PROCEDURE FOR USE OF THE MSA PRESSURE DEMAND AIR MASK

The MSA air mask provides complete respiratory protection in any atmosphere for a period up to thirty minutes at normal physical exertion. The air mask also provides an audi-alarm signal which automatically operates when low air pressure develops. The alarm will operate when tank pressure is lowered to 500 psi. Certain gases and chemicals such as hydrogen cyanide, AN, and phenol which poison through the skin require full protective clothing in addition to the MSA air mask to provide complete protection. The pressure demand regulator will maintain a "positive" pressure in the face mask if a proper seal is made.

Preparation for Use

The following consecutive steps should be followed in putting on the apparatus before entering a toxic atmosphere:

1. Check pressure gauge in the cylinder valve to insure that the cylinder is full (1900-2000 psi). If there is less pressure, the service life will be reduced accordingly.

2. Put on the MSA air mask using either of the following methods: (The preferred method is the vest method.)

   a. Vest Method Extend narrow shoulder straps. Don the air mask like a vest. Lean forward while the shoulder straps are being adjusted. Fasten waist belt securely and snap chest strap if desired.

   b. Overhead Method Lay apparatus on cylinder, hip pad up and pointing away from you. Extend the shoulder straps to their full length, lean forward, grasp the cylinder and backplate firmly with both hands between the cylinder clamp and the waist belt. Lift the apparatus straight up and over the head and rest it on your back. The shoulder straps will fall in place over the shoulders. Adjust straps before straightening up. Fasten waist belt snugly. Should further adjustment be necessary, lean forward and adjust straps. Use of chest strap is optional.

3. The facepiece is put on using the following method:

   Safety or prescription glasses should be removed so a proper seal can be established. Pull out the facepiece headband straps so that the ends are at the buckles and grip the facepiece between thumb and finger. Insert the chin into lower part of the facepiece and pull headbands back over the head to obtain a firm and comfortable fit against the face at all points.

Adjust headbands as follows:

a. See that straps lie flat against the head.
b. Tighten lower or "neck" straps.
c. Tighten side straps (do not adjust forehead or "front" strap).
d. Place both hands on headband pad and push in towards the neck.
e. Repeat operations b and c.
f. Tighten forehead or "front" strap, if necessary to position the lens for best vision. Check the tightness of the facepiece fit by placing your hand over the open end of the breathing tube and inhaling gently. The facepiece should collapse on the face if the seal is satisfactory. Connect mask hose to regulator before entering contaminated area if this has not already been done.

4. Check the regulator valves. The bypass (red) valve should be in the "closed" position.

5. Open fully, and lock open with the locking lever, the main line (yellow) valve and observe the pressure gauge on the demand regulator. This gauge indicates the pressure of the air cylinder. Turn off the cylinder valve and watch the pressure gauge on the regulator. There should be no drop of pressure if the equipment is leak tight. If there is a noticeable drop of pressure, the equipment should be checked and the leak corrected before entering a toxic atmosphere. Again open the air cylinder valve to a fully open position.

6. Breath normally as the pressure demand regulator automatically satisfies all breathing requirement. There will be a positive pressure in the face mask and if an air tight seal is not maintained, depletion of the bottled air supply will occur more rapidly.

USE IN TOXIC ATMOSPHERE

The air mask furnishes complete respiratory protection for a period of time governed by the amount of exertion, but approximately 30 minutes at normal work. Therefore, it is necessary to periodically check the pressure gauge on the pressure demand regulator as it continually indicates the amount of air in the cylinder. When the needle reaches 500 psi on the pressure gauge

the audi-alarm signal will begin ringing and continue to ring until 100 psi on the gauge is reached. This means the bell will ring for approximately six minutes. When the bell starts ringing, it is time to return to fresh air.

During normal use the bypass (red) valve is closed and is only used if the pressure demand regulator becomes inoperative. Also, the bypass valve can be used if toxic vapors enter the facepiece or to remove excessive fogging of the facepiece.

EMERGENCY PROCEDURES IN TOXIC ATMOSPHERE

The MSA air mask furnishes respiratory protection only and other means of body protection must be considered while working in hazardous environments.

1. If a facepiece develops leaks or poor seal is made, the bypass (red) valve can be opened and adjusted for a more positive pressure on the facepiece thus prohibiting toxic vapor from entering the mask. When this is done the air supply will be used up more rapidly and a constant visual inspection of the regulator pressure must be made.

2. When entry into hazardous areas is necessary, a life line should be attached to the safety ring provided on the MSA air mask frame.

3. Never enter a hazardous area containing toxic chemicals or an oxygen depleted vessel without a backup man.

4. A full acid or vapor suit should be used with the MSA air mask when working in areas containing toxic chemicals that can poison by skin absorption.

5. Know what [redacted] toxic chemical exposure will be encountered and take proper precautions. If you are not sure of all conditions request assistance from the Safety Department.

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