

Proposal to amend gtr7 annex4

Backset measurement test procedure using HRMD method

CLEPA/OICA Proposal
19th march 2012 GTR7 phase II inf

HRMD measurement method

- currently HRMD in combination with HPM described as one method to measure backset
- original HPM based on specification on SAE J826 and developed to measure H-points (seat adjustment and dummy positioning)
- HRMD headform tool developed by ICBC to measure the backset

HRMD – Head Restraint Measuring Device

HPM – Hip Point Manikin based on SAE J826

ICBC - The Insurance Corporation of British Columbia , Canada

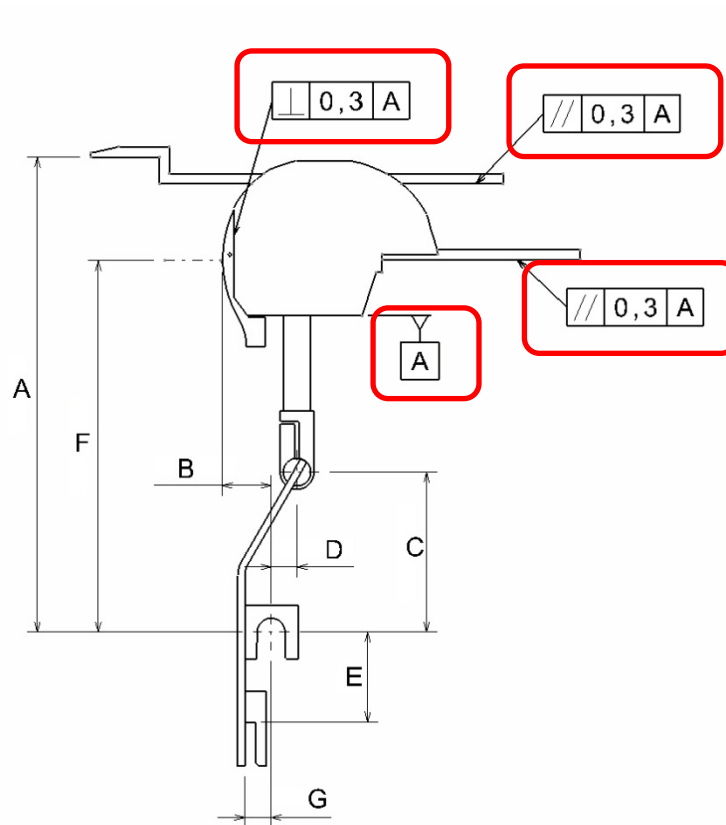
HRMD measurement method

- current text in gtr 7 annex 4:
 - dimensions of HRMD described in table of figure 4-1, but tolerances missing
 - dimensions (including tolerances) of HPM in combination with HRMD missing
- reliable test tools guarantee reproducible and repeatable test results
- accumulating of tolerances shall be avoided
- tolerances of test tool must be smaller than tolerances for backset criteria

HRMD measurement method

Proposal:

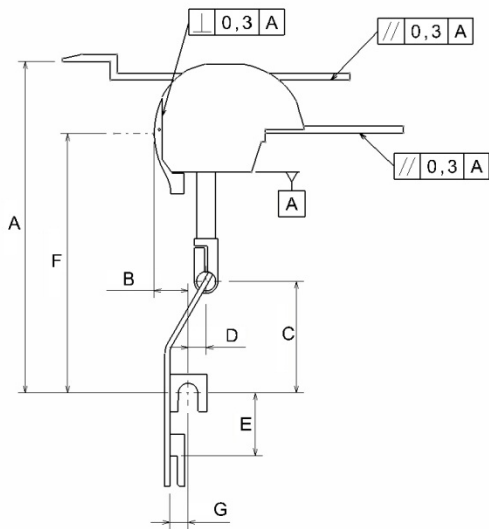
1. Definition of general tolerances for the test tool



HRMD measurement method

Proposal:

2. Definition of tolerances for relevant dimensions



		Dimension	Tolerance
A	Distance between weight hangers and Z-probe	441.0 mm	[±0.5 mm]
B	Distance between weight hangers and backset probe	48.0 mm	[±0.3 mm]
C	Distance between weight hangers and HRMD axis in Z	148.0 mm	[±0.5 mm]
D	Distance between weight hangers and HRMD axis in X	23.0 mm	[±0.3 mm]
E	maximal distance of weight hanger adapter to HPM hook	< 101.5 mm	
F	Distance between the apex of X-probe and the H-Point axis	333.5 mm	[±0.5 mm]
G	Distance between weight hangers and contact surface	25.0 mm	[±0.3 mm]

HRMD measurement method

Proposal:

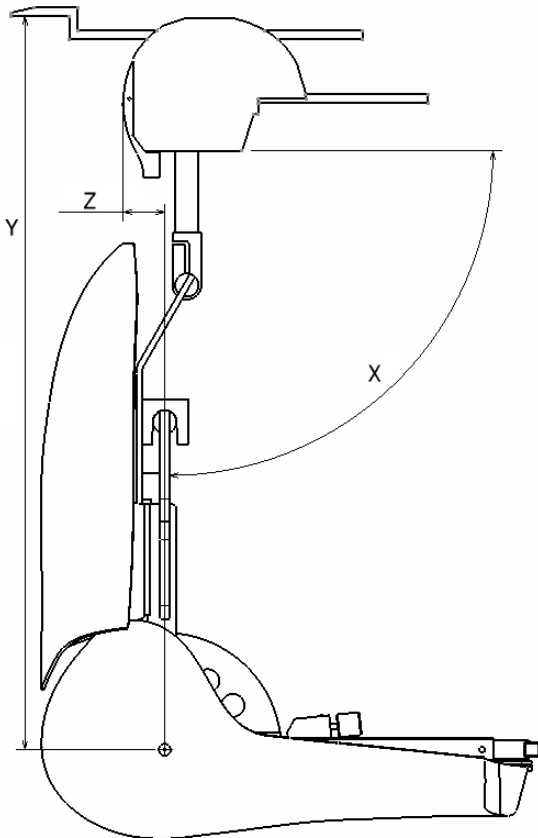
3. Definition of whole mass of HRMD including probes

The mass of the HRMD including the probes will be $8300 \text{ g} \pm 50\text{g}$.
Each single ballast weights shall have a mass of $4800 \text{ g} \pm 10 \text{ g}$.

HRMD measurement method

Proposal:

4. Definition of relevant dimensions for combination of HRMD and HPM (due to task of backset measurement)



Condition: X adjusted at 90°		Dimension	Tolerance
Y	Distance between Z-probe and H-Point axis	797.4 mm	[±1.5 mm]
Z	Distance between backset probe and H-Point axis	48.0 mm	[±0.3 mm]

HRMD measurement method

General:

- Dimension inclusive tolerances have to be checked by OEM, suppliers and technical services
- Existing proposal could be used for finalisation in IG on Head Restraints
- Further comments are welcome