

Industry Standard Section Repair Procedures

1. Initial Tire Inspection:

- An injury that penetrates 75% or more of the body plies and exceeds puncture repair limits requires a section repair. DO NOT attempt to repair this type of damage with nail hole repair units. Demount the tire from the wheel and locate the injury.
- Remove any injuring object and make a careful visual inspection to determine the size, angle, and extent of the injury. Use a probing awl to probe for unseen internal damage. Determine whether the injury is within repairable limits. (See pg. 34 for section repair limits)

2. Filling the Injury Area:

○ Preparing the Outside of the Tire:

- Using a low speed buffer and a carbide cutter, begin removing all damaged rubber, both inside and outside the tire and steel cord in the injury area. All broken cords and loose strands of cable must be removed, leaving only solid, undamaged rubber at the sides of the opening. If in the tread area, use an appropriate buffing wheel to buff at 45° angle down to the cord and 90° through the cord.
- Using a high speed buffer with a pencil stone, polish the exposed cord ends, being careful not to scorch the rubber. Clean away any rubber or steel dust left behind both inside and outside the tire. Using a low speed buffer and an appropriate buffing wheel, round over the edges of the prepared area.

○ Preparing the Inside of the Tire:

- Clean the inner liner around the injury area with a pre-buff chemical rubber cleaner. Using an inner liner scraper, remove dirt, mold lubricants, and other contaminants.
- Using a low speed buffer with an appropriate buffing wheel, buff an area about 1" larger than the injury area to an RMA #1 texture. As on the other side, round over the edges of the prepared area. Use a vacuum cleaner to remove buffing dust.
- Measure the thickness of the tire at the injury area and note this measurement for future reference. Also measure and record the dimensions of the repair area.
- Spread a generous coating of Black Vulcanizing Cement over the prepared injury area both inside and outside the tire.

○ Filling the Injury:

- Secure a backing plate on the inner liner. Fill the injury area with an appropriate filling material. Stitch and pack material so as to avoid creating any gaps or air pockets, working from the center outward, making sure to stitch rubber over the edges. Filling material should be about 1/8" (3mm) above the outside of the tire when finished packing. Remove the backing plate and cure the filling material following manufacturer's cure time recommendations.

3. Repair Unit Application:

- Select the proper size reinforced repair unit and center it over the injury on the inner liner. Mark an area about 1/2" (13mm) larger than the selected repair unit. Clean the selected area completely with a chemical pre-buff. Using an inner liner scraper, remove all dirt, mold lubricants, and other contaminants.
- Using a low speed buffer and an appropriate buffing wheel, buff the selected area to an RMA #1 texture. Remove all buffing dust with a vacuum.
- Using a chemical vulcanizing cement recommended by the repair manufacturer, apply a thin, even coating to the prepared and buffed surface. Allow cement to dry thoroughly!
- While beads are in a relaxed position, remove backing from repair unit and center the repair over the injury. Stitch repair down thoroughly with a stitching tool, working from the center out, making sure to stitch the edges.
- Once the repair unit has been stitched down, apply a generous coating of Inner Liner Sealer to the edges of the repair unit.

4. Finishing the Repair:

- Using a low speed buffer and an appropriate buffing wheel, lightly buff the outside of the repaired area until the rubber is flush with the surrounding area, presenting a smooth finished appearance. For tread area repairs, use a regroover to replace original tread design. For sidewall repairs, apply a Section ID Patch on the outside of the tire next to the repaired area to indicate the location of the section repair.