

U.S. COAST GUARD MAINTENANCE  
PROCEDURE CARD

**DRY SUIT SUPPLEMENT**

SEMI-ANNUAL DRY SUIT INSPECT/CLEAN

CONSUMABLES:

Cleaner, Dry Suit, P/N: 30130, CAGE: 1CAY9 (if required)

Detergent, Laundry, P/N: 145495, CAGE: 5T372, NIIN: 014120535 (or equivalent)

Leak Test Compound, P/N: MIL-PRF-25567, CAGE: 81349, NIIN: 006211820, (if required)

Protectant, 303, P/N: ACC303-8OZ, CAGE: 04QK6

Talcum Powder, P/N: A-A-59303, CAGE: 58536, NIIN: 002709989

Urethane Repair Adhesive, P/N: 477, CAGE: 64249, (if required)

Wax, Paraffin, P/N: A-A-59255, CAGE: 58536, NIIN: 002852044

**A PRELIMINARY STEPS**

1. Determine type of dry suit that is being inspected.
2. Proceed to appropriate section of MPC:
  - a. Proceed to Step 2 B for Lightweight dry suit, (USIA, KOKATAT, MSD630, and MSD585).
  - b. Proceed to Step 2 C for Mustang Sentinel Heavy Duty Dry Suit (MSD 640)
  - c. Proceed to Step 2 D for Mustang Modular industrial Dry Suit (MSD 900)

**B INSPECT/CLEAN LIGHTWEIGHT DRY SUIT (USIA, KOKATAT, MSD630, MSD585)**

*NOTE: A suitable work area is required to conduct the inspections. The work area should be smooth and flat, where the suit will not snag, tear or otherwise be punctured or damaged and should also be cleared of all non-essential equipment and materials. The working surface should be free of harmful contaminants such as oil, grease, acids or solvents. Work areas which are subjected to wide temperature variations should be avoided.*

1. Lay out dry suit in a clean area, free of obstructions.
2. Inspect dry suit for the following:
  - a. Cuts, tears, or seam separation.
  - b. Loose, broken or missing teeth along the entire length of the entry or relief slide fasteners.
  - c. Missing pull tab lanyard on slide fasteners.
3. Remove dry suit from service if any of the above items are noted.

*NOTE: If dry suit leak test is due, perform leak test prior to cleaning.*

U.S. COAST GUARD  
MAINTENANCE PROCEDURE CARD

4. Wash lightweight dry suit using one of the following methods:

**WARNING**

**AVOID EYE AND SKIN CONTACT WITH CLEANER. WASH EXPOSED SKIN THOROUGHLY AFTER HANDLING. FAILURE TO COMPLY MAY RESULT IN PERSONAL INJURY.**

**CAUTION**

**DO NOT USE FABRIC SOFTENER, BLEACH OR WASH-IN TREATMENTS AS THEY CAN AFFECT THE SUITS BREATHABILITY.**

**USE ONLY FRONT OR TOP LOADING WASHERS WITH NO ADJITATOR POST, WASHING MACHINES WITH ADJITATOR POSTS CAN DAMAGE THE SUIT.**

- a. Hand-wash using cleaner, P/N: 30130, and fresh water.  
(1) Rinse dry suit using fresh, clean water.
- b. Machine wash warm on gentle cycle using detergent, P/N: 145495.
5. Dry using one of the following methods:
- a. Hang-dry suit inside out on a hanger, P/N: STY31070, in a cool dry, well ventilated area out of direct sunlight.  
(1) Reverse dry suit on hanger to dry exterior.

**CAUTION**

**CHECK GARMENT CARE LABEL BEFORE USING MACHINE DRYER, MACHINE DRYING MAY HARM SOME LIGHTWEIGHT DRY SUITS.**

- b. Tumble dry using air (no-heat) setting.
6. Restore serial number marking, as required.

**CAUTION**

**TIZIP® MASTERSEAL ZIPPERS (MUSTANG SENTINEL DRY SUITS) DO NOT REQUIRE THE ZIPPER CHAIN TO BE LUBRICATED, ONLY THE DOCKING END. LUBRICATING THE ZIPPER CHAIN MAY AFFECT THE ZIPPERS PERFORMANCE.**

7. Lubricate the following components using wax, P/N: A-A-59255.
- a. Entry zipper docking ends.
- b. Relief zipper docking ends.
- c. Snap fasteners (6).
8. Document any equipment replacement on members AF-538.
9. Document any discrepancies or repairs in dry suit maintenance log.

**C INSPECT/CLEAN SENTINEL HEAVY DUTY DRY SUIT (MSD640)**

*NOTE: A suitable work area is required to conduct the inspections. The work area should be smooth and flat, where the suit will not snag, tear or otherwise be punctured or damaged and should also be cleared of all non-essential equipment and materials. The working surface should be free of harmful contaminants such as oil, grease, acids or solvents. Work areas which are subjected to wide temperature variations should be avoided.*

1. Remove the immersion module from the outer shell as follows, (Refer to Figure 8):
  - a. Completely open the entry and relief zipper covers.

*NOTE: (3) snaps located on the entry zipper; (2) one at the end of each sleeve; (1) at the back of the neck.*

- b. Unsnap the (6) immersion module and outer shell connection snaps.
  - c. Disconnect the duty belt keepers
  - d. Pull belt keepers out of the outer shell.
  - e. Pull the neck area out of the entry zipper area.
  - f. Pull the arms and lower half of the suit out of the outer shell.

2. Inspect each module for the following:

- a. Cuts, tears, or seam separation.
  - b. Loose, broken or missing teeth along entry and relief zippers.
  - c. Legible markings on outer shell.
  - d. Missing pull tab lanyard on zippers.

3. Remove dry suit from service if any of the above items are noted.

*NOTE: Repairs to the MSD640 immersion module and outer shell are authorized at unit level under certain conditions. Refer to MPC RSS583020.3 to determine if unit level repair is authorized.*

- a. Perform unit level repairs to dry suit, if applicable, (Refer to MPC RSS583020.3).

*NOTE: Manufacturers will not replace/repair damaged dry suits over 5 years from manufacture date. Ensure that dry suit is clean and dry prior to shipping for repair.*

- (1) Send non-repairable dry suit to manufacturer if under warranty or if repair cost is economical.
    - (2) Replace damaged dry suit module, P/N: (see expendables list), if required.

*NOTE: If dry suit leak test is due, perform leak test prior to cleaning.*

4. Wash dry suit modules separately using one of the following methods:



**WARNING**

**AVOID EYE AND SKIN CONTACT WITH CLEANER. WASH EXPOSED SKIN THOROUGHLY AFTER HANDLING. FAILURE TO COMPLY MAY RESULT IN PERSONAL INJURY.**

**CAUTION**

**DO NOT USE FABRIC SOFTENER, BLEACH OR WASH-IN TREATMENTS AS THEY CAN AFFECT THE SUITS BREATHABILITY.**

- a. Hand-wash using cleaner, P/N: 30130, and fresh water.
  - (1) Rinse dry suit using fresh, clean water.

**WARNING**

**AVOID EYE CONTACT, SKIN CONTACT, INHALATION, AND INGESTION WITH DETERGENT USE IN A WELL VENTILATED AREA. FAILURE TO COMPLY MAY RESULT IN PERSONAL INJURY.**

**CAUTION**

**USE ONLY FRONT OR TOP LOADING WASHERS WITH NO ADJITATOR POST, WASHING MACHINES WITH ADJITATOR POSTS CAN DAMAGE THE SUIT.**

- b. Machine wash warm on gentle cycle using detergent, P/N: 145495.
5. Dry using one of the following methods:
- a. Hang-dry suit inside out on a hanger, P/N: STY31070, in a cool dry, well ventilated area out of direct sunlight.
    - (1) Reverse dry suit on hanger to dry exterior.

**CAUTION**

**CHECK GARMENT CARE LABEL BEFORE USING MACHINE DRYER. MACHINE DRYING MAY HARM SOME LIGHTWEIGHT DRY SUITS.**

- b. Tumble dry using air (no-heat) setting.
6. Assemble outer shell to immersion module as follows:
- a. Completely unzip the entry and relief zippers of the outer shell.

*NOTE: Make sure that the front of the immersion layer is facing the front of the outer shell.*
  - b. Slide the inner immersion suit layer into the outer shell.
  - c. Align the positions of the duty belt keepers on the inner immersion layer with the corresponding button holes on the outer shell.
  - d. Slide the duty belt keepers through the button holes of the outer shell.



*NOTE: (3) snaps located on the entry zipper; (1) one at the end of each sleeve; (1) at the back of the neck.*

*NOTE: Ensure the sleeves of the inner immersion layer are not twisted inside the suit.*

- e. Align the snaps of the outer suit with the snaps of the inner suit in the (6) locations.
- f. Fasten the (6) snaps together.

**CAUTION**

**TIZIP® MASTERSEAL ZIPPERS DO NOT REQUIRE THE ZIPPER CHAIN TO BE LUBRICATED, ONLY THE DOCKING END. LUBRICATING THE ZIPPER CHAIN MAY AFFECT THE ZIPPERS PERFORMANCE.**

- 7. Lubricate the following components using wax, P/N: A-A-59255, (Refer to Figure 8).
  - a. Entry zipper docking ends.
  - b. Relief zipper docking ends.
  - c. Snap fasteners (6).

**WARNING**

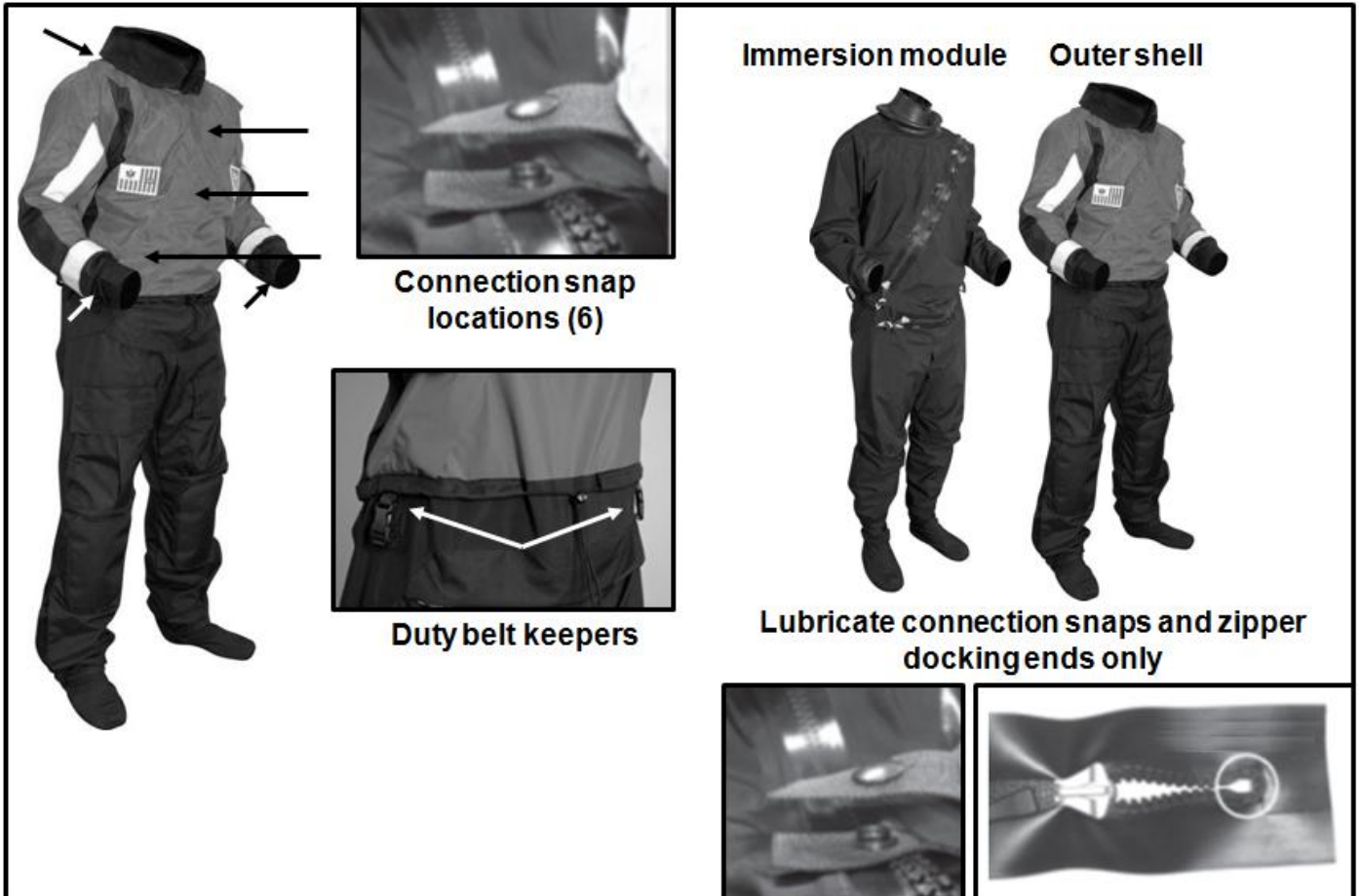
**AVOID EYE CONTACT, SKIN CONTACT, AND INHALATION WITH POWDER. WASH EXPOSED SKIN THOROUGHLY AFTER HANDLING. FAILURE TO COMPLY MAY RESULT IN PERSONAL INJURY.**

**CAUTION**

**TALCUM POWDER USED TO LUBRICATE DRY SUIT SEALS SHALL NOT CONTAIN IMPREGNATED OILS OR SCENTS. IMPREGNATED OILS AND SCENTS WILL DAMAGE SUIT SEALS BY CAUSING PREMATURE DRY ROT AND CRACKING.**

- 8. Dust wrist and neck seals lightly with talcum powder, P/N: A-A-59303.
- 9. Document any equipment replacement on members AF-538.
- 10. Document any discrepancies or repairs in the dry suit maintenance log.





**MSD 640 HEAVY DUTY DRY SUIT**

**Figure 8**



U.S. COAST GUARD  
MAINTENANCE PROCEDURE CARD

**C INSPECT/CLEAN MODULAR INDUSTRIAL DRY SUIT (MSD900/901)**

*NOTE: A suitable work area is required to conduct the inspections. The work area should be smooth and flat, where the suit will not snag, tear or otherwise be punctured or damaged and should also be cleared of all non-essential equipment and materials. The working surface should be free of harmful contaminants such as oil, grease, acids or solvents. Work areas which are subjected to wide temperature variations should be avoided.*

1. Remove the immersion module from the outer shell, (Refer to Figure 9).
2. Loosen the immersion module neck seal drawstring completely.
3. Remove the thermal liner from the immersion module as follows, (Refer to Figure 10):
4. Inspect each dry suit module, over its entire surface for the following:
  - a. Cuts, tears, or seam separation.
  - b. Loose, broken or missing interconnection or relief slide fastener teeth.
  - c. Legible markings on outer shell.
  - d. Missing pull tab lanyard on slide fasteners.
5. Remove dry suit from service if any of the above items are noted.
  - a. Replace outer shell, P/N: MA3004 22, if required.
  - b. Replace immersion module, P/N: MA3007, if required.
  - c. Replace thermal liner, P/N: MA3010, if required.
6. Inflate head pillow through the inflation tube until firm.
  - a. Lock inflation tube lock closed.

**WARNING**

**AVOID EYE OR PROLONGED SKIN CONTACT WITH LEAK TEST COMPOUND, AVOID BREATHING VAPORS. USE IN WELL-VENTILATED AREA. WASH THOROUGHLY AFTER USE.**

7. Apply leak test compound, P/N: MIL-PRF-25567, to the head pillow in the following locations:
  - a. Inflation tube.
  - b. Base of the tube on the bladder connection point.
8. Inspect head pillow for signs of deflation or leakage.

**WARNING**

**AVOID EYE CONTACT, SKIN CONTACT, INHALATION, AND INGESTION WITH ADHESIVE. USE IN A WELL VENTILATED AREA. WASH EXPOSED SKIN AND CONTAMINATED CLOTHING THOROUGHLY AFTER HANDLING. FAILURE TO COMPLY MAY RESULT IN PERSONAL INJURY.**

*NOTE: Apply a 1/16 inch bead of repair adhesive over the hole and 1/4 inch beyond. Allow repair to cure at least eight hours before re-checking.*

- a. Repair pinhole leaks in the head pillow using urethane repair adhesive, P/N: 477.
- b. Remove dry suit if leakage is detected from the inflation tube or tube base.

**WARNING**

**AVOID EYE AND SKIN CONTACT WITH CLEANER. WASH EXPOSED SKIN THOROUGHLY AFTER HANDLING. FAILURE TO COMPLY MAY RESULT IN PERSONAL INJURY.**

**CAUTION**

**DO NOT USE FABRIC SOFTENER, BLEACH OR WASH-IN TREATMENTS AS THEY CAN AFFECT THE SUITS BREATHABILITY.**

*NOTE: If dry suit leak test is due, perform leak test prior to cleaning.*

9. Hand-wash thermal liner using dry suit cleaner, P/N: 30130, and fresh water.
  - a. Rinse with fresh water.
  - b. Hang dry thermal liner until dry.
10. Machine wash immersion module using dry suit cleaner on warm setting.
11. Machine dry immersion module on low heat setting.
12. Clean outer shell as follows:
  - a. Remove head pillow from outer shell.
  - b. Remove any items from pockets.
  - c. Machine wash outer shell module using dry suit cleaner, on warm setting.
  - d. Hang dry outer shell until dry.



U.S. COAST GUARD  
MAINTENANCE PROCEDURE CARD

- e. Install head pillow back into outer shell module.

*NOTE: Ensure modules are dry before assembling.*

13. Assemble thermal liner to immersion module as follows:

- a. Lay immersion module face down with waterproof zipper and neck seal fully open
- b. Lay thermal liner face down on top of immersion module.
- c. Reach through the leg portion of the Immersion module to the foot.
- d. Pull the immersion module ankle inside out exposing the ankle interconnection zipper.
  - (1) Mate the immersion module and thermal liner ankle interconnection zippers.
  - (2) Close the interconnection zippers completely.
  - (3) Push the connected immersion module and thermal liner ankles back down into the suit.
  - (4) Repeat above steps for opposite ankle.
- e. Connect the upper and lower interconnection zippers adjacent to the waterproof relief zipper at the waist.
- f. Reach through the arm portion of the immersion module to the wrist.
- g. Pull the immersion module wrist inside out exposing the wrist interconnection zipper.
  - (1) Mate the immersion module and thermal liner wrist interconnection zippers.
  - (2) Close the interconnection zippers completely.
  - (3) Push the connected immersion module and thermal liner wrists back down into the suit.
  - (4) Repeat above steps for the opposite wrist.
- h. Zip the upper and lower waist interconnection zippers located under the arms closed.
- i. Roll back the edge of the neck seal on the immersion module to expose the interconnection zipper.

**CAUTION**

**AVOID PINCHING THE WATERPROOF MATERIAL OF THE IMMERSION MODULE WITH THE ZIPPER SLIDER.**

- (1) Zip the neck interconnection zippers of the immersion module and thermal liner closed.
- (2) Fold the neck seal back down.

14. Assemble the outer shell to the immersion/thermal modules as follows:

- a. Loosen the wrist adjustment straps completely.
- b. Lay the outer shell face down.
- c. Lay the assembled immersion/thermal module face down on top of the outer shell.
- d. Route the legs of the immersion/thermal module through the legs of the outer shell.
- e. Route the arms of the immersion/thermal module through the arms of the outer shell.
- f. Pull the neck seal up to the neck of the outer shell.
- g. Zip the wrist interconnection zippers at both wrists closed.

U.S. COAST GUARD  
MAINTENANCE PROCEDURE CARD

- h. Fold the outer shell open around the waist exposing the upper and lower waist interconnection zippers.
  - i. Zip the lower interconnection zipper around the circumference of the outer shell closed.
  - j. Zip the upper interconnection zipper at the center of the back closed.
15. Lubricate dry suit entry slide fastener across its entire length using paraffin wax, P/N: A-A-59255.

**WARNING**

**AVOID EYE CONTACT, SKIN CONTACT, AND INHALATION WITH POWDER. WASH EXPOSED SKIN THOROUGHLY AFTER HANDLING. FAILURE TO COMPLY MAY RESULT IN PERSONAL INJURY.**

**CAUTION**

**TALCUM POWDER USED TO LUBRICATE DRY SUIT SEALS SHALL NOT CONTAIN IMPREGNATED OILS OR SCENTS. IMPREGNATED OILS AND SCENTS WILL DAMAGE SUIT SEALS BY CAUSING PREMATURE DRY ROT AND CRACKING.**

16. Dust wrist and neck seals lightly with talcum powder, P/N: A-A-59303.
17. Restore serial number marking, as required.
18. Document any discrepancies or repairs in dry suit maintenance log.

U.S. COAST GUARD  
MAINTENANCE PROCEDURE CARD

**4 ANNUAL DRY SUIT LEAK TEST**

**A PRELIMINARY STEPS**

1. Have member don the following PPE equipment:
  - a. Undergarments.
  - b. Socks.
  - c. Boots.
  - d. Dry suit.
  - e. Hood and gloves, if local climate conditions require.

**B TEST**

1. Have member enter a body of water deep enough to allow him/her to stand or swim immersed to the top of the neck seal.
2. **Remain in water for no less than 15 minutes.**

*NOTE: Minor seepage around the wrist and neck seals is normal and does not indicate a leak. Isolated water soaked spots on the undergarment, or soaked socks indicates a leak. Flooding into the dry suit socks indicates a serious leak*

3. Check with member to determine if the dry suit leaked.
4. Remove dry suit from service if leaks are detected.

*NOTE: Repairs to the MSD630 and MSD640 dry suit are authorized at unit level under certain conditions. Refer to MPC RSS583020.3 to determine if unit level repair is authorized.*

- a. Perform unit level repairs to dry suit (MSD634/640), if applicable, (Refer to MPC RSS583020.3).

*NOTE: Manufacturers will not replace/repair damaged dry suits over 5 years from manufacture date. Ensure that dry suit is clean and dry prior to shipping for repair.*

- b. Send non-repairable dry suit to manufacturer if under warranty or if repair cost is economical.
- c. Replace dry suit or module, P/N: (see expendables list), if repair is not economical.

**C FINAL STEPS**

1. Clean dry suit.
2. Clean all cold weather PPE worn during test
3. Document any equipment replacement on members AF-538.
4. Document test in dry suit maintenance log.

U.S. COAST GUARD  
MAINTENANCE PROCEDURE CARD

Item	Qty
<b>Balaclava</b>	1 ea
<b>Dry Suit</b>	1 ea
<b>Insulated Boots</b>	1 ea
<b>Cold Weather Glove Layer 1</b>	1 pr
<b>Cold Weather Glove System –</b> (The TEC-250 glove is considered layers 2 and 3. If the TEC-250 is issued or a glove that meets the salient characteristics of the TEC-250, layer 2 (TS-40) is not required)	1 pr
<b>Neoprene Hood</b>	1 ea
<b>Thermal Socks</b>	2 pr
<b>Thermal Underwear, Layer 1:</b> Two pairs of Layer 1 are required (Example: Either 2 pairs of lightweight, 2 pairs of medium weight or 1 pair of each)	2 pr
<b>Thermal Underwear, Layer 2: (Not required with Modular Industrial Dry Suit)</b> One pair of Layer 2 is required; it can be either the light or medium weight suit as determined by the Unit Commander	1 pr
<b>PS50 Watch Cap</b>	1 ea

**COLD WEATHER PPE**

**Table 1**

U.S. COAST GUARD  
MAINTENANCE PROCEDURE CARD



1. Remove bladder from head pillow.



2. Unsnap and fold open the hood.



3. Expose wrist interconnection zippers.



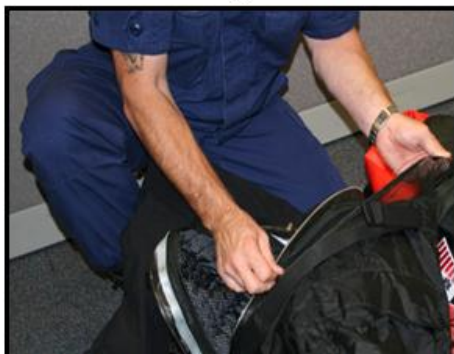
4. Unzip wrist interconnection zippers.



5. Fold outer shell at the waist to expose the upper and lower waist interconnection zippers.



6. Unzip the upper zipper in the center of the back.



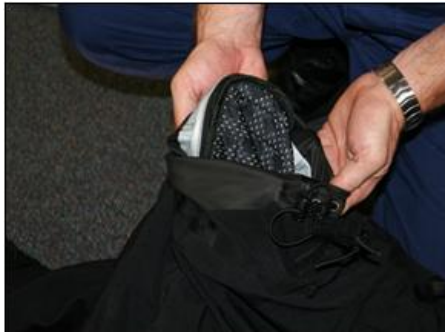
7. Unzip the lower zipper to completely disconnect the outer shell.



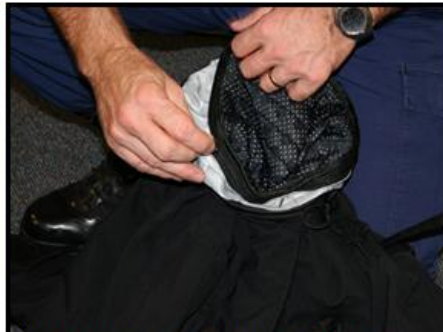
8. Remove outer shell from immersion module.

**MSD 900/901 IMMERSION MODULE REMOVAL**

**Figure 9**



1. Roll back the neck seal to expose the thermal lining interconnection zipper.



2. Unzip the neck thermal lining interconnection zipper.



3. Unzip the zipper around the waist, fold the suit open to expose the upper and lower waist interconnection zippers.



4. Unzip the upper and lower waist interconnection zippers.



5. Unzip the upper and lower interconnection zippers adjacent to the waterproof relief zipper



6. Reach between the modules to the wrist. Pull wrist cuff through exposing the interconnection zipper



7. Unzip the wrist interconnection zipper.  
Repeat Steps 6-7 for opposite wrist.



8. Reach between the modules to the ankle. Pull the ankle cuff through exposing the ankle interconnection zipper.



9. Unzip the ankle interconnection zipper.  
Repeat Steps 8-9 for opposite ankle.

**MSD 900/901 THERMAL LINING REMOVAL**

**Figure 10**