



PRODUCT MANUAL

TACTICAL AIRCREW DRY SUIT SYSTEM

FOR MODEL NUMBERS: MSF300 & MSF300vGB



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1.0 SCOPE

This manual provides information on the function and features of the Mustang Survival Tactical Aircrew Dry Suit System Model MSF300 and MSF300vGB. Also included are test, maintenance and repair instructions to assist qualified Life Support Equipment Technicians.

The MSF300 and the MSF300vGB are identical except for the material used to construct the wrist seals. The MSF300 utilizes a neoprene wrist seal and the MSF300vGB utilizes a rubber (latex) wrist seal. This manual includes fitting instructions for both types of wrist seals.

NOTE: Throughout this manual, the product is referred to as the MSF300 unless there are specific instructions that apply to the various models.

2.0 PRODUCT DESCRIPTION AND FEATURES

The MSF300 may be used in lieu of traditional dry suits and anti-exposure work suits when a suit of greater durability, comfort and protection from exposure to cold is required.

Built to endure the most extreme operating environments, the suit's two-layer modular system is a result of Mustang's ongoing commitment to research and development. Crewmembers may use this suit when operating in conditions requiring dry suit use. The MSF300 is designed for over-water helicopter operations or any other tactical operations where the environment dictates the need for increased hypothermia protection.

The MSF300 provides hypothermia protection and inherent buoyancy using two interconnected modules forming a single system. Each module may be repaired, to a degree, or replaced individually. The first module is a breathable foam liner, which provides hypothermia protection and flotation while reducing heat stress. The second module is the Outer Shell and provides the suit with watertight integrity and the equivalent protection of a dry suit. The outer fabric is a GORE® laminated Nomex®.

FEATURES:

- Military grade GORE-TEX waterproof, breathable and fire resistant dry suit fabric
- Proprietary CCS™ Closed Comfort System adjustable neck seal and flexible wrist seals provide easy donning and comfort
- Watertight zippers and seams
- Articulated knees for maximum mobility
- YKK watertight zipper for entry and relief
- Integrate GORE-TEX dry socks
- Highly abrasion resistant, reinforced seat and knees
- Multiple arm and leg pockets for item storage
- Neoprene survival hood and inflatable survival mittens



Figure 1. Component Locations





3.0 SIZING

SIZE	CHEST CIRCUMFERENCE		WAIST		INSEAM	
XS	30" - 34"	76 - 86 cm	28"	71 cm	27"	69 cm
S	34" - 38"	86 - 96 cm	28" – 30"	71 - 76 cm	27.5"	70 cm
M	38" - 42"	96 - 106 cm	32" – 34"	81 – 86 cm	31"	79 cm
L	42" - 46"	106 - 116 cm	36" – 38"	91 – 96 cm	32"	81 cm
XL	46" - 50"	116 - 127 cm	40" – 42"	102 – 106 cm	33"	84 cm
XXL	50" - 54"	127 - 137 cm	44" – 46"	112 – 116 cm	34"	86 cm
XXXL	54" – 58"	137 – 147 cm	48" – 50"	122 – 127 cm	35"	89 cm



4.0 WRIST SEAL FITTING - NEOPRENE (MODEL MSF300 ONLY)

NOTE: ONLY NEOPRENE SEALS CAN BE TRIMMED USING THIS PROCEDURE.

- a. Your suit comes equipped with universal-sized wrist seals that have a tapered sealing surface at the end of the cuff. This tapered end allows you to modify the size of the cuff opening to match the physical characteristics of your hand and wrist. Trimming the end of the cuff increases the diameter of the end opening, allowing a larger wrist to be inserted and sealed comfortably without damaging the cuff. Users with unusually boney wrists should try to make the wrist seal fit properly further up the arm where the sealing surface is smooth. Once the wrist seal is trimmed, it may not provide an adequate seal for a smaller wrist. The wrist seals should only be trimmed if they are unreasonably tight and restrict blood flow. If seal trimming is required, proceed as follows:
- b. Required materials: ruler, sharp scissors and a white china marker or silver pen.
- c. Trim only 1/8" at a time to a maximum of 1". Using a ruler, mark a circular line around the seal that is offset from the edge of the cuff end by 1/8" (Figure 2).

Figure 2. Marking wrist seal trim line.



CAUTION: TRIM SEALS WITH EXTREME CAUTION. A SMOOTH TRIM LINE IS ESSENTIAL. EXCESSIVE OR CARELESS TRIMMING COULD RESULT IN LOOSE SEALS THAT LEAK AND NECESSITATE REPLACEMENT.

- d. Using sharp scissors carefully cut the cuff end at the marked line. Only cut one layer of material at a time (Figure 3).

Figure 3. Cutting wrist seal.



NOTE: VISUALLY INSPECT THE TRIMMED EDGE FOR NICKS. IF THE CUT IS NOT SMOOTH AND STRAIGHT CAREFULLY TRIM OUT ANY NICKS. NICKS CAN CAUSE A TEAR DURING DRESSING AND DOFFING.



- e. Evaluate the fit and repeat steps above until there is a proper fit.
- f. After trimming the seals, have the user don the suit to determine seal restriction and water-sealing characteristics. Make any additional adjustments to the seal.

5.0 WRIST SEAL FITTING – RUBBER (LATEX) (MODEL MSF300GB ONLY)

NOTE: ONLY RUBBER (LATEX) SEALS CAN BE TRIMMED USING THIS PROCEDURE.

- a. Your suit comes equipped with universal-sized wrist seals that have a tapered sealing surface at the end of the cuff. This tapered end allows you to modify the size of the cuff opening to match the physical characteristics of your hand and wrist. Trimming the end of the cuff increases the diameter of the end opening, allowing a larger wrist to be inserted and sealed comfortably without damaging the cuff. Users with unusually boney wrists should try to make the wrist seal fit properly further up the arm where the sealing surface is smooth. Once the wrist seal is trimmed, it may not provide an adequate seal for a smaller wrist. The wrist seals should only be trimmed if they are unreasonably tight and restrict blood flow. If seal trimming is required, proceed as follows:

- b. Required materials: Ruler, sharp scissors and a white china marker or silver pen.

CAUTION: TRIM SEALS WITH EXTREME CAUTION. A SMOOTH TRIM LINE IS ESSENTIAL. EXCESSIVE OR CARELESS TRIMMING COULD RESULT IN LOOSE SEALS THAT LEAK AND NECESSITATE REPLACEMENT.

- c. Turn the wrist seal inside-out so you can see the rings running parallel down the gasket around the circumference of the seal.
- d. Trimming only one ring at a time carefully cut between the rings with a very sharp pair of scissors.

NOTE: VISUALLY INSPECT THE TRIMMED EDGE FOR NICKS. IF THE CUT IS NOT SMOOTH AND STRAIGHT CAREFULLY TRIM OUT ANY NICKS. NICKS CAN CAUSE A TEAR DURING DONNING AND DOFFING.

- e. Check for fit and if necessary repeat steps above until there is a proper fit.
- f. After trimming seals, have the user don the suit to determine seal restriction and water-sealing characteristics. Make any additional adjustments to the seal.



6.0 DONNING AND DOFFING THE SUIT

6.1 PREPARATION

- a. Test the wrist seal for fit. See the wrist seal fitting instructions (Section 4.0 and 5.0 of this document), if required.
- b. Completely loosen the neck seal.
- c. Ensure the wrist adjustment Velcro® fasteners are fully loosened.
- d. Fully open the entry zipper.
- e. Ensure the zipper holding loop and waterproof zipper pull-tab are exposed
- f. Wear socks to minimize wear and tear on the Outer Shell's built-in socks

6.2 DONNING

CAUTION: USE EXTREME CAUTION WHEN DONNING THE MSF300. PRIOR TO DONNING, REMOVE ALL RINGS, WATCHES, EARRINGS, NECKLACES AND EYEGLASSES THAT WILL CAUSE DAMAGE TO WRIST AND NECK SEALS.

- a. Pick up the suit system and fold the top forward, over the waist.
- b. Slowly slide your legs in until your toes reach the end of the socks (Figure 4).

Figure 4. Donning legs into the suit.





- c. Now insert each arm as shown in Figure 5 until your hands are completely exposed. Ensure insulating undergarments are not caught between the seal and your skin.

Figure 5. Donning arms into the suit.



- d. Bring the upper portion of the suit over your head, aligning the neck opening with the top of the head. Reach inside the top of the neck seal with the fingers and gently pull the seal outward and down as you push your head through (Figure 6). Ensure insulating undergarments are not caught between seal and skin.

Figure 6. Donning suit over the head.





6.3 CLOSING THE ZIPPER

WARNING: THE SLIDE FASTENERS MUST BE FULLY CLOSED OR THERE WILL BE A BREACH IN THE GARMENT. FAILURE TO COMPLY COULD RESULT IN INJURY OR DEATH OF PERSONNEL.

- a. Grasping the waterproof entry zipper donning strap with your left hand, begin pulling the zipper slider with your right hand to start to close the waterproof zipper, continuing to close the zipper as far as possible.
- b. Switch hands, and with your left hand, grasp the zipper slider and continue closing the waterproof zipper until it is completely closed while holding the donning strap with your right hand to gain leverage.
- c. Ensure the waterproof relief zipper is completely closed.
- d. In addition to closing the main waterproof entry zipper, check that the relief zipper is completely closed.
- e. Don footwear.

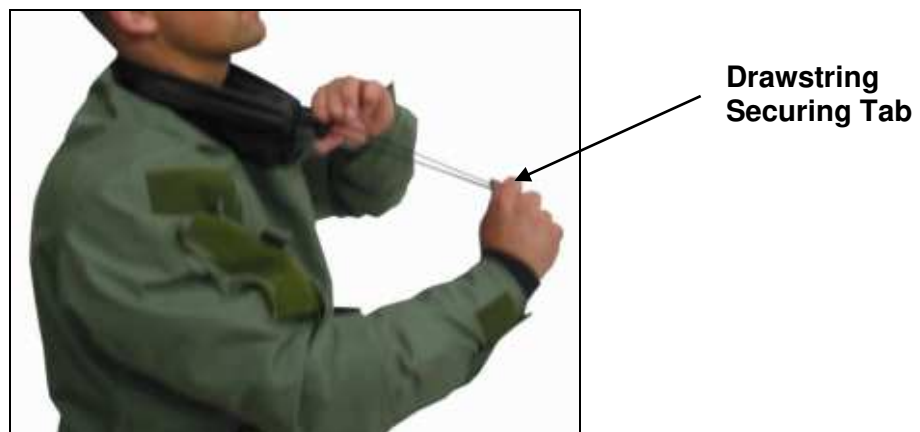
WARNING: FAILURE TO COMPLETELY CLOSE THE WATERPROOF ENTRY ZIPPER AND THE RELIEF ZIPPER WILL RESULT IN LEAKAGE OF WATER INSIDE THE SUIT AND REDUCTION OF IN-WATER SURVIVAL TIME. HAVE A FELLOW CREWMEMBER DOUBLE-CHECK EACH SLIDE FASTENER TO ENSURE THEY ARE COMPLETELY CLOSED AGAINST THEIR SEALING PLUGS.

6.4 ADJUSTMENT

WARNING: THE NECK SEAL MUST BE FULLY ADJUSTED CLOSED OR THERE WILL BE A BREACH IN THE GARMENT. FAILURE TO COMPLY COULD RESULT IN INJURY OF DEATH OF PERSONNEL.

- a. By pulling on the drawstring securing tab, adjust the neck seal to a snug but comfortable fit (Figure 7). Do not tighten the neck seal to a point of discomfort.

Figure 7. Adjusting the Neck Seal





- b. Secure the ends of the neck seal drawstring to the tab located at the outer edge of the neck seal.
- c. Adjust the wrist Velcro® fasteners.

6.5 EMERGENCY DONNING INSTRUCTIONS

NOTE: IN THE EVENT OF ENTERING THE WATER, THE MSF300 HAS A NUMBER OF EMERGENCY FEATURES THAT ARE CRUCIAL TO YOUR SURVIVAL.

- a. Neck Seal - After entering the water, tighten the neck seal by grasping the drawstrings and pulling the tabs out and away from the neck until a snug, comfortable fit is achieved.
- b. Neoprene Hood - Remove the neoprene hood from the thigh pocket and install it on your head.
- c. Inflatable Mittens - Remove the mittens from the thigh pocket and install on your hands. Inflate each of the mittens using the oral inflation tube.
- d. Inflatable Mittens - Adjust the wrist closure to ensure a proper fit.

6.6 DOFFING

- a. Remove all other equipment donned over the suit system before proceeding.
- b. Undo the main entry zipper.
- c. Release the wrist adjustment Velcro® fasteners.

WARNING: Failure to completely open the waterproof entry zipper will result in damage to the suit when it is doffed.

- d. Completely loosen the neck seal drawstring and open the waterproof entry zipper.
- e. Insert fingers between the neck seal and neck. Gently stretch the seal outward and upward while pulling shoulders and head out of the suit.
- f. Cup the hand, fingertips and thumb together, and gently pull your hand from the seal. Repeat for other hand.
- g. Remove your legs from the suit.



7.0 STORING THE SUIT

7.1 PACKING PROCEDURE

- a. Open the entry zipper and slacken the neck seal opening as much as possible.
- b. Lay out the suit system on a table, facing up (Figure 8).

Figure 8. Suit laying face up.



- c. Fold the sleeves across the front (Figure 9).

Figure 9. Sleeves folded.





- d. Fold the legs up (Figure 10).

Figure 10. Legs folded.



- e. Fold over at the waist (Figure 11).

Figure 11. Suit folded at waist.





- f. Pick up the suit system and place into the bag, with the zipper at the top (Figure 12).

Figure 12. Picking up the suit.



7.2 STORAGE

WARNING: Never store the suit wet. Never hang the suit from the neck seal; use non-metal hangers. Failure to comply may result in result in suit damage.

It is important that the MSF300 is stored in:

- a. A dry area, where normal room temperature may be maintained.
- b. An area without excessive sunlight and ultra violet rays, and is free of petroleum products, acids and other damaging contaminants.

NOTE: When in storage, apply talcum powder to the inner surfaces of the wrist seals to prevent them from sticking together.



8.0 METAL ZIPPER CARE

- a. Lubricate the zipper based on the following guidelines:
 - i. After water immersion,
 - ii. after washing the outer shell,
 - iii. after 180 days of service.
- b. Clean the zipper of any mud, sand, salt or foreign elements. Use warm soapy water and soft bristle brush to remove any heavy deposits.
- c. For the metal entry and relief zippers, use the zipper lubricant spare part MA2292, paraffin wax, or equivalent wax to maintain the functionality of the zipper.



9.0 CLEANING

9.1 PREPRATION

- a. Mud and soil stains should be removed from the suit. Mud stains must be either allowed to dry and then removed with a soft-bristle brush, or sponged clean with cold fresh water. Other stains should be sponged with cold fresh water. After cleaning, the suit should be thoroughly air-dried.
- b. Remove all items from the pockets including the neoprene hood and inflatable mitts.
- c. Separate the liner from the outer shell. See the liner removal section (Section 10.1) and installation section (Section 10.2) of this manual for specific instructions.

9.2 CLEANING THE OUTER SHELL

WARNING: Do not use bleach or other chlorine products. Do not use fabric softeners. Do not dry clean.

- a. The suit can be laundered using machines as follows:
- b. Use a washing machine with no central agitator (this is typical with a front loading machine).
- c. Ensure that the entry and relief zippers are closed.

WARNING: Choose mild detergents or detergents developed for breathable laminate technical fabrics. Dreft liquid Laundry Detergent is also recommended.

- d. Ensure that only cold or warm water is used with mild low sudsing powdered detergent.
- e. Use a gentle wash cycle.
- f. Rinse the suit three times, using clean, fresh water for each rinse.

NOTE: Proper rinsing is essential to removing the entire soap residue. Any residue could inhibit the vapour permeability of the fabric.

- g. Each rinse cycle should be a minimum of one minute.

WARNING: Tumble drying the suit at too high of a heat setting could affect the waterproof characteristics of the suit.

- h. Air dry or tumble dry in a front loading dryer on a low heat setting.

9.3 CLEANING THE LINER

- a. Wash by hand in warm water using a mild powdered soap.
- b. Rinse thoroughly in clean water.
- c. Hang to air-dry.



10.0 LINER REMOVAL AND INSTALLATION

10.1 DISASSEMBLY PROCEDURE

- a. Unzip the waterproof entry zipper.
- b. Reach in and pull the sleeves inside out.
- c. Unfasten the two interconnection buckles at each wrist.
- d. Unfasten the two interconnection buckles at each shoulder.
- e. Unzip the upper and lower waist interconnection zippers (Figure 13).

Figure 13. Removing waist interconnection zippers.



- f. Reach in and pull the legs inside out.
- g. Unfasten the two interconnection buckles at each ankle.
- h. Separate the liner from the shell.



10.2 ASSEMBLY PROCEDURE

WARNING: Ensure the Outer Shell and Thermal Liner are completely dry before reassembling.

- a. Lay out the Thermal Liner and Outer Shell side by side facing down (Figure 14).

NOTE: Check the labels of the Thermal Liner to ensure they are located on the inside (the bulky side of the seams of the Thermal Liner should face out).

Figure 14. Outer shell and thermal liner ready for assembly.



- b. Ensure that the waterproof entry zipper and neck seal adjustment are fully opened.



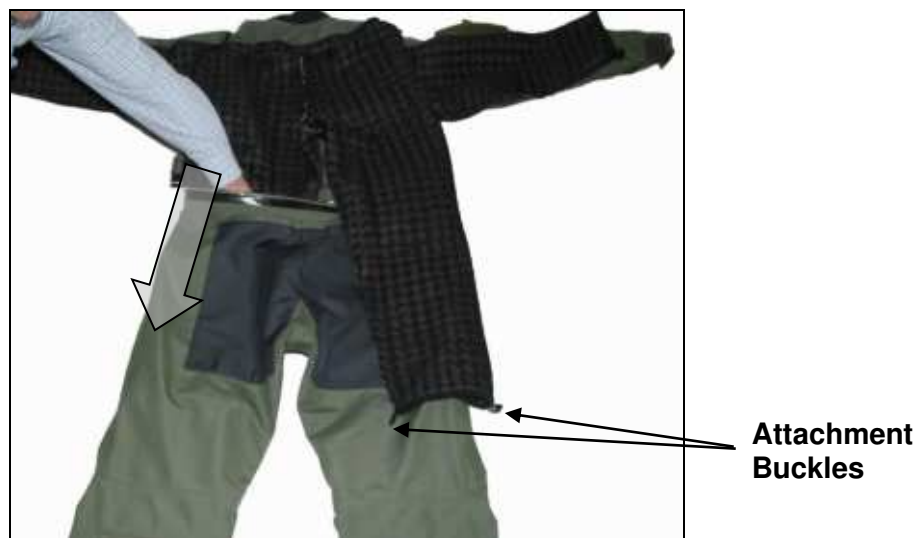
- c. While maintaining the orientation, lay the Thermal Liner over the Outer Shell (Figure 15).

Figure 15. Thermal liner over outer shell.



- d. Keeping the bottom flat and straight, insert each leg of the Thermal Liner down into each leg of the Outer Shell until it reaches the interconnection buckles at the ankle (Figure 16).

Figure 16. Inserting liner legs into outer shell.



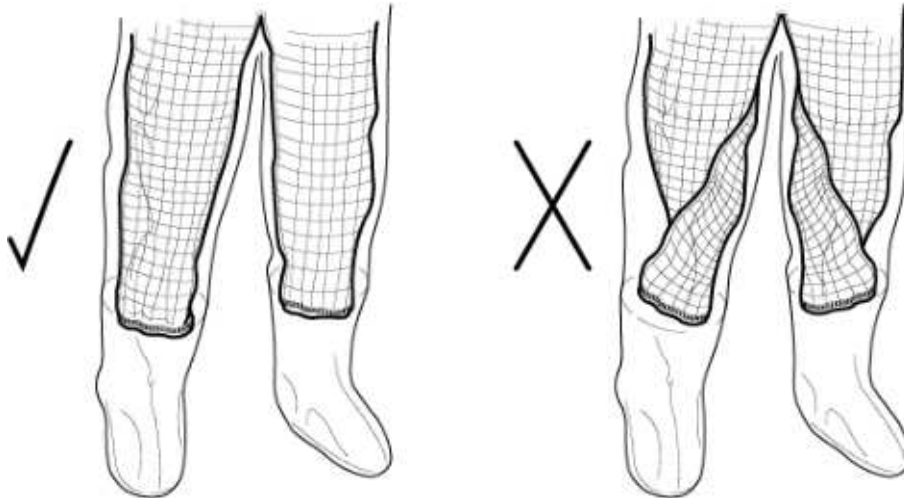
NOTE: Ensure the legs do not twist, maintaining a matching orientation during insertion.

- e. When you've fed the Thermal Liner into the end of the Outer Shell, grasp both layers and pull them out together.



- f. Attach the two buckles on each cuff, connecting the Thermal Liner and the Outer Shell. Ensure that the buckles are aligned properly at the ends of the cuffs for proper connection.
- g. Then, after ensuring that the attachment is complete, push the two pieces back down each leg of the Outer Shell. Using your hand, check that the liner is not twisted after installation (Figure 17).

Figure 17. Liner leg installation.



- h. Attach the two buckles under each shoulder, connecting the Thermal Liner and the Outer Shell (Figure 18).

Figure 18. Shoulder area attachment.



- i. Ensure that the buckles are aligned for proper connection. The Thermal Liner should not be twisted.



- j. Insert each arm of the Thermal Layer by grasping the arms at the interconnection buckles and pull both arms through the arm of the Outer Shell (Figure 19).

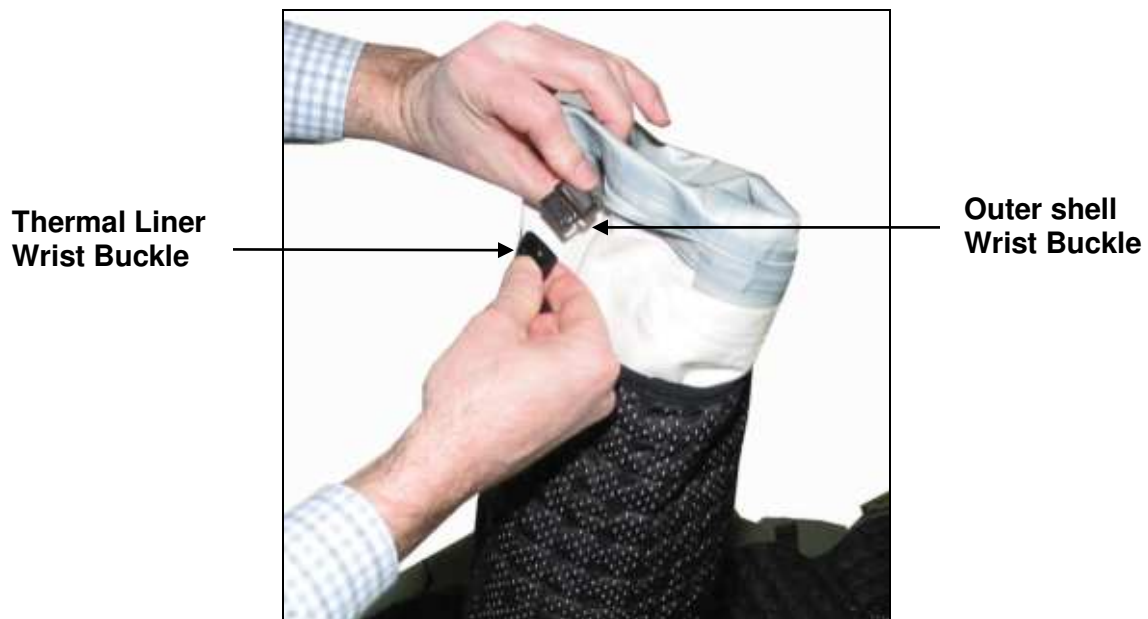
Figure 19. Insert the liner arms into the outer shell.



NOTE: Ensure that the arms do not twist. Maintain a matching orientation during insertion.

- k. When you've fed the Thermal Liner into the end of the outer shell, grasp both layers and pull them out together (for each arm).
- l. Attach the two buckles on each cuff, connecting the Thermal Liner and the Outer Shell. Ensure that the buckles are aligned properly at the ends of the cuffs for proper connection. The arms of the Thermal Liner should not be twisted (Figure 20).

Figure 20. Liner to outer shell connection buckle.





- m. Then, after ensuring that the attachment is complete, push the two pieces back down each arm of the Outer Shell.
- n. After laying the Outer Shell out flat again, join the Thermal Liner and the Outer Shell. Fasten the upper zippers, connecting the two layers (Figure 21).

Figure 21. Liner to outer shell connection near main entry zipper.



- o. Complete the connection of the Thermal Liner and the Outer Shell by fastening the lower zippers (Figure 22).

Figure 22. Liner to outer shell connection near main entry zipper.





11.0 INSPECTION

11.1 GENERAL

The suit requires visual inspection and maintenance pre-flight and post flight by the user (reference section 11.2). Based on typical aircraft operations, inspect and test suit every 180 days in service (sections 11.2 and 11.3). In addition, it's recommended to perform an inspection and test if it is suspected that suit has been damaged.

11.2 VISUAL INSPECTION

- a. There is no excessive wear or damage to the material, particularly stiffness, discoloration, burns, tears and frayed edges.
- b. There is no separation of the seams, broken or missing stitches.
- c. All metal components (e.g. grommets and snaps) are intact and free from damage or corrosion.
- d. The zippers are intact and operating smoothly.
- e. All neck seal cord locks and straps are adjusting freely smoothly.
- f. All pockets and pocket closures are intact.
- g. Neck, wrist seals and socks have not deteriorated: cuts, tears, detachment.
- h. Inspect hood and gloves for general condition. If used, ensure glove oral inflation tubes are in the open position. When tethered, coil and secure lines with masking tape or rubber bands for quick usage.



11.3 LEAK TESTING

The following suit leakage test uses Mustang Survival Dry Suit Test Kit (MA8836). Mustang Survival's Legacy Dry Suit Test Kit (MA8835) is also suitable for use and illustrated in the procedure below (Figure 23). The control box has one pressure gauge and two controls. The black control lever has three positions as labeled on the control box. The knurled knob can be turned to restrict the airflow traveling into the dry suit.

Figure 23. Suit Leakage Test Kit (MA8835 Left and MA8836 Right)



- Prepare the outer shell for leak testing by removing the liner (see section 10.1 of this document). Turn the Outer Shell inside out.
- Place the neck plug into the Outer Shell, through the main entry zipper (Figure 24). Close the main entry zipper. Close the remaining opening by reaching in through the neck opening to pull the zipper toggle fully closed.

Figure 24. Inserting neck plug through zipper opening.





- c. For MA8835, Pull the narrower end of the neck plug through the opening of the neck seal (Figure 25). For MA8836, pull end with exposed air hose fittings through opening of neck seal.

Figure 25. Pulling neck plug through neck seal opening.



- d. Stretch the neck seal to fit securely around the neck plug ensuring the top of the seal extends past the groove in the in the next plug (Figure 26).

Figure 26. Stretching neck seal over the neck plug.





- e. Fit the cinching strap over the neck seal (Figure 27).

Figure 27. Installing cinching strap.



- f. Secure the cinching strap by pulling the excess strap, and fasten the Velcro closures (Figure 28). Ensure strap sits within the groove on the neck plug.

Figure 28. Securing cinching strap.



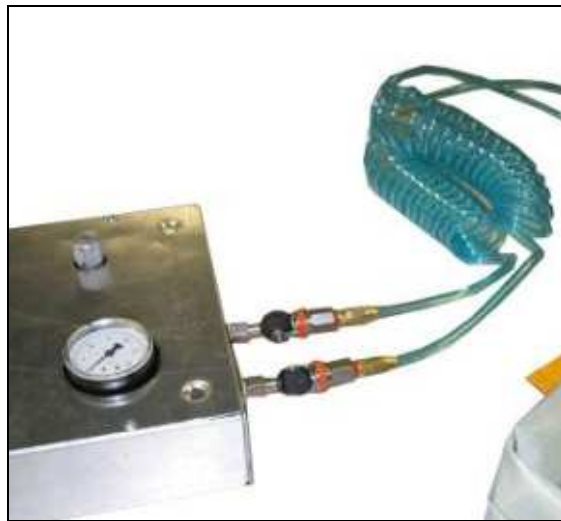
- g. Clamp both wrist seals with the clamps provided. If the wrist is too long for the clamp, fold wrist seal once and clamp (Figure 29).

Figure 29. Wrist seal clamping.



- h. Connect the two coiled pneumatic hoses to the output side of the control box. The two hoses are interchangeable (Figure 30).

Figure 30. Hoses connected to control box.



- i. Connect the other ends of the coiled hoses to the neck plug. It does not matter which hose connects to which plug (Figure 31).

Figure 31. Hoses connected to neck plug.



- j. Ensure your configuration matches the figure below that shows the two coiled pneumatic hoses correctly attached to the control box and the neck plug (Figure 32).

Figure 32. Suit to control box configuration.





WARNING: Ensure the control lever is set in the off position before the high-pressure air is connected.

- k. Ensure the control lever is set in the off position. Connect high-pressure air source to the input side of the control box (Figure 33). The air pressure should be no greater than 150 psig.

Figure 33. High pressure air source connection.



- l. The control box has one pressure gauge and two controls. The black control lever has three positions as labeled on the control box. The knurled knob can be turned to restrict the airflow traveling into the dry suit.

WARNING: Pressures significantly greater than 12 inches of water (or approximately 0.5 psig) risk suit damage due to pressure on the fabric and seams. Monitoring pressure can help the longevity of the suit.

- m. Move the control lever to the fast position (Figure 34). The suit should inflate rapidly. Once the suit appears $\frac{3}{4}$ inflated, move the lever to the slow position. Turn the knurled knob to restrict the airflow rate until the suit inflates up to 12 in. water pressure. Twist the knurled knob further to hold pressure inside the suit at 12 in. water pressure.

Figure 34. Control box, black control lever.





- n. Place the suit front side up and spray the entire suit with a soap and water solution of 0.5% soap to water by weight. Pay particular attention to the seams and zippers (Figure 35).

Figure 35. Suit spray down.



NOTE: For the soap, a mild dish washing soap is recommended. Alternatively, an industrial surfactant, STEOL CS-230 K, is an excellent alternative.

- o. Examine any area of the suit where bubbles are forming and take action depending on the severity as follows (note that bubbles forming at a rate of less than one per second are probably not leaks):
 - i. Small foamy bubbles collecting slowly on seam: Entrapped air. No leak present, no action required.
 - ii. Small foamy bubbles collecting quickly on seam: Uncertain. Agitate seam around bubbles to remove any entrapped air. If bubbles persist after 2 minutes then consider as leak, mark leak area with a china marker, and document on the inspection record.
 - iii. Steady stream of larger bubbles: Leak. Mark leak area and document on the inspection record.
 - iv. Any other type of bubble formation or any sign of bubbles on a panel shall be treated as a leak.
- p. Turn the suit face side down and again soap down the suit and inspect for leaks.
- q. After the leakage inspection is complete, rinse the suit with clean water (no soap).
- r. After rinsing, move the control lever to the off position. Remove the clamps from the suit and disassemble the rest of the test kit. Hang the suit to dry.

WARNING: Ensure the Outer Shell and Thermal Liner are completely dry before reassembling.

- s. Install the liner into the outer shell following section 10.3.



12.0 REPAIRS

12.1 GENERAL

The protection provided by this dry suit relies very much on its watertight characteristics. It is extremely important that damaged suits are handled in accordance with the following repair requirements.

Qualified repair personnel can normally perform minor repairs, with adequate facilities. The manufacturer should do all major repairs.

Patch kit RE0010GB is required for leak repairs.

12.2 LEAK REPAIRS

It is recommended that the following guidelines be used in determining potential for repair using heat sealing.

- a. Pinholes and small slits, cuts and tears less than 1 inch in length may be patched by the heat-sealing method.
- b. Do not patch the neck seals, wrist seals or socks.
- c. The total area of patches should not exceed 10% of the suit. Repair no more than 10% of any one panel.
- d. Any holes larger than a small slit, cut or tear less than 1 inch in length should be sent to Mustang Survival for repair.

12.3 PATCHING

To apply a patch proceed as follows:

NOTE: Ensure that the suit has been thoroughly dried prior to patching. Round off the corners of the heat tape prior to application. Ensure the patch/heat tape is applied on the inner surface of the suit fabric. A household iron and an ironing board or pad are required.

- a. Turn iron on at medium setting and wait for ten minutes to allow the iron surface temperature to stabilize at 310-320°F (155-160°C).

NOTE: Use an iron that accurately displays temperature to avoid damage to the fabric.

NOTE: Mustang Survival offers an optional Rapid Repair Hand Iron (Mustang Survival Part # RE0004) that can be used to apply the patches. When using the Mustang Survival Rapid Repair Hand Iron it should be set to the maximum temperature and verified with a device that can measure the target temperatures.

- b. Remove the inner liner and turn the suit inside out per section 10.1.
- c. Locate the puncture/leak location.
- d. Lay the dry suit on a flat surface such that the inside of the suit is facing up.
- e. Ensure the area around the puncture is clean and dry.



- f. Select an appropriate size patch for the repair. It is recommended that the patch extend at least 1/2" beyond the puncture zone.
- g. Place the shiny side of the patch downward so that it is in contact with the inside surface of the dry suit.
- h. Ensure the patch is centered over the puncture.
- i. Place a hot iron on the patch and apply pressure perpendicular to the flat surface for approximately 20-25 seconds.
- j. Smooth out wrinkles and air pockets by moving iron along the patch.
- k. Remove the iron.
- l. Allow the repaired area to stand for a minimum of 5 minutes prior to further handling.
- m. Test the suit for leakage.
- n. Dry the suit and reassemble per section 10.2.



13.0 SPARE PARTS

PART NUMBER	DESCRIPTION	MIN ORDER QUANTITY
MA7345	REPLACEMENT OUTER SHELL	1
MA7246	REPLACEMENT THERMAL LINER	1
MA7348	NEOPRENE SURVIVAL HOOD	1
MA7149	INFLATABLE MITTEN SET	1
MA8836	LEAK TEST KIT	1
MA2292	ZIPPER LUBRICANT	1
RE0010GB	REPAIR PATCH KIT	1
RE0004	REPAIR PATCH HAND IRON	1



14.0 WARRANTY INFORMATION

LIMITED WARRANTY/ Mustang Survival products are warranted to be free from defects in materials and workmanship for a period of one year from the date of purchase by the initial purchaser (the Customer End user) under normal and intended conditions and use. Proof of purchase may be required at the discretion of Mustang Survival. Products, which, in the sole judgment of Mustang Survival, have received excessive or abusive use or have been altered in any way by a dealer, the Customer or any other person, will not be covered by this limited warranty.

Mustang Survival requires return of the product (postage or delivery costs prepaid by Customer) for inspection before determining whether the product will be covered under limited warranty. A return authorization is required before the goods are returned and should be obtained by contacting our Customer Service Department. Once returned, Customer Service, Quality Assurance and Sales Departments inspect the product as required. It is then determined whether the product will be covered under this limited warranty. If the product is deemed to be covered under our warranty policy, it will either be repaired or replaced at the sole discretion of Mustang Survival at no charge to the Customer. The only obligation or liability of Mustang Survival under this limited warranty is to repair or replace the product and Mustang Survival shall not, under any circumstances be liable for loss of use or any consequential damages sustained by the Customer. All other warranties expressed or implied, and remedies with respect to the condition or use of the product, which might otherwise be provided by law in any jurisdiction, are specifically excluded.

15.0 CONTACT

For Warranty repairs, replacement items and accessories contact
Mustang Survival:
TF 1 800 526 0532
E custserv@mustangsurvival.com