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Foreign Systems for Ensuring the Operability of Construction Equipment

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Abstract. *In the countries of Western Europe and the United States, two trends prevail in the use of construction equipment: branded maintenance of own equipment and rental (leasing) with maintenance. There is also a confluence of both trends in the activities of large firms.*

Keywords: *technical operation, aspects, facility, maintenance system, foreign countries.*

Introduction

Service technology has become a separate branch of business. Many, even very large construction companies, prefer to provide maintenance of their equipment to specialized organizations. Manufacturers of construction equipment organize regional service centers, often on the basis of firms that also perform dealer functions. These firms provide high quality services at all stages of the life cycle of machines: from acquisition to disposal. The competition in the service sector is very high. Therefore, firms that have certified their services according to the ISO 9000 system of standards enjoy the advantage.

In recent years, there has been a clear trend in the United States of decreasing the size of the fleet of construction machines owned by users, and vice versa, the number of machines involved in leasing and leasing is growing rapidly. [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15]

Main part

There is also high competition in the rental and leasing market for construction equipment. Leasing enterprises are forced to have a fairly clear idea of the needs of the market and the demands of the consumer, systematically work to reduce the level of current costs, and ensure strict control over compliance with the terms of the lease (leasing). As a result, a system of criteria for the quality of the work of the rental enterprise was formed.

Thus, the signs of high quality of services for the provision of cars for rent without a driver are [16, 17, 18]:

- the constant availability of a large selection of types and sizes of machines, as well as auxiliary equipment to meet most customer requests. For this, schemes are sometimes used when rental enterprises acquire a significant fleet of cars on a financial lease and then sublease or sublease the cars;
- provision for rent, as a rule, of serviceable equipment, equipment with little operating time. About 90% of the fleet of cars provided for rent are in operation for no more than 3 years;
- only high-quality models of equipment manufactured by manufacturers with a high reputation are provided for rent,
- most equipment failures are eliminated at the workplace within two hours. If necessary, the failed machine is replaced with a working one. The repair and maintenance service operate around the clock;
- delivery of equipment to the customer is carried out at the required place and at the required

time;

- the maximum possible exclusion of the loss of working time of machines leased is ensured due to the clarity of technical operation,

- tenants are provided with recommendations on the rational selection of equipment for the effective use of leased machines;

- personnel in contact with customers are carefully selected and well trained;

- rental rates are at an acceptable level for the customer and. correspond to the high quality of service provision.

The system of quality of services of the rental company lies on three "pillars":

- high qualification of specialists;

- effective marketing service;

- high quality of services for the technical operation of equipment.

Services for the technical operation of machines are often included as part of

part of the "goods" for the provision of cars for rent. In addition, they can be offered independently of the lease as a separate product.

In general, maintenance services include the following complexes:

- commissioning of machines;

- maintenance, diagnostics and current repair during the warranty period;

- diagnostics in the post-warranty period;

- current and application repairs of machines and units in the post-warranty period;

- overhaul of machines and units;

- provision of spare parts (new and refurbished).

Leading rental companies and dealers often carry out the full range of technical maintenance of machines in-house. However, in some cases, some of the listed services are performed under contracts by third parties.

Conclusion

The high quality of services for the technical operation of machines is characterized by the following features:

1. The state of technology contributes to the maximum extent to solving the production tasks of the client and maintaining its competitiveness.

2. Considerable attention is paid to preventive measures aimed at minimizing the failures of machine assemblies as much as possible.

3. Proactive repair of units is carried out in a timely manner, as long as this work is not time-consuming, complicated and does not require large expenses and long-term downtime of equipment.

The limits of the main characteristics of the efficiency of technical operation are as follows:

- the coefficient of technical readiness must be at least 85 ... 90%;

- the ratio of the total annual labor costs for maintenance, diagnostics and current repairs to the annual operating time of machines is not more than 0.3 ... 0.4 (man-hour / machine-hour);

- deviation from the maintenance schedule is not more than ±10%;

- the degree of planned repairs is at least 80 ... 90%;

- the average time spent on the application repair, no more than 2 ... 5 hours;

- the average time between machine stops due to breakdowns is at least 60 hours.

Achieving such a high level of operation of equipment is possible only with the organization of the STE, built on the basis of the latest scientific achievements and modern technologies.

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