

Canine Head Vascular Access Simulator



Instruction Manual

Introduction

Congratulations on your purchase of the SurgiReal Canine Head Vascular Access Simulator! This product has been designed by veterinary surgeon educators to provide you with a powerful educational support tool. The simulator has been engineered to be simple to use and long lasting. However, routine maintenance and replacement of consumable components are required to keep your simulator operating effectively

Refer to this manual while using the Canine Head Vascular Access Simulator (CHVAS) to prolong the model's life

The Canine Head Vascular Access Simulator is not indestructible and its parts will not last forever. Our products are made to withstand the stress of 'normal' usage. However, we cannot predict the forces that might occur if you use, or allow the product to be used, outside of its intended use or if it is used in other ways that apply high stress or fatigue loads. With damage, the life of the product or other parts can be drastically reduced and may fail without warning.

The life of a part is determined by its construction, materials, use, maintenance, and environment (humidity, salinity, temperature, etc.), so it is not possible to give an accurate timetable for replacement. Any form of crack, scratch, or change of color in a high-stress area may indicate that the life of the part has been reached and the part should be replaced.

Warranty

SurgiReal Products Inc. warrants this product and its parts against defects in materials or workmanship for **one year** from the original ship date. During this period, SurgiReal Products will repair or replace defective parts with new or reconditioned parts at SurgiReal's option, without charge to you. This limited warranty extends only to the original purchaser.

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Getting Started

Your simulator is pre-assembled and only requires a few steps before it is ready to use. You will need to prepare the artificial blood (Fig. 2 & 3), place the artificial skin sleeve on the model (Fig. 9,10,11), and prime the vessel system.

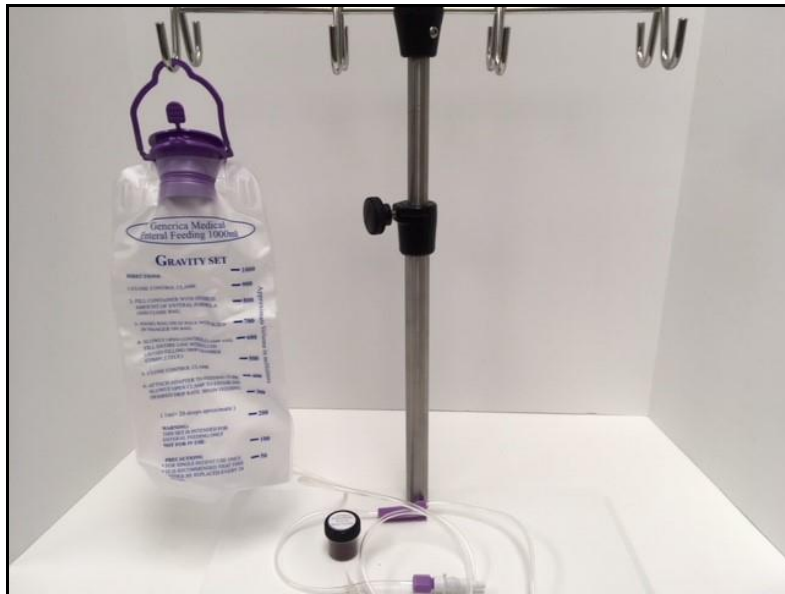


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Preparing the Artificial Blood

Your simulator is provided with an IV Bag and an initial supply of artificial blood powder. We recommend that the artificial blood is prepared as follows:

1. Fill the gravity bag that comes with the model with approximately 500ml of water (Fig. 2).

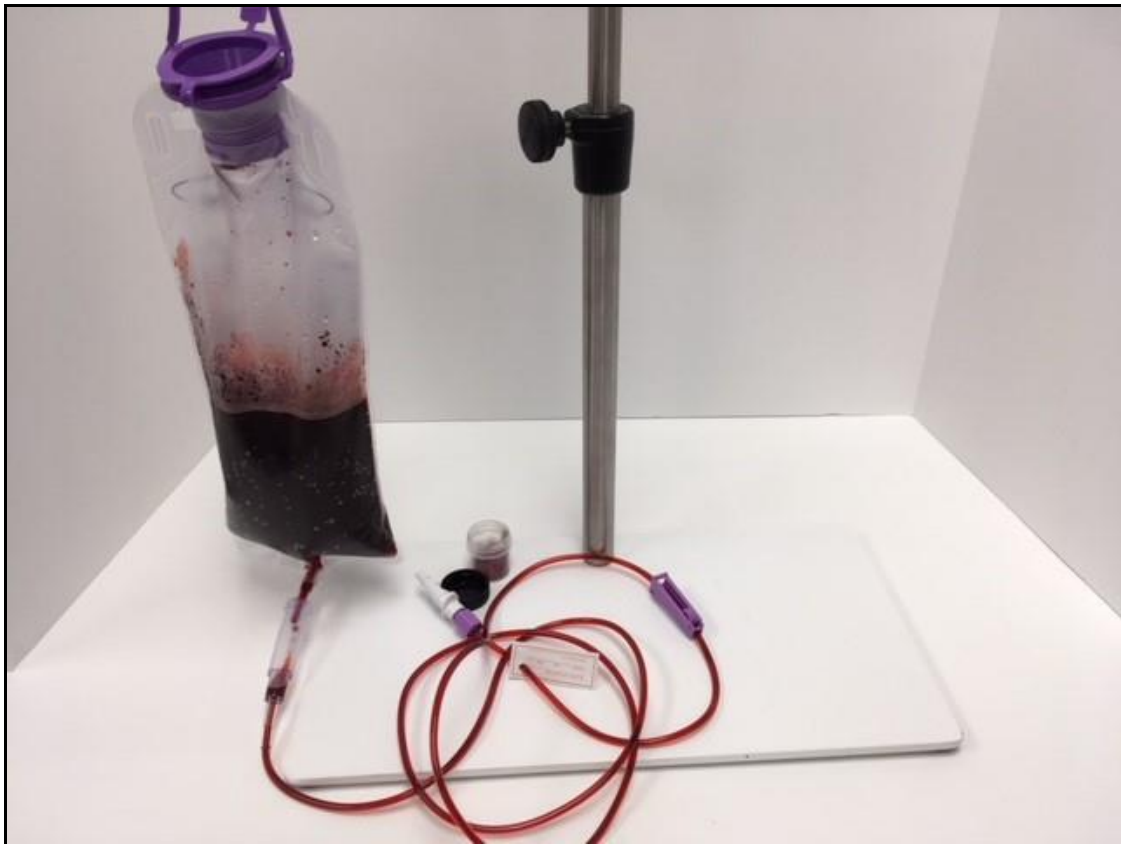


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2. Pour the entire SurgiReal artificial blood powder vial into the gravity bag and allow it to permeate the water (Fig. 3).



4

3. Open the roller clamp on the gravity bag enough for the blood mixture to reach the end of the tube (Fig. 4).

PLEASE USE ONLY SURGIREAL ARTIFICIAL BLOOD MIXED WITH WATER (Any other liquid used in the silicone vein can damage it and create leaks. Warranty is void if any other mixture is used.)

Placing/Removing the Artificial Skin

Your simulator comes with the skin in a separate bag to prolong the life of both the skin and the head. We recommend placing the skin as follows:

1. Insert the skin in the slit on one side of the head. Find the pegs through the back opening of the head and slip the skin over them (Fig. 5).



2. Turn the head around to the front again and insert the loose side of the skin through the opposite slit. Use the same method as above. Find the pegs through the back opening of the head and slip the second side of the skin over them (Fig. 6).



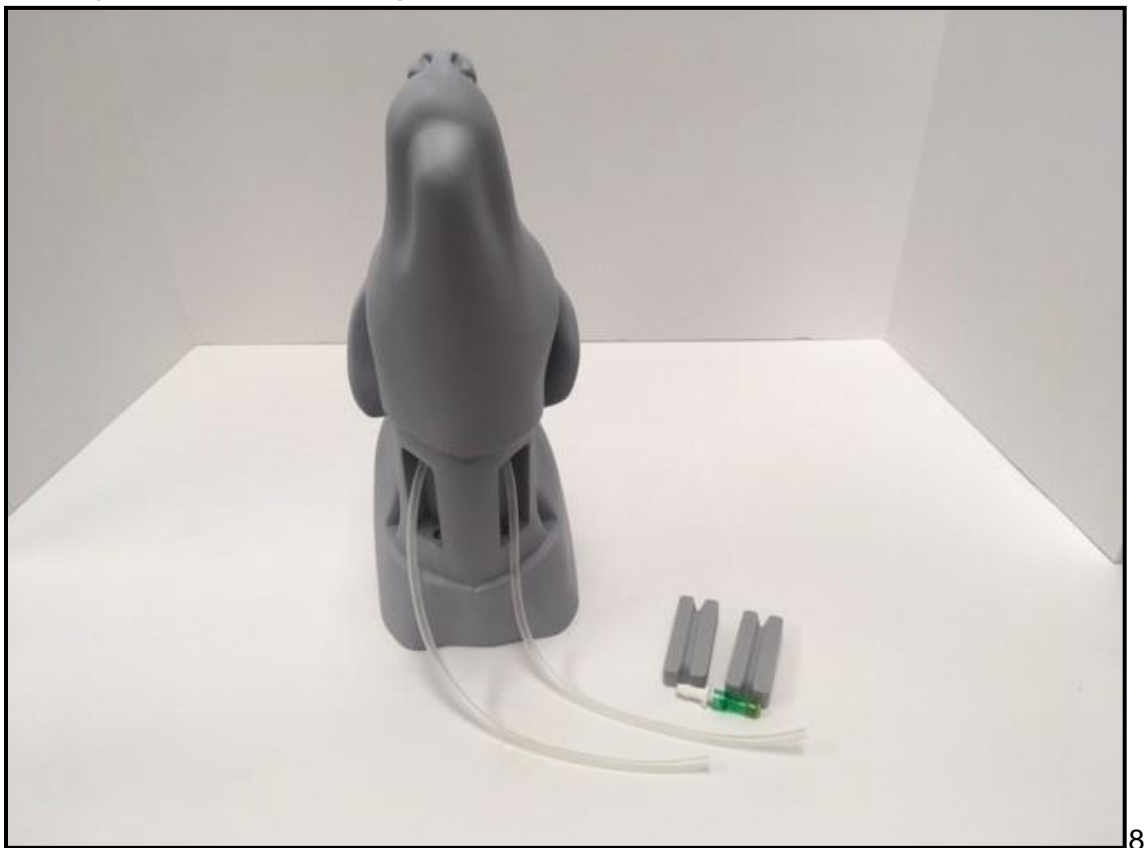
3. The reverse of this same method should be used to remove the skin sleeve after every use and if replacement is necessary.

It is important to remove the skin after each use and store it separately. If this step is not taken the skin will lose elasticity.

Exchanging the Vein

Your simulator comes equipped with one jugular vein on each side of the neck already assembled. When either of these veins begins to leak it needs to be replaced with another jugular vein. These can be purchased on our website www.surgireal.com or by calling 800-873-1445. Once purchased the vein can be replaced using the following steps:

1. Pull out the silicone backing from behind the jugular vein. Pull out the bottom side of the vein. When it is free, push the vein upwards through the top hole (Fig. 8).



2. Turn the head around and use your hand or a pair of needle holders to grab the end of the vein or the clear plastic elbow connector that attaches the two veins. Pull the veins completely out of the head (Fig. 9).



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3. Remove the plastic elbow connector by pulling off each vein. Dispose of the old vein or veins. Thread the new vein back through the top hole. When the vein is over half way through, turn the head around and use your hand or needle holders to grab the end that was inserted. Pull this end out enough to reattach the plastic elbow. Repeat with the other vein (Fig. 10). When both are attached pull the slack out from the front of the head until the elbow connector rests above the top skin peg (Fig. 11).

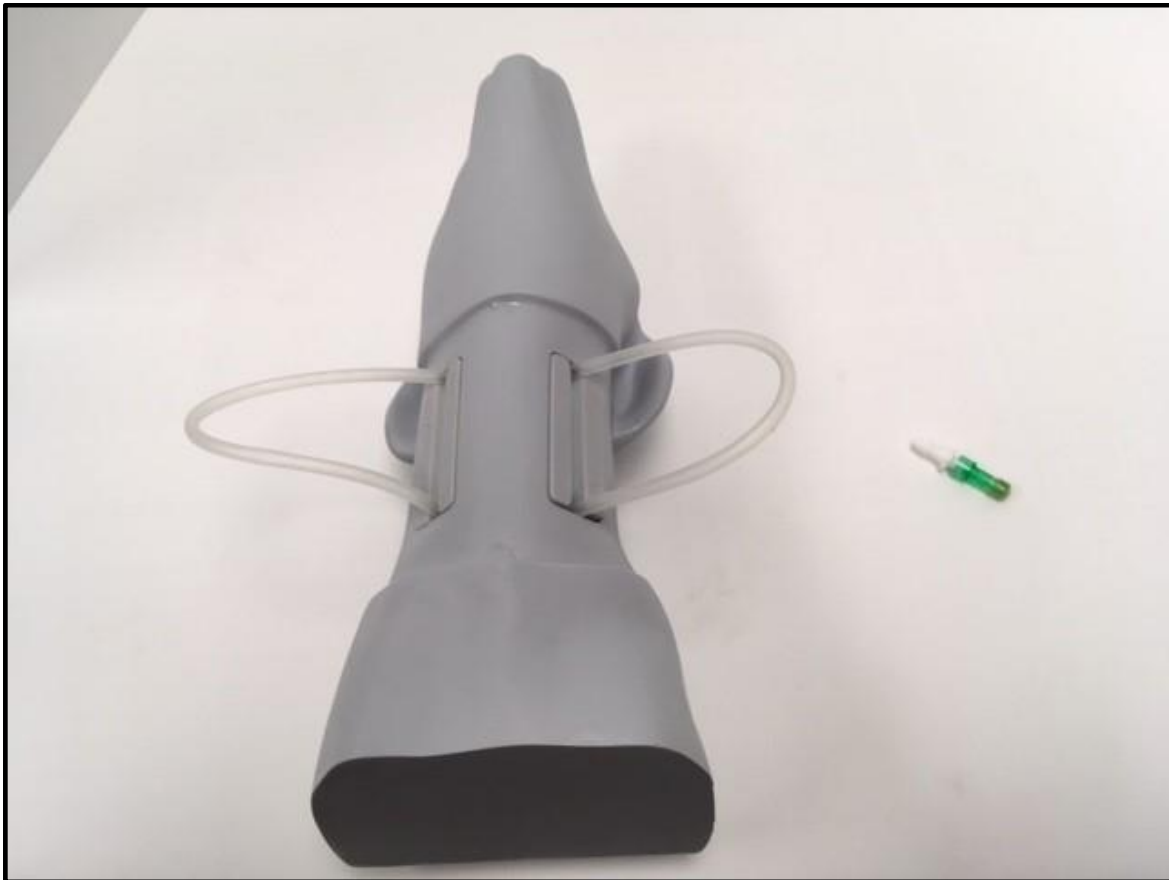


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4. Thread the bottom half of the vein through the bottom hole but leave slack. Insert either the grey silicone plugs for normal draws or the black silicone plugs for a more challenging draw (Fig. 12). Pull the veins tight over the veins. Attach the green connector to one of the veins.



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Maintenance and Care

The following actions will help to keep the simulator in working condition and ensure that its useful life is maximized.

- 1.** When not in use, clean the artificial vein and remove any fluid (SurgiReal artificial blood) to avoid blocking the vein when the fluid dries. You can do this by using a syringe to inject clean water into the vessel system. Follow this with compressed air or air dry in a hanging position.
- 2.** After use gently remove the skin and the artificial vein. Re-assemble the system prior to use.

Troubleshooting

1. When setting up the artificial blood, ensure that the IV bag is hung less than a foot above the simulator. Any higher than that will cause pressure that may lead to the head leaking before 100 draws.
2. Use only a 22-gauge needle or smaller when practicing on the simulator. Using a larger needle will drastically reduce the life span of each jugular vein.
3. The jugular vein should be pushed up and over the barb portion of all connectors in the model. If this vein is not pushed all the way on it can lead to leakage.
4. The jugular vein should sit loosely in the silicone channel. If it is pulled too tight all of the previous needle holes will open up and cause major leaks.



Maintenance and replacement parts for your Canine Head Vascular Access Simulator can be ordered online at: www.surgireal.com or by calling 800-873-1445.

Thank you for purchasing SurgiReal products. If you have any questions or concerns, please contact us can through e-mail at info@surgireal.com or give us a call at 800-873-1445.