



Marine Safety Forum – Safety Flash 08-08

Issued: 11th February 2008

Subject: Heavy Doors in Heavy Weather

A seafarer crushed one of his fingers in a fire door and had to be airlifted ashore for treatment.

The injured party (IP) was going to the laundry, accessing it through two fire doors. The weather was worsening, and at the time of the incident the sea state was 3.5 metres with the wind was blowing approximately 36 knots.

The IP opened the first door and stepped through. As he took his hand off the outside handle to put it on the inside handle, the door started to shut suddenly and he was unable to hold it back. His finger was fractured when it was caught between the door and the door frame.

There are some misconceptions concerning the closure units on doors, the first of which is that they should close gently. This is not true and means adjustments are being made to them unnecessarily and, in most cases, incorrectly. Doors need to close securely, and on a rolling ship this will necessitate a fairly heavy closure. They should close slowly (closing speed) up until the last few inches or so and then close fairly heavily to ensure that they are closed securely (latching speed). It is important to remember this if you are approaching a closing door.

The second issue is the fact that people think the arm of the door should be adjusted in order to adjust the closing speed. This is also incorrect as the arm is set up when the unit is fitted and should not need to be adjusted. There are many different types of closing units and the main ones are covered here. Basically, there are screws either at the end of the unit or at the front. There can be anything from two to five screws which are used to adjust the different closing cycles. These are:

Closing Speed

This is the speed that the door will initially close until it gets to the latching point which is, as stated previously, approximately 2-3 inches from the fully closed position. Generally, the screw is turned a full clockwise turn to slow the closing speed, and a full turn anti-clockwise to speed this up.

Latching Speed

This is the speed that governs the final part of the closing mechanism which is the last few inches. Once again, it is a full turn clockwise for a slower latching speed and a full turn anti-clockwise for a faster latching speed.

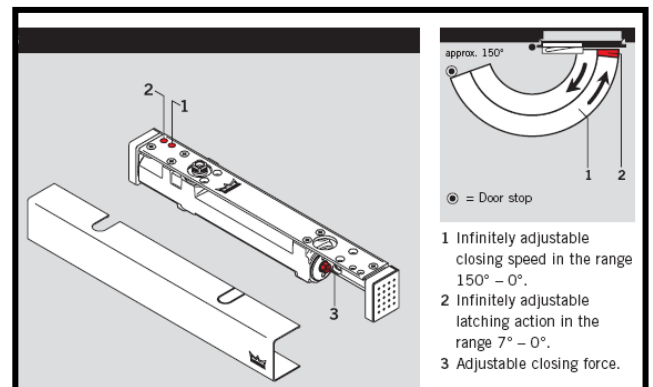
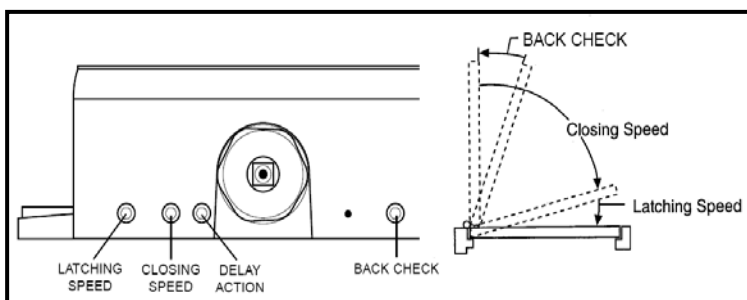
Delay Action

Some door closures have what is known as a delay action. This is basically the delay from the time that the door gets to the latching position and the time when it closes. Turn the screw one full turn clockwise to increase the delay and one full turn anti-clockwise to reduce the delay time.

Back Check

Turn the back check adjusting valve clockwise to reduce the opening capacity. This function is to avoid the door, handle or door closer coming in contact with a wall, etc.

This is a guide only and some may be on the top, some on the bottom or sides. With the Dorma unit, you may need to remove the cover but it has nothing to do with the arm.



Root Causes:

- Faulty dampening system due to slight leak, making the door close more violently than it should have.
- Worsening weather conditions. The vessel followed best practice by heading into the weather, turning and running with the weather. This minimizes side-to-side movement and allows the vessel to 'ride' the waves, but would have increased the weight of doors when being used.

Actions Taken:

- Inspect all door closure units and report any faults
- Try to identify what types of units you have onboard and identify the adjusting screws
- Take into account weather conditions when moving about the vessel