

IMPLEMENTATION OF DAY RUNNING LIGHTS SYSTEM IN OLD CARS WITHOUT CHANGING THE HEADLIGHTS

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Rezumat. *Lucrarea de față prezintă sistemul de iluminare la autoturisme în general, istoricul și evoluția sa. Începând cu anul 2009, luminile de conducere pe timp de zi au devenit obligatorii în Uniunea Europeană, în concluzie toți producătorii de autoturisme sunt obligați să echipeze noile autoturisme cu proiectoare de lumini de zi. În urma studiilor efectuate, s-a stabilit că autoturismele echipate cu lumini de zi prezintă un risc de accidente frontale și laterale cu aproape 15% mai mic. De asemenea, se va prezenta un modul universal de lumini de zi care se poate implementa foarte ușor la autoturismele care nu au în dotare asemenea lumini.*

Abstract. *This paper presents the lighting system of cars in general, its history and evolution. Since 2009, the mandatory use of day running lights (DRL) was introduced in UE regulations therefore all car manufacturers are compelled to equip all brands of new cars with this type of lights. After many studies were carried out, it was proven that DRL reduce frontal and side crashes by almost 15%. An innovative electric module that implements DRL in old cars' illumination system without changing the headlights will be also presented.*

Keywords: day running lights, headlight, halogen bulb, relay, module, automatic.

1. History

Over the time, with the evolution of cars, the lighting system has also evolved.

The headlights on the very first cars were fuelled with petrol or acetylene (similar to what is shown in Figure 1); this kind of headlights were preferred in the 1880's, because they were windproof and rainproof.



Fig. 1. Acetylene headlight.



Fig. 2. Bilux type bulb.

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