

# **2005 CITA CONFERENCE**

**'Global Perspective on Roadworthiness Enforcement'**

## **WORKSHOP #4 - CONCLUSIONS**

**Title: Comparative brake testing methods  
(in-service HGVs) around the world**

# PARTICIPATION

*Chairman: Jorge Soria Galvarro, Sweden*

*Secretary: Ignacio Lafuente, Spain*

SGS Argentina/Uruguay/Paraguay	ARGENTINA
AutoTest Products Pty Ltd (VIPAC Engineers & Scientists)	AUSTRALIA
Bundesanstalt für Verkehr/Amt der Niederösterreichischen Landesregierung	AUSTRIA
AS s.c.a.	BELGIUM
SBAT nv	BELGIUM
Centre de Contrôle des Véhicules Automobiles CCVA	BURKINA FASO
Center for Vehicles of Croatia	CROATIA
BM AUTOTEKNIK	DENMARK
Statens Bilinspektion / Applus Danmark A/S	DENMARK
ARK	ESTONIA
Actia Muller Services	FRANCE
MAHA	GERMANY
VOSA	GREAT BRITAIN
Transport Department - HKSAR	HONG KONG
Ministerio delle Infrastruttura e dei Trasporti	ITALY
RTSD	LATVIA

Roads Authority of Namibia	NAMIBIA
RDW	NETHERLANDS
Van Leeuwen Test Systems BV	NETHERLANDS
LTSA	NEW ZEALAND
TERNZ LTD	NEW ZEALAND
Vehicle Testing New Zealand Ltd	NEW ZEALAND
Driver & Vehicle Testing Agency	NORTHERN IRELAND
Land Transport Authority	SINGAPORE
JP Ljubljanski Potniski Promet d.o.o.	SLOVENIA
STS Group (PTY) LTD	SOUTH AFRICA
APPLUS+ Iteuve	SPAIN
IVESUR, S.A.	SPAIN
Bilprovningen	SWEDEN
SWEDAC	SWEDEN
Ministry of Works	TANZANIA
SGS Argentina, Uruguay & Paraguay	URUGUAY
Battelle Institute	USA
Hunter Engineering Company	USA

# PAPERS PRESENTED.

**Periodic Safety Inspection - As practiced in the United States.**  
*Pete Liebetreu, Hunter Brake Testing (USA, America)*

- Situation of Brake performance assessment in the different states
- Commercial vehicles (carriers) / private use
- Emissions testing / safety (brake) testing
- System Centralized / Decentralized:
  - State stations
  - Authorized garages
- Techniques used:
  - Visual
  - Brake test (imbalance, performance)

Impact of Inspection Programs on Safety

Other brake testing (Taxis, Bus, military, ...)

# PAPERS PRESENTED.

**Application of Performance-Based Brake Testers in North America**  
*S.J. Shaffer, Battelle Memorial Institute (USA, America)*

## **Commercial Motor Vehicle Responsibilities in North America**

- 1.- New Vehicle regulation in North America (NHTSA – FMVSS)
- 2.- In-service regulations (FMCSA – FMCSR)
- 3.- Brake requirements US FMVSS 121 – FMCSR 393.52

## **Summary of CMV Safety inspections in north America**

- 1.- Annual Inspection: Self administered
- 2.- In-service Vehicles: CVSA (Commercial Vehicles Safety Alliance)

## **Application of PBBT Performance Based Brake Testers**

- 1.- PBBT and New Vehicles .
- 2.- PBBT and In-service Vehicles
- 3.- PBBT and Periodic Inspections
- 4.- PBBT and Vehicle Maintenance
- 5.- PBBT and Accident investigation

# PAPERS PRESENTED.

## Roller brake testing in Europe

*Jan van der Does, VLT (Holland, Europe)*

*Mogens Norlem, BM (Denmark, Europe)*

- 1.- Test in UK by VOSA
- 2.- Test in France by Licensed Companies
- 3.- Test in Belgium by GOCA members
- 4.- Test in the Netherlands by Licensed Workshops
- 5.- Test in Scandinavian countries  
(Norway, Sweden, Finland, Island, Denmark)
  - Directive 96/96
  - Performance: extrapolation / (Ref. Brake forces to be introduced)
  - Ovality / Threshold

# PAPERS PRESENTED.

**Study on the application of reference values**

*Eddy de Haes, RDW (Holland, Europe)*

Reference values as defined in Regulation 13 09 series supp.7  
Verification of the reference brake forces on the basis of ISO/ CD N644

The study is carried out by RDW , the Dutch Center for Vehicle Approval and the Reference values and Data sheets were presented by DAF Trucks.

Supervision by CITA WG 5

The application of reference values simplifies the test procedure provided that the relevant data is easy available.

# CONCLUSIONS

Brake performance assessment is mandatory in all European procedures according to the existing 96/96/EU Directive.

The way of assessment may vary from country to country.

N. America (US, Canada, Mexico) applies safety controls in roadside inspection. *Commercial Vehicle Safety Alliance* to harmonize the procedures.

Asian and African countries apply similar procedures to the European ones

Brake performance (Reference brake force) and Electronic systems (checked through OBD) will require the cooperation of Vehicle Manufacturers.

CITA to play a key role in the harmonization of future test procedures.

# THANK YOU

**Jorge SORIA GALVARRO**  
**BILPROVNINGEN AB – Sweden**

**CITA aisbl**  
**International Motor Vehicle Inspection Committee**  
Rue de la Technologie 21-25  
B-1082 BRUSSELS (Belgium)  
TEL.: + 32 2 469 06 70  
FAX: + 32 2 469 07 95  
e-mail: [cita.vehicleinspection@skynet.be](mailto:cita.vehicleinspection@skynet.be)  
[www.cita-vehicleinspection.org](http://www.cita-vehicleinspection.org)