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

JT/T 1029-2016

**Technical specifications for the maintenance of hybrid electric
vehicle**

(English Translation)

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1 Scope

This Standard specifies the operational safety and technical requirements of the maintenance of hybrid electric vehicle.

This Standard is applicable to hybrid electric vehicle with total mass not less than 3500kg.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB 7258, Steel cylinders for the on-board of compressed natural gas as a fuel for vehicles

GB/T 18344, Specification for the inspection and maintenance of motor vehicle

GB/T 19596, Terminology of electric vehicles

GB/T 19751, Hybrid electric vehicles safety specification

GB/T 27876, Technical specification for the maintenance of compressed natural gas vehicle

JT/T 1009, Technical Specification for the Maintenance of Liquefied Natural Gas Vehicle

3 Terms and definitions

For the purposes of this document, the terms and definitions defined in GB/T 19596 and GB 7258 apply.

Low voltage electrical control system

Low voltage electrical controller

- 1) Check working conditions;
- 2) Check the fixing;
- 3) Clean with air gun or brush.`
- 1) The controller shall work normally;
- 2) The controller shall be connected as specified, firmly installed;
- 3) The radiator, wire plug shall be clean, dry.

Cooling fan

- 1) Check the connection of wiring;
- 2) Check the fixing;
- 3) Clean the appearance.
- 1) The wiring plugin shall be well connected;
- 2) The fan body shall be firm;
- 3) The surface of fan shall maintain clean.

High voltage electrical control system

Drive motor

- 1) Clean the appearance;
- 2) Check the wiring connection;
- 3) Check the fixing;
- 4) Check the working conditions;
- 5) Check the cooling system.
- 1) The motor surface shall be clean, dry;
- 2) The wiring plugin shall be well connected;
- 3) The motor installation brackets and shock cushion shall be intact, firm;
- 4) When the motor is working, there shall be no abnormal vibration or noise;
- 5) The motor cooling system shall work normally, no leakage, with sufficient coolant.

Generator

- 1) Clean the appearance;
- 2) Check the wiring connection;

- 3) Check the fixing;
- 4) Check the working conditions;
- 5) Check the cooling system;
- 6) Check the working conditions of belt.
 - 1) The generator surface shall be clean, dry;
 - 2) The wiring plugin shall be well connected;
 - 3) The generator installation brackets and shock cushion shall be intact, firm;
 - 4) When the generator is working, there shall be no abnormal vibration or noise;
 - 5) The generator cooling system shall work normally, no abnormal temperature change;
 - 6) The generator belt shall not be loose or aged.

High voltage electrical controller

- 1) Check working conditions;
- 2) Check the fixing which shall be good;
- 3) Clean with air gun or brush.
 - 1) The controller shall work normally;
 - 2) The controller shall be connected as specified, with firm

Insulation property Measure the insulation resistance of case.

The case insulation property shall be in accordance with GB/T 18384.

High voltage electrical control system

Drive motor

- 1) Cleaning scales;
- 2) Replenishing grease;
- 3) Check the bearing radial clearance and replace it as appropriate;
- 4) Measure insulation resistance.
 - 1) The inside of the motor cooling system shall be free of scale;
 - 2) Motor grease shall be sufficient;
 - 3) The radial clearance of the bearing shall meet the requirements of the product specification;

4) Motor insulation property shall comply with GB/T 18384.

Generator

- 1) Measure insulation resistance;
- 2) Repair insulation resistance failure.

Generator insulation property shall comply with GB/T 18384.

Drive motor controller

- 1) Measure insulation resistance;
- 2) Repair insulation failure.

Insulation property of drive motor controller shall comply with GB/T 18384.

4 Vehicle insulation property

- 1) Measure insulation resistance;
- 2) Repair insulation failure.

Vehicle insulation property shall comply with GB/T 18384.

5.3 Completion inspection for secondary maintenance of hybrid electric vehicle

5.3.1 Inspection requirements

The completion inspection of secondary maintenance for conventional vehicles and natural gas special equipment of hybrid electric vehicle shall be carried out according to GB/T 18344, Gb/T 27876 and JT/T 1009. The completion inspection of secondary maintenance for electric system-specific equipment of hybrid electric vehicle shall meet the inspection requirements of fastening, insulation, safety marks and road test. Refer to Annex A for the completion inspection record sample for secondary maintenance for electric system-specific equipment.

5.3.2 Fastening inspection

The installation of main components such as the power battery pack (super capacitor bank), drive motor, motor cooling system, electrical control system, circuit and other special devices shall comply with the relevant maintenance technical requirements of vehicle manufacturer. The clamp shall be positioned

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