

## Tires and Fuel Efficiency



### Proper Tire Inflation

Under-inflated tires waste energy, degrade performance, and increase the potential for blow-outs. Because tires gradually deflate if not checked, they need to be re-inflated from time to time. You can improve vehicle safety and fuel economy by as much as 3 percent if you keep your tires inflated properly. Vehicle manufacturers list the recommended tire pressure in the owner's manual and/or on a sticker located elsewhere on the automobile. (The tire sidewall indicates maximum pressure allowed, not necessarily the recommended tire inflation). Some tire dealers offer nitrogen to inflate tires to reduce the gradual deflation and normal deterioration of rubber compound.

### Fuel Efficient Tires

To help achieve the Corporate Average Fuel Economy (CAFE) standards, the auto industry generally equips new vehicles with tires that have significantly lower rolling resistance and better fuel economy than the average replacement tire.



*Rolling Resistance Test Lab  
Photo courtesy of Smithers  
Scientific Services, Inc.*

Replacement tires do not have to meet original equipment fuel efficiency standards. Consumers have limited sources of information regarding tire rolling resistance and fuel economy characteristics. Rolling resistance refers to the force required to keep a tire moving at a constant speed. Tire manufacturers seek to reduce the rolling resistance in order to improve fuel economy.

On October 1, 2003, Governor Gray Davis signed Assembly Bill 844, requiring the California Energy Commission to develop a comprehensive tire energy efficiency program. The goal is to equalize the energy efficiency of replacement tires sold in California with the original tires on new vehicles.

### How much fuel can be saved with fuel efficient tires?

The Energy Commission's *Tire Rolling Resistance Study* will provide consumer information about potential fuel savings of promoting and using low rolling resistance tires.

### What is the California Energy Commission doing to promote fuel efficient tires?

To help consumers choose the appropriate replacement tires, the Energy Commission is developing a complete database of

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all replacement tires marketed in the state. The database should be available in 2007 or 2008.

The Energy Commission has contracted with Smithers Scientific, Inc., an independent tire testing lab, to test tires for rolling resistance and other tire characteristics. Approximately 120 tires will be tested and the information will be made publicly available.



*Laser Profilometry Testing  
Photo courtesy of Smithers Scientific Services, Inc.*

The tire study results will also be used to establish regulations for the companies to report rolling resistance information and as the basis for a

potential possible minimum fuel efficiency standard. In the interim, some tire companies, such as Michelin, have begun marketing fuel efficient tires as part of their current tire product line.

### **What can government and private fleets do to use more fuel efficient tires?**

Government agencies, fleet owners, and consumers should request rolling resistance information before purchasing replacement tires. Requests should emphasize that this information must clearly distinguish a fuel efficient tire from a less fuel efficient tire.



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