

Attached Sheet 2

**MEASUREMENT OF HYDROGEN CONCENTRATION OF
PURGED GAS AT TIME OF DISCHARGE**
(Related to 3-8-2 of this Technical Standard)

1. Measuring device

Devices for measuring hydrogen concentration ("measuring devices" in this Attached Sheet) shall be a contact-combustion type hydrogen detector having the capacity posted in the following table or any other detector of the equivalent capacity.

Table Capacity of contact-combustion type hydrogen detector

Item	Capacity
Range of detection	Hydrogen concentration 0 ~ 4%
Reading of hydrogen concentration	Reading should be possible at least to approximately 0.1 % of hydrogen concentration.
Indication error	±0.2% or below of hydrogen concentration
Measurement interval	100 millisecond (msec) or less

2. Measurement site

The measurement shall be conducted where it is little affected by wind.

3. Measurement method

3-1 Preparation for measurement

3-1-1 The fuel cell system of the test vehicle shall be warmed up thoroughly.

3-1-2 The measuring device shall be warmed up thoroughly before use.

3-1-3 Place the measuring section of the measuring device on the center line of the purged gas flow at the closest possible position within 100 mm from the purged gas discharge outlet.

3-1-4 If the fuel cell system stops automatically during the measurement, measures shall be taken so that the fuel cell system will not stop.

3-2 Measurement

Perform purging, following the procedure of 3-2-1 and 3-2-2 below. At this time, measure hydrogen concentration.

3-2-1 With the test motor vehicle in a stationary state, turn the ignition key switch to start the fuel cell system. Then, after a lapse of one minute or more, turn off the ignition key switch, and measure the hydrogen concentration during this period.

3-2-2 Continue the measurement of hydrogen concentration, until the purging is finished after the ignition key switch has been stopped.

4. Maximum hydrogen concentration

The maximum hydrogen concentration shall be the sum of the maximum value of the measured hydrogen concentration and the indication error of the measuring device.

Attached Sheet 3**TEST FOR HYDROGEN GAS LEAKAGE DETECTOR, ETC.**

(Related to 3-9-5 of this Technical Standard)

1. Test conditions

1-1 Test vehicle

The test vehicle shall be in the condition given in Paragraphs 1-1-1 and 1-1-2 below.

1-1-1 Unless necessary for the discharge of test gas, the hood, luggage compartment lid, and doors shall be closed.

1-1-2 Components that are unlikely to affect test results need not be genuine parts.

1-2 Test gas

Mixture of air and hydrogen gas with $3.9\% \pm 0.1\%$ hydrogen concentration shall be used.

1-3 Test site

The test shall be conducted where it is little affected by wind.

2. Test method

2-1 Preparation for test

2-1-1 Start the fuel cell system of the test vehicle if the vehicle is a fuel cell vehicle, and warm it up thoroughly in a stationary state. If the vehicle is not a fuel cell vehicle, warm it up and keep it idling.

2-1-2 If necessary for blowing the test gas to the hydrogen gas leakage detector without fail, the following measures of Paragraphs 2-1-2-1 through 2-1-2-3 may be taken.

2-1-2-1 Attach a test gas induction hose to the hydrogen gas leakage detector.

2-1-2-2 Take measures to make the gas stay near the hydrogen gas leakage detector.

2-1-2-3 Remove the hydrogen gas leakage detector.

2-1-3 If the fuel cell system in a fuel cell vehicle stops automatically during the test, measures shall be taken so that the fuel cell system will not stop. If the test vehicle is not a fuel cell vehicle and is constructed to stop idling automatically, measures shall be taken so as to prevent the engine from stopping.

2-1-4 In cases where the operating conditions of the device to shut off hydrogen gas supply cannot be confirmed, confirmation may be performed by monitoring the operating signal or supply power of the shut-off valve.

2-2 Test

Blow test gas to the hydrogen gas leakage detector.