



**House
Legislative
Analysis
Section**

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INCREASE SEMI-TRAILER AXLES

House Bill 5205 as passed by the House Second Analysis (2-7-02)

Sponsor: Rep. Judson Gilbert
Committee: Transportation

THE APPARENT PROBLEM:

According to testimony offered by a spokesman from the Ontario Trucking Association and confirmed by the Michigan Department of Transportation, Michigan is alone among the 50 states in its prohibition of 53-foot, three-axle semi-trailer trucks on its roadways. In Michigan, two axles on the 53-foot semi are the limit. The two-axle regulatory standard was adopted in 1986 when the standard semi-trailer length was 48-feet. Then traffic experts knew little about the turning radius of the then new, longer 53' semi-trailer trucks and recommended a conservative two-axle standard. Their caution was favored by drivers, generally, since many feared the proliferation of the bigger semi-trucks on the highways.

However, since 1986 the 53-foot 3-axle semi-trailer has become the standard transport in the North American trucking industry. Further, recently the University of Michigan Traffic Research Institute completed a study to demonstrate that the performance characteristics of a 53-foot three-axle semi-trailer (including its turning and roll-over characteristics) are about the same as those of a two-axle semi-trailer. In addition, when the maximum weight of the load is not increased, the three axles can distribute the weight of the load more evenly over the road's surface, causing less damage to bridges, and to the road bed and road surface.

According to committee testimony, 92 percent of the trade between the United States and Canada across the border of Ontario and Michigan is transacted by trucks. Canadian truckers report they must use different vehicles in their fleets than their customary 53-foot three-axle trucks in order to make runs into Michigan. Often those vehicles run partially empty, which increases the truckers' business costs. To reduce the industry's costs, and to bring Michigan's axle standard into line with other states and nations in North America, legislation has been introduced.

THE CONTENT OF THE BILL:

House Bill 5205 would amend the Michigan Vehicle Code to specify the number of axles allowed on 53-foot semi-trailers, increasing that number from two to three.

The vehicle code sets "normal length maximums" for a variety of vehicles and combinations of vehicles. Currently the law specifies no overall length limit for a truck tractor and semi-trailer combination, but the semi-trailer cannot exceed 53 feet. In addition, the law specifies that all semi-trailers longer than 50 feet must have a wheel-base of 40.5 feet, plus or minus six inches, as measured from the kingpin coupling to the center of the rear axle or the center of the tandem axle assembly if equipped with two axles. House Bill 5205 would amend this provision to remove the reference to "the tandem axle assembly if equipped with two axles," and specify instead, "rear axle assembly." The bill also would change the required minimum wheelbase for all semi-trailers longer than 50 feet from 40.5 feet to "37.5 to 40.5." Further, currently under the law a semi-trailer with a length longer than 50 feet is prohibited from operating with more than two axles on the semi-trailer. Instead, the bill would prohibit operation with more than three axles.

MCL 257.719

FISCAL IMPLICATIONS:

The House Fiscal Agency notes the bill would have no direct fiscal impact on state or local government. (2-4-02)

ARGUMENTS:

For:

Ninety-two percent of the trade between the United States and Canada that crosses the border between Michigan and Ontario is transacted by truck. The size of those trucks has increased during the past 15 years, and there are many different kinds of vehicles

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in the truck fleets. However, the 53-foot 3-axle semi-trailer is now the standard-sized transport in the North American trucking industry. All states and provinces allow 53-foot 3-axle semi-trailers except Michigan, where, instead, two axles are the limit. Recently the University of Michigan Traffic Research Institute completed a study to demonstrate that the performance characteristics of a 53-foot three-axle semi-trailer (including its turning and roll-over characteristics) are about the same as those of a two-axle semi-trailer. In addition, when the maximum weight of the load is not increased, the three axles can distribute the weight of the load more evenly over the road's surface, causing less damage to bridges, and to the road bed and road surface. This legislation to allow three axles on 53-foot semi-trailers would bring Michigan into line with other states and provinces. It also would help the owners of interstate trucking companies to run the vehicles in their fleets more efficiently.

Against:

This bill would bring Michigan's axle standard into line with other states and Canada. Although the 53-foot three-axle weight would not be increased by this bill, the overall weight of a vehicle increases by about 2,000 pounds when a new axle (in this case a third axle) is added to its frame. This then allows a small increment of cargo weight, as well. Semi-trucks and trailers have grown longer, heavier, and more numerous during the past several decades. For example, according to committee testimony, the 53-foot semi-trailer arrived on the trucking scene in about 1986, replacing the 48-foot semi-trailer. In the meantime and despite the changes in the size and number of vehicles, the road system has not expanded appreciably. Consequently, roadways are more congested with heavier and larger trucks, and they feel less safe for the drivers of smaller vehicles. When the 53-foot vehicles arrived on the scene, researchers at the state's traffic research institute estimated that they would produce a 20 percent increase in pavement damage, and the additional highway costs were estimated to fall between 0.3 and 1.3 million dollars per year for each one percent of 48-foot trailers replaced by 53-foot units. (UMTRI-86-13) Policymakers should be aware that the trucking industry's norms are inching upward, and as they do so, the regulatory frameworks in the law have been adjusted to accommodate the change.

Against:

According to the Department of Transportation, a report completed by the University of Michigan Transportation Institute in 1986 (UMTRI-86-13)

indicates that a minimum wheel-base of 40.5 feet is recommended, and that further decreases in the wheel-base can degrade dynamic performance at high speeds. Therefore in order to ensure safety, the report suggests that 40.5 feet is also the preferred minimum wheel-base. This bill was amended on the House floor to allow a shorter wheel-base--as low as 37.5 feet--which could make the vehicles less safe at high speeds and on turns at intersections.

POSITIONS:

The Department of State Police supports the bill. (2-5-02)

The Road Builders Association supports the bill. (2-5-02)

The Michigan Trucking Association supports the bill. (2-5-02)

The Department of Transportation is neutral on the bill. (2-5-02)

Analyst: J. Hunault

■ This analysis was prepared by nonpartisan House staff for use by House members in their deliberations, and does not constitute an official statement of legislative intent.