

интернет-портал на согласование дистрибьютору;

- дистрибьютор или другая подрядная организация, имеющая с ним договор на оказание соответствующих услуг, подтверждает рекламационный акт или отправляет его на доработку инженеру по гарантии ДСТОА (блок 6);
- ДСТОА в соответствии с утвержденной дистрибьютором инструкцией корректирует рекламационный акт (блок 7);
- стоимость услуг по гарантийному ремонту компенсируется дистрибьютором дилерскому предприятию в соответствии с тарифным планом по договорным отношениям между ними (блок 8);
- в случае, если ремонт не покрывается гарантийным обслуживанием, рассчитанная стоимость его ремонта оплачивается владельцем АТС (блок 9);
- выполняется отчет по гарантийным рекламациям для дистрибьютора и рас-

печатка полученных результатов (блоки 10, 11).

Внедрение проекта «Расширенная гарантия» до 5 лет в дилерскую сеть «Тойота Моторз» позволило закрепить имидж автомобилей марки «Тойота» в России, расширить объемы их продаж, повысить загрузку ДСТОА.

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# THE ISSUE OF CENTRALIZATION AND DEVELOPMENT OF CAR WARRANTY SERVICE

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#### **ABSTRACT**

In the article the authors demonstrate practicability of centralized management schemes for additional car warranty services which meet the principles of sustainable development of the after-sales service at the dealership service stations and increase in their profitability optimally, improve customer service culture of car owners by extending the warranty and planning costs for the maintenance of vehicles. The authors propose a tool for the implementation of the project «Extended Warranty» in Russian terms; the management algorithm of additional warranty service and represent the operation process of the proposed technical-and-economic project.

## **ENGLISH SUMMARY**

**Background.** The manufacturer warranty of vehicles is gratuitous repair of malfunctions (defects) that have arisen as a result of violations of assembly technology and (or) production within a certain time period or mileage. Warranty works are technical actions to eliminate failures and malfunctions that result from processes of component parts running-in, as well as from «hidden» defects. In this case the car owner pays only for routine maintenance.

To ensure the competitiveness the manufacturers of vehicles constantly extend the warranty period to eliminate failures and malfunctions. This is an incentive not only for continuous improvement of quality and suitability of produced vehicles, but also a means of increasing the number of arrivals at dealership service stations (hereinafter-DSS).

Automobile factories have recently increased the warranty period to 3 years, but taking into account the real running conditions, they often impose restrictions on mileage for particular car components (suspender, steering, interior trim, etc.). One of the options for further increase in terms of warranty is to provide car owners with an additional service, so-called «Extended Warranty». Cost of the policy for such a service is roughly equivalent to «Comprehensive automobile insurance» insurance policy per year.

**Objective.** The authors attempt to prove the hypothesis that follows. According to the authors, the main aim of «Extended warranty» is car sales expansion and then attraction of the sold cars to maintenance service at DSS. «Extended warranty» project will make it possible to attract to DSS owners of cars of 4th and 5th year of operation to perform maintenance and repair and thereby enhance profitability of DSS.

According to «Extended warranty» DSS conducts inspection checkup of the vehicle technical state and eliminates discovered malfunctions.

In the authors' opinion these warranty costs of DSS (taking into account, that DSS eliminates defects and malfunctions gratuitously) along with production costs, storage costs and shipping costs of vehicles should be included in their prime cost.

**Methods.** The authors use mathematical and statistical methods and tools, as well as management instruments.

**Results.** The authors propose the formula for definition of warranty costs share in the prime cost of one vehicle for the annual period of operation (G):

 $G=C_{ron}/S_{ron}$ , %

where  $C_{roa}$  – warranty costs for one car per a year in rubles;  $S_{roa}$  – annual prime cost for vehicle (i model) production per a year, in rubles.

To reduce the vehicle prime cost, it is necessary to minimize the total warranty costs

 $\Sigma C_{ro} = C_{rs} + C_{sq} + C_{mar} \rightarrow min$ , where  $C_{rs}$  – technical operations costs in rubles (control-diagnostic and repair works to restore lost working capacity);  $C_{sq}$  and  $C_{mar}$  – costs of spare parts and materials in rubles.

The average cost of one warranty repair is calculated the following way:

$$C_{\rm cp} = \sum_{i=1}^{N} C_{\rm ro} / N_{\rm ro} ,$$

where  $C_{cp}$  – average cost of one warranty service (one repair) in rubles.;  $\sum_{i=1}^{N} C_{ro}$  – general warranty service for a particular time period in rubles;  $N_{ro}$  – the number of warranty services for the same period.

Currently, the extension of warranty periods is more centralized, and is carried out through central-office manufacturing companies (the distributors).

Pic.2 shows the process of additional policies «Extended warranty» distribution. After car purchase at DSS the car owner can buy «Extended warranty» policy at any time within the basic manufacturer warranty. DSS receives compensation fee for policy sale, the remaining funds shall be transferred to the account of the distributor (car manufacturer) and bank of the contractor, which carries out an extended warranty and controls on behalf of the manufacturer the entire process of extended warranty service.

Monetary means received by the distributor for warranty policies form warranty fund and are spent as intended after termination of general warranty period set forth by the manufacturer. To reduce financial risks and losses for additional warranty service, it is possible to include in the management scheme an insurance company.

The mechanism of reimbursement under the policy «Extended warranty» is the following (Pic.3). In case of malfunction within additional warranty period, car owner goes to DSS. If malfunction is covered by warranty, DSS sends a corresponding request to the distributor, who analyzes the claim itself or transfer it to the skilled contractors. The distributor or contractor checks the validity of each complaint and report their results to DSS. Only after claim approval DSS starts warranty repair.

The costs of performing the necessary repair actions under the policy «Extended Warranty» are reimbursed to DSS by the distributor.

Technologically, management of warranty service is carried out according to the algorithm (Pic.4).

- Warranty service starts with basic data entry (general information of vehicle, car owner, malfunction or defect) (section 1);
- The start data of warranty service and previously performed technical actions (in framework of warranty service) are checked (section 2);
- Technical specialists of DSS make inspection checkup to find malfunctions and to specify volume and value of the undertaken works (section 3);
- In reliance on the inspection checkup results, it is decided to make warranty or commercial repair (section 4);
- Necessary technical actions are performed (repair, replacement of defective parts) and a claim report is prepared for reimbursement by car manufacturer or other authorized organization (section 5), which is sent through an Internet portal for approval of the distributor;
- Distributor or another contractor, which has a contract with him for the provision of related services, confirms the claim report or sends it back for revision to the engineer under the DSS warranty (section 6);
- DSS in accordance with the approved distributor instruction corrects the claim report (section 7);
- The warranty service costs are compensated by the distributor to DSS in accordance with the tariff plan for the contractual relationship between them (section 8);
- if repair is not covered by warranty service, the calculated repair cost is paid by car owner (section 9);;
- a report on warranty claims and printed copy of the obtained results are prepared for the distributor (sections 10, 11).

**Conclusions.** In Russia the implementation of additional policies «Extended Warranty» is carried out through the existing dealer network of the distributor. The main participants in the development of additional warranty service in Russia are world famous brands «Ford», «Toyota» and «Renault».

One of the successful examples of «Extended warranty» is «Toyota Motors». Implementation of the project «Extended Warranty» up to 5 years in the dealer network «Toyota Motors» has allowed to strengthen the reputation of the brand «Toyota» in Russia, to expand their sales, increase the workload of DSS.

<u>Key words</u>: management, repair, centralization, system, extended warranty, automotive transport, vehicles, dealership auto service stations.

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