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AMENDMENTS TO THE SPECIFICATION OF THE SAE J826 3-D H-POINT
MACHINE

Regulations for motor vehicles often require the determination and specification of seating reference positions for occupants. This is usually achieved by the use of a 3-D H-Point machine.

ECE Regulations specify a the use of a 3-D H-Point machine in accordance with ISO 6549-1980, which bears great similarity to versions of SAE J826 published prior to June 2002. The 3-D H-Point machine ('manikin') specified in SAE J826 in 1962 (and subsequent revisions MAY87, JUN91, JUN92 and JUL95) has been used as a basis for many vehicle regulations in other regions around the world.

SAE J826 was amended in June 2002 to align with the new HPM-II manikin (formerly known as the ASPECT manikin). This manikin differs from the previous SAE J826 manikin in that it has different shaped (narrower) buttocks and an articulated spine and the leg, thigh and foot segments are optional. SAE now offer only the HPM-II manikin for sale. The old machine is obsolete and no longer available.

Due to the narrower buttocks, the HPM-II tends to sink lower into the seat cushion (by approximately 10mm in the vertical direction) compared to the old manikin. The HPM-II may also result in a different fore-aft H-Point location compared to the old manikin, but this is dependent on the prominence of the lumbar support.

This situation causes some difficulties for type approval of motor vehicles. If the use of the old manikin is required, the inability to purchase this machine effectively precludes new manufacturers and test facilities. If the use of the new machine is required, all manufacturers and test facilities would need to purchase new equipment and there may need to be a phase-in period to facilitate purchase and delivery of a large number of machines.

It has been suggested that relationships between the H-Points as measured by the old and new H-Point machines may be able to be developed. This may enable the use of either the old or new machines, at least as an interim solution.

It is Australia's understanding that the issue of changes to the specification of the 3-D H-Point machine is being discussed by SAE, ISO and the US Government.

Australia would like to place this item on the agenda for discussion at GRSP so that a clear regulatory direction to accommodate changes to the H-Point machine may be taken globally.