

Brake System

Electric Park Brake

The park brake switch has three positions, Apply, Release and Idle, and is hard wired to a new control module. The switch is fitted with double contacts for increased robustness.

The Electronic Control Module is mounted in the luggage compartment, using a new mounting bracket. This module now connects directly to the CAN network, which has eliminated the gateway delay between the CAN and SCP networks.

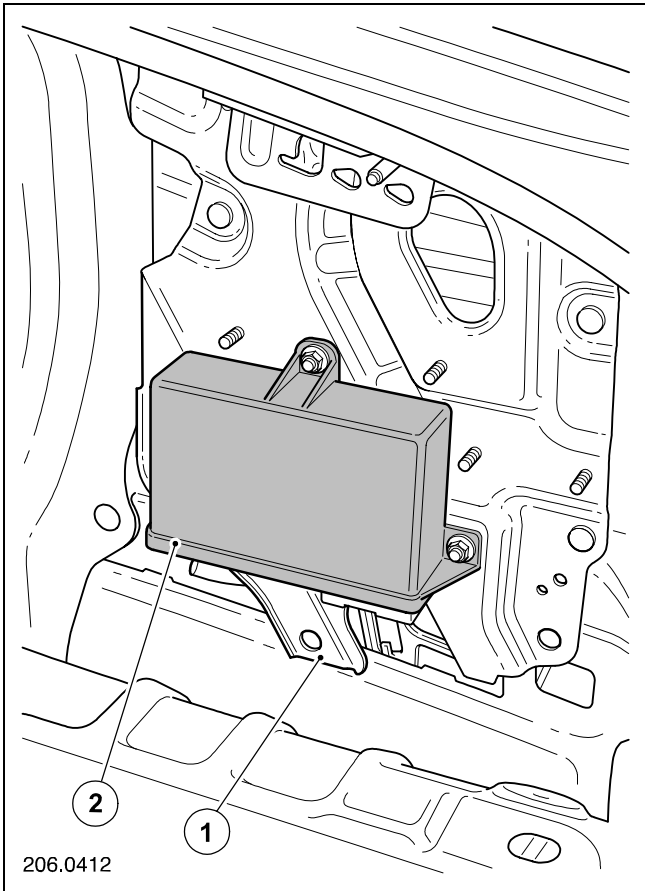


Fig. 43 Electronic park brake module

1. Mounting bracket
2. Electronic control module

The park brake is applied using a cable mechanism, which is operated by an actuator fitted to the rear sub-frame.

- Naturally aspirated variants use the existing rear brake calipers.
- Supercharged variants use dedicated park brake calipers.

A new In-Gear Switch is fitted to the manual transmission to provide the Drive Away Release feature.

The system provides enhanced diagnostic trouble code (DTC) coverage and diagnostics.

Function

Manual Apply:

The park brake is applied manually by lifting the console switch. Manual application can be effected either when the vehicle is stationary or when in motion.

The application process of the park brake varies, controlled by the Park Brake Module, depending on whether the vehicle is stationary or in motion.

Static Apply (speed less than 3 km/h):

- The park brake is applied to full force within one second of activating the switch.

Dynamic Apply - Low Speed (speed less than 32 km/h):

- Momentary switch activation - the park brake is applied for 1/4 second.
- Continuous switch activation - the park brake is applied until the switch is released or until completion of the apply cycle.

Dynamic Apply - High Speed (speed greater than 32 km/h):

A series of pre-determined on-off pulses is provided, approaching full braking force over a period of approximately two seconds.

Audio and visual warnings are provided if the park brake is applied whilst the vehicle is in motion.

Manual Release:

The park brake is released manually by pushing down the console switch.

Automatic Apply:

Key Out Apply - the park brake is applied automatically when the ignition key is removed.

Automatic Release:

Drive Away Release:

- The park brake is released automatically on interpretation of the movement of the accelerator pedal, combined with information from the inclination sensor (vehicles with automatic transmission).
- The release action has been calibrated to allow driving away, without rolling back, on an incline of up to 1:3.

Shift From Park Release:

- The park brake is released automatically when a gear is selected, without the engine running.

Service Mode

The Service Mode must be activated (using WDS) to service the rear calipers, cables and actuator. This allows decoupling of the components and prevention of accidental damage to the actuator.

The park brake switch functions will be inhibited.

Service Bay Diagnostics

The following service bay diagnostics are available:

- Data Logger - Time base graphical representation of PID values
- DTC Monitor - DTC retrieval and pinpoint test
- Guided - Diagnosis of individual component
- System / Sub-System test selection menu
- New symptom based test selection menu
- Configuration - Dealer configuration for replacement modules.

On Board Diagnostics

Diagnostic trouble codes (DTC) are provided as follows:

- DTC - Fault code coverage for module inputs/outputs.
- DTC Snapshot - Status capture of relevant parameters when fault code logs.
- Self Test - On Demand Self Test for system functional check.

Service Parts

The following parts will be available to service the parking brake system:

- Actuator assembly - serviced as complete unit.
- Two rear cables - a dedicated service tool is required to release the cable tension.
- Electronic control module.
- Switch assembly and harness link to module.
- Separate park brake calipers on supercharged vehicles.

Chassis (S-TYPE)

Steering System

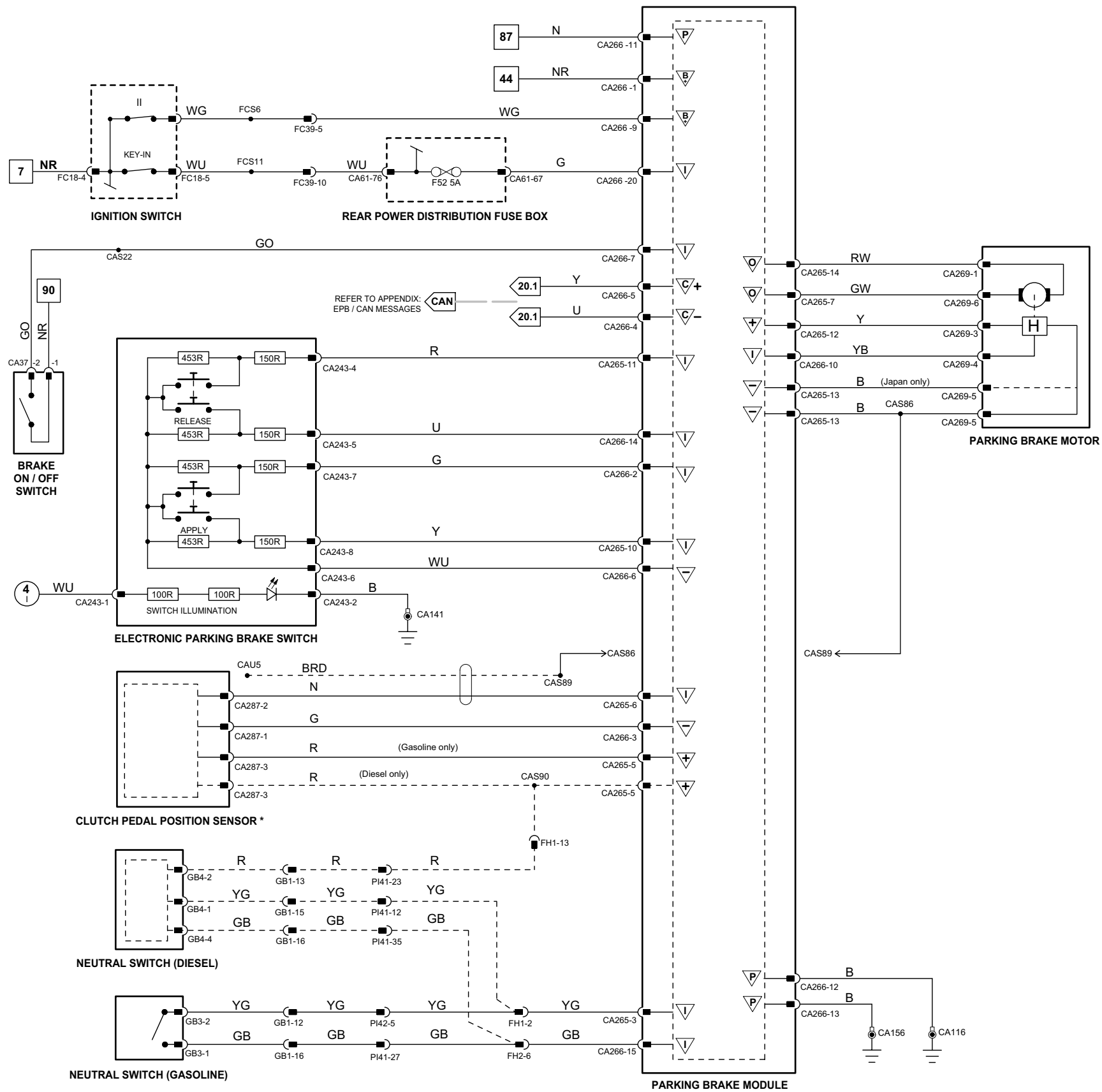
Power Assisted Steering System

The system used is the same as that used on previous models, but with the following change.

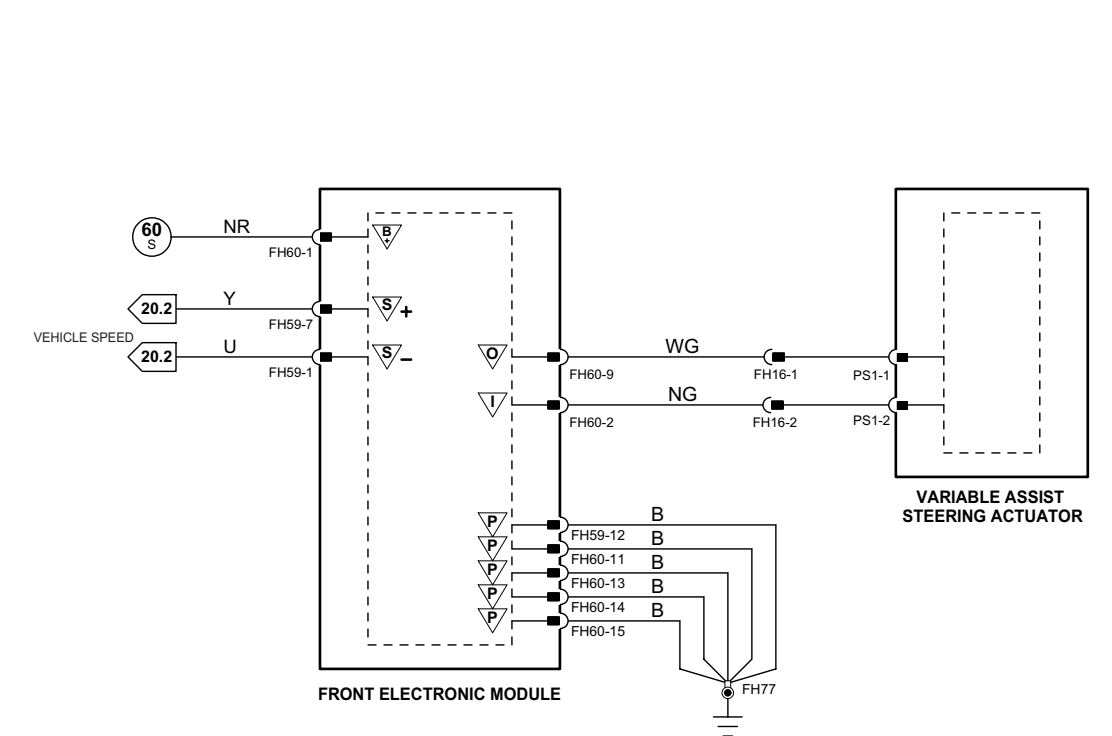
LHD vehicles:

- Electrical transducer rotated by 180°.

The fixings and torque figures are all carry-over.



ELECTRONIC PARKING BRAKE



VARIABLE ASSIST POWER STEERING

NOTE: Neutral Switch and Clutch Pedal Position Sensor – manual transmission vehicles only.
 * Early production vehicles – feature not enabled.

1 → 3 Fig. 01.1	4 → 76 Fig. 01.2	77 → 92 Fig. 01.3	1 → 14 Fig. 01.4	15 → 45 Fig. 01.5	46 → 80 Fig. 01.6	81 → 118 Fig. 01.7	Input	Battery Voltage	Sensor/Signal Supply V	CAN	D2B Network
							Output	Power Ground	Sensor/Signal Ground	SCP	Serial and Encoded Data

VARIANT: All Vehicles
 VIN RANGE: All
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