



9 TECHNOLOGIES TO IMPROVE SAFETY DURING TRUCKING

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ANNOTATION

Trucking is one of the most important industries in the United States, but it is also one of the most dangerous. In 2015, there were 4,067 large trucks and buses involved in fatal crashes in the United States, an 8% increase from 2014. This is why improving safety in trucking with technology is so important.

It can also be used to improve safety in trucking by making it easier for drivers to comply with hours-of-service regulations. For example, electronic logging devices can automatically record a driver's hours of service, making it less likely that they will exceed the legal limit.

KEYWORDS

Improvements in the trucking industry, use of high-tech AI in safety, new route planning software, sensors, and cameras.

Major Technologies Improving Safety in Trucking

Following are a few of the most recent and interesting technologies that are used for ensuring safety during trucking.

Telematics

Telematics is a broad term that can be applied to a variety of emerging technologies and applications in the automotive industry. It is used to describe the process of sending, receiving, and storing data via telecommunication devices, such as onboard computers, GPS devices, and cellular phones.

One of the most common applications of telematics in the automotive industry is in the area of vehicle diagnostics and maintenance. Telematics can be used to monitor a vehicle's performance and identify potential problems early on, before they become serious. This can help to avoid costly repairs and downtime. Telematics can also be used to monitor a driver's behavior, such as speed, braking, and cornering. This information can be used to improve driver safety and training.

How is it being used in the Automotive Industry?

The automotive industry is not the only one that is embracing telematics. The insurance industry is also beginning to use telematics to track driver behavior and offer pay-as-you-drive insurance rates. Telematics is also being used in the agricultural industry to track livestock and crops, and in the construction industry to track heavy equipment. The possibilities for telematics are endless, and it is sure to continue to revolutionize the way we live and work.



One way that technology can be used to improve safety in trucking is through the use of telematics. Telematics is the use of computers and other electronic devices to track, monitor, and manage vehicles. This information can be used to improve safety by helping to identify dangerous driving behaviors and by providing real-time information about traffic and weather conditions.

Advanced Driver Assistance Systems

Another way that technology can be used to improve safety in trucking is through the use of advanced driver assistance systems (ADAS). These systems use sensors and cameras to provide warnings to drivers about potential hazards on the road. They can also help drivers to avoid collisions by automatically applying the brakes or by steering the vehicle away from danger.

It involves a suite of electronic safety features that are designed to assist the driver in a variety of tasks. These features can include things like adaptive cruise control, lane-keeping assist, and automatic emergency braking. While ADAS features can vary between different manufacturers, they all share the common goal of improving safety on the roads.

Benefits & Drawbacks of ADAS

One of the key benefits of ADAS is that it can help to reduce the number of accidents that occur each year. By assisting the driver with tasks like keeping the vehicle in its lane or automatically braking in an emergency situation, ADAS can help to avoid or mitigate the severity of accidents. In addition to improving safety, ADAS can also help to improve the efficiency of the transportation system by reducing congestion and travel times.

Despite the many benefits of ADAS, there are also some potential drawbacks to consider. One of the main concerns is that, as these systems become more advanced, there is a risk of driver reliance on the technology. This could lead to a decrease in driving skills and an increase in accidents if the systems were to fail. Additionally, the cost of ADAS features can be prohibitive for some consumers, which could limit the uptake of these technologies.

Overall, ADAS features show great promise in terms of improving safety on the roads. However, it is important to consider the potential risks and drawbacks of these technologies before widespread adoption.

Electronic Stability Control (ESC)

Electronic Stability Control (ESC) is a technology that helps truck drivers maintain control of their vehicles in difficult driving conditions. ESC uses sensors to monitor the direction of the truck and its position on the road. If the truck starts to lose control, ESC automatically applies the brakes to help keep the truck going in the right direction.

ESC is especially helpful in slippery conditions, such as when a truck is driving on a wet or icy road. It can also help a truck driver stay in control when making a sharp turn or when going down a steep hill.



ESC can help prevent accidents and save lives. It is estimated that ESC reduces the risk of rollover accidents by 80%. In addition, ESC has been shown to reduce the severity of accidents that do occur.

Truck drivers who have ESC in their vehicles can have greater peace of mind when driving in challenging conditions. This technology can help them avoid accidents and arrive at their destination safely.

Intelligent Speed Adaptation

Intelligent speed adaptation is a technology that can be used to help improve safety in trucking. It is a system that can automatically adjust the speed of a truck based on the current conditions. This can help to avoid accidents by ensuring that the truck is always traveling at a safe speed.

There are many different types of intelligent speed adaptation systems, but they all have the same goal of improving safety. Some systems use GPS to automatically adjust the speed of the truck, while others use sensors to detect the speed of other vehicles around the truck.

Intelligent speed adaptation is still in the early stages of development, but it has the potential to greatly improve safety for both truckers and other motorists. If you are a trucker, it is worth considering investing in a system that can help keep you safe on the road.

Automatic Freight Matching

In an effort to improve safety in the trucking industry, many companies are now offering automatic freight matching services. This service helps to connect truck drivers with loads that are appropriate for their vehicles, based on factors such as the size and weight of the load, the destination, and the driver's experience level.

This can be a valuable tool for both new and experienced drivers, as it can help to ensure that they are not taking on a load that is too large or heavy for their vehicle. It can also help to prevent accidents by making sure that drivers are not traveling to unfamiliar destinations.

The automatic freight matching service is not without its drawbacks, however. Some trucking companies have reported that it can be difficult to find drivers who are willing to use the service, as it can be seen as an intrusion into their privacy. Additionally, the service can be costly, and some companies have found that it is not always accurate.

Despite these challenges, the automatic freight matching service is a valuable tool that can help to improve safety in the trucking industry. It is important for companies to weigh the pros and cons of the service before deciding whether or not to use it.

AI-Powered Applications

There are many potential applications for AI in trucking that could improve safety. For example, AI could be used to monitor driver behavior and alert them to potential safety



issues. AI could also be used to help plan routes, avoiding areas that are known to be dangerous for trucks. In addition, AI could be used to monitor traffic conditions and alert drivers to potential hazards on the road.

AI has the potential to make a significant impact on safety in trucking. By helping to monitor driver behavior, plan routes, and monitor traffic conditions, AI can help to make the roads safer for everyone.

AI can ensure safety in trucking by constantly monitoring the truck's environment and looking for potential hazards. If a hazard is detected, the AI can take evasive action to avoid it. Additionally, AI can keep track of the truck's speed and location and provide warnings if the truck is in danger of speeding or going off-route.

It can also provide a wealth of data that can be used to improve safety in trucking. For example, AI can track the number of close calls a truck has had, or the number of times a driver has had to brake suddenly. This data can be used to identify areas where safety needs to be improved.

Route Planning Software

Trucking is a dangerous business. Every year, thousands of people are killed in truck accidents. That's why it's so important to have good route planning software in place.

There are a number of different route planning software programs on the market, but not all of them are created equal. Some are better than others at finding the safest routes for trucks.

The best route planning software takes into account a number of different factors, including traffic patterns, weather conditions, and the type of cargo being transported. By taking all of these factors into account, the software can find the safest route possible.

If you're responsible for planning routes for a trucking company, make sure you're using the best route planning software available. It could mean the difference between life and death.

Driver Scorecards

Driver Scorecards are an important tool for safety in trucking. They help trucking companies track and manage driver performance, identify risk factors, and improve safety. Driver Scorecards can also be used to reward safe driving behavior and encourage drivers to adopt safe driving practices.

When used correctly, Driver Scorecards can be an effective way to improve safety in trucking. However, they are not a perfect solution and should be used as part of a comprehensive safety program. If you are considering using Driver Scorecards in your trucking company, be sure to consult with safety experts to ensure that they will be used effectively.



Alert Systems

An alert system is a great way to keep truckers safe on the road. There are many different types of alert systems, and they all have their own advantages and disadvantages. Here are a few of the most popular alert systems for truckers:

Cell phone alerts: Cell phone alerts are a great way to stay informed about road conditions, traffic, and weather. Many phones now have built-in GPS, so you can easily track your location and get directions. You can also set up alerts for specific areas, so you'll always know what's going on around you.

Radio alerts: Radio alerts are another great way to stay up-to-date on road conditions and traffic. Many truckers listen to the radio to stay informed, and there are many different channels dedicated to truckers. You can also find radio apps that you can download to your phone.

CB radio: CB radios are a classic way to stay in touch with other truckers and get information about the road. They can be a great way to pass the time on long trips, and you can also use them to get help if you're in a bind.

GPS: GPS systems are becoming more and more popular in trucks. They're a great way to track your location and get turn-by-turn directions. Many GPS systems also have traffic and weather updates, so you can avoid delays.

Dashcams: Dashcams are a great way to record your trips, and they can also be used to document accidents or incidents. Many truckers use dash cams to stay safe on the road.

Bottom Line

Technology has played a significant role in improving trucking safety. Advancements in technology have led to the development of safer trucks and improved driver safety. Trucking companies have adopted new technologies to help improve communication between drivers and dispatch, track driver hours, and monitor vehicle maintenance. These improvements have helped to reduce accidents and improve the safety of the trucking industry.

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