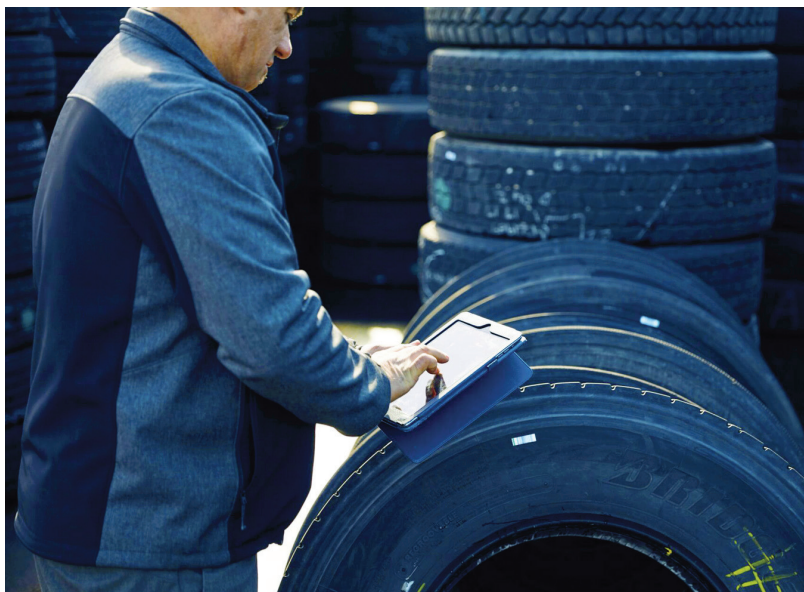


## THE FINANCIAL AND ENVIRONMENTAL BENEFITS OF RETREADED TIRES

ORGANIZATIONS ARE USING RETREAD TIRES TO OPERATE EFFICIENTLY AND SAFELY WHILE MINIMIZING THEIR ENVIRONMENTAL IMPACT.

Author: Jay Golden, PhD. Duke University Center for Sustainability and Commerce

Author: Rob Handfield, PhD. North Carolina State University Distinguished Professor of Supply Chain Management



Corporate executives and government officials face the daily challenges of operating in an ever-increasing competitive landscape driven in part by financial and environmental stewardship. Nowhere is this more evident than for those organizations dependent on the safe and cost-effective movement of people and goods on our roads and highways. As transportation and logistics leaders seek to optimize their daily operations, they are also seeking to find ways to drive sustainable solutions that reduce their carbon footprint, minimize the impact on the environment, and contribute to the well-being of their local community. In pursuing these objectives, fleet managers often rely on a time-tested technology that contributes to all three of these components.

### The solution?

#### Using safe and dependable retread tires on fleet vehicles.

The use of retreads in North America dates back to the establishment of the Oliver Rubber Company in 1912; mass commercialization of the retreaded tire, however, didn't take place until the 1960s with the introduction of the Bandag retread system and the subsequent development of the radial tire. Through the latter half of the


### KEY TAKEAWAYS

Organizations are using retread tires to operate efficiently and safely while minimizing their environmental impact.

- The reliability of new and retread tires are virtually indiscernible.
- Retreads save money. For example, the NYC Dept. of Sanitation saves \$1.4 million per year with retreads.
- The retread process uses 70% less oil than creating a new tire and minimizes landfill waste.

20th century the technology of both the tire casings (the core of the tire) and the retread process itself evolved to the point where the reliability and performance of new and retreaded tires became virtually indiscernible.

Today, organizations seeking to operate more efficiently while maintaining the highest level of safety routinely use retread tires in their fleet. This includes both public sector organizations such as the U.S. Department of Defense and the majority of major municipalities. The public is generally unaware that retreads are used on many of the most important vehicles that we rely on for emergency response, driving children to school, landing commercial aircraft and transporting critical government leaders. For instance, retreaded tires are safely used on the drive wheels of school buses, fire trucks, ambulances, and other emergency vehicles. In addition, approximately 80 percent of all aircraft tires in service in the United States are retreaded.<sup>2</sup> According to the United States Environmental Protection Agency (USEPA), retreaded tires are successfully used on Air Force One.<sup>3</sup>



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Organizations seeking to operate more efficiently while maintaining the highest level of reliability and uptime routinely use retread tires in their fleet. Multiple government studies by NHTSA, the State of Washington, the Virginia Department of Transportation, and the Arizona Department of Transportation support the use of retreaded tires, and performance of the product is validated by real-world evidence: For instance, the fleet manager at the New York City Sanitation Department highlighted the fact that retreads in his fleet have less than a 0.01% failure rate due to manufacturer defects.<sup>1</sup>

Most tire failures occur when trucks run over potholes, curbs, debris, or other materials on New York city streets, and are not caused by any structural defect of the retreaded tire. And retreads save money – over \$1.4M annually for the NYC Department of Sanitation.

Retreads are also used by the majority of large private-sector fleets, whose vehicles regularly drive in excess of one-hundred thousand miles per year and are exposed to exceptionally challenging road conditions compared to passenger vehicles. It is estimated that more than 95% of fleets with over 500 tractors maintain a retread tire program, with some fleets averaging two or more retreads for every new tire purchased.<sup>2</sup> Fortunately, modern premium-brand tires are designed to be retreaded multiple times<sup>3</sup>, so a single tire casing can see more than 500,000 miles of use in its lifetime.

Just as important in today's environmentally conscious society is that the use of retread tires in a fleet demonstrates an organization's commitment to the environment in many ways. First, retread tires in service lower the volume of raw materials required for the manufacturing of a new tire. This includes a pronounced reduction in the use of oil. In fact, the US EPA estimated a greater than 70% savings in oil used for a retread as compared to a new tire. This also means significant reductions in greenhouse gas emissions.

In addition to reducing the amount of raw materials extracted, retread tires also minimize the amount of waste that ends up in landfills. The latest figures by the US EPA indicate that over 11.2 M waste tires were dumped into the U.S. municipal solid waste stream. To understand this figure, it is equivalent to lining up passenger tires tread to tread from roughly Los Angeles to San Diego or Philadelphia to Washington DC. Because a retread tire prevents the need for manufacturing a new tire, significant environmental benefits are achieved.

Finally, retread tires are good for the American economy and the American worker. Retreads are produced in approximately 500 manufacturing facilities in every state in the Union, and are offer steady work for thousands of employees.

In an era of uncertainty, retread tires are a reliable and cost effective option that every fleet manager should consider when it comes time to replace their tires.

1. Interview with Supervisor Joe Pace and John D'Angelo, Director of Field Operations, New York Sanitation Department, January 30, 2017. Failure rate of >0.01% is due to manufacturing defects; the majority of tire failures are caused by road debris or curb impacts
2. Source: Bridgestone Bandag 2015 Fleet Survey
3. Bridgestone, Goodyear, Michelin premium casings are all warrantied for at least 3 retreads