MANUFACTURING COMPANY

OWNER'S MANUAL

30 Lb. Stack Laundry Dryer

MODEL

GAS

L28DRS30G

CISSELL MANUFACTURING COMPANY
HEADQUARTERS
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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.

MAN471 8/96 D0528

IMPORTANT NOTICES—PLEASE READ

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

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

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

- WHAT TO DO IF YOU SMELL GAS

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

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

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

WARNING: Wear Safety Shoes to prevent injuries.

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

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

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

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

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

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

WARNING: Do not operate without guards in place.

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

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

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

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

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

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

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

WARNING: Before operating gas ignition system - purge air from Natural Gas or Propane Gas Lines per manufacturer’s instructions..

CISSELL DRYER WARRANTY

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

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

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

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

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

CISSELL MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY, STATUTORY OR OTHERWISE, CONCERNING THE EQUIPMENT OR PARTS INCLUDING, WITHOUT LIMITATION, A WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, OR A WARRANTY OF MERCHANTABILITY. THE WARRANTIES GIVEN ABOVE ARE EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. CISSELL NEITHER ASSUMES, NOR AUTHORIZES ANY PERSON TO ASSUME FOR IT, ANY OTHER WARRANTY OR LIABILITY IN CONNECTION WITH THE MANUFACTURE, USE OR SALE OF ITS EQUIPMENT OR PARTS.

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

IDENTIFICATION NAMEPLATE

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

TABLE OF CONTENTS
30 LB. STACK LAUNDRY DRYER

SYMBOLS

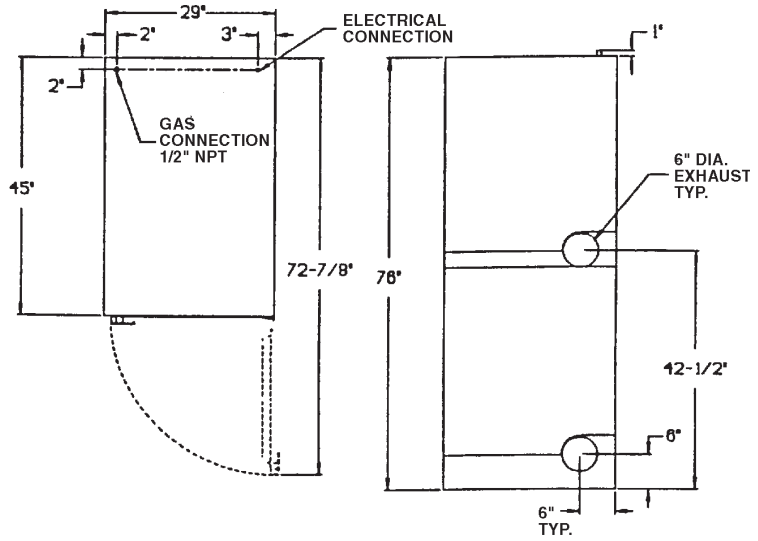
The following symbols are used in this manual and/or on the machine. The numbers between () refer to the numbers on the machine surveys.

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

SYMBOLS

The following symbols are used in this manual and/or on the machine. The numbers between () refer to the numbers on the machine surveys.

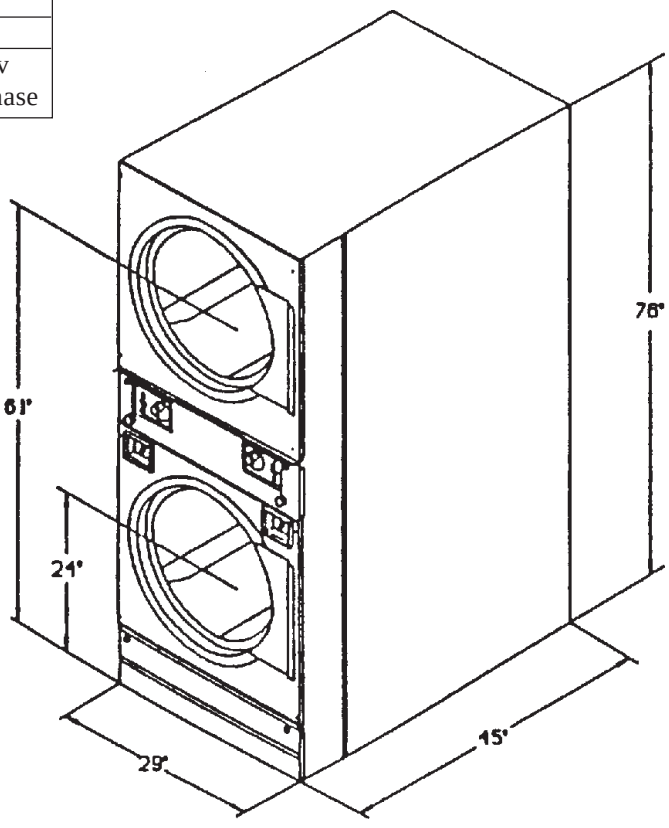
Symbol	Description	Part/Measurement
	**rotation in two directions** **rotation dans les deux sens** **Drehbewigung in zwei Richtungen** **movimiento rotativo en los dos sentidos**	
	**direction of rotation** **sens de mouvement continu de rotation** **Drehbewegung in Pfeilrichtung** **movimiento giratorio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



SPECIFICATIONS

Tumbler Capacity (Dry Weight)	30 lbs.
Tumbler Diameter	27”
Tumbler Depth	29”
Approx. Weight (Uncrated)	800 Lbs.
Approx. Weight (Shipping Weight)	850 Lbs.
Motor (HP)	1/2
Air Flow (Per Pocket)	450 CFM
Heat Input (Per Pocket)	75,000 BTU/H
Exhaust Diameter	6”
Door Opening	22-5/8”
Electrical Specifications	115/208/230v 50/60Hz - 1 phase

Manufacturer reserves the right to make changes in specifications without notice or obligation.



PLANNING FOR INSTALLATION

Cissell Manufacturing Co. provides quality appliances that are easy to install, operate and service. Each dryer is delivered complete and ready for connection to external vent ducts, power and gas lines. Plan for the installation of your dryer before it arrives. This will save you time and will assist your contractors at installation. Check to see if a permit is required. A preinstallation check list should include:

- A sketch of the dryer room with dimensions. Show the dryer location - place the dryers next to an outside wall if possible. Allow space for rear servicing and periodic inspection behind the dryers - (3) feet minimum is recommended for ease of servicing.
- Do not install dryer in a corrosive or contaminated atmosphere or near combustible materials. Make sure circulating air requirements are adhered to.
- Do not install or store dryer in an area where it will be exposed to water and/or weather.
- Show walls and partitions.
- Show location and size of venting duct outlet.
- Show the location of electrical power.
- Specify the location of the gas supply.
- Installation should be on a sound, carpetless and level floor capable of supporting dryer weights. Check your local building codes.
- Calculate the size of vents required to supply the dryer room with outside air (MAKE-UP AIR). Refer to the ADEQUATE AIR SUPPLY section of this manual.
- Optional: An electrical outlet box for connecting a vacuum or other tools and rear lighting for better visibility during servicing.

CODES & STANDARDS

The installation of the dryer should be performed by qualified licensed proferssionals in accordance with local building codes and local, state and federal standards. Warranty is void unless dryer is installed according to instructions in this manual. All dryer installations by the owner or contractors must conform to all or part of the following regulations:

United States

National Fuel Gas Code - ANSI #Z223.1	(latest edition).
National Electric Code - ANSI/NFPA #70	(latest edition).
National Electric Code - USAS-C1	(branch circuit grounding conductors to metallic boxes)

Canada

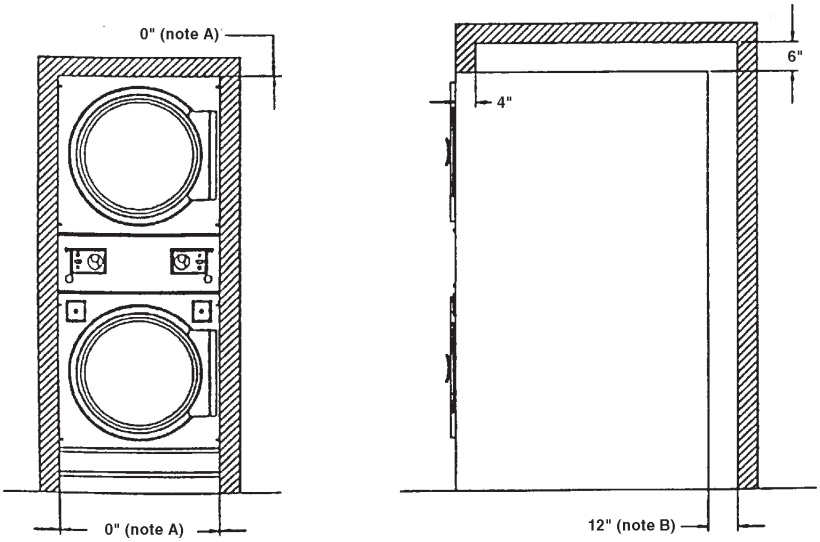
CAN 1-B149.1 & 2 - Installation codes for gas burning appliances.
CSA C22.1 Canadian Electrical Code Part 1.

The installation of a dryer is not complex. The dryer requires make-up air, *gas* for drying heat, *electrical power*, and *air exhaust ducts*.

For safety, all installation and testing must conform to the **CODES AND STANDARDS** section of this manual.

CONSTRUCTION CLEARANCE

The stack dryer may be installed in various configuration including free standing against a wall or recessed into a partition wall or room (as illustrated). It is recommended that adjacent materials be noncombustible. As illustrated, clearances to combustible construction material are minimum.



Note A

When dryer is installed flush with and protruding through a wall, the first 4” may contact combustible construction. From the point back, top clearance must be 6” and side clearance 1”.

Note B

Rear clearance is 12” minimum - (36” is recommended for ease of installation, maintenance and service).

Other

2” clearance from exhaust ducting.

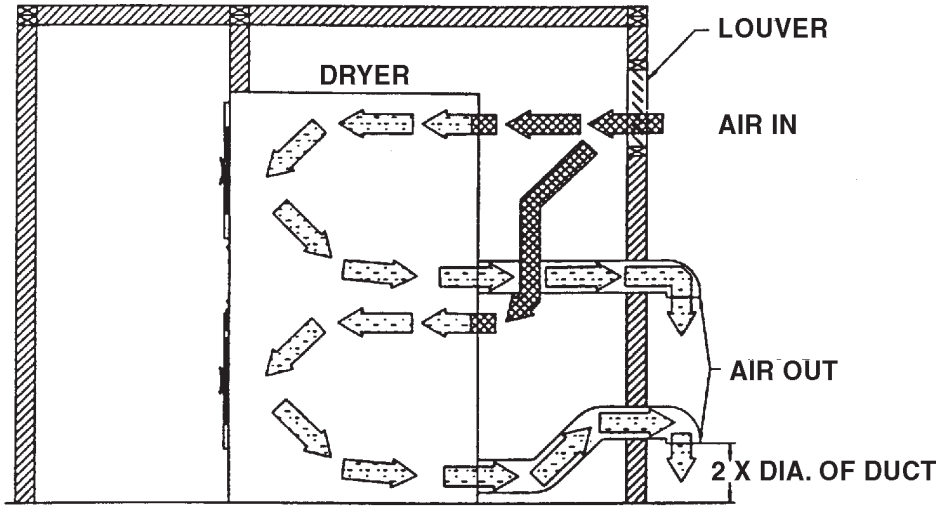
12” minimum clearance from top of dryer to sprinkler system.

ADEQUATE AIR SUPPLY

To operate safety and efficiently, a dryer must *intake* clean dry air, *pass it through* the dryer and then *exhaust* it outside of the building. The air taken into the dryer is called **MAKE-UP AIR.**

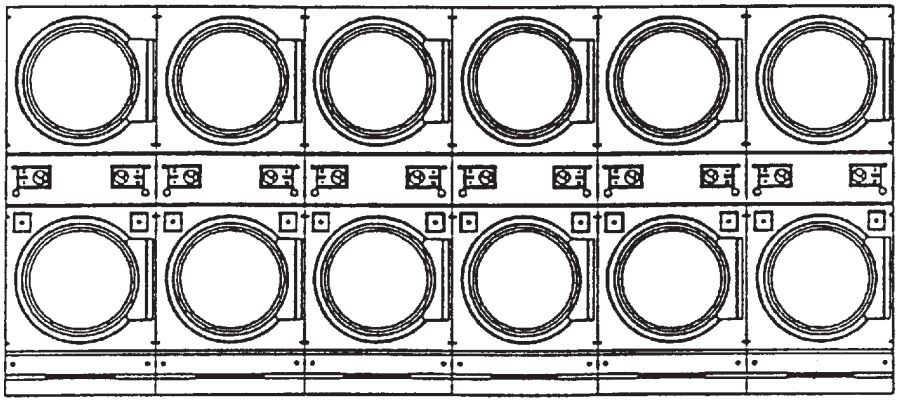
A dryer can quickly deplete available MAKE-UP AIR in a sealed insulated room, consequently vents to the outside of the building are required. Vents are usually openings in a wall covered with louvers.

Each L28DRS 30G dryer requires 2 square feet of unrestricted outdoor MAKE-UP AIR to operate efficiently.



SECTIONAL SIDE OF ROOM

Example: For a Bank of Six Dryers, a Total Make-up Air Opening of 1728 Square Inches is Required



TYPICAL INSTALLATION SHOWING AIR OPENINGS

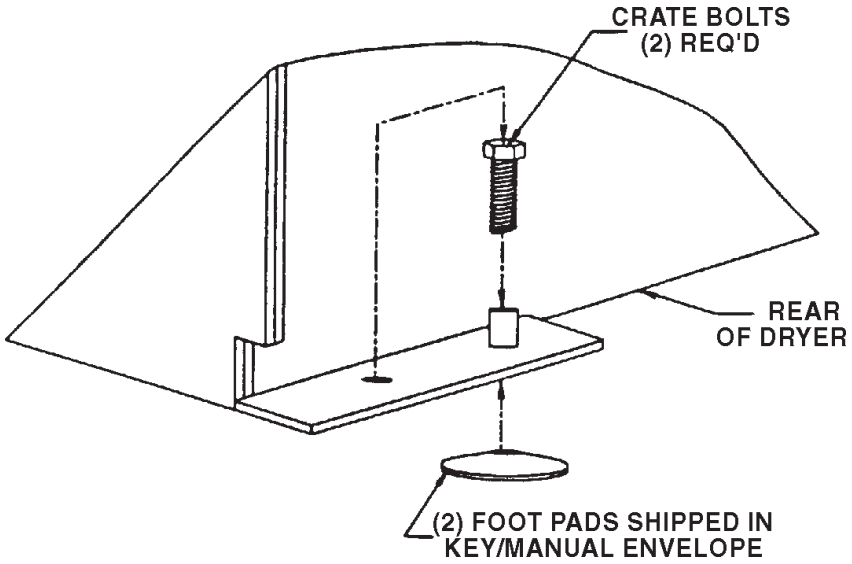
UNPACKING

Your new dryer should be kept in a clean environment. All major construction (i.e. walls, partitions, enclosures) should be substantially complete before unpacking. The dryer is delivered bolted to a skid and covered with a polyethylene protective cover.

- Inspect for damage before unpacking. Immediately report any apparent damage to the carrier before you sign the receipt (document the damage on the trucker's receipt).
- If damage is found after the carrier has departed, call the freight terminal immediately and request an INSPECTION AND FREIGHT CLAIM FORM. Save all packing material.
- Unpack the dryer.
- Open the upper dryer door and remove the envelope containing keys, leveling pads and INSTALLATION & OPERATION MANUAL.
- Unlock and remove the lower lint compartment door.
- Unscrew the (4) crate bolts holding dryer on the skid - save (2) crate bolts for leveling.
- Slide dryer off the skid.
- Note that external connections for electric and gas are made at the top rear of the dryer. The exhaust collars for vent ducts are located on the back for both tumblers.
- Remove shipping blocks located between tumbler and front door panel.

LEVELING

All electrical, gas and vent ducts should be in place and ready for hook-up before the dryer is moved into position.



- Remove (2) foot pads from envelope (shipped in upper tumbler door).
- Screw (2) crate bolts thru rear base of dryer and into foot pads (refer to illustration). Front foot pads are factory installed.
- Level dryer from side to side.
- Tilt dryer back 2º - 3º

ELECTRICAL

A licensed electrical contractor should install the electrical service for the dryer. Personal injury/dryer failure may result if not installed according to codes and standards.

- Remove the back guard and locate the wiring diagram on left side panel.
- Verify that the voltage, frequency and phase of the electrical service is the same as specified on the dryer data label.
- Install each dryer on a separate circuit. Check for polarity. Use copper wire - not aluminum. Provide a separate ground wire. Each circuit should include a circuit breaker of the correct amperage. Some building codes may require a ground fault interrupter (GFI) breaker.
- Connect the electrical service to the outlet box at the rear top of each dryer. Add a strain relief and grommet where the service enters the outlet box. A wiring diagram is provided with each dryer.

- Ground the dryer. The separate ground wire must be installed in accordance with best commercial practice and in compliance with local building codes and local, state and federal standards.

GAS

A licensed plumber should install the plumbing service for the dryer. Personal injury/dryer failure may result in not installed according to codes and standards.

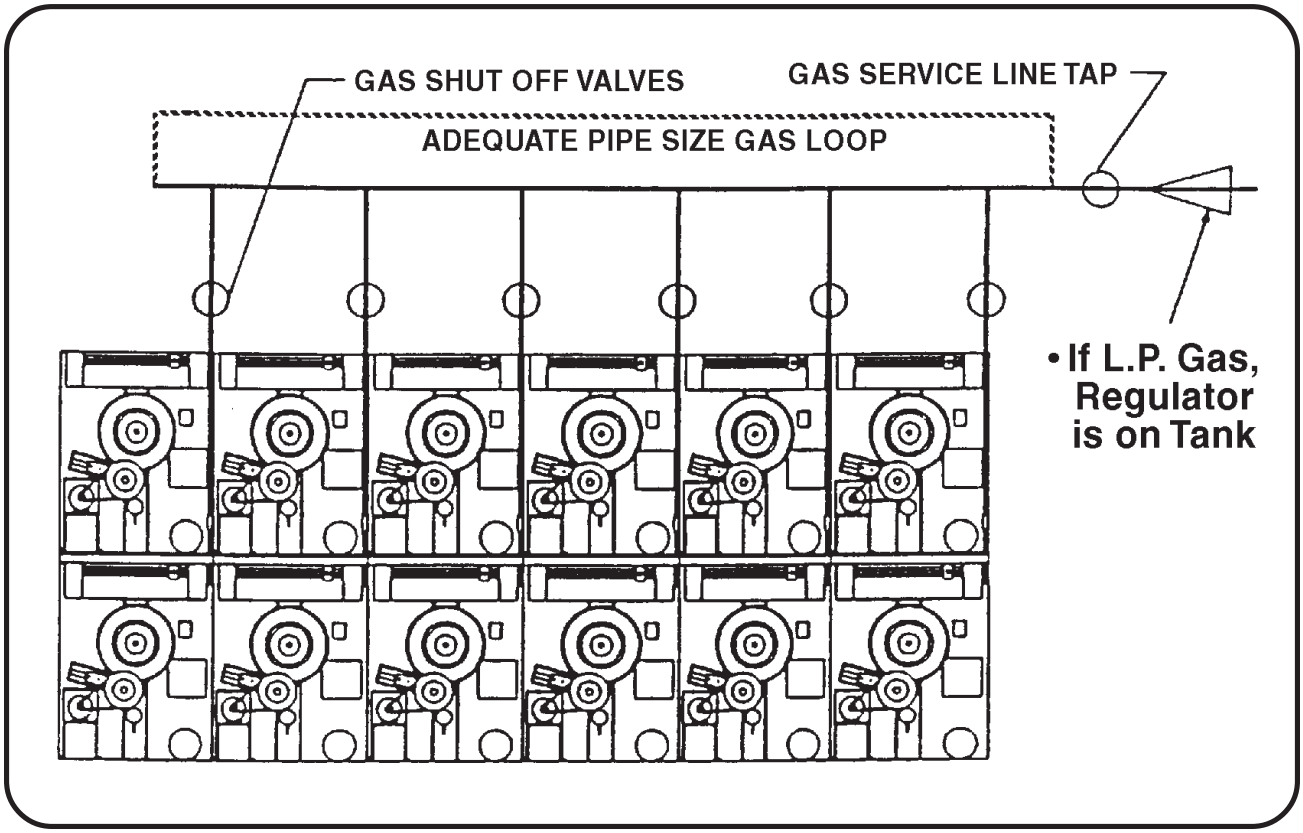
Verify that the gas service corresponds to that specified on the dryer data label. Unless special ordered from the factory, all data is based upon dryer installation under 2,000 feet elevation.

Single dryer

- Install 1/2” nominal pipe (except butane or propane) from the service enterance to each dryer. Smaller diameter pipe will result in ignition problems, slow drying, increased use of energy and may create a safety problem.
- Install a **MAIN GAS SHUT-OFF** valve that turns off the gas supply to the dryer.
- Connect gas line to dryer gas pipe at top of dryer.

Multiple dryers

- Install a continuous loop manifold. The size and length of gas supply line, number of gas fittings, pipe line friction, gas manifold pressure and gas/air mixture can be determined by your plumber or gas company.
- Install a **MAIN GAS SHUT-OFF** valve that turns off the gas supply to the dryer.
- Connect gas line to dryer gas pipe at top of dryer.


GAS SHUT OFF VALVES
GAS SERVICE LINE TAP
ADEQUATE PIPE SIZE GAS LOOP
• If L.P. Gas, Regulator is on Tank

TYPE OF GAS

	NATURAL	LIQUID PROPANE (L.P.)
Manifold pressure	3.5 inches W.C.	11 inches W.C.
In-line pressure (W.C.)	6.0 inches to 12.0 inches	11 inches W.C.
Orifice size (D.M.S.)	#20	3/32”

Gas outlet size 1/2” N.P.T.

BTUH input (each tumbler) 75,000

BTUH input (per dryer) 150,000

Manifold pressure measured at gas valve pressure tap when gas valve is on. Measured in inches of water column.

Drill Manufacturers Standard (D.M.S.) is equivalent to standard twist drill.

Water column (W.C.) is in inches.

Important

The dryer is set up for natural gas. If Liquid Petroleum (L.P.) Gas is to be used, a kit with instructions is shipped in the basket with the dryer.

GAS TESTING

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 pressure equal to less than 1/2 PSIG (3.5 KPA).

Failure to comply with this could cause fire or explosion and/or dryer damage.

Test each gas connection for leaks by brushing on a soapy water or detergent solution. **Never test for leaks with an open flame.**

VENTING & EXHAUSTING

A licensed contractor should install the dryer vent ducts. Duct work not properly designed and installed or which does not meet codes and standards can be a potential source of fire, personal injury and dryer failure.

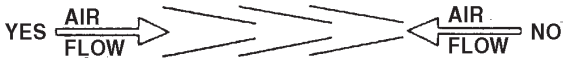
Each dryer tumbler must be exhausted outside the building via a ducting system. Basically there are (4) categories:
Individual duct - Dual duct - Main Connector duct - Custom duct

Improperly sized ducts will create excessice back pressure which results in slow drying, increase in energy usage, overheating of dryer and possible dryer damage.

Do not obstruct the flow of combustion and ventilation air.

Design Guides

VENT DUCTS

- Shape of duct is not critical if cross sectional area is maintained.
- Use rust resistant duct material.
- Inside of ducts should be smooth with no sheet metal screws protruding.
- Overlap all joints. 

- Tape all joints to avoid air loss and to avoid condensation.
- Install several clean-out and inspection doors.
- Do not exceed 20’ of duct work.
- Do not use 90º turns. Use 30º or 45º instead.
- Ducts should have 2” of clearance (all around) when they go through a wall.
- Insulate ducts passing through walls or cold areas.
- Horizontal ducts exiting a building should terminate with a 90º elbow bent downward. Do not put screening or cap over end of duct. Minimum clearance from the end of 90º elbow to ground should be 2x duct diameter.
- Vertical ducts exiting through a roof should terminate with a 180º turn downward. Do not put screening or cap over end of duct. Minimum clearance from the end of 180º elbow to roof level should be 2x duct diameter.
- Do not vent into enclosed spaces - i.e. an attic. Venting must be to the outdoors.

MULTIPLE VENTED INSTALLATION

Single dryer

Whenever possible, each stack dryer tumbler should have an **individual** short straight exhaust duct.

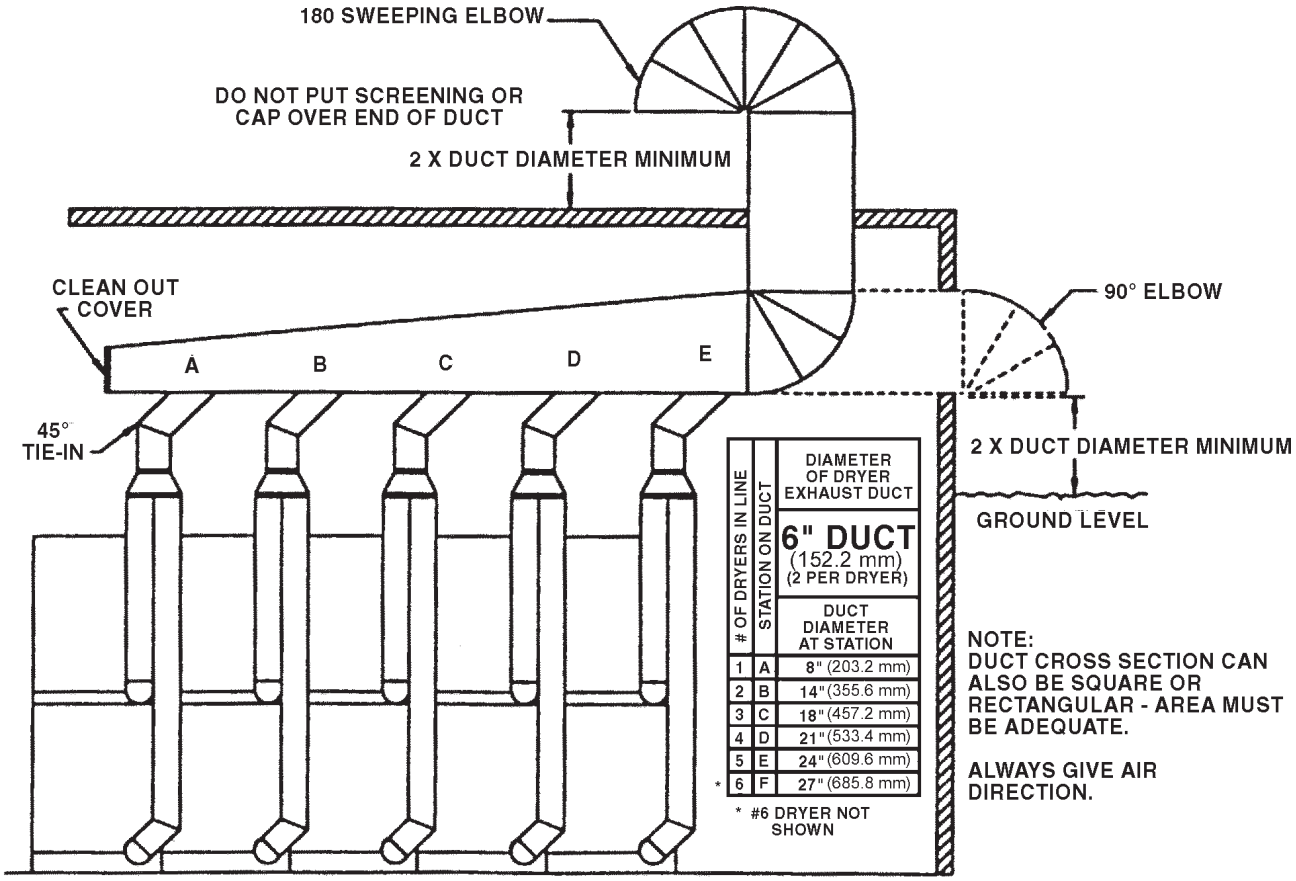
Multiple dryers

- Whenever possible, each dryer tumbler in multiple installations should have **individual** short straight exhaust ducts.
- If an individual or dual duct is not possible, install a long tapered **main connector duct**. A duct exceeding 20' should be a custom duct designed by a professional Heating and Air Conditioner (HVAC) contractor.
- Individual tumbler ducts enter the main connector duct at a 45º angle in the direction of exhaust air flow.
- The diameter of the main connector duct progressively increases as more dryers are added. (refer to illustration).

Testing

Back pressure of ducting system should not exceed 0.3 inch water column when all dryers are operating. Use a manometer for tests. More detailed ducting information can be obtained directly from your Heating and Air Conditioning (HVAC) contractor or dealer.

Multiple vents



TYPICAL MULTIPLE VENTED INSTALLATION

INSTALLATION CHECK

Carefully review each item in the Installation & Operation Manual.

Check the Codes & Standards section of the manual.

- Dryer installation must meet or exceed all codes and standards.
- Check the room venting. Each dryer must have sufficent MAKE-UP AIR.
- Read and follow all caution, warning and direction labels attached to the dryer.
- Check incoming electrical power - power must be identical to dryer data label.
- Check gas supply - supply must be identical to dryer data label.
- Check that all bolts, nuts, screws, terminals and fittings are secure.
- Check all safety covers and electric box covers - they must be installed.
- Check the control panel door and lint compartment doors - they should be closed and locked.
- Manually rotate the dryer tumblers and check for interference.

INITIAL OPERATION TEST

Each dryer is inspected, tested and operated at the factory before shipment. Occasionally, in transit, a dryer is subjected to excessive vibration and shock. After installation, minor adjustments may be necessary.

- Open all gas shut offs and gas valves.
- Initially load each tumbler with clean rags (removes any excess oil remaining from the manufacturing process).
- Close dryer door (on tumbler under test).
- Turn on all electric power to the dryer.

For "Computerized" models, the amount of dry time will appear on the digital display. Maximum time is 99 minutes. Additional coins may be vended any time during the cycle.

Turn Temperature Fabric Selector to desired setting. "LOW" is for delicate, sheer, and easy dry fabrics. 130° - 140°F exhaust temperature. "MEDIUM" is for synthetics and permanent press fabrics. 155° - 165°F exhaust temperature. "HIGH" is for cottons, linens, and heavy fabrics. 170° - 180°F exhaust temperature.

Press "PUSH TO START" button until dryer is running.

1. Digital Display will count down time remaining in cycle.
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.

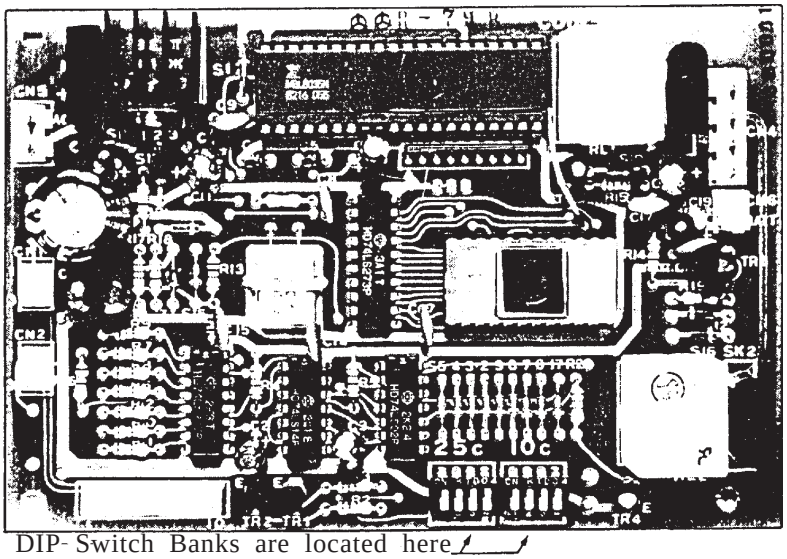
If the tumbler door is opened during the drying cycle, the fan and heat will shut off. Press "PUSH TO START" button to resume cycle.

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.

Setting Time on "Computerized" Coin Meter"



DIP- Switch Banks are located here

1. This dryer is equipped with 2 separate DIP switch banks for setting drying time. One is for 10¢, one for 25¢. This model dryer is equipped with a single slot 25¢ coin meter.

2. Each DIP switch bank consists of 4 small switches each with a specified amount of time (minutes), as shown:

   "Off" (down) position equals 0 minutes.

3. To set the time on the 25¢ DIP: Simply set the appropriate switch to the "on" (up) position to total the desired time. There are 3 min. already built in the 25¢ DIP. Subtract 3 min. from your desired total time, and set the switches to equal the remainder.

   Example: 25¢ for 15 min.

   15 min. (desired total time)
   - 3 min. ("built-in" time)
   12 min. (set switches for remainder)

TROUBLESHOOTING CHART

TROUBLE	CAUSE	REMEDY
Motor will not start.	No power.	Check fuses on circuit breakers. Make sure main control switch is ON.
	Incorrect power.	Check power source; voltage, phase and frequency must be the same as specified on electrical rating plate.
	Time off.	Check coin meter for proper vending.
	Loose wiring connections.	Check wire connections in electrical box on rear of dryer.
Motor tripping on thermal.	Low voltage.	Check voltage at motor terminals. Voltage must be within ± 10% of voltage shown on motor rating plate - if not, check with local power company for recommended corrective measures.
	Inadequate wiring.	Check with local power company to insure that wiring is adequately sized for load.
	Loose connections.	Check all electrical connections and tighten any loose connections.
	Inadequate air.	Check installation sheet in service manual for recommended make-up air opening.
	Poor housekeeping.	Clean lint accumulation on and around motors.
Basket will not turn.	Loading door open.	Close door.
	Door Switch out of adjustment.	Adjust switch.
	Defective Door Switch.	Replace switch.
	Defective Basket Motor Contractor.	Replace contactor.
	Defective electronic coin board.	Replace electronic coin board.
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.
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 to ignition terminal board pin 4 & B.
	Silicon carbide igniter will not glow - red.	Broken or defective igniter - replace.
	Silicon carbide igniter will not glow.	Defective sensor.
	Lint door open.	Close lint door.
	Defective gas valve.	Replace coil assembly.
	Gas turned off.	Turn manual gas valve “on”.

TROUBLESHOOTING CHART

TROUBLE	CAUSE	REMEDY
Dryer runs but no heat (continued).	Pressure 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.
	Pressure switch defective.	Replace pressure switch.
	Gas pressure too low.	Check manifold pressure and adjust to pressure specified on rating plate. If this pressure cannot be obtained, have gas supplier check main pressure.
	Improper orifice.	Dryer is orificed for type of gas specified on rating plate. Check with gas supplier to determine specifications for gas being used. If different from rating plate, contact factory and obtain proper orifices.
	Defective thermostat.	Replace thermostat.
	Defective safety thermostat.	Replace thermostat below basket or on bonnet at rear of dryer.
Main burner 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.	Radiant Sensor defective Bonnet thermostat kicking on and off.	Replace Radiant Sensor. Check for proper make-up air and exhaust ducting.
Low or high gas flame.	Incorrect main burner orifice.	Replace orifices - check factory for correct size.
Dryer too hot.	Incorrect main burner orifice.	Replace orifices - check factory for correct size.
	Lint accumulation.	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 exhuast system.	Check service manual 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.

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 for 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 ignition period. This will continue until the number of retries has been used up. At the time, the module will go into safety lockout.

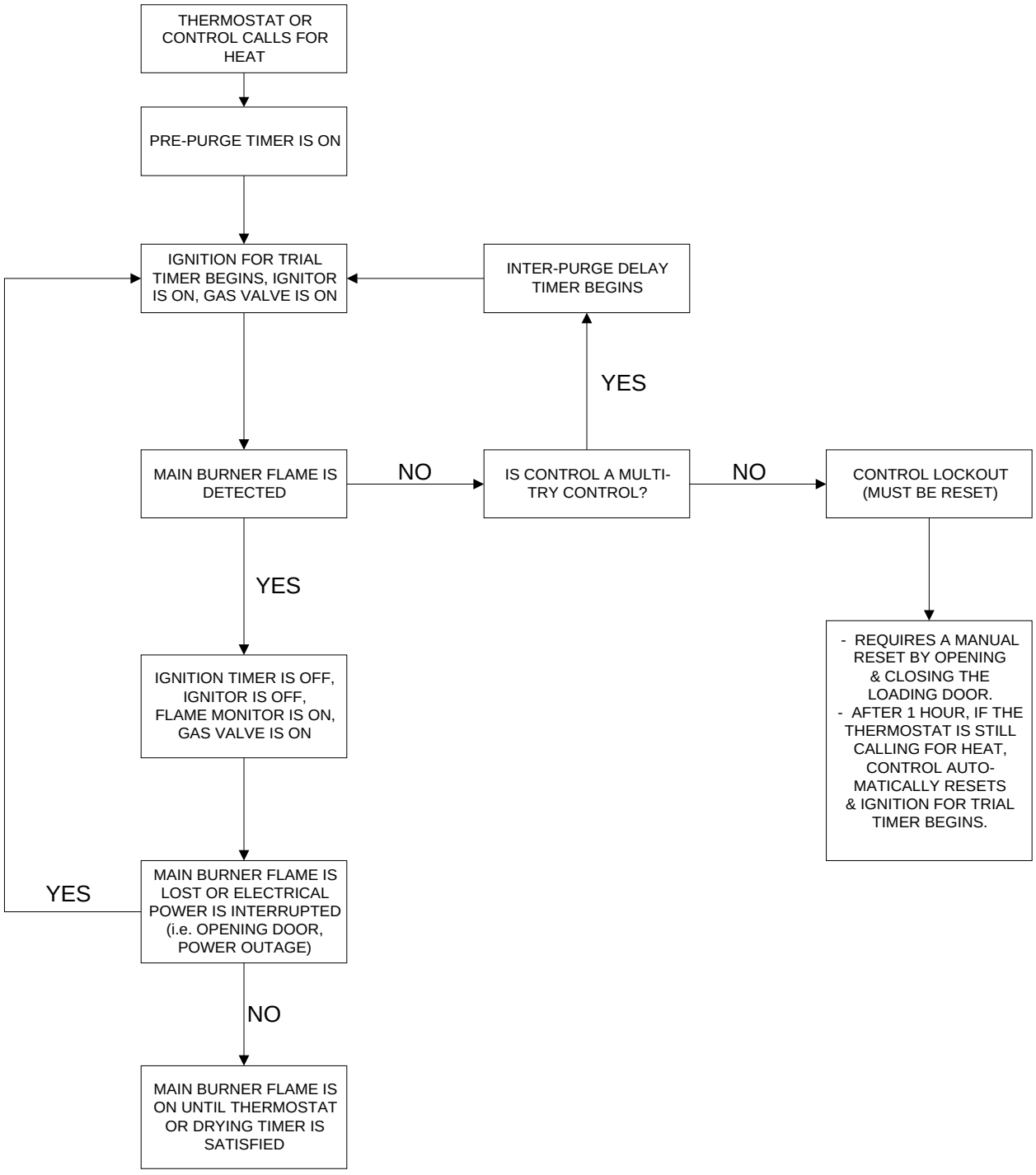
4. Recovery from safety lockout requires one of the following:
   a. A manual reset by opening and closing the loading door.
   b. After one hour if the Control Thermostat is still calling for heat, the module will automatically reset and the trial for ignition period will start over.

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



Failure to install, maintain and operate the dryer according to manufacturers instructions may result in conditions which can produce bodily injury and property damage.

CLEANING

Establish a **cleaning schedule based upon frequncy of use.** The following cleaning intervals are minimum requirements. Maintain dryer efficiency by frequent removal of lint from dryer exterior and interior paying particular attention to dryer exterior and interior paying particular attention to dryer venting system. Remember lint from most fabrics is highly combustible and can create a fire hazard.

DAILY

- LINT COMPARMENTS - remove lint.

  One lint compartment door is at the bottom of dryer. Unlock, pivot door down and pull out lint drawer. Remove lint by hand.

  The other lint compartment door is at center of dryer. Unlock, pivot door down and pull out lint drawer. Remove lint by hand.

  Do not use a brush on the lint screen. Do not remove lint screen.

  Excessive buildup of lint can affect dryer efficiency and can create a fire hazard.

  Replace or close lint compartment door - do not force. Doors have safety interlocks. Dryer will not operate if doors are open.

- TUMBLER - clean tumbler interior with a nonflammable cleaner.

- EXTERIOR - clean with non-abrasive household cleaner.

MONTHLY

- LINT COMPARTMENTS - clean lint from temperature probes and bracket assemblies.

EVERY (3) MONTHS

- MOTOR AIR VENTS - remove lint from vents and surrounding area.

- DRYER FRONT PANELS - remove lint from behind the front panels and between the baskets and wrappers.

- GAS VALVE BURNER TRAIN - remove lint with a dusting brush or vacuum cleaner attachment.

- COIN SLOT - remove lint from coin slot mechanism.

Keep area clean and free from combustible material, gasoline and other flammable vapors and liquids.

CLEANING (Cont.)

EVERY (6) MONTHS

- INTERNAL DUCT SYSTEM - remove lint from ducts and back draft dampers. Note that partially closed dampers can significantly reduce air flow.
- EXTERNAL VENT DUCT - remove lint.

LUBRICATION

EVERY (2) TO (3) MONTHS

- IDLER SHAFT - grease with a good grade automotive grease in the 285º range.

Motors and trunion bearings are sealed and do not require maintenance.

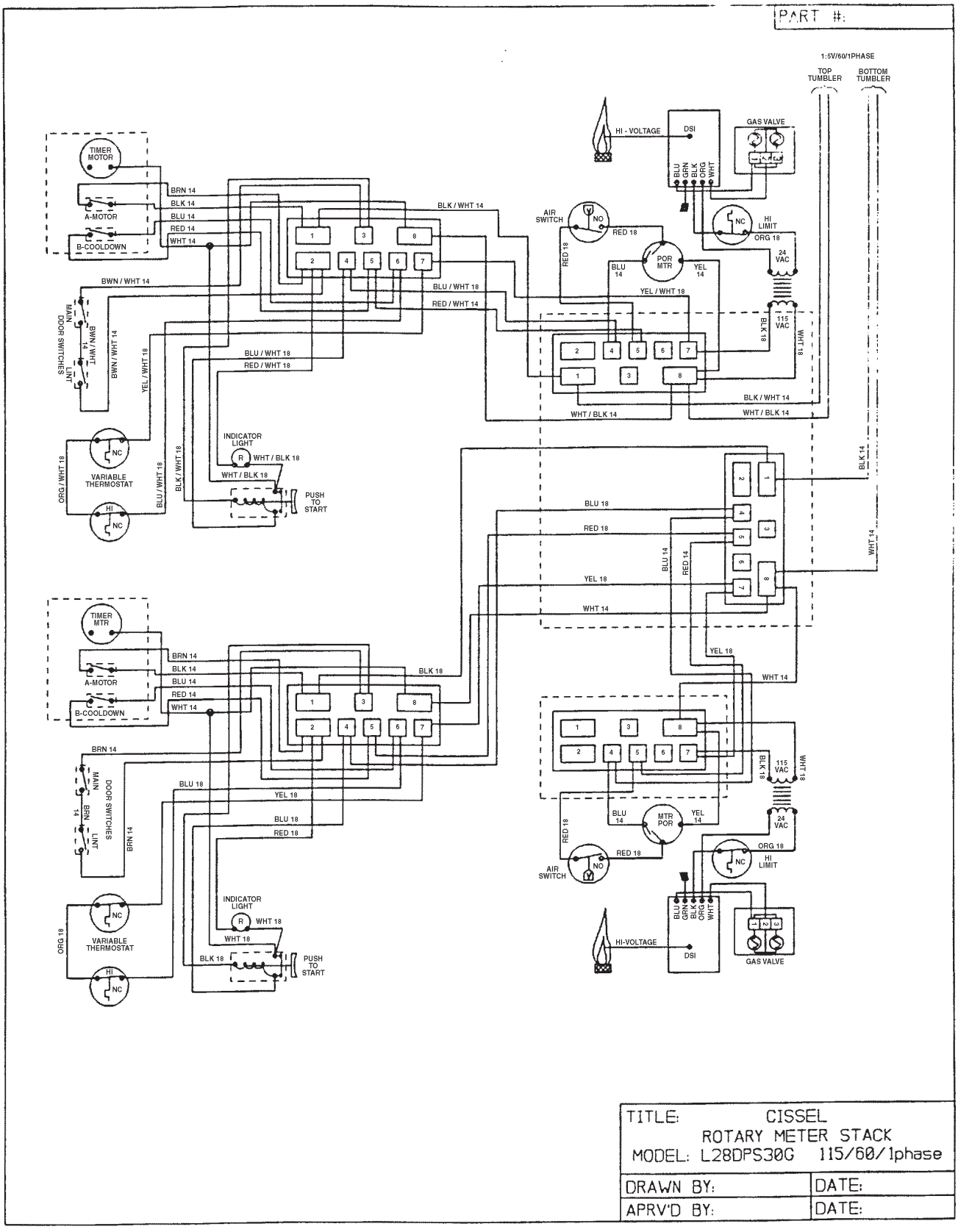
ADJUSTMENTS

(7) DAYS AFTER FIRST OPERATION

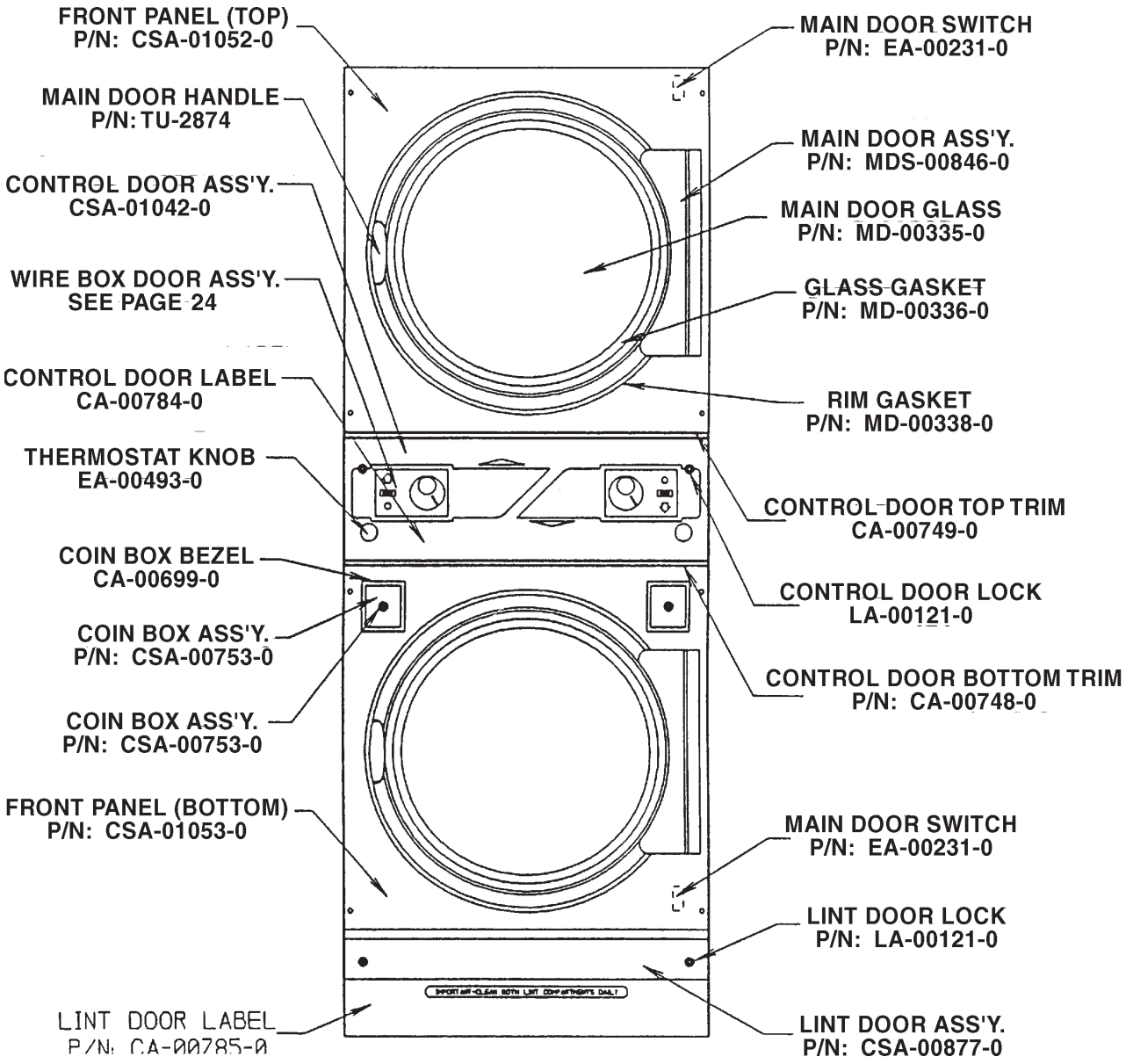
- Inspect and refasten all loose bolts, nuts, screws (bearing set screws), gas connections (unions, shut-off valves, orifices, etc.), electrical connections and grounding connections.

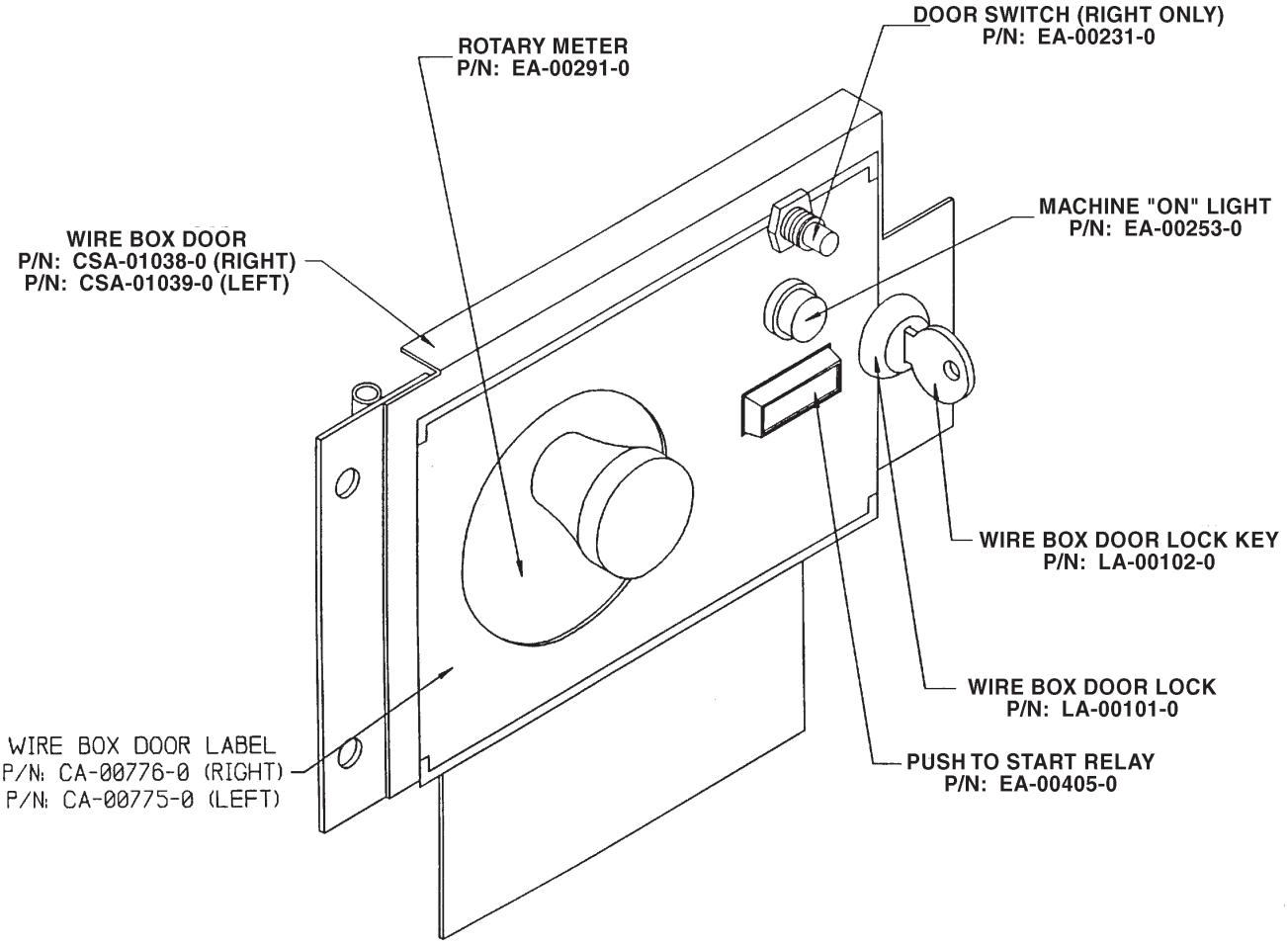
EVERY (6) MONTHS

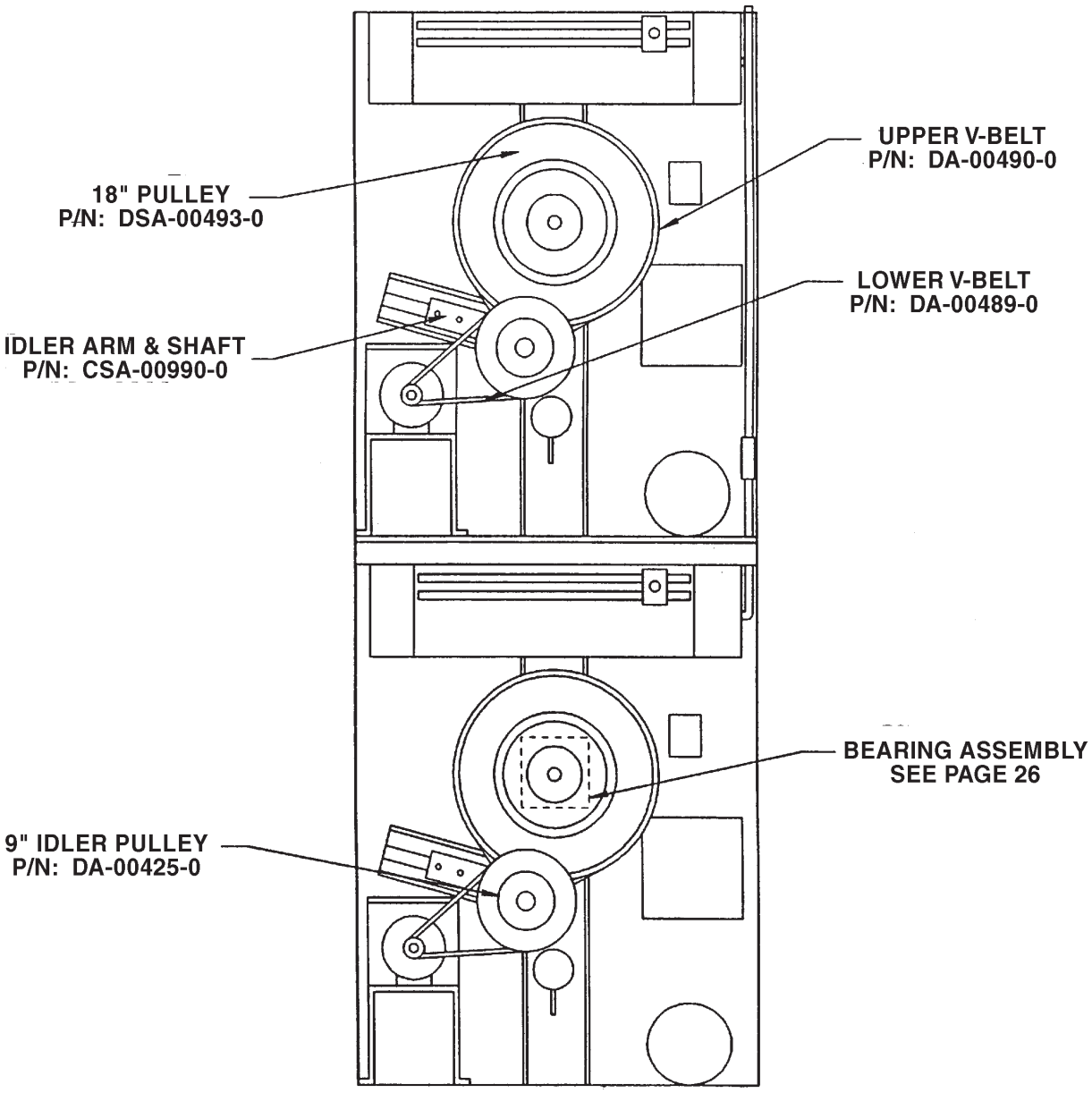
- Replace all motor and drive belts that are cracked or frayed.
- Tighten all drive belts according to Technical Service Manual tension specifications.
- Correct any belt misalignment.
- Check the operation of all control and valves.
- Check the operation of all safety devices including door switches and lint compartment switches.

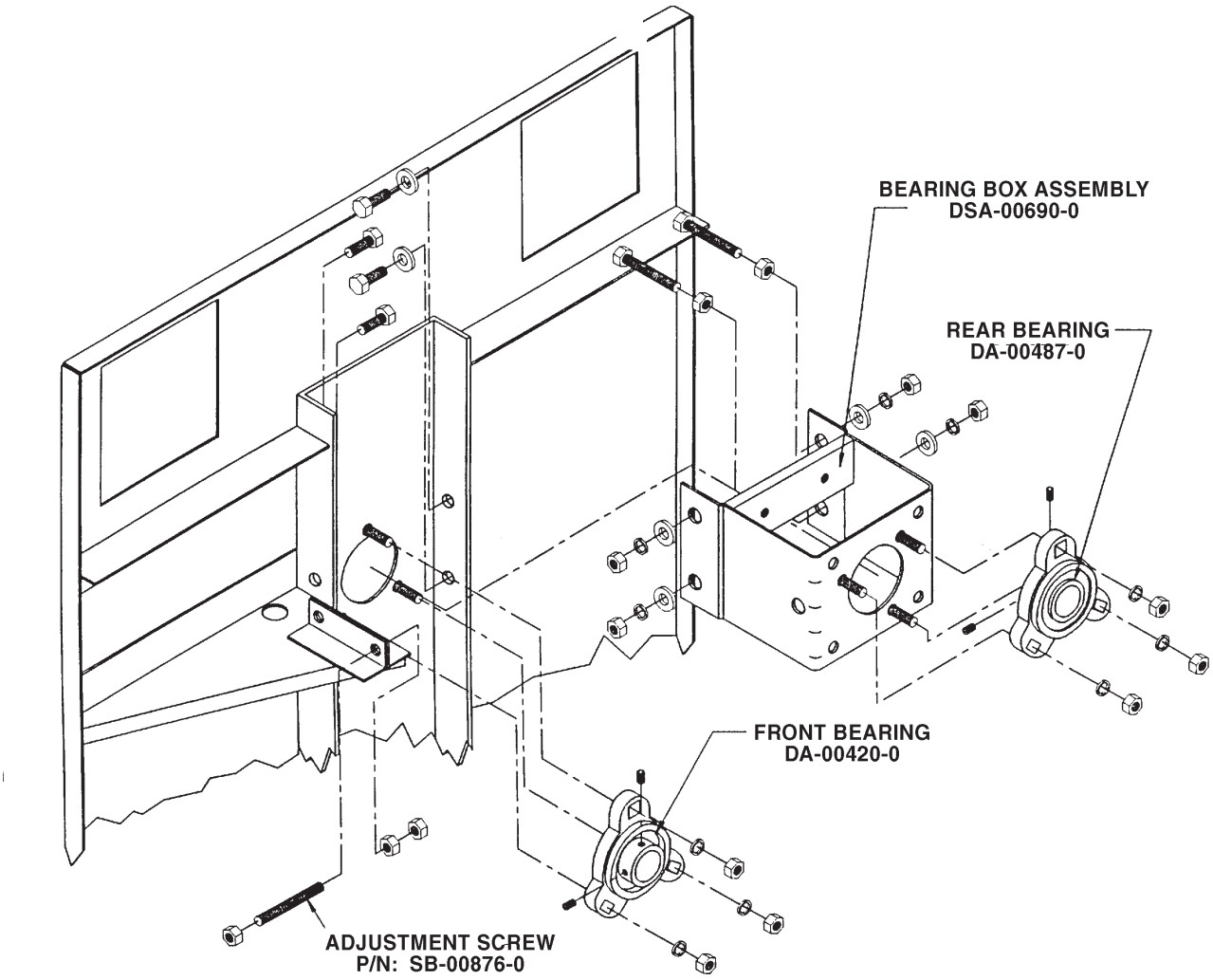

PART #:
1:5V/60/1PHASE
TOP TUMBLER
BOTTOM TUMBLER
HI - VOLTAGE
DSI
GAS VALVE
BLU GRN BLK ORG WHT
AIR SWITCH
NO
NC
HI LIMIT
ORG 18
RED 18
POR MTR
BLU 14
YEL 14
24 VAC
115 VAC
YEL / WHT 18
BLU / WHT 18
RED / WHT 18
BLK / WHT 14
WHT / BLK 14
BWN / WHT 14
MAIN DOOR SWITCHES
LINT
TIMER MOTOR
A-MOTOR
B-COOLDOWN
BRN 14
BLK 14
BLU 14
RED 14
WHT 14
VARIABLE THERMOSTAT
HI
INDICATOR LIGHT
R
WHT / BLK 18
PUSH TO START
ORG / WHT 18
BLU / WHT 18
BLK / WHT 18
BLK 18
WHT 18
BLU 18
RED 18
YEL 18
WHT 14
BLK 14
TIMER MTR
MTR POR
BRN
ORG 18
TITLE: CISSEL
ROTARY METER STACK
MODEL: L28DPS30G 115/60/1phase
DRAWN BY:
DATE:
APRV'D BY:
DATE:

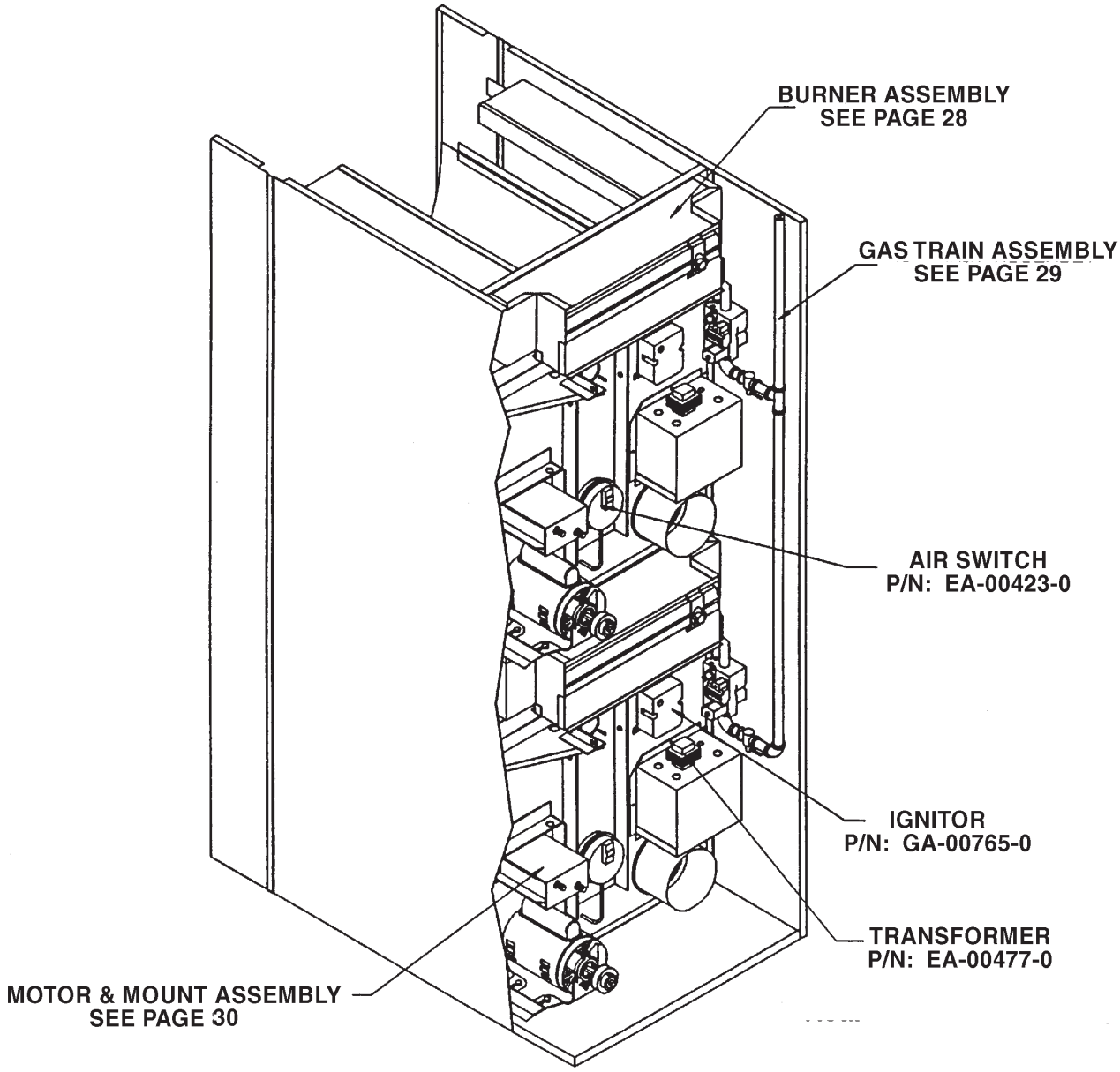
DRYER - FRONT VIEW

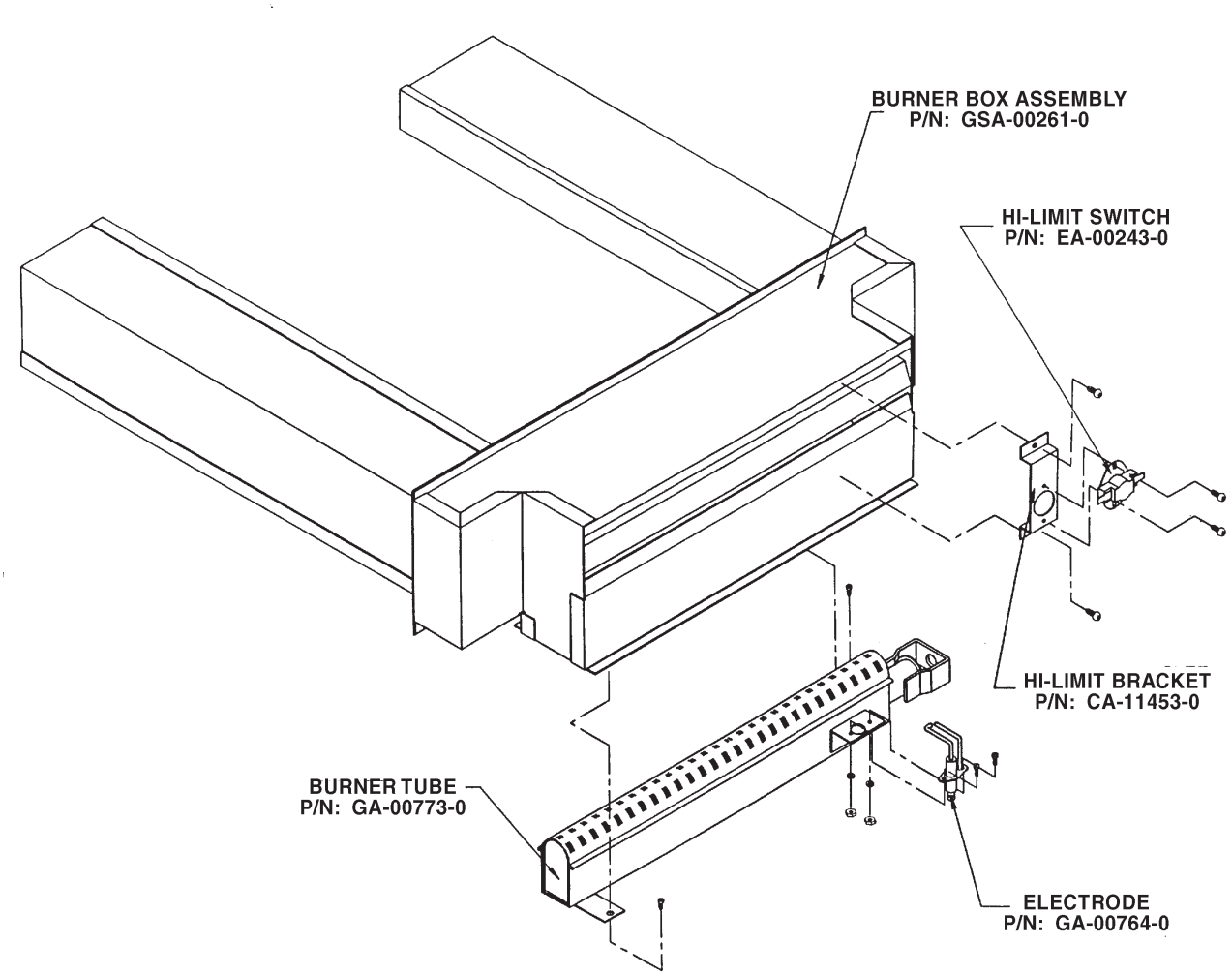


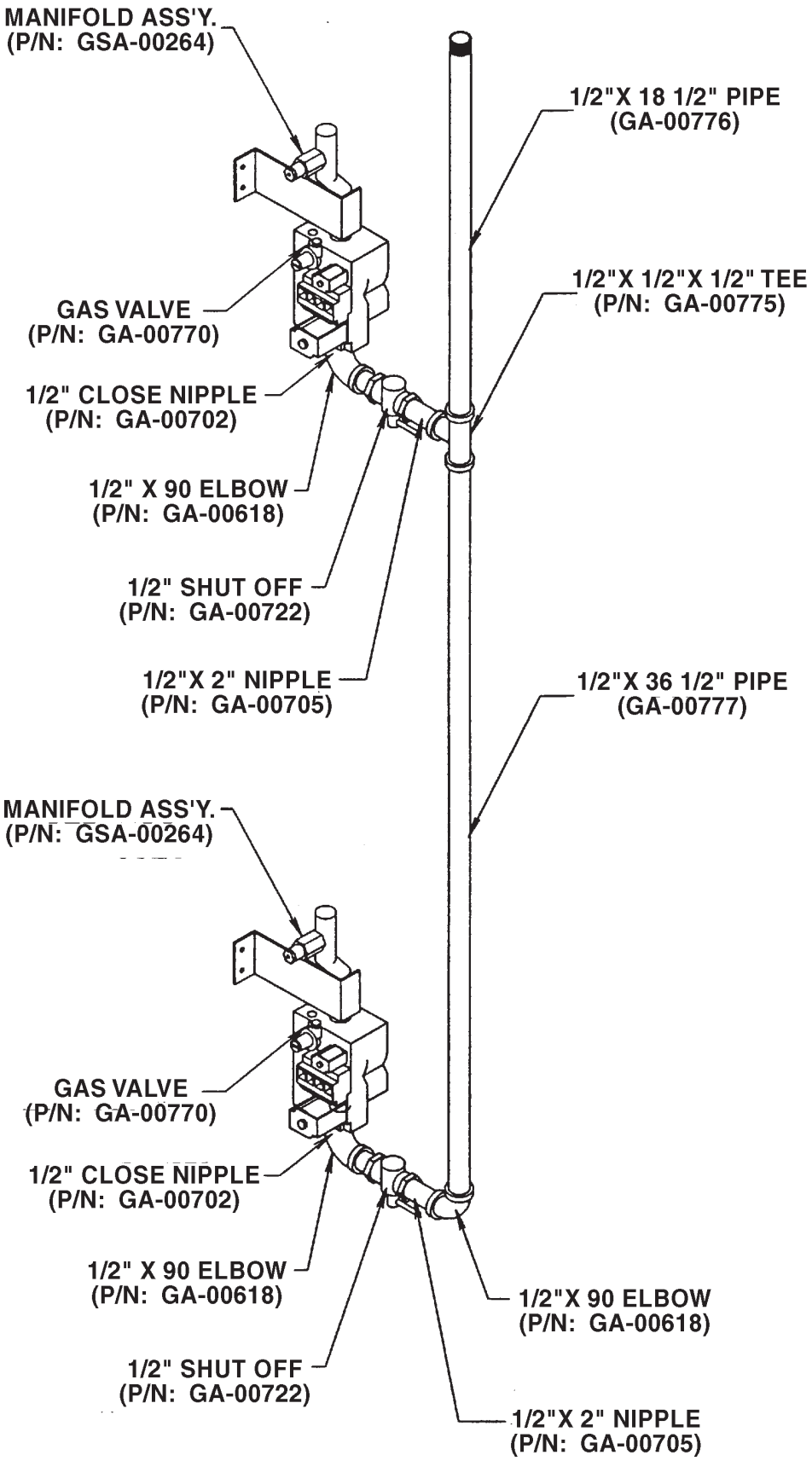

DOOR SWITCH (RIGHT ONLY)
P/N: EA-00231-0
ROTARY METER
P/N: EA-00291-0
MACHINE "ON" LIGHT
P/N: EA-00253-0
WIRE BOX DOOR
P/N: CSA-01038-0 (RIGHT)
P/N: CSA-01039-0 (LEFT)
WIRE BOX DOOR LOCK KEY
P/N: LA-00102-0
WIRE BOX DOOR LOCK
P/N: LA-00101-0
WIRE BOX DOOR LABEL
P/N: CA-00776-0 (RIGHT)
P/N: CA-00775-0 (LEFT)
PUSH TO START RELAY
P/N: EA-00405-0

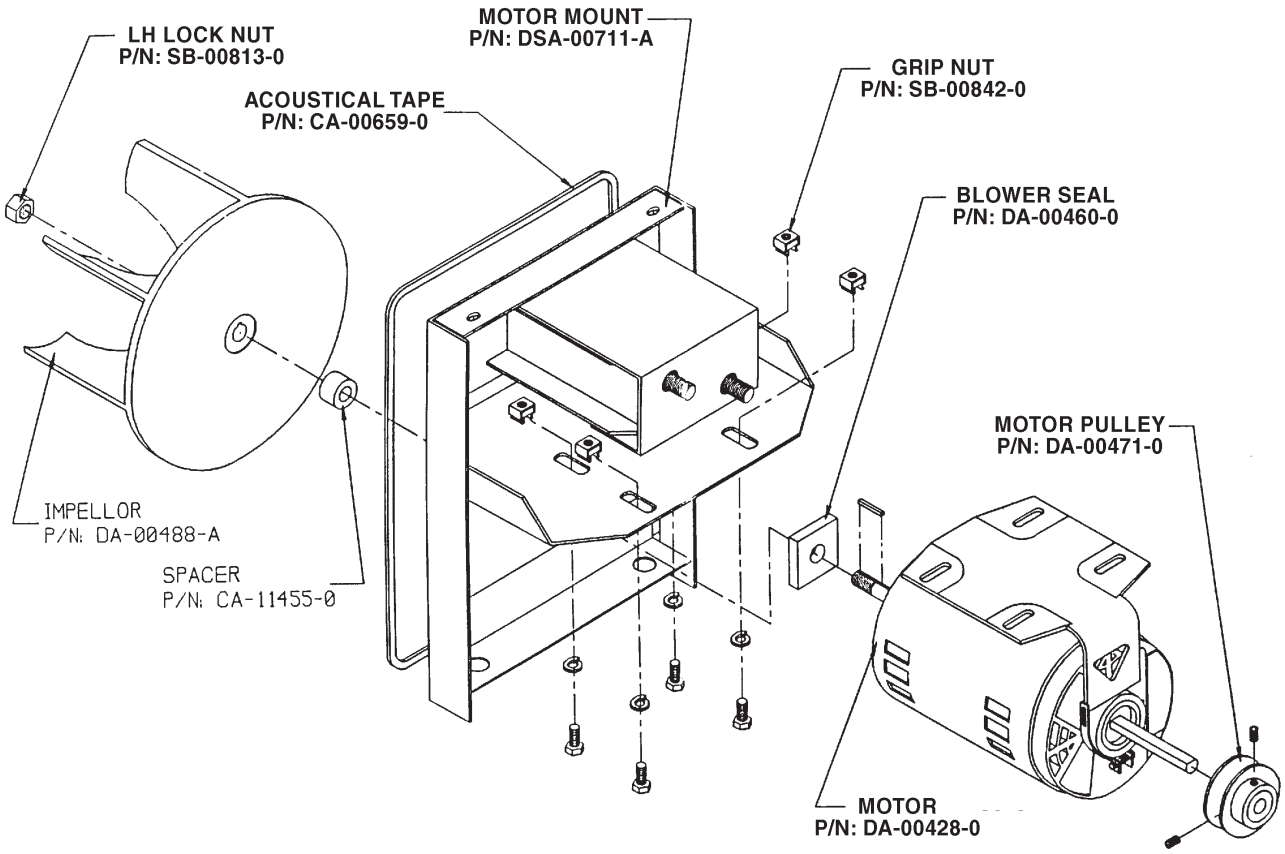

18" PULLEY
P/N: DSA-00493-0
IDLER ARM & SHAFT
P/N: CSA-00990-0
9" IDLER PULLEY
P/N: DA-00425-0
UPPER V-BELT
P/N: DA-00490-0
LOWER V-BELT
P/N: DA-00489-0
BEARING ASSEMBLY
SEE PAGE 26

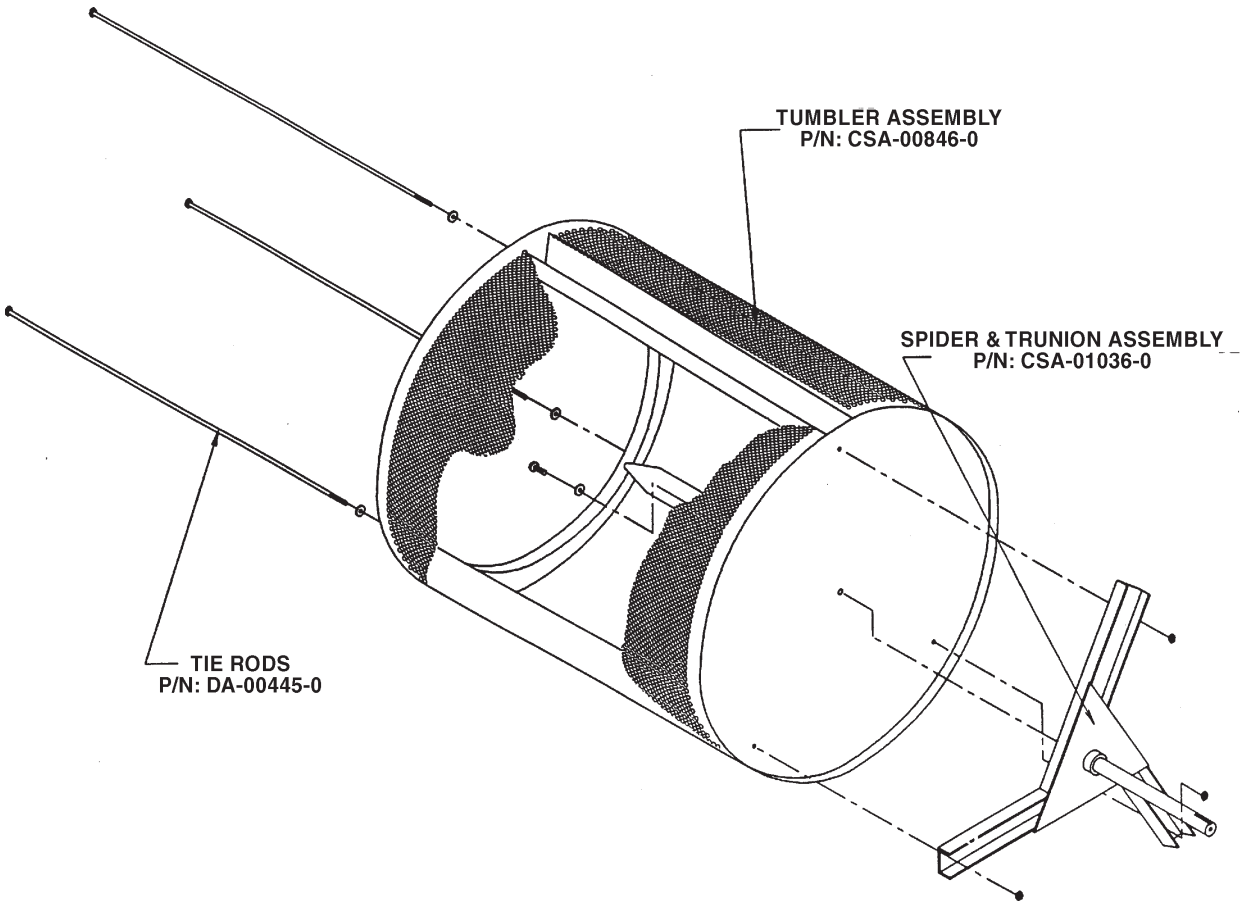

BEARING BOX ASSEMBLY
DSA-00690-0
REAR BEARING
DA-00487-0
FRONT BEARING
DA-00420-0
ADJUSTMENT SCREW
P/N: SB-00876-0

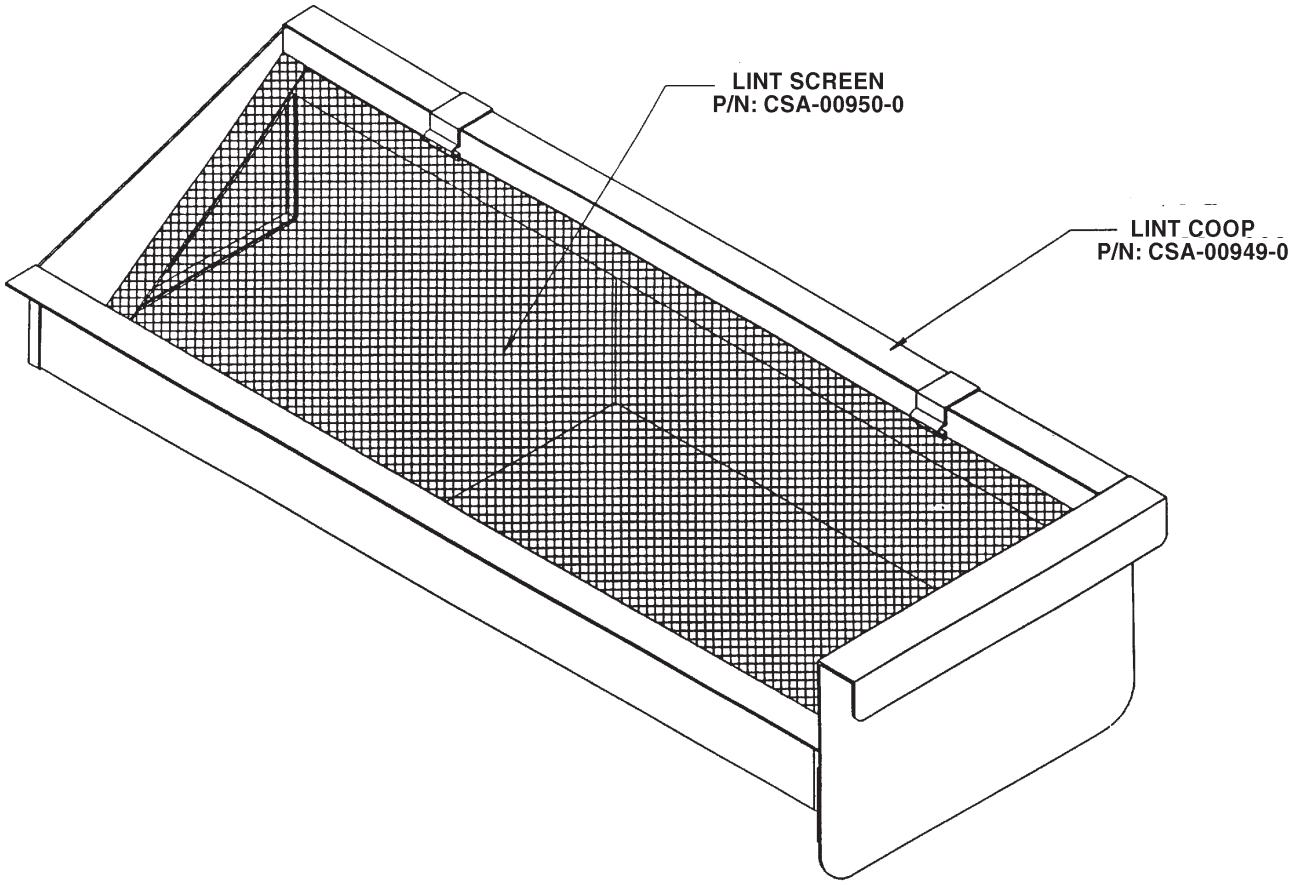

BURNER ASSEMBLY
SEE PAGE 28
GAS TRAIN ASSEMBLY
SEE PAGE 29
AIR SWITCH
P/N: EA-00423-0
IGNITOR
P/N: GA-00765-0
TRANSFORMER
P/N: EA-00477-0
MOTOR & MOUNT ASSEMBLY
SEE PAGE 30


BURNER BOX ASSEMBLY
P/N: GSA-00261-0
HI-LIMIT SWITCH
P/N: EA-00243-0
HI-LIMIT BRACKET
P/N: CA-11453-0
BURNER TUBE
P/N: GA-00773-0
ELECTRODE
P/N: GA-00764-0

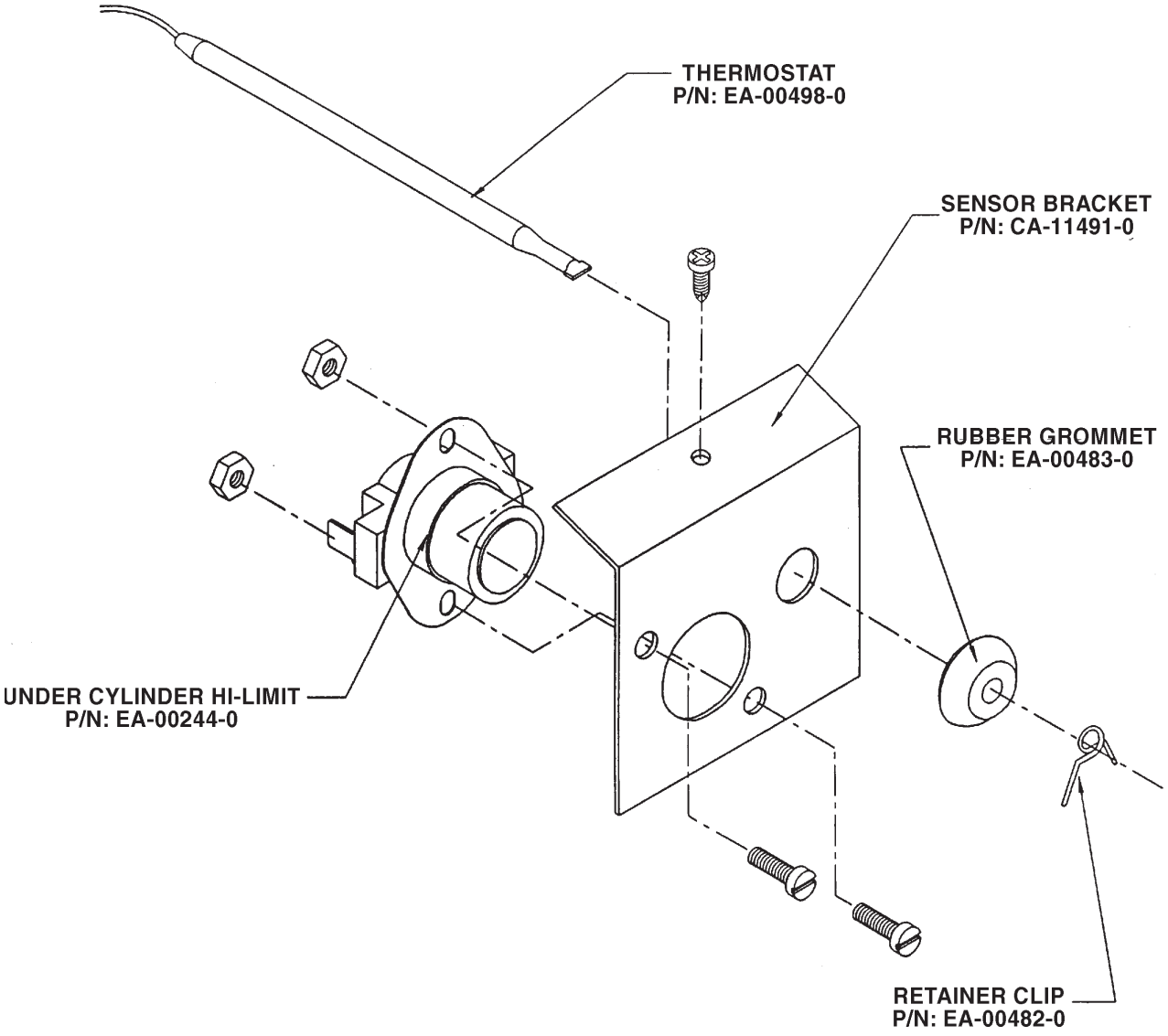

MANIFOLD ASS'Y.
(P/N: GSA-00264)
1/2"X 18 1/2" PIPE
(GA-00776)
GAS VALVE
(P/N: GA-00770)
1/2"X 1/2"X 1/2" TEE
(P/N: GA-00775)
1/2" CLOSE NIPPLE
(P/N: GA-00702)
1/2" X 90 ELBOW
(P/N: GA-00618)
1/2" SHUT OFF
(P/N: GA-00722)
1/2"X 2" NIPPLE
(P/N: GA-00705)
1/2"X 36 1/2" PIPE
(GA-00777)
MANIFOLD ASS'Y.
(P/N: GSA-00264)
GAS VALVE
(P/N: GA-00770)
1/2" CLOSE NIPPLE
(P/N: GA-00702)
1/2" X 90 ELBOW
(P/N: GA-00618)
1/2"X 90 ELBOW
(P/N: GA-00618)
1/2" SHUT OFF
(P/N: GA-00722)
1/2"X 2" NIPPLE
(P/N: GA-00705)


LH LOCK NUT
P/N: SB-00813-0
MOTOR MOUNT
P/N: DSA-00711-A
GRIP NUT
P/N: SB-00842-0
ACOUSTICAL TAPE
P/N: CA-00659-0
BLOWER SEAL
P/N: DA-00460-0
MOTOR PULLEY
P/N: DA-00471-0
IMPELLOR
P/N: DA-00488-A
SPACER
P/N: CA-11455-0
MOTOR
P/N: DA-00428-0


TUMBLER ASSEMBLY
P/N: CSA-00846-0
SPIDER & TRUNION ASSEMBLY
P/N: CSA-01036-0
TIE RODS
P/N: DA-00445-0


LINT SCREEN
P/N: CSA-00950-0
LINT COOP
P/N: CSA-00949-0

UNDER BASKET THERMOSTAT ASSEMBLY



WARRANTY REPAIR

Cissell Manufacturing Co. will repair or replace all parts (except for belts and gaskets) found defective within a period of two years. Your warranty is included in this section - refer to *Repairs* for information. Please read it carefully. Warranty for belts and gaskets found defective will be covered within a period of 90 days.

Warranty is void if dryer is not installed and operated according to instructions in this manual and per applicable local codes and local, state and federal standards.

Assistance

- If you have a problem, first contact your installation contractor or your authorized distributor.

- If the problem cannot be resolved, contact Cissell Manufacturing Co.

- Before calling your distributor or Cissell Manufacturing Co. for assistance, please complete the following:

Model Number_____ **Serial Number** _____

Date purchased _____

Gas specification _____

Distributor Name_____

Address_____

City_____ **State**_____ **Zip** _____

Tel. No. _____

Note

The model number and serial number can be found on the data label located on back left side panel.

REPLACEMENT PARTS

Order replacement parts from your authorized distributor.