

No. SDL/9980(15-16)/AEPL/40(16-17)

Date: 02/06/2016

**DEVELOPMENTAL TEST REPORT
ON TESTING OF AEPL's 2 AND 3 SEATER HIGHBACK PASSENGER SEATS**

1.0 NAME OF THE PARTY: M/s. Autoglastic Engineering Pvt Ltd. (AEPL)
257/1, Podhigai, Thirukalukundram Road,
Vallam, Chengalpattu,
Chennai – 603 002

2.0 REFERENCES:

2.1 Correspondence Reference: E-mail dt 25/02/2016
2.2 Specification Reference: AIS 023/2005

3.0 TEST COMPONENTS:

Sr. No	Description of seat	AEPL Drg. No.	AEPL Part No.	Seat Identification
3.1	2 seater with wall mtg.	B40100001A00	B40100001A00	SDL/9980/15-16/03/01 to 02
			B40100002A00	
3.2	3 seater with wall mtg.	B40100003A00	B40100003A00	SDL/9980/15-16/03/03 to 04
			B40100004A00	
3.3	3 seater with 3 legs	B40100005A00	B40100005A00	SDL/9980/15-16/03/05 to 06
3.4	3 seater with 3 legs rear seat	B40100006A00	B40100006A00	SDL/9980/15-16/03/07
			B40100007A00	
			B40100008A00	

4.0 TEST REQUIREMENTS:

- 4.1 Dimensional Measurement:**
Passenger seats should meet the dimensions as per AIS 023 requirement.
- 4.2 Energy Dissipation Test:**
Passenger seats should meet the requirements as per cl.4.2.3.1 of AIS 023 requirement.
- 4.3 Seat Static Strength Test:**
Passenger seats should meet the Requirements as per cl. 5.1 of AIS 023.

5.0 TEST EQUIPMENTS:

- 5.1 Servo hydraulic Actuators, Moog make, ± 50 kN- FTL/INS/746 & FTL/INS/744
5.2 Load cells, Interface make, ± 50 kN- FTL/INS/742 & FTL/INS/743
5.3 GT Controller - FTL/CO/24
5.4 IDAQ – Data acquisition system
5.5 B & K Accelerometers
5.6 Manikin FTL/IN/285





Pre Test



Post Test

Fig 4 – Seat Static Strength (H1H2) Test Set up of AEPL's 3 seater Highback seat with wall mtg.



7.3 Seat Static Strength Test:

Following table shows Seat static strength test results. Fig.06 and 08 shows the load vs. displacement graphs.

Sr. No.	Height From reference floor (mm)	Load to be Applied(kN)	Displacement range as per Standard(mm)	Load achieved (kN)	Actual Displacement (mm)
2 seater with wall mtg.					
7.3.1	H1 - 800	2.5	100 to 400	2.5	156
	H2 - 550	7.27	More than 50	7.27	120
3 seater with wall mtg.					
7.3.2	H1 - 800	3.75	100 to 400	3.75	100
	H2 - 500	12.0	More than 50	12.0	63
3 seater with 3 legs					
7.3.3	H1 - 800	3.75	100 to 400	3.75	171
	H2 - 500	12.0	More than 50	12.0	113

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Place of Issue - PUNE

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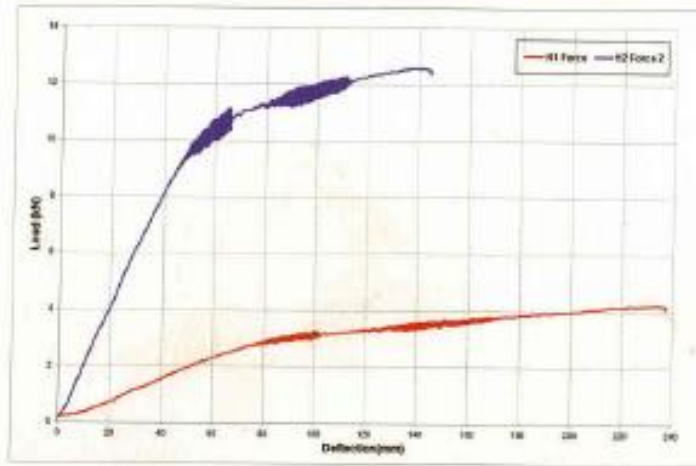


Fig 8 – Load vs. Displacement graph acquired on AEPL's 3 seater Highback seat with 3 leg.

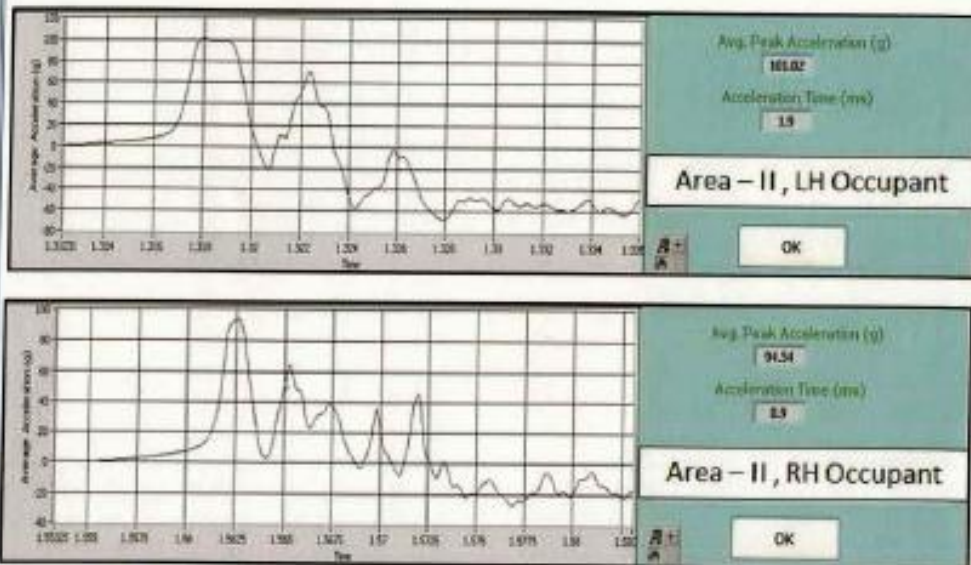


Fig 9 – Deceleration vs. Time graph acquired on AEPL's 2 seater Highback seat with wall mtg.