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GARAVENTA

TECHNICAL BULLETIN

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FILE S/L

OVERSPEED SAFETY DEVICE- GSL-1

(ARRESTOR)

On GSL-1 & GSL-3 Stair-Lifts, the arrestor is an overspeed safety device which is designed to stop the lift both mechanically and electrically if an overspeed condition is reached. Although it is extremely unlikely that a GSL-1 or a GSL-3 will reach an overspeed condition, the overspeed device is very important. In fact, removing or disabling the arrestor on a lift will cause a safety hazard and is a serious code violation.

Each overspeed device is tested on a special machine in our factory. The trip speed of the device is tested. This speed is then noted on the test sticker on the pawl. It is important that the overspeed arrestor is **not** tampered with and that the safety switch is not bypassed for any reason. Several arrestor ropes have been seriously damaged because the safety switch was bypassed and so the power was not removed from the motor when the overspeed safety device engaged. This is an expensive mistake because the lower rope may have to be replaced.

There are several reasons why an overspeed system may engage. Unless the cause is removed, the nuisance tripping will recur causing a great deal of inconvenience to the lift users. Frequently the arrestor is activated by objects which are caught in the lower rope. Look for debris such as papers or plastic waste in the area around the arrestor. Run the lift up and down the system to find any foreign matter which will cause engagement of the pawl. On outdoor lifts, look for leaves or twigs. You may be surprised at what you find. Our list includes chewing gum, cigarettes, candy wrappers and parts of a pen.

On older lifts, the normal movement of the pawl is affected by corrosion or wear on the pawl bearing. The lubricant sometimes degenerates to a wax-like, highly viscous paste rather than a lubricant. Any one of these factors may result in activation of the overspeed device.



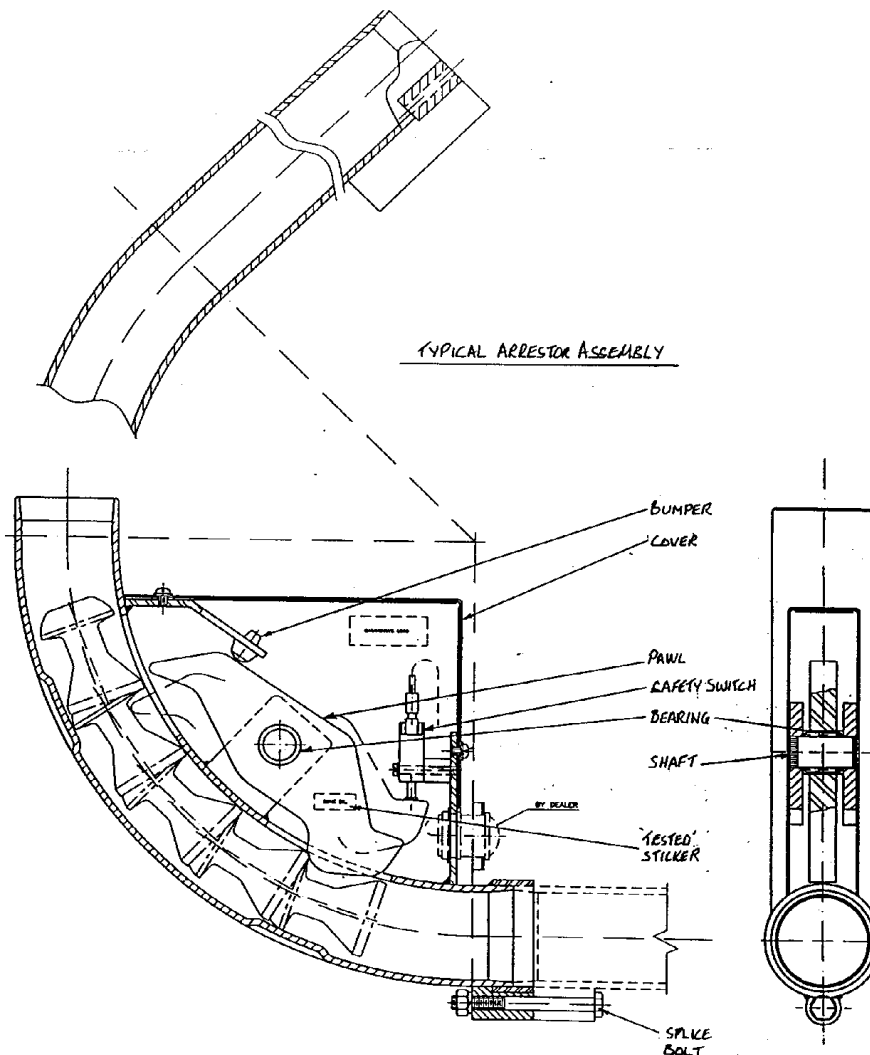
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The pawl should rock back and forth as it follows the moving arrestor (or lower) rope. If you suspect that you may have problems with an overspeed device, try replacing the bearing and cleaning the old lubricant out of the system. Use a good quality gear oil, (grease is too viscous) and check the operation at least twice a year. Make sure that, in the event of tripping, the safety switch is activated. Do **not** check this by setting the arrestor during travel, as this causes unnecessary stress to the entire drive system. Instead, disconnect power from the unit and engage the arrestor while your assistant carefully hand cranks the unit in the down direction. Again, be careful not to damage the lower rope. Then check that the safety switch is activated.

A well maintained overspeed safety system will provide years of trouble free operation. Include arrestor maintenance as part of your regular service of the stair lift. You will save yourself and your customer a lot of time and money.



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