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**PROFESSIONAL STANDARD
OF THE PEOPLE'S REPUBLIC OF CHINA**

中华人民共和国汽车行业标准

QC/T 893-2011

**Failure Classification and Assessment of
Electrical Machine System for Electric
Vehicle**

电动汽车用驱动电机系统故障分类及判断

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The Ministry of Industry and Information Technology has approved 1081 professional standards such as "Water Cooled Tubular Heat Exchangers" (standard number, name, main content and implementation date are detailed in Attachment 1) and 19 non-ferrous and metallurgy professional standard samples (see Attachment 2), including: 258 chemical industry professional standards, 7 petrochemical professional standards, 43 metallurgy professional standards (including 11 standard samples), 148 non-ferrous professional standards (including 8 standard samples), 92 building material professional standards, 11 rare earth professional standards, 3 gold professional standards, 85 textile professional standards, 125 light industry professional standards, 49 automobile professional standards, 177 machinery professional standards and 102 communication professional standards, and announces them now.

The above chemical industry professional standards are published by Chemical Industry Press; the petrochemical professional standards are published by Sinopec Press; the metallurgy professional standards are published by Metallurgical Industry Press; the non-ferrous, gold, rare earth and textile professional standards are published by China Standards Press; the building material professional standards are published by China Building Materials Press; the light industry professional standards are published by China Light Industry Press; the machinery professional standards are published by China Machine Press; the automobile professional standards are published by China Planning Press; and the communication professional standards are published by Posts & Telecom Press.

Attachment: Number, Name and Implementation Date of 49 Automobile Professional Standards

Ministry of Industry and Information Technology of the People's Republic of China

December 20, 2011

Attachment:

Number, Name and Implementation Date of 49 Automobile Professional Standards

SN	Standard number	Standard name	Replaced standard number	Implementation date
1	QC/T 893-2011	Failure Classification and Assessment of Electrical Machine System for Electric Vehicle		2012-07-01
2	QC/T 894-2011	On Board Measurement Methods for Emissions from Heavy-Duty Hybrid Electric Vehicles		2012-07-01
3	QC/T 895-2011	On-board Conductive Charger for Electric Vehicles		2012-07-01
4	QC/T 896-2011	Interface of Electrical Machine System for Electric Vehicles		2012-07-01

5	QC/T 897-2011	Technical Specification of Battery Management System for Electric Vehicles		2012-07-01
6	QC/T 853-2011	Hexagon Flange Removing Scraps Bolts		2012-07-01
7	QC/T 854-2011	Stud with Double End		2012-07-01
8	QC/T 855-2011	Hexalobular Socket Pan Head Screws		2012-07-01
9	QC/T 856-2011	Hexagon Lobular Socket Countersunk Head Screws		2012-07-01
10	QC/T 857-2011	Weld Studs		2012-07-01
11	QC/T 858-2011	Hexagon Thick Nuts-Fine Thread		2012-07-01
12	QC/T 859-2011	A Type Square Nuts Box		2012-07-01
13	QC/T 860-2011	Hexagon Weld Nuts		2012-07-01
14	QC/T 861-2011	Flat Head Threaded Tubular Hexagon Blind Riveted Nuts		2012-07-01
15	QC/T 862-2011	B Type Square Nuts Box		2012-07-01
16	QC/T 863-2011	Square Weld Nuts		2012-07-01
17	QC/T 864-2011	Hexagonal Nuts with Serrated Flange		2012-07-01
18	QC/T 865-2011	Tapping Rivets		2012-07-01
19	QC/T 866-2011	Hexalobular Socket Raised Countersunk Head Screws		2012-07-01
20	QC/T 867-2011	Round Weld Nuts		2012-07-01
21	QC/T 868-2011	Plastic Hexagon Nuts		2012-07-01
22	QC/T 869-2011	Short-cycle Drawn Arc Welding Studs		2012-07-01
23	QC/T 870-2011	Double End Studs $b_m=1.25d$		2012-07-01
24	QC/T 871-2011	Double End Studs $b_m=2d$		2012-07-01
25	QC/T 872-2011	Hexagon Weld Nuts with Flange		2012-07-01
26	QC/T 873-2011	Hexalobular Socket Raised Countersunk (Oval) Head Self Drilling Screws with Tapping Screw Thread		2012-07-01
27	QC/T 874-2011	Hexalobular Socket Countersunk Head Self Drilling Screws with Tapping Screw Thread		2012-07-01
28	QC/T 875-2011	Hexalobular Socket Pan Head Self Drilling Screws with Tapping Screw Thread		2012-07-01
29	QC/T 876-2011	Hexagon Collar Head Tapping Screws for Plastic		2012-07-01
30	QC/T 877-2011	Hexagon Flange Head Tapping Screws for Plastic		2012-07-01
31	QC/T 878-2011	Hexalobular Socket Pan Head Tapping Screws for Plastic		2012-07-01
32	QC/T 879-2011	Plastic Expansion Nut with Open End-Type E		2012-07-01
33	QC/T 880-2011	No Unscrew Bolt		2012-07-01
34	QC/T 881-2011	Weld Studs for Plastic		2012-07-01
35	QC/T 882-2011	Split Clamps		2012-07-01
36	QC/T 883-2011	Sealing Plugs		2012-07-01
37	QC/T 884-2011	Hexagon Socket Pipe Magnetic Plugs		2012-07-01
38	QC/T 885-2011	B Type Spring Nuts-Prevailing Torque Type		2012-07-01

39	QC/T 886-2011	Weld Studs for Arc Welding		2012-07-01
40	QC/T 887-2011	Vent Pipe Assembly		2012-07-01
41	QC/T 888-2011	All-metal Hexagon Collar Weld Nuts-Prevailing Torque Type		2012-07-01
42	QC/T 889-2011	Retainers for Shafts-Type A		2012-07-01
43	QC/T 890-2011	Plastic Expansion Nut with Open End-Type D		2012-07-01
44	QC/T 891-2011	Welding Screws for Plastic		2012-07-01
45	QC/T 892-2011	Open End Blind Rivets with Break Pull Mandrel and Protruding Head for Plastic Parts		2012-07-01
46	QC/T 608-2011	B Type Spring Nuts	QC/T 608-1999	2012-07-01
47	QC/T 712-2011	Weld Nuts for Fixing the Safety Belt Devices of Vehicle	QC/T 712-2004	2012-07-01
48	QC/T 616-2011	Plastic Expansion Nut with Open End-Type C	QC/T 616-1999	2012-07-01
49	QC/T615-2011	Plastic Expansion Nut with Open End-Type B	QC/T 615-1999	2012-07-01

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Foreword

This standard is drafted in compliance with the rules in GB/T 1.1-2009.

This standard is proposed by and under the jurisdiction of the National Technical Committee on Road Vehicles of Standardization Administration of China (SAC/TC 114).

Drafting organizations of this standard: Hunan CSR Times Electric Vehicle Co., Ltd., Beijing Institute of Technology, Shanghai Edrive Co., Ltd., China Automotive Technology & Research Center, Tianjin Qingyuan Electric Vehicle Co., Ltd., Chery Automobile Co., Ltd., Shanghai Auto Test Center, Institute of Electrical Engineering, Chinese Academy of Sciences, Harbin Institute of Technology, Beijing New Energy Automobile Co., Ltd., Shanghai E-Propulsion Auto Technology Co., Ltd., China Automotive Engineering Research Institute Co., Ltd.

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QC/T 893-2011

Failure Classification and Assessment of Electrical
Machine System for Electric Vehicle
电动汽车用驱动电机系统故障分类及判断

1 Scope

This standard specifies the failure confirmation principle, failure mode and failure classification of electrical machine system for electric vehicle.

This standard is applicable to the electrical machine system for various electric vehicles.

2 Normative References

The following documents are indispensable for the application of this standard. For dated references, only the dated edition of the normative document referred to applies. For undated references, the latest edition (including any amendments) of the normative document is applicable to this standard.

GB/T 18488 (All Parts) "General Specification of Electrical Machine System for Electric Vehicles"

GB/T 19596 "Terminology of Electric Vehicles"

3 Terms and Definitions

For the purposes of this standard, the terms and definitions established in GB/T 19596 and GB/T 18488 (all parts) as well as the terms in Appendix A apply.

4 Confirmation Principle of Failure Mode

4.1 In principle, the failure shall be described with the failure mode of the spare parts of



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