	Cincinnati Fire Department Fire Training Supplement DRILL BOOK	SECTION #7 RAT Skills & Evolutions
Date: January 2018	**TOPIC TITLE:**	Total # of Pages: 5
Section #: 7	RAT Pack and Air Transfill Procedure	Topic #: 17

TOPIC #17: RAT Pack and Transfilling Air

Each of the RAT companies will be set up to perform search operations with the goal of locating missing and/or trapped firefighters. The primary objective is to supply the downed firefighter with an adequate air supply to enable the firefighter to be extricated and exit the structure safely. The equipment is designed to be light enough not to impede progress through a structure to the victim. This section outlines the use of the Rat pack which serves as the primary tool in supplying the necessary air to a fighter trapped inside of a structure.

Fig 1a

The RAT Pack consists of the following parts:
Canvas Bag
1 Hour Cylinder
1 MMR
1 MSA Face piece
1 Air Transfer Hose 12ft. Long
3 (20ft. x 1 in.) tubular webbing tied in a 10ft. loop, flat rolled and tucked in carabiner.
1 Pair of wire cutters
1 Pair of Trauma shears
100ft. of Vismet Rope

This section will focus on the air supply equipment in this bag, the transfilling of air between the RAT pack air cylinder and the receiving cylinder, which would be the cylinder for the downed fire fighter.

The canvas bag is for the purpose of holding some of the assorted parts to access and supply air to a fire fighter in need. The contents of this bag represent the minimum equipment to be carried. The bag has 4 large pockets for holding items.


Fig 2a


Fig 2b

TOOL POCKET

The purpose of this pocket is to hold some of the tools contained in the RAT pack. This is not to limit the RAT companies from adding tools the company feels will assist the rescue operations. Inside this pocket is a canvas pouch containing a pair of EMS shears and wire cutters. Also in this pocket you will find 3 pieces of 1 inch tubular webbing, flat rolled and tucked in carabiners. The pieces of webbing will be 20' long and tied in a 10' loop.

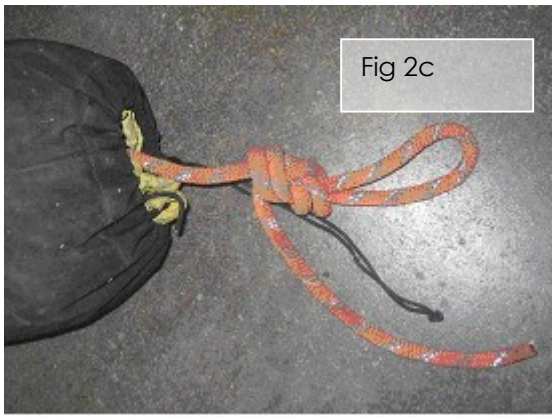
Fig 2c

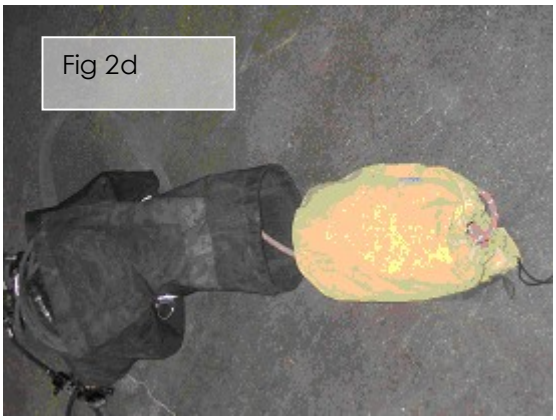
Fig 2d

ROPE POCKET

This pocket is used to hold 1 bag containing 100 feet of Vismet static kern mantle rope. This line may be deployed by the RAT team once the victim is located to designate the most direct route to the victim. This rope may also be utilized to extend the wide area search line or used for sub-floor rescue techniques. This rope is to be tied into the bottom of the RAT Pack after being threaded through the bottom of the Rope Bag.

MASK POCKET

Fig 3a

The **Mask pocket** will contain the MSA Face piece with MMR. It can be used in the event that the downed fire fighter has a non-working or damaged face piece or MMR. For the RAT companies the MMR is equipped with a soft touch button. This button allows for manual opening of the regulator in the event the member cannot take the sharp inspiration required to activate the MMR.

1. To activate the MMR simply press the soft button while the mask is in place and the system pressurized.
2. To shut off the flow of air depress the gray shut off button on the MMR

If the downed fire fighter's face piece is intact there is only a need for the MMR. Insure that a manual flow of air for the victim is initiated in the event the sharp inspiration cannot be initiated by the fire fighter.

Transfilling Air to the Cylinder of a Downed Fighter.
For the purpose of transfilling air, this section will be focusing on the RAT Pack cylinder and its parts, along with the transfill hose and receiving connection.

Transfilling Hose Pocket

Inside the large pocket is the hose and connector necessary for transfilling air. The hose is 12' in length and has a female connection on one end. With the cylinder turned off and no pressure in the system, the hose will be flexible and can be coiled into the pocket. Once the cylinder is turned on, and the system pressurizes, the hose will become more rigid.

Fig 3B

On the end of this hose is a push together type connection as pictured in Fig 4a.

Fig 4a

In this picture note that the rubber cover has been taken off. Take care to store the hose with the cover in place to protect the end of the hose from damage. The RAT Pack air cylinder must have pressure greater than the receiving air cylinder.

QUICK-FILL SYSTEM EMERGENCY OPERATIONS

1. Turn on the cylinder valve.
2. Remove the 12-foot emergency transfill hose from its protective pouch.
3. Remove the rubber dust cover on the Quick-Fill System hose assembly.
4. Remove the rubber dust cover from the male Quick- Fill System fitting.
5. Push the female fitting on to the male fitting until they click in place. Pull on the hose to be sure it snapped in place.
6. After approximately 30-60 seconds, pressure between the SCBA cylinders will be equal.
7. Disconnect the Quick-Fill System hose from the SCBA by pulling the gray sleeve back on both ends. A hiss or pop may be heard as the fittings separate and the high pressure air is sealed off.

QUICK-FILL SYSTEM PROBLEM RESOLUTION

If the dust cover will not stay on the male fitting because air is leaking Immediately reconnect the Quick-Fill System hose to seal off the leak.

COMPLETING THE TRANSFILL

1. Compare the SCBA pressure gauge or ICM Unit reading to the secondary air source pressure gauge reading. If the readings are the same, pressure is equal.

2. To disconnect the Quick-Fill System hose after transfilling, pull the gray sleeve back. The hose fitting and the male fitting will separate. A hiss or pop may be heard as the fittings separate and the high pressure air is sealed off.

3. Immediately leave the area to fresh air.

Preparing the Quick-Fill System for Storage:

a. Press in on the center of the quick-disconnect dust cap to release any pressure in the Quick-Fill System hose.
b. Roll up the hose and place it in its protective pouch.

Note: Only MSU and HR Company Members are authorized to repair or disassemble the Quick-Fill System. If repairs are required, submit the equipment to MSU.

"D" RING FOR CONNECTION TO A DOWNED FF

A large "D ring has been supplied to allow attachment to a downed firefighter in order to keep the unit with the downed firefighter and eliminate the need for one of the rescue firefighters to carry and maintain the bag when performing simple drags. **NOTE: THIS ISN'T RATED FOR A LOAD OR TO BE USED IN VERTICAL RESCUE**

1. The RAT Pack can be connected to a firefighter on his / her way to rescue a downed firefighter with the large "D" ring carabineer. (image 5a)

2. The RAT pack can be hooked to the victim to free the hands of the rescuers (Image 5b, 5c and 5d)

Fig 5a


Fig 5b


Fig 5c

Fig 5d