

MUSTANG SURVIVAL



OWNER'S MANUAL



MSD577SR

SWIFT WATER RESCUE DRY SUIT

WE SAVE LIVES FOR A LIVING

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Patent Information:

US Patent No. 6,668,386 Canadian Patent No.2,381,720 and other Patents Pending

DESCRIPTION

The MSD577 SR was designed as a response to our customers who needed a better dry suit solution for the increasingly technical and hazardous operations they were being called upon to perform in. In the wake of disasters such as hurricanes and floods, it was evident that rescuers required a dry suit designed specifically for the swift water conditions encountered in these situations.

Mustang Engineers gathered information from industry experts on the characteristics of the missions performed in Swift Water Rescue dry suits, and set out to design a suit tailored to the mission. The results are dramatic. Professional Swift Water Rescue instructors across North America tested the suit and their feedback was incorporated in the final design to improve performance and minimize in-water drag and fatigue. The result is the best Swift Water Rescue dry suit on the market.

Features include:

- Minimized drag for improved rescuer safety and effectiveness
- Innovative design and fabrics
- Reduced bulk and enhanced fit provided by stretch panels, internal 3-point adjustment system, integrated thigh straps, tri-glide suspenders and adjustable waist belt
- Padding and abrasion-resistant materials for increased rescuer protection and safety
- Highly durable and lightweight construction
- Taped watertight seams and breathable GORE-TEX® laminate
- CCST™ Closed comfort system neck seal for comfort and reduced thermal burden
- Lined, trim-to-fit stretch neoprene wrist seals
- SOLAS retro-reflective tape on arms for visibility
- Optional custom screening and patch application for easy identification
- Quick donning and doffing with diagonal cross-chest waterproof entry zipper

WARNING: Dry suits alone provide inadequate insulation for hypothermia protection. All users should wear appropriate thermal undergarments to prevent hypothermia. Dry suits are not inherently buoyant. All users should wear appropriate flotation devices with the dry suit. Water rescue is inherently dangerous. Users should be aware of risks associated with water rescue and complete training in the use of water rescue equipment and techniques.

INSTRUCTIONS FOR USE

This manual supplies instructional, maintenance and safety information for the MSD577 SR, unless specified otherwise.

NECK SEALS AND WRIST FITTING

Neck Seal Instructions

Mustang's patented Closed Comfort Seal (CCS™) can be worn loose to provide comfort out of the water and can quickly be drawn tight to keep the water out. The adjustable seal also provides increased durability compared to traditional latex seals.

For maximum effectiveness the neck seal should be adjusted to be snug, but not uncomfortably tight.

Wrist Seal Trimming Instructions

The suit comes equipped with neoprene wrist seals that have a tapered sealing surface. 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 seal increases the diameter of the end opening, allowing a larger wrist to be inserted and sealed comfortably without damaging the wrist seal.

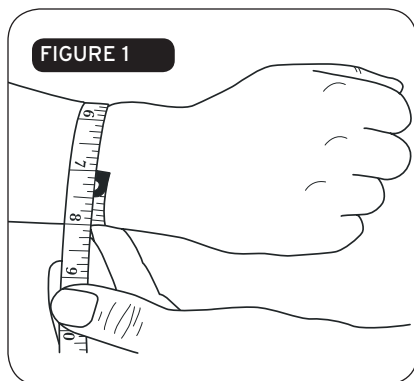
Required materials: Tape measure, sharp scissors

When trimming, use a very sharp pair of scissors with no nicks. Make a small incision in the side of the ring and continue cutting around the ring until you make a clean cut. Any little nicks can cause a tear when stretching the seal. Be conservative with your measurements. You can always cut more but you cannot add back!

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 trim table below details recommended "Trim Off" lengths relative to wrist size. To ensure a watertight seal that provides safety, the fit should be tight without cutting off circulation to your hand. Don't cut off more wrist seal than recommended, otherwise the safety provided may be compromised.

1. Use a tailor's measuring tape or other device to determine each wrist circumference [Fig 1]. Measure just above the wrist joint towards the elbow. Left and right wrist sizes may vary. Measure again to confirm.
2. Refer to the trim table below to determine the recommended "Trim Off" amount. E.g.: a wrist size of 7" requires approximately 1/2" be trimmed from the cuff end.



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

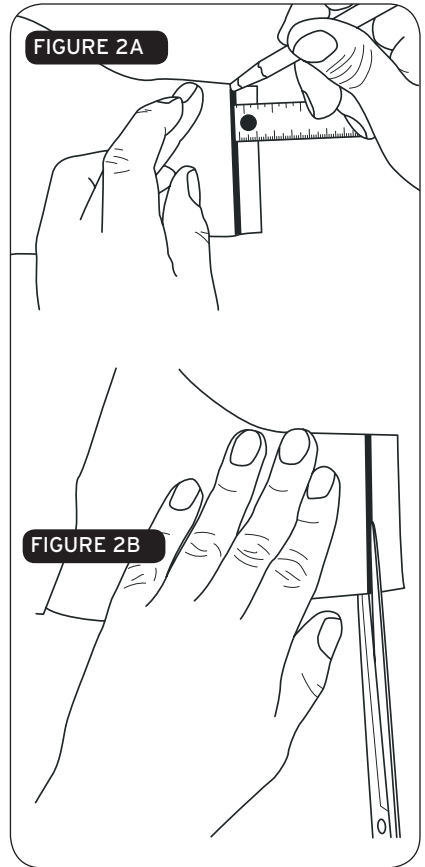
4. If wrist circumference is 6" or less, try on the cuff "as is" to gauge the comfort and seal provided. Continue with trimming only if required.

5. If trimming is required, mark a circular line around the cuff that is offset from the original cuff end by the recommended "Trim Off" amount [Fig 2A].

6. Using sharp scissors, or a razor, carefully cut the cuff end at the marked line [Fig 2B]. Evaluate the fit and comfort after each cut. Apply talcum powder to your hand and wrist to make donning the cuff much easier. Don the sleeve by pointing the fingers straight, tucking the thumb into the palm and inserting the hand through the seal. Do not make a fist when putting your wrist through the seal. Forcing the wrist through a cuff that is too small may tear the cuff end open.

7. If further trimming is required, shorten the cuff end 1/8" at a time until the optimum balance of fit and comfort is achieved. It is not recommended to exceed the original cut by more than 1/2"

8. To maximize the protection provided by the wrist seals, try to minimize flexing of the wrist when in the water.



DONNING THE SUIT

Before donning the suit, ensure that appropriate undergarments have been selected for the conditions.

CAUTION: Use extreme care when donning the drysuit. Prior to donning, remove all rings, watches, earrings, necklaces and eyeglasses that will cause damage to wrist and neck seals. Footwear other than socks must not be worn inside the dry suit.

Suit Preparation Prior to Donning

1. Loosen the neck seal completely.
2. Ensure that the Velcro™ wrist covers are unfastened and the ankle gussets are opened.
3. Ensure that the waist belt and thigh straps are fully loosened.
4. Ensure that the waterproof entry zipper is fully opened.
5. Ensure the suspenders are pulled out of the suit legs.

Donning the Suit

1. Slide your legs into the suit until your toes reach the end of the socks.
2. Fold back the waterproof entry zipper flap, exposing the waterproof entry zipper.
3. Don the suspenders. Ensure they are crossed in back but not twisted.
4. Apply talcum powder inside wrist seals.
5. Place the right arm into the right sleeve.
6. Carefully place the right hand into the right cuff by pointing the fingers straight, tucking the thumb underneath and inserting the hand through the seal. Do not make a fist when putting your wrist through the seal.
7. Roll the Velcro™ wrist covers back and refasten to a snug fit.
8. Repeat Steps 4 - 8 for the left arm.
9. 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 fingers and gently pull the seal outward and down as you push your head through. Flatten any folds or rolls of the seal against the skin.
10. Close the waterproof entry zipper. Reach over your left shoulder with your right hand and grasp the zipper toggle. While holding the bottom of the zipper, pull the toggle down until the zipper is completely fastened.
11. Ensure the waterproof relief zipper is completely closed.

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 survival time when in the water. Have a fellow team member double-check each slide fastener to ensure they are completely closed against their sealing plugs.

12. Fasten the ankle gussets.
13. Burp the suit before water entry. Squat down and force excess air through the neck opening. Tighten the patented neck seal by grasping the drawstring and pulling the tabs out and away from the neck until a snug, comfortable fit is achieved.

ADJUSTMENT POINTS

To improve fit, lower in-water resistance and reduce rescuer fatigue, the integrated suspenders can be adjusted to a comfortable and secure position.

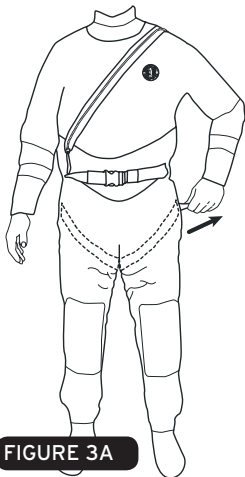


FIGURE 3A

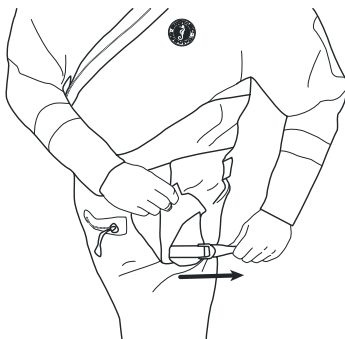


FIGURE 3B

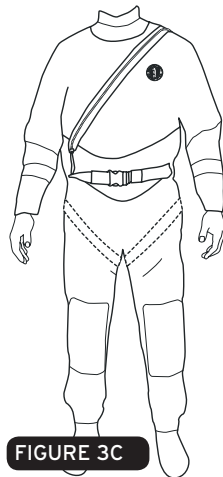


FIGURE 3C

1. Before completely donning the suit, adjust the suspenders to personal preference. The suspenders are three-way adjustable with two front buckles and a back crossover.
2. After donning, tighten the removable waist belt to a comfortable position [Fig 3A]. When used correctly, the waist belt will help to distribute the load of the suit evenly, reducing fatigue during long operations.
3. Cinch integrated thigh straps to a comfortable and snug position [Fig 3B]. This will improve the fit and mobility of the suit, and reduce excess material in the thigh areas which would otherwise increase drag and lead to rescuer fatigue. The thigh straps are located under each of the Kevlar hip patches.
4. The loose ends of the thigh straps should be secured under the hip patch with the Velcro™ closure to eliminate snag hazards [Fig 3C].

See the next section for suspender attachment instructions

WARNING: The integrated adjustment system is not designed to be used as a load-bearing harness of any kind. Misuse may be hazardous for the wearer and will damage the suit.

FIGURE 4A



FIGURE 4B



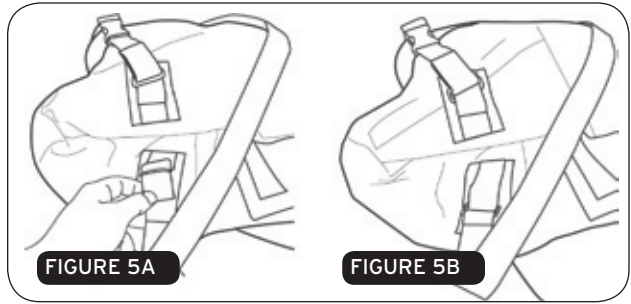
FIGURE 4C



Attaching Suspenders

Replacement suspenders are available for order under Mustang part number MA7650.

1. Completely unzip the entry zipper.
2. Open the suit so that the (front and back) attachment loops are accessible [Figs 4A - 4C on previous page].



3. Attach the end of the suspender, with the buckle, to the suit's front attachment point by un-peeling the Velcro™ flaps and lifting the Velcro™ strap that is folded on itself. Fold the flaps over the strap (so that hook Velcro™ faces hook Velcro™) [Fig 5A]. Pass the suspender through the attachment loop. The strap end can now be folded over itself so the Velcro patches close. To secure the suspender, wrap the Velcro flaps around the edges of the strap and attach to Velcro on the opposite side of the strap.

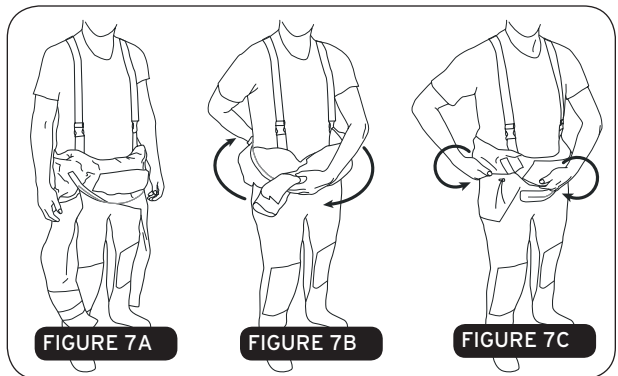
NOTE: If the suit is supplied with a Thermal Liner, suspender ends must be passed through the holes provided.

4. While keeping the strap straight, attach the non-adjusting end of a suspender to the suit's back attachment point [Fig 5B]. This procedure should be similar to Step 3.
5. Repeat these steps to attach the other suspender. It is recommended to use two suspenders for even support.
6. Use the suspender strap ends to adjust for a secure comfortable fit [Fig 6].



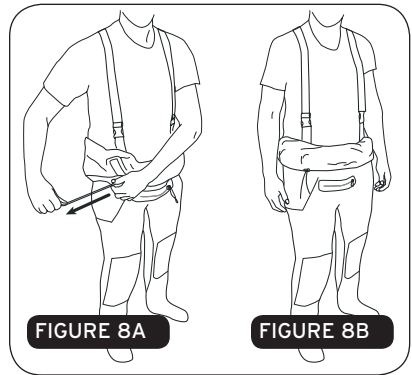
TOP-STOW FEATURE: ROLLING UP THE ARMS

To reduce thermal burden while away from water, the MSD577 SR features an innovative waist roll-up design to improve comfort, reduce suit damage



and provide a more secure storage system for the top half of the suit than simply tying the arms together around the waist.

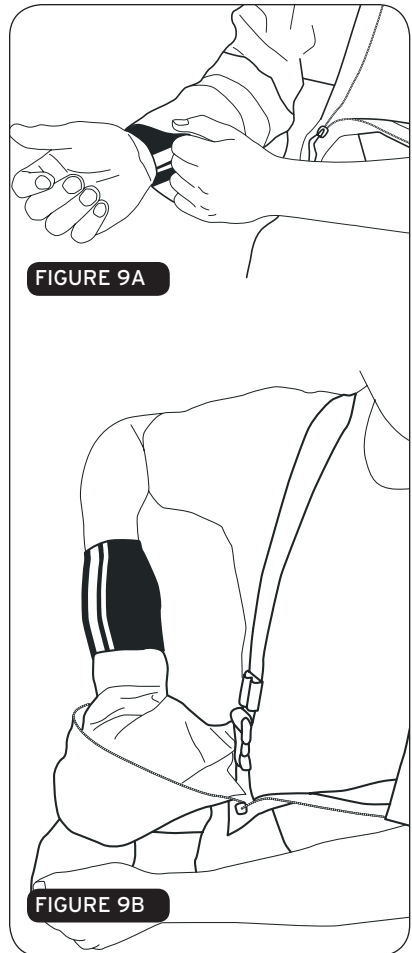
1. Let the suit hang from the suspenders and waist belt (if used) [Fig 7A].
2. Wrap the right arm behind the torso, and the left arm in front of the torso, [Fig 7B] and roll the suit down on top of itself as far as the belt. Turn the interior roll panels over the rolled suit [Fig 7C], and pull the bungee cord tight [Fig 8A], securing the roll in place.
3. Adjust the cord lock on the bungee to maintain tension [Fig 8B].



DOFFING THE DRY SUIT

1. Remove all equipment worn over the suit.
2. Thoroughly rinse down the exterior of the suit while wearing it, paying special attention to the seals and zippers. Remove all dirt, salt and debris.
3. Loosen the belt and thigh straps.
4. Completely open the waterproof zipper. Make sure that the entry zipper is completely open. A zipper can be broken if it is not fully open when you try to doff the suit.

WARNING: Placing undue force on the zipper may damage the seal and harm the integrity of the suit. Never forcefully yank on the zipper.



5. Completely loosen the neck seal drawstring. Insert fingers between neck seal and neck. Gently stretch the seal outward and upward while pulling neck seal over your head.
6. Gently begin to pull both arms out of the suit by grabbing the outside cuff [Fig 9A] and turning sleeves inside out as you do [Fig 9B].

WARNING: Pulling on the neoprene wrist seal may damage the seal.

7. Slowly pull hands through wrist seal.
8. Pull suit down past hips and slide legs from the suit. Turn the sleeves right-side out again.
9. Follow the cleaning and storage instructions for the suit.

CLEANING AND MAINTENANCE

Cleaning

1. Thoroughly rinse your dry suit after every use.

Do not dry clean. Do not iron. Do not bleach.

2. Treat stains with a pre-wash treatment such as Shout® or Spray 'n Wash®. Follow the manufacturer's instructions. Rinse well.
3. Machine wash warm (104° F/40° C) on gentle cycle with a gentle powder or liquid detergent. Do not use fabric softener, bleach or wash-in treatments, as they can affect the suit's breathability.
4. Tumble-dry warm for at least 50 minutes . The heat from the dryer will help to reactivate the product's durable water based repellent (DWR) treatment.
5. Apply a topical water based repellency restorative (DWR treatment), following the manufacturer's instructions.

Maintenance

Regular zipper maintenance is recommended to maintain a water-tight seal, inhibit rust and corrosion and keep the zipper gliding freely. These steps are essential to zipper longevity:

1. Clean the zipper of any heavy deposits of mud, sand, salt or foreign substances using warm soapy water.
2. Use one of the recommended cleaning fluids listed below to clean the inner and outer elements of the zipper.
3. Apply a recommended lubricant to the outer elements of the zipper only, according to supplier directions.
4. Close and open zipper carefully to thoroughly distribute lubricant. Repeat process until zipper moves freely. Wipe away excess.
5. A suit that is used daily requires Steps 3 and 4 to be done on a weekly basis, as a minimum, paying close attention to more frequent cleaning of the zipper as required.

ZIPPER CARE

Care Product	Product Name	Supplier
Cleaning Fluid	Zippy Cool Zip Care BDM Fluid	YKK USA McNett BDM UK
Lubricating Wax	Zippy Cool Zip Tech BDM Wax	YKK USA McNett BDM UK

REPAIRS

Should a Mustang Survival product require repair or inspection, please contact your local dealer or Mustang Survival Customer Service. Contact us for a Return Authorization Number (RA#) and correct shipping address prior to sending your Mustang Survival product in for service. A Return Authorization Number for tracking and identification purposes must accompany all products returned to our facility.

The cost of non-warranty repairs is dependent upon the cost of the materials and extent of the repair. After the product is inspected, Mustang Survival will notify you of the cost associated with the repair to obtain your approval on the costs before the repair is started.

For In-Field Repairs, Mustang Survival Recommends McNett's GORE-TEX® Fabric Repair Kit.

STORING THE DRY SUIT

The suit can be hung to dry. Hang the suit with all zippers half closed.

Folding and Packing

Ensure that the suit is thoroughly clean and dry and that the main entry zipper is in the closed position before folding and packing. To fold and pack the suit:

1. Lay the suit flat on its back on a horizontal; clean surface, allowing the suit to be fully extended with none of the parts overlapping [Fig 10].
2. Fold the left sleeve, from the shoulder, straight across the body of the suit. Fold the right sleeve, from the shoulder, straight across the body of the suit on top of the folded left arm.
3. Fold the socks over top of the legs until they reach crotch level.
4. Fold the legs, from the crotch, up to the chest level, right below the folded sleeves.
5. Fold the suit in half. It is now ready to pack [Fig 11].



ACCESSORIES

Recommended Dry Suit Liner – MSL351 Dry Suit Liner

Thermal protection is needed for a variety of water and weather conditions. The MSL351 was designed to integrate with Mustang Dry Suits improving protection against hypothermia without limiting mobility. The liner combines different weight Polartec® fleece panels to maximize heat loss when wearing the dry suit out of the water and to provide extra insulation protection when in cold water. The MSL351 has shortened, tapered sleeves that won't interfere with wrist seals and full-length tapered legs that fit inside dry suits comfortably without bunching. The liner provides warmth without weight, is highly breathable, quick drying, durable and machine washable.

Water Rescue Vests - MRV100 SR (Rescuer Vest) and MRV200 SR (Instructor Vest)

All dry suits should be worn in conjunction with a flotation device.

These IRIA Certified rescue vests are made of rugged, high visibility rip stop nylon and contain extra flotation to combat the reduced buoyancy effects of turbulent water. An integrated structural harness and single piece over-the-shoulder foam design provide extra strength, structural integrity and body protection. Multiple adjustment points provide a secure fit that prevent ride up and a "live bait" quick release belt helps the rescuer to escape dangerous situations. Fast Tabs on both shoulders act as easy attachment points for accessories such as knives, scissors or strobe lights.

The MRV100 is the choice for rescue professionals involved in boat and shore operations or low to medium risk swift water environments. Includes two quick-drain front pockets for storing extra gear.

The MRV200 enables rescue swimmers to safely and quickly reach victims in high risk swift water environments. Removable front and back pockets reduce snag risks and a one hand self extrication leash aides in self rescue. An internal nylon plate disperses force when the chest harness is under tension and provides protection against impact.

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.

CONTACT

For further information concerning this manual or the suit, contact:

Mustang Survival Corp.
3810 Jacombs Road
Richmond, BC V6V 1Y6

Tel: 1.800.526.0532

E-mail: mustang@mustangsurvival.com

Web: mustangsurvival.com

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PRIOR TO SALE.**



research & Design

For 40 years Mustang Survival has been committed to providing life support solutions. Through constant innovation and the application of new technologies, Mustang is the leading supplier of quality flotation and hypothermia protection products to the most demanding users - from fishermen, sailors and power boaters to the Coast Guard, jet fighter pilots and even NASA astronauts.

CANADA

3810 Jacombs Road
Richmond, BC
Canada V6V 1Y6

TEL 604.270.8631
TOLL FREE 1.800.526.0532
FAX 1.888.676.5014

USA

3870 Mustang Way
Bellingham, WA
USA 98226

TEL 360.676.1782
TOLL FREE 1.800.526.0532
FAX 1.888.676.5014

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Our commitment to quality has earned our Richmond facilities ISO 9001 registration, the highest of all international standards. This is our guarantee you're receiving the ultimate in design and manufacturing.

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