

City of Bend Bend Fire and Rescue

Section 1.3 - VENTILATION

Task 1.3.3 – Hydraulic Ventilation

STANDARD:

1. Use negative air pressure generated by a hose stream to ventilate products of combustion from a portion of a structure.
2. Use of all safety precautions considered “best practice” for fire ground operations.

RESOURCES:

1. Full personal protective equipment incl. SCBA, portable radios and personal tools.
2. Fully equipped pumping apparatus.
3. Enclosed structure with real or artificial smoke product.

PROCEDURE:

1. Identify & confirm location/extent of smoke/fire and fire attack information.
2. Extend hand line into area of involvement and control active fire if present.
3. Determine that hydraulic ventilation is appropriate considering:
 - a. Location and extent of fire.
 - b. Absence of potential to draw fire toward the exhaust opening being used to ventilate.
4. Create an exhaust opening, typically a window or door to the exterior of the space and assess for the possibility of unnecessary damage secondary to hydraulic ventilation.
5. Consider both water runoff and salvage needs prior to hydraulic ventilation.
6. Confirm an air entry point is open and secure and consider wind direction.
7. Address the exhaust opening with the hose nozzle approx. 2 ft. inside and directed toward the exterior.
8. Set the nozzle pattern to an approx. 60 degree fog pattern.
9. Flow water to create a negative pressure within the area, drawing smoke to the outside.
10. Adjust the nozzle pattern to cover 85 – 95% of the exhaust opening to maximize vacuum.
11. Monitor interior conditions and cease ventilation when conditions improve, ventilation is deemed ineffective or conditions worsen.

SAFETY CONSIDERATIONS:

1. Hydraulic ventilation is deemed appropriate for the given fire situation
2. Full Personal Protective Clothing including SCBA and portable radios are used throughout the operation.
3. Continually monitor fire/smoke conditions prior to, during and after ventilation operations.