

## Case Study

### Pocan® DP 7139 frame connector



Figure 1 Ford frame connector

**Yazaki** is a global company that works closely with all major car makers to produce a wide range of tailor made products.

The vehicle frame connector shown above is used in the servo steering area. This component serves to connect the electro hydraulic motor pump aggregate (MPA) to the current supply and, in view of the life cycle of motor vehicles, must remain functional over a long term. Yazaki chose Pocan DP 7139 – a hydrolysis-stabilized PBT with 30 % glass fiber – due to the fact that weather-related influences such as moisture and temperature changes are expected in this area of application.

Hydrolysis-stabilized grades are considerably more resistant to aging in a moist and warm environment than comparable standard products. As a result of hydrolysis stabilization, the mechanical properties degrade slower. This means that, for example, the impact strength of Pocan DP 7139 declines much slower than it was the case in comparison to conventional, glass filled PBT.

Figure 2 illustrates how the mechanical properties of Pocan DP 7139 are more resistant to aging as compared to standard products.

**Material:** Pocan DP 7139  
**Supplier:** Yazaki  
**Customer:** TRW  
**OEM:** miscellaneous  
**Industry:** Automotive

The USCAR test describes a testing method at different temperatures and moisture levels, as the conditions intensify from class two (100 °C peak temperature) to class four (150 °C peak temperature). The figure below shows the results of the test on specimen.

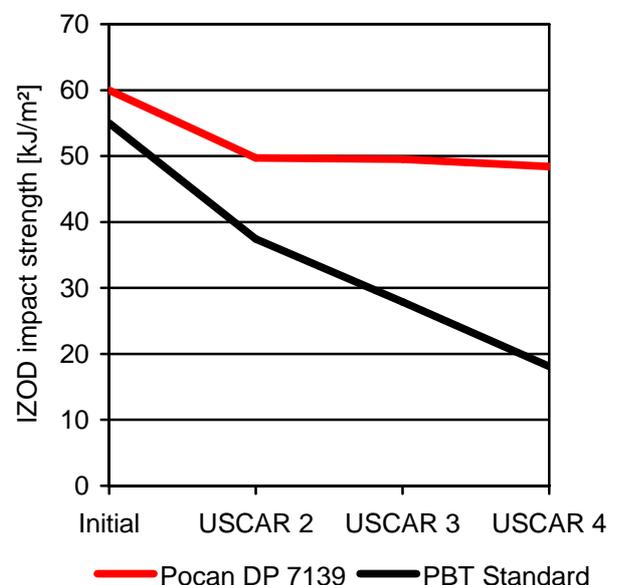


Figure 2 USCAR test on test bodies



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Unless specified to the contrary, the values given have been established on standardized test specimens at room temperature. The figures should be regarded as guide values only and not as binding minimum values. Kindly note that, under certain conditions, the properties can be affected to a considerable extent by the design of the mold/die, the processing conditions and the coloring.

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