

# SAFETY LABORATORY TEST DATA PACKS

## DISTRIBUTION

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Mr D. PROBERT  
SAFETY TEST LABORATORY  
CONTRACT FILE

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## OBJECTIVES

1. To carry out HyGe sled tests on 'Storm', 'Blade', Phoenix', and 'Action 2000' wheelchairs to validate the performance characteristics of the wheelchair tiedown and occupant restraint systems supplied by 'Unwin Safety Systems'.
2. To subject the wheelchairs to an acceleration pulse which meets the specification of proposed regulation ISO WD 7176-19.
3. To measure and record the maximum forward displacement of the wheelchair and occupants head and knee.
4. To provide a still and high speed photographic record of the test.

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Date:

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FRONTAL IMPACT PERFORMANCE REQUIREMENTS  
OF DRAFT WORKING DOCUMENT ISO/CD 7176/19-1  
REQUIREMENTS OF SECTION 6

TEST No. S5557 'PHOENIX' POWERED WHEELCHAIR WITH 50%ILE HYBRID II OCCUPANT.	RESULTS
6.1 Did the ATD remain in the wheelchair.	YES
6.2 Did the wheelchair remain in an upright position on the sled.	YES
6.3 Did any components with a mass in excess of 100 grammes detach.	NO
6.4 Did any adjustable parts move from their pre-test positions.	NO
6.5 Was there any leakage from the wheelchair batteries.	NO
6.6 Were the batteries retained in the wheelchair footprint.	YES
6.7 Did any load bearing part of the wheelchair fracture completely.	NO
6.8 Were any damaged surfaces less than 7 mm wide.	YES
6.9 Was the ATD released from the occupant restraint and removed from the wheelchair without the use of tools.	YES
6.10 Was the tiedown system removed from the sled without the use of tools.	YES
6.11 Was the horizontal movement of the wheelchair (X wc) less than 200 mm.	YES (123 mm)
6.11 Was the horizontal movement of the dummy knee (X knee) less than 375 mm.	YES (341 mm)
6.11 Was the horizontal movement of the dummy head (X head) less than 650 mm.	YES (639 mm)
6.12 Was the ratio X knee/X wc >1.1.	YES
6.13 Was the decrease of the mean H-point height less than 20%.	YES