

News & Facts

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Usual causes of Winkhaus locks being broken

Broken Gearbox

This type of failure is can be caused when a lock has been subjected to extreme abusive loads. As a result of this it has caused either the central gearbox to burst open or components inside to break.

Most of the common causes can be identified by inspection of the gearbox function.

Please note - If a gearbox is opened without Winkhaus UK Ltd permission, all warranties are void.

Burst Gearbox

This type of break can be identified by looking at the rear of the gearbox. When the gearbox bursts the rear plate will be pushed apart (Fig 1). In more severe cases gearbox components will push out of the gearbox completely (Fig 2). This failure is seen when a door has been closed and locked then the handle is forced in attempted entry i.e. burglary attempt.

Spindle casting

A spindle casting failure can be identified when the casting breaks (Fig 3). This failure is seen when a door has been closed and locked then the handle is forced in attempted entry i.e. burglary attempt.

Spring Cassette

This component (Fig 4) provides the spring in the handles when throwing hooks. They can break if the loads needed to throw the hooks are significantly increased. The most common cause of this problem is fitting/installation. If the keeps are not properly adjusted, the door drops or the air gap is incorrect the hooks barb or rub against the keeps increasing the loads required to fully throw the hooks and enable locking. Where this fault occurs the door installation should be checked.

As this component is not visible, identification can be established when lifting the handles to throw the hooks. The handle will lift but the hooks do not throw.







Fig 2.



Fig 3.



Fig 4.



Winkhaus Locking systems comply with the PAS23 standard as a minimum. This includes a 50,000 cycle test under a maximum load of 10KG on a standard handle. This means that if a lock is operated on average 10 times per day, 50,000 cycles is 5000 days or 13.70 years.

Our locks are actually tested to DOUBLE the PAS23 requirement i.e. 100,000 cycles under the same load pressures.

The central gearbox is designed to break fail secure at 50 NM or 50KG (one hundredweight) on a standard handle which is 5 times the requirement of PAS23.

Hooks out of Synchronisation

This problem can be seen when one hook is out (Fig 5), when the deadbolt and other hook(s) are in the unlocked position. The lock will then not lock fully as the hook jams the mechanism. There can be many reasons for this to occur including door installation, transport, handling and storage.

On Trulock[™] this issue is not seen, as a rack and pinion system is used on the hook mechanism. On Cobra[™] and Thunderbolt[™] there are now two driving tabs in place instead of the original one.

Rivet Casting Snapped

The hook and gearbox are held in position by two rivets which go through a casting on the rail to hold it in position. This casting can snap causing the hook box to push away from the rail as shown to the right (Fig 6). It has been determined that the cause of the "snapping" is transit damage, especially where doors have not been packed correctly between sash and frame. In addition Winkhaus have changed our packaging method and the casting now has a steel pin running through it which will provide more resistance to fracturing.

Other Reasons for Malfunction

Please be aware that there can be other issues that can occur but the reasons are harder to determine, so investigation at Winkhaus is needed. Any additional information such as order numbers, date of fitting, description of the breakage, will allow us to process all returns more accurately.



Fig 5.



Fig 6.