

defense  
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Ministry of Education and Science of Ukraine  
National Technical University  
Dnipro University of Technology  
Faculty of Mechanical Engineering  
(faculty)  
Department of Automobiles and Automobile Economy  
(full name)

### EXPLANATORY NOTE

qualification work of the degree   bachelor    
(bachelor, specialist, master)

student Esawi Khaled  
(name)

academic group                   274-19-2 IC                    
(code)

specialty                   274 Automobile transport                    
(code and name of specialty)

specialization according to the educational and professional program  
«Automobile transport»  
(official name)

on the topic: «Modernization of the passenger car service station in Turan with detailed development of the service area» 02.06.23 №443-c

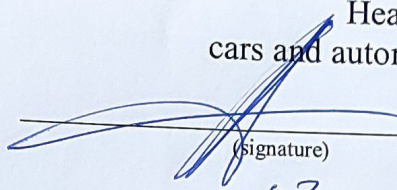
Managers	Surname, initials	Rating on a scale		Signature
		rating	institutional	
qualification work	Krivda V.V.	87	good	<i>[Signature]</i>
chapters:				
Technological chapter	Krivda V.V.	87	good	<i>[Signature]</i>
Service technology chapter	Krivda V.V.	87	Good	<i>[Signature]</i>
Economic chapter	Vagonova O. G.	85	good	<i>[Signature]</i>
Labor protection chapter	Cheberyachko S.I.	85	good	<i>[Signature]</i>
Reviewer	<i>[Signature]</i>	85	good	<i>[Signature]</i>
Normocontroller	Yerisov M.M.	85	good	<i>[Signature]</i>

Dnipro  
2023



**APPROVED:**

Head of Department  
cars and automotive Economy  
(full name)



(signature)

Bas K.M.  
(surname, initials)

«02» 66 2023 year

**TASK**  
**for qualifying work**  
**degree** bachelor  
(bachelor, specialist, master)

**qualification work of the degree** bachelor  
(bachelor, specialist, master)

**student** Esawi Khaled **academic group** 274-19-2 IC

**specialty** 274 Automobile transport

**specialization according to the educational and professional program**

«Automobile transport»

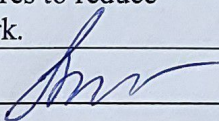
(official name)

**on the topic:** «Modernization of the passenger car service station in Turan with detailed development of the service area» 02.06.23 №443-c

chapters:	Content	Term implementation
Technological chapter	The project of the reconstruction of the passenger car service station, the calculation of the production building, the selection of equipment for the service area	12.05.23-18.05.23
Service technology chapter	Development of a technological map with the improvement of the technology of replacing brake pads	19.05.23-25.05.23
Economic chapter	Calculation of the enterprise, taking into account profitability	26.05.23-31.05.23
Labor protection chapter	Analysis of dangerous and harmful factors at the maintenance station, measures to reduce ergonomic risks during work.	01.06.23-05.06.23

**Task issued**

(signature of the manager)



Krivda V.V.

(surname, initials)

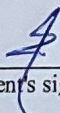
**Date of issue** 02.06.2023

**Date of submission to the examination board**

17.07.2023

**Accepted for implementation**

(the student's signature)



Esawi Khaled

(surname, initials)



### ABSTRACT

Explanatory note: 93 pages, 10 figures, 25 tables, 6 appendices, 12 references, graphic part A1 4.

The object of reconstruction is an existing technical service station for passenger cars.

The main goal is to improve this station by increasing the production area, selecting equipment for the service and repair zone, implementing occupational safety measures, and conducting economic analysis and calculations with profitability considerations.

The work involves the reconstruction of the technical service station for passenger cars, including the calculation of production areas and zones to ensure a more qualitative and efficient operation of the enterprise.

The section on service technology discusses the process of servicing the braking system of passenger cars. The economic part presents techno-economic calculations for the technical service station.

Safety measures are also provided, including occupational safety methods for the workers of the technical service station.

#### PROJECT, TECHNICAL SERVICE STATION, AUTOMOBILE, IMPROVEMENT, TECHNICAL EQUIPMENT

The qualification work on the topic " Modernization of the passenger car service station in Turan with detailed development of the service area" has been checked for plagiarism using the software <https://unichек.com/uk-ua>. The uniqueness is 98%. The results of the check are provided in Appendix F.

AAE.BT23.01.Abs.EN

Mea.	Sh.	Nº dok.	Signat.	Date	Abstract	Liter.	Sh.	Sh's.
Design.		Esawi						
Check.		Krivda						
Superv.		Krivda						
Norm contr.		YERIZOV						
Approv.		Bas						

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The objectives and tasks set for this qualification work have been achieved. An analysis of the technical condition of the break system and the economic activities of the technical service station was carried out. A production program for the maintenance and repair of the break system was calculated. The necessary technological equipment and tools were selected and provided in the service and assembly area. The main potential vehicle malfunctions and the necessary technological equipment for quality repair work in the service area were considered. Measures were implemented to ensure the safety of the technological processes of maintenance and repair of the break system. An economic feasibility calculation of the reconstruction of the technical service station was conducted.

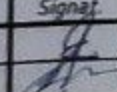
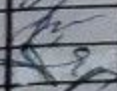
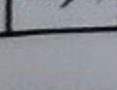

During the analysis of the enterprise's work, deficiencies in the organization of work in the department were identified, and options for their elimination were considered, as well as equipping the department with the necessary technological equipment. The economic effect of implementing the above measures was calculated, as well as the estimated useful life span.

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Conclusions

Liter.	Sh.	Sh's.
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