



# Validation Test Report

GWT Housing

August 12, 2019.

Tested & Reported By	Test Date	From July 16, 2018 To July 26, 2018
Jung Up Seo	Classification	Unrestricted

## TE CONNECTIVITY RELIABILITY TEST REPORT

Test Name : Validation for GWT Housing

### 1. Introduction

#### 1-1 Purpose

Testing was performed on the GWT Housing to determine if it conformance to the requirements of Product Specification.

#### 1-2 Scope

This report covers the mechanical performance requirements of the GWT Housing. The testing was performed between July 16, 2018 and July 26, 2018.

#### 1-3 Test Samples

The test samples were randomly selected from normal current production lots.

Description	P/N	Product Specification
HALL SENSOR 4P PLUG HSG	1-1897007-1	108-61086
GAS VALVE 2P CONNECTOR	2-1743216-1	108-1271-1
GAS VALVE 3P CONNECTOR	2-1743217-1	108-1271-1
PDL 2P PLUG HSG 3.96mm (GWT)	2005247-2	108-61082
PDL 2P CAP HSG 3.96mm F/H (GWT)	2005248-2	108-61082
187 3P FOR DRYER	2-1743068-1	108-61062
250 FLAG POSITIVE LOCK 2P HSG(PITCH=12mm)	1-1743206-1	108-61105
250 FLAG POSITIVE LOCK 2P HSG(PITCH=12mm)	1-1743206-2	108-61105

#### 1-4 Conclusion

The GWT Housing meets the mechanical performance requirements of Product Specification.

#### 1-5 Attachment

Test Result

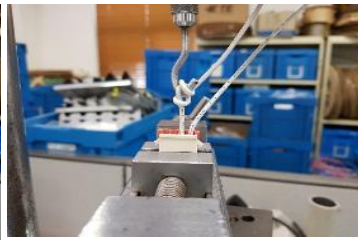
**- HALL SENSOR 4P PLUG HSG Test Result**

- 1) Contact & Wier Size : 1743728-1, 22AWG  
 2) HDR ASSY : 1897005-1, TPA : 1897008-6  
 3) Spec : 108-61086

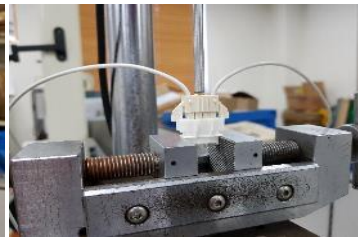
NO	Test Items	P/N	Acceptance criteria	Unit	Test Result										Judgment	
					Wire (AWG)	S1	S2	S3	S4	S5	S6	S7	S8	S9		S10
1	Contact Insertion Force	1-1897007-1	0.9kgf Max.	kgf	#22	0.46	0.46	0.41	0.40	0.45	0.38	0.42	0.41	0.44	0.42	OK
2	Contact Retention Force		4.2kgf Min.		#22	8.68	7.92	9.69	9.27	9.43	9.42	8.38	8.48	9.22	9.33	OK
3	Connector Mating Force		5.6kgf Max.		#22	3.28	3.02	3.00	3.15	2.66	2.91	2.53	2.87	3.05	3.14	OK
4	Connector Unmating Force		0.8kgf Min.		#22	3.79	3.74	3.99	4.00	3.68	3.90	3.93	3.92	3.86	3.77	OK



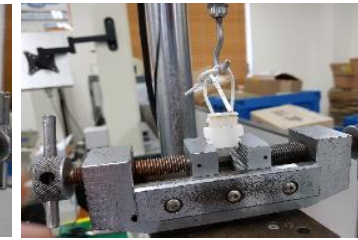
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<Contact Retention Force>



<Connector Mating Force>



<Connector Unmating Force>

**- GAS VALVE 2P CONNECTOR Test Result**

1) Contact & Wier Size : 1217039-1, 16AWG

2) Spec : 108-1271-1

NO	Test Items	P/N	Acceptance criteria	Unit	Test Result										Judgment	
					Wire (AWG)	S1	S2	S3	S4	S5	S6	S7	S8	S9		S10
1	Contact Insertion Force	2-1743216-1	26N Max.	N	#16	9.6	15.4	9.2	9.1	19.3	18.9	6.2	5.4	9.5	18.3	OK
2	Contact Retention Force		50N Min.		#16	121.2	114.7	115.1	121.9	127.2	111	113.7	112.8	116.2	120.3	OK



<Contact Insertion Force>

<Contact Retention Force>

- GAS VALVE 3P CONNECTOR Test Result

1) Contact & Wier Size : 1217039-1, 16AWG

2) Spec : 108-1271-1

NO	Test Items	P/N	Acceptance criteria	Unit	Test Result										Judgment	
					Wire (AWG)	S1	S2	S3	S4	S5	S6	S7	S8	S9		S10
1	Contact Insertion Force	2-1743217-1	26N Max.	N	#16	3.3	7.8	6.9	18.2	12.1	4.1	14.1	15.3	17.1	5.2	OK
2	Contact Retention Force		50N Min.		#16	125.3	136.5	118.5	132.7	111.2	118.6	124.8	122.7	130.4	124.9	OK



<Contact Insertion Force>



<Contact Retention Force>

– PDL 2P PLUG HSG 3.96mm (GWT) Test Result

1) Contact & Wier Size : 1743728-1, 22AWG

2) CAP : 179463, TPA : 177918-1

3) Spec : 108-61082

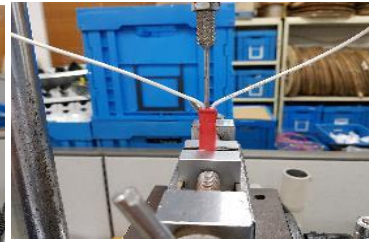
NO	Test Items	P/N	Acceptance criteria	Unit	Test Result										Judgment	
					Wire (AWG)	S1	S2	S3	S4	S5	S6	S7	S8	S9		S10
1	Contact Insertion Force	2005247-2	0.7kgf Max.	kgf	#22	0.22	0.22	0.29	0.20	0.25	0.25	0.24	0.27	0.25	0.23	OK
2	Contact Retention Force		4.2kgf Min.		#22	9.75	10.07	9.20	9.52	10.23	9.33	10.11	9.48	9.87	10.70	OK
3	Connector Mating Force		2.8kgf Max.		#22	1.01	1.04	1.13	1.11	1.11	1.08	1.10	1.09	1.05	1.12	OK
4	Connector Unmating Force		0.4kgf Min.		#22	0.85	0.79	0.84	0.74	0.89	0.88	0.79	0.78	0.72	0.77	OK



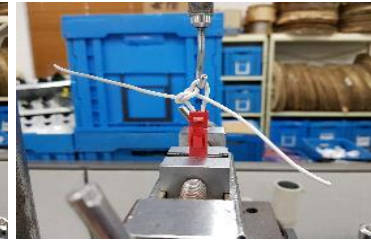
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<Contact Retention Force>



<Connector Mating Force>



<Connector Unmating Force>

- PDL 2P CAP HSG 3.96mm F/H (GWT) Test Result

1) Contact & Wier Size : 177916-1, 22AWG

2) PLUG : 177898, TPA : 177918-1

3) Spec : 108-61082

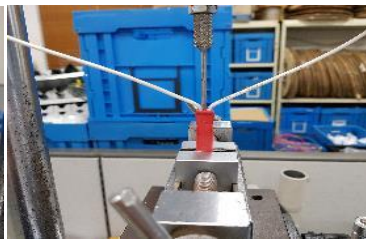
NO	Test Items	P/N	Acceptance criteria	Unit	Test Result										Judgment	
					Wire (AWG)	S1	S2	S3	S4	S5	S6	S7	S8	S9		S10
1	Contact Insertion Force	2005248-2	0.7kgf Max.	kgf	#22	0.44	0.45	0.53	0.49	0.44	0.53	0.48	0.42	0.51	0.47	OK
2	Contact Retention Force		4.2kgf Min.		#22	9.52	9.99	10.45	10.2	10.34	8.65	9.72	10.18	10.44	9.79	OK
3	Connector Mating Force		2.8kgf Max.		#22	1.01	1.04	1.13	1.11	1.11	1.08	1.1	1.09	1.05	1.12	OK
4	Connector Unmating Force		0.4kgf Min.		#22	0.85	0.79	0.84	0.74	0.89	0.88	0.79	0.78	0.72	0.77	OK



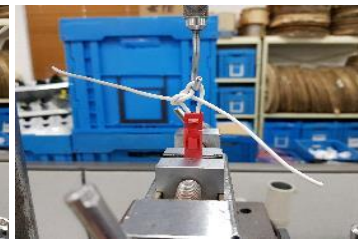
<Contact Insertion Force>



<Contact Retention Force>



<Connector Mating Force>



<Connector Unmating Force>

- 187 3P FOR DRYER Test Result

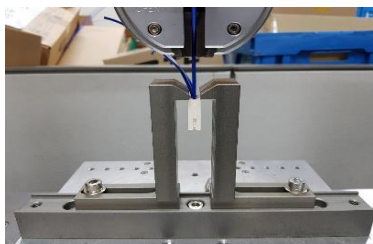
1) Contact & Wier Size : 170324-1, 20AWG

2) Spec : 108-61062

NO	Test Items	P/N	Acceptance criteria	Unit	Test Result										Judgment	
					Wire (AWG)	S1	S2	S3	S4	S5	S6	S7	S8	S9		S10
1	Contact Insertion Force	2-1743068-1	Reference	kgf	#20	0.67	0.66	0.73	0.79	0.68	0.74	0.65	0.74	0.74	0.64	-
2	Contact Retention Force		50N Min.		#20	11.00	10.23	10.50	9.27	11.98	9.58	8.56	11.37	8.77	11.77	OK



<Contact Insertion Force>



<Contact Retention Force>



- 250 FLAG P-LOCK HSG 2P 12mm Test Result

1) Contact & Wier Size : 936604-1, 16AWG

2) Spec : 108-61105

NO	Test Items	P/N	Acceptance criteria	Unit	Test Result										Judgment	
					Wire (AWG)	S1	S2	S3	S4	S5	S6	S7	S8	S9		S10
1	Contact Retention Force	1-1743206-1	Reference	kgf	#16	8.16	7.82	7.57	8.97	8.56	8.24	7.93	8.41	8.63	7.72	-
		1-1743206-2			#16	8.93	8.72	9.66	8.68	8.65	7.66	8.32	8.55	8.90	8.18	-



<Contact Retention Force>