

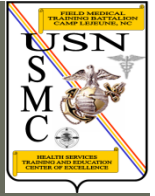


M50 FIELD PROTECTIVE MASK



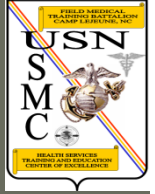


OVERVIEW



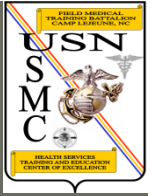
- Components
- Disassembly
- Assembly
- Fitting
- Don & Clear
- Maintain the Gas Mask





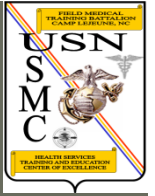
LEARNING OBJECTIVES

Please Read Your
Terminal Learning Objectives
And
Enabling Learning Objectives





COMPONENTS





COMPONENTS

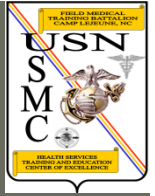


Characteristics

- Protects the wearer against
 - Chemical agents
 - Biological agents
 - Radiological fallout
- Will NOT protect wearer against industrial gases
 - Ammonia
 - Carbon monoxide



COMPONENTS

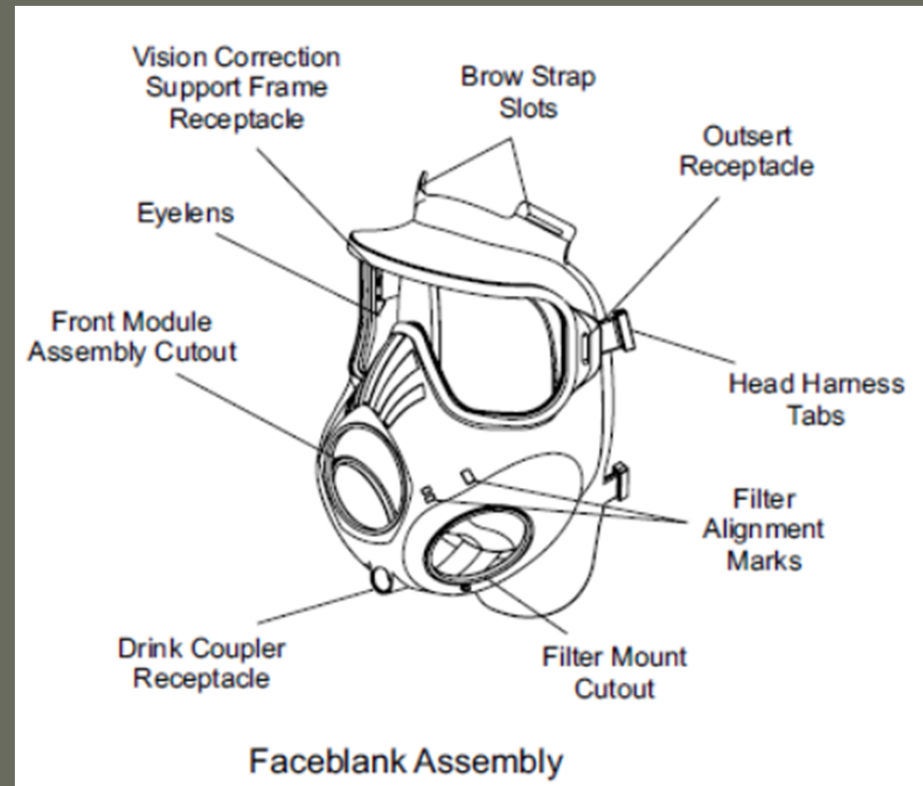


Characteristics

- Allows wearer the capability to drink water while worn
- Comes in three sizes, marked top left of mask
 - SMALL
 - MEDIUM
 - LARGE

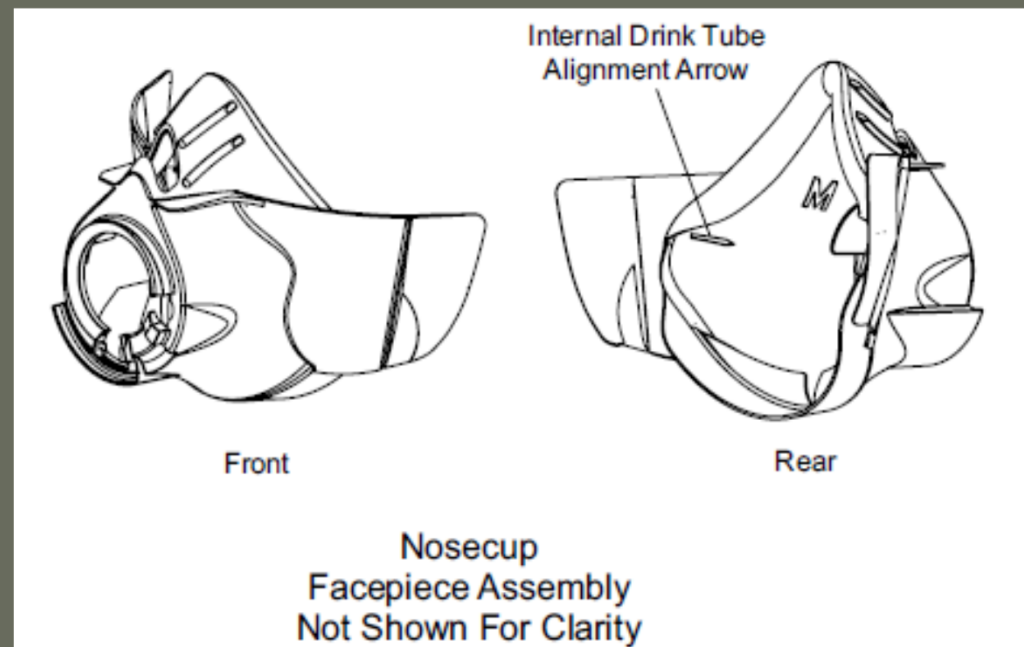
COMPONENTS

- FACEPIECE ASSEMBLY
 - Butyl/silicone rubber faceblank
 - Foundation of the mask



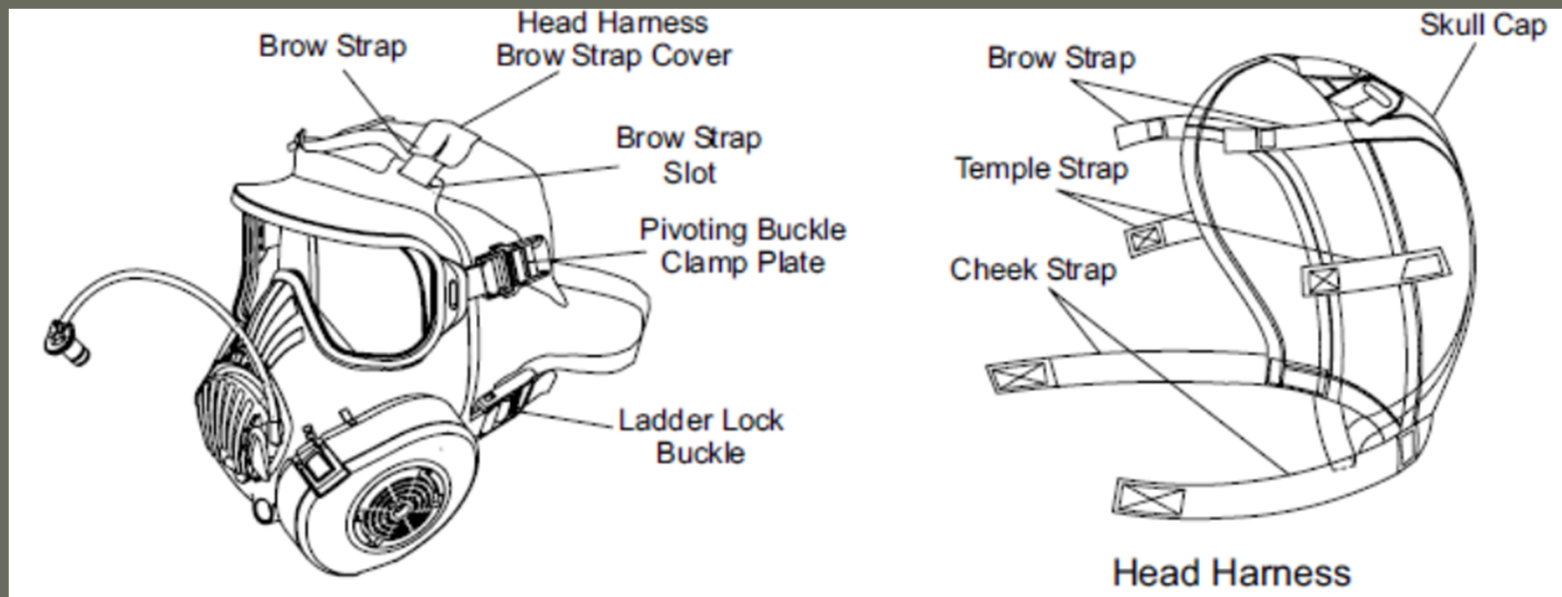
COMPONENTS

- NOSE CUP ASSEMBLY
 - Made of injection molded silicone rubber
 - Assists in air flow through mask
 - Size located on left interior side



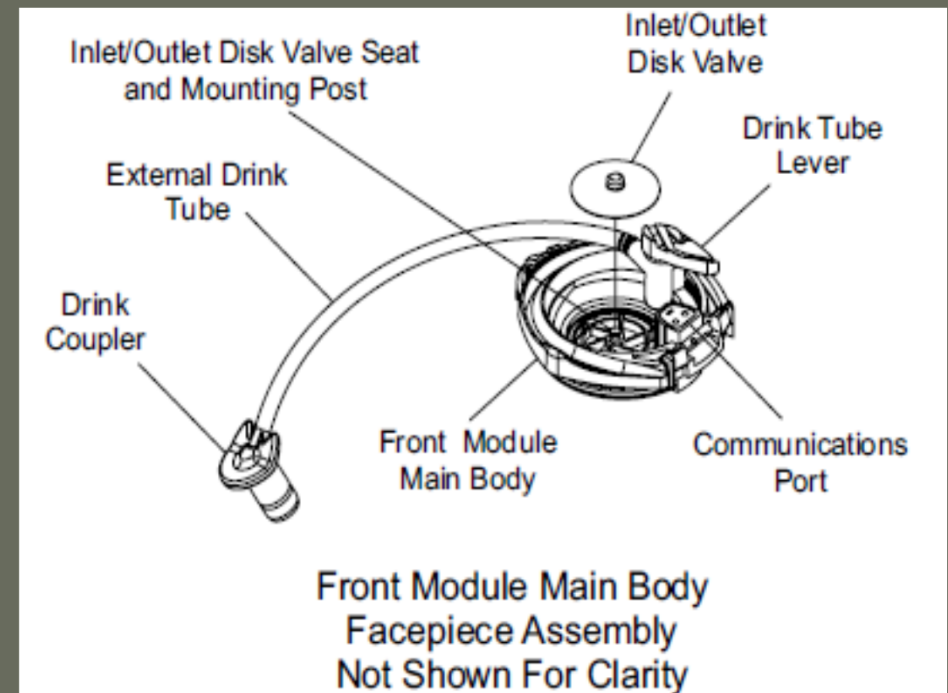
COMPONENTS

- HEAD HARNESS
 - Constructed of elastic side straps and skull cap



COMPONENTS

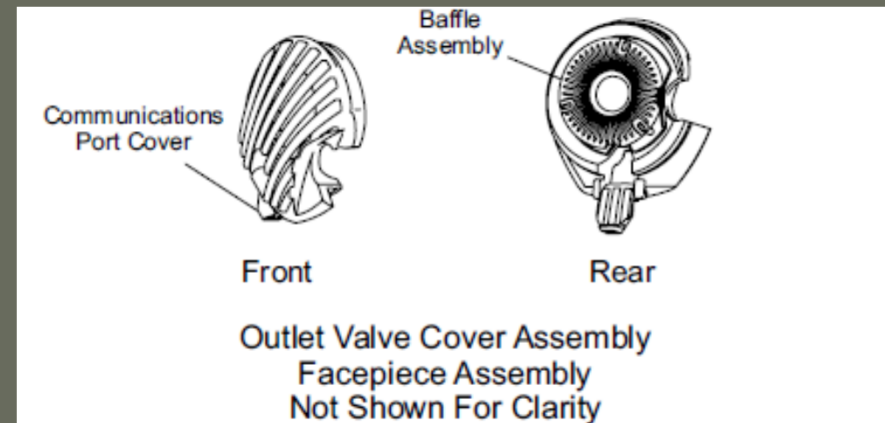
- FRONT MODULE
 - Plastic housing that integrates:
 - Inlet/Outlet disk valve
 - Drink system components
 - Communications port



COMPONENTS

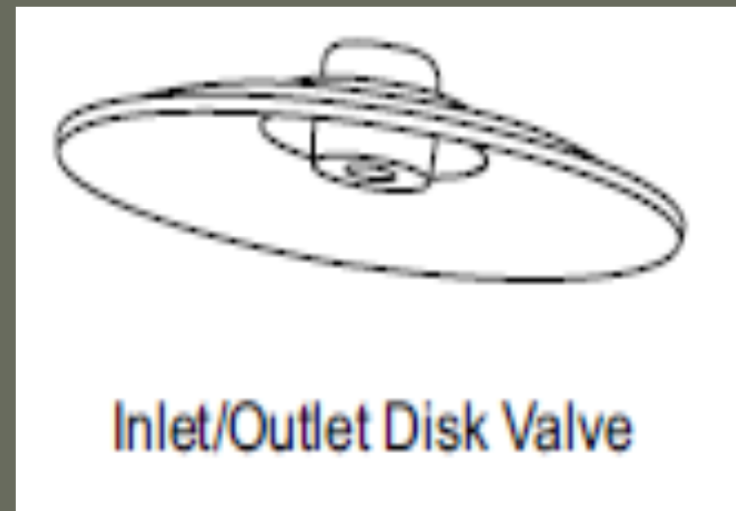
- OUTER VALVE COVER ASSEMBLY

- Fits over front module main body
- Protects drinking system and communications port
- Provides a direct speech capability



COMPONENTS

- Inlet/Outlet Disk Valve
 - 3 Inlet/outlet disk valves in facepiece assembly
 - Outlet disk releases exhaled air
 - Inlet disks permit filtered air into mask
 - Disks are black for identification purposes



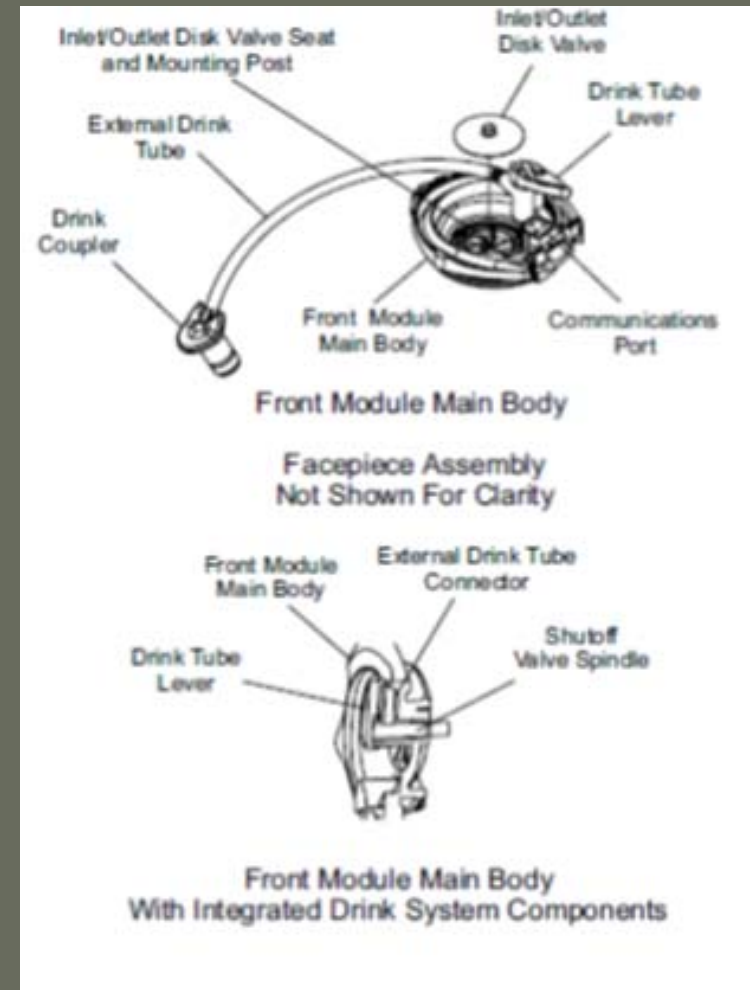
COMPONENTS

- SELF-SEALING DISK VALVE
 - 2 self-sealing disk valves in facepiece assembly
 - Opened by properly attached filter
 - Prevents unfiltered air from entering mask
 - Clear in color for identification purposes



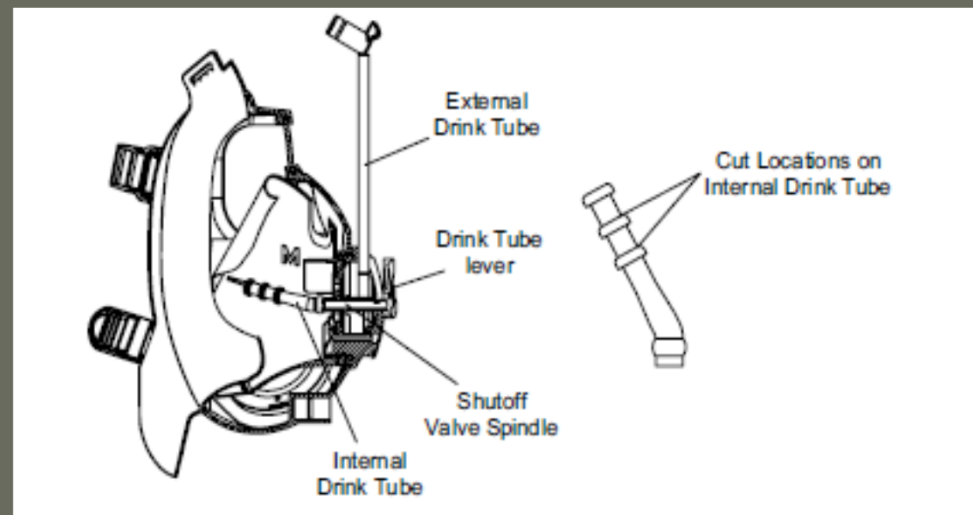
COMPONENTS

- DRINKING SYSTEM
 - Integrated into the mask
 - External tube with coupler to link to canteen
 - Internal drink tube inside of mask
 - Lever opens shutoff valve and swings internal drink tube



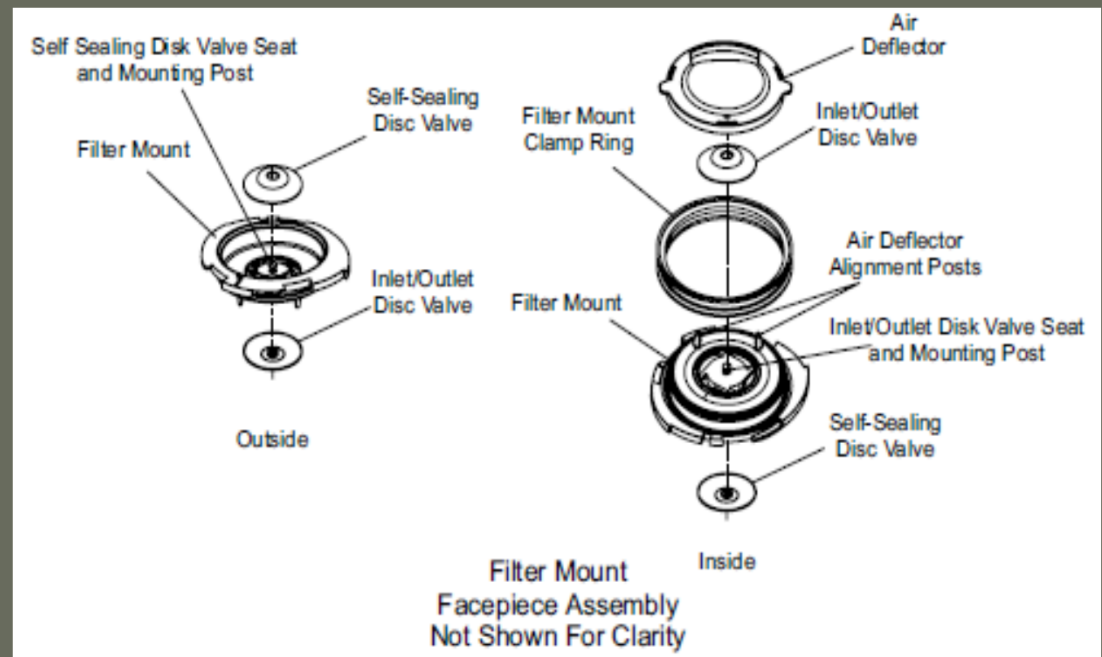
COMPONENTS

- INTERNAL DRINK TUBE
 - Attached directly to shutoff valve spindle
 - Length of tube can be cut to fit individual



COMPONENTS

- FILTER MOUNTS
 - Designed to allow quick installation of filters
 - Integrates disk valves and air deflectors





COMPONENTS

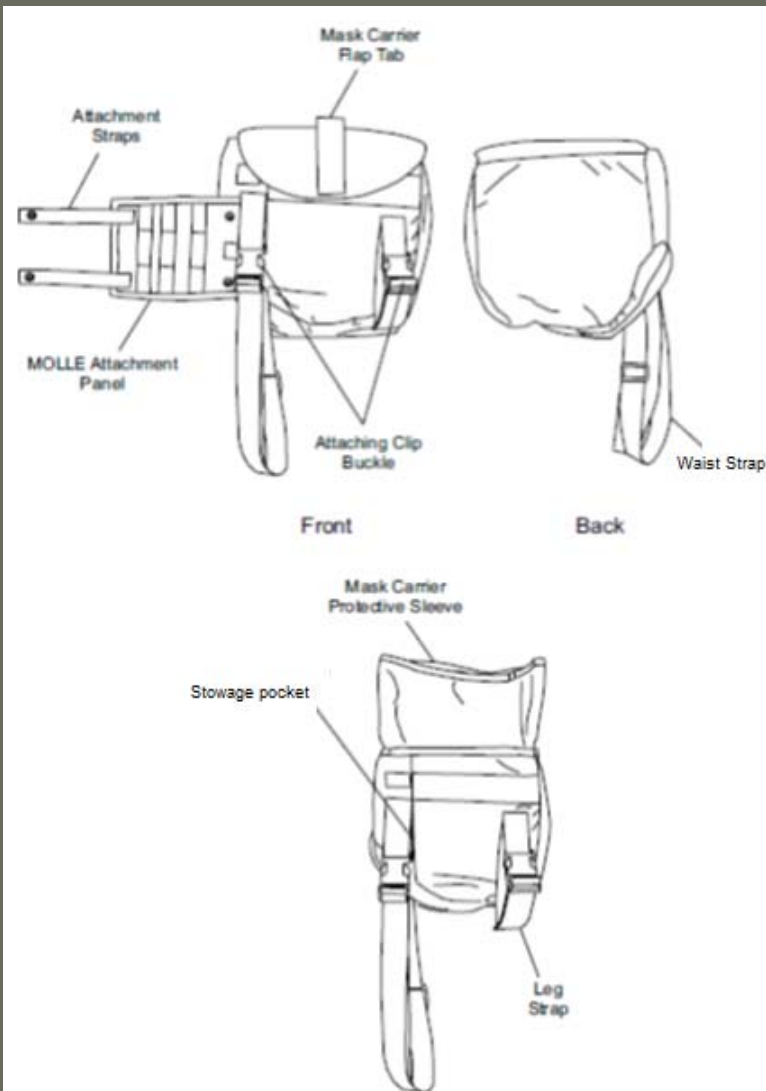


- AIR DEFLECTORS
 - Direct filtered incoming air
 - Assist in eyelens defogging



Air Deflector

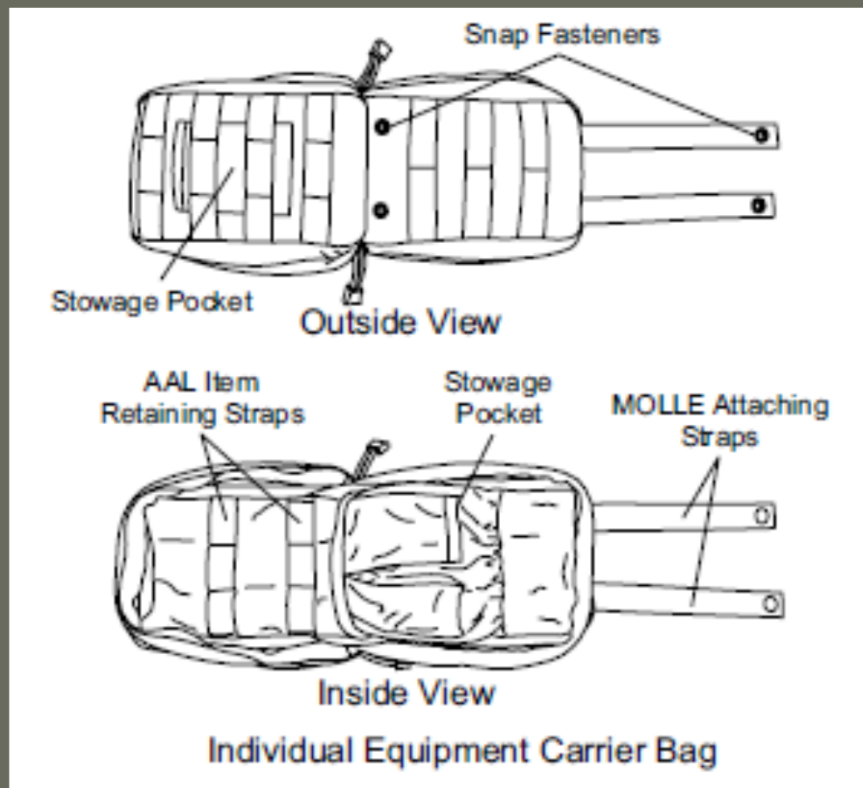
COMPONENTS



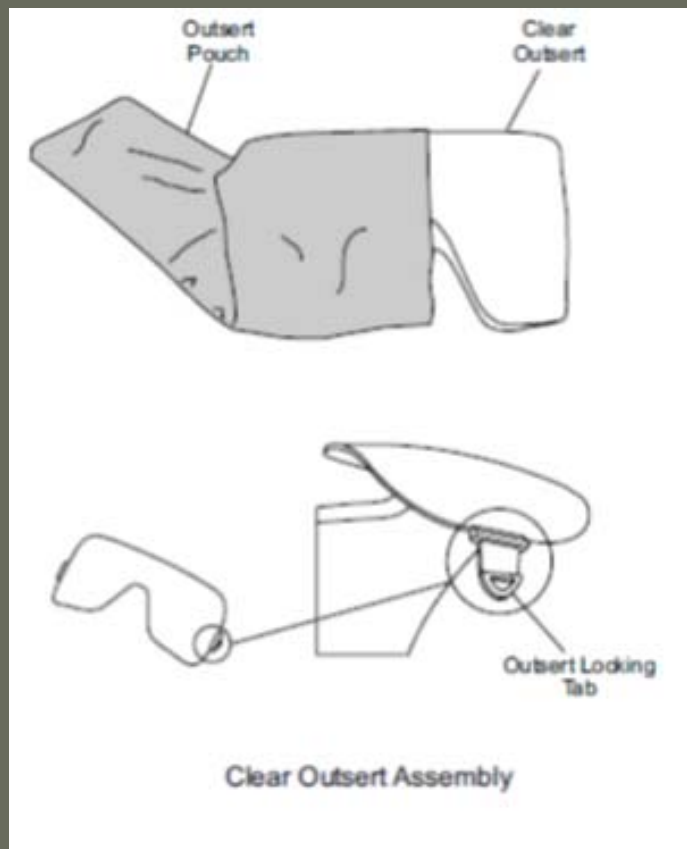
- MASK CARRIER
 - Provides for storage and carriage of M50FPM and components
 - Protective sleeve within carrier protects mask

COMPONENTS

- INDIVIDUAL EQUIPMENT CARRIER BAG
 - Provides for storage of select items



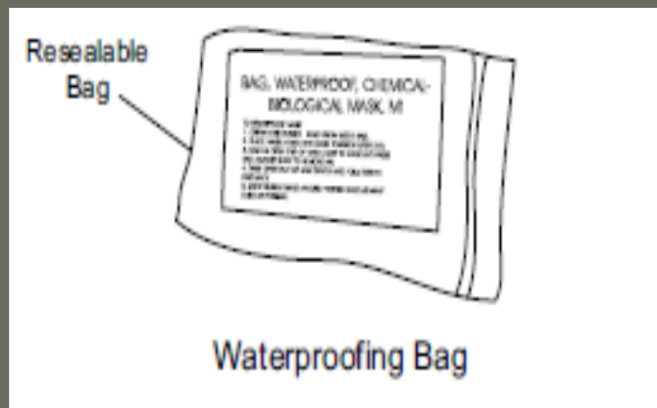
COMPONENTS



- CLEAR OUTSERT ASSEMBLY
 - Protects eyelens from scratches and damage
 - Issued with an outsert pouch which can be used to clean the mask
 - Stowed attached to mask

COMPONENTS

- WATERPROOFING BAG



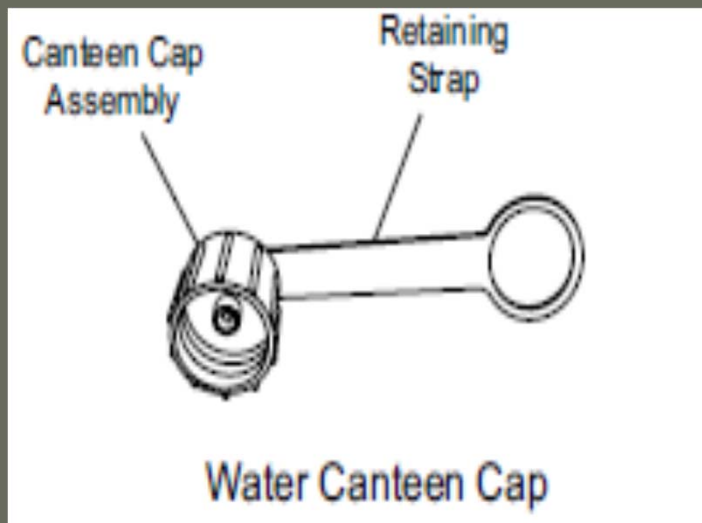
- Used to keep mask dry

- WARNING: DO NOT PLACE FOOD IN BAG

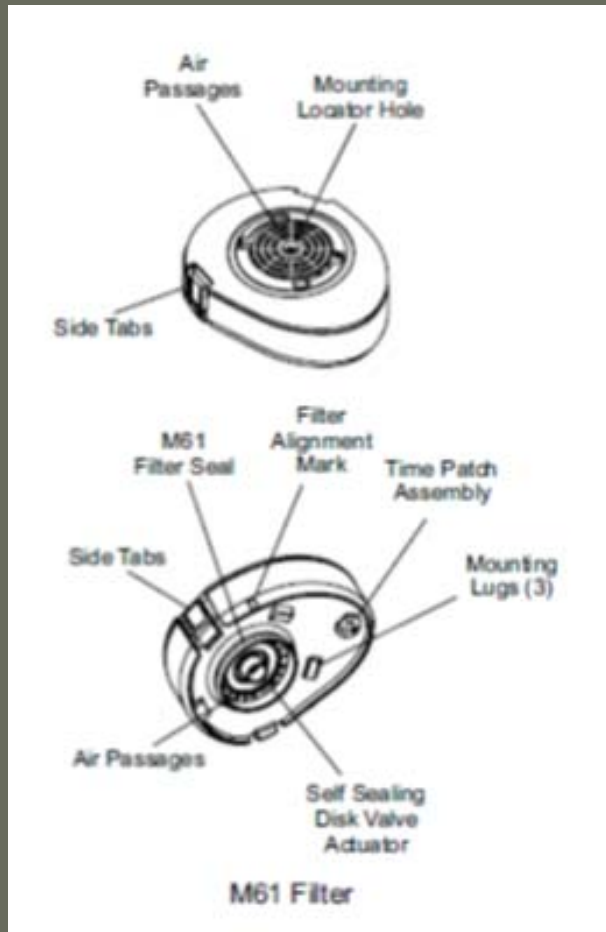
- Food may become contaminated and cause illness or death

COMPONENTS

- WATER CANTEEN CAP
 - Replaces the M1 canteen cap
 - Provides capability to connect the drink coupler



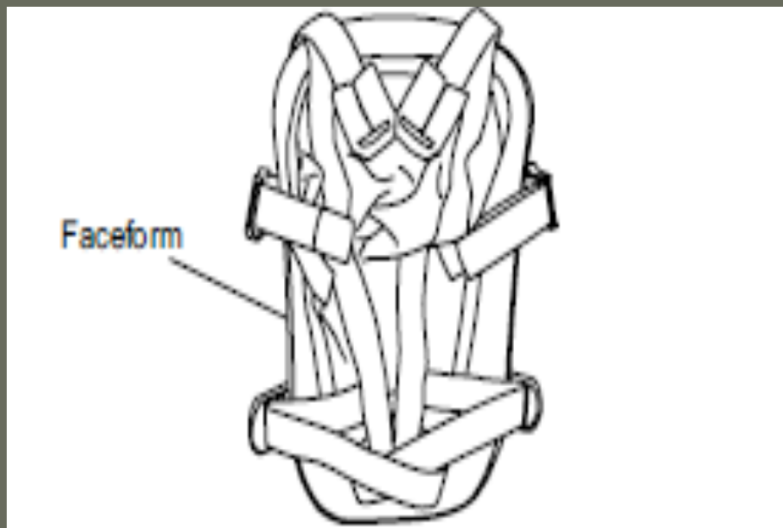
COMPONENTS



- M61 FILTERS
 - Contain activated carbon media and particulate filter
 - Twin filters, one on each side of mask
 - Sealed and packaged filters have a 5 year shelf life
 - Time patch to indicate unserviceable filters

COMPONENTS

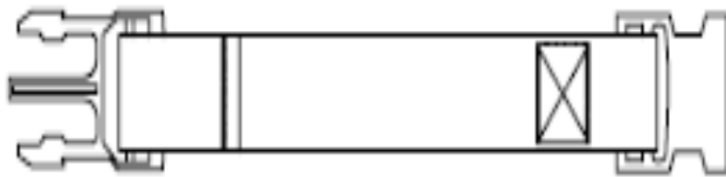
- FACEFORM
 - Placed in the mask to minimize deformation
 - Used whenever storing mask assembly >30 days



STUDENT NOTE:
DO NOT discard the
faceform

COMPONENTS

- MASK CARRIER EXTENSION STRAP

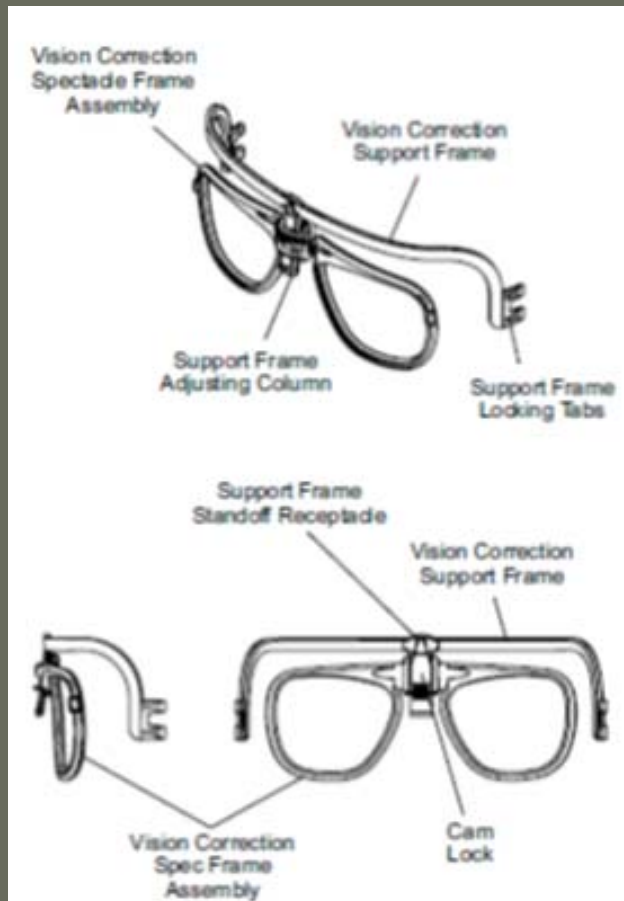


Mask Carrier Extension Strap

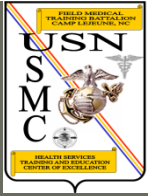
- Used to extend leg strap

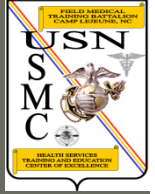
- Facilitates shoulder carry configuration

COMPONENTS



- VISION CORRECTION ASSEMBLY
 - Vision Support Frame attaches to inside of mask
 - Vision Correction Spectacles can be adjusted to fit individual

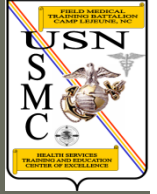




DISASSEMBLE THE M50 MASK



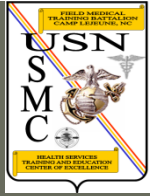
DISASSEMBLE THE M50 MASK



1. Remove clear/sunlight/laser outserts.
 - Grasp the top and bottom of the outsert with both hands
 - Gently rotate the bottom of the outsert up and away from the face piece assembly



DISASSEMBLE THE M50 MASK

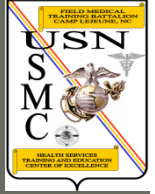


2. Remove outlet valve cover

- Remove drink tube couple from receptacle
- Unwrap external drink tube
- Turn the drink tube lever to a horizontal position
- Grasp outlet valve cover from underneath the communications port and lift



DISASSEMBLE THE M50 MASK

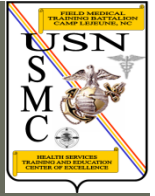


3. Remove outlet valve disk

- Pinch center of the outlet disk valve between thumb and middle finger
- Pull gently away from the mounting post



DISASSEMBLE THE M50 MASK

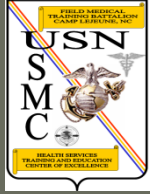


4. Remove M61 Filters

- Grip the filter side tabs on the M61 Filter and squeeze inward
- Twist the filter towards the front of the mask, and lift it from the filter mount



DISASSEMBLE THE M50 MASK

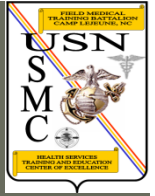


STUDENT NOTE

- Filters DO NOT decontaminate or neutralize contamination
- Contaminated filters are hazardous



DISASSEMBLE THE M50 MASK



5. Remove self-sealing disk valves
 - Pinch the center of the self-sealing disk valve
 - Pull gently away from the mounting post



DISASSEMBLE THE M50 MASK

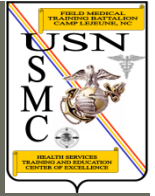


6. Remove Internal Drink Tube

- Turn drink tube lever on front module assembly upward
- Grasp internal drink tube and firmly pull
- Turn drink tube lever downward to place internal drink tube coupler in stowed position



DISASSEMBLE THE M50 MASK

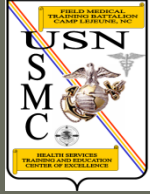


7. Remove air deflectors

- Reach into facepiece and move the nosecup to one side exposing the air deflector
- Gently pull the air deflector off the filter mount clamp ring exposing the inlet disk valve
- Repeat on the other side



DISASSEMBLE THE M50 MASK

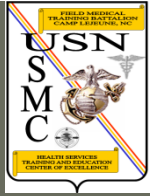


8. Remove inlet valve disks

- Pinch valve gently with thumb and middle finger
- Pull gently away from the mounting post

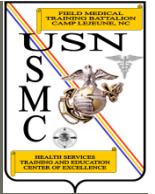


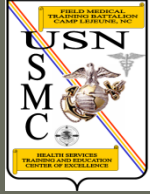
DISASSEMBLE THE M50 MASK



9. Remove head harness

- Undo the two brow strap hook and pile fasteners at the top of the harness skullcap
- Pull the brow straps through the slots
- Lift the clamp plates of the pivoting buckles and pull the temple straps through and out of the buckles
- Remove the cheek straps





ASSEMBLE THE M50 MASK



ASSEMBLE THE M50 MASK

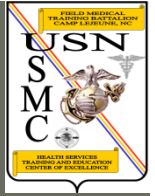


1. Install head harness

- Install brow straps first
- Temple straps second
- Cheek straps are final straps to be installed
- Head harness should sit centered



ASSEMBLE THE M50 MASK



2. Install inlet disk valves

- Check that disk valve and seat are clean
- Fold back the nosecup to expose center hole of the filter mount assembly
- Position the outlet disk valve
- Gently press the center of the disk until fully seated on the mounting post

ASSEMBLE THE M50 MASK

3. Install air deflectors

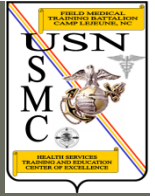
- Move nosecup and position air deflector over filter mount clamp ring, ensure air deflector is aligned over the alignment posts and press



**Filter mount clamp ring
alignment post**



ASSEMBLE THE M50 MASK



4. Install internal drinking tube.

- Turn drink tube lever on front module assembly upward
- Install drink tube on tube coupler and press
- Adjust to fit
- Place internal drink tube in stowed position
- Check for proper alignment



ASSEMBLE THE M50 MASK

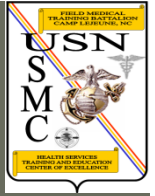


5. Install self-sealing disk valves

- Check the valve seat and valve mounting post for cleanliness and damage
- Position self-sealing disk valve on mounting post
- Gently press the center of the disk until seated on post



ASSEMBLE THE M50 MASK

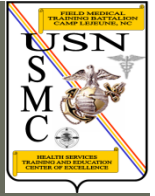


6. Install M61 Filters

- Pick up the filter with the side tabs facing toward the bottom
- Align the filter alignment tab with marking on the facepiece assembly and press until the filter is snug against the mask
- While pressing, turn toward the back until tabs click



ASSEMBLE THE M50 MASK

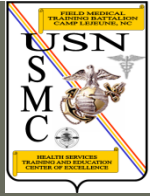


Ensure a self-sealing disk function check is performed after replacement of the disk valves:

- Place mask snug against the face
- Remove either the left or right M61 Filter
- Place hand over the filter air inlet passages
- Inhale, mask should collapse against your face
- Replace filter and check other side



ASSEMBLE THE M50 MASK



7. Install outlet disk valve

- Visually inspect the disk
- Align over the valve mounting post
- Gently press the center of the disk until fully seated on the mounting post



ASSEMBLE THE M50 MASK



8. Install outlet valve cover

- Turn drink tube lever to clear outlet valve cover
- Align outlet valve cover over communications port
- Gently snap into place
- Close communications port door by pushing on the raised tab until it clicks
- Reinstall drink components

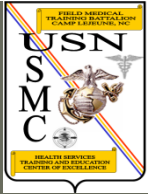


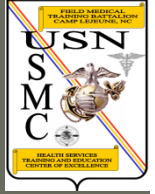
ASSEMBLE THE M50 MASK



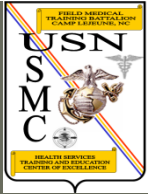
9. Install clear/sunlight/laser outserts

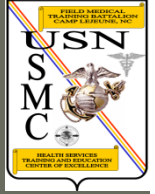
- Align the locking tabs on the ends of the outsert with the outsert receptacles
- Gently rotate the outsert down pushing the locking tabs into the outsert receptacles



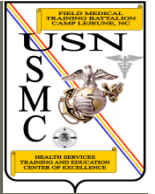


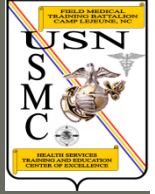
DEMONSTRATION OF DISASSEMBLY AND ASSEMBLY OF M50



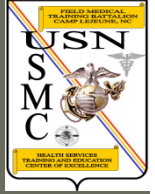


PRACTICAL APPLICATION OF DISASSEMBLY AND ASSEMBLY OF M50





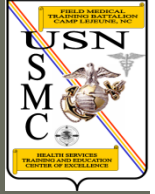
WEARING THE CARRIER & FITTING/ADJUSTING THE M50 FPM



WEARING THE CARRIER



- **WAIST BELT CONFIGURATION**
 - Place carrier on left hip
 - Wrap waist strap around and clip buckle
 - Adjust strap to proper size
 - Wrap leg strap around and clip buckle
 - Adjust strap to proper size

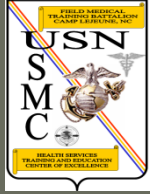


WEARING THE CARRIER

- SHOULDER SLING CONFIGURATION



- Extend both straps to max length
- Attach extension strap to leg strap
- Clip waist strap into buckle
- Place carrier overhead and left arm
- Wrap leg strap around waist and clip buckle
- Adjust straps to proper size



FITTING AND ADJUSTING THE FPM



FITTING & ADJUSTING THE FPM



1. FITTING

- Loosen head harness
- Pull head harness over front of mask
- Hold hair back from sealing area and place chin in the chin pocket
- Hold mask against face with one hand
- Using other hand, slip head harness over head
- Straps should lie flat



FITTING & ADJUSTING THE FPM



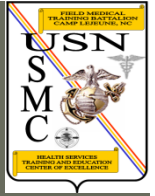
2. ADJUSTING

Have a buddy complete the following steps:

- Hold mask tightly to your face
- Center skullcap on back of head
- Place thumb under buckle of forehead strap
- Give strap end short, sharp tugs until buckle feels snug
- Adjust other forehead strap in same manner



FITTING & ADJUSTING THE FPM



2. ADJUSTING (cont'd).

- Place thumb under buckle of cheek strap
- Adjust cheek strap until it feels snug
- Adjust other cheek strap in same manner
- Release mask, mask should not slip down
- If mask slips, readjust straps until mask remains in place
- Adjust temple straps

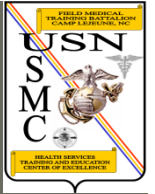


FITTING & ADJUSTING THE FPM



3. CHECKING FOR FIT

- Edge of mask comes up on forehead but not into hairline
- Temple and cheek straps do not cut into ears
- Mask does not press flesh so tightly that eyes are partly closed
- Bottom of mask does not cut into throat
- Nosecup does not obscure vision





DONNING, DRINKING, AND DOFFING THE M50 FPM

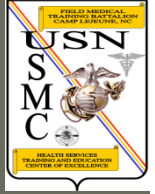


DONNING, DRINKING, & DOFFING



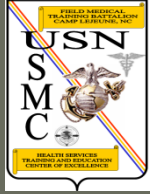
Once the sign is given, you have

9 SECONDS!!!



DONNING, DRINKING, & DOFFING

- PREPARING AND CARRYING THE FPM
 - Your mask should be pre-fit
 - Store the mask with the head harness wrapped to the front
 - Faceform should be removed
 - Filters should be checked and installed



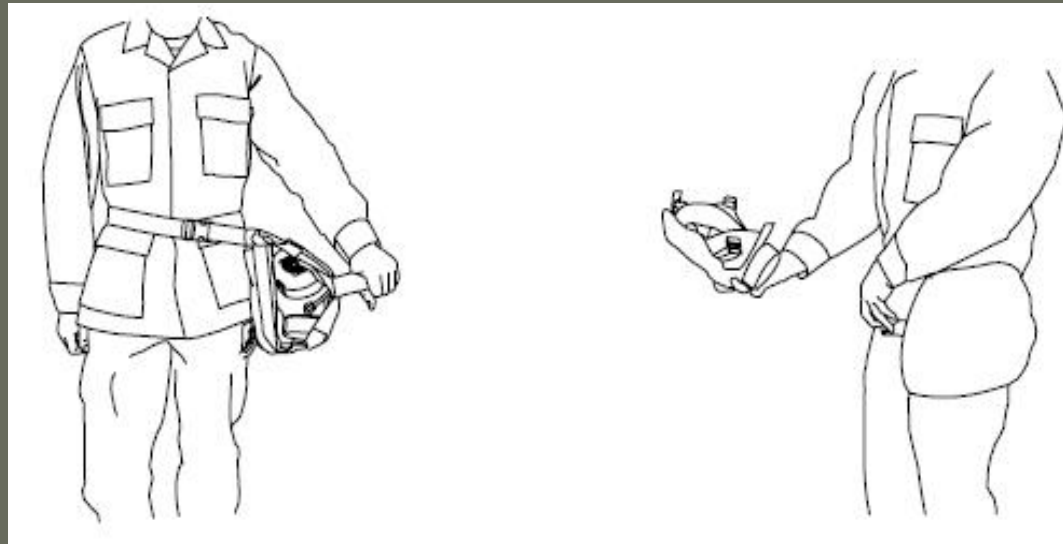
DONNING, DRINKING, & DOFFING

- DONNING PROCEDURES
 - Stop breathing and close your eyes
 - DO NOT TAKE ANOTHER BREATH OR OPEN YOUR EYES UNTIL THE MASK HAS BEEN PROPERLY DONNED
 - Remove cover/helmet as well as glasses



DONNING, DRINKING, & DOFFING

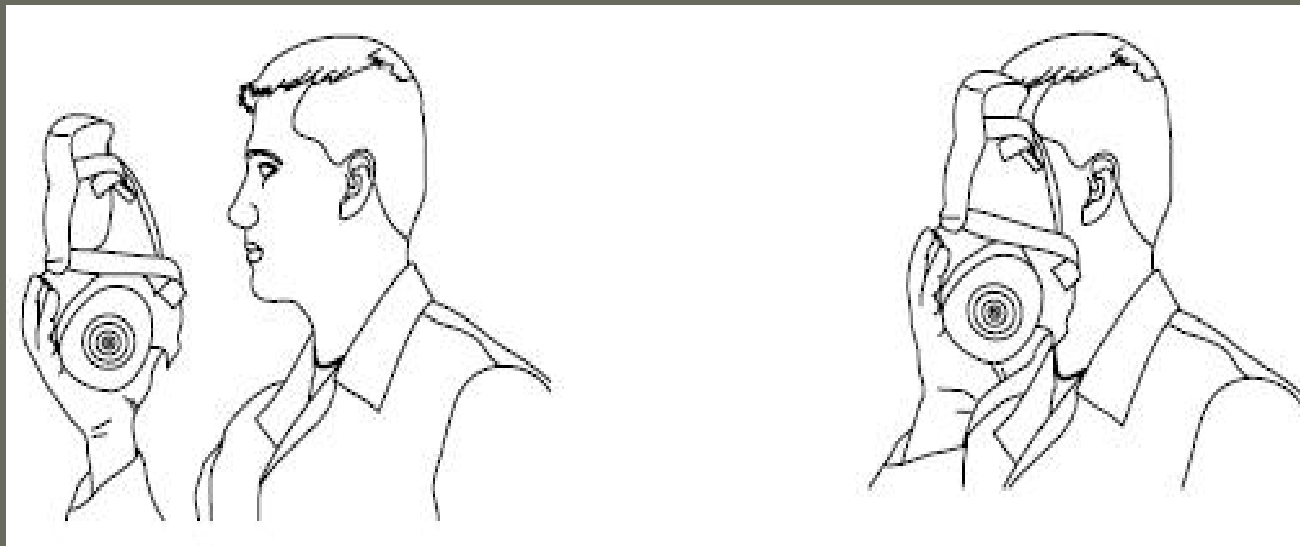
- With your left hand grasp the mask carrier flap tab
- Pull open carrier
- With your right hand grasp mask and remove it from carrier





DONNING, DRINKING, & DOFFING

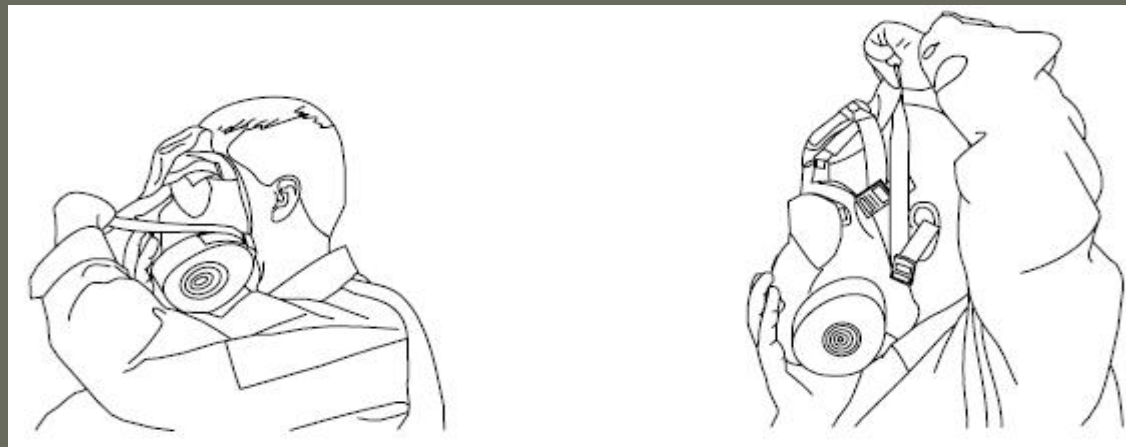
- Put your chin in chin pocket and press mask snugly against your face

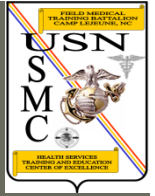




DONNING, DRINKING, & DOFFING

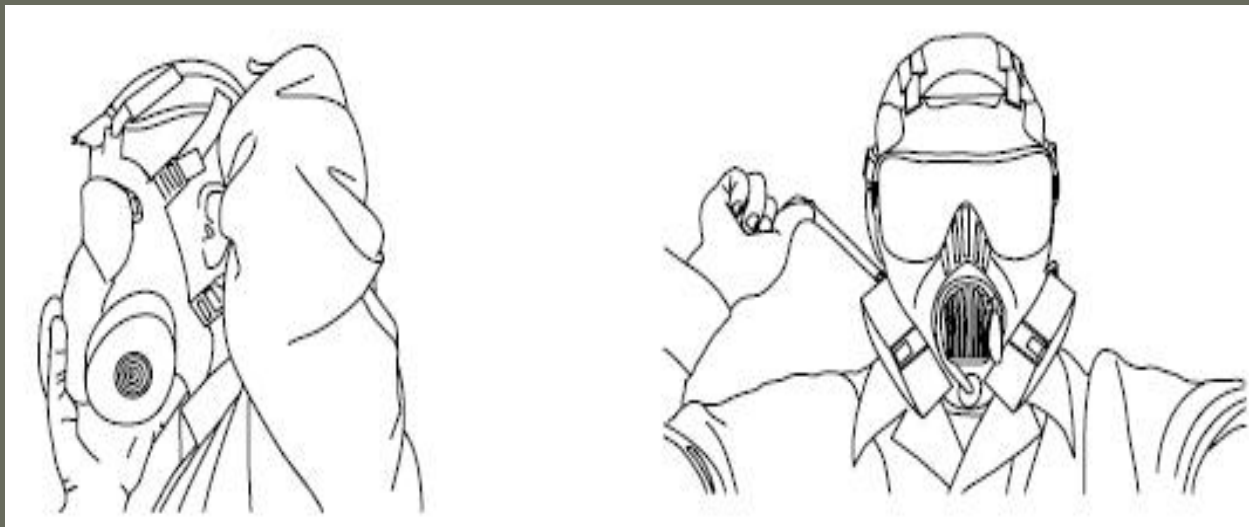
- Grasp head harness tab and pull harness over your head
- Be sure ears are between the temple and cheek straps
- Pull head harness as far down as possible
- Brow and temple straps should be tight and approximately parallel





DONNING, DRINKING, & DOFFING

- Tighten cheek straps one at a time or both at the same time
- Ensure straps lay flat against your head





DONNING, DRINKING, & DOFFING

- Seal outlet valve by placing one hand over the outlet valve cover assembly
- Exhale forcibly
- Contaminated air is forced out around the edges of the mask assembly

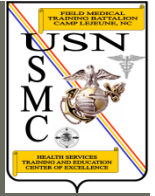




DONNING, DRINKING, & DOFFING

- Conduct a negative pressure test
- With both hands cover both M61 filters and breath in
- Mask should collapse against your face and remain as you hold your breath
- If mask does not collapse, check for matter between face and mask
- Clear and try again



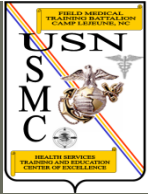


DONNING, DRINKING, & DOFFING

- Once your mask is properly sealed, breathe normally
- Give the hand and arm signal while shouting GAS! GAS! GAS!



- If wearing MOPP ensemble, pull up hood and secure
- Put on helmet and pick up rifle
- Close carrier, continue your mission

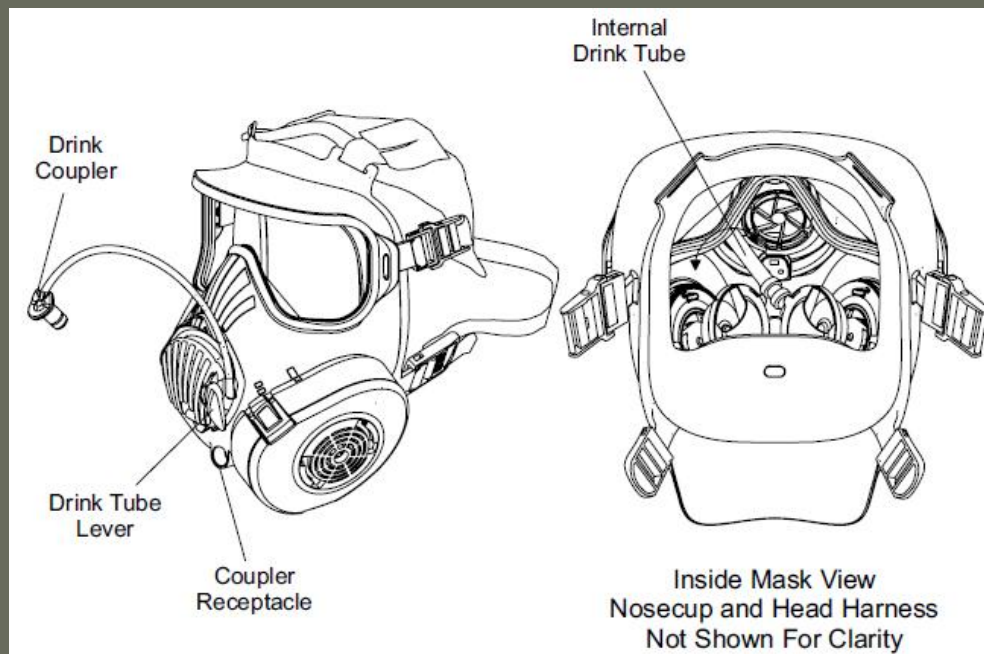




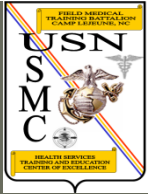
DONNING, DRINKING, & DOFFING

- DRINKING WHILE MASKED
 - Decontaminate top of canteen
 - Pull drink coupler out of receptacle
 - Push drink coupler into canteen cap so that seal snaps
 - Turn drink tube lever on front module assembly upward
 - Lever opens system and positions internal tube
 - Blow air into canteen

DONNING, DRINKING, & DOFFING

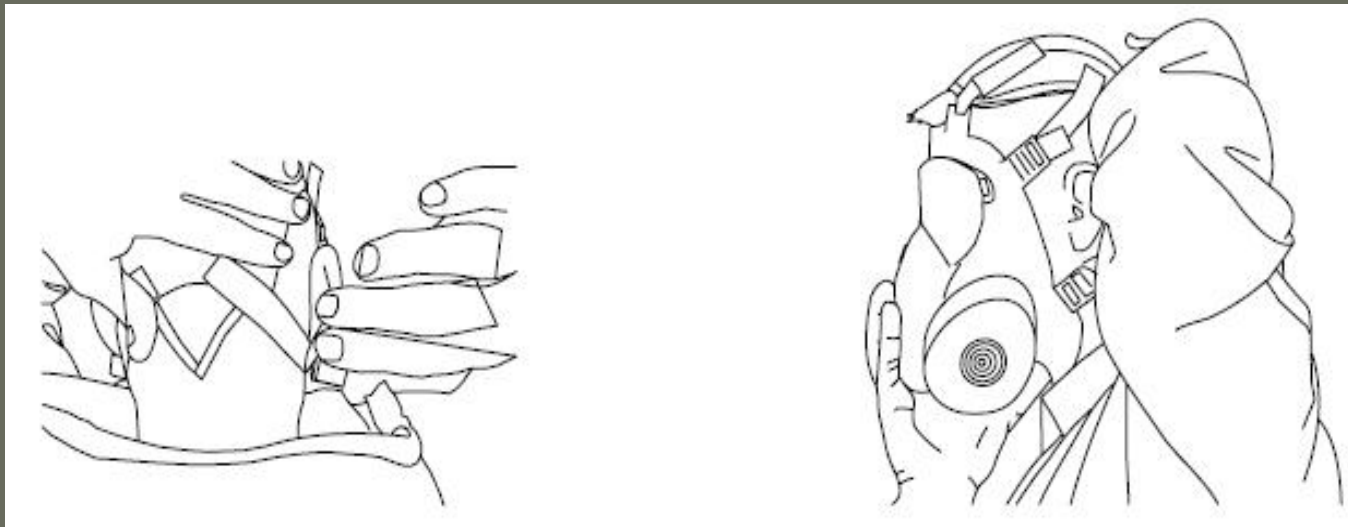


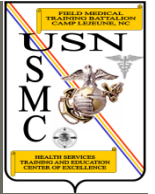
- Once done drinking
 - Blow into tube to remove water
 - Disconnect tube from canteen
 - Stow external tube and canteen



DONNING, DRINKING, & DOFFING

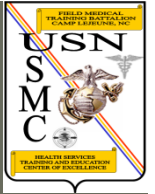
- DOFFING PROCEDURES
 - Loosen cheek straps
 - Grasp front of mask and pull off your head
 - Stow mask with head harness over front of the mask

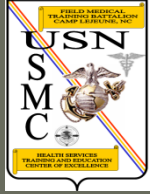




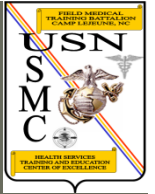


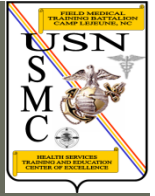
DEMONSTRATION OF DONNING, DRINKING, AND DOFFING THE M50





PRACTICAL APPLICATION OF DONNING, DRINKING, AND DOFFING THE M50

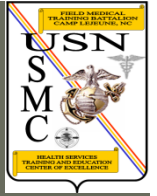




MAINTAINING THE M50 FPM



MAINTAINING THE MASK



It is YOUR responsibility to maintain the mask.
The mask should be cleaned anytime it is soiled.

- DO NOT stow mask until it is completely dry after cleaning
- DO NOT use hot or boiling water
- DO NOT use chemicals or baby wipes
- Use only warm water and mild toilet soap
- There are two levels of cleaning: Light and Heavy



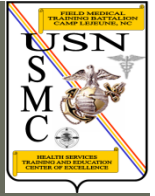
MAINTAINING THE MASK



- Light Cleaning:
 - Disassemble the M50
 - Use a damp outsert pouch
 - Clean outlet valve cover assembly, outlet disk valve, inlet disk valves, air deflectors, self-sealing disk valves, audio frequency amplifier adapter, and head harness
 - Allow to dry completely
 - Reassemble and stow



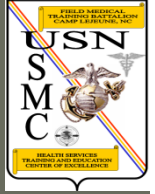
MAINTAINING THE MASK



- Heavy Cleaning:
 - Disassemble the M50
 - Immerse mask in warm, soapy water
 - Shake all debris from mask, do not scrub
 - Rinse mask in clean, warm water
 - Clean other pieces as in light cleaning
 - Allow to dry completely



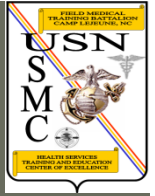
MAINTAINING THE MASK



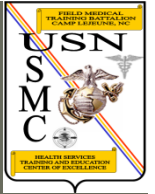
- Cleaning the Drinking system:
 - Connect drink coupler to a canteen of clean water
 - Open drink lever and shutoff valve
 - Hold mask upside down and allow water to flow through the system
 - Remove cap from canteen while still attached to system to drain remaining water
 - Close lever and shutoff valve, allow mask to dry



MAINTAINING THE MASK



- Cleaning the Mask Carrier:
 - Empty contents from bag
 - Shake dirt and foreign matter from bag
 - If needed use a dry brush to remove dirt and foreign matter
 - If water is required, soak brush not carrier
 - Hang bag to air dry





M50 FIELD PROTECTIVE MASK



FMST 307