



Automobile Club d'Italia

ROAD SAFETY

“retroreflective contour marking”

The Italian experience about mandatory adoption retrofitting reflective contour markings on all heavy goods vehicles

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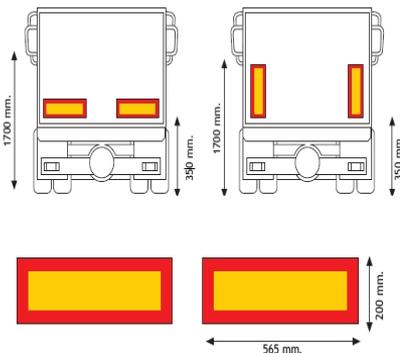


Increase Visibility of Heavy Vehicles at night: *the Mandatory Adoption of the Reflective Panels in Italian Law*



In the Italian Highway Code the obligation of **adoption of reflective panels** was introduced by **Decree Law 151/2003** , which came into force in **June 2003** and became law (L. 214 /2003) in August of that year.

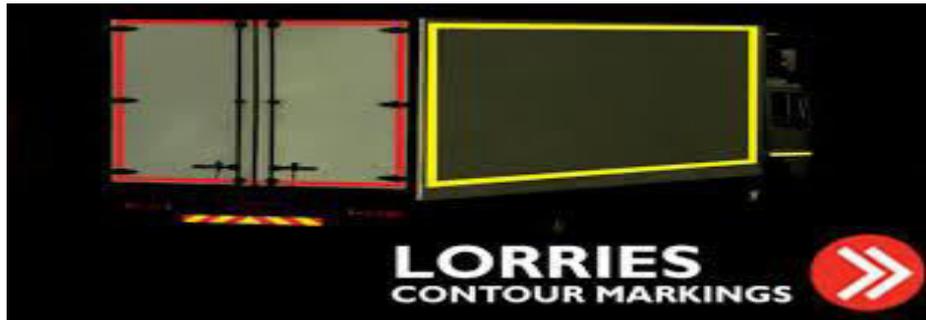
Article 151 of the Italian highway code provides for the mandatory adoption of reflective and fluorescent panels on certain types of vehicles: fully laden vehicles over 3.5 tonnes and trailers and semitrailers of total mass full load exceeding 3.5 tonnes.



The panels are those mandated by the UN ECE Regulation 70 and are considered true by the Department of Motor Vehicles of the Ministry of Transport only if provided with the approval mark and irremovably fixed.

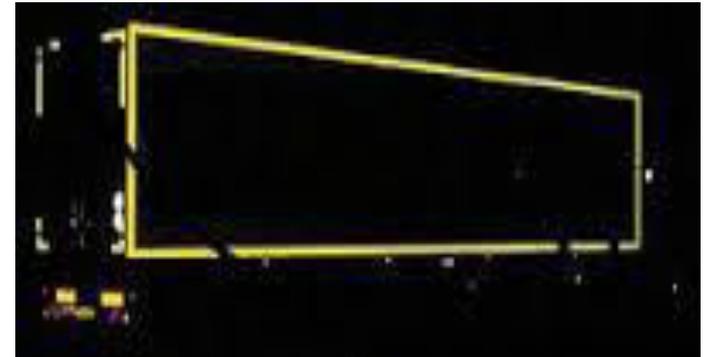


Increase Visibility of Heavy Vehicles at night: *the Mandatory Adoption of Retrofitting Reflective Contour Markings in Italian Law*



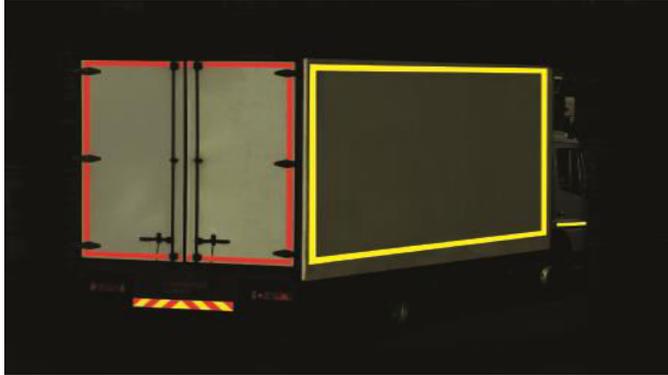
Article 72 of the Italian highway code provides for the mandatory adoption of reflective strips in accordance with the provisions of international regulation UN / ECE 104

Retro-reflective tapes have **become obligatory** for newly registered vehicles with L 306/2004, while the deadline for the retrofit of older vehicles was extended for the last time **without exception** with L.51 / 2006 of 31 December 2006.



EU DIRECTIVE 2007/35/EC

the Mandatory Adoption of Retrofitting Reflective Contour Markings in Italian Law



EU Directive 2007/35/EC (amending, for the purposes of adapting to technical progress, Council Directive 76/756 / EEC on the subject of lighting and signaling devices for motor vehicles and their trailers) states that **from July 2008, lorries with minimum weight of 7.5 tonnes and trailers from a maximum mass of 3.5 tonnes must be fitted with countour marking**

From july 2011 retroreflecting contour marking must not only be applied to new vehicles types, but also to older vehicles that are be licensed for the first time. **But countour marking isn't compulsory for existing vehicles.**

From 2011 to date, the European institutions have intervned only on technical regulation. First of all with: **Regulation EC 661/2009 for motor vehicles and trailers about requirements for types approved.** Then, **with Regulation EC 166/2015** which supplemented and amended the original regulation, sets out detailed rules on the specific procedures, technical requirements and tests for type-approval. It also covers components and separate technical units for motor vehicles





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Feedback On The Adoption Of Retrofitting Reflective Contour Markings on all Heavy Goods Vehicles In Italy



HOW TO EVALUATE THE EFFECTIVENESS OF THE MANDATORY ADOPTION OF RETROFITTING REFLECTIVE CONTOUR MARKING



Improving the night visibility of heavy good vehicles is definitely an action in favor of the reduction in accidents, but it is rather complex to prove statistically what might be the effects of the adoption of such a particular rule as retrofitting reflective contour markings.





WHAT ARE THE SIGNIFICANT DATA?



We must therefore consider the data of accidents before and after the adoption of the considered visibility system, select those relating to night, from dusk to dawn (an average time for those countries, like Italy, that have a particular longitudinal extent of their territory) and focus on the data on rear-end collisions, side impact collisions and collision with stationary vehicles, in which at least a heavy good involved

Images supplied courtesy of Reflexive, part of the Croci Group



The Fatal Accident Rate Phenomenon of heavy goods vehicles in Italy 2005-2013

Total 2005-2013 accidents with heavy goods vehicle	Total 2005-2013 traffic fatal accidents with heavy goods vehicle	%
7,663	2,284	29.8%

Total traffic fatalities in Italy between 2005 and 2013

Only fatal road accidents in which a heavy good vehicle (lorry, articulated vehicle and road tractors) was involved were considered.

Trucks and special vehicles were not considered because of the large number of light vehicles circulating for which weight/size isn't reported in the statistical data.



Frequency Fatal Accidents of heavy goods vehicles and Accidents with vehicles in general

YEAR	Total Frequency Fatal Accident with heavy good vehicles	Variation % in Fatal Accident with heavy good vehicles	Total Fatal Accident	Variation % in Total Fatal Accident
2005	323		5,271	
2006	345	6.81	5,178	- 1.76
2007	312	- 9.57	4,718	- 8.88
2008	288	- 7.69	4,358	- 7.63
2009	206	- 28.47	3,973	- 8.83
2010	249	20.87	3,871	-2.57
2011	214	-14.06	3,616	- 6.59
2012	183	-14.49	3,515	- 2.79
2013	164	-10.38	3,161	- 10.07
TOT range 2005-2013	2,284		37,661	



Percentage of Increase or Decrease by Type of Collision Fatalities that have involved, at least, one good heavy vehicle at night

YEAR	Variation % in rear-end collisions with heavy good vehicles	Variation % in side impact collisions with heavy good vehicles	Variation % in collision with stationary vehicles
2005			
2006	16%	-19.8%	25%
2007	- 18.3%	17.4%	10%
2008	-14.6%	-17.3%	- 45.5%
2009	- 30.3%	- 26.9%	- 8.3%
2010	1.9%	44.9%	27.3%
2011	- 24.1%	- 38%	0%
2012	4.9%	- 6.8%	- 64.3%
2013	9.3%	- 12.2%	120%
TOT % 2013-2006	- 56.9%	- 47.8%	- 45%



Long Road Safety Mobility

Security is often in the adoption of homogeneous small, but valuable expedients.

Technical regulations, identified by the European Union, are often subject to long processes of adaptation, respecting the diversity of the laws of member States.

This modality is a more democratic model, but it often takes too long, undermining the effectiveness of the operational measure



INCREASE DAYTIME VISIBILITY OF HEAVY VEHICLES



Vista diurna di un autocarro al quale è stata applicata la bordatura retroriflettente

*If it is important to increase the visibility of vehicles during the daytime even with the adoption of the lights on motorways or on rural roads



* then it should be noted that the reflecting panels and retrofitting reflective contour markings increase the visibility of the heavy goods vehicle even in cold daylight, typical of northern European territories.



This is measure in support of those taken or being taken to reduce the accident rate and increase the safe mobility of all road users, including vulnerable users



Retro-reflective Contour Markings

ACI supports FIA proposals



According to previous studies by the European Commission, published in 2004, from which it is already known, on the basis of studies conducted in the United States and of the study carried out with data on accidents on Dutch lorries by SWOV, that compared a presumptive conservative estimate of the costs of such accidents with the costs of the adoption of such a system on vehicles registered before 2011, whose natural longevity could keep them in circulation until 2033, **it is clear why it is reasonable to support the adoption of the measures required for such vehicles.**



In fact ACI shares and supports the position of FIA Region 1 for the European Union's endorsement of mandatory retrofittment of retroreflective contour marking also for vehicles registered before 2011.

In the same context , ACI supports and shares the ETSC actions in favor of adopting measures and rules to improve the nighttime visibility of trucks.



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THANKS FOR
YOUR ATTENTION

