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**STATE OF PROBLEM OF FORMATION OF REPAIR-SERVING  
INFLUENCES COMBINE HARVESTERS**

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All studies on the subject, made earlier by different authors, can be divided into several groups. First group: research on optimization of resources diamantado and overhaul of its complex Assembly, representing the car indivisible object with inherent characteristics of dynamics of costs of technical maintenance. On optimized limit value of the accumulated costs of repair or spare parts set the rules for the cessation of use of the product for purpose of techno-economic considerations. Second group: studies on the rationale of the strategy the technical operation of individual machine elements, which condition is characterized by changing with the growing developments of the parameters. Studies in this group reported to the working methodology, but these methods allow to determine the optimal frequency of monitoring and the permissible deviations of the parameters are applicable only to independent access to control and repair component parts. Third, the research on grouping strategies repair-serving for the elements in the strategy TOR for the machine. Known methods of forming

compound repair-serving use principles of supporting transactions and other decisions, but do not provide a single, integrated solution on the level "an integral part – Assembly – machine".

The study of repair-serving for group replacements of parts dedicated to the work of A. V. Barinova, E. A. Volodarsky, A. T. Saeva, G. S. Rahutin, V. Rogozhkin, A. S. Streltsov, V. I. Chernoiyanov, J. M. Sinugina and many other scientists. Considered the development does not meet the requirement, given the structure of the object, the results obtained justify operating rates effective for use in maintenance, diagnosis, and also for grouping these operations, but cannot be applied to justify the set of control indicators of the system of repair-serving elements with sequential dependent access to the product. Held in conditions of control and diagnostic operation specified for parameters whose measurement is possible is capable of cleaning methods. If it does not specify the depth of disassembly and rules for decision-making in the refinement of the preliminary diagnosis for diagnostic the signs.

Comprehensively the issues of health management of machines studied by V. M. Vlasov, S. V. Golovin, A. S. Denisov., L. V. Dichterischen, I. E. Dyumin, S. A. Egorov, D. V. By Karagodin, E. G. Keenom, G. V. Kramarenko, A. G. Krause, K. Koshkin, Etc., E. S. Kuznetsov, V. M. by Malinin, A. I. Selivanov, M. T. Hasimom, A. M. Sanina etc. In some of these works by minimizing a function of the total unit cost determined the range of group replacements parts and time to their maintenance. However, the authors do not consider the possibility of conducting tests on partial write-off in connection with preventative replacement or elimination of the consequences of failure. The authors ' advice for effective elements, but not for the object of repair in General, as prescribed by its strategy of maintenance and repair is not associated with the management of the technical condition of individual components.

The analysis of researches proves insufficient justification assignment rules repair: they are not considered complex and relationships that are often optimized on a variety of methodological and information basis and the component parts are considered from the standpoint of the individual repair, while it is not the damage to the environment as a result of work of internal-combustion engines of combines.

Thus, the analysis allowed to approach the evaluation of the achieved level of development of the problem of optimization of the process of determining the need for repair and maintenance. Thanks to the work done by the scientists mentioned above, made possible the formation of research directions for improving the system repair-serving combines.