

Japan's Comment for ANNEX2
of Battery Durability GTR
@EVE56

30. May. 2022

“Lifetime” Temperature Measurement

Considering the additional observations below, Japan proposes:

1. to re-visit and clarify the purpose of the lifetime temperature measurement; and
2. to discuss the definition of “lifetime” based on pros and **cons*** of whether the IG-OFF time should be included in the definition or not

Additional observations for temperature measurement during parking, based on 55th EVE-IWG discussions

If the definition of lifetime includes IG-OFF time,

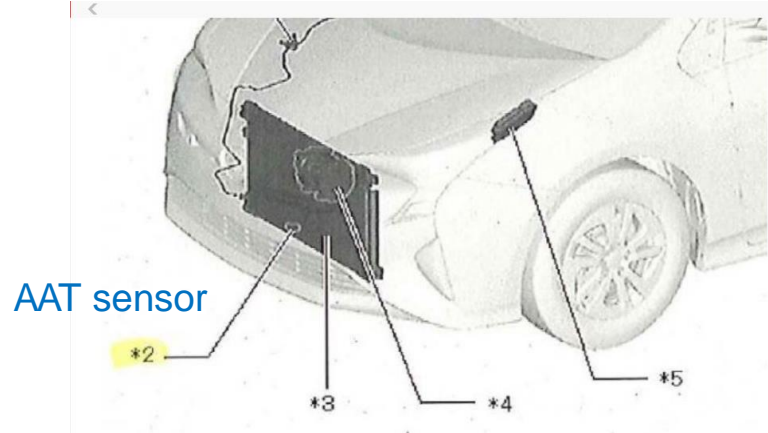
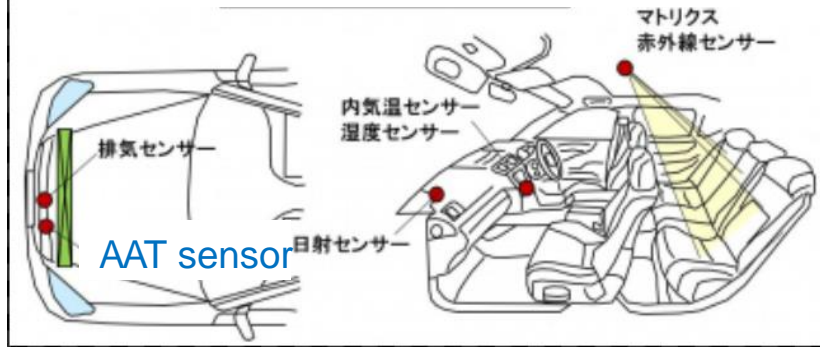
1. The measurement ECU, CAN-communication ECU, and data storage ECU must be operated at all times (or periodically wake up/sleep) while parked, which requires ***additional electrical energy** consumption (12 V battery dead, decrease in EV range, etc.).
2. There would be a high possibility of gaining ***abnormal values and error factors** in measurement during parking. This is because the position of an ambient air temperature sensor (AAT sensor) is often located around the radiator in front of the vehicle in order to accurately measure the ambient air temperature during driving (See page 3).)

<Example of error factors in parking>

effects of direct sunlight, reflection of sunlight from the ground (road surface temperature), exhaust gas from other vehicles, snow, freezing, etc.

Reference

Sensor locations for Air Condition Control ECU



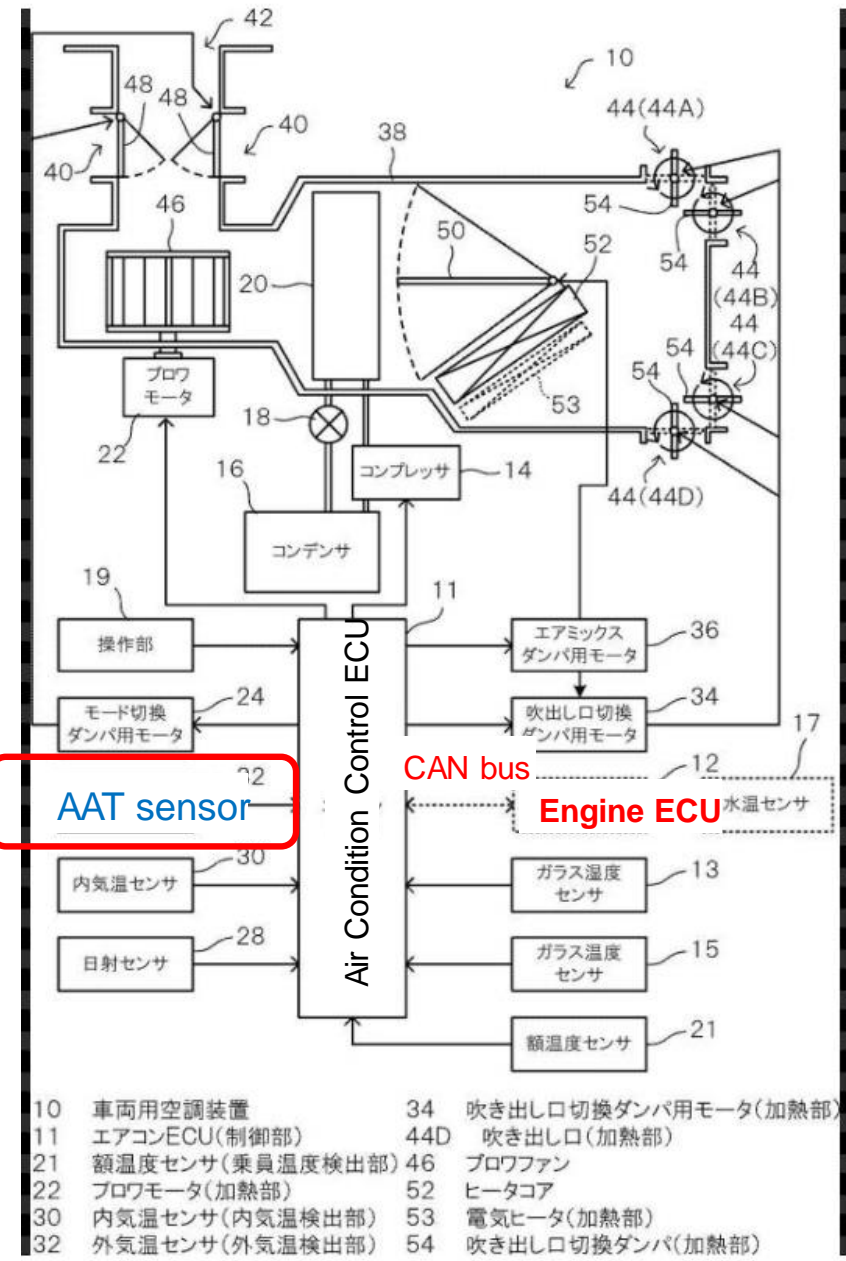
AAT sensor

現行プリウスやアクア、クラウンなどはフロントバンパーの裏側に取り付けられている。2番が外気温センサー（サーミスタASSY）、3番がクーラーコンデンサーASSY、4番がモーター



AAT sensor

ノートの外気温センサーはフロントバンパー内側あたりに取り付けられている



- | | |
|--------------------|------------------------|
| 10 車両用空調装置 | 34 吹き出し口切替ダンパ用モータ(加熱部) |
| 11 エアコンECU(制御部) | 44D 吹き出し口(加熱部) |
| 21 額温度センサ(乗員温度検出部) | 46 プロワファン |
| 22 プロワモータ(加熱部) | 52 ヒータコア |
| 30 内気温センサ(内気温検出部) | 53 電気ヒータ(加熱部) |
| 32 外気温センサ(外気温検出部) | 54 吹き出し口切替ダンパ(加熱部) |