

Vehicle Retarder Market to Grow USD 2.7 billion to USD 5.5 Billion by 2033, Driven by Demand for Enhanced Braking Safety

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/EINPresswire.com/ -- According to a new report published by Allied Market Research, titled, "Vehicle Retarder Market," The [vehicle retarder market size](#) was valued at \$2.7 billion in 2023, and is estimated to reach \$5.5 billion by 2033, growing at a CAGR of 7.4% from 2024 to 2033.

A vehicle retarder is an auxiliary braking system designed to slow down heavy-duty vehicles without using traditional friction brakes. It works by converting the vehicle's kinetic energy into heat, which is then dissipated, resulting in a smoother, wear-free deceleration process. Retarders are commonly used in trucks, buses, and other commercial vehicles to reduce wear on the primary braking system, improve safety on long descents, and enhance fuel efficiency. They can be hydraulic, electromagnetic, or mechanical, and are especially valuable in applications requiring frequent braking, such as in urban transportation or heavy cargo logistics.

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For instance, in July 2021, Toyota Material Handling launched the Toyota HST series of hydrostatic IC engine counterbalance forklift trucks. The updated Tonero HST models now feature an advanced hydraulic retarder, which enhances the trucks' safety and productivity. This new retarder technology, combined with the powerful 1ZS Toyota-designed industrial engine, significantly improves the driving experience by reducing noise levels and providing smoother operation. The vehicle retarder market analysis indicates that the growing emphasis on reducing emissions is a major driver in the industry.

Furthermore, the integration of sophisticated technologies, including electronic control units,



which improve braking efficiency and safety, is one of the major trends the vehicle retarder industry is seeing. As electric retarders can minimize wear and fuel consumption, there is also an increase in demand for them. This is particularly true for electric and hybrid vehicles. Sustainability is another big trend, with producers concentrating on creating eco-friendly ways to cut emissions.

The key players analyzed in this report are Cummins Inc., Frenelsa, INDUSTRIAS ZELU (Klam Retarder), Scania AB, Shaanxi Fast Auto Drive Group Company, SORL Auto Parts, Inc., TBK Co., Ltd., Telma S.A., Voith Group, and ZF Friedrichshafen AG. The companies have adopted strategies such as expansion, partnership, product launch, and others to improve their market positioning. Strategic collaborations with OEMs are key drivers in improving vehicle retarder market share for leading companies.

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In addition, since retarders give big commercial vehicles in crowded urban locations dependable braking, urbanization and the expansion of smart transportation systems are driving up demand for them in logistics and public transportation. Vehicle retarder market size is expected to expand steadily due to the [rising demand for safety and efficiency in heavy-duty vehicles](#). The global vehicle retarder market forecast shows an increasing focus on sustainability and regulatory compliance in the next decade.

The rise in demand for heavy commercial vehicles is significantly boosting the vehicle retarder industry. As industries expand and logistics needs grow, the increased use of heavy trucks and buses necessitates advanced braking solutions to handle demanding operational conditions. Vehicle retarders enhance safety and braking efficiency, addressing the challenges of heavy loads and steep gradients. This rising requirement for robust and reliable braking systems in commercial vehicles is fueling the vehicle retarder market growth.

Furthermore, expansion of the mining and construction sectors, and rising awareness of vehicle wear and tear reduction have driven the demand for vehicle retarder.

However, high installation and maintenance costs are impeding the growth of the vehicle retarder market. The expense associated with purchasing and installing advanced retarder systems, coupled with ongoing maintenance requirements, can be substantial. This financial burden is a significant deterrent for fleet operators and vehicle owners, particularly in cost-sensitive markets. As a result, the high cost of vehicle retarders limits their adoption, affecting overall market demand and growth potential. Moreover, limited adoption in emerging markets, and weight and space limitations are major factors that hamper the growth of vehicle retarder.

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On the contrary, the rise in adoption of electric and hybrid commercial vehicles presents a lucrative opportunity for the vehicle retarder market. As these vehicles gain traction, the need for advanced braking systems, including retarders, becomes increasingly important to manage their unique braking dynamics and regenerative braking systems. Vehicle retarders can enhance safety and performance by providing additional braking support, making them a valuable addition to the braking systems of electric and hybrid commercial vehicles, thus driving market growth.

Furthermore, retarders are essential to the safe deceleration of self-driving trucks and buses, which is another development that is reshaping the market the usage of autonomous vehicles. Automation and smart braking systems are among the top vehicle retarder market trends transforming the industry. Retarders that can seamlessly interact with smart systems to enable enhanced vehicle control, energy recovery, and economical braking are becoming more and more necessary as smart cities and urban transportation demand grow.

The market's congruence with the larger evolution of the transportation and automotive industries is shown in these trends. The hydraulic retarder segment continues to hold the largest vehicle retarder market share, but electric retarders are expected to capture a growing share.

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Key Findings of The Study

On the basis of product type, the electrical segment is anticipated to exhibit a remarkable growth during the forecast period.

On the basis of application, the more than 100 MT segment is anticipated to exhibit a remarkable growth during the forecast period.

On the basis of region, the Asia-Pacific is anticipated to exhibit remarkable growth during the forecast period

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