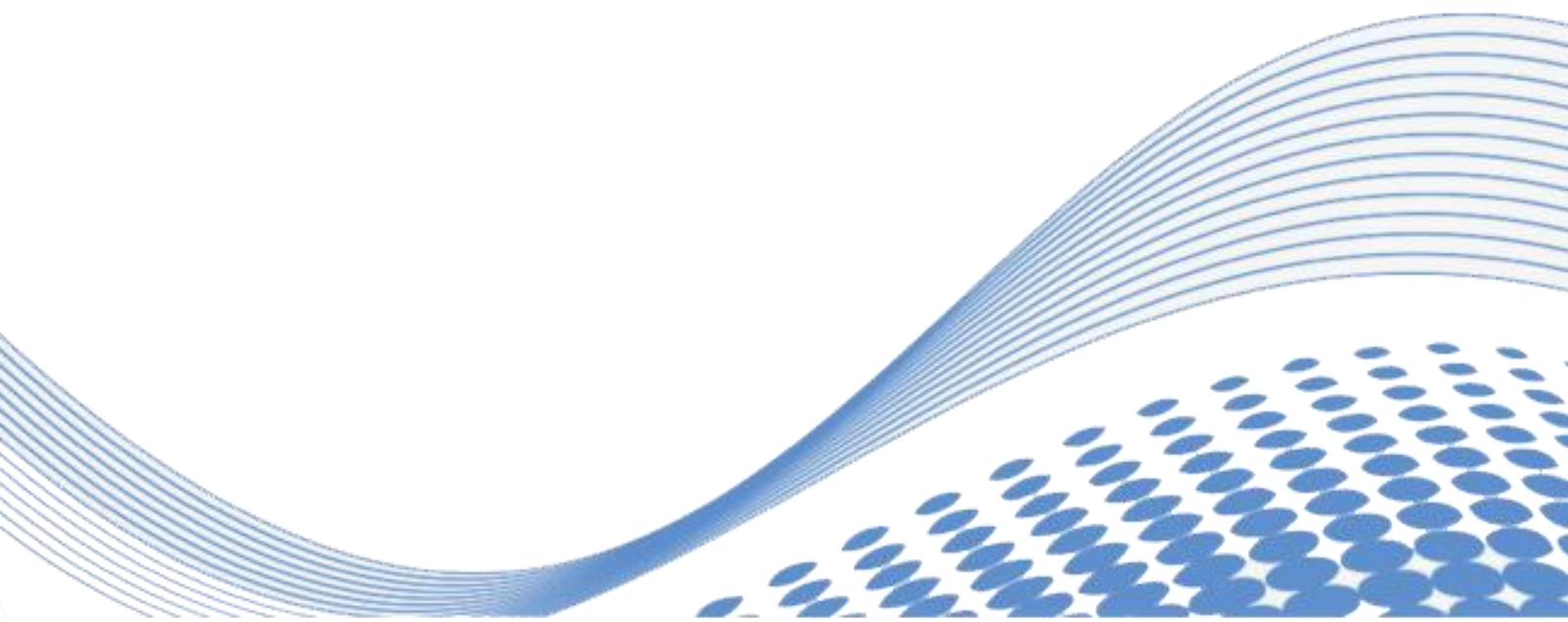


Test Report



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 07/12/2021

Testing Period 08/12/2021-17/12/2021

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: 24/01/2022

Prepared by: Zhichao Wang Reviewed by: Yongle Pan Approved by: Yun Xiantao

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-21110018-001	6-Axis vibration test	Intact

2. Test method

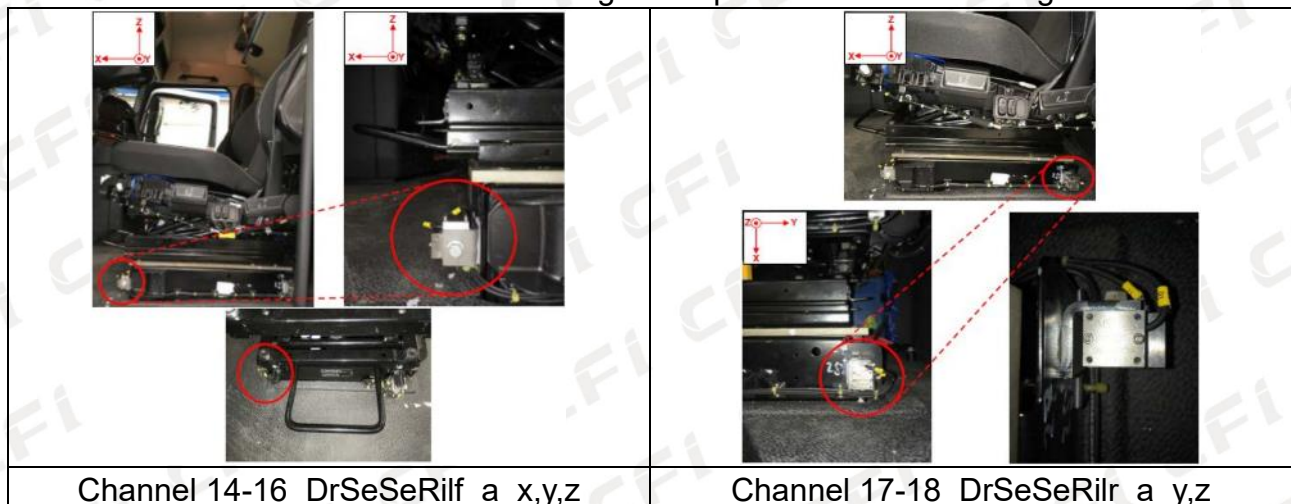
2.1 Install the seat on the six-axis vibrating table

2.2 Adjust the seat to the design position

Driver Seat Position:



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



Channel 14-16_DrSeSeRilf_a_x,y,z

Channel 17-18_DrSeSeRilr_a_y,z

Test Report

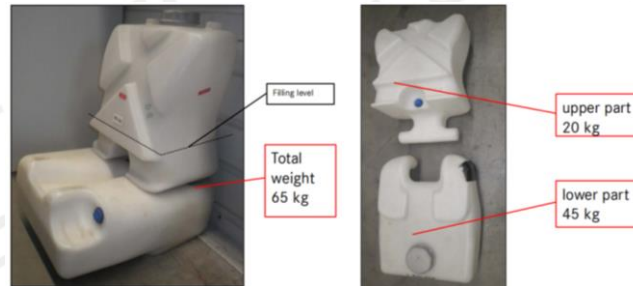
	
<p>Channel 19-20_DrSeSeRirf_a_x,z</p>	<p>Channel 21_DrSeSeRirr_a_x,z</p>
	
<p>Channel 22-23_DrSeSelf_a_x,z</p>	<p>Channel 24-26_DrSeSerf_a_x,y,z</p>
	
<p>Channel 27-28_DrSeSerr_a_y,z</p>	<p>Channel 29_DrSeSeBrlb_a_x</p>

Test Report

	
Channel 30-31_DrSeSeBrrt_a_x,z	Channel 32-33_DrSeSeBrrb_a_x,y
	
Channel 34-36_DrSeSeBrrt_a_x,y,z	Channel 55-56_DrSeSeBrrt_s_x,y
	/
Channel 57_DrSeSeBrrt_s_z	/

2.4 Prepare a test dummy as shown below

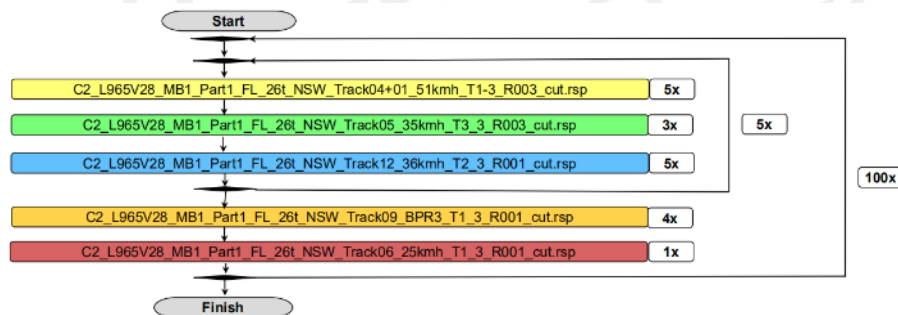
Test Report



2.5 Iterate the road profiles

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



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

Test Report

	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; 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.

3.1.3. Test result(s)

3.1.3.1 Test success items

Test Report

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
	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

Test Report

	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.

3.1.3.2 The operating force of the recliner handle

Pre-test	69.7N	Post-test	67.4N
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3.1.3.3 Seat cushion operate force

Operating force	Pre-test	Post-test
Lock force	43.3N	50.2N

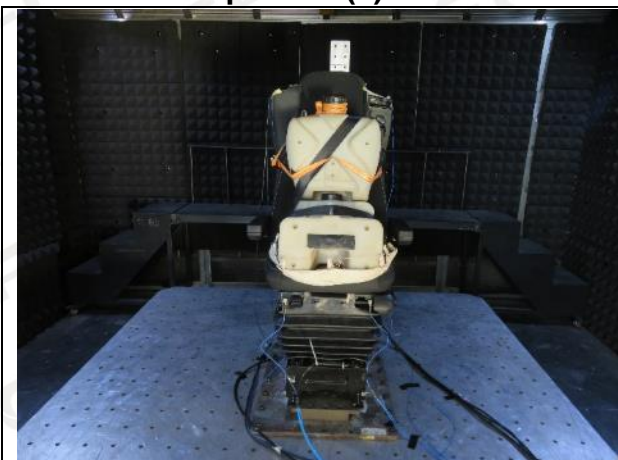
3.1.3.5 The waving value of longitudinal and latitudinous shaking by 350N loading and 70N loading

Waving value(mm)	Day1	Day2	Day3	Day4	Day5
350N_X	7.9	7.6	13.5	12.3	14.4
350N_Y	17.3	21.3	32.4	/	/
70N_X	1.0	1.8	1.3	2.2	2.24
70N_Y	6.0	5.6	7.8	/	/

3.1.3.6 Dummy position

Moving distance (mm)	Day1	Day2	Day3	Day4	Day5	Day6	Day7	Day8	Day9
Right side	0	0	0	0	0	0	0	0	0
Left side	12	13	12	11	12	13	14	12	13

3.1.4. Test Setup Photo(s)



Test with dummy set up



Test with dummy set up

Test Report



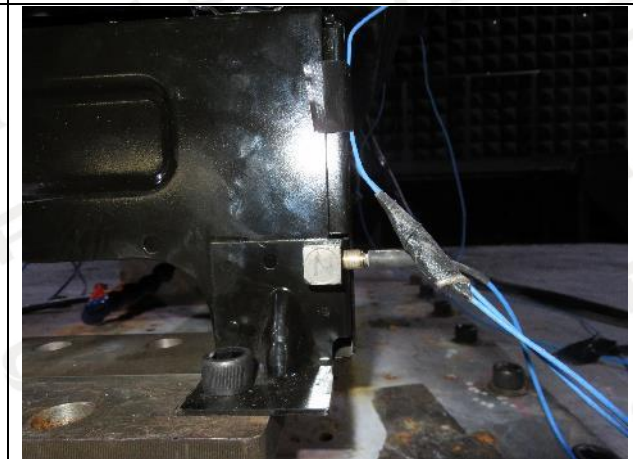
Test with dummy set up



Test with dummy set up



Test with dummy set up



Channel 14-16_DrSeSeRilf_a_x,y,z setup



Channel 17-18_DrSeSeRilr_a_y,z setup



Channel 19-20_DrSeSeRilf_a_x,z setup

Test Report



Channel 21_DrSeSeRirr_a_z setup



Channel 22-23_DrSeSelf_a_x,z setup



Channel 24-26_DrSeSerf_a_x,y,z setup



Channel 27-28_DrSeSerr_a_y,z setup



Channel 29_DrSeSeBrlb_a_x setup



Channel 30-31_DrSeSeBrIt_a_x,z setup

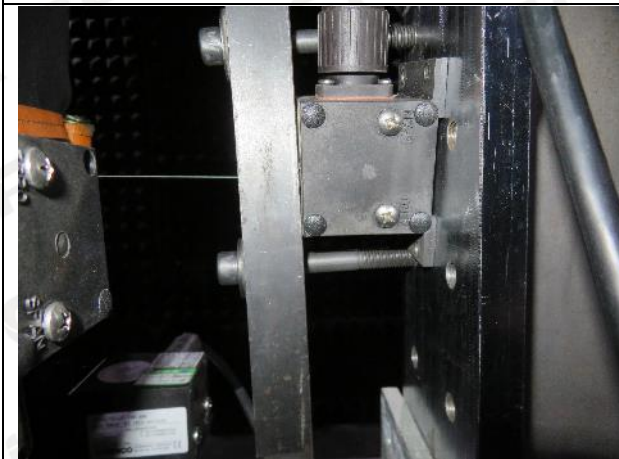
Test Report



Channel 32-33_DrSeSeBrrb_a_x,y



Channel 34-36_DrSeSeBrrt_a_x,y,z



Channel 55_DrSeSeBrrt_s_x



Channel 56_DrSeSeBrrt_s_y



Channel 57_DrSeSeBrrt_s_z



After test

Test Report



After test



After test



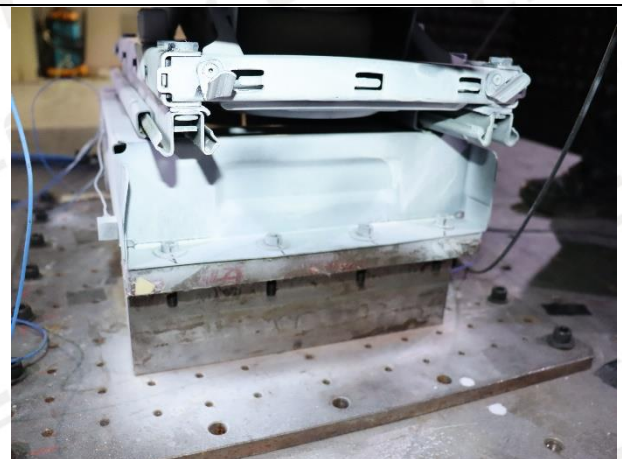
After test



After test

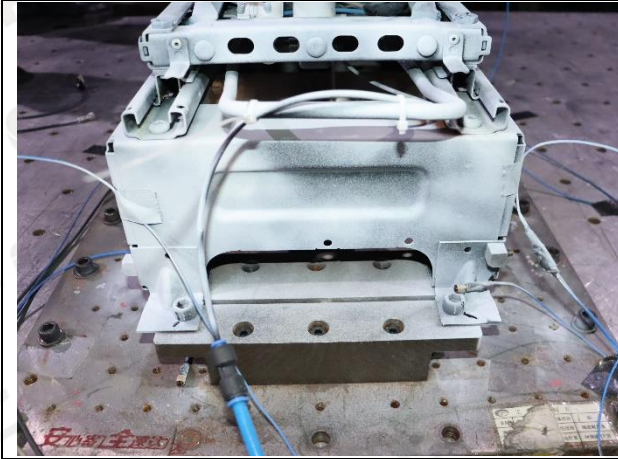


After test

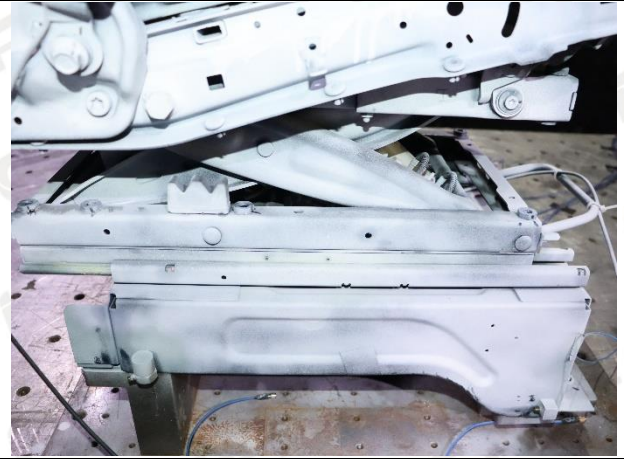


After test

Test Report



After test



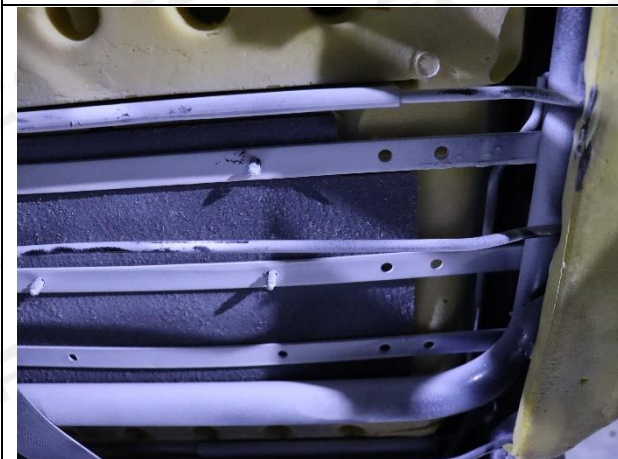
After test



After test



After test



After test








After test

Test Report



Test Report

	
After test-Tilt System	After test-Sliding Rail
	
After test-Seat Back Frame	After test-Seat Belt System
	/
After test-Seat Riser	/

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**.

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	356A15	GT-JQ0268	04/08/2022
Accelerometer	3713E1125G	GT-JQ0270	12/04/2022
Accelerometer	3713E1125G	GT-JQ0271	12/04/2022
Accelerometer	3713E1125G	GT-JQ0272	12/04/2022
Accelerometer	353B33	GT-JQ02104	08/07/2022
Accelerometer	353B33	GT-JQ02112	27/01/2022
Displacement sensor	PT1A-15-UP-10K-M6	GT-JQ02119	24/05/2022
Displacement sensor	PT1A-15-UP-10K-M6	GT-JQ02120	24/05/2022
Displacement sensor	PT1A-15-UP-10K-M6	GT-JQ02121	24/05/2022
Electronic force gauge	153341	GT-JQ0223	03/01/2022

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.

This report is a substitute report of SZCF-TRE21110018-001, the original report is invalid

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