

# WorldSID Pre-Production Dummies Delivered

The fabrication, assembly, integration, and delivery of all 11 WorldSID pre-production dummies was completed, in July 2003. All pre-production dummies were delivered with a variety of accelerometers, load cells, and IR-TRACCs for measuring displacements and with the optional, self-contained data acquisition systems (DAS) with 64 to 160 data channels.



Each of the three WorldSID regions purchased WorldSID pre-production dummies, with three dummies being sent to



*WorldSID Pre-Production Dummy with jacket removed*

the Asia-Pacific region, five to the Americas region, and three to the European region.

Nearly 80 test engineers and technicians participated in regional training sessions, concurrent to the initial dummy deliveries. Each of the three WorldSID regions held a three to four day training session where attendees reviewed the newly rewritten user's manuals and par-

ticipated in "hands-on" training where they learned how to assemble, set up, and operate the WorldSID, DAS, and DAS software.

In addition, new WorldSID dummy positioning procedures have been drafted with the support of Transport Canada and are currently being utilized and evaluated by pre-production dummy users.



*WorldSID Data Acquisition System, 160 data channels*

Worldwide testing of the WorldSID pre-production dummies continues, with test plans discussed on page 2.

## Preparation of ISO International Standard 15830 Underway

ISO has approved the preparation of ISO International Standard 15830, entitled *Road vehicles - Anthropomorphic side impact dummy - Design and performance specifications for a 50<sup>th</sup> percentile male side impact dummy (WorldSID)*.

ISO 15830 is intended to document fully the design and required performance specifications

of the WorldSID, providing dummy manufacturers worldwide with the detailed drawings and specifications required for dummy manufacturing and regulatory use.

The Standard is made up of the following five parts:

- 1 - Definitions, symbols, and rationale
- 2 - Mechanical subsystems

- 3 - Electronic subsystems
- 4 - Support equipment
- 5 - User's manual

The Standard is being prepared by the Program Manager, the Design Team, and the Tri-Chair and upon completion, is planned to be submitted for a consensus to WG5, and then for balloting by SC12 and TC22 committees of ISO.

## Latest WorldSID Publication

Hautmann et al, Updated Biofidelity Rating of the Revised WorldSID Prototype Dummy, 18th ESV Conference, Nagoya 2003



*Pre-production dummy pelvis*



TNO Sled Tests, 2003

## Planned Pre-Production Dummy Testing

The delivery of 11 pre-production dummies began an intensive series of worldwide tests to evaluate the performance of the pre-production design.

Currently, component and laboratory tests are being performed in Asia-Pacific, the Americas and Europe by 10 automotive manufacturers and 15 test laboratories and research organizations.

The combined effort of this testing will also include 30 full-scale in-vehicle crash tests.

The results of pre-production dummy testing will be reported by the respective participating laboratories, groups, and automotive manufacturers.

### Component and laboratory tests

- ISO TR 9790 sled, pendulum, and drop biofidelity
- positioning and handling
- out-of-position airbag
- neck sled
- head drop and pendulum
- rib component verification
- instrumented arm
- repeatability and reproducibility
- temperature sensitivity
- durability

### Full-scale vehicle tests

- ECE95
- FMVSS 214
- oblique pole
- vehicle-to-vehicle
- IIHS
- EuroNCAP
- FMVSS 201



Pre-production dummy ISO TR9790 Testing at SIBER



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### The WorldSID Objective

To develop a new, globally accepted, advanced technology, side impact crash test dummy for improved assessment of injury risk to car occupants in lateral collisions.

### WorldSID Contributors

AAM	INRETS	Porsche
AAMA	ISO	Renault
ACEA	JAMA	SIBER *
Autoliv	JARI	TNO
Audi	LAB	Toyota
BMW	Lear	Transport Canada
CEESAR	MIRA	TRL
DaimlerChrysler	NHTSA	TRW
DTRS	Nissan	Volvo
Ford	OSRP	VW
GM	PDB	
Honda	PSA	

\*EC Sponsored

### WorldSID Phase II Project Manager

Dynamic Research, Inc.

### WorldSID Design Team Organisations

Denton ATD Inc,  
Diversified Technical Systems Inc.,  
Endevco Corporation Inc,  
First Technology Safety Systems Inc,  
R.A. Denton Inc

Learn more online at [www.worldsid.org](http://www.worldsid.org)