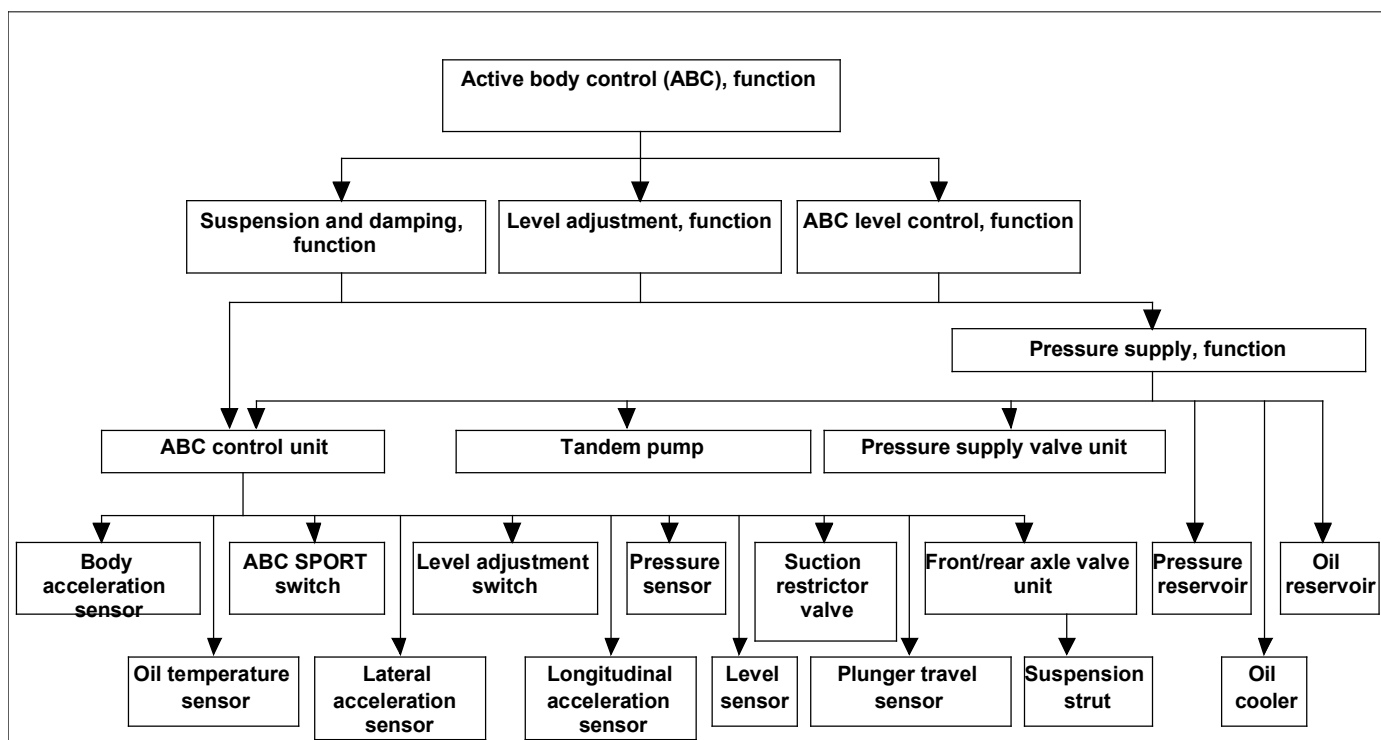


P32.50-2122-79



Active Body Control (ABC) is an active suspension and damping system. The entire static and dynamic load is handled by the four suspension struts located at the wheels. Each suspension strut has a dynamically adjustable hydraulic cylinder (plunger) fitted in series to a coil spring and in parallel to a shock absorber. The hydraulic cylinders move to produce forces that counteract wheel movement.

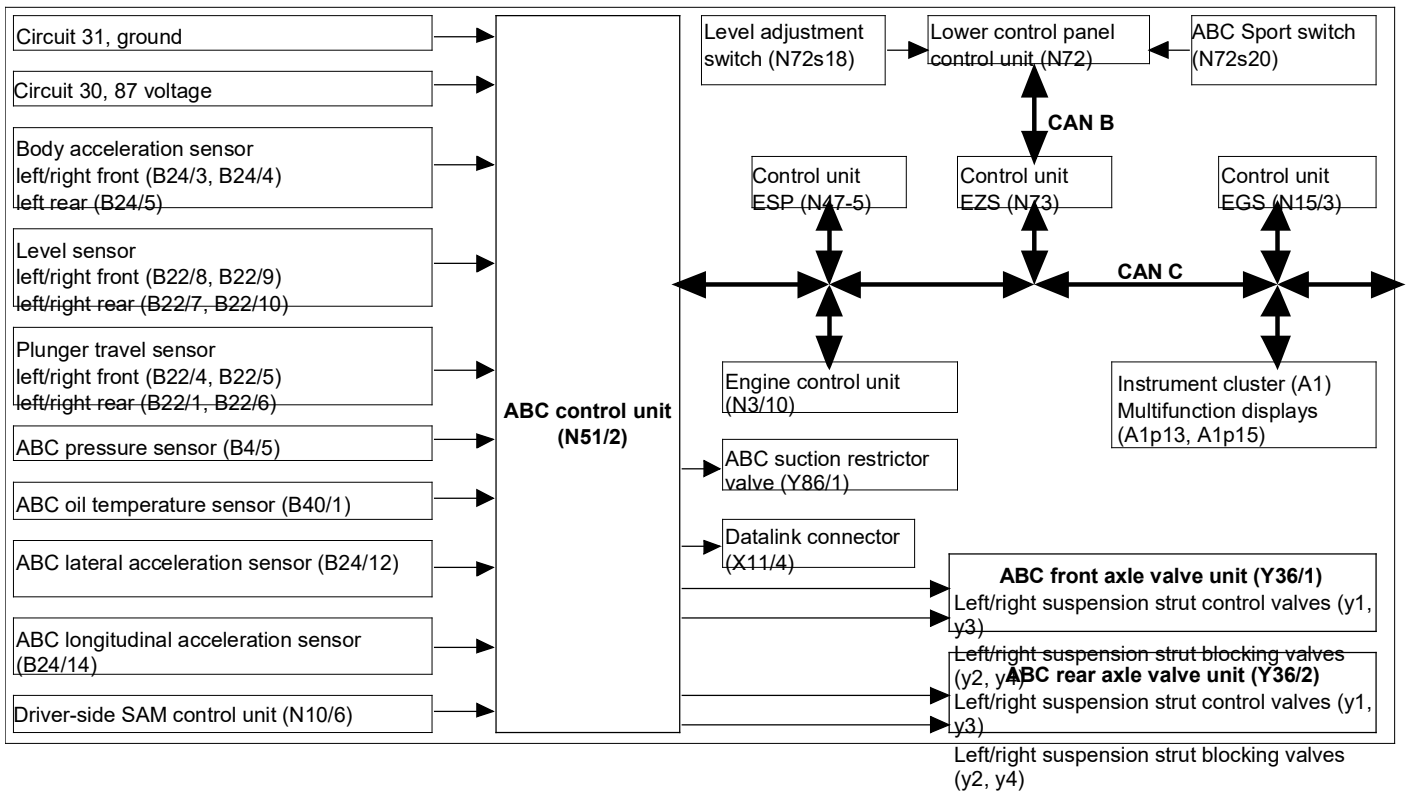
ABC includes the following additional functions:

- **Level control** enables a manual, as well as a speed-dependent automatic raising or lowering of the vehicle level.
- The **level control system** controls the vehicle level at the front and rear axles and ensures the vehicle level remains constant according to the driving and vehicle loading conditions.

Advantages

- Greater driving safety and ride comfort due to:
 - Adaptation of suspension and damping to road surface conditions and driving style.
 - Considerable reduction in vibrations.
 - Decrease in vertical sprung mass vibrations due to the road surface.
 - Reduction in body rolling and pitch motion.
 - Reduction in aerodynamic drag resulting in improved fuel economy.
 Less lift at the front axle.
- The system can be individually adjusted by:
 - Increasing the vehicle level in 2 stages for poor road surfaces or driveways.
 - Setting 2 performance maps for a comfortable or sporty driving style.
- Driver information is provided by:

- Raised vehicle levels and sport performance maps indicated by function indicator lamps in the switches.
- Warning when vehicle level is too low via multifunction display in instrument cluster.



Function overview

The relevant functions of the hydraulic control loops are controlled by the components of the electrical/electronic system.

The ABC control unit receives input signals from the following components:

- ETC [EGS] control unit (via CAN)
- ESP control unit (via CAN)
- Engine control unit (via CAN)
- EIS [EZS] control unit (via CAN)
- Comfort and sport switch (via CAN)
- Level adjustment switch (via CAN)
- Left front SAM control unit (wake-up signal)
- 3 body acceleration sensors
- 2 front axle level sensors
- 2 rear axle level sensors
- 1 plunger travel sensor per suspension strut
- 1 pressure sensor
- 1 longitudinal acceleration sensor
- 1 lateral acceleration sensor
- 1 oil temperature sensor
- Voltage supply and ground

In the ABC control unit, the input signals are converted into output signals for the following components:

- 4 control valves
- 4 blocking valves
- 1 suction restrictor valve
- 2 multifunction displays in instrument cluster
- Indicator lamps in switches: ABC Sport, level control

The ABC control unit decides which control functions have to be operated based on the input signals.

	Active body control (ABC) driver information Active body control (ABC) location of hydraulic components		GF32.50-P-0001-03S GF32.50-P-0001-06SL
	Active body control (ABC) location of electrical/ electronic components		GF32.50-P-0001-07SL
AD	ABC control unit CAN signals		AD32.50-P-2000-04A
	Suspension and damping, function		GF32.50-P-2000A
	Level adjustment, function		GF32.22-P-4005B
	ABC level control, function	Model 230 except	GF32.50-P-4004SR

