

CAUSES OF TRAFFIC CONGESTION ON CITY STREETS

Mizrabov Ulug‘bek is the son of Bolikul JizPI,

assistant,

Abdulkarimov Shag‘zod is the son of O‘ktam Special
subject teacher of Vocational School . 1, Bulung'ur district,

Abstract: The article describes the causes and consequences of traffic jams in city streets, which are considered to be one of today's urgent problems.

Key words: traffic, cars, public transport, car roads, noise, road environment, factories.

Japan is the largest producer of cars. The number of cars produced in Japanese car factories is 8.0 million units per year. The second place is the USA with 6.5 million units, and the third place is Germany with 5.0 million units. The position of Uzbekistan in the production of light cars is not low.

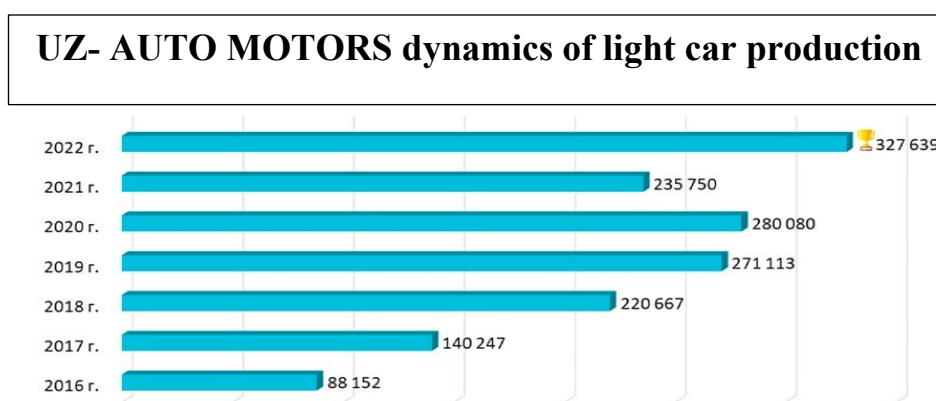


Figure. 1. Change of car production in Uzbekistan by years

Among the SNG countries, in the first 6 months of 2022, Uzbekistan took the lead in the production of passenger cars and put 160,000 passenger cars on sale. It is clear that the automobile industry makes a great contribution to the economic development of countries, but the problems in the process of their operation, that is, the increase in the number of cars from the capacity of large city streets and the increase in traffic caused by improper traffic management. in the (Figure 3).



Figure 2. Traffic jams on city streets

According to the analysis, traffic jams are caused by several reasons.

- intersection of roads with unequal carrying capacity according to the road category;
- non-observance of traffic rules;
- the width of the carriageway of the road (incorrect design of the road);
- moving at very low speed;
- exceeding the load level of the road;
- increase in traffic flow density.

Traffic flow density plays an important role in creating traffic jams on road networks and is determined by the following formula:

$$q = \frac{N}{V}, \text{ avt/km};$$

N- amount of traffic in one lane,

V- speed of traffic flow, km/soat;

The maximum theoretical carrying capacity of the highway is also expressed as follows, gaining importance in the formation of traffic jams in the street-road networks.

$$P = \frac{1000 V}{L_d}, \text{ avt/soat};$$

V- the speed of cars moving in the lane, km/soat;

L_d - dynamic gauge of cars, m;

In addition, the size of the carriageway is one of the factors that prevent the occurrence of traffic jams in the city's road networks.

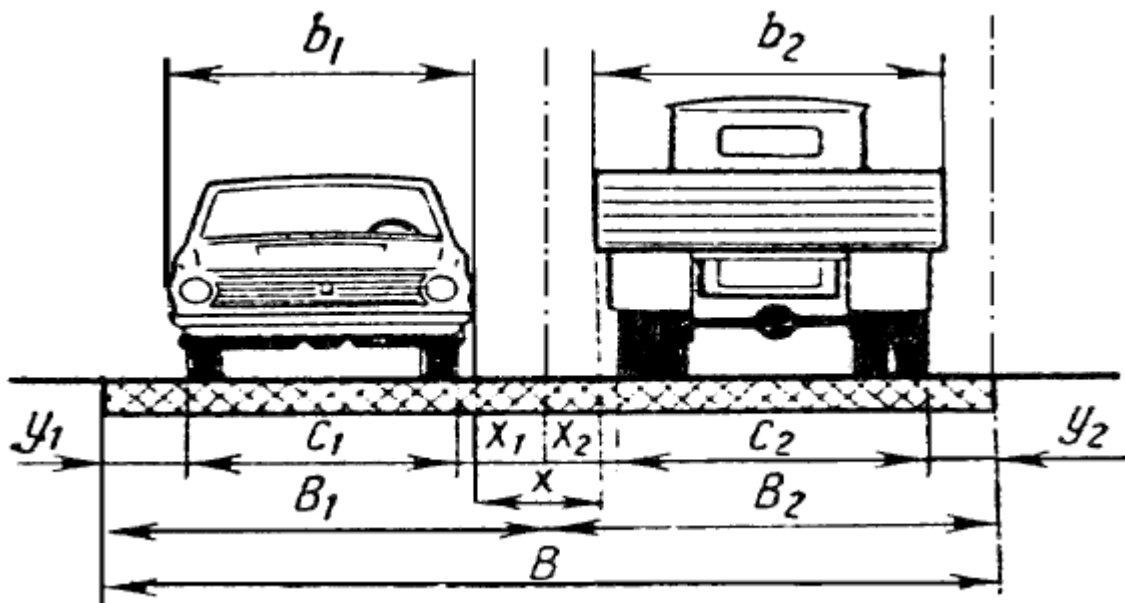


Figure 3. Determining the traffic section of the road

Determining the safe distance between oncoming vehicles

$$X = 0.3 + 0.1 \sqrt{V_1 + V_2};$$

The distance between the outer wheel of the vehicle and the edge of the pavement

$$Y = \sqrt{0.1 + 0.0075 V};$$

Conclusion

In conclusion although the developing automobile industry makes a great contribution to the development of the economy of the countries, their exploitation process is becoming more difficult day by day, that is, as a result of traffic jams due to the increase in the number of cars in large cities, the demand for using new approaches to traffic on the streets is increasing. causing them to be scientifically based. Our main goal is to provide a solution to traffic jams in our country.

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