



**UNITED STATES MARINE CORPS  
PROGRAM MANAGER  
INFANTRY COMBAT EQUIPMENT (ICE)  
2200 LESTER STREET  
QUANTICO, VIRGINIA 22134-5010**

IN REPLY REFER TO:

USMC MODULAR TACTICAL VEST ASSEMBLY GUIDE

Enabling Learning Objective: Utilizing the provided instruction and KWIKPOINT reference card assemble and fit the MTV.

TERMINAL LEARNING OBJECTIVE: Demonstrate proper assembly and fitting of the MTV.

Reference: MTV KWIKPOINT Reference Card

Overview: The Marine MTV was designed to provide the individual Marine with a body armor system that incorporates load bearing capability and superior protection. When assembled properly the MTV distributes the Fighting load and allows the Marine greater freedom of placement of ancillary items.

Body

1. Inventory

Upon receipt of the MTV utilizing the provided KwikPoint Reference card located in the rear plate pocket inventory the system and ensure the following items are present:

Front Carrier with Soft Armor Insert  
Rear Carrier with Soft Armor Insert and Spine Armor Insert  
Side ESAPI Pouches with Soft Armor Inserts  
Groin Armor Carrier with Soft Armor Insert  
Collar/Yoke Assembly  
Throat Armor Assembly  
Right & Left Cummerbund Assemblies  
Two Cummerbund Stays  
Bungee Cord, One Wrap and Barrel Lock  
MEDEVAC Strap  
Rifle Bolster

2. Inspection

Inspect Front and Rear Carrier for rips and tears. Ensure plate pockets are not sewn down.  
Inspect all soft armor components for tears or stains associated with exposure to petroleum products.  
Inspect Cummerbund assemblies and ensure that the white Dacron loops are not frayed or the side plate pockets are not sewn shut.  
Inspect Collar and Yoke assemblies for tears

3. Assembly

I. Front/Rear Carrier Assembly

- II. Throat and Collar Assembly
- III. Cummerbund Assembly
- IV. Fitting
- V. Final Assembly

I. Front and Rear Carrier Assembly.

Insert ESAPI Plates into front and rear plate pockets (Fig 1). While pulling slight tension on the shoulder straps located on the front carrier, ensure they are center of the hook pile tape on the shoulder with the wide portion flush with the lower portion of the hook pile tape on the front carrier (Fig 2). Turn the front carrier over so that the interior mesh portion is facing up and connect the Groin Armor to the center ladder lock as shown insuring the label is facing up toward the interior (body) portion of the vest (Fig 3). Flat fold the MEDEVAC strap and place it in the Kangaroo Pouch located on the front cummerbund flap (Fig 4). While standing the front and rear carriers up, facing you as they would ride on your body connect one slide release buckle without engaging the hook pile tape on the front and rear carrier (Fig 5). Pull tension and lay the front shoulder strap onto the rear carrier, repeat for the opposite side. Once assembled the system should have a smooth neck opening and the slide release buckles should lay against the shoulders with no gap (Fig 6).



Fig 1



Fig 2



Fig 3



Fig 4



Fig 5



Fig 6

## II. Collar/Yoke and Throat Insertion.

Lay the Assembled front and rear carrier face up with the neck opening away from you and open the carrier in half so that the mesh interior is exposed and the front carrier is away from you. Insert the tabs on the collar through the ladder locks on the rear carrier and pass them back through the ladder locks on the yoke (Fig 7). Once complete, smooth the yoke down removing all creases (Fig 8). Stand the system up facing you as it would ride on your body and smooth the collar from the rear to front, standing it up as it would ride on your body smoothing out all the creases and ensuring both sides are even. Insert the Throat into the channel located at the base of the front carrier neck line above the plate pocket (Fig 9).



Fig 7



Fig 8



Fig 9

## III. Cumberbund Assembly.

Place the Cumberbund on the ground so that the labels are facing up and the left assembly is on your right side. Insert the pull cable into the bottom grommet on the right cumberbund and pass through to the rear bottom grommet (Fig 10) (For instructional purposes the system will be assembled for a bottom release due to muscular ease in performing the release function. If so desired the user may assemble the system for a top release by performing the same procedure utilizing the top grommets). Pass the White Dacron loops through the grommets on the Three Hole Adaptor and pass the release cable through the Dacron loops securing the adaptor to the right cumberbund and

place the free running end in the opposing grommet (Fig 11). Lace the two halves together from top to bottom with the bungee cord. ENSURE YOU DO NOT UTILIZE THE PERMANENT LOOPS ON THE RIGHT CUMMERBUND! DOING SO WILL DISABLE THE EMERGENCY RELEASE! YOU MUST LACE THROUGH THE THREE-HOLE ADAPTOR! After you have joined the cummerbund halves insert the free running ends of the bungee cord through the barrel lock ensuring that you engage it by depressing the ears at the base of the lock until you hear a "Click". FAILURE TO ENGAGE THE BARREL LOCK WILL RESULT IN THE BUNGEE CORD BECOMING LOOSE. Run the Barrel lock up to the base of the Cummerbund ensuring you leave four inches of gap between the Cummerbund loops for initial fitting. Stow the excess bungee utilizing the One Wrap (Fig 12) DO NOT CUT THE BUNGEE CORD. Hold the Side ESAPI Pouch so that the Velcro is facing up and the flap open and away from you. Insert the Side ESAPI on top of the soft armor with "Strike Face" facing you (Fig 13). Place the Side ESAPI's into the Cummerbund slots with the labels of the pouches facing in toward the body (Fig 14 & 15). Place the completed system in the rear cummerbund tray and secure the flap (Fig 16).



Fig 10



Fig 11



Fig 12



Fig 13



Fig 14



Fig 15



Fig 16

#### IV. Fitting.

Initial donning & fitting will use the buddy system. Don the MTV over the head ensuring that the tops of the front and rear plate pockets are even (Fig 17). The front ESAPI edges should cover the chest from "Nipple to Nipple" (Fig 18). Check the placement of the top locating the top of the front ESAPI plate and referencing the proximal location to the suprasternal notch (Fig 19). It should not ride any lower than 1 inch below the suprasternal notch. The suprasternal notch is located at the junction of the clavicle (collarbone) and the sternum. FAILURE TO DO SO CAN RESULT IN DEATH. If necessary remove the vest and adjust it until the plate rides at the proper height. Smooth the front armor panel under the rear panel ensuring there is a minimum of one and one half inches of overlapping armor (Fig 20). Secure the cummerbund under the flap exposing no more than  $\frac{3}{4}$ " of Velcro on the cummerbund (Fig 21 & 22). Ensure that the Side ESAPI's are adjusted so that they ride on the center of the rib cage and as close to the axillary cavity as comfort dictates (Fig 23). Check the Rear Cummerbund to ensure that it is supported by the Cummerbund tray. 2 inches of the cummerbund must remain inside the tray for proper support (Illustrated with red lines in Fig 24). Once the Side ESAPIs and Cummerbund have been adjusted, tie a loose overhand knot next to the barrel lock (Fig 25). If necessary, adjust the Groin Armor to provide adequate coverage without hampering movement. Once the vest has been adjusted place the Cummerbund stays in the next full row of MOLLE outside of the Cummerbund Tray (Fig 26), stow the shoulder straps under the ladder locks (Fig 27). When properly fitted the MTV should fit snug in the shoulders and not ride on the hips (Fig 28). Remove the vest and complete final assembly.



Fig 17



Fig 18





Fig 19



Fig 20



Fig 21



Fig 22



Fig 23

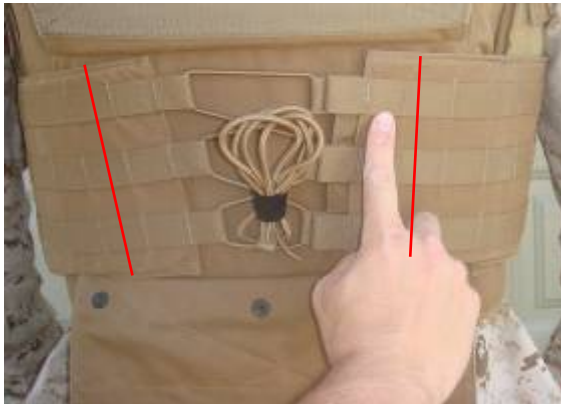


Fig 24



Fig 25



Fig 26



Fig 27



Fig 28

#### V. Final Assembly.

Install the Cummerbund stays and secure the rear cummerbund tray utilizing the Velcro and Snaps (Fig 29). Install the Rifle Bolster so that it allows the user to shoulder the service rifle (Fig 30).



Fig 29



Fig 30

#### VI. Armor fitting "Don'ts".

The following show examples of improper fitting and assembly of the MTV. Vest too large (Fig 31), Shoulder Straps not adjusted evenly (Fig 32), Cumberbund too small (Fig 33), Cumberbund improperly assembled (Fig 34), Vest "Bridged" with hydration tube (Fig 35), Vest "Bridged" with pouch (Fig 36).



Fig 31



Fig 32



Fig 33



Fig 34



Fig 35



Fig 36

Summary: Because the MTV is classified as Personal Protective Equipment it is imperative that the system is fitted and assembled properly to ensure adequate protection and mission accomplishment.