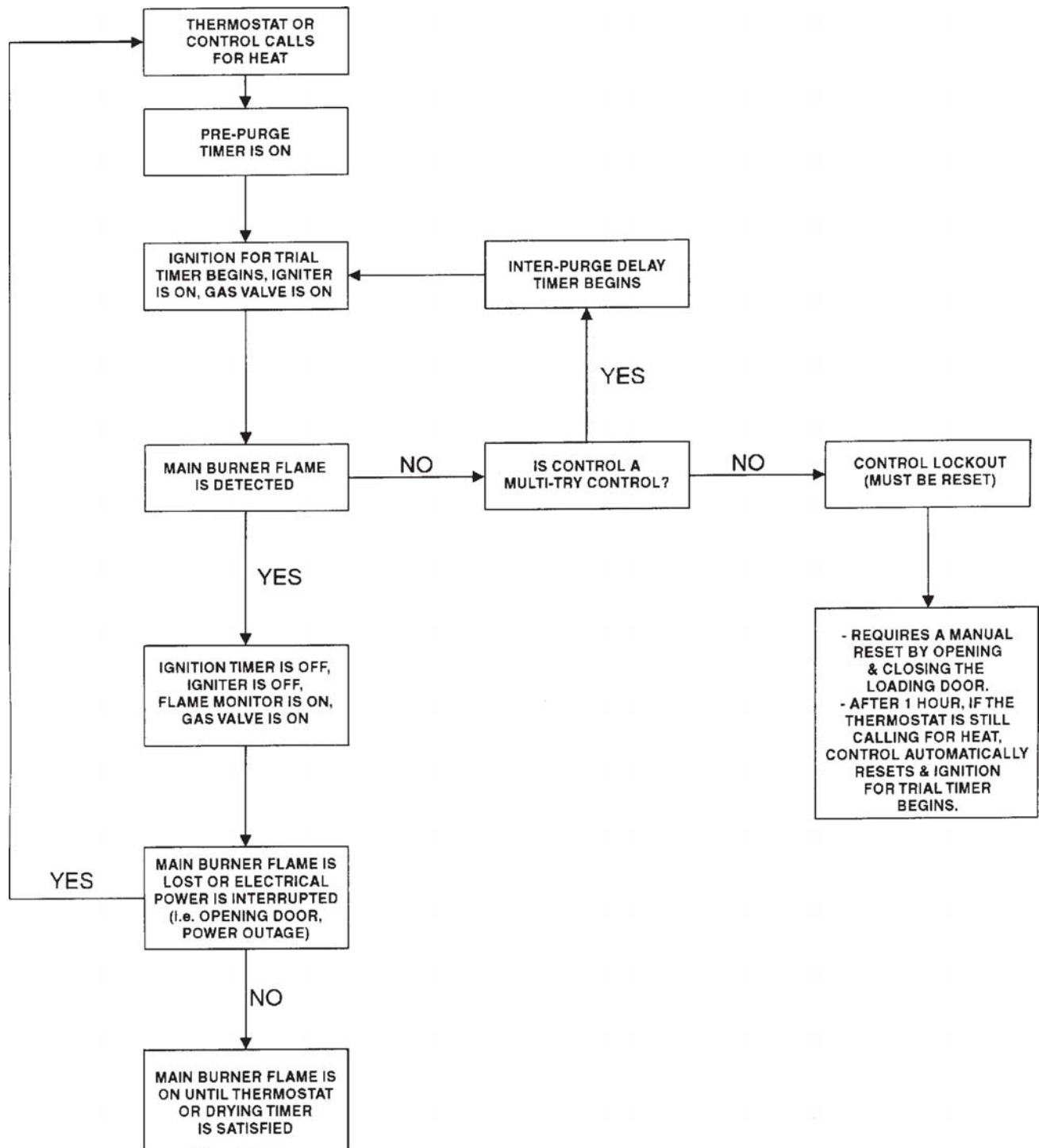
TROUBLE	CAUSE	REMEDY
Dryer too hot.	Incorrect main burner orifice.	Replace orifices. Check factory for correct size.
	Inadequate make-up air.	Make-up air must be 4 to 6 times the exhaust area of the dryer.
	Lint accumulated.	Remove lint.
	Exhaust duct dampers.	Must be full open or replace.
	High gas pressure.	Adjust gas pressure per rating plate.
	Partially restricted or inadequately sized exhaust system.	Check service section for recommended sizes. Remove obstructions or lint build up from duct work. NEVER use smaller size exhaust duct. ALWAYS use larger size.
	Defective thermostat.	Replace thermostat.
Dryer runs no steam to coils.	Valve closed.	Check all valves in steam supply and return. Make sure they are open.
	Steam trap blocked.	Remove and clean. Replace if defective.
	Solenoid valve.	On dryers using solenoid temperature control, check operation of solenoid valve by advancing thermostat.
	Thermostat.	On dryers using solenoid temperature control, thermostat controls operation of Solenoid Valve. If defective, replace thermostat.
	Check valve installed incorrectly.	Check for inlet and outlet marking on check valve and invert if necessary.
	Strainer clogged.	Remove plug and blow down strainer or remove and clean thoroughly if heavily clogged.
Water in steam line.	Steam piping installed incorrectly.	Check piping per steam installation instructions.
	Trap not functioning.	Check trap for size and capacity. If dirty and sluggish, clean thoroughly or replace. Check return line for high back pressure, or another trap charging against the trap functioning improperly.

Direct-Spark Ignition Operation

DIRECT SPARK IGNITION OPERATION

- NOTE: Some models are equipped with a dual ignition system. The dual ignition system contains two direct spark ignition modules in parallel. Each module has its own flame sense circuit and acts independently of the other. If either bonnet limit thermostat opens because of high heat or flame impingement, the entire ignition system will shut down.
1. When a call for heat is received from the control supplying 24VAC to the ignition control module, the pre-purge delay timer begins. This delay time allows any air/sediment to be ejected prior to burner ignition. Following the pre-purge delay period, the gas valve is energized and the spark ignitor sparks for the trial ignition period.
 2. When a flame is detected during the trial for ignition period, the spark ignitor shuts off and the gas valve remains energized.
 3. If no flame is detected by the flame sense circuit, the ignition control module will go into safety lockout. The valve will be turned off immediately. If the module has multiple retries and no flame is detected, the gas valve is de-energized and the module goes into an interpurge delay. After this delay, the module will attempt another trial for the ignition period. This will continue until the number of retries has been used up. At the time, the module will go into safety lockout.
 4. Recovery from safety lockout requires one of the following:
 - a. A manual reset by opening and closing the loading door.
 - b. After one hour if the control thermostat is still calling for heat, the module will automatically reset and the trial for ignition period will start over.
 5. Opening the loading door will cause the flame to extinguish. Closing the door and starting the dryer will restart the trial for ignition period.
 6. Once the control thermostat has been satisfied and/or the drying timer has been timed out, the ignition control module(s) will be de-energized, the gas valve(s) will be de-energized and the flames will extinguish.
 7. The machine will continue to run in a cooldown mode without heat. This process will cool the load to the touch and help to eliminate wrinkling.

***DIRECT SPARK
IGNITION OPERATION
FLOW CHART***



General Maintenance

GENERAL MAINTENANCE

1. **Clean lint trap daily.** Remove lint before or after each day of operation. A clean lint trap will increase the efficiency of the dryer and the moisture-laden air will be exhausted outside more quickly.
2. **Keep basket and sweep sheets clean.** Clean as often as needed. The basket and sweep sheets are accessible by removing the front panel of the dryer.
3. **Gas burners, steam coils, electric coils.** Check and clean often.
4. **Pulleys and belts.** Keep clean as oil and dirt will shorten the life of a belt. Check periodically for alignment. Pulley shafts must be parallel and the grooves must be aligned. Check belt tension periodically. Adjust tension by movement of idler bracket. Lubricate idler pulley once every two months using six grams of high temperature grease. Do not over-grease.
5. **Electric motor.** Keep motor clean and dry. Motors are packed with sufficient grease for 10 years normal service. After that, bearings and housing should be cleaned and repacked one third full with Chevron grease No. SR1-2. See label on motor for further information.

If motor overheats, check voltage and wiring. Low voltage, inadequate wiring and loose connections are the main cause of motor failures.

6. **Adjustable leveling bolts.** One at each corner permits accurate alignment of dryer.
To adjust: Block one corner of dryer up off the floor, loosen hex nut. With wrench, turn bolt clockwise to raise dryer, opposite to lower. Rear bolts are outside of dryer and front bolts are inside lint trap compartment.

General Maintenance

GENERAL MAINTENANCE

7. Periodically clean and examine exhaust system.
8. Keep dryer area clean and free of gasoline, combustible materials and other flammable liquids or vapors.
9. Do not obstruct the flow of combustion (make-up) air and ventilating air.
10. Check gas pressure periodically.
11. Gas burners air inlet shutters can be adjusted for proper flame by following instructions outlined on separate page of this manual.
12. **Main Basket Bearings.** Lubricate once every six months using six grams of high temperature grease. Do not over-grease.
13. **Steam Heating Units.** Keep steam coils clean. Check periodically and clean as often as required. Remove lint and dirt accumulation from coil fins to avoid decreasing their efficiency.
14. **Clean Out Panel (Energy Saver Gas Models Only).** Remove this panel located on the energy saver heating unit and clean the inside area of lint and dirt on a regular basis.

Burner Air Inlet Shutter Adjustment (w/Illustrations)

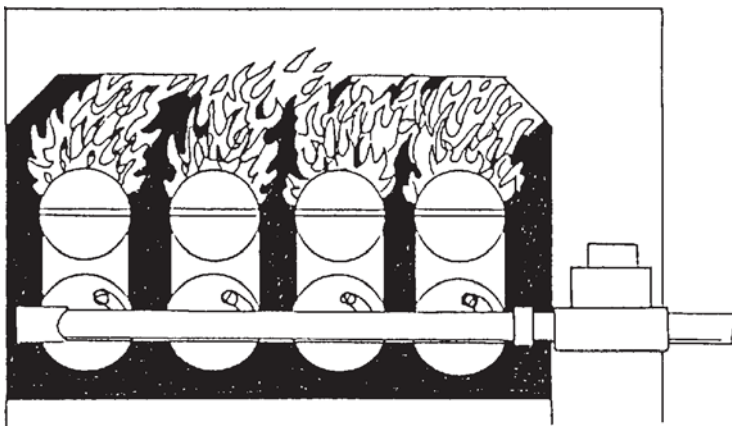
BURNER AIR INLET SHUTTER ADJUSTMENT

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

Air Shutter Adjustment

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

Burner air inlet shutters are correctly adjusted when flame is primarily blue.



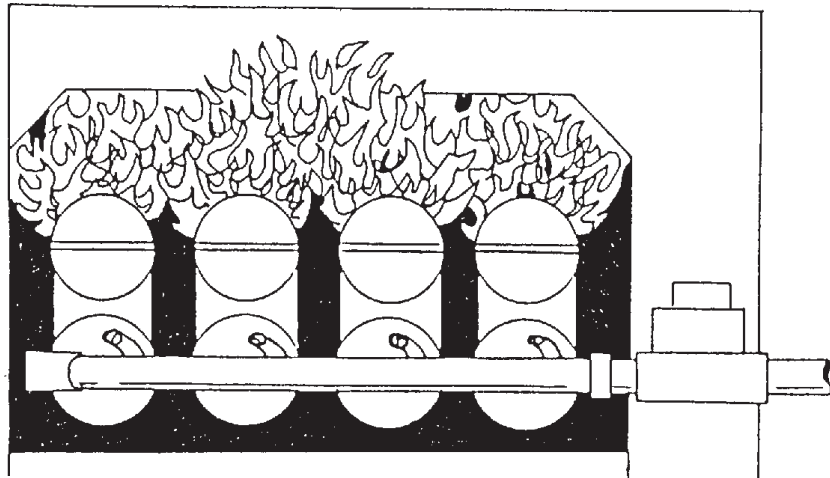
CORRECT

Burner Air Inlet Shutters Adjustment

NEED TO ADJUST SHUTTER

Need to Adjust Shutter

Burners air inlet shutters are adjusted insufficient; air is admitted through the burner. Flame pattern is straight up and flame is yellow.

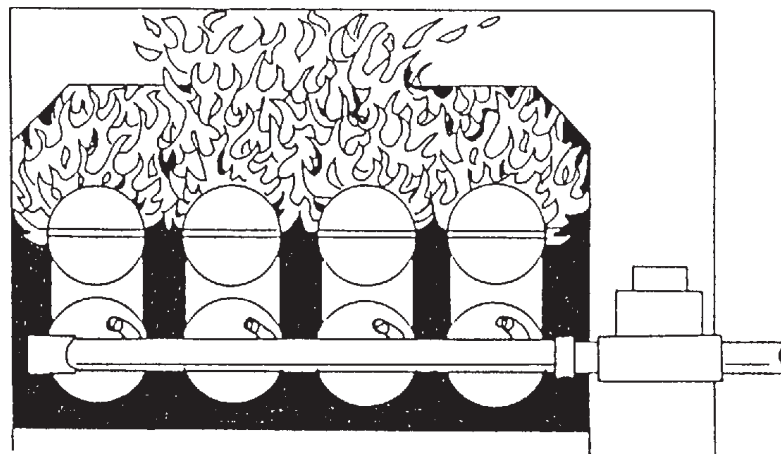


WRONG

NEED TO PROVIDE CORRECT AIR FLOW THROUGH THE DRYER

Need to Provide Correct Airflow Through the Dryer

This flame pattern indicates the burner air inlet shutters are correctly adjusted, but air through the dryer is insufficient. This condition indicates excessive lint in the lint compartment, lack of make-up air in the room, restricted exhaust duct, or a vacuum in the room caused by an exhaust fan.

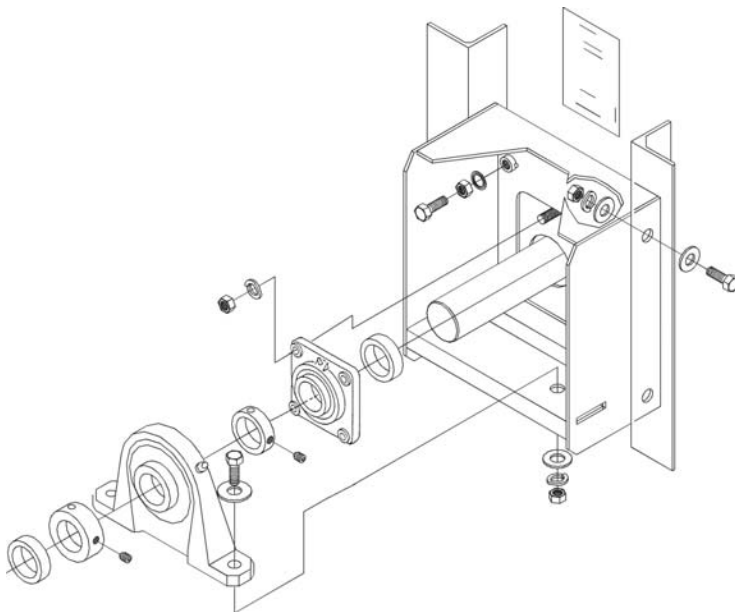


WRONG

Replacing Bearings and Collars Instructions

REPLACING BEARINGS AND COLLARS INSTRUCTIONS

- Step 1** Remove belt guard, V-belt, spacer and basket sheave.
- Step 2** Loosen set screws on the flange bearing and on the pillow block bearing.
- Step 3** Remove the two bolts holding the pillow block bearing and take it off the shaft.
- Step 4** Remove the three nuts and washers holding the flange basket bearing and take it off the dryer.
- Step 5** Inspect the bearings for damage and replace as necessary, in reverse order of removing them. Before tightening securely, align basket per instructions on separate instruction sheet.
- Step 6** Lubrication guide—Bearings never need lubrication. They have been permanently lubricated by the supplier with a high temperature grease.



Basket Alignment—Single Motor Model

BASKET ALIGNMENT— SINGLE MOTOR MODEL



- Step 1** Loosen the set screws on the flange and pillow block bearings.
- Step 2** Loosen the 4 side bolts, “1, 2, 3, 4,” on the basket bearing bracket. (see figure 3) Loosen the two adjusting bolts and locknuts “5, 6,” inside the bracket. And loosen the bolts “7,” on the pillow block bearing.
- Step 3** Place one “A” and two “B” diameter pins inside the drying compartment between the rim of the basket opening and the rim of the door opening in the positions shown in figures 1 and 2. Check the two “B” pins for equal clearance.

NOTE

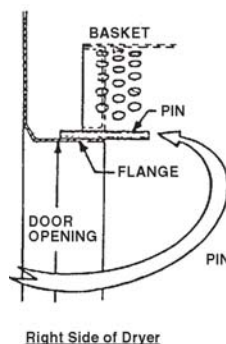
Push the basket toward the rear.

- Step 4** With the pins in position, tighten the set screws on the bearing races.
- Step 5** Tighten the side bolts “1, 2, 3, 4,” in numerical order. Tighten the bolts “7” on the pillow block bearing. And tighten the bolts “5” and locknuts “6”.
- Step 6** Remove the aligning pins.

CAUTION

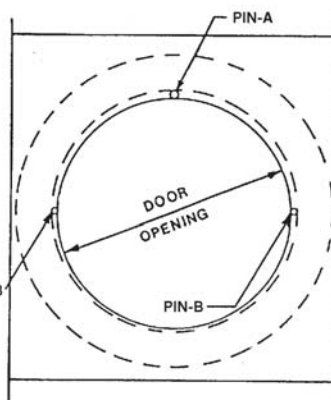
Check to see that the set screws are wrench tight on bearings.

FIG. 1



Right Side of Dryer

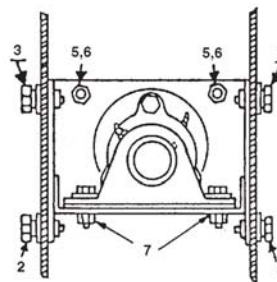
FIG. 2



Front of Dryer

PIN-A - 5/8 DIA.
PIN-B - 5/16 DIA.

FIG. 3



Basket Alignment—Double Motor Model

BASKET ALIGNMENT— DOUBLE MOTOR MODEL

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



NOTE

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

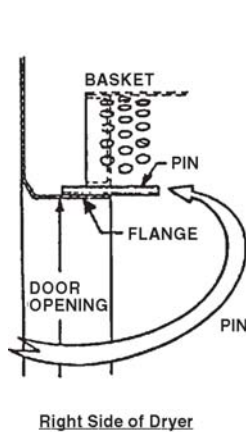


FIG. 1

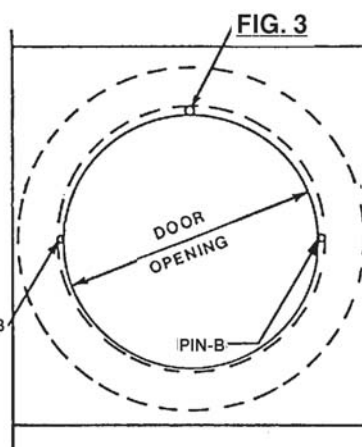


FIG. 2
PIN A - 1/2" Dia.
PIN B - 3/8" Dia.

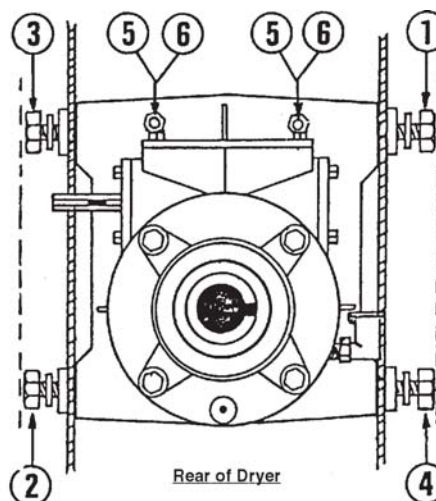


FIG. 3

Shimming the Basket and Spider Assembly

SHIMMING THE BASKET AND SPIDER ASSEMBLY

This procedure is normally necessary when replacing either the basket or the spider assembly on any dryer. Proper shimming is crucial to obtain a true running basket.

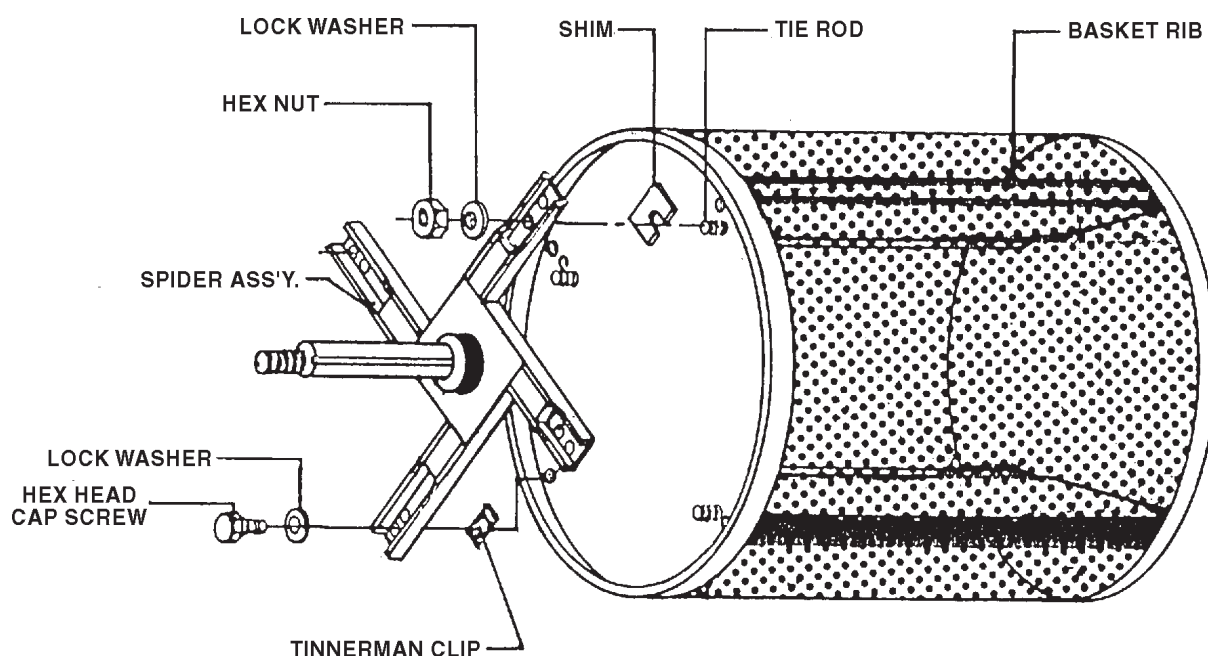
ALIGN ROTATE

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



NOTE

If the point mentioned in *Step B* is between two ribs, both ribs might have to be shimmed.



Air Switch Adjustment (with Illustration)

AIR SWITCH ADJUSTMENT

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

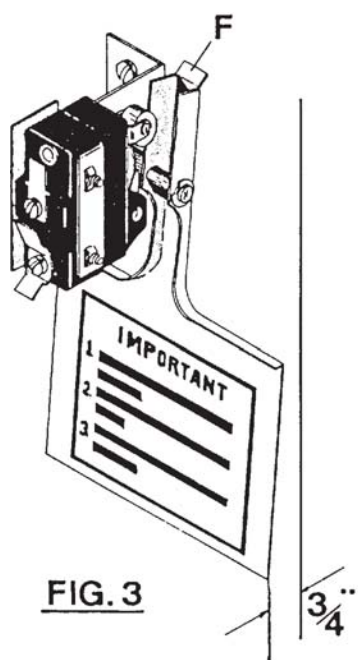


FIG. 1

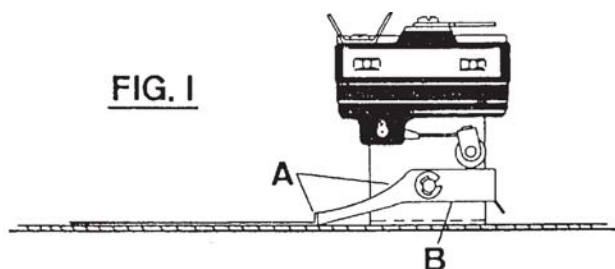
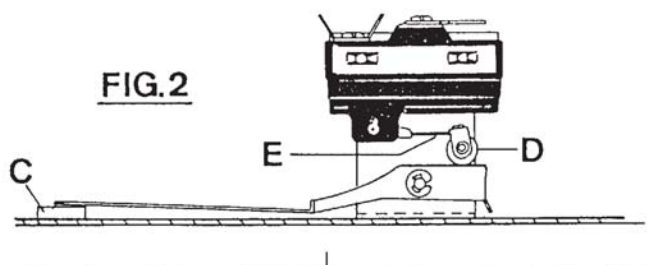


FIG. 2



Dryers with Reversing Control Timer

INSTRUCTIONS FOR DRYERS WITH REVERSING CONTROL TIMER

Instruction

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

CAUTION

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

Adjustment of reversing timer dwell time

CAUTION

Dryer power supply must be shut off before adjusting timer.

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

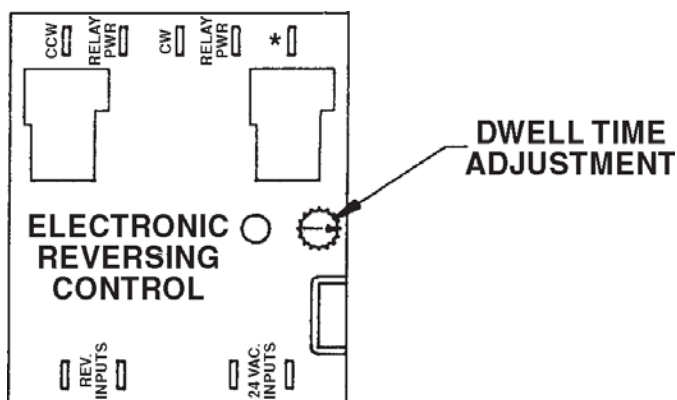
Turning the dwell adjustment knob counter-clockwise increases the dwell time and turning it clockwise decreases the dwell time.

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

Minimum basket stopping time is 4 seconds.

NOTE:

Select non-reversing or reversing before starting dryer.



NOTE:

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

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

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

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

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

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

**OPERATION AND
MAINTENANCE**



OPERATION AND MAINTENANCE

After Start Up

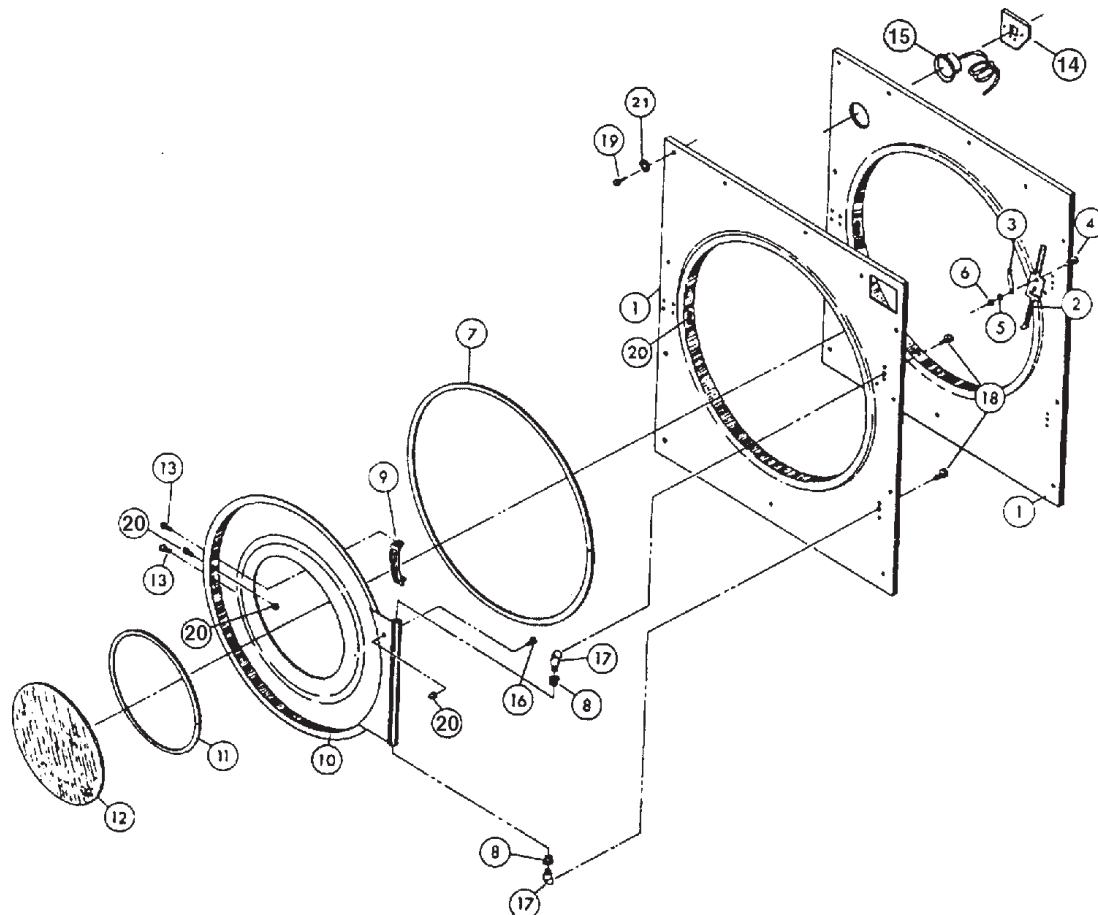
The gear reducer is shipped filled with oil to the right level and after two weeks or 100 hours of operation, drain the oil, and flush the gear reducer with a light flushing oil. The original oil can be used for re-filling if it has been filtered; otherwise, new oil must be used. After this, change the oil every six months or 2500 hours of operation.

CAUTION

- **USE AGMA 8EP TYPE OIL; CISELL PART #TU3465 ONLY!!**
- To fill with oil: Remove the oil level plug, and add oil until oil is noted at the oil level plug hole.
- Re-install the oil level plug and the breather plug in the gear reducer before operating.

Parts—Front Panel and Door Assembly

TU6056 Front Panel and Door Assembly (Time and Temperature) (Specify Color)
 TU13989 Front Panel and Door Assembly (Time and Temperature) with Thermometer

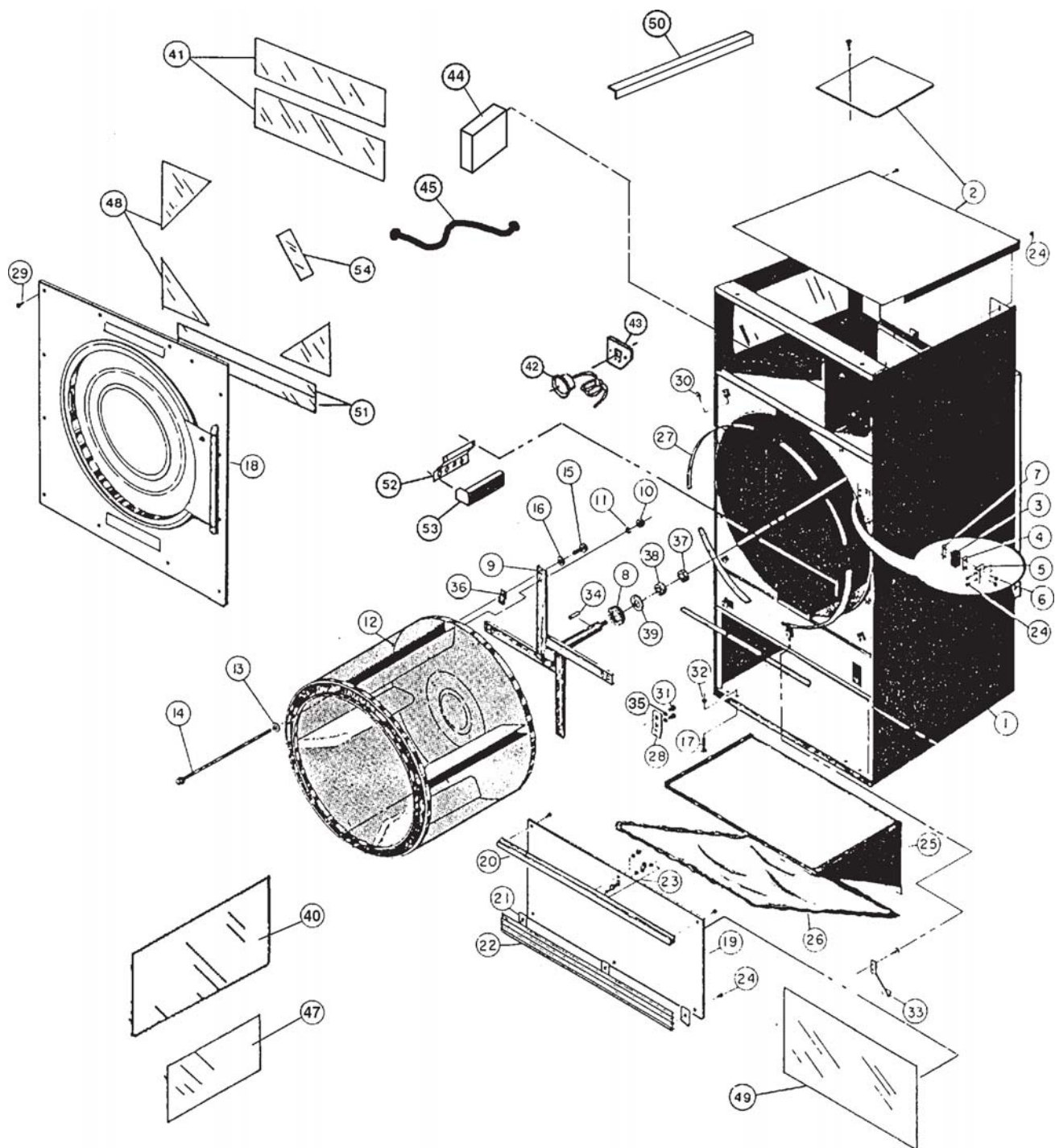


1	TU10785	Front Panel (for Time and Temp.) (Specify Color)	13	TU3215	#10 - 32 x 3/8" Taptite Screw
	TU10787	Front Panel (for Thermometer) (Specify Color)	14	TU6766	Thermometer Mtg. Plate
2	TU2194	Door Switch Actuator	15	TU3593	Thermometer (Optional)
3	TU2105	Actuator Spring		TU3816	Lens Repl. (Texas Gage ONLY)
4	M262	#8 - 32 Truss Head Screw		TU8475	Lens Repl. (Marshalltown Inst. ONLY)
5	FB187	#8 Split Lockwasher		TU11193	Lens Repl. (Weiss)
6	TU3266	#8 - 32 Hex Nut		TU13213	Lens Repl. (Weiss)
7	TU5288	Basket Door Seal	16	TU4839	#10 - 32 x 3/8" Machine Screw
8	PIF172	Delrin Bearing	17	TU2236	Hinge Posts
9	TU2874	Basket Door Handle	18	TU2836	5/16" - 18 x 1/2" Hex Head Cap Screw
10	TU5859	Basket Door (Specify Color)	19	TU2878	#10 x 5/8" Sheet Metal Screw
11	TU1692	Rubber Gasket	20	TU5158	Door Catch & Latch Asm.
12	K105	Door Glass	21	M271	#8 Internal Tooth Lockwasher

TU4827—Actuator Assembly consists of Ref. No.s 2, 3, 4, 5, & 6

TU5857—Basket Door Assembly consists of (Specify Color) Ref. No's. 7, 8, 9, 10, 11, 12, 13, 14, 15, & 16

75 lb. Laundry Dryer—Front View (Illustration)

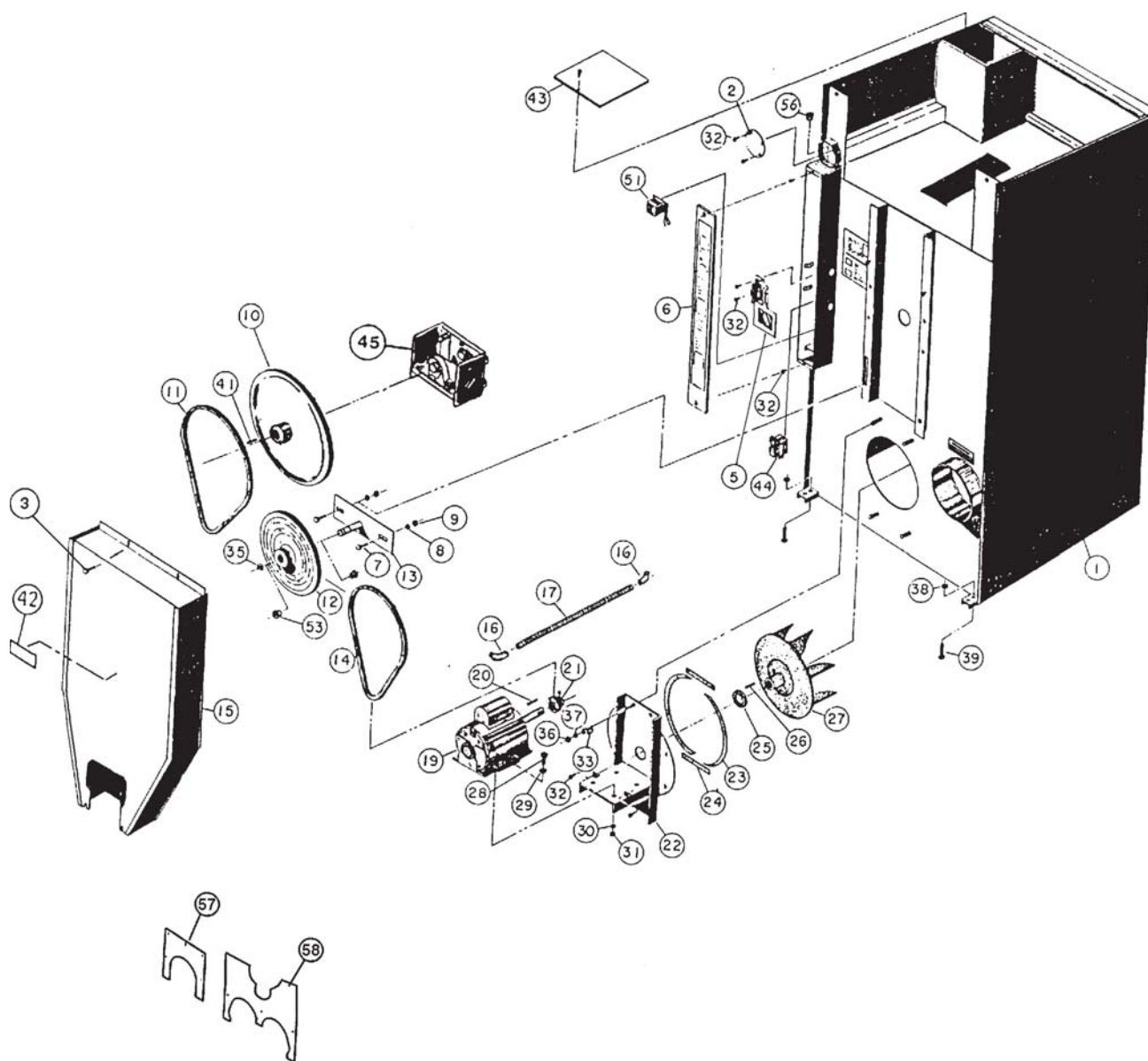


Parts—75 lb. Laundry Dryer—Front View

1	TU13111	Jacket - Gas or Electric Models (Single Motor)	28	TU3206	Lock Plate
	TU13112	Jacket - Steam Models (Single Motor)	29	TU2878	#10 x 5/8" S.M.S. (Pkg. of 6)
2	TU8273	Solid Top (Gas Models)	30	TU2877	#10 Speed Nut (Pkg. of 6)
	TU9274	Solid Top (Electric Models)	31	TU3209	#14 x 5/8" Sheet Metal Screw
	TU10651	Mechanism Box Cover (Steam Dryer ONLY)	32	TU4937	3/8" - 16 Jam Nut (Pkg. of 6)
3	TU1979H	Door Switch	33	TU8366	Lint Trap Front Support
4	TU1770	Insulator	34	TU5240	8" Large Shaft Key
5	TU2373	Door Switch Bracket	35	RC349	1/4" Internal Lockwasher
6	TU3219	#6 x 1" Sheet Metal Screw	36	TU8365	Tinnerman Nut
7	TU1771	#6 Tinnerman Nut (Pkg. of 12)	37	TU3536	Jam Nut (Double Motor Models ONLY)
8	TU108	Felt Seal (Double Motor Models ONLY)	38	TU3537	Full Nut (Double Motor Models ONLY)
9	K369	Spider Replacement (Single Motor Models)	39	TU14062	Washer (2 each)
	K108	Spider Replacement (Double Motor Models)	40	TU7690	Side Insulation
10	TU2882	1/2" - 20 Hex Nut (Pkg. of 6)	41	TU7736	Front Panel Insulation
11	TU2831	1/2" Split Lockwasher (Pkg. of 6)	42	TU3593	Thermometer (Optional)
12	TU8293	Basket ONLY (Single or Double Motor Models)		TU3816	Lens Repl. (Texas Gage ONLY)
	TU8296	Basket/Spider Assembly (Double Motor Models ONLY)		TU8475	Lens Repl. (Marshalltown Inst. ONLY)
	K384	Basket/Spider Assembly (Single Motor Models ONLY)		TU11193	Lens Repl. (Weiss)
13	TU2883	1/2" Cut Washer		TU13213	Lens Repl. (Weiss)
14	TU8297	Tie Rod	43	TU6766	Thermometer Mtg. Plate
	TU7006	Shims	44	TU13409	Spark Ignition Mount, 3-Trial (Gas Only)
15	TU3210	5/16" - 18 x 5/8" Hex Head Cap Screw		TU13627	Spark Ignition Mount, 1-Trial (Gas Only)
16	TU2814	5/16" Lockwasher (Pkg. of 6)	45	TU13629	Cable, H-Voltage DSI
17	TU3211	3/8" - 16 x 2-1/2" Leveling Bolt	47		Insulation (Mod. Valve Models)
18	TU6056	Front Panel and Door Assembly (for Time & Temperature) (Specify Color)	48	TU7735	Front Panel Insulation (Energy-Saver Models)
	TU13946	Front Panel and Door Assembly (Energy-Saver Models) (Specify Color)	49	TU8153	Lint Trap Door Insulation (Energy-Saver Models)
	TU7627	Front Panel and Door Assembly (for Time & Temperature) with Thermometer (Specify Color)	51	TU8107	Insulation (Energy-Saver Models)
19	TU5566	Lint Door Weldment (Specify Color)	52	TU9111	Thermostat Assembly
20	TU7473	Handle	53	TU8457	Thermostat Cover Weldment
21	TU2710	Trim Holder	54	TU8108	Insulation (Energy-Saver Models)
22	TU2385	Trim		TU5808	Lint Door Assembly w/Lock consists of Ref. No's. 19, 20, 21, 22, 23, & 24
23	TUB1867	Lock and Key			Specify Color
24	TU7733	#8 x 1/2" Self Drill Screw (Pkg. of 6)		TU13945	Lint Door Assembly w/Lock (Energy-Saver Models) (Specify Color)
25	TU10290	Lint Screen Housing		TU13476	Lint Door Assembly w/Latch (Specify Color)
26	TU10362	Self-Cleaning Lint Screen ONLY		TU13950	Lint Door Assembly w/Latch E/S (Specify Color)
	TU5225	Lint Screen Frame ONLY			
27	TU5876	Sweep Sheet Gaskets			

75 lb. Laundry Dryer—Single Motor Model—Rear View (Illustration)

Models: L36USS36 ——— Gas (Energy-Saver)
 L36URS36 ——— Gas, Steam or Electric



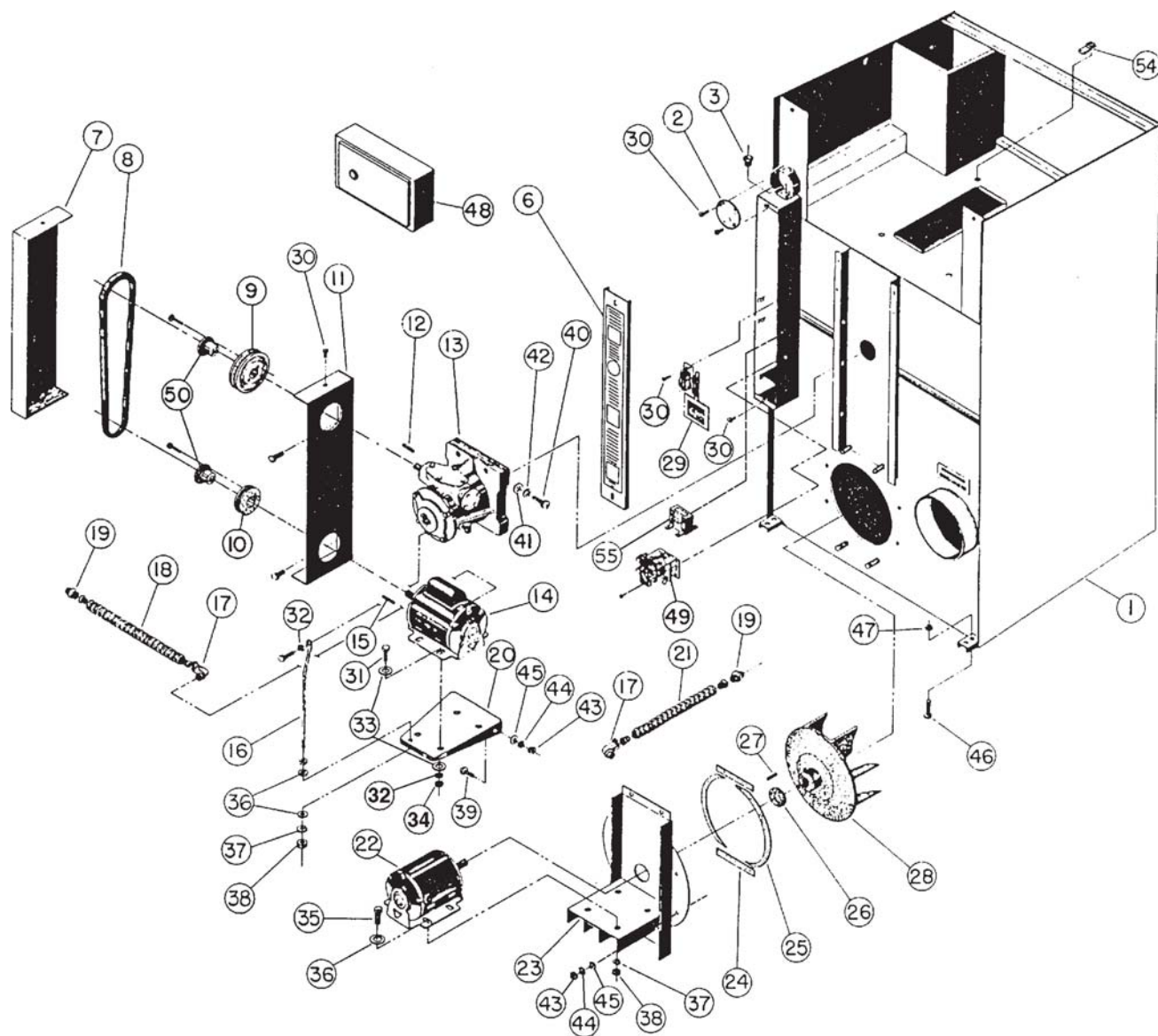
Parts—75 lb. Laundry Dryer—Single Motor Model—Rear View

1	TU13111	Jacket Welded (Gas/Electric)	28	TU5439	Hex Head Screw - 5/16" - 18 x 3/4"
	TU13112	Jacket Welded (Steam Models ONLY)		(Pkg. of 6)	
2	SB170	Junction Box Cover	29	VSB130	Cut Washer - 5/16" (Pkg. of 6)
3	TU6263	Screw	30	TU2814	Split Lockwasher - 5/16" (Pkg. of 6)
5	TU8206	Air Switch Assembly (see separate page)	31	C249	Hex Nut - 5/16" (Pkg. of 6)
6	TU5890	Control Box Cover	32	RC344	Self Drilling Screw (Pkg. of 6)
7	TU12576	Carriage Bolt - 3/8" - 16 x 1"	33	PT196	Cable Strap
8	VSB134	3/8" Split Lockwasher (Pkg. of 6)	35	TU3247	Retaining Ring
9	TU4787	3/8" Hex Nut (Pkg. of 6)	36	TU4787	Hex Nut - 3/8" (Pkg. of 6)
10	TU12642	Basket Sheave with Set Screws	37	VSB134	Lockwasher - 3/8" (Pkg. of 6)
11	TU10888	V-Belt - 50/60 Hz. AX64	38	TU4937	Jam Nut - 3/8" (Pkg. of 6)
12	TU5217	Idler Sheave - 50/60 Hz.	39	TU3211	Leveling Bolt - 3/8" - 16 x 2-1/2"
13	TU12803	Idler Bracket with Grease Fitting (Gas Dryers)	41	TU11019	Key
14	TU6725	V-Belt (50 Hz.) - 4L-600	42	TU10418	Lubrication Label
	TU4794	V-Belt (60 Hz.) - 4L-590	43	TU10651	Mechanism Box Cover (Steam Dryer ONLY)
15	TU12799	Rear Guard Complete	44	TU13463	Relay - 9A, 3 Pole w/Aux.
16	TU4791	Right Angle Connector		TU13516	Relay - 12A, 3 Pole w/Aux.
17	CFB4200	Cable - 42" Long	45	-----	Cast Iron Bearings and Bracket Assembly (See separate page for parts breakdown)
18	TU4790	Straight Connector	51	TU13480	Transformer - 240V/24V
19	-----	Motor *		TU13515	Transformer - 120V/24V
20	TU5241	Key		TU13514	Transformer - 460V/24V
21	TU7603	Motor Sheave, 60 Hz., with Set Screw		TU13642	Transformer - 575V/24V
	TU12802	Motor Sheave, 50 Hz., with Set Screw		TU13643	Transformer - 380-415V/24V
22	TU14065	Motor Mount W/A	53	TU7184	Bronze Bushing (2 each)
23	TU2473	Side Gasket	54	TU10418	Idler Pulley Label
24	TU2474	Top and Bottom Gasket	56	TU2372	Bushing
25	TU2476	Felt Seal	57	TU10359	Motor Adapter—3 Ph. Only
26	TU4684	Key	58	TU13044	Motor Adapter—1 Ph. Only
27	TU8740	Fan Wheel - 50/60 Hz. with Set Screws			
	TU3282	Round Set Screw ONLY (Pkg. of 6)			
	F819	Square Set Screw ONLY (Pkg. of 6)			

* See Motor List Page

75 lb. Laundry Dryer—Double Motor Model—Rear View (Illustration)

Models: L36USD36 — Gas (Energy-Saver)
 L36URD36 — Gas, Steam or Electric

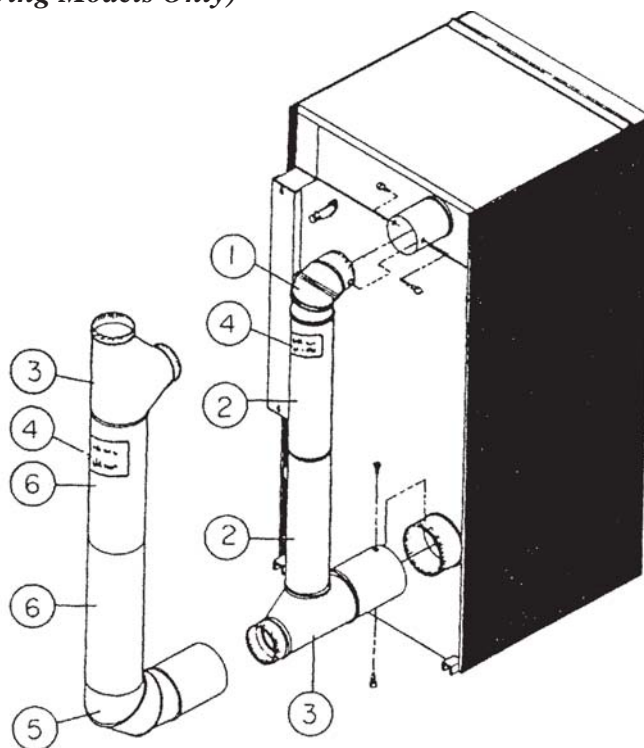


Parts—75 lb. Laundry Dryer—Double Motor Model—Rear View

1	TU13956	Jacket Welded (Gas/Electric)	29	TU8206	Air Switch Assembly
	TU13957	Jacket Welded (Steam)			(See separate page)
2	SB107	Junction Box Cover	30	TU7733	8 x 1/2" Self Drill Screw (Pkg. of 6)
3	TU2372	Snap Bushing	31	RC344	1/4" - 20 x 3/4" Cap Screw
6	TU5890	Control Box Cover	32	TU2846	1/4" Lockwasher (Pkg. of 6)
7	TU14095	Belt Guard Cover	33	TU2847	1/4" Cut Washer (Pkg. of 6)
8	TU2317	V-Belt 4L-380 - 50/60 Hz.	34	TU4934	1/4" - 20 Hex Nut (Pkg. of 6)
9	TU6722	Gear Sheave (AK-51H) with	35	TU5439	5/16" - 18 x 3/4" Cap Screw
		Set Screw, 60 Hz.			(Pkg. of 6)
	510101040	Gear Sheave (AK-46H) with	36	VSB130	5/16" Cut Washer (Pkg. of 6)
		Set Screw, 50 Hz.	37	TU2814	5/16" Split Lockwasher (Pkg. of 6)
10	TU7334	Motor Sheave (AK-34H) with	38	C249	5/16" - 18 Hex Nut (Pkg. of 6)
		Set Screw, 60 Hz.	39	TU3124	3/8" - 16 x 3/4" Cap Screw
	510101041	Motor Sheave (AK-39H) with	40	RC347	1/2" - 13 x 1-1/2" Cap Screw
		Set Screw, 50 Hz.	41	TU1851	1/2" Cut Washer (7/32" Thick)
11	TU5254	Belt Guard Mounting	42	TU2831	1/2" Lockwasher (Pkg. of 6)
12	TU4684	Shaft Key	43	TU4787	3/8" - 16 Hex Nut (Pkg. of 6)
13	TM100	Small Gear Reducer	44	VSB134	3/8" Lockwasher (Pkg. of 6)
		(see separate page)	45	IB140	3/8" Cut Washer
14	----	Basket Motor	46	TU3211	3/8" - 16 x 2-1/2" Level. Bolts
		(see Motor List page)	47	TU4937	3/8" - 16 x 3/4" Cap Screw
15	TU4684	Key			(Pkg. of 6)
16	TU8608	Belt Adjusting Rod	48	----	Reversing Control Box
17	TU4791	Right Angle Connector			(see separate page)
18	CFB1700	1/2" Greenfield Cable	49	TU13463	Relay - 9A, 3 Pole w/Aux.
19	TU4790	Straight Connector		TU13516	Relay - 12A, 3 Pole w/Aux.
20	TU33	Motor Drive Bracket	50	TU2833	Bushing (H-5/8) for Sheave
21	CFB3000	1/2" Greenfield Cable	54	TU6760	Clip Nut
22	----	Fan Motor	55	TU13480	Transformer - 240V/24V
		(see Motor List page)		TU13515	Transformer - 120V/24V
23	TU2376	Motor Mount Weldment		TU13514	Transformer - 460V/24V
24	TU2474	Top and Bottom Gasket		TU13642	Transformer - 575V/24V
25	TU2473	Side Gasket		TU13643	Transformer - 380-415V/24V
26	TU2476	Felt Seal			
27	TU4684	Key			
28	TU8740	Fan Wheel with Set Screws			
		(50/60 Hz.)			

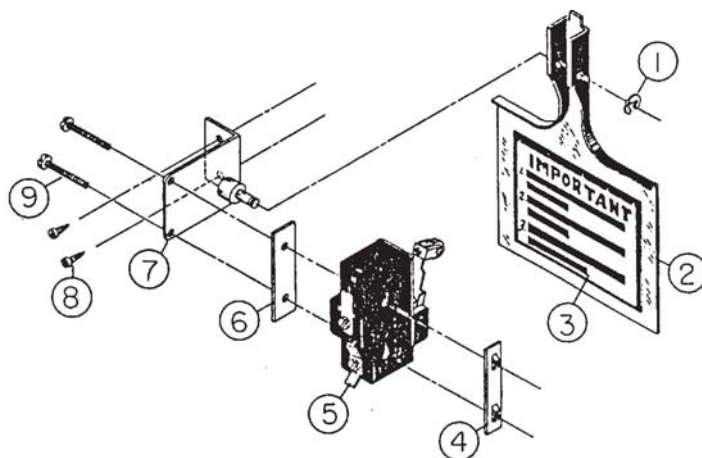
Duct Work Parts
(Energy-Saving Models Only)

- | | | |
|---|--------|--------------------|
| 1 | TU8053 | Duct Elbow |
| 2 | TU8055 | Duct Long |
| 3 | TU8052 | Duct Tee |
| 4 | TU9161 | Installation Label |
| 5 | TU7375 | Extended Elbow |
| 6 | TU8177 | Duct Short |

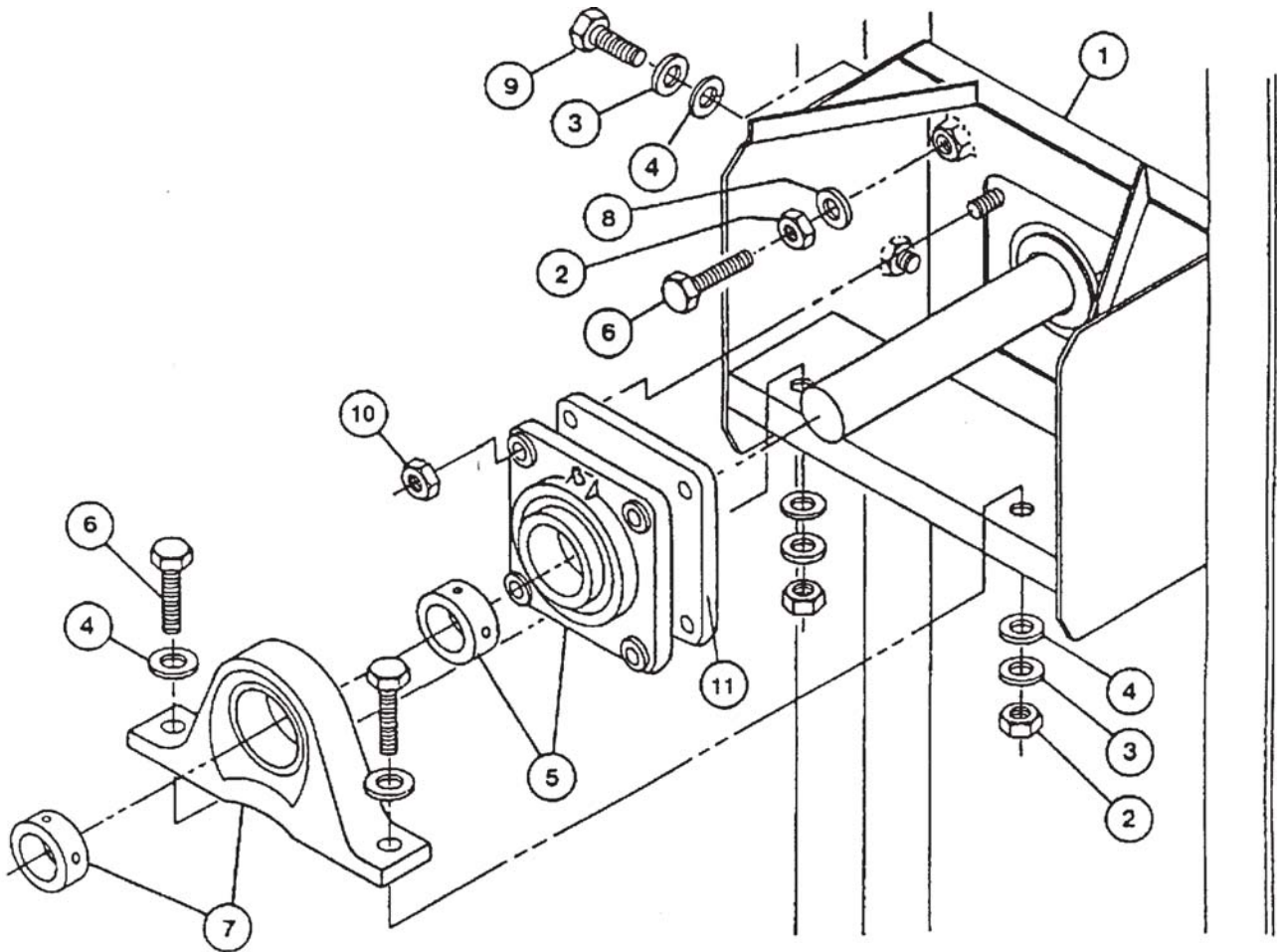


Air Switch Assembly
TU8206

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

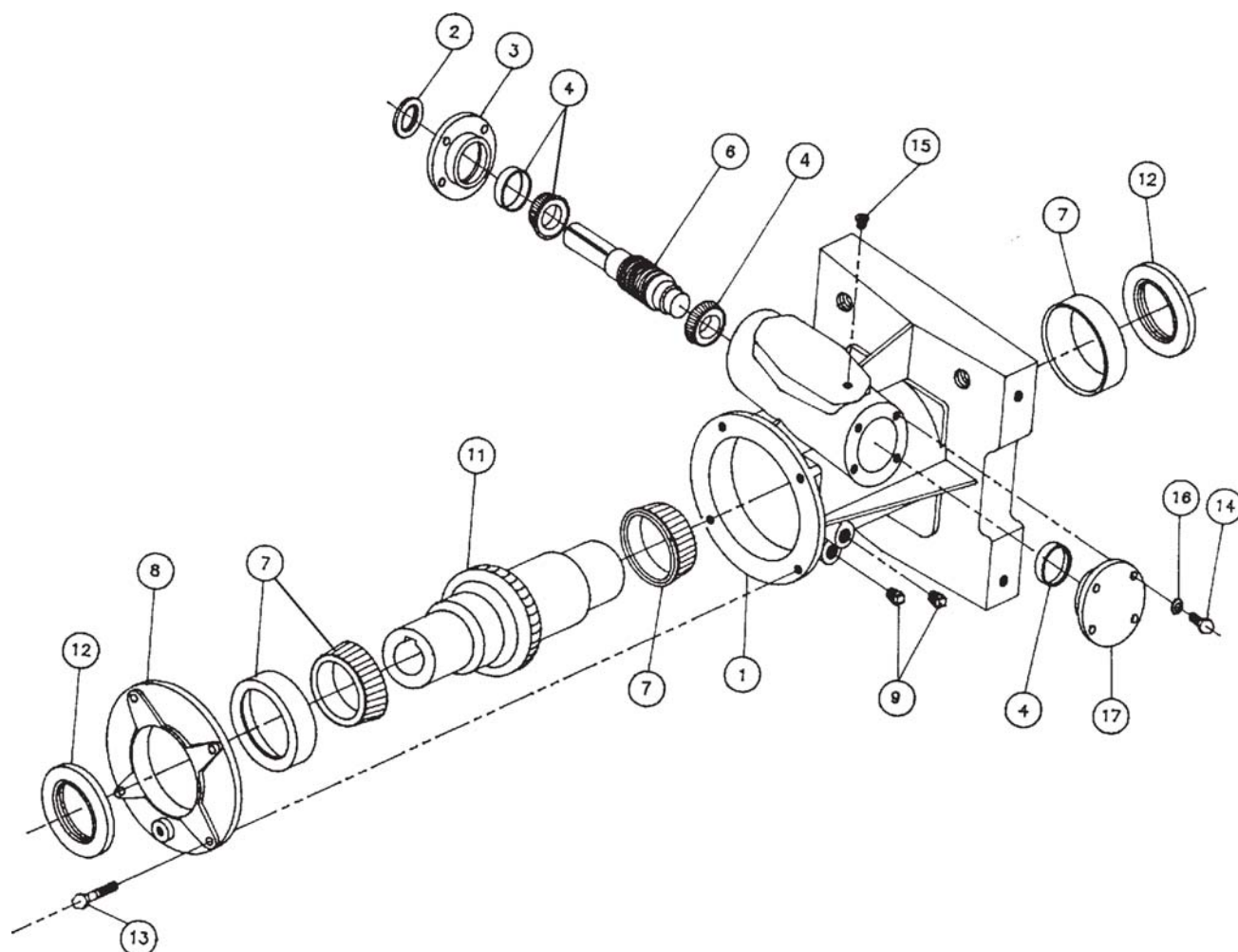


Bearings and Related Parts (with Illustration)



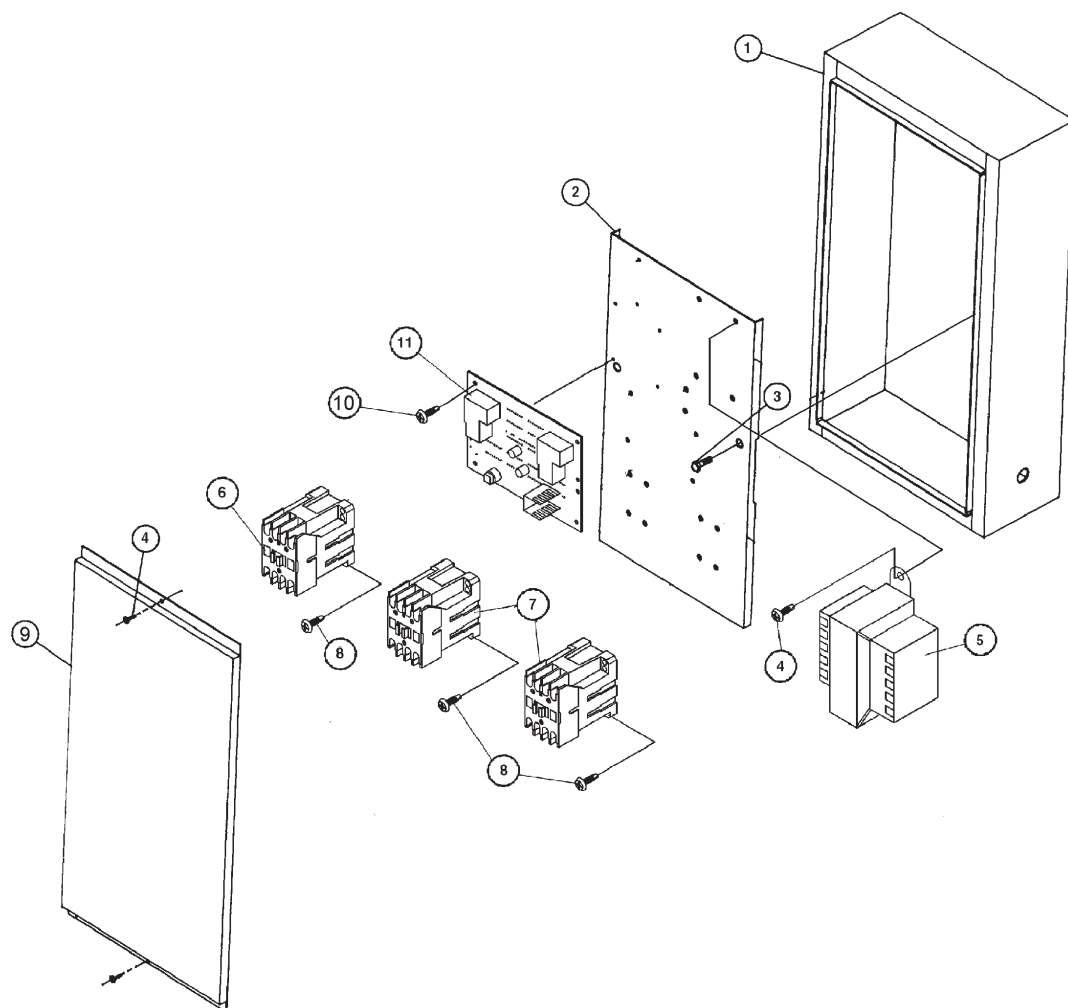
- | | | |
|----|---------|--|
| 1 | TU13147 | Bearing Support Bracket |
| 2 | OP233 | 1/2" Hex Nut (pkg 6) |
| 3 | TU2831 | 1/2" Lockwasher (pkg 6) |
| 4 | TU2883 | 1/2" Flat Washer |
| 5 | K447 | Flange Bearing with Spacers & Jam Nuts |
| 6 | TU2195 | 1/2" - 13 x 1-3/4" Cap Screw (pkg 6) |
| 7 | TU13334 | Pillow Block Bearing |
| 8 | OP251 | 1/2" I.T. Lockwasher (pkg 6) |
| 9 | RC347 | 1/2" - 13 x 1-1/4" Cap Screw (pkg 6) |
| 10 | TU13372 | Jam Nut 1/2" - 13 w/Nylon |
| 11 | TU11852 | Spacer - Bearing |

Parts—Small Gear Reducer—TM100



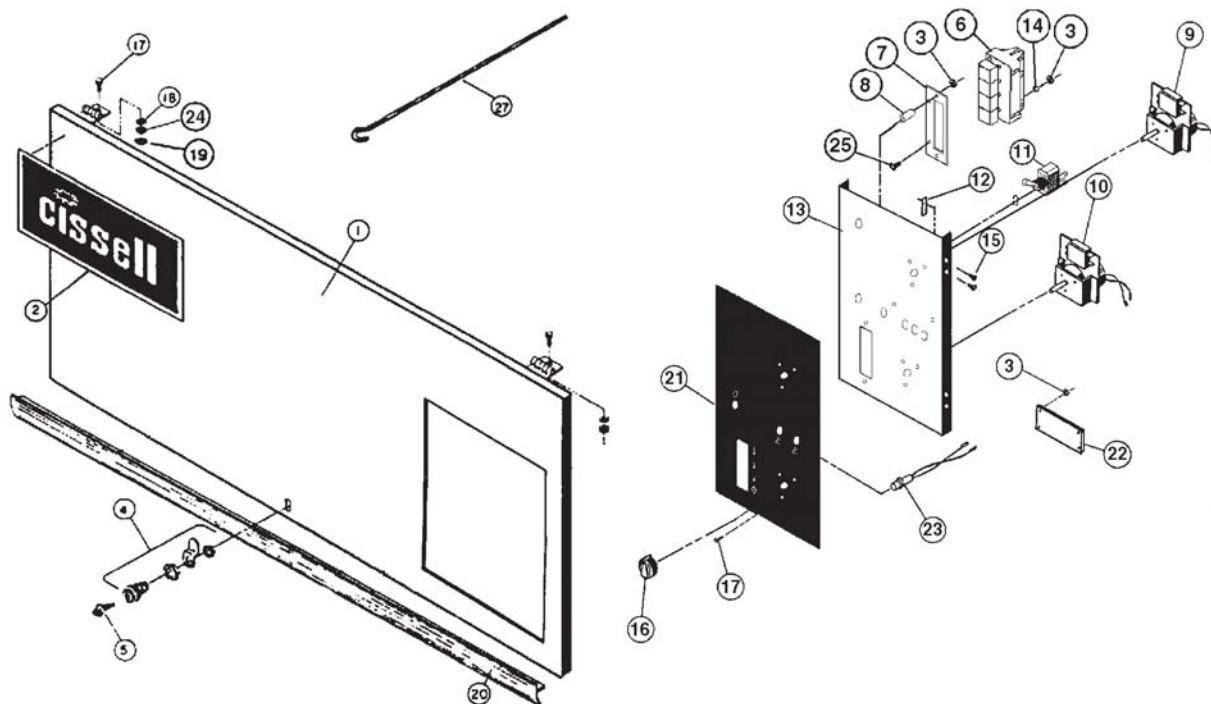
1	TM103	Housing	1
2	TM104	Small Seal	1
3	TM105	Small Open End Cap	1
4	TM108	Small Bearing Cup & Cone	2
6	TM101	Worm 1-1/2" x 7-1/8"	1
7	TM110	Large Bearing Cup & Cone	2
8	TM112	Large End Cap	1
9	TM115	1/4" Pipe Plug	2
11	TM102	Worm Gear	1
12	TM120	Oil Seal	2
13	TU2623	Cap Screw 3/8" - 16 x 1-1/2"	4
14	TU2839	Cap Screw 1/4" - 20 x 7/8"	8
15	TM121	Vent Plug 1/4" NPT	1
16	RC349	1/4" Internal Tooth Lockwasher	8
17	TM118	Small Closed End Cap	1

Reversing Control Box Assembly



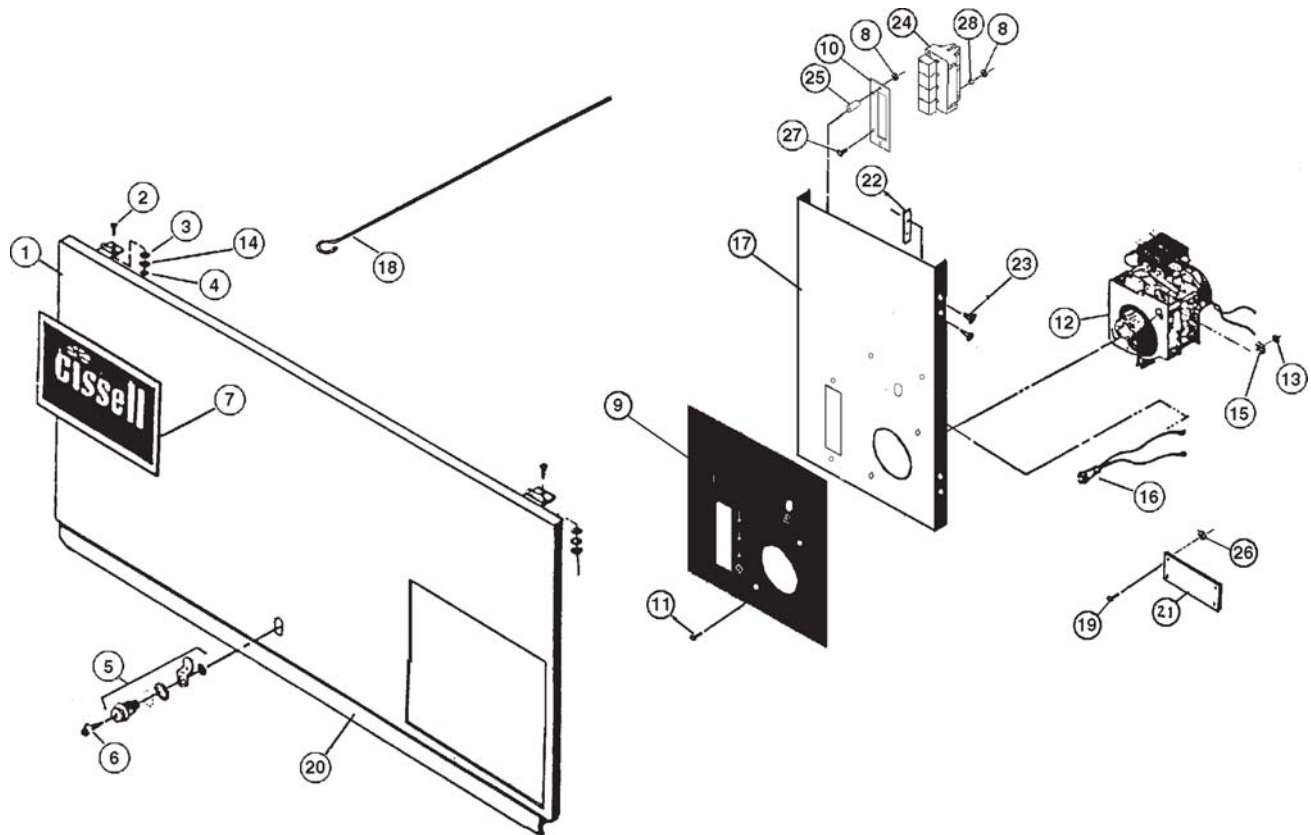
1	TU9374	Reversing Control Box W/A
2	TU13700	Control Panel Plate
3	RC344	1/4" - 20 x 3/4" Hex Head Screw
4	TU7733	#8 - 18 x 1/2" Self Drill Screw (Pkg 6)
5	TU13480	Transformer, 200-240V/24V w/Reset
6	TU13516	Contactor, 24V
7	TU13526	Contactor Assembly, 24V Reversing
8	TU2793	#8 - 18 x 3/4" Self Drill Screw (Pkg 6)
9	TU14118	Box Cover Plate
10	F540	#6 x 5/8" Phillips Head Screw
11	TU12874	Timer, Solid State Reversing

Control Panel and Access Door—Double Timer Model

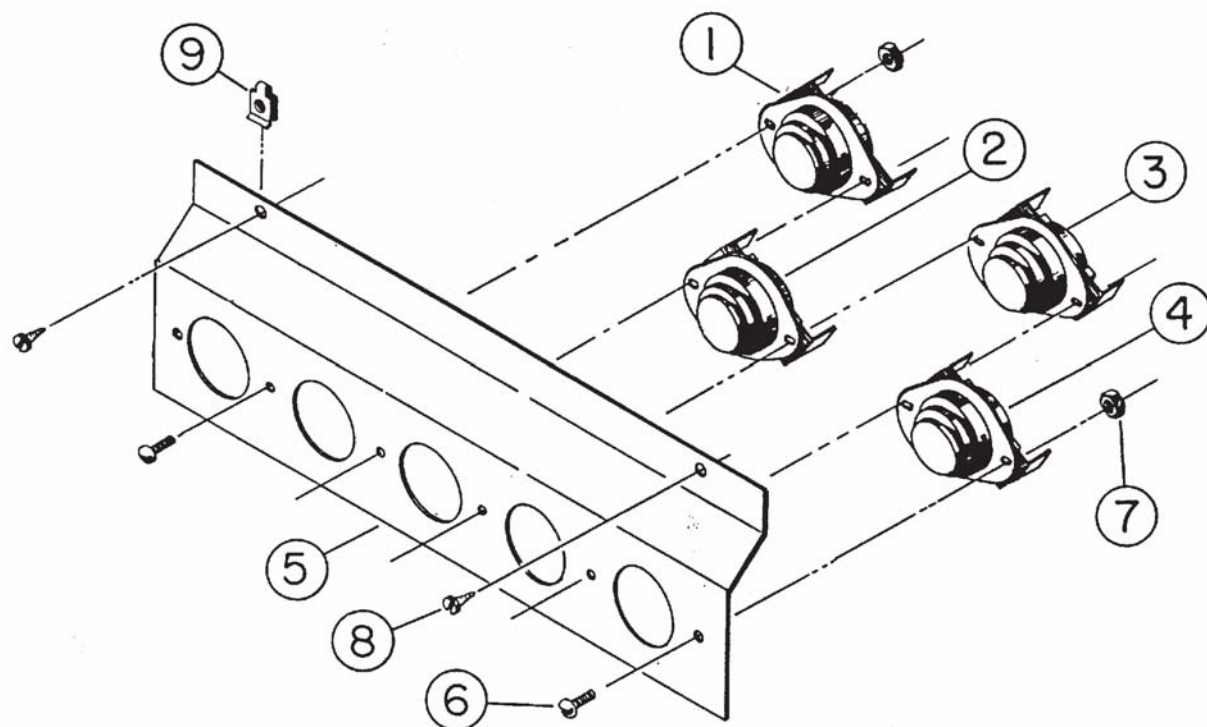


1	TU13940	Access Door W/A (Specify Color)	14	M271	#8 Int. Tooth Lockwasher
2	TU8013	Cissell Nameplate	15	TU9524	#6 x 5/16" Screw
3	TU3400	Nut	16	TU2555	Timer Knob
4	TU4822	Lock #3186	17	TU3479	10 - 32 x 7/16" Truss Head Screw
5	TU2844	Key JWC2	18	P104	1/4" Cut Washer
6	TU11510	Push Button Switch	19	TU2842	#10 - 32 Hex Nut
7	TUT191A	Push Button Switch Plate	20	TU7983	Upper Front Trim
8	TU13942	Spacer	21	TU13814	Control Panel Nameplate (N/Rev.)
9	TU12932	Timer, 24V, 0-60 Minutes		TU13816	Control Panel Nameplate (Rev.)
10	TU12933	Timer, 24V, 0-15 Minutes	22	TU8629	Terminal Board
11	FG147	Toggle Switch	23	TUT316	Pilot Light - 24V
12	TU1771	TwinNut	24	FB187	#10 Lockwasher
13	TU13856	Control Panel Plate Asm.	25	SV136	#6-32 x 15/16" Truss Head Screw

Control Panel and Access Door—Coin Meter Model



1	TU9391	Access Door Weldment	14	FB187	#10 Lockwasher
2	TU3479	#10-32 x 7/16" Truss Head Screw	15	P104	1/4" Cut Washer
3	P104	1/4" Cut Washer	16	TUT316	Indicator Lamp—24V
4	TU2842	#10-32 Hex Nut	17	TU13858	Control Panel Plate Asm.
5	TU9386	Lock-JWC3	18	TU5739	Support Rod
5A	TU8995	Cam	19	M262	Screw
6	TU9387	Key - JWC3	20	TU7959	Chrome Trim
7	TU8013	Cissell Nameplate	21	TU8629	Terminal Board
8	TU3400	Nut	22	TU1771	Twin Clip
9	TU13843	Control Panel Nameplate	23	TU9524	#6 x 5/16" Screw
10	TUT191A	Push Button Switch Plate	24	TU11510	Push Button Switch
11	TU4958	#8-32 x 3/8" Machine Screw	25	TU13942	Spacer
12	-----	Coin Meter (Specify Voltage, Coin Denomination, Single or Double Slot)	26	TU3266	Nut
13	TU3266	#8-32 x 11/32" Hex Nut	27	SV136	#6-32 x 15/16" Truss Head Scr.
			28	M271	#8 - Int. Tooth Lockwasher

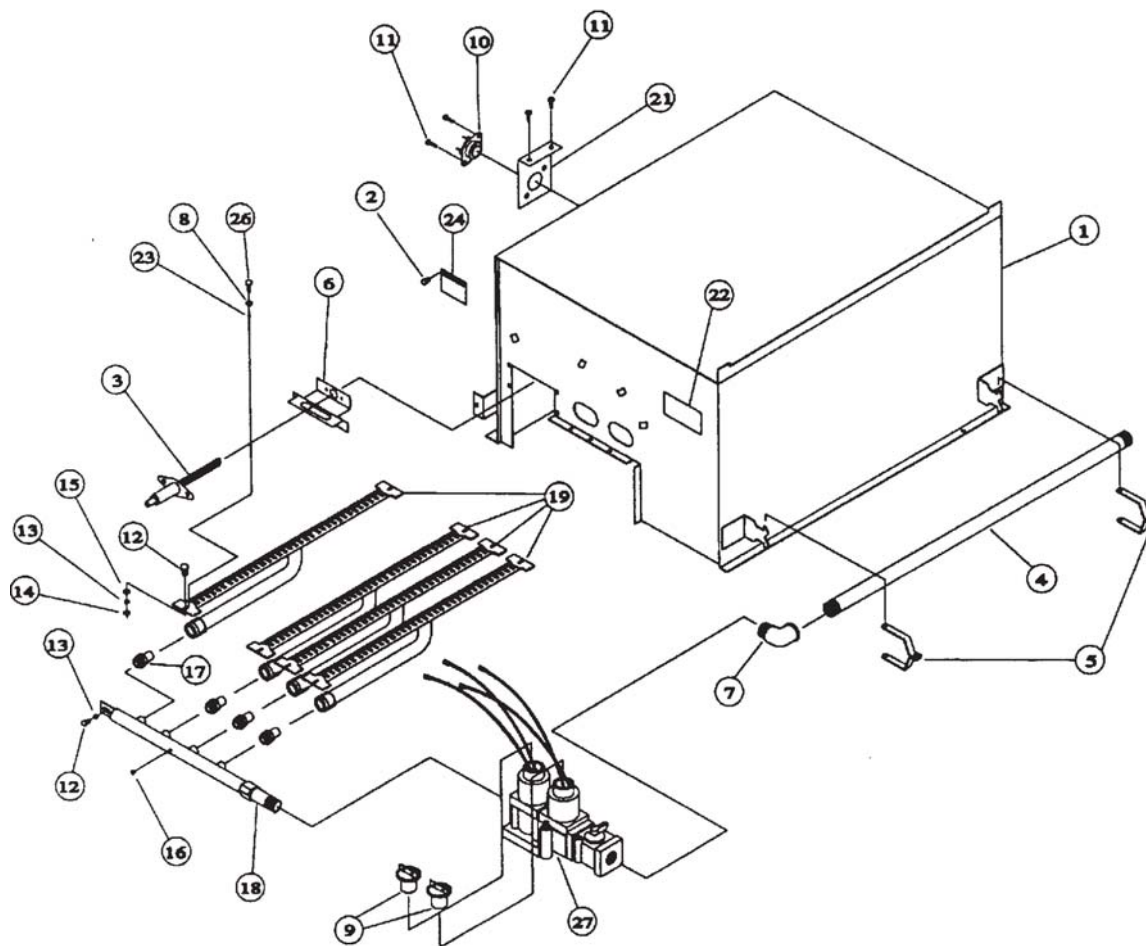


- | | | |
|---|---------|--|
| 1 | TU3240H | Safety High Limit Thermostat |
| 2 | TU3240H | 185°F Thermostat |
| 3 | TU5150H | 150°F Thermostat |
| 4 | TU7244H | 135°F Thermostat |
| 5 | TU5143 | Mounting Bracket |
| 6 | TU3624 | #6-32 x 1/4" Round Head Screw (6 each) |
| 7 | TU3400 | #6-32 Hex Nut |
| 8 | TU7733 | #8 x 1/2" Self Drill Screw |
| 9 | TU6067 | #8 Speed Clip (2 each) |

Parts—Standard Gas Bonnet

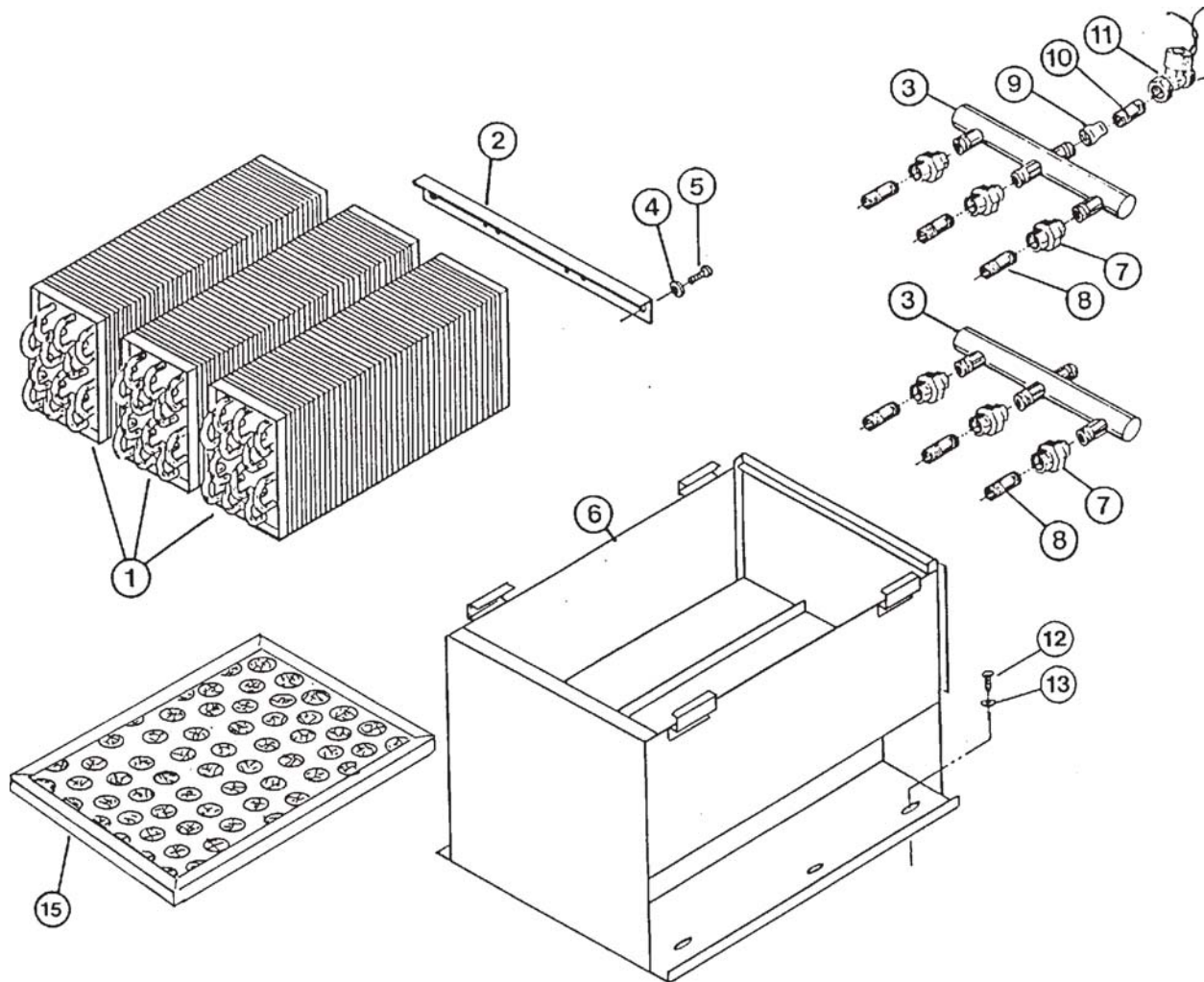
GAS BONNET - TU13676 (Natural Gas)

GAS BONNET - TU13717 (LP Gas)



1	TU8683	Bonnet	15	TU2847	1/4" Flat Washer
2	TU7733	#8 - 18 x 1/2" Self Drill Screw (Pkg. of 6)	16	TU2224	1/8" Pipe Plug
3	GA-00764-0	Electrode Spark Igniter	17	TU3539	Gas Burner Orifice (Specify Size)
4	TU13212	1/2" Pipe Nipple 24"	18	TU8288	Manifold Assembly
5	TU2226	Manifold Mounting Bracket	19	TU7840	Burner
6	TU13826	Electrode Spark Mounting Bracket	21	TU13695	Bonnet Thermostat Bracket
7	OP291	1/2" Elbow (Street)	22	----	Gas Rating Plate
8	M271	Lockwasher	23	P104	1/4" Cut Washer Brass
9	C1365	Connector T & B	24	TU8645	Installation Instructions
10	TU13678	Thermostat, Man. Reset 300°	26	TU3416	#8 x 1-1/4" Sheet Metal Scr.
11	TU7733	#8 Self Drill Scr. (Pkg. of 6)	27	TU13523	1/2" Combination Gas Valve (Natural Gas)
12	CB36	1/2" - 20 x 1/2" Hex Head Screw		TU13513	1/2" Combination Gas Valve (LP Gas)
13	TU2846	1/4" Split Lockwasher			
14	TU4934	1/4" - 20 Hex Nut			

Parts—Steam Heating Unit—6 Coil

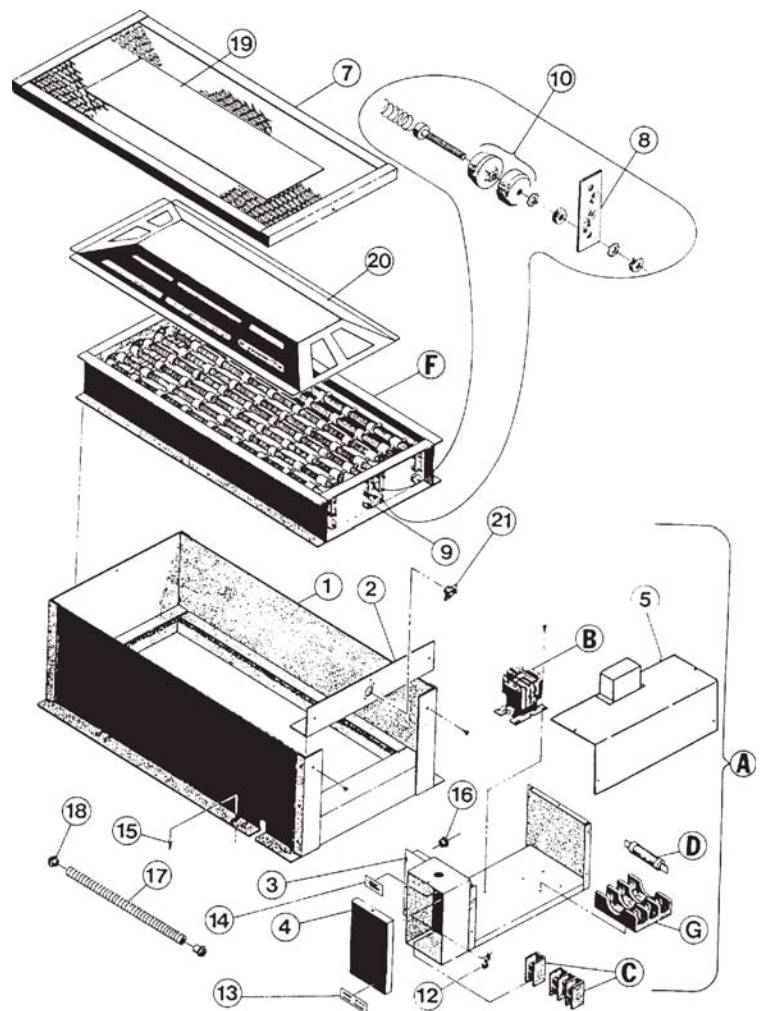


TU13690 (24V)

- | | | |
|----|---------|-----------------------------------|
| 1 | TU3172 | Steam Coil (6 Coil) |
| 2 | TU6683 | Coil Holder |
| 3 | TU6679 | Manifold |
| 4 | TU2846 | 1/4" Lockwasher (Pkg. of 6) |
| 5 | CB36 | 1/4" - 20 x 1 1/2" Screw |
| 6 | TU10929 | Bonnet Weldment |
| 7 | TU4600 | 3/4" Union |
| 8 | TU4607 | Nipple - 3/4" x 2-1/2" |
| 9 | TU2735 | Reducer - 3/4" x 1" |
| 10 | TU4608 | Nipple - 3/4" x 2" |
| 11 | TU13517 | Solenoid Valve (24V, 60Hz.) |
| 12 | RC344 | 1/4" - 20 x 3/4" Screw |
| 13 | TU2847 | 1/4" Cut Washer |
| 15 | TU9953 | Air Filter (not part of assembly) |

Parts—Electric Heating Unit

- | | | |
|----|---------------|--------------------------------|
| 1 | TU3103 | Bonnet Weldment |
| 2 | TU3102 | Hold Down Plate |
| 3 | TU9402 | Control Box W/A |
| 4 | TU9398 | Terminal Box W/A |
| 5 | TU12456 | Top Cover |
| 7 | TU3104 | Air Inlet Cover |
| 8 | TU3767 | Contact Strap (4 each) |
| 9 | TU3768 | Contact Strap (1 each) |
| 10 | TU3253 | Insulators (pkg. of 6) |
| 12 | TU7738 | Grounding Lug |
| 13 | TU9254 | High Voltage Label (415V Only) |
| 14 | TU9258 | Grounding Label |
| 15 | RC344 | 1/4" - 20 x 3/4" Screw |
| 16 | TU5958 | Bushing |
| 17 | CFB0750 | Cable 7 1/2" Long |
| 18 | TU4790 | Straight Connector |
| 19 | TU10496 | Cover |
| 20 | TU10411 | Air Baffle |
| 21 | TU7244 | 135° Thermostat |
| A | See next page | Control Box Less Wiring |
| B | See next page | Contactor |
| C | See next page | Terminal Block |
| D | See next page | Fuse |
| E | See next page | Bonnet W/Elements |
| F | See next page | Heater Elements |
| G | See next page | Fuse Holder |

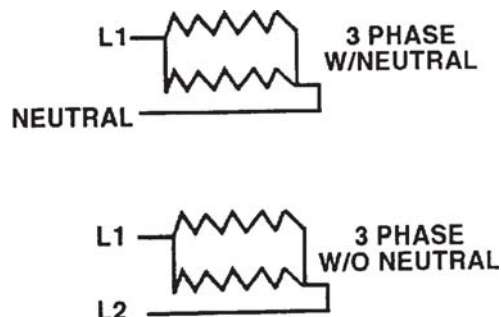
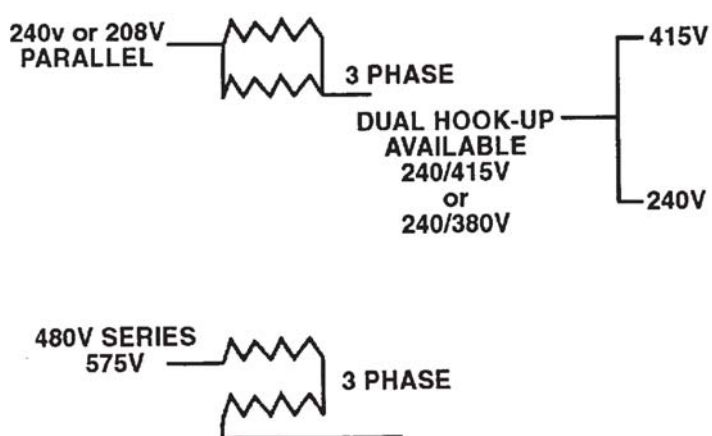


75 lb. Electric Heating Unit

	A	B	C	D	E	F	G	H	I
Complete Bonnet Assembly	Control Box Less Wiring	Contactor (24V Coil)	Terminal Block	Heater Fuse Block	Heater Fuses	Bonnet with Elements	Heater Elements	Motor Fuse Block	Motor Fuses
TU13748	TU13773 208V 3PH	TU13520 30/45 AMP 2 required	TU9143	TU11096 2 required	TU7224 40 AMPS 6 required	TU9333 40KW 208V 3PH	HE10610 40KW 208V	TU8201	TU819710 10 AMPS 3 required
TU13749	TU13774 240V 3PH	TU13520 30/45 AMP 2 required	TU9143	TU11096 2 required	TU7224 40 AMPS 6 required	TU9336 40KW 240V 3PH	HE10810 40KW 240V	TU8201	TU819710 10 AMPS 3 required
TU13934	TU13775 200-220V/ 346-380V 3PH	TU13520 30/45 AMP 2 required	TU9143* TU9142**	TU11096 2 required	TU7224 40 AMPS 6 required	TU9336 40KW 240V 3PH	HE10810 40KW 240V	TU8200	TU819908 8 AMPS 3 required
TU13750	TU13775 240/415V 3PH	TU13520 30/45 AMP 2 required	TU9143* TU9142**	TU11096 2 required	TU7224 40 AMPS 6 required	TU9336 40KW 240 or 415V 3PH	HE10810 40KW 240V	TU8200	TU819908 8 AMPS 3 required
TU13751	TU13776 480V 3PH	TU13520 30/45 AMP 1 required	TU9143	TU9141	TU7072 40 AMPS 3 required	TU9336 40KW 480V 3PH	HE10810 40KW, 240V Used for 40KW, 480V	TU8200	TU819908 8 AMPS 3 required
TU14021	TU14020 208V 3PH	TU13521 45/80 AMP 1 required	TU9143	TU11096 1 required	TU7074 60 AMPS 3 required	TU7589 30KW 208V 3PH	HE10810 240V, 40KW Used for 208V 30KW	TU8201	TU819710 10 AMPS 3 required
TU14174	TU14173 575V 3PH	TU13520 30/45 AMP 1 required	TU8745	TU9141	TU7071 35 AMPS 3 required	TU14172 40KW 575V 3PH	HE11160 287V, 40KW Used for 575V 40KW	TU8200	TU819908 8 AMPS 3 required

* 3 Pole

** 1 Pole (Neutral)



Wire Size of Power Supply for Electric Heating Circuit

WIRE SIZE OF POWER SUPPLY FOR ELECTRIC HEATING CIRCUIT Double Motor Model

Rated Heater Input	Total Connected Amperes at Rated Voltage	HZ.	Minimum Size Power Wire*	Minimum Conduit Trade Size	Branch Circuit Maximum Fuse Size
40KW @ 208V/3Ph**	121.7 Amps	60	1 AWG	1 1/2"	125
40KW @ 208V/3Ph	116.5 Amps	60	1 AWG	1 1/2"	125
40KW @ 240V/3Ph**	106.7 Amps	60	2 AWG	1 1/4"	110
40KW @ 240V/3Ph	101.5 Amps	60	2 AWG	1 1/4"	110
40KW @ 480V/3Ph	52.7 Amps	60	6 AWG	1"	60
40KW @ 240V-415V/3Ph	102/59 Amps	60	2/6 AWG	1 1/4" / 1 1/4"	110/60
40KW @ 575V 3Ph	45.7 Amps	60	6 AWG	1 1/4"	50
30KW @ 240V/1Ph	133 Amps	60	0 AWG	1 1/2"	150

WIRE SIZE OF POWER SUPPLY FOR ELECTRIC HEATING CIRCUIT Single Motor Model

Rated Heater Input	Total Connected Amperes at Rated Voltage	HZ.	Minimum Size Power Wire*	Minimum Conduit Trade Size	Branch Circuit Maximum Fuse Size
40KW @ 208V/3Ph**	121.7 Amps	60	1 AWG	1 1/2"	125
40KW @ 208V/3Ph	116.5 Amps	60	1 AWG	1 1/2"	125
40KW @ 240V/3Ph**	106.7 Amps	60	2 AWG	1 1/4"	110
40KW @ 240V/3Ph	101.5 Amps	60	2 AWG	1 1/4"	110
40KW @ 480V/3Ph	52.7 Amps	60	6 AWG	1"	60
40KW @ 240V-415V/3Ph	102/59 Amps	60	2/6 AWG	1 1/4" / 1 1/4"	110/60
40KW @ 575V 3Ph	45.7 Amps	60	6 AWG	1 1/4"	50
30KW @ 240V/1Ph	133 Amps	60	0 AWG	1 1/2"	150

CAUTION: THIS MACHINE HAS ONE POWER SUPPLY CONNECTION POINT. Disconnect power before servicing dryer.

*** Based on:**

1. 75°C copper conductors
2. Ampacity of first breaker/disconnect/fused disconnect should not be more than 125% of the connected load.
3. Wiring length from breaker/fused disconnect/disconnect less than 100 LF.

**** Single Phase Motor**



50/75 lb.

Laundry Dryer with Japanese Coin Meter

SUPPLEMENT MANUAL

MODELS

L36URD30G

L36URD36G

L36URS30G

L36URS36G

CISSELL MANUFACTURING COMPANY

U.S. HEADQUARTERS

831 SOUTH FIRST ST.
P.O. BOX 32270
LOUISVILLE, KY
40203-2270

PHONE: (502) 587-1292
PARTS EXPRESS: 1-800-882-6665
PARTS SALES FAX: (502) 584-4070
SALES OFFICE FAX: (502) 585-3625

EUROPEAN HEADQUARTERS

PANTEX/CISSELL B.V. PHONE: (05970) 58333
INDUSTRIEWEG 27 FAX: (05970) 12723
P.O. BOX 53
9670 AB WINSCHOTEN
THE NETHERLANDS

NOTICE

**ALL INFORMATION SHOWN IN THIS MANUAL IS SUPPLEMENTAL TO
INFORMATION CONTAINED IN THE STANDARD OWNER'S MANUAL.**

OPERATION OF COIN METER

1. After loading the dryer with water washed clothes, close the loading door.
2. Turn the TEMPERATURE SELECTOR knob to the desired setting.

LOW for delicate, sheer, and easy to dry fabrics. 130°-140°F exhaust temperature.
MEDIUM for permanent press and synthetics. 155°-165°F exhaust temperature.
HIGH for cotton and heavy fabrics. 170°-180°F exhaust temperature.

3. Insert the proper coin(s) into the coin slot. The amount of drying time will be displayed on the digital display. The maximum amount of time is 99 minutes. Coins may be added any time during the operating cycle. Once the coins are deposited the dryer will begin the cycle.

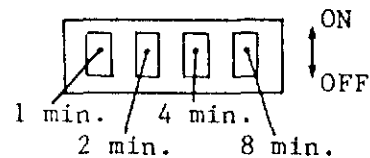
What is happening after cycle begins:

- Digital display counts down minutes remaining.
- The fan motor and basket will revolve.
- The heat will be energized.
- The heated air will mix with the clothes to evaporate the moisture.
- The thermostats will operate at the set temperature.
- The heat will shut off and a cooling cycle will cool the clothes.
- If door is opened during cycle, the fan and heat will shut off. Close the door to resume cycle.

INSTRUCTIONS FOR SETTING TIME ON COIN METER BOARD

This dryer is equipped with a DIP switch bank for setting the amount of time (minutes) for each coin deposited. It is located on the back side of the circuit board on the control panel. Use the DIP switch bank marked "25c" for this dryer. Do not use "10c".

The DIP switch bank consists of four small switches; each one determines a specified amount of time (if in the ON position. The OFF position equals 0), as shown:

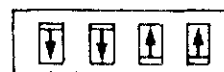


INSTRUCTIONS FOR SETTING TIME

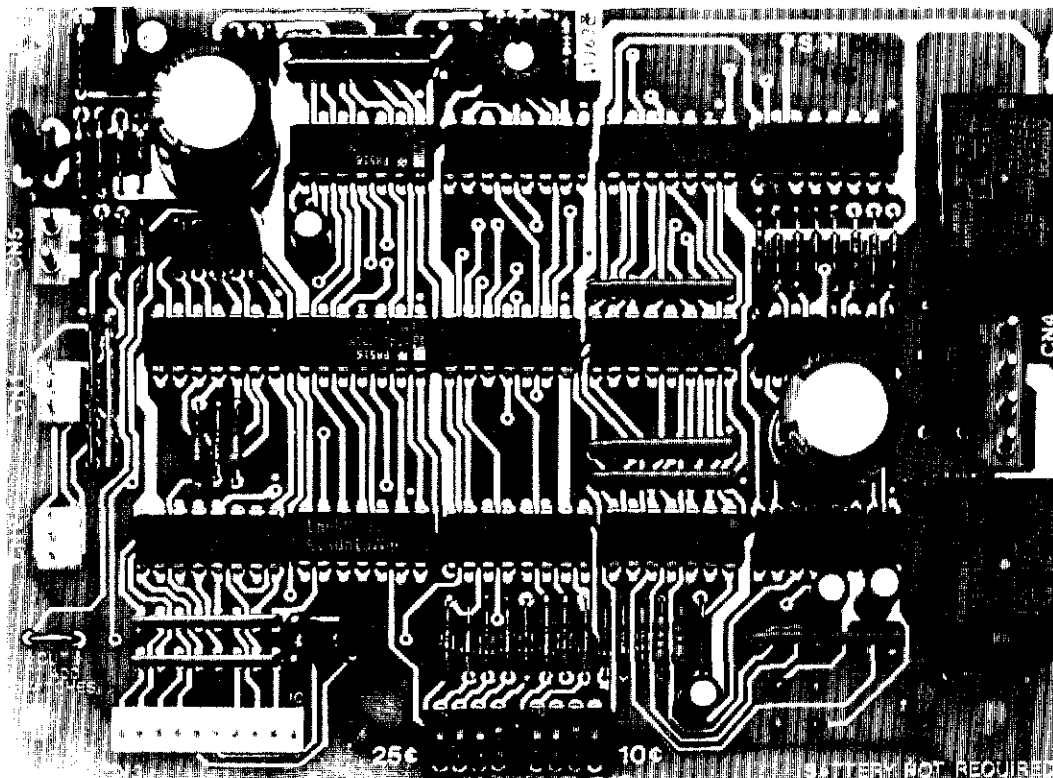
1. Use the DIP switches marked "25c". These switches have 3 minutes built in. Determine the total time (minutes) desired for each coin deposited. Subtract 3 minutes from total and the remainder is the amount of time you must set with the DIP switches.
2. Using the values for each of the four switches (as shown above), set the appropriate combination of switches ON to equal the amount of time calculated in Step 1. The OFF position equals 0 minutes.

EXAMPLE: 15 minutes per coin.

15 minutes (desired total time)
-3 minutes (built-in time)
 12 minutes (remainder to set switches)



$$\begin{array}{rcl}
 0 & +0 & +4 & +8 & = & 12 \text{ minutes} \\
 \text{built-in time} & & & & = & +3 \text{ minutes} \\
 \text{Total desired} & & & & = & 15 \text{ minutes}
 \end{array}$$

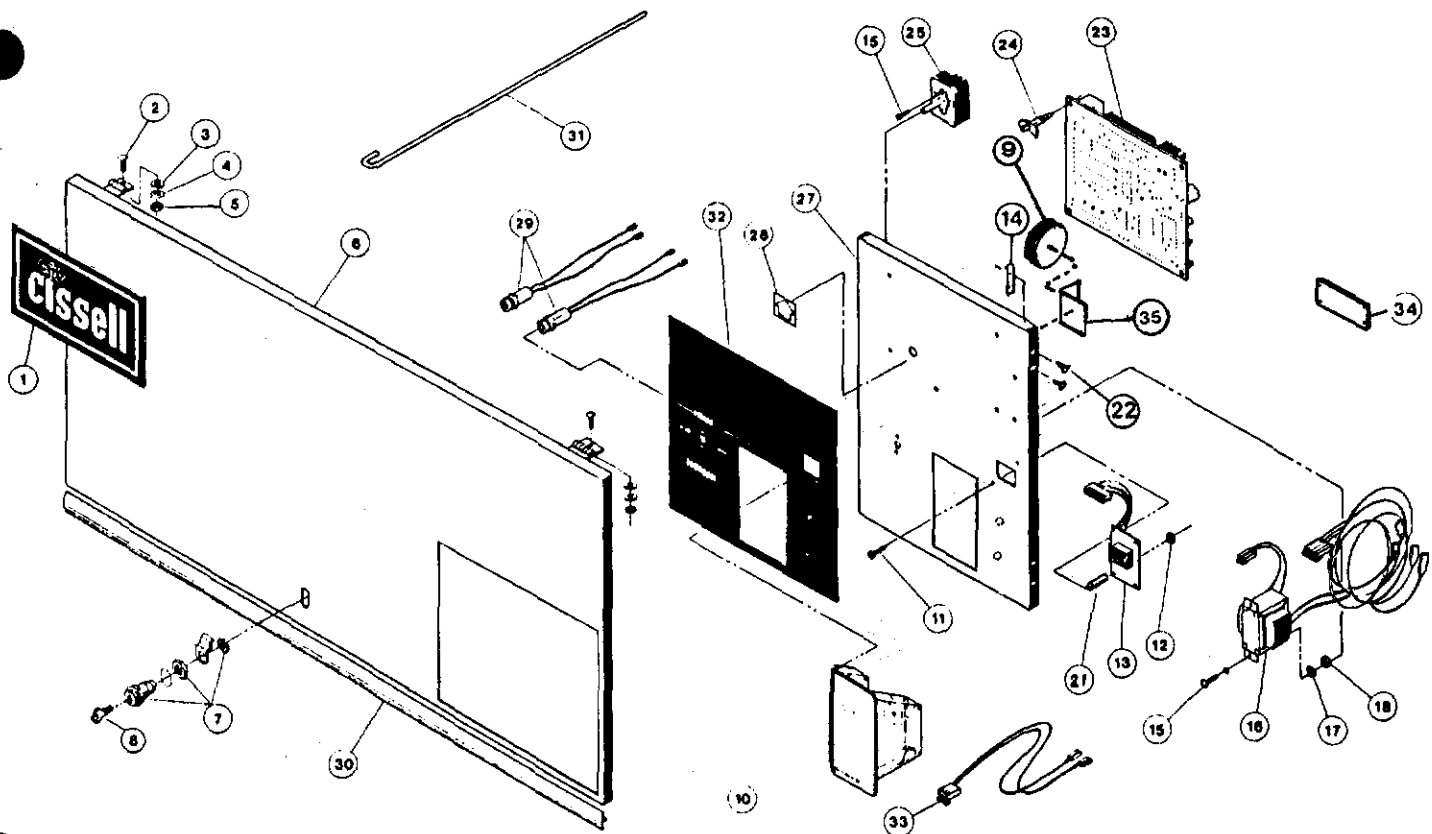


The DIP Switches are located here

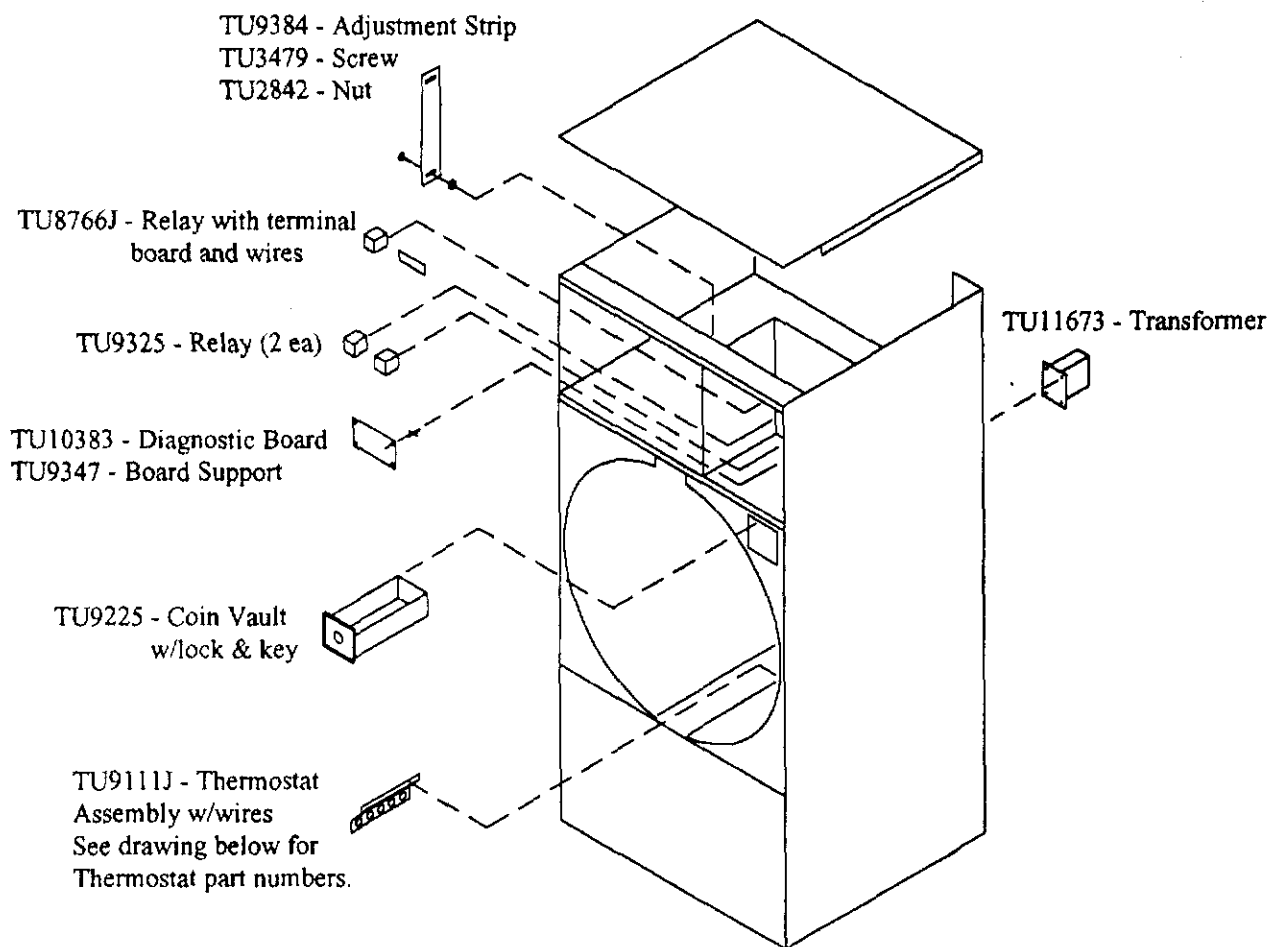
50/75 LB. DRYERS - JAPANESE COIN METER CONTROL PANEL ASSEMBLY

Ref.No.	Part No.	Description	Ref.No.	Part No.	Description
1	TU8013	Cissell Nameplate	16	TU9327	Transformer & Wires
2	TU3479	#10-32 x 7/16" Truss Screw	17	M270	#6 Internal Tooth Washer
3	P104	1/4" Cut Washer	18	TU3400	#6-32 x 5/16" Hex Nut
4	FB187	#10 Lockwasher	20	TU9525	#6-32 x 1/4" Screw
5	TU2842	#10-32 Hex Nut	21	TU11668	Standoff
6	TU11659	Access Door Panel Only*	22	TU9524	#6 x 5/16" Screw
7	TU4822	Lock w/cam (JWC2)	23	TU9329	Coin Meter Circuit Board
8	TU2844	Key (JWC2)	24	TU9347	Circuit Board Support
9	TU8935	Knob	25	TU9030	Temperature Selector Switch
10	CM220	Coin Selector	27	TU12746	Control Panel Plate
11	TU9426	#4-40 x 5/8" Machine Screw	28	TU9514	Reset Label
12	TU9427	#4-40 Hex Nut	29	TU5421	Neon Lamps
13	TU9328	Digital Display Assembly	30	TU7959	Door Trim
14	TU1771	Twin Clip Nut	31	TU5739	Door Support Arm
15	TU3624	#6-32 x 1/4" Screw	32	TU12745	Control Nameplate
			34	TU8629J	Terminal Board
			35	TU13116	SWITCH MNTG BRKT

* TU11666 - Door Assembly consists of Ref. No.'s 1, 6, 7, 8, 30, & 31.



NOTE: THE PARTS SHOWN BELOW REPLACE OR ARE ADDITIONAL
TO PARTS IN STANDARD OWNER'S MANUAL.



THERMOSTAT PART NUMBERS

