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Document Information

Location: Electrical - Instrument Cluster

Topic: IC speed differs from GPS speed

Condition: Whilst Driving

Diagnostic Trouble Codes: N/A

Measure

In the event of a customer may be concerned that either the GPS vehicle speed differs from the speed displayed in the Instrument Cluster or the Odometer value increase for a set trip differs from other vehicles, this is due to:

- UN ECE Regulation 39 dictates that the instrument cluster must never read slower than actual:

"A speedo must never show less than the actual speed, and must never show more than 110% of actual speed + 6.25mph. So if your true speed is 40mph, your speedo could legally be reading up to 50.25mph but never less than 40mph. Or to put it another way, if your speedo is reading 50mph, you won't be doing more than 50mph but it's possible you might actually only be travelling at 40mph."

Source: <http://www.thecarexpert.co.uk/how-accurate-is-a-car-speedometer/>

- In North America [SAE J1226](#) is followed which whilst different, also allows for a tolerance between actual and displayed speed reading.
- Different vehicle manufactures will work to different tolerances therefore it is possible different mileage will be accrued on the same trip due to the indicated speed difference when traveling. e.g the faster speed indicated the higher the mileage increase.
- Indicated speed and GPS speed will differ due to the vehicle using speed sensors which is then calculating the speed complying to the regulations above, and GPS using positional data to calculate the speed.

Parts Information

N/A

Attachments

N/A

KA Update Information

21/04/2021 KA Review

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