Surgical Abdomen Platform
Catastrophic Event Team Training Module

Nicked Aorta Procedure
Nicked Renal Artery Procedure
Lacerated Kidney Procedure
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The **Surgical Abdomen** Platform for the TraumaMan® System is a flexible abdominal site that accommodates an array of surgical procedures:

- Nicked Aorta Procedure
- Nicked Renal Artery Procedure
- Lacerated Kidney Procedure

This interchangeable set of procedures enables full surgical teams to work on improving not only technical, task-related skills, but also communication and teamwork. This platform is fully compatible with the existing TraumaMan System.

The **Catastrophic Event Team Training Module** is the first module available for the Surgical Abdomen Platform. This module provides multiple training opportunities including the diagnosis and treatment of an injury, the management of an emergency surgery, preparation for a catastrophic surgical event, and building confidence and reliability in an individual role within a team framework.

This guide provides an overview of recommended processes for set-up, use, cleaning, and maintaining both the Surgical Abdomen Platform and each of the three procedures.
SYSTEM OVERVIEW

1. Upper TraumaMan Body Form Skin
2. Abdominal Platform Tray
3. Lower Body Form
4. Interlocking Tray Support Bar
5. Surgical Abdomen Replaceable Tissue
6. Simulated Umbilicus Insert
7. Ball Tip Hex Screwdriver and two screws
8. Abdominal Cavity
9. Bladder Cavity Insert
10. Vessel Bifurcation Insert. Three options ship with this module:
   • Pre-nicked Aorta without Renal Artery (shown)
   • Aorta with Pre-nicked Renal Artery
   • Aorta with Renal Artery (for use with Lacerated Kidney procedure)
11. Static Patient’s Left and two Right Kidneys—Static and Lacerated
12. Partial Large Intestine
13. Complete Digestive Tract
15. Bottle of Red Concentrate
16. Overflow Tube
17. Pump Tube (Red)
18. Flow Control Valve
19. Drain Tube (Yellow)
20. Drain Valve
PROCEDURE OVERVIEWS

**Lacerated Kidney Procedure**
- Patient’s right (active) kidney with barbed connector
- Vessel bifurcation with one ball joint on left renal artery
- Note: Patient right kidney is pre-lacerated.

**Nicked Renal Artery Procedure**
- Patient’s right (static) kidney
- Vessel bifurcation with two ball joints on renal artery
- Note: Renal artery is pre-nicked.

**Nicked Aorta Procedure**
- Patient’s right (static) kidney
- Vessel bifurcation with no renal artery
- Note: Aorta is pre-nicked.
SURGICAL ABDOMEN SET-UP

1. To set-up the Surgical Abdomen Platform, remove TraumaMan’s Replaceable Tissue and Body Form Skin.

2. The Body Form Skin should be carefully stored to avoid damaging or misplacing it.

3. Use the packaging from the new Body Form Skin to store.

4. Tuck the bubble wrap into the original Body Form Skin.

5. Carefully roll it up.
SURGICAL ABDOMEN SET-UP

6. Place the Body Form Skin into the plastic bag. The tissue can now be stored. Take care not to place any heavy or sharp objects on top of it, which can cause damage to the soft tissue.

7. Also remove the Abdominal Foam and Reservoir and carefully store them as well.

Neither the Body Form Skin nor the Abdominal Foam and Reservoir will be needed when using the Surgical Abdomen Platform.

8. Next attach the Abdominal Platform Tray to TraumaMan’s original Tray. To do this you will need the Interlocking Tray Support Bar and the included screws and screwdriver.

9. Place the Interlocking Tray Support Bar around the original Body Form Tray.

10. Place the top of the Abdominal Platform Tray over the exposed portion of the original Tray.
SURGICAL ABDOMEN SET-UP

11 The Abdomen Platform Tray should be centered so that the holes in it and the Support Bar line up.

12 Pull the Support Bar up as far as possible. To attach it, the Support Bar will need to be pulled as far up as possible and will require some force.

13 Use the included screws and screwdriver to secure the Abdominal Platform Tray to the original Tray. You may need to hold the Tray and the Bar tightly together.

14 If you are simulating a laparoscopic case, place the Simulated Insufflation Frame around the Abdominal Cavity – this will simulate an insufflated abdomen during the procedure. If you are simulating a trauma case, it can be left out.

15 Place the Frame and Cavity on the tray. Feed the tubes through the appropriate slot in the tray. Ensure that the tubing is channeled appropriately for tray placement.
SURGICAL ABDOMEN SET-UP

16  Make note of the indentations on the Cavity and notches on the Tray—these should be securely connected.

17  To set up one of the Catastrophic Event Team Training Modules, remove the Lower Body Form.

18  Note that the Lower Body Form has notches on it that allow for a snug fit.

19  Replace the Lower Body Form on the Tray. Make sure the notches fit into place.

20  Fit the new Upper Body Form Skin around the shoulders and thoracic Cavity—attach it to the Tray—starting at the neck and moving down.
SURGICAL ABDOMEN SET-UP

21 The Neck and Chest Tissues can also be reattached.

22 Attach the Pump Tube, the Drain Tube, and the Overflow Tube to the Abdominal Cavity. Ensure that the control valve end is closest to the Body Form. Then connect the other end to the Blood Circulation System.

23 The Pump Tube (marked with a red band) must be connected to the corresponding tube on the Cavity and the Fluid Container in order for the system to function properly.

24 The Drain Tube (marked with a yellow band) must be connected to the corresponding tube on the Cavity but it does not matter which of the other two connections on the Container are used.

25 The Overflow Tube can be attached to the third connection on the Cavity and the Container.
SURGICAL ABDOMEN SET-UP

26 Insert patient’s left kidney. To insert, flip the kidney so it is partially inside-out and then hook to bottom tab and then pull up and over the top tab.

NOTE: It has been placed correctly when the top is seated against the tray.

27 Choose which procedure you will do. Insert appropriate patient’s right kidney, using the procedure as above.

For Lacerated Kidney Procedure, insert active kidney. For Nicked Aorta or Nicked Renal Artery Procedure, insert static right kidney.

28 Attach the appropriate Vessel Bifurcation Insert for the chosen procedure (see page 4 for detailed images). Attach the ends of the Vessel Bifurcation Insert to the metal hooks on the Cavity. Attach the top of the Vessel Bifurcation Insert to the Fluid Supply Tube. Ensure that the “UP” label is visible.

29 To prepare the fluid in the Blood Circulation System, pull the Container’s pour spout up and remove the cap.

30 Please note the lid on the Container cannot be easily removed – it should be filled and emptied via the pour spout.
SURGICAL ABDOMEN SET-UP

31  Add one ounce of Red Concentrate through the pour spout.

32  For optimal performance, fill the Container with two gallons of water. Additional Red Concentrate can be added to make fluid darker.

33  Use caution when handling the Red Concentrate to avoid stains.

34  To confirm that the Pump is functioning, turn the Flow Control Valve so that it is almost closed - this is to prevent fluid from flowing freely into the cavity. Next, power the system on.

35  If fluid does not start filling the Pump Tube, very slowly move the valve toward the open position (in-line with the tube). Fluid should start to enter the Cavity via the aortic/renal nick or lacerated kidney. To prevent any fluid from spraying out, it is recommended to hold something over the nick or laceration.
SURGICAL ABDOMEN SET-UP

36  The Flow Control Valve can be moved towards the closed position (perpendicular to the tube) to decrease the flow or opened to increase the flow.

37  To open the Drain Valve turn the lever so that it is in-line with the Tube. This will allow fluid to drain from the Cavity.

38  The Overflow Tube will allow for fluid to drain should the fluid level in the Cavity get too high.

39  Once you have confirmed the system is functioning, power it off.

40  If you don’t want fluid in the Cavity, the Drain Valve and Flow Control should be opened.
SURGICAL ABDOMEN SET-UP

41 Replace the Complete Digestive Tract in the Abdominal Cavity and attach the Abdominal Tissue.

42 The Surgical Abdomen Platform also comes with a Replaceable Tissue that is designed to be used a minimum of three times and a Simulated Umbilicus Insert, but these should not be attached until a module is set up in the abdominal area.

43 To begin, attach the Tissue in the centered position using the middle set of holes.

44 Start with the second button nearest to the end of the Abdominal Platform Tray.

45 Once one side is attached, pull the Tissue tightly over the Body Form and Frame. Then attach the other side.
SURGICAL ABDOMEN SET-UP

46 If you experience any difficulty, move the system to the edge of a table, which provides extra clearance.

47 Insert the Simulated Umbilicus Insert (three ship with each tissue), which provides an important landmark. It should be inserted in the middle of the Tissue, at the mid-line and then can be repositioned as the Tissue is moved.

Your system is now ready for use.
USING THE SYSTEM

1. The Catastrophic Event Team Training Module allows for three procedures: Nicked Aorta, Nicked Renal Artery, and Lacerated Kidney.

2. There are several removable/replaceable components in the Cavity, including the three different Vessel Bifurcation Inserts, two different patient’s right Kidneys, a left Kidney, a Partial Large Intestine, a Bladder and Bladder Support, and the Small Intestines.

3. The Bladder and Bladder Support sit above the Cavity’s drain and can be removed as necessary.

4. The Complete Digestive Tract is included to provide a realistic obstacle and can also be removed if needed.

5. The Nicked Aorta, Nicked Renal Artery, and Patient’s Right Lacerated Kidney are the replaceable components for the various module procedures.
The Abdominal Tissue provides a very realistic simulation, whether you are simulating an exploratory laparotomy or a response to a complication due to a laparoscopic procedure.

The flow of fluid can be controlled using the Flow Control Valve, which is black.

The drainage of fluid is managed with the Drain Valve.

To slow the flow of fluid through the abdominal cavity, move the Flow Control Valve slowly towards the closed position. You can close it completely by moving it so that it is perpendicular with the tube.

To increase the flow of fluid, move the Flow Control Valve towards the open position – in-line with the tube.
USING THE SYSTEM

11 To prevent fluid in the Abdominal Cavity from draining, the Drain Valve should be positioned perpendicular to the Tube.

12 To allow draining, move the Drain Valve to an in-line position with the Tube.

13 Should the fluid level rise to the top of the Cavity, there is an Overflow Drain to allow for additional drainage.

Please note: this drain will not be adequate to prevent fluid from overflowing if the fluid is flowing at its maximum rate, so it is recommended that the system always be monitored while it is powered on.

14 When the procedure or simulation is complete, power the system off and make sure the Drain Valve and Flow Control Valve are open to allow the Cavity to empty of fluid. This will prevent accidental spillage while the system is not in use and limit staining from the simulated blood.
CHANGING REPLACEABLE COMPONENTS

1. To prepare the system for additional procedures, the used Nicked Aorta, Nicked Renal Artery, or Lacerated Kidney will need to be removed and replaced. To do this, the Abdominal Tissue will need to be unbuttoned.

2. Prior to removing the Abdominal Tissue, remove the Simulated Umbilicus Insert and set it aside.

3. Then detach the Tissue from the Tray’s buttons and set it aside as well.

4. Carefully remove the Complete Digestive Tract from the Cavity—they may have some fluid residue on them.

5. Unhook the ends of the insert from the metal hooks on the abdominal cavity.
CHANGING REPLACEABLE COMPONENTS

6 To remove the used Vessel Bifurcation Insert, gently pull off the fluid supply tube.

7 Select the appropriate Vessel Bifurcation Insert. Attach the ends of the new Vessel Bifurcation Insert to the hooks.

8 Insert left kidney. To insert, flip the kidney so it is partially inside-out and then hook to bottom tab and then pull up and over the top tab.

9 Insert appropriate right kidney, using the same procedure as above.

   For Lacerated Kidney Procedure, insert active kidney.

   For Nicked Aorta or Nicked Renal Artery Procedure, insert normal (static) right kidney.

10 Once the Insert and Kidneys are in place, replace the Complete Digestive Tract.
11 Then reattach the Tissue in an uncut position.

12 The Tissue can be moved one notch to the left or right or turned 180 degrees to provide an uncut area over the procedure site depending on size of previous incisions.

13 If the Tissue has already been cut, it will need to be sutured or stapled prior to the next procedure.

14 Like set-up, attach it, starting with the second button nearest to the end of the Abdominal Platform Tray.

If you experience any difficulty, move the system to the edge of a table, which provides extra clearance for the excess material.

15 Re-insert the Simulated Umbilicus Insert in the middle of the Tissue, at the midline of the body form.

To resume use, power the system on.
CLEANING AND MAINTENANCE

1. When training is complete, the fluid should be drained out of the Cavity to prevent spillage and staining.

2. If training is ongoing, the system can be left as it is.

3. If training is complete, the Blood Circulation System Container should be emptied when training is complete to prevent the growth of mold.

4. When it is empty, replace the pour spout lid.

5. To clean the system, start by removing the Complete Digestive Tract and wiping them clean.
Cleansing and Maintenance

6. Remove the used Vessel Bifurcation Insert and Kidneys. Wipe clean and set them aside. Discard if used.

7. Then remove the Bladder and Bladder Insert.

8. There may be fluid between the Bladder and the Insert so use caution.

9. Wipe them clean and set them aside.

10. Tilt the Abdominal Cavity up so that any remaining fluid flows toward the drain.
CLEANING AND MAINTENANCE

11  Clean the Abdominal Cavity – soap can be used for difficult stains.

12  Replace the Bladder and Bladder Insert.

13  If there is still fluid in the Tubes, with the Lower Body Form removed, tilt the entire Cavity up until all of the fluid is emptied back into the Fluid Container.

14  With the Lower Body Form and Cavity removed, the Tray can also be cleaned if needed.

15  Insert a new procedure module setup.
TROUBLESHOOTING

1 **Difficulty with the Abdominal Platform Tray.** If you are having difficulty attaching the Abdominal Platform Tray to TraumaMan’s original Tray, check that the Support Bar is pressed up as tightly as possible to the tray.

2 Make sure the Abdominal Platform Tray is centered, so that the holes in the tray and support bar are lined up.

   Visualize the hole opening before inserting the screws.

1 **No fluid in the Cavity.**

If there is no fluid flowing into the Cavity, begin your troubleshooting by turning the system off, and then check for the following.

2 Begin by removing the Bladder to ensure that the drain isn’t clogged.

3 If there is still no fluid, make sure the Pump Tube is connected to the corresponding Tube on the Cavity and the container connection with the red band.
TROUBLESHOOTING

4 Make sure the Pump Tube is connected to the corresponding Tube on the Container with the red band.

5 If fluid is detected around the plug or power switch, the ground fault interrupter will be tripped and the reset button will need to be pressed.

1 **Fluid not draining.**
If the fluid is not draining from the Cavity, check to make sure the Drain Tube’s valve is in the open position – inline with the Tube.

2 Make sure there is nothing obstructing the drain by pulling the Bladder and Insert out of the Cavity.

3 If you experience any difficulty or would like any additional information, please contact Simulab’s Customer Care Team.

   Email: info@simulab.com
   Phone: (206) 297-1260
90-DAY WARRANTY

Simulab offers a 90-day warranty for the Surgical Abdomen Platform and the Catastrophic Event Team Training Module. This warranty covers manufacturing defects and system functions. User errors are not included. For warranty claims, please contact Customer Service for an RMA request and ship the part or entire system back to Simulab Corporation for replacement.

For warranty repairs, the customer is responsible for freight costs back to Simulab. When it is determined that the repair is covered by the warranty, Simulab will pay return shipment to the customer.

MAINTENANCE AND SUPPORT AGREEMENT

Simulab is pleased to offer two optional Maintenance and Support Agreement plans with the Surgical Abdomen Platform and the Catastrophic Event Team Training Module. This program allows for repair of any part of these products, including damage or system malfunction that occurs as a result of normal wear and tear.

To receive repair, please contact Customer Service for an RMA number. Customer Service will also provide instructions on how and what to return to initiate this process.

Production turn time is four weeks upon receipt of materials. Expedited freight is available upon request and a quote will be provided. The customer is responsible for all freight costs associated with replacement or refurbishment.

PRICING

» One-year Maintenance and Support Agreement: $1,00.00 (TMMP-SACE1)
» Three-year Maintenance and Support Agreement: $2,000.00 (TMMP-SACE3)

These plans can be purchased within the first 90 days from date of invoice without a reinstatement fee. The term of the agreement will start on the date of invoice.

If a Maintenance and Support Agreement (TMMP-SACER) is purchased at a date later than 90 days from the invoice date, there will be a $500.00 reinstatement fee in addition to the price of the agreement. The term will start on the date of the invoice of the maintenance agreement.
## REPLACEMENT PARTS CATALOG

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<th>Part Number</th>
<th>Description</th>
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<td>SARA-10</td>
<td>Replaceable Aorta Kit (5-pack)</td>
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<td>SALK-10</td>
<td>Replaceable Lacerated Kidney Kit (5-Pack)</td>
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<td>SARR-10</td>
<td>Replaceable Renal Artery Kit (5-Pack)</td>
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<td>Surgical Abdomen Replaceable Tissue</td>
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<td>TSA-1001</td>
<td>Surgical Abdomen Lower Body Form</td>
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<td>MAC-4</td>
<td>Red Concentrate for Arterial Blood (4oz)</td>
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