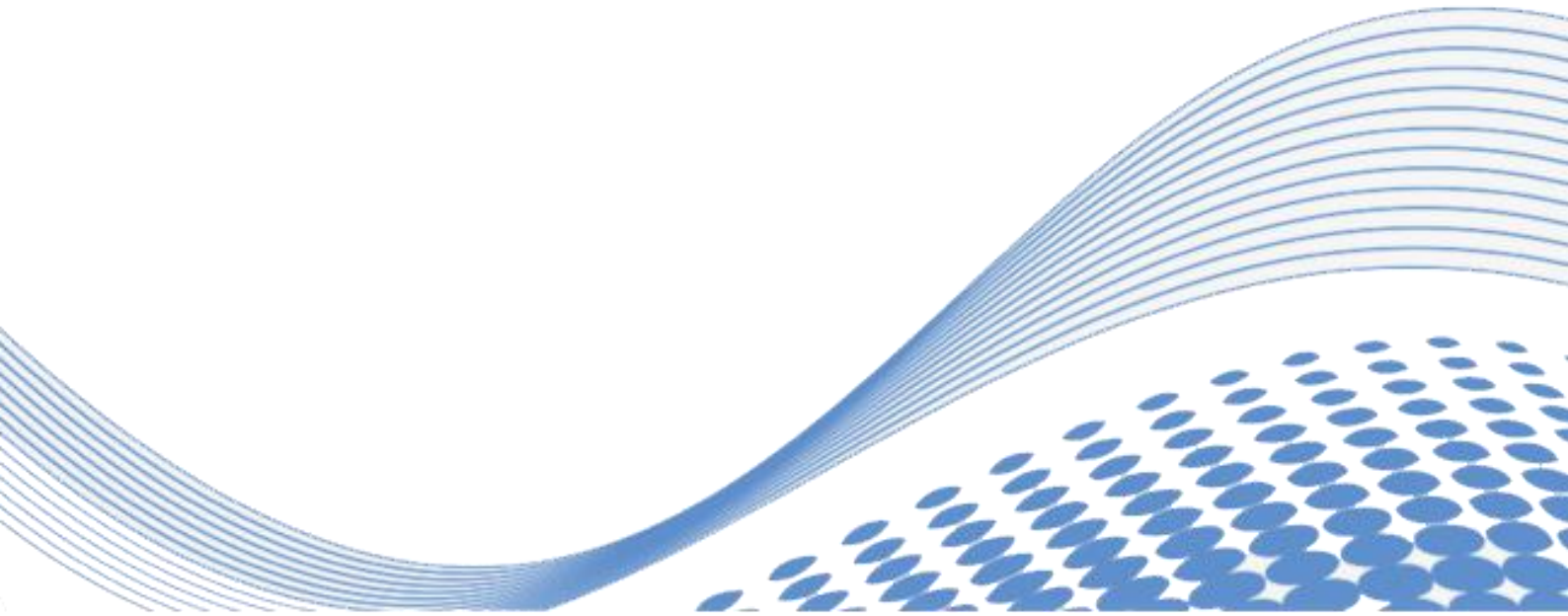


Test Report



SuZhou Chunfen Test Technology Service Co., Ltd

Test Report

Applicant Beijing Goldrare Automobile Parts Co.,LTD.
Address Industrial Park of Liucun Town, Changping District, Beijing, China
Sample Name H6 passenger seat
Quantity 1pcs
Model /
Received 13/10/2021
Testing Period 14/10/2021-28/10/2021
Test Type commission test

Test Summary

No.	Test Item	Test Conclusion
1	6-Axis vibration test	Details see page5 to page7



Signed for and on behalf of
CFI (SU ZHOU) CO.,LTD

Date: 09/11/2021

Prepared by: Zhichao Wang Reviewed by: Yongke Pan Approved by: Yim Xiaotao

声明:

1. 报告无检测机构“检测报告专用章”或公章、公司标志和“报告编号”无效;
The report is invalid without the company's Test Report Special seal or Official seal. Company logo and report number;
2. 报告不得局部复制。复制报告未重新加盖检测机构“检测报告专用章”或公章无效;
Test report must not be copied partially. The copy of the report is invalid without the company's Test Report Special seal or Official seal;
3. 报告无编制、审核、批准人签字(章)无效;
The report is invalid without signatures of creator, reviewer and approver;
4. 报告涂改无效;
Test report is invalid with any alter;
5. 对报告若有异议, 请于收到报告 15 日内向检测机构提出, 逾期不予处理;
If there is any doubt about the result of the test report, please contact our company within 15 days after receiving the report;
6. 检测结果仅对来样负责。

The test results are solely responsible for the sample(s).

Test Report

1. Sample Description

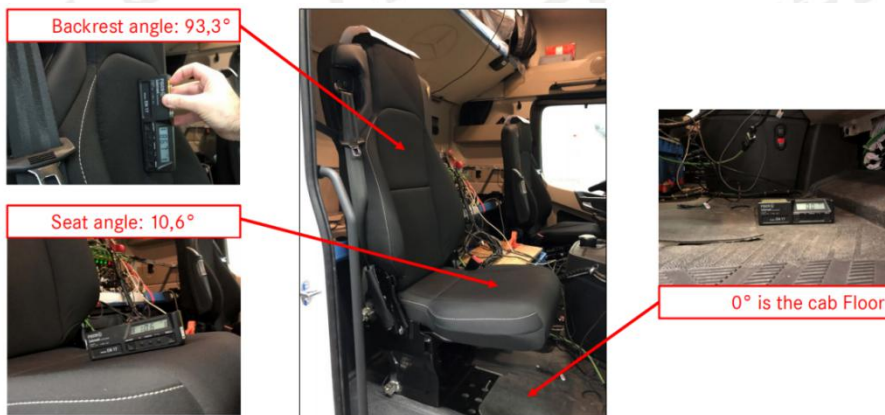
Sample Name	Customer Sample ID	Sample ID	Test Item(s)	Sample State
H6 passenger seat	/	ETL-21030027-002	6-Axis vibration test	Intact

2. Test method

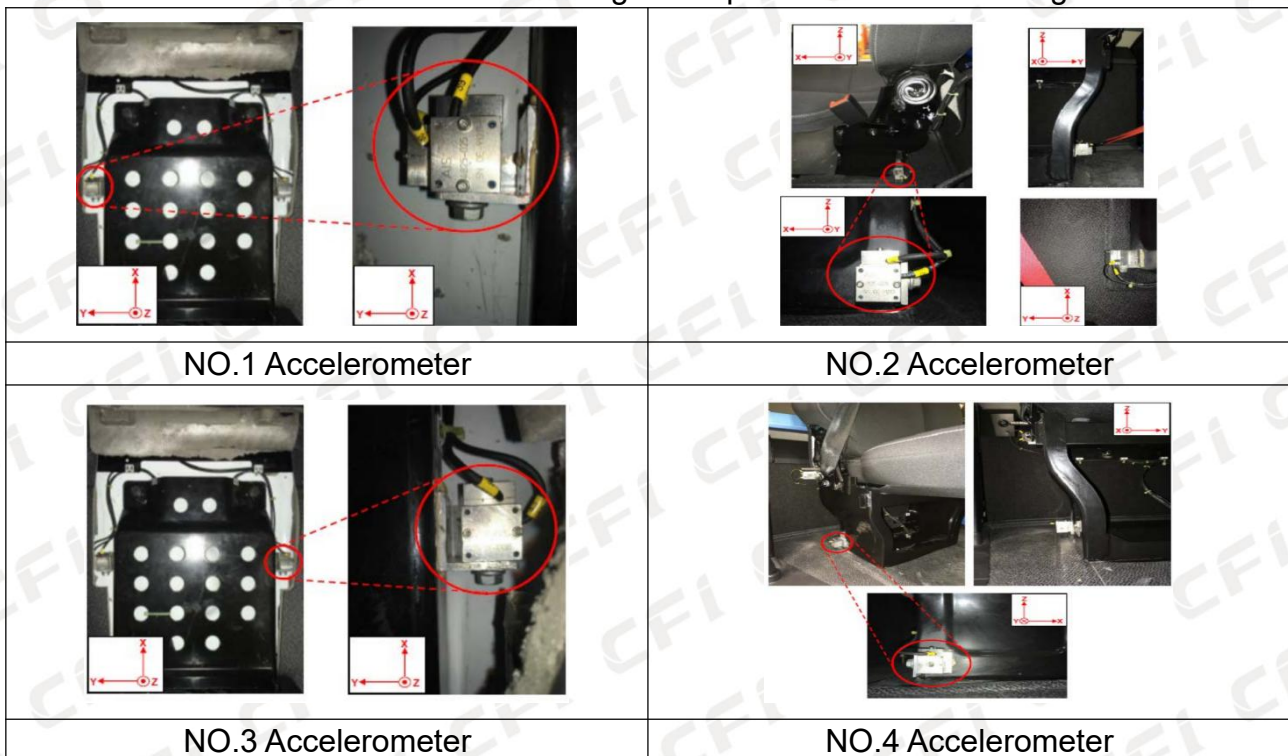
2.1 Install the seat on the six-axis vibrating table

2.2 Adjust the seat to the design position


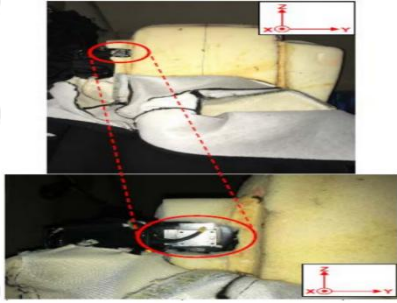
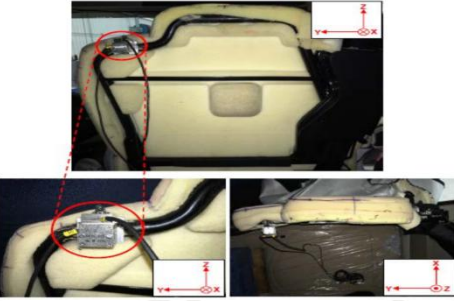
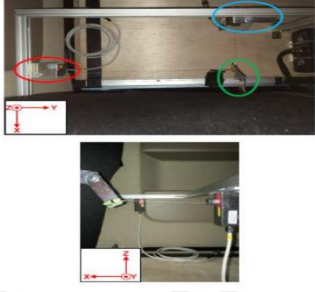
Co-Driver Seat Position:



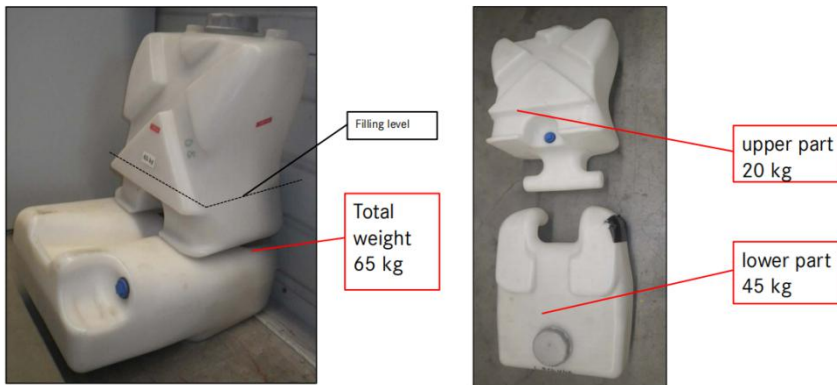
2.3 install the sensor on the seat according to the position shown in the figure



Test Report

	
<p>NO.5 Accelerometer</p>	<p>NO.6 Accelerometer</p>
	
<p>NO.7 Accelerometer</p>	<p>NO.8 and NO.9 Displacement sensors</p>

2.4 Prepare a test dummy as shown below



2.5 Iterate the road profiles (The iteration results should be confirmed by Daimler' s engineer before starting the test.)

Track	Length (s)
Track04+01_51kmh_T1_3_R3	99.5
Track05_35kmh_T3_3_R3	43.3
Track12_36kmh_T2_3_R1	144.6
Track09_BPR3_T1_3_R1	92.1
Track06_25kmh_T1_3_R1	59.8

2.6 Start the test. The sequence file is shown below

Test Report



3. Summary of Test Results

3.1.6-Axis vibration test

3.1.1. Test Standard

Daimler test program (H6 seat) and customer's requirements

3.1.2. Technical Requirements


Type	Requirements
Seat Frame Structure	No crack or off-welding on seat frame (defect detection needed)
	No weird Sound or Noise
	No deformation on Metal Sheet
	No looseness of the screw (torque should be measured and mark should be made before test)
Seat Back Adjustment	Unlock smoothly to use, no feeling of abnormal block
	Engaged tooth plate should not be slipped out by hand disturbing.
	The operating force of the recliner handle should be recorded before, in the middle of, and after the test.
	Seat Back Angle adjustment should be smooth, no feeling of abnormal block
Seat Cushion	Cushion should be smooth to fold or lay down.
	No several deformation, crack on Seat Cushion Pan
Whole Seat	No obvious deformation or damage on outlook appearance (Fabric cover, foam and plastic part)
	The waving value of longitudinal and latitudinous shaking by 350N loading. No standard value but to record every day. (acc.to displacement sensor)
	The clearance of longitudinal and latitudinous shaking by 70N loading. No standard value but to record every day. (acc.to displacement sensor)
Seat Belt	The process of seat belt extending to buckle-on should be smooth without any abnormal feeling.
	The belt should be retracted smoothly when buckle off.
Base Plate	No break of spot-welding
	No break of looseness on the screw fixing seat and base plate

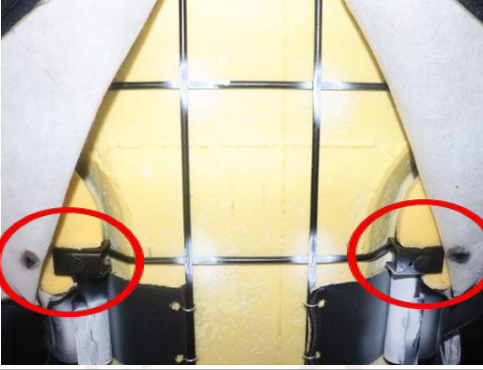
Test Report

Dummy's position	A mark on the dummy should be made to record the position change, just use for position correction, no critical evaluation.
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3.1.3. Test result(s)

3.1.3.1 Test failure items

1	Two breaks in the seat frame
Failure description	
Test progress	73% of the test

2	The cover at the buffer block is worn through
Failure description	
Test progress	80% of the test
Cause of failure	Test causes the screw hole of the face sleeve to become larger

3.1.3.2 Test success items

	Test results
Seat Frame Structure	No crack or off-welding on seat frame
	No deformation on Metal Sheet
	No looseness of the screw
Seat Back Adjustment	Unlock smoothly to use, no feeling of abnormal block
	Engaged tooth plate doesn't slipped out by hand disturbing.
	Seat Back Angle adjustment is smooth, no feeling of abnormal block
Seat	Cushion can be smooth to fold or lay down.

Test Report

Cushion	No several deformation, crack on Seat Cushion Pan
Whole Seat	No obvious deformation or damage on outlook appearance
Seat Belt	The process of seat belt extending to buckle-on is smooth without any abnormal feeling.
	The belt retracts smoothly when buckle off.
Base Plate	No break of looseness on the screw fixing seat and base plate

3.1.3.3 The operating force of the recliner handle

Pre-test	62.4N
Mid-test	61.8N
Post-test	65.8N

3.1.3.4 Lock force and unlock force of the seat cushion

Operating force	Pre-test	Post-test
Lock force	35.2N	36.2N
Unlock force	61.2N	62.8N

3.1.3.5 The waving value of longitudinal and latitudinous shaking by 350N loading and 70N loading

Waving value(mm)	Day1	Day2	Day3	Day4	Day5	Day6	Day7	Day8	Day9	Day10	Day11	Day12
350N_X	7.86	7.88	7.91	7.98	8.10	8.03	8.05	8.13	8.16	8.51	8.55	8.61
350N_Y	6.64	6.65	7.59	7.70	7.81	7.78	7.81	7.95	7.98	10.8	11.0	12.1
70N_X	1.78	1.79	1.79	1.81	1.85	1.90	1.95	2.08	2.11	2.85	2.91	3.42
70N_Y	1.16	1.17	1.18	1.19	1.22	1.76	1.79	1.85	1.87	2.52	2.71	2.85

3.1.3.6 Dummy position

Moving (mm)	Day1	Day2	Day3	Day4	Day5	Day6	Day7	Day8	Day9	Day10	Day11	Day11
Right side	10	2	5	6	3	8	Without dummy	Without dummy	Without dummy	Without dummy	Without dummy	Without dummy
Left side	10	5	10	7	5	10	Without dummy	Without dummy	Without dummy	Without dummy	Without dummy	Without dummy

3.1.4. Test Set Up Photo(s)

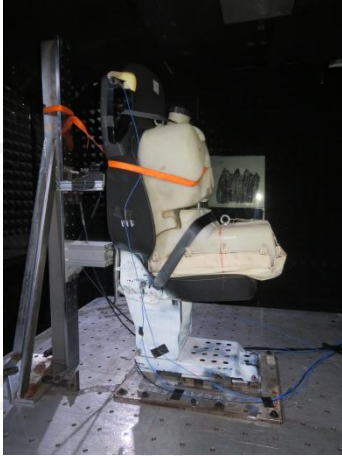
Test Report



Test with dummy set up



Test with dummy set up



Test with dummy set up



Test with dummy set up



Test with dummy set up



Test without dummy set up

Test Report

4. Test Instrument

Instrument Name	Model No.	Instrument No.	Calibration Validity
Mast table	353.20	GT-JS0231	28/02/2022
Angle meter	VICTOR 5003	GT-JQ0261	04/06/2022
Accelerometer	356A15	GT-JQ0263	04/08/2022
Accelerometer	356A15	GT-JQ0264	04/08/2022
Accelerometer	356A15	GT-JQ0265	04/08/2022
Accelerometer	356A15	GT-JQ0266	04/08/2022
Accelerometer	356A15	GT-JQ0267	04/08/2022
Accelerometer	3713E1125G	GT-JQ0270	12/04/2022
Accelerometer	3713E1125G	GT-JQ0271	12/04/2022
Displacement sensor	PT1A-15-UP-10K-M6	GT-JQ02119	24/05/2022
Displacement sensor	PT1A-15-UP-10K-M6	GT-JQ02120	24/05/2022

Note: All of the testing methods are not within the scope of CMA qualification. This test report is only used for customer scientific research, teaching, internal quality control, product development, etc, which is for internal reference only.

*****End of Report*****