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В збірнику представлені тези доповідей науково-педагогічних працівників, наукових співробітників, аспірантів та студентів НУБіП України, провідних вітчизняних і закордонних вищих навчальних закладів та наукових установ, в яких розглядаються завершені етапи розробок.

The Proceedings presents abstracts of reports of scientific and pedagogical workers, research staff, graduate students and students of the NULES of Ukraine, leading domestic and foreign higher educational institutions and scientific institutions, in which completed stages of development are considered.

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BASIC TECHNICAL SUPPORT FOR VIDEO-ENDOSCOPE PARAMETERS IN TECHNICAL MILL OF GRAIN HARVESERS

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Until recently, almost any engine defect was possible only as a result of complete disassembly [1]. Many repair cases looked like this: a grain harvesers

owner contacted a service station because he was concerned about some well-known alarming symptoms of engine operation [2]: increased consumption, discoloration of exhaust gases, leakage of working fluids, and so on.

The technicians [3], having accepted the order for diagnostics, removed and disassembled the engine, soon laying out a list of defects and breakdowns to the unfortunate owner of the grain harvesers [4]. Disassembling an engine is a lengthy, labor-intensive and expensive procedure [5].

Many customers have encountered a problem: in order to diagnose the wear of one ring, they had to disassemble half the grain harvesers. On the other hand, some customers were upset when they expected to see a minor fault, but were faced with the need for major repairs. And most importantly, each case was associated with a lot of meaningless work that could have been avoided.

A solution was found: we acquired equipment for engine endoscopy! Engine endoscopy, which costs significantly less than the cost of its dismantling and disassembly, has significantly improved our work performance.

This modern technology came to the automobile business from medicine. Similar to how a gastroenterologist forces a patient to swallow an endoscope, a mechanic at an auto repair shop can perform an engine endoscopy before purchasing a grain harvesers to quickly and inexpensively diagnose the grain harveser's engine. The endoscope is inserted into the desired working cavity of the engine through one of the technological holes. Thanks to a camera installed at the end of the device, auto mechanics see the detailed condition of the engine on the monitor.

In some situations, engine endoscopy is the only way to avoid risks or large losses for the grain harvesers owner:

- Carrying out such a procedure when purchasing a used grain harvesers can save you from many problems;
- If a minor breakdown is suspected, endoscopy of a grain harvesers engine of which is significantly lower than the cost of disassembling the engine, is the ideal solution;
- If a grain harvesers owner wants to estimate the cost of future major repairs without disassembling the engine, it may be worth using the worn-out engine to the end, because its repair will cost the same as a new unit - the cost of engine endoscopy will be incomparably cheaper than complete disassembly and troubleshooting of the engine.

Endoscopy is an effective method that can provide rapid diagnosis of engine defects. Has the following advantages:

- Endoscopy of engine cylinders, the price of which is significantly less than engine disassembly, allows you to evaluate the quality of the surfaces of engine cylinders, pistons and rings. And sometimes, with the help of special attachments, you can even remove excess particles from the cylinder.
- Allows you to assess the condition of hard-to-reach components, such as a turbocharger, intake manifold, etc.

Versatility. Thanks to a variety of attachments, one endoscope can work with most grain harvesers models.

There is no need to wait several hours for mechanics to disassemble the engine. Carry out an engine endoscopy a high-quality, quick and rational examination of the engine of your grain harvesers – contact the specialists. Call and our specialists will advise you and inform you how much engine endoscopy costs.

Checking engine cylinders with an endoscope is a common procedure recently. It applies to diesel and gasoline units. The advantage of the procedure is that there is no need to disassemble the motor.

The condition of the internal combustion engine mechanics is determined with maximum accuracy, the degree of wear and tear, the quality of service (when it comes to buying a used grain harvesers) and the veracity of the mileage are determined. Directly checking the engine with an endoscope involves placing an endoscope or probe into the engine being serviced along the spark plug passage. Such a device is structurally a controlled camera equipped with illumination.

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