

TÜV Rheinland TNO Automotive International B.V.
Steenovenweg 1b • NL-5708 HN Helmond

Sekisui Jushi B.V.
Attn. Mr. De Jong
Ringweg 50
6045 JL Roermond
The Netherlands

Hans de Lang
Tel: +31 492 70 0791
Fax: +31 40 265 2742
Mobil: +31 651 37 7223
Mall: Hans.delang@tt-automotive.eu

Helmond, 20. October 2010

Short report dynamic durability tests on SJC pole cones.

Dear Mr. De Jong,

On behalf of Sekisui Jushi Corporation 3 different Pole Cones were tested. The tests were done with the Flying Wheel Testing Machine in the Sekisui Jushi Ryuo factory in Japan under supervision of TÜV Rheinland TNO Automotive International.

The Purpose of the tests was to goal of the impact durability of 3 different pole cones.

Tabel 1: Test specifications

Velocity [km/h]	70
Impactor mass [(kg)]	1150
Number of repeats	1000

Tabel 2: test item

	PC80LSGW	PC65NSRW-T2	PC-65NS1RW
Height above ground [mm]	800	800	800
Diameter cone [mm]	130	80	80
Diameter base [mm]	136	96	96
Anchorage method	Integrated M24 bolt fixed in an embedded anchor.	Integrated M24 bolt fixed in an embedded anchor.	Integrated M16 bolt fixed in an embedded anchor.

The tests showed that all three cones were able to withstand the 1000 cycles. The upright angle after the test deviated not more than 2° from the initial angle. The base of the cones remained undamaged. Although the top of the cones suffered some damage the cones remained functional.

With kind regards,

Hans de Lang B.Sc.



TÜV Rheinland TNO
Automotive International B.V.

Steenovenweg 1b
NL-5708 HN Helmond

Phone +31 492 70 0791
Fax: +31 40 265 2742

Management Board
Katja Pahnke (chairman)
Achim Schmitz

KvK 17214164

Tax Number
NL8186.93.113.B01