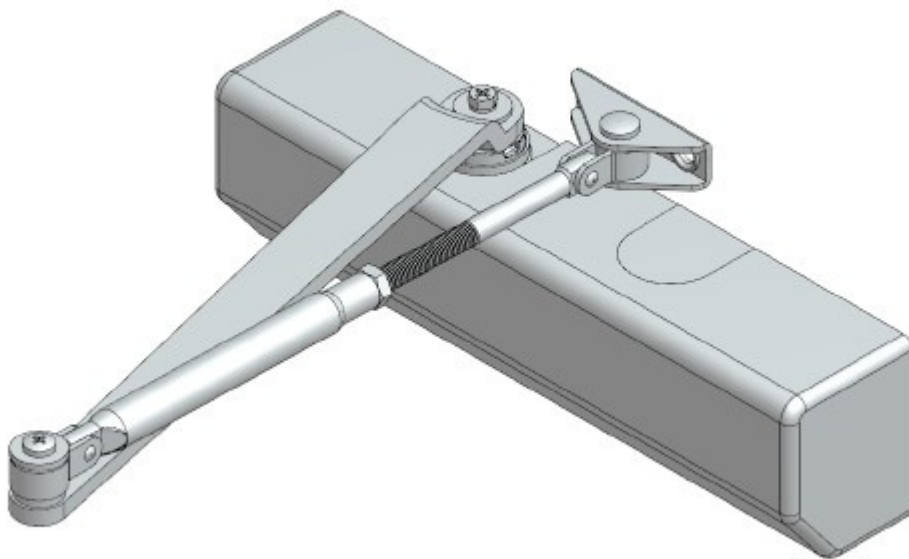



# Retrofit instructions - Ryobi D-2550BC door closer



## Introduction

This document describes procedure for retrofitting of Ryobi closer D-2550 (Stannah part number 513352) to steel frame door & wooden fire door. Required steps for each are described as Section A & Section B following, respectively.



**Note:** Do not make any alterations to door closer adjustment screws until directed in the instructions below; this is important to ensure that the correct closing & opening forces are achieved without the need to make measurements.

This document is part of a 'retrofit kit', Stannah part number 6104110. One kit is required for each door to be retrofitted; the kit provides sufficient parts for any applicable door type.

Parts supplied as fitting kit:

Item	Stannah part number	Qty
Nutsert	500018	4
Screw M5 x12 TX25	501565	2
Screw No.10 x 1/2" pan head self tap pozi	502248	2
Door closer	513352	1
Retrofit instructions (this document)	513353	1

## Section A: Retro fit of Ryobi D-2550BC to steel frame door

### Tools required

In addition to general purpose hand tools, the following items will be required to carry out the retrofitting of the replacement closer on a steel frame door:

- Nutsert hand tool, or drill bit diameter 4.2mm & M5 tap
- Drill bit diameter 7.2mm
- Drill
- Torx security bit TX25

### Introduction

The replacement closer & existing unit fitted to the steel frame door (Ryobi D-8803, Stannah # 500127) are similar in appearance; the replacement unit however has "power" adjustment (aka 'spring adjustment'), in addition to the usual speed controls (2 off) & "back check". Additionally, it's mounting position on the door is different to the unit it replaces.

### Required actions

Steps to fit the new closer are described in generic terms in the instruction leaflet provided with the closer unit. However, all details are not explicit, so a full description of the process to be followed is described following.

1. Remove existing closer
2. Mark out position on door leaf for closer body & on door frame for closer footplate. All fixings should preferably be made with nutserts, but if appropriate tool is not available, it is permissible to affect fixings by drilling diameter 4.2mm holes, & then tapping M5. Drilling

positions are shown in sketches provided as Images 1 & 2 below. Note that on the door leaf, only two holes are required to be drilled (A, Image 1), since 2 off nutserts (B, Image 1) already exist. Images 1 & 2 illustrate positions for left hand hinge door, & so horizontal dimensions shall be reversed for right hand hinge.

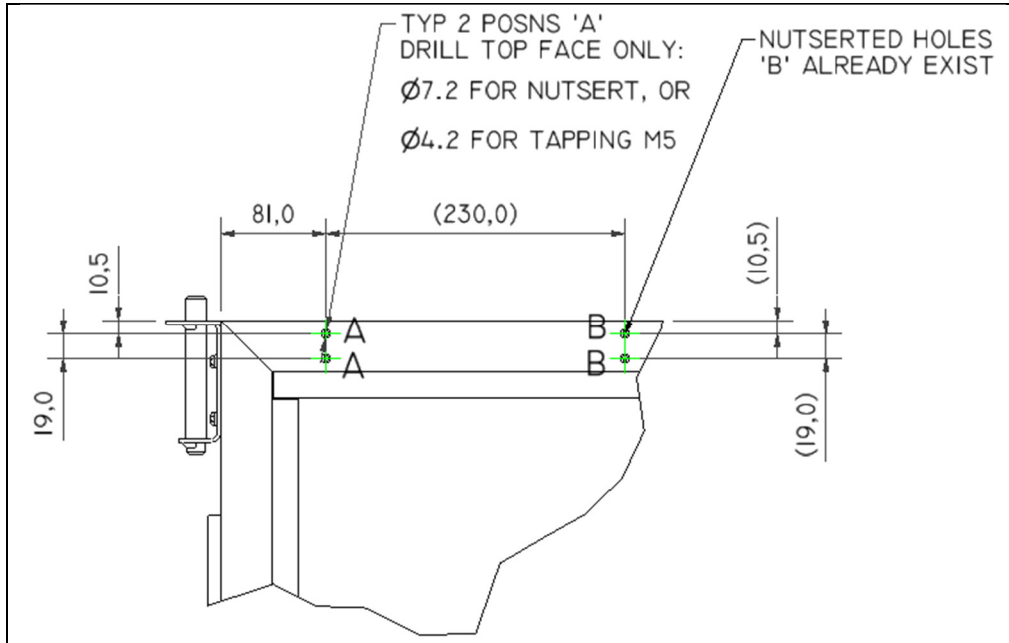


Image 1: Drilling, door leaf

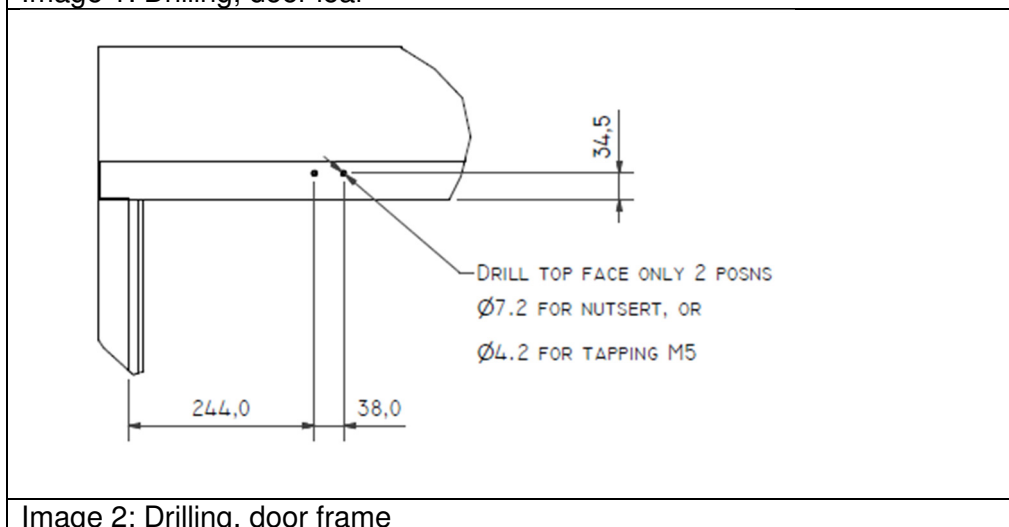


Image 2: Drilling, door frame

3. With mounting holes drilled & nutserts fitted (or drilled & tapped), proceed to fit the closer, noting these details:

- Closer body to be positioned on the door with the pivot of the closer closest to the door hinge, & with the arm set at 90 deg to the door face – Image 3 illustrates this for a door with LH slam
- orientation of the footplate - to be positioned in the “standard position” orientation as described in the fitting instructions, & an extract of which is shown as Image 4
- Closer link arm (arm which has its length adjustable) to be set such that distance between its pivot centres is 252mm

4. Adjust setting screws as indicated in the table below; by means of testing these were found to give optimum performance, balancing minimal opening force & still achieving reliable closing action. *Do not* make any further adjustments, at this stage. For ease of reference, identification of the setting screws are shown in Images 5 to 7 (all images extract from the fitting instructions)

Power (spring adjustment)	Latch speed	Door speed	Back check
4 turns ACW	1 turn ACW	none	2.1/2 turns ACW



**Note:** The reason requiring use of this closer is that opening force on the existing unit has been shown to exceed the maximum permitted value of 40N described in EN81-41; closing force (& consequently opening force) is controlled primarily by the “power” adjustment & so to achieve the required value, bearing in mind installers are not equipped to measure the opening force, it is important that the specified screw adjustments only are set.



Image 3

<p>Image 4</p>	<p>Image 5: "Power" adjustment screw</p>
<p>Image 6: speed adjustment screws</p>	<p>Image 7: Back check adjustment screw</p>

5. Check for satisfactory operation: door should close smoothly & reliably. If for any reason door operation is not satisfactory then as a last resort, minor adjustment of speed setting screws (Image 6) may be attempted. Under no circumstance shall any further adjustment be made to the power setting. If any adjustment is undertaken, it is important to keep count of adjustments to each screw, & document them on the test sheet.

6. Fit 2 off M5 screws provided in retrofit kit to redundant holes in door frame. Note that there no visible redundant holes in the door leaf.

7. *Do not* fit the plastic cover supplied with the door closer; this item should be discarded together with unused fixings.

8. Retrofitting is now complete.

## Section B: Retro fit of Ryobi D-2550BC to wooden fire door

### Tools required

In addition to general purpose hand tools, the following items will be required to carry out the retrofitting of the replacement closer on a wooden fire door:

- Nutsert hand tool, or drill bit diameter 4.2mm & M5 tap
- Drill bits diameter 7.2mm & 3.8mm
- Drill
- Torx security bit TX25

### Introduction

The replacement closer & existing unit fitted to the fire door (Ryobi D-1554BC, Stannah # 500298) are similar in appearance; the replacement unit however has “power” adjustment (aka ‘spring adjustment’), in addition to the usual speed controls (2 off) & “back check”. Additionally, it’s mounting position on the door is different to the unit it replaces.

### Required actions

Steps to fit the new closer are described in generic terms in the instruction leaflet provided with the closer unit; however, all details are not explicit, so a full description of the process to be followed is described following.

1. Remove existing closer
2. Mark out position on door leaf for closer body & on door frame for closer footplate. Fixing in to door frame should preferably be made with nutserts, but if appropriate tool is not available, it is permissible to affect these fixings by drilling diameter 4.2mm holes, & then tapping M5. Fixings in to the door leaf are made using self tapping screw provided with the door closer, & by means of pilot holes (drill diameter 3.8mm x 25mm deep). Drilling positions are shown in the instruction leaflet provided with the closer, & in extract shown as Image 8 below. Note that Image 8 shows positions for left hand hinge door.

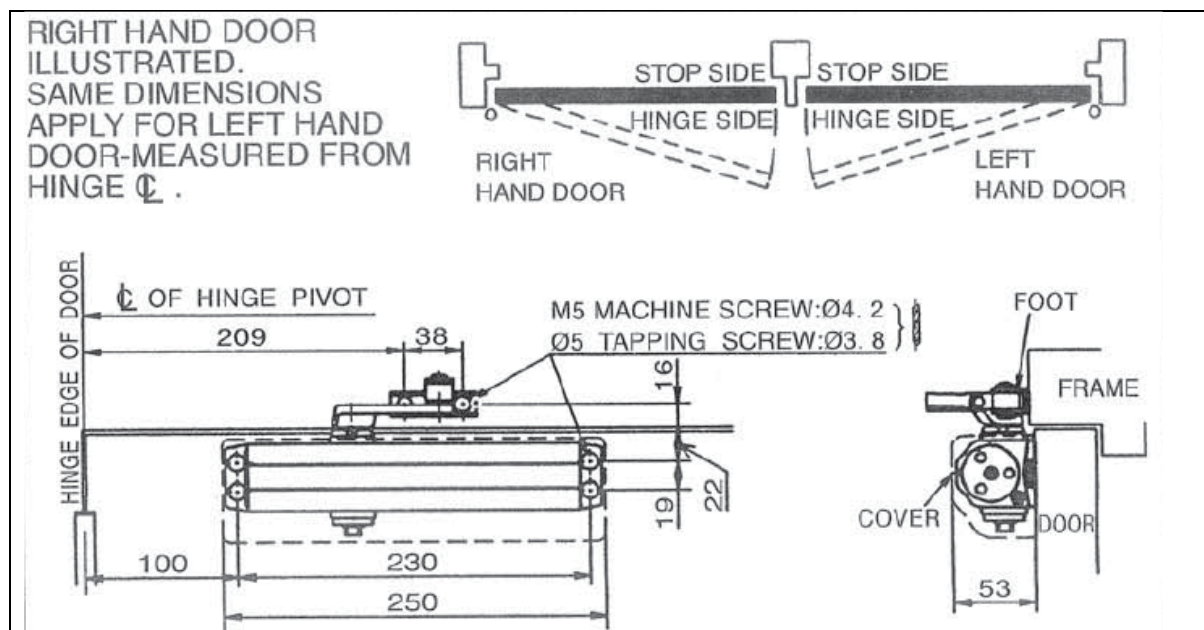


Image 8

3. With mounting holes drilled & nutserts fitted (or drilled & tapped), proceed to fit the closer, noting these details:

- Closer body to be positioned on the door with the pivot of the closer closest to the door hinge, & with the arm set at 90 deg to the door face – Image 3 illustrates this for a door with LH slam
- orientation of the footplate - to be positioned in the “standard position” orientation as described in the fitting instructions, & an extract of which is shown as Image 4
- Closer link arm (arm which has its length adjustable) to be set such that distance between its pivot centres is 252mm

4. Adjust setting screws as indicated in the table below; please do not make any further adjustments, as these settings have been found to give the best balance of minimising opening force & still achieving reliable closing action. For ease of reference, identification of the setting screws are shown in Images 5 to 7 (all images extract from the fitting instructions).

Power (spring adjustment)	Latch speed	Door speed	Back check
4 turns ACW	1 turn ACW	none	2.1/2 turns ACW



**Note:** The reason requiring use of this closer is that opening force on the existing unit has been shown to exceed the maximum permitted value of 40N described in EN81-41; closing force (& consequently opening force) is controlled primarily by the “power” adjustment & so to achieve the required value, bearing in mind installers are not equipped to measure the opening force, it is important that the specified screw adjustments only are set.

5. Check for satisfactory operation: door should close smoothly & reliably. If for any reason door operation is not satisfactory then as a last resort, minor adjustment of speed setting screws (Image 6) may be attempted. Under no circumstance shall any further adjustment be made to the power setting. If any adjustment is undertaken, it is important to keep count of adjustments to each screw, & document them on the test sheet.

6. Fit screws provided in the retrofit kit to redundant holes:
- 2 off M5 x12 TX25 into nutserted holes in door frame
  - 2 off No.10 x 1/2” pan head self tap pozi in door leaf (Note that 2 off original holes used by ‘old’ closer in the door leaf are covered up by the new closer)

Image 9 shows a typical finished installation.



Image 9

7. Fit the plastic cover supplied with the door closer over the closer body (see Image 9)
8. Retrofitting is now complete.

#### Document properties

Property	Value	Comment
Part number	513353	(to facilitate entity on kbm)
Source document	Vault\$\Stannah Lifts\Midilift SL\Technical Documents\513353.docx	
pdf stored	LiftsGeneral\$\DWF\513353_Rev%.pdf	where % is latest version – see 'Modification history' below

#### Modification history

Rev	Issue Date	Name	Changes
0	07/07/21	Colin Dibley	Initial release. ECN A6643.