

LESSON PLAN

**PART I
COVER SHEET**

LESSON TITLE: MCU-2/P Series Mask and Accessories

TRAINING METHOD: Demonstration - Performance

REFERENCES: T.O. 14P4-15-1, Chemical-Biological Mask Type MCU-2/P
T.O. 14P4-1-151, Chemical-Biological Canisters and Filter Elements
Procedures and Serviceability List

**AIDS AND
HANDOUTS:** One MCU-2/P Mask, Protective Hood, M1 Canteen Cap, and
Waterproofing Bag per student.
Spectacle Inserts if required.
Mask confidence area or chamber, simulants or training agents, and
support equipment as applicable.
Attachment 1: Mask Illustration
Attachment 2: Hood Adjustment Illustration
Attachment 3: Mask Carrier Wear Illustrations
PIN 606041DF (B Block), B-2 - MCU-2/P Mask and Accessories
AFMAN 32-4006, Mask Confidence and Liquid Hazard Simulant
Training

LESSON OBJECTIVE: Given an MCU-2/P Series Mask, its accessories, a demonstration on the use of the mask, and practice, correctly perform all of the task steps listed. The student will also, during the final course exam, demonstrate understanding of at least four samples of behavior listed below.

SAMPLES OF BEHAVIOR:

1. State the purpose of the MCU-2/P Series Mask.
2. Identify limitations of the MCU-2/P Series Mask.
3. State the inspection frequencies for the MCU-2/P Series Mask.
4. State when the C-2 canister must be replaced.
5. Identify the proper adjustments while wearing the protective hood.
6. Identify the proper steps for donning the mask with hood attached.

TASK STEPS:

1. Inspect and determine serviceability of the MCU-2/P Series Mask.
2. Remove and replace the C-2 canister.
3. Adjust mask to fit.
4. Inspect hood for serviceability.
5. Install hood onto mask and properly adjust according to weather conditions.
6. Adjust and wear mask carrier.
7. Stow mask in carrier.
8. Don and doff mask with hood attached.

ORGANIZATIONAL PATTERN: Topical

SUGGESTED COURSE(S) OF INSTRUCTION: NBC Defense Training

STRATEGY: Ensure each student is proficient and confident with their mask. Start by ensuring students have the correct size mask by using the proper measuring caliper. Stress the importance of the mask as their single most important piece of equipment. Always verify the inspection criteria and operational procedures against the most current technical references. Most Readiness Flights have some type of local "Survive To Operate" guide developed. Since deployed individuals will not have their own T.O., the local guide is the best place to list inspection criteria. This lesson plan will only cover the basics. After teaching donning of the mask with the hood attached, conduct a mask drill to ensure students can don the mask and hood in 15 seconds. When teaching the canteen cap, the use of water is not necessary. Use the procedures in AFMAN 32-4006, to conduct a mask confidence training exercise. The mask confidence training helps instill student confidence in the mask as well as their own ability to properly don and seal the mask.

LESSON OUTLINE:

- MAIN POINT 1. MCU-2/P MASK
- A. Purpose
 - B. Sizes
 - C. Types
 - D. Limitations
- MAIN POINT 2. MASK INSPECTION AND THEORY OF OPERATION
- A. Inspection frequency
 - B. Documentation
 - C. Familiarization and Inspection of Components
 - D. Accessories
 - E. Operation
 - F. Cleaning
- MAIN POINT 3. CHEMICAL/BIOLOGICAL C-2 CANISTER
- A. Replacement
 - B. Conversion Option
- MAIN POINT 4. FITTING THE MASK
- A. Procedures
 - B. Drinking tube
 - C. "Leak check"
- MAIN POINT 5. PROTECTIVE HOOD
- A. Purpose
 - B. Types
 - C. Attaching Hood to Mask
- MAIN POINT 6. MASK CARRIER
- A. Shoulder carry position
 - B. Leg carry position with web belt
 - C. Leg carry position without web belt
- MAIN POINT 7. DONNING AND DOFFING MASK (WITH HOOD ATTACHED)
- A. Donning
 - B. Doffing
- MAIN POINT 8 ADDITIONAL ACCESSORIES
- A. M1 Canteen Cap
 - B. Waterproofing Bag
 - C. Spectacle Inserts
 - D. Outserts
- MAIN POINT 9. OPERATIONAL SAFETY TIPS

PART II

TEACHING PLAN

INTRODUCTION

ATTENTION: "Alarm Red, MOPP 4!!!" The base is under attack and there is a threat of NBC agents being used.

MOTIVATION: The MCU-2/P Series Mask is your first line of defense for your eyes and respiratory tract. Knowing how to use your mask will enable you to survive and operate in a contaminated environment.

OVERVIEW: This lesson will cover:

- ⇒ Purpose, size, types, and limitations
- ⇒ Mask inspection procedures and theory of operations
- ⇒ Chemical/Biological C-2 canister filters (Known simply as the C-2 canister)
- ⇒ How to fit and properly adjust the mask
- ⇒ The protective hood; purpose, types, inspection, and wearing instructions
- ⇒ Wearing the carrier and storing the mask
- ⇒ Donning and doffing the mask
- ⇒ Accessories such as the M1 canteen cap and the waterproofing bag
- ⇒ Operational safety tips while wearing the mask

TRANSITION: We'll begin by covering the purpose of the mask.

BODY**MAIN POINT 1.
MCU-2/P MASK****A. PURPOSE****MCU-2/P Series Mask**

A. The MCU-2/P Series Mask, with a serviceable C-2 canister installed, protects your face, eyes, and respiratory tract from chemical and biological warfare agents and radioactive dust particles. It will also protect against riot control agents such as tear gas. The mask:

TWO-VOICEMITTERS

⇒ Has two voicemitters: the front one is for face-to-face speech and the side one is for use with communications equipment such as a telephone or radio.

DRINKING TUBE

⇒ Is equipped with a drinking tube, which enables you to drink from a canteen equipped with an M1 canteen cap.

SPECTACLES

⇒ Can be worn with approved mask compatible spectacles.

FLEXIBLE EYELENS

⇒ Has a flexible eyelens which enhances the use of binoculars, gun scopes, or other optical equipment.

GOOD VIEW

⇒ Gives you a good all-around view with its single lens.

INTERCHANGEABLE
CANISTER

⇒ Allows the C-2 canister to be used on either side of the mask as desired.

B. SIZES

B. The proper size mask is essential to providing maximum protection. There are three mask sizes, which are identified by raised letters on the front facepiece portion of the mask above the eyelens.

The mask will be marked with either an S, M, or L for short, medium, or long.

C. TYPES

C. In addition to the basic MCU-2/P mask, an MCU-2A/P mask is available . The MCU-2A/P is equipped with a micmitter, which allows the use of a specialized microphone while wearing the mask.

D. LIMITATIONS

D. The MCU-2/P Series Mask has certain limitations:

NOT A REPLACEMENT
FOR REQUIRED SELF-
CONTAINED
BREATHING
APPARATUS

⇒ This mask is not effective, therefore not authorized, for use during industrial chemical spills. Chemicals of this nature normally require a self-contained breathing apparatus. For example, the mask and C-2 canister would not be effective against chemicals such as ammonia, chlorine or even carbon monoxide fumes.

NOT EFFECTIVE IN
CONFINED SPACES

⇒ The mask is not effective in confined spaces when there is insufficient oxygen to support life. The MCU-2/P Series Mask is simply a filter respirator; it does not supply or produce oxygen.

TRANSITION:

Now that you're familiar with your mask, let's talk about the inspection criteria and theory of operation.

MAIN POINT 2.
MASK INSPECTION
AND THEORY OF
OPERATION

Since, it's your responsibility to maintain a serviceable mask, you need to know when and how to inspect it; how to document the inspection; and how the mask is designed to work.

A. INSPECTION
FREQUENCY

A. Inspect the mask upon issue, every six months after removal from the packaging, and at least every seven days during wartime.

B. DOCUMENTATION

B. Document the mask's inspection on a DD Form 1574 (Serviceability Tag) or data automated product.

INCLUDE ALL OF THE
INFO ON THE MASK
AND INSPECTION

Whichever system you use, annotate the national stock number, type, and size of the mask. Also include the mask lot number, your organizational address, and your signature. Indicate the date you inspected the mask and the date due for the next inspection.

ANNOTATE ALL INFO
ON THE INSTALLED
CANISTER

TRANSITION:

C. FAMILIARIZATION
AND INSPECTION OF
COMPONENTS

INSTRUCTOR'S NOTE: Show the students where to find the lot number and size located on the mask.

You may use the same inspection document to record the recurring inspection each time you inspect the mask.

When a serviceable C-2 canister is installed, annotate the canister lot number and the date it was installed in the remarks section of the DD Form 1574 or in an area designated on the data automated form.

INSTRUCTOR'S NOTE: Attachment 1, in Part IV, can be used while explaining components and inspection

It's important you become familiar with the components of your mask. One of the best ways to do this is by inspecting your mask.

C. The MCU-2/P Series Mask consists of the following components:

INSTRUCTOR'S NOTE: Verify procedures in T.O. 14P4-15-1, Table 5 for complete inspection criteria and explain to the students what to do if there are discrepancies.

FACEPIECE

⇒ The facepiece is molded of silicone rubber which forms an effective seal on the face. Ensure it's not cracked or deteriorated.

HEAD HARNESS

⇒ The head harness holds the mask to the face. It has six elastic straps, a headpad, and a quick-don pull tab. Ensure the head harness has elasticity for a proper seal.

VOICEMITTERS

⇒ Voicemitters are located on the center and either side of the facepiece. The voicemitters transmit the user's voice outside the mask. The side voicemitter is useful when using phones, radios, or other communications equipment. Always make sure these voicemitters aren't damaged and are tightly seated.

INSTRUCTOR'S NOTE: If students require use of the micmitter, briefly mention it is part of the MCU-2A/P front voicemitter.

OUTLET VALVE
ASSEMBLY

⇒ The outlet valve assembly has a one-way valve at the bottom of the facepiece. The valve should be replaced if it's damaged or doesn't seat properly.

OUTLET VALVE
COVER

⇒ The outlet valve cover is a rubber cover that holds the drinking tube coupling. It fits over the end of the outlet valve body and can be easily replaced if torn, dry rot or otherwise damaged.

DRINKING TUBE

⇒ The drinking tube is a rubber tube used with the M1 canteen cap to provide water to the wearer. The tube shouldn't have any breaks or leaks in it.

NOSECUP

⇒ The nosecup is made of silicone rubber and is located inside the facepiece. The nosecup helps prevent the mask from fogging by allowing air to enter through two nosecup valves and keeping warm air off the eyelens.

INLET VALVE
ASSEMBLY

⇒ The inlet valve assembly consists of a one-way valve disc and an air deflector assembly. As always, when inspecting any disks make sure they're flat; not ripped or curled.

LENS

⇒ The lens is made of transparent urethane and provides a wide field of vision. The lens must be free from stains, excessive scratches, and cracks.

OUTSERT

⇒ The outsert is a clear or tinted shell that protects the lens from scratches and chemical droplets.

CANISTER

⇒ The C-2 canister is made with layers of impregnated charcoal which provide the filtration. The canister must be free from dirt, debris, and water. Check it for physical damage around the seams and threads.

D. ACCESSORIES

D. The mask also has the following accessories:

- ⇒ mask carrier
- ⇒ protective hood
- ⇒ waterproofing bag
- ⇒ M1 canteen cap
- ⇒ spectacle inserts
- ⇒ mask outsert

We will cover these accessories in more detail throughout the lesson.

INSTRUCTOR'S NOTE: Attachment 1, in Part IV, can be used to explain the theory of operation.

TRANSITION:

Now that you're familiar with the components let's look at how they all work together.

E. OPERATION

E. With the mask on and properly adjusted it works as soon as you inhale:

⇒ The air comes in through the C-2 canister which filters out toxic agents before air enters the facepiece.

⇒ The air then passes through the one-way inlet valve and hits the air deflector. The air is deflected across the lens to prevent fogging.

⇒ The air is drawn through the one-way nosecup valves. The nosecup prevents warm, exhaled air from fogging the lens.

⇒ When you exhale, the air escapes the mask through the one-way outlet valve and then out the outlet valve cover.

F. CLEANING

F. With the hood and canister removed from the mask, you can clean the mask by:

⇒ Removing the haze from the mask lens using a wet cloth and a mild liquid detergent.

⇒ Immersing the mask, hood and outsert in a mild liquid detergent and warm solution. Agitate to clean thoroughly.

TRANSITION:

MAIN POINT 3.
CHEMICAL/
BIOLOGICAL C-2
CANISTER

A. REPLACEMENT

⇒ Rinse thoroughly and dry.

⇒ Return the mask to the "ready position" by installing the hood, canister, and outsert.

Up to this point, we've talked about the mask, its capabilities, inspection, and how it operates. Before we go into fitting and wearing the mask, we need to discuss the single most important component of the mask -- the C-2 canister. We'll talk about what the C-2 canister does, when to replace it, and how to mount the canister on either side of the mask.

Normally, the only thing preventing you from taking your mask to war today is an unserviceable canister installed on it.

A serviceable C-2 canister filters chemical and biological agents as well as radioactive dust particles from the air you breathe.

A. T.O. 14P4-1-151 will give you all the information on serviceable and expired lot numbers as well as complete replacement criteria.

Once filters are removed from the factory sealed package they have a service life based on various climatic conditions and/or exposure to chemical warfare agents. Normally you will be directed by higher authority to replace filters especially when there is a clear indication of imminent use of chemical or biological agents. Filters will also be changed when:

15 DAYS AFTER
EXPOSURE

⇒ fifteen days have elapsed after exposure to CB agents (**with the exception of BLOOD agents.**)

IMMEDIATELY AFTER
BLOOD

⇒ after exposure to BLOOD agents. Blood agents degrade the canisters quicker than other agents.

DAMAGE

⇒ they show evidence of mechanical damage such as breaks or cuts on edge of seal, punctures, or dented threads.

IMMERSED IN WATER

⇒ if the canister has been immersed in water or wetted in any way.

BREATHING
RESISTANCE

⇒ if you experience excessive breathing resistance. A clogged canister will increase breathing resistance but will not impair the filter's ability to remove agents.

TROPICAL

⇒ they have been exposed for 2 months in tropical climates (Panama, Puerto Rico, etc.)

TEMPERATE

⇒ they have been exposed for 12 months in temperate climates (Korea, Europe, etc.)

ARCTIC

⇒ they have been exposed for 24 months in arctic climates (Alaska etc.)

INTERCHANGEABLE IN
NATO

The C-2 canister was also designed to be interchangeable with other NATO canisters.

B. CONVERSION
OPTION

B. The MCU-2/P Series Mask was designed so the canister could be mounted on either side depending on the wearer's needs.

For example, if a person is right handed and has to fire a weapon, he/she would probably want the canister on the left side of the mask.

To change the positions of the inlet valve assembly/canister and the side voicemitter, simply:

<p>INSTRUCTOR'S NOTE: Verify procedures in T.O. 14P4-15-1 for conversion option.</p>

⇒ Remove the canister if installed.

- ⇒ Carefully remove the inlet valve assembly.
- ⇒ With the straight side of carrier shoulder strap D-ring, unscrew and take out the side voicemitter retaining ring, voicemitter and gasket. Discard the old gasket.
- ⇒ Push inlet valve body in desired port. Make sure the inlet valve body is properly seated and the air deflector is in the correct position.
- ⇒ Screw canister into facepiece and tighten.
- ⇒ Put a new gasket and voicemitter in the remaining port.
- ⇒ Install the side voicemitter with the flange and four pins facing outward.
- ⇒ Install a new gasket under the side voicemitter each time it is removed.
**REUSE OF THE OLD GASKET
COULD RESULT IN LEAKAGE.**
- ⇒ Screw in the voicemitter retaining ring (slots outward) and tighten with the carrier D-ring.

TRANSITION:

Now you know the parts of the mask and how to move and when to change the canister, let's go over how to fit your mask.

MAIN POINT 4.
FITTING THE
MASK

Let's talk about how to fit the mask and what is required to do a "leak check".

A. PROCEDURES

A. With the mask ready for fitting (canister installed, head harness straps loose and reversed over the front of the mask, and the outsert removed) you can fit the mask as follows:

- ⇒ Place mask on face, keeping the hair out of the way and pull the head harness over the head using the quick don tab.
- ⇒ Tighten temple straps, one at a time, using small jerking pulls until the mask feels snug.
- ⇒ Check that the headpad is centered at the high point of rear of head. Adjust if necessary.
- ⇒ Tighten the neck straps then the forehead straps in the same manner.

B. DRINKING TUBE

The mask should be comfortable on the face with no straps cuttings or pinching. The mask should not be so tight the nosecup presses painfully on the nose.

B. While wearing the mask, with the head harness properly adjusted, check the internal and external drinking tubes for a secure fit.

C. "LEAK CHECK"

C. The last thing to check when fitting the mask is to perform a negative pressure check ("leak check") by pressing your palm over the end of the canister and inhaling. The mask will deflect and you shouldn't feel any air entering your mask. You will have to check and adjust your mask if leaks occur.

You can now remove the mask. Loosen ONLY the mask neck straps. Grasp mask by pulling outlet valve assembly and remove by pulling down, outward, and up.

TRANSITION

Before we get into the actual donning procedures we will cover the protective hood and how to attach it to the mask.

MAIN POINT 5. PROTECTIVE HOOD

The protective hood is made from rubber-coated nylon cloth. The hood has underarm straps which hold the hood in place, an adjustable neck strap to aid in hood pressurization, and two snap-fastening temple tab straps for attaching the hood to the mask temple tabs. The face opening in the hood is made to fit tightly around the lens.

A. PURPOSE

A. It is designed to cause pressurization (a balloon effect inside the hood) which helps keep out agent vapors and provides protection against liquid droplets.

B. TYPES

B. There are two types of hoods in stock. Some early production hoods are not equipped with a neck cord, underarm straps, or temple straps. Therefore, they can not be attached to the mask and must be stowed, donned, and doffed as separate items. The later, most common, model is furnished with a neck cord, underarm straps, and temple straps.

Inspect your hood for damage (pinholes, tears, rips, or rubber coating scuffed off or sticky) prior to attaching to the mask or donning.

C. ATTACHING HOOD
TO MASK

C. To attach the hood to the mask follow these simple steps:

⇒ Unfold the hood and loosen the neck cord.

⇒ Turn the hood inside out. Spread the hood flat, with the face opening up.

⇒ Place the mask face down on the hood and insert the canister through the face opening.

⇒ Fasten the hood temple straps over the mask temple tabs.

⇒ Pull the hood over the mask as you turn the hood right side out.

⇒ Stretch the hood face opening around the top and sides of the mask lens.

⇒ The temperature outside determines how you adjust the hood on your mask.

WEATHER
ADJUSTMENT FOR THE
HOOD

COVER THE OUTLET
VALVE ASSEMBLY 30°
- 90° DEGREES
FAHRENHEIT

EXPOSE THE OUTLET
VALVE ASSEMBLY
BELOW 30° OR ABOVE
90° F

Ensure the hood covers the top of the outlet valve cover. However, if you have to wear the hood in temperatures below 30° F or above 90° F, stretch the lower part of the face opening under the outlet valve assembly.

Below 30° or above 90° Fahrenheit creates uncomfortable wearing conditions. However, when the hood is worn covering the outlet valve assembly, the hood fills slightly with air.

This inside pressure provides additional protection to the head, neck, and respiratory areas of the user.

INSTRUCTOR'S NOTE: Use Attachment 2, in Part IV, to illustrate the different hood adjustments

⇒ Next, pull the back of the hood up and over the face of the mask and then reverse the head harness over the face of the mask.

⇒ Stow the mask and hood in its carrier, positioned upright and facing away from the body.

MAIN POINT 6.
MASK CARRIER

Proper donning of the mask depends on your ability to have immediate access to the mask. This will happen if you wear your carrier properly.

You may wear the mask carrier in three different positions. However, there is one common denominator: the carrier is designed to only be worn on a person's left side.

INSTRUCTOR'S NOTE: Use Attachment 3, in Part IV, (Mask Carrier Wear Illustration) to illustrate different wearing positions.

A. SHOULDER
CARRY POSITION

A. Shoulder Carry Position:

⇒ With the carrier on your left side, pass the shoulder strap (wide strap) around your back and over your right shoulder. Fasten the D-ring to the hook on the top inside corner of the carrier. Adjust the strap so the carrier hangs at your waist.

⇒ Route the waist (thin) strap around your waist and connect to the O-ring on the carrier. Adjust the strap for a close secure fit.

B. LEG CARRY
POSITION WITH WEB
BELT

B. Next is the leg carry with carrier attached to the web belt:

C. LEG CARRY
POSITION WITHOUT
WEB BELT

TRANSITION:

⇒ Roll up the long wide strap and put it in the pocket at the top of the carrier.

⇒ With the carrier against your left hip, fasten the front and the rear hook (on the short wide strap) to your web belt.

⇒ Route the thin strap around your left leg (a double wrap may be required for a smaller leg), and connect it to the O-ring on the carrier. Adjust the strap for a close, secure fit.

C. The last way to wear the carrier is the leg carry position without a web belt.

⇒ With the carrier against your left hip, route the wide strap around your waist. Fasten the D-ring to the hook sewn on top inside corner of the carrier. Adjust the strap so the carrier is snug around your waist.

⇒ Route the thin strap around your leg in the same manner as you did in the web belt position.

Now you're ready. You have inspected the mask, attached the hood, and stored the mask in the carrier. Next you will learn to properly don the mask.

MAIN POINT 7.
DONNING AND
DOFFING MASK
(WITH HOOD
ATTACHED)

Due to the short time it takes for toxic agents to affect you, becoming an expert in donning the mask and getting an air tight seal is imperative. With suspected contamination, every step in donning the mask is important and must be done quickly and accurately. You must put the mask on before you take another breath.

INSTRUCTOR'S NOTE: Verify donning procedures in T.O. 14P4-15-1.

A. DONNING

A. Donning the mask with hood attached should take place in 15 seconds. This allows you to don the mask and get an airtight seal in nine seconds with an additional six seconds to pull the hood over the head and tighten the neck cord. Follow these steps in this order:

15 SECONDS

- (1) STOP BREATHING!
- (2) Close eyes tightly.
- (3) Remove headgear.
- (4) Remove mask and hood from carrier.

(5) Hold outlet valve assembly in palm of one hand. Using free hand, push forehead hair aside. Place mask on face forcing the chincup very tightly against chin. Pull headharness over head using the quick-don tab.

(6) Grasp a neck strap in each hand and tighten with small jerking motions. The neck straps should be the only straps adjusted. Temple and forehead straps are adjusted when you fit the mask and then left in position.

(7) Expel air held in the lungs.

(8) Press palm of one hand over the canister opening. Inhale to determine whether an airtight seal of mask against face has been obtained.

(9) Open eyes and RESUME NORMAL BREATHING.

(10) Pull back of hood over your head so the hood covers your head. Drape cape over shoulders. Make sure the cape is under neck cord.

(11) Use neck cord fastener to tighten neck cord until hood is held snugly around neck.

B. DOFFING

(12) Pass straps under arms. Fasten ends to front of cape.

(13) Replace headgear and close the carrier.

B. Doffing the mask involves these five steps:

(1) Unfasten underarm straps and loosen neck cord.

(2) Pull back of cape forward over head and leave hood suspended from front of mask.

(3) Loosen ONLY the mask neck straps. Grasp mask by pulling outlet valve assembly and remove by pulling down, outward, and up.

(4) Shake or wipe any moisture or frost accumulations from inside of hood and mask.

(5) Properly stow mask in carrier.

INSTRUCTOR'S NOTE: Donning and doffing mask with hood **unattached** is different. Refer to T.O. 14P4-15-1 for these procedures.

TRANSITION:

This next section will briefly cover some additional equipment and capabilities of the MCU-2/P Series Mask.

MAIN POINT 8.
ACCESSORIES

There are some additional pieces of equipment you can use with your mask. We have already covered the hood and carrier. There is also an M1 canteen cap, waterproofing bag, and spectacle outserts.

INSTRUCTOR'S NOTE: Use T.O. 14P4-15-1 to teach procedures for drinking while wearing the mask and for using the waterproofing bag.

A. M1 CANTEEN CAP

A. As you know the MCU-2/P Series Mask is equipped with a drinking tube. To use the drinking tube you must replace the standard canteen cap on your canteen with an M1 canteen cap. Tighten the cap very tight to ensure a gas tight seal.

B. WATERPROOFING
BAG

B. The waterproofing bag is essential in keeping your mask and C-2 canister dry when climatic conditions could cause them to get wet.

There are two warnings you must be aware of when using the waterproofing bag.

C. SPECTACLE
INSERTS

D. OUTSERTS

MAIN POINT 9.
OPERATIONAL
SAFETY TIPS

⇒ Don't store the mask in the waterproofing bag for more than 24 consecutive hours. Offgassing from the bag material and moisture accumulation may affect the canister.

⇒ Don't put food in the bag.

C. There are specially designed authorized inserts which allow personnel who must wear glasses to see while wearing the mask. They are available by prescription through the base medical facility and they have fitting procedures which check the mask seal while wearing the inserts.

D. The outserts are clear or tinted polycarbonate shells. The outserts protect the lens from scratches, chemical droplets, and oil and petroleum products.

Safety is paramount when using any protective equipment. This last section will cover or re-emphasize some basic safety issues concerning the MCU-2/P Series Mask:

HAVE THE PROPER
SIZE

Ensure you have a proper size mask by using the proper measuring caliper. This is usually done at Supply when you receive your operational mask. The CE Readiness Flight or your unit disaster preparedness representative can size your mask if they have the proper measuring caliper. A leaking mask will not protect against toxic agents.

DON'T OVERTIGHTEN

Don't over tighten the mask. Over tightening may actually cause leaks.

CHECK FOR LEAKS

Check the mask for leaks every time you put it on by performing your negative pressure or "leak" check.

DON THE MASK
QUICKLY

Don the mask quickly. Remember it should be on and sealed before you take another breath.

REMEMBER THE
LIMITATIONS

The MCU-2/P Series Mask is not intended for industrial chemical use and is not effective in confined spaces where there is not enough oxygen to support life.

WEAR THE HOOD
PROPERLY

When wearing the mask with the hood over the outlet valve do not loosen the straps of the head harness for comfort. If the straps are loosened, the wearer is in danger of suffocation by carbon dioxide and unprotected against toxic agents.

EXTREME WEATHER
CONDITIONS

If you become overheated in cold weather, do not remove your mask outdoors until your head cools and sweat has dried. Frostbite may result if the mask is removed while your face is still wet.

HAVE SERVICEABLE
CANISTERS

A serviceable C-2 canister must be installed in the MCU-2/P Series Mask prior to use in a toxic chemical or biological environment.

CONCLUSION

SUMMARY:

In summary, we covered:

- ⇒ Purpose, size, types, and limitations of the MCU-2/P Series Mask
- ⇒ Mask components, inspection procedures, and how the mask works
- ⇒ The C-2 canister; when to change it and how the conversion option works
- ⇒ How to fit and perform a "leak" check on the mask
- ⇒ How to attach the protective hood and adjust it according to weather conditions
- ⇒ Different positions for wearing the carrier and how to stow the mask in the carrier
- ⇒ Donning and doffing procedures for the mask with the hood attached
- ⇒ Different accessories with the mask
- ⇒ And finally, some operational safety tips

REMOTIVATION:

The MCU-2/P Series Mask can save your life, if you know how to use it properly

CLOSURE:

This concludes this lesson.

TRANSITION:

(Develop locally to next topic)

PART III
EVALUATION
STUDENT PERFORMANCE STANDARDS

The following steps were completed by the student: (* Must be done without error)	Yes	No
1. Inspect and determine serviceability of the MCU-2/P Series Mask. *		
2. Remove and replace the C-2 canister.		
3. Adjust mask to fit *		
4. Inspect hood for serviceability.		
5. Install hood onto mask and properly adjust according to weather conditions.		
6. Adjust and wear mask carrier.		
7. Stow mask in carrier.		
8. Don and doff mask with hood attached. *		

TEST ITEMS

1. LESSON OBJECTIVE: State the purpose of the MCU-2/P Series Mask .

QUESTION:(TRUE or FALSE)

The MCU-2/P Series Mask protects the wearer's face, eyes, and respiratory tract against all known chemical and biological warfare agents and radioactive dust particles.

- a. True
- b. False

KEY: a

REFERENCE: Main Point 1

2. LESSON OBJECTIVE: Identify limitations of the MCU-2/P Series Mask.

QUESTION:(MULTIPLE CHOICE)

Which of the following statement(s) is TRUE?

- a. The MCU-2/P Series Mask will not protect against ammonia or carbon monoxide fumes.
- b. The MCU-2/P Series Mask is an authorized respiratory device for industrial chemical spills.
- c. The MCU-2/P Series Mask is effective in confined spaces where the oxygen content is insufficient to support life.
- d. None of the above.

KEY: a

MAIN POINT 1

3. LESSON OBJECTIVE: State the inspection frequencies for the MCU-2/P Series Mask.

QUESTION:(MULTIPLE CHOICE)

Which of the following statement(s) is TRUE?

- a. The MCU-2/P Series Mask is inspected upon issue.
- b. The MCU-2/P Series Mask is inspected six months after removal from packaging.
- c. The MCU-2/P Series Mask is inspected every seven days during wartime.
- d. All of the above.

Key: d

Reference: Main Point 2

4. LESSON OBJECTIVE: State when the C-2 canister must be replaced.

QUESTION:(MULTIPLE CHOICE)

When higher authority directs or when a clear indication of the use of chemical/biological warfare agents is imminent, personnel should:

- a. Be issued serviceable C-2 canisters from base supply.
- b. Inspect and repair the existing C-2 canister installed on their MCU-2/P mask.
- c. Immediately replace and install a serviceable C-2 canister on their MCU-2/P mask.
- d. Replace C-2 canister as soon as possible after the first attack involving chemical/biological agents.

Key: c

Reference: Main Point 3

5. LESSON OBJECTIVE: Identify the proper adjustments while wearing the protective hood.

QUESTION:(TRUE or FALSE)

The hood, when configured for moderate temperatures (30° - 90° F), is attached to the mask with the outlet valve assembly exposed.

- a. True
- b. False

Key: b

Reference: Main Point 5

6. LESSON OBJECTIVE: Identify the proper steps for donning the mask with hood attached.

QUESTION(MULTIPLE CHOICE)

Which of the following lists the steps in the correct order for donning the MCU-2/P Series Mask with the hood attached.

- a. Close eyes; place mask on face; stop breathing; adjust neck straps; determine an airtight seal; expel the air in your lungs; resume normal breathing
- b. Stop breathing; close eyes; place mask on face; expel the air in your lungs; adjust neck straps; resume normal breathing; and determine an airtight seal.
- c. Stop breathing; close eyes; place mask on face; adjust neck straps; expel the air in your lungs; determine an airtight seal; and resume normal breathing.
- d. Place mask on face; stop breathing; close eyes; determine an airtight seal; adjust neck straps; expel the air in your lungs; and resume normal breathing.

Key: c

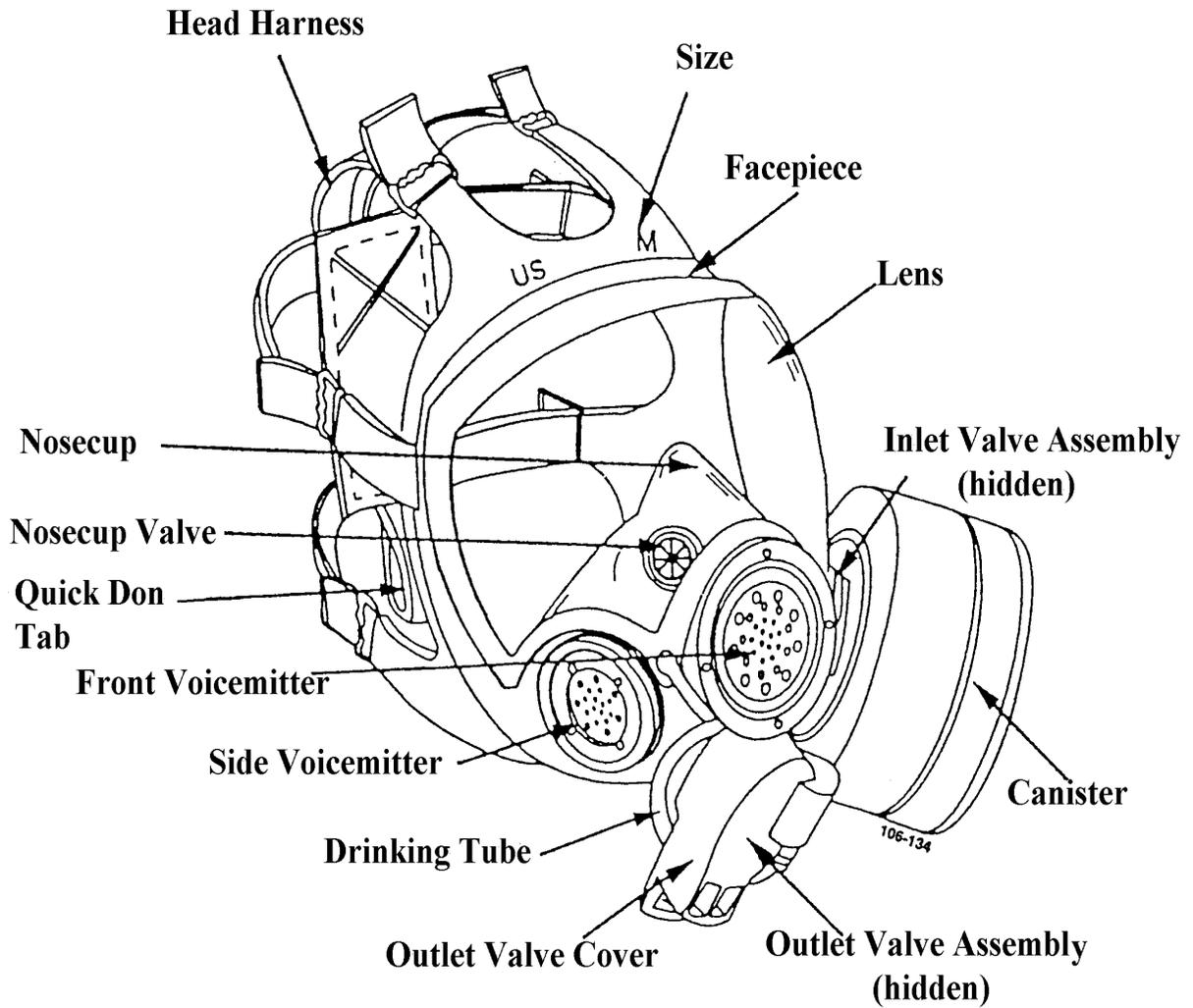
Main Point 7

PART IV

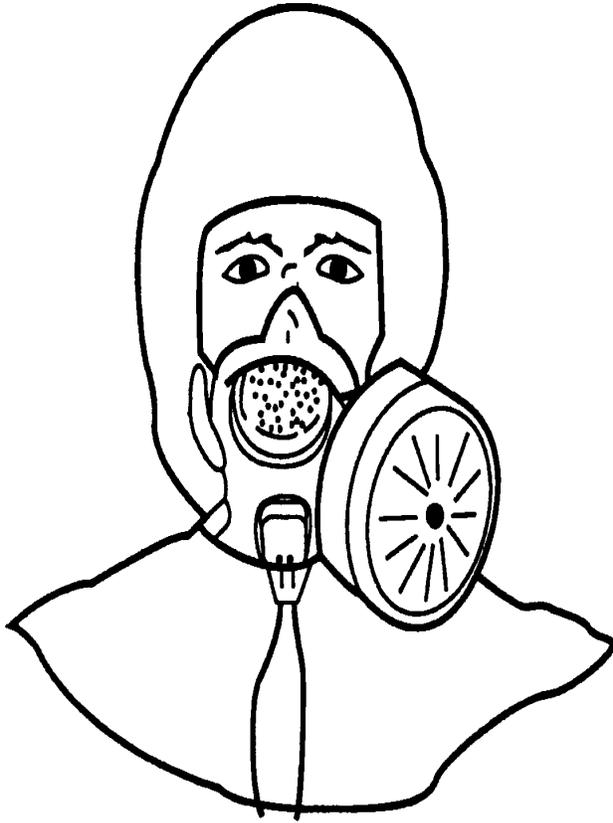
RELATED MATERIALS

- AFMAN 32-4006.** Mask Confidence and Liquid Hazard Simulant Training
- ATTACHMENT 1.** Mask Illustration
- ATTACHMENT 2.** Hood Adjustment Illustration
- ATTACHMENT 3.** Mask Carrier Wear Illustration
- RTP C9** (M17A2 (X-Small) Protective Mask and Accessories)
- RTP C11** (Ground Crew Chem Defense Ensemble)
- RTP F17** (Wartime Chemical Contamination Control Area (CCA) Ground Crew Ensemble Donning Doffing Procedures)

Mask Illustration

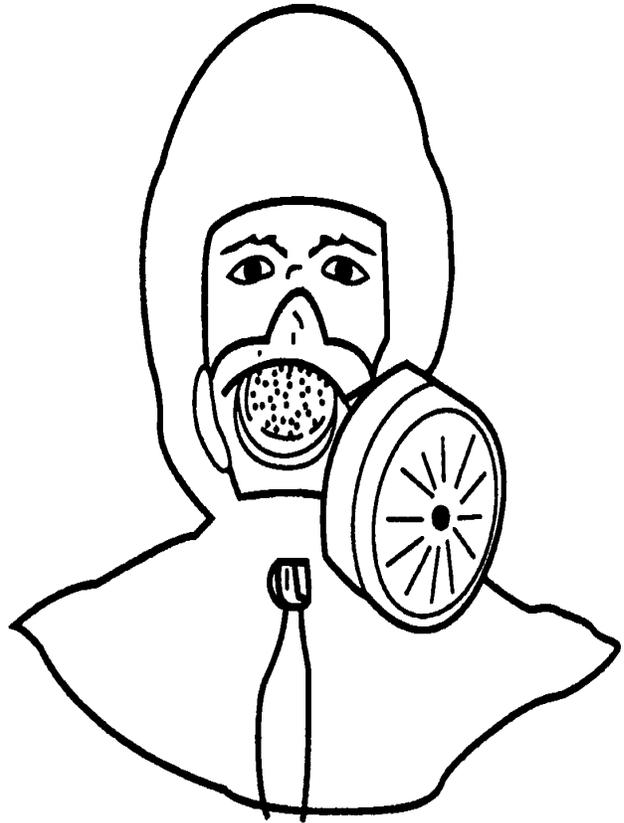


Hood Adjustment Illustration



**HOOD UNDER
OUTLET VALVE
COVER**

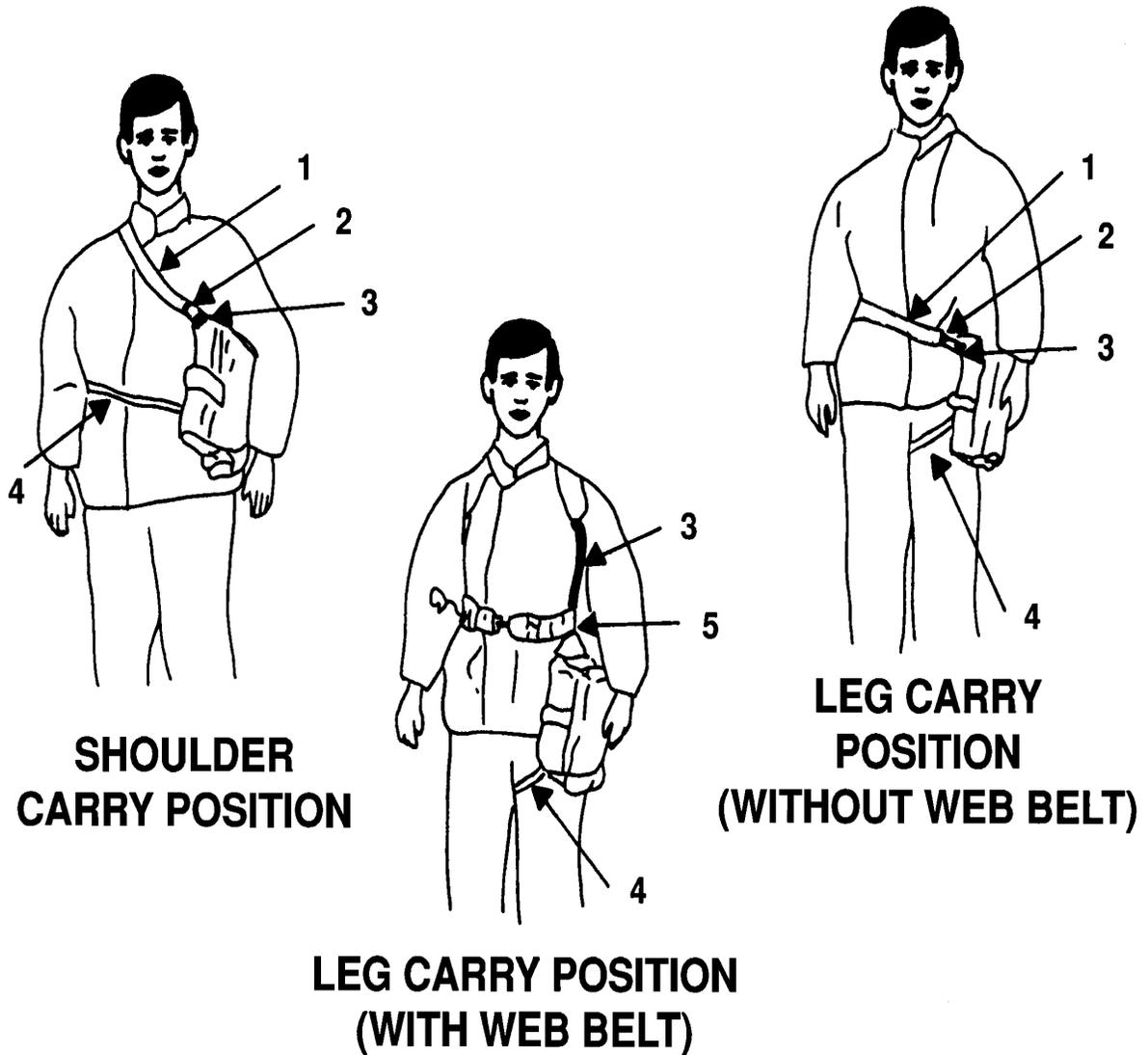
**(BELOW 30° AND ABOVE
90° F)**



**HOOD OVER
OUTLET VALVE
COVER**

(30° - 90°F)

Mask Carrier Wear Illustration



1. SHOULDER STRAP (WIDE STRAP)
2. D-RING
3. FRONT HOOK
4. WAIST STRAP (THIN STRAP)
5. REAR HOOK

TRAINING PACKAGE COMMENT REPORT

RTP #	RTP DATE
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To get an *immediate response* to your questions concerning subject matter in this Readiness Training Package (RTP), call the author (listed on the front cover) or the Contingency Training Section at DSN 523-6160 between 0700-1600 (CT), Monday through Friday. Otherwise, write, fax, or E-mail the author to make comments, suggestions, or point out technical errors in the area of: references, body information, performance standards, test questions, and attachments.

NOTE: Do not use the Suggestion Program to submit corrections for printing or typographical errors.

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