

TriMark EEC INTEREUROPE Load Testing

Annex II of EEC INTEREUROPE Vehicular Door Directive specifies requirements for door locks and door retention components including latches, hinges, and other supporting means, to minimize the likelihood of occupants being thrown from the vehicle as a result of impact.

The EEC standard requirements are dependent on door application, e.g. hinged doors, sliding doors, or hinged upward swinging doors. To determine specific requirements for a particular application see recent version of Annex II to Directive 70/387.

For side hinged doors, EEC specifies two different static loading capacities. Loading capacity requirements differ for transverse and longitudinal loading. See Figure 1 and 2 to examine how transverse and longitudinal loads are applied to the door latches and striker bolts.

Figure 1 and 2 illustrates how TriMark performs transverse and longitudinal testing to TriMark 50-100 Two-Rotor Latch. Testing is very similar for other rotary latch product lines, including 50-200/250 Slimline Rotary Latch, 50-400 Floating Striker Single Rotor Latch and 50-700 12mm Single Rotor Latch.

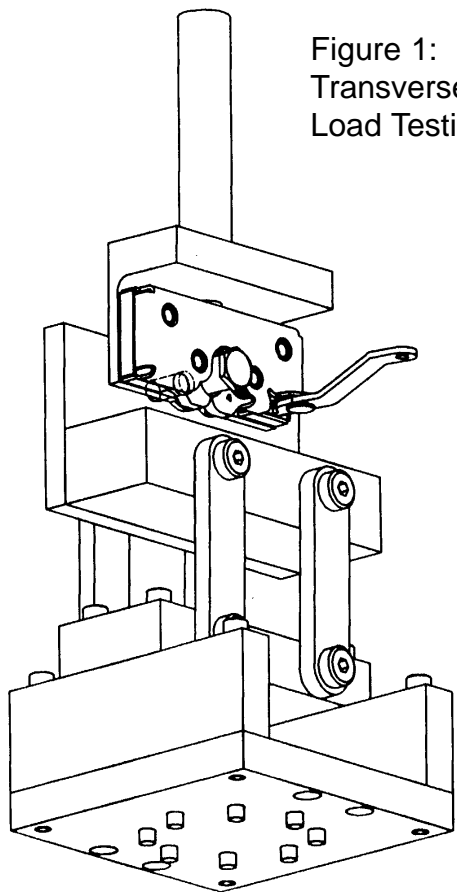


Figure 1:
Transverse
Load Testing

- Transverse loading requirements are 8,900 Newtons (2,000 pounds) when latched fully in primary state of latch and 4,450 Newtons (1,000 pounds) when latched in secondary state of latch. (Figure 1)



- Longitudinal loading requirements are 11,120 Newtons (2,500 pounds) when latched fully in primary state of latch and 4,450 Newtons (1,000 pounds) when latched in secondary state of latch. (Figure 2)

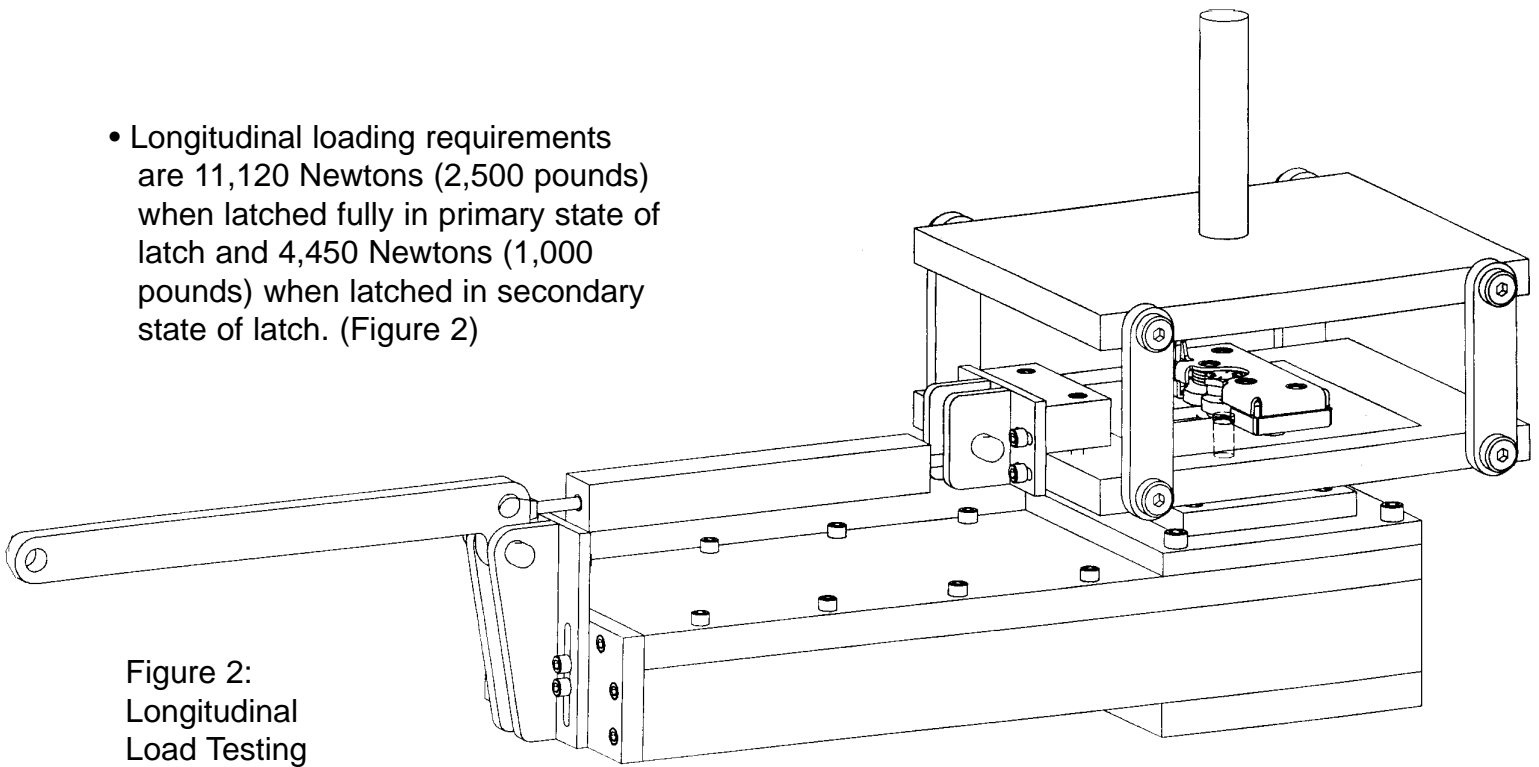


Figure 2:
Longitudinal
Load Testing



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The purpose of this publication is to explain EEC INTEREUROPE Vehicular Door Directive testing practices of TriMark latches and other EEC compliant products. **It is not the intention of this publication to interpret and address all concerns of EEC INTEREUROPE.** It should be understood that EEC INTEREUROPE compliance includes requirements in addition to load strength, such as 30G inertial loading. Further analysis is needed than is described for full compliance with EEC INTEREUROPE.

Each year a representative sample of hardware is selected and tested from all part numbers advertised as meeting loading requirements of EEC INTEREUROPE. In order to optimize its testing resources, TriMark does not test all pertinent part numbers during each year. Rather, only those part numbers are load tested annually which are judged to be representative of EEC INTEREUROPE compliant hardware. Specimens are selected conservatively according to factors, which affect the load bearing capacities of the EEC INTEREUROPE compliant hardware. This sampling methodology promotes testing which examines different combinations of factors, which affect hardware strength. Only factors that have been proven to not affect strength adversely can be ignored when test specimen sampling is considered. After the test specimens have been selected and assembled to common production practices the selected specimens are tested in accordance with Annex II of EEC INTEREUROPE Vehicular Door Directive so that the hardware compliance can be verified..

It should be understood that EEC INTEREUROPE compliance of an entire door system could be independent of load bearing capabilities of door hardware. It is important that customers follow application assistance and recommended practices of TriMark, when hardware is used in an application, which is included in the scope of EEC INTEREUROPE. **TriMark does not claim to test all potential applications of the EEC INTEREUROPE compliant products.**