

City Tire Recapping Strategy

The Fleet Services Division currently installs recapped tires on 80% of City-owned vehicles. At the April 13, 2004, City Council meeting, the Mayor expressed concerns regarding the use of recapped tires on City owned vehicles. In response, the Fleet Services staff has compiled the following information indicating the benefits of using recapped tires.

California Integrated Waste Management Act, Assembly Bill 939, requires localities in California to comply to a 25% reduction in hazardous waste being disposed of in landfills by the year 1995, and a 50% reduction by the year 2000. According to the California Integrated Waste Management Board (CIWMB), Californians generate over 29 million scrap tires per year; and because tires are not biodegradable, they remain in the landfill after the surface is covered. The CIWMB estimates that millions of tons of tires are also stockpiled around the state, creating health and safety concerns. Illegally dumped tires in communities create a hazardous waste environment.

Waste Reduction Strategies

The City of Inglewood repairs all passenger and truck tires in accordance with the tire manufacture's recommendations, which prevents tires from being replaced prematurely.

The City of Inglewood installs retreaded tires on all service oriented equipment, including ***construction equipment, heavy equipment, and pick up trucks.***

Tires in good condition are repaired, retreaded, or sent back to the vendors to be recycled into Crumb Rubber which will be used to manufacture rubber trashcans, tire stops, asphalt pavement, concrete, playground and athletics mats, floor tile, carpet padding, soaker hoses, and waste receptacles.

Tires that have been driven on after going flat cannot be repaired because the steel cords are damaged, predisposing the tires to failure.

Retreading Policy

Following are procedures for repairing or retreading tires for the City of Inglewood:

Inglewood will recap all tires used on service-oriented equipment, ***construction equipment, heavy equipment and pick up trucks,*** which is half the cost of new tires, thereby a reduction of cost to the City of Inglewood.

Retread tires are not designed for accelerated speeds; therefore, retread tires will **not** be installed on any Police Department vehicles.

In order to stay consistent with management practices, the City of Inglewood uses Bandag retreads on all City tires.

Tires, which cannot be retreaded, are picked up for disposal and will be regrooved or recycled.

Tires that cannot be retreaded, i.e., damaged tires, high-speed police and sedan tires and illegally dumped tires in the community, are sent to a tire recycler for a fee. The tires will be recycled into crumb rubber, which will be used to manufacture new products.

Tire casings are never be retreaded more than three times. When a tire is retreaded, a label is branded to the side of the casing for permanent notification of when the tire was retreaded.

Vehicles may have retreaded tires installed on the front wheel position, providing the tires have been retreaded and certified by a Bandag manufacturer for the safety integrity of the tire. Certification will be indicated by a label molded to the casing, should the tire not be certified the tire shall only be used on the rear tire position at all times.

Tires that have gone flat when driving are not repaired. When a tire is driven on flat, the steel cords become damaged and the tire could fail, causing a hazardous condition.

Tires that can be repaired are dismantled and repaired by installing a patch from the inside of the tire. An alternative method of repairing a tire is to install a plug in the tire with the tire still mounted to the rim.

Facts & Figures

Retreaded tires contain over 75% post consumer recycled materials.

Retreaded tires have one of the highest percentages of post consumer recycled material contents of products produced today.

The core of any retreaded tire is the worn tire casing, which is reused only after undergoing a rigorous inspection process. Since the casing has already undergone one lifecycle, it is classified as a post-consumer recycled raw material in the manufacture of a new retread.

The only raw material utilized in the manufacturing of a retreaded tire is the rubber used in the new tread. Since most of the rubber used in tire manufacturing is petroleum based (very little natural latex rubber is used in manufacturing retreaded tires), retreading makes a significant contribution towards oil conservation. In addition to the cost savings of a retreaded tire (can cost half as much as a new tire); retreading can contribute significantly to the saving of natural resources.

When compared to the manufacture of a comparably sized new tire, every passenger tire that is retreaded saves over 4 gallons of oil. The savings on a truck tire is even

more significant, and can be as much as 15 gallons per tire. All of this translates into a savings of over 400 million gallons of oil annually.

Approximately 20 million retreaded tires were sold in North America, with sales totaling more than \$2 billion. The majority of these were medium truck tires. There are approximately 1060 retreading plants in North America owned/operated by independent small businesses and by new tire manufacturers and a major tread rubber supplier.

Who Benefits from using Retreaded Tires

- Nearly 100 percent of the world's airlines use retreaded tires.
- 80 percent of the tires used by the commercial aviation industry are retreaded tires.
- Nearly 100 percent of off-the-road, heavy-duty vehicles use retreaded tires.
- School buses and municipal vehicles use retreaded tires.
- Federal and military vehicles, including those operated by the U.S. Postal Service use retreaded passenger, truck and aircraft tires.
- Trucking fleets and overnight delivery vehicles use retreaded tires.
- Taxi fleets, racecars and industrial vehicles use retreaded tires.
- Fire trucks, and other emergency vehicles use rethreaded tires.
- Farm tractors and other agricultural equipment use rethreaded tires.
- Passenger car owners use rethreaded tires.

Safety Features

- Rethreaded passenger car tires are manufactured according to Federal Safety Standards developed by the U.S. Department of Transportation.
- Retreaded tires can be driven at the same legal speeds as comparable new tires with *no loss in safety, performance, or comfort.*
- Commercial aircraft retreads are approved by the Federal Aviation Administration.
- Military aircraft retreads are approved by the various military services.
- Retreaded truck tires are manufactured according to rigorous industry recommended practices.

Economic Benefits

- Retreaded tires give the same mileage as comparable new tires, at a *lower cost-per-mile*.
- The cost of a retreaded tire will generally be from 30 to 50 percent less than the cost of a new tire. This translates to billions of dollars of savings for consumers and trucking fleets every year.
- Steel belted radials are routinely retreaded and are available with all types of tread patterns, including all-season and mud & snow tread patterns.
- Retreading greatly reduces solid waste disposal problems. Every tire retreaded is a tire saved from the landfill.
- Energy savings. Retreading conserves hundreds of millions of gallons of oil every year.
- *Retreading is truly recycling!*
- Approximately 70 percent of the cost of a new tire is in the tire body. With proper maintenance, retreading permits the continued use of your important investment. Truck tires can often be retreaded several times.
- Retreaded tires generally carry a warranty comparable to that of a new tire.

Frequently Asked Questions)

- **Q.** Where does rubber on the road come from?
 - A.** The rubber pieces you see on the road come from both new and retreaded tires. It is important to note that most of the rubber on the road comes from truck tires and is caused mainly by underinflation, overloading, and tire abuse.
- **Q.** Are retreaded tires really as safe as new tires?
 - A.** Yes. Adjustment percentages of retreaded tires are about the same as with new tires. Statistics compiled by the U.S. Department of Transportation show that nearly all tires involved in any tire related accidents are under inflated or bald. Properly maintained tires, whether new or retreaded, do not cause accidents.

- **Q.** Do any standards (federal or industry) control the quality and safety of retreaded tires?
 - A.** Yes. Passenger, light pick-up, and 4x4 tires are retreaded according to standards established by the U.S. Department of Transportation and carry a code number (**) on the sidewall indicating where and when the tire was retreaded. Due in part to the standards established by the truck retread tire industry, the U.S. Department of Transportation has not developed regulations for manufacturing retreaded truck tires. The overall quality of retreaded truck tires has increased dramatically in recent years with the introduction of high technology, including the use of computers in manufacturing and non-destructive tire testing.
As with passenger car tires, most problems with truck tires can be traced back to poor maintenance (primarily under inflation) and abuse

- **Q.** Can I buy retreaded RADIAL and HIGH PERFORMANCE tires?
 - A.** Yes. Steel belted and non-steel belted radials and high performance tires are retreaded. Since high performance tires are usually manufactured with cap plies, the retread ability of the original tire casing is greatly improved.

- **Q.** Can retreaded tires be driven at highway and interstate speeds?
 - A.** Yes. Retreaded tires can be driven at the same legal speeds as comparable new tires with no loss in safety or comfort.

- **Q.** How long will they last?
 - A.** With proper maintenance and care, retreaded tires will provide the same amount of service as comparable new tires. Retreads tread life varies from the same as a comparable new tire to 75% of a new tire. The variables here, relative to a comparable new tire are, 1. Retreads often start with less tread depth, 2. Due to casing conditions, the retread footprint may be smaller/narrower than the new tire, 3. Trailer tires are removed from service for reasons other than wear out over 80% of the time, especially with in-line haul service.

- **Q.** Are there any driving conditions where retreaded tires should not be driven?
 - A.** No. Retreaded tires can be driven wherever comparable new tires can be driven. The only restriction is on the steer axle of busses hauling passengers.

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