

4WD SYSTEM

■ DESCRIPTION

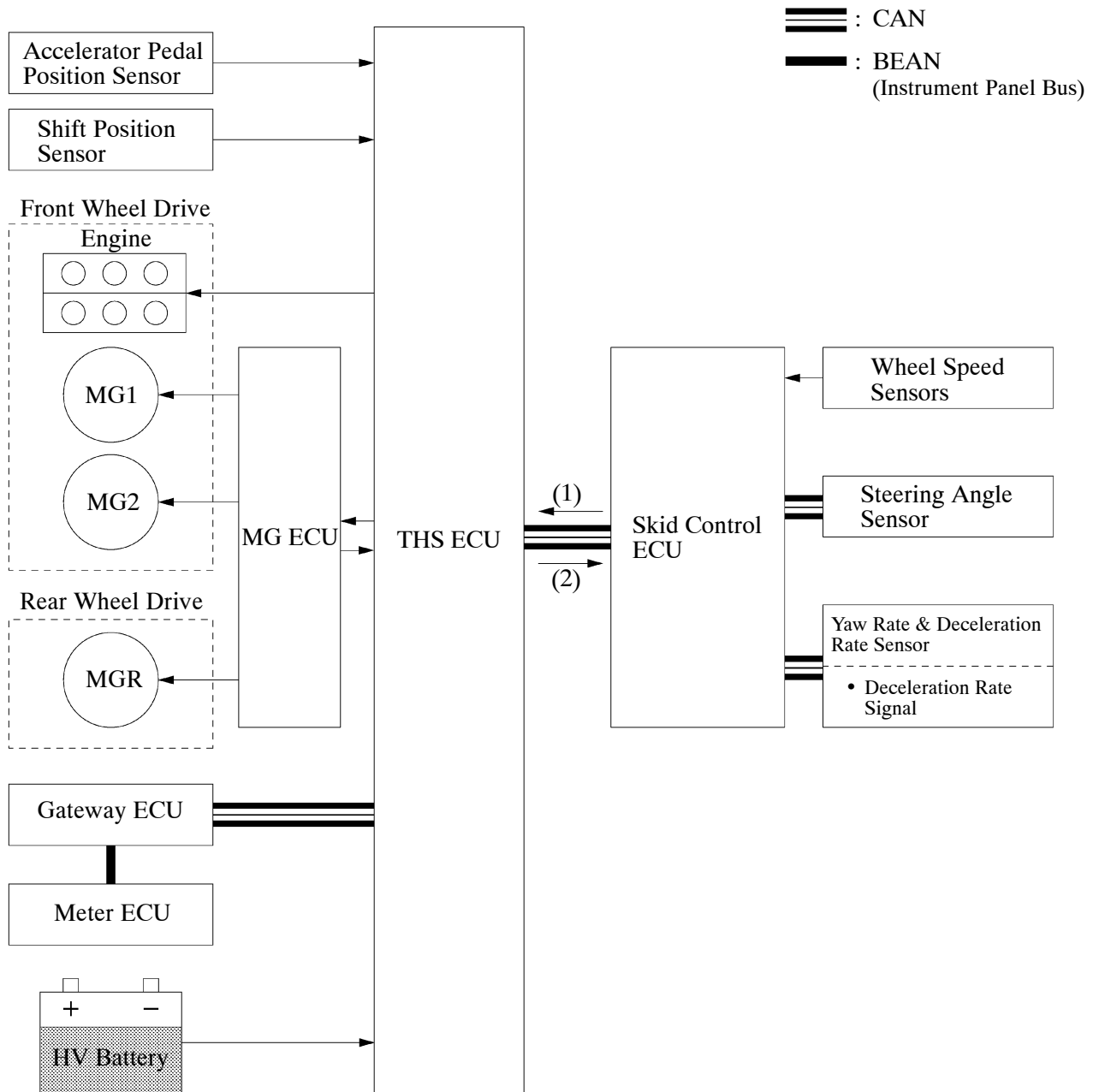
1. General

- The new RX400h uses an electric type 4WD system.
- Under the control of the THS ECU, this system uses an MGR (Motor Generator Rear) in the rear transaxle to directly drive the rear wheels. According to the driving conditions of the vehicle, the THS ECU linearly effects distribution control to attain an optimal front-rear torque distribution that provides the drive force required by the vehicle as a whole. Therefore, this system realizes a high level of fuel economy performance and traction performance under various conditions, thus realizing excellent driving stability.

► Feature of 4WD System ◀

Item	Outline
Starting Off	On a slippery road surface, the skid control ECU calculates the required total motive force and the torque distribution between the front and rear wheels, and transmits the signals to the THS ECU. Upon receiving these signals, the THS ECU appropriately drives the front and rear wheels, in order to achieve traction performance while ensuring driving stability.
Normal Driving	• As a rule, the system stops the driving of the rear wheels during normal driving to ensure fuel economy performance. • If the vehicle is being driven on a slippery road surface, accelerates, or makes a tight turn, the skid control ECU detects the conditions of the vehicle based on the signals provided by the sensors. Then, the skid control ECU calculates the required total motive force and the torque distribution between the front and rear wheels, and transmits the signals to the THS ECU. Upon receiving these signals, the THS ECU appropriately drives the front and rear wheels, in order to achieve traction performance while ensuring driving stability.
Decelerating	When the vehicle is decelerating, the kinetic energy is recovered from the front and rear wheels, converted into electrical energy, and used for recharging the HV battery by means of MG2 and MGR. This contributes to fuel economy performance.

► System Diagram ◀

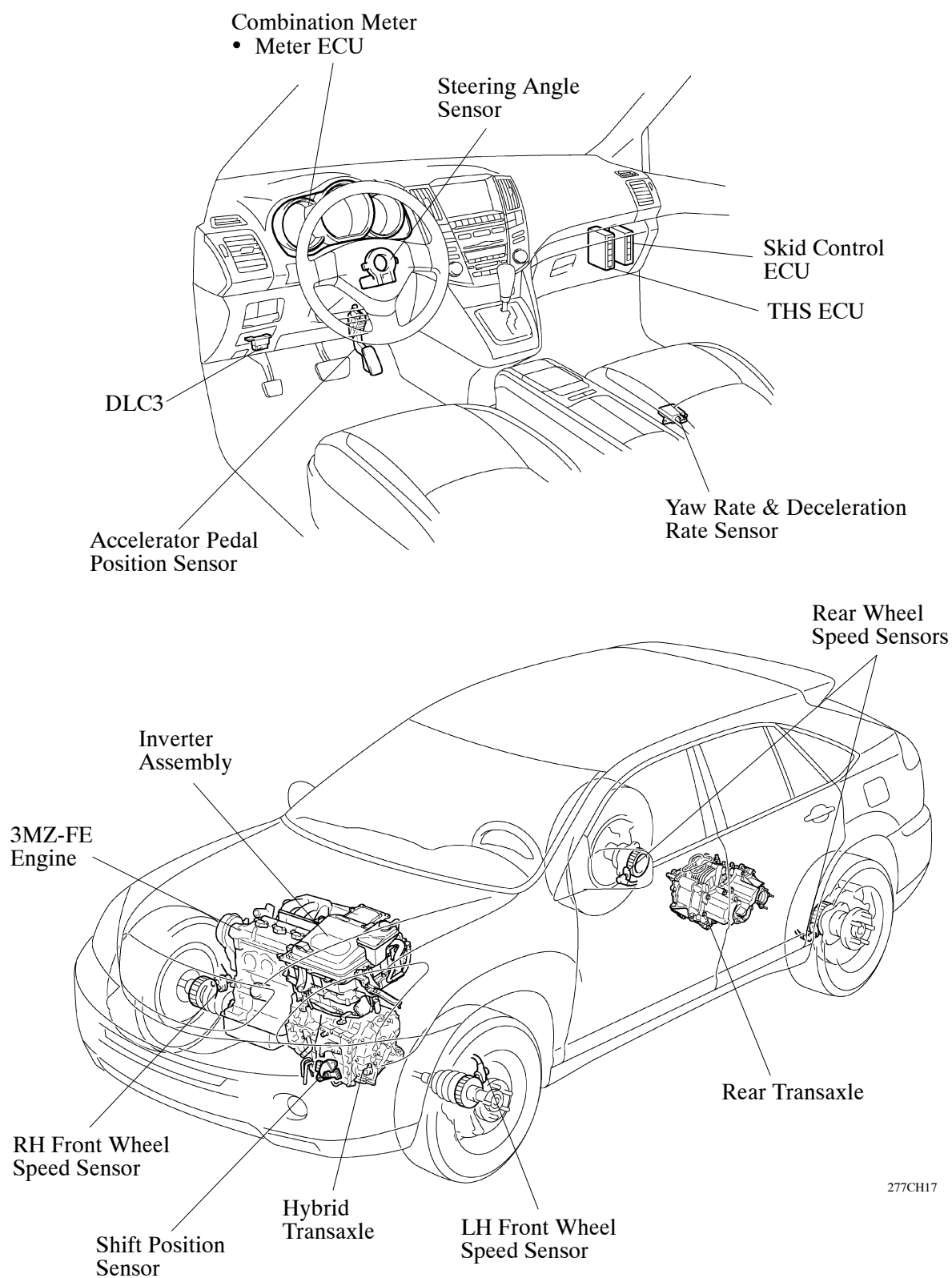


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- (1) : • Required motive force distribution rate for front and rear wheels
 (2) : • Required total motive force
 • Motive force execution value of front and rear wheels
 • Shift position signal

2. Layout of Main Components



277CH17

LHD Model