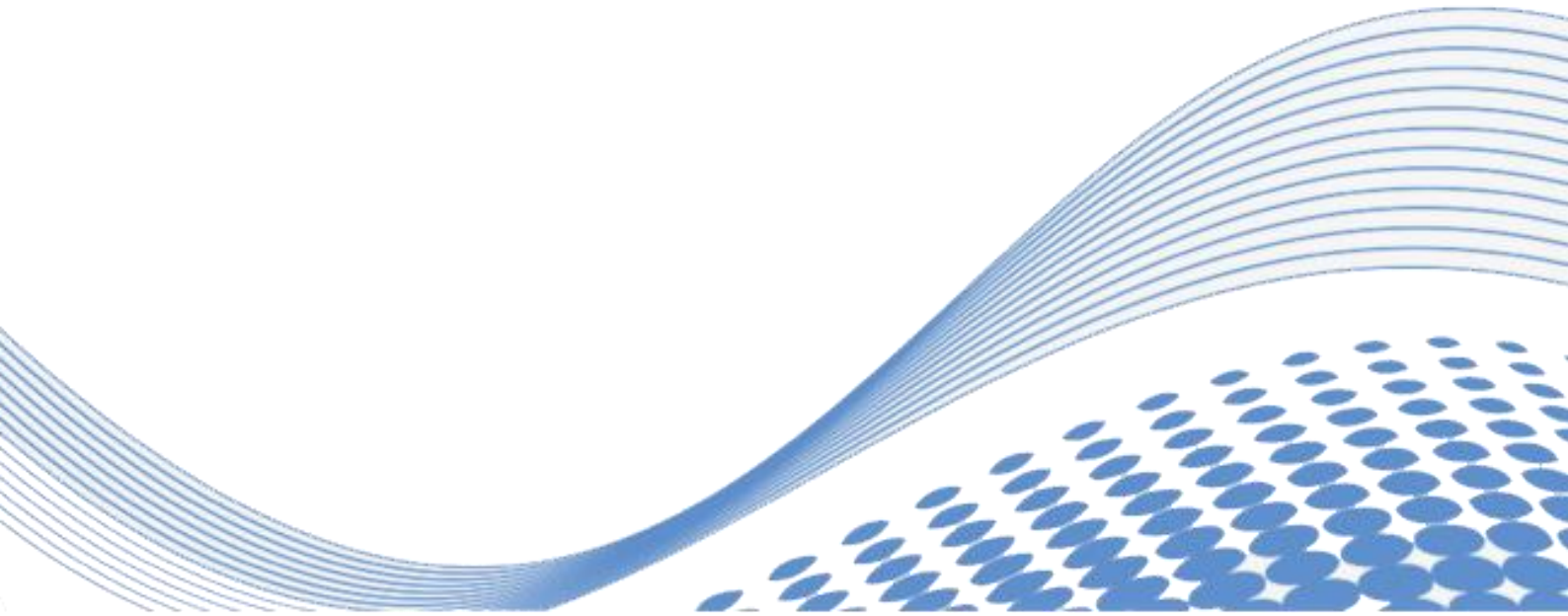


Test Report



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 Driver seat
Quantity 1pcs
Model /
Received 01/07/2022
Testing Period 01/07/2021-11/07/2022
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: 22/07/2022

Prepared by:

Reviewed by:

Approved by:

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 Driver seat	/	ETL-22060022-001	6-Axis vibration test	Intact

2. Test method

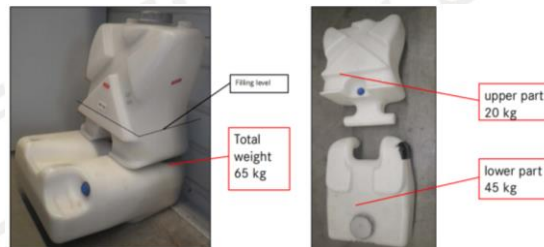
2.1 Install the seat on the six-axis vibrating table

2.2 Adjust the seat to the design position

Driver Seat Position:



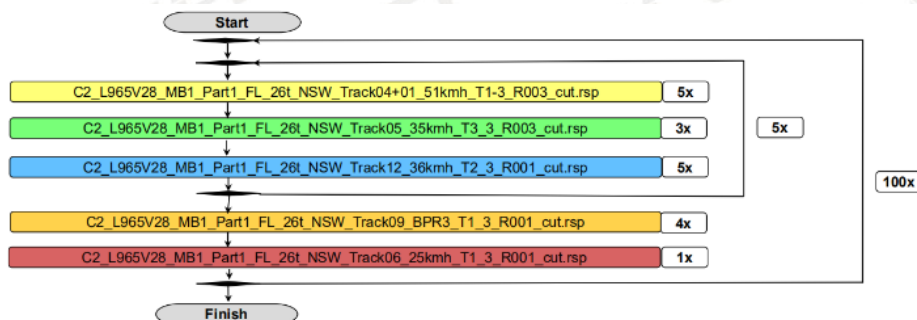
2.3 Prepare a test dummy as shown below



2.4 Iterate the road profiles

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

2.5 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 system	Seat Belt is good to use after whole test mileage;
	No crack, structure broken, weld off, screw loosen or fall off, or severe deformation detected on the new designed retractor position.
Base Plate	No break of spot-welding
	No break of looseness on the screw fixing seat and base plate
Seat Suspension Frame	No crack, structure broken, weld off, screw loosen or fall off, or severe deformation detected; No air breakage of valve system or air bag; No function failure of suspension use.
Seat Frame Beams	No crack, structure broken, weld off, screw loosen or fall off, or severe deformation detected;
Tilt System	No crack, structure broken, weld off, screw loosen or fall off, or severe deformation detected;

Test Report

	The new designed tilt structure showed a good performance during whole test mileage, no teeth slip occurred and the position could be maintained perfectly.
Sliding Rail	No crack, structure broken, weld off, screw loosen or fall off, or severe deformation detected; The sliding rail could be locked, unlocked or adjusted smoothly after whole test mileage.
Seat Back Frame	No crack, structure broken, weld off, screw loosen or fall off, or severe deformation detected; Especially no structure failure of curving and welding position detected.
Seat Riser	No crack, structure tearing, severe deformation or weld off detected on seat riser. The screw connection between rail and seat riser maintained well.
Dummy's position	A mark on the dummy should be made to record the position change, just use for position correction, no critical evaluation.
Fastener Bolts	The connecting bolts between the seat frame and the shock absorber cannot be loosened The connecting bolts between the bottom bracket and the slide rail cannot be loosened The fastening bolts of the elevation tooth plate cannot be loosened

3.1.3. Test result(s)

3.1.3.1 Test success items

Test results	
Seat Frame Structure	No crack or off-welding on seat frame
	No weird Sound or Noise
	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
Suspension	Frame Situation-no crack
	No Abnormal Sound
	Airbag Appearance Situation-no abrasion damage
	Air Path Situation-no leakage or abrasion damage
	Height Adjustment and Fast Lowering function normal
	Sheet Metal Deformation-no Serious Deformation
	Internal-Roller of suspension scissors-bracket Situation-working Smoothly
Damper Lever Oil Leakage-no Oil Leakage	

Test Report

	No Screw Loosen
Seat Cushion	Cushion is smooth to fold or lay down.
	No several deformation, crack on Seat Cushion Pan
Whole Seat	No obvious deformation or damage
Seat Belt system	Seat Belt is good to use after whole test mileage;
	No crack, structure broken, weld off, screw loosen or fall off, or severe deformation detected on the new designed retractor position.
Base Plate	No break of spot-welding
	No break of looseness on the screw fixing seat and base plate
Seat Suspension Frame	No crack, structure broken, weld off, screw loosen or fall off, or severe deformation detected; No air breakage of valve system or air bag; No function failure of suspension use.
Seat Frame Beams	No crack, structure broken, weld off, screw loosen or fall off, or severe deformation detected;
Tilt System	No crack, structure broken, weld off, screw loosen or fall off, or severe deformation detected; The new designed tilt structure showed a good performance during whole test mileage, no teeth slip occurred and the position could be maintained perfectly.
Sliding Rail	No crack, structure broken, weld off, screw loosen or fall off, or severe deformation detected; The sliding rail could be locked, unlocked or adjusted smoothly after whole test mileage.
Seat Back Frame	No crack, structure broken, weld off, screw loosen or fall off, or severe deformation detected; Especially no structure failure of curving and welding position detected.
Seat Riser	No crack, structure tearing, severe deformation or weld off detected on seat riser. The screw connection between rail and seat riser maintained well.
Fastener Bolts	The connecting bolts between the seat frame and the shock absorber are not loose
	The bolts connecting the bottom bracket and the slide rail are not loose
	Elevation gear plate fastening bolts are not loose

3.1.3.2 The operating force of the recliner handle

Pre-test	62.5N	Post-test	67.7N
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Test Report

3.1.3.3 Seat cushion operate force

Operating force	Pre-test	Post-test
Lock force	35.9N	36.1.2N

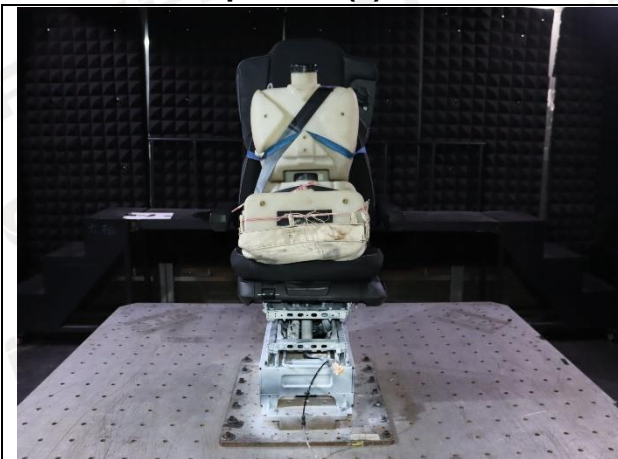
3.1.3.5 The waving value of longitudinal and latitudinous shaking by 350N and 70N loading

Waving value/mm	Day1	Day2	Day3	Day4	Day5	Day6	Day7	Day8	Day9	Day10	Day10
350N_X	21	22	23	22	23	21	22	23	23	22	24
350N_Y	44	47	49	48	49	45	46	45	47	46	47
70N_X	4	5	5	5	6	4	5	5	6	5	6
70N_Y	6	7	8	8	8	8	8	8	8	8	9

3.1.3.6 Dummy position

Moving distance/mm	Day2	Day3	Day4	Day5	Day6	Day7	Day8	Day9	Day10	Day11
Right side	5	2	3	2	8	9	7	10	10	9
Left side	8	5	5	6	5	10	6	11	9	8

3.1.4. Test Setup Photo(s)



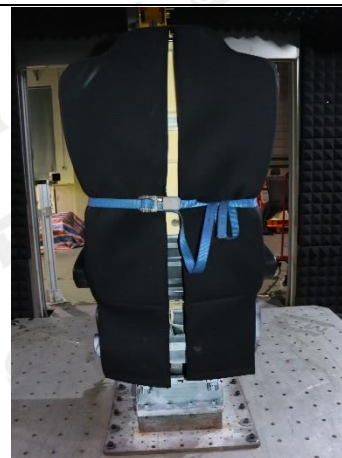
Test with dummy set up



Test with dummy set up



Test with dummy set up



Test with dummy set up

Test Report



After test



After test



After test



After test

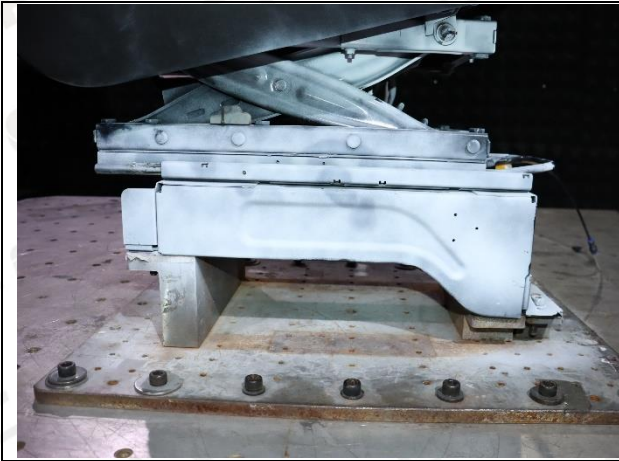


After test



After test

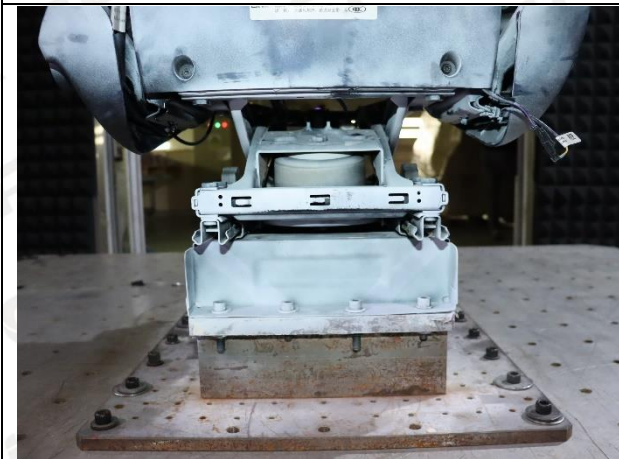
Test Report



After test



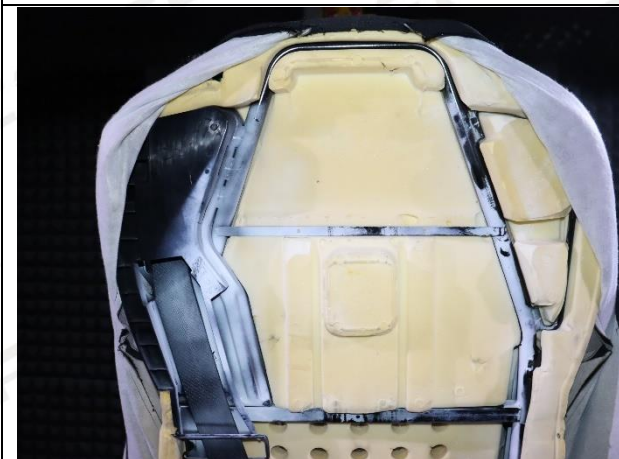
After test



After test



After test



After test



After test

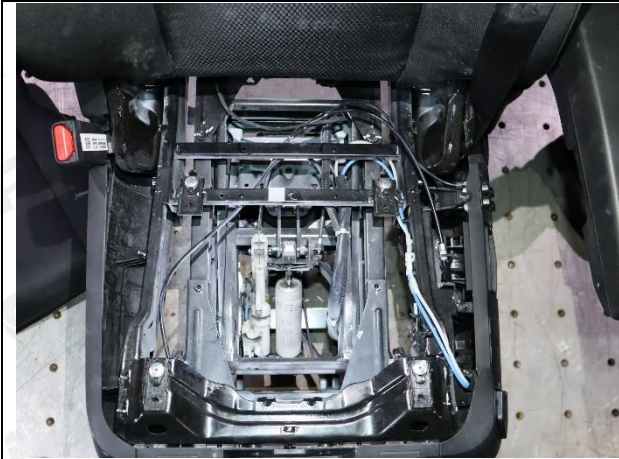
Test Report



After test



After test



After test-Seat Suspension Frame



After test-Tilt System

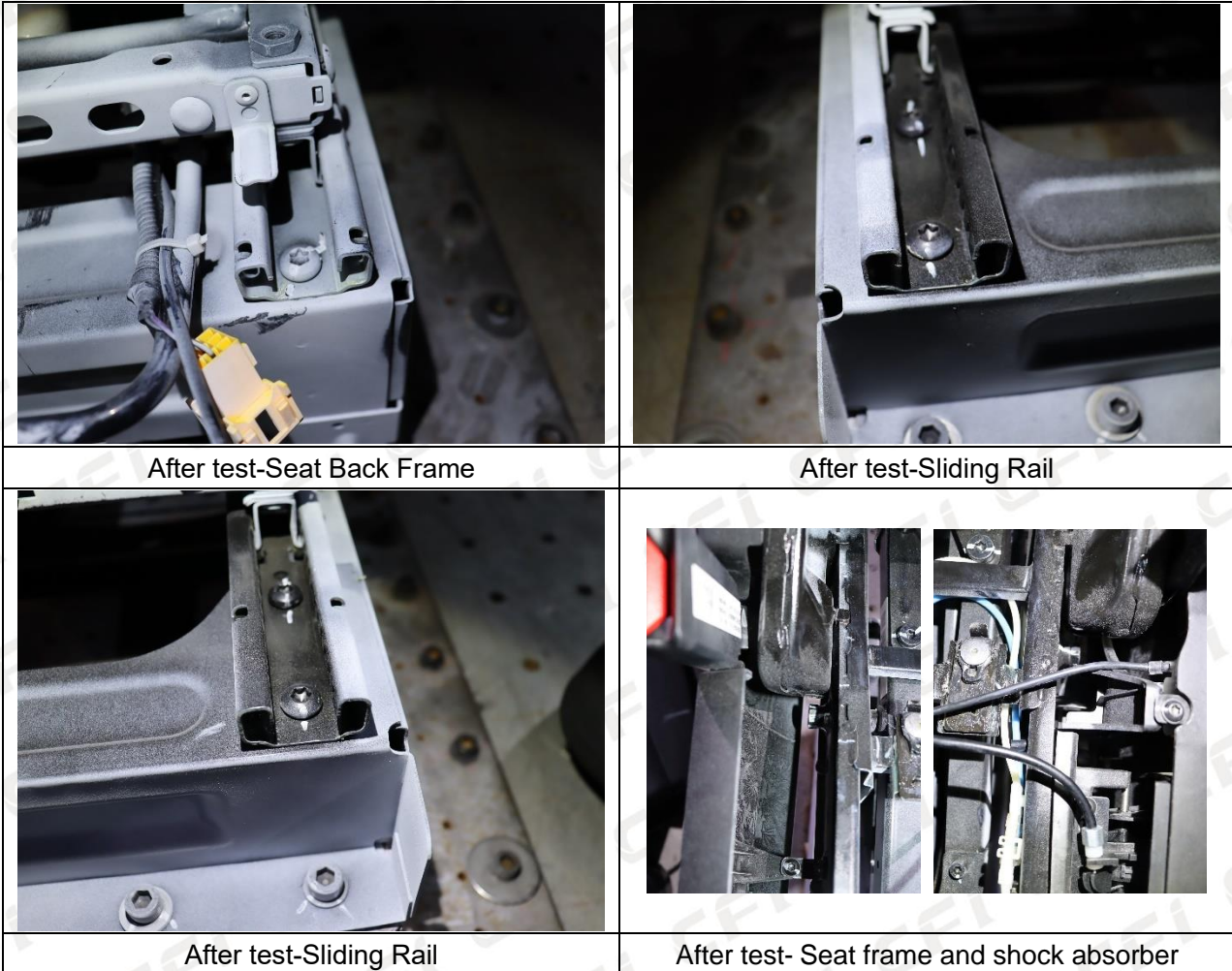


After test-Tilt System



After test-Sliding Rail

Test Report



Conclusion: According to the full inspection result, the testing target had a good performance during the whole vibration running mileage and no structure, appearance or function failure detected. The test is judged as SUCCESSFULLY PASSED.

4. Test Instrument

Instrument Name	Model No.	Instrument No.	Calibration Validity
Mast table	353.20	GT-JS0231	21/02/2023
Angle meter	220409672	GT-JQ02142	21/06/2023
Electronic force gauge	153341	GT-JQ0223	03/01/2023
Steel tape	5m	GT-JQ0250	1307/2024

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*****