

# WASHINGTON STATE TRANSPORTATION COMMISSION

## FACT SHEET: HISTORY AND IMPACT OF STUDED TIRES

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### Background

- Washington banned studded tires until 1969, when lawmakers voted to allow their use year-round.
- By 1971, with nearly a third of all the cars in the state having studded tires, state officials got lawmakers to limit their use to between Nov. 1 and April 1.
- Many leaders and organizations at the local and state level have called for a ban on studded tires, including the Commission who recommends the ban nearly every year in its recommendations to the Governor and Legislature.
- For the past 25 years, WSDOT and the Transportation Commission have tried to persuade lawmakers to ban studded tires. Lawmakers tried in 1991 and 1993 to pass a law charging a \$25 tax on all studded tires – this did not pass. Later they proposed an annual "permit fee" of \$8 per tire – this did not pass either. More recently in 2010 they attempted to ban the tires and also attempted to establish a \$100 annual fee for each vehicle with studded tires – both approaches failed.

### The Facts – Road Damage

- Engineering research indicates that tire studs damage hot mix asphalt and concrete pavements, wearing away the pavement and eventually forming ruts on the pavement surface.
- This type of rut damage is called “raveling.” Raveling on concrete pavements only comes from studded tire wear; raveling on hot mix asphalt comes primarily from studded tire wear and some from general tire wear.
- Damage to concrete pavement on state highways due to studded tires is estimated at **\$16 million annually.**

### The Facts – Safety

- The road damage caused by studded tires also reduces road safety for all motorists when water collects in pavement ruts caused by studded tires and creates dangerous driving conditions like hydroplaning and increased splash and spray.
- Studded tires wear out paint stripes and raised pavement markers.
- Research shows that tires with studs perform better on glare ice than non-studded tires, but are not as effective in snow, slush, or wet pavement.
- Vehicles equipped with studded tires require a longer stopping distance on wet or dry pavement than do vehicles equipped with standard tires.

- Tire studs reduce the full contact between a tire's rubber compound and the pavement.
- On a statewide average, glare ice conditions occur less than 1% of the time in Washington. And, WSDOT anticipates that the frequency of these events will decrease as it continues to improve snow and ice control practices.
- WSDOT recommends good winter traction tires as the best all-around winter driving solution due to their ability to handle multiple types of road conditions.
- To qualify as traction tires, tires must have at least an eighth of an inch of tread and be labeled "Mud and Snow (M+S)", "All Season", or have a Mountain/Snowflake symbol.
- Vehicles over 10,000 gross vehicle weight rating (GVWR), including some larger passenger trucks, SUVs, RVs and vehicles towing trailers, must carry chains Nov. 1 through March 31 on certain state-owned roads.

### The Facts – **Other States and Countries**

- Metal studded tires are banned for all or most vehicles in at least 4 states with severe driving conditions including Minnesota, Wisconsin, Michigan and Illinois. Michigan does allow rubber studded tires.
- The Federal Highway Administration (FHWA) supports efforts to ban studded tires.
- Germany, Poland, the Czech Republic, and Japan also have banned their use. In the case of Japan, tires with metal studs were banned in part because of the health hazards from substantial dust along its highways during their winter months from the damaged concrete.