

How to Check Personal Equipment at Controle

Revision 7: 5/14/2025

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Introduction

This document is meant to be a brief guideline as to how personal fencing equipment is being inspected by equipment inspection personnel at North America Cup (NAC) events. This approach is also used often at USA regional fencing events.

Masks

The following inspections are considered as “repairable failures”. If the mask does not meet the requirements, the mask is to be returned to the fencer so that repairs can be made.

[m.25.7, m.27, m.32]

1. Visually check to see if the mask is missing any components (e.g., rivets, binding, security straps).
2. Visually check to see if there are any holes, tears, or abrasions on the bib which could catch a point.



Mask with Loose Trim and Bib

3. Tug moderately on the bib and the trim to determine if the bib is securely attached to the mask frame.



Properly Fitted Mask



*Improperly Bent Mask
Tongue*



*Worn Out Mask Elastic
Strap*

4. Visually determine if the metallic tongue is bent in a continuous curve. The position of the tongue should be able to contact the back of the fencer's head. If the tongue appears not to be able to touch the back of the fencer's head, have the fencer put on the mask to verify.
5. Verify that the horizontal elastic security strap touches the back of the fencer's head when the mask is worn and is still elastic. If the strap appears not to be able to touch the back of the fencer's head, have the fencer put on the mask to verify.

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- Determine if the security strap's Velcro tabs are in working condition by fastening the strap to them. While holding the mask by the strap, gently bounce the mask up and down. The strap should still be securely connected to the Velcro tabs.



Comfort-Fit Plus Strap

Mask without a Tongue

- For masks that have been designed without a tongue (e.g., Leon Paul X-Change), verify that all of the straps and parts are present and are in good working condition. The straps must meet the requirements of item 5. [m.25.7f]

For the Leon Paul X-Change style mask, the “Comfort-Fit Plus Strap” must be present for USA sanctioned local, regional and national events. The bib must have the required sewn in mounting clips for the strap.



Ohmmeter with Lamé Probe and Cables

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- For the Leon Paul X-Change style mask, check that the bib is the correct size for the mask.



Mask Size	Bib Size
S	1
M	2
L	3
XL	4

Once confirmed, centralize the bib in the channel so that any gap is equal on both sides. Then check to see if the gap looks like it is more than 5mm.

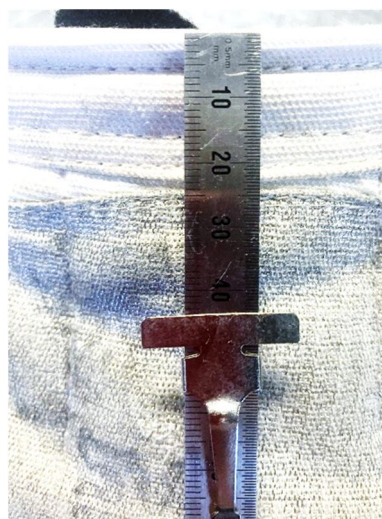


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9. Foil Masks: Using an ohmmeter with a low resistance scale, check the electrical resistance of the lamé fabric of the bib with a standard lamé test probe. The resistance should be less than 5.0Ω between any two points on the lamé material. Also check that the lame tabs have an electrical resistance less than 5.0Ω between any two points on the bib lamé material. All lamé repair patches must be securely attached and be electrically connected to the rest of the lame material. [m.27]



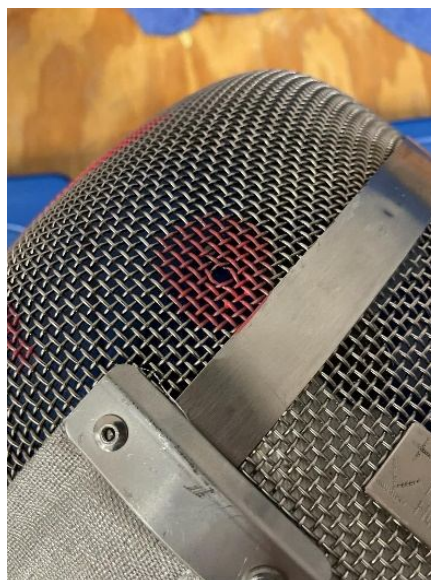
Illegal lamé material location



Legal lamé material location

10. Foil Masks: Check to see that the upper edge of the lamé material on the bib is within 1.5cm to 2cm below the chin portion of the mask. [m.27.2]
11. Sabre Masks: Using an ohmmeter with a low resistance scale, check the electrical resistance of the entire mask with a standard lamé test probe. The resistance should be less than 5.0Ω between any two points. [m.32]
12. Sabre Masks: Visually check to see if there are no holes, tears, or abrasions on the lamé material. All lame repair patches must be securely attached and be electrically connected to the rest of the mask. [m.32]
13. Sabre Masks: Saber masks with clear plastic visors are no longer legal and cannot be used for sanctioned USA Fencing or FIE competitions.

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Masks That Have Been Failed for Safety Reasons

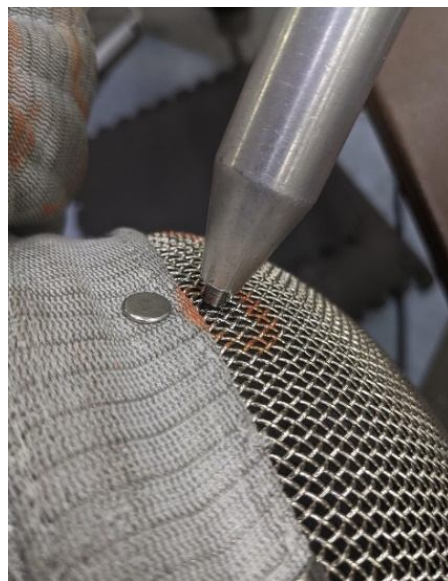
The following mask inspections are done for safety reasons. Failure of any of these inspections are considered as “non-repairable failures” and the mask is to be confiscated and labeled in some permanent manner as “FAIL”. If possible, all failed masks should be verified by the competition head tech (or other senior armorer) before labeling and confiscation. According to USA Fencing SEMI mandates, the confiscated mask can be returned to the owner once they have completed their competitions for the event. [m.25.7d]



Suggested Locations for Mask Punch Tests

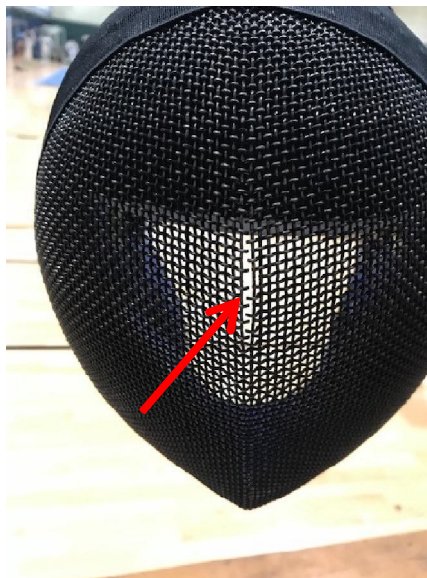


Commercial 12kg Mask Punch



Mask that failed mask punch test

14. Randomly test at least four (4) areas of the front of the mask mesh using a standard 12kg (~26 lbs) mask punch. An additional punch test should be done on the side areas of the mask. Each punch test is to be done quickly to the surface of the mesh. If the mesh does not resist the punch test, the mask is considered an automatic "FAIL". [m.25.7]



Examples of broken or damaged wires in the mask mesh

15. Visually inspect the front of the mask wire mesh to determine if there are areas which could hold or catch a point or if there is a broken wire in the mesh. Punch test the suspect areas with a standard 12 kg (~26 lbs) mask punch to verify the integrity of the damaged area. If the mesh does not resist the punch test, the mask is considered an automatic "FAIL". [m.25.7]
16. Looking from the inside of the mask, determine if any of the mesh's wires is broken or has been distorted. Punch test the suspect areas with a standard 12 kg (~26 lbs) mask punch to verify the integrity of the damaged area. If the suspected area fails the punch test or there is a broken wire, the mask is considered an automatic "FAIL". [m.25.7]
17. Squeeze the sides of the mask together to determine if there are any broken weld joints or if the frame is broken. A broken frame or weld joint will most times will produce a faint clicking sound. A visual examination should be done to verify the mask's frame condition. If the mask is found to have a broken frame or weld joint, the mask is considered an automatic "FAIL". [m.25.7]
18. Check that the tongue of the mask is securely attached to the rest of the mask frame. A broken weld joint between the tongue and frame is easily recognized. If the mask tongue moves freely, the mask is considered an automatic "FAIL". [m.25.7]

Foil and Saber Lamé Vests and Jackets

The following foil lamé vest and saber jacket inspections are considered as “repairable failures”. Lamé vest and jackets can be returned to the fencer so that they can have the necessary repairs made. [m.28, m.34]

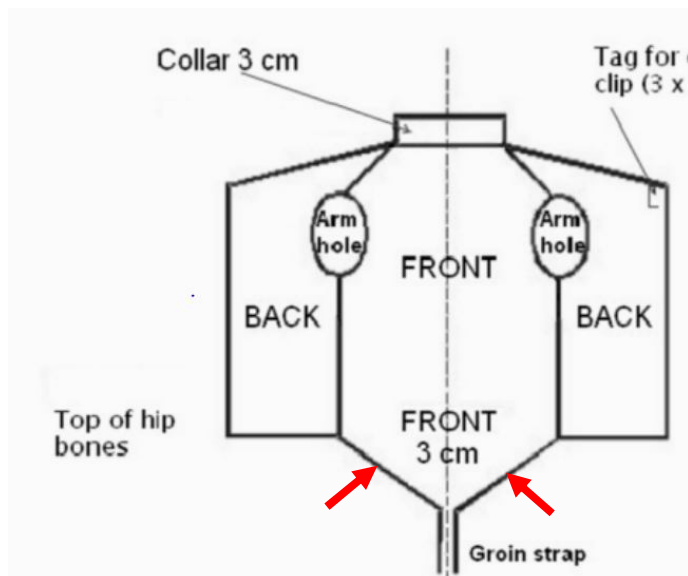


Foil Lamé Vest

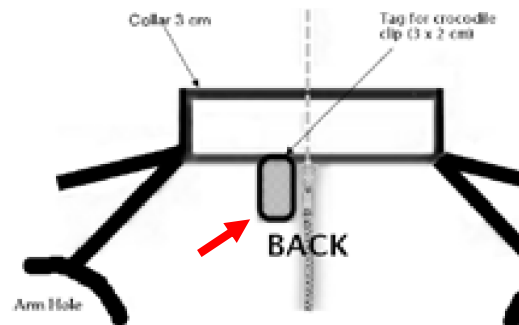


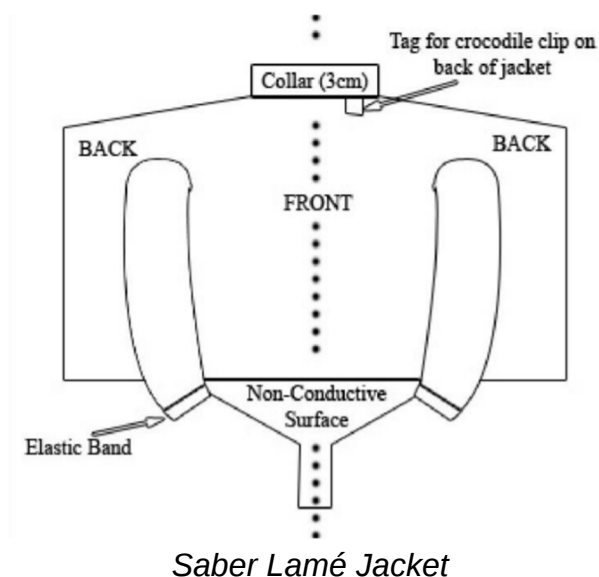
Saber Lamé Jacket

1. Visually examine the vest and jacket for holes and for the presence of the mask wire attachment tag on the back of the collar.



Foil Lamé Vest





2. For foil vests, verify that when the vest is laid flat, there is a straight line between the point of junction of the lines of the groin and the two points corresponding to the tops of the hip bones (ilium).
3. Using an ohmmeter with a low resistance scale, check the electrical resistance of the lamé material of the vest/jacket on each panel in multiple locations with a standard lamé test probe [m.28.5a]. The maximum allowable resistance is 5.0Ω. All panels of the vest or jacket must be electrically connected to each other.

Pay attention to high wear areas (e.g., chest area), collar, mask cord attachment tag on the back, and the underarm areas. For saber jackets, also pay attention to the inner and outer elbow areas and the fencing arm cuff in addition to the above listed areas.

4. All lamé repair patches must be securely attached to the lamé material and be electrically connected to the rest of the lamé material on the vest or jacket. The maximum allowable resistance for the repair patches is 5.0Ω.



5. For national level competitions, visually confirm that the fencer's last name is printed on the back of the vest or jacket. In lieu of having the fencer's last name on the back of the vest or jacket, the last name can be printed on the front of the rear leg of their knickers. For national level domestic events in the USA, the country designation is not required.

The printed areas must be electrically conductive with the rest of the lamé material.

For regional events, neither the fencer's last name nor country designation printed on the back of the vest or jacket or knickers is required.

Saber Gloves and Saber Lamé Cuffs

The following saber glove and saber lamé cuff inspections are considered as “repairable failures”. Saber gloves or lame cuff can be returned to the fencer so that they can have the necessary repairs made. [m.25.6, m.33]



Saber Glove with Integral Lamé Cuff



Separate Saber Lamé Cuff

1. Visually inspect the glove for holes which may catch a point, especially on the back of the hand. No adhesive tape patches are allowed. All patches must be sewn on.
2. Using an ohmmeter with a low resistance scale, measure the resistance between multiple points on the lamé cuff with a standard lame test probe [m.28.5a]. The maximum allowable resistance is 5Ω.

The same 5Ω maximum allowable resistance requirement also applies for a separate lamé cuff.

3. All lame repair patches must be securely sewn or glued on and be electrically connected to the rest of the lamé material on the glove or cuff and meet the same 5Ω maximum resistance requirement.

4. Verify that there is a 5 cm (~2") wide band of lamé material on the inside of the glove or cuff. This lame area must have a maximum allowable resistance of 5.0Ω and be electrically connected to the lamé material on the exterior of the glove or cuff.



Typical Saber Glove FIE Homologation Labels

5. Visually confirm the presence of a FIE homologation label is properly sewn into the interior of the glove. If a saber glove without an integral lamé cuff is submitted for inspection, the presence of a FIE homologation label is still required.
6. Check the Velcro closure to see that it is secure.
7. All separate lamé cuffs must have a sewn in finger loop.
8. If a saber glove with a failed integral cuff is used with a separate cuff, the lamé portion of the saber glove must be labeled as "FAIL". The saber glove must still comply with item 1.
9. The length of the glove cuff must be long enough to cover approximately 50% of the fencer's forearm. [m.25.6]

Foil and Epee Gloves

The following inspections are considered as "repairable failures". Gloves can be returned so that they can have the necessary repairs made. [m.25.6, m.26]

1. Visually inspect the glove for holes which may catch a point, especially on the back of the hand. No adhesive tape patches are allowed. All patches must be sewn on.

2. Check the Velcro closure to see that it is secure.
3. The length of the glove cuff must be long enough to cover approximately 50% of the fencer's forearm. [m.25.6]

Foil and Sabre Body Cords

The following inspections are considered as “repairable failures”. Body cords can be returned to the fencer so that they can have the necessary repairs made. [m.29, m.35]



*Foil/Saber 2-Pin Style
Body Cord*



*English Style Bayonet
Body Cord*



*Italian Style Bayonet
Body Cord*

1. Measure the electrical resistance of each wire of the body cord using a low resistance scale ohmmeter. The resistance of each individual wire should be less than 1.0Ω . While measuring the wire's resistance, gently tug or wiggle the plugs and wires to determine if there is a possible break in the wire(s), loose connections inside the plugs, or loosely fitting pins.
2. Visually check to see if the cord is functionally complete and properly wired.

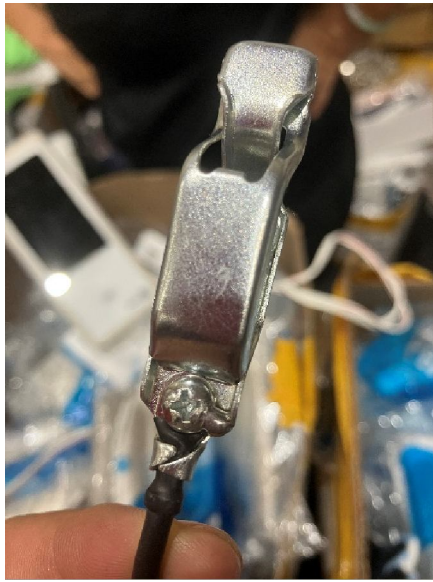


*2-Pin Style Weapon Plug with
Security Clip*



*2-Pin Style Weapon Plug
without Security Clip*

3. For 2-pin body cords, check to see that the weapon plug end of the body cord has a security clip. If the weapon plug has been submitted for inspection without a security clip, some type of retaining device must be present on the weapon socket.
4. For sanctioned USA Fencing competitions only, both 2-pin and bayonet style body cords are allowed.



*Incorrect solder joint
(Solder is from clip to top
Of fastener)*



Correct solder joint

5. Visually check that the solder joint on the alligator clip is not covered and that the alligator clip is soldered directly onto the wire.
6. Determine if the alligator clip wire of the body cord is “free” for at least 40cm (~16 inches).
7. For sanctioned USA Fencing competitions, the plastic plugs do not have to be clear plastic.

Epee Body Cords

The following inspections are considered as “repairable failures”. Body cords can be returned to the fencer so that necessary repairs can be made. [m.31]



1. Measure the electrical resistance of each wire using a low resistance scale ohmmeter. The resistance should be less than 1.0Ω . While measuring each wire's resistance, gently tug or wiggle the plugs and wire to determine if there is a possible break in the wire(s), loose connections inside the plugs, or loosely fitting pins.
2. Visually check to see if the cord is functionally complete and properly wired.
3. For sanctioned USA Fencing competitions, the plastic plugs do not have to be clear plastic.

Mask Cords

The following inspections are considered as “repairable failures”. The mask cord can be returned to the fencer so that they can have the necessary repairs made. [m.29, m.32]

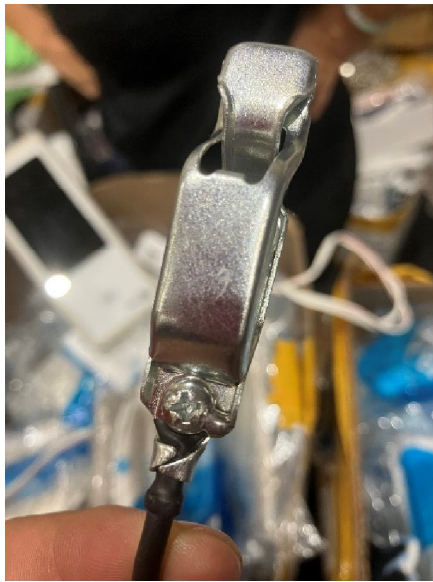


Straight Style Mask Cords



Curly Style Mask Cord

1. For sanctioned USA Fencing sanctioned competitions only, both straight and “curly” mask cords are allowed.



*Incorrect solder joint
(Solder is from clip to top
of fastener)*



Correct solder joint

2. Visually check that the solder joints on the alligator clips are not covered and that the body of the alligator clips are solder directly onto the wire. The overall length of a straight style mask cord is to be between 30cm (~12") and 40 cm (~15.8").
3. Measure the electrical resistance of the mask cord using a low resistance scale ohmmeter. The resistance should be less than 1.0Ω . During testing, gently tug or wiggle the alligator clips and wire to determine if there is a possible break in the wire or solder joint.

Revisions:

1. 02/07/2022: Text has been modified to include the use of electrically conductive adhesive lamé patches to foil mask, saber masks and lamé vest/jacket.

Additional information added throughout the document.

References to sections of the USA Fencing Rule book have been added to text.

2. 07/11/2022: Added picture of failed mask, added TOC
3. 06/29/2023: New pictures of failed mask, updated text
4. 11/11/2023: Added new pictures of mask with damaged wire mesh. Added new pictures of alligator clip solder joints.
5. 2/29/2024: Added new picture of mask with loose trim and bib.
6. 4/27/2024: Added section on location of upper edge of the lamé material on foil masks.
7. 5/14/2025: Added section on correct sizing of bibs on Leon Paul X-Change masks.