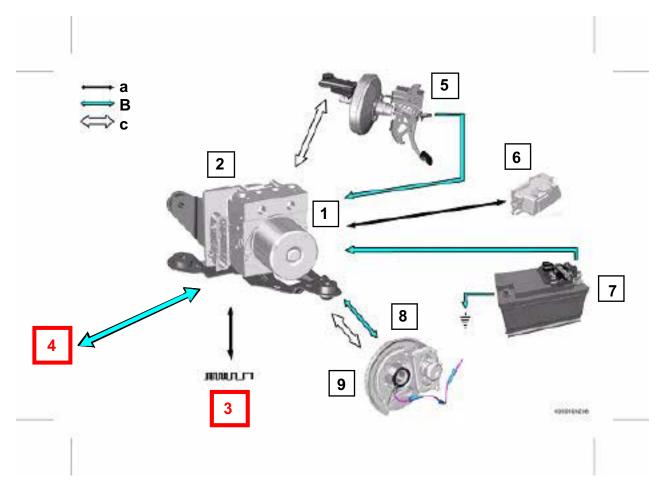
# ANTI-LOCK BRAKING SYSTEM

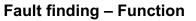
# Fault finding – Functional diagram



Number	Description			
1	Hydraulic unit (8 solenoid valves)			
2	Computer			
3	Instrument panel			
4	Vehicle speed wire connection			
5	Brake lights switch			
6	Diagnostic socket			
7	Battery			
8	Wheel speed sensor			
9	Brake disc and instrumented bearing			

а	CAN network
В	Electric circuit
с	Hydraulic circuit







### ABS (anti-lock braking system):

The **ABS** prevents the wheels from locking when braking. This function allows the vehicle to be steered and ensures vehicle stability under braking.

#### EBD (electronic braking distribution):

The EBD optimises the brake force distribution between the front and rear axles. This function ensures vehicle stability under braking.

#### MSR (anti-lock braking system on engine torque control):

This is a function that enhances the **ABS** performance. It prevents the drive wheels from spinning excessively when the driver's foot is lifted or when changing down gears on a low grip surface, by allowing the engine control to regulate the engine driving torque (resisting torque compensation) to "relaunch" the wheels.

The system also supplies the vehicle speed to the other computers by a wire connection (for the radio for example) and via the multiplex network for the other computers. The **ABS** computer supplies the multiplex network with the odometry for the instrument panel and navigation system. If heavy braking produces very rapid deceleration, the **ABS** computer sends a request to the **UCH** (passenger compartment connection unit) via the multiplex network to ask it to switch on the hazard warning lights (according to the law in the country concerned).

Fault finding – Defect and safe modes



## Fault finding warning lights programming

	Instrume	Meaning			
Brake faults	ABS system	SERVICE	STOP	EBD*	EBD* and ABS function faulty
	ABS system	SERVICE			ABS faulty
Brake faults flashing at <b>2 Hz</b>	<b>ABS</b> flashing at <b>2 Hz</b> (slowly)			EBD* flashing at <b>2 Hz</b> (slowly)	The <b>ABS</b> computer is in fault finding mode
	ABS flashing at 8 Hz (quickly)				Tachometric index not programmed
	ABS flashing at 8 Hz (quickly)				Vehicle speed at initialisation not programmed.
	ABS flashing at 8 Hz (quickly)				Tachometric index and vehicle speed at initialisation not programmed.
Brake faults	ABS flashing at 8 Hz (quickly)		STOP	<b>EBD</b> * flashing at <b>8 Hz</b> (quickly)	Vehicle variant not programmed
Brake faults	ABS flashing at 8 Hz (quickly)		STOP	<b>EBD</b> * flashing at <b>8 Hz</b> (quickly)	Vehicle option and tachometric index not programmed
Brake faults	ABS flashing at 8 Hz (quickly)		STOP	<b>EBD</b> * flashing at <b>8 Hz</b> (quickly)	Vehicle option and vehicle speed at initialisation not programmed
Brake faults	ABS flashing at 8 Hz (quickly)		STOP	EBD* flashing at 8 Hz (quickly)	Vehicle option, tachometric index, and vehicle speed at initialisation not programmed.

Note:

The STOP warning light is always accompanied by a single audible warning (1 beep).

\* EBD: Electronic distribution braking.