



# City of Portland Green Purchasing Case Study

## Lead-Free Wheel Balancing Tape

### Purchasing Green

Wheel weights are clipped to the rims of automobile tires during tire rotation to balance the tire for a smooth ride and to prolong tire life. Wheel weights are traditionally made from lead, which can be problematic for the environment, since hitting curbs and potholes, rapid accelerations and decelerations, and sharp turning can cause wheel weights to loosen and fall off. Lost wheel weights are abraded into lead dust, which can contaminate surrounding soils and waterways. Although efforts to collect and recycle lead wheel weights are in place nationwide, it's estimated that 1,600 metric tons of lead is released each year onto U.S. roadways from lost wheel weights.

Many states have banned the use of lead wheel weights, and while the State of Oregon does not currently have a ban in place, the Oregon Department of Transportation instituted a program to phase out the use of lead wheel weights in the state vehicle fleet. As tires are replaced, lead wheel weights will be replaced with steel wheel weights. Ninety percent of the state's fleet will be lead-free by 2017.

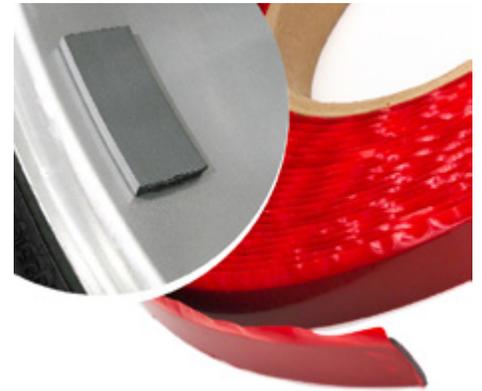
The City of Portland recognized the trend of using alternative materials for wheel weights, and in a proactive move began using 3M Lead-Free Precision Wheel Balancing Tape in place of lead wheel weights in April 2011.

### Benefits

3M Lead-Free Precision Wheel Balancing Tape is a heavy flexible composite double-sided sticky tape that adheres to the inside of the wheel. There are different types of tapes, depending on the placement of the weights. The tapes are customizable in that you can cut the tape to be the exact weight needed, so there is little waste. Because the tape is lead-free, the environmental impacts associated with lost lead tire weights are negated.

### Cost

As fleet vehicles came into the shop for tire balancing, the City began replacing existing (or lost) wheel weights with wheel balancing tape. Compared to traditional lead weights, the balancing tape is about twice as expensive – about \$0.30/inch. The City found it cost a total of \$1,600 to implement the replacement throughout the entire fleet. In terms of other costs, installing wheel balancing tape is a bit more labor intensive, as it requires some prep work to properly clean the tire before placing the tape. Although there are no cost savings to using the lead-free wheel tape instead of lead weights, the City felt the environmental benefits outweighed any real or perceived additional costs.



*CityFleet is using 3M Lead-Free Wheel Balancing Tape to replace traditional wheel weights..*

### At a glance –

#### *Who –*

- CityFleet

#### *Product –*

- 3M Lead-Free Precision Wheel Balancing Tape

#### *Cost –*

- \$0.30/inch of tape

#### *Benefits –*

- Lead-free
- Customizable
- Less weight

*“Balancing tape is a great product that helps us meet our goals of improved vehicle performance while helping to protect our environment.”*

Don DePiero,  
Vehicle Maintenance Superintendent,  
CityFleet

## Performance

Like traditional lead wheel weights, balancing tape can still become loose and fall off, especially in driving conditions where vehicles rapidly change their momentum. Under normal day-to-day driving conditions, however, the City has found no issues with the tape and are happy with the product.

## Lessons Learned

CityFleet found that it is very important to make sure the mounting surface is cleaned and prepped according to the product specifications. Special cleaners are needed to make sure the tires are grease- and dirt-free to ensure the tapes adhere properly.

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## About CityFleet

*CityFleet's seven repair facilities maintain Portland's 3,150 vehicles and equipment. This includes parking patrol vehicles, sedans, pick-ups, vans, police sedans, dump trucks, back hoes, and heavy construction equipment. They perform oil, lube, and filter changes; DEQ emission inspections; and engine, transmission, drive train, electrical, suspension, heating, cooling, and air conditioning diagnoses and repairs. CityFleet garages are also certified Eco-Biz Automotive Shops, a designation that recognizes their commitment to minimizing their environmental impacts. CityFleet was also named one of the Top Elite Fleets by Government Fleet Magazine from 2011-2016, after being named the number one fleet in 2010. In 2015 CityFleet became a GFMA Certified Management Operation and Clean Fleet Certified. As a result, CityFleet was the first government fleet in North America to obtain a Master Certification.*

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