

## **MagneGrip Vehicle Exhaust Removal System**

### **Standard Operating Guideline**

The following describes the purpose and recommended use of the MagneGrip Vehicle Exhaust Removal System. The intent of the system is to remove harmful emissions produced when apparatus engines are engaged inside the bay area during emergency response and minor engine checks. This is accomplished by the direct capture and removal of hazardous vehicle exhaust fumes that otherwise would be released into the open air while the engines are operating.

To ensure the highest quality of indoor air it should be considered the responsibility of all department personnel to use the exhaust removal system as directed. All Personnel should be advised of the hazards presented by exhaust emissions and take appropriate action to reduce exposure to the harmful fumes.

#### **AUTOMATIC SYSTEM OPERATION**

Exiting the Station:

1. When the control panel is set in the **“Auto-Mode”**, upon engine startup, the exhaust fan will automatically start and begin the capture and removal of exhaust emissions via a pressure switch and/or transmitter. The exhaust fan will then shut down after a pre-set time, typically 3-minutes, after the apparatus has left the bay area.
2. After ensuring all personnel are seat-belted and the vehicle is ready to move, the driver/engineer of any vehicle attached to the system shall move the vehicle forward at a safe speed. Due to variances in spacing between apparatus and/or bay door widths, moving at the slowest speed needed to move the vehicle forward until completely passing the threshold of the bay door will minimize recoiling of the exhaust tubing.  
Though the release of the nozzle from the tailpipe adaptor is not reliant on the movement speed of the vehicle, it is recommended to exit at a speed of 5mph or less. This recommendation will ensure the safety of others and will help prevent damage to the exhaust system or nearby equipment in congested areas.
3. It is recommended that all personnel remaining in the station stay clear of the exiting vehicle and detaching exhaust system components.

Entering the Station:

1. Upon returning to the station, one person (spotter) should exit the apparatus prior to entering the bay to retrieve the nozzle of the exhaust removal system for attachment to the vehicle tailpipe adaptor.
2. The spotter should direct the driver/engineer to enter the bay until the tailpipe of the vehicle reaches a designated position for attachment of the system nozzle to the tailpipe adaptor. Upon reaching this position the spotter should direct the driver/engineer to stop to allow for nozzle attachment. To attach the nozzle to the tailpipe adaptor simply align the notches in of the nozzle boot (@ 12, 3 & 9 o'clock) with the locating pins of the tailpipe adaptor.
3. Once the nozzle is securely connected to the tailpipe adaptor, the exhaust fan will energize automatically and run for a pre-set time (typically 3 minutes) and the spotter may direct the driver/engineer to move the vehicle to its normal parking position.

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### MANUAL SYSTEM OPERATION

#### Non-moving System Operation:

1. When a vehicle is properly connected to the exhaust removal system, it can be started inside the bay area to allow for brief engine and vehicle check procedures. All engine checks should be limited to 15 minutes with engine speed no higher than 1500rpm. All engine checks requiring higher rpm's and extended run time should be conducted outside with the bay doors closed to prevent infiltration of emissions back into the bay area.
2. Prior to starting any apparatus engine to perform an engine check, the control panel switch must be moved to the "**Manual Mode**" to start the exhaust fan and by-pass the timer to allow for continuous operation. Once all engines are shut off the switch can then be moved back to the auto-position to make the system ready for the next emergency response.

#### Daily Maintenance:

1. The nozzle of the hose drop should be inspected for obstructions that could reduce or prevent airflow.
2. The tailpipe adaptor should be inspected to ensure that it is clean and in good repair for proper attachment of the nozzle. It is recommended that the tailpipe adaptor be cleaned each time the vehicle is washed.

#### Periodic Maintenance:

1. All tracks, rails, rollers and magnet assemblies should be inspected periodically for proper operation and wear. All lubrication of these items should be done using a "silicone" spray only.
2. For systems equipped with transmitters the batteries should be tested and/or replaced on an annual basis.

All other maintenance or repair issues should be reported to department personnel designated to be the exhaust system representative.

\*For additional details refer to maintenance manuals.