# Alternatives of the modernization of the Hungarian Defence Forces' fuel support tasks

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The article describes the factors affecting the execution of the supply tasks of the fuel service and the causes and alternatives of the modernization of the supply function of fuel support.

The work of the fuel support staff is made rather difficult by the obsolete technical equipment that has been in service for decades, the substantial amount of administration required by refuelling and accounting and the limited number of well trained personel available.

The implementation of the chip-card based refuelling, supervising and dispatching system described in the article provides a practicable alternative for the reduction of the administrative tasks of fuel support and the modernisation of supply.

# Introduction

In the past two decades dramatic changes have taken place in the supply system of the fuel supply service regarding both its supply tasks and its technical equipment. The majority of the technical equipment of the service is rather worn-out, its average age being about 25-30 years and it no longer meets the requirements set by the current tasks of the HDF. Moreover, the use of fuel technical equipment is currently regulated by many other technical, fire protection and environmental regulations and laws. The technical condition and the utilization level of the fuel stations at the HDF's installations, the technical condition and the mobile capability of the fleet of refuelling trucks currently in-service and the condition of the fuel support systems at airfields have been assessed. In order that the fuel service can comply with the legal regulations and carry out the main tasks of the HDF, it has become indispensible to work out a comprehensive modernisation program for the fuels service, the implementation of which would last several years. Once the modernisation program has been completed, the fuel support and the fuel support-related tasks will become simpler and will be assisted by up-to-date technical equipment. In accordance with this, as a first step, the modernisation of the equipment and the facilities used for storing and dispensing fuels has been started and is still ongoing. There is also a need for a new, up-to-date and economical form of fuel support which does not require a lot of human resources.

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Received: July 12, 2007

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#### The reasons for modernisation

The first and most important reason that makes modernisation a necessity is the level of wear and tear of the existing technical equipment. Over many decades of use the majority of the equipment has become worn and its mobile capability has decreased to a great extent. Some of the existing refuelling trucks are no longer serviceable and in many cases they only serve as repair material for the maintenance of other refuelling vehicles. The cubic capacity of their fuel tanks is rather small, most of them have a spark ignition engine, their specific fuel consumption is high and their use is inconsistent with NATO's Single Fuel Concept, and therefore this equipment cannot be used in an area of operations. A large number of these vehicles do not meet the ADR requirements.<sup>1</sup>

The fuel stations were built in the 1960s and 1970s. They are obsolete, their built-in fuel tanks are in a rather bad technical condition, their operation is uneconomical due to the decreased vehicle traffic and they do not fully comply with the fire protection and environmental regulations. The majority of the fuel tanks do not have double walls, so their use raises environmental concerns. The steadily decreasing budget of the HDF, including the budget of the fuel supply service, would not be able to afford the additional burden of environmental penalties and the costs of soil regeneration.

The procurement and fielding of the new Gripen fighter aircraft and the NATO STANAGs concerning airfield refuelling systems justify the need for the upgrading and continuous modernisation of airfield fuel dispensing systems.

The second reason necessitating the modernisation is the fact that the current system of supply tasks is rather confusing and complicated. The fuel supply of the troops is carried out in several different ways: on the one hand it is possible for the military unit to receive the necessary fuels in kind, with no payment involved (supply in kind), and on the other hand, in the case of road vehicles (mainly passenger cars and minibuses) the alternative of purchasing fuel with the so-called MOL-card also exists, where the units finance the costs from the budget of the unit. The refuelling of the vehicles takes rather a long time and involves a lot of administrative tasks to be performed by the operator dispensing fuel. The tasks preceding the refuelling and the accounting following it are complicated, time-consuming and require continuous contact with the other service branches. Another inadequacy of the current supply system is the fact that it makes it very

<sup>&</sup>lt;sup>i</sup> The European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR – L'Accord européen relatif au transport international des marchandises dangereuses par route) regulates the carriage of hazardous materials in this way.

difficult for the logistics officer to monitor the changes in the sustenance supplies, whereas in an ideal situation he/she should always have up-to-date data.

The reason for the technical and functional transformation of the supply system is the limited availability of human resources. As a result of the introduction of contract service and the suspension of compulsory military service, carrying out the supply tasks has become a lot more difficult because in many places there is a shortage of soldiers who are trained in this area. "According to the special regulations (Htp/17 item 43) regarding fuel support, military units are supposed to provide 24-hour fuel station duty, but the new Service Regulations do not list it among the 24-hour duties. The Service Regulations do not list the fuel station operator on duty among the duties under item 268.1., however, under item 268.3. they allow the commander, within his competence, to order other duties (e.g.: fuel station duty). This is a practicable solution, but it cannot be permanent."<sup>1</sup> As a result, due to the low number of personnel assigned to the fuel supply service, in some places the 24-hour operation of the fuel station is not ensured and only the appointed military units operate fuel stations around the clock. Moreover, paying the operator on duty would be an additional burden on the budget of the military unit.

Due to the reasons mentioned above, it is necessary to form an up-to-date supply system which would make it possible to establish a refuelling, data-collecting, supervising and dispatching system that integrates the HDF's fuel stations into a uniform system.

#### The possibilities for modernization

After the examination and analysis of the current system, the modernization of the supply tasks is feasible in two directions:

- 1. Performing the tasks of fuel supply exclusively by civilian firms;
- 2. Establishing an up-to-date, economical and cost-effective system facilitating the economical use of human resources and at the same time preserving the current system which is based on acquiring in kind the amount of fuel which is anticipated to be consumed.

A good example of the partial realization of the first conception mentioned above is the MOL-card based refuelling, according to which the designated vehicles of a military unit (mostly passenger cars and minibuses) can refuel upon payment exclusively at MOL filling stations. This method of supply already has a history of several years and experience shows that although there have not been any interruptions in the supply, from a financial aspect fuel husbandry in kind allows for a lot more cost-effective and more economical use of materiel. J. VENEKEI: Modernization of the fuel support tasks

Another direction of the modernization is the implementation of a refuelling, datacollecting, supervising and dispatching system that integrates the HDF's fuel stations in one single system. Numerous examples of this solution can be found in the Scandinavian countries' civilian filling station networks, in one part of Italy's filling station networks and some foreign armies also use similar refuelling systems. Obviously, the establishment of a similar, up-to-date system requires the thorough examination of the current fuel support tasks of the HDF, and the possibilities for the adoption of the similar systems already in use in other countries should be assessed bearing in mind the Hungarian peculiarities. The operation of a system like this must be cost-effective since the budget resources tend to be continuously decreasing. "The aim of cost-effectiveness is to meet the fuel needs of military operations at the lowest possible cost. The economical use of resources, personnel and equipment is always an important principle of the organisation and execution of support."<sup>2</sup>

Accordingly, an up-to-date, chip-card based refuelling, supervising and dispatching system under the Hungarian circumstances must meet the following specific requirements:

- 1. it must ensure the continuous availability of the existing supply stocks and consumption data
- 2. it must reduce the length of refuelling
- 3. it must replace the current manual accounting with the use of modern computer technology
- 4. it must ensure accurate and itemized accounting
- 5. it must reduce the number of operators dispensing fuel
- 6. it must reduce the amount of fuel illegally pumped
- 7. it must ensure and ease the obligation to supply information to the Customs and Finance Guard

Since the logistic officer responsible for fuel supply tasks most often relies upon the usage data in the vehicle trip logs while processing the refuelling date and the trip logs, it seems expedient to alter the current system of issuing and handling trip logs and make it compatible with the chip-card based refuelling, supervising and dispatching system outlined above. This task requires a close cooperation with the vehicle-technical service in order that the two systems can work together harmonically.

AARMS 6(4) (2007)

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## Summary

The fuel support tasks performed by the troops and the services and sub-units of military organisations have been undergoing significant changes in the past few decades. The transformation of high-level logistic organisations is currently underway.

The pool of technical equipment and the infrastructure of the service are also continuously changing since they have to meet the requirements for modern armies and they also have to comply with the legal regulations.

The tasks emerging in the field of supply involve a lot of administrative work, and make difficult the husbanding of the resources, sustaining supply levels and using materiel economically.

In this short article I have outlined an alternative with the help of which the fuel support tasks would become simpler, its costs would decrease and the standard of supply would reach the level which meets the requirements of our time. At the same time it would be economical and would ensure an effective performance of the fuel service tasks deriving from the functions of the HDF.

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