

MOTORWAY PATROL ON SLOVAK MOTORWAYS AND EXPRESSWAYS

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Summary: Ensuring the motorways and expressways in terms of their safety is the primary task of the administrator. This activity includes, inter alia, on the one hand control of such roads, and on the other, to help drivers in need and deficiencies found. In Slovakia, the activity is performed by the National Motorway Company establishing Motorway patrols. The patrol operates 24 hours a day and has become a significant contribution to improving road safety in the Slovak Republic.

Key words: application, traffic, motorway, communications, control, need, help, vehicle

INTRODUCTION

Road safety and its improvement is a top priority for any modern society. It should be noted that although increasing the safety of all the elements that make up the transport infrastructure, occurs a number of special events, which in some cases end tragically. To minimize the number of road accidents in motorways and expressways, it is necessary to adopt a series of preventive measures. Among the positive measures may be included the activities of the National Motorway Company (NMC), which creating of Motorway patrol increases the safety of road safety providing better quality of maintenance and repair of motorways and increased service levels to users network of motorways and expressways. Control activities carried out by NMC as part of their work, have been extended from 2013 for new activities to help motorists - problematic situations that can happen to a driver on the road.

1. MOTORWAY PATROL ESTABLISHMENT

Improving road safety on motorways and certain expressways of Slovak Republic (SR) providing quality, accessible, safe and acceptable user motorway network and high-quality, customer-oriented services (1) was one of the strategic objectives of the NMC. Its establishment was based on the "Strategy of the National motorway company, a. s. for the period of 2014 - 2018 ". In this document, NMC defined its basic strategy, which among other things has set as a priority for continuous improvement and innovation of services, introduction of new elements of security and ensuring user comfort. These services may include the provision of assistance to motorists in need through motorway patrols (SOS number, Motorway patrol).

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The part of meeting this goal was also the introduction of Motorway patrol that initially more than a year and a half worked (from 1.1.2013 to 1.4.2015) in the section of motorway D1, D2 and R1 expressway in the most busy areas in pilot operation. From 2.4.2015 it is in full operation. Initially it operated their activities to only 14 management centers and since December 2015 in 15 management centers (Table 1) to oversee the approximately 750 kilometers of roads and thus covers the entire network of motorways and expressways.

Tab. 1 - Motorway patrol vehicles deployment in SR

Basic motorway patrols	Motorways and expressways
Malacky	D2
Bratislava	D1, D2, D4
Trnava	D1
Trenčín	D1, I/50 (R2)
Považská Bystrica	D1, D3, R6
Martin	D1
Liptovský Mikuláš	D1, R3
Beharovce	D1
Mengusovce	D1
Prešov	D1, R4
Galanta	R1
Nová Baňa	R1
Zvolen	R1, R2
Košice	R2, R4
Čadca	D3, R5

Source: (3)

To the 31.12.2015 has NMC in management in total more than 758,22 km of motorways, expressways and first class roads (Table 2).

Tab. 2 – Motorways and expressways in management of NMC

Motorways and expressways	Type	Length (km)
Motorways		464,10
Expressways	Expressways	211,37
	Others selected 1. class roads	82,75
Summary		758,22

Source: (3)

2. MOTORWAY PATROL VEHICLE EQUIPMENT

Motorway patrol vehicles are an emergency units of NMC, capable of quickly intervene and resolve incidents on motorways and expressways. Currently NMC has 15 special and visibly marked cars VW Crafter of white and yellow-orange color with the bottom red-white 45 degrees sloping hatching (Fig. 1). The vehicle is equipped by a tow bar. Furthermore, the vehicle body is:

- motorway patrol inscription on the front bonnet,
- on the front and on the sides of the vehicle body is logo, phone logo with the telephone number 0800 100 007,
- on the sides of the vehicle body and the back of:
 - the logo with the inscription Motorway patrol and with three pictograms that illustrate the main contents of the vehicle crew,
 - the logo with the name of the NMC operator,
 - vehicle number (from 1 to 15, the number is also on the vehicle roof),
- five orange warning lights on the rear vehicle body.



Source: (4)

Fig. 1 - Motorway patrol vehicle indication

Motorway patrol vehicles are adequately equipped to ensure their activities. The most important equipment is portable traffic signs, tools (common motorist tools, shovel, pickaxe, jack, tow rope etc.), fire extinguishers, means for removing oil products, cards to help motorists in 13 foreign languages and packages for provision of premedical first aid.

In each of Motorway patrol vehicle, that is in operation 24 hours, is available professionally trained and equipped two-member crew.

3. MOTORWAY PATROL ROLES

The main task of the service is to provide assistance to motorists in emergency situations in which they may find themselves on the motorways. Motorway patrol does not replace components of the Integrated rescue system (IRS). The service is free of charge, it is included in the motorway signs. For example, for the period of 02.04.2015 - 31.12.2015 Motorway patrol solved more than 10 000 incidents and drove in their activities 1 280 663 km (2). The task of Motorway patrol is especially (5, 6):

- help the motorist in:
 - changing a wheel and apply reserve,
 - the failure,

- security of withdrawal to the nearest parking area,
 - the lack of fuel (to supplement their mileage before service station),
 - request for information on towing services,
 - request for information on the nearest car / tire repair,
 - security of stationary vehicle by cover and road markings of Motorway patrol vehicles (breakdown assistance vehicle or a car accident), (Fig. 2 - 3),
 - contacted of Motorway police and IRS,
- control of highways and selected expressways:
 - rest-stop control,
 - practicability control in winter
 - control of snow guard in winter,
 - the removal of foreign objects forming a barrier in the motorway,
 - the control of traffic signs,
 - the fencing control,
 - control of slopes and vegetation,
 - control of building facilities and road conditions (potholes, retaining walls, noise barriers),
 - ensure cleanup of the accident from fluids.



Source: (2)

Fig. 2- Motorway patrol vehicle with traffic signs

To intervene and help the driver sends Central operating station of NMC vehicles of Motorway patrol or individual crew can intervene operationally in finding a stationary vehicle on the route of travel. In the event of deficiencies in the control of selected motorways and expressways Motorway patrol vehicle crew, if it is in its possibilities to remedy the fault. If not, the irregularity will report to the Central operating station NMC, which sends to the appropriate place necessary forces and means of ensuring appropriate corrections.



Source: (7)

Fig. 3- Stationary vehicles marking by Motorway patrol vehicles

4. DRIVER PROCEDURE IN CASE OF A VEHICLE BREAKDOWN ON THE MOTORWAY

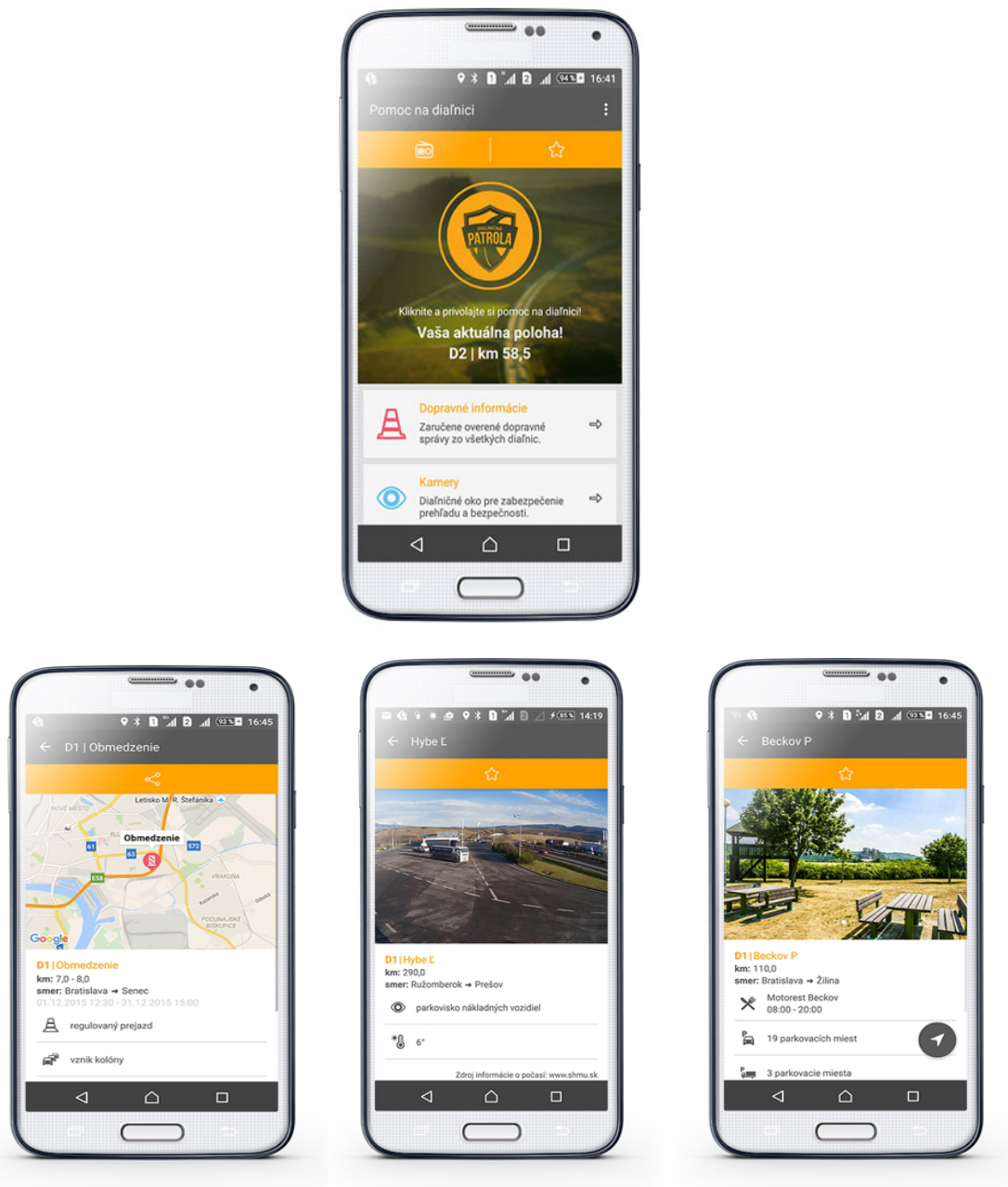
In terms of road safety is considered to be the weakest the person and his dangerous behavior. For example in 2015 was found that the most common causes of road accidents were misconduct driver and high speed. A variety of drivers do not know the principles of the legality of the failure of his vehicle on a motorway or expressway. The procedure in case of any failure of the vehicle should be as follows: (8)

- in the indication of any problem on the motorway the driver must immediately turn on warning lights on the vehicle and carefully drive the car as close as possible to the side of the road,
- if the driver does not have turnout or free area, he must stop on the roadside, closest to the crash barrier,
- driver lefts on warning lights, put on a reflective vest and through the passenger door get out the vehicle,
- driver places warning triangle about 250 meters from the vehicle (distance from the edge of the road is about 1 meter) and the other occupants of the vehicle shall transfer behind the roadside or crash barriers for safety (must not remain seated in the vehicle),
- the driver calls for help Motorway patrol using the phone number 0800 100 007, or SMS, or contacts Travel assistance insurance (it is also possible to use the emergency SOS phones that are on the motorway in about two kilometers apart).

For calling the Motorway patrol can the driver use a mobile application Help on the motorway with locating the exact position (Fig. 4). The application is further expanded upon:

- the necessary contacts to provide assistance,
- the current traffic reports and information,
- optimal selection of a rest-stop with services,

- the tourist attractions across Slovakia, which the driver can use on his way.



Source: (9)

Fig. 4 –Help on the motorway mobile application

CONCLUSION

Safety in road traffic is generally characterized by the absence of accidents, injuries, deaths. In enhancing road safety and quality of services on motorways and dual expressways play an important role vehicles of Motorway patrol NMC. The main task in addition to checking the road conditions is also help drivers in need. NMC is considering as the main advantage of Motorway patrol introduction the response time, increase safety and security of users of motorways and expressways.

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