

## Verification Report

No. CANEC1613036701

Date: 28 Jul 2016

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WUHAN SUNON ELECTRONICS CO.,LTD.

YOUANG VILLAGE QIANCHUAN STREET, HUANGPI DISTRICT, WUHAN, HUBEI PROVINCE  
CHINA

Sample Name : quartz watch movement  
SGS Job No. : CP16-042643 - GZ  
Internal Reference No. : 2.1  
Tested Basic Model No. PE10  
(P.O. No.) :  
Client Ref. Info. : According to declaration from client, the materials in models PE28, PE27, PE26, PE25 are the same as those in model PE10.  
Manufacturer : WUHAN SUNON ELECTRONICS CO.,LTD. .  
Country of Origin : China  
Country of Destination : EU  
Date of Sample Received : 05 Jul 2016  
Verification Period : 05 Jul 2016 - 28 Jul 2016  
Verification Requested : With reference to RoHS Directive 2011/65/EU recasting 2002/95/EC.  
Verification Method : Please refer to next page(s).  
Verification Result : Please refer to next page(s).  
Verification Conclusion : Based on the verification results of the submitted samples, the results of Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs) comply with the limits as set by RoHS Directive 2011/65/EU Annex II; recasting 2002/95/EC.  
Note : The test results are related only to the tested items. The report shall not be reproduced except in full without the written approval of the testing laboratory.

Signed for and on behalf of  
SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch



Jenny Liao  
Approved Signatory



Verification Method :

1. With reference to IEC 62321-2:2013, review was performed for the samples disjointed from the submitted articles.
2. With reference to IEC 62321-1:2013, tests were performed for the samples indicated by the photos in this report
  - (1) With reference to IEC 62321-3-1:2013, screening by EDXRF spectroscopy
  - (2) Wet chemical test method
    - a. With reference to IEC 62321-5:2013, determination of Cadmium by ICP-OES
    - b. With reference to IEC 62321-5:2013, determination of Lead by ICP-OES
    - c. With reference to IEC 62321-4:2013, determination of Mercury by ICP-OES
    - d. With reference to IEC 62321-7-1:2015 & IEC 62321:2008, determination of Hexavalent chromium by Colorimetric method using UV-Vis.
    - e. With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS



In accordance with the result of material risk assessment, the following disjointed parts in the submitted sample have been verified.

Part No.	Part Description	BOM No.	Restricted Substances	Results of EDXRF (1)	Result of Wet Chemical Testing(2) (mg/kg)	Conclusion on EU RoHS	Sample Submitted / Resubmitted Date
1	Grey plastic shell	-	Pb Cd Hg Cr(VI)▼ PBBs PBDEs	BL BL BL BL BL BL	--- --- --- --- --- ---	Comply Comply Comply Comply Comply Comply	05 Jul 2016
2	Silvery metal shell (connected w/ No.1)	-	Pb Cd Hg Cr(VI)▼ PBBs PBDEs	BL BL BL IN --- ---	--- --- --- ND --- ---	Comply Comply Comply Comply --- ---	05 Jul 2016
3	Pink plastic gear (in No.1)	-	Pb Cd Hg Cr(VI)▼ PBBs PBDEs	BL BL BL BL BL BL	--- --- --- --- --- ---	Comply Comply Comply Comply Comply Comply	05 Jul 2016
4	Black plastic gear (in No.1)	-	Pb Cd Hg Cr(VI)▼ PBBs PBDEs	BL BL BL BL BL BL	--- --- --- --- --- ---	Comply Comply Comply Comply Comply Comply	05 Jul 2016



Part No.	Part Description	BOM No.	Restricted Substances	Results of EDXRF (1)	Result of Wet Chemical Testing(2) (mg/kg)	Conclusion on EU RoHS	Sample Submitted / Resubmitted Date
5	White plastic gear (in No.1)	-	Pb Cd Hg Cr(VI)▼ PBBs PBDEs	BL BL BL BL BL BL	--- --- --- --- --- ---	Comply Comply Comply Comply Comply Comply	05 Jul 2016
6	Silvery metal sheet (small) (in No.1)	-	Pb Cd Hg Cr(VI)▼ PBBs PBDEs	BL BL BL IN --- ---	--- --- --- ND --- ---	Comply Comply Comply Comply --- ---	05 Jul 2016
7	Silvery metal sheet (in No.1)	-	Pb Cd Hg Cr(VI)▼ PBBs PBDEs	BL BL BL IN --- ---	--- --- --- ND --- ---	Comply Comply Comply Comply --- ---	05 Jul 2016
8	Silvery metal tube (in No.1)	-	Pb Cd Hg Cr(VI)▼ PBBs PBDEs	OL BL BL BL --- ---	23588▲ --- --- --- --- ---	Comply Comply Comply Comply --- ---	05 Jul 2016



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Part No.	Part Description	BOM No.	Restricted Substances	Results of EDXRF (1)	Result of Wet Chemical Testing(2) (mg/kg)	Conclusion on EU RoHS	Sample Submitted / Resubmitted Date
9	Silvery metal shaft (in No.1)	-	Pb Cd Hg Cr(VI)▼ PBBs PBDEs	IN BL BL IN --- ---	1522▲ --- --- ND --- ---	Comply Comply Comply Comply --- ---	05 Jul 2016
10	Silvery metal sheet (in No.1)	-	Pb Cd Hg Cr(VI)▼ PBBs PBDEs	BL BL BL IN --- ---	--- --- --- ND --- ---	Comply Comply Comply Comply --- ---	05 Jul 2016
11	White plastic sheet (in No.1)	-	Pb Cd Hg Cr(VI)▼ PBBs PBDEs	BL BL BL BL BL BL	--- --- --- --- --- ---	Comply Comply Comply Comply Comply Comply	05 Jul 2016
12	Translucent plastic part (in No.1)	-	Pb Cd Hg Cr(VI)▼ PBBs PBDEs	BL BL BL BL BL BL	--- --- --- --- --- ---	Comply Comply Comply Comply Comply Comply	05 Jul 2016



Part No.	Part Description	BOM No.	Restricted Substances	Results of EDXRF (1)	Result of Wet Chemical Testing(2) (mg/kg)	Conclusion on EU RoHS	Sample Submitted / Resubmitted Date
13	Silvery metal sheet (in No.1)	-	Pb Cd Hg Cr(VI)▼ PBBs PBDEs	BL BL BL BL --- ---	--- --- --- --- --- ---	Comply Comply Comply Comply --- ---	05 Jul 2016
14	Silvery metal shaft (connected w/ No.1)	-	Pb Cd Hg Cr(VI)▼ PBBs PBDEs	IN BL BL BL --- ---	1745▲ --- --- --- --- ---	Comply Comply Comply Comply --- ---	05 Jul 2016
15	White plastic knob (connected w/ No.14)	-	Pb Cd Hg Cr(VI)▼ PBBs PBDEs	BL BL BL BL BL BL	--- --- --- --- --- ---	Comply Comply Comply Comply Comply Comply	05 Jul 2016
16	Silvery metal part (in No.1)	-	Pb Cd Hg Cr(VI)▼ PBBs PBDEs	BL BL BL IN --- ---	--- --- --- ND --- ---	Comply Comply Comply Comply --- ---	05 Jul 2016



Part No.	Part Description	BOM No.	Restricted Substances	Results of EDXRF (1)	Result of Wet Chemical Testing(2) (mg/kg)	Conclusion on EU RoHS	Sample Submitted / Resubmitted Date
17	Copper-colored metal wire w/ transparent surface (on No.16)	-	Pb Cd Hg Cr(VI)▼ PBBs PBDEs	BL BL BL BL BL BL	--- --- --- --- --- ---	Comply Comply Comply Comply Comply Comply	05 Jul 2016
18	Yellow plastic sheet (on No.16)	-	Pb Cd Hg Cr(VI)▼ PBBs PBDEs	BL BL BL BL BL BL	--- --- --- --- --- ---	Comply Comply Comply Comply Comply Comply	05 Jul 2016
19	Green "PCB" (in No.1)	-	Pb Cd Hg Cr(VI)▼ PBBs PBDEs	BL BL BL BL BL BL	--- --- --- --- --- ---	Comply Comply Comply Comply Comply Comply	05 Jul 2016
20 -C	Silvery metal wire (solder) (on No.19)	-	Pb Cd Hg Cr(VI)▼ PBBs PBDEs	BL BL BL BL --- ---	--- --- --- --- --- ---	Comply Comply Comply Comply --- ---	05 Jul 2016 18 Jul 2016



Remark :

- (1) (a) There are the results on total Br while test items on restricted substances are PBBs and PBDEs. There is the result on total Cr while test item on restricted substances is Cr(VI).
- (b) Results are obtained by EDXRF for primary screening, and further chemical testing by ICP-OES (for Cd, Pb, Hg), UV-Vis (for Cr(VI)) and GC-MS (for PBBs, PBDEs) is recommended to be performed, if the concentration exceeds the below warning value according to IEC62321-3-1:2013 (unit: mg/kg).

Element	Polymer	Metal	Composite Materials
Cd	$BL \leq (70-3\sigma) < X < (130+3\sigma) \leq OL$	$BL \leq (70-3\sigma) < X < (130+3\sigma) \leq OL$	$LOD < X < (150+3\sigma) \leq OL$
Pb	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$
Hg	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$
Br	$BL \leq (300-3\sigma) < X$	--	$BL \leq (250-3\sigma) < X$
Cr	$BL \leq (700-3\sigma) < X$	$BL \leq (700-3\sigma) < X$	$BL \leq (500-3\sigma) < X$

(c) BL = Below Limit, OL = Over Limit, IN = Inconclusive, LOD = Limit of Detection, -- = Not regulated.

(d) The XRF screening test for RoHS elements - The reading may be different to the actual content in the sample be of non-uniformity composition.

- (2) (a) mg/kg = 0.0001%, MDL = Method detection Limit, ND = Not Detected (<MDL), --- = Not conducted, - = Without BOM.

(b) Unit and MDL in wet chemical test

Test Item	Pb	Cd	Hg
Unit	mg/kg	mg/kg	mg/kg
MDL	10	10	10

The MDL for single compound of PBBs and PBDEs is 100 mg/kg,  
 MDL of Cr(VI) for polymer and composite sample is 10 mg/kg,  
 MDL of Cr(VI) for metal sample is 0.10 µg/cm<sup>2</sup>.





(c) ▼ =Metal sample

- a. The sample is positive for CrVI if the CrVI concentration is greater than 0.13 µg/cm<sup>2</sup>.  
The sample coating is considered to contain CrVI
- b. The sample is negative for CrVI if CrVI is ND (concentration less than 0.10 µg/cm<sup>2</sup>).  
The coating is considered a non-CrVI based coating
- c. The result between 0.10 µg/cm<sup>2</sup> and 0.13 µg/cm<sup>2</sup> is considered to be inconclusive  
- unavoidable coating variations may influence the determination

Information on storage conditions and production date of the tested sample is unavailable and thus Cr(VI) results represent status of the sample at the time of testing.

IEC 62321 series is equivalent to EN 62321 series

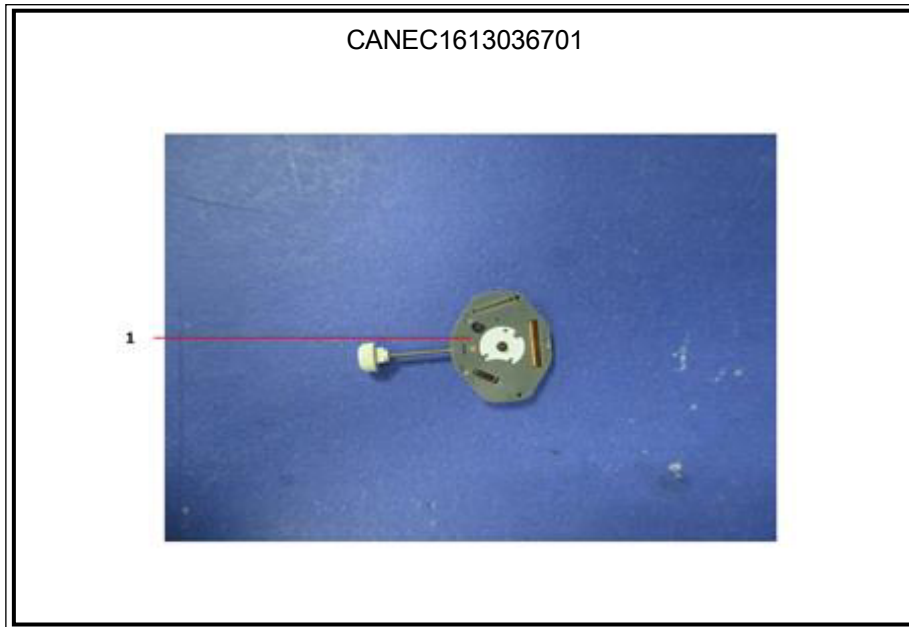
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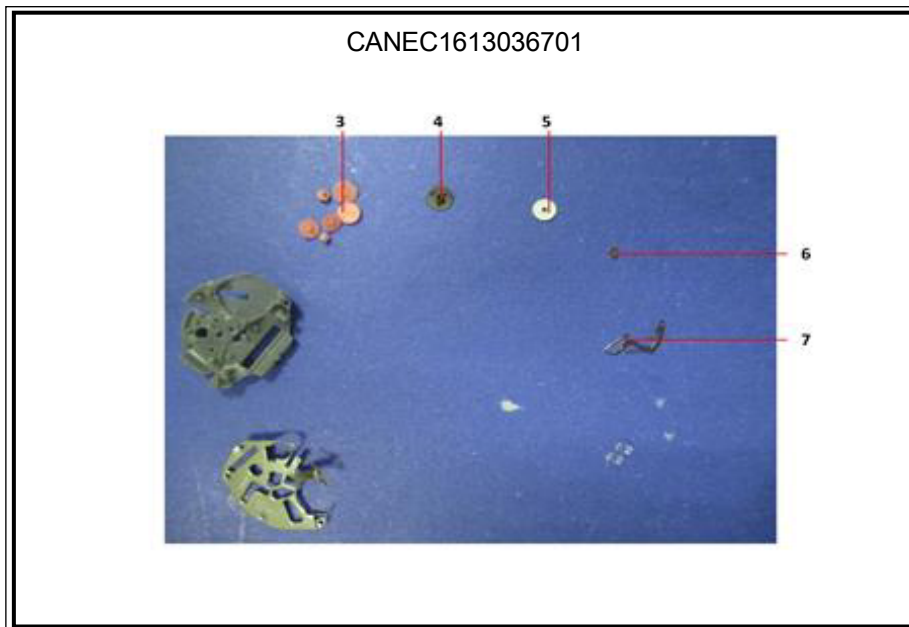


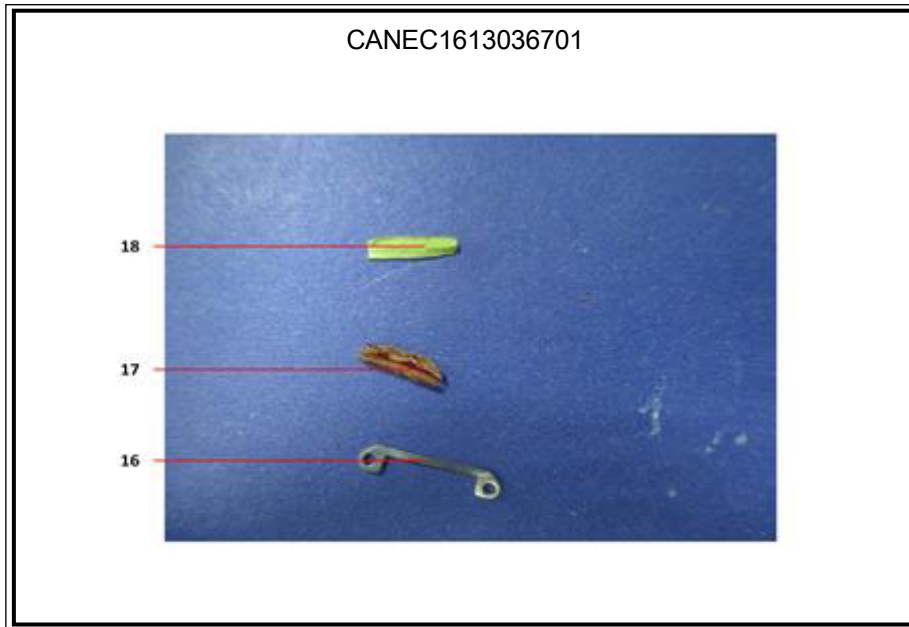
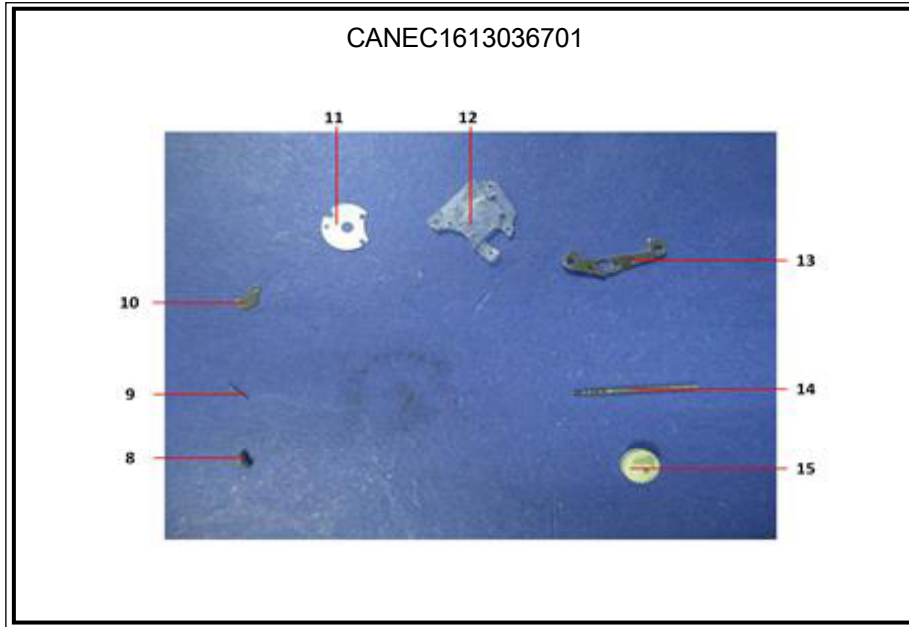
- (d)▲ = According to the declaration from the client,  
Lead (Pb) in No.8 is exempted by EU RoHS directive 2011/65/EU based on [ANNEX III 6(c)]: Copper alloy containing up to 4 % lead by weight.  
Lead (Pb) in No.9, No.14 are exempted by EU RoHS directive 2011/65/EU based on [ANNEX III 6(a)]:  
Lead as an alloying element in steel for machining purposes and in galvanised steel containing up to 0.35 % lead by weight.



Sample photo:

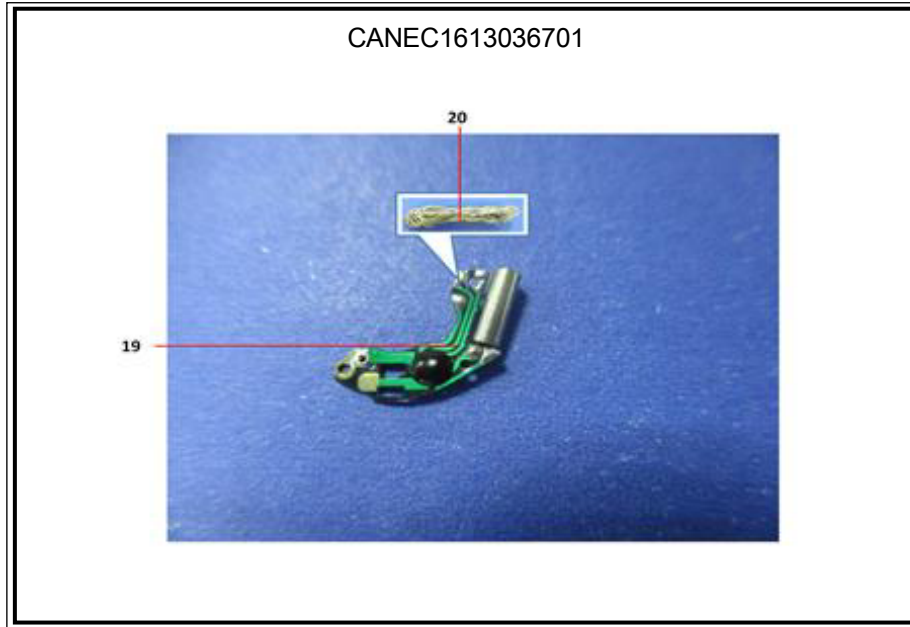






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