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## ***ANALYSIS OF POSSIBILITY FOR APPLICATION OF SOME STRATEGIES BY MOTOR VEHICLE MAINTENANCE***

### **ABSTRACT:**

Essence of traditional and modern strategy of motor vehicle maintenance is analyzed. Special attention is given to modern strategy of motor vehicle maintenance.

Fuzzy logic application enables large advantage in many human activities. Large possibility of its application is to use in the systems of motor vehicle maintenance.

Aim of the work is a review, in the briefest form, of fuzzy logic base, some causes of uncertainty in the systems of motor vehicle maintenance and possibility of its application by maintenance.

In order to achieve maximum effectiveness of usage of motor vehicles, in future more attention will be given to their maintenance, both through improvement of maintenance system and increased engagement of those who participate in its development, production and exploitation.

Without integral logistic support, esp. information systems for management of maintenance, we cannot speak about possibility to apply modern strategy for vehicle maintenance.

Two types of preventive maintenance are mostly used. First is preventive maintenance based on reliability information (on empirically defined distribution of possibility of work time until breakdown).

Main application of so-called accelerated strategies of maintenance is not to conduct any activity of preventive maintenance if it is not economically justifiable.

Nowadays there is a tendency towards combined application of existing strategies of maintenance. The reason is placed in variety of maintained vehicles. Second reason is existence of flaws of current strategy for maintenance.

By application of knowledge based system, or so-called soft computing, we come to efficient methods used for treatment of problems while maintenance of technical systems, from the aspect of imprecision. One of such systems is fuzzy logic. Fuzzy logic is rarely used individually. Mostly its application is combined with neuro computing, genetic computing and expanding the possibility of expert systems.

Application of fuzzy logic enabled many improvements, in large number of fields of human performance. Great possibilities of its application should be used in the systems of technical system maintenance.

Geometric model of management of process of preventive maintenance by fuzzy logic, which essence is showed in this work, should enable: defining of parameters in uncertainty of work of technical system; defining influence of specific parameters on the process of preventive maintenance of technical system; defining most influential parameter and order of activities that should be done, as defining moment to start preventive maintenance. Procedure of forming geometric model should be defined by maintenance manager, who is in authority of decision making about preventive maintenance of technical system.

Application of fuzzy logic during maintenance of technical system is justifiable by the fact that the model of maintenance is complex, esp. if it is taken into account that description of maintenance problem includes work and breakdown condition and also mid condition. By its application, we are closer to the goal of acquiring maximum readiness, effectiveness and minimal costs.

**KEYWORDS:** vehicles, maintenance and fuzzy logic

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