



call or text any time: 434-242-9045
rahlmosrigging@gmail.com

The Practical Rigger

Sewing a Simple Patch

Notes:

1. *A senior rigger may sew a patch over a damaged area up to 10 inches long if the finished patch comes no closer than 1" from a seam and 5" from a tape or line attachment. — Parachute Rigger Handbook*
2. **Sew within 1/32-inch of the edge of the material, no closer than 1/64" and no farther than 7/64".**

AT THE LAYOUT-CUTTING TABLE

Step 1—Pre-Cut the Patch

Cut out a rectangular piece of material at least two inches bigger than the damage in each direction—minimum 6" in any direction. Always go a little bigger than you think!

Step 2—Create a Fold Line on the Patch

- Mark a line around the edge of the patch on all four sides **FOUR SQUARES IN** from the “zero-line.” The zero line is the outside edge of the first **COMPLETE** line of ripstop squares.
- Fold the patch on the marked lines.
- Burnish the folded edge over a sharp edge of a counter, but don't damage the fabric.
- Fold the patch in half along one of the longer edges and make a tick mark where that fold crosses the fold line from the last steps.

Step 3—Pre-Position the Patch

- Center the patch over the damaged area **INSIDE** the canopy both north-south and east-west with the tick mark from the last steps at the top (north). Mark a “plus sign” mark **ON THE CANOPY** intersecting where the tick mark and top edge of the patch should lay so the patch is centered over the hole.
- From the plus sign, extend a line east and west along that ripstop line a little past where the left and right (east and west) ends of the patch will be.
- **DO NOT MARK any other edges of where the patch will go yet.**

AT THE MACHINE

Check that the machine is sewing correctly and that there is enough thread in the bobbin.

Step 4—Sew Along the Line

- Re-fold the first edge of the patch (the “north” edge with the centering tick mark).
- Lay the patch over the damaged area on the **INSIDE** of the canopy and match the north tick mark to the plus sign and the line you drew in Step 3.

- Position everything for starting **at least one inch before** the tick/center to sew approximately ONE HALF OF A SQUARE from the edge of the patch.
- Set the needle into the fabric before sewing the first two locking stitches to hold everything in place.
- Maneuver the bulk of the canopy to reduce any tension, and be careful not to catch any other part of the canopy and lines underneath.
- Control the thread ends, hand-turn the control wheel through the first two locking stitches, and start to sew. Be careful to keep the ripstop line on the edge of the folded patch EXACTLY on the ripstop line you marked on the canopy.
- STOP about 2" from the first corner of the patch. (ALWAYS stop with the needle set and about halfway back up its return stroke.)

Step 5—Fold and Mark the Next Sew Line

- Fold the next edge of the patch and sew to within one-half of a square from the end. That's where your next sew line will start. Again, make sure to stop with the needle set down into the fabric and about a half stroke back up (to make sure the hook underneath has caught the top thread to form the next stitch).
- Before you turn to sew the next edge, clip your starting threads.
- From the new corner you just created, mark on the canopy the first ripstop line that you can see alongside the patch. Project the line a little beyond the next corner.

Repeat Step 5 for the remaining edges and corners until you come back to where you started. **Oversew at least 1-1/4 inches (required)** and around the next corner if needed.

BACK AT THE LAYOUT-CUTTING TABLE

Step 6—Mark the Inside of the Patch

- On the OUTSIDE (damaged) surface of the canopy, determine the zero lines inside the stitched rectangle holding the patch. The zero lines are the FIRST COMPLETE RIPSTOP LINES WITH NO STITCHING CROSSING them.
- Mark a rectangle EIGHT COMPLETE squares from the zero lines.
- Mark a diagonal line FOUR squares from each inside corner of the new marked rectangle outward toward the corners of the patch.

Step 7—Cut Out the Damaged Area: Carefully cut all the marked lines of the new rectangle to remove the damaged area. Also cut the diagonal lines as described. Make sure to cut the diagonal lines completely to finish EXACTLY on the corner of the fourth square.

BACK AT THE MACHINE:

Step 8—Fold, Sew, and Complete

- Start sewing on the side of the patch OPPOSITE the overstretch on the patch.
- Sew the same one-half square distance from the edge, carefully folding the edge under. Keep the work flat and tension on the material even in all directions. Make sure to sew far enough past each corner to catch the underfolded fabric on the next inside edge once you go to make the turn.
- **Overstretch at least 1-1/4 inches** past where you started and around the next corner if needed.

Step 9—Inspect Your Work: Make sure the patch and seams are loading evenly with a one-square positioning tolerance along any line. Stitch row tolerance should be 1/32" from the edges and must be within 1/64" and 7/64" (less than one square) from any edges. Being careful not to cut the patch or the canopy, clip and remove any thread ends inside and outside.