

Work Progress of EVS-GTR TF1

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Background of "protection against water "on previous meetings

◆On the 2nd EVS meeting, waterproof requirement items were proposed in the Outline.

◆On the 3rd EVS meeting, the necessity of waterproof requirements was discussed.

◆On the 4th EVS meeting, a taskforce was set up to propose the requirements and test procedures of protection against water for the whole vehicle.

2. Work progress



Setting up a working group

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Items under study:

♦Risk of electric shock for vehicles being exposed to water.

 Test procedures and test standards of "protection against water".



Following work has been completed:

- ◆ FAW (China) performed a test to measure the isolation resistance change
- of HV components which have been exposed to water, and provided a report.
- ◆ Japan(JARI) provided a report of water immersion test of HV batteries.
- ◆ FAW(China) analyzed the risk of electric shock for isolation failure of

HV components in a report.

- FAW (China) proposed a draft of test procedures and requirements of "protection against water".
- Reports and analysis results have been discussed.



1. Whether "protection against water" requirements and test should be included in EVS or not.

◆ Opinion 1: Because of potential equalization part, there is no risk of electric shock for isolation failure caused by water for HV components. The requirements and test are not necessary.

◆ Opinion 2: For HV components of class II which don't have potential equalization part, there is a risk of electric shock for isolation failure caused by water.

Opinion 3: As the waterproof test is very costly and time-consuming,
it's not appropriate to be required in EVS.



2. How to make the test procedure and test standard of "protection against water" ?

Opinion 1: The isolation failure of class II components can't be measured by the test procedures written in GB/T 18384(ISO-6469-2001).
New test procedures and standards are needed.
Opinion 2: Tests must be reliable, reproducible, well justified

and cost-effective in regulations.



1. For the members of TF1, please give your opinions and justification about the first open item before April 30th. China(FAW) will collect all the opinions and present them on the 5^{th} EVS meeting.

2. If there is a risk of electric shock for isolation failure of HV components of class II, please give suggestions of a easy and reliable test method to reduce this risk.



