HPM Variations

(experience of several calibrations)
HPM Variations Examples

HPM
1. Five or more versions of HPM's, with unknown copies are existing
2. Actual standards for measuring devices are not fullfilled

HPM weight differences about 4 kg!
Differences in shape (> 9 mm) and position (> 4 mm) of the cushion and back shell!
H-Pt. markings are not in line with the axis.
HPM Variations Examples

Caused by: same manufacturer

Contact surfaces of HRMD differs more than 9 mm!
several mm in every direction and of angle more than 0,5°

structure problems

New HPM compared with older version:
No vertical mounting of back shell!

6mm difference in weight
hanger position in X-direction

new
old

Black back shell is smaller over all compared to the white version

different manufacturers

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HPM Variations Surface Comparison Example

Technosports/Automotive Accessories

Parts overlay done based on best fit over the shells!

AA HPM with smaller (>5 mm) contour in the hips area

No continuous shape of AA cushion
Technosports/Automotive Accessories

Parts overlay done based on best fit over the shells!

No continuous shape in comparison with the TS HPM (angle, parallelism?)
Technosports/Automotive Accessories

Parts overlay done based on the axis of the middle t-bar tube. Cut section through H-Pt. Markings horizontal and vertical,

- AA HPM in red colour
- no symmetry, cushion with angled position to the horizontal
- different radius
- excentric position of AA cushion and AA cushion smaller
Technosports/Automotive Accessories

Parts overlay done based on the axis of the middle t-bar tube. Cut section through H-Pt. Markings horizontal and vertical,

AA HPM in red colour

AA 407 mm  AA 377 mm

TS 410 mm  TS 379 mm
HPM Variations Surface Comparison Example

OEM’s and competitors like
Audi
BMW
VW
Johnson Controls
Faurecia
did studies also with same or even worse results.

Scan comparison of AA and TS HPM weight hanger show difference of 3.5 mm in X-direction

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About 4 kg weight difference has effect in H-Pt. measuring and backset.

Excenteric shell positions on the metal structure and differences in critical dimensions with big influence in H-Pt. measuring and backsets, pending on the seat shape, especially the position and hardness of sidebolsters.