

## Test Results Summary ISO 7176/ANSI RESNA WC

<b>Test No:</b> S17654 <b>Test Date:</b> 16 <sup>th</sup> September 2022 <b>Test Facility:</b> UTAC Millbrook Servo Sled <b>Client:</b> Drive DeVilbiss <b>Wheelchair:</b> CS1142T <b>Mass (kg):</b> 13.5 <b>Occupant:</b> HIII 50th Ballast 77kg <b>Tie Down Restraint:</b> Koller Excel 4 point + Titus passenger harness	<b>RESULTS</b>
a) Did the wheelchair securement points show any sign of material failure other than deformation or yielding	PASS
b) Did any securement point deformation or distortion prevent manual removal of the wheelchair tie-down system	PASS
c) Was the wheelchair in an upright position on the test platform	PASS
d) Did the ATD remain in a seated posture at the end of the test (with a torso angle less than 45° to the vertical when viewed from any direction)	PASS
e) Did any rigid components, parts, equipment or accessories in excess of 150g detach during the test (related to the test article)	PASS
f) Did any occupant contactable components fragment or separate with an edge less than 2mm	PASS
g) Did any of the primary load carrying parts and components show visible signs of structural failure other than deformation or loading	PASS
h) Horizontal ATD wheelchair excursion limits as per limits shown in table 3 of 5.3.2:	PASS
Was the horizontal movement of the test wheelchair P-Point (Xwc) less than 200mm (±5mm)	21mm
Was the horizontal movement of the dummy knee (Xknee) less than 375mm (±5mm)	203mm
Was the horizontal movement of the dummy head (Xheadf) less than 650mm (±5mm)	265mm
Was the rear head excursion (Xheadr) less than -450mm (±5mm)	-288mm
i) Was the ratio $X_{knee}/X_{wc} > 1.1$	PASS
$X_{knee}/X_{wc}$	9.67
j) Did any locking mechanisms of tilt seating systems release or have structural components that released during the test	PASS
k) Was the average decrease of H-Point height relative to the wheelchair platform less than 20% of the pre test height	PASS
l) Did the seating insert (seat or back support) detach from the wheelchair during the test	PASS
n) Did any of the tiedown and occupant restraint system fail due to interaction with the wheelchair or its components during the test	PASS
o) Did all securement hooks remain attached to the wheelchair's securement points throughout the test and remain attached at the end	PASS
p) Did the wheelchair-anchored belt restraints become detached at anchorages, disconnect at buckles, or show complete failure	PASS
<b>ISO 7176/ANSI RESNA WC</b> Crash Test criteria were fulfilled.	<b>PASS</b>

## Pre Test

Adjustment	Pre Test Measurement
Backrest Angle	84.3°
LH Hip To Floor Dimension	530 mm
B Post Height Above ATD Shoulder	175 mm
B Post Anchorage Aft Of ATD Shoulder	275 mm

## Post Test

Test Pulse Criteria	Result
Velocity Change	50.4 km/h
Met Pulse Corridor?	YES
Exceeds 20g for a cumulative time period of 15ms	YES
Exceeds 15g for a cumulative time period of 40ms	YES
Pulse Duration of at least 75ms	YES

Criteria	Result
P Point <200mm	21mm
ATD Knee <375mm	203mm
ATD Head C of G Fwd Excursion <650mm	265mm
ATD Head C of G Rwd Excursion <-450mm	288mm
Ratio Knee To P Point > 1.1	9.67