

# Relaxation Zone and GVWR Application for US

9<sup>th</sup> GRSP Ad Hoc Meeting  
Geneva, Switzerland  
December 5-6, 2005

# 1998 AGREEMENT

## ARTICLE 4 & 6

### REGISTRY OF GLOBAL TECHNICAL REGULATIONS

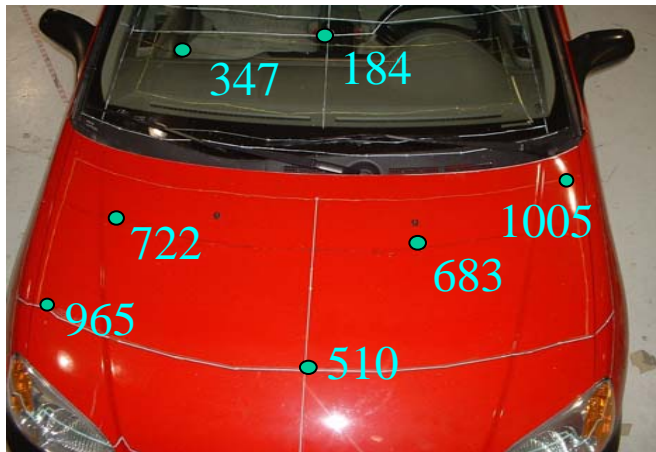
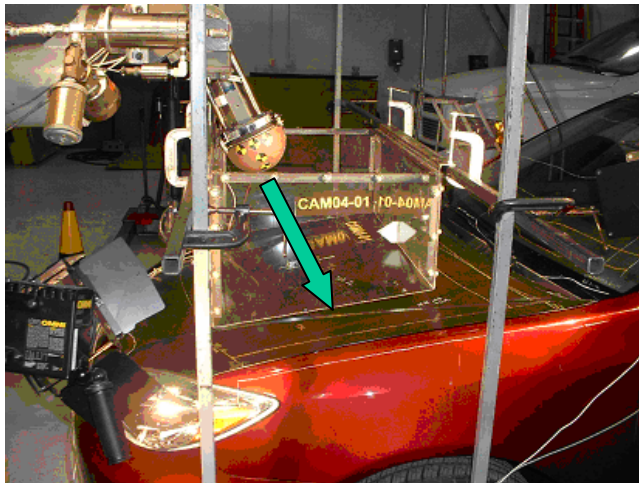
- 4.1.2.1. provide for **high levels of safety**, environmental protection, energy efficiency or anti-theft performance; and
- 6.3.4. In response to a proposal referred to it for developing a new global technical regulation, the Working Party shall use **transparent procedures** to:
  - 6.3.4.1. develop recommendations regarding a new global technical regulation by:
    - 6.3.4.1.1. giving consideration to the objective of the proposed new global technical regulation and the need for establishing alternative levels of stringency or performance;
    - 6.3.4.1.2. considering technical feasibility;
    - 6.3.4.1.3. **considering economic feasibility**;
    - 6.3.4.1.4. **examining benefits**, including those of any alternative regulatory requirements and approaches considered;
    - 6.3.4.1.5. **comparing potential cost effectiveness** of the recommended regulation to that of the alternative regulatory requirements and approaches considered;
    - 6.3.4.1.6. **verifying whether the new global technical regulation under development satisfies the stated objective of the Regulation and the criteria in Article 4.**

# TERMS OF REFERENCE

The aim of the group is to present a **performance-based proposal** for the testing and qualification of vehicles, including passenger cars, vans, and light trucks, with respect to pedestrian safety, which could reasonably be incorporated in a global technical regulation (gtr).

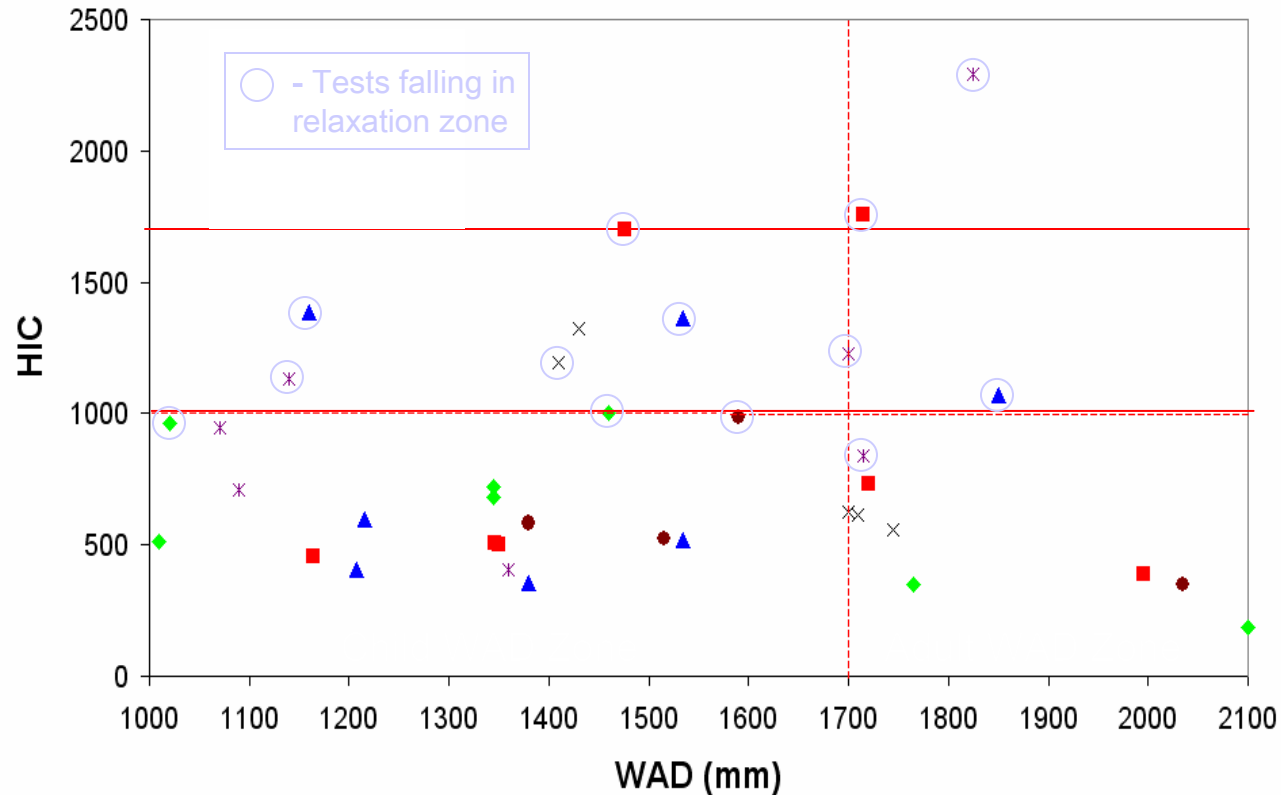
- objective(s) and **benefits of any new regulation** (or amendments to existing regulations) with reference to present levels and sources of knowledge;
  - use of the best available technology and **improvements in technology that will provide significant steps in developing methods and in achieving and improving benefits, including both active and passive safety measures;**
  - the **costs**, both monetary and social, that may be attendant to each level of regulatory stringency or performance;
  - the **relationship or potential interaction of any proposed technical regulation to other regulations currently in force** or to be adopted either individually by any Contracting Party or under existing Agreements administered by WP.29.
- ...the informal group shall develop complete and detailed recommendations, **in compliance with paragraph 6.3.4. of Article 6 of the 1998 Agreement**, by the end of 2005.

# GTR Feasibility – Head Tests



- Six Vehicles
  - Toyota Camry, Toyota Sienna, GMC Savana, Ford Escape, Dodge Ram, Honda Civic
- Child and Adult Headforms
- GTR Speeds and Angles
- Various Locations:
  - 50<sup>th</sup> Percentile WAD
  - High/Low Clearance Areas

# GTR Feasibility – Head Tests Results



Most tests passed the GTR HIC requirements

# GTR Feasibility – Head Tests

## Vehicle Application for US

### GVWR for tested vehicles

2001 Honda Civic - 3505 lbs (1590 kg)  
2001 Ford Escape - 4140 lbs (1878 kg)  
2004 Toyota Camry - 4167 lbs (1894 kg)  
2004 Toyota Sienna - 5689 lbs (2580 kg)  
2004 GMC Savana - 7200 lbs (3266 kg) †  
2003 Dodge Ram - 8650lbs (3924 kg) †

† Pass gtr requirements with HIC relaxation zone  
for 1/3 area @ HIC = 1700.  
(Test results in INF GR PS 132.)

# Information needed to assess cost/benefit of head requirements

- Baseline performance of current fleet and projection of benefits to be derived from this gtr
- Cost to meet head requirements
  - TRL feasibility information adequate & ok?
- Implications on other standards/regulations
  - E.g., c.g. data on implementation of Phase I?