



Independent Test for Durability and Functionality

Safety Seal Tubeless Tire Repairs

Submitted by : North Shore Laboratories

Location : Peabody, MA 01960

Test brief : Evaluate durability and sealing characteristics of Safety Seal Tubeless Tire Repairs over the tread life of the tire.

Test date(s) : April 12, 1990 – August 7, 1990

Test description

Four (4) new BF Goodrich P205/75 R15 XLM H/T tires were punctured using 3/16" common nails which were left in the tire. The tires were subjected to a pre-test holographic analysis to confirm structural integrity. Tire were then placed on a 1989 Chevrolet Astrovan, inflated to 35 psi and driven for 50 miles with the nails still in them to better simulate a real-world puncture. The tires were then taken to an independent repair facility where they were repaired using Safety Seal repairs following the manufacturer's instructions. The tires were then driven on until treadwear reached the legal limit (when the treadwear indicators were exposed), **a distance of 41,351 miles.**

Test Conditions : Vehicle was driven primarily on city, highway and secondary roads as well as some test track for high speed testing (95 mph). All types of summer weather conditions were encountered.

Controls : Air pressure was monitored daily. Tires were rotated at 3,000 mile intervals. Tires were examined for tread wear at 6,000 mile intervals.

Post-test examination

- 1) Physical inspection showed **no air loss** during testing.
- 2) Holographic analysis showed **no ply separation or other damage** at or near the repairs.
- 3) X-ray analysis showed **no wire cord corrosion, deterioration, distortion or rusting.**

Conclusion : All tires successfully completed the 41,351 mile test and all repair locations were deemed sound, exhibiting no air loss or damage.



The Ultimate Test

Safety Seal Proven Safe & Effective for the Life of the Tire



The Puncture

- Four BF Goodrich P205/75 R15 XLM H/T steel belted radials
- Four punctures, one per tire, using a 3/16 inch common nail.
- Tire driven 50 miles with nails in place to simulate real world conditions.



The Repair

- Tires repaired using Safety Seal tubeless tire repairs.
- Tires inflated to 35 psi and delivered to test facility.



The Results

- After 41,351 miles the tread has reached the end of its useable life.
- The Safety Seal repairs and tires are inspected three ways:

X-Ray - Holography - Visual

Final Analysis after 41,000 Miles				
	Tire #1	Tire #2	Tire #3	Tire #4
X-Ray Inspection	Pass	Pass	Pass	Pass
Holographic Inspection	Pass	Pass	Pass	Pass
Visual Inspection	Pass	Pass	Pass	Pass