

DECROBOND

TROUBLESHOOTING

Troubleshooting door malfunction

Malfunctions arise from a variety of causes. It is important that these be corrected promptly to minimize damage and avoid any compromising of safety.

Binding

The most common malfunction is a loss of operating gaps that result in door leaves sticking or failing to close correctly. It may be that the leading edge binds on the doorframe or at meeting edges of double leaf doors. Often the bottom edge of a door will bind on the floor.

The causes of and suggested remedies for this can be as follows:

Defect	Probable Cause	Remedial Options
Swelling of door components due to moisture intake	Moisture content in the building is too high	Reduce humidity. Do not adjust doors unless essential until the moisture content is stable at 12% (for internal use)
Hinges have worked loose allowing door leaf to fall away from the hanging jamb	Stressing caused by racking or blocks put in hinge side rebate to hold doors open Wrong size screw fixings Not all screw positions have been used	Remove obstructions Tighten fixing screws. If necessary increase the screw size. Replace is defective Provide restraint to prevent racking
Hinges have worn allowing door leaf to drop	Hinges are not to the correct BS EN 1935 class for the application	Check that the background is stable and that it will support the lateral load. Re-pack at fixing positions particularly at the bottom, until the door leaves hang correctly. Re-fix doorframe.
Doorframe jambs have spread at the bottom allowing the leading edge of the door leaf/leaves to drop	Door leaf weight may cause compression of packing or stud due to the effect of lateral load at the bottom hinge position	Check that the background is stable and that it will support the lateral load Re-pack at fixing positions particularly at the bottom, until the door leaves hang correctly. Re-fix doorframe
Doorframe fixings are loose	Racking exerting leverage on doorframe fixings Over-drilling or breakout of fixing positions Impact from wheeled loads	Re-pack and correct the hang of the door leaf. Tighten fixing screws and if necessary replace failed plugs or make new fixing positions Provide restraint to prevent racking. Provide protective rail / guards to deflect wheeled traffic away from the door frame
Door leaf binding on floor	Floor covering may be over planned thickness Possible high spot in screed within the arc of the door Doorframe not set plumb	Re-fix the door as necessary. Packing under frame jambs may raise the door sufficient to clear obstacle
Binding and none of the previous apply	It is possible that the edge gap has been set too fine	Adjust the gap by deepening or moving the hinge recess/es in the door frame or leaf Bevel closing stile to maintain a minimum gap on the hinge knuckle face

Note: The edges of door leaves should not be planed or otherwise modified unless it is impossible to correct the fault by other means. If door leaves are adjusted, any Intumescent and smoke seal that is damaged will have to be replaced.

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Oversize gaps

Operating gape may become enlarged and may exceed the range permitted by specifications and test and assessment reports.

The causes and suggested remedies can be these:

Defect	Probable Cause	Remedial Options
What no smoke or acoustic seal is present: Gaps in excess of range permitted by test / assessment reports.	Shrinkage of door components, packings and timber grounds, studs or subframes.	Pack out behind hinges. If necessary re-pack and re-fix doorframe. Re-lip (by manufacturer) and replace seals.
When smoke or acoustic seal is present: Any visible gap.	Shrinkage or disturbance caused by impact. Seals have worn or have become permanently compressed. Extend pivot centre hanging devices.	Pack out behind hinges. If necessary, re-pack and re-fix doorframe. Replace seals with new or larger. Profile closing stile of leaf to suit closing arc of door.

Note: The edges of door leaves should not be planed or otherwise modified unless it is impossible to correct the fault by other means. If door leaves are adjusted, any Intumescent and smoke seal that is damaged will have to be replaced.

Failure to close

In addition to closing failure caused by loss of operating gaps, other defects can develop or become apparent.

Defect	Probable Cause	Remedial Options
Hinge binding resulting in the door leaf tending to spring open.	Hinges have not been sufficiently recessed. The doorstop is too tight on the closing face of the door leaf at the hinged edge.	Modify fitting of hinges. Adjust position of doorstops. Reset hinge positions when doorframe has an integral doorstop.
Door leaves twisted, bowed or cupped.	Twist caused by hold open device that is not level with the closing force. Hygrothermal differences on faces.	Remove the cause; the door leaf may return to a flat condition. If not, replace the door leaf. Relkocate hold open device. Reduce effect by relocating hinges.
Door leaves fail to latch.	Closer failing to overcome resistance of latch or seals. Latch bolt and keep plate may have become misaligned. Door bolts may not be engaged. Misalignment of door bolts and sockets.	Adjust closer speed and latching action. If necessary, fit larger closer. Change seals. Reposition keep plate. Ensure that users engage bolts at top and bottom of door leaf. Realign bolts with sockets by adjustment of the doorframe fixings.
Binding of smoke or acoustic seals when none of the previous problems apply.	It is possible that the leading edge gap has been set too fine. Seals may be broken or disrupted by wear due to incorrect fitting.	When applicable, modify retaining grooves to suit. The seals, if in good condition, may be refitted. Fit smaller seals. If damaged, seals should be replaced with attention to correct fitting and cause of destruction.