diesel fuel heating for effective performance of diesel internal combustion engine.

Power tool, diesel fuel, diesel biofuels, heating.

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MODEL with quality units TECHNICAL SERVICE TO THEIR CERTIFICATION

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The results of research determining quality technical service units. The model quality measures technical service units in their certification. Developed by a team of technical and economic parameters as indicators of quality and safety technology and technical service.

Technight service, farming, standardization and quality.

Resolutionska problem. Beforeand acts in Ukraine were published in 1993. Decree of the Cabinet of Ministers of Ukraine "On standardization and certification and" The list of products subject to compulsory certification in Ukraine. " In 1996 published some new ISO which establishes the basic principles, structure and rules of the existing state system of certification - UkrSEPRO. Certification should generally provide life insurance and health, protection of their property and environmental protection. In Ukraine there is a single certification system - UA-performing interrelated activities: product certification (processes and services); certification of production; certification of quality.

The most important is the need to consider the quality management (goods and services) create a common culture of quality and continuous improvement of quality control in the industry andhropromyslovoho complex. Program of the Government of Ukraine determined "On measures to improve the quality of domestic products" articulated state policy in the field of asistyu based on supporting and encouraging the efforts of enterprises and organizations in their efforts to meet the needs of

consumers by improving the quality and competitiveness, the development and introduction of modern methods of quality management.

Andstitutionalism recent research. In Ukraine barely underway research in the field of quality assurance and quality control. Most domestic enterprises do not use modern techniques to improve the quality and business excellence based on the principles of comprehensive quality management (TQM), and are widespread in Europe and the world. No support, promote individual experience of Ukraine, which gained considerable experience in quality management system and achieved a high level of business excellence, no organized system of cooperation and exchange of experience between them. The basis of modern quality management systems on the experience that has been accumulated over the past decade in the field of control and quality management. Enterprises Ukraine passed his way in the development of control systems and quality management systems from simple technical control systems, defect-free and defect-free products manufacturing work to complex systems of quality management (KSUKP).

Metand dperssurvey findings. Pidvyschennya Effectsvnosti onservants uabout technical service units provided by the development model of quality indicators for the certification.

Rezultaty research. Prand agricultural development thathniky (hereinafter - BHT) used nomenclature indicators that are regulated by standards or regulations for its production. Quality rating BHT performed by methods regulated in the specifications for manufacturing. In the system of quality control requirements foreseen formulation parameters and indicators of production methods for its assessment [23].

Youdi agricultural machinery subject to mandatory certification Dhlamentovani "Pereconsecutive productionsher, uabout Sectionidlyahaye shellsv'yazkoviy certification in Ukraine ", approved by the State Committee of Ukraine for Technical Regulation and Consumer Policy on February 1, 2005 №28. However, these regulations are not always clearly stipulate the list of indicators as BHT and methods of certification tests. Their total number exceeds several dozen. At existing principles describe the idea of efficiency is not provided them with quality.

In theidpovidno "Peretreatment productionsher, uabout Sectionidlyahaye shellsv'yazkoviy Certification in Ukraine "by BHT species subject to certification testing [16]. These include: Road vehicles, parts and accessories, including:

andvtomobili passenger, their bodies and chassis, trucks, their bodies and chassis, buses, trolleybuses, their bodies and chassis, trailers, their bodies and chassis, scooters, light motorcycles, motorbikes, scooters, parts of road vehicles and supplies; agricultural machinery, including: machinery for the preparation and tillage, sowing machines and planting, means the use of pesticides and agrochemicals, machinery for harvesting and post-harvest grain handling, machine navantazhuvalni-unloading vehicles, auxiliary, machinery for livestock, machinery and poultry equipment, machinery for harvesting and feeding.

Unfortunately, in the "List of products subject to compulsory certification in Ukraine" no tractors as the main mobile power tools in the production of agricultural products and
tacossame technical service, as the object of
production.

The system of quality management standards ISO to ISO 9001-2009, ISO ISO 9004-2001 examined in five sections [2- 14]: quality management system; liability management; resource management; output; measurement, analysis and improvement.

Vypusfor products associated with the development and design of products and substantiation requirements for it. These issues are widely discussed in general terms in the regulations. Principles of products in GOST 15.001-88 regulated "system development and staging to production Production of" nomenclature indicators presented in GOST 22851-77 'Choice nomenklaturы
Indicatorhey qualities promышlennoy products. Main
onlozhenyya. " Requirements more particularly described in the technical specifications for the manufacture of agricultural machinery. For some they are the most widely discussed in the above specification.

Prand justifying range of quality indicators advisable
determine which group products include BHT. Subject to the provisions of paragraphs 24 and 25 "List of products ..." Complete equipment refers to products subject to repair, and some parts relating to products that can not be repaired.

Justification of the choice range of quality indicators expedient to perform accounting, appointment and conditions of use
Products; analysis of customer requirements; problems of quality control; properties and structure, characterized by; basic requirements for quality indicators. With this in mind it is advisable
Roseviewed the following standardized quality indicators adapted to agricultural machinery and its components listed in
Tablel. 1. Standard 22851-77 establishes the following range

aboutAIN sets of indicators of quality in product properties (Tab. 1), characterized them.

1. Groupsand indicators of quality agricultural machinery.

Num	Name of quality indicators BHT	Marking	Stakekist sub-indices	BHT Group	
				those not be repaired	those be repaired
1	Performance appointment	P	9		
2	Economic Indicators toykorystannya raw materials, materialiv, fuel and power	E	7	+	+
3	Performance Categoriesadiynosti	H		+	+
3.1	Reliability	H_{to}	3	+	+
3.2	Durability	H_d	12	+	+
3.3	Pemontoprydat-Categoriesawns	H_p	2	-	+
3.4	preservation	H_{from}	2	+	+
4	Performance Ergonomic	E_p	4	+	+
5	Performance aesthetic	E_{with}	8	+	+
6	Performance technological	$That_x$	4	+	+
7	Indicators trans-portabelnosti	T_p	5	+	+
8	Performance standardization and unification	$Article_{in}$	4	+	+
9	Patent Indicators Legal	PP	3	+	+
10	environmental indicators	E_{for}	2	+	+
11	Pokaznykybezpeky	B	3	+	+

Prand assessing the level of quality necessary to consider the economic indicators characterizing development costs, production, operation or use of products. To characterize the scattering actual values of certain indicators of quality in different units of one type of product should be applied indexes homogeneity. Depending on the specific features of BHT and conditions of use of some quality indicators are presented in Table. 1 may be absent. If necessary, introduce other indicators of the quality characteristic of the machine or component parts. Indicators purpose characterize the properties of BHT,

uo determine the basic functions for which it is intended, and determine its scope.

GlueLadies purpose indicators can serve the following indicators: Performance; maximum and minimum speed;
sweatzhnist; agility; permeability; The content of nutrients; harmful impurities; The minimum outside temperature.

Dindicators of economic use of raw materials, fuel and energy are: unit costs of raw materials (materials);
cost of raw materials (materials) at regulated conditions; specific fuel consumption; specific energy consumption (energy); efficiency; fuel consumption for a given (regulated) mode of operation; power consumption (energy) for a given (regulated) mode of use.

Indicatorand reliability characterize properties: reliability; durability; maintainability; preservation.

Erhonomichni indicators characterizing the system "man-product (eg," man-machine ")" and take into account a set of property rights: hygiene; anthropometric; physiology; psychological. They are found in industrial and domestic
processes.

Estetychni indicators characterizing information expressiveness, rationality form, composition and integrity of the perfection of the production performance of products. By the aesthetic parameters include: line style; compliance fashion; functional and structural adaptation; organization of three-dimensional structure; color color; quality and coverage
finishingand surface; cleanliness performance combinations, roundness and mating surfaces; clarity of performance logos, signs and packaging.

Indicatorand thathnolohichnosti harakteryzuyutb owandstyvosti
Products, Determining the optimal allocation of costs of materials, labor and time facilities at the technological preparation of production, manufacture and operation of the product. These include: the complexity of production; technological cost of the product; the relative complexity of training in the operation of the product; unit cost of repairs.

Indicatortransportability and fitness products to characterize the movement in space (transport), which is not accompanied by its use
abof consumption. These include: the average length of training products to transportation; average complexity preparation
productionsher to transportation; average length settings

productionsher on a certain kind of means of transportation; volume ratio using a means of transportation; the average duration of unloading party products with a certain kind of means of transportation.

Indicatorand standardization and unification characterize the intensity of production standard, unified and original parts, and the level of unification with other products. These include: vzhyvanosti factor; repeatability coefficient; coefficient of mutual unification; rate unification group
products. Patent legal parameters characterizing the extent updating technical solutions used in the production of patent protection and unobstructed sales in Ukraine and abroad. These include: patent protection; Novelty; territorial distribution.

Indicatorand characterize the level of environmental harmful effects on the environment arising during operation or
consumption products. Selection and determination of these parameters is necessary to consider the requirements of environmental protection. These include: the content of contaminants released into the environment; probability of emission into the
environment harmful particles and gases emitted during storage, transportation, operation or consumption of products.

Indicatorand characterize the safety features of products that contribute to safety when using staff. These include: the probability of failure-free operation; the response time of protective devices; dielectric strength insulation
conductive parts of the product, which may clash of rights.

The system above 11 sets of indicators for efficiency advisable to describe their idea analytical expression of set theory:

{Ω}= {P} U {E} U {H} U {Er} U {{EsU TehU {May} U {} U {stu PpU {Ek} U {B}. (1)

Consideringand composition of the sub-indices of 11 groups (Tab. 1) general
forilkist sub-68:

$$\sum_{1}^{11} From = \sum_{1}^{9} P + \sum_{1}^{7} E + \sum_{1}^{19} H + \sum_{1}^{4} Ep + \sum_{1}^{8} Ewith + \sum_{1}^{4} Thatx + \sum_{1}^{5} Tp + \sum_{1}^{4} Articlein + \sum_{1}^{3} PSection + \sum_{1}^{2} Efor + \sum_{1}^{3} B = 68 \quad (2)$$

DTo determine the direct number of quality indicators to be monitored is advisable to use a particular machine standards GOST 2860-94, GOST 14.201-83, GOST 14.202-73,
DOST 14.205-83, GOST 12971-67, GOST 14192-96, GOST 16456-70 [11-17] ESTPP standards, SSBT and drawings. With certification tests reasonable to evaluate the group of economic, ergonomic, environmental performance, safety and other subject specific machine. Number of subgroups to be evaluated at

certification test is about 16, ie about 25% of the total.

To Sectionidstavi conAuthority is often higher dperssurvey findings Blvd.and developed group techNIKO economic indicators even assti and showingers even assti

thathnolohiyi security forces and technical services (Table. 2, Tab. 3).

2. TechNIKO economic indicatorand Icostand Fauremuvan technight service.

Name of technical service quality indicators	Technical service				
	Materialy and products (technical fluids and fuel)	In theytratni materials	Fromap asni parts	In theyroby that Categoriesis subject to repair (to be	In theyroby to be repair and restoration
Purpose economical toykorystannya	+	+	+	+	+
raw materials, materialiv, fuel and energy	+	+	+	+	+
RELIABILITY:	+	+	+	+	+
toezvidmovnist	-	-	-	+	+
dovhovichnist	-	-	+	+	+
remontoprydatnist	-	-	-	-	+
fromtoerezhennya		+	+	+	+ +

3. Indicatorand Icostand technoloBIR and Bezpekand Fauremuvan technight service.

Name of technical service quality indicators	Technical service				
	Materialy and products (technical fluids and	In theytratni materials	Fromap asni parts	In theyroby that Categoriese shall be subject to	In theyroby to be repair and restoration
Erhonomichnist	-	-	-	+	+
Aesthetics	-	-	-	+	+
Tehnolohichni performance	+	+	+	+	+
Fitness for carriage	+	+	+	+	+
Performance standardization and unification	+	-	+	+	+
Patent law	+	-	+	+	+
Environm ental	+	+	+	+	+
Security	+	+	+	+	+

Conclusion. In thestanovleni of products, which include farming and its components. Determined the number and names of groups as indicators of agricultural machinery. Drafted analytical model quality measures and a number of sub-indicators. Number of indicator sets is 11 and subgroups - 68 items. Established groups and subgroups indices to be evaluated in the certification tests. Their number is under 4 groups and including 16 subgroups. Developed by a team of technical and economic parameters as indicators of quality and safety technology and technical service.

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Pryvedenы nauchnыh Results of research on indicators Definition Quality tehservysnыh formyrovanyy. System model is designed indicators Quality Tools at formyrovanyy tehnycheskoho s Standardization. Razrabotanы group techno-economic indicators and indicators QUALITY Quality and safety technology tehnycheskoho SERVICE.

Technycheskyy service, selskohozyaystvennaya Technology, standardization, indicators of quality.

Results of scientific researches by definition figures of merit of service shapings are resulted. The model of system of figures of merit of shapings of technical service is developed at their standardization. Groups of technical-and-economic indexes of quality and figures of merit of production engineering and safety of technical service are developed.

Technical services, agricultural machinery, standardization, quality indicators.