AIM OF DEVELOPMENT

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Product Concept

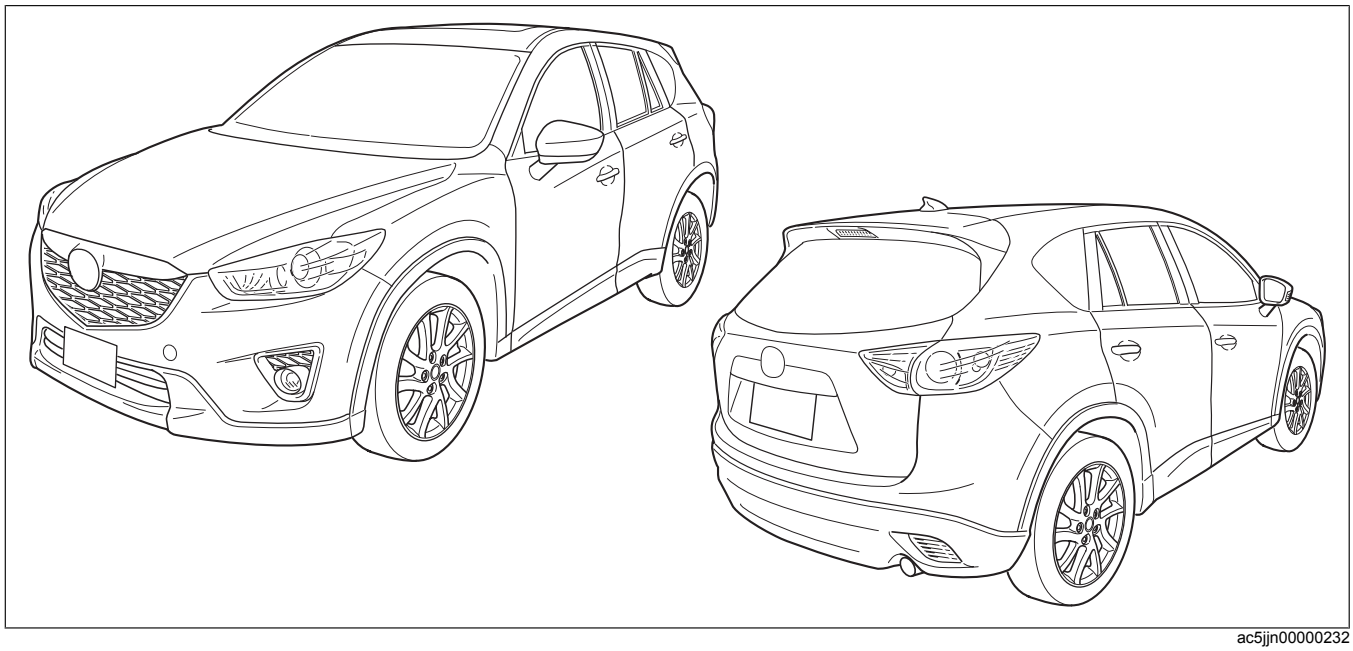
Creation of a new category in vehicles with a sports-minded concept distinctive from conventional SUVs.

Vehicle Outline

Packaging

- The large diameter tires are top-in-class for the current SUV class. The front tires are positioned further forward of the front occupants to express the vehicle's sporty proportions and strong, solid feel.
- The shape of the windshield, with greater angularity than existing vehicles, realizes smooth, sleek proportions.

External View



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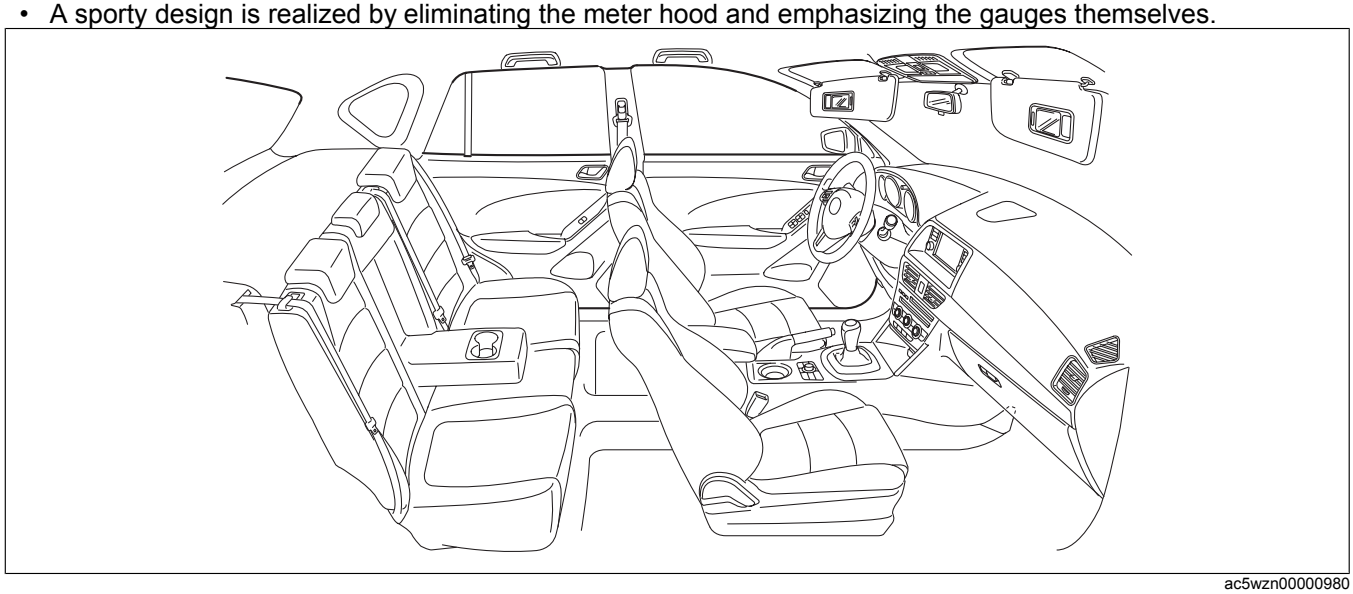
Design theme

- Advanced emotional styling
- Exceptional dynamic performance
- Support of sophisticated urban lifestyle

Interior design

- The use of high quality materials realizes a high quality design as seen in the refined area around the gauges.
- A stylish, dynamic interior is realized by an instrument panel providing a roomy interior space, and by an equipment layout in consideration of driver usability.
- A sporty design is realized by eliminating the meter hood and emphasizing the gauges themselves.



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Engine

- SKYACTIV-G 2.0 (Gasoline engine), SKYACTIV-G 2.5 (gasoline engine) and SKYACTIV-D 2.2 (Diesel engine) has been adopted.

Engine mechanical [SKYACTIV-G 2.0, SKYACTIV-G 2.5]

- For SKYACTIV-G 2.0, the following is performed to lower fuel consumption.
  - — Improvement of mechanical resistance loss
    - Narrowed down crankshaft journal
    - Optimized piston skirt shape
    - Lowered piston ring tension
    - Roller follower adopted
    - Reduction of valve spring load
    - Stabilization of timing chain behavior
    - Optimized engine coolant passage
    - Optimized water pump impeller shape
    - Lowered drive belt tension
    - Optimized oil passage
    - Optimized oil pump shape
    - Oil pump discharging pressure control has been adopted.
  - — Improvement of pumping loss
    - Variable valve timing mechanism has been adopted on both sides of intake and exhaust.

Engine mechanical [SKYACTIV-D 2.2]

- For SKYACTIV-D 2.2, the following is performed to lower fuel consumption.
  - — Low compression ratio
    - Combustion efficiency by lower compression ration (14.0)
  - — Weight reductions
    - Aluminum alloy cylinder block adopted
    - Exhaust manifold integrated cylinder heads adopted
  - — Weight reduction and mechanical resistance loss improvements
    - Piston shape optimized
    - Narrowed down crankshaft journal
- The SKYACTIV-D 2.2 has adopted an IDEVA for improved ignition stability during cold engine starts.

ENGINE CONTROL [SKYACTIV-G 2.0, SKYACTIV-G 2.5]

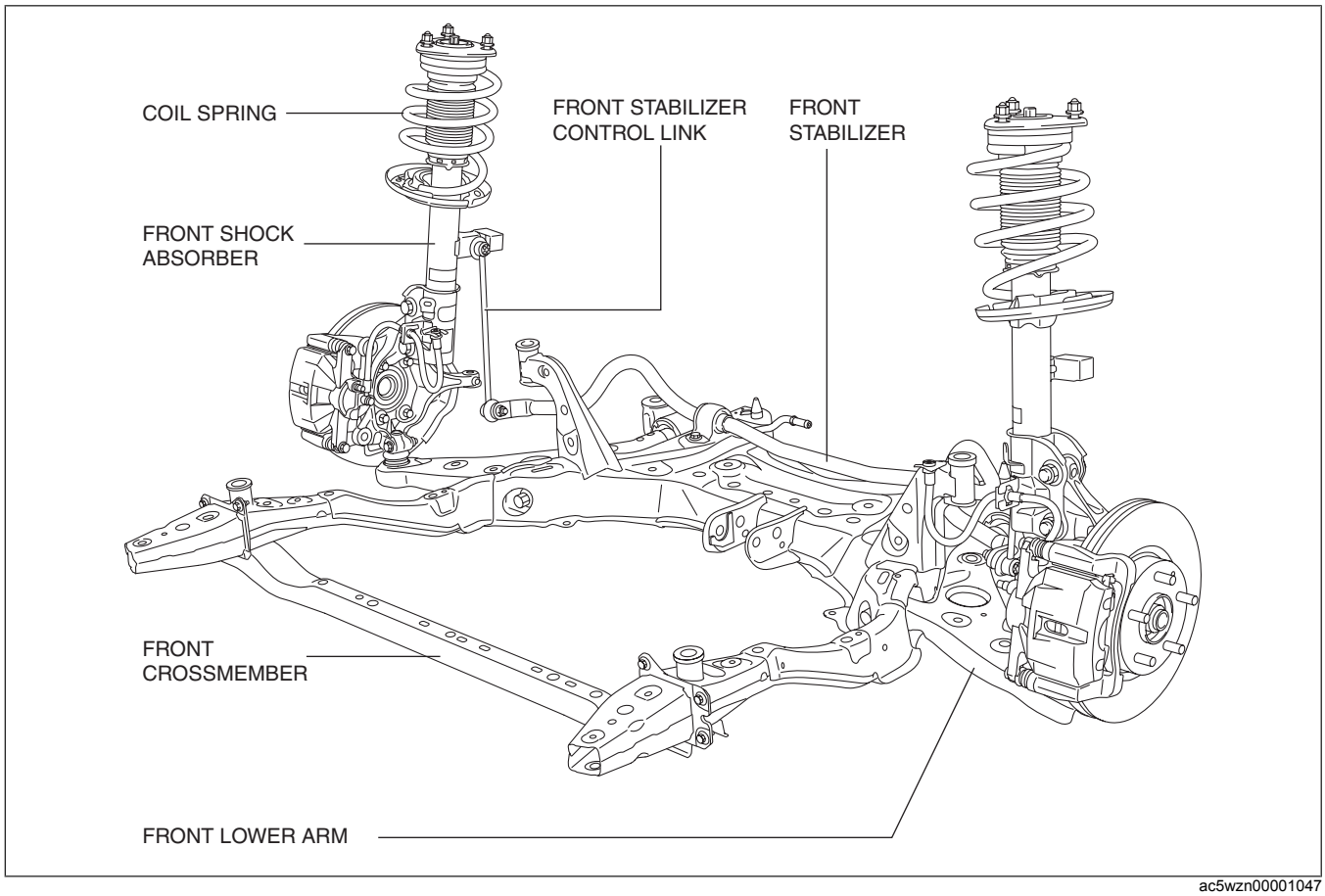
- L-jetronic and D-jetronic type detectors have been combined for intake air amount detection, improving the accuracy of the intake air amount measurement.
- Electric variable valve timing control has been adopted on the intake side for improved fuel efficiency and pumping loss reduction by variably controlling the intake valve timing without any influence from the engine conditions.
- i-stop control has been adopted for improved fuel efficiency, reduced exhaust gas emissions, and reduced idling noise. (with i-stop control)

ENGINE CONTROL [SKYACTIV-D 2.2]

- Two-step boost control has been adopted which realizes low emissions, low fuel consumption and high torque/ response by the efficient, high air charging obtained in all ranges.
- An exhaust gas recirculation (EGR) system has been adopted for cleaner exhaust emissions and improved fuel efficiency.
- i-stop control has been adopted for improved fuel efficiency, reduced exhaust gas emissions, and reduced idling noise.

Suspension

- Front suspension
  - — Strut-type suspension adopted
  - — For the front / rear crossmembers, the welded flange has been eliminated (flange-less), the cross-section expanded and the connection rigidity of the welded parts improved to achieve both rigidity and light weight.
  - — By adoptiong a 6-point rigid mount-type front crossmember, the force generated from the tires is transmitted directly, and an agile vehicle response in low-to-mid speed range has been realized.



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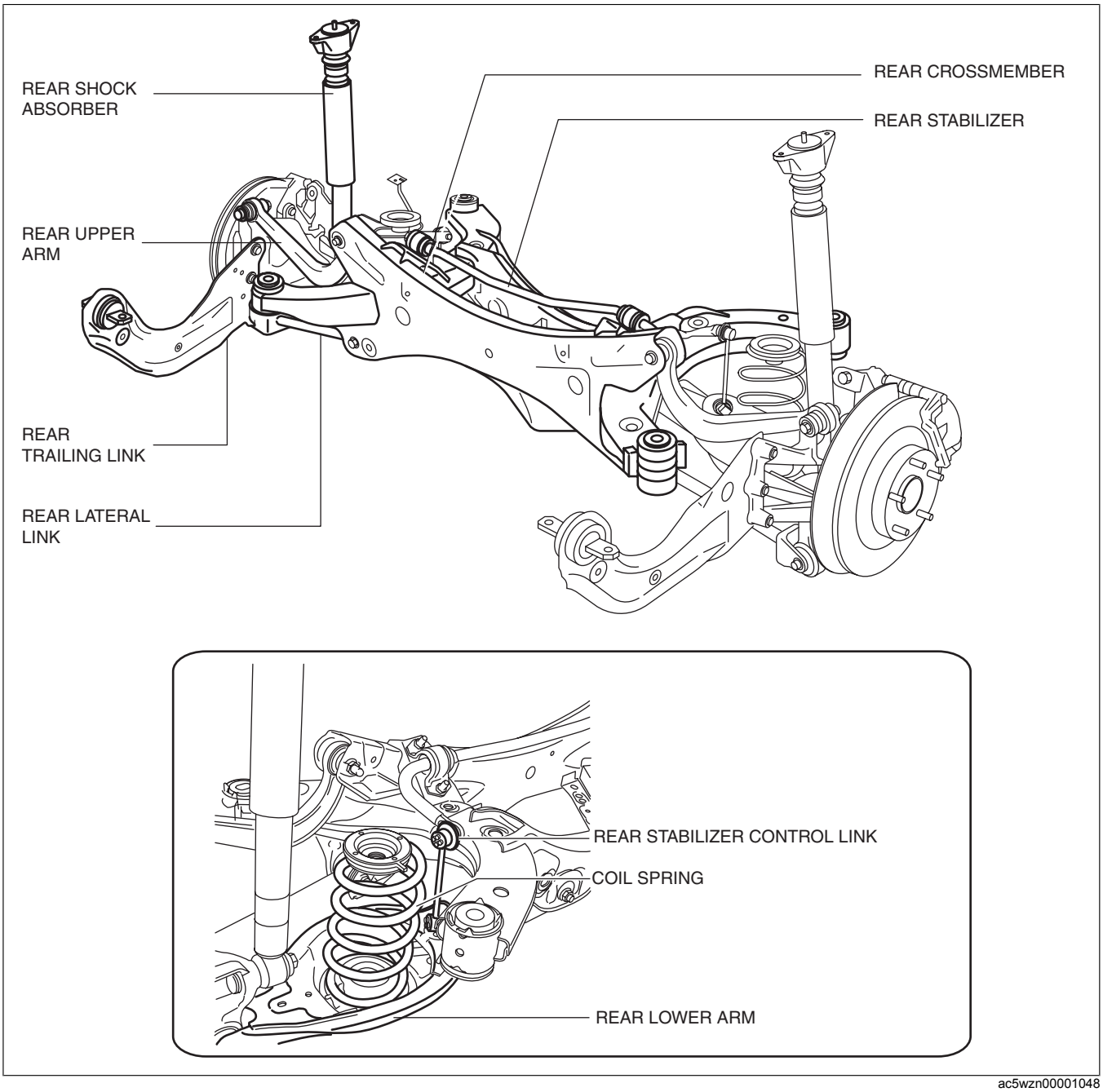
- Rear suspension
  - — An E-type multi-link rear suspension adopted.
  - — For the front /rear crossmembers, the welded flange has been eliminated (flange-less), the cross-section expanded and the connection rigidity of the welded parts improved to achieve both rigidity and light weight.

2WD



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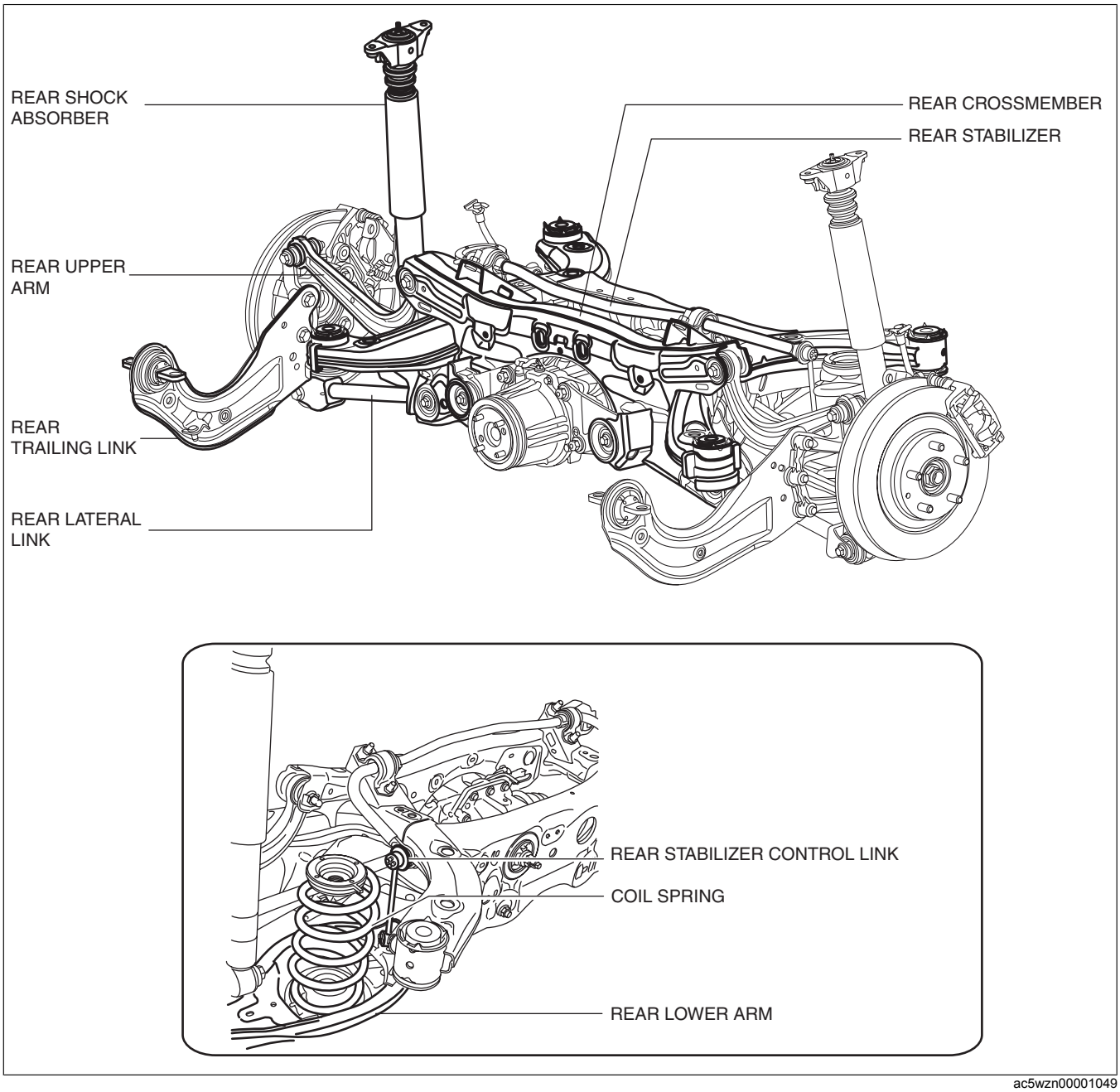
4WD



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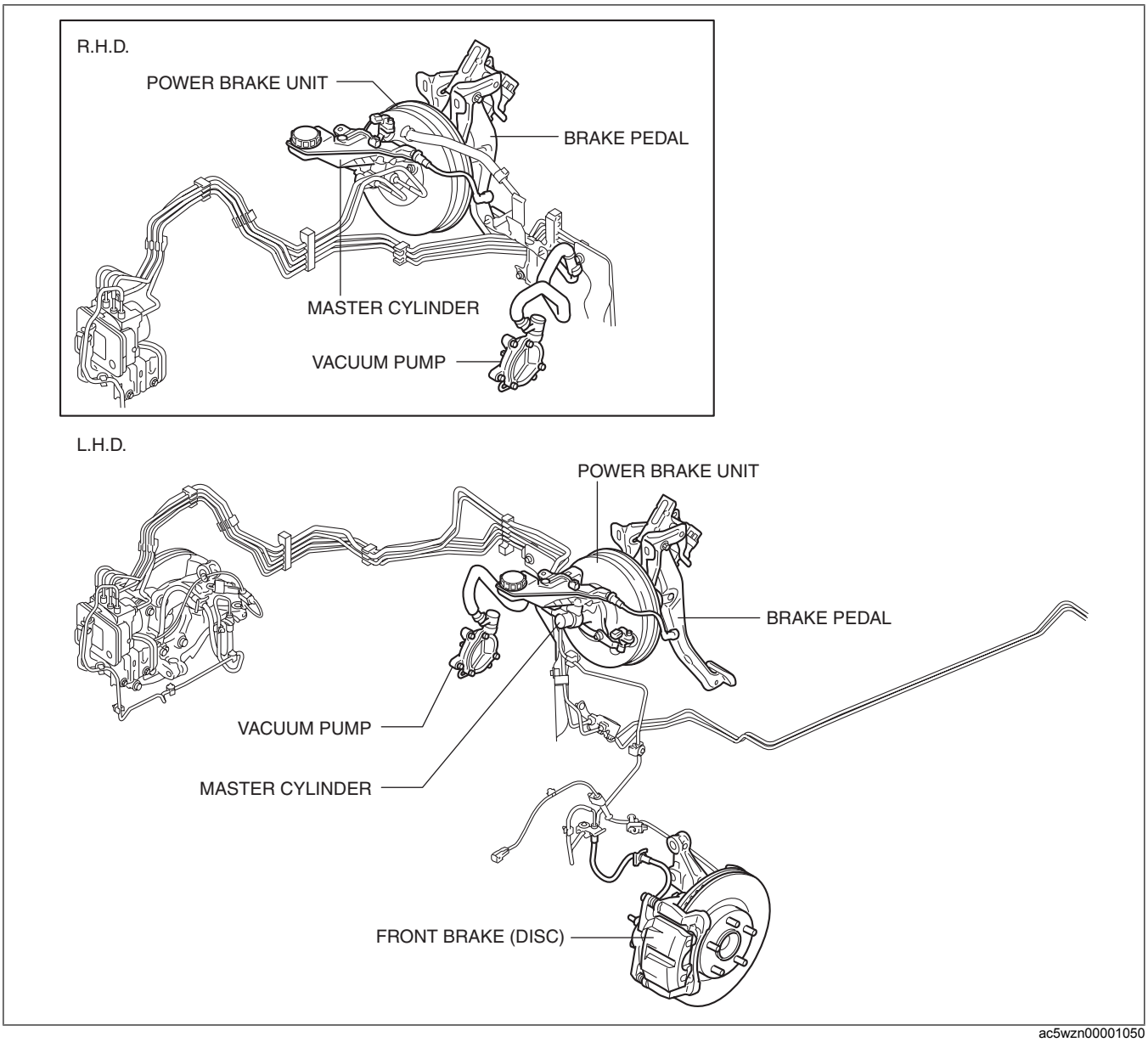
Brakes

- Conventional brake system
  - — A brake pedal with an intrusion minimizing mechanism has been adopted. As a result, driver safety has been improved.
  - — A small diameter long-stroke type master cylinder has been adopted, improving operability and response.
  - — A vacuum pump has been adopted, improving brake force.
  - — A large diameter, ventilated disc-type front brake has been adopted, improving braking force.
  - — A large diameter, solid disc-type rear brake has been adopted, improving braking force.



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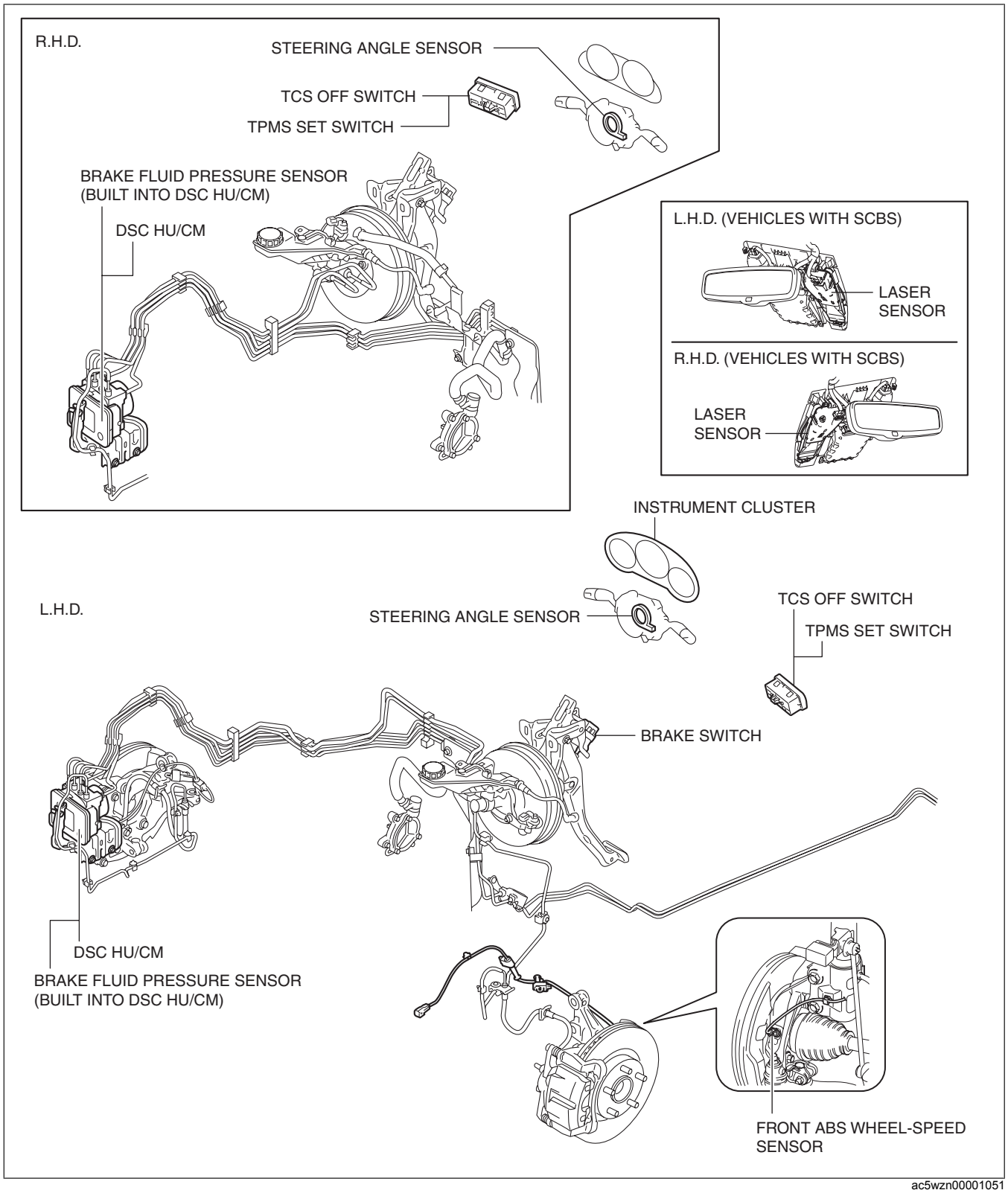
- Dynamic stability control
  - — Electrical brake assist control has been adopted, improving safety.
  - — The DSC HU/CM, integrating both the hydraulic unit (HU) and control module (CM), has been adopted, resulting in a size and weight reduction.
  - — An enhanced malfunction diagnosis system, used with the Mazda Modular Diagnostic System (M-MDS), improving serviceability.
  - — Serviceability improved by the automatic configuration function.
  - — Receives the lateral-G and yaw rate signals between the sophisticated air bag sensor (SAS) control module and the DSC HU/CM via controller area network (CAN) lines instead of the conventional combined sensor.



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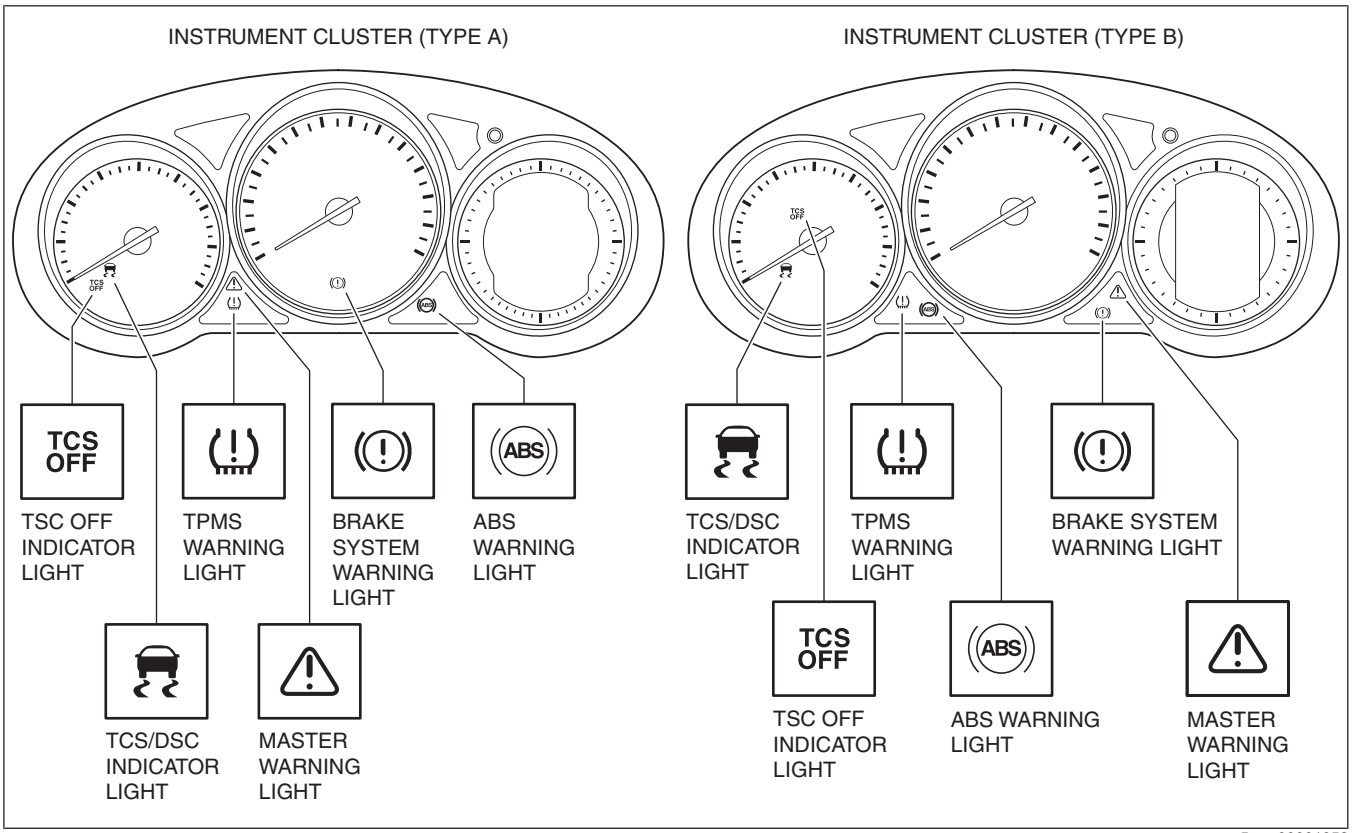

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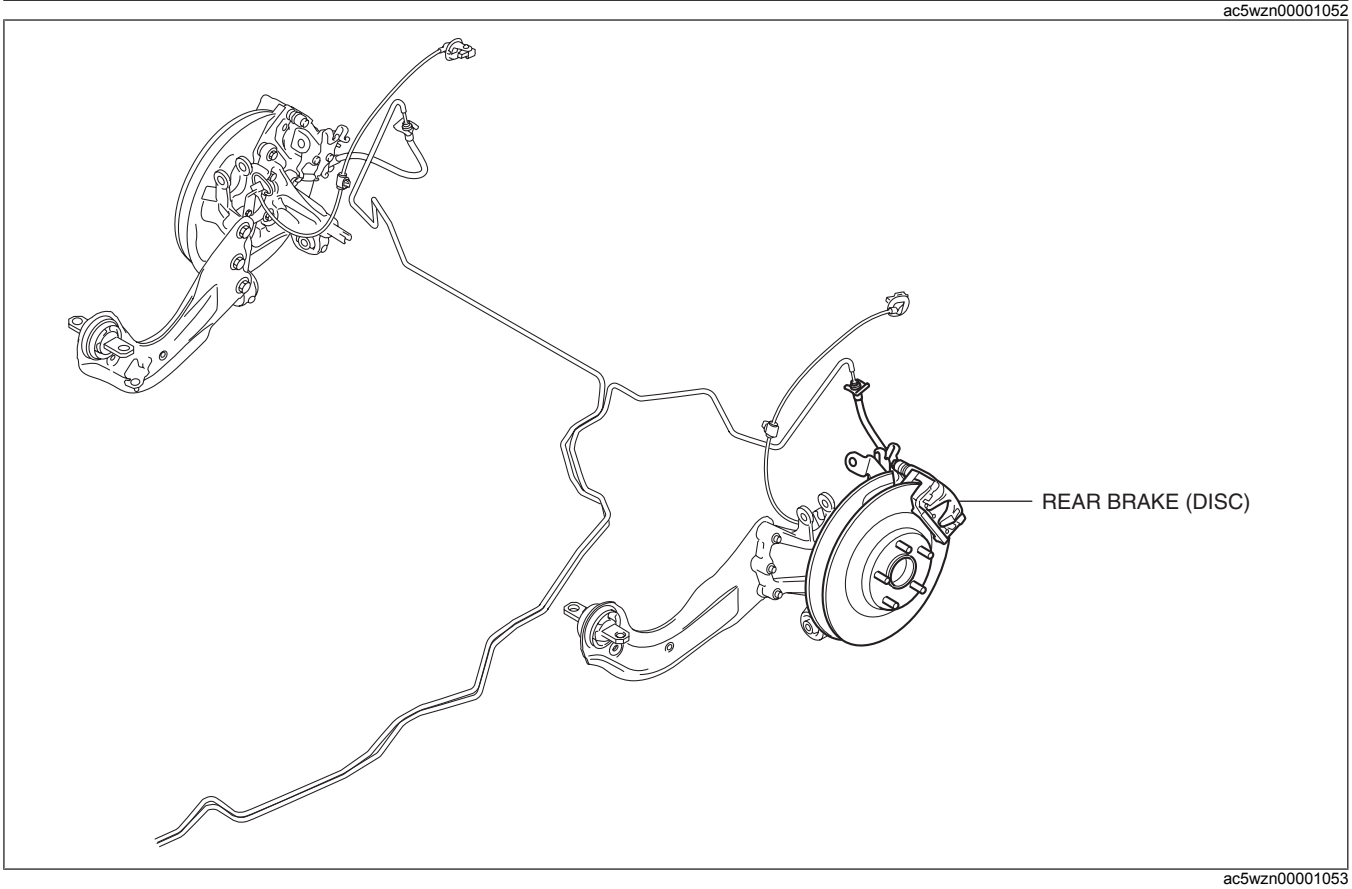

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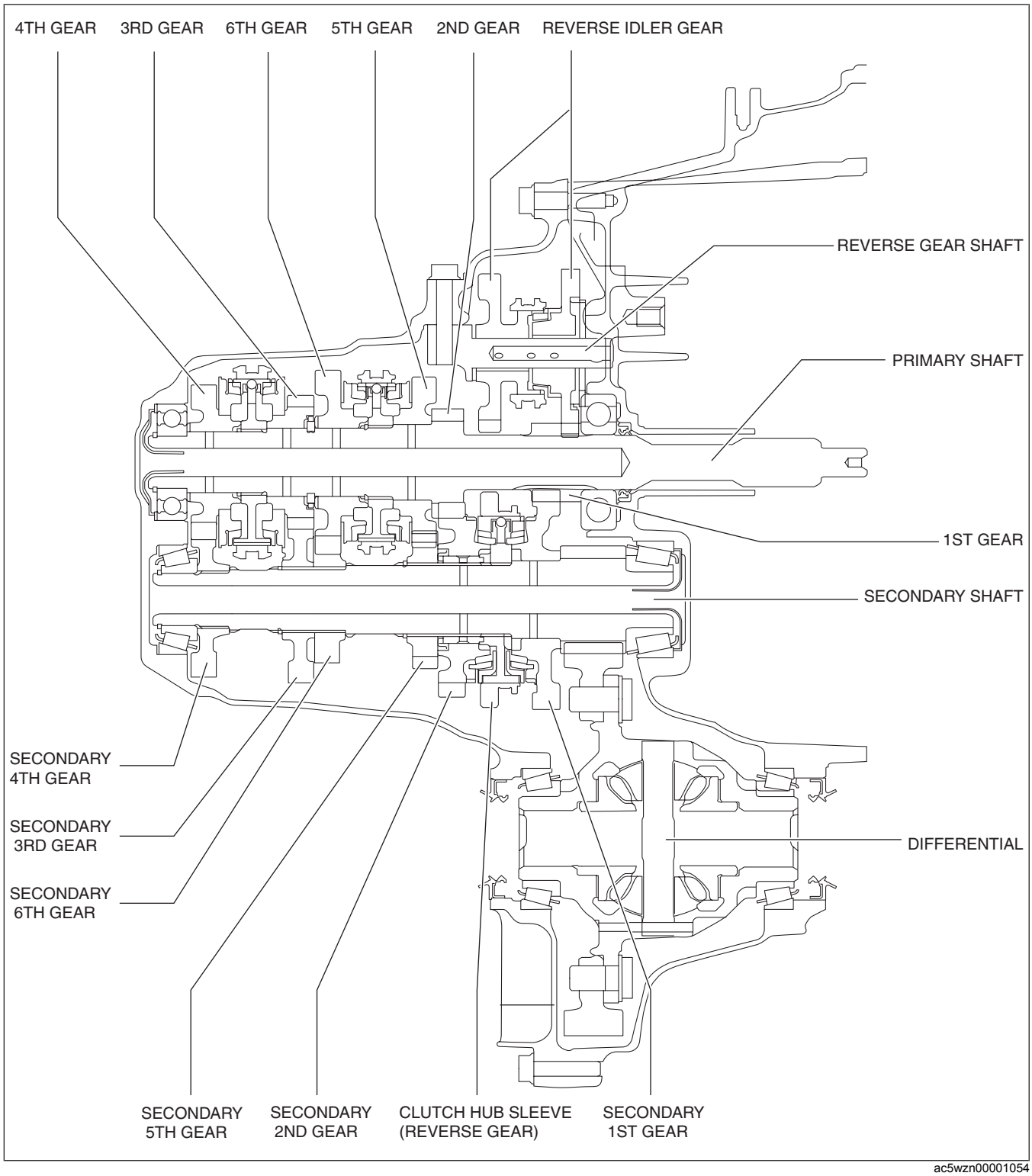
Transaxle

- Manual transaxle (C66M-R, C66MX-R)
  - — For SKYACTIV-G 2.0, six-speed C66M-R, C66MX-R manual transaxle has been adopted.



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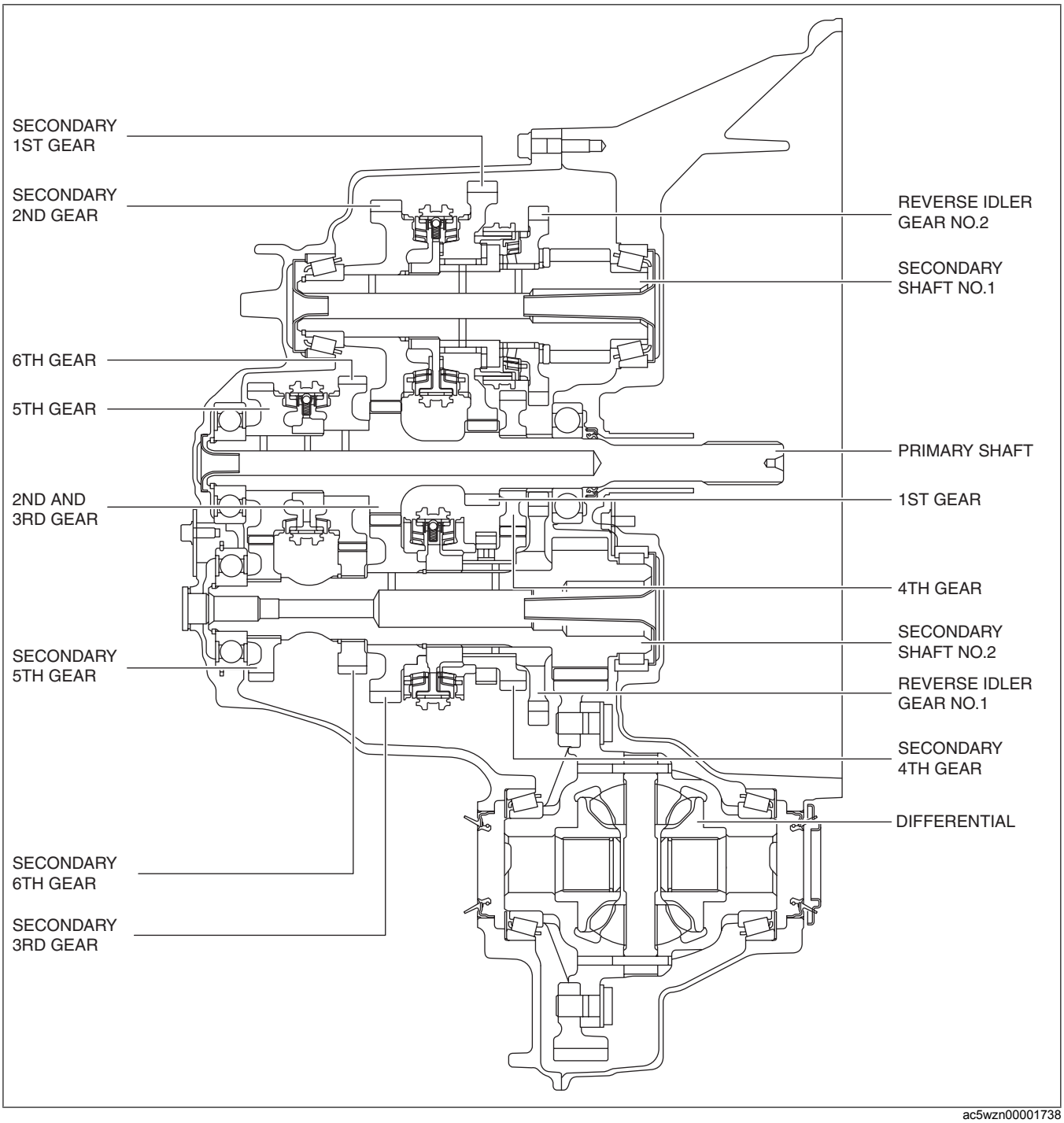
- Manual transaxle (D66M-R, D66MX-R)
  — For SKYACTIV-D 2.2, six-speed D66M-R, D66MX-R manual transaxle has been adopted.



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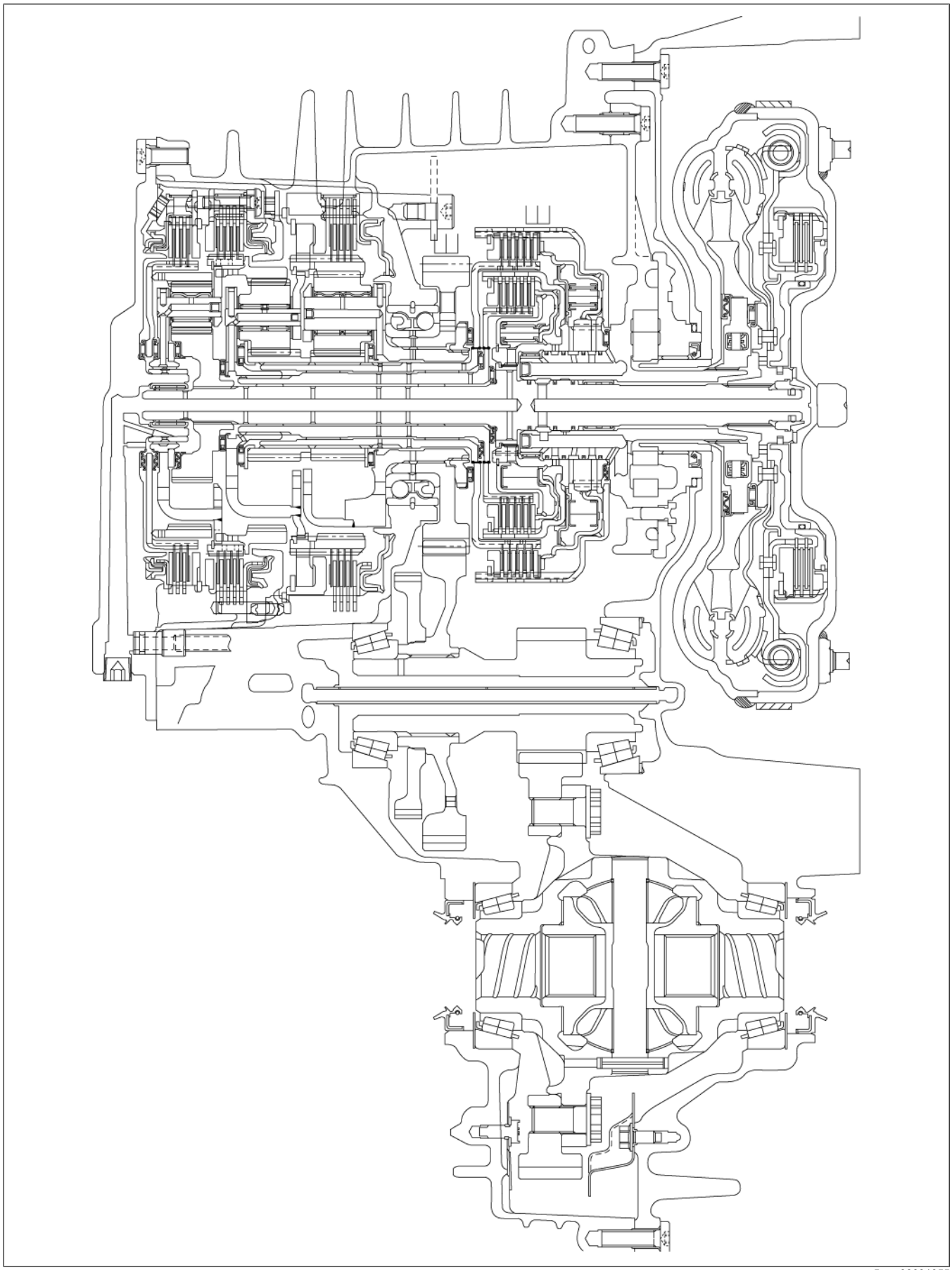
- Automatic transaxle (FW6A-EL, FW6AX-EL)
  — For SKYAVTIV-G 2.0, SKYACTIV-G 2.5, six-speed FW6A-EL, FW6AX-EL automatic transaxle has been adopted.



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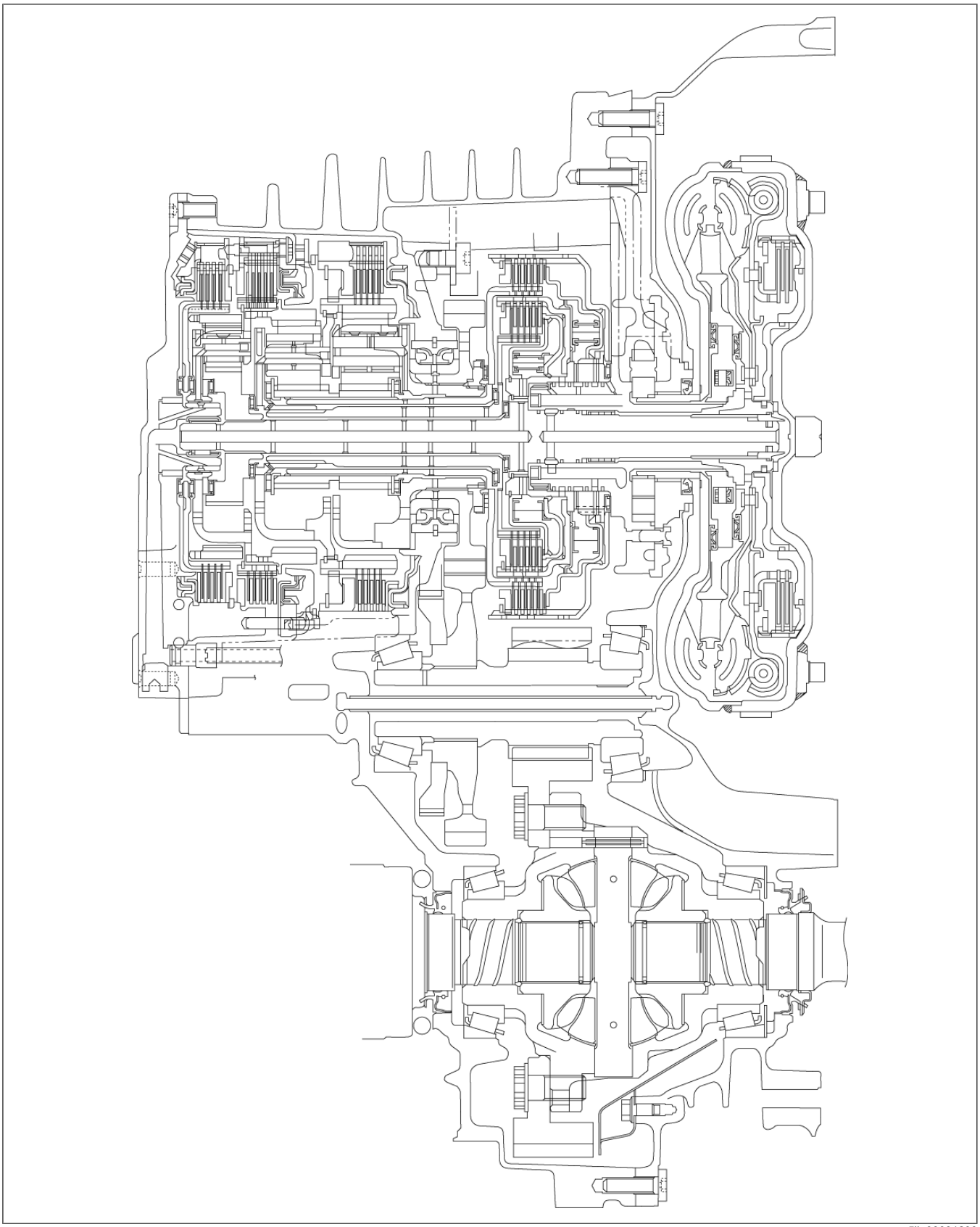
- Automatic transaxle (GW6A-EL, GW6AX-EL)
  — For SKYAVTIV-D 2.2, six-speed GW6A-EL, GW6AX-EL automatic transaxle has been adopted.



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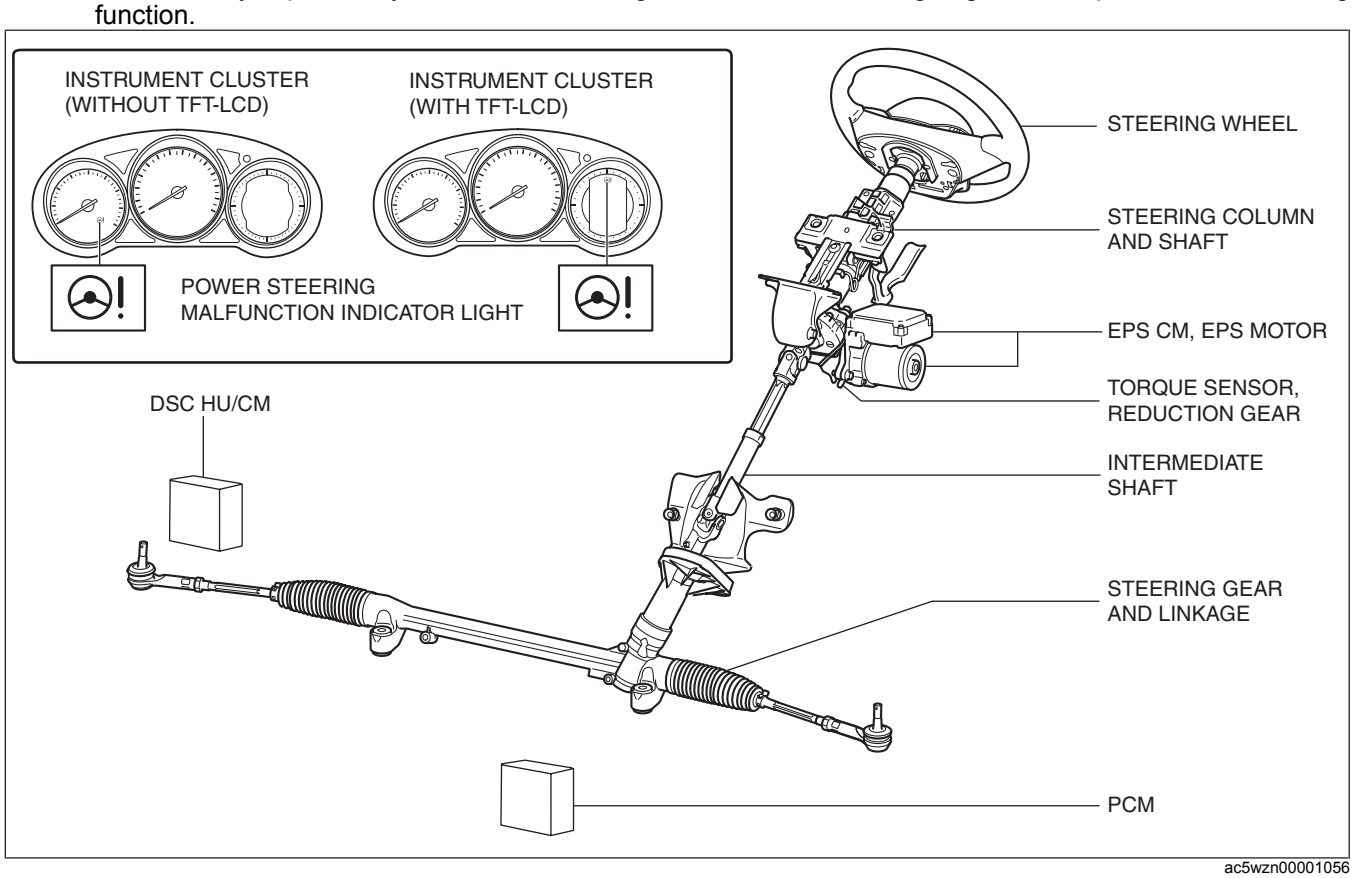
Steering

- Power steering
  - — A column assist-type EPS has been adopted call modeles.
  - — EPS provides smooth handing from low to high speeds as a result of the excellent steering feel provided by the electronic control and the vehicle-speed responsive control.

— EPS does not require a power steering oil pump and generates assist force only when the steering wheel is steered. As result, engine load is lowered and fuel efficiency is improved.
— Serviceability improved by the automatic configuration and the steering angle neutral position auto-learning function.



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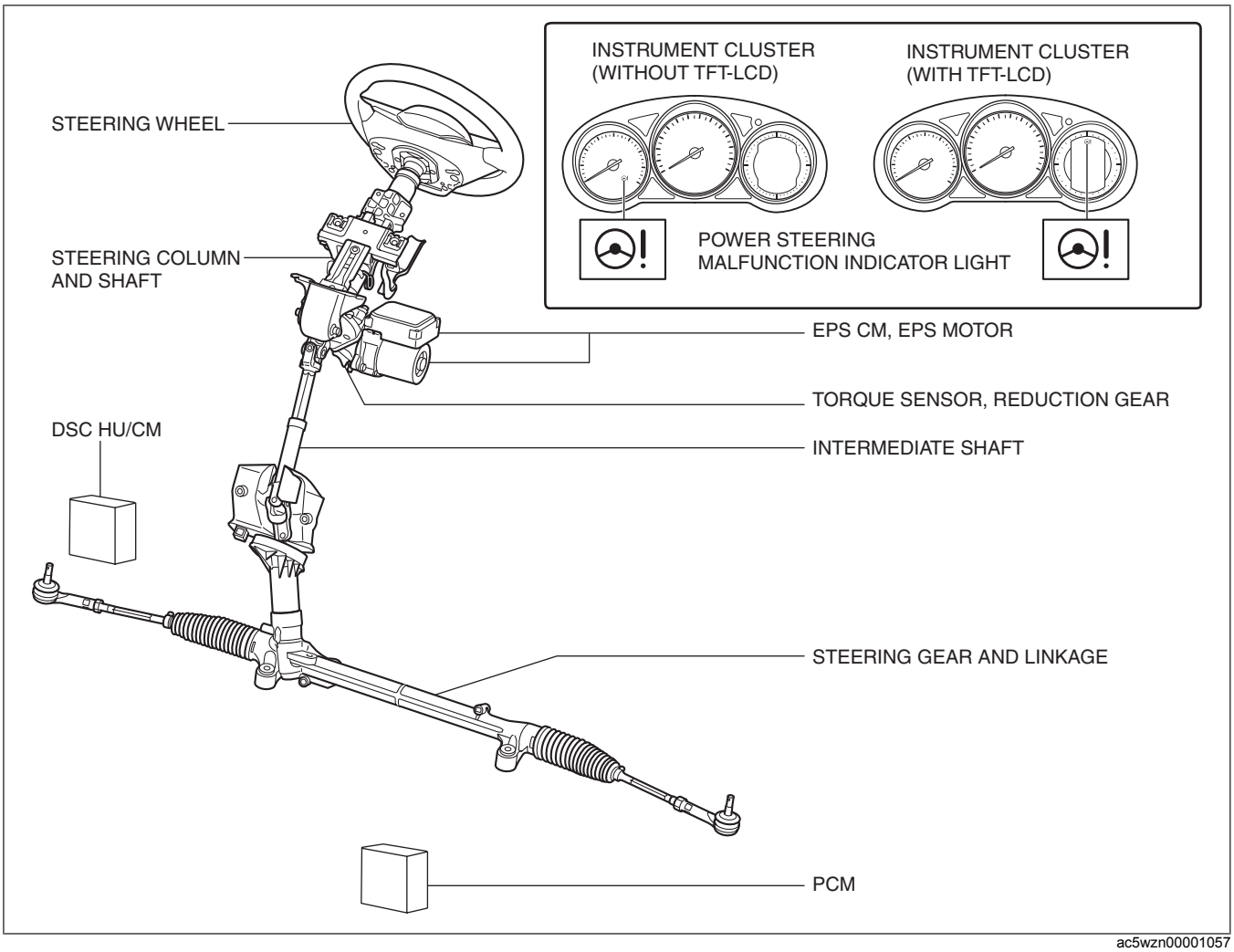

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Safety

- The multi-load path and triple H-shaped structure of distributing the power absorbed at the collision were used for the body shell.
- An immobilizer system has been adopted. This anti-theft device prevents the engine from being started unless the encrypted identification code, transmitted from a special electronic chip embedded in the key, corresponds with the identification code registered in the vehicle.
- A ring structure has been adopted for the triple H structure, realizing top-level crash safety performance.
- Curtain air bags have been adopted that deploy and cover the front and rear side windows to protect the heads of front and rear passengers.
- Side air bags that effectively protect the chest area have been adopted for the front seats.
- Pre-tensioner and load limiter mechanisms have been adopted for the front seat belts.
- Steering shaft with energy adsorbing mechanism adopted.
- An intrusion minimizing brake pedal has been adopted.
- Both ISOFIX and top tether anchors are provided in the rear seat for child-seat fixing.
- Auto-dimming mirror has adopted.

Driver's support

- Rear vehicle monitoring system adopted.
- Blind spot monitoring system adopted.
- ESS (Emergency Stop signal System) adopted.
- Hi beam control system adopted.
- Lane departure warning system adopted.