



Repair Manual

RM-4

**250UL and 251UL
Uni-Seal[®] Ultra Repair In
A Speed Rated Tire**

APPLICATION OF #250UL AND #251UL UNI-SEAL® ULTRA INSTRUCTIONS.

As with any automotive repair, a tire repair requires the utmost precision and accuracy to attain maximum safety and effectiveness. Tech tire repair units are the best in the world, but can be ineffective if improperly applied. This is why we've provided you with this step-by-step repair manual. When followed exactly, this manual enables you to treat every injury with optimum results. By doing so, you assure safety and effectiveness as well as provide customer satisfaction.

Please follow the instructions closely so you can put your customers back on the road with a quality Tech repair.

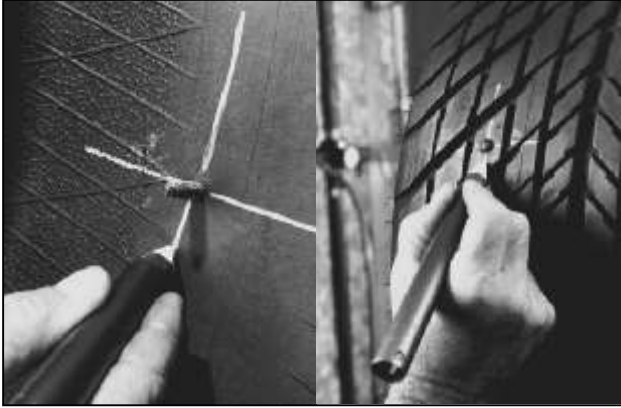
For radial tire injuries, Tech Uni-Seal Ultra repairs provide dependable and permanent applications, using hot or cold methods. Both the stem and cap areas are covered with gray cushion gum. This enables both the stem and cap to vulcanize to the tire assuring a permanent, leak-proof repair. The cushion gum is covered with an easy-to-remove blue polyethylene protective covering. A wire is incorporated into the stem of both repair units to assure easier application. These units also make excellent repairs when used in the retread process. Uni-Seal Ultras 250UL and 251UL can also be used on all bias tires.



Uni-Seal Ultra Cat. No.	Stem Dia.	Box Qty.	Description & Injury Size
250UL	1/4", 6mm	14	Uni-Seal Ultra 1/8", 3mm injury
251UL	3/8", 9mm	12	Uni-Seal Ultra 1/4", 6mm injury

Tech 250UL and 251UL Uni-Seal Ultras are recommended for injuries 1/8" (3mm) and 1/4" (6mm) respectively in the tread, shoulder and sidewall of standard passenger and truck tires. They are recommended for use in the tread only of high performance speed rated tires H and above. Maximum injury size limitation in these tires is 1/4" (6mm).

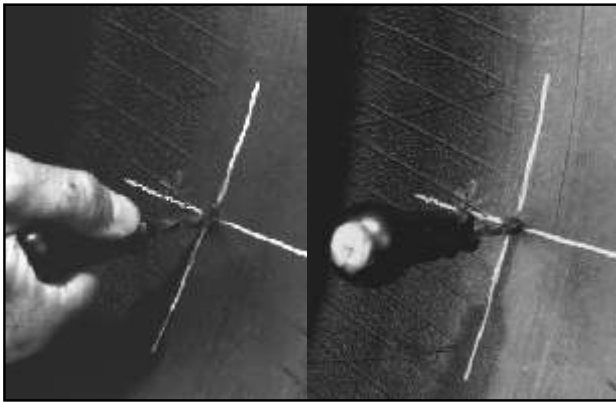
Tech Uni-Seal Ultras have passed the Department of Transportation's new Tire Test Standard (DOT139). This test was mandated by the Transportation Recall Enhancement, Accountability, and Documentation (TREAD) Act, to improve the performance of passenger and light truck tires. This new test puts tires through more stringent requirements using increased speeds, load, duration, temperature, and lower inflation pressure.



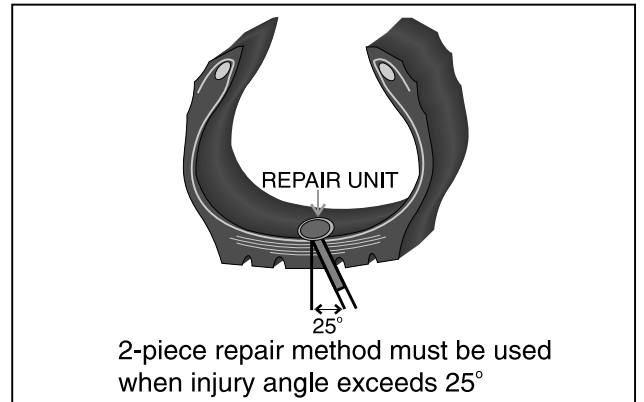
1 Locate and mark the injury on the inside and outside of the tire.



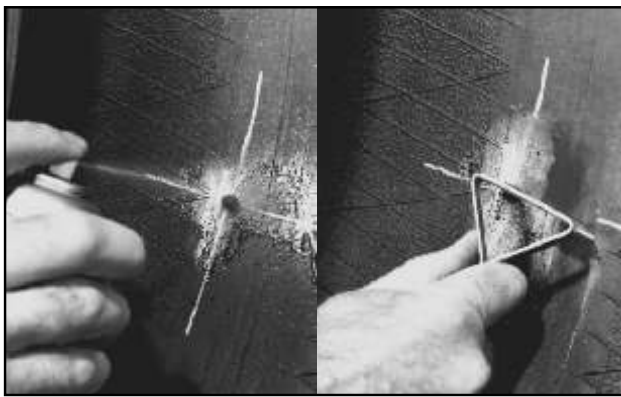
2 If present, remove any imbedded or penetrating objects from the tire, then check for ply separation.



3 Using the Tech Spiral Cement Tool #915, determine the angle and the size of the injury. If the injury accepts only the tapered portion of Spiral Cement Tool, use the 250UL Uni-Seal Ultra repair unit. If the injury accepts the spiral portion of the tool, use the 251UL Uni-Seal Ultra.



4 If the injury angle exceeds 25 degrees, a 2-piece repair method should be used. (Refer to Tech's Two-Piece Repair Method Manual RM-5).



5 Pre-clean the innerliner by applying Tech Rub-O-Matic Aerosol #704A. While the area is still moist, use a Tech Scraper #933 to remove contaminating substances. This procedure should be repeated 2-3 times.



6 Draw a perimeter approximately 1/2" (15mm) around the repair unit or use a #111TM Template. The outlined area will act as a guide when mechanically buffing.



7 Mechanically buff the area with a Tech low rpm buffer and a fine grit buffing wheel. Do not exceed 5,000 rpm. Protective eyewear must be used.

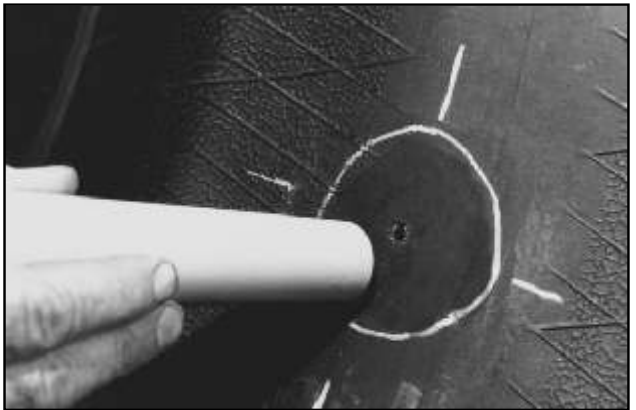


8 Using the proper Carbide Cutter* in a low rpm drill (max. 1,200 rpm), follow the angle of injury and drill from the inside/out 3 times in a clockwise rotation. Then repeat this procedure from the outside of tire.

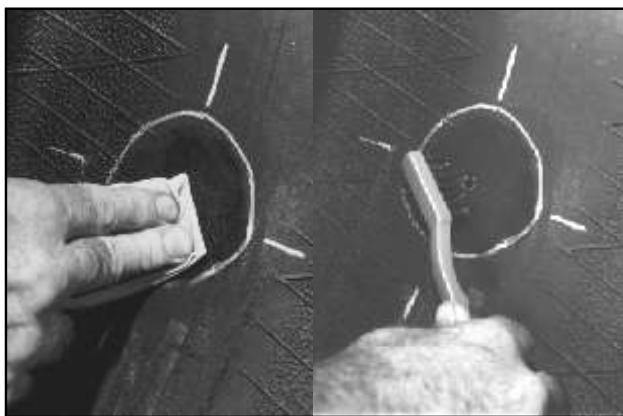
*Use a #270 or #270P with a 250UL and a #271 or #271P with a 251UL.



9 When repairing the upper or lower sidewall area of a tire, omit drilling the injury from the inside and drill only from the outside of the tire a minimum of 3 times. Be sure to follow the angle of the injury.



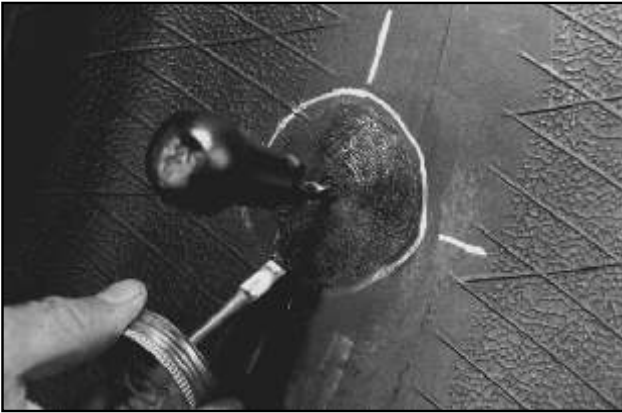
10 Vacuum thoroughly to remove any loose buffing dust and steel shavings.



11 Clean the buffed area with a lint free cloth and Tech Rub-O-Matic #704 from the center of the injury outward, letting the solvents evaporate 3-5 minutes. When cleaning with a brush, lightly brush the area from the top to the bottom. When using either method, repeat 2-3 times.



12 In a clockwise direction, cement the injury from the inside/out with Tech Chemical Vulcanizing Fluid #760 and the Tech Spiral Cement Tool. Leave the tool in the injury as you go to the next step.



13 Apply a thin coat of Chemical Vulcanizing Fluid to the buffed area of the innerliner. Allow 3-5 minutes to dry. Allow more drying time in humid or cold climates.



14 Remove the blue poly from the stem.



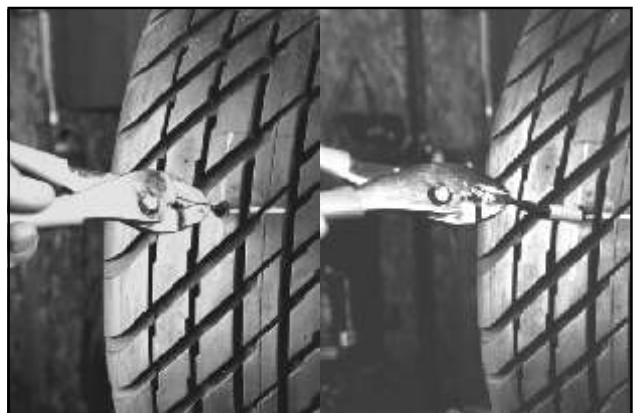
15 Remove the blue poly from the cap portion of the repair and reposition it onto the cap. This allows you to handle the repair unit without contaminating the gray cushion gum.



16 Apply one brush width of Chemical Vulcanizing Fluid onto the black tapered portion of the stem for lubrication.



17 Remove the spiral cement tool and feed the wire through the injury from the inside of the tire.



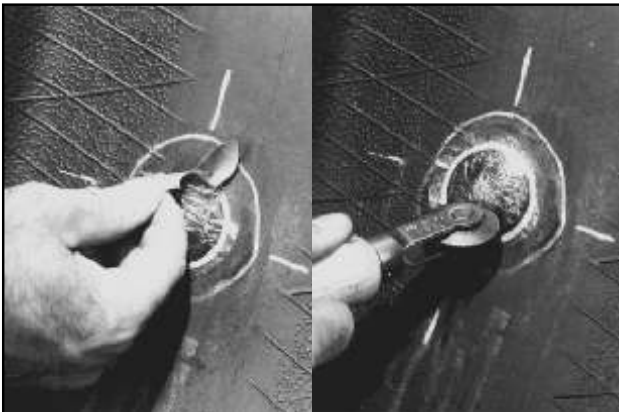
18 Grasp the wire on the outside of the tire with a pair of pliers and begin to pull the Uni-Seal Ultra into place until it firmly seats to the innerliner.



19 Press down the repair unit from the center outward.



20 Stitch down the repair unit from the center outward.



21 Remove the blue poly, thumb down and stitch the remainder of the repair unit into place.



22 Remove the clear polyethelene from the back of the repair unit.



23 If repairing a tubeless tire, coat any buffed surface and the repair unit edge with Tech Security Coat #738. If tube type, cover the repair with Tech Tire Talc #706 to prevent the repair from vulcanizing to the tube.



24 Cut the stem approximately 1/8" (3mm) above the surface of the tire and inspect the finished repair.



25

The tire can now be returned to service.

Note: When repairing radial tires, use the Tech Carbide Cutters #270 or #270P with a #250UL Uni-Seal Ultra and #271 or #271P Cutter with a #251UL Uni-Seal Ultra.

Note: For bias tires, you only need the #261 Uni-Seal cutter, which is to be used only with the #251UL Uni-Seal Ultra. When using a bias Uni-Seal cutter, you only need to cut from inside of the tire out.