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AUTOMATIZATION PROCESS OF GIVING DIAGNOSIS MOTOR VEHICLES

ABSTRACT: Diagnostics imply procedures of defining condition and its cause, based on application of diagnostic means. Therefore, giving diagnosis means establishing of connection between vehicle and its breakdown and defining condition of vehicle, according to functions of criteria set in advance. During the diagnostic process, it is necessary to make a list of symptoms and list of breakdowns that may manifest through mentioned symptoms. It is necessary to define cause and effect relations between symptom and breakdown. Titles and ways of detection must also be precisely defined. When all of these activities are successfully completed, forming of diagnostic algorithms begin. If previously defined process of diagnostics is automated, then that is so-called automated diagnostic system. Process of giving diagnostics of the basic model for the diagnostic objects, as diagnostic stencils, consists of the following stages: Measurement and conversion, for establishing values of diagnostic parameters; Presenting values of diagnostic parameters in the system of Bull functions; Giving values to Bull functions of irregularity.

Optimization of diagnostic parameters has theoretical and practical importance.

Criteria for optimization may be: Minimal amount of symptoms; Minimal diagnostic time; Minimal work while giving diagnosis; Maximum correctness of given diagnosis; Minimal average (total) time for technical maintenance and repair by using diagnostics.

In diagnostic stencils, there are given content description of all connections between structural and diagnostic parameters of objects (analytic functions, statistic dependence, logical connections, tables, graphics...) on a specific mathematic level as Bull function. Therefore, it may be used as a universal diagnostic model of complex diagnostic objects. Visibility and relative simplicity of such a model simplifies the process of giving diagnosis.

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Key words: vehicles, automatic diagnostics process.

INTRODUCTION

Automatization of diagnostics represents necessary basis for creation of information bases of subsystems of technical maintenance and repair, as well as important functional part of automatized system for management in companies with larger number of mobile systems.

Automatization of means for measuring, converting and data processing enables simultaneous measuring of several different diagnostic parameters in different control points. Possibility to define average value of measured parameters and their analysis. Those possibilities for technical realization of diagnostic methods are unfeasible during classical measuring and analysis.

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