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Research Article

CRITICAL ANALYSIS OF THE ENVIRONMENTAL IMPACT OF FUELS USED IN VEHICLES

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ABSTRACT

In the article, in the modern socio-economic and political development of our republic, one of the most important areas for the development of the automotive industry and the transport system and the development of transport infrastructure is the development of an automobile network, the organization of a fuel supply reserve for these vehicles in the near future and the use of other types of fuel, recommendations are given.

KEYWORDS

Engine, exhaust gases, gas cylinders, cylinders, pistons, neutralizer.

INTRODUCTION

In recent years, many measures have been taken to improve the quality of services to the population in the field of motor transport, and the targeted tasks of the development of motor transport services are being consistently fulfilled [1,2]. Among them are many decisions and orders and several tasks related to the development of our national motor transport. A number of decisions and orders for the further development and implementation of this direction are confirmed by the example of changes in our time. Because of this,

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As a result of the implementation of such reforms in many areas in our country, along with qualitative changes in our economy, the processes of socio-economic development of our country, liberalization of the economy and further deepening of these reforms are underway [4,5,6,7].

The next priority direction, intended for a long-term perspective, which is of decisive importance in increasing the potential, power and competitiveness of our country, is the implementation of strategically important projects aimed at the modernization of the main leading industries, technical and technological renewal, development of transport and infrastructure communications. is to conduct an active investment policy [8-12].

Now the comparative study of the components of different directions of our national economy with the world market is of great importance. The national economy of Uzbekistan is a total of industries, associations, enterprises, and organizations, which are integrated into the economic system based on common laws and development goals.

In the current socio-economic and political development of our republic, one of the most important directions of the development of the automotive industry and transport system and the development of the transport infrastructure is the development of the automotive network, the organization of fuel supply reserves for these cars in the near future and other types of alternative energy sources implementation are the second important task [13-19].

Today, the world's largest car manufacturers are making their cars run on methane gas. For example, Volvo, Audi, Chevrolet, Daimler-Benz, Iveco, MAN, Opel, Citroen, Ssania, Fiat, Volkswagen, Ford, Honda, and Toyota, which are the world's largest manufacturers, are among them. In Uzbekistan, the Cabinet of Ministers has decided on this issue, and a certain part of the cars are adapted to gas, the reason for this is that the carbon-containing liquid, i.e. oil products, are gradually decreasing in Uzbekistan. Currently, more than 17 million cars around the world are running on methane gas [20-26].

As can be seen from the table, when using natural gas, that is, liquefied and compressed gases, the release of toxic substances into the atmosphere is reduced by 2-3 times [27-30].

In addition, when compressed and liquefied gases are used in the car's internal combustion engine, it can be seen that the toxic substances in the used gases are reduced by two or three times. Also, when 1 litre of gasoline is used in an internal combustion engine, 16 m3 of air is needed, which means that 16 m3 of air is poisoned. If 1 m3 of compressed and liquefied gases are used, then 9.5 m3 of air is needed. So, it can be seen from here that when gas is used instead of gasoline, air pollution is less.

Table 1. The amount of gases released from cars running on gas fuel and intended for it (year-round)

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The content of toxic substances used	The amount of toxic substances that work in gasoline. tons/year	The amount of toxic substances produced when cars use compressed gases tons/year	Comparison of engines used in gas and gasoline tons/year	The amount of toxic substances emitted when LPG is used. tons/year	The amount of toxic substances produced when cars use compressed gases tons/year
CO	1,704	0.587	1,117 (65%)	0.346	1,358 (79%)
CH	0.284	0.207	0.077 (27%)	0.122	0.162 (57%)
NO2	0.113	0.138	0.025 (22%)	0.081	0.032 (28%)
SO2	0.005	-	-	-	-
C20H12	0.54 x 10-6	-	-	-	-
Total:	2,106	0.932	1,174 (56%)	0.549	1,557 (74%)

The main source of atmospheric pollution is vehicles with internal combustion engines (IYoD). When fuel is burned in IYOD, highly toxic lead compounds, heavy metals and toxic compounds are released, which cause serious diseases. Every year in Europe, 225,000 people die from diseases caused by toxic gases emitted from cars. In modern urban conditions, diseases such as atherosclerosis, various disorders of the cardiovascular system, and lung cancer can be acquired by breathing in street air [2]. The need for fuel that replaces gasoline for cars is increasing. Until this time, experts tested electric current, ethyl alcohol, natural gas, methanol and other elements as an alternative fuel to gasoline. Therefore, in many countries, special attention is being paid to the transition of motor vehicles from traditional fuel to alternative fuel. It should be said that certain works are being carried out in this regard in our country. As a result, Uzbekistan rose from 14th place to seventh place among the countries of the world regarding the transfer of motor vehicles to alternative fuel this year. It is known that now Uzbekistan is one of the few car-producing countries. Today, the streets of our country are full of light and reliable, comfortable and safe vehicles designed for passenger transportation, and if we are happy to see that the people are far away and their problems are easy, then there is a demand for them abroad as well. We are proud that it is increasing. The consistent application of modern technologies to the industry, and the acceleration of modernization work, make it possible to produce motor vehicles that meet world standards. It should be recognized that gas shows its special capabilities in terms of cost-effectiveness and all-around convenience. The main convenience of gas is its

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cheapness. At the same time, it is distinguished by environmental cleanliness and many advantages. Installation of gas devices on vehicles is becoming popular in all countries of the world. For example, now the management of the city of Paris has switched all public vehicles to methane gas. There are more than 800 gas stations in Germany, and measures are being taken to increase their number in the future. The fact that the expansion of the alternative energy network dramatically improves the atmosphere is clearly proven by the emission of harmful gases into the air from a car running on methane gas up to 5 times less [3]. The gas increases the power of the engine without stressing the car during operation. For example, the cylinder and piston system serve for a long time, the gas does not wash away the oil from the "walls" of the cylinder, it creates favourable conditions for good mixing of the fuel with air for uniform combustion, and the lubrication period is much longer. The gas burns almost completely, the pistons, valves and spark plugs do not burn, and the "load" of the pistons and crankshafts is lightened. As a result, the engine runs smoothly, vibrations and shocks are not felt, and the noise of the engine is reduced. All these factors, in the end, save more than two times the amount spent on fuel, the service life of the engine by 30-40 per cent, and that of oil and grease. Allows for 2x extension. Naturally, the expenses for their repair will also decrease [3].

Gas has other advantages besides economic efficiency. For example, it is possible to switch the car to both gas and gasoline on the way, starting from the car cabin. The car does not stop moving even when there are malfunctions in the supply part of the gas system. In addition, when the car's gas cylinder is completely filled, the car can move twice as much. This makes it more convenient for long-distance drivers. The owners of expensive foreign cars equipped with a catalytic neutralizer also positively evaluate the gas fuel system. This system also has a positive effect on the car's depreciation. If the gas is used correctly, the service life of rubber devices will be extended by five years.

It is known that cars emit tons of toxic substances into the atmosphere in one minute. Analyzes show that cars are responsible for air-polluting gases in the big cities of our republic. Therefore, the use of gas is important because it serves to improve ecology. Because there are almost no catalytic poisons in gas fuel. Most drivers have the opinion that keeping gas under pressure in a cylinder is much more dangerous than diesel and gasoline. It is not. Gas cylinders are much safer. They are made so strong that they do not pose a risk of cracking or exploding. Gas cylinders have been repeatedly tested for resistance to fire, acid, and high temperatures. As a rule, the cylinders are installed in places in the car where the risk of damage is low. In this regard, the famous company "BMW" studied the risk of damage to the car's body. It is known that the risk of injury in the part of the car where the gas equipment is located is only around 1-5 per cent [4].

It is true that reducing the environmental risk caused by the harmful gases emitted by a large number of motor vehicles is now of universal importance. Earlier, the creation of environmentally friendly cars was of little interest to ordinary people. The problem with these governments and Green organizations was the dates. But the steady rise in gasoline prices has fueled public interest in environmentally friendly cars and alternative fuels.

CONCLUSION

Today, in order to reduce air pollution by cars, the technical condition of cars and keeping them at

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the level of environmental requirements remain of primary importance. along with the transition to environmentally friendly and low-cost fuel types.

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