

## **With Heavy Vehicle Highway Safety Foremost In Mind**

**The Time Has Come To Get Honesty On The Table About The Critical Need To Mandate That All Heavy Vehicles Meet Stringent Directional Stability Regulations That Will Result In A Dramatic Reduction In Driving Fatigue And The Many Related Catastrophic Heavy Vehicle Highway Accidents.**

There is a reason why flying on an airliner is twenty-two times safer than driving on the highway. No stone has been left unturned in the design regulations for commercial aircraft that require directional stability and controllability, as a primary consideration. While on the other hand, the dire need for heavy vehicle directional stability is not presently a requirement.

### **Time Is Of The Essence**

Even though the proven technology is here for the asking, it will require some time after a mandatory requirement becomes effective before all new production heavy over-the-road vehicles will be available with the new low-fatigue drivability . Further more, it will take several years for all of the high-fatigue drivability vehicles to be replaced by the safer new production models.

**For additional technical information on the Howard Precision Steer Wheel Control System**

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**RIVER CITY PRODUCTS, INC.**



**HOWARD  
PRECISION STEER WHEEL  
CONTROL SYSTEM™**

**This Informative Document Is Must Reading For All Who Are Interested In Knowing The Most Important Next Step To Be Taken In Reducing Heavy Vehicle Driving Fatigue Related Catastrophic Highway Accidents**

### **Understanding Heavy Vehicle Directional Stability**

In the interest of clearly understanding the term “Directional Stability” referred to herein, it should be known that the term stabilizer is broadly used in naming automotive products that don’t have to do with achieving directional stability. For example, the highly beneficial heavy vehicle electronic stabilizing system that remains inactive until the vehicle is inadvertently over-steered, and likely to overturn, wherein the electronic stabilizer automatically applies the brakes to one of the steer wheels to prevent the catastrophic oversteer rollover accident. Conversely, the Heavy Vehicle Directional Stability System referred to in this document remains active on every mile driven and greatly prevents heavy vehicle driving fatigue and related catastrophic highway accidents.

## **Reducing Excessive Heavy Vehicle Driving Fatigue And Resultant Catastrophic Heavy Vehicle Highway Accidents**

A breakthrough in technology solves the long-standing truck and bus excessive driving fatigue problem that has been responsible for numerous catastrophic heavy vehicle highway accidents. When learning to drive a heavy truck or bus, the first thing a driver learns is that holding the steering wheel straight will not keep a heavy vehicle going straight. Keeping a heavy vehicle tracking straight and safely under directional control requires an inordinate amount of left and right steering corrections, thereby resulting in an excessive amount of driving fatigue.

Over the many years, the brilliant engineers and designers of the heavy vehicle industry have made enormous progress in the function and reliability of their products. However, there remains a long-standing major problem related to the lack of vehicle directional stability that has now been solved. In regard to this major accomplishment by others, the heavy vehicle industry has taken a complacent attitude because of the NIH factor ( Not Invented Here), by applying the old platitude that says “if it ain’t broke, don’t fix it.” The facts are that the heavy vehicle steering components are not broken, they simply don’t have the technology to achieve the directional stability that is direly needed to greatly

reduce heavy vehicle driving fatigue and related heavy vehicle catastrophic highway accidents.

The proven cost effective technology that does away with the serious lack of heavy vehicle directional stability, is here for the asking. It is also probable that the highly qualified heavy vehicle design community would come up with additional technology to solve the heavy vehicle directional stability problem if it becomes mandatory to do so.

The new technology is more than paid for by a substantial savings in operational costs. The new technology not only greatly reduces driving fatigue, it also greatly reduces the long-standing excessive heavy vehicle steer wheel tire wear problem that is caused by the inherent unstable behavior of the steer wheels.

Another major heavy vehicle highway safety issue that is also solved by the new technology, is the loss of directional control during steer wheel tire blowouts. Heavy buses and trucks equipped with the new technology have encountered steer wheel tire blowouts. In each instance, the vehicle drivers have reported easy straight-line controllability without the customary steering wheel fight and loss of directional control.

## **In The Quest For The Best, There Are Sometimes Limits To What Can Be Accomplished With Existing Technology**

In the never-ending pursuit of perfection, the very creative heavy vehicle design community has made amazing progress in advancing the function and reliability of their products, with the exception of the mistaken assumptions about adequately controlling the directional stability of a heavy vehicle with nothing more than the geometry of the steered wheels. Over the many years, as the size and weight of the vehicles increased, various changes in the geometry of the steer wheels were beneficial. However, as the size and weight of heavy over-the-road vehicles doubled and redoubled, the serious need for achieving more perfect directional stability could not be achieved by changes in the steering geometry.

The major drivability problem created by the lack of heavy vehicle directional stability is the fact that holding the steering wheel straight would not keep a heavy vehicle going straight. With present day state of the art heavy vehicle steering technology that is lacking in directional stability, keeping a heavy vehicle going straight and safely under control requires an inordinate amount of repetitive left and right steering corrections that result in an excessive amount of driver fatigue and related catastrophic heavy vehicle highway accidents.

Advancing the state of the art in heavy vehicle highway safety has historically required the development of new technology. For example, the early mechanical brakes

were changed to hydraulic brakes. As the weight increased, the hydraulic brakes were changed to air actuated brakes. Presently, the drum brakes are being replaced by disk brakes. The need for improving heavy vehicle brakes is obvious because of the critical need to reduce emergency stopping distance. However, the need to improve heavy vehicle directional stability has not been so obvious because, for going on a hundred years, heavy vehicle steering and directional control problems that required an inordinate amount of driver steering corrections, have been an accepted way of life for the heavy truck and bus drivers. A hundred years of excessive driving fatigue is enough. The time has come for change now that proven cost effective heavy vehicle directional stability technology is here for the asking.

The new technology achieves a level of heavy vehicle directional stability that is entirely new to the heavy vehicle industry. The new electronic stabilizing devices are primarily designed to prevent catastrophic roll-over accidents and do not provide directional stability when driving, and have no beneficial effect on reducing driving fatigue and related catastrophic heavy vehicle highway accidents. No other so called previous stabilizing device even comes close to achieving the heavy directional stability required to make a suitable reduction in driving fatigue and related catastrophic heavy vehicle accidents.