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CEINUM RA-KB00-015

1 COLD WEATHER PERSONAL PROTECTIVE EQUIPMENT (PPE) INSP/ACPT

REFERENCES:

COMDTINST M10470.10 (series) Rescue and Survival Systems Manual Chapter 3
Form AF-538, Personal Clothing and Equipment Record
MPC CB0010.0
MPC [KB0073.0](#)
MPC [KB0074.0](#)
MPC [KB0079.0](#)

TOOLS/TEST EQUIPMENT:

Scissors, P/N: 5110-01-241-4375, CAGE: 80244, NIIN: 012414375 (If required)
Tape Measure, P/N: 8315-00-782-3520, CAGE: 80244, NIIN: 007823520 (If required)

EXPENDABLES:

NONE

CONSUMABLES:

NONE

A GENERAL INSTRUCTIONS

WARNING

**VARIOUS STEPS IN THIS PROCEDURE EMPLOY ITEMS ON
THE HAZARDOUS MATERIALS LIST. BEFORE EXECUTING
THIS MPC, REFER TO THE APPLICABLE MSDS/SDS FOR
FULL SAFETY AND HANDLING PROCEDURES.**

NOTE: The individual serial number is comprised of the first three letters of the member's last name followed by the last four digits of the member's employee identification number, (Example: SN John Smith, EMPLID 1234567, would be SMI4567). In service cold weather PPE not individually issued may be assigned a unit generated serial number (i.e. unit OPFAC + 3 digits). Do not use dashes, hyphens, or spaces in the assigned individual or unit serial number. Individual serial number for standard and cold weather PPE will be the same.

1. Assign individual serial number.
2. Perform acceptance inspection upon initial issue, or when a member transfers in from another unit.

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NOTE: If standard sized equipment does not provide the proper fit, and the manufacturer is unable to provide special sizing to meet personnel needs, units are authorized to purchase an alternative item that most closely meets the required salient characteristics, (Refer to [COMDTINST M10470.10 \(series\) Chapter 3](#)). Units shall make the following notation in the remarks section of the AF-538: "Due to sizing limitations, an alternative Item(s) has been issued in lieu of the item required by the RSSM".

3. Document all issuances, returns, or replacements on the member's form AF-538.
4. Documentation for all tasks includes the following:
 - a. Document all issuances or returns on the member's form AF-538.
 - b. Document all dry suit repairs in the dry suit maintenance log.
5. Transfers:
 - a. Members transferring to another unit which utilizes cold weather PPE.
 - (1) Departing unit:
 - (a) Review member's AF-538 with the member present to verify accuracy.
 - (b) Complete form DD-1149 Requisition and Invoice/Shipping Document.

NOTE: Standard and cold weather PPE may be shipped together.
 - (c) Unit ships, via trackable means, all PPE, member's AF-538, and appropriate copy of DD-1149 invoice to new unit.
 - (2) Receiving unit:
 - (a) Review the member's AF-538 with the member present to verify accuracy.
 - (b) Re-issue PPE to member, noting any new equipment on the member's form AF-538.
 - (c) Complete acceptance inspection, Step 1 B of this MPC, noting any new equipment on the member's AF-538.
 - b. Members transferring to a unit which does not utilize cold weather PPE:
 - (1) Issuing unit collect the following returnable cold weather PPE items:
 - (a) Dry suit.
 - (b) Layer 2 fleece thermals.
 - (c) Cold weather gloves.
 - c. Members released from active duty or retiring:
 - (1) Issuing unit collect all cold weather PPE items.
 - (2) Issuing unit dispose of the following non-returnable PPE:
 - (a) Layer 1 synthetic thermals.
 - (b) Layer 1 cold weather gloves.
 - (c) Thermal socks.
 - (d) Insulated boots.
 - (e) Balaclava.
 - (f) Watch cap.
 - (g) Neoprene hood.



B ACCEPTANCE INSPECTION

NOTE: DSF units use MPC CB0010.0 located at <http://cgweb.comdt.uscg.mil/G-RCB/CBRNE%20Maintenance.htm> for Chemical, Biological (CB) dry suit maintenance.

1. Issue required cold weather PPE items to member, (Refer to [Table 1](#)).
2. Stencil individual serial number on the inside of the dry suit, adjacent to the entrance slide fastener.
3. Inspect dry suit, (Refer to Item [2](#) of this MPC).
4. Inspect all additional issued PPE, (Refer to Item [3](#) of this MPC).
5. Fit the below applicable dry suit to member.
 - a. Fit USIA dry suit as follows:

CAUTION

USE EXTREME CARE WHEN TRIMMING USIA LATEX NECK AND WRIST SEALS. AN EVEN TRIM LINE IS ESSENTIAL TO AVOID SPLITTING THE SEAL WHEN THE SUIT IS DONNED. DO NOT TRIM MORE THAN ONE RING AT A TIME. DO NOT ATTEMPT TO TRIM THROUGH TWO LAYERS OF SEAL MATERIAL WITH ONE CUT. NICKS CAUSED BY SHARP POINTS MAY RESULT IN SPLIT SEALS WHEN THE SUIT IS DONNED.

- (1) Trim USIA dry suit seals using sharp scissors, (If required), (Refer to [Figure 1](#)).
 - (a) Replace USIA dry suit seals, (If required), (Refer to MPC [KB0073.0](#)).
- b. Fit KOKATAT dry suit as follows:

CAUTION

KOKATAT NEOPRENE WRIST AND NECK SEALS SHOULD NOT NEED TO BE TRIMMED TO FIT. SIZING ISSUES WITH NEOPRENE SEALS SHALL BE ADDRESSED TO THE MANUFACTURER.

CAUTION

USE EXTREME CARE WHEN TRIMMING KOKATAT LATEX NECK SEAL. AN EVEN TRIM LINE IS ESSENTIAL TO AVOID SPLITTING THE SEAL WHEN THE SUIT IS DONNED. DO NOT ATTEMPT TO TRIM THROUGH TWO LAYERS OF SEAL MATERIAL WITH ONE CUT. NICKS CAUSED BY SHARP POINTS MAY RESULT IN A SPLIT SEAL WHEN THE SUIT IS DONNED.

- (1) Trim latex neck seal using sharp scissors, (If required), (Refer to [Figure 2](#)).
 - (a) Replace neck seal, (If required), (Refer to MPC [KB0074.0](#)).
- c. Fit MUSTANG MSD585 dry suit as follows:
 - (1) Have member don dry suit.
 - (a) Trim wrist seals, (If required), (Refer to [Figure 3](#)).
 - (b) Send dry suit to manufacturer for seal replacement, (If required).
- d. Fit MSD630/640 dry suit.
 - (1) Have member don dry suit.



- (a) Check neck seal for the following while member goes through the range of normal head movements:
 - 1) Neck seal fits snugly.
 - 2) Neck seal remains in direct contact with the neck throughout all normal head movements.
 - 3) Trim neck seal, (If required), (Refer to MPC [KB0079.0](#)).
 - 4) Replace neck seal, (If required), (Refer to MPC [KB0079.0](#)).
- (b) Check wrist seals for the following while member goes through the range of normal motion:
 - 1) Wrist seals fit tightly enough to prevent water entry.
 - 2) Wrist seals do not restrict blood flow.
 - 3) Trim wrist seals, (If required), (Refer to MPC [KB0079.0](#)).
 - 4) Replace seals, (If required), (Refer to MPC [KB0079.0](#)).
6. Leak test dry suit, (Comply with Item 4 of this MPC).
7. Document issuance.
 - a. Issuer and member document issuance or replacements on members form AF-538.
8. Document any discrepancies or repairs in the dry suit maintenance log.



2 SEMI-ANNUAL DRY SUIT INSP/CLN

REFERENCES:

Form AF-538, Personal Clothing and Equipment Record
MPC CB0010.0

TOOLS/TEST EQUIPMENT:

NONE

EXPENDABLES:

Boat Crew Dry Suit (Selected) (If required):

Aids to Navigation and Ice Rescue Units (Industrial/Heavy Weight Dry Suit):

Modular Industrial Dry Suit, P/N: MSD901 22, CAGE: 1CJ91

Sentinel USCG Female Heavy Duty Boat Crew Dry Suit, Latex Seals, P/N: MSD641-22, CAGE: 1CJ91

Sentinel USCG Female Heavy Duty Boat Crew Dry Suit, Neoprene Seals, P/N: MSD643-22,
CAGE: 1CJ91

Sentinel USCG Heavy Duty Boat Crew Dry Suit, Latex Seals, P/N: MSD640-22, CAGE: 1CJ91

Sentinel USCG Heavy Duty Boat Crew Dry Suit, Neoprene Seals, P/N: MSD642-22, CAGE: 1CJ91

Boat Forces Units, Orange and Black with Reflective Tape and CG Marking
Package (Lightweight Dry Suit):

KOKATAT, P/N: 4DSUBCLOB, CAGE: 04QK6

Mustang MSD585, P/N: MSD585LS, CAGE: 1CJ91

Sentinel USCG Female Lightweight Boat Crew Dry Suit, Neoprene Seals, P/N: MSD633-22,
CAGE: 1CJ91

Sentinel USCG Lightweight Boat Crew Dry Suit, Neoprene Seals, P/N: MSD632-22, CAGE: 1CJ91

Sentinel USCG Female Lightweight Boat Crew Dry Suit, Rubber Seals, P/N: MSD631-22,
CAGE: 1CJ91

Sentinel USCG Lightweight Boat Crew Dry Suit, Rubber Seals, P/N: MSD630-22, CAGE: 1CJ91

USIA, P/N: CG/8880, CAGE: 0Z3Y7

Deployable Specialized Forces (DSF) Units:

CG-CB Dry Suit, KOKATAT, P/N: 4DSUBCCBNAVY2 (S), CAGE: DOL 42

CG-CB Dry Suit, KOKATAT, P/N: 4DSUBCCBNAVY3 (M), CAGE: DOL 42

CG-CB Dry Suit, KOKATAT, P/N: 4DSUBCCBNAVY4 (L), CAGE: DOL 42

CG-CB Dry Suit, KOKATAT, P/N: 4DSUBCCBNAVY5 (XL), CAGE: DOL 42

CG-CB Dry Suit, KOKATAT, P/N: 4DSUBCCBNAVY6 (XXL), CAGE: DOL 42

Port Security Units, Alpha Green without SOLAS Reflective Tape:

KOKATAT, P/N: 4DSUMASPSE, CAGE: 04QK6

USIA, P/N: CG/8888G, CAGE: 0Z3Y7

Hanger, Wooden, P/N: STY31070, CAGE: 0L4A1, NIIN: 002626657 (Or equivalent)

Modular Industrial Dry Suit Replacement Modules (If required):

Immersion Module, Industrial Dry Suit, P/N: MA3007, CAGE: 1CJ91

Outer Shell, Industrial Dry Suit, P/N: MA3004 22, CAGE: 1CJ91



Thermal Liner, Industrial Dry Suit, P/N: MA3010, CAGE: 1CJ91
Sentinel MSD640 Heavy Duty Dry Suit Replacement Modules (If required):
Immersion Module, Female, Neoprene Seals, P/N: MA0643, CAGE: 1CJ91
Immersion Module, Female, Rubber Seals, P/N: MA0641, CAGE: 1CJ91
Immersion Module, Male, Neoprene Seals, P/N: MA0642, CAGE: 1CJ91
Immersion Module, Male, Rubber Seals, P/N: MA0640, CAGE: 1CJ91
Outer Shell, Female, P/N: MA1641-22, CAGE: 1CJ91
Outer Shell, Male, P/N: MA1640-22, CAGE: 1CJ91

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

NOTE: Once an item is issued, it shall only be taken out of service for maintenance, repair or unserviceable condition. If an item is issued to a member and is taken out of service and sent to a repair facility for maintenance or repair, a replacement item needs to be issued if the season dictates the need for it.

NOTE: DSF units use MPC CB0010.0 located at <http://cgweb.comdt.uscg.mil/G-RCB/CBRNE%20Maintenance.htm> for Chemical, Biological (CB) dry suit maintenance.

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 900/901).



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: Repairs to the MSD630 are authorized at unit level under certain conditions. Refer to MPC [KB0079.0](#) to determine if unit level repair is authorized.

- a. Repair MSD630 dry suit, if applicable, (Refer to MPC [KB0079.0](#)).

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 dry suit for repair if under warranty or if repair cost is economical.

NOTE: Refer to [Figure 4](#), [Figure 5](#), and [Figure 6](#) for dry suit sizing charts. USIA custom order form is [Figure 7](#).

- (1) Replace dry suit, P/N: (see expendables list), if repair cost is not economical.

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

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.

- a. Hand-wash using cleaner, P/N: 30130, and freshwater.

- (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. WASH EXPOSED SKIN THOROUGHLY AFTER HANDLING. FAILURE TO COMPLY MAY RESULT IN PERSONAL INJURY.

CAUTION

USE ONLY FRONT OR TOP LOADING WASHERS WITH NO AGITATOR POST, WASHING MACHINES WITH AGITATOR 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. 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 ZIPPER'S 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 member's 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: Three snaps located on the entry zipper; One at the end of each sleeve; One at the back of the neck.

- b. Unsnap the six 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 [KB0079.0](#) to determine if unit level repair is authorized.

- a. Perform unit level repairs to dry suit, if applicable, (Refer to MPC [KB0079.0](#)).

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 freshwater.
 - (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. WASH EXPOSED SKIN THOROUGHLY AFTER HANDLING. FAILURE TO COMPLY MAY RESULT IN PERSONAL INJURY.

CAUTION

USE ONLY FRONT OR TOP LOADING WASHERS WITH NO AGITATOR POST, WASHING MACHINES WITH AGITATOR 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: Three snaps located on the entry zipper; One at the end of each sleeve; One 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 six locations.
 - f. Fasten the six 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 ZIPPER'S 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 member's AF-538.
- 10. Document any discrepancies or repairs in the dry suit maintenance log.

D 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, (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 CONTACT, INHALATION, AND PROLONGED SKIN CONTACT WITH LEAK TEST COMPOUND. USE IN A WELL VENTILATED AREA. FAILURE TO COMPLY MAY RESULT IN PERSONAL INJURY.

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 8 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.

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 dry suit for repair if under warranty or if repair cost is economical.

NOTE: Refer to [Figure 4](#) for sizing chart.

- (2) Replace dry suit, P/N: (see expendables list), if repair cost is not economical.

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 SUIT'S 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 freshwater.
 - a. Rinse with freshwater.
 - 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.
 - 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.
 - 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.



3 ANNUAL COLD WEATHER PPE INVENTORY INSP/CHK

REFERENCES:

Form AF-538, Personal Clothing and Equipment Record

TOOLS/TEST EQUIPMENT:

NONE

EXPENDABLES:

Balaclava, P/N: 83243, CAGE: 096Y0 (If required)

Boat Crew Dry Suit (Selected) (If required):

Aids to Navigation and Ice Rescue Units (Industrial/Heavy Weight Dry Suit):

Modular Industrial Dry Suit, P/N: MSD901 22, CAGE: 1CJ91

Sentinel USCG Female Heavy Duty Boat Crew Dry Suit, Latex Seals, P/N: MSD641-22, CAGE: 1CJ91

Sentinel USCG Female Heavy Duty Boat Crew Dry Suit, Neoprene Seals, P/N: MSD643-22,
CAGE: 1CJ91

Sentinel USCG Heavy Duty Boat Crew Dry Suit, Latex Seals, P/N: MSD640-22, CAGE: 1CJ91

Sentinel USCG Heavy Duty Boat Crew Dry Suit, Neoprene Seals, P/N: MSD642-22, CAGE: 1CJ91

Boat Forces Units, Orange and Black with Reflective Tape and CG Marking Package
(Lightweight Dry Suit):

KOKATAT, P/N: 4DSUBCLOB, CAGE: 04QK6

Mustang MSD585, P/N: MSD585LS, CAGE: 1CJ91

Sentinel USCG Female Lightweight Boat Crew Dry Suit, Neoprene Seals, P/N: MSD632-22,
CAGE: 1CJ91

Sentinel USCG Female Lightweight Boat Crew Dry Suit, Rubber Seals, P/N: MSD631-22,
CAGE: 1CJ91

Sentinel USCG Lightweight Boat Crew Dry Suit, Neoprene Seals, P/N: MSD632-22, CAGE: 1CJ91

Sentinel USCG Lightweight Boat Crew Dry Suit, Rubber Seals, P/N: MSD630-22, CAGE: 1CJ91

USIA, P/N: CG/8880, CAGE: 0Z3Y7

Deployable Specialized Forces (DSF) Units:

CG-CB Dry Suit, KOKATAT, P/N: 4DSUBCCBNAVY2 (S), CAGE: DOL 42

CG-CB Dry Suit, KOKATAT, P/N: 4DSUBCCBNAVY3 (M), CAGE: DOL 42

CG-CB Dry Suit, KOKATAT, P/N: 4DSUBCCBNAVY4 (L), CAGE: DOL 42

CG-CB Dry Suit, KOKATAT, P/N: 4DSUBCCBNAVY5 (XL), CAGE: DOL 42

CG-CB Dry Suit, KOKATAT, P/N: 4DSUBCCBNAVY6 (XXL), CAGE: DOL 42

Port Security Units, Alpha Green without SOLAS Reflective Tape:

KOKATAT, P/N: 4DSUMASPSE, CAGE: 04QK6

USIA, P/N: CG/8888G, CAGE: 0Z3Y7

Boots, Insulated (Selected) (If required):

Kamik Workday 2, P/N: BK0130-(size), CAGE: 38074, (Men's Sizes 7-15)

Kamik Workday 2, P/N: BK4130-(size), CAGE: 38074, (Boy's Sizes 4-6)

Kamik Workday 3, P/N: BK0131-(size), CAGE: 38074, (Men's Sizes 7-13)

XTRATUF 16 inch Insulated Safety Boot, P/N: IK-830611, CAGE: 9X054 (Men's Sizes 3-16)

Fastener Tape, Hook, 2 inch Self Adhesive, P/N: A-A-55126, CAGE: 58536, NIIN: 010331734 (If required)



Fastener Tape, Pile, 2 inch Self Adhesive, P/N: A-A-55126, CAGE: 58536, NIIN: 010331735 (If required)
Glove, Cold Weather Modular Layer 1, P/N: TS-10, CAGE: 0DT88 (If required)
Glove, Cold Weather Modular Layer 2, P/N: TS-40, CAGE: 0DT88 (If required)
Glove, Cold Weather Modular Layer 3, P/N: TEC-250, CAGE: 0DT88 (If required)
Hood, Neoprene, Mustang, P/N: MA7348, CAGE: 1CJ91 (If required)
Socks, Thermal, P/N: BT1M, CAGE: 0Z3Y7 (If required)
Tape, Reflective, P/N: SCOTCHLITE 31, CAGE: 94960, NIIN: 004813424 (If required)
Thermal Drawers, Lightweight Layer 1 Synthetic (Selected) (If required):
 Extra Small, P/N: A-A-55270, CAGE: 58536, NIIN: 014155664
 Small, P/N: A-A-55270, CAGE: 58536, NIIN: 014155667
 Medium, P/N: A-A-55270, CAGE: 58536, NIIN: 014155669
 Large, P/N: A-A-55270, CAGE: 58536, NIIN: 014155672
 Extra Large, P/N: A-A-55270, CAGE: 58536, NIIN: 014155761
Thermal Drawers, Medium Weight Layer 1 Synthetic (Selected) (If required):
 Extra Small, P/N: A-A-55246, CAGE: 58536, NIIN: 012279542
 Small, P/N: A-A-55246, CAGE: 58536, NIIN: 012279543
 Medium, P/N: A-A-55246, CAGE: 58536, NIIN: 012279544
 Large, P/N: A-A-55246, CAGE: 58536, NIIN: 012279545
 Extra Large, P/N: A-A-55246, CAGE: 58536, NIIN: 012279546
Thermal Undershirt, Lightweight Layer 1 Synthetic (Selected) (If required):
 Extra Small, P/N: A-A-55270, CAGE: 58536, NIIN: 014155898
 Small, P/N: A-A-55270, CAGE: 58536, NIIN: 014155901
 Medium, P/N: A-A-55270, CAGE: 58536, NIIN: 014155906
 Large, P/N: A-A-55270, CAGE: 58536, NIIN: 014155913
 Extra Large, P/N: A-A-55270, CAGE: 58536, NIIN: 014155916
Thermal Undershirt, Medium Weight Layer 1 Synthetic (Selected) (If required):
 Extra Small, P/N: A-A-55246, CAGE: 58536, NIIN: 012279547
 Small, P/N: A-A-55246, CAGE: 58536, NIIN: 012279548
 Medium, P/N: A-A-55246, CAGE: 58536, NIIN: 012279549
 Large, P/N: A-A-55246, CAGE: 58536, NIIN: 012279550
 Extra Large, P/N: A-A-55246, CAGE: 58536, NIIN: 012279551
Thermal Underwear, Lightweight Layer 2 Fleece (If required):
 Exotherm I, P/N: EX1M (size), CAGE: 0Z3Y7
Thermal Underwear, Medium Weight Layer 2 Fleece (Selected) (If required):
 Exotherm II, P/N: EXM2 (size), CAGE: 0Z3Y7
 Exotherm III, P/N: EXM3 (size), CAGE: 0Z3Y7
Watch Cap, PS50, P/N: 83930, CAGE: 096Y0 (If required)

CONSUMABLES:

Detergent, Laundry, P/N: 145495, CAGE: 5T372, NIIN: 014120535 (Or equivalent)
Fabric Softener, Liquid, P/N: DRK2979953, CAGE: 1P5R3 (Or equivalent)
Urethane Repair Adhesive, P/N: 477, CAGE: 64249 (If required)

A INSPECT

1. Inventory issued cold weather PPE items as listed on member's AF-538, (Refer to [Table 1](#)).
 - a. Issue replacement cold weather PPE items, (If required).



2. Inspect the following items for cuts, tears, holes, or split seams:
- Balaclava.

NOTE: Issue new insulated boots if the sole is worn beyond the tread depth on the walking surface of the boot tread, feeling for any smooth areas. If any area on the walking surface larger than 4 square inches (2 inch x 2 inch) is worn, the boot shall be replaced.

- Insulated boots.
- Cold weather glove system.
- Neoprene hood.

WARNING

AVOID EYE AND SKIN CONTACT WITH ADHESIVE. WASH EYE WITH WARM WATER AND SEEK COMPETENT MEDICAL ADVICE. WASH EXPOSED SKIN WITH SOAP AND WARM WATER. FAILURE TO COMPLY MAY RESULT IN PERSONAL INJURY.

CAUTION

NEOPRENE HOOD MAY BE REPAIRED PROVIDED THE DAMAGED AREA IS LESS THAN 1 INCH, AND DOES NOT CROSS ANY SEAM.

- Repair small holes or tears using urethane repair adhesive, P/N: 477, (If required).
 - Allow repair to cure for 8 hours.
- Check neoprene hood for the following additional required items, (Refer to [Figure 11](#)):

NOTE: There is one 2 inch x 2 inch piece of pile tape located on the top of the hood, and two 1 inch x 2 inch pieces of pile tape located on each side of the hood for flap retention. Pile tape may be attached to hood by use of urethane repair adhesive, or by stitching.

- Pile tape installed on top and sides hood.
 - Replace pile tape, P/N: A-A-55126, (if required).

NOTE: There are four 1 inch x 2 inch pieces of hook tape attached to the flap; two on the inside of the flap, and two on the outside. Reflective tape may be attached to hood by use of urethane repair adhesive, or by stitching.

- Hook tape located on the hood flap.
 - Replace hook tape, P/N: A-A-55126, (If required).

NOTE: There are three pieces of 2 inch x 4 inch reflective tape installed. One located on each side of the hood, and one piece on top of the hood. Reflective tape may be attached to hood by use of urethane repair adhesive, or by stitching.

- Reflective tape installed on the top and sides of the hood.
 - Replace reflective tape using a 2 inch x 4 inch section of cloth-backed reflective tape, P/N: SCOTHLITE 31, (If required).

- Thermal socks.
- Thermal underwear.



- g. Watch cap.
- 3. Repair or replace PPE item, P/N: (see expendables list), (If required).

B CLEAN

WARNING

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

- 1. Machine wash following cold weather PPE items using laundry detergent, P/N: 145495, on cool setting:
 - a. Balaclava.
 - b. PS50 watch cap.
 - c. Cold weather gloves, all layers.
 - d. Thermal socks.
 - e. Layer 1 synthetic thermals.
 - f. Layer 2 fleece thermals.

WARNING

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

- g. Add fabric softener, P/N: DRK2979953, to load during rinse cycle.

WARNING

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

- 2. Hand-wash the neoprene hood in cold water using cleaner, P/N: 30130.
 - a. Machine or hang dry cool, out of direct sunlight.
- 3. Document any equipment replacement on member's AF-538.
- 4. Unit AOPS administrator document inventory in TMT.
- 5. Document annual inventory on member's AF-538.



4 ANNUAL DRY SUIT LEAK TEST

REFERENCES:

Form AF-538, Personal Clothing and Equipment Record

MPC CB0010.0

MPC [KB0079.0](#)

TOOLS/TEST EQUIPMENT:

NONE

EXPENDABLES:

Boat Crew Dry Suit (Selected) (If required):

Aids to Navigation and Ice Rescue Units (Industrial/Heavy Weight Dry Suit):

Modular Industrial Dry Suit, P/N: MSD901 22, CAGE: 1CJ91

Sentinel USCG Female Heavy Duty Boat Crew Dry Suit, Latex Seals, P/N: MSD641-22, CAGE: 1CJ91

Sentinel USCG Female Heavy Duty Boat Crew Dry Suit, Neoprene Seals, P/N: MSD643-22,
CAGE: 1CJ91

Sentinel USCG Heavy Duty Boat Crew Dry Suit, Latex Seals, P/N: MSD640-22, CAGE: 1CJ91

Sentinel USCG Heavy Duty Boat Crew Dry Suit, Neoprene Seals, P/N: MSD642-22, CAGE: 1CJ91

Boat Forces Units, Orange and Black with Reflective Tape and CG Marking Package
(Lightweight Dry Suit):

KOKATAT, P/N: 4DSUBCLOB, CAGE: 04QK6

Mustang MSD585, P/N: MSD585LS, CAGE: 1CJ91

Sentinel USCG Female Lightweight Boat Crew Dry Suit, Neoprene Seals, P/N: MSD633-22,
CAGE: 1CJ91

Sentinel USCG Female Lightweight Boat Crew Dry Suit, Rubber Seals, P/N: MSD631-22,
CAGE: 1CJ91

Sentinel USCG Lightweight Boat Crew Dry Suit, Neoprene Seals, P/N: MSD632-22, CAGE: 1CJ91

Sentinel USCG Lightweight Boat Crew Dry Suit, Rubber Seals, P/N: MSD630-22, CAGE: 1CJ91

USIA, P/N: CG/8880, CAGE: 0Z3Y7

Deployable Specialized Forces (DSF) Units:

CG-CB Dry Suit, KOKATAT, P/N: 4DSUBCCBNAVY2 (S), CAGE: DOL 42

CG-CB Dry Suit, KOKATAT, P/N: 4DSUBCCBNAVY3 (M), CAGE: DOL 42

CG-CB Dry Suit, KOKATAT, P/N: 4DSUBCCBNAVY4 (L), CAGE: DOL 42

CG-CB Dry Suit, KOKATAT, P/N: 4DSUBCCBNAVY5 (XL), CAGE: DOL 42

CG-CB Dry Suit, KOKATAT, P/N: 4DSUBCCBNAVY6 (XXL), CAGE: DOL 42

Port Security Units, Alpha Green without SOLAS Reflective Tape:

KOKATAT, P/N: 4DSUMASPSE, CAGE: 04QK6

USIA, P/N: CG/8888G, CAGE: 0Z3Y7

CONSUMABLES:

NONE



A PRELIMINARY STEPS

NOTE: DSF units use MPC CB0010.0 located at <http://cgweb.comdt.uscg.mil/G-RCB/CBRNE%20Maintenance.htm> for Chemical, Biological (CB) dry suit leak test.

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 [KB0079.0](#) to determine if unit level repair is authorized.

- a. Perform unit level repairs to dry suit (MSD634/640), if applicable, (Refer to MPC [KB0079.0](#)).

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

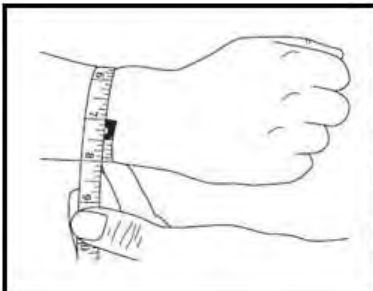
1. Clean dry suit, (Refer to Item 2 of this MPC).
2. Clean all cold weather PPE worn during test, (Refer to Item 3 of this MPC).
3. Document any equipment replacement on member's AF-538.
4. Document test in dry suit maintenance log.



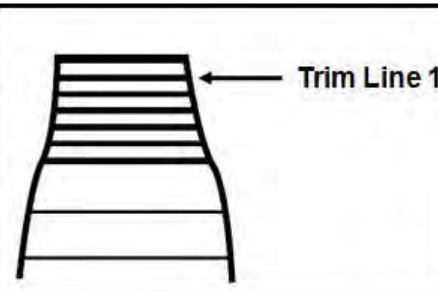
Item	Required Qty
Balaclava	1 ea
Dry Suit	1 ea
Insulated Boots	1 ea
Cold Weather Glove Layer 1	1 pr
Cold Weather Glove Layer 2/3 (The TEC-250 glove is considered layer 2 and layer 3. If the TEC-250 is issued or a glove that meets the salient characteristics of the TEC-250, layer 2 (TS-40) is not required)	1 pr
Neoprene Hood	1 ea
Thermal Socks	2 pr
Thermal Underwear, Layer 1: 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
Thermal Underwear, Layer 2: (Not required with Modular Industrial Dry Suit) 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
PS50 Watch Cap	1 ea

COLD WEATHER PPE
Table 1



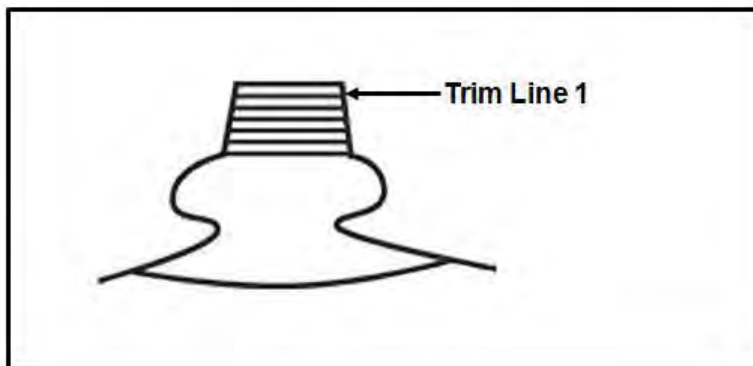


Trim Line	Wrist (inches)	Wrist (mm)
Trim Line 1	4 1/2	114
Trim Line 2	5	127
Trim Line 3	5 3/8	137
Trim Line 4	5 7/8	149
Trim Line 5	6 3/8	162
Trim Line 6	6 7/8	175
Trim Line 7	7 3/8	187
Trim Line 8	7 7/8	200
Trim Line 9	8 5/8	215
Trim Line 10	8 7/8	219



1. Measure wrists with a measuring tape.
2. On the wrist seal, you will see 10 rings, with the ring closest to the end of the seal being number 1 trim line, trim the wrist seals using the following guide lines:
 - a. Use a very sharp pair of scissors with no nicks.
 - b. Make a small incision in the side of the ring and continue cutting around the ring until you make a clean cut.
NOTE: Any little nicks can cause a tear when stretching the seal.
NOTE: Always be conservative on your measurements. You can always cut more, but once you cut the seal, you cannot add back.
NOTE: Wrist seals should be worn just above the wrist bone. The seal should be very snug, but not uncomfortably tight.
 - c. If you experience tingling in the fingers, proceed to cut off another ring.
 - d. Some users have a significant tendon in their wrist that does not allow for a tight seal. This can be helped by pulling up the wrist seal over the tendon.

Trim Line	Neck (inches)	Neck (mm)
Trim Line 1	11 1/8	283
Trim Line 2	11 3/4	298
Trim Line 3	12 3/8	314
Trim Line 4	13	330
Trim Line 5	13 7/8	352
Trim Line 6	14 1/2	368
Trim Line 7	15	381
Trim Line 8	15 5/8	397
Trim Line 9	16 1/8	410
Trim Line 10	17	432
Trim Line 11	17	457



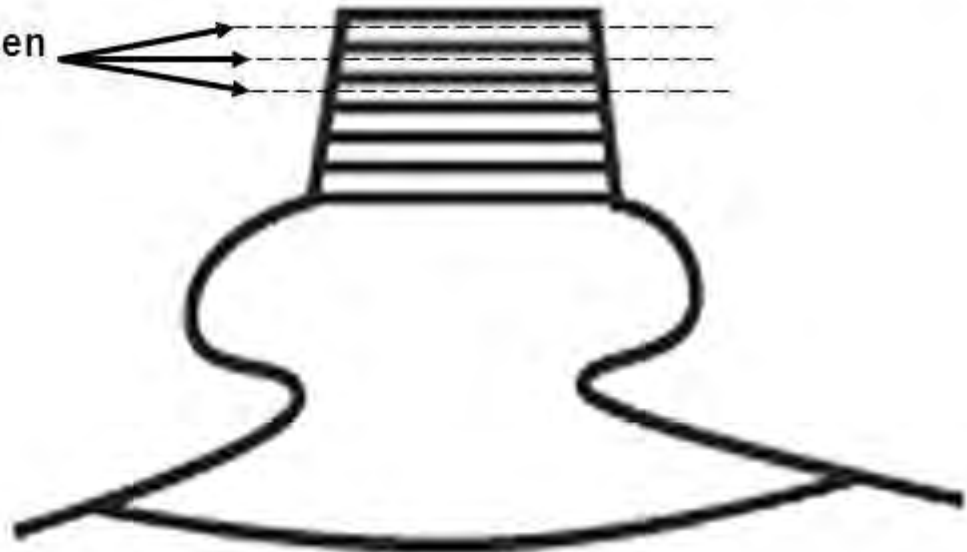
1. On the neck seal, you will see 11 rings.
2. Measure your neck with a measuring tape.
3. With the ring closest to the opening at the top of the neck being trim line number 1, trim the neck seal using the following guide lines.
NOTE: Use a very sharp pair of scissors with no nicks.
4. Make a small incision in the side of the ring and continue cutting around the ring until you make a clean cut.
5. Any little nicks can cause a tear when stretching the seal.
6. Always be conservative on your measurements. You can always cut more, but once you cut the seal, you cannot add back.
7. When trying on, the neck seal should be very snug, but not uncomfortably tight.

USIA DRY SUIT WRIST/NECK SEAL TRIMMING INSTRUCTIONS

Figure 1



Make cuts between
rings

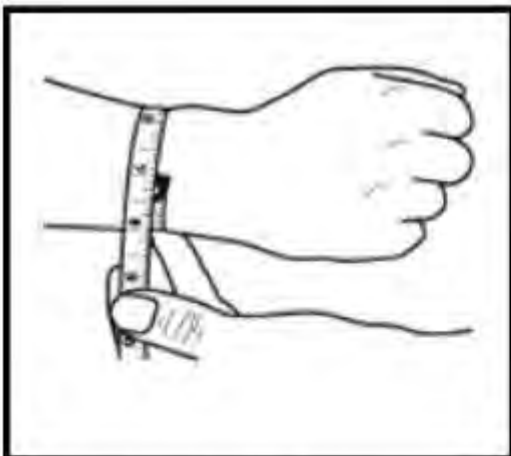


1. Turn KOKATAT dry suit inside-out, notice the rings running parallel down the gaskets.
2. Make all cuts in-between the rings.
3. Visually inspect the trimmed edge for nicks; the cut must be straight. Nicks need to be trimmed out before you try it on.
4. Carefully cut between one ring at a time.
5. Check for fit after each cut.

KOKATAT GASKET TRIMMING INSTRUCTIONS

Figure 2

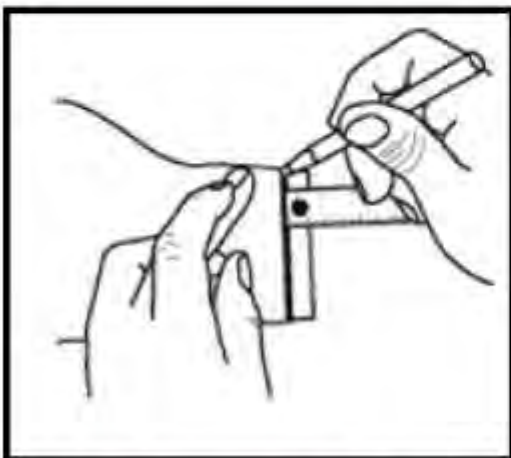




1. Measure members wrist size.

Wrist Size	Trim Off
5 1/2" - 6"	0 "
6 1/2"	1/4 "
7"	1/2 "
7 1/2"	3/4 "
8"	1 "

2. Determine appropriate "Trim Off" amount.



3. Mark a circular line around the cuff that is offset from the original cuff end by the "trim off" amount.



4. Carefully cut the cuff end at the marked line.

MSD585 SEAL TRIMMING INSTRUCTIONS

Figure 3



Mustang MSD 900/901 Industrial Suit

Size	Chest	Waist	Inseam
S	34" - 38"	28" - 30"	27.5"
M	38" - 42"	32" - 34"	31"
L	42" - 46"	36" - 38"	32"
XL	46" - 50"	40" - 42"	33"
XXL	50" - 54"	44" - 46"	34"

Mustang MSD 575/585LS Lightweight Suit

Size	Height	Chest	Waist
XS	61" - 65"	33" - 36"	61" - 65"
S	64" - 68"	36" - 39"	64" - 68"
M	67" - 71"	39" - 42"	67" - 71"
L	70" - 74"	42" - 45"	70" - 74"
XL	73" - 77"	45" - 48"	73" - 77"
XXL	76" - 80"	48" - 51"	76" - 80"

KOKATAT Sizing Chart

FEMALE SIZES	S (6-8)	M (10-12)	L (14-16)	XL (18-20)	XXL (18-20)	
Bust	34" - 36"	38" - 40"	42" - 45"	46" - 49"	46" - 49"	
Waist	26" - 28"	30" - 32"	32" - 36"	38" - 40"	40" - 44"	
Hips	36" - 38"	40" - 42"	44" - 46"	46" - 48"	50" - 52"	
Inseam	28" - 30"	30" - 32"	32" - 34"	34" - 35"	30" - 32"	
Sleeve	28" - 30"	30" - 32"	32" - 34"	34" - 36"	30" - 32"	
Height	60" - 64"	64" - 68"	66" - 70"	66" - 72"	64" - 68"	
Weight (lbs.)	100-120	130-150	160-180	180-200	180-200	
Neck Gasket	S	L	L	L	L	
Wrist Gasket	S	S	L	L	L	
Ankle Gasket	one size fits all					
Built-In Socks	S	S	S	-	S	
MALE SIZES	XS	S	M	L	XL	XXL
Chest	32" - 34"	36" - 38"	40" - 42"	44" - 46"	48" - 50"	52" - 54"
Waist	26" - 28"	30" - 32"	32" - 34"	36" - 38"	40" - 42"	42" - 44"
Hips	34" - 36"	36" - 38"	40" - 42"	42" - 44"	46" - 48"	48" - 50"
Inseam	26" - 28"	28" - 30"	30" - 32"	32" - 34"	34" - 35"	34" - 36"
Sleeve	30"	32"	34"	35"	36"	37"
Height	60" - 64"	62" - 66"	66" - 70"	70" - 74"	72" - 76"	72" - 78"
Weight (lbs.)	100-125	115-140	140-175	175-200	200-240	220-260
Neck Gasket		S	L	L	L	L
Wrist Gasket		S	L	L	L	L
Ankle Gasket	one size fits all					
Built-In Socks		S	M	M	M	L

KOKATAT Notes:

- The numbers in the sizing chart take one layer of insulation into consideration.
- If you fall in the upper range of a size, it is recommended that you choose the next size up
- Take measurements with insulation on
- The sleeve is measured with the elbow bent, thumb 6 inches from chin, and measured from the center point of the back of the neck around the elbow to the wrist bone
- The inseam is from crotch to ankle bone
- The chest is around the fullest part of your chest
- The waist is where you normally wear your pants

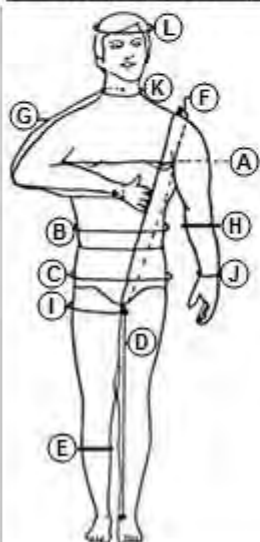
SIZING CHARTS

Figure 4



	XXS	XS	S	S-Long	M-Short	M	M-Long	L-Short
Height	61"	61" - 64"	65" - 67"	68" - 70"	65" - 67"	68" - 70"	71" - 73"	68" - 70"
Chest	34	34/36	37/39	37/39	40/42	40/42	40/42	43/45
Hips	36	36/38	39/41	39/41	42/44	42/44	42/44	45/47
Inseam	24	26	27.5	29	27.5	29	30.5	29
Torso	59	62	65	68	65	68	71	68
Sleeve	27.5	29	30.5	32	30.5	32	33.5	32

	L	L-Long	XL-Short	XL	XL-Long	XXL-Short	XXL	XXXL
Height	71" - 73"	74" - 76"	71" - 73"	74" - 76"	77" - 79"	74" - 76"	77" - 79"	77" - 79"
Chest	43/45	43/45	46/48	46/48	46/48	49/51	49/51	52/54
Hips	45/47	45/47	48/50	48/50	48/50	51/53	51/53	54/57
Inseam	30.5	32	30.5	32	33.5	32	33.5	33.5
Torso	71	74	71	74	77	74	77	77
Sleeve	33.5	35	33.5	35	36.5	35	36.5	36.5



- _____ Height
- A. _____ Chest - (across nipples taking a deep breath)
- C. _____ Hip - (across largest portion)
- D. _____ Inseam - (crotch to ankle bone)
- F. _____ Torso
- G. _____ Sleeve Length - (hold arm out, bent at 90 degrees.)
measure from center of back of neck.
outside of elbow to top of wrist bone)

USIA DRY SUIT SIZING CHART

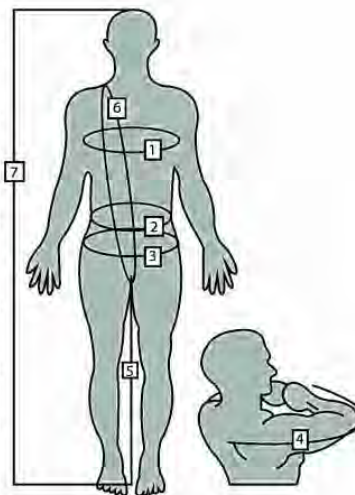
Figure 5



STEP 1

For accurate measurements, please refer to the measurement diagram and instructions provided. All measurements should be taken with a "tailors" (flexible) tape while wearing garments and armour usually worn under the dry suit.

DESCRIPTION	MEASUREMENT	PROCEDURE
1 Chest		Measure the horizontal circumference around the chest at maximum girth. For males, this is typically where the tape runs under the armpits at the scye. For females, this is at the bustline.
2 Waist		Measure the horizontal circumference around the waist (belt) line.
3 Hips		Measure the horizontal circumference around the hips and buttock at maximum girth.
4 Sleeve		With your arms horizontal, bent at the elbows, and with your fists touching knuckle-to-knuckle out from the chest, measure the distance from the center of the back along the outside of the arm to the outer top of the wrist.
5 Inseam		Measure the vertical distance from the crotch to the floor. Use a book pressed firmly up between the legs and measure from the top of the book.
6 Torso Hoop		With your shoulders relaxed and the tape running over the center of one shoulder and between the legs, measure the vertical trunk circumference.
7 Height		Vertical standing height with good posture and no footwear.



STEP 2

Based on your measurements, determine your size according to the chart below. If all your measurements fall between the ranges of two sequential sizes (such as between S and M) select the size that best fits your Torso Hoop and Inseam.

DESCRIPTION	XS	S	M	L1	L2	XL	XXL	3XL
Chest	35-38"	37-40"	39-42"	41-44"	43-46"	45-48"	49-52"	53-56"
Waist	29-32"	31-34"	34-37"	35-38"	37-40"	41-44"	46-49"	51-54"
Hips	37-40"	38-41"	39-42"	40-43"	41-44"	43-46"	47-50"	53-56"
Sleeve	29-31"	31-33"	33-35"	34-36"	35-37"	36-38"	37-39"	38-40"
Inseam	28-30"	30-32"	32-34"	33-35"	34-36"	34-36"	34-36"	34-36"
Torso Hoop	59-62"	62-65"	65-68"	67-70"	69-72"	71-74"	76-79"	78-81"

STEP 3

Based on your height, determine your suit length according to the chart below.

HEIGHT	XS	S	M	L1	L2	XL	XXL	3XL
Short	57-60"	61-64"	65-68"	66-69"	68-71"	70-73"	72-75"	72-75"
Regular	60-63"	64-67"	68-71"	69-72"	71-74"	73-76"	75-78"	75-78"
Long	63 ^{1/2} -66 ^{1/2} "	67 ^{1/2} -70 ^{1/2} "	71 ^{1/2} -74 ^{1/2} "	72 ^{1/2} -75 ^{1/2} "	74 ^{1/2} -77 ^{1/2} "	76 ^{1/2} -79 ^{1/2} "	78 ^{1/2} -81 ^{1/2} "	78 ^{1/2} -81 ^{1/2} "

Following Steps 1-3 should bring you to one comprehensive size such as L1 Short or Medium Regular, which is a combination of your overall measurements (chest, waist, etc.) and your height.

*Please note if all your measurements DO NOT fall into the range of two sequential sizes, for example, chest measurement is Medium but Waist measurement is in L2 you may require a full customized suit. Please contact your Mustang Survival Representative for more information.

SENTINEL (MSD634/640) DRY SUIT SIZING

Figure 6



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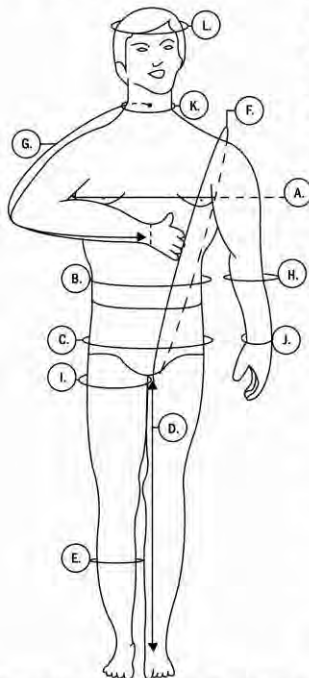


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CUSTOM ORDER DATA FORM

DEALER NAME:	
CONTACT:	
PHONE:	FAX:
CUSTOMER NAME:	P.O. NO.:
PRODUCT:	COLOR:
SPECIAL FEATURES, ADDITIONS (e.g., large belly, big hips, relief zipper, pocket, etc.):	



MEASURE CAREFULLY

TAKE ALL MEASUREMENTS AT WIDEST POINT

- Height: _____ Weight: _____
- A. _____ Chest (Across nipples taking a deep breath.)
 B. _____ Waist (The beltline.)
 C. _____ Hip (Across the largest portion.)
 D. _____ Inseam (From the crotch to the ankle bone.)
 E. _____ Calf
 F. _____ Torso (Take measurement from center of the shoulder through the crotch and back to shoulder. Have customer snug their shoulders.)
 G. _____ Sleeve Length (Hold arm out, bend at 90 degrees. Measure from center of back of neck outside of elbow, to top of wrist bone.)
 H. _____ Forearm
 I. _____ Thigh (Measure at the largest point.)
 J. _____ Wrist K. _____ Neck
 L. _____ Head M. _____ Shoe

Suit Fit: Loose: _____ Fitted: _____

I AUTHORIZE CONSTRUCTION OF A CUSTOM SUIT AND ACCEPT FULL RESPONSIBILITY FOR THE ACCURACY OF ALL PERTINENT INFORMATION.

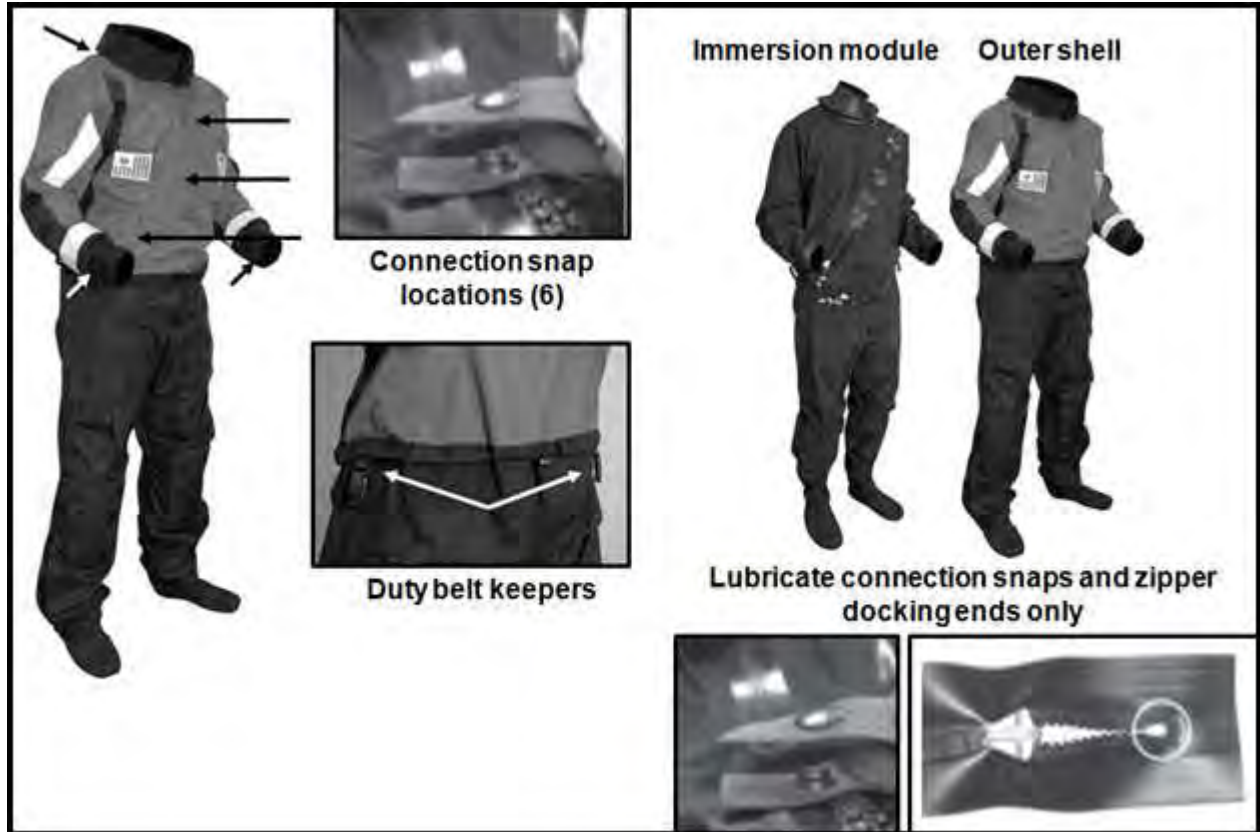
DEALER _____ DATE _____ CUSTOMER _____ DATE _____

USIA CUSTOM ORDER FORM

Figure 7



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MSD 640 HEAVY DUTY DRY SUIT

Figure 8





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.

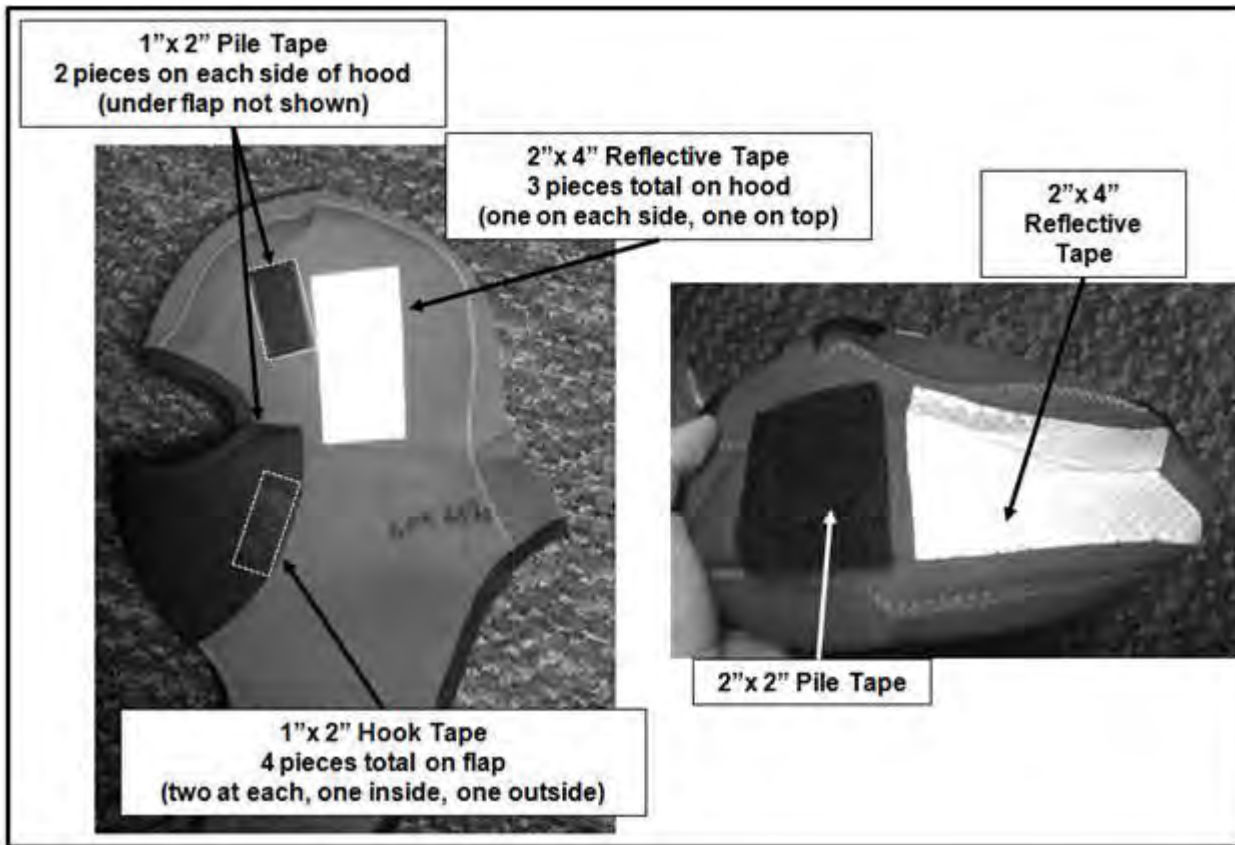


9. Unzip the ankle interconnection zipper.
Repeat Steps 8-9 for opposite ankle.

MSD 900/901 THERMAL LINING REMOVAL

Figure 10





MA7348 NEOPRENE HOOD

Figure 11

