

ADG-758

(Gas HSI)

Installation Manual

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 vapor and liquids in the vicinity of this or any other appliance.

— **WHAT DO YOU 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.

AVERTISSEMENT: Assurez-vous de bien suivre les instructions données dans cette notice pour réduire au minimum le risque d'incendie ou d'explosion ou pour éviter tout dommage matériel, 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 appareil.

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

- * Ne pas tenter d'allumer d'appareil.
- * Ne touchez à aucun interrupteur. Ne pas vous servir des téléphones se trouvant dans le bâtiment où vous vous trouvez..
- * Évacuez la pièce, le bâtiment ou la zone.
- * Appelez immédiatement 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 être assurés par un installateur ou un service d'entretien qualifié ou par le fournisseur de gaz.



For replacement parts, contact the distributor from which the dryer was purchased or

American Dryer Corporation

88 Currant Road

Fall River MA 02720-4781

Telephone: (508) 678-9000 / Fax: (508) 678-9447

e-mail: techsupport@amdry.com

Retain This Manual In A Safe Place For Future Reference

American Dryer Corporation products embody advanced concepts in engineering, design, and safety. If this product is properly maintained, it will provide many years of safe, efficient, and trouble-free operation.

ONLY qualified technicians should service this equipment.

OBSERVE ALL SAFETY PRECAUTIONS displayed on the equipment or specified in the installation/operator's manual included with the dryer.

The following “**FOR YOUR SAFETY**” caution **must be** posted near the dryer in a prominent location.

FOR YOUR SAFETY

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

POUR VOTRE SÉCURITÉ

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.

We have tried to make this manual as complete as possible and hope you will find it useful. **ADC** reserves the right to make changes from time to time, without notice or obligation, in prices, specifications, colors, and material, and to change or discontinue models.

Important

For your convenience, log the following information:

DATE OF PURCHASE _____ MODEL NO. **ADG-758**

DISTRIBUTORS NAME _____

Serial Number(s) _____

Replacement parts can be obtained from your distributor or the **ADC** factory. When ordering replacement parts from the factory, you can FAX your order to **ADC** at (508) 678-9447 or telephone your orders directly to the **ADC** Parts Department at (508) 678-9000. Please specify the dryer **model number** and **serial number** in addition to the **description** and **part number**, so that your order is processed accurately and promptly.

“IMPORTANT NOTE TO PURCHASER”

Information must be obtained from your local gas supplier on the instructions to be followed if the user smells gas. These instructions must be posted in a prominent location near the dryer.

IMPORTANT

YOU MUST DISCONNECT and LOCKOUT THE ELECTRIC SUPPLY and THE GAS SUPPLY BEFORE ANY COVERS or GUARDS ARE REMOVED FROM THE MACHINE TO ALLOW ACCESS FOR CLEANING, ADJUSTING, INSTALLATION, or TESTING OF ANY EQUIPMENT per OSHA (Occupational Safety and Health Administration) STANDARDS.

“Caution: Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper operation.”

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

CAUTION

DRYER(S) SHOULD NEVER BE LEFT UNATTENDED WHILE IN OPERATION.

WARNING

**CHILDREN SHOULD NOT BE ALLOWED TO PLAY ON OR NEAR THE DRYER(S).
CHILDREN SHOULD BE SUPERVISED IF NEAR DRYER(S) IN OPERATION.**

FOR YOUR SAFETY

**DO NOT DRY MOP HEADS IN THE DRYER.
DO NOT USE DRYER IN THE PRESENCE OF DRY CLEANING FUMES.**

WARNING

UNDER NO CIRCUMSTANCES should the door switch or the heat circuit devices ever be disabled.

WARNING

The dryer must never be operated with any of the back guards, outer tops, or service panels removed. **PERSONAL INJURY or FIRE COULD RESULT.**

WARNING

DRYER MUST NEVER BE OPERATED WITHOUT THE LINT FILTER/SCREEN IN PLACE, EVEN IF AN EXTERNAL LINT COLLECTION SYSTEM IS USED.

IMPORTANT

PLEASE OBSERVE ALL SAFETY PRECAUTIONS displayed on the equipment and/or specified in the installation/operator's manual included with the dryer.

Dryer(s) **must not** be installed or stored in an area where it will be exposed to water and/or weather.

The wiring diagram for the dryer is located in the front electrical control box area.

Table of Contents

SECTION I

IMPORTANT INFORMATION.....	3
A. Receiving and Handling	3
B. Safety Precautions	4

SECTION II

SPECIFICATIONS/COMPONENT IDENTIFICATION	6
A. Specifications	6
B. Component Identification.....	8

SECTION III

INSTALLATION PROCEDURES	10
A. Location Requirements	10
B. Unpacking/Setting Up	11
C. Dryer Enclosure Requirements	12
D. Fresh Air Supply	13
E. Exhaust Requirements	14
F. Electrical Information	18
G. Gas Information.....	24
H. Preparation For Operation/Start-up	28
I. Preoperational Tests	29
J. Preoperational Instructions	31
K. Shut Down Instructions	32

SECTION IV

SERVICE/PARTS INFORMATION	33
A. Service	33
B. Parts	33

SECTION V

WARRANTY INFORMATION	34
A. Returning Warranty Card(s)	34
B. Parts	34
C. Returning Warranty Card(s)	34

SECTION VI	
ROUTINE MAINTENANCE	36
A. Cleaning	36
B. Adjustments	37
SECTION VII	
PROCEDURE FOR FUNCTIONAL CHECK OF REPLACEMENT	
COMPONENTS	38
SECTION VIII	
REVERSING TIMER SPIN/DWELL ADJUSTMENTS	41
SECTION IX	
TECHNICAL INFORMATION	50
Data Label	50
SECTION X	
TROUBLESHOOTING	44
Microprocessor (Computer) Models	46
Dual Timer Models	53

SECTION I

IMPORTANT INFORMATION

A. RECEIVING and HANDLING

The dryer is shipped in a protective stretch wrap cover with protective cardboard corners and top cover (or optional box) as a means of preventing damage in transit. Upon delivery, the dryer and/or packaging, and wooden skid should be visually inspected for shipping damage. If any damage whatsoever is noticed, inspect further before delivering carrier leaves.

Dryers damaged in shipment:

1. **ALL** dryers **should be** inspected upon receipt and before they are signed for.
2. If there is suspected damage or actual damage, the trucker's receipt **should be** so noted.
3. If the dryer is damaged beyond repair, it **should be** refused. Those dryers which were not damaged in a damaged shipment **should be** accepted, but the number received and the number refused **must be** noted on the receipt.
4. If you determine that the dryer was damaged after the trucker has left your location, you should call the delivering carrier's freight terminal immediately and file a claim. The freight company considers this concealed damage. This type of freight claim is very difficult to get paid and becomes extremely difficult when more than a day or two passes after the freight was delivered. It is your responsibility to file freight claims. Dryer/parts damaged in transit **cannot** be claimed under warranty.
5. Freight claims are the responsibility of the consignee, and **ALL** claims **must be** filed at the receiving end. **ADC** assumes no responsibility for freight claims or damages.
6. If you need assistance in handling the situation, please contact the **ADC** Traffic Manager at (508) 678-9000.

IMPORTANT: The dryer *must be* transported and handled in an upright position at all times.

B. SAFETY PRECAUTIONS

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.

WARNING: The dryer *must never be* operated with any of the back guards, outer tops, or service panels removed. PERSONAL INJURY or FIRE COULD RESULT.

1. **DO NOT** store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
2. Purchaser/user should consult the local gas supplier for proper instructions to be followed in the event the user smells gas. The instructions **should be** posted in a prominent location.
3. WHAT TO DO IF YOU SMELL GAS...
 - a. **DO NOT** try to light any appliance.
 - b. **DO NOT** touch any electrical switch.
 - c. **DO NOT** use any phone in your building.
 - d. Clear the room, building, or area of **ALL** occupants.
 - e. Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
 - f. If you **cannot** reach your gas supplier, call the fire department.
4. Installation and service **must be** performed by a qualified installer, service agency, or gas supplier.
5. Dryer(s) **must be** exhausted to the outdoors.
6. Although ADC produces a very versatile machine, there are some articles that, due to fabric composition or cleaning method, **should not be** dried in it.

WARNING: Dry only water-washed fabrics. **DO NOT** dry articles spotted or washed in dry cleaning solvents, a combustible detergent, or "all purpose" cleaner. **EXPLOSION COULD RESULT.**

WARNING: DO NOT dry rags or articles coated or contaminated with gasoline, kerosene, oil, paint, or wax. **EXPLOSION COULD RESULT.**

WARNING: DO NOT dry mop heads. Contamination by wax or flammable solvent will create a fire hazard.

WARNING: DO NOT use heat for drying articles that contain plastic, foam, sponge rubber, or similarly textured rubberlike materials. Drying in a heated basket (tumbler) may damage plastics or rubber and also may be a fire hazard.

7. A program **should be** established for the inspection and cleaning of lint in the burner area, exhaust duct work, and area around the back of the dryer. The frequency of inspection and cleaning can best be determined from experience at each location.

WARNING: The collection of lint in the burner area and exhaust duct work can create a potential fire hazard.

8. For personal safety, the dryer **must be** electrically grounded in accordance with local codes and/or the NATIONAL ELECTRIC CODE ANSI/NFPA NO. 70-LATEST EDITION.

NOTE: Failure to do so will VOID THE WARRANTY.

9. **UNDER NO CIRCUMSTANCES** should the dryer door switches, lint drawer switch, or heat safety circuit, ever be disabled.

WARNING: PERSONAL INJURY or FIRE COULD RESULT.

10. This dryer is not to be used in the presence of dry cleaning solvents or fumes.

11. Remove articles from the dryer as soon as the drying cycle has been completed.

WARNING: Articles left in the dryer after the drying and cooling cycles have been complete can create a fire hazard.

12. **READ and FOLLOW ALL CAUTION and DIRECTION LABELS ATTACHED TO THE DRYER.**

WARNING: YOU MUST DISCONNECT and LOCKOUT THE ELECTRIC SUPPLY and THE GAS SUPPLY BEFORE ANY COVERS or GUARDS ARE REMOVED FROM THE MACHINE TO ALLOW ACCESS FOR CLEANING, ADJUSTING, INSTALLATION, or TESTING OF ANY EQUIPMENT per OSHA (Occupational Safety and Health Administration) STANDARDS.

SECTION II

SPECIFICATIONS/COMPONENT IDENTIFICATION

A. SPECIFICATIONS

BASKET (TUMBLER) DIAMETER		37"	94 cm
BASKET (TUMBLER) DEPTH		36"	91.5 cm
BASKET (TUMBLER) MOTOR		3/4 HP*	.560 kw
DOOR OPENING (DIAMETER)		21-1/2"	54.61 cm
BASKET (TUMBLER) VOLUME		22.4 cu. ft.	.634 cu.m.
DRYERS PER 20'/40' CONTAINER		10/20	
DRYERS PER 6 m/12 m CONTAINER		10/20	
DRYERS PER 45'/48' TRUCK		24/26	
DRYERS PER 14 m/15 m TRUCK		24/24	
Gas	VOLTAGE AVAILABLE	120-460v / 1 ϕ -3 ϕ / 3, 4w / 50/50 Hz	
	APPROX. WEIGHT (UNCRATED)	721 lbs.	327.1 kg
	APPROX. WEIGHT (CRATED)	771 lbs.	349.7 kg
	HEAT INPUT	175,000 btu/hr	44,100 kcal/hr
	AIRFLOW	750 cfm	21.24 cm
	INLET PIPE SIZE**	3/4"	1.91 cm

Shaded areas are stated in metric equivalents

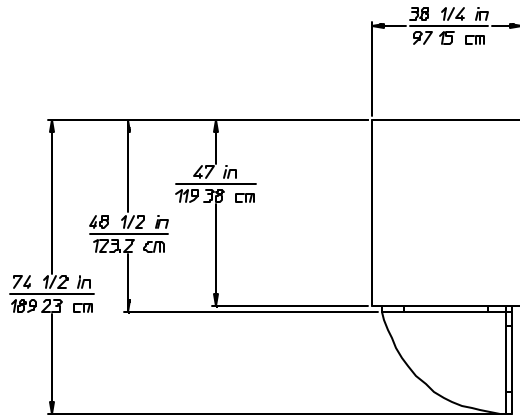
* For Non-Reversing Models.

** A minimum of 3/4" (1.91 cm) **must be** supplied to the gas inlet for each dryer.

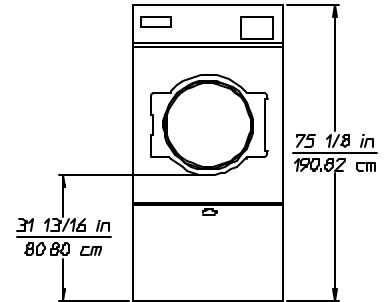
NOTE: ADC reserves the right to make changes in specifications at any time, without notice or obligation.

Specifications

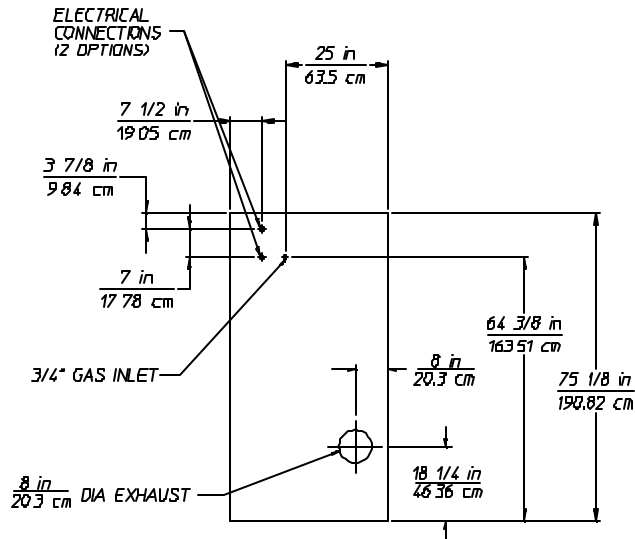
ADG-758 (Gas)



PLAN VIEW

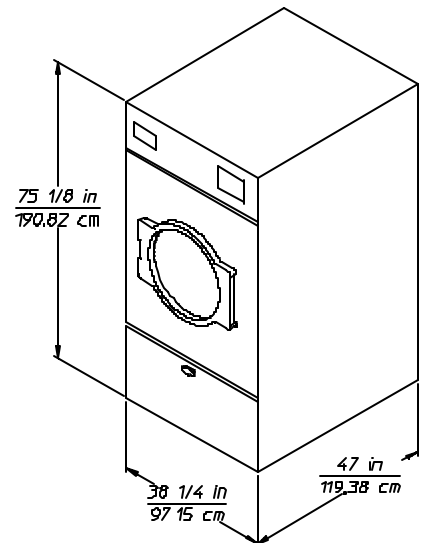


FRONT VIEW



REAR VIEW

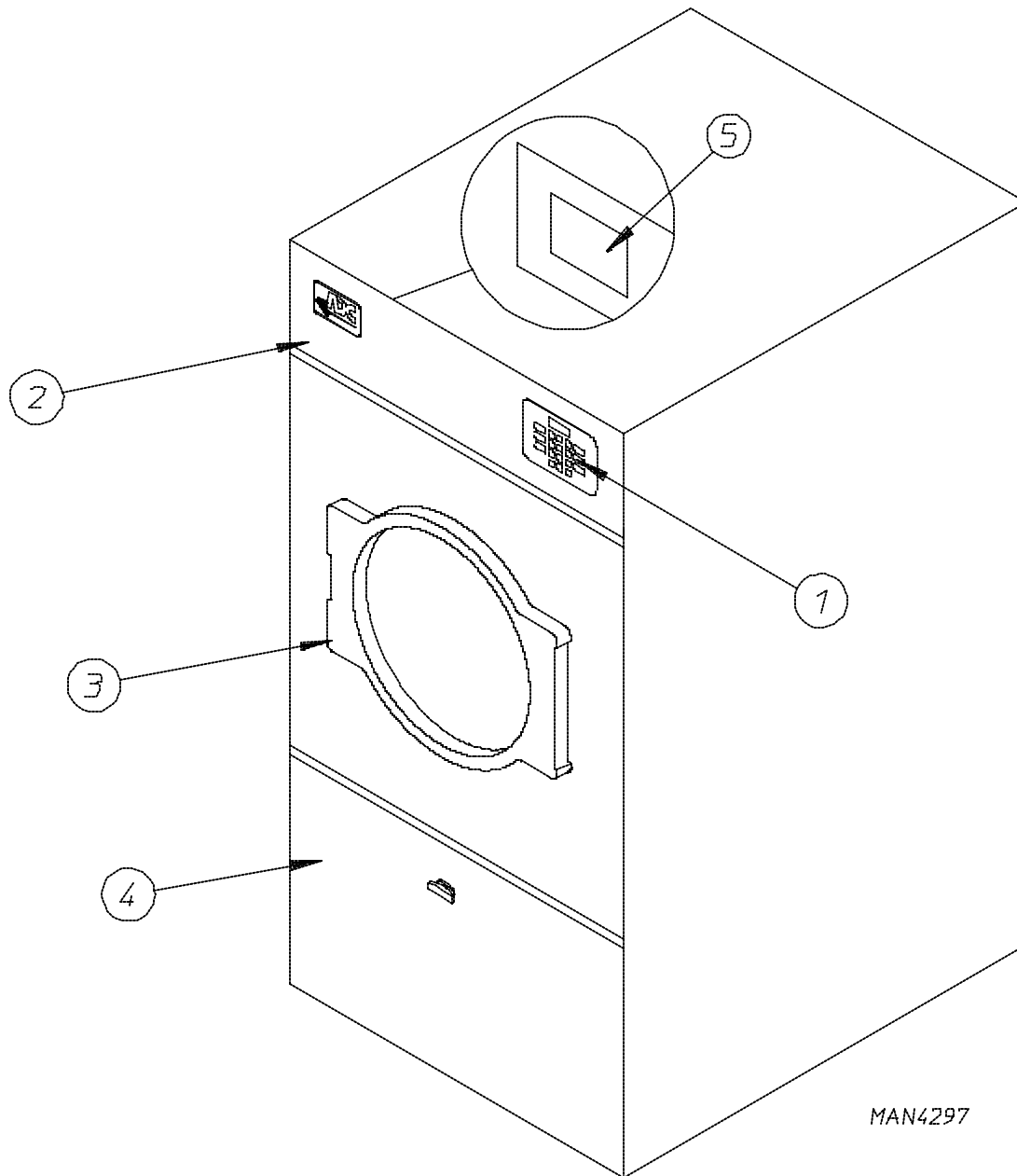
SPEC 306



NOTE: ADC reserves the right to make changes in specifications at any time, without notice or obligation.

B. COMPONENT IDENTIFICATION

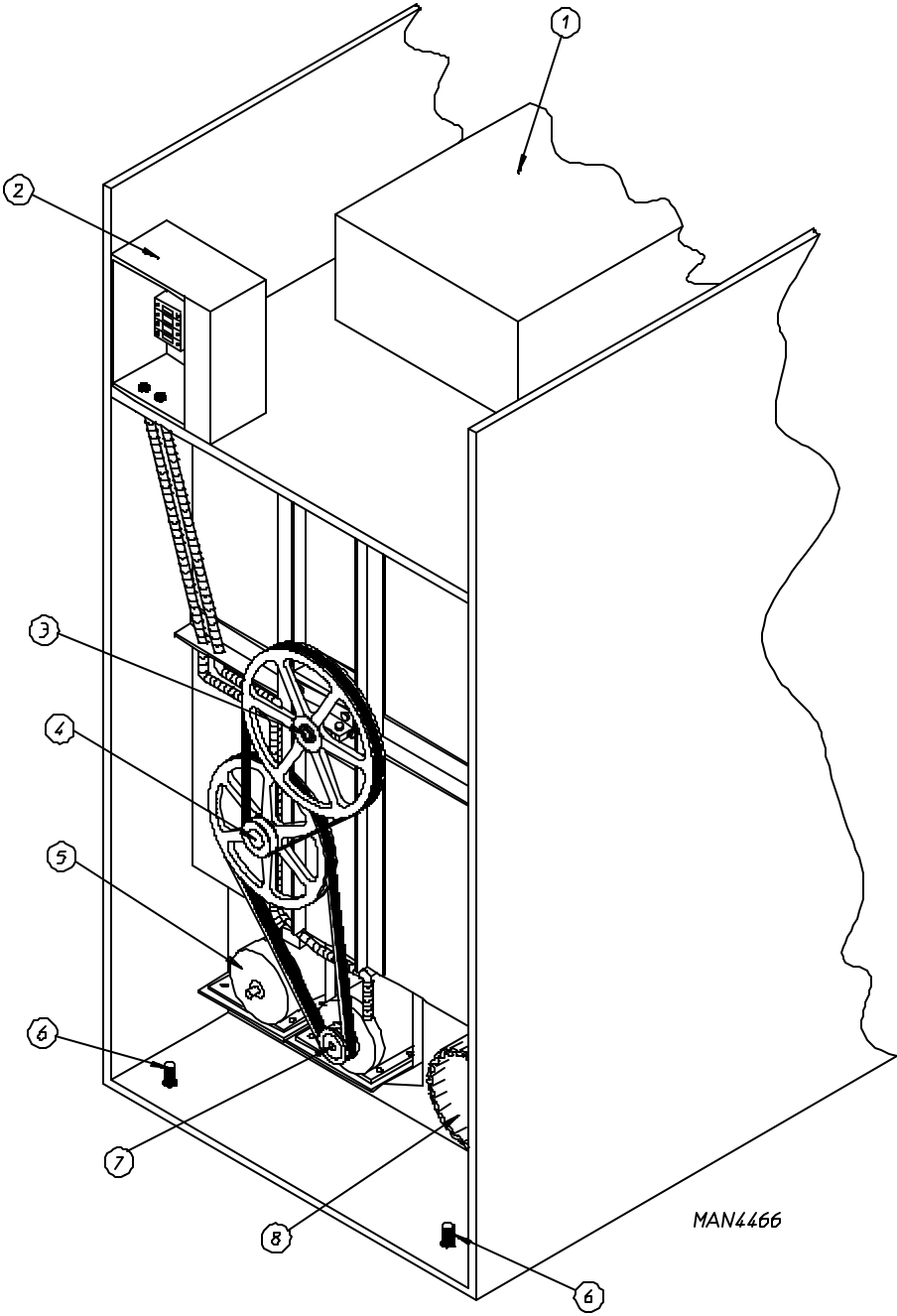
1. Dryer Front View



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<u>Illus. No.</u>	<u>Description</u>
1	Controls
2	Control (top access) Door Assembly
3	Main Door Assembly
4	Lint Compartment Area (lint screen located behind lint door)
5	Data Label and Installation Label (located behind control [service] door)

2. Dryer Rear View



<u>Illus. No.</u>	<u>Description</u>
1	Heating Unit
2	Electric Service Relay Box
3	Tumbler Bearing Mount Assembly
4	Idler Bearing Mount Assembly
5	Blower Motor Assembly (for Reversing Models ONLY)
6	Leveling Legs (rear)
7	Basket (Drive) Motor Assembly
8	Dryer Exhaust

SECTION III

INSTALLATION PROCEDURES

Installation **should be** performed by competent technicians in accordance with local and state codes. In the absence of these codes, the installation **must conform** to applicable American National Standards: National Fuel Gas Code ANSI.Z223.1-LATEST EDITION and/or National Electric Code ANSI/NFPA NO. 70-LATEST EDITION.

A. LOCATION REQUIREMENTS

Before installing the dryer, be sure the location conforms to local codes and ordinances. In the absence of such codes or ordinances the location **must conform** with the National Fuel Gas Code ANSI.Z223.1-LATEST EDITION.

1. The dryer **must be** installed on a sound level floor capable of supporting its weight. It is recommended that carpeting be removed from the floor area that the dryer is to rest on.
2. The dryer **must not be** installed or stored in an area where it will be exposed to water and/or weather.
3. The dryer is for use in noncombustible locations.
4. Provisions for adequate air supply **must be** provided as noted in this manual (refer to **Fresh Air Supply** in **Section D**).
5. Clearance provisions **must be** made from combustible construction as noted in this manual (refer to **Dryer Enclosure Requirements** in **Section C**).
6. Provisions **must be** made for adequate clearances for servicing and for operation as noted in this manual (refer to **Dryer Enclosure Requirements** in **Section C**).
7. Dryer **must be** exhausted to the outdoors (refer to **Exhaust Requirements** in **Section E**).
8. Dryer **must be** located in an area where correct exhaust venting can be achieved as noted in the manual (refer to **Exhaust Requirements** in **Section E**).

IMPORTANT: Dryer *should be* located where a minimum amount of exhaust duct will be necessary.

B. UNPACKING/SETTING UP

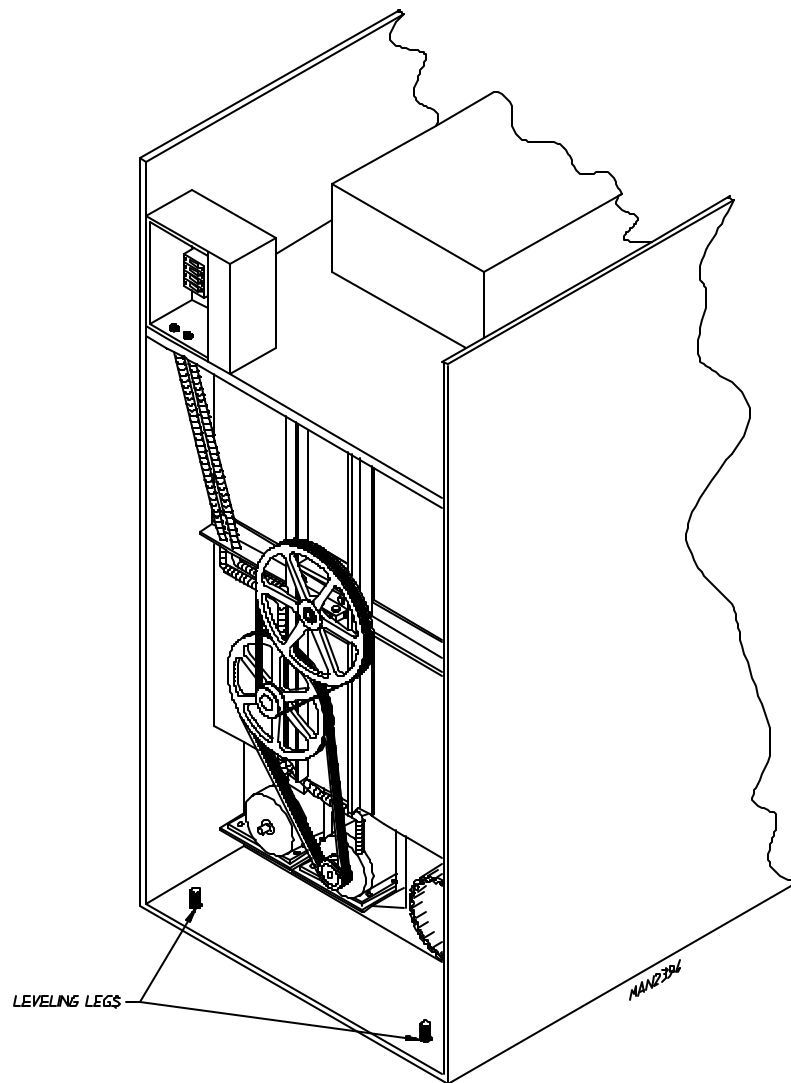
Remove protective shipping material (i.e., plastic wrap, and/or optional shipping box) from dryer.

IMPORTANT: Dryer *must be* transported and handled in an upright position at **ALL** times.

The dryer can be moved to its final location while still attached to the skid or with the skid removed. To un-skid the dryer, locate and remove the four (4) bolts securing the base of the dryer to the wooden skid. Two (2) are at the rear base (remove the back panel for access), and two (2) are located in the bottom of the lint chamber. To remove the two (2) bolts located in the lint chamber area, remove the lint door.

To increase bearing life and improve efficiency, the dryer **should be** tilted slightly to the rear.

The lint coops of **ALL** ADG-758 dryers are supported during shipping by a bracket. **REMOVE THIS BRACKET BEFORE STARTING THE DRYER.**

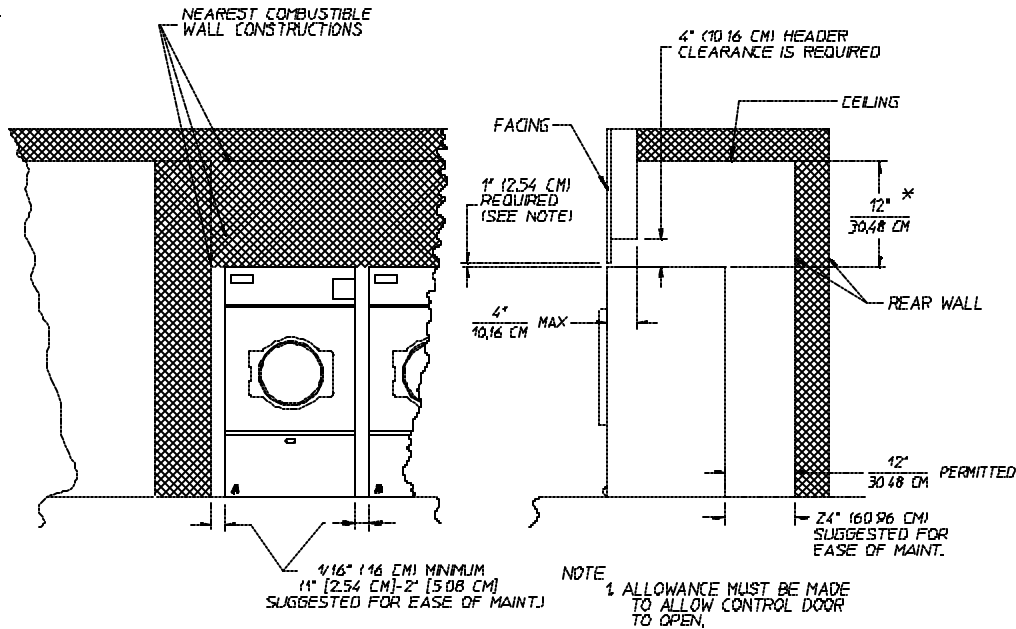


1. Leveling Dryer

The dryer is equipped with four (4) leveling legs, one (1) at each corner of the base. Two (2) are located at the rear of the dryer base, and two (2) are located in the lint chamber (coop). To increase bearing life and improve efficiency, the dryer **should be** tilted slightly to the rear.

C. DRYER ENCLOSURE REQUIREMENTS

Bulkheads and partitions **should be** made of noncombustible materials and **must be** located a minimum of 12-inches (30.48 cm) - (18-inches [45.72 cm] or more is recommended for ease of installation, maintenance, and service) - above the dryer outer top, except along the front of the dryer which may be partially closed in if desired. The clearance between the bulkhead header and the dryer **must be** a minimum of 4-inches (10.16 cm) and **must not** extend more than 4-inches (10.16 cm) to the rear of the front. The bulkhead facing **must not** be closed in all the way to the top of the dryer. A 1-inch (2.54 cm) clearance is required.



*IN CASES WHERE SPRINKLER HEADS ARE OVER THE DRYERS 18" (45.72 CM) IS SUGGESTED

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INSTALLATION DRYER CLEARANCE TO ADJACENT WALL STRUCTURES

NOTE: Allowances **must be** made for opening the control door.

Dryers may positioned side wall to side wall. However, a 1/16" (.16 cm) minimum allowance **must be** made for opening and closing of the control door and the lint door. It is suggested that the dryer be positioned about 2-feet (.61 meters) away from the nearest obstruction for ease of installation, maintenance, and service (to be measured from the back guard). Refer to the **illustration above** for details.

NOTE: Air considerations are important for proper and efficient operation.

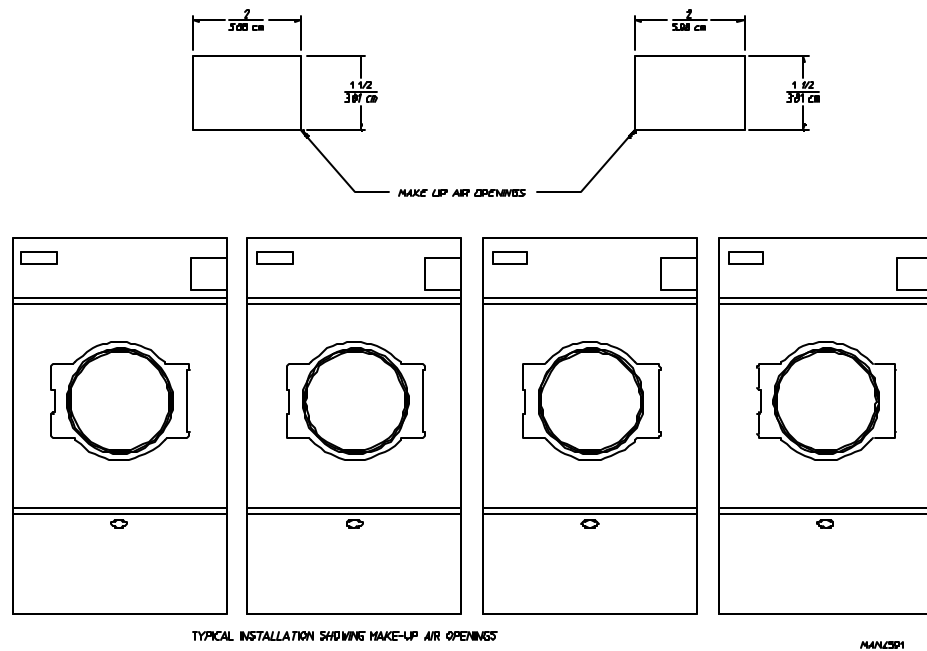
IMPORTANT: Even though a minimum of only 12-inches (30.48 cm) is required, 18-inches (45.72 cm) or more is suggested. The additional clearance is advantageous for ease of installation and service.

IMPORTANT: When fire sprinkler systems are located above the dryers, a minimum of 18-inches (45.72 cm) above the dryer console (module) is required. Dryers may be positioned side wall to side wall however, a 1/16" (.16 cm) minimum allowance is required rbetween dryers (or wall) for ease of installation and maintenance. Allowances **must be** made for the opening and closings of the control door and the lint door.

D. FRESH AIR SUPPLY

When the dryer is operating, it draws in room air, heats it, passes this air through the basket (tumbler), and exhausts it out of the building. Therefore, the room air **must be** continually replenished from the outdoors. If the make-up air is inadequate, drying time and drying efficiency will be adversely affected. Ignition problems and sail switch "fluttering" problems may result, as well as premature motor failure from overheating.

Air supply (make-up air) **must be** given careful consideration to assure proper performance of each dryer. An unrestricted source of air is necessary for each dryer. An air flow of 750 cfm (cubic feet per minute) - (.2124 cmm [cubic meters per minute]) - **must be** supplied to each gas dryer. As a general rule, an unrestricted air entrance from the outdoors (atmosphere) of a minimum of 1-1/2 square feet (.14 square meters) is required for each dryer.



To compensate for the use of registers or louvers used over the openings, this make-up air **must be** increased by approximately thirty-three percent (33%). Make-up air openings **should not be** located in an area directly near where exhaust vents exit the building.

It is not necessary to have a separate make-up air opening for each dryer. Common make-up air openings are acceptable. However, they **must be** set up in such a manner that the make-up air is distributed equally to **ALL** the dryers.

EXAMPLE: For a bank of four (4) dryers, two (2) unrestricted openings measuring 2-feet (.61 meters) by 1-1/2 feet (.46 meters) - (6 square feet [.56 square meters]) is acceptable.

Allowances **must be** made for remote or constricting passageways or where dryers are located at excessive altitudes or predominantly low pressure areas.

IMPORTANT: Make-up air **must be** provided from a source free of dry cleaning solvents fumes. Make-up air that is contaminated by dry cleaning solvent fumes will result in irreparable damage the motors and other dryer components.

NOTE: Component failure due to dry cleaning solvent fumes will VOID THE WARRANTY.

E. EXHAUST REQUIREMENTS

1. General Exhaust Duct Work Information

Exhaust duct work **should be** designed and installed by a qualified professional. Improperly sized duct work will create excessive back pressure which results in slow drying, increased use of energy, overheating of the dryer, and shutdown of the burner by the airflow (sail) switches, burner hi-limits, or basket (tumbler) hi-heat thermostats.

CAUTION: DRYER *MUST BE* EXHAUSTED TO THE OUTDOORS.

CAUTION: IMPROPERLY SIZED OR INSTALLED EXHAUST DUCT WORK CAN CREATE A POTENTIAL FIRE HAZARD.

The duct work **should be** laid out in such a way that the duct work travels as directly as possible to the outdoors with as few turns as possible. Single or independent dryer venting is recommended.

Horizontal Venting:

When single drying venting is used the length of duct work from the dryer to the outside exhaust outlet **should not** exceed 25 feet (7.62 meters). The minimum diameter of this duct work **must be** at least 8-inches (20.32 cm). In the case of multiple (common) dryer venting, the distance from the last dryer to the outside exhaust outlet **should not** exceed 15 feet (4.57 meters). The shape of the duct work is not critical so long as the minimum cross-sectional area is provided. It is suggested that the use of 90° turns be avoided; use 30° and/or 45° angles instead. The radius of the elbows **should preferably be** 1-1/2 times the diameter of the duct. Including basket (tumbler)/dryer elbow connections or elbows used for outside protection from the weather, no more than two (2) elbows **should be** used in the exhaust duct run. If more than two (2) elbows are used, the cross-sectional area of the duct work **must be** increased. **ALL** duct work **should be** smooth inside with no projections from sheet metal screws or other obstructions which will collect lint. When adding ducts, the duct to be added should overlap the duct to which it is to be connected. **ALL** duct work joints **must be** taped to prevent moisture and lint from escaping into the building. Inspection door **should be** installed at strategic points in the exhaust duct work for periodic inspection and clean-out of lint from the duct work.

Vertical Venting:

When single dryer venting is used the length of the duct work from the dryer to the outside exhaust outlet **should not** exceed twenty 15 feet (4.57 meters). The minimum diameter of this duct work **must be** at least 8-inches (20.32 cm). In the case of multiple (common) dryer venting, the distance from the last dryer to the outside exhaust outlet **should not** exceed twenty 15 feet (4.57 meters). The shape of the duct work is not so critical so long as the minimum cross-sectional area is provided. It is suggested that the use of 90° turns be avoided; use 30° and/or 45° bends instead. The radius of the elbows **should preferably be** 1-1/2 times the diameter of the duct. **ALL** duct work **should be** smooth inside with no projections from sheet metal screws or other obstructions which will collect lint. When adding ducts, the duct to be added should overlap the duct to which it is to be connected. **ALL** duct work joints **must be** taped to prevent moisture and lint from escaping into the building. Inspection door **should be** installed at strategic points in the exhaust duct work for periodic inspection and clean-out of lint from the duct work.

IMPORTANT: Exhaust back pressure measured by a manometer in the exhaust duct *should not* exceed 0.3 inches of water column (.74 millibars).

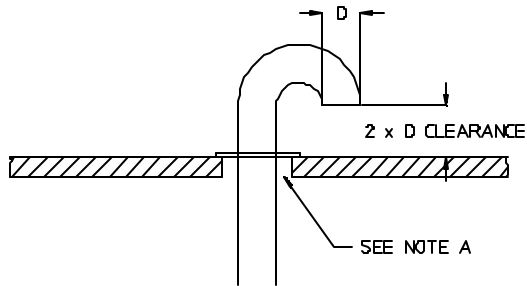
NOTE: Where the exhaust duct work passes through a wall, ceiling, or roof made of combustible materials, the opening *must be* 2-inches (5.08 cm) larger (all the way around) than the duct. The duct *must be* centered within this opening.

a. Outside Duct Work Protection

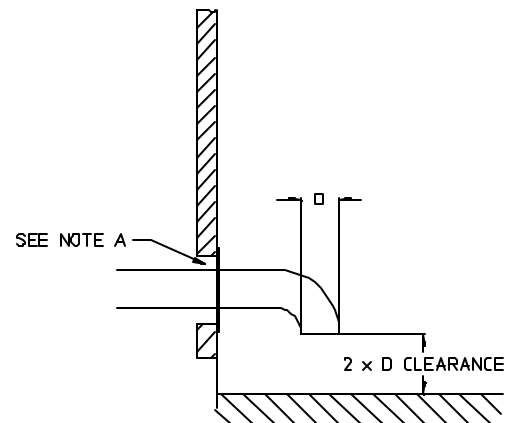
- 1) To protect the outside end of horizontal duct work from the weather, a 90° elbow bent downward **should be** installed where the exhaust exits the building. If the duct work travels vertically up through the roof, it **should be** protected from the weather by using a 180° turn to point the opening downward. In either case, allow at least twice the diameter of the duct between the duct opening and the nearest obstruction.

IMPORTANT: *DO NOT* use screens or caps on the outside of opening of exhaust duct work.

VERTICAL DUCTING



HORIZONTAL DUCTING



NOTE "A" OPENING MUST BE TWO (2) INCHES (5.08 CM) LARGER THAN DUCT (ALL THE WAY AROUND) THE DUCT MUST BE CENTERED WITHIN THIS OPENING

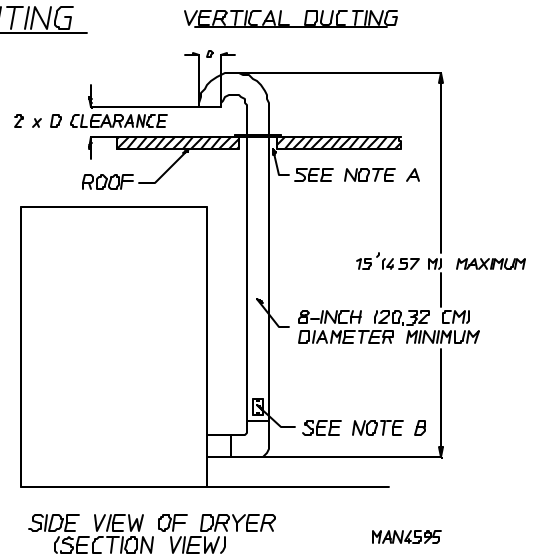
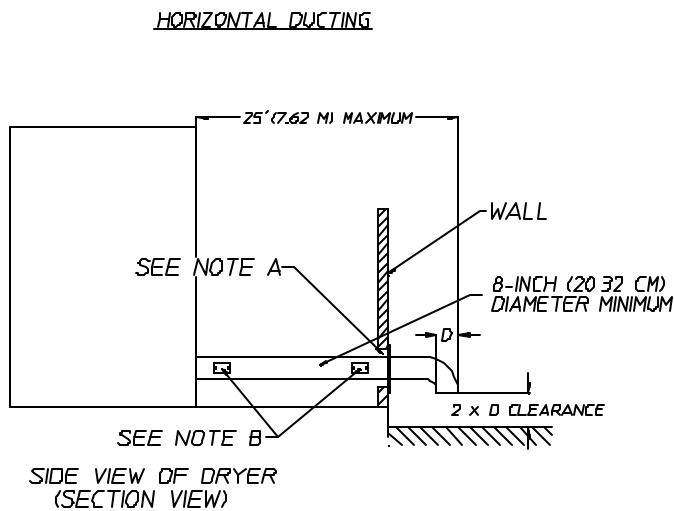
MAN4589

2. Single Dryer Venting

Where possible, it is suggested to provide a separate exhaust duct for each dryer. The exhaust duct **should be** laid out in such a way that the duct work travels as directly as possible to the outdoors with as few turns as possible. It is suggested that the use of 90° turns in the ducting be avoided; use 30° and/or 45° angles instead. The shape of the exhaust duct work is not critical so long as the minimum cross section area is provided.

IMPORTANT: Exhaust back pressure measured by a manometer in the exhaust duct *should not* exceed 0.3 inches of water column (.74 millibars).

SINGLE DRYER VENTING



- NOTE: "A"- OPENING MUST BE TWO (2) INCHES (5.08 CM) LARGER THAN DUCT (ALL THE WAY AROUND). THE DUCT MUST BE CENTERED WITHIN THIS OPENING
- "B"- INSPECTION DOORS SHOULD BE INSTALLED AT STRATEGIC POINTS FOR PERIODIC INSPECTION AND CLEANING

IMPORTANT: For extended duct work runs, the cross section area of the duct work can only be increased to an extent. When the duct work approaches the maximum limits noted in this manual, a professional heating venting air conditioning (HVAC) firm *should be* consulted for proper venting information.

ALL duct work **should be** smooth inside with no projections from sheet metal screws or other obstructions which will collect lint. When adding ducts, the duct to be added should overlap the duct to which it is to be connected. **ALL** duct work joints **must be** taped to prevent moisture and lint from escaping into the building. Inspection doors **should be** installed at strategic points in the exhaust duct work for periodic inspection and clean-out of lint from the duct work.

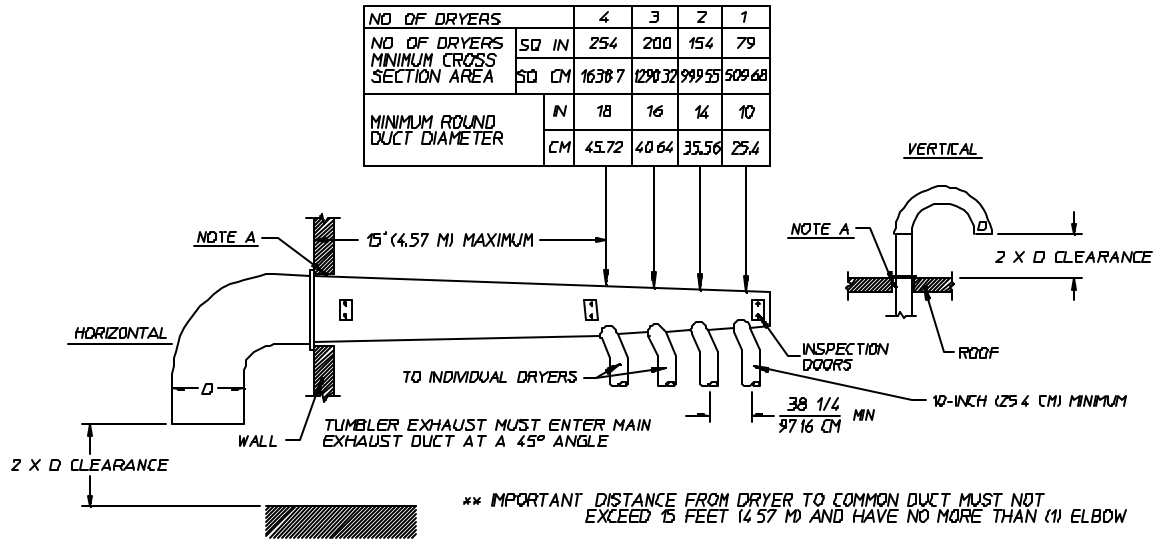
NOTE: Where the exhaust duct work passes through a wall, ceiling, or roof made of combustible materials, the opening **must be** 2-inches (5.08 cm) larger (all the way around) than the duct. The duct **must be** centered within this opening.

a. Outside Duct Work Protection

- 1) To protect the outside end of horizontal duct work from the weather, a 90° elbow bent downward **should be** installed where the exhaust exits the building. If the duct work travels vertically up through the roof, it **should be** protected from the weather by using a 180° turn to point the opening downward. In either case, allow at least twice the diameter of the duct between the duct opening and the nearest obstruction.

IMPORTANT: *DO NOT* use screens or caps on the outside of opening of exhaust duct work.

MULTIPLE DRYER VENTING (ADG-758) WITH 8" (20.32 CM) DIAMETER
(750 CFM [2124 cmm]) EXHAUST CONNECTIONS AT COMMON DUCT



IMPORTANT NO MORE THAN 4 DRYERS CAN BE CONNECTED TO ONE COMMON DUCT (VENT)

FORMULAS TO CALCULATE DUCTING CROSS SECTIONAL AREA

CROSS SECTIONAL AREA OF A ROUND DUCT = $785 (199 \text{ CM}) \times D^2$ WHERE D = DIAMETER OF THE DUCT

CROSS SECTIONAL AREA OF A RECTANGULAR DUCT = $W \times H$ WHERE W = WIDTH AND H = HEIGHT.

NOTE A: OPENING MUST BE TWO (2) INCHES (5.08 CM) LARGER THAN DUCT (ALL THE WAY AROUND). THE DUCT MUST BE CENTERED WITHIN THIS OPENING

MAN4601

IMPORTANT: For extended duct work runs, the cross section area of the duct work can only be increased to an extent. When the duct work approaches the maximum limits noted in this manual, a professional heating venting air conditioning (HVAC) firm *should be* consulted for proper venting information.

ALL duct work **should be** smooth inside with no projections from sheet metal screws or other obstructions which will collect lint. When adding ducts, the duct to be added should overlap the duct to which it is to be connected. **ALL** duct work joints **must be** taped to prevent moisture and lint from escaping into the building. Inspection doors **should be** installed at strategic points in the exhaust duct work for periodic inspection and clean-out of lint from the duct work.

NOTE: Where the exhaust duct work passes through a wall, ceiling, or roof made of combustible materials, the opening **must be** 2-inches (5.08 cm) larger (all the way around) than the duct. The duct **must be** centered within this opening.

a. Outside Duct Work Protection

- 1) To protect the outside end of horizontal duct work from the weather, a 90° elbow bent downward **should be** installed where the exhaust exits the building. If the duct work travels vertically up through the roof, it **should be** protected from the weather by using a 180° turn to point the opening downward. In either case, allow at least twice the diameter of the duct between the duct opening and the nearest obstruction.

IMPORTANT: *DO NOT* use screens or caps on the outside of opening of exhaust duct work.

F. ELECTRICAL INFORMATION

1. Electrical Requirements

It is your responsibility to have **ALL** electrical connections made by a properly licensed and competent electrician to assure that the electrical installation is adequate and conforms with local and state regulations or codes. In the absence of such codes, **ALL** electrical connections, material, and workmanship **must conform** to the applicable requirements of the National Electrical Code ANSI/NFPA NO.70-LATEST EDITION..

IMPORTANT: Failure to comply with these codes or ordinances, and/or the requirements stipulated in this manual can result in personal injury or component failure.

NOTE: Component failure due to improper installation will VOID THE WARRANTY.

Each dryer **should be** connected to an independently protected branch circuit. The dryer **must be** connected with copper wire only. ***DO NOT use aluminum wire which could cause a fire hazard.*** The copper conductor wire/cable **must be** of proper ampacity and insulation in accordance with electric codes for making **ALL** service connections.

NOTE: The use of aluminum wire will VOID THE WARRANTY.

IMPORTANT: A separate circuit servicing each dryer ***must be*** provided.

2. Electrical Service Specifications

a. Gas Models

ADG-758 (Gas)

ELECTRICAL SERVICE SPECIFICATIONS (PER DRYER)*

SERVICE VOLTAGE	PHASE	WIRE SERVICE	APPROX. AMP DRAW		CIRCUIT BREAKER
			60 Hz	50 Hz	
120	1∅	2	12	--	25
208	1∅	2	7	--	15
240	1∅	2	7	4	15
208	3∅	3	3	--	15
240	3∅	3	3	3	15
380/400	3∅	3/4	--	2	15
416	3∅	3/4	--	2	15
460/480	3∅	3/4	2	--	15

* Contact factory for electrical information not listed.

IMPORTANT: Figures shown are for Non-Reversing Models ONLY. For reversing models contact the factory.

IMPORTANT: The dryer *must be* connected to the electric supply shown on the data label that is affixed to the back of the dryer, at the upper right hand corner. In the case of 208 VAC or 230/240 VAC, the supply voltage *must match* the electric service specifications of the data label *exactly*.

IMPORTANT: The wire size *must be* properly sized to handle the related current.

WARNING: **208 VAC and 230/240 VAC ARE NOT THE SAME.** Any damage done to dryer components due to improper voltage connections will automatically VOID THE WARRANTY.

NOTE: ADC reserves the right to make changes in specifications at any time, without notice or obligation.

3. Grounding

A ground (earth) connection **must be** provided and installed in accordance with state and local codes. In the absence of these codes, grounding **must conform** to applicable requirements of the National Electric Code ANSI/NFPA NO. 70-LATEST EDITION. The ground connection may be to a proven earth ground at the location service panel.

For added personal safety, when possible, it is suggested that a separate ground wire (no. 18 minimum) be connected from the ground connection of the dryer to a grounded cold water pipe. **DO NOT ground to a gas pipe or hot water pipe.** The grounded cold water pipe must have metal to metal connection all the way to the electrical ground. If there are any non-metallic interruptions, such as, a meter, pump, plastic, rubber, or other insulating connectors, they **must be** jumped out with no. 4 copper wire and securely clamped to bare metal at both ends.

IMPORTANT: For personal safety and proper operation, the dryer **must be** grounded.

Provisions are made for ground connection in each dryer at the electrical service connection area.

4. Electrical Connections

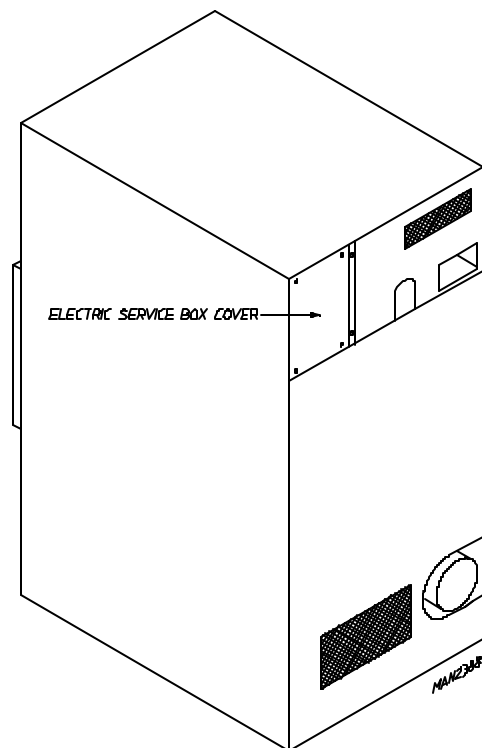
NOTE: A wire diagram is located in the front electrical control box for connection data.

a. Gas Models ONLY

NOTE: A CIRCUIT SERVING EACH DRYER MUST BE PROVIDED.

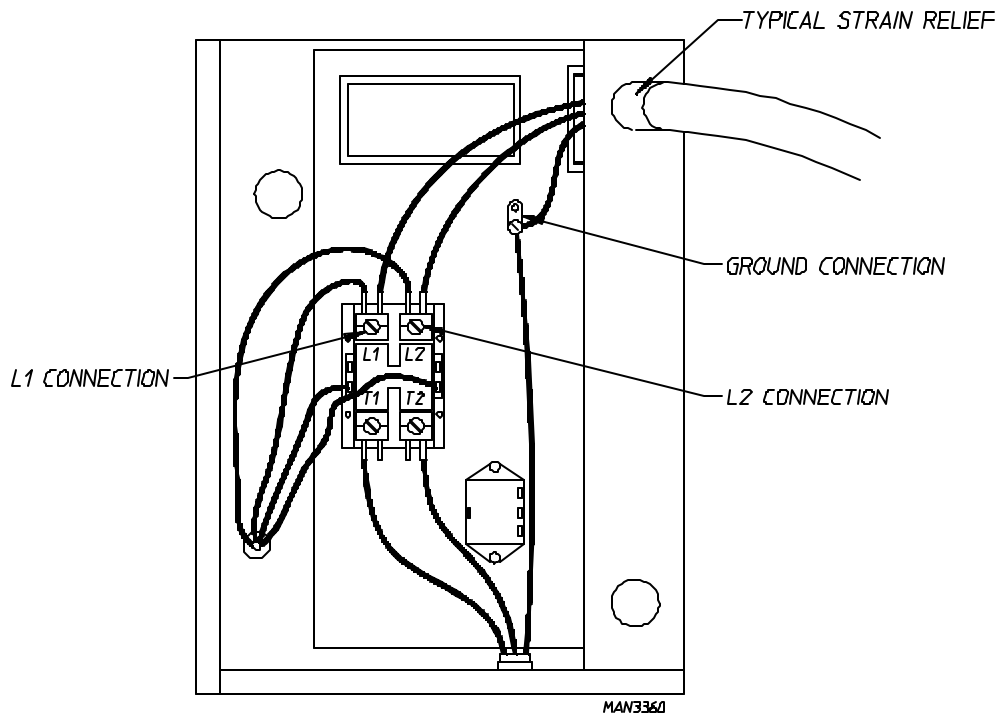
1) Single-phase (1 ϕ) Wiring Connections (Hookup)

The electrical connections on **ALL** single-phase (1 ϕ) gas models and steam model dryers are made into the rear service bx located at the upper left area of the dryer.



Actual electrical wire connections are made to L1 and L2 terminals of the motor contactor located in the rear service box mentioned on **page 20**. The ground connection is also made to the copper lug also provided in this box.

SINGLE-PHASE (1 ϕ) ELECTRICAL CONNECTION LEADS		
BLACK + POSITIVE	WHITE + NEUTRAL	GREEN + GROUND
OR L2		



If local codes permit, power to the dryer can be made by the use of a flexible U.L. listed power cord/pigtail (wire size **must conform** to rating of dryer), or the dryer can be hard wired directly to the service breaker panel. In both cases, a strain relief **must be** installed where the wiring enters the dryer.

2) 3-Phase (3 ϕ) Wiring Connections (Hookup) - for NON-REVERSING MODELS ONLY

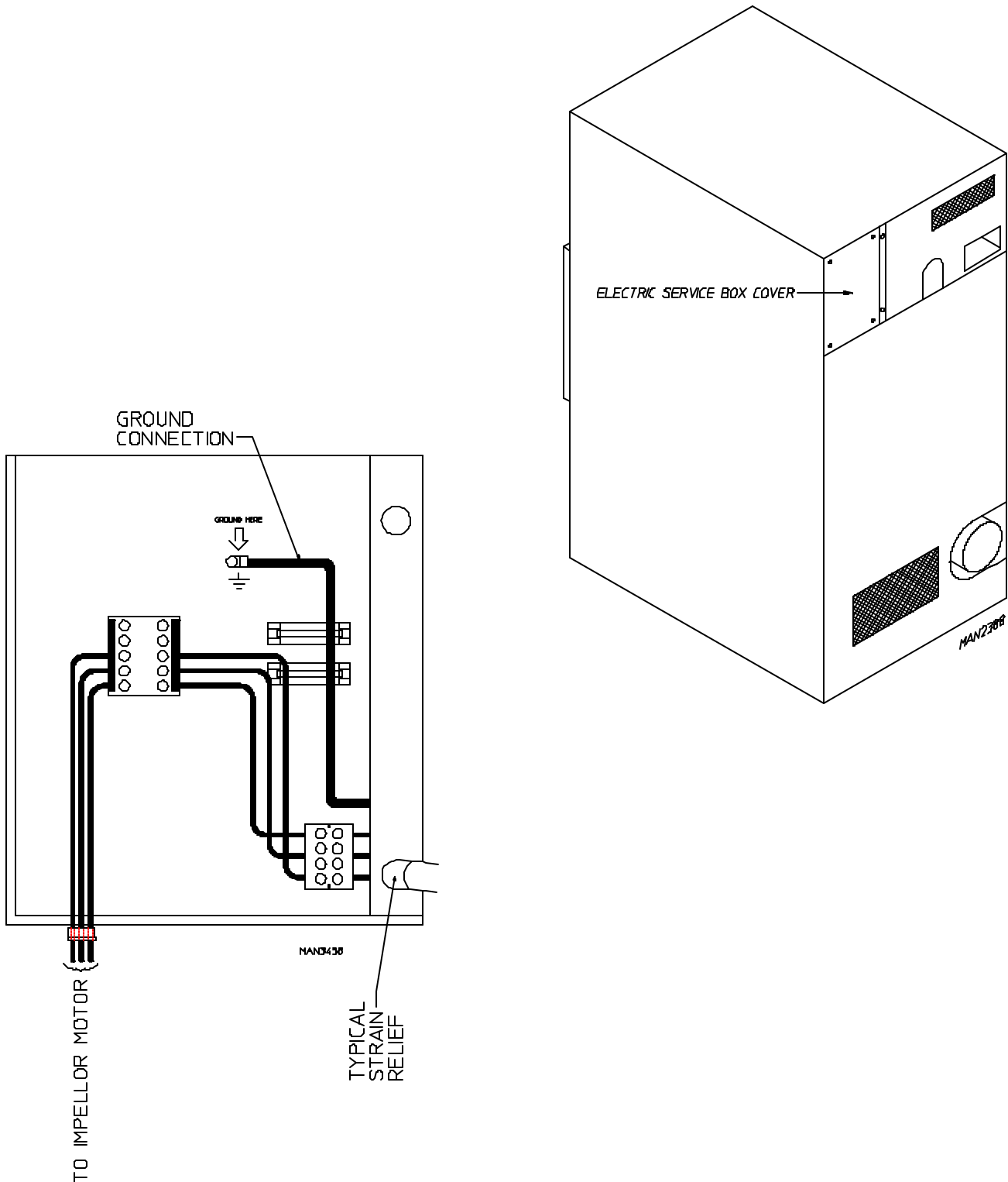
The electrical connections on **ALL** 3-phase (3 ϕ) gas model and steam model dryers are made into the rear service box located at the upper left area of the dryer.

NOTE: A CIRCUIT SERVING EACH DRYER *MUST BE* PROVIDED.

If local codes permit, power to a gas dryers can be made by the use of a flexible U.L. listed power cord/pigtail (wire size **must conform** to rating of dryer), or the dryer can be hard wired directly to the service breaker panel. In **ALL** cases, a strain relief **must be** installed where the wiring enters the dryer.

The only electrical input connections to the dryer are the 3-phase (3 ϕ) power leads (L1, L2, L3, and sometimes neutral) and ground. Single-phase (1 ϕ) power for the control circuit is done internally to the dryer. No single-phase (1 ϕ) input connection is required on a 3-phase (3 ϕ) dryer.

For gas dryers manufactured for operation at 3-phase (3 ϕ), the electrical connections are made at the power distribution block located in the service box at the rear, upper left corner of the dryer. The ground connection is made to the copper lug also provided in this box. To gain access to the service box contactor, the service box cover **must be** removed.



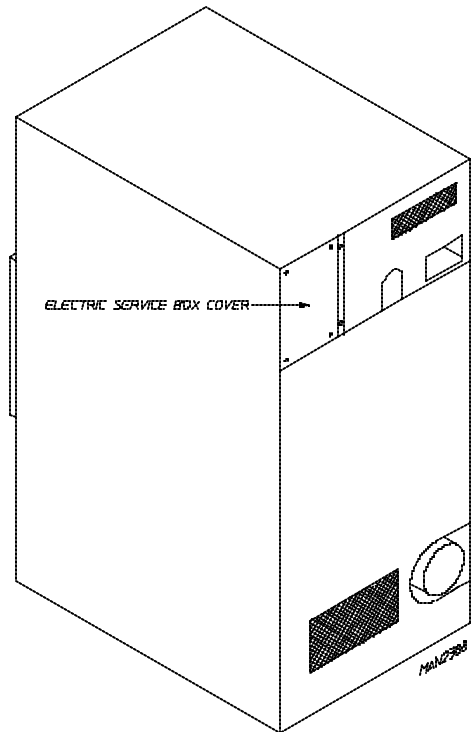
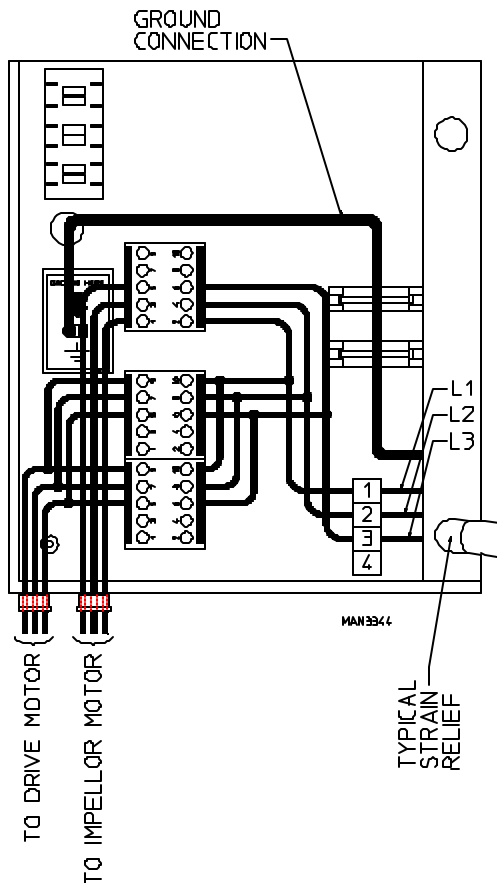
3) 3-Phase (3 ϕ) Wiring Connections (Hookup) - for NON-REVERSING MODELS ONLY

The electrical connections on **ALL** 3-phase (3 ϕ) gas model dryers are made into the rear service box located at the upper left area of the dryer.

NOTE: A CIRCUIT SERVING EACH DRYER *MUST BE PROVIDED.*

If local codes permit, power to a gas or steam dryer can be made by the use of a flexible U.L. listed power cord/pigtail (wire size **must conform** to rating of dryer), or the dryer can be hard wired directly to the service breaker panel. In **ALL** cases, a strain relief **must be** installed where the wiring enters the dryer.

The only electrical input connections to the dryer are the 3-phase (3 ϕ) power leads (L1, L2, L3, and sometimes neutral) and ground. Single-phase (1 ϕ) power for the control circuit is done internally to the dryer. No single-phase (1 ϕ) input connection is required on a 3-phase (3 ϕ) dryer.



For gas model dryers manufactured for operation at 3-phase (3 ϕ), the electrical connections are made at the power distribution block located in the service box at the rear, upper left corner of the dryer. The ground connection is made to the copper lug also provided in this box. To gain access to the **service box contactor**, the **service box cover** must be removed.

G. GAS INFORMATION

It is your responsibility to have **ALL** plumbing connections made by a qualified professional to assure that the gas plumbing installation is adequate and conforms with local and state regulations or codes. In the absence of such codes, **ALL** plumbing connections, materials, and workmanship **must conform** to the applicable requirements of the National Fuel Gas Code ANSI Z223.1-LATEST EDITION.

IMPORTANT: Failure to comply with these codes or ordinances, and/or the requirements stipulated in this manual, can result in personal injury and improper operation of the dryer.

The dryer and its individual shut-off valves **must be** disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psig (3.5 kPa). The dryer **must be** isolated from the gas supply piping system by closing its individual manual shut-off valve during any pressure test of the gas supply system at test pressures equal to or less than 1/2 psig (3.5 kPa).

IMPORTANT: Failure to isolate or disconnect dryer from supply as noted can cause irreparable damage to the gas valve which will VOID THE WARRANTY.

WARNING: FIRE or EXPLOSION COULD RESULT.

1. Gas Supply

The gas dryer installation **must meet** the American National Standard...National Fuel Gas Code ANSI Z223.1-LATEST EDITION, as well as local codes and ordinances and **must be** done by a qualified professional.

NOTE: Undersized gas piping will result in ignition problems, slow drying, increased use of energy, and can create a safety hazard.

The dryer **must be** connected to the type of heat/gas indicated on the dryer label affixed behind the right control box door. If this information does not agree with the type of gas available, **DO NOT operate the dryer**. Contact the distributor who sold the dryer or the **ADC** factory.

IMPORTANT: Any burner changes or conversions **must be** made by a qualified professional.

The input ratings shown on the dryer data label are for elevations up to 2,000 feet (609.6 meters), unless elevation requirements of over 2,000 feet (609.6 meters) were specified at the time the dryer order was placed with the factory. The adjustment or conversion of dryers in the field for elevations over 2,000 feet (609.6 meters) are made by changing each burner orifice. If this conversion is necessary, contact the distributor who sold the dryer or contact the **ADC** factory.

2. Technical Gas Data

a. Gas Specifications

	TYPE OF GAS			
	Natural		Liquid Propane	
Manifold Pressure*	3.5 inches W.C.	8.7 mb	10.5 inches W.C.	26.1 mb
Inline Pressure	6.0 - 12.0 inches W.C.	14.92 - 29.9 mb	10.5 inches W.C.	26.1 mb

Shaded areas are in metric equivalents

* Measured at gas valve pressure tap when the gas valve is on.

b. Gas Connections:

Inlet connection ----- 3/4-inch N.P.T.

Inlet supply size ----- 3/4-inch N.P.T. (minimum)

Btu/hr input (per dryer) -- 175,000 (44,100 kcal/hr)

1) Natural Gas

Regulation is controlled by the dryer's gas valve's internal regulator. Incoming supply pressure **must be** consistent between a minimum of 6.0 inches (14.92 millibars) and a maximum of 12.0 inches water column (W.C.) - 29.9 millibars - pressure.

2) Liquid Propane (L.P.) Gas

Dryers made for use with L.P. gas have the gas valve's internal pressure regulator blocked open so that the gas pressure **must be** regulated upstream of the dryer. The pressure measured at each gas valve pressure tap **must be** a consistent 10.5 inches water column (W.C.) - 26.1 millibars. There is no regulator or regulation provided in an L.P. dryer. The water column pressure **must be** regulated at the source (L.P. tank) or an external regulator **must be** added to each dryer.

ADC MODEL NUMBER	Rating	Rating	TYPE OF GAS						L.P. Conversion Kit Part Number
			Natural			Liquid Propane			
			Qty.	D.M.S.*	Number	Qty.	D.M.S.*	Part Number	
ADG-758	175,000	44,100	4	#30	140819	4	#49	140803	882230

Shaded area is stated in metric equivalent

* D.M.S. (Drill Material Size) equivalents are as follows:

Natural Gas #30 = .1285" (.33 cm)

Liquid Propane Gas .. #49 = .0730" (.19 cm)

3. Piping/Connections

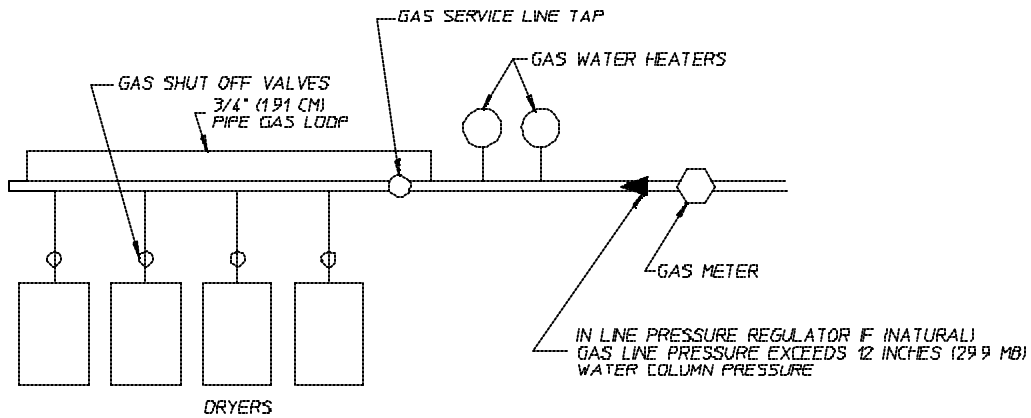
ALL components/materials **must conform** to National Gas Code specifications. It is important that gas pressure regulators meet applicable pressure requirements and that gas meters be rated for the total amount of **ALL** the appliance BTU's being supplied.

The dryer is provided with a 3/4" N.P.T. inlet pipe connection located at the right side of the base of the dryer. The minimum pipe size (supply line) to the dryer is 3/4" N.P.T. For ease servicing, the gas supply line of each dryer **must have** its own shut-off valve.

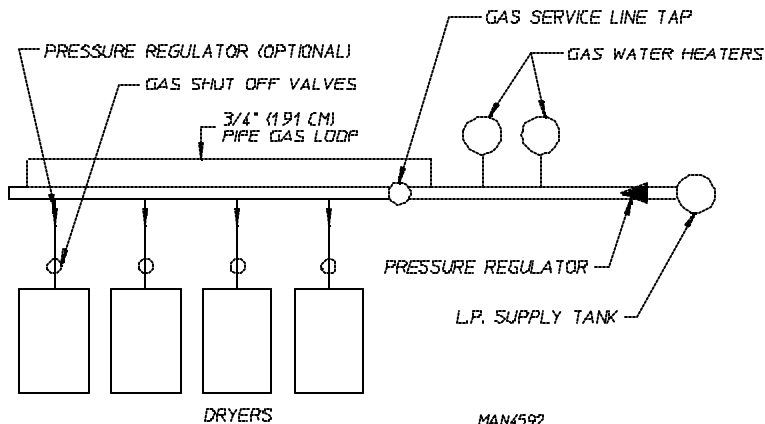
The size of the main gas supply line (header) will vary depending on the distance this line travels from the gas meter or, in the case of L.P. (liquid propane) gas, the supply tank, other gas-operated appliances on the same line, etc. Specific information regarding supply line size **should be** determined by the gas supplier.

NOTE: Undersized gas supply piping can create a low or inconsistent pressure which will result in erratic operation of the burner ignition system.

TYPICAL NATURAL GAS INSTALLATION



TYPICAL L.P. GAS INSTALLATION



MAN4592

Consistent gas pressure is essential at **ALL** gas connections. It is recommended that a 3/4 inch (1.91 cm) pipe gas loop be installed in the supply line serving a bank of dryers. An in-line pressure regulator **must be** installed in the gas supply line (header) if the (natural) gas pressure exceeds 12.0 inches of water column - 29.9 millibars - pressure.

NOTE: A water column test pressure of 3.5 inches (8.7 millibars) for natural gas and 10.5 inches (26.1 millibars) for L.P. (liquid propane) dryers is required at the gas valve pressure tap of each dryer for proper and safe operation.

A 1/8" (5.08 cm) N.P.T. plugged tap, accessible for a test gauge connection, **must be** installed in the main gas supply line immediately upstream of each dryer.

IMPORTANT: Pipe joint compounds that resist the action of natural gas and L.P. gas **must be** used.

IMPORTANT: Test **ALL** connections for leaks by brushing on a soapy water solution (liquid detergent works well).

WARNING: NEVER TEST FOR LEAKS WITH A FLAME!!!

ALL components/materials **must conform** to National Gas Code specifications. It is important that gas pressure regulators meet applicable pressure requirements and that gas meters be rated for the total amount of **ALL** the appliance BTU's being supplied.

IMPORTANT: The dryer and its individual shut-off 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 psig (3.5 kPa).

NOTE: The dryer **must be** isolated from the gas supply piping system by closing its individual manual shut-off valve during any pressure test of the gas supply system at test pressures equal to or less than 1/2 psig (3.5 kPa).

I. PREPARATION FOR OPERATION/START-UP

The following items **should be** checked before attempting to operate the dryer:

1. Read **ALL** "CAUTION," "WARNING," and "DIRECTION" labels attached to the dryer.
2. Check incoming supply voltage to be sure that it is the same as indicated on the dryer data label affixed to the back side of the top front control/service door. In the case of 208 VAC or 230/240 VAC ***THE SUPPLY VOLTAGE MUST MATCH THE ELECTRIC SERVICE EXACTLY.***
3. Check to assure that the dryer is connected to the type of heat/gas indicated on the dryer data label.
4. The sail switch damper assembly was installed and pre-adjusted at the factory prior to shipping. However, each sail switch adjustment **must be** checked to assure that this important safety control is functioning. (Refer to **page 30** for Sail Switch Adjustment.)
5. Be sure that **ALL** gas shut-off valves are in the open position.
6. Be sure **ALL** side and base panels are on the dryer.
7. Check **ALL** service doors to assure that they are closed and secure.
8. Be sure the lint drawer is securely in place.
9. Rotate the basket (tumbler/drum) by hand to be sure it moves freely.
10. Check bolts, nuts, screws, terminals, and fittings for security.
11. Check tumbler bearing set screws to insure they are **ALL** tight.

J. PREOPERATIONAL TESTS

ALL dryers are thoroughly tested and inspected before leaving the factory. However, a preoperational test **should be** performed before the dryer is publicly used. It is possible that adjustments have changed in transit or due to marginal location (installation) conditions.

1. Turn on electric power to the dryer.
 - a. Open **ALL** shut-off valves.
2. Refer to the Operating Instructions for starting your particular model dryer.

When a gas dryer is first started (during initial start-up), the burner has a tendency not to ignite on the first attempt. This is because the gas supply piping is filled with air, so it may take a few minutes for this air to be purged from the lines.

NOTE: During the purging period, check to be sure that **ALL** gas shut-off valves are open.

NOTE: Gas dryers are equipped with a Hot Surface Ignition (HSI) system which has internal diagnostics. If ignition is not established within three (3) times the heat circuit in the HSI module will "LOCK-OUT" until it is manually reset. To reset the HSI system, open and close the main door and restart the dryer.

A gas pressure test **should be** taken at the gas valve pressure tap of each dryer to assure that the water column pressure is correct and consistent.

NOTE: Water column pressure requirements (measured at the gas valve pressure tap)...

Natural Gas ----- 3.5 Inches Water Column (W.C.) - 8.7 millibars

L.P. Gas ----- 10.5 Inches Water Column (W.C.) - 26.1 millibars

IMPORTANT: There is no regulator provided in an L.P. dryer. The water column pressure **must be** regulated at the source (L.P. tank), or an external regulator **must be** added to each dryer.

3. Make a complete operational check of **ALL** safety related circuits:

- a. Door Switch(es)
- b. Hi-Limit Thermostats
- c. Sail Switch

NOTE: To check for proper sail switch operation, open the main door and while holding main door switch plunger in, start the dryer. Dryer should start but heat circuit *should not be* activated (on). If the heat system is activated, the sail switch is improperly adjusted and *must be* adjusted by bending the actuator arm of the sail switch toward the burner box. If the actuator arm is bent to far toward the burner box of the dryer, the dryer may not have heat when needed. After any adjustment to the sail switch, the above procedure *must be* repeated to verify proper operation of the sail switch.

4. The dryer **should be** operated through one (1) complete cycle to assure that no further adjustments are necessary and that **ALL** components are functioning properly.

IMPORTANT: The dryer basket (tumbler) is treated with a protective coating. **ADC** suggests tumbling old clothes or material in the basket (tumbler), using a mild detergent to remove the protective coating.

5. Make a complete operational check of **ALL** operating controls.

a. For microprocessor models check controller (computer) programs/selections...

- 1) Each microprocessor controller (computer) has been preprogrammed by the factory with the most commonly used parameter (program) selections. If computer program changes are required, refer to the computer programming manual which was shipped with the dryer.

6. Check the electric service phase sequence (3-phase [3 ϕ] models only). While the dryer is operating, check to see if the blower wheel (impellor/fan) is rotating in the proper direction. Looking from the front, the blower wheel (impellor/fan) should spin in the clockwise (CW) direction. If it is, the phasing is correct. If the phasing is incorrect, reverse two (2) of the three (3) leads at connections L1, L2, L3 of the power supply to the dryer.

IMPORTANT: If the blower wheel (impellor/fan) is rotating in the wrong direction, this will not only drastically reduce drying efficiency, but it can also cause premature component failure.

7. REVERSING MODELS ONLY -basket (tumbler) dryer **should never be** operated with less than a 30 lb. (13.61 kg) load (dry weight). The size of the load will affect the coast-down and dwell (stop) times. The basket (tumbler) must come to a complete stop before starting in opposite direction.

a. Microprocessor Models

- 1) Spin Times and Stop Times **are not adjustable** in the Automatic Mode and have been preprogrammed into the microprocessor controller (computer) for 120-seconds spin time and a 5-second dwell (stop) time.
- 2) Spin Times and Stop Times **are adjustable** in the Manual (timed) Mode.

b. Dual Timer Models

- 1) Both dwell (stop) time and basket (tumbler) spin time are adjustable. Refer to the **illustration on page 41**.

8. Check to insure that **ALL** set screws (i.e., tumbler drive, idler, etc.) are tight.

K. PREOPERATIONAL INSTRUCTIONS

1. To start the dryer...

a. Microprocessor (computer) dryers...

- 1) The L.E.D. (light emitting diode) display will read "FILL."
- 2) Press the "E" on the touchpad of the keyboard.
- 3) The L.E.D. display will quickly show "Ld30," "F180." The dryer will start, and the L.E.D. display will show "dr30."

Refer to the User's Manual for detailed operating instructions.

b. Dual Timer dryers...

- 1) Turn drying timer knob for a time of 20 minutes.
- 2) Select "High Temp."
- 3) Push "Push To Start" switch.
- 4) To stop dryer, open the main door.

L. SHUT DOWN INSTRUCTIONS

If the dryer is to be shut down (taken out of service) for a period of time, the following **MUST BE** performed;

1. Discontinue power to the dryer either at the external disconnect switch or the circuit breaker.
2. Discontinue the heat supply:
 - a. ***GAS MODELS*** ... discontinue the gas supply.
 - 1) **SHUT OFF external gas supply shut-off valve.**
 - 2) **SHUT OFF internal gas supply shut-off valve located in the gas valve burner area.**

SECTION IV

SERVICE/PARTS INFORMATION

A. SERVICE

1. Service **must be** performed by a qualified trained technician, service agency, or gas supplier. If service is required, contact the distributor from whom the **ADC** equipment was purchased. If the distributor cannot be contacted or is unknown, contact the **ADC** Service Department for a distributor in your area.

NOTE: When contacting the **ADC** Service Department, be sure to give them the correct **model number** and **serial number** so that your inquiry is handled in an expeditious manner.

B. PARTS

1. Replacement parts **should be** purchased from the distributor from whom the **ADC** equipment was purchased. If the distributor **cannot** be contacted or is unknown, contact the **ADC** Parts Department for a distributor in your area. Parts may also be purchased directly from the factory by calling the **ADC** Parts Department at (508) 678-9000 or you may FAX in your order at (508) 678-9447.

NOTE: When ordering replacement parts from the **ADC** dealer or the **ADC** factory be sure to give them the correct **model number** and **serial number** so that your parts order can be processed in an expeditious manner.

SECTION V

WARRANTY INFORMATION

A. RETURNING WARRANTY CARD(S)

1. ~~Before any dryer leaves the~~ ADC factory test area, a warranty card (ADC Part No. 112254) is placed on the back side of the main door glass. These warranty cards are intended to serve the customer where we record the individual installation date and warranty information to better serve you should you file a warranty claim.
 - a. If a warranty card (ADC Part No. 112254) did not come with your dryer, contact the ADC Warranty Department or ADC Service Department at (508) 678-9000.

B. PARTS

For a copy of the ADC commercial warranty covering your particular dryer(s), contact the ADC distributor from whom you purchased the equipment and request dryer warranty form ADC Part No. 450199. If the distributor cannot be contacted or is unknown, warranty information can be obtained from the factory by contacting the ADC Warranty Department at (508) 678-9000.

NOTE: Whenever contacting the ADC factory for warranty information, be sure to have the dryer's **model number** and **serial number** available so that your inquiry can be handled in an expeditious manner.

C. RETURNING WARRANTY PARTS

ALL dryer or parts warranty claims or inquires **should be** addressed to the ADC Warranty Parts Department. To expedite processing, the following procedures **must be** followed:

1. No parts are to be returned to ADC without prior written authorization ("Return Material Authorization") from the factory.

NOTE: An R.M.A. ("Return Material Authorization") is valid for only sixty (60) days from date of issue.

- a. The R.M.A. issued by the factory, as well as any other correspondence pertaining to the returned part(s), **must be** included inside the package with the failed merchandise.

2. Each part **must be** tagged with the following information:
 - a. **Model number** and **serial number** of the dryer from which part was removed.
 - b. Nature of failure (be specific).
 - c. Date of dryer installation.
 - d. Date of part failure.
 - e. Specify whether the part(s) being returned is for a replacement, a credit, or a refund.

NOTE: If a part is marked for a credit or a refund, the invoice number covering the purchase of the replacement part **must be** provided.

NOTE: Warranty tags (ADC Part No. 450064) are available at "no charge" from ADC upon request.

3. The company returning the part(s) must clearly note the complete company name and address on the outside of the package.
4. **ALL** returns **must be** properly packaged to insure that they are not damaged in transit. *Damage claims are the responsibility of the shipper.*

IMPORTANT: No replacements, credits or refunds will be issued for merchandise damaged in transit.

5. **ALL** returns **should be** shipped to the ADC factory in such a manner that they are insured and a proof of delivery can be obtained by the sender.
6. **Shipping charges are not the responsibility of ADC. ALL returns should be "prepaid" to the factory. Any "C.O.D. or "COLLECT" returns will not be accepted.**

IMPORTANT: No replacements, credits, or refunds will be issued if the claim **cannot** be processed due to insufficient information. The party filing the claim will be notified in writing, either by "FAX" or "CERTIFIED MAIL - Return Receipt Requested," as to the information necessary to process claim. If reply is not received by the ADC Warranty Department within thirty (30) days from the FAX/letter date, then no replacement, credit, or refund will be issued, and the merchandise **will be discarded**.

SECTION VI

ROUTINE MAINTENANCE

A. CLEANING

A program and/or schedule **should be** established for periodic inspection, cleaning, and removal of lint from various areas of the dryer, as well as throughout the duct work system. The frequency of cleaning can best be determined from experience at each location. Maximum operating efficiency is dependent upon proper air circulation. The accumulation of lint can restrict this air flow. If the guidelines in this section are met, an ADC dryer will provide many years of efficient, trouble-free, and - most importantly - safe operation.

WARNING: LINT FROM MOST FABRICS IS HIGHLY COMBUSTIBLE. THE ACCUMULATION OF LINT CAN CREATE A POTENTIAL FIRE HAZARD.

WARNING: KEEP DRYER AREA CLEAR AND FREE FROM COMBUSTIBLE MATERIALS, GASOLINE, and OTHER FLAMMABLE VAPORS and LIQUIDS.

NOTE: Suggested time intervals shown are for average usage which is considered six (6) to eight (8) operational (running) hours per day.

SUGGESTED CLEANING SCHEDULE

EVERY THIRD or FOURTH LOAD

Clean the lint screen every third or fourth load. A clogged lint screen will cause poor dryer performance. The lint screen is located behind the lint door in the base of the dryer. Open the lint door, brush the lint off of the lint screen, and remove the lint. Inspect the lint screen and replace if torn.

NOTE: The frequency of cleaning the lint screens can best be determined from experience at each location.

WEEKLY

Clean lint accumulation from the lint chamber, thermostat, and microprocessor temperature sensor (sensor bracket) area.

WARNING: TO AVOID HAZARD OF ELECTRICAL SHOCK, DISCONTINUE ELECTRICAL POWER SUPPLY TO THE DRYER.

90 DAYS

1. Remove lint from around basket (tumbler), drive motors, and surrounding areas.
2. Remove lint from gas valve burner area with a dusting brush or vacuum cleaner attachment.
3. Clean any lint accumulation in and around both the blower and drive motor casing openings.

NOTE: To prevent damage, avoid cleaning or touching the hot surface ignitor assembly.

EVERY 6 MONTHS

Inspect and remove lint accumulation in customer furnished exhaust duct work system and from dryers internal exhaust ducting.

NOTE: THE ACCUMULATION OF LINT IN THE EXHAUST DUCT WORK CAN CREATE A POTENTIAL FIRE HAZARD.

NOTE: DO NOT OBSTRUCT THE FLOW OF COMBUSTION and VENTILATION AIR. CHECK CUSTOMER FURNISHED BACK DRAFT DAMPERS IN THE EXHAUST DUCT WORK. INSPECT and REMOVE ANY LINT ACCUMULATION WHICH CAN CAUSE THE DAMPER TO BIND or STICK.

NOTE: A back draft damper that is sticking partially closed can result in slow drying and shut-down of the heat circuit safety switches or thermostats

NOTE: When cleaning the dryer cabinet(s), avoid using harsh abrasives. A product intended for the cleaning of appliances is recommended.

B. ADJUSTMENTS

7 DAYS AFTER INSTALLATION and EVERY 6 MONTHS THEREAFTER

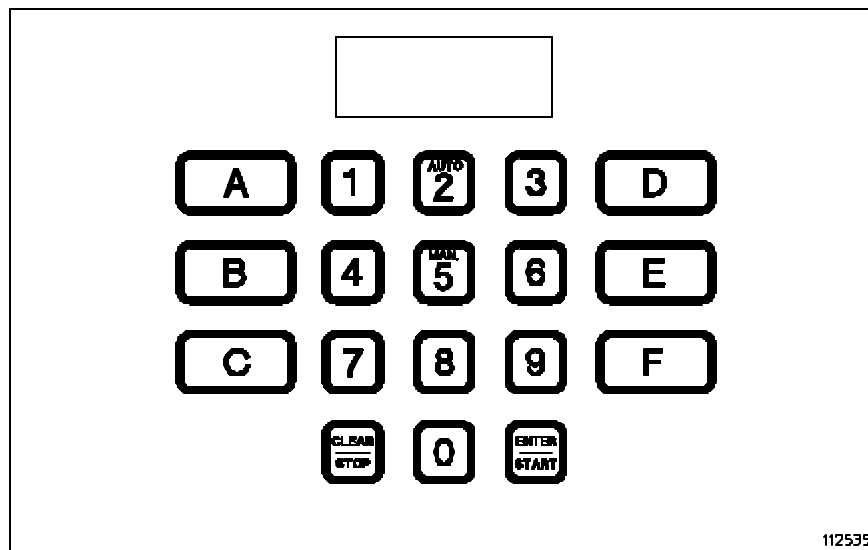
Inspect bolts, nuts, screws, (bearing set screws), non-permanent gas connections (unions, shut-off valves, orifices, and grounding connections). Motor and drive belts **should be** examined. Cracked or seriously frayed belts **should be** replaced. Tighten loose V-belts when necessary. Complete operational check of controls and valves. Complete operational check of **ALL** safety devices (door switches, lint drawer switch, sail switch, burner and hi-limit thermostats).

SECTION VII

PROCEDURE FOR FUNCTIONAL CHECK OF REPLACEMENT COMPONENTS

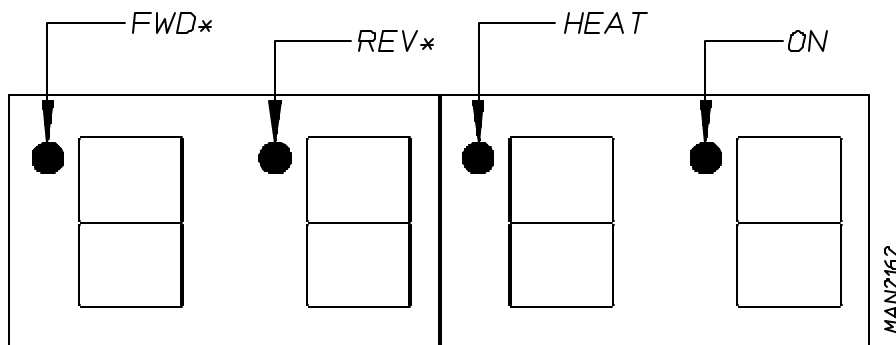
1. Microprocessor (computer) Board

- a. Upon completing installation of the replacement microprocessor (computer) board, reestablish power to the dryer.
- b. Start the drying cycle by pressing any of the preset cycles in letters "A" thru "F."



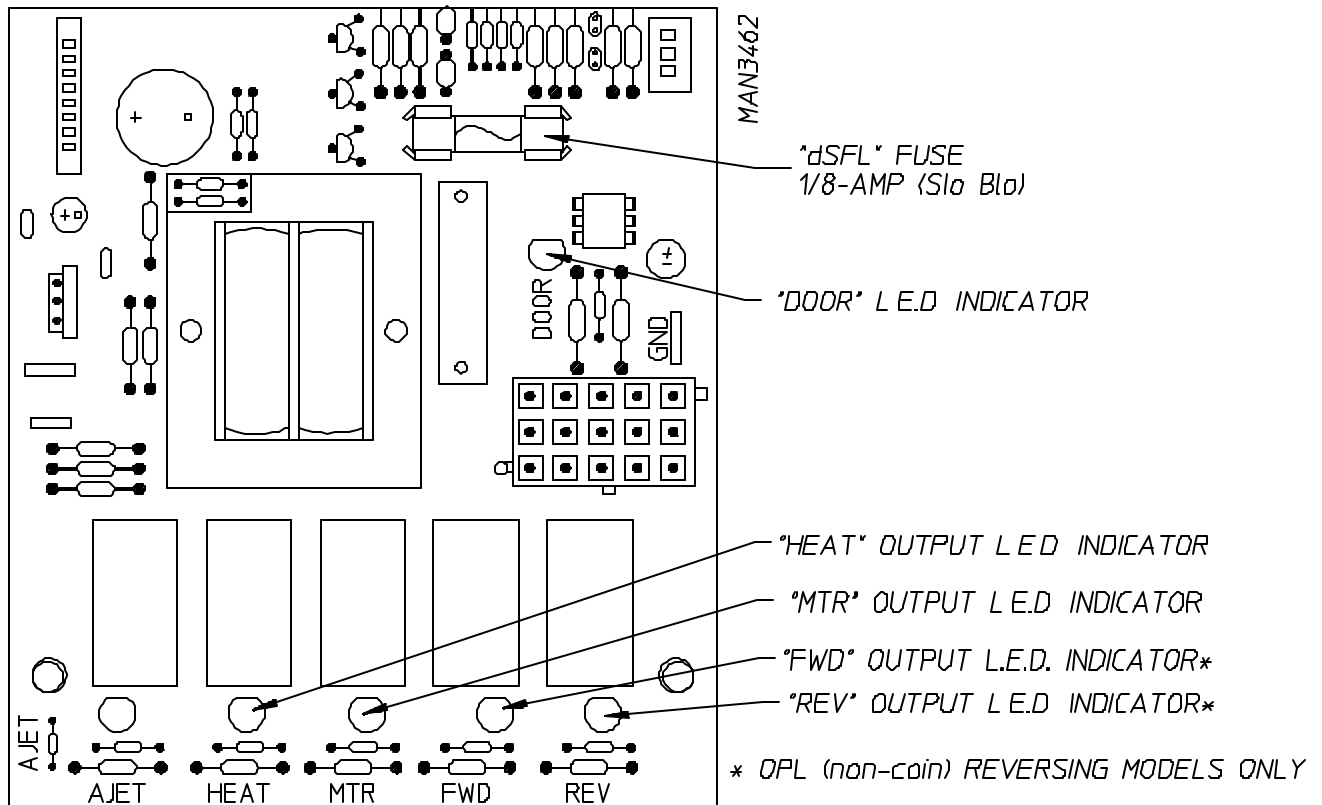
MAN4063

- c. Verify that the motor(s) and the heat indicator dots, in the microprocessor (computer) L.E.D. (light emitting diode) display are on. (Refer to the **illustration below**.)



*OPL (NON-COIN) REVERSING MODELS ONLY

- d. Verify that motor(s) heat, and door indicator lights on the back side of the microprocessor (computer board are lit. (Refer to **illustration below.**)



- e. Open the main door.

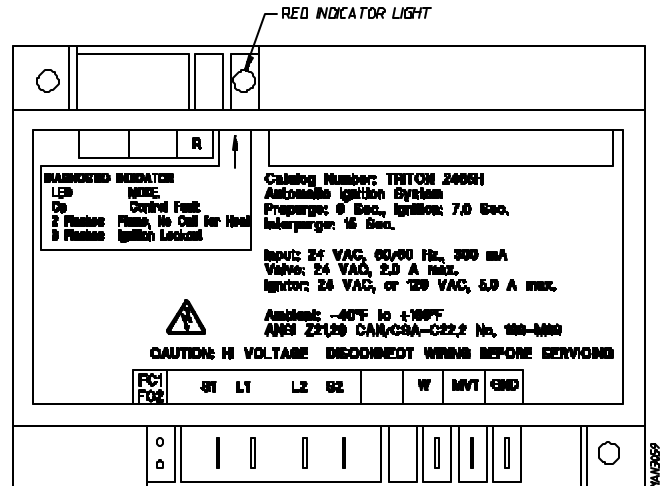
The dryer **must stop** and **ALL** indicator lights on the back side of the microprocessor (computer) board **must go out.** (Refer to illustration above.)

- f. Try to restart the dryer with the main door open.
- g. The microprocessor (computer) board's L.E.D. (light emitting diode) display **must read "DOOR."**
- h. Close the main door and restart dryer.
- i. Functional check of microprocessor (computer) board is complete.

2. Hot Surface Ignition (HSI) System - for Gas Models Only

- a. Upon completing installation of the replacement Hot Surface Ignition (HSI) module, reestablish power to the dryer.
- b. The Hot Surface Ignition (HSI) module's "red" indicator light will light for up to approximately 5-seconds (self check routine).

If the Hot Surface Ignition (HSI) module's "red" indicator light stays on or flashes continuously, then the HSI module is wired incorrectly or has failed.



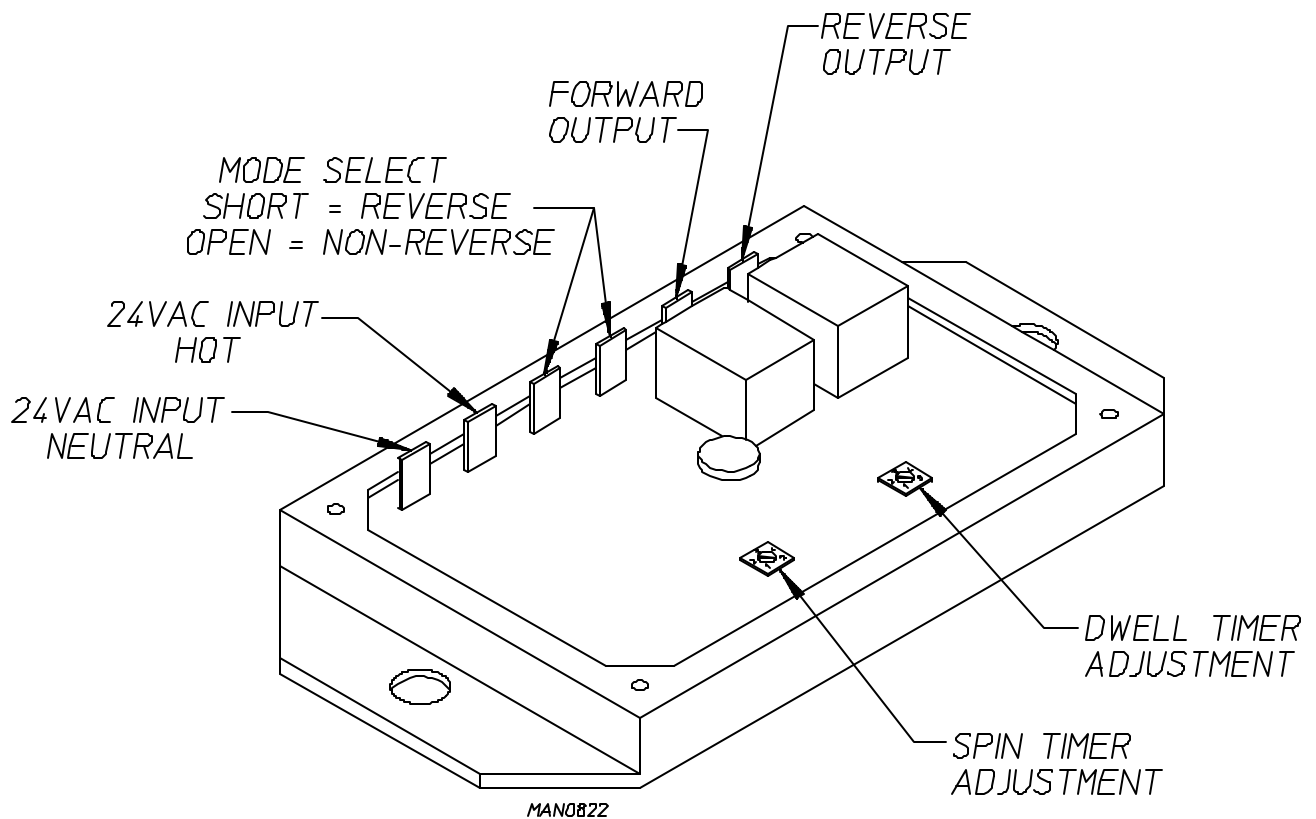
- c. Start the drying cycle.
- d. The hot surface ignitor will turn on. After approximately 4-seconds the hot surface ignitor will shut off and the gas valve will be energized. **Ignition (flame) should now be established.**
- e. With the burner flame on, remove the flame sensor wire from the S2 terminal of the HSI module. **The burner flame must shut off immediately.**
- f. Stop the drying cycle, with the flame sensor wire still removed, restart the drying cycle.
- g. The hot surface ignitor will turn on, and after approximately 4-seconds the hot surface ignitor will shut off. The gas valve will be energized and the hot surface ignitor will shut off. Ignition (flame) **should be** evident for approximately 7-seconds and then shut off.
- h. The Hot Surface Ignition (HSI) module will attempt two (2) additional ignition trials after which the HSI module will lock out and the "red" indicator light **will flash continuously.**
- i. Functional check of the Hot Surface Ignition (HSI) Module is complete.
 - 1) Replace the flame sensor wire from the S2 terminal to the HSI module.

SECTION VII

REVERSING TIMER SPIN/DWELL ADJUSTMENTS

Timer models have an electronic reversing timer in the electrical service box which is located in the upper left rear area of the dryer.

Both the Dwell (stop) Time and the basket (tumbler) Spin Time are adjustable by mode selection switches located on the electronic timer (as noted in the illustration below).

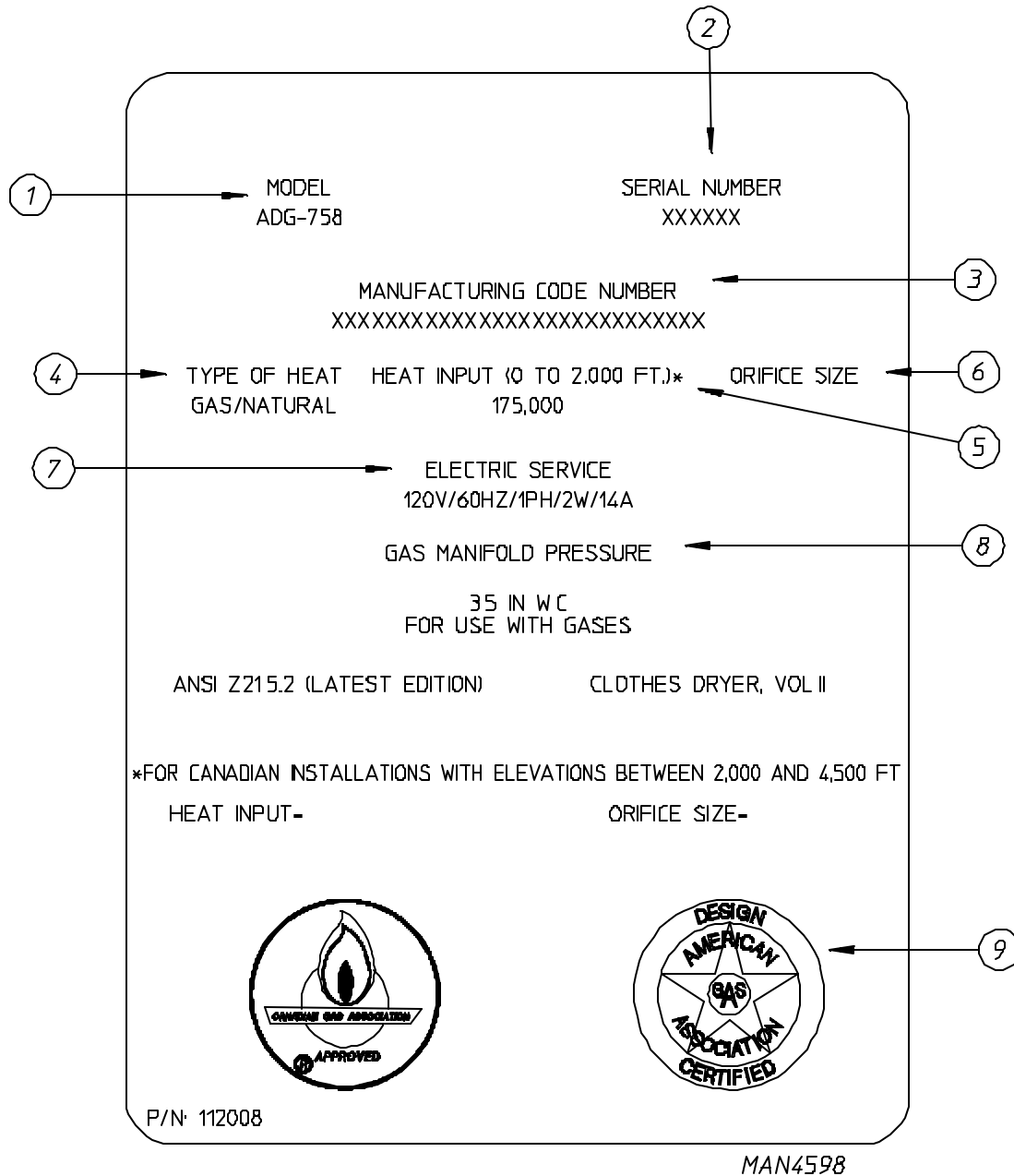


TIMING LEGEND					
SPIN TIME					
Switch Position Number	1	2	3	4	5
Time in Seconds*	30	60	90	120	150
DWELL (Stop) TIME					
Switch Position Number	1	2	3	4	5
Time in Seconds*	5	6	8	10	12
* Values shown are +/- 1 second.					

SECTION VIII

DATA LABEL LOCATION/INFORMATION

DATA LABEL



When contacting **American Dryer Corporation**, certain information is required to insure proper service/parts information from **ADC**. This information is on the data label that is located in the left inside front side panel (as shown in the illustration above). When contacting **ADC** please have the **model number** as well as the **serial number** readily available.

THE DATA LABEL

1. MODEL DRYER

The model number is an **ADC** number which describes the size of the dryer and the type of heat (gas).

2. SERIAL NUMBER

The serial number allows **ADC** to gather information on your particular dryer.

3. MANUFACTURING CODE NUMBER

The manufacturing code number is a number issued by **ADC** which describes **ALL** possible options on your particular model.

4. TYPE OF HEAT

The type of heat describes the type heat for your particular dryer; gas (either natural gas or liquid propane [L.P.]).

5. HEAT INPUT (for GAS DRYERS)

This describes the heat input in British Thermal Units per Hour (BTUH).

6. ORIFICE SIZE (for GAS DRYERS)

Gives the number drill size used.

7. ELECTRIC SERVICE

This describes the electric service for your particular model.

8. GAS MANIFOLD PRESSURE (for GAS DRYERS)

This describes the manifold pressure taken at the gas valve tap.

9. APPLICABLE APPROVAL SEAL(S)

I.E., American Gas Association, Canadian Gas Association.

SECTION VII

TROUBLESHOOTING

IMPORTANT: YOU MUST DISCONNECT and LOCKOUT THE ELECTRIC SUPPLY and THE GAS SUPPLY BEFORE ANY COVERS or GUARDS ARE REMOVED FROM THE MACHINE TO ALLOW ACCESS FOR CLEANING, ADJUSTING, INSTALLATION, or TESTING OF ANY EQUIPMENT per OSHA (Occupational Safety and Health Administration) STANDARDS.

The information provided will help isolate the most probable component(s) associated with the difficulty described. The experienced technician realizes, however, that a loose connection or broken/ shorted wire may be at fault where electrical components are concerned...and not necessarily the suspected component itself.

IMPORTANT: When replacing blown fuses, the replacement *must be* of the exact rating as the fuse being replaced. The information provided *should not be* misconstrued as a handbook for use by an untrained person in making repairs.

WARNING: ALL SERVICE and TROUBLESHOOTING *SHOULD BE* PERFORMED BY A QUALIFIED PROFESSIONAL OR SERVICE AGENCY.

WARNING: WHILE MAKING REPAIRS, OBSERVE ALL SAFETY PRECAUTIONS DISPLAYED ON THE DRYER or SPECIFIED IN THIS MANUAL.

TABLE OF CONTENTS

(FOR TROUBLESHOOTING)

MICROPROCESSOR (COMPUTER) MODELS

	ITEM	PAGE
No L.E.D. DISPLAY	A	46
DRIVE MOTOR DOES NOT START	B	46
DRIVE MOTOR (REVERSING MODELS ONLY) OPERATES IN ONLY ONE DIRECTION	C	46
DRIVE MOTOR OPERATES FOR A FEW MINUTES THEN STOPS	D	46
BLOWER/FAN MOTOR (REVERSING MODELS ONLY) DOES NOT START	E	47
BLOWER/FAN MOTOR (REVERSING MODELS ONLY) OPERATES FOR A FEW MINUTES THEN STOPS	F	47
BLOWER MOTOR AND FAN MOTOR (REVERSING MODELS ONLY) BOTH DO NOT START	G, H	47
BLOWER MOTOR AND FAN MOTOR (REVERSING MODELS ONLY) OPERATES FOR A FEW MINUTES AND BOTH STOP	I	47 AND 48
L.E.D. DISPLAY READS "dSFL"	J AND P	48 AND 49
L.E.D. DISPLAY READS "door"	K, L	48

MICROPROCESSOR (COMPUTER) MODELS (CONTINUED)

	Item	Page
MICROPROCESSOR CONTROLLER (COMPUTER) WILL NOT ACCEPT ANY KEYBOARD (KEYPAD)		
ENTRIES	M	48
MICROPROCESSOR CONTROLLER (COMPUTER) WILL ONLY ACCEPT CERTAIN KEYBOARD		
(KEYPAD) ENTRIES	N	48
MICROPROCESSOR CONTROLLER (COMPUTER) LOCKS UP	O	49
DRYER STOPS DURING CYCLE AND L.E.D. DISPLAYS "dSFL" AND RETURNS TO "FILL"	P	49
DRYER STOPS DURING CYCLE AND L.E.D. DISPLAY RETURNS TO "FILL"	Q	49
DRYER DISPLAY READS "SEFL"	R	49
DRYER DISPLAY READS "Hot"	S	49
HEAT UNIT IS NOT OPERATING (NO HEAT)	T, U	50, 51
DRYER IS TAKING TOO LONG TO DRY	V	51 and 52
"AUTO" CYCLE OVER DRYING	W	52
"AUTO" CYCLE UNDER DRYING	X	52
MAIN BURNERS (GAS MODELS ONLY) BURNING WITH YELLOW FLAME	Y	52
CONDENSATION ON MAIN DOOR GLASS	Z	52
DRYER MAKING SCRAPING NOISE AT BASKET (TUMBLER) AREA	AA	52 and 53
EXCESSIVE NOISE OR VIBRATION	BB	53

TIMER MODELS

	ITEM	PAGE
DRYER MOTOR DOES NOT START	A, B	53, 54
DRIVE MOTOR (REVERSING MODELS ONLY) OPERATES IN ONLY ONE DIRECTION	C	54
DRIVE MOTOR OPERATES FOR A FEW MINUTES THEN STOPS	D	54
BLOWER/FAN MOTOR (REVERSING MODELS ONLY) DOES NOT START	E	54
BLOWER/FAN MOTOR (REVERSING MODELS ONLY) OPERATES FOR A FEW MINUTES THEN		
STOPS	F	54
BLOWER MOTOR AND FAN MOTOR (REVERSING MODELS ONLY) BOTH DO NOT START	G	55
HEATING UNIT IS NOT OPERATING (NO HEAT)	H, I	55 AND 56
DRYER IS TAKING TOO LONG TO DRY	J	56 AND 57
MAIN BURNERS (GAS DRYERS ONLY) BURNING WITH YELLOW FLAME	K	57
CONDENSATION ON MAIN DOOR GLASS	L	57
DRYER MAKING SCRAPING NOISE AT BASKET (TUMBLER) AREA	M	57
EXCESSIVE NOISE OR VIBRATION	N	58

MICROPROCESSOR (COMPUTER) MODELS

A. No L.E.D. (light emitting diode) display (for microprocessor [computer] models ONLY)...

1. Service panel fuse blown or tripped breaker.
2. Blown control circuit L1 or L2 1/2-amp (Slo Blo) fuse.
3. Failed microprocessor controller (computer).
4. Failed step down transformer (*for models 380 volts or higher ONLY*).

B. Drive motor is not operating (does not start)...

1. Microprocessor controller (computer) motor indicator dot and relay output L.E.D. (light emitting diode) indicator dots are on ...
 - a. Failed drive motor contactor (relay).
 - b. Failed arc suppressor (A.S.) board (*for Reversing Models ONLY*).
 - c. Failed drive motor.
2. Microprocessor controller (computer) motor indicator dot and relay output L.E.D. (light emitting diode) indicator dots are on, but motor output L.E.D. indicator is off ...
 - a. Failed microprocessor controller (computer).

C. Drive motor (*for Reversing Models ONLY*) operates in one direction only...stops and restarts in same direction...

1. Failed drive motor contactor (relay).
2. Failed arc suppressor (A.S.) board.
3. Failed microprocessor controller (computer)...check output indicator.

D. Drive motor operates okay for a few minutes, and then stops and will not restart...

1. Motor is overheating and tripping out on internal overload protector ...
 - a. Motor air vents clogged with lint.
 - b. Low voltage to the motor.
 - c. Failed motor.
 - d. Basket (tumbler) is binding...check for obstruction.
 - e. Failed idler bearings or tumbler bearings.
 - f. Failed blower (impellor/fan)...out of balance (*for Non-Reversing Models ONLY*).

E. Blower/Fan motor is not operating (does not start)...

1. Microprocessor controller (computer) motor indicator dot and relay output L.E.D. (light emitting diode) indicator dots are on ...
 - a. Failed drive motor contactor (relay).
 - b. Failed arc suppressor (A.S.) board (*for Reversing Models ONLY*).
 - c. Failed drive motor.
2. Microprocessor controller (computer) "door" L.E.D. (light emitting diode) is on, but motor output L.E.D. indicator is off ...
 - a. Failed microprocessor controller (computer).

F. Blower/Fan motor (*for Reversing Models ONLY*) operates okay for a few minutes, then stops and will not restart...

1. Motor is overheating and tripping out on internal overload protector ...
 - a. Motor air vents clogged with lint.
 - b. Low voltage to the motor.
 - c. Failed motor.
 - d. Failed blower (impellor/fan)...out of balance.

G. Both drive motor and blower (impellor/fan) motor (*for Reversing Models ONLY*) not operating (do not start)...microprocessor controller (computer) motor indicator dots are on and relay output L.E.D. (light emitting diode) indicators are on...

1. Failed arc suppressor (A.S.) board.
2. Failed contactors (both blower [impellor/fan] and drive).
3. Failed motors (both blower [impellor/fan] motor and drive motor).

H. Both drive motor and blower (impellor/fan) motor run a few minutes and stop...microprocessor controller (computer) L.E.D. (light emitting diode) motor indicator dots and the "door" L.E.D. indicator are on but the relay output L.E.D. indicators are off but (microprocessor controller [computer] L.E.D. display does not read "door")...

1. Failed microprocessor controller (computer).

I. Both drive motor and blower (impellor/fan) motor run a few minutes and stop...microprocessor (computer) L.E.D. (light emitting diode) display continue to read time or percent of extraction and ALL indicator dots are off...

1. Fault in the main door switch circuit ...

- a. Main door switch circuit out of adjustment.
- b. Loose connection in main door switch circuit.

J. Microprocessor controller (computer) L.E.D. (light emitting diode) display reads "dSFL" continuously and the buzzer (tone) sounds every 30-seconds...

1. Fault in microprocessor heat sensor circuit ...
 - a. Blown "dSFL" 1/8-amp fuse on microprocessor controller (computer).
 - b. Failed microprocessor temperature sensor.
 - c. Failed microprocessor controller (computer).
 - d. Broken wire or connection somewhere between the microprocessor controller (computer) and the microprocessor temperature sensor.

K. Microprocessor controller (computer) L.E.D. (light emitting diode) display reads "door" and the microprocessor controller (computer) "DOOR" L.E.D. indicator is on...

1. Failed microprocessor controller (computer) ...
 - a. Main door not closed all the way.
 - b. Main door switch is out of proper adjustment.
 - c. Failed lint main door switch.
 - d. Broken wire/connection in main door wiring circuit.

2. Failed 24 VAC step down transformer.

L. Microprocessor controller (computer) L.E.D. (light emitting diode) display reads "door" and the microprocessor controller (computer) "DOOR" L.E.D. indicator is on...

1. Failed microprocessor controller (computer).

M. Microprocessor controller (computer) L.E.D. (light emitting diode) will not accept any keyboard (touchpad) entries, (i.e., L.E.D. [light emitting diode] display reads "FILL" and when keyboard [touchpad] entries are selected, the L.E.D. display continues to read "FILL")...

1. Failed keyboard label (touchpad) assembly.
2. Failed microprocessor controller (computer).

N. Microprocessor controller (computer) will accept only certain keyboard (touchpad) entries...

1. Failed keyboard label (touchpad) assembly.

O. Microprocessor controller (computer) locks up and the L.E.D. (light emitting diode) display reads erroneous message(s) or only partial segments...

1. Transient power voltage spikes...disconnect the electrical power to the dryer, wait one (1) minute and reestablish power to the dryer. If problem is still evident ...
 - a. Failed microprocessor controller (computer).
 - b. Failed keyboard label (touchpad) assembly.

P. Dryer stops during a cycle, microprocessor controller (computer) buzzer (tone) sounds for 5-seconds, and then the L.E.D. (light emitting diode) reads "dSFL" for approximately 30-seconds and then returns to "FILL"...

1. Loose connection somewhere between the microprocessor controller (computer) and the microprocessor temperature sensor.
2. Loose "dSFL" 1/8-amp fuse on the microprocessor controller (computer).

Q. Dryer stops during a cycle, microprocessor controller (computer) buzzer (tone) sounds for 5-seconds, and then the L.E.D. (light emitting diode) returns to "FILL"...

1. Loose connection somewhere between in the main power circuit to the microprocessor controller (computer).

R. Microprocessor controller (computer) L.E.D. (light emitting diode) display reads "SEFL"...

1. Rotational sensor circuit failure...fault somewhere in the basket (tumbler) rotation or circuit ...
 - a. Basket (tumbler) not rotating ...
 - 1) Broken or loose V-belts.
 - 2) Failure in the drive motor circuit...refer to **Section B**, **Section C**, and **Section D** on **page 54**.
 - b. Failed rotational sensor.
 - c. Broken wire or connection between the rotational sensor and the microprocessor controller (computer).
 - d. Microprocessor controller (computer) is programmed incorrectly for Rotation Sensor Option and dryer is not equipped with this option.

S. Microprocessor controller (computer) locks up and the L.E.D. (light emitting diode) display reads "Hot"...

1. Possible overheating condition...microprocessor controller (computer) has sensed a temperature which has exceeded 220° F (104.45° C).

"Hot" display will not clear until temperature has dropped to 220° F (104.45° C) or lower and the microprocessor controller (computer) is manually reset by pressing the "CLEAR/STOP" key.

T. Heating unit is not operating (no heat)...no voltage at HSI (Hot Surface Ignition) module...when the dryer is first started and both indicator dot and the "HEAT" output L.E.D. (light emitting diode) is on...

1. Fault in sail switch circuit ...
 - a. Sail Switch is out of adjustment or has failed.
 - b. Sail switch damper is not closing or is fluttering ...
 - 1) Lint screen is dirty.
 - 2) Restriction in the exhaust.
 - 3) No exhaust air flow ...
 - a) Failed impellor (fan/blower).
 - b) Fault in blower (impellor/fan) motor circuit (*for Reversing Models ONLY*).
2. Tripped burner manual reset hi-limit.
3. Tripped lint chamber sensor bracket basket (tumbler) manual reset hi-limit switch.

U. Heating unit is not operating (no heat)...voltage is evident at HSI (Hot Surface Ignition) module...

1. Fault in Hot Surface Ignition (HSI) system ...
 - a. Ignitor glows, but no ignition and HSI module "LOCKS-OUT ("red" L.E.D. [light emitting diode] indicator flashes) ...
 - 1) Flame probe assembly is out of adjustment or has failed.
 - 2) Severe air turbulence.
 - 3) Failed HSI module.
 - 4) Failed gas valve.
 - b. Ignitor glows, burner lights but burner goes off right away...
 - 1) Flame probe assembly is out of adjustment or has failed.
 - 2) Sail switch is fluttering ...
 - a) Lint screen is dirty.
 - b) Restriction in exhaust duct work.
 - c) Hot Surface Ignitor does not glow and the HSI module "LOCKS-OUT ("red" L.E.D. [light emitting diode] indicator flashes) ...

- (1) Fault in ignitor wiring...break or loose connection.
- (2) Failed ignitor assembly.
- (3) Failed HSI module.

V. Dryer operates but is taking too long to dry...

1. Exhaust duct work run too long or is undersized...back pressure **cannot** exceed 0.3 inches water column (W.C.) - .74 millibars.
2. Restriction in duct work ...
 - a. Dryer back draft damper is sticking partially closed.
 - b. Restriction/obstruction in duct work ...
 - 1) Check duct work from dryer all the way to the outdoors.
3. Insufficient make-up air.
4. Impellor (fan/blower) is rotating in the wrong direction (*for 3-Phase [3 ϕ] Models ONLY*).
5. Lint screen is dirty or is not being cleaned often enough.
6. Inadequate air flow ...
 - a. Impellor (fan/blower) failure.
7. Low or inconsistent gas pressure

Natural Gas pressure - **must be** 3.5 inches of water column (W.C.) - 8.7 millibars.

L.P. (liquid propane) Gas pressure - **must be** 10.5 inches of water column (W.C.) - 26.1 millibars.
8. Poor air/gas mixture at burner (too much or not enough air) at the burner...yellow or poor flame pattern...
 - a. Not enough make-up air.
 - b. Restriction in the exhaust.
9. Poor air/gas mixture at burner (too much gas or not enough air) at the burner...yellow or poor flame pattern ...
 - a. Gas pressure too high.
 - b. Impellor (fan/blower) is rotating in the wrong direction (*for 3-Phase [3 ϕ] Models ONLY*).
 - c. Burner orifice size (D.M.S. [drill material size]) too large for application (i.e., high elevation).
10. Sail switch is fluttering ...
 - a. Restriction in the exhaust ...

1) Lint screen is dirty or is not being cleaned often enough.

11. Gas supply may have too low a heating value.

W. At the completion of the "AUTO" drying/cooling cycle, the load is coming out over dried...

1. Percent of dryness (dryness level) of the cycle selected is too high.
2. Factor "A" and Factor "B" is not set correctly or Factor "B" has to be adjusted for adverse local conditions.

X. At the completion of the "AUTO" drying/cooling cycle, the load is still coming out damp...

1. Percent of dryness (dryness level) of the cycle selected is too low.
2. Factor "A" and Factor "B" is not set correctly or Factor "B" has to be adjusted for adverse local conditions.

Y. Main burners are burning with a yellow flame...

1. Poor air/gas mixture (too much gas or not enough air) at the burner ...
 - a. Not enough make-up air.
 - b. Restriction in the exhaust.
 - c. Gas pressure too high.
 - d. Impellor (fan/blower) is rotating in the wrong direction (*for 3-Phase [3 ϕ] Models ONLY*).
 - e. Burner orifice size (D./M.S. [drill material size] too large for application (i.e., high elevation).

Z. Condensation on the main door glass...

1. Too long, undersized, or improperly installed duct work.
2. Back draft damper is sticking in the partially closed position.

AA. Scraping noise at basket (tumbler) area...

1. Check for obstruction caught in basket (tumbler)/wrapper area.
2. Basket (tumbler) is out of proper alignment ...
 - a. Check both vertical and lateral alignment.
 - b. Check for gap between the front panel and basket (tumbler)...bearing set screws may have come loose, and basket (tumbler) walked forward or backwards
3. Loose basket (tumbler) tie rod.

4. Failed basket (tumbler) support).

BB. Excessive noise and/or vibration...

1. Dryer is not leveled properly.
2. Impellor (fan/blower) out of balance ...
 - a. Excessive lint build up on the impellor (fan/blower).
 - b. Failed impellor (fan/blower).
3. Loose basket (tumbler) tie rod.
4. Failed basket (tumbler) support.
5. Loose motor mount.
6. Failed idler bearing(s) or basket (tumbler) bearing(s).
7. V-belts too tight or too loose.
8. Tumbler bearing set screws are loose.
9. Failed motor bearing.

TIMER MODELS

A. Dryer will not start...both drive motor and blower (impellor/fan) motor are not operating and indicator light is off...

1. Service panel fuse blown or tripped breaker.
2. Dryer control circuit L1 or L2 1/2-amp (Slo Blo) fuse is blown.
3. Open in main door switch ...
 - a. Main door is not closed all the way.
 - b. Main door switch is out of proper adjustment.
 - c. Failed main door switch.
 - d. Broken connection/wire somewhere in the main door switch circuit.
4. Failed push to start relay.
5. Failed 24 VAC step down transformer or fault in the wiring.
6. Failed heat timer.

7. Failed control step down transformer (*for 380 volts or higher models ONLY*).

B. Drive motor is not operating (does not start)...

1. Failed drive motor contactor (relay).
2. Failed reversing timer (*for Reversing Models ONLY*).
3. Failed drive motor.

C. Drive motor (*for Reversing Models ONLY*) operates in one direction only...stops and restarts in the same direction...

1. Failed reversing motor contactor (relay).
2. Failed reversing timer.

D. Drive motor operates okay for a few minutes, then stops and will not restart...

1. Motor is overheating and tripping out on internal overload protector ...
 - a. Motor air vents clogged with lint.
 - b. Low voltage to motor.
 - c. Failed motor.
 - d. Low voltage to motor.
 - e. Failed idler bearing(s) or tumbler bearing(s).

E. Blower/Fan motor is not operating (does not start)...

1. Failed blower (impellor/fan) motor contactor (relay).
2. Failed blower (impellor/fan) motor.

F. Blower/Fan motor operates okay for a few minutes, then stops and will not restart...

1. Motor is overheating and tripping out on internal overload protector ...
 - a. Motor air vents clogged with lint.
 - b. Low voltage to motor.
 - c. Failed motor.
 - d. Failed impellor (blower/fan)...out of balance.

G. Both drive motor and blower (impellor/fan) motor (for Reversing Models ONLY) are not operating (do not start) and indicator light is on...

1. Fault at L1 or L2 termination(s) between the terminal block and contactors (relays).
2. Failed contactors (both blower [impellor/fan] and drive).
3. Failed motors (both blower [impellor/fan] and drive).

H. Heating unit is not operating (no heat)...no voltage at heating unit...

1. Fault in sail switch circuit ...
 - a. Sail switch is out of adjustment or has failed.
 - b. Sail switch damper is not closing or is fluttering ...
 - 1) Lint screen is dirty.
 - 2) Restriction in the exhaust.
 - 3) No exhaust air flow ...
 - a) Failed impellor (fan/blower).
 - b) Fault in blower (impellor/fan).
2. Tripped burner manual reset hi-limit.
3. Tripped lint chamber sensor bracket basket (tumbler) manual reset hi-limit switch.

I. No heat operating (no heat)...no voltage at heating unit...

1. Fault in Hot Surface Ignition (HSI) system ...
 - a. Hot Surface Ignitor glows but no ignition and HSI (Hot Surface Ignition) module "LOCKS-OUT" ("red" L.E.D. [light emitting diode] indicator flashes) ...
 - 1) Flame probe assembly out of adjustment.
 - 2) Severe air turbulence.
 - 3) Failed HSI module.
 - 4) Failed gas valve.
 - b. Hot Surface Ignitor glows, but burner goes off right away ...
 - 1) Flame probe assembly is out of adjustment or has failed.
 - 2) Sail switch is fluttering.

c. Hot Surface Ignitor does not glow and HSI (Hot Surface Ignition) module "LOCKS-OUT" ("red" L.E.D. [light emitting diode] indicator flashes) ...

1) Fault in Hot Surface Ignitor wiring...break or loose connection.

2) Failed Hot Surface Ignitor.

3) Failed HSI module.

2. Sail Switch is fluttering ...

a. Lint screen is dirty.

b. Restriction in exhaust duct work.

J. Dryer operates but is taking too long to dry...

1. Exhaust duct work run too long or is undersized...back pressure **cannot** exceed 0.3 inches water column (W.C.) - .74 millibars.

2. Restriction in duct work ...

a. Dryer back draft damper is sticking partially closed.

b. Restriction/obstruction in duct work ...

1) Check duct work from dryer all the way to the outdoors.

3. Insufficient make-up air.

4. Impellor (fan/blower) is rotating in the wrong direction (*for 3-Phase [3 ϕ] Models ONLY*).

5. Lint screen is dirty or is not being cleaned often enough.

6. Inadequate air flow ...

a. Impellor (fan/blower) failure.

7. Low or inconsistent gas pressure

Natural Gas pressure - **must be** 3.5 inches of water column (W.C.) - 8.7 millibars.

L.P. (liquid propane) Gas pressure - **must be** 10.5 inches of water column (W.C.) - 26.1 millibars.

8. Poor air/gas mixture at burner (too much or not enough air) at the burner...yellow or poor flame pattern...

a. Not enough make-up air.

b. Restriction in the exhaust.

9. Sail switch is fluttering ...
 - a. Lint screen is dirty or is not being cleaned often enough.
 - b. Restriction in the exhaust.
10. Gas supply may have too low a heating value.

NOTE: Lint accumulation on the sensor bracket can act as an insulator which will affect the accuracy of the Automatic Drying Cycle.

K. Main burners are burning with a yellow flame...

1. Poor air/gas mixture (too much gas or not enough air) at the burner ...
 - a. Not enough make-up air.
 - b. Restriction in the exhaust.
 - c. Gas pressure too high.
 - d. Impellor (fan/blower) is rotating in the wrong direction (*for 3-Phase [3 ϕ] Models ONLY*).
 - e. Burner orifice size (D./M.S. [drill material size] too large for application (i.e., high elevation).

L. Condensation on the main door glass...

1. Too long, undersized, or improperly installed duct work.
2. Back draft damper is sticking in the partially closed position.

M. Scraping noise at basket (tumbler) area...

1. Check for obstruction caught in basket (tumbler)/wrapper area.
2. Basket (tumbler) is out of proper alignment ...
 - a. Check both vertical and lateral alignment.
 - b. Check for gap between the front panel and basket (tumbler)...bearing set screws may have come loose, and basket (tumbler) walked forward or backwards.
3. Loose basket (tumbler) tie rod.
4. Failed basket (tumbler) support).

N. Excessive noise and/or vibration...

1. Dryer is not leveled properly.
2. Impellor (fan/blower) out of balance ...
 - a. Excessive lint build up on the impellor (fan/blower).
 - b. Failed impellor (fan/blower).
3. Loose basket (tumbler) tie rod.
4. Basket (tumbler) out of adjustment, or adjustment bolts (hardware) are loose.
5. Failed basket (tumbler) support.
6. Loose motor mount.
7. Failed idler bearing(s) or basket (tumbler) bearing(s).
8. V-belts too tight or too loose
9. Bearing set screw(s) (either basket [tumbler], idler, or blower [impellor/fan] shaft are loose.
10. Failed motor bearing.

ADC 113090 1- 05/10/99-15 2* 05/12/99-25 3* 08/25/99-25 4-09/30/99-25

