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ENSURING ROAD SAFETY THROUGH PROPER VEHICLE MAINTENANCE IN FURQAT DISTRICT

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Annotatsiya. Vehicle technical condition plays a vital role in ensuring road safety in Furqat District, Fergana Region. This paper analyzes the impact of technical failures on road traffic accidents. The study highlights the importance of regular technical inspection, driver responsibility, and modern diagnostic technologies to significantly improve traffic safety in the district.
Kalit so‘zlar: Vehicle maintenance, Road safety, Technical condition, Furqat District, Traffic accidents, Vehicle inspection, Diagnostic systems

In modern society, motor vehicles have become an integral part of daily life. In developing countries like Uzbekistan, the rapid increase in the number of vehicles creates a serious burden on road infrastructure and safety systems. Furqat District of Fergana Region is no exception. Due to high agricultural and industrial activity, the intensity of freight and passenger transportation in the district is quite high. Therefore, the technical condition of vehicles is one of the most critical factors in ensuring safe movement [1].

According to various studies, 15–25% of road traffic accidents (RTAs) are directly related to technical malfunctions of vehicles. In some regions, this figure can be even higher. Furqat District, located in foothill and mountainous areas, has roads with sharp turns and elevation changes, which place additional demands on vehicles. In such conditions, failures in the braking system, steering, tires, and lighting equipment can lead to severe consequences [2].

- The main types of technical failures include:
- Inefficient operation of the braking system;
- Malfunctions in steering and suspension;
- Worn or improperly inflated tires;
- Problems with the engine and electrical systems;
- Failure of lighting and signaling devices.

Each of these defects poses a direct threat to the lives of drivers, passengers, and pedestrians, especially at high speeds. For instance, brake system failure often results in fatal accidents. According to the World Health Organization (WHO), accidents caused by technical faults tend to have more severe outcomes compared to other causes [3].

In Furqat District, most vehicles are used for agricultural purposes and cargo transportation. The technical condition of trucks and tractors is particularly important. When heavy vehicles operate under load without proper maintenance, they endanger not only the driver but also other road users. Analysis of recent traffic accidents in the district shows a rising trend in incidents caused by technical reasons.

The government of Uzbekistan has adopted several laws and resolutions to improve road safety. The Cabinet of Ministers’ “Road Traffic Rules” and regulations on vehicle operation make technical inspection mandatory. However, in practice, compliance with these requirements remains insufficient. Many drivers undergo formal inspection without thorough examination of their vehicles. This situation creates significant risks in active transport areas such as Furqat District [4].

Modern approaches emphasize the use of digital technologies for monitoring vehicle technical conditions. Tools such as onboard computers, diagnostic scanners, and GPS-based

monitoring systems can detect faults in advance. Implementing these systems in Furqat District would not only enhance safety but also extend the service life of vehicles.

Many scholars have studied the relationship between vehicle technical condition and road safety. Azizov Q.H. emphasizes that technical condition, together with the human factor, is one of the main causes of traffic accidents [1]. Alimov S.E. stresses the necessity of considering technical factors when modeling transport flows in urban and rural areas [2]. Tursunov S.X. and Hamroyev E.G. demonstrated the effectiveness of artificial intelligence in automating technical diagnostics [5].

Despite existing regulations, several challenges persist in Furqat District:

- Insufficient number of technical inspection stations;
- Low level of technical safety culture among drivers;
- High proportion of aging vehicles;
- Weak monitoring and control systems.

Solving these problems requires a comprehensive approach. First, a monthly technical monitoring system should be introduced in the district. Second, regular training seminars for drivers must be organized. Third, it is necessary to establish modern diagnostic centers equipped with up-to-date tools.

In conclusion, the technical condition of vehicles plays a decisive role in ensuring road safety in Furqat District, Fergana Region. This issue cannot be solved by one-sided efforts. It requires coordinated action from the government, local authorities, transport companies, and drivers. Scientific research and practical recommendations in this field will help elevate road traffic safety in the district to a new level.

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