



TEST REPORT

PRODUCT ENGINEERING LABORATORY	RL. 13-0846	REV 1
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Material / Parts description: Terminal Micro Quadlock System Clean Body	PN: 1719532-5	Drawing Issue A4
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Requester: MAURICIO GISOLDI	Distribution: PRODUCT ENGINEERING
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Customer: YAZAKI	Supplier: TE CONNECTIVITY
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Confidentiality: <input type="checkbox"/> 1- CONFIDENTIAL <input type="checkbox"/> 2- TYCO RESTRICTED <input checked="" type="checkbox"/> 3- ADDRESSED CUSTOMER <input type="checkbox"/>	Distribution: <input checked="" type="checkbox"/> REQUESTER <input checked="" type="checkbox"/> DM-TEC <input type="checkbox"/> <input type="checkbox"/>
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Purpose: 1 - Product Validation	General information: New validation to use TE MQS Clean Body terminal in the ECM Delphi Connector 64 ways.
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Test(s): Terminal-from-Connector Extraction Force. Pressure/Vacuum Leak.	Specification (s): GMW 3191 Rev_Dec_2007
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Conclusion:

Samples met requirements.

August 7th, 2013
Date

SIGNATURE ON FILE
Executed by
JÉSUS V. DE OLIVEIRA PRETO
LABORATORY ENGINEER

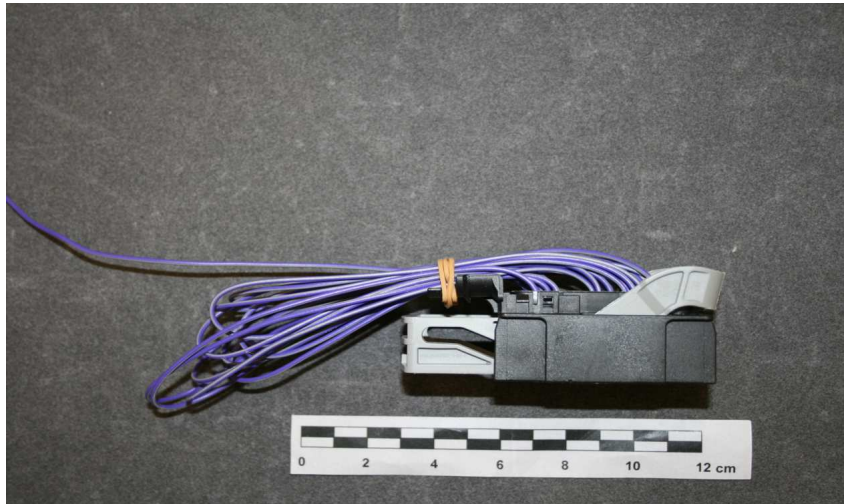
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Responsible
PAULO S. ALMEIDA
LABORATORY COORDINATOR

Samples Identification

275 Samples MQS Terminal Clean Body PN 1719532-5 wire gauge 0,5mm².

11 Samples Delphi Connector 64 Ways Delphi PN 7287-5160-30.

04 sample GM Celta injection module.



MQS Terminals Clean Body mounted in the Delphi Connector 64 Ways



GM Celta injection module

Terminal-from-Connector Extraction Force

Samples

25 Samples MQS Terminal Clean Body PN 1719532-5 wire gauge 0,5mm².
1 Sample number 11 Delphi Connector 64 Ways Delphi PN 7287-5160-30.

Equipments

Instron Electromechanical Testing Systems Model 3365, Nr. 92-339017-085

Specification

GMW 3191 Rev_DEC_2007 Item 4.9

Requirements

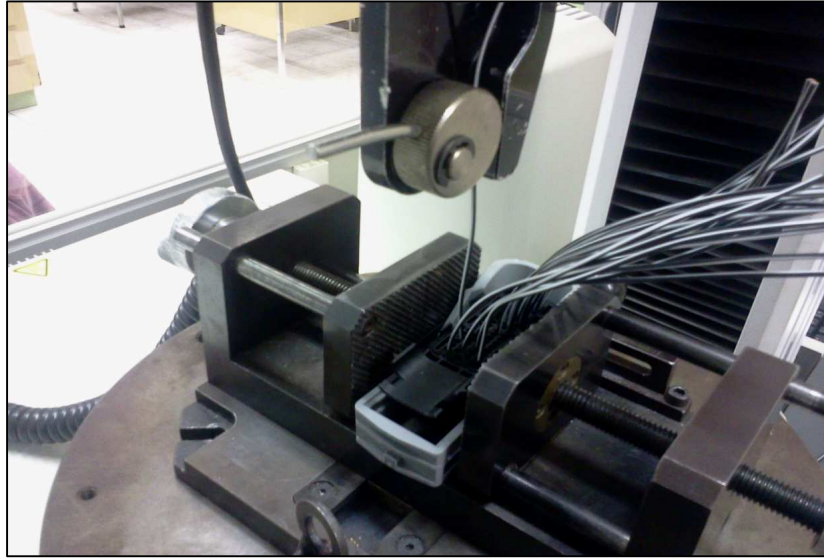
Minimum Extraction Force 30 N.

Procedures

Pull the wire at a uniform rate of (50 ± 10) mm/min until pull-out occurs, with primary lock only (according to TE product engineering).



Instron Electromechanical Testing Systems Model 3365, Nr. 92-339017-085



Terminal extraction

Results:

Sample 11

Way	Extraction Force (N)
2	34,85
4	34,88
5	35,01
7	36,08
13	34,18
16	34,2
19	36,81
20	35,72
23	35,33
31	37,02
33	36,03
35	37,08
36	35,62
37	34,45
39	35,19
41	35,6
45	35,41
46	35,06
49	37,23
50	35,71
52	36,8
53	36,96
54	36,4
57	36,32
64	35,55
Min	34,18
Max	37,23
Aver.	35,74

Samples met requirements.

Pressure/Vacuum Leak

Samples

250 Samples MQS Terminal Clean Body PN 1719532-5 wire gauge 0,5mm².
10 Samples numbers P1 to P10 Delphi Connector 64 Ways Delphi PN 7287-5160-30.
4 sample GM Celta injection module.

Equipments

Vacuum pump Edwards mod. 3
Automated Pressure Calibrator Mensor mod. CPC6000.

Specification

GMW 3191 Rev_DEC_2007 Item 4.9

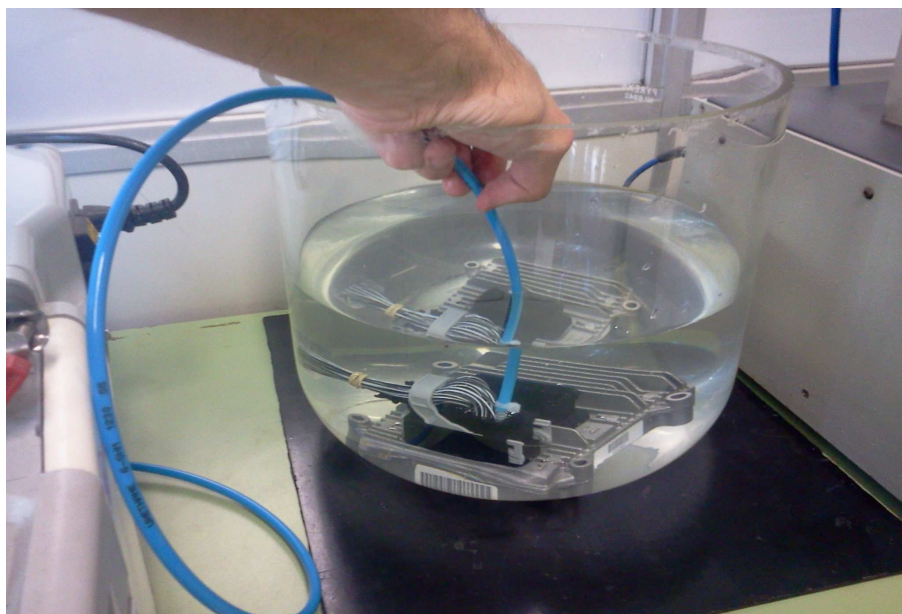
Requirements

No bubbles visible exiting any test sample and no evidence of water or florescent dye shall be present in the interior of mated connector.

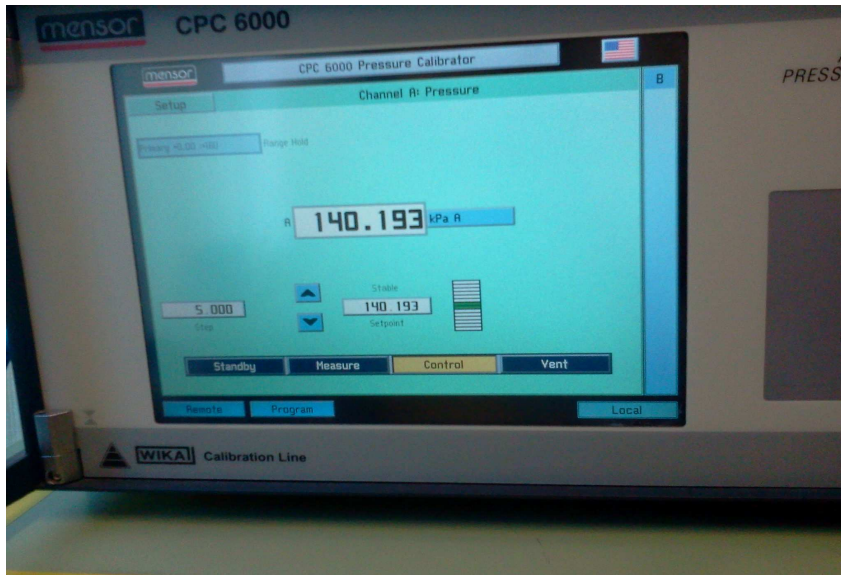
Procedures

- a) Assembly connector housing with its respective components (sealed terminals) and mate the connector to the counterpart.
- b) Submerge all samples into a container filled with salt water solution and detergent.
- c) Apply 48KPa of pressure inside connection during 15 seconds. Check for bubbles presence.
- d) Apply 48KPa of vacuum into connection during 15 seconds. Disassembly the connection and check for ingress of water.
- e) Assembly each connection again.
- f) Soak all samples to 100°C for 70 hours.
- g) Allow the samples to cool in ambient temperature.
- h) Repeat steps "b", "c", "d" and "e" using pressure and vacuum of 28KPa.

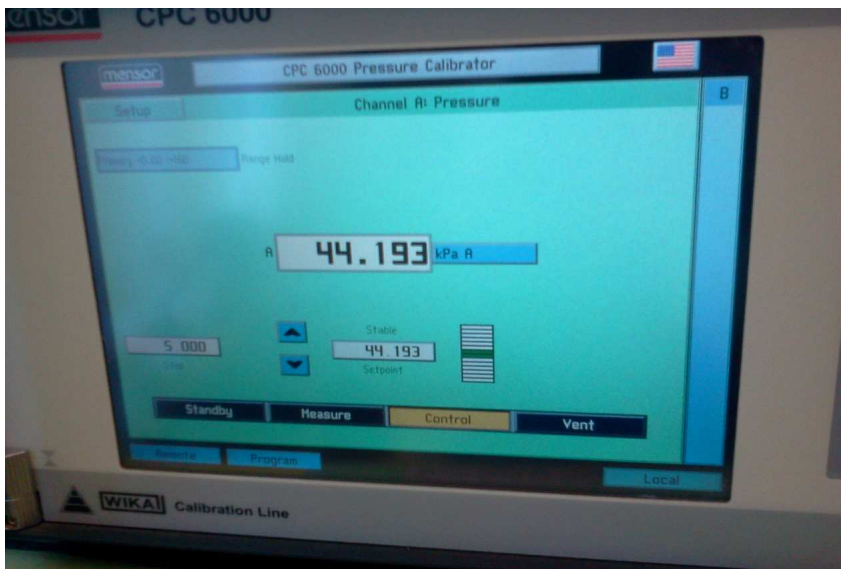
Results:



Sample under test (No bubbles)



Automated Pressure Calibrator (92,193 enviromental pressure + 48 Kpa = 140,193 Kpa abs)



Automated Pressure Calibrator (92,193 enviromental pressure - 48 Kpa = 44,193 Kpa abs)

Initial test:

Sample	Pressure	Vaccum
P1	Without bubbles	No water ingress
P2	Without bubbles	No water ingress
P3	Without bubbles	No water ingress
P4	Without bubbles	No water ingress
P5	Without bubbles	No water ingress
P6	Without bubbles	No water ingress
P7	Without bubbles	No water ingress
P8	Without bubbles	No water ingress
P9	Without bubbles	No water ingress
P10	Without bubbles	No water ingress

Test after exposure to 100 °C during 70 hours:

Sample	Pressure	Vaccum
P1	Without bubbles	No water ingress
P2	Without bubbles	No water ingress
P3	Without bubbles	No water ingress
P4	Without bubbles	No water ingress
P5	Without bubbles	No water ingress
P6	Without bubbles	No water ingress
P7	Without bubbles	No water ingress
P8	Without bubbles	No water ingress
P9	Without bubbles	No water ingress
P10	Without bubbles	No water ingress

Samples met requirements.