



# Technical Warning Notice

## **Subject: Manufacturer's brake instructions**

Many machines installed today are gearless with the braking device acting directly on the traction sheave; the brake being CE-marked as it provides important safety functions such as prevention of 'unchecked upwards movement' and 'unintended car movement'. These pose a challenge for maintenance engineers; when facing an unfamiliar brake it is likely that technical details and instructions will be needed.

It is important that anyone working on this equipment understands the operating principle of the brake and is confident how adjustments are made. The most effective way to do this is to use the manufacturer's maintenance instructions. The following is general guidance:

- Safety components (CE-marked) must be maintained in accordance with the manufacturer's instructions to ensure they remain serviceable and to the original design criteria.
- Brake components should only be replaced with original spare parts conforming to the original design. Unofficial spare parts could change the operation/performance of the brake e.g. using different friction material or bonding agent could change the stopping capability of the brake, this may not be immediately obvious but could change dependent on the temperature of the material or brake surface.
- Brakes are often used as 'holding brakes' engaging only after the lift has been stopped by the drive. The brake only STOPS the machine when driven on inspection control or on operation of an electrical safety device. Before riding on inspection control, check the machine's brakes are operating correctly as part of access procedures.
- Lifts with gearless machines are likely to accelerate quickly when the brake is manually opened. Where machines feature dynamic braking, it should not be assumed that this will control the speed or even that it is working correctly (e.g. from a faulty component or temporarily disconnected motor winding). Manual movement of any machine must be controlled by the person operating the brake whether it is power operated or manual in accordance with the manufacturer's instructions.
- Brakes vary in design and operating principle; only adjust a brake where the operating principle and adjustments are clearly understood. Always refer to the manufacturer's instructions, these can be found in the owner's manual.
- Many controllers carry out self-checks to ensure the braking function remains serviceable, these vary from stalled torque checks to simple brake switches monitoring the action of the brakes shoes. These features should be checked as part of maintenance and retained as part of any modernisation.
- If the controller detects an error then it may remove the lift from service. This should be kept in mind when attending such a lift and the fault resolved before returning the lift to service. This type of fault might require a deliberate reset.
- Where automated brake checks are not included, manufacturers typically recommend periodic manual checks, again these inspections will be described in the owner's manual. These inspections should be added to maintenance schedules.