

RETREAD TIRES ARE ENVIRONMENTALLY FRIENDLY

- Retreading eliminates millions of scrap tires being sent to landfills each year.
- The manufacturing energy needed to retread a tire is roughly 70% of that required to manufacture a new one.
- According to the Environmental Protection Agency, retreading an average truck tire consumes approximately 7 gallons of oil, as compare to the 22 gallons required to manufacture a new tire - a 15-gallon difference.
- In 2014, 15.6 million truck tires were retreaded in the US, yielding a national savings of 234 million gallons of oil. This, in turn, significantly reduced carbon emissions and greenhouse gases in our environment.
- In 2015, McCarthy Tire Service used 9.7 million pounds of rubber retreading, an average of 1,700 tires per day, making us the 6th largest independent tire retreader in the US.
- Even with multiple retreads, a tire will eventually exceed its useful life, or it will be damaged beyond safe and affordable repair. Because of BASys™, the customer always has visibility to the decision to scrap a tire. McCarthy Tire sends all scrap tires to certified tire recyclers.



Bandag Authorized Dealer
340 Kidder Street, Wilkes-Barre, PA 18702

Give New Life to Old Tires with Retreading

COMMERCIAL TRUCKS	SCHOOL BUSES
CONSTRUCTION EQUIPMENT	WASTE VEHICLES
FARM EQUIPMENT	

McCarthy Tire Service

800-724-3506

www.McCarthyTire.com



THE BANDAG RETREAD PROCESS



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WHY RETREAD YOUR TIRES?

Retreading gives a tire new life by **removing worn tread** from the tire casing and replacing it with **new tread**. During the process, the casing is thoroughly inspected and any injuries are repaired.

- Retread tires have the same safety rating as new tires. In many applications, the tread out performs new tires.
- Most tires can be retreaded more than once, depending on the application.
- On average, retreaded tires can **save you 30% to 40%** compared to the cost of new tires.
- A new tread is only **10% of a tire's total weight**. Reusing a casing rather than creating a new tire saves on manufacturing costs, disposal costs, and landfill space.

Retread tires are used on:

COMMERCIAL TRUCKS	SCHOOL BUSES
CONSTRUCTION EQUIPMENT	WASTE VEHICLES
FARM EQUIPMENT	

Bandag's proprietary **BASys™ Manufacturing System** is where it starts. We load your maintenance and retread specifications into BASys™ to ensure that your tires, whether you have 10 or 100, are being retreaded according to your specifications every time they come through our manufacturing facility.



Then, we assign a unique barcode to each casing so it can be tracked in real time throughout its lifecycle. The system captures the tire's owner, brand, model, age, number of retreads and repairs, failure reasons, and location. You have peace of mind knowing that every tire delivered back to you is the same tire that you entrusted to us at pick-up. This data also can help you make informed decisions about your fleet's tires that will **save money, increase performance, and reduce downtime**.

THE RETREADING PROCESS

MOST TIRES CAN BE RETREADED MORE THAN ONCE...SAVING YOU MONEY!



STEP 1. RECEIVING

When a tire is picked up at a customer's site, the technician barcodes three areas of the casing, and the tire is delivered to the retread plant.

The worn tire is scanned into our BASys™ system to begin the retreading process. Each barcode is unique to the tire and can never be used again



STEP 2. INSPECTION

The inspector logs the tire to determine the tread design specified by the customer. The tire is manually inspected for cuts, nail holes, and bead damage. Next, it goes on a machine that rotates the tire while shooting an electrical current through the tread to show holes that the eye cannot detect. The tire then goes through "shearography," a process similar to an x-ray machine that shows any belt separations in the casing.



STEP 6. EXTRUSION

Uncured rubber is extruded onto the casing to bind the new tread to the existing tire.

STEP 8. CURING

The tire is placed in a curing envelope and all the air is evacuated. The tire is moved into the curing chamber where intense pressure and heat bond the new tread, uncured rubber, and casing together into a retreaded tire.

STEP 3. BUFFING

The tire is sent to the buffing station to remove the remaining tread on the casing. This process trues up the casing so the correct trim and radius remain across the belt package. Between 3/32s to 5/32s of undertread is left on the tire so it will not build up heat during normal driving conditions.



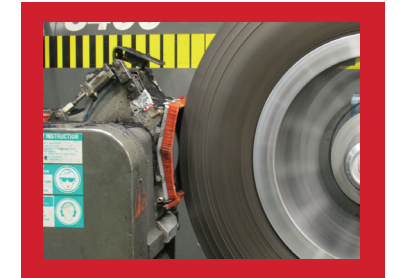
STEP 5. REPAIRING

At the repairing station, the technician thoroughly repairs all of the injuries.



STEP 9. FINAL INSPECTION

A technician gives the cured tire a thorough inspection to ensure that the final product meets customer specifications and government regulations. A coat of paint is applied to enhance its appearance, and the finished tire is moved to the warehouse for delivery to the customer.



STEP 4. SKIVING

The skiving station holds two functions. First, the technician repairs minor cuts and rock drilling in the crown and sidewall areas. Next, the technician does another visible inspection to determine if further repairs are needed for deep injuries that did not entirely penetrate the casing.

STEP 7. BUILDING

The tire proceeds to the building process. The builder scans the barcode to determine the tread design specified by the customer. This information was logged at the initial inspection process and is confirmed before building. The tread is applied on top of the extruded rubber and the ends are spliced together.

