FCC Test Setup Photographs for
47CFR15, Subpart B for Unintentional Radiators, per Section 101 Equipment authorization of unintentional radiators,
and
47CFR15, Subpart C per Section 209 General Limits for Operation of Intentional Radiators

On

Volvo MMS Sensor

[MMS Sensor Front: FCC ID: LQN2960, Model No: 902960]
[MMS Sensor Rear: FCC ID: LQN2961, Model No: 902961]
[MMS Sensor Front Warranty: FCC ID: LQN2960, Model No: 902962]

Part No(s):

MMS Sensor Front Volvo Part No: 30797734
MMS Sensor Rear Volvo Part No: 30797735
MMS Sensor Front Warranty Volvo Part No: 30797800

Report No.

20070402-02-Fc15

Judgement

Complies as Tested

Provided for evaluation by

Connaught Electronics, LTD

IDA Industrial Estate
Dunmore Road, Tuam
Co. Galway, Ireland

Tests and Report by

ITC Engineering Services, Inc.

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Sunol, California 94586-0543
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ISO 17025 Accredited Compliance Laboratory

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PART 1 General

Test Information

Product: **Model Number(s):**	Volvo MMS Sensor 902960, 902961 & 902962	
Manufacturer's Name **Manufacturer's Address** **Contact**	Connaught Electronics, LTD IDA Industrial Estate Dunmore Road, Tuam Co. Galway, Ireland Tel: + 011 353 (93) 25128 Mr. Patrick Denny	 Fax : +011 353 (93) 25133 Email dennypatrick@cei.ie
Test Laboratory	ITC Engineering Services, Inc. 9959 Calaveras Road, PO Box 543 Sunol, CA 94586-0543 Email: itcemc@itcemc.com Web Site: http://www.itcemc.com	 Tel: +1(925) 862-2944 Fax: +1(925) 862-9013
Test Number **Report Number**	20070402-02 20070402-02-Fc15	
Test Date(s) & Issue Date	April 9 – April 13, 2007	June 4, 2007
Test Engineer(s)	Femi Ojo	
Documentation	Femi Ojo	
Test Results	☑ Complies as Tested	❑ Fail
Total Number of Pages	8	

The electromagnetic interference and RF tests, which this report describes, were performed by an independent engineering consultancy firm, ITC Engineering Services, Inc. (ITC), in accordance with the requirements specified in the FCC rules, 47CFR Part 15, Subparts B and C. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical characteristics. Any modifications specified in this report for compliance must be implemented in all production units for compliance to be maintained.

Tests Performed:

Emissions Requirements:

- OPEN FIELD RADIATED EMISSIONS in accordance with the FCC PART 15 Sub-Part B.

RF Requirements:

- FIELD STRENGTH OF FUNDAMENTAL in accordance with the FCC 47 CFR 15.209.
- HARMONIC EMISSIONS in accordance with the FCC 47 CFR 15.209.
- SPURIOUS EMISSIONS in accordance with the FCC 47 CFR 15.209.

Report generated by	Report reviewed by
	
Femi Ojo,	**Michael Gbadebo, P.E, Chief Engineer.**
Compliance Engineer	**(California License # 11303)**

Declaration/Disclaimer

ITC Engineering Services, Inc. (ITC) reports apply only to the specific samples tested under stated test conditions. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. ITC Engineering Services, Inc. shall have no liability for any deductions, inferences or generalizations drawn by the client or others from ITC Engineering Services, Inc. issued reports.

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ITC Engineering Services, Inc. (ITC) is:
Accepted by the Federal Communications Commission (FCC) for FCC Methods, CISPR Methods and AUSTEL Technical Standards (Ref: NVLAP Lab Code 200172-0)

Approved by the Industry Canada for Telecom Testing

Certified by Rockford Engineering Services GmbH for EMC Testing according to the European EMC Directive 89/336/EEC per EN45001

Certified by Reg. TP for EMC Testing according to the European EMC Directive 89/336/EEC per EN45001 for RES GmbH (DAR-Registration number: TTI-P-G 159/98-00)

Certified by the Voluntary Control Council for Interference by Information Technology Equipment (VCCI) for EMC testing, in accordance with the Regulations for Voluntary Control Measures, Article 8, Registration Numbers - Site 1: C-1582 and R-1497.

PART 1 General (Cont)

Test Methodology

The electromagnetic interference and RF tests, which this report describes, were performed by an independent engineering consultancy firm, ITC Engineering Services, Inc. (ITC), in accordance with the FCC test procedure ANSI C63.4-2003

Test Facility

The open area test site, the conducted measurement facility, the semi anechoic chamber and the test equipment used to collect the emissions and RF data is located in Sunol, California, and is fully described in site attenuation report. The approved site attenuation description is on file at the Federal Communications Commission.

Table 1 Radio Device Measurement Information

Product Type **Model Number(s)**	Volvo MMS Sensor 902960, 902961 & 902962	
Applicant / Manufacturer Address	Connaught Electronics, Ltd. IDA Industrial Estate, Dunmore Road, Tuam, Co. Galway, Ireland	
Contact	Mr. Patrick Denny Tel: +011 353 93 25128	dennypatrick@cel.ie Fax: +011 353 93 25133
Total Number of Pages including Appendices	30 Pages	
Test Report File No.	20070402-02-Fc15	

Table 2 Measurement Uncertainty

150kHz to 30MHz:		
Combined standard uncertainty uc(y)	± 1.68 dB	Normal
Expanded uncertainty U	± 3.36 dB	Normal (k = 2)
30MHz to 1GHz:		
Combined standard uncertainty uc(y)	± 3.24 dB	Normal
Expanded uncertainty U	± 6.48 dB	Normal (k = 2)
1GHz to 18GHz:		
Combined standard uncertainty uc(y)	± 2.48 dB	Normal
Expanded uncertainty U	± 4.96 dB	Normal (k = 2)
Above 18GHz:		
Radiated emission up to 26 GHz	± 3 dB	
Radiated emission up to 40 GHz	± 3 dB	
Radiated emission up to 75 GHz	± 3 dB	

PART 2 TEST SETUP PHOTOGRAPHS

Radiated Emissions Test Setup Photographs

Figure 1: Open Field Radiated Emissions Test Setup below 1 GHz (View 1)

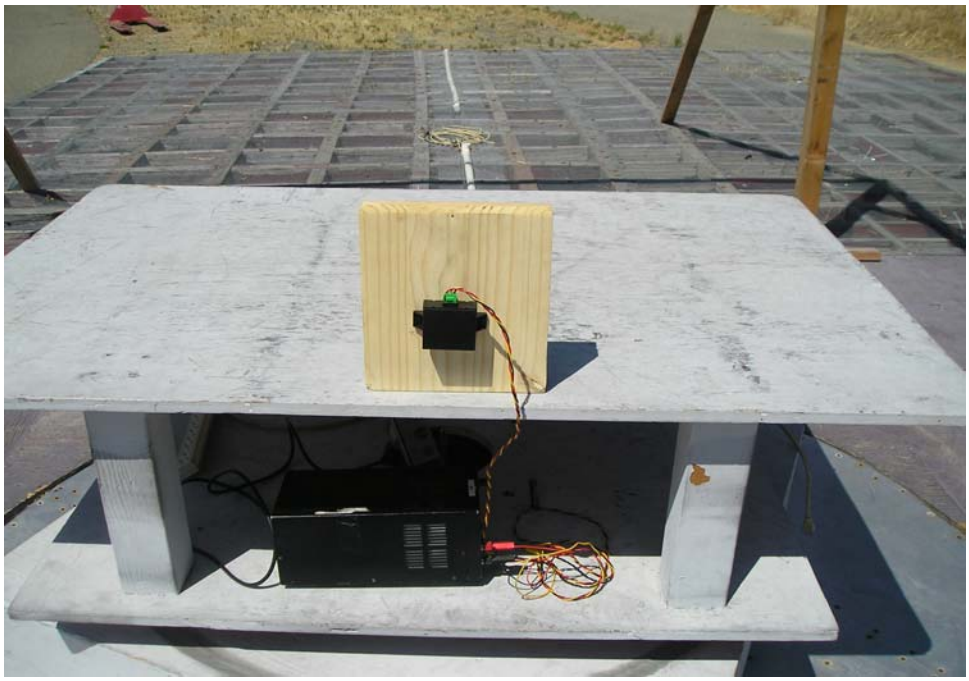

Figure 2: Open Field radiated Emissions Test Setup below 1GHz (View 2)

Figure 3: Radiated Emissions Test Setup, above 1 GHz (view 1)

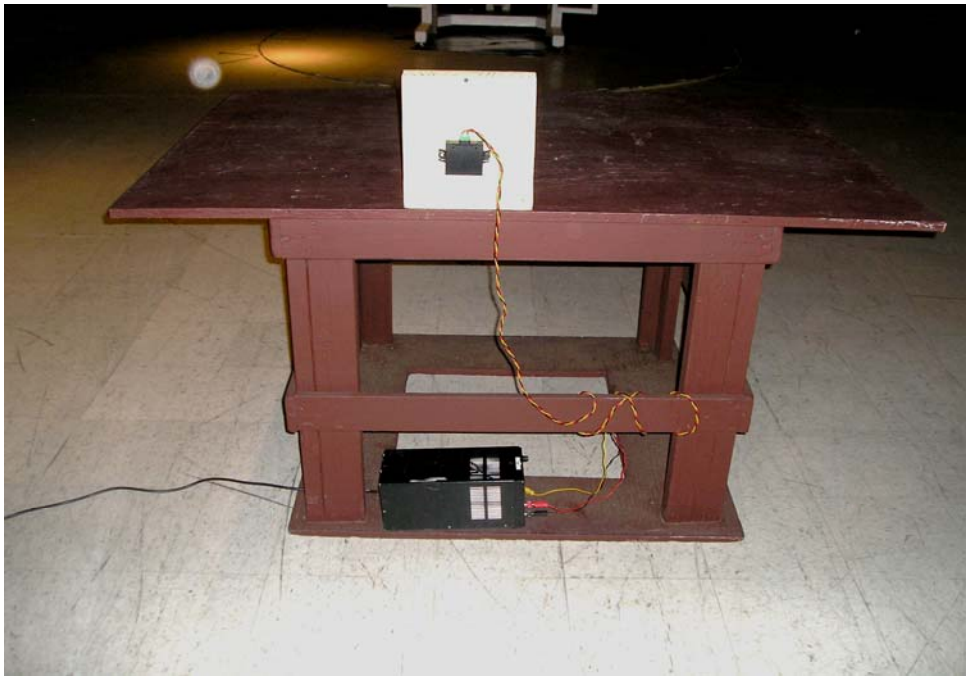

Figure 4: Radiated Emissions Test setup, above 1 GHz (view 2)

Field Strength of Fundamental and Occupied Bandwidth Photographs

Figure 5 Test Set Up Photos – Field Strength of Fundamental Measurement