

Department Laboratory
Laboratory Blood Bank
Section Equipment
Site(s) UMMC/UMMCH
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Subject OPERATION OF TERUMO STERILE TUBING WELDER TSCD™

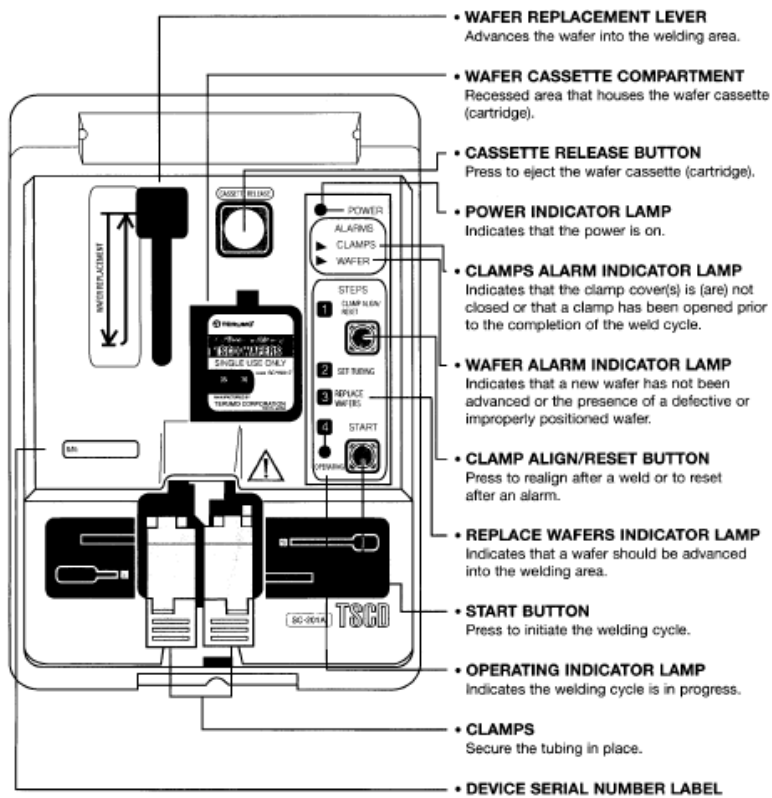
Purpose This procedure explains the operation of the Terumo Sterile Tubing Welder TSCD™ for sterile connecting compatible tubing to transfer blood products between bags using a closed system.

Policy Sterility of transfusable components must be maintained for patient safety.

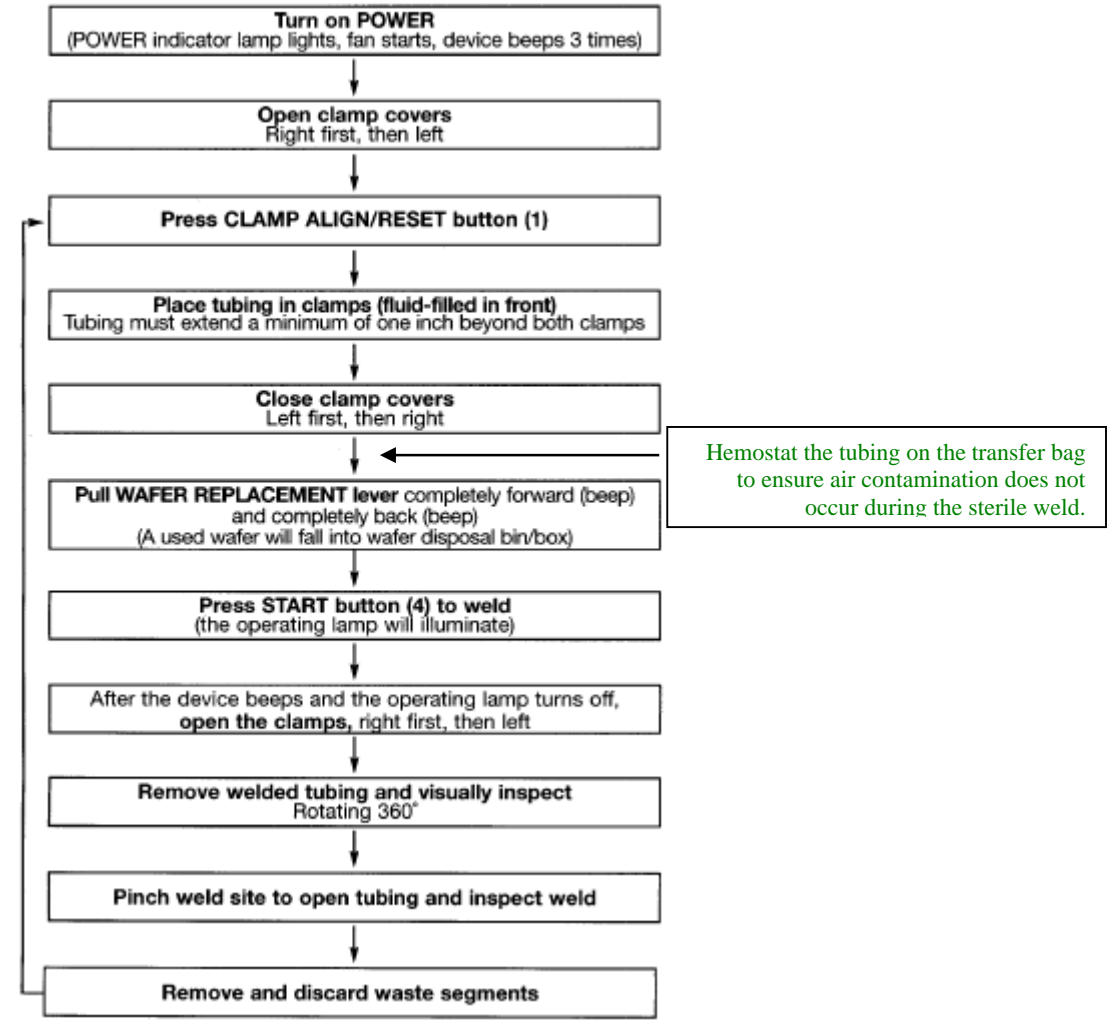
Procedure Uses:

1. Add a transfer bag to single bag apheresis product that has only one port.
 - a. When volume reduction is required.
 - b. Splitting into multiple doses provided storage of any platelets is in original bag.
2. Access a RBC without creating an open system.
 - a. Make segments with numbered tubing to retain original outdate.
 - b. Remove Adsol into sterile connected bag.
 - c. Split red cell units/Partial units for peds transfusions with specified volumes.
3. Attachment of syringe/filter set in preparation of syringe products.

Operation: Refer to illustration and manufacturer flow chart below.



5.1 Operational Flow Chart



1. Open cover and turn “power switch” on (Power switch is located on back of TSCD).
2. Open the clamp covers and press the “Clamp Align/Reset” switch. Check that clamps have realigned.
3. Set tubing that contains no liquid in the back slot (transfer bag/tubing to the right side of machine). Set the tubing that contains liquid in the front slot (unit to the left side of machine). **NOTE:** Use only PVC tubing with outer diameter **between 3.86 and 4.6 mm** and thickness **between 0.508 and 0.800mm**.
4. Close left clamp cover, then right clamp cover, pressing down the front end of each clamp cover until it locks with a click.

5. Hemostat the tubing on the transfer bag to ensure air contamination does not occur during the sterile weld.
6. Pull the “Wafer Replacement” lever to its full extent toward front, (one beep will sound). Then push the lever back to its original position (one beep will sound).
NOTE: If the “Wafer Replacement” lever is not completely pulled, the lever cannot be returned to its original position.
7. Push the “Start” button.
 - a. Do not touch clamps once weld cycle has started.
 - b. Do not pull tubing while it is being welded.
 - c. Operating light goes off and beeps when process is complete.
 - d. If wafer alarm lamp lights, repeat steps 5 and 6.
8. Inspect weld integrity:
 - a. If acceptable, open seal by pinching or rolling tubing until fluid path opens.
 - b. Misaligned welds are not acceptable and may not be complete. Assume blood product is an open system if this occurs and change outdate accordingly (i.e. Plts-4 hours, RBC’s-24 hr.)
 - c. Use the QCE program to document the weld.

Replacing Wafer Cassette:

1. Press the “Cassette Release” button to lift the far edge of the cassette.
 - a. Cassette cannot be released if “Wafer Replacement” lever is not in its original position.
 - b. Cassette cannot be released unless last wafer has passed through complete cycle.
 - c. If cassette does not release DO NOT force out.
2. Position the new cassette so the label is on top facing the installer.
3. Slide in the front edge of the cassette and push down on back edge until it snaps into place.
4. Write lot number of wafers on top of cassette.

Computer Entry Use the QCE program to document the weld.

1. Select the BBTEMP as the Bench/Rack
2. Select #2 scheduled Quality Control.
3. Enter appropriate date and shift.
4. Weld QC will be unscheduled. There are six units available in each shift to use for

the QC, Unit 1 thru Unit 6. Use the Unit 1 first. If units have already been done they will be listed under EQUIP—unscheduled--.

5. Enter a “;” before the unit number and any lot number with a letter in it.
6. If a lot number is not available or cannot be read, enter a “;” and “CAN’T READ”.
7. For APPEAR enter “A” acceptable or “K” for not acceptable.

- Maintenance:
1. Turn TSCD off and unplug.
 2. Surface Cleaning: Wipe any spills that occur immediately. Clean surfaces with a cloth dampened with a mild cleaning solution.
 3. Clamp Cleaning: Perform as needed. Using an alcohol wipe or cotton swab dampened with isopropyl alcohol, clean the clamp covers and tubing holder slots. **Caution:** Do not spill any solutions inside instrument. If this occurs, **DO NOT USE** and contact Technical Supervisor or equipment maintenance person ASAP.
 4. Water Cassette Compartment Cleaning: Perform as needed. Remove wafer cassette. Using an alcohol wipe or cotton swab dampened with isopropyl alcohol, clean the compartment. Ensure all foreign matter is removed from the compartment before replacing wafer cassette.
 5. Air Filter Cleaning/Replacing: Perform on a regular basis. Remove and wash the air filter in a mild soap solution and pat dry. Clean the air filter cover and compartment with a cotton swab dampened with a mild soap detergent.
 6. Wafer Disposal Bin Emptying/Cleaning: Done each time the wafers are replaced. Clean surfaces with a cloth dampened with a mild cleaning solution or isopropyl alcohol.

- Equipment/
Supplies
1. Terumo Sterile Tubing Welder.
 2. Copper welding wafers.
 3. Sterile transfer bags.
 4. Sterile syringe/filer sets.

Reagents Quality Control:

1. Frequency:
 - a. Perform a quality control weld for each new lot number of wafers as received.
 - b. Weekly (Mondays) QCE 3rd shift or when a new wafer cartridge is installed, perform a quality control weld. (NICU does this on day shift).
2. Procedure:

- a. Take two pieces of scrap tubing, seal one end of each piece.
- b. Weld the open ends of the tubing pieces together.
- c. Open the seal by pinching or rolling the weld until the fluid pathway opens.
- d. Visually inspect the weld for uneven weld while holding tubing taut.
- e. Submerge weld in water and squeeze the tubing with air in it while looking for bubbles.
- f. If weld passes inspection, attach a white adhesive tape with date and wafer lot number on it to weld. Store on lid until next QC weld and toss.
- g. Log all weekly QC welds in QCE under WELDQC.
- h. If a new wafer cartridge is loaded, enter the QC as unscheduled.
- i. If weld QC fails, repeat weld steps. Examine repeat weld. Show defective weld to Technical Supervisor and discontinue to use welder until resolved.

- References
1. TSCD Operating [Instructions](#)
 2. [Terumo Customer Service: 1.877.339.4228](#)

Summary of Changes Added picture of welder and added updated flow chart from Operating Instructions.
Updated formatting.

Document History	
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