

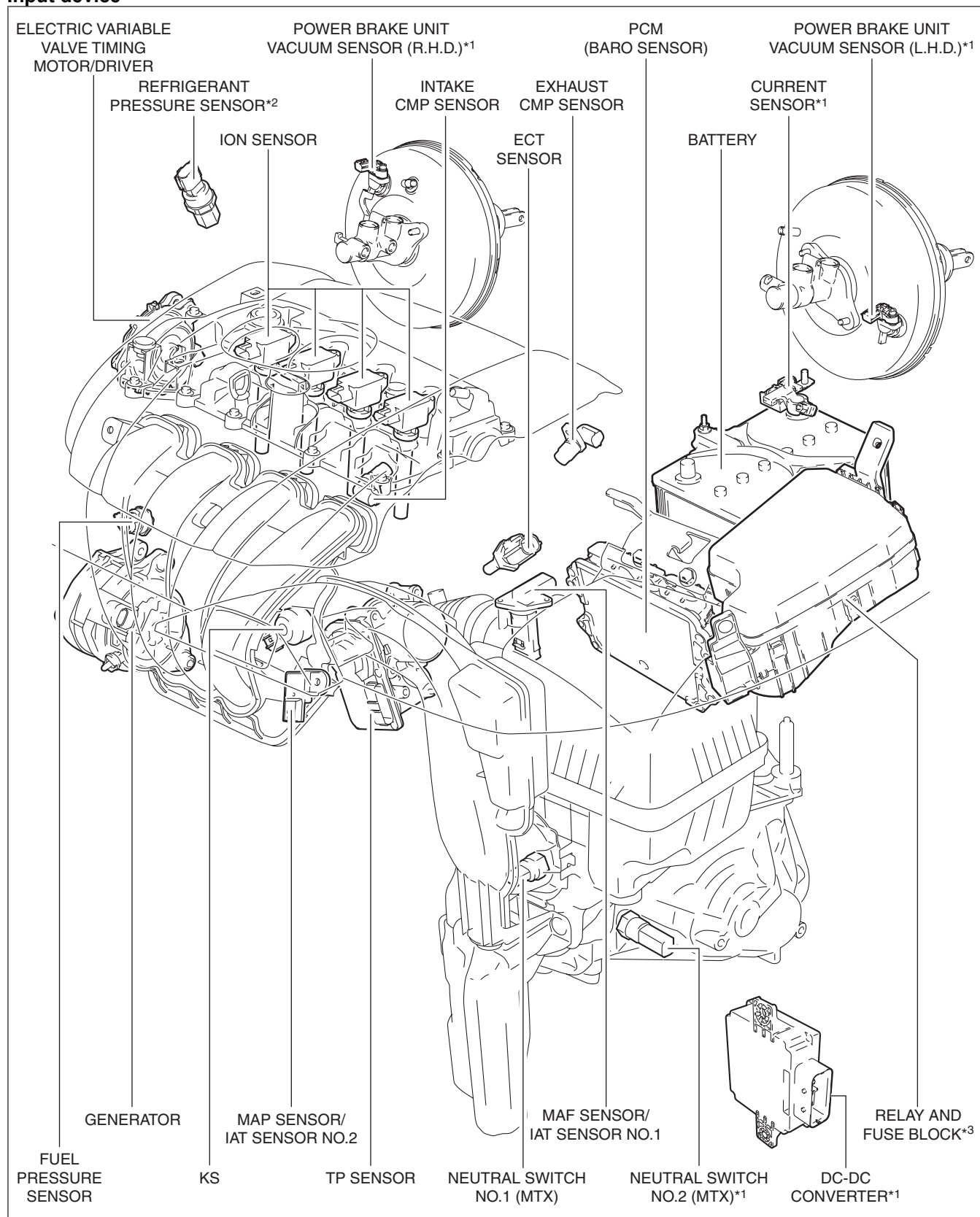
**Outline**

- L-jetronic <sup>\*1</sup> and D-jetronic <sup>\*2</sup> type detectors have been combined for intake air amount detection, improving the accuracy of the intake air amount measurement.
  - MAF sensor adopted
  - MAP sensor adopted
  - IAT sensor No.1 and No.2 adopted
- Valve timing control has been adopted on both sides of the intake and exhaust, improving fuel economy and emission performance.
  - Intake side: Electric variable valve timing control**
    - Intake CMP sensor adopted
    - Electric variable valve timing motor/driver adopted
    - Electric variable valve timing relay adopted
  - Exhaust side: Hydraulic variable valve timing control**
    - Exhaust CMP sensor adopted
- Engine oil control has been adopted reducing engine load.
  - Engine oil solenoid valve adopted
- DC-DC converter control has been adopted for improved power supply stability.
  - DC-DC converter adopted
- With the adoption of fuel pump control, fuel pump power consumption has been reduced, improving fuel economy.
  - Fuel pump control module adopted
- Generator output control adopted, fuel economy/idling stability improved.
  - Current sensor adopted
- With the adoption of the ion sensor, which detects pre-ignition, engine reliability has been improved.
- LIN communication has been adopted to the current sensor and DC-DC converter for simplified wiring harnesses.

<sup>\*1</sup> : Measures the intake air amount directly using the MAF sensor.

<sup>\*2</sup> : Measures the intake air pressure introduced into the cylinder using the MAP sensor and calculates the intake air amount indirectly.

## Structural View Input device

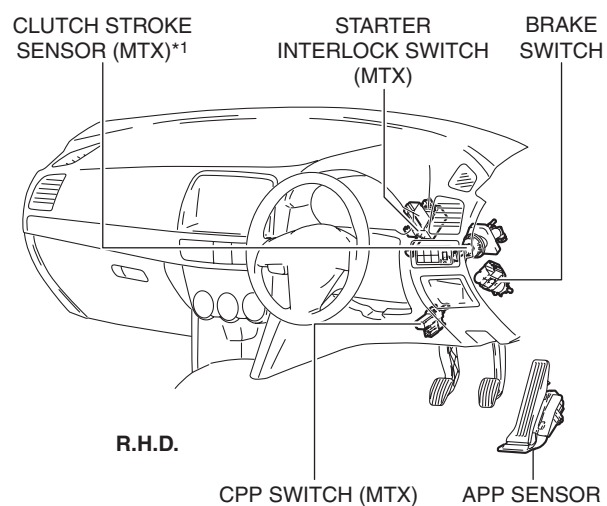
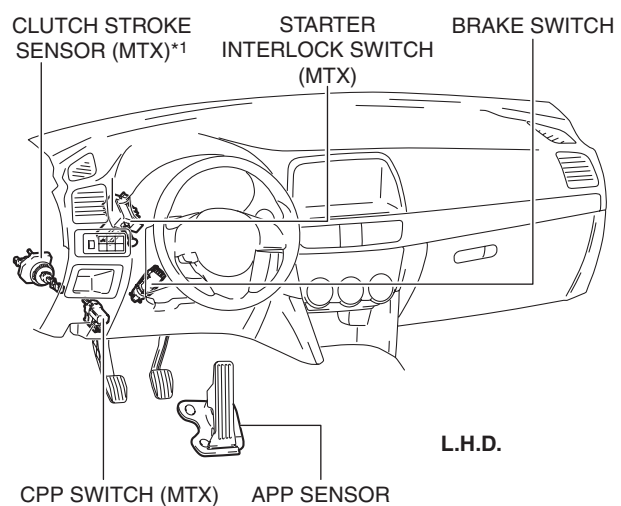


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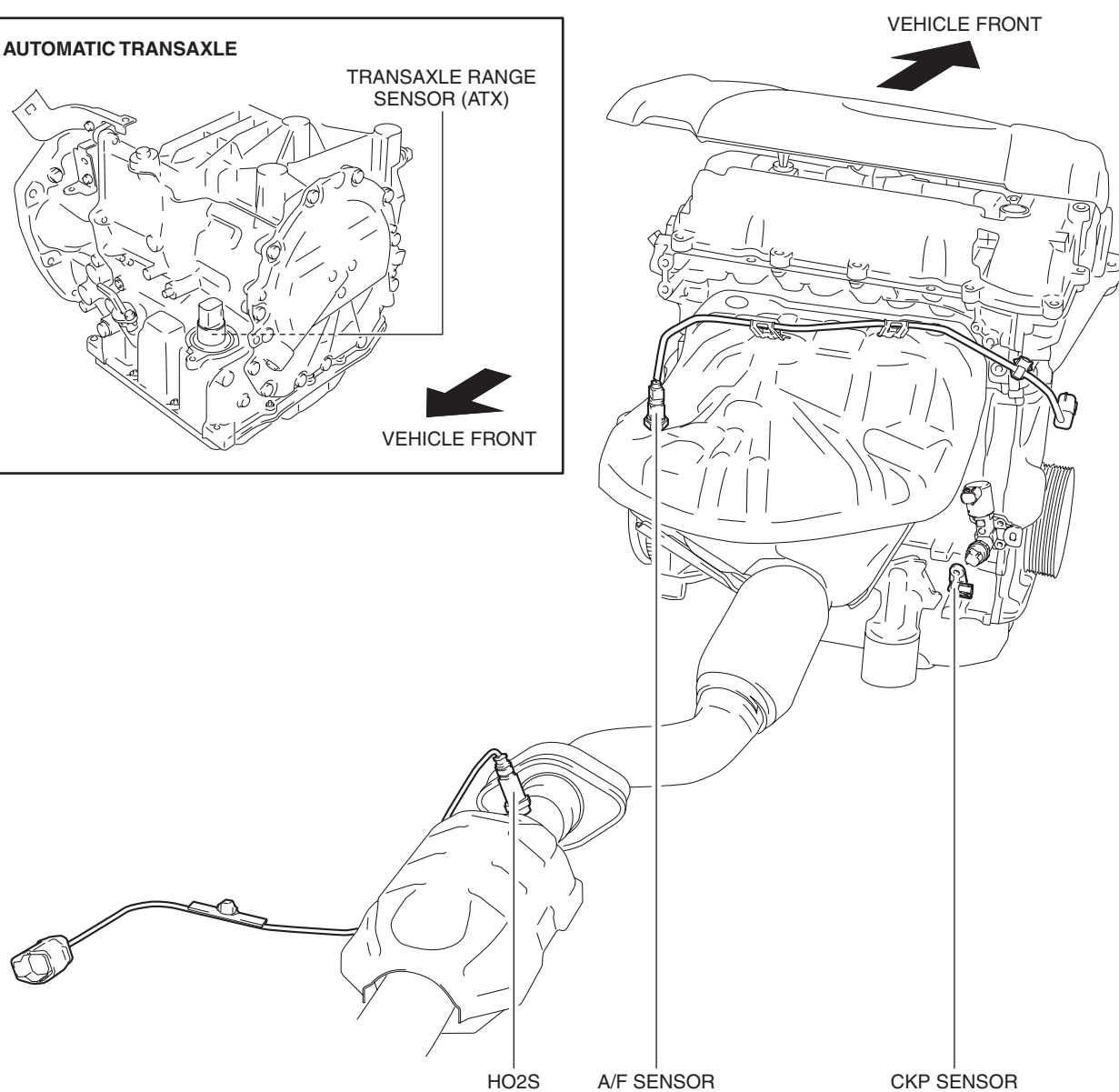
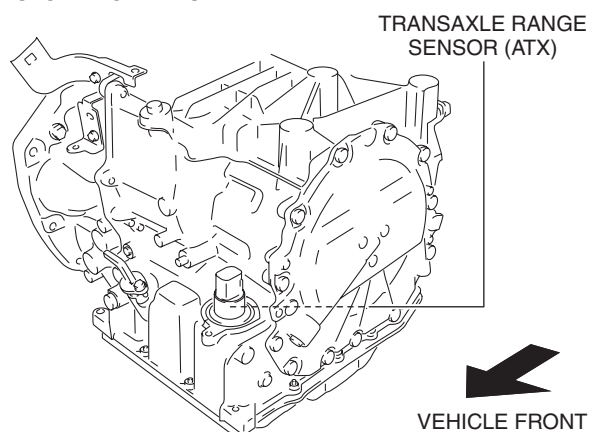
\*1 : With i-stop system

\*2 : With air conditioner

\*3 : IG1 relay

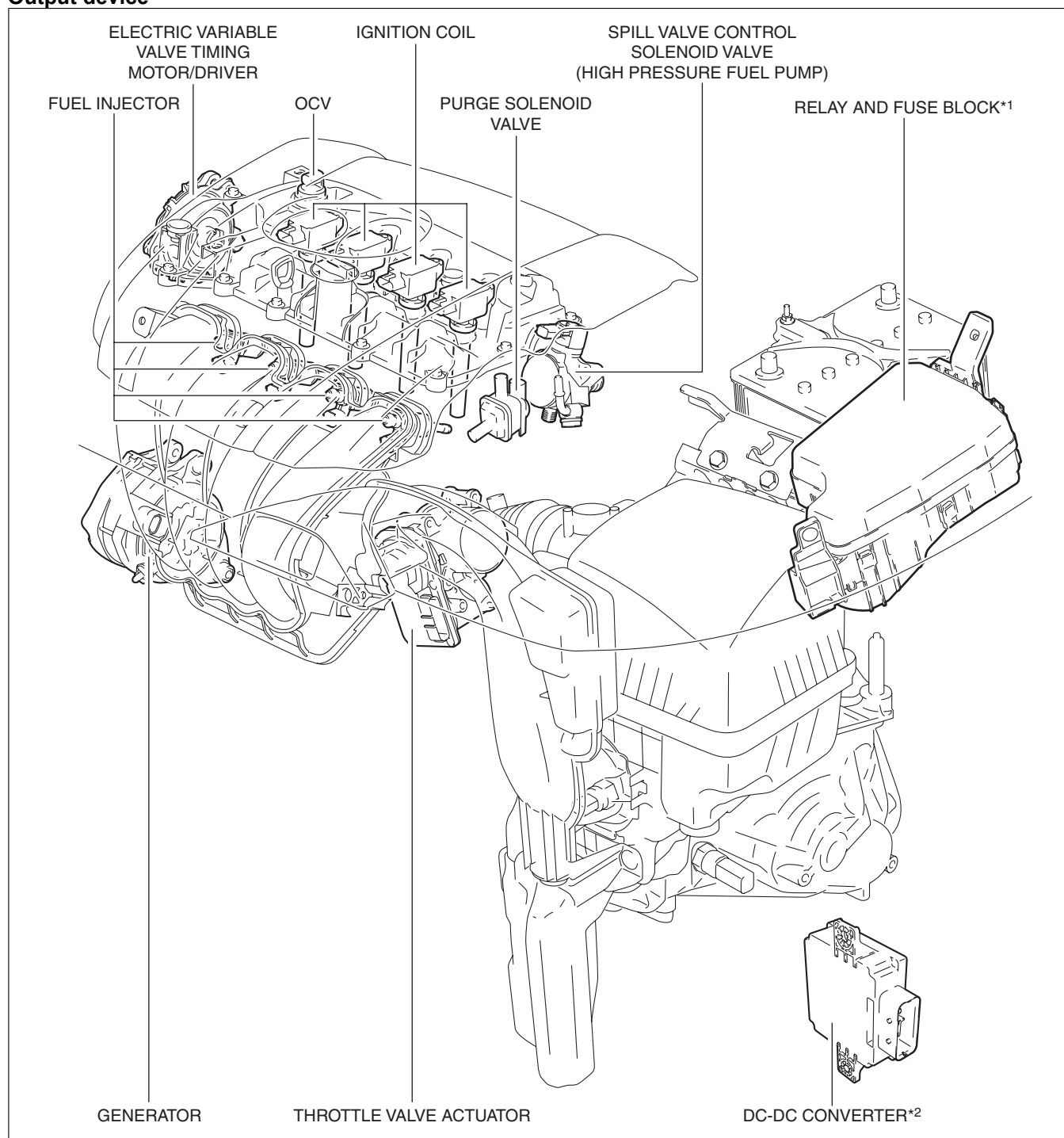


#### AUTOMATIC TRANSAXLE



\*1 : With i-stop system

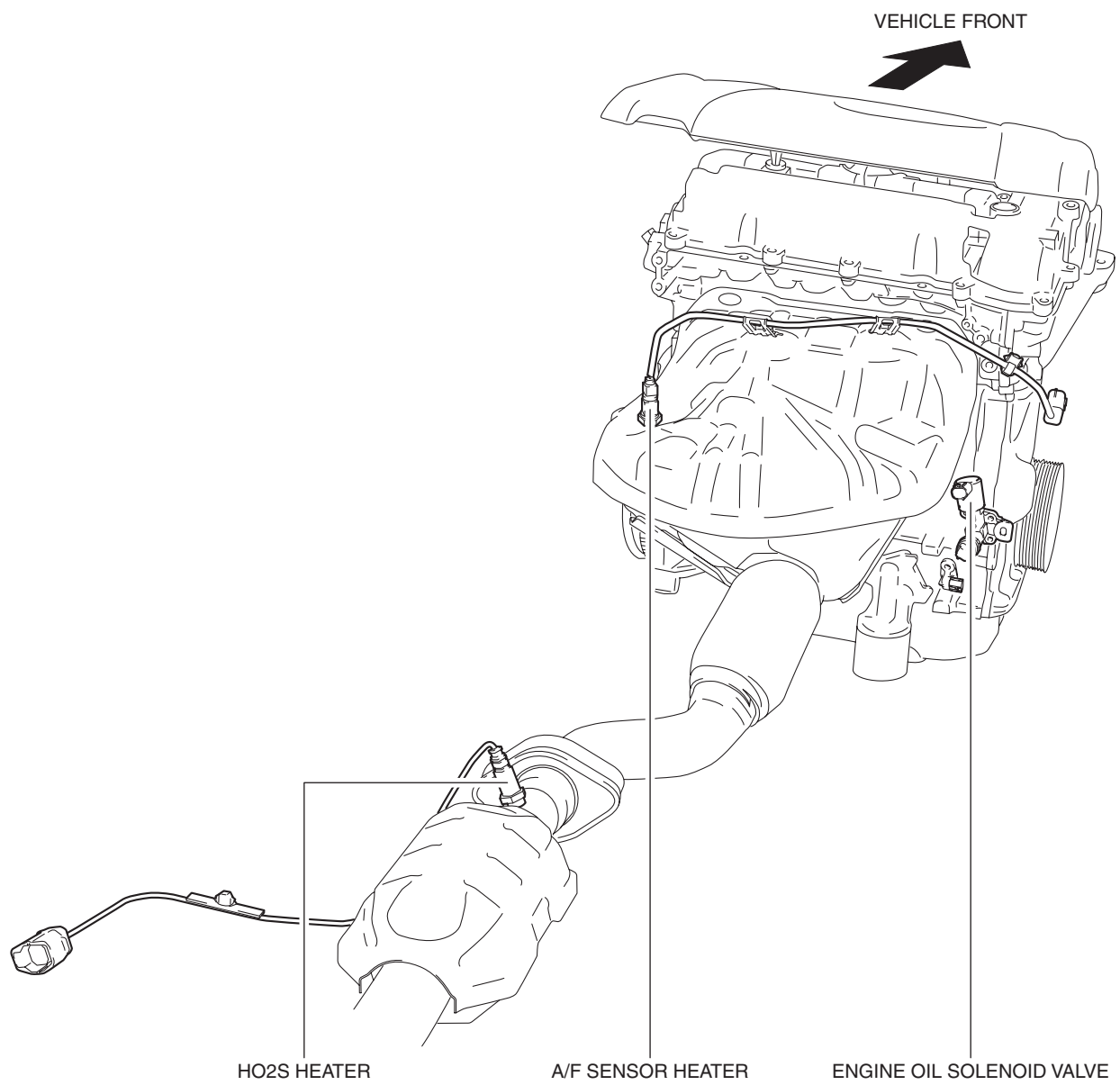
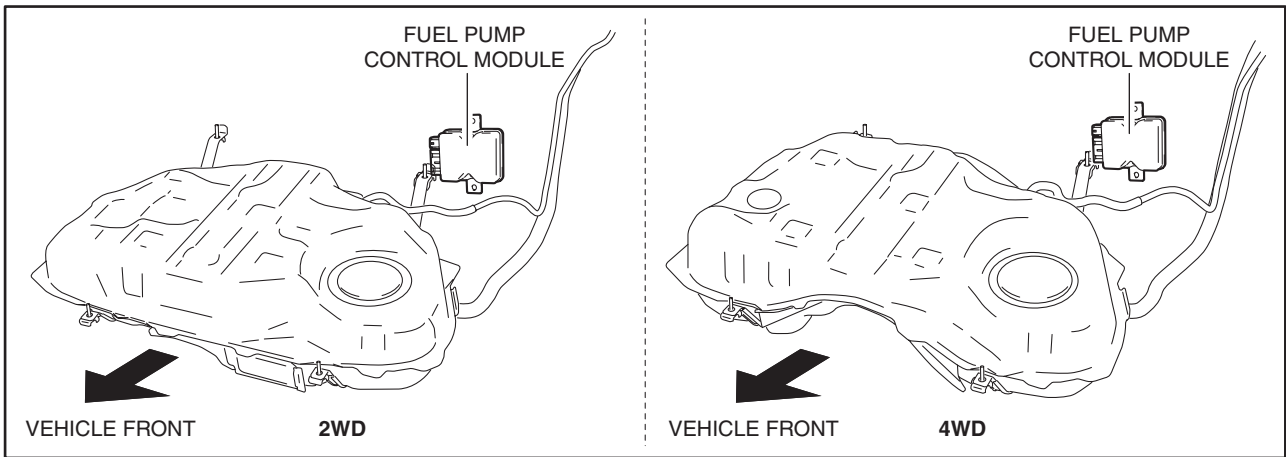
## Output device



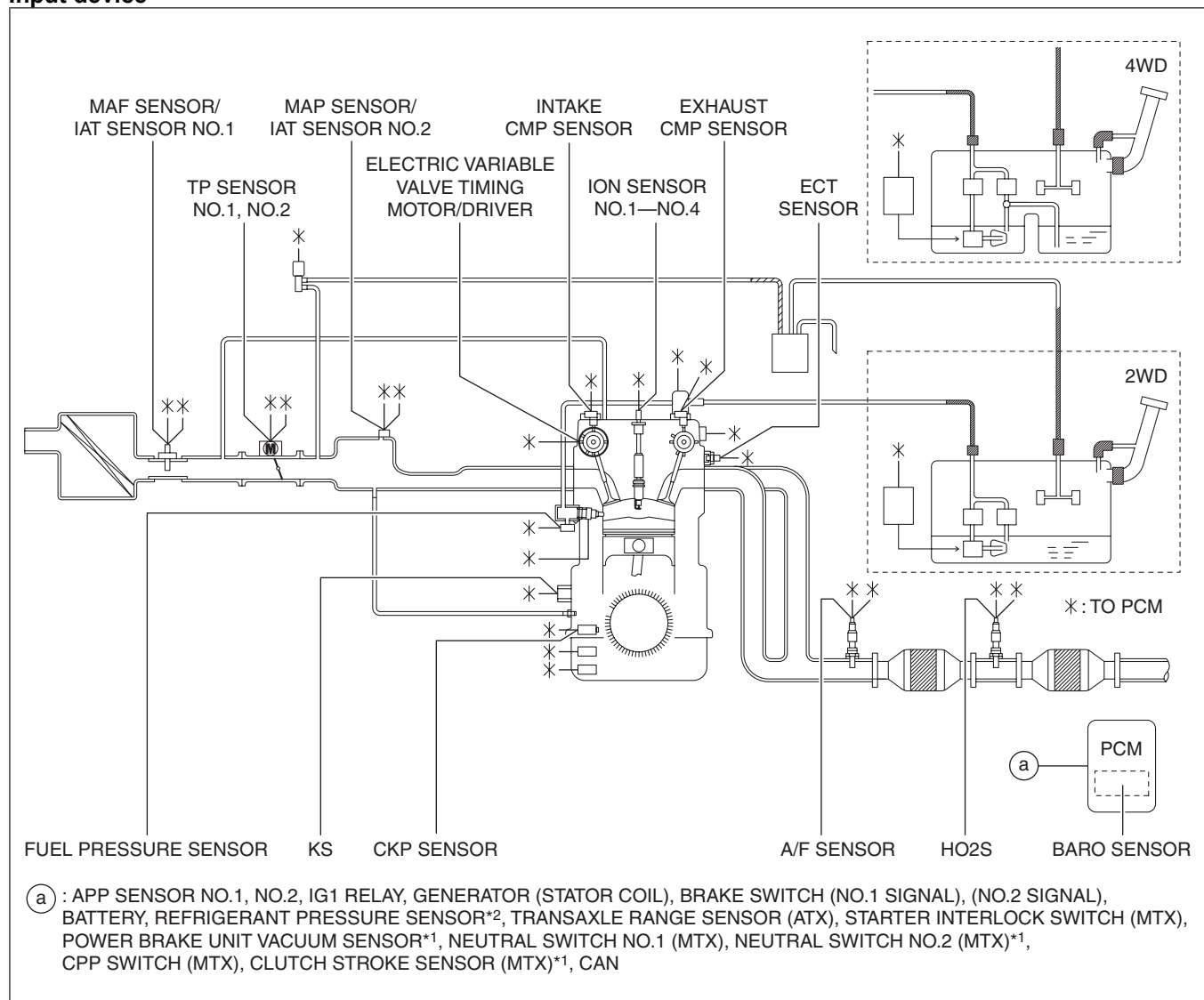
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\*1 : Fuel pump relay, starter relay, electric variable valve timing relay, fuel injector relay, main relay, A/C relay, cooling fan relay No.1, cooling fan relay No.2, cooling fan relay No.3

\*2 : With i-stop system



## System Diagram Input device

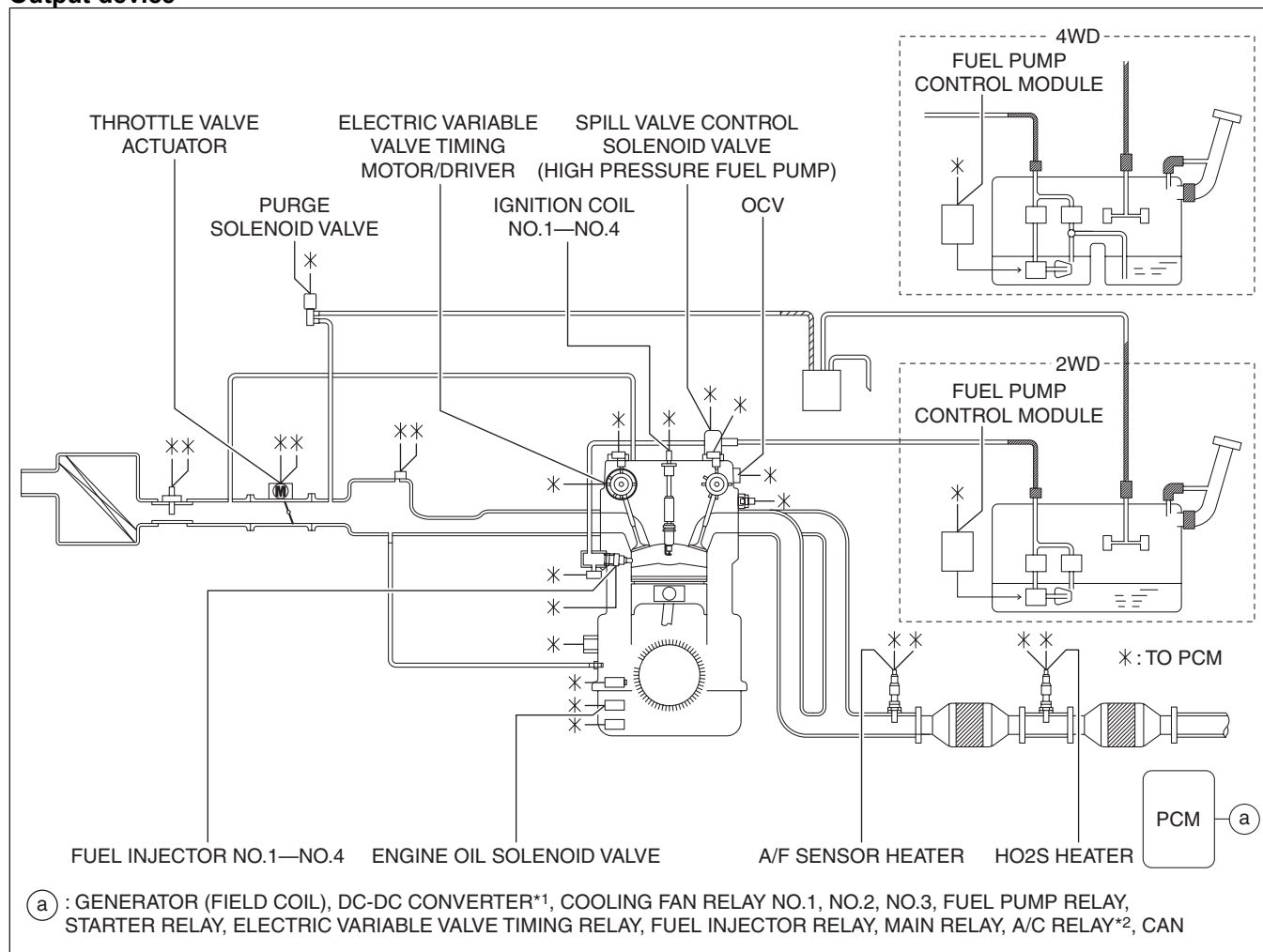


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\*1 : With i-stop system

\*2 : With air conditioner

## Output device

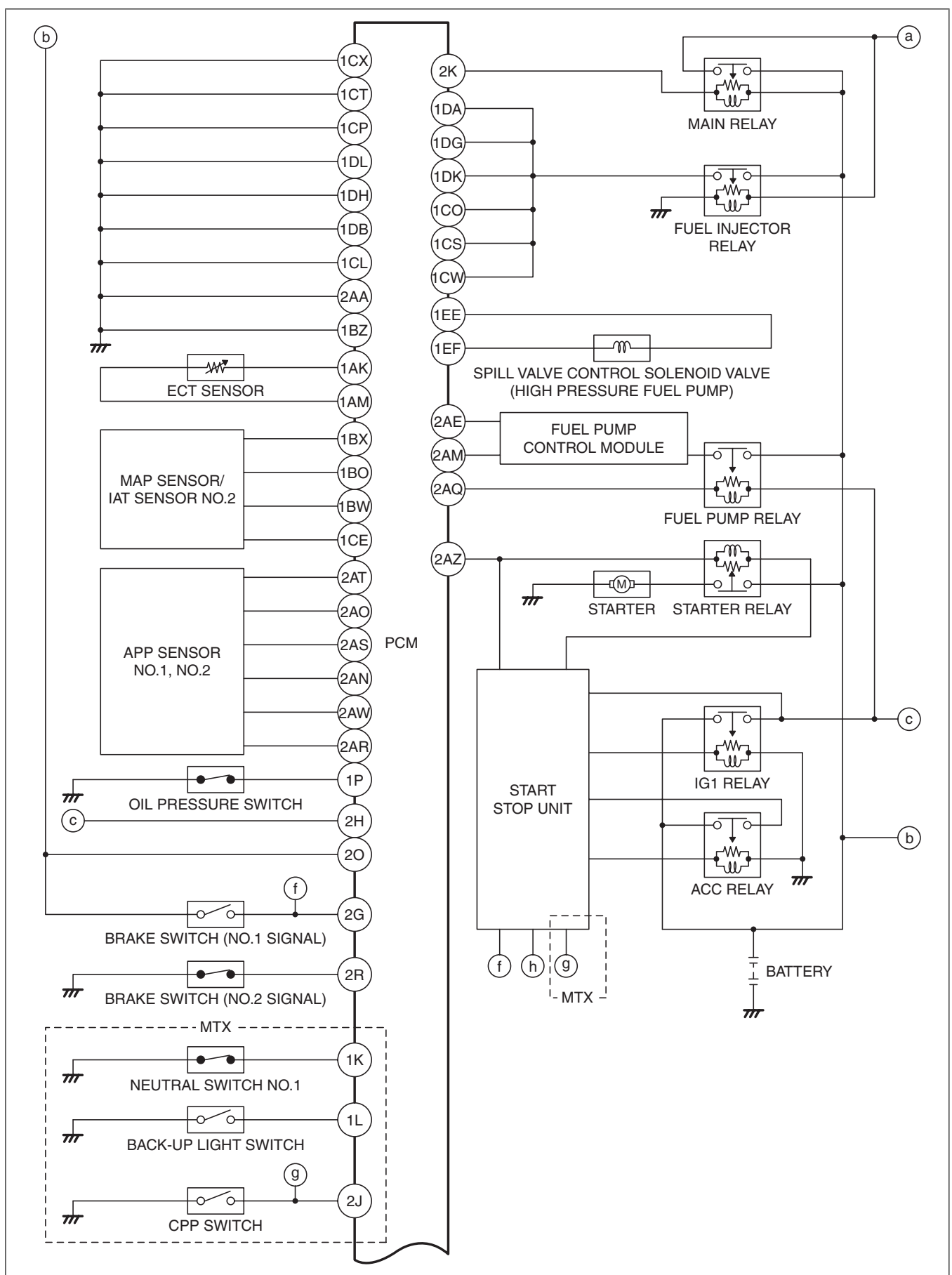


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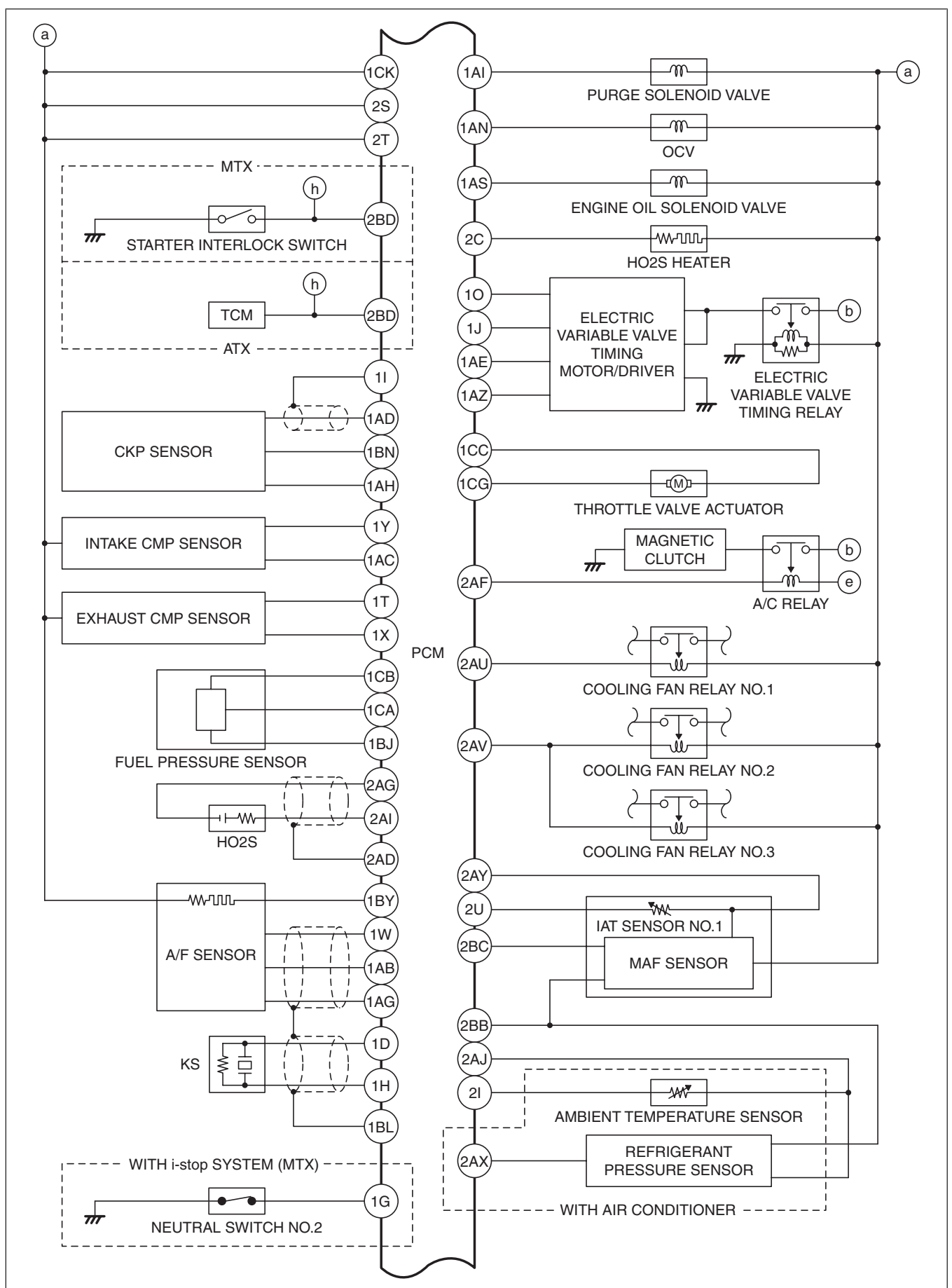
\*1 : With i-stop system

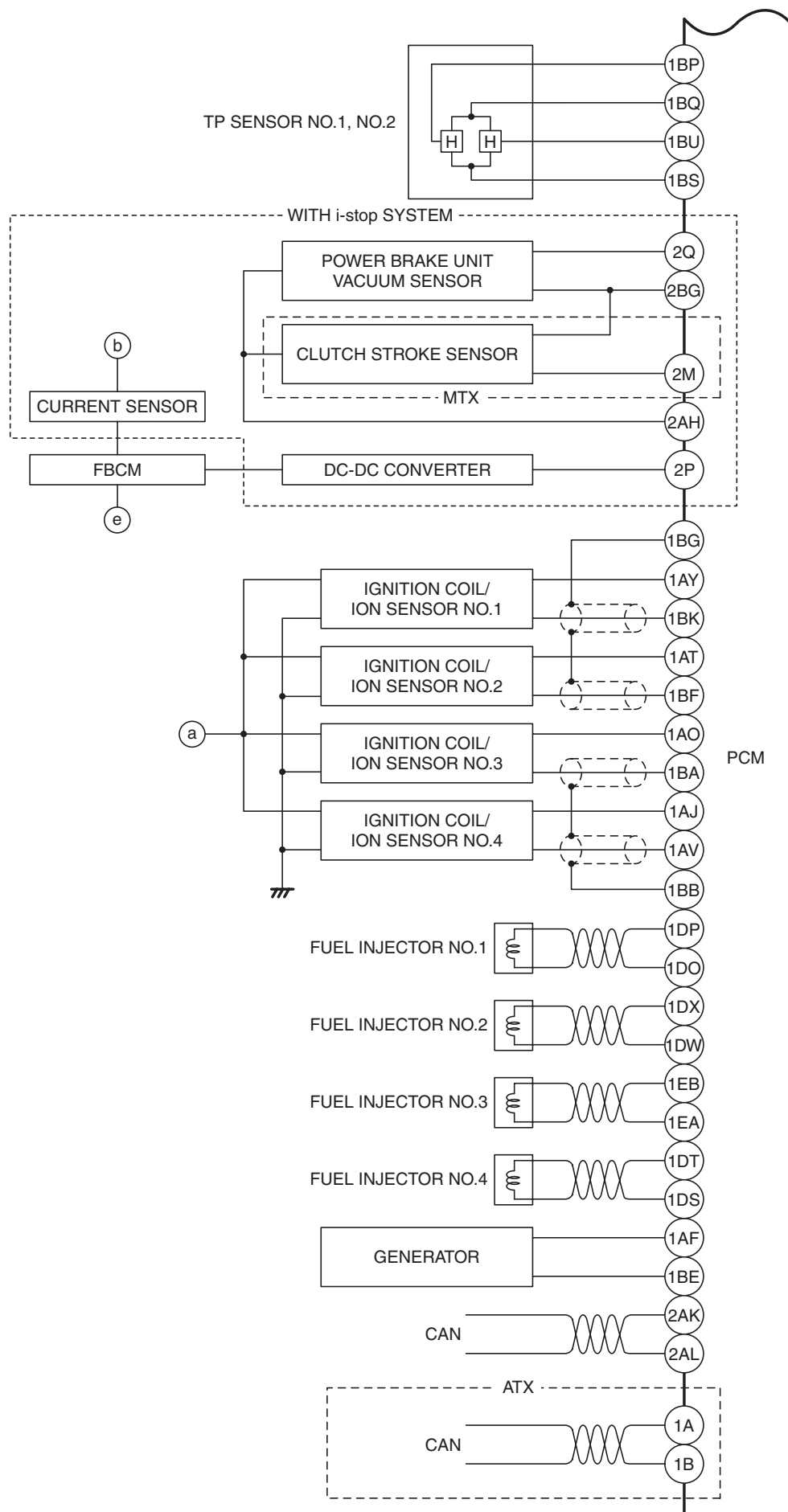
\*2 : With air conditioner

## System Wiring Diagram

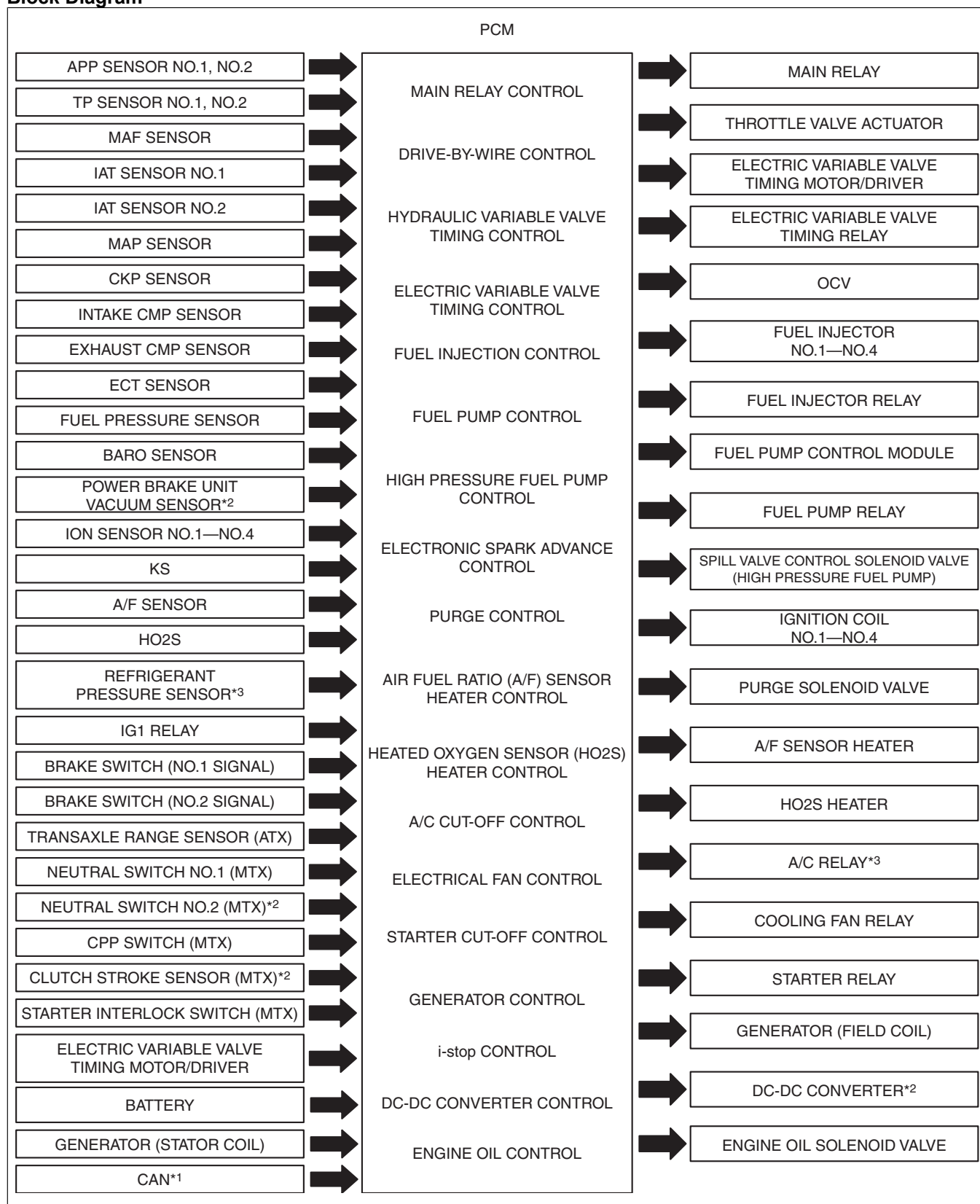








## Block Diagram



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\*1 : TCM (ATX), DSC HU/CM, front body control module (FBCM), rear body control module (RBCM), instrument cluster, start stop unit, EPS control module

\*2 : With i-stop system

\*3 : With air conditioner

- Each control system and their related input and output parts are as follows.

×: Applicable

[illegible]

Item	MAIN RELAY CONTROL	DRIVE-BY-WIRE CONTROL	HYDRAULIC VARIABLE VALVE TIMING CONTROL	ELECTRIC VARIABLE VALVE TIMING CONTROL	FUEL INJECTION CONTROL	FUEL PUMP CONTROL	HIGH PRESSURE FUEL PUMP CONTROL	ELECTRONIC SPARK ADVANCE CONTROL	PURGE CONTROL	A/F SENSOR HEATER CONTROL HO2S HEATER CONTROL	A/C CUT-OFF CONTROL	ELECTRICAL FAN CONTROL	STARTER CUT-OFF CONTROL	GENERATOR CONTROL	i-stop CONTROL	DC-DC CONVERTER CONTROL	ENGINE OIL CONTROL
Fuel injector No.1—No.4					x										x		
Fuel injector relay					x										x		
Fuel pump control module						x											
Fuel pump relay						x											
Spill valve control solenoid valve (High pressure fuel pump)							x										
Ignition coil No.1—No.4								x							x		
Purge solenoid valve									x								
A/F sensor heater										x							
HO2S heater										x							
A/C relay <sup>*4</sup>											x						
Cooling fan relay No.1, No.2, No.3												x					
Starter relay													x		x		
Generator (Field coil)														x	x		
DC-DC converter <sup>*2</sup>															x	x	
Engine oil solenoid valve																	x

<sup>\*1</sup> : TCM (ATX), DSC HU/CM, front body control module (FBCM), rear body control module (RBCM), instrument cluster, start stop unit, EPS control module

<sup>\*2</sup> : With i-stop system

<sup>\*3</sup> : Without i-stop system

<sup>\*4</sup> : With air conditioner