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Regulation of Work and Rest Pattern for Personnel of Transport Companies in Ukraine: Peacetime and Specifics of Wartime

Regulacja schematu pracy i odpoczynku dla personelu przedsiębiorstw transportowych w Ukrainie. Czas pokoju a specyfika czasu wojny

ABSTRACT

The article substantiates the relationship between human working capacity and the work and rest pattern of the personnel of transport enterprises. Driving vehicles requires increased working capacity, that is why the legislation must clearly regulate the working time of the personnel involved in transportation. The specifics of the legal regulation of the work and rest pattern of employees of air, road, rail and water transport enterprises are considered in accordance with the norms of the legislation of Ukraine and some conventions of the International Labour Organization. Unfortunately, there are currently no legal norms regarding the regulation of the work and rest pattern for carriers in conditions of martial law, depending on the region in which they operate. The authors make conclusions about the need to study the experience of European countries regarding the regulation of the working time and rest time of transport workers according to: different modes of transport; intensifying the process of ratification by Ukraine of international agreements on regulation of the work and rest patterns; strengthening the responsibility of employers for non-compliance with the requirements of legal norms regarding the working time and rest time of employees; cooperation of employers, trade unions and state authorities in the development of program provisions and effective mechanisms for the implementation of defined norms for the protection of socio-economic and labour rights of employees at transport enterprises; revising the work and rest pattern of transport sector workers in accordance with the conditions of martial law; legal recognition of higher social guarantees for carriers working in front-line zones and combat zones.

Keywords: work and rest pattern; transport; personnel; transport companies; safety

INTRODUCTION

At the current stage of the development of social and labour relations in the world, there is a tendency to realize the need for legal regulation of the work and rest pattern of transport enterprises personnel. There is a need to correlate domestic legislation with international law, the role of which is constantly growing in the period of European integration processes.

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The need to solve the problem of ensuring the safety of transport processes, increasing productivity and labour efficiency led to the search and development of scientifically based norms of the work and rest pattern, the formation of legal standards for the protection of social and labour rights of employees of transport enterprises.

Given that the employees of transport enterprises are under the influence of natural, industrial, and socio-psychological factors while carrying out their professional activities, they are required to have the ability to quickly make informed decisions in order to avoid emergency situations and ensure the reliability and safety of transport processes. The issue of creating healthy and safe working and rest conditions for employees is becoming urgent. An important role in this process is played by both the state and business entities, as well as trade unions.

Modern practices show that employers do not always comply with the established norms when planning and regulating working hours and rest time, which leads to irrational use of labour resources, an increase in accidents and catastrophes during cargo and passenger transportation. In Ukraine, this problem is also complicated because of Russian military aggression.

The main goal of a rational work and rest pattern is to maintain working capacity at an optimal level, that is, a person's ability to work.

Specific aspects of the issue of regulating the work and rest pattern of transport personnel are considered in the works of A. Apanasenko, V.I. Burlakov, D. Dmytrenko, M. Holbin, L. Olkhoviyk, N. Orlova, M. Staszewska,¹ etc.

The purpose of the article is to study the peculiarities of the regulation of the work and rest pattern of the personnel of enterprises of various modes of transport in accordance with the legislation of Ukraine and its international legal obligations in the field of protection of social and labour rights, as well as the development of proposals for improving Ukrainian labour legislation for personnel of transport companies taking into account specifics of martial law.

¹ A. Apanasenko, *Osoblyvosti rehulyuvannya trudovykh vidnosyn na zaliznychnomu transporti Ukrainy*, Kharkiv 2010; V.I. Burlakov, Yu.P. Puchkov, O.V. Popov (eds.), *Lyudskiy faktor u systemi zberezhennya liotnoyi prydatnosti aviatsiynoyi tekhniki*, Kyiv 2018; D. Dmytrenko, *Pravove rehulyuvannya robochoho chasu i chasu vidpochynku moryakiv v ukrajini ta finlyandi*, "Naukovyy visnyk Uzhhorodskoho Natsionalnoho Universytetu. Seriya Pravo" 2021, vol. 64; M. Holbin, *Mizhnarodno-pravovi zobov'yazannya Ukrainy stosovno zakhystu trudovykh i sotsialnykh prav moryakiv*, "Almanakh mizhnarodnoho prava" 2015, vol. 15, <http://inlawalmanac.mgu.od.ua/v15/6.pdf> (access: 31.5.2024); L. Olkhoviyk, O. Buy, *Mizhnarodno-pravove rehulyuvannya pratsi moryakiv*, "Porivnyalne analitychne pravo" 2018, no. 2, <https://journals.indexcopernicus.com/api/file/viewByFileId/767957.pdf> (access: 31.5.2024); N. Orlova, *Osoblyvosti pravovoho rehulyuvannya okhorony pratsi na vodnomu transporti*, "Pidpryyemnytstvo, hospodarstvo i pravo" 2020, vol. 6; M. Staszewska, *Czas pracy kierowców*, Warszawa 2019.

REGULATION OF WORK AND REST PATTERN IN TRANSPORT IN UKRAINE: GENERAL ISSUES

Driving vehicles requires increased attention and concentration, which leads to excessive emotional and nervous stress. That is why the legislation clearly regulates the working time of the personnel involved in transportation. Regulation is aimed at ensuring an optimal balance between work and rest. Failure to comply with the following rules and violations of the rights of drivers can lead to excessive fatigue, and therefore increase the risk of causing accidents and catastrophes on transport.

Working time as the duration of an employee's mandatory stay at the workplace in order to perform official duties is determined, on the one hand, by the level of production development, and on the other hand, by the physical and psychophysiological capabilities of a person.

Working hours are regulated by both the government and the employer. According to the Labour Code of Ukraine² (Article 50), the upper limit of the duration of working hours is established: 40 hours per week for normal working conditions; for workers employed in jobs with harmful working conditions – no more than 36 hours per week (Article 51). For the most part, a five-day working week with two days off is established for employees: the duration of daily work (shifts) is determined by the rules of the internal work schedule or shift schedules, which are approved by the owner or a body authorized by him in agreement with the trade union committee of the organization in compliance with the established legislation on the length of the working week.

The rules of the internal labour schedule determine the procedure for accepting and dismissing employees, the main responsibilities of employees and employers, incentives for success in work, responsibility for violations of labour discipline, the start and end time of daily work (shifts). Shift schedules are made known to employees no later than one month before their implementation. In other cases, when work is not carried out in shifts, work schedules are approved. They are made for a certain working period, within which the set length of the working week must be observed.

At those enterprises and organizations where, due to the nature of production and working conditions, the introduction of a five-day working week is impractical, a six-day working week with one day off is established: the duration of daily work cannot exceed 7 hours for a weekly norm of 40 hours, 6 hours for a weekly norm of 36 hours, and 4 hours for a weekly norm of 24 hours.

The legislation also regulates the duration of annual and additional leaves. All employees who work on the basis of an employment contract at enterprises regardless of the form of ownership, as well as those who work under an employment

² Labour Code of Ukraine, approved by Law No. 322-VIII of 10 December 1971 of the State Government, <https://zakon.rada.gov.ua/laws/show/322-08> (access: 31.5.2024).

contract with citizens engaged in entrepreneurial activity without creating a legal entity, have the right to leave.

The leave is granted with preservation of the place of work and wage/salary for its period. The duration of leaves is calculated in calendar days. Article 4 of the Law of Ukraine “On Leaves”³ establishes the following types of leaves:

- annual leaves, which consist of basic (at least 24 calendar days) and additional leaves;
- additional holidays in connection with study;
- creative holidays;
- social leave;
- leave without wage/salary.

In conditions of martial law in Ukraine, normal working hours may be increased to 60 hours per week at critical infrastructure facilities with a proportional increase in wages. If in peacetime employees had to rest at least 42 consecutive hours every week, during the period of martial law, the weekend can be reduced to 24 hours. In addition, the following are cancelled:

- prohibition of work on weekends;
- reduced working day on the eve of holidays, non-working days and weekends;
- postponement of the day off, if a holiday or non-working day coincides with a day off;
- restrictions on overtime work.⁴

Taking into account specifics of transport sector, the work and rest pattern on different transport modes is regulated in different ways and by different government bodies/services. Figure 1 represents a system of legal regulation of the work and rest pattern for the personnel of transport companies in Ukraine.

A driver’s productivity as well as safety on transport largely depend on the work and rest pattern, which is considered as regulated alternation of periods of work and breaks for rest during a work shift, day, week, year.

Work and rest patterns are formed taking into account the working capacity of a person (Figure 2).

³ Law of Ukraine No. 504/96-BP of 15 November 1996 “On Leaves”, <https://zakon.rada.gov.ua/laws/show/504/96-%D0%B2%D1%80#Text> (access: 31.5.2024).

⁴ Law of Ukraine No. 2136-IX of 15 March 2022 “On the organization of labour relations under martial law”, <https://zakon.rada.gov.ua/laws/show/2136-20#Text> (access: 31.5.2024).

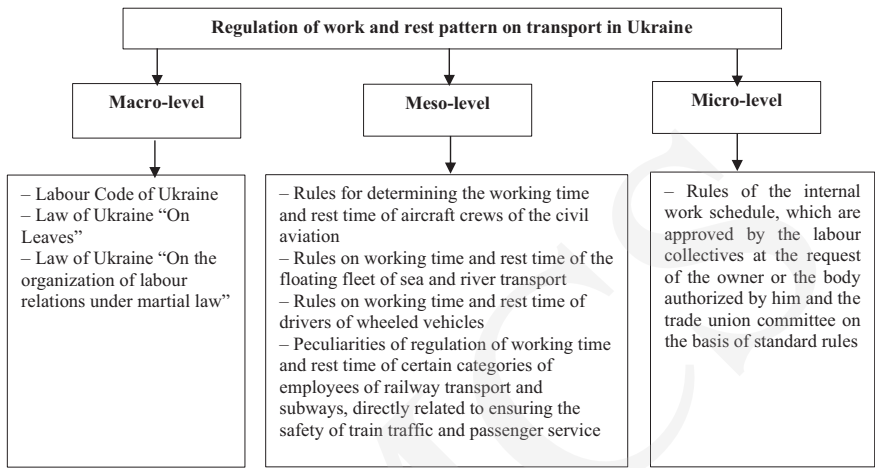


Figure 1. System of legal regulation of the work and rest pattern for the personnel of transport companies in Ukraine

Source: Authors' own elaboration.

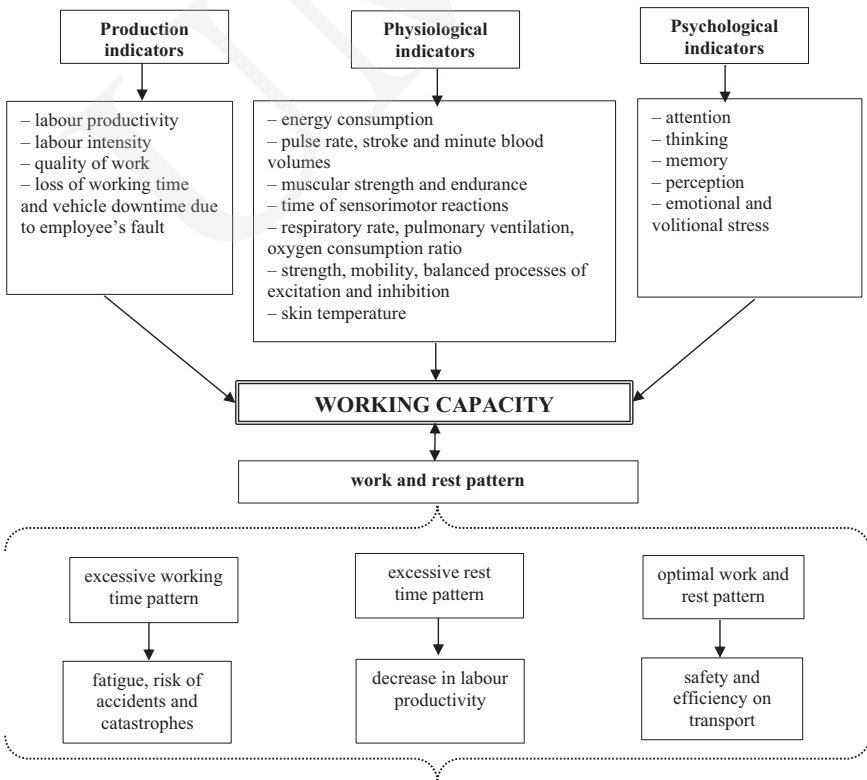


Figure 2. Work and rest pattern in ensuring safety and efficiency on transport

Source: Authors' own elaboration.

Working capacity of drivers is determined by three groups of indicators, which characterize the results of production activity, physiological shifts and changes in mental functions of a person in the process of activity.⁵

Excessive working time pattern can lead to a temporary decrease in working capacity (fatigue), which is manifested in a decrease in quantitative and qualitative indicators of work and deterioration of the coordination of work functions.

Modern ideas about fatigue are based on the central nervous concept, which in particular emphasizes that the source of the feeling of fatigue is exclusively in the central nervous system, and not caused by overexertion of muscles. The cause of fatigue is the critical amount of expenditure of functional resources and the formation of a neurophysiological conflict between activity and restorative processes, the aggravation of which is accompanied by discoordination and deficiency of nerve impulses.

A subjective sign of fatigue is the feeling of tiredness, which the driver experiences as a kind of mental state (a feeling of exhaustion, distraction, uncoordinated movements, deterioration of memory and speed of thinking, problems with self-control, drowsiness).

PECULIARITIES OF WORK AND REST PATTERN REGULATION ON DIFFERENT MODES OF TRANSPORT

The efficiency of the labour process in any mode of transport, the quality of the work performed and the services provided depend on the work techniques and methods, the regulation of the work and rest pattern, compliance with the requirements of labour discipline. A rational and scientifically based definition of working hours and rest time at the enterprise depends on the growth of reproduction of the employee's physical and psychological characteristics, labour productivity and the intensity of the production process.

Air transport. In the civil aviation of Ukraine, regulation of working time and rest time of aircraft crews is carried out in accordance with the Rules approved by the Order of the Ministry of Transport of Ukraine of 2 April 2002.⁶ The Rules are used by the civil aviation operator of Ukraine when planning the working time and rest time of the aircraft crew members, in order to guarantee the safety of the flight when civil aircraft perform regular, charter flights and all types of aviation work. The rules were developed in accordance with the Convention on International

⁵ V.I. Burlakov, Yu.P. Puchkov, O.V. Popov (eds.), *op. cit.*

⁶ Order of the Ministry of Transport of Ukraine No. 219 of 2 April 2002 "On the approval of the Rules for determining the working time and rest time of aircraft crews of the civil aviation of Ukraine", <https://zakon.rada.gov.ua/laws/show/z0390-02#Text> (access: 31.5.2024).

Civil Aviation (Ukraine joined the Convention in 1992),⁷ taking into account the recommendations of the International Civil Aviation Organization.

According to clause 2 of the Rules, working time is the time during which the crew of the aircraft is obliged to perform the work defined by the labour contract and the rules of the internal labour procedure. It includes:

- flight time (block time);
- pre-flight training;
- post-flight work time;
- waiting time for departure due to reasons beyond the control of the aircraft crew at airports, operational points and other places of its stay in case of non-provision of rest conditions;
- time spent on different shifts or in the reserve;
- time spent by the aircraft crew on flight analysis, training and exercise training, passing a medical examination and other types of work provided for by the rules of the operator's internal work schedule;
- time of the flight (movement) of the crew members as passengers for their flight from another airfield;
- relay time.

The duration of work of aircraft crew members is set within the following time limits:

- duration of daily work should not exceed 12 hours, followed by a rest period;
- duration of daily work in the event of a flight delay or the need to land at an alternate aerodrome to complete the flight (with the agreement of the crew members): up to 14 hours, but not more than twice within a consecutive 28-day period;
- time in reserve: up to 12 consecutive hours.
- total time of the crew's stay in the reserve: up to 48 hours per month;
- number of crew reserves: up to six times a month.

For crew members, the maximum daily, monthly and annual duration of flight time is established (clause 5.2 of the Rules).⁸

Aircraft crew members must be provided with rest time before a scheduled flight in order to maintain the required level of their psychophysiological functions and guarantee reliable professional activity and flight safety. Rest time between flights is given to a crew member after completing a flight task to restore the body's psychophysiological functions.

The following rest patterns of crew are defined:

⁷ Convention on International Civil Aviation, 1944, https://zakon.rada.gov.ua/laws/show/995_038#Text (access: 31.5.2024).

⁸ Order of the Ministry of Transport of Ukraine No. 219 of 2 April 2002.

- duration of rest of the crew at the base airport must be at least twice the duration of their previous working hours;
- the minimum duration of crew rest should be at least 12 hours;
- pre-flight rest time and rest time between flights outside the base airport (at least 8 hours);
- weekly rest (weekends) must be given to the crew of at least 42 hours, taking into account pre-flight rest time and rest time between flights.

The issue of tension, monotony and difficulty of work of operators of unmanned aerial systems (UAS) and flight control groups (FCGs) is becoming relevant today. As evidenced by the research results, the content of their work requires the presence of an appropriate level of psychophysiological characteristics: from the UAS operator – a quick reaction to a moving object, resistance to monotonous work, long-term concentration of attention, speed of switching attention; from FCGs – a high level of visual and auditory memory, readiness to make decisions in extreme conditions. Taking into account the characteristics of the level of tension and difficulty of work of UAS operators and FCGs, the following patterns of their work are determined:

- UAS operators: shift according to the schedule, 4 working days per week, 1 day for rest, 2 full days off, weekly workload 36 hours;
- FCGs: 8 hours per day, daily shifts several times a month.⁹

Road transport. Let's consider the main requirements regarding the duration of working hours and the rest period of drivers of wheeled vehicles.

In accordance with the Law of Ukraine "On Road Transport", a motor carrier must ensure the working and rest conditions of drivers in accordance with the requirements of the law, ensure the training and instruction of drivers in accordance with the procedure determined by the central body of executive power, which ensures the formation and implementation of state policy in the field of transport (Article 34).¹⁰

The "Rules on working time and rest time of drivers of wheeled vehicles", which was approved by the Order of the Ministry of Transport and Communications of Ukraine of 7 June 2010, defines the specifics of the regulation of working time and rest time of drivers of wheeled vehicles and the procedure for its accounting.¹¹

⁹ V.V. Kalnysh, A.V. Shvets, O.V. Maltsev, V.I. Yeshchenko, *Poryavnyalna kharakterystyka pratsi zovnishnikh pilotiv bezpilotnykh aviatsiynykh kompleksiv ta osib hrupy kerivnytstva poliotamy*, "Ukrayinskyy zhurnal viyskovoyi medytsyny" 2022, vol. 3(3); V.V. Kalnysh, I.S. Trinka, S.M. Pashkovskyy, Yu.V. Symynyuk, N.V. Koval, Ponimatchenko S.L., *Poryavnyalna kharakterystyka psykhoфизиологических особенностей операторов беспилотных авиационных комплексов та персоналу з управління повітряним рухом*, "Visnyk Vinnytskoho natsionalnoho medychnoho universytetu" 2023, vol. 27(1).

¹⁰ Law of Ukraine No. 2344-III of 5 April 2001 "On Road Transport", <https://zakon.rada.gov.ua/laws/show/2344-14#Text> (access: 31.5.2024).

¹¹ Order of the Ministry of Transport and Communications of Ukraine No. 340 of 7 June 2010 "On the approval of the Rules on working time and rest time of drivers of wheeled vehicles", <https://zakon.rada.gov.ua/laws/show/z0811-10#Text> (access: 31.5.2024).

According to the Rules, working hours should be understood as the time during which the driver is obliged to perform the work defined by the employment contract and the rules of the internal work schedule.

The duration of work of drivers is set in the following time limits:

- normal duration of working hours of drivers: up to 40 hours per week;
- duration of daily work (shifts) under the condition of a five-day work week with two days off is determined by the rules of the internal work schedule or shift schedules, which are approved by the Carrier in agreement with the elected body of the primary trade union organization (trade union representative) in compliance with the established duration of the work week;
- duration of daily work (shifts) under the condition of a six-day working week with one day off: up to 7 days;
- working hours on the eve of holidays and non-working days are reduced by one hour;
- duration of work (shifts) of the driver at night is reduced by one hour.

If the normal length of the working day includes long periods of downtime, waiting in the vehicle or at the workplace, or if the driver needs to be able to reach a suitable place of rest, the length of the working day (shift) may be increased to 12 hours, provided that the driving time during the day (shifts) does not exceed 9 hours.

By Order of the Ministry of Infrastructure of Ukraine of 24 June 2021, a number of changes were made to the specified Regulation, which entered into force on 10 December 2021.¹² The document, in particular, provides for a new requirement to fill out a confirmation of activity form. In case of temporary incapacity of the driver or his stay on leave, as well as if the driver did not transport passengers and/or cargo, the carrier can fill out a confirmation form. In addition, changes have been made to clause 2.3, namely, the maximum driving time during the day (changes) has been increased from 9 to 10 hours, provided that this situation will not occur more than twice a week. The duration of the driving period cannot exceed 56 hours per week and 90 hours over a fortnight.

For comparison, in Poland a driver's working time cannot exceed 8 hours per day and, as a rule, 40 hours in a five-day working week. The settlement period should not exceed 4 months. In case of exceeding the normalized work, the weekly working time of the driver is up to 48 hours. Each day, the driver has the right to at least 11 hours of uninterrupted rest. Daily rest of drivers who carry out regular transportation on routes of more than 50 km can take place in a vehicle, if this vehicle is parked and equipped with a place to sleep.¹³

¹² Order of the Ministry of Infrastructure of Ukraine No. 337 of 24 June 2021 "On Amendments to the Order of the Ministry of Transport and Communications of Ukraine, 7 June 2010, No. 340", <https://zakon.rada.gov.ua/laws/show/z1125-21#Text> (access: 31.5.2024).

¹³ M. Staszewska, *op. cit.*

In Ukraine, when deciding the issue of driver rest, the employer must proceed from the following principles:

- duration of a driver's daily (between-shift) rest during any 24-hour period, counting from the beginning of the working day (shift), must be at least 11 consecutive hours;
- if the vehicle is driven by two drivers during the work shift, each driver must have a daily rest of at least 9 consecutive hours;
- in a bus or a cargo vehicle driven by two people, it is necessary to install a bed or other specially equipped place to ensure proper rest for the driver;
- rest hours not used by the driver per day are summed up and can be given to him later within the limits of the shift schedule;
- duration of weekly rest must be at least 45 consecutive hours;
- engaging drivers to work on holidays and non-working days is allowed in the prescribed manner if stopping work is impossible due to production and technical conditions (continuously operating enterprises), as well as in connection with the implementation of works related to the need to serve the population and perform repair, loading and unloading operations.

In accordance with the Rules of labour protection in road transport, approved by the Order of the Ministry of Emergency Situations of Ukraine of 7 September 2012, the employer:

- does not have the right to direct the driver to the next trip, if he did not have a rest before departure, provided for by the current legislation of Ukraine (clause 1.15 of Chapter XIII);
- is obliged to inform the driver (drivers) about the work and rest regime (clause 1.16 of Chapter XIII);
- write down the route to be followed in the waybill, indicating the places of temporary and long-term rest (clause 1.16 of Chapter XIII).¹⁴

Bodies authorized to control road transport and the field of road safety conduct an inspection of the established work and rest pattern of drivers in accordance with the requirements of the legislation of Ukraine and have the right to prosecute persons guilty of violations in the prescribed manner.

At the international level, the issue of the work and rest pattern of drivers is regulated, in particular, by the Convention of the International Labour Organization (ILO) on the duration of working hours and rest in road transport of 27 June 1979.¹⁵ According to the Convention, the maximum total duration of driving, including overtime, should not exceed 9 hours per day or 48 hours per week. Every

¹⁴ Order of the Ministry of Emergency Situations of Ukraine No. 964 of 7 September 2012 "On the approval of the Rules of labour protection in road transport", <https://zakon.rada.gov.ua/laws/show/z1299-12#Text> (access: 31.5.2024).

¹⁵ https://zakon.rada.gov.ua/laws/show/993_215#Text (access: 31.5.2024).

hired driver has the right to a break after a continuous period of work of 5 hours (clause 1 of Article 4).

The daily rest of drivers is at least 10 consecutive hours during any twenty-four-hour period, counting from the beginning of the working day. The competent authorities or bodies in each country may provide for daily rest breaks of different duration depending on whether the carriage of passengers or goods is concerned and whether the rest takes place at the driver's place of residence or elsewhere.

In the European Union, the work of truck drivers is regulated by Regulation (EC) No. 561/2006.¹⁶ This Regulation provides for the installation of a special device – a tachograph – on the vehicle and provides for a number of fines in case of violation of labour standards for the driver. To work in the EU, a tachograph must have an appropriate certificate. In the European Union, truck drivers are very closely monitored for compliance with the norms of the regime and rest, which makes it possible to reduce the number of traffic accidents involving freight transport.

The European Labour Authority has defined the following work and rest patterns for the driver:

- daily working hours: up to 9 hours (can be increased to 10 hours, but no more than two times a week);
- duration of working hours per week: up to 56 hours (but no more than 90 hours within 2 weeks);
- duration of regular daily rest: at least 11 hours (shortened daily rest of at least 9 hours between two weekly rests);
- duration of regular weekly rest: at least 45 hours (shortened weekly rest at least 24 hours).¹⁷

During the Russian-Ukrainian war, the EU countries softened the requirements for the work and rest pattern of drivers transporting humanitarian goods to Ukraine (Figure 3).¹⁸

¹⁶ Regulation (EC) No. 561/2006 of the European Parliament and of the Council of 15 March 2006 on the harmonisation of certain social legislation relating to road transport and amending Council Regulations (EEC) No. 3821/85 and (EC) No. 2135/98 and repealing Council Regulation (EEC) No. 3820/85 (OJ L 102/1, 11.4.2006).

¹⁷ Yevropeyskyy orhan z pytan pratsi, *Rezhym pratsi ta vidpochynku vodiya*, 2022, https://www.ea.europa.eu/sites/default/files/2022-08/Driving_and_Resting_Times_Ukrainian.pdf (access: 31.5.2024).

¹⁸ A. Kulikowska-Wielgus, *Tymczasowe rozluźnienia czasu pracy i odpoczynku w Polsce*, 4.3.2022, <https://trans.info/pl/rozluznienia-czasu-pracy-i-odpoczynku-278348> (access: 31.5.2024); Regulation (EC) No. 561/2006.

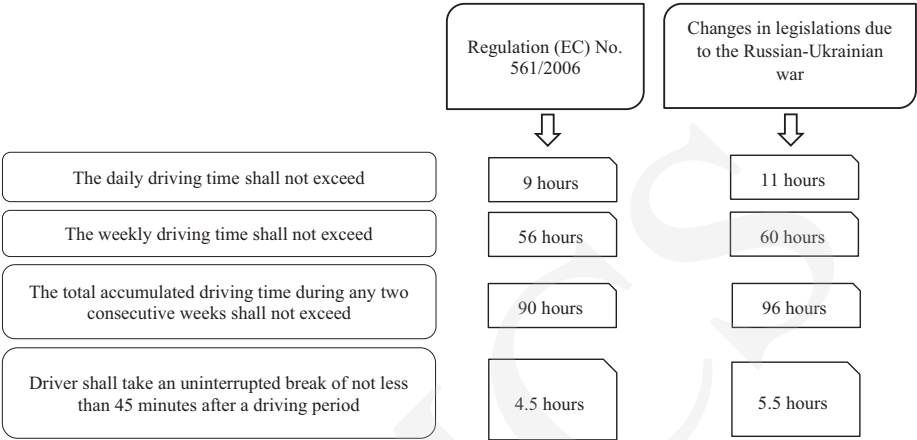


Figure 3. Changes in the time of work and rest of trucks’ drivers in the EU during the transportation of humanitarian goods in wartime

Source: Authors’ own elaboration.

Rail transport. Let’s consider the peculiarities of accounting for working time, rest time and working conditions of railway transport workers who perform their work duties in the way or within the service stations of the railway transport infrastructure, ensure the continuity of the transportation process of passengers and cargo, and the safety of train traffic.

In railway transport, the working hours and rest time of employees connected with ensuring the safety of train traffic and passenger service is regulated by a special normative act “Peculiarities of regulation of working time and rest time of certain categories of employees of railway transport and subways, directly related to ensuring the safety of train traffic and passenger service” of 10 March 1994 (No. 40/C), approved by the State Administration of Railway Transport of Ukraine.¹⁹

Issues regarding working hours and rest time, which are not defined in the above-mentioned Order, are regulated by the labour legislation of Ukraine. In particular, the Law of Ukraine “On Railway Transport” stipulates that “the working and rest time pattern of certain categories of railway transport workers, whose work is directly related to the movement of trains, is established by JSC ‘Ukrzaliznytsia’ in accordance with the current legislation of Ukraine in agreement with industry trade unions” (Article 15).²⁰

¹⁹ Order of the State Administration of Railway Transport of Ukraine No. 40-C of 10 March 1994 “Peculiarities of regulation of working time and rest time of certain categories of employees of railway transport and subways, directly related to ensuring the safety of train traffic and passenger service”, <https://www.vpmu.org.ua/osoblivosti-regulyuvannya-robochogo-chasu-i-chasu-vidpochinku> (access: 31.5.2024).

²⁰ Law of Ukraine No. 273/96-BP of 4 July 1996 “On Railway Transport”, <https://zakon.rada.gov.ua/laws/show/273/96-%D0%B2%D1%80#Text> (access: 31.5.2024).

Failure to comply with current regulations, job instructions, and internal labour regulations leads to a decrease in productivity and fatigue of employees of enterprises, which, accordingly, creates a threat to the safety of train movement and their shunting work, can lead to emergency situations and cause damage to the surrounding natural environment.

Peculiarities of regulation of working time and rest time of certain categories of employees of railway transport and subways are directly related to ensuring the safety of train traffic and passenger service.

At railway transport enterprises engaged in round-the-clock non-stop work, where the daily length of working hours cannot be observed, upon agreement with the trade union committee, a final record of working hours with an accounting period – month, quarter, round – can be introduced. But at the same time, the norm of working hours in total should not exceed the normal duration of working hours – 40 hours per week.

Working hours of employees whose permanent work continues on the way:

- train crews of passenger trains;
- employees of refrigerated trains;
- hopper-dispenser and dump truck routes;
- transporter wagons of the articulated type;
- service, baggage and collection-distribution wagons in the case of the total duration of the round trip and more can be taken into account by tour (the time from the moment of reporting to work for a trip to the moment of reporting to work for the next trip after rest at the point of permanent work).

The beginning of the work of locomotive and train crews, employees of refrigerator sections, etc. is considered the time of arrival at the place of permanent work (depot, electrical depot, reserve, locomotive crew exchange point, locomotive turnover point) according to the schedule, order or call; end of work – the moment of drawing up the relevant technical documentation (like the driver's route) after handing over the locomotive, section or wagon, train to the depot or change point.

The working hours of locomotive and conductor crews are organized according to the name schedule or according to the no-call system and set within the following time limits:

- duration of continuous work of locomotive crews: 7 hours;
- duration of continuous work of locomotive crews of suburban trains: up to 10 hours;
- duration of continuous work can be increased to 12 hours (with the agreement of trade unions and the consent of the collective of locomotive crews);
- work with shift duration exceeding the norm should not last longer than two calendar days in a row;
- uninterrupted rest time between shifts: at least 12 hours;
- weekly duration of working hours: 40 hours;

- average duration of working hours per week, including overtime, is up to 46 hours;
- total number of overtime hours: up to 120 hours per year;
- number of night trips of locomotive crews: no more than two nights in a row.

It is legally determined that an increase in the continuous work of locomotive crews is allowed in some cases, namely: natural disasters (snow and sand drifts, landslides, the consequences of hurricanes, downpours, floods, earthquakes, etc.), extraordinary circumstances (train catastrophes, accidents, fires, passage of recovery and fire trains, trains designated for special requirements, etc.). In the above-mentioned cases, the continuous duration of work of locomotive crews should not exceed 12 hours.

For employees of passenger wagons (passenger wagon conductors, stewards, senior trip stewards), the work and rest schedule is established under the following conditions:

- taking into account local conditions for each train based on the recommendations of Ukrzaliznytsia and the Trade Union Council;
- duration of continuous work: no more than 12 hours;
- the maximum duration of work per working day: up to 16 hours.

At the same time, it is expedient to provide in the current regulations for situations related to the delay of train movement due to military shelling and de-energization of railway stations, which leads to an increase in the duration of work of locomotive and conductor crews, employees of passenger and refrigerated trains.

Accounting for the working hours of locomotive and conductor crews, employees of passenger and refrigerated trains (sections), employees of railway industry, and workers of rebuilt trains is carried out in accordance with the Peculiarities, according to which employees of locomotive and conductor crews are given weekly rest days on any day of the week evenly throughout the month by adding 24 hours to the calculated rest due after the next trip in the working week. The duration of weekly rest may not be reduced to 42 hours in work schedules. These rest days are provided only at the point of permanent work.

It should be noted that the specifics of the legal regulation of labour relations in railway transport regarding the duration of working hours and rest time takes into account the presence of sources of increased danger, the implementation of labour activities for a long time in trips outside the place of permanent work (the traveling nature of the work of locomotive and train crew employees), the presence of special types of recreation (at the main point, on a trip, at a change point).²¹

Water transport. Let's consider the peculiarities of regulation of working hours and rest time of crew members of sea vessels and inland navigation vessels by shipowners.

²¹ A. Apanasenko, *op. cit.*

Ukraine has not ratified any of the international conventions that regulate the working time and rest time of seafarers. Among the acts of the ILO, it is possible to single out:

- Convention No. 109 “On wages, working hours on board a ship and the composition of the ship’s crew”;
- Convention No. 163 “On social and household services for seafarers at sea and in port”;
- Convention No. 180 “On working seamen’s time and ship’s crew composition”;
- Convention No. 187 “Regarding seamen’s wages, working hours and ship’s crew composition”, etc.

This testifies to the presence at the international level of a developed system of legal norms aimed at protecting the work of seafarers. For comparison, Finland has ratified twenty-three ILO conventions related to the work of seafarers, Ukraine – only six conventions.²² There is a need to intensify the process of ratification by Ukraine of international agreements regarding this issue.

The Convention of the ILO “On Labour in Maritime Shipping” (Maritime Labour Convention, MLC) of 23 February 2006 establishes minimum requirements that relate, in particular, to such issues as provision of paid annual leave, duration of work and rest time, standards of living conditions on a ship, professional training. The fundamental principles of the MLC determine the rights and obligations of actors of labour relations, the right of seafarers to regulated working hours and rest time, and form an effective mechanism for the protection of seafarers’ rights.

Among the participants of MLC are countries under whose flags more than 75% of the total number of cargo vessels in the world sail. In particular, among them are Panama, Malta, Cyprus, Liberia, and the Marshall Islands, whose flags are preferred by domestic shipowners. This means that about 70,000 Ukrainian sailors working under the flags of foreign countries will be able to use the rights granted by MLC.

At the legislative level in Ukraine, this issue is defined in the relevant Regulation,²³ according to which “working time is the time during which a crew member is obliged to perform work in the interests of the ship in accordance with the employment contract (operational duties, maintenance of the ship, passengers and crew members, maintenance of the ship in normal operational and technical condition) according to the schedule watches, performance of ship work and daily schedule on the ship, which are approved by the ship owner or the ship captain on his behalf” (II. Working time).

²² D. Dmytrenko, *op. cit.*

²³ Order of the Ministry of Infrastructure of Ukraine No. 135 of 29 February 2012 “On the approval of the Rules on working time and rest time of the floating fleet of sea and river transport of Ukraine”, <https://zakon.rada.gov.ua/laws/show/z0445-12#Text> (access: 31.5.2024).

A five-day 40-hour work week with two holidays – on Saturday and Sunday – is established for crew members of sea and river transport vessels. The duration of the working day is 8 hours, on the eve of holidays and non-working days – 7 hours. For those who work in harmful and difficult working conditions, according to the results of the attestation of workplaces according to working conditions, a reduced working time is established – no more than 36 hours per week. At the same time, the monthly, quarterly, and annual rate of working hours is calculated based on a five-day working week with two holidays.

On ships with 24-hour work during operation, a three-shift, 8-hour watch schedule is usually established for crew members. On ships that are not operated around the clock, a two- or one-shift watch schedule is established. At the same time, a two-shift work schedule is established with a shift duration of up to 12 hours.

For crew members who are not on watch, working hours are set from 8 a.m. to 5 p.m. with a lunch break of up to one hour. Taking into account climatic, weather and other conditions, working hours can be set between 6 a.m. and 8 p.m.

Depending on the specific conditions of the ships' operation (duration of the voyage, operating or navigation period, frequency of calls to ports, time of parking in the port, climatic conditions, availability of living quarters, their compliance with current sanitary and hygienic standards for sea and river transport) and forms of organization of work of members crew (fixation of three periodically changing crews on two ships, or two crews on one ship) schedules of watches (work) lasting more than 8, but not more than 12 hours per day may be established.

Holidays, non-working days and weekends according to the calendar do not exempt crew members from being on watch.

In accordance with the Regulation "rest time is a period outside working hours during which crew members are exempt from all official duties. Rest time does not include short breaks in work" (III. Rest time).²⁴

According to the Labour Code of Ukraine and the Law of Ukraine "On Leaves", ship crew members have the right to:

- daily rest;
- weekly rest days;
- rest on holidays and non-working days;
- reduced working hours on pre-holidays and non-working days;
- basic and additional annual leave.

At the same time, the main issues regarding the establishment of working and rest time patterns for seafarers are regulated by internal labour regulations, shift schedules and other local acts.

The issue of compliance with the requirements regarding the equipment of vessels with the appropriate number of crew members is relevant. In particular, this

²⁴ *Ibidem.*

issue is regulated by the provision of the ILO Convention “On Minimum Standards on Merchant Ships” of 13 October 1976 (ratified by Resolution of Verkhovna Rada of Ukraine No. 3387-XII of 14 June 1993), according to which each state must at the legal level, determine safety standards regarding qualifications, duration of working hours, and the composition of the crew.²⁵

According to the results of the study, one of the causes of accidents on water transport is the insufficient number of crew members (requirements regarding the minimum crew size depending on the purpose and size of the vessel, the mode of operation of the vessel are not taken into account), which leads to overloading and accumulation of fatigue of sailors, insufficient rest for recovery physical and mental abilities. In addition, the work of seafarers can be defined as difficult and stressful due to physico-chemical, medical-biological, social-psychological factors, both at work and during rest.²⁶ Crew fatigue and nervousness negatively affect the crew’s ability to make sound decisions. Therefore, fatigue is identified as another important factor in serious shipping accidents, as an example: in 2005, the British bulk carrier “Lerrix” ran aground in the Baltic Sea because the tired captain fell asleep on the bridge; in 2017, the destroyer “USS Fitzgerald” collided with the container ship “Alnic MC” in the open sea; in 2017, the USS John McCain destroyer of the same class rammed the “ACX Crystal” tanker.²⁷

Taking into account the specifics of the activities of seafarers, who are mostly in the process of performing their labour duties outside of Ukraine, it is difficult to ensure the fulfilment of their rights and the solution of socio-economic problems without applying the provisions of international law. To some extent, seafarers do not have a sufficient legal field to protect their rights against foreign shipowners.²⁸ Harmonizing national labour legislation and the practice of labour relations in maritime shipping, taking into account the international nature of its activity, is allowed by international labour standards, which are defined in the conventions and recommendations of the ILO.²⁹

Thus, the legal regulation of seafarers’ labour in Ukraine is not detailed enough because modern standards of international treaties are not taken into account. The modern trend of internationalization in the field of maritime transport regarding the issue of legal regulation of social and labour relations should lead to awareness of the need to combine national means with international cooperation. The

²⁵ ILO Convention on Minimum Standards for Merchant Ships, 1976, https://zakon.rada.gov.ua/laws/show/993_052#Text (access: 31.5.2024).

²⁶ N. Orlova, *op. cit.*

²⁷ Sudnoplavstvo, *Vtoma ekipazhu – odna z holovnykh prychyn katastrof na mori*, 6.4.2018, <https://ua.sudohodstvo.org/vtoma-ekipazhu-odna-z-golovnih-prichin-katastrof-na-mori> (access: 31.5.2024).

²⁸ M. Holbin, *op. cit.*

²⁹ L. Olkhoviyk, O. Buy, *op. cit.*

ratification procedure of the MLC and the adoption of the Law “On Recruitment and Employment of Seafarers”, the draft of which was prepared in 2021 and is currently being processed, need to be accelerated. Ukrainian legislation does not regulate some issues of social protection of seafarers, in particular regarding material compensation for overtime work, there is no special port control procedure for compliance with seafarers’ labour standards.

At the same time, it should be noted that the war in Ukraine had a negative impact on the transport sector, completely stopping the work of air transport and partially – water transport. Road and rail transport work in conditions of increased risks. Such a situation requires an urgent need to make changes to the legal acts that directly regulate the mode of work and rest for carriers. First of all, it is necessary to take into account the current situation in each specific region. Currently, three types of territories can be distinguished in Ukraine: (1) deep rear zones, (2) front-line zones, and (3) combat zones and temporarily occupied territories. Each of them has different safety requirements, a different level of stress, which, accordingly, requires a differentiated approach to the organization of work and rest for personnel of transport companies. Taking into account the higher physical and mental-emotional stress due to the direct threat to the life and health of carriers, the high probability of damage to rolling stock and cargo during transportation, the destruction of transport infrastructure, it is necessary to legally establish higher social guarantees for carriers working in front-line areas and combat zones.

CONCLUSIONS

Analysing the issue of regulating work and rest at transport enterprises, it can be stated that in Ukraine there is a sufficiently developed system of mandatory and optional legal norms aimed at the protection of personnel in the transport sector. However, it is advisable to:

- study of the experience of European countries regarding the regulation of working time and rest time of transport workers by individual modes of transport;
- intensification of the process of ratification and implementation of the content of some ILO conventions;
- strengthening the responsibility of employers for non-compliance with the requirements of legal norms regarding the working time and rest time of employees;
- activation of cooperation between employers, trade unions, and state authorities in the matter of developing program provisions and effective mechanisms for the implementation of defined norms for the protection of socio-economic and labour rights of transport enterprises personnel;

- revision of the work and rest pattern of transport sector workers in accordance with the conditions of martial law as well as legal consolidation of higher social guarantees for carriers working in front-line zones and combat zones.

At the same time, in the field of rail transport, it is expedient to provide in the current regulations for situations related to the delay of train movement due to military shelling and de-energization of railway stations, which leads to an increase in the duration of work of locomotive and conductor crews, employees of passenger and refrigerated trains.

The modern trend of internationalization in the field of maritime transport regarding the issue of legal regulation of social and labour relations should lead to awareness of the need to combine national means with international cooperation. The ratification procedure of the MLC and the adoption of the Law “On Recruitment and Employment of Seafarers” should be accelerated. Ukrainian legislation should also regulate some issues of social protection of seafarers, in particular regarding material compensation for overtime work; it is necessary to introduce special port control procedure for compliance with seafarers’ labour standards.

REFERENCES

Literature

- Apanasenko A., *Osoblyvosti rehulyuvannya trudovykh vidnosyn na zaliznychnomu transporti Ukrainy*, Kharkiv 2010.
- Burlakov V.I., Puchkov Yu.P., Popov O.V. (eds.), *Lyudskiy faktor u systemi zberezhennya liotnoyi prydatnosti aviatsiynoyi tekhniki*, Kyiv 2018.
- Dmytrenko D.O., *Pravove rehulyuvannya robochoho chasu i chasu vidpochynku moryakiv v ukrajini ta finlyandiyi*, “Naukovyy visnyk Uzhhorodskoho Natsionalnoho Universytetu. Seriya Pravo” 2021, vol. 64, DOI: <https://doi.org/10.24144/2307-3322.2021.64.32>.
- Kalnysh V.V., Shvets A.V., Maltsev O.V., Yeshchenko V.I., *Poryavnyalna kharakterystyka pratsi zovnishnikh pilotiv bezpilotnykh aviatsiynykh kompleksiv ta osib hrupy kerivnytstva poliotamy*, “Ukrayinsky zhurnal viyskovoyi medytsyny” 2022, vol. 3(3), DOI: [https://doi.org/10.46847/ujmm.2022.3\(3\)-118](https://doi.org/10.46847/ujmm.2022.3(3)-118).
- Kalnysh V.V., Trinka I.S., Pashkovskyy S.M., Symynyuk Yu.V., Koval N.V., Ponimatchenko S.L., *Poryavnyalna kharakterystyka psykhoфизиологичних особливостей операторів безпilotnykh aviatsiynykh kompleksiv ta personalu z upravlinnya povitryanym rukhom*, “Visnyk Vinnytskoho natsionalnoho medychnoho universytetu” 2023, vol. 27(1), DOI: [https://doi.org/10.31393/reports-vnmedical-2023-27\(1\)-25](https://doi.org/10.31393/reports-vnmedical-2023-27(1)-25).
- Orlova N., *Osoblyvosti pravovoho rehulyuvannya okhorony pratsi na vodnomu transporti*, “Pidpryyemnytstvo, hospodarstvo i pravo” 2020, vol. 6.
- Staszewska M., *Czas pracy kierowców*, Warszawa 2019.

Online sources

- Holbin M., *Mizhnarodno-pravovi zobov'yazannya Ukrayiny stosovno zakhystu trudovykh i sotsialnykh prav moryakiv*, "Almanakh mizhnarodnoho prava" 2015, vol. 15, <http://inlawalmanac.mgu.od.ua/v15/6.pdf> (access: 31.5.2024).
- Kulikowska-Wielgus A., *Tymczasowe rozluźnienia czasu pracy i odpoczynku w Polsce*, 4.3.2022, <https://trans.info/pl/rozluźnienia-czasu-pracy-i-odpoczynku-278348> (access: 31.5.2024).
- Olkhoviyk L., Buy O., *Mizhnarodno-pravove rehulyuvannya pratsi moryakiv*, "Porivnyalne analitychne pravo" 2018, no. 2, <https://journals.indexcopernicus.com/api/file/viewByFileId/767957.pdf> (access: 31.5.2024).
- Sudnoplavstvo, *Vtoma ekipazhu – odna z holovnykh prychn katastrof na mori*, 6.4.2018, <https://ua.sudohodstvo.org/vtoma-ekipazhu-odna-z-golovnih-prichin-katastrof-na-mori> (access: 31.5.2024).
- Yevropeyskyy orhan z pytan pratsi, *Rezhym pratsi ta vidpochynku vodiya*, 2022, https://www.ela.europa.eu/sites/default/files/2022-08/Driving_and_Resting_Times_Ukrainian.pdf (access: 31.5.2024).

Legal acts

- Convention of the International Labour Organization on the duration of working hours and rest in road transport, 27 June 1979, https://zakon.rada.gov.ua/laws/show/993_215#Text (access: 31.5.2024).
- Convention on International Civil Aviation, 1944, https://zakon.rada.gov.ua/laws/show/995_038#Text (access: 31.5.2024).
- ILO Convention on Minimum Standards for Merchant Ships, 1976, https://zakon.rada.gov.ua/laws/show/993_052#Text (access: 31.5.2024).
- Labour Code of Ukraine, approved by Law No. 322-VIII of 10 December 1971 of the State Government, <https://zakon.rada.gov.ua/laws/show/322-08> (access: 31.5.2024).
- Law of Ukraine No. 273/96-BP of 4 July 1996 "On Railway Transport", <https://zakon.rada.gov.ua/laws/show/273/96-%D0%B2%D1%80#Text> (access: 31.5.2024).
- Law of Ukraine No. 504/96-BP of 15 November 1996 "On Leaves", <https://zakon.rada.gov.ua/laws/show/504/96-%D0%B2%D1%80#Text> (access: 31.5.2024).
- Law of Ukraine No. 2344-III of 5 April 2001 "On Road Transport", <https://zakon.rada.gov.ua/laws/show/2344-14#Text> (access: 31.5.2024).
- Law of Ukraine No. 2136-IX of 15 March 2022 "On the organization of labour relations under martial law", <https://zakon.rada.gov.ua/laws/show/2136-20#Text> (access: 31.5.2024).
- Order of the Ministry of Emergency Situations of Ukraine No. 964 of 7 September 2012 "On the approval of the Rules of labour protection in road transport", <https://zakon.rada.gov.ua/laws/show/z1299-12#Text> (access: 31.5.2024).
- Order of the Ministry of Infrastructure of Ukraine No. 135 of 29 February 2012 "On the approval of the Rules on working time and rest time of the floating fleet of sea and river transport of Ukraine", <https://zakon.rada.gov.ua/laws/show/z0445-12#Text> (access: 31.5.2024).
- Order of the Ministry of Infrastructure of Ukraine No. 337 of 24 June 2021 "On Amendments to the Order of the Ministry of Transport and Communications of Ukraine, 7 June 2010, No. 340", <https://zakon.rada.gov.ua/laws/show/z1125-21#Text> (access: 31.5.2024).
- Order of the Ministry of Transport of Ukraine No. 219 of 2 April 2002 "On the approval of the Rules for determining the working time and rest time of aircraft crews of the civil aviation of Ukraine", <https://zakon.rada.gov.ua/laws/show/z0390-02#Text> (access: 31.5.2024).
- Order of the Ministry of Transport and Communications of Ukraine No. 340 of 7 June 2010 "On the approval of the Rules on working time and rest time of drivers of wheeled vehicles", <https://zakon.rada.gov.ua/laws/show/z0811-10#Text> (access: 31.5.2024).

Order of the State Administration of Railway Transport of Ukraine No. 40-C of 10 March 1994 "Peculiarities of regulation of working time and rest time of certain categories of employees of railway transport and subways, directly related to ensuring the safety of train traffic and passenger service", <https://www.vpmu.org.ua/osoblivosti-regulyuvannya-robochogo-chasu-i-chasu-vid-pochinku> (access: 31.5.2024).

Regulation (EC) No. 561/2006 of the European Parliament and of the Council of 15 March 2006 on the harmonisation of certain social legislation relating to road transport and amending Council Regulations (EEC) No. 3821/85 and (EC) No. 2135/98 and repealing Council Regulation (EEC) No. 3820/85 (OJ L 102/1, 11.4.2006).

ABSTRAKT

W artykule wyjaśniono relację pomiędzy zdolnością do pracy człowieka a schematem pracy i wypoczynku personelu przedsiębiorstw transportowych. Prowadzenie pojazdów wymaga zwiększonej zdolności do pracy, dlatego przepisy prawne muszą jednoznacznie regulować czas pracy personelu zaangażowanego w transport. Przyjmuje się, że specyfika regulacji prawnej schematu pracy i odpoczynku pracowników przedsiębiorstw transportu powietrznego, drogowego, kolejowego i wodnego jest zgodna z przepisami prawnymi Ukrainy i niektórymi konwencjami Międzynarodowej Organizacji Pracy. Niestety, brak jest obecnie przepisów dotyczących regulacji schematu pracy i odpoczynku w warunkach stanu wojennego w zależności od regionu, w którym obowiązują. Autorzy formułują wnioski na temat konieczności analizy doświadczeń państw europejskich w zakresie regulacji czasu pracy i czasu odpoczynku pracowników transportu w podziale na: różne środki transportu; zintensyfikowanie procesu ratyfikacji przez Ukrainę umów międzynarodowych w dziedzinie regulacji schematu pracy i odpoczynku; zwiększenie odpowiedzialności pracodawców za nieprzestrzeganie wymogów norm prawnych dotyczących czasu pracy i czasu odpoczynku pracowników; współpracę pracodawców, związków zawodowych i organów państwowych przy opracowywaniu norm programowych i skutecznych mechanizmów wdrożenia określonych norm ochrony praw społeczno-ekonomicznych i pracowniczych pracowników przedsiębiorstw transportowych; zrewidowanie schematu pracy i odpoczynku pracowników sektora transportu zgodnie z warunkami stanu wojennego; prawne uznanie wyższych gwarancji socjalnych przewoźników pracujących w strefach przyfrontowych i strefach prowadzenia działań bojowych.

Słowa kluczowe: schemat pracy i odpoczynku; transport; personel; przedsiębiorstwa transportowe; bezpieczeństwo