THE MAIN FAULTS OF TRANSMISSION UNITS

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Abstract: As we know, nowadays the demand for vehicles is high, and at the same time, it is necessary to design quality service methods to eliminate malfunctions during operation. Car washing and drying lines are organized in car centers and large car service enterprises. In these lines, high-pressure water or brush washing equipment and medium-pressure hot air drying equipment are installed at the car washing station. We will try to explain this in the following article.

Keywords: car, transport, washing, plot, service, enterprises, dealer, technical service, post, workshop

Faults in the gearbox and distribution box. These malfunctions cause problems when switching gears, the gears can disconnect themselves or cause noises during operation. It becomes difficult to connect gears due to the loosening of bolts on the fork or head of the exchange coupling mechanism, jamming of fasteners, worn gears, bearings and bushings. Corrosions on the sides of the teeth of the synchronizer clutch and gears and on the working surfaces cause the transmissions to break off due to the incomplete connection of the gears, the loosening of the locking springs[1-3]. The noise in the transmission box is caused by corrosion and breakage of the working surfaces of the shaft bearings and gear teeth, as well as a decrease in the oil level.

Faults in main and cardan transmissions, differentials, half-shafts and joints with equal angular velocity. Malfunctions occur as a result of long-term use without timely maintenance or poor-quality TKC[4-6]. Examples of main drive and differential failures include corroded or broken gear teeth, differential crosspieces and bearings, as well as loose main drive shafts. All of them are manifested by increased noise in the rear axle housing during movement. The presence of knocks and knocks when starting, turning or moving the car indicates malfunctions in cardan transmissions or joints with equal angular velocity. These malfunctions are caused by excessive wear of cross shafts and hinge cups, if the balance of the cardan shaft is disturbed, strong vibrations and noises are formed in

the transmission. The main faults in half-axes are caused by the eating of their slots[7-8].

Maintenance of clutch. During operation, the clutch is adjusted, but before that, the free path of the clutch shaft is checked. A ruler with two sliders is used for this. One end of the ruler rests on the floor of the cabin, and the pusher is fixed on the landing pad. The clutch lever is pressed until the resistance to movement increases sharply, and this situation is recorded with the help of a second pusher[9-10]. The distance between the two sliders of the ruler determines the free path of the wheel. Modern Nexia, Espero and similar cars often use a hydraulic drive for the clutch. Such a clutch is brought to the norm of full movement and free movement of the drive shaft. To determine the full travel path, the distance between the clutch lever and the lower part of the steering wheel (in the NEKSYA car) is determined, then the distance is determined again by fully pressing the lever. The difference between these two distances should be 130-136 mm. If this distance differs from the norm, then adjustments are made. The free movement of the kick should be between 8-15 mm[5].

In Spark, Nexia and Gentra passenger cars, the free travel of the clutch shaft is adjusted by changing the length of the working cylinder rod.

As a result of corrosion of pistons, pistons or cylinders, cracks occur in excess of the norm. Through them, air enters the guide of the clutch, and it is expelled through the air exhaust pipe of the working cylinder[11-12]. For this, the working cylinder is cleaned of dust and dirt. The fluid level is checked by opening the lid of the clutch fluid reservoir. It is 15-20 mm from the carved part. should not be below or below the "min" mark. The rubber cover of the exhaust valve (1) of the working cylinder is removed, a rubber hose is inserted in its place, and one end is lowered into a glass container filled with brake fluid in the volume of 1□3...1□2. The push rod is moved frequently until resistance is felt, that is, until the travel path of the push rod does not change, then, while pressing the push rod, the valve is turned 1□2...3□4 circles, and when the push rod is pressed to the end, the valve is locked and the reaction is slowly released[13-14]. This situation is continued until there are no more air bubbles in the glass container. During operation, the level of brake fluid in the tank is periodically checked and adjusted. Finally, the valve is hardened and removed from the hose.

TXK to the gearbox and distribution box. How the boxes work is checked during daily inspections and when the car is in motion. Particular attention is paid to the compactness of the compactors, easy and noiseless connection of

transmissions. There should be no extraneous knocks and noises during the operation of the tested units. It is necessary to fully connect the gears of the extensions, it is not allowed to separate by itself.

The heat of the transmission case should be such that it does not burn the hand when the car is stopped.

In addition to monitoring, hearing, and temperature checks at the KKK and 1-TXK, the casing of the boxes is cleaned of dirt, the sealed areas are checked and removed, and the oil level is brought to the norm. In addition to the above-mentioned works in the 2-TXK, the oils in the boxes are changed according to the map. This work is carried out at special workstations with hoists or viewing channels. The oil in the box is drained as soon as the engine stops, before the box has time to cool.

The oil level in the units is checked using a dipstick or through an inspection hole. If the oil level has decreased, clean oil is added and the soap channels are cleaned. Oil change is performed as follows: after draining the old oil in the box, 1□2 l of washing oil is poured instead. One wheel of the rear axle of the car is raised, the engine is started and the first gear is engaged. The transmission starts to work, at the same time the interior of the box is washed and cleaned of waste. After a few minutes, the washing oil is drained and clean oil is poured. During the oil change, the drain plug magnet is also cleaned[15].

The required position of the transfer case control levers is provided by adjusting the length of the levers. For this purpose, the towing fingers are released from the splints and separated from the fork. When the latches are fully engaged, the stocks are set to the fully engaged position. The levers are placed in the position where the gears are connected, and by turning the fork, the desired length of the pull is set. Then the ratchet is put in place, the finger is splinted and locked with a counter nut[16].

Gearbox repair. Current repair is carried out when the forward gear of the car works noisily, the gears do not mesh well (this is caused by the synchronizer ring becoming unusable), when the external, lateral surfaces of the synchronizer clutch teeth, bearings, shafts are eaten, and the gear teeth are broken. Depending on the condition of the eaten parts, they are replaced (with a pair of fasteners) and repaired. Replacing parts ensures that the gearbox will work for a long time without damage, and as a result, less labor will be spent on repairs. Special tools are used to remove (remove) the synchronizer pin and other details of the transmission gear.

LIST OF REFERENCES:

1. Asliddin P. et al. SILINDR-PORSHEN GURUHI ELEMENTLARINING TAVSIFI VA DVIGATELNING EFFEKTIV KO'RSATKICHLARI //Scientific Impulse. – 2023. – Т. 1. – №. 11. – С. 605-611.

2.Asliddin P. et al. PORSHEN HALQASINING ISHIGA TA'SIR QILUVCHI OMILLAR //Scientific Impulse. – 2023. – Т. 1. – №. 11. – С. 611-620.

3.Xusniddin o'g'li P. A. PORSHEN HALQANING UZOQ ISHLASHINI BELGILOVCHI ASOSIY KATTALIKLAR //Научный Фокус. – 2023. – Т. 1. – №. 2. – С. 680-685.

4.Yuldashev A., Abdumuminova N., Xalimov J. ПОВЫШЕНИЕ КРИТЕРИИ ОЦЕНКИ ЗНАНИЙ СТУДЕНТА ОБЪЕКТИВНО С НАУЧНЫМИ ИССЛЕДОВАНИЯМИ //Точная наука. – 2018. – №. 26. – С. 113-115.

5.Soliyev A., Raximbek X. TRANSPORT VOSITALARI KONSTRUKTIV XAVFSIZLIK TIZIMLARINI JORIY ETISHNING TASHKILIY VA HUQUQIY ASOSLARI TAXLILI //Научный Фокус. – 2023. – Т. 1. – №. 2. – С. 568-574.

6.Javlonbek Kholmirzaev, Isroiljon Kuchkorov, Adhamjon Kakhkharov PROBLEMS OF CARRYING OUT AUTO TECHNICAL RESEARCH WITH THE PARTICIPATION OF TWO-WHEELED MECHANICAL VEHICLES // Central Asian Academic Journal of Scientific Research. 2022.

7.Asliddin P. et al. SILINDR-PORSHEN GURUHI ELEMENTLARINING TAVSIFI VA DVIGATELNING EFFEKTIV KO'RSATKICHLARI //Scientific Impulse. – 2023. – Т. 1. – №. 11. – С. 605-611.

8.Mamadzhanov B. et al. Dielectric separation //E3S Web of Conferences. – EDP Sciences, 2024. – Т. 471. – С. 02017.

9. Karimovna M. D. et al. AGLOMERATSIYALAR SHAKLLANISHI //Лучшие интеллектуальные исследования. – 2023. – Т. 10. – №. 1. – С. 173-178.

10. Икромов Нурулло Авазбекович, Гиясидинов Абдуманоб Шарохидинович, & Рузиматов Бахром Рахмонжон Угли (2021). МЕРЫ ПО СНИЖЕНИЮ ЭКОЛОГИЧЕСКОГО ВОЗДЕЙСТВИЯ АВТОПАРКА. Universum: технические науки, (4-1 (85)), 44-47.

11. Икромов, Н. А. (2021). Исследования физико-механических свойств радиоционно модифицированных эпоксидных композиций и покрытий на их основе. Universum: технические науки: электрон. научн. журн, 12, 93.

12.Anvarjonovich T. S. AVTOTRANSPORT KORXONALARIDA MAVJUD YORDAMCHI USTAXONALAR FAOLIYATINI TASHKIL QILISH VA TAKOMILLASHTIRISH //World scientific research journal. – 2023. – Т. 18. – №. 1. – С. 136-141.

13. Sherali T. ZANJIRLI UZATMALAR //Новости образования: исследование в XXI веке. – 2023. – Т. 2. – №. 14. – С. 117-131.

14. Kholmatov U. S. et al. Characteristics of optoelectronic discrete displacement converters with hollow and fiber light guides //E3S Web of Conferences. – EDP Sciences, 2024. – Т. 471. – С. 06015.

15. Melikuziev A. et al. IMPROVING THE PERFORMANCE OF THE FUEL INJECTION SYSTEM //Development and innovations in science. – 2022. – Т. 1. – №. 14. – С. 10-14.

16. Xalilbek o‘g‘li, X. E. (2023). MOTOR MOYLARIDA BO ‘LADIGAN O ‘ZGARISHLAR VA ULARNING XIZMAT QILISH DAVRI. Mexatronika va robototexnika: muammolar va rivojlantirish istiqbollari, 1(1), 321-323.