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Roy Milnes

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Dear Mr. Milnes

Your letter to the ABI was passed on to me concerning your reservations about daytime running lamps.

Although Thatcham shares your concern about overly bright DRL's, the insurance data from around the world (including IIHS - owners of HLDO suggest a significant reduction in crashes where they are used.

European regulations do not allow DRLs to be an excessively bright and we have no data to suggest in the UK that they are a problem, and so Thatcham generally supports their use.

Find attached a copy of the Thatcham's internal report on DRLs outlining our views.

I hope this is of interest to you.



Matthew Avery
Crash Laboratory Manager



DRLs (daytime running lamps) and their effect upon Motor Vehicle

Accident Prevention

Daytime running lights are a low-cost method to reduce crashes. They are especially effective in preventing daytime head-on and front-corner collisions by increasing vehicle conspicuity and making it easier to detect approaching vehicles from farther away.

Laws in Canada, Denmark, Finland, Hungary, Iceland, Norway, and Sweden require vehicles to operate with lights on during the daytime. There are two types of laws. Canada's requires vehicles to be equipped with DRLs. The other type of law -- in effect in Denmark, Finland, Hungary, Iceland, Norway, and Sweden - - requires motorists to turn on their headlights if their vehicles do not have automatic DRLs. This kind of law applies to drivers' only, and vehicles do not have to be specially equipped. In 1972, Finland mandated daytime running lights in winter on rural roads and a decade later made DRLs mandatory year-round. Sweden's law took effect in 1977, Norway's in 1986, Iceland's in 1988, and Denmark's in 1990. Hungary has required drivers on rural roads to operate with vehicle lights on since 1993. Canada requires DRLs for vehicles made after December 1, 1989. No U.S. state mandates DRLs, although some US and EU states require drivers to operate vehicles with lights on in bad weather.

In the United States daytime running lamps are quite common place. They're standard on all GM, Lexus, Mercedes Benz, Saab, Subaru, Suzuki, Volkswagen, and Volvo models, as well as some Toyota models. GM offers retrofit DRL kits for vehicles that don't already have DRLs. The kits can be used on non-GM models, as well. In Europe most northern European countries require the fitment of DRLs but the feature is permissible in EU states not requiring mandatory usage.

Nearly all published reports indicate DRLs reduce multiple-vehicle daytime crashes. Evidence about DRL effects on crashes comes from studies conducted in Scandinavia, Canada, and the United States. A study examining the effect of Norway's DRL law from 1980 to 1990 found a 10 percent decline in daytime multiple-vehicle crashes. A Danish study reported a 7 percent reduction in DRL-relevant crashes in the first 15 months after DRL use was required and a 37 percent decline in left-turn crashes. In a second study covering two years and 9 months of Denmark's law, there was a 6 percent reduction in daytime multiple-vehicle crashes and a 34 percent reduction in left-turn crashes. A 1994 Transport Canada study comparing 1990 model year vehicles with DRLs to 1989 vehicles without them found that DRLs reduced relevant daytime multiple-vehicle crashes by 11 percent.

In the United States, a 1985 an Insurance Institute study determined that commercial fleet passenger vehicles modified to operate with DRLs were involved in 7 percent fewer daytime multiple-vehicle crashes than similar vehicles without DRLs. A small-scale fleet study conducted in the 1960s found an 18 percent lower daytime multiple-vehicle crash rate for DRL-equipped vehicles. Multiple-vehicle daytime crashes account for about half of all police-reported crashes in the United States. A 2000 Insurance Institute study reported a 3 percent decline in daytime multiple-vehicle crash risk in 9 U.S. states concurrent with the introduction of DRLs. US researchers, using data from 4 US states, concluded that there was a 7 percent decline.

Running vehicle lights in the daytime does not significantly shorten bulb life. Systems like those on General Motors cars that use high beams are designed to operate at half their normal power during daylight hours, thereby conserving energy and reducing the effect on a vehicle's fuel economy. NHTSA estimates that only a fraction of a mile per gallon will be lost, depending on the type of system used. General Motors estimates the cost to be about \$3 USD per year for the average driver. Transport Canada estimates the extra annual fuel and bulb replacement costs to be \$3-15 USD for systems using reduced-intensity headlights or other low-intensity lights and more than \$40 USD a year for DRL systems using regular low- beam headlights.

In most countries mandating DRLs, glare has not been an issue. However, some motorists in the United States have complained that their systems here too bright. In response to these complaints, NHTSA has proposed reducing the maximum allowable light intensity from 7,000 to 1,500 candelas, a value more in line with our European DRLs. As yet this has not been implemented.

In Europe DRL regulation is covered by ERE R87 (revision 2002) and permits a light output of 800 candelas. It is not apparent in any European Research data that a light output of this intensity is considered distracting by other road users but it is understood that the EC commission is looking into the effectiveness of DRL's in accident prevention and how distracting or otherwise they may be to other road users or that any particular model is more effective or distracting than any other.

On the basis of the research findings currently available Thatcham would support to widespread fitment of low intensity **DRL's** to the entire vehicle fleet.

Matthew Avery
Crash Laboratory Manager Thatcham