Transport Research Laboratory
Impact Test Group

DYNAMIC RESTRAINT TEST REPORT

Customer:	**Invacare (UK) Ltd**
customer reference:	817005/S
test vehicle:	Apollo Indoor Apollo Outdoor
test number:	04LM01-2
test type:	ISO/DIS 7176/19 (December1999)
test speed:	48 km/h
test date:	5 June 2000

If you have any questions relating to this test please contact the Impact Test Group Manager:
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Requirements of Section 5			Result
5.3.1.a	Was the horizontal movement of the:	(i) wheelchair (X wc) < 200mm?	Yes *105*
		(ii) dummy knee (X knee) < 375mm?	No *340*
		(iii) dummy head (X head) < 650mm?	Yes *427*
5.3.1.d	Was the ratio of X knee/X wc > 1.1?		Yes *3.2*
	(i)	Did the batteries move completely outside of the wheelchair footprint?	No
	(ii)	Did the battery contact the back of the ATD legs?	No
5.3.2.a	(i)	Did the wheelchair remain in an upright position on the test platform?	Yes
	(ii)	Did the ATD remain in the wheelchair with its torso at an angle of less than 45 deg when viewed from any direction?	Yes
			Front = 2° Side = *31°*
5.3.2.b	Did the wheelchair securement points show visible signs of material failure?		No
5.3.2.c	For manual tiedowns: Did the securement points show any deformation or distortion to prevent manual disengagement and removal tiedown end fittings?		
5.3.2.d	Did any components, fragments or accessories with a mass in excess of 100gm completely detach from the wheelchair? *Note: Small parts of battery cover and joysick handle detached.*		No
5.3.2.e	Did any fragmented or separated component that may contact the occupant produce sharp edges with a radius less than 2mm?		No
5.3.2.f	Was the ATD removed from the wheelchair without the use of tools?		Yes
5.3.2.g	Was the wheelchair released from the tiedown system without the use of tools?		Yes
5.3.2.h	Was the decrease of the mean H-point height < 20%		Yes

Conclusion: The system met all the requirements of Sections 5.3.1 and 5.3.2 and thus gave a satisfactory impact performance.

Pass/Fail:	PASS

Analysed by:	A. Anwar	Date:	05/06/2000