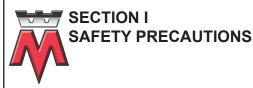
291-I-006 Effective 3-1-2024



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## TO THE OWNER, AND INSTALLATION, OPERATION AND MAINTENANCE PERSONNEL

The safety of the operator and those people that may come into contact with the equipment is of great importance to Wm. W. Meyer & Sons, Inc. ("Meyer" "factory"). The decals, shields, guards, and other protective features designed, furnished, or recommended for this machine are there for your protection. BEFORE attempting to operate or perform maintenance on this equipment READ carefully and UNDERSTAND all safety instructions contained in this set of **Instructions**. Failure to do so could result in serious injury or death.

### Equipment owner responsibilities

Equipment owners are responsible for understanding the contents of this document and compliance with applicable government laws and regulations and appropriate industry standards including the proper disposal of all collected material. The owner should also contact any associations affiliated with their market for any training, certification, and/or proper procedures (suggested or required), for their particular business. Appropriate safety and equipment training is the responsibility of the owner. The owner/operator is responsible for any hazards related to the material that is being handled by the vacuum and for ensuring that the users of the equipment have and use the proper Personnel Protective Equipment (PPE). In addition, the owner must create a Lockout/ Tagout procedure for personnel to follow before performing any maintenance on this equipment. This manual is intended to assist the owner in the training process. The operation and maintenance of this equipment should be restricted to those trained in its use and possess the expert knowledge to perform maintenance.

## **Operation and Maintenance personnel responsibilities**

Personnel that are operating or maintaining this equipment must READ carefully and UNDERSTAND the sections of this Instruction Manual relevant to the work they are performing. The various precautions and recommendations detailed within this manual are not necessarily all-inclusive. These instructions are intended to provide general safety and operational guidance relating to typical uses with which Meyer is familiar. If you have any safety or operational questions pertaining to the design or application of the equipment, we encourage you to contact Meyer at (847) 918-0111.

#### SIGNAL WORD DEFINITIONS

- **A DANGER** Indicates the presence of a hazardous situation that, if not avoided, WILL result in death or serious injury.
- **WARNING** Indicates the presence a hazardous situation that, if not avoided, COULD result in death or serious injury.
- **CAUTION** Indicates the presence of a hazardous situation that, if not avoided, COULD result in minor or moderate injury.
  - Indicates information that is important, but is not related to a particular hazard.

Indicates specific safety related instructions or procedures

#### IMPORTANT SAFETY INFORMATION

**WARNING** To reduce the risk of serious injury or death:

### Be Qualified.

INSTRUCTIONS

- Operation of this equipment must be limited to those that are properly trained in its use.
- Servicing or maintaining this equipment must be performed by trained maintenance personnel only.

#### Read all safety information.

- Read and understand all the **safety related information contained in this manual** and the **Engine manual** prior to attempting to perform any work with or on this equipment.
- **Obey** all **safety labels** on the equipment. Do not remove any safety labels. If the equipment is missing any labels (see "Safety Labeling" section), contact the factory immediately, before putting the equipment into service.

**Heavy** - handle safely. The weight of this equipment and its component parts could cause serious injury if dropped or mishandled during service or maintenance. Always use safe handling and rigging methods.

**Guard and avoid dangerous internal parts.** Components of this equipment contain moving parts that will crush and cut any body part they contact, resulting in serious injury or death.

• Inlet and outlet openings must always be properly guarded by being connected to some type of ducting (hose) on the inlet and a covering device on the outlet. Do not operate with the inlet or outlet exposed.

• **Guards** must be installed in the proper location and be in working order before operating equipment.

Never reach inside the equipment for any reason while it is in operation.

Never leave the equipment unattended while it is running.

**Keep clear.** Always keep hands, feet, or other body parts, loose clothing, jewelry, away from the inlet and outlet.

Lockout/Tagout engine before servicing or maintaining this equipment.

- Remove and maintain exclusive control of the engine ignition key.
- Before working on engine or equipment, disable engine by disconnecting the negative (-) battery terminal and securing it.
- Engine and exhaust surfaces may be hot; allow them to cool before performing any work.
- Follow your employer's Lockout/Tagout procedures.

If a malfunction should occur, turn the machine off immediately and correct the problem, before restarting the machine. If there are any questions as to the safe operation of this equipment, please do not hesitate to contact us at (847) 918-0111.

## HAZARD IDENTIFICATION

### Principle of operation

The Zephyr is a truck body/trailer mounted machine that utilizes a powerful fan to move air against resistance and is powered by a gasoline engine. The vacuum draws air through the body/baghouse and creates negative air pressure at the inlet of the baghouse. By connecting a pick-up hose to the inlet, the air moved by the machine, is used to vacuum out air ducting.

### Carbon monoxide hazard

The machine is powered by an internal combustion gasoline engine that produces exhaust fumes. These fumes contain carbon monoxide which is a colorless & odorless gas that can poison and kill someone or something in minutes. Because the Zephyr can be installed in a truck body/trailer, care must be taken that the fumes produced by the engine are piped outside of the enclosed area and away from living beings.

### Fire hazard

The air is filtered in the baghouse by cloth bags and the material vacuumed in through the pick-up hose must be compatible with cloth. Vacuumed material that is hot or smoldering CANNOT be vacuumed by this machine. If that is the type of material being handled, another technology MUST be used.

## Hazardous material

Because the machine collects whatever is vacuumed in through the hose that material MUST NOT be toxic or hazardous to one's health. In addition, after the air is filtered in the baghouse it is exhausted outside of the machine. There is the possibility of a bag breaking or the vacuum somehow malfunctioning and releasing the collected material.

## Vacuum inlet

This machine can create a powerful suction at the inlet of the baghouse. Care must be taken not to allow any body part or clothing to become drawn into the inlet. Whenever the machine is running a hose must be attached to the inlet.

## **Rotating parts hazard**

The vacuum fan wheel is metal and operates at high speed. At the inlet and outlet this creates a hazardous pinch point. The inlet and discharge of this vacuum blower are designed to be connected to piping to properly move the air. Do not operate the vacuum blower without the inlet and discharge piping connected. There is a V-Belt drive connecting the engine output shaft to the vacuum fan wheel shaft and optional compressor. This drive operates at high speed and anything contacting the belt drive will can be crushed or cut. It is covered by a belt drive guard. Do not remove the guard during operation or start the vacuum without the guard in place.

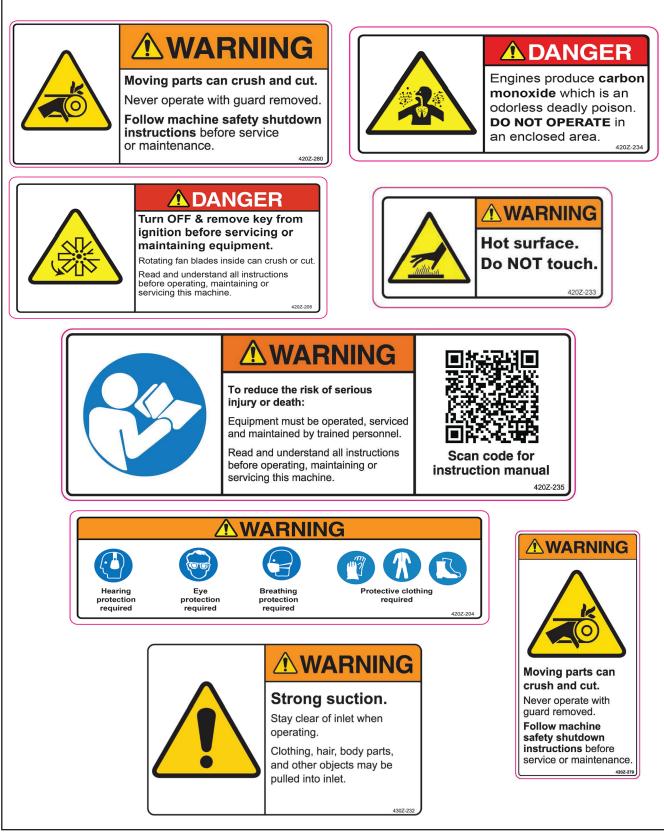
## Training

The owner also bears the responsibility to ensure that personnel who may be working around or operating the vacuum are properly trained. Personnel must be aware that: (1) before working on, cleaning, repairing, or maintaining a vacuum, Lockout/Tagout procedures must be strictly followed, (2) the vacuum must not be operated without guarding in place, and (3) before working around a vacuum, personnel must read and understand the Operator's Manual.

If there are any questions as to the safe operation of this equipment, please do not hesitate to contact us at (847) 918-0111.

## SAFETY LABELING

The following safety labels shown are affixed on the equipment. Do Not use the machine if any labels are missing, damaged, or have fallen off.





#### MACHINE SAFETY SHUTDOWN INSTRUCTIONS

Before service, maintenance, or reaching into the machine for any reason follow these steps to ensure the machine cannot be started.

- 1. Follow the Machine Shutdown Instructions.
- Disconnect the fuel tank and close the vent on the tank.
  Disconnect the negative battery terminal and secure it
- using the lockout box. 4. Follow your employer's Lockout/Tagout procedures.

## **MACHINE START UP INSTRUCTIONS**

- 1. Read and understand the Operation and Maintenance manuals for Zephyr, engine and compressor (if so equipped).
- 2. Doors to the truck/trailer must be open and no fuel vapor present.
- 3. Attach the hose to the inlet of the Zephyr using the clamp provided.
- 4. Attach additional hose lengths as needed using connectors and clamps.
- 5. Cut the correct size hole in the ductwork, attach the duct collar and attach the hose to the collar.
- 6. Attach the fuel line and open the vent on the fuel tank. Ensure that the fuel line will not come in contact with anything that could damage it.
- 7. Start the engine according to the Engine Manufacturer's Operating Manual. The engine speed is factory set at 3300-3500 RPM.
- 8. Your Zephyr is now ready for use.

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## MACHINE SHUTDOWN INSTRUCTIONS

- 1. Move the throttle to the slow position. Run the machine for approximately 5 minutes.
- 2. Turn the engine off and remove the key.
- 3. Disconnect the hose.

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Replacement label kits are available at no charge from Wm. W. Meyer & Sons, Inc. (847) 918-0111. A Safety Supplement Data sheet is included with this manual. Keep this supplement with the machine for quick reference.

SECTION II APPLICATION - INTENDED USE OF EQUIPMENT

The Zephyr is designed to safely and easily clean heating and cooling air ducts.

**WARNING** This equipment must be used only for the purpose for which it was intended. Any other use could cause bodily injury to the operator, costly damage to the equipment and void the warranty.

SECTION III

**WARNING** This machine MUST be grounded before operation. Operating without proper grounding could lead to an accumulation of static electricity which could ignite fuel vapors present in the area.

Using a forklift or other means place the vacuum in the truck body/trailer. The box must have at least one 48" side door for proper engine ventilation. Consult the factory for the proper location. Position the vacuum in the center of the truck body and drill an 1/8" dia. pilot hole through the center of each mounting foot hole. If there is any interference with the structural members of the underside of the truck body or other parts, shift the vacuum to clear these obstructions. Then drill out the holes to the proper size and bolt the unit in place. Drill a 1/4" dia. hole next to the engine mount on the passenger side. Feed the green ground wire through the hole and attach it to the truck chassis.

**WARNING** The engine exhaust must be piped away from and outside the truck box/trailer. The exhaust piping will be hot and must be guarded to avoid burns. Ensure that nothing can come in contact with the piping that may catch fire.

SECTION IV

**WARNING** Prior to use, the operator must read and understand the entire manual and all the safety related information including all the warnings and guarding instructions. This includes but is not limited to reading and understanding the "IMPORTANT SAFETY INFORMATION" and "HAZARD IDENTIFICATION" Sections. Verify that all guarding is in place and the area is clear of non-essential personnel. Failure to do so could lead to serious injury or death.

**DANGER** Engine exhaust contains carbon monoxide, a poisonous gas that could kill you in minutes. You CANNOT see it, smell it, or taste it. Even if you do not smell exhaust fumes, you could still be exposed to carbon monoxide gas. Operate only in well-ventilated areas. If you start to feel sick, dizzy, or weak while using this product, shut it off and get to fresh air immediately. Seek medical attention immediately. You may have carbon monoxide poisoning.

## 

The surfaces of the engine and exhaust can be extremely hot. Do not touch, allow to cool before servicing.

## 

The vacuum has a strong suction at the inlet. At all times keep hands, clothing, etc., away from the inlet of your vacuum.

**WARNING** Pressurized air and material leaving the discharge can cause serious injury or death if personnel are struck. Do not rely on the filter bags to stop all material that may enter the vacuum system. Stay clear of outlet and surrounding area while operating. Never operate without filter bags attached and in good repair.

## FUEL SAFETY

Fuel is highly flammable. Avoid spills, heat, and buildup of static electricity. Never fully fill the fuel tank, allow room for the expansion of the fuel so that when it expands it does not overflow. Fill the tank away from the engine and other sources of heat or open flames. Always fill the tank on the ground, never in the back of a truck or other vehicle. The tank must be in constant contact with the ground and the pump nozzle must be in constant contact with the tank during the filling process. This will lessen the chance of static electricity buildup. Failure to follow these instructions could lead to serious injury or death.

## MACHINE START UP INSTRUCTIONS

**WARNING** The doors to the truck/trailer must be open so that the operator and the machine have adequate ventilation. If there is a fuel odor, wait 10 minutes to allow the fuel vapor to dissipate before proceeding.

- 1. Read and understand the Operation and Maintenance manuals for the vacuum, engine, and compressor (if so equipped).
- 2. Doors to the truck/trailer must be open and no fuel vapor present.
- 3. Attach the hose to the inlet of the vacuum using the clamp provided.
- 4. Attach additional hose lengths as needed using hose connectors and clamps.
- 5. Attach the fuel line and open the vent on the fuel tank. Ensure that the fuel line will not touch anything that could damage it.
- 6. Start the engine according to the Engine Manufacturer's Operating Manual. The engine speed is factory set at 3300-3500 RPM.
- 7. Your Zephyr is now ready for use.



**WARNING** There is a powerful suction at the inlet of the vacuum. The inlet hose must remain attached to the vacuum until it has come to a complete shop. Failure to do so could result in serious injury or death.

- 1. Move the throttle to the slow position. Run the machine for approximately 5 minutes.
- 2. Turn the engine off and remove the key.
- 3. Disconnect the hose.

#### Machine Safety Shutdown Instructions:

- 1. Follow the machine shutdown instructions.
- 2. Disconnect the fuel tank and close the vent on the tank.
- 3. Disconnect the negative battery terminal and secure it using the lockout box.
- 4. Follow your employer's Lockout/Tag out procedures.



SECTION VI MAINTENANCE

**WARNING** Before performing any service or maintenance ensure that the machine cannot be started. Follow the Machine Safety Shutdown Instructions before service or maintenance. Failure to do so could lead to serious injury or death.

For engine service or maintenance see the engine Operator's Manual.

Your vacuum is designed to be used with minimal maintenance for all its components.

**BATTERY:** The battery provided with your equipment is of the lead acid type. The battery cables should be checked daily for corrosion and tightness.

**DRIVE BELTS:** The drive belts will need to be replaced when there are visible signs of cracking or excessive wear. The replacement interval will depend on the number of hours the machine has been operated and how well the alignment and tension has been maintained. Contact Wm. W. Meyer & Sons, Inc. for replacement belts (847) 918-0111.

DESCRIPTION	FREQUENCY
INSPECT DRIVE(S)	EACH SHIFT
CHECK GUARDS	EACH SHIFT
DRIVE ALIGNMENT & TENSION	20 HOURS
CHECK ENGINE EXHAUST PIPE	EACH SHIFT
CHECK ALL DRIVE SET SCREWS	20 HOURS
BEARINGS (DRIVE & VAC BLW)	1500 HOURS
VACUUM BLOWER OIL	4500 HOURS

**NOTICE** Noises or vibrations coming the vacuum, means that something is seriously wrong with the unit. The vacuum MUST be shut down immediately. Failure to do so could lead to costly damage to the equipment.



## SECTION VII TROUBLESHOOTING

**WARNING** Before attempting any inspection or removing any guards, FOLLOW the machine Safety Shutdown Instructions.

If a problem noise or vibration should occur, stop the equipment immediately!! Contact the factory as soon as possible. Do not operate this equipment until it has been thoroughly checked by the factory or factory authorized representative.

If there is no suction from the end of the hose and you can hear that the vacuum is running something is most likely blocking the airflow.

- 1. Follow the Machine Safety Shutdown Instructions.
- 2. Check for blockages in the hose, inlet connection to the vacuum, and the air discharge.
- 3. Inspect inside the vacuum box for something blocking the inlet to the vacuum fan.
- 4. Clear all blockages, close the vacuum box door, reconnect the hose and restart the vacuum.

**WARNING** DO NOT start or operate this equipment if any guards are removed. DO NOT remove any guards while the equipment is running. Shut down the engine first before attempting to inspect this machine. FOLLOW the Machine Safety Shutdown Instructions. If guards are removed, they MUST be reinstalled BEFORE starting the vacuum.

If the fan wheel is not running most likely the drive belts have come off or are loose. Shut the engine down as per step 1 above, remove the belt guards and examine the drive system. Replace or remount the belts and align. Reinstall the belt guards and restart the vacuum per the Machine Start Up Instructions. If this does not solve the problem, contact the factory for assistance (847) 918-0111.



# **SAFETY SUPPLEMENT**

Effective 11-1-2016

## ATTENTION INSTALLERS/OPERATORS FOR YOUR PROTECTION:

- 1. Read and understand the Operating Manual accompanying this equipment before performing any work.
- 2. Additional safety label kits are available from Meyer upon request at no charge. This is part of our effort to ensure this equipment is installed, operated and maintained in the safest possible manner. Affix these labels in locations to achieve maximum visibility and thereby alert any personnel that may ever be on-site that a potential for injury could occur.
- 3. Under no circumstances should this equipment be installed or operated in a manner that permits access to the interior of the vacuum.
- 4. Inlet connection must always have a hose attached.
- 5. In the event that the inlet is ever exposed, proper guarding to prevent access to the vacuum interior must be installed immediately and prior to start-up.
- 6. *<u>Always shut off unit and remove key</u>* before performing any work.
- 7. Always keep loose clothing, hands, feet or any parts of your body, tools and/or any foreign objects away from the inlet and outlet of the vacuum.
- 8. Never remove the hose that is on the vacuum without first shutting the vacuum down and removing the key.
- 9. Consult the Meyer factory if you have any questions regarding the proper installation, operation and maintenance of this equipment.

Wm. W. Meyer & Sons, Inc.

1700 Franklin Blvd • Libertyville, IL 60048 • Phone: 847-918-0111• Fax: 847-918-8183 Email: sales@wmwmeyer.com · Website: http://www.meyercontractor.com

File # 291-P-001

## SAFETY LABELS

Locate all of the safety labels on your equipment and know their meaning before operating your Vacuum.

## **FOR YOUR SAFETY**

- **DON'T:** VACUUM HAZARDOUS, TOXIC OR COMBUSTIBLE
  - VACUUM HOT MATERIAL (OVER 100°F) OR USE IT TO PICK UP FLAMMABLE LIQUIDS ORGASES.
  - USE THE VACUUM IN ANY AREAS WHERE FLAMMABLE OR • POISONOUS VAPORS MAY BE PRESENT.
  - PICK UP ANYTHING THAT IS BURNING OR SMOLDERING.



## 

Moving parts can crush and cut.

Never operate with guard removed. Follow machine safety shutdown instructions before service or maintenance.



## 

Engines produce carbon monoxide which is an odorless deadly poison. DO NOT OPERATE in an enclosed area. 4207



## \Lambda DANGER

Turn OFF & remove key from ignition before servicing or maintaining equipment. Rotating fan blades inside can crush or cut. Read and understand all instructions

before operating, maintaining or servicing this machine.





## WARNING To reduce the risk of serious injury or death:

Equipment must be operated, serviced and maintained by trained personnel.

4207-280

Read and understand all instructions before operating, maintaining or servicing this machine.



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#### MACHINE SAFETY SHUTDOWN INSTRUCTIONS

Before service, maintenance, or reaching into the machine for any reason follow these steps to ensure the machine cannot be started.

- 1. Follow the Machine Shutdown Instructions.
- Disconnect the fuel tank and close the vent on the tank.
  Disconnect the negative battery terminal and secure it using the lockout box.
- 4. Follow your employer's Lockout/Tagout procedures.

## **MACHINE START UP INSTRUCTIONS**

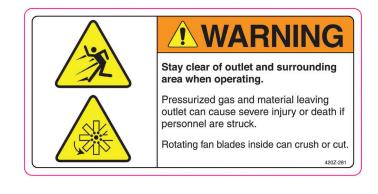
- 1. Read and understand the Operation and Maintenance manuals for Zephyr, engine and compressor (if so equipped).
- 2. Doors to the truck/trailer must be open and no fuel vapor present.
- 3. Attach the hose to the inlet of the Zephyr using the clamp provided.
- 4. Attach additional hose lengths as needed using connectors and clamps.
- 5. Cut the correct size hole in the ductwork, attach the duct collar and attach the hose to the collar.
- 6. Attach the fuel line and open the vent on the fuel tank. Ensure that the fuel line will not come in contact with anything that could damage it.
- 7. Start the engine according to the Engine Manufacturer's Operating Manual. The engine speed is factory set at 3300-3500 RPM.
- 8. Your Zephyr is now ready for use.

420Z-273

## **MACHINE SHUTDOWN INSTRUCTIONS**

- 1. Move the throttle to the slow position. Run the machine for approximately 5 minutes.
- 2. Turn the engine off and remove the key.
- 3. Disconnect the hose.

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Wm. W. Meyer & Sons, Inc. 1700 Franklin Blvd. Libertyville, IL 60048 847-918-0111

machine.

Do not store fuel tank in enclosed space.

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Email: sales@wmwmeyer.com · Web: www.meyercontractor.com