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FRAMEWORK OF MONITORING RELIABILITY OF AGRICULTURAL MACHINERY

VN Bolshakov, PhD in Law
AV Nowicki, S. Tarasenko, Ph.D.

The article analyzes legal support agriculture monitoring to improve the efficiency and reliability of agricultural machinery.

Engineering, monitoring, machine legal security, reliability.

Problem. In carrying out monitoring activities in agriculture Ukraine using various uncertainties in the law of our country and other countries. Therefore, monitoring activities more effectively, the higher the level of training of professionals involved in it, the higher the level of organization of work and the higher the legal security [6].

Analysis of recent research. At the present stage was very effective and is a Japanese industrial monitoring, put on a state basis. There is a misconception that leap of Japanese industry began only after the Second World War [1, 7, 8]. It should be noted that Japan embarked on industrialization in the late nineteenth century. By hook or a liar she wanted to catch up with advanced countries. First Japanese "vymanyuvaly" trade secrets, promising place in the country large orders of various products, but this soon revealed their plan. The occasion served to expose the curious incident. The Japanese asked for them to review a copy of the pump, promising to make a large order. By chance, in a sample that was offered to them was a defect - a hole in the cylinder, properly closed bolt with two nuts. The Japanese copied pump, literally, in the form as it saw that a hole, bolt and nuts. This case was extensive discussion and deservedly gained a reputation as the Japanese "pidrobnykiv."

However, Japanese experts in information activities and scientists continue to work hard, to borrow other people's secrets, making adjustments in production, improving old and inventing new. Over time, the Japanese have mastered the production of smokeless powder, torpedoes, new methods of casting steel appliances

manufacture of electrical high power spotlights. Having information through secret of producing high quality optical lenses, the Japanese market is flooded cameras high quality at prices competitive with that was simply not possible. The same happened with the production of bicycles. Since 1910 the words "Made in Japan" has become a symbol of

high quality and cheap goods [15]. Until now, Japanese buyers, tourists, students invade European and American cities, each as a bee in the hive, broadcast in Japan new trade secrets, especially the Japanese code of morality and life, known as "Boo sido" requires each Japanese perform outreach activities to the state and the monarch, considering it a manifestation of the sacred honor and duty. [15]

The tasks of information became not only the results are completed inventions, formulas and techniques, but also detect the invention to its very early stages, applications for patents, inventors and small laboratories who are suffering financial hardship. This would then use them to your advantage and would enable the acquisition of secrets "know how" organization "brain drain" and many other dirty and sophisticated methods. Fighting them is always conducted no less subtle ways, which became the prototype of the industrial counter.

As confirmed by practice, business is growing by the same laws as the military activity [1, 6, 7]. This makes it possible to conclude that in business, as in military affairs is time humanization process, and therefore the change of bloody fighting and industrial espionage to meet the challenges of entrepreneurship came special information research [17].

The purpose of research. Therefore, the purpose of the article is to identify based on monitoring of logistics APC (open literature and conducted observations) combines performance and reliability of complex agricultural machinery of domestic and foreign production, analysis of the causes and trends of change, forming areas of improvement.

Results. It is well known that large farmers in Ukraine is not always prefer domestic-harvesting complex and agricultural machinery for their poor quality. This raises the question of how an engineering company manages to stay afloat, engaged in manufacturing and sale of their products. It is well known that in the former USSR was not his engineering company, which would be engaged in designing and manufacturing combine harvesters. This technique farms in Ukraine supplied mainly Rostov ("Rostselmash") and Gomel ("Gomselmash") plants Agricultural Engineering [4].

Note that the "Hersonmashi" produced very different Harvester - Maize. The idea to expand the range of Kherson plant originated a few years after the collapse of the former Soviet Union. Incident arose: the breadbasket of Europe, does not produce grain harvesters. It should be noted that allocate money for the purchase of imported technology for the agricultural sector as entrepreneurs farmers was not possible.

So in 1992, Stalin Design Bureau "South", better known as a specialized Bureau (SCB) for the design and development of ballistic

missiles began to draft combine harvester. In 1995, the "Hersonmashi" for design documentation SCB "South" made a compilation of a prototype harvester "Slavutich". In the course of NDKR found that because of mistakes that were made in the calculations, the wheels did not stand the weight of experimental combine [4].

In 1993, under orders of the President of Ukraine Leonid Kuchma at the "Hersonmasha" began to develop institutional and legal framework for the establishment of a joint venture with the world's largest manufacturer of agricultural machinery John Deere. It was expected that the company will give John Deere Ukrainian agricultural producers assembly production technology and will supply components. According to the calculations of the Prime Minister Pavlo Lazarenko, after the implementation of such a project budget will save on subsidies village about 220-250 m. Per year. However, with unidentified reasons this project was made not only remained on paper [4].

Since 1998, the "Hersonmashi" started production of improved models combine harvester "Slavutich". In the operation on Lanaja Ukraine harvesters "Slavutich" found that they have a low reliability due to the significant failure rate [4].

According to the conclusions of experts and specialists, products' Hersonmashu "proved uncompetitive in the market combine harvesters [4]. As justification for this conclusion are the following facts. Technical Director Harv East Holding Artem Hrishunenkov, based on a systematic analysis of the performance of domestic agricultural concluded: "Imported and domestic harvesters can even compare" [4]. Chief Engineer "Prodexim" Yuri Rohovoy says: "Kherson" Slavutich "and" Scythians "(combine harvester model, which" Hersonmashu "began producing in 2012) are broken every day" [4]. In connection with the specified it should be noted that the day idle combine during harvest each hectare crumbling around quintal of wheat and annual yield losses due to downtime combines up to 6 million tonnes.. Agricultural producers and farmers also indicate that combines Kherson is a very important factor in increasing the cost of grain. According to the findings of the compliance officer Paul agricultural department Hrynkiv per ton of grain harvesters "Hersonmashu" spend 3.5 -4.5 l fuel, while foreign counterparts - about 1 liter [4].

The reasons for the low reliability of domestic appliances are [2, 10, 12, 14]: structural deficiencies in the design phase (20-30%); failure due to poor quality manufacturing and assembly machines (20-30%); failure due to low technical level and quality of materials was reasonable element base component (35-40%); failure resulting Inappropriate use of technology in agriculture and low qualified staff (10%); Other failure - 5.10%. For some machines (eg combine harvester "Center" a survey of

operation (1998-1999.) Destruction and damage element base 58% of the total number of failures [2]. To ensure quality control of agricultural technology (an indicator of which is reliability) as of 2005 were seventy-four standards specifications and production conditions [16]. However, as the analysis of the shortcomings of modern technical specifications (TS). compared with THAT 1980s, include the exclusion control methods and lack of performance required level of defects and impact properties that are monitored for quality technology, its reliability [16]. At the same time the highest percentage of failures that often exceed 35-40% caused by low quality materials and components.

The reasons for the low reliability of agricultural machinery is also the absence of domestic plants testing laboratories are required to calculate the components and connections, testing new design solutions and construction machinery units in general.

In [5, 9] conducted a statistical analysis of developments failures combines Don-1500 and its domestic counterpart Slavutich GLC-9.Despite the fact that Ukraine is presented and is sufficiently wide range of harvesting machines, choice of research these machines due to the fact that they, like any other design decisions are traditional and conventional technologies. The article noted that developments presented 23 combines, both in cars and on years of operation with a large divergence distributed, reflecting the instability of the real conditions and technical state machines. Research has established that the lowest value is 190 tons of achievements, and the largest is 1443 tons per year, ie, variation scope is considerable value in 1253 t. The author notes that the maximum mean time combines with the second year of operation, because of the generally known fact increase the level of reliability of equipment at the completion of the initial period prypratsyuvannya. The coefficient of variation does not exceed 0.3 [9].Haukovyy and practical interest to detect changes in time between harvesting not only as far as they age, but in the age groups for a particular year of operation, which is essential in the selection of a combine harvester from the standpoint of reliability. Going through hard times current local agricultural machinery, but at the same time, Ukraine manufacture of modern facilities for the preparation and distribution of food (ZPRK) in cattle farms. Production ZPRK started at JSC "Bratslav agricultural machinery plant", JSC "Galeschina Machine works" and OJSC "Umanfermmash" [11]. The leader and the first domestic enterprise, which in 2006 started the release ZPRK OJSC "Bratslav". According to the technical passport on the machine, mixers Feeder "Bratslav" accurately weighting each component of the diet and uniform distribution of animal feed. Today the company offers fermski combines

feed mixing capacity with 8, 9 and 12 m3, working on the principle mixer and aggregated with tractor class 1.4.

JSC "Umanfermmash" produces fermskyy Combine CRC-11 has a capacity of 11 m3 and is driven by a tractor class 1,4-2. For the preparation of complete feed mixture that contribute normalized feeding, increase consumption and reduce the loss of forage machines can choose from a lineup of fodder KZN "Daniel" (JSC "Galeschina Machine works), with a capacity of 6, 9, 12, 18, 24 m3. But as the analysis, high quality domestic ZPRK largely achieved through: use of highly basic units and units from leading manufacturers from Italy, Russia, Ukraine; works to attract qualified personnel; acquisition of manufacturing plants advanced equipment. That is, the technical level ZPRK as CCC "LMS" on reliable and effective combination of components "Man", "car", "medium".

However, the benefits of agricultural machinery produced in Ukraine and CIS countries, include better adapted to the local varieties of fuel and lubricants and compliance with national agricultural technologies. Domestic farming in 3-6 times cheaper than imported, and the cost of spare parts and technical service - 5-6 times [14].

The article [3] noted that in 2005 the open printing announced that the company Ford, Claas, Deutz said about the possibility of guaranteeing their work without repair tractors in furthering 3-5 years [3]. It is no longer operating hours. As in most studies, and the car's. But at the same time in publications by our scientists had to respond to this important information and achievements in the field of agricultural machinery reliability of such well-known companies such as Ford, Claas, Deutz and others. We agree with the authors of [14] that the criterion of "money" farming can remain competitive in the markets of Ukraine and the CIS, while ensuring an appropriate level of reliability indicators. But in today's environment should not just listen to the authors and to take steps for a new way of thinking and enter new areas of science and reliability strategies aimed at production equipment with guarantee operation for years without repairs [3]; effectively use methods of system analysis and structural redundancy in the formation of highly reliable systems "man-machine" [5] "The man-machine-environment" in Ukraine AIC [12].

According to many authors, the strategy of the reliability of the science must provide includes two areas of sustainability reliability as science, technology development should be done in tandem two groups of specialists, engineers and technologists; production requires the use of high-tech equipment involving qualified service personnel [3]; for complex technical systems "man - machine - environment" CCC "LMS", which is foragers, sophisticated farm machinery and equipment repair -

tehnolohichne important reserve of reliability is the more efficient use of professionally important (PVYA) personnel [12]. The above demonstrates the need for increased operational efficiency and reliability of agricultural machinery produced in Ukraine. At the present stage of progress necessary to use foreign experience in design and manufacture of agricultural machinery. Thus, many studies have established the status of domestic harvesting on a background of foreign competitors [4] on paper a few differences, but the big Ukrainian agricultural holdings domestic appliances not honored and not buying, and prefer imported even reuse.

In modern society it necessary to use the experience of China in the development of military technology [13]. Military of China over the past 20 years conducting very effective innovation policy: they zakupayut two samples of modern military equipment (aircraft, tanks, artillery), make them re-inzhenirinh, modernizing, and on the basis of domestic produce military equipment - aircraft, tanks, artillery, and competitive. These are repeated complaints and appeals in state institutions in the PRC embassy. However, despite the above measures of government agencies, China continues to purchase "signaling" models of military equipment and conducts their next upgrade, because these actions are not contrary to international law and information as mutually beneficial as Russia and China. Doing so profitable China, because it gets through re-inzhenirinhu new technology, and Russia, organizing maintenance base in countries that China sells military equipment, through the same re-inzhenirinhu has reliable information about modern production base of China [13].

Conclusions

Such information is necessary and activity in Ukraine. You must buy two or three samples of agricultural machinery, one sample disassemble and carry Re-engineering in order to identify structural and technological features, and others - to investigate to identify positive performance. Thus for re-use should inzhenirynhu literature monitoring (of information) in developed countries. Information activities conducted as an open, legal information and information from closed - and classified for official use. Information activities carried out with public information and legal methods are monitored within the regulations.

In modern society this information can be obtained from public sources.

It should be mentioned that due to the fact that monitoring should be conducted without violations, prior to each transaction monitoring is necessary to control the legal provision, ie in planning and executing monitoring is necessary to analyze the law on the legal permissibility of actions to be held in Ukraine AIC.

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In this article conducted a legal analysis Provision Monitoring ahropromыshlennoho complex with a view of the effectiveness and Increase nadezhnosty selskohozyaystvennoy technology.

Technique, MONITORING, Machines, pravovoe Provision, reliability.

The paper analyzes the legal establishment of the monitoring agriculture to improve the efficiency and reliability of agricultural machinery.

Technology, monitoring, machinery, legal security, reliability.

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STATE TECHNICAL DETAILS TYPE "eccentric" AND RESTORATION

SS Karabynosh, IS Harkovskyy, Ph.D.
VA Eroshenko, student

In the article the results of a study of technical condition of parts such as eccentric, which are widely used in machinery for the processing of agricultural products. Enhanced recovery eccentrics protection using natural gas.

***Eccentric, wear rates, culling, suitability, surfacing, nozzle burner*.**

Problem. At a time when our country was created manufacturing, urgent problem is to ensure the smooth operability machines by introducing systematic maintenance and repair. For this it is important to establish the appropriate repair - serving basis. Given that the majority of machine parts processing industry operating in harsh conditions and environments must adopt new technologies and methods of repairing cars and upgrade them. The main task of repair and servicing base - providing a given technical readiness tractor fleet farms at the right time for agricultural production with minimal labor and material costs. However, under conditions of severe economic hardship current time, these works are not always performed at the appropriate technical level [1, 2].

Pemont mashyn ta obladnannya for pepepobky silskohospodapskoyi sypovyny sppyazheno with znachnymy tpudnoschamy. This pepshu chephu pov'yazane with those pobochi povephni detaley dotykayutsya to hapchovyh ppoduktiv, dalnisha pepepobka are not zv'yazana with tepmichnymy ppotsesamy. In other slovam tpeba to note that after obpobky takymy detalyamy ppoduktsiya