THE UNITED KINGDOM VEHICLE APPROVAL AUTHORITY

COMMUNICATION CONCERNING THE APPROVAL GRANTED (1)/ ~~APPROVAL EXTENDED~~ (1)/ ~~APPROVAL REFUSED~~ (1)/ ~~APPROVAL WITHDRAWN~~ (1)/ ~~PRODUCTION DEFINITIVELY DISCONTINUED~~ (1) OF A TYPE OF ~~ELECTRICAL/~~ ELECTRONIC SUB-ASSEMBLY (1) WITH REGARD TO REGULATION NO. 10.04

E11 Approval No: 10R-048612

Extension No: Not applicable

1. Make (trade name of manufacturer): Canadus Power Systems

2. Type and general commercial description(s): HD-1224, Electronic de-sulfation unit for batteries

3. Means of identification of type, if marked on the ~~vehicle/~~component~~/ separate technical unit:~~ (1)

3.1. Location of that marking: Product label on housing

4. Category of vehicle: L, M, and N

5. Name and address of manufacturer:

Canadus Power Systems
9261 Ravenna Road, Suite B-12
Twinsburg, OH 44087
USA

6. In the case of components and separate technical units, location and method of affixing of the ECE approval mark: Permanent label on housing

USQ307222

10-Oct-14
UK Approval Authority

7. Address(es) of assembly plant(s):

PCB Assembly:
TT Electronics
3700 Lane Road
Perry, OH 44081
USA

Final Assembly:
Mold-Tech
A Meritec Company
1359 West Jackson Street
Painesville, OH 44077
USA

8. Additional information (where applicable): See appendix

9. Technical Service responsible for carrying out the tests: Vehicle Certification Agency

10. Date of test report: 10 October 2014

11. No. of test report: T10ASTU-8612 00

12. Any remarks: Approval to Supplement 2

See Appendix

13. Place: BRISTOL

14. Date: 10 OCTOBER 2014

15. Signature: 

A. W. STENNING
Head of Technical and Quality Support Group

16. The index to the information package lodged with the Approval Authority, which may be obtained on request, is attached.

17. Reasons for extension: Not applicable

(1) Strike out what does not apply.

Appendix

to type-approval communication form No. 10R-048612

concerning the type-approval of an electrical/electronic sub-assembly under Regulation No. 10.04

1. Additional information:

1.1. Electrical system rated voltage: 12 - 30V. pos or neg ground

1.2. This ESA can be used on any vehicle type with the following restrictions: None

1.2.1. Installation conditions, if any: Electrically connected directly to battery terminals. Housing mounted using screws or adhesives

1.3. This ESA can be used only on the following vehicle types: Not applicable

1.3.1. Installation conditions, if any: Not applicable

1.4. The specific test method(s) used and the frequency ranges covered to determine immunity were: (Please specify precise method used from Annex 9):
Bulk Current Injection: 20 - 200 MHz
Absorber chamber: 200 – 2000 MHz

1.5. Laboratory accredited to ISO 17025 and recognized by the Approval Authority responsible for carrying out the tests: TUV, 47523 Clipper St, Plymouth, MI 48170

2. Remarks: None

(1) Strike out what does not apply.

A Canadus Technologies Company

ANNEX II B

Information document ID10-8612-00 relating to EC type-approval of an electric/electronic subassembly with respect to electromagnetic compatibility ECE regulation 10.04

Change Log:			
Extension Level	Date	Author	Reason for Extension
00	10/08/2014	Biggs	Not Applicable

1. Make (trade name of manufacturer): **Canadus Power Systems**

2. Type and general commercial description(s): *(list of variants and brief description)(full description should be placed in the Appendix 1)*: **Electronic de-sulfation unit for batteries**

3. Means of identification of type, if marked on the component/separate technical unit *(strike one out)*: **HD-1224**

3.1 Location of that marking: **Product Label**

4. Name and address of manufacturer (*organisation responsible for placing on market or setting to work):*

Canadus Power Systems
9261 Ravenna Road, Suite B-12
Twinsburg, Ohio 44087

Name and address of authorized representative, if any *(otherwise indicate not applicable)*:

N/A

5. In the case of components and separate technical units, location and method of affixing of the approval mark:

Permanent label on housing

6. Address(es) of assembly plant(s) (*main/final assembly plants, may be sub-contractors)*:

PCB Assembly:
TT Electronics
3700 Lane Road
Perry, Ohio 44081
USA

Final Assembly:
Mold-Tech
A Meritec Company
1359 West Jackson Street
Painesville, Ohio 44077
USA

7. This ESA shall be approved as a separate technical unit *(choose one)*

8. Any restrictions of use and conditions for fitting: *(typically manufacturer's instructions to be followed, ex: 12 volt negative earth vehicles only) (where necessary include installation instructions that show vehicle normal operation should not be affected)*

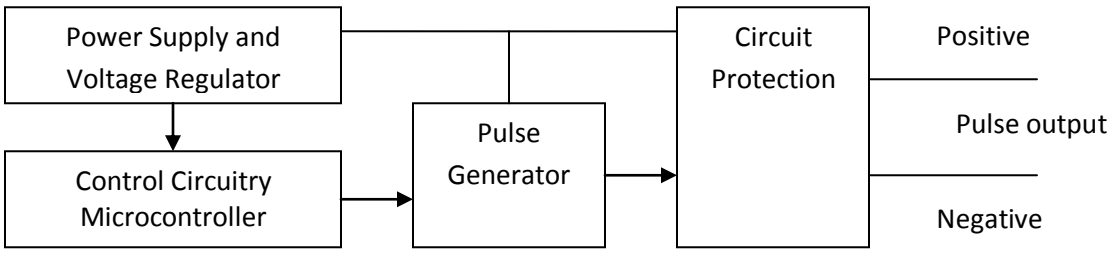
To be installed directly across the positive and negative battery terminals

9. Electrical system rated voltage: **Input Voltage range is 12VDC-30VDC, pos/neg (ground). For use with 12V and 24V vehicle electrical systems.**

Appendix 1

1. Description of the ESA chosen to represent the type:

Block Diagram of ESA:



Main Components

Microcontroller: Microchip PIC12F1501, PIC12F1571, or PIC12F1572
Power Supply: FET Source follower, 250V N-channel FET, Fairchild FDD6N25TM or equivalent
Voltage Regulator: TI or National: LM9036MX-5.0, LM9036QMX-5.0
Pulse Generator: Boost Converter: 47uH inductor (Bourns SRN6045-470M or equ.) and a 250V N-Channel Fet (Fairchild FQD16N25CTM or equ.)
Circuit Protection: 500V P-Channel FET: ST Micro STD3PK50Z or equ.

Is the device an 'Intentional Transmitter'? (Yes/No): **NO**
If yes, please indicate:
Transmission Frequency:
Signal Type:
Output power in W:

2. **Photographs/diagrams of module**

3. **Photograph/diagram of E-Mark**