

TIRE RETREADING & REPAIR



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FEATURING

Retreading Rubber Tracks	41
What Caused This?	45
Know Your Cement	47
What Does the Triangle Mean?	48
Tire Clinic	49
Retreader's Mart	50

PHOTO ABOVE:

Many of the rubber tracks that have been rejected have been damaged beyond repair or are not retreadable for a variety of other reasons.

RETREADING RUBBER TRACKS

by **Marvin Bozarth**
TIA Senior Technical Consultant

Retreading and repairing rubber tracks can be profitable, but it requires a lot of ingenuity and common sense, plus some rather expensive equipment. Rubber tracks are becoming more and more popular on a wide variety of off-the-road equipment, from small skid steer loaders and trackhoes to large farm tractors and earthmoving equipment.

Brahler Industrial Retread in Jacksonville, Illinois, has perfected a system for retreading and repairing some of the more popular 12-inch and 18-inch rubber tracks. Rubber tracks are subjected to a lot of severe use and an important part of the retread process is knowing which tracks are retreadable. A considerable amount of the tracks sent in for retread or repair are rejected. Not only does the tread wear out, but the inside of the track where the wheels carry the main weight of the machine will, in many cases, wear out before the tread.

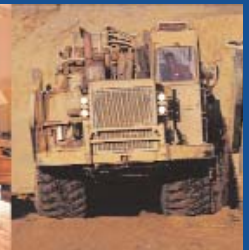
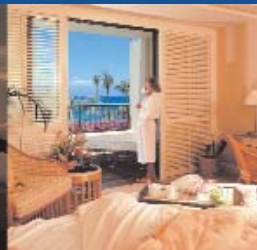
The inside repair consists of replacing a rubber strip on each side of steel cleats in the center of the track. The two areas that are replaced are approximately 2.5 inches wide by 1.0 inch deep, and the area has to be buffed with nearly half of the area being the steel cleats. The steel has to be buffed and cleaned before it is cemented with special cement that will permit rubber to be bonded to steel. Then the two grooves are filled with uncured rubber and thoroughly stitched in preparation for curing in an autoclave.

The tread is replaced with a precure process that uses a special tread design for each side of the track. The tread area of the track is buffed by using a special set up on a truck tire precure buffer. After the track is buffed, a layer of precure cushion is applied one side at a time and thoroughly stitched. An envelope is



Above: Steve Wardlow, sales manager, and Dave Ward, plant manager, examine the repair being done to the inside of an 18" track.

Below: This close-up view of the inside of the track shows the area that has been buffed away and cement has been applied to the steel cleats in the track.



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Above: Repair technician Don Fry applies replacement rubber to bond to the steel and rubber in the track

Below: This close-up view shows the repaired area of the track after it has been cured.

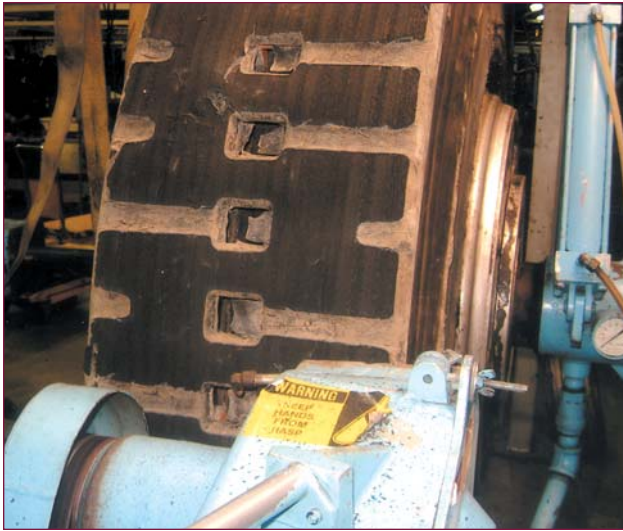


An envelope is applied before the track is cured in the autoclave shown in the background.

then applied and the track is cured in a large autoclave. The process nearly always requires that the tread, as well as the interior of the track, be replaced and cured separately.

Brahler reports that the retread is delivering substantially more hours than the original new track. A set of new tracks will generally cost from \$4,500 to \$5,000 compared to \$600 to \$700 for four tires on similar size skid steer loaders. The company also produces pneumatic and solid tire retreads for skid steer loaders at a considerable savings compared to new product.

A three-man team, including Steve Wardlow, Dave Ward, and Mike Kurk, have worked long hours for many months to develop the equipment and knowledge necessary to make the system work. They are still in the process of building



The tread design is being removed in preparation for retreading on a truck tire buffer.



After the bonding gum and the two pre-cured treads have been applied, it is thoroughly stitched.



Shown above are the completed 18" and 12" retreads.

machinery to improve efficiency and to expand to additional sizes. I am always amazed at how retreaders are able to develop new technology to overcome the problems that pop up in our industry from time to time. **TTI**



Brahler's displays this retreaded 18" rubber track in their training room.



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