

V-16 Hazard warning device

DGT 3.0 connected vehicle platform

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Are warning triangles a safe system?

NEWS

Driver dies after being run over while signalling a breakdown on the A-68

A man died on Wednesday after being run over by a lorry on the A-68 near Monzalbarba

FATAL ACCIDENT

Man dies due to being run over by a lorry when signalling a van breakdown in Lorca

The accident occurred on the A7, near La Hoya, after the driver of the broken down vehicle stopped on the hard shoulder

TRAFFIC ACCIDENT

Lorry driver died after being run over on the M-50 when signalling a breakdown in Getafe (Madrid)

A 47-year-old man died on Friday after being hit by a car when he got out of his lorry to signal a breakdown on the M-50 ring road, at

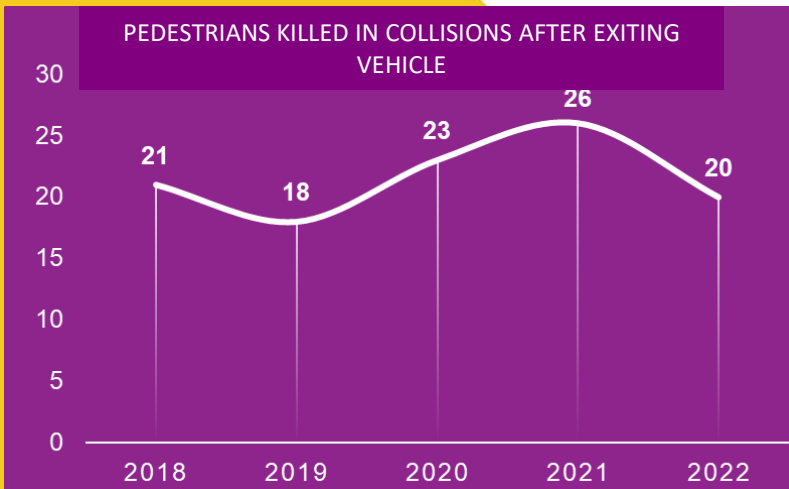
Are warning triangles a safe system?

- Unnecessary risk of walking on road (100-200m). Pedestrian in 120 km/h setting
- In adverse weather conditions, triangles cannot stand on their own and they fall over
- Triangles are left on the carriageway

Country legislation:

In the UK, prohibited on motorways (*“never attempt to place a warning triangle on a motorway”* Rule 275)

In ES, not mandatory on motorways (**INSTRUCTION MOV 2023/15**)



What is the V-16?



Functionality

- Can be fitted **without needing to exit the vehicle**
- **Increases the physical visibility** of broken down vehicles on the road.
- Creates a new concept of “**virtual visibility**” through its connection to the DGT 3.0 connected vehicle platform and the use of the **National Access Point (NAP)**, as envisaged by Directive 2010/40/EU.
- Democratises connectivity, making **connectivity accessible to all vehicles**, both new and old, regardless of model or range.
- Is **universal** because it can be used by drivers with reduced mobility (who cannot easily exit the vehicle to go and place the triangle on the road).

Regulatory framework. Signalling stationary vehicles



Vienna Convention Article 23 and Annex 5. 6

Must be signalled at a distance with a triangle or some other equally effective device, prescribed by the legislation of the country in which the vehicle is registered.

Royal Decree 159/2021 of 16 March regulating assistance services on public roads (Amended by Royal Decree 1030/2022 of 20 December).

As of 1 January 2026, the only system will be the **V-16**.



Regulatory framework. Spain. Use obligation



General Traffic Regulation: Article 130. Immobilization of the vehicle and fall of the load

4. In the cases referred to in the previous sections, without prejudice to turning on the emergency light if the vehicle has it and, when appropriate, the position and clearance lights, as long as the road is left clear, every driver must use the regulatory danger pre-signaling device to warn of this circumstance.

General Vehicle Regulation, approved by Royal Decree 2822/1998 of 23 December.

ANNEX XII Vehicle accessories, spare parts and tools. Passenger cars, mixed vehicles, vehicles for the transport of goods and buses. Three-wheeled vehicles and quadricycles NO obligation.

Annex XI V-16. 2. This device will be placed in the highest possible part of the immobilized vehicle, ensuring maximum visibility.

Certification of V-16 devices

Devices are certified using the procedure set out in Directive MOV 3/2022: Procedure for the certification of V16 signals connected to DGT 3.0. (23 May 2022).

The list of certified makes and models of connected V-16 devices will be published on the website:

<http://www.dgt.es/v16>

Annex XI, Vehicle Signs, of the General Vehicle Regulation, approved by Royal Decree 2822/1998 of 23 December, establishes the technical specifications for signalling, with V-16 relating to the hazard warning device.



Thanks

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