

Step-by-Step TIRE REPAIR

Single-Piece Tire Puncture Repair Procedures

The following "how to" photos and captions show and explain accepted industry procedures for repairing tire puncture injuries. Additional information is available on RMA's website – rma.org – and by requesting its Puncture Repair Procedures information, or by requesting information about TIA's Basic Automotive Tire Service training series, which includes a module dedicated to puncture repair.



1. Locate injury and circle with a tire crayon. Consult information about reparability of tires and check that the injury is within the tire's repairable area. DO NOT INVERT RADIAL TIRES.



2. Remove the foreign puncturing object and probe the injury with an awl to determine the angle of penetration.



3. Clean the area around the injury with cleaner fluid and a scraper.



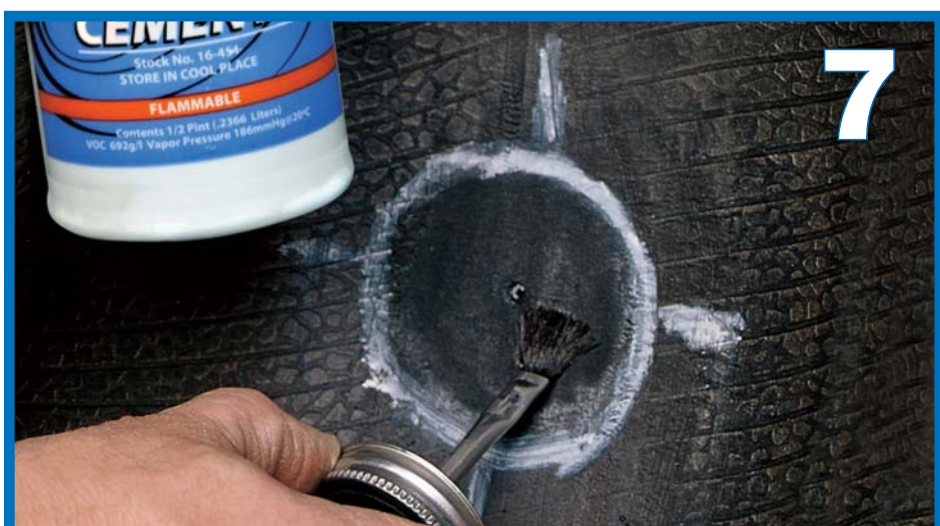
4. Using a low speed drill (500-700 rpm) and the appropriate size carbide cutter, ream the injury following the angle of penetration four times from the inside of the tire, and four times from the outside. Use proper eye protection.



5. Use a low speed buffer (max. 2,500 rpm) and a buffing stone to buff the innerliner 1/2-inch larger than the patch (RMA #1 Buffing Texture.)



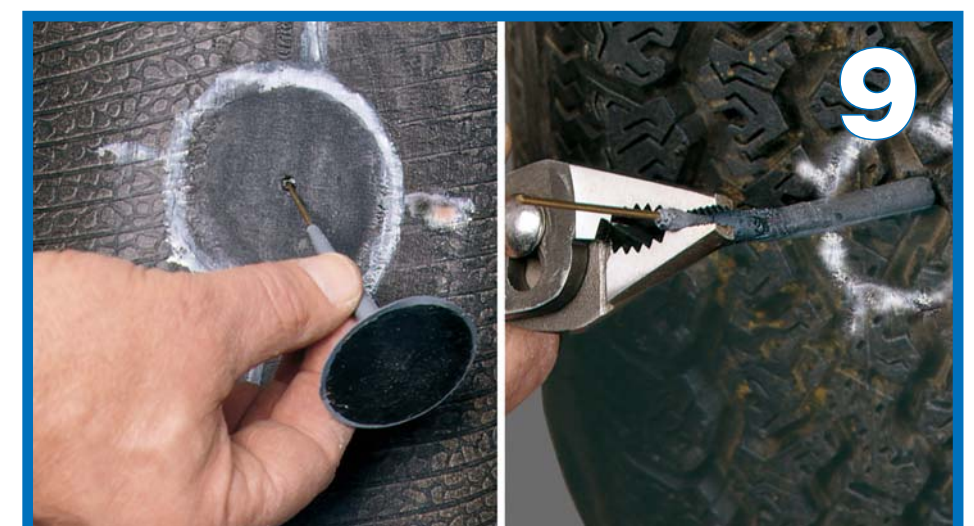
6. Remove buffing dust with a vacuum, then clean the buffed area with cleaner fluid and a scraper to avoid contaminating the injury channel.



7. Apply an even coat of self-vulcanizing cement to the buffed area. Allow cement to dry completely (drying time will vary depending on temperature and humidity).



8. Dip awl into cement and insert into injury to lubricate the injury. DO NOT ALLOW CEMENT TO DRY. DO NOT DRIP CEMENT ONTO BUFFED AREA.



9. While the cement is still wet, insert the guide wire through the injury from the inside. Using pliers, grasp stem behind the wire and pull until the patch is seated against the innerliner. Do not over-pull and cause the patch to dimple. DO NOT USE PILOT WIRE TO PULL STEM THROUGH.



10. Stitch the repair unit vigorously from the center working outwardly. Use as much hand pressure as possible.



11. Apply repair sealer to the overbuff area.



12. Apply bead sealer to the head of the tire before inflation to help prevent air loss around the bead.



13. After inflating, cut the plug flush with the outside tread area. The tire is now ready to be returned to service.

WHEN NOT TO REPAIR A TIRE

- There is 2/32-inch or less of tread on any two adjacent tread grooves. The tire is not legal on U.S. highways.
- The tire cord or steel belt is exposed, there are flex breaks or severe sidewall abrasions.
- There is any evidence of a separation in the tread area or the sidewall of the tire.
- There is any evidence to indicate the tire has been run flat. **Do not inflate**, since inflation could result in serious injury. Demount the tire and inspect for innerliner damage.
- There are punctures or damage in the shoulder or sidewall areas.
- Never use any wheel with a rim that is bent, pitted from corrosion, cracked or worn. Remove rust, dirt and foreign materials from wheel/rim parts.

DISCLAIMER

Repairing a tire is a serious business. This information was researched and written using existing industry-approved procedures and material from both the RMA and TIA, and is NOT intended to be used as a substitute for proper tire repair training. The photos and additional information were supplied by Myers Tire Supply/Patch Rubber Co. The process shown here is consistent with those used by other major repair product makers, but consult their specific instructions before using. This information represents a consensus of tire industry experts. This is meant for educational purposes and those who use the methods recommended are solely responsible for any injuries, deaths or losses resulting from their application.

WHEN 'ALWAYS' IS RIGHT

- Inflate the tire to maximum allowed pressure. **Do not overinflate.**
- Check the surface and the valve for the source of the leak(s) by using water, soap solution or leak detector.
- Locate the injury and circle with a crayon.
- Remove the valve core to deflate the tire.
- Demount and inspect the inside of the tire on a well-lighted spreader for innerliner cracks, open splices, exposed tire cord or steel belts, broken beads or bead wires, bulges or blisters, or other interior damage. If any damage other than a 1/4-inch maximum puncture injury in the tread is present, **do not repair.**