

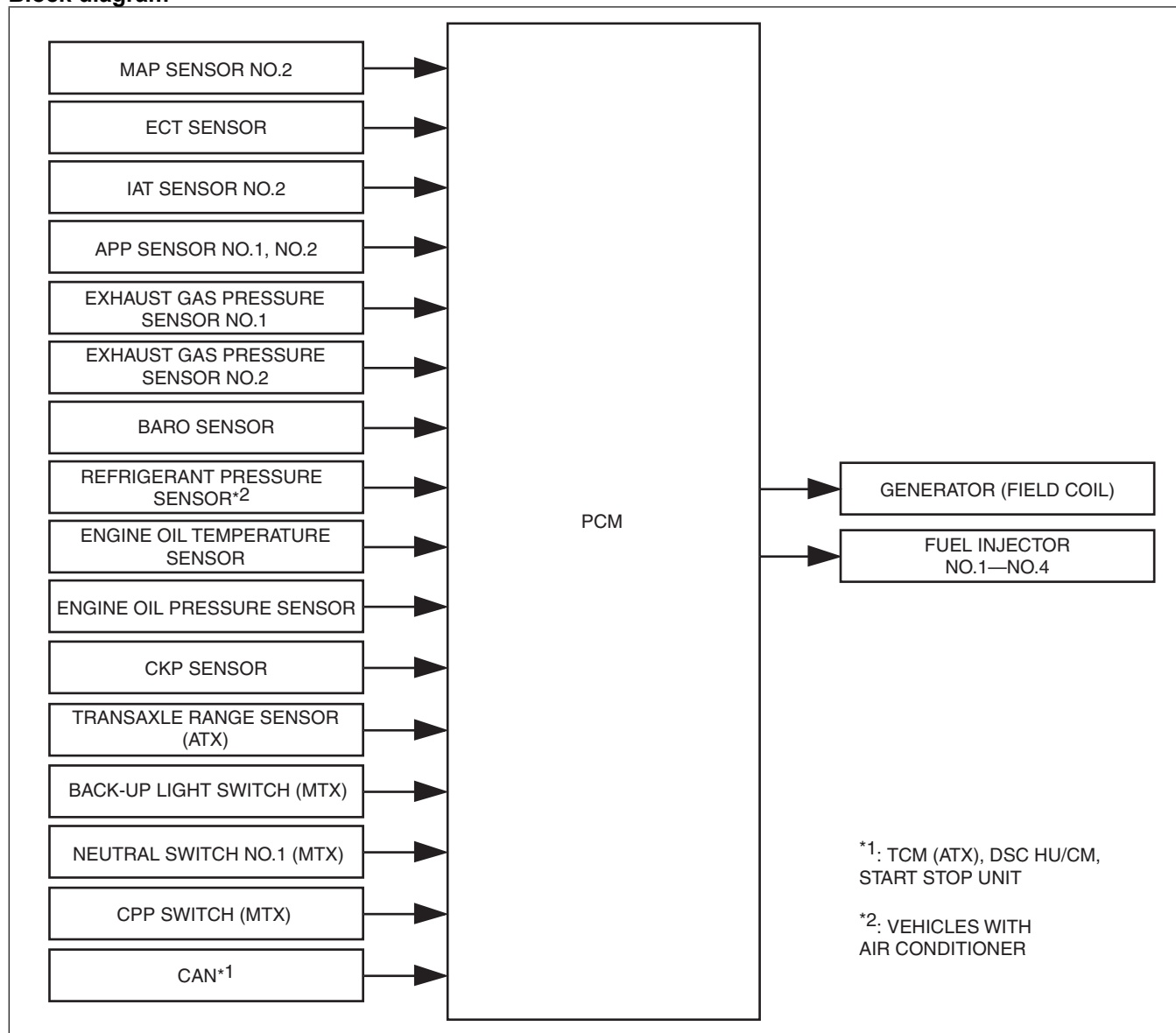
IDLE SPEED CONTROL [SKYACTIV-D 2.2]

id0140z7952300

Outline

- The PCM controls the fuel injection amount so that the target idle speed according to the engine operation conditions is obtained

Block diagram



ac5wzn00002121

Operation

- The fuel injection amount is controlled so that the actual idle speed is close to the target idle speed.
- The target idle speed is set under various conditions and consists mainly of the following control items.

Item	Control description	Target idle speed
Feedback Control	The actual idle speed conforms to the target idle speed during normal idling.	800 rpm
Speed control during fast idle increase	The target engine speed is increased for early activation of the catalytic converter after a cold engine start.	1,750 rpm
Engine Speed Control During Warm-up	Approaches the target engine speed during warm-up based on the input signal from engine coolant temperature sensor and intake air temperature sensor.	750—1,500 rpm

Item	Control description	Target idle speed
Engine speed control during fuel injection amount learning	During fuel injection amount learning, the engine speed is controlled so that it matches the target engine speed.	During auto-learning control 775 rpm During manual learning control 775—2,000 rpm
DPF regeneration control	Controls the engine speed during DPF regeneration control so that it matches the target engine speed.	Auto DPF regeneration 775—925 rpm Compulsory DPF regeneration 1,750 rpm *

* : If there is incorrect combustion of soot during diesel particulate filter regeneration, the exhaust gas temperature increases which may cause damage to the diesel particulate filter. In this case, post injection is stopped and the engine speed increases to **2,500 rpm**. Due to this, low temperature exhaust gas is sent to the oxidation catalytic converter at high speed and the diesel particulate filter is cooled to prevent damage.

- No idle increase due to electric and A/C load.