Transmitted by the expert from Japan

PROPOSAL FOR AMENDMENT OF TRANS/WP.29/GRRF/2002/17/Rev.4
(Run flat tyre - Zero pressure detection devices)

A.   PROPOSAL

Paragraph 5.1.6.3., amend to read:

"5.1.6.3.   The warning signal shall operate when ~~the ignition circuit of the vehicle is energized, or within 3 minutes of the start of vehicle motion or~~ the vehicle **is operating at the speed of 40 km/h or above** ~~speed exceeds [25 km/h]~~ and it shall be verified that none of the defects referred to in paragraphs 5.1.6. and 5.1.6.2. are present before extinguishing the signal."

B.   JUSTIFICATION

Paragraph 5.1.6.3:

As proposed in Informal document 56-9 (at the 56th session of GRRF), paragraph 5.1.6.3 is not necessary. However, if paragraph 5.1.6.3 is to remain, Japan proposes above amendment.

Direct detection systems, which intermittently transmit sensor signals, are already being applied in the market and accepted even though in some circumstances it takes some time to detect conditions. There is no special needs to add extra performance to current systems.

The time to detect is not straight-forward to determine and more detailed consideration will be required to find the appropriate requirement.

According to the investigation, for typical direct type systems when the vehicle is operated at speeds in the range of about 5 km/h to 40 km/h, transmitter interval is generally about 1 hour and tire condition is detected within about 1 hour.

When the vehicle speed is in the range of 40 km/h to 100km/h, transmitter interval is about 1 minute and tire condition is detected within about 10 minutes.
When the vehicle speed is over 100km/h transmitter interval is same 1 minute, but it has not been possible to find sufficient data to determine the time to detect.

Another difficulty has been found, due to above reason, when it comes to prescribing an initial check requirement.

With indirect type systems, only insufficient data could be obtained for setting limit values.

Reference
Receiving Performance of Direct Type
   (Bench Test Results)

Case 1

voltage,received[dBµV/m]

tire rotation angle[deg]

Case 2

voltage,received[dBµV/m]

tire rotation angle[deg]

Case 3

voltage,received[dBµV/m]

tire rotation angle[deg]

Case 4

voltage,received[dBµV/m]

tire rotation angle[deg]