

ML-79 WET WASH

Installation/Operator's 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. **ML-79 WW**

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.

The illustrations on the following pages may not depict your particular dryer exactly. The illustrations are a composite of the various dryer models. Be sure to check the descriptions of the parts thoroughly before ordering.

“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: Lors 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 DRYERS.
CHILDREN SHOULD BE SUPERVISED IF NEAR DRYERS 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.

Dryers **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.

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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 Electrical Code ANSI/NFPA NO. 70-LATEST EDITION, or in CANADA, the Canadian Electrical Codes Parts 1 & 2 CSA C22.1-1990 or LATEST EDITION.

NOTE: Failure to do so will VOID THE WARRANTY.

9. **UNDER NO CIRCUMSTANCES** should the dryer door switches, the lint drawer switch, or the 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. Replace leaking flexible steam hoses or other fixtures immediately. **DO NOT** operate the dryer with leaking flexible hoses. **PERSONAL INJURY MAY RESULT.**

13. **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 Diameter	37"	94 cm	
Basket Depth	36"	152.4 cm	
Basket Motor	1 HP	.746 kw	
Door Opening (Diameter)	31-3/8"	79.7 cm	
Basket Volume	22.4 cu. ft.	.634 cu. m.	
Dryers per 20'/40' container	10/20		
Dryers per 45'/48" Truck	24/24		
Gas	Voltage Available	120-460v / 10-30 / 50/60 Hz	
	Approx. Weight (Uncrated)	721 lbs.	327 kg
	Approx. Weight (Crated)	771 lbs.	349.7 kg
	Heat Input	200,000 btu/hr	50,400 kcal/hr
	Airflow	1,200 cfm	33.98 cmm
	Inlet Pipe Size	3/4*	1.91 cm
Electric	Voltage Available	208-460v / 10-30 / 50/60 Hz	
	Approx. Weight (Uncrated)	721 lbs.	327 kg
	Approx. Weight (Crated)	771 lbs.	349.7 kg
	Airflow	1,200 cfm	33.98 cmm

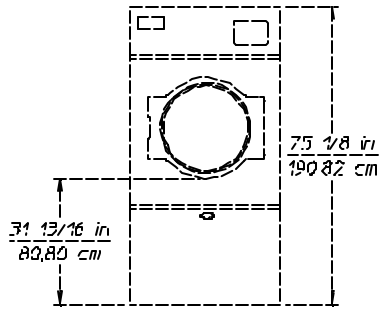
Shaded areas are stated in metric equivalents

* Minimum of 3/4" pipe must be supplied to the gas inlet for each dryer

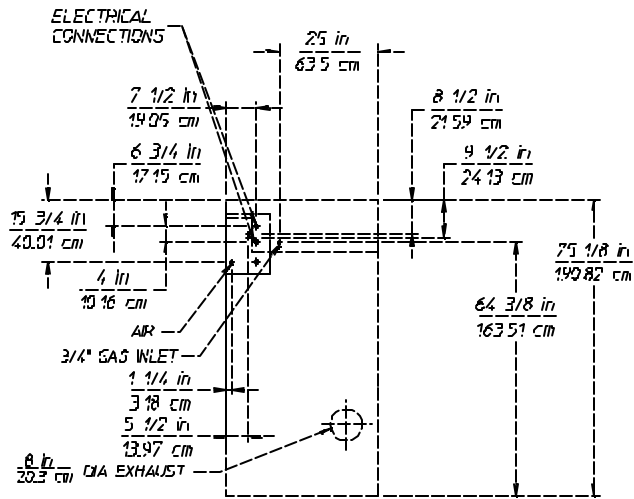
IMPORTANT: Dryers *must be* provided with a clean, dry, regulated 80 PSI (+/- 10 PSI) air supply.

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

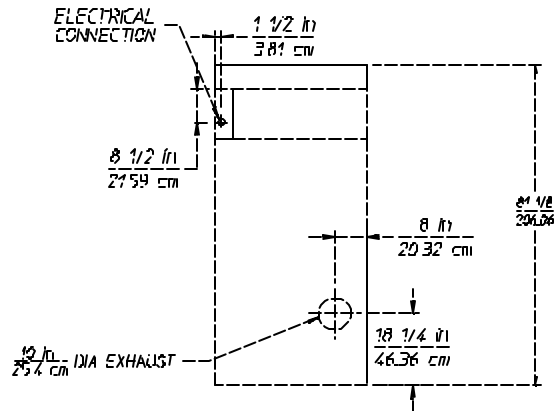
Specifications ML-79 WET WASH



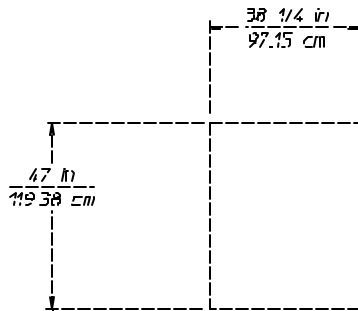
GAS MODELS
FRONT VIEW



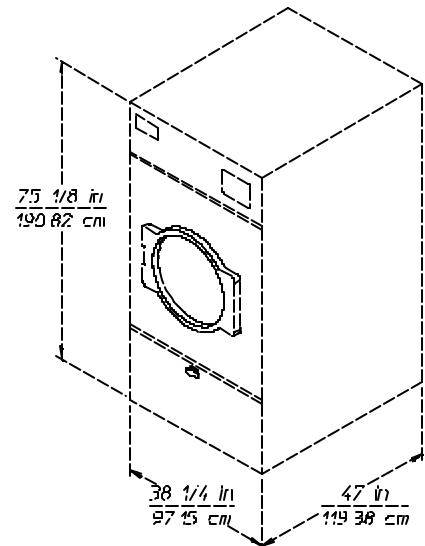
GAS
REAR VIEW



ELECTRIC
REAR VIEW



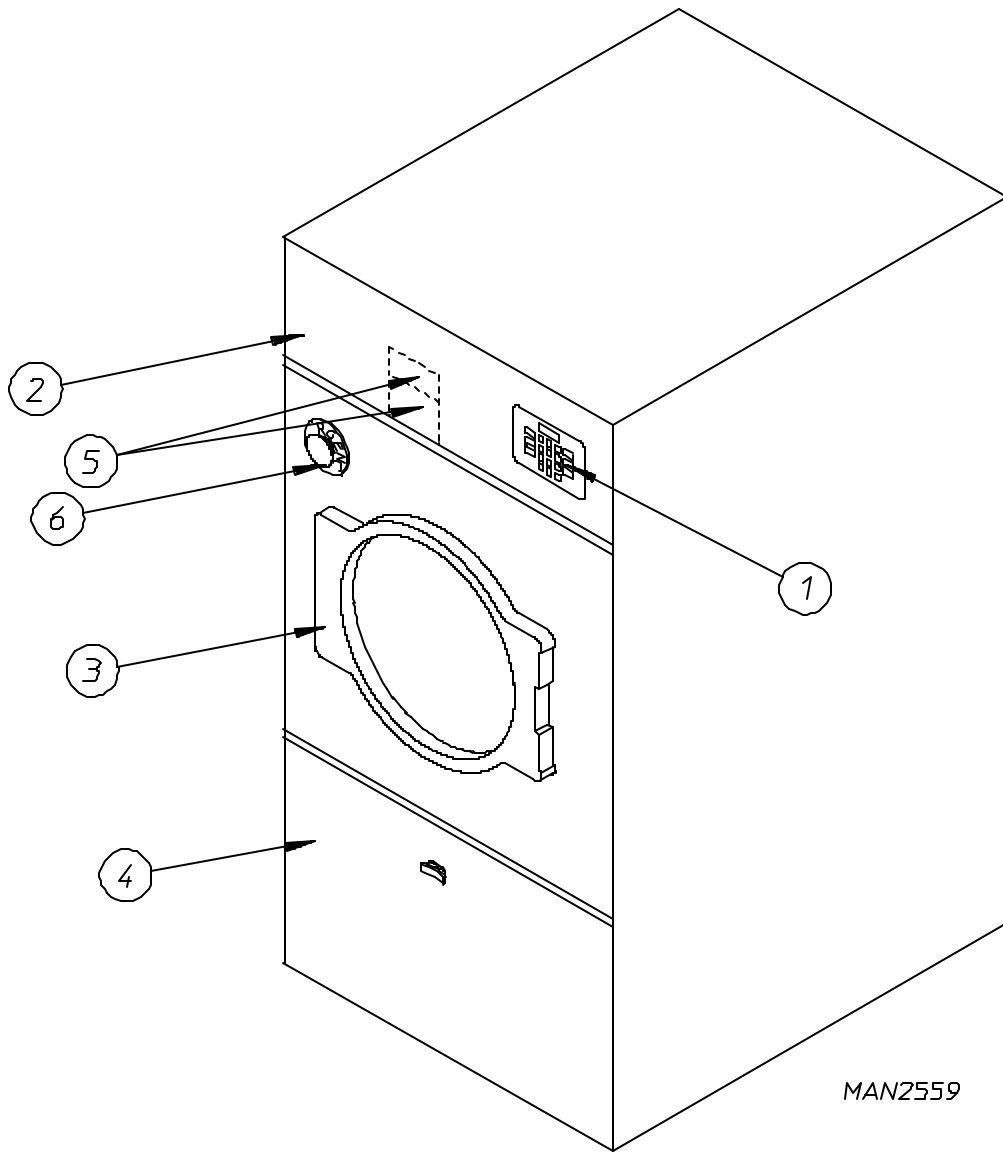
PLAN VIEW



SPEC 146

B. COMPONENT IDENTIFICATION

1. Dryer Front View



MAN2559

Illus. No.

Description

- | | |
|---|---|
| 1 | Controls |
| 2 | Control (top access) Door Assembly |
| 3 | Main Door Assembly (Left hand shown) |
| 4 | Lint Compartment Area (lint screen located behind door) |
| 5 | Data Label and Installation Label (located behind control [service] door) |
| 6 | Emergency Stop |

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 Electrical Code ANSI/NFPA NO. 70-LATEST EDITION, or in CANADA, the Canadian Electrical Codes Parts 1 & 2 CSA C22.1-1990 or LATEST EDITION.

A. LOCATION REQUIREMENTS

Before installing the dryer be sure the location controls to local codes and ordinances. In the absence of such codes or ordinances the location **must conform** with the National Electrical Code ANSI/NFPA NO. 70-LATEST EDITION, or in CANADA, the Canadian Electrical Codes Parts 1 & 2 CSA C22.1-1990 or 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 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.

9. Provisions **must be** made for an adequate air supply to be brought to the dryer. Refer to make up air requirements on page 12.

B. UNPACKING AND SETTING UP

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

IMPORTANT: Dryer must be transported and handled in an upright position at all time.

The dryer can be moved to its final location with or without the skid attached. 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.

With the skid removed, to make it easier to slide the dryer into its final position, slightly lower **ALL** four (4) leveling legs, so the dryer will slide on the legs instead of the base frame.

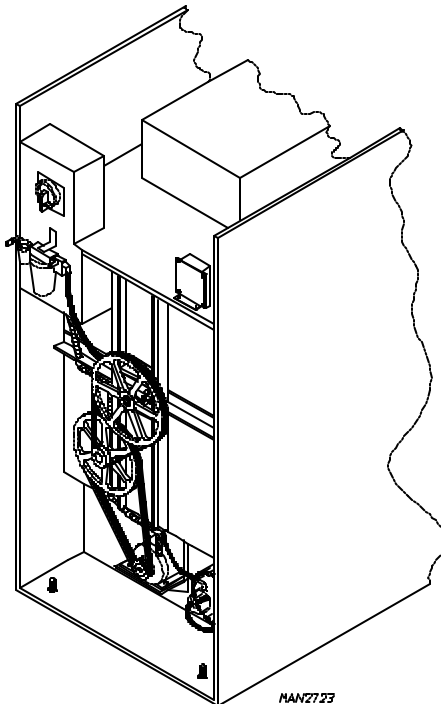
To increase bearing life and improve efficiency, the dryer **should be** titled slightly to the rear.

The basket (tumbler) is supported during shipping by a wooded block. *REMOVE THIS BLOCK BEFORE STARTING THE DRYER.*

IMPORTANT: For microprocessor (computer) models, this wooden block must be removed before connecting power to the dryer or irreparable damage to the basket (tumbler) will result.

The lint coops of **ALL** MW-79 dryers are supported during shipping by a bracket. *REMOVE THIS BRACKET BEFORE STARTING THE DRYER.*

Before operating machine, the humidity sensor located behind the control door must be placed on the outer top of the dryer (see page 47 for installation instructions). Check to ensure the relay box cover has been put on and the air filter assembly connected. Forty (40) p.s.i. is required for the air filter system.

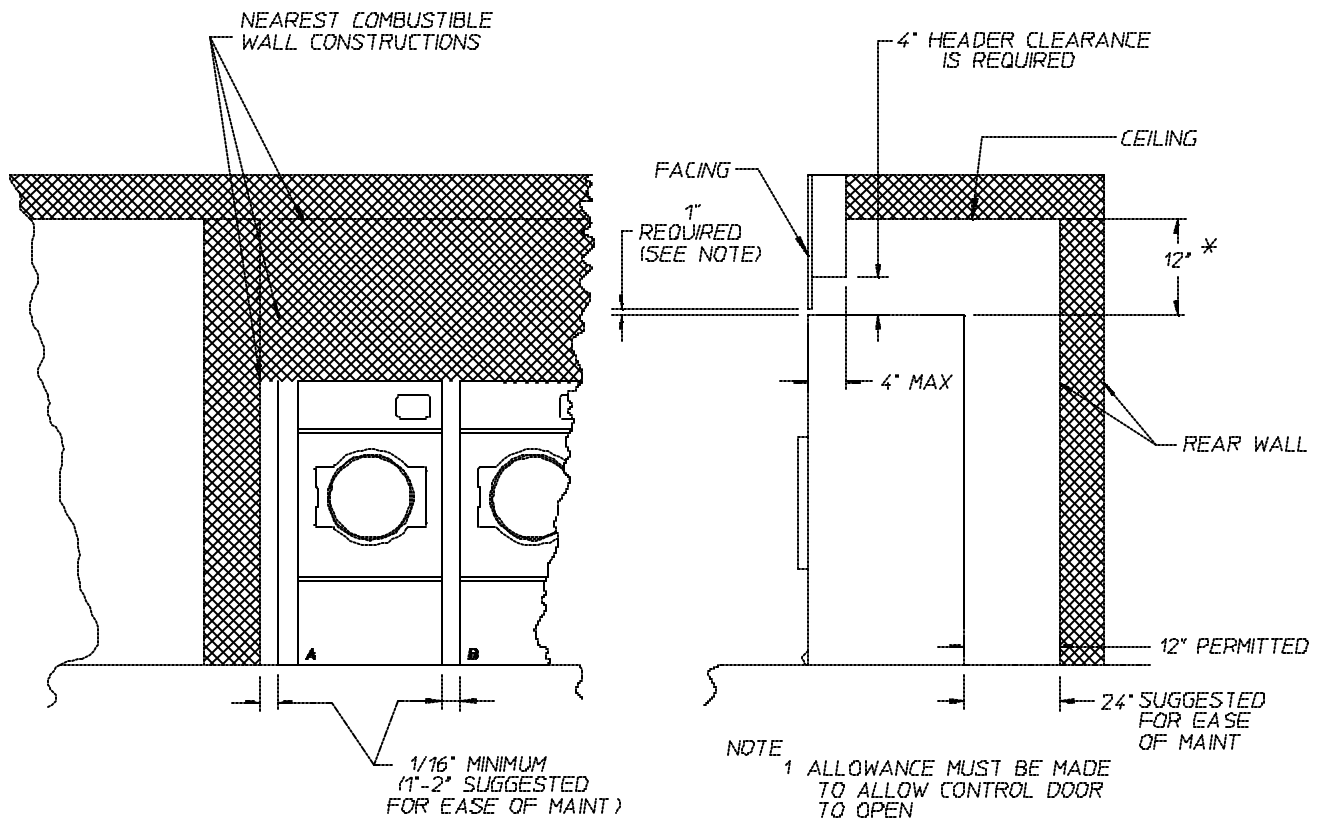


1. LEVELING DRYER

The dryer is equipped with four (4) leveling legs, one 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 twelve (12) inches (18 inches 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 four (4) inches and **must not** extent more than four (4) inches to the rear of the front. The bulkhead facing **must not** be closed in all the way to the top of the dryer. A one (1) inch clearance is required.



*IN CASES WHERE SPRINKLER HEADS ARE OVER THE DRYERS 18" IS SUGGESTED

MAN2381

INSTALLATION. DRYER CLEARANCE TO ADJACENT WALL STRUCTURES.

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

Dryers may be positioned side wall to side wall. However, a 1/16" 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 two (2) feet 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.

NOTE: The top on the dryer extend 6" above the control door. If measuring from the control door the minimum header clearance.

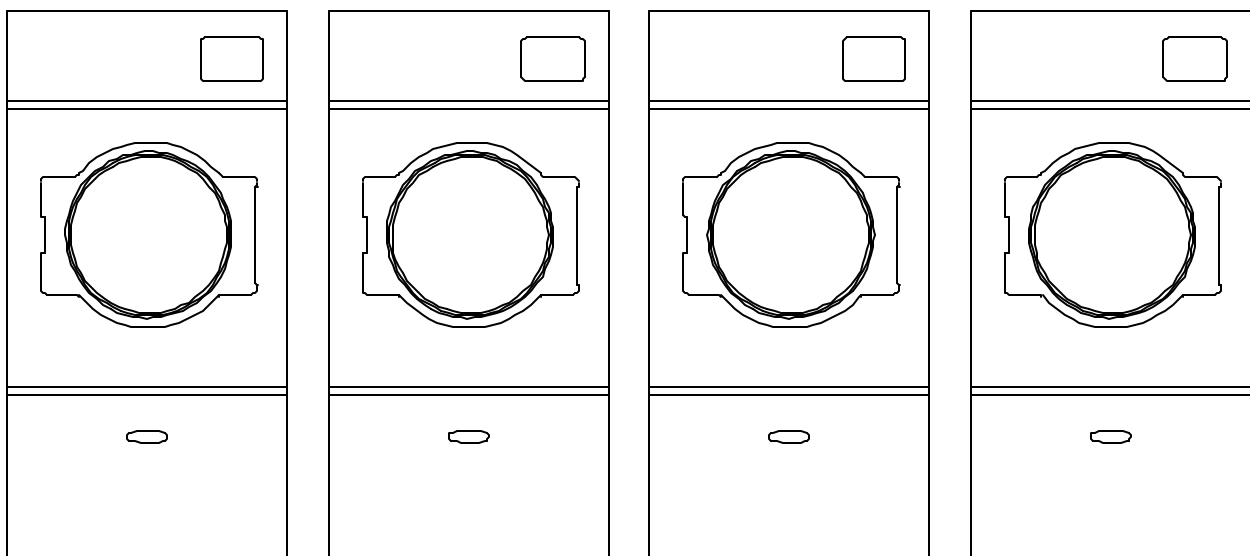
IMPORTANT: Even though a minimum of only 12 inches is required, 18 inches or more is suggested, especially in cases where sprinkler heads are over the installation and service.

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

D. MAKE UP AIR REQUIREMENTS

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 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 1,200 cfm (cubic feet per minute) **must be** supplied to each gas and electric dryer. As a general rule, an unrestricted air entrance from the outdoors (atmosphere) of a minimum of 1-1/2 square feet is required for each dryer.



TYPICAL INSTALLATION SHOWING MAKE-UP AIR OPENINGS

MAN2499

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** of the dryers.

EXAMPLE: For a bank of four (4) dryers, two (2) unrestricted openings measuring 2 feet by 1-1/2 feet (6 square feet) 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 to 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.

When single drying venting is used the length of ductwork from the dryer to the outside exhaust outlet should not exceed fifteen (15) feet. The minimum diameter of the duct work must be at least 10 inches. Even though the dryer exhaust duct for gas and electric units is only 8". 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° or 45° angles instead. The radius of the elbows **should preferably be** 1-1/2 times the diameter of the duct. Including basket (tumbler) and 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 will be connected. **ALL** duct work joints **must be** taped to prevent moisture and lint from escaping into the building. The 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 .3 inches of the water column.

IMPORTANT: Minimum duct work diameter is 10 inches.

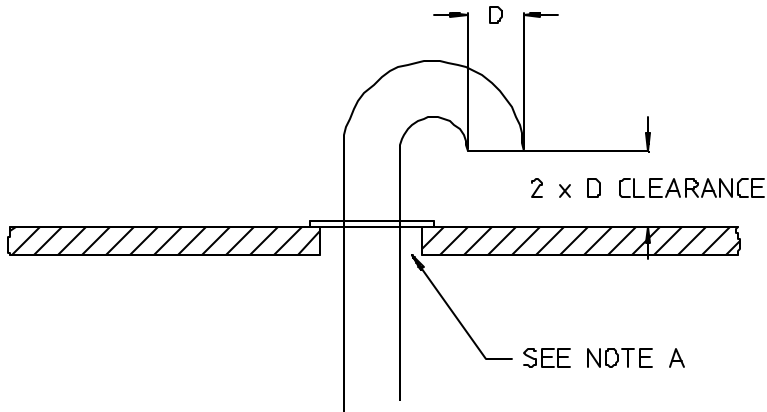
IMPORTANT: Where the exhaust duct work passes through a wall, ceiling, or roof made of combustible materials, the opening **must be** 2 inches larger, all the way around, the duct. The duct **must be** centered within this opening.

a. Outside Duct Work Protection

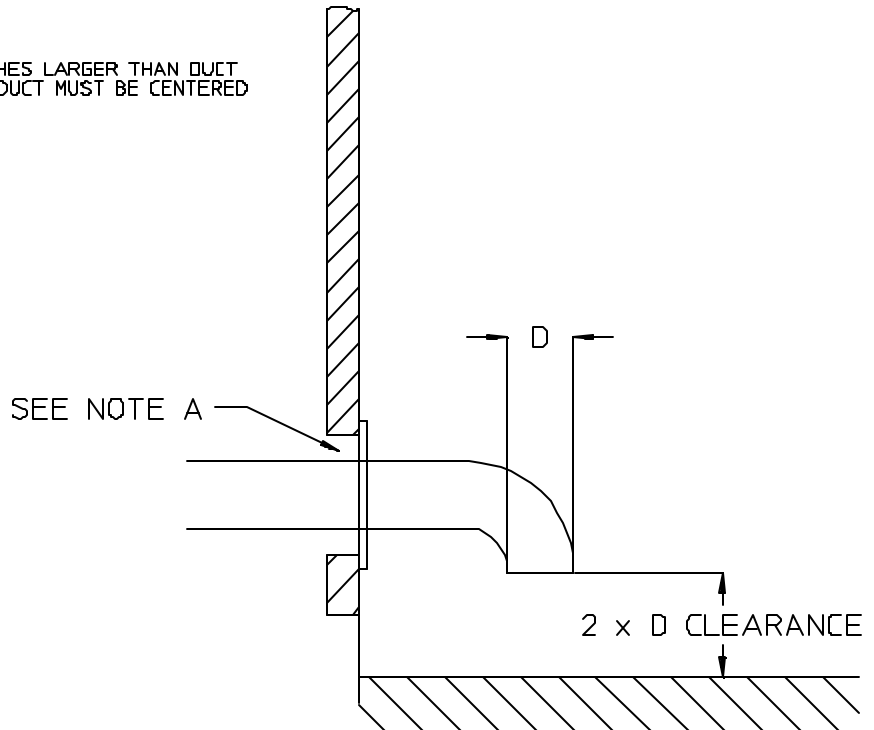
1. To protect the outside end of horizontal duct work from the weather, a 90° elbow bent downward **should be** installed where the exhaust exits the building. If the duct work travels vertically up through the roof, it **should be** protected from the weather by using a 180° turn to point the opening 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



NOTE *A*: OPENING MUST BE TWO (2) INCHES LARGER THAN DUCT
{ALL THE WAY AROUND} THE DUCT MUST BE CENTERED
WITHIN THIS OPENING



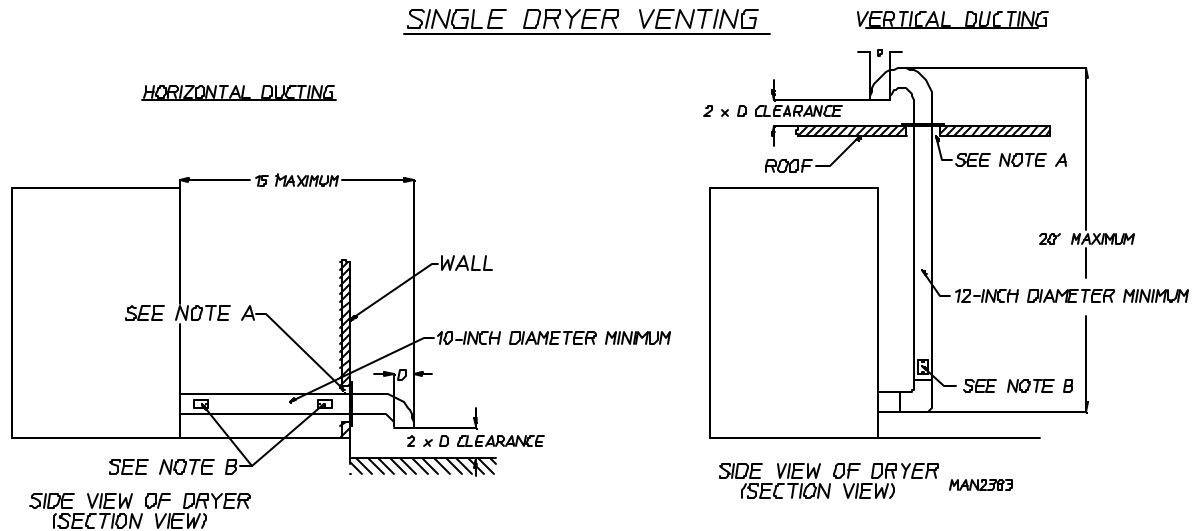
2. Single Dryer Venting

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° 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: Minimum duct size for dryer is 10 inches for a round duct or 9" x 9" for a square duct. The duct size must not be reduced anywhere down stream of the dryer.

IMPORTANT: Exhaust back pressure measured by a manometer at each basket (tumbler) exhaust duct area **should not** exceed .3 inches of water column.

It is important that the duct work from each dryer not exceed fifteen (15) feet with no more than (2) elbows (excluding dryer connections and outside exhaust outlets). If the duct work exceeds fifteen (15) feet or has numerous elbows, the cross section area of the duct work **must be** increased in proportion to the length and number of elbows in it. In calculating duct size, the cross section area of a square or rectangular duct **must be** increased by twenty (20) percent for each additional fifteen (15) feet. The diameter of a round exhaust duct **must be** increased ten (10) percent for each additional fifteen (15) feet. Each 90° elbow is equivalent to an additional thirty (30) feet, and each 45° elbow is equivalent to an additional fifteen (15) feet.

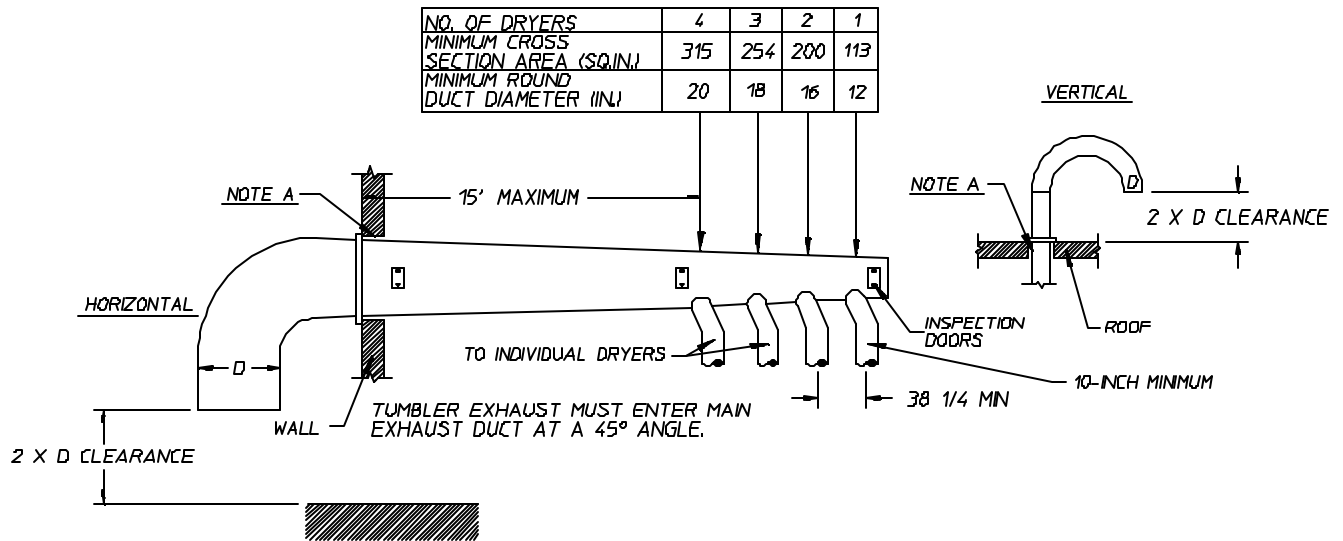


NOTE: "A" - OPENING MUST BE TWO (2) INCHES LARGER THAN DUCT (ALL THE WAY AROUND). THE DUCT MUST BE CENTERED WITHIN THIS OPENING
 "B" - INSPECTION DOORS SHOULD BE INSTALLED AT STRATEGIC POINTS FOR PERIODIC INSPECTION AND CLEANING

IMPORTANT: For extended duct work runs, the cross section area of the duct work can only be increased to an extent. Maximum proportional duct work runs **cannot** exceed fifteen (15) feet more than the original limitations of the maximum limit 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.

MULTIPLE DRYER VENTING (MWG-79/MWE-79) WITH 8" DIAMETER
(1200 CFM) 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 = $785 \times D^2$ 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 LARGER THAN DUCT (ALL THE WAY AROUND) THE DUCT MUST BE CENTERED WITHIN THIS OPENING

MAN41B3

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

a. Outside Duct Work Protection

- To protect the outside end of horizontal duct work from the weather, a 90° elbow bent down load **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 the exhaust duct work.

IMPORTANT: For extended duct work runs, the cross section area of the duct work can only be increased to an extent. Maximum proportional duct work runs cannot exceed fifteen (15) feet with two (2) elbows. When the duct work approaches the maximum limits as noted in this manual, a professional HVAC firm should be consulted for proper venting.

F. ELECTRICAL INFORMATION

1. ELECTRICAL REQUIREMENTS

It is your responsibility to have ALL electrical connections made by a properly licensed and component 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, or in CANADA, the Canadian Electrical Codes Parts 1 & 2 CSA C22.1-1990 or LATEST EDITION.

IMPORTANT: Failure to comply with these codes or ordinances or 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.

NOTE: Wiring diagrams are affixed to the inside at the top front control door and to the rear upper back guard/panel.

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

2. ELECTRICAL SERVICE SPECIFICATIONS

GAS ELECTRICAL SPECIFICATIONS (Per Dryer)†					
IMPORTANT: 208 and 230/240 VAC are not the same. When ordering, specify exact voltage. NOTES: A. Ratings are for dual element-time delay-current limiting, class RK1 and RK5 fuses ONLY. B. Circuit breakers are thermal magnetic (industrial) type ONLY. For others, calculate and verify correct breaker size according to appliance amp draw rating and type of breaker to be used. C. Circuit breakers for 3Ø dryers must be 3-pole type.					
SERVICE VOLTAGE	PHASE	WIRE SERVICE	APPROX AMP DRAW	DUAL ELEMENT FUSE	CIRCUIT BREAKER
115	1	2	13	20	25
208	1	2	8	12	15
208	3	3	5	8	15
230	1	2	9	12	15
230	3	3	5	8	15
240	1	2	9	12	15
380-400	3	3	3	5	15
416	3	3	3	5	15
460	3	3	3	5	15

IMPORTANT: The dryer **must be** connected to the electric supply shown on the data label that is affixed to the back of the dryer in 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: For electrically heated models contact the factory for electrical service specifications.

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 Electrical Code ANSI/NFPA NO. 70-LATEST EDITION, or in CANADA, the Canadian Electrical Codes Parts 1 & 2 CSA C22.1-1990 or 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 a 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.

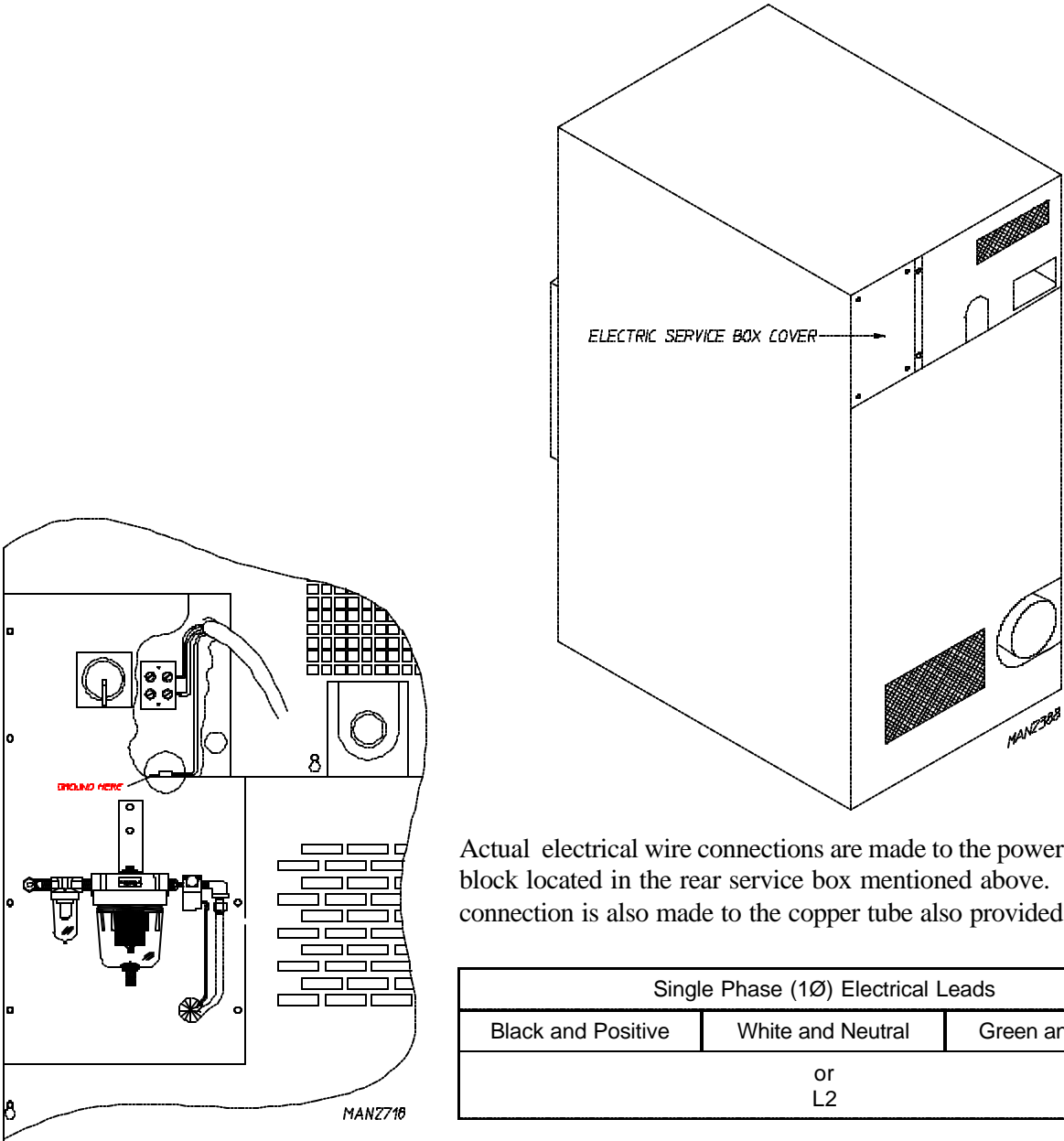
4. ELECTRICAL CONNECTIONS

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

a. Single phase (1Ø) wiring connections (hookup).

1. Gas model only

The electrical connections on ALL single phase (1Ø) gas dryers are made into the rear service box located at the upper left area of the dryer.



Actual electrical wire connections are made to the power distribution block located in the rear service box mentioned above. The ground connection is also made to the copper tube also provided in this box.

Single Phase (1Ø) Electrical Leads		
Black and Positive	White and Neutral	Green and 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 or 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.

b. 3 Phase (3Ø) Wiring Connections and Hookup

The electrical connections on ALL 3 Phase (3Ø) gas are made into the rear service box located at the upper rear of the dryer. Electrical connections for electrically heated dryers are made in the rear electric box located at the upper rear area of the dryer.

IMPORTANT: A separate circuit serving each dryer must be provided.

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 or in CANADA, the Canadian Gas codes parts 1&2 CSA C22.1-1990 LATEST EDITION.

IMPORTANT: Failure to comply with these codes or ordinances, 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 VOIDING THE WARRANTY.

WARNING: FIRE or EXPLOSION COULD RESET.

1. Gas Supply

The gas dryer installation **must meet** the American National Standard, National Fuel Gas Code ANSI Z223.1-LATEST EDITION or in CANADA, the Canadian Gas Codes parts 1&2 CSA C22.1-1990 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 or 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 rating shown on the dryer data label are for elevations up to 2,000 feet, unless elevation requirements of over 2,000 feet 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 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.	10.5 inches W.C.
Inline Pressure	6.0 - 12.0 inches W.C.	10.5 inches W.C.

b. Gas Connections:

Inlet connection 3/4" inch N.P.T.
 Inlet supply size 3/4" inch N. P.T.
 Btu/hr input (per dryer) 200,000

1. Natural Gas

Regulation is controlled by the dryer's gas valve's internal regulator. Incoming supply pressure **must be** consistent between 6 and 12 inches water column 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 11 inch water column. 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.

Model Number	BTU Per Hour Rating	Type of Gas						L.P. Conversion Kit Part Number
		Natural			Liquid Propane			
		Qty.	D.M.S.*	Part Number	Qty.	D.M.S.*	Part Number	
ML79 WW	200,000	4	#29	4	4	#47	140805	881231

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

Natural Gas.....#29 = .1360"
 Liquid Propane Gas.....#47 = .0785"

3. Piping and Connections

ALL components and materials **must conform** to National Gas Code specifications. It is important that gas pressure regulators meet applicable pressure requirement 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.

If local codes permit, power to a gas dryer can be made by the use of a flexible U.L. listed power cord or pigtail (wire 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.

1. GAS Models Only

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

For gas dryers manufactured for operation at three phase (3Ø), 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 and contactor, the service box cover must be removed.

2. ELECTRICALLY Heated Models Only

The only electrical input connections to the dryer are the 3-phase (3Ø) power leads (L1, L2, L3 and sometimes neutral) and ground. Single phase power for the control circuit and for any single phase (1Ø) motors (if present) is done internally to the dryer by the factory at the oven contactor. No single phase (1Ø) input connection is required on a 3-phase (3Ø) dryer.

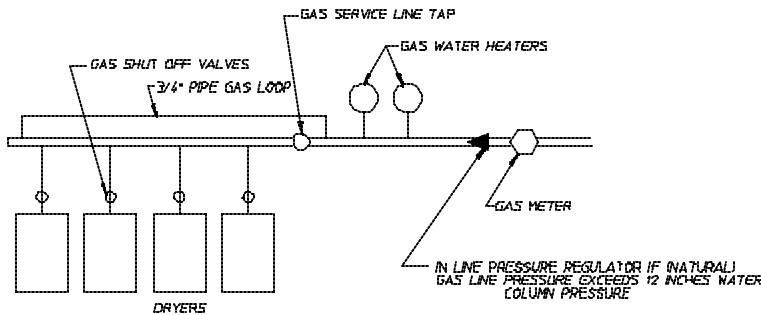
CAUTION: The dryer must be grounded. A ground lug has been provided for this purpose.

Input connection wiring must be sized properly to handle the dryer's current draw. This information is printed on the dryers data label.

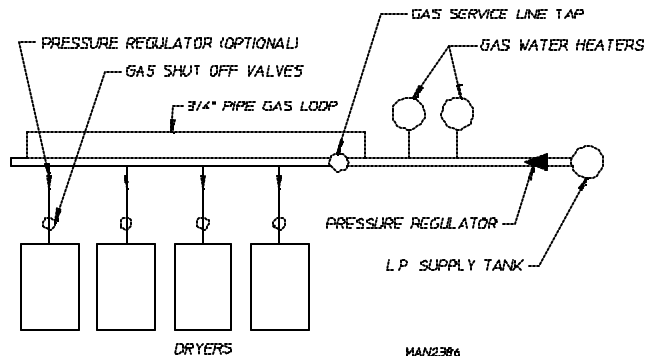
IMPORTANT: A separate circuit serving each dryer must be provided.

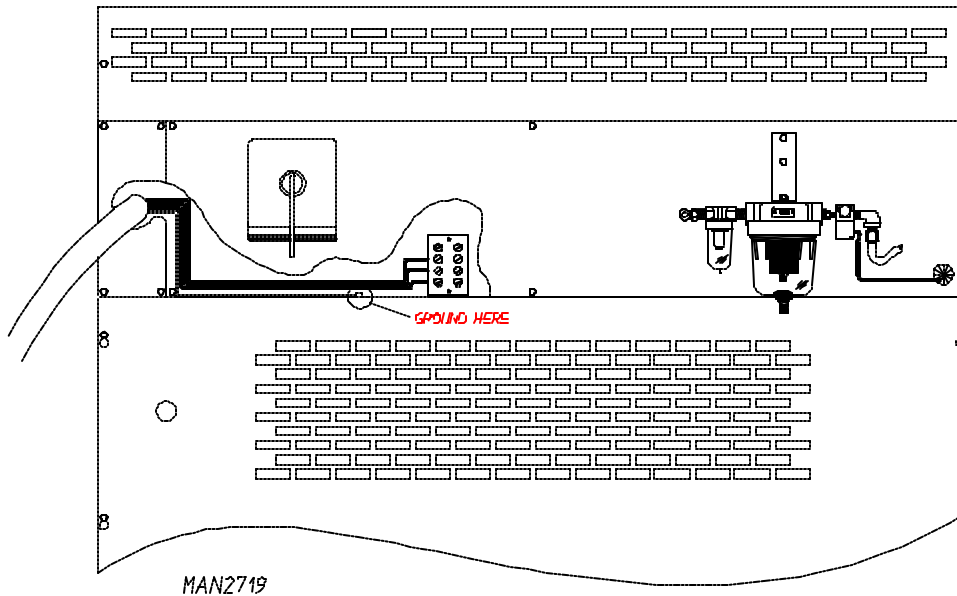
The electrical input connections are made at the ?????. The ground connection is made to a oven copper lug also provided in this area.

TYPICAL NATURAL GAS INSTALLATION



TYPICAL LP GAS INSTALLATION





IMPORTANT: A strain relief must be used where the input wiring enters the rear electric box.

Consistent gas pressure is essential at **ALL** gas connections. It is recommended that a 2-inch 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 inches of water column pressure.

NOTE: A water column test pressure of 3.5 inches for natural gas and 11 inches 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" N.P.T. plugged tap, accessible for a rest 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 and materials **must confirm** 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).

H. AIR INFORMATION

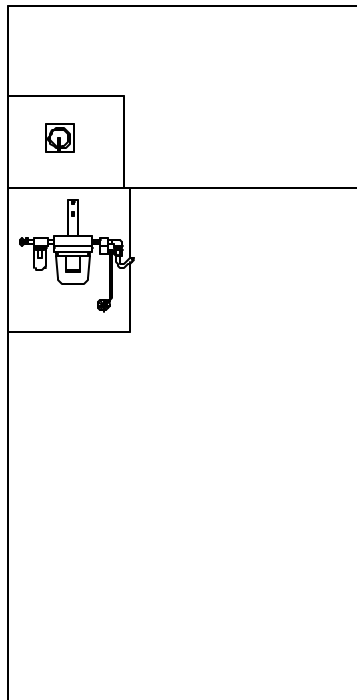
1. Air Jet System

The ML-79WW is manufactured with a Pneumatic Air Jet system which requires an external supply of compressed air. The air connection is made to a three way micro valve located on the rear electric relay box cover.

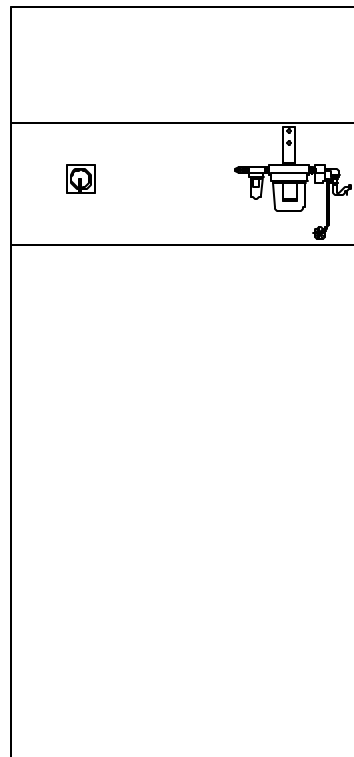
IMPORTANT: The condensation filter must be checked and drained every thirty days. This will vary depending on the amount of equipment usage.

NOTE: Drain bowls with manual drain to keep accumulated liquids below element. Liquid will be carried downstream if it reaches the element. Replace element when plugged.

GAS



ELECTRIC



MAN2720

A. Air Requirements

1. The air supply required to operate this dryer correctly is regulated at 40 p.s.i. Any deviation from this may cause damage to the outlet humidity sensor.

B. Air Connection

1. The air connection to the dryer is of 1/8" N.P.T.
2. The air connection for gas only is located in the rear of the dryer on the upper left.
3. The air connection for electric only is located in the upper right side in the rear of the dryer.

I. PREPARATION FOR OPERATION AND 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 and service door. In the case of 208 VAC or 230/240 VAC, *THE SUPPLY VOLTAGE MUST MATCH THE ELECTRIC SERVICE EXACTLY.*
3. GAS MODELS - Check to assure that the dryer is connected to the type of heat or gas indicated on the dryer data label.
4. GAS & ELECTRIC MODELS - The sail switch damper assembly was installed and adjusted at the factory prior to shipping. However, each sail switch adjustment **must be** checked to assure that this important safety control is functioning.
5. GAS MODELS - 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 door is securely in place.
9. Rotate the basket (tumbler and drum) by hand to be sure it moves freely.
10. Check bolts, nuts, screws, terminals and fittings for security.
11. Check to ensure all back guards and covers are on the dryer.
12. Check to ensure air supply is connected to the dryer (40 p.s.i.).
13. Check to ensure that all shipping blocks and braces have been removed.

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 (gas models only).
2. Refer to the operating instructions for starting your particular model dryer.
3. *Gas Dryers*
 - a. When a gas dryer is first started (during initial start-up), it has a tendency not to ignite on the first ignition attempt. This is because the gas supply piping is filled with air, so it may take a few minutes for the air to be purged from the lines.

NOTE: Purging period, check to be sure that ALL gas shut-off valves are open.

NOTE: Gas dryers are equipped with a direct spark ignition (DSI) system which has internal diagnostics. If ignition is not established the heat circuit in the DSI module will lock out until it is manually reset. To reset the DSI system, open and close the main door and restart the dryer.

- b. 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 pressure tap of the gas valve body:
Natural Gas 3.5 inch water column
L.P. Gas 10.5 inch water column

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.

Electrically Heated Dryers

- a. Check to ensure electric oven and contactor assembly is activating.
4. Make a complete operational check of ALL safety related circuits:
 - a. Door Switches
 - b. Hi-Limit thermostats
 - c. Sail Switch (for gas and electric models only)

NOTE: To check for proper sail switch operation for gas and electric models only, open the main door and while holding main door switch plunger in, start dryer. Dryer should start but heat circuit should not be activated. If heat, burner or oven, does activate; shut dryer off and make necessary adjustments.

5. 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.

6. Make a complete operational check of ALL operating controls.
 - a. For microprocessor model check controller (computer) program and 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.
7. Check the electric service phase sequence (3-phase [3Ø] models only). While the dryer is operating, check to see if the blower wheel (impellor and fan) should spin in the clockwise 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 and fan) is rotating in the wrong direction, this will not only drastically reduce drying efficiency, but it can also cause premature component failure.

8. Check to ensure 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. display will read "FILL."
 - 2.) Press the "F" on the touch pad of the keyboard.
 - 3.) The L.E.D. display will show "Ld00." The dryer will start and run until the preprogrammed time runs out.

Refer to the user's manual for detailed operating instructions.

L. SHUT DOWN INSTRUCTIONS

If the dryer is to be shut down or 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 AND 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 and serial numbers** so your inquiry is handled in a timely manner.

B. PARTS

1. Replacement parts **should be purchased** from the distributor that 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 fax your order to (508) 678-9447.

NOTE: When ordering replacement parts from the ADC dealer or the ADC factory be sure to give them the correct **model and serial numbers** so your parts order can be processed in a timely 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 then **ADC** Warranty Department at (508) 678-9000.

NOTE: Whenever contacting the **ADC** factory for warranty 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: REMOVE POWER FROM THE MACHINE BEFORE PERFORMING ANY MAINTENANCE IN THE MACHINE (cleaning the lint drawers and both steam coil lint screens are the only exceptions).

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

CLEAN LINT FROM LINT DRAWER/SCREEN EVERY THIRD or FOURTH LOAD.

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.

30 DAYS

Drain condensation filter bowls. This may vary depending on how often the equipment is used.

NOTE: Drain bowls with manual drain to keep accumulated liquids below element. Liquid will be carried down stream if it reaches the element. This will damage the outlet humidity sensor. Replace element when plugged.

90 DAYS

Remove lint from around basket (tumbler), drive motors, and surrounding areas. Remove lint from the gas valve burner area with a dusting brush or vacuum clearer attachment.

Re-grease the two (2) 1-3/8" bearings that support the impellor/fan shaft. Use Shell Avania #3 grease or its equivalent. Impellor (fan/blower) shaft bearings **should be** lubricated using a #3 grease or its equivalent.

Check to make sure that the set screws on the impellor/fan shaft bearings are tight.

Remove lint from around basket (tumbler), drive motors, and surrounding areas. Remove lint from gas valve burner area with a dusting brush or vacuum cleaner attachment.

NOTE: To prevent damage, avoid cleaning and/or touching the Hot Surface Ignitor.

Remove lint accumulation from inside

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 shutdown 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.

Check ALL V-Belts for tightness and wear. Retighten, realign, or replace if required.

NOTE: V-Belts *should be* replaced in matched sets (pairs).

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 Health Administration) STANDARDS.

The information provided will help isolate the most probable components associated with the difficulty described. The experienced technician realizes, however, that a loose connection, or broken or shorted wire may be at fault where electrical components are concerned, not necessarily the suspect component itself. Electrical parts should be checked for failure before being returned to the factory.

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 a 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.

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MICROPROCESSOR (COMPUTER) MODELS

- A. No L.E.D. display (microprocessor 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.
 - 4. Failed control stepdown transformer (380 volts or higher models only).
- B. Drive motor not operating (does not start)
 - 1. Microprocessor (computer) motor indicator dot and relay output L.E.D. indicator dots are on
 - a. Failed drive motor contactor (relay).
 - 2. Microprocessor (computer) motor indicator dot and “door” L.E.D. indicator are on, but motor output L.E.D. indicator is off.
- C. Drive motor operates normally for a few minutes, then stops and will not restart
 - 1. Motor is overheating and tripping internal overload protector
 - a. Motor air vents are clogged with lint.
 - b. Low voltage to motor.
 - c. Failed motor.
 - d. Basket (tumbler) is binding, check for obstruction.
- D. Microprocessor controller (computer) display reads “dFSL” continuously and the buzzer (tone) sounds every 30 seconds.
 - 1. Fault in microprocessor heat sensing circuit
 - a. Blown “dFSL” 1/8 amp fuse on the microprocessor (computer).
 - b. Failed microprocessor temperature sensor.
 - c. Failed microprocessor controller.
 - d. Broken wire or connection somewhere between the microprocessor controller (computer) and microprocessor temperature sensor.
- E. Microprocessor controller (computer) display reads “door” and microprocessor controller (computer) “door” L.E.D. indicator is off.
 - 1. Fault (open circuit) in main door switch circuit.
 - a. Main door not closed all the way.
 - b. Main door switch is out of proper adjustment.
 - c. Failed main door switch.
 - d. Broken connection or wire in main door wiring circuit.
 - 2. Failed 24 VAC step down transformer or fault in wiring.
- F. Microprocessor controller (computer) L.E.D. display reads “door” and microprocessor controller (computer) “door” L.E.D. indicator is on.

1. Failed microprocessor controller (computer).
- G. Microprocessor controller (computer) will not accept any keyboard entries, i.e., display reads “FILL” and when keyboard entries are selected, the display continues to read “FILL.”
1. Failed keyboard label (touchpad) assembly.
 2. Failed microprocessor controller (computer).
- H. Microprocessor controller (computer) will only accept certain keyboard entries.
1. Failed keyboard (touchpad) assembly.
- I. Microprocessor controller (computer) locks up and display reads erroneous messages or only partial segments.
1. Transient power voltage (spikes) disconnect power to dryer, wait one (1) minute and reestablish power to dryer, if problem is still evident.
 - a. Failed microprocessor controller (computer).
 - b. Failed keyboard label (touchpad) assembly.
- J. Dryer stops during a cycle, microprocessor controller (computer) buzzer (tone) sounds for 5 seconds, and then the L.E.D. display 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).
- K. Dryer stops during a cycle, microprocessor controller (computer) buzzer (tone) sounds for 5-seconds, and then the L.E.D. display returns to “FILL.”
1. Loose connection somewhere in the main power circuit to the microprocessor controller (computer).
 2. Failed arc suppressor (A.S.) board (reversing models only).
- L. Microprocessor controller (computer) L.E.D. display reads “Hot.”
1. Possible overheating condition, microprocessor controller (computer) has sensed a temperature which has exceeded 220° F.
- “Hot” display will not clear until temperature sensed has dropped to 220° F or lower and the microprocessor controller is manually reset by pressing the “CLEAR/STOP” key.
- M. Heating unit is not operating (no heat), no voltage at heating unit (i.e. gas model DSI module, electric oven contactor) when dryer is first started and both the heat indicator dot and the “HEAT” output are on.

GAS MODELS

1. Fault in sail switch
 - 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 exhaust.
 - 3.) No exhaust air flow.
 - a.) Failed fan

2. Failed burner hi-limit switch.
3. Failed lint chamber sensor bracket tumbler hi-limit switch.

ELECTRIC MODELS

1. Fault in sail switch circuit.
 - a. Sail switch is out of adjustment or failed.
 - b. Sail switch damper is not closing or is fluttering.
 - 1.) Lint screen is dirty.
 - 2.) Restriction in exhaust.
 - 3.) No exhaust air flow.
 - a.) Failed impellor.
 - b.) Fault in fan motor circuit.
 - c. Failed oven hi-limit switch.
 - d. Failed lint chamber sensor bracket basket (tumbler) hi-limit switch.
- N. Heating unit is not operating (no heat), no voltage at heating unit (i.e. gas model DSI module or electric oven contactor).
 1. Failed microprocessor controller (computer).
- O. No heat, voltage is confirmed at heating unit (i.e. gas model DSI module or electric oven contactor).

GAS MODELS

1. Fault in DSI ignition system.
 - a. Ignitor sparks but no ignition and module locks out (RED indicator stays on).
 - 1.) Ignitor probe assembly is out of adjustment or has failed.
 - 2.) Severe air turbulence.
 - 3.) Failed DSI module.
 - 4.) Failed gas valve.
 - b. Ignitor sparks, burner lights but goes off right away.
 1. DSI ignitor flame probe out of adjustment or has failed.
 2. Sail switch is fluttering.
 - a. Lint screen is dirty.
 - b. Restriction in exhaust duct work.
 - c. Ignitor does not spark and module locks out (RED indicator stays on).
 1. Fault in HV (high voltage wire), break or loose connection.
 2. Failed ignitor probe assembly.
 3. Failed DSI module.

ELECTRIC MODELS

1. Failed oven contactor or coil.
 2. Failed electric heating elements.
- P. Dryer is taking too long to dry.
1. Exhaust duct work too long or is undersized, back pressure cannot exceed .3 inches water column.
 2. Restriction in exhaust.
 - a. Dryer back draft damper is sticking partially closed.
 - b. Restriction or obstruction in duct work.
 - 1.) Check duct work all the way to the outdoors.
 3. Insufficient make up air.
 4. Impellor and fan is rotating in the wrong direction only (3 phase models only).
 5. Lint screen is dirty or is not being cleaned often enough.
 6. Inadequate air flow.
 - a. Impellor and fan failure.
7. GAS MODELS
- a. Low or inconsistent gas pressure.

Natural gas pressure must be between 3.5 and 4 inches of water column.

L.P. gas pressure must be between 10.5 and 11 inches of water column.
 - b. Poor air and gas mixture (too much gas or not enough air) at burner, yellow or poor flame pattern.
 - 1.) Not enough make-up air.
 - 2.) Restriction in exhaust.
 - 3.) Gas pressure too high.
 - 4.) Impellor and fan rotating in the wrong direction (3 phase models).
 - 5.) Burner orifice size (D.M.S.) too large for application (i.e. high elevation).
 - c. Sail switch is fluttering.
 - 1.) Restriction in exhaust.
 - a.) Lint screen is dirty or is not being cleaned often enough.
 - d. Failed burner hi-limit switch, opens at incorrect temperature.
 - e. Gas supply may have low heating value.
8. ELECTRIC DRYERS
- a. Not enough make up air.
 - b. Restriction in exhaust.
 - c. Lint screen is dirty or is not being cleaned often enough.
 - d. Blower and fan is rotating in the wrong direction (3 phase models only).

- e. Failed electric elements.
- f. Sail switch is fluttering.
 - 1.) Restriction in exhaust.
 - 2.) Switch not adjusted properly.
- 9. Extractors (washers) not functioning properly.
- 10. Failed microprocessor controller, temperature calibration is inaccurate.
- 11. Failed microprocessor temperature sensor, calibration is inaccurate.
- 12. Failed lint chamber hi-heat switch (thermostat), opens at incorrect temperature.
- 13. Microprocessor temperature sensor is covered with lint.

NOTE: Lint accumulation on the sensor bracket can act as an insulator which will affect the accuracy of the automatic drying cycle.

- Q. At completion of “AUTO” drying and cooling cycle, load is coming out over dried.
 - 1. Percent of dryness (dryness level) of cycle selected is too high.
 - 2. A and B factors not set correctly or “B” factor has to be adjusted for adverse location conditions.
- R. At completion of “AUTO” drying and cooling cycle, load is coming out still damp.
 - 1. Percent of dryness (dryness level) of cycle selected is too low.
 - 2. A and B factors not set correctly or “B” factor has to be adjusted for adverse location conditions.
- S. Main burners are burning with a yellow flame for gas models only.
 - 1. Poor air and gas mixture (too much gas or not enough air) at burner.
 - a. Not enough make up air.
 - b. Restriction in exhaust.
 - c. Gas pressure too high.
 - d. Blower and fan (3 phase models only) rotating in the wrong direction.
 - e. Burner orifice size (D.M.S.) too large for application (i.e. high elevation).
- T. Condensation on main door glass.
 - 1. Too long, undersized or improperly installed duct work.
 - 2. Back draft damper is sticking in partially closed position.
- U. Scraping noise at basket (tumbler) area.
 - 1. Check for obstruction caught in basket (tumbler) or wrapper area.
 - 2. Basket (tumbler) is out of proper alignment.
 - a. Check both vertical alignment and lateral alignment.
 - b. Check gap between front panel and basket (tumbler), bearing set screws may have come loose, and basket (tumbler) walked forward or back.
- V. Excessive noise or vibration.
 - 1. Dryer is not level properly.

2. Blower and out of balance.
 - a. Excessive lint build up on blower and fan.
 - b. Failed blower and fan.
3. Loose basket (tumbler) tie rod.
4. Failed tumbler support.
5. Loose motor mount.
6. Failed idler or basket (tumbler) bearings.
7. V-belts too tight or too loose.
8. Tumbler bearing set screws are loose.
9. Failed motor bearings.

SECTION VIII

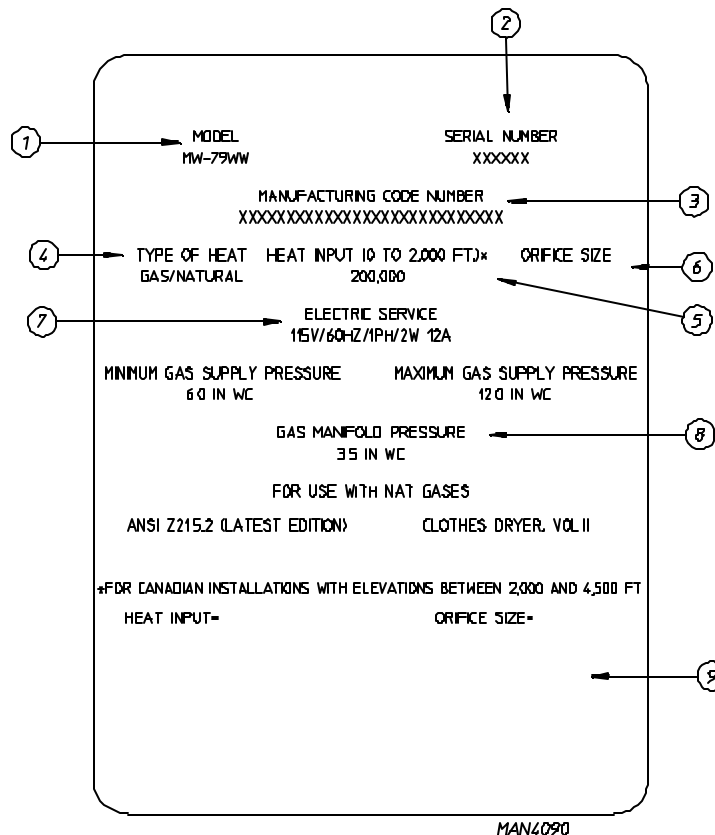
TECHNICAL INFORMATION

A. DATA LABEL

Contact American Dryer Corporation

When contacting American Dryer Corporation certain information is required to ensure proper service or parts information from American Dryer. This information is on the data label located on the inside of the control door. When contacting American Dryer please have the model and serial numbers handy.

1. MODEL NUMBER - The model number is an ADC number which describes the size of the dryer and type of heat (gas, electric or steam).
2. SERIAL NUMBER - The serial number allows ADC to gather information on your particular dryer.
3. MANUFACTURING CODE NUMBER - The manufacturing code number is issued by ADC and describes all possible options on your particular model.
4. TYPE OF HEAT - Describes the type of heat; gas (natural or L.P.), steam or electric.
5. HEAT INPUT - For gas dryers describes the heat input in British thermal units.
6. ORIFICE SIZE - Gives the number size of the drill used.
7. ELECTRIC SERVICE - Describes the electric service for your particular model.
8. GAS MANIFOLD - Describes the manifold pressure as taken at the gas valve.
9. APPLICABLE APPROVAL SEALS - I.E. American or Canadian Gas associations.

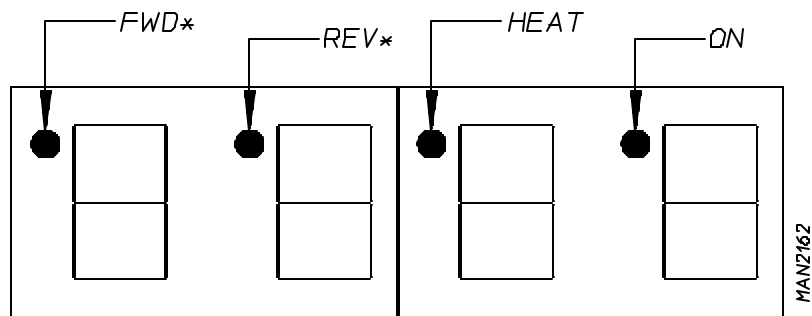


SECTION IX

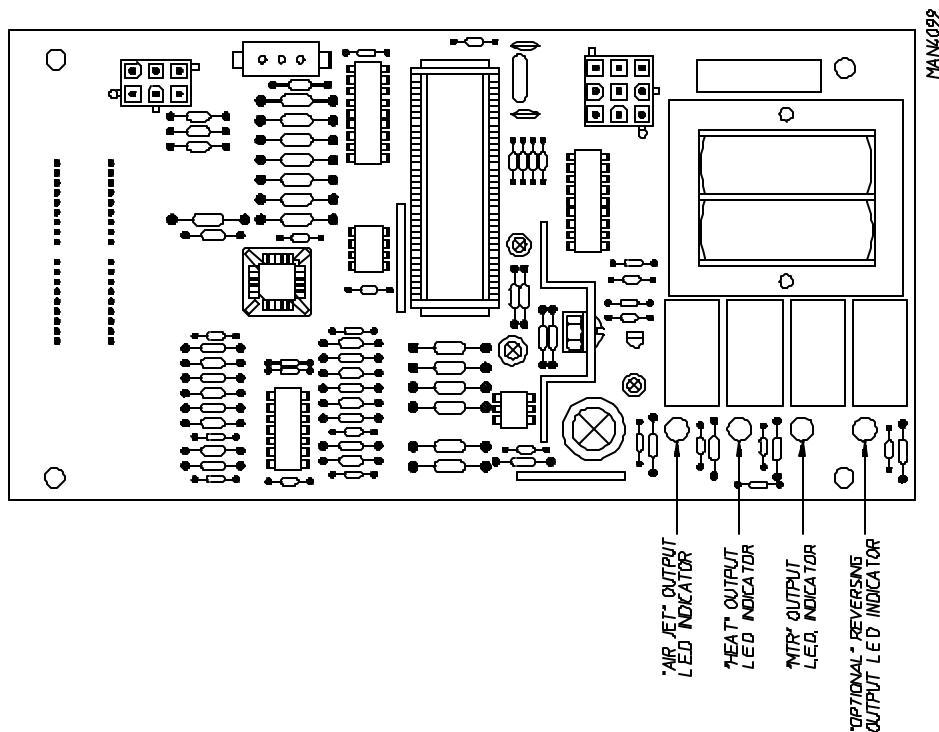
PROCEDURE FOR FUNCTIONAL CHECK OF REPLACEMENT COMPONENTS

1. Microprocessor (computer) Board

- a. Upon completing installation of the replacement microprocessor (computer) board, reestablish power to the dryer.
- b. Start the drying cycle.
- c. Verify that the motors and the heat indicator dots, in the microprocessor (computer) L.E.D. display are on. (Refer to the illustration below).



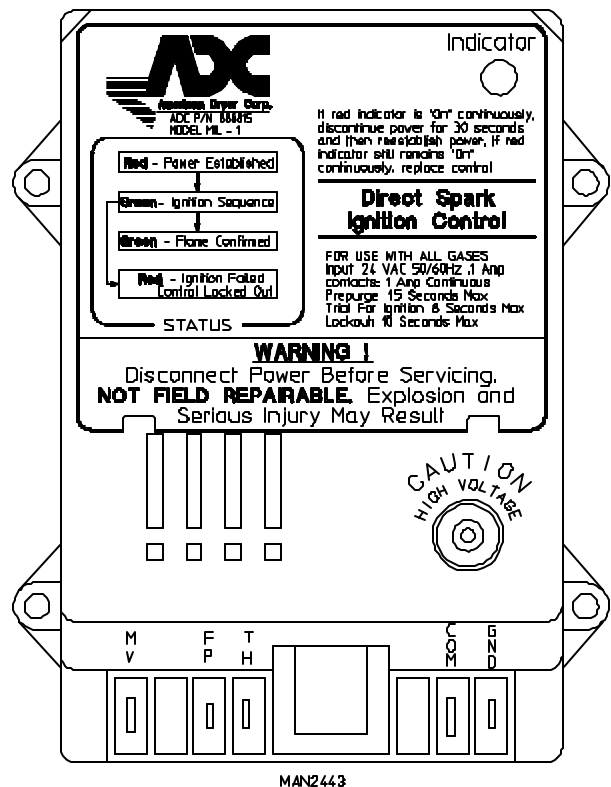
- d. Verify that the motors heat, and door indicator lights on the back side of the microprocessor (computer) board are lit.



- e. Open 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** on previous page [page 40]).
- f. Try to restart the dryer with the main door open.
- g. The microprocessor (computer) board's L.E.D. **must read** "DOOR."
- h. Close the main door and restart the dryer.
- i. Functional check of microprocessor (computer) board is complete.

2. Direct Spark Ignition (DSI) System

- a. Upon completing installation of the replacement Direct Spark Ignition (DSI) module, reestablish power to the dryer.
- b. Start the drying cycle.
- c. The ignition (DSI) module's L.E.D. indicator will light "red" for up to approximately 1.5 seconds (pre-purge time).
- d. The module's indicator light will then turn "green." The gas valve will be energized and the ignitor probe will spark for approximately 8 seconds. The burner flame should now be established.
- e. With the burner flame on, remove the flame sensor wire from the FS terminal of the DSI module.
- f. The burner flame **must shut off** and the ignition module **must lock out** with the DSI module's indicator light "red."
- g. Stop the drying cycle, with the flame sensor wire still removed, restart the drying cycle.
- h. The ignition module **must proceed** through the pre-purge, with the indicator light "red," the ignition trial time of approximately 8 seconds, with the indicator light "green," and then proceed to lock out with the indicator light "red."
- i. Functional check of the Direct Spark Ignition (DSI) Module is complete.
 1. Replace the flame sensor wire from the FS terminal to the DSI module.



AQUATEX HUMIDITY SENSOR INSTRUCTIONS

1. Before operating machine, the humidity behind control door must be placed on the outer top of dryer.
2. Install sensor by running the sensor through the hole in the outer top of dryer. See figure #1.
3. Insert rubber grommet that is on humidity sensor wire, in hole on outer top.

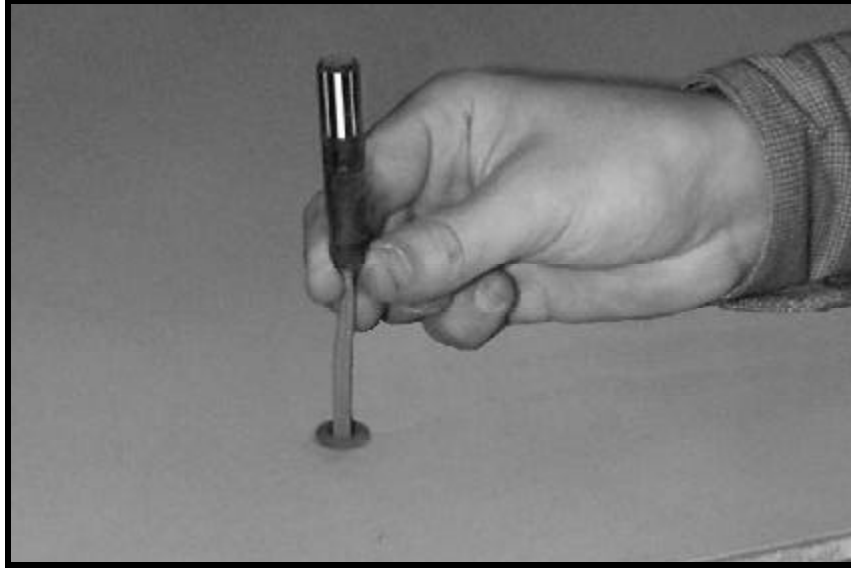


figure #1

4. Place humidity sensor in grommet as in figure #2. The humidity sensor must be free from all obstructions in order for proper operation. See figure #2.

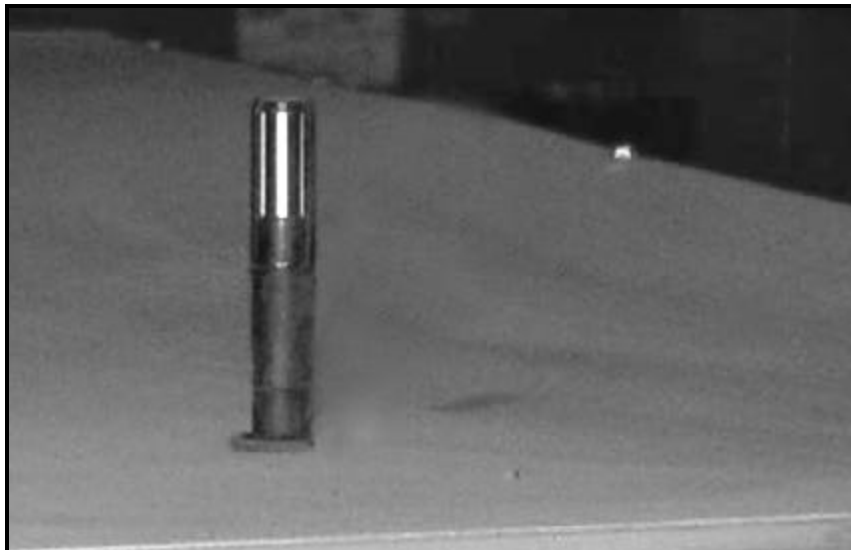


figure #2

ADC 113026 1- 07/29/99-25 2- 12/08/00-10



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