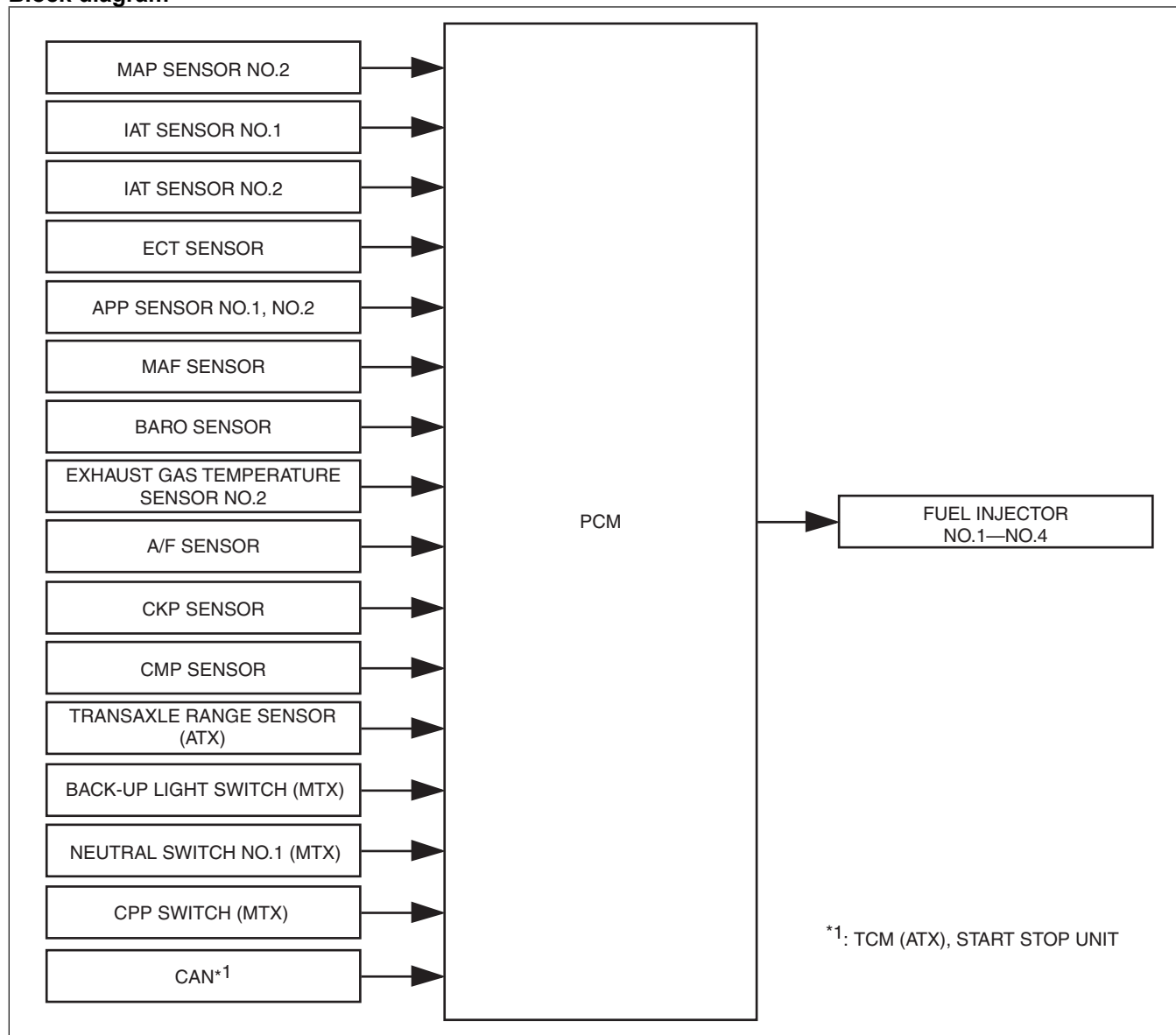## FUEL INJECTION TIMING CONTROL [SKYACTIV-D 2.2]

id0140z7988000

Outline
• The PCM determines and controls the optimum fuel injection timing according to engine operation conditions based on the signals from each input sensor.
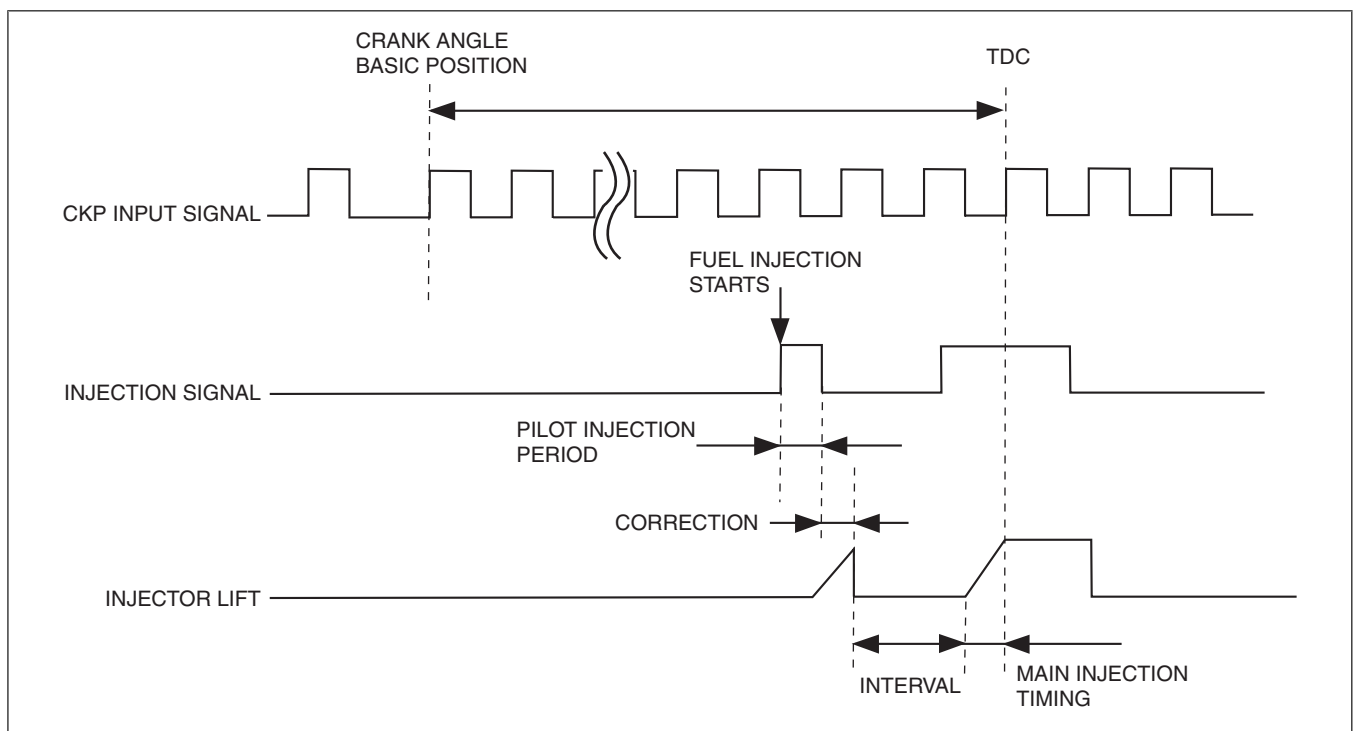
Block diagram


```
MAP SENSOR NO.2 ──▶
IAT SENSOR NO.1 ──▶
IAT SENSOR NO.2 ──▶
ECT SENSOR ──▶
APP SENSOR NO.1, NO.2 ──▶
MAF SENSOR ──▶
BARO SENSOR ──▶                    PCM ──▶  FUEL INJECTOR NO.1—NO.4
EXHAUST GAS TEMPERATURE SENSOR NO.2 ──▶
A/F SENSOR ──▶
CKP SENSOR ──▶
CMP SENSOR ──▶
TRANSAXLE RANGE SENSOR (ATX) ──▶
BACK-UP LIGHT SWITCH (MTX) ──▶
NEUTRAL SWITCH NO.1 (MTX) ──▶
CPP SWITCH (MTX) ──▶
CAN*1 ──▶
```

*1: TCM (ATX), START STOP UNIT

ac5wzn00002126

Operation
• Fuel injection start timing is determined based on the fuel injection amount and crank angle signals input from the crankshaft position sensor.

am6zzn00001039

Determination of Fuel Injection Timing
• The PCM calculates the optimum fuel injection timing based on the predetermined target fuel injection timing and input signals from each sensor.

Target Fuel Injection Timing
• Target fuel injection timing is calculated based on the engine speed and the fuel injection amount.

Injection Timing Correction
• The actual fuel injection timing is corrected based on the input signals from each sensor such as the IAT, ECT, and BARO sensors.