

Replacement Brake Calipers (Regulation No. 90)

Brake calipers are parts relevant to safety. To ensure proper operation and full performance according to OE-design, replacement calipers should fulfil minimum standards in terms of:

- Correct functional dimensions (housing and main components)
- Braking performance
- Resistance against corrosion and brake fluid
- Material strength and fatigue behaviour
- Compatibility to ABS and ESP-systems

Non fulfilment of minimum standards might lead to malfunctions within the braking and safety systems. Critical effects on safety are:

- Leakage inside the caliper will result in pressure loss and malfunction of the braking system.
- Insufficient piston rollback leads to malfunction of ABS and ESP systems or in worst-case leads to overheating and damage of caliper, brake disc and pads.
- Failure of the parking brake might cause uncontrolled vehicle movement.
- Poor caliper efficiency due to insufficient clamping force, wrong modules of elasticity or uncontrolled material fatigue will lead to extended stopping distance or malfunction of ABS and ESP-systems.

CLEPA would request that specifications for replacement brake calipers, new and remanufactured, are introduced in the GRRF Work programme and in Regulation Nr. 90.

These specifications would be based on:

- Casting certificate for reverse engineered housings
- Endurance test under several conditions
- Tensile strength tests
- Compatibility test to ABS or ESP-System in terms of dynamic behaviour and tensile strength
- Brake performance (piston rollback and clamping force)
- ... tbd.

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