

¹ THE STUDY OF MOTOR VEHICLES SUITABILITY FOR MOUNTING COMBAT SYSTEMS

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Abstract

At the beginning of the development a new all-terrain vehicle one of the most all-inclusive research is the research work on its suitability to have the superstructure built. Within the research work presented in this paper a number of analyses have been made with regard to the vehicle conception, mounting weapons, and also the tests with regard to the vehicle characteristics. In this paper the term suitability of the all-terrain vehicle for building superstructure on it has been introduced, i.e. the factor of suitability of the all-terrain vehicle for built-in superstructure.

The suitability factor of the all-terrain vehicle for built-in superstructure has been defined in several ways and from a number of viewpoints, i.e. a variety of criteria has been applied and they depend on the purpose of the superstructure. On the basis of the analysis that has been made for the vehicle with four axles it can be concluded that it is possible to satisfy the requirements of customers for the axis load and with a less number of axles.

The load bearing factor possibility has been defined as the ratio of the geometrical characteristics of the vehicles frames (longitudinal supporters) that are being compared.

The similar analysis has been made from the aspect of the vehicle stability and vehicle maintenance. By defining the factors of additional load it was possible to explicitly define the load increase on the tested section for two specific usage conditions and also to evaluate the successful way to build-in superstructure onto this type of vehicle.

Key words: all-terrain vehicle, combat vehicle, suitability, combat system.

PROUČAVANJE POGODNOSTI MOTORNJIH VOZILA ZA MONTIRANJE BORBENIH SISTEMA

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Rezime: Na početku razvoja jednog novog terenskog vozila jedno od najsveobuhvatnijih istraživanja je istraživanje njegove pogodnosti za nadgradnju. U okviru istraživanja koje je

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prikazano u ovom radu sprovedeno je niz analiza koje se odnose na koncepciju vozila, ugradnju oruđa, zatim ispitivanje karakteristika vozila.

U radu je uveden pojam pogodnosti terenskog vozila za nadgradnju, odnosno faktor pogodnosti terenskog vozila za nadgradnju.

Faktor pogodnosti terenskog vozila za nadgradnju je definisan na više načina i sa više gledišta odnosno primenjeni su različiti kriterijumi a oni zavise od namene nadgradnje.

Iz analize koja je sprovedena za vozila sa četiri mosta može se zaključiti da je moguće zadovoljiti zahteve korisnika za osovinskim opterećenjem i sa manjim brojem mostova.

Faktor mogućnosti prijema opterećenja definisan je kao odnos geometrijskih karakteristika ramova (uzdužnih nosača) vozila koja se upoređuju. Slična analiza je sprovedena sa aspekta stabilnosti vozila i održavanja vozila.

Definisanjem faktora dodatnog opterećenja eksplicitno se određuje povećanje opterećenja na posmatranom mestu za dva karakteristična uslova upotrebe i omogućava sagledavanje uspešnosti nadgradnje ove vrste vozila.

Ključne reči: terensko vozilo, borbena vozila, pogodnost, borbeni sistem.