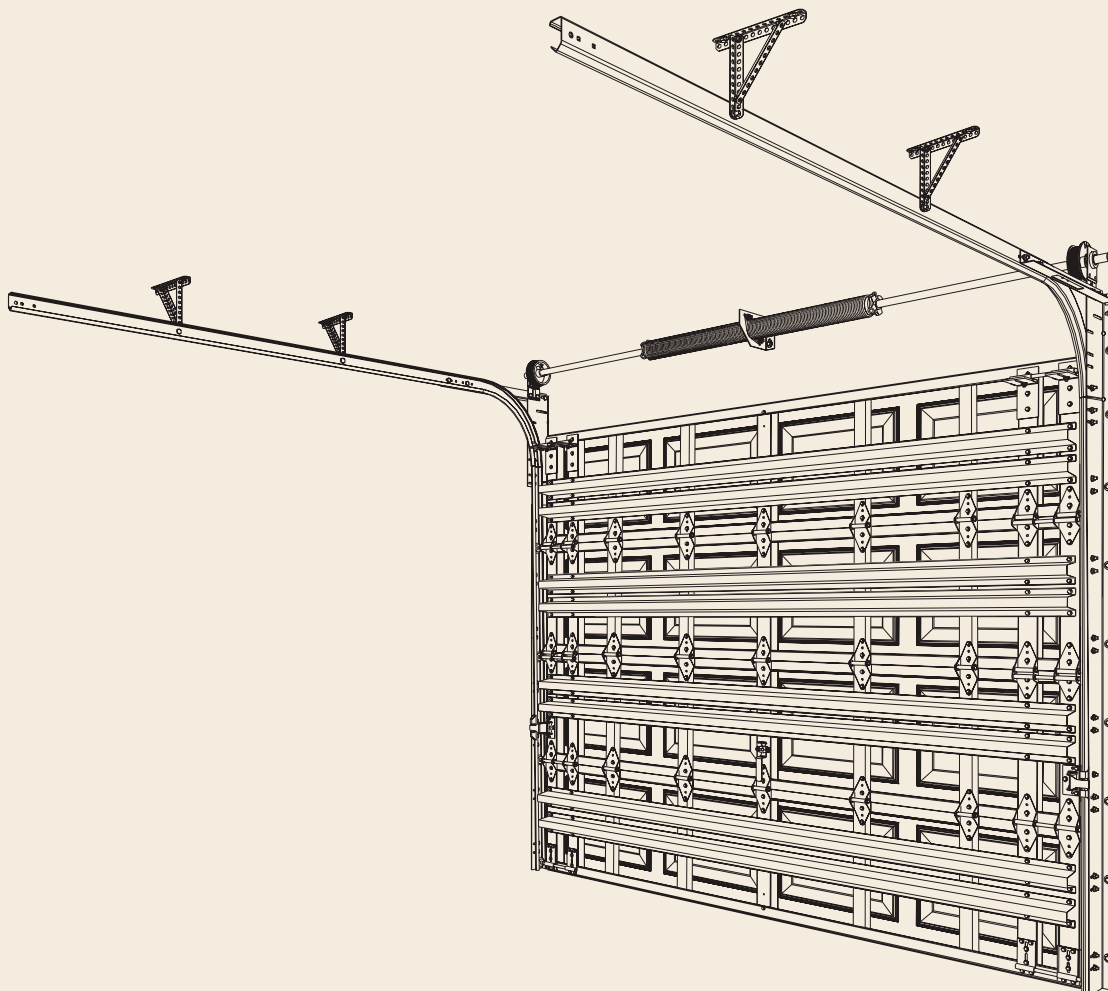




Panelift[®]

WINDPANEL[™] WTG **Including Tracklock Wind Brace and Storage Rack** INSTALLATION INSTRUCTIONS



DISCLAIMER

**THESE INSTRUCTIONS ARE INTENDED FOR
PROFESSIONAL GARAGE DOOR INSTALLERS**

Note: All references are taken from inside looking out



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When installed correctly this product has been deemed to comply with AS1170.2 and AS4505:2012 cyclonic areas. This has satisfied the cyclic test criteria specified for both net outwards and inwards pressure, based on the criteria listed in the Wind Pressure table for region C and D terrain category TC2

1.0 BEFORE YOU START

1.1 SAFETY CHECKLIST

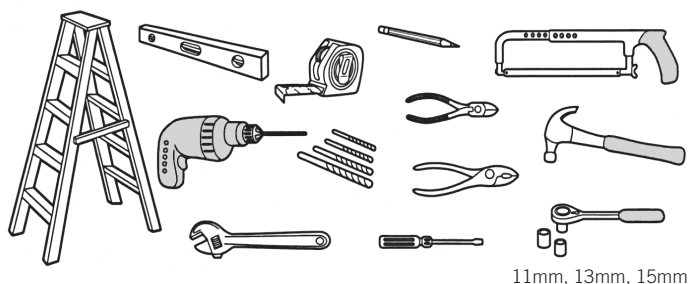
The following hazards and hazard controls have been identified for installers during the installation of this door.

Hazard	Control
<ul style="list-style-type: none"> Housekeeping - risk of slip trip or fall Housekeeping - risk of injury to other people or animals in the installers work area 	<ul style="list-style-type: none"> Tidy up site prior to start work as a minimum area should be at least the area of the installation back into the garage and 2 metres in front If the Site housekeeping is deemed to be unsafe do not install the door Keep all people well clear of installers work area with appropriate signage and discussion with owner
<ul style="list-style-type: none"> Manual handling when moving the door from the Trailer or Ute to the installation area - risk of musculoskeletal injury Manual handling when installing Doors & Openers particularly above head height - risk of musculoskeletal injury or twisting Manual handling when installing tracks and torsion bars - risk of musculoskeletal injury 	<ul style="list-style-type: none"> Pack sizes Use of 2 person lifts Use of mechanical aids Avoid twisting (Practice correct lifting techniques) Correct use of ladders while installing tracks
<ul style="list-style-type: none"> Working at heights and working with ladders - risk of fall from height 	<ul style="list-style-type: none"> Ladder check Ladder placement Do not work off the top rung
<ul style="list-style-type: none"> Sharp edges on door, tracks or related jewellery - risk of laceration 	<ul style="list-style-type: none"> Wear appropriate PPE (Dyneema cut off Gloves) Follow instruction explicitly particularly for the installation of windows in some panel doors as the unrolled cut out edges presents a very sharp edge
<ul style="list-style-type: none"> Pinch points - risk of cut, puncture or crush injury 	<ul style="list-style-type: none"> Wear appropriate PPE and keep hands well clear of pinch points Ensure hands well clear of the panels
<ul style="list-style-type: none"> Use of hand tools - risk of eye injury, laceration, cut, stab or puncture injuries (Tools checklist) Use of Electric/ Battery or pneumatic tools - noise hazard Use of cutting tools creating sparks - risk of fire 	<ul style="list-style-type: none"> Wear appropriate PPE and utilise operators manual Use appropriate noise/hearing protection in the form of ear plugs or ear muffs Ensure appropriate fire protection available and housekeeping to ensure that flammable liquids or materials are removed from the area of work
<ul style="list-style-type: none"> Tension spring - risk of release of stored energy (striking installer on the head or body) 	<ul style="list-style-type: none"> Ensure correctly fitting winding bar is used Ensure the correct length winding bar is utilised Ensure winding bar is placed appropriately in the torsion socket plug Ensure correct bolts are tightened or loosened (or clamp pliers) to ensure there is no release or controlled release of energy from the spring either through the torsion bar or the winding bar Keep hands clear of the torsion plug at all times Keep head clear of the tensioning bar at all times

1.2 TOOLS CHECKLIST

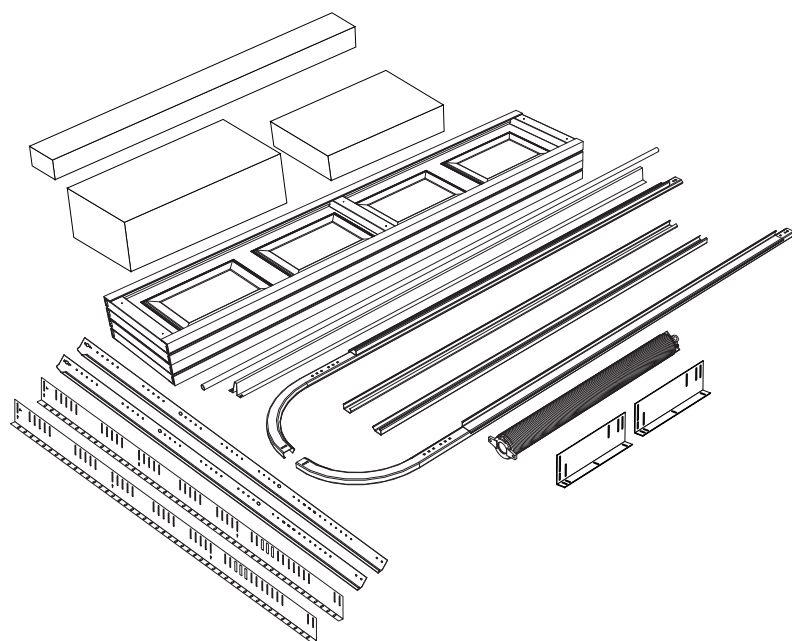
A comprehensive tool kit is required which should include these items:-

- Hammer
- Spirit level 1200mm/water level 7-8 metres (clear hose)
- Measuring tape
- Extension lead
- Step ladder
- Speed drill
- Impact drill
- Comprehensive set of steel and masonry drill bits
- Hack saw
- Open end adjustable spanner
- A set of open end spanners
- Socket set and speed brace
- Set square
- Wood chisel
- Steel chisel
- Cutting knife
- Wood and steel punch
- Screw driver set
- Pliers
- Tin snips
- 2 vice grips
- Felt tip pen & pencil
- 2 winding bars OT2457 or OT2458



1.3 PARTS CHECKLIST

FIGURE 1.3.1 PARTS CHECKLIST



NOTE: Not all parts are required for all door sizes and all regions:

- 1 x Panel pack
- 1 x Torsion shaft
- 2 x Tracks straight
- 2 x Tracks curved
- 2 x Tracklocks
- 1 or 2 reinforcing for each panel
- 1 or 4 springs
- 1 x small parts box
- 1 or more brace rack boxes (optional)
- 1 - 4 brace boxes
- 1 - 4 brace parts boxes

NOTE: Ensure the order numbers on each item match.

REGION	DOOR WIDTH	REINFORCING	BRACE	TRACKLOCK
C	1800mm > 3100mm	2 to each panel	NO	YES
C	3105mm > 3400mm	1 to each panel	1	NO
C	3405mm > 6150mm	1 to each panel	2	NO
D	1800mm > 2200mm	2 to each panel	NO	YES
D	2205mm > 3400mm	1 to each panel	2	NO
D	3405mm > 4300mm	1 to each panel	3	NO
D	4305mm > 5500mm	1 to each panel	4	NO

1.4 CHECKING MEASUREMENTS

Before unpacking the door, check that the door width is furnished to that of the door opening plus 60mm. Also measure one panel height and multiply by the number of panels to give you the door height.

For Standard Installations

Sideroom	120mm	
Headroom	340mm	(add 50mm for automatic opener) (or 5 panel high doors and doors wider than 5500mm wide) (add 50mm for ceiling brace adapter)

For Low Sideroom Installations

(with or without automatic opener)

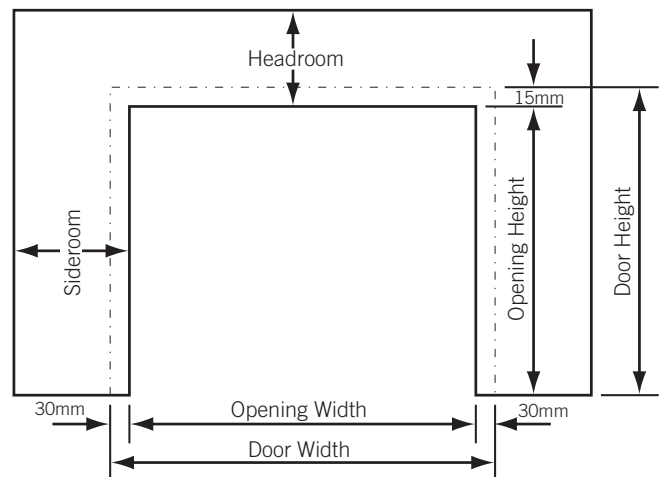
Sideroom	Add 90mm (not recommended)
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For Rear Torsion Installations

(not available for Tracklock system)

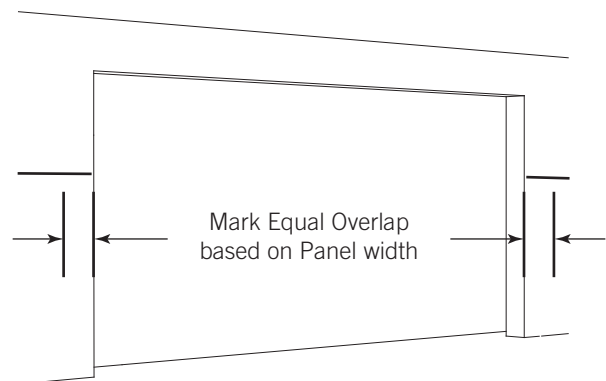
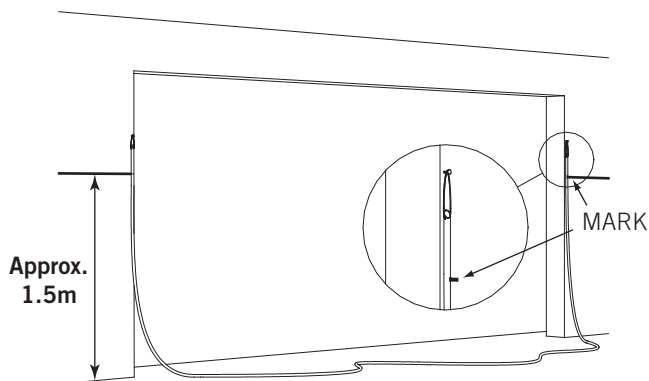
Sideroom	155mm	(doors up to 15m ²)
	295mm	(doors greater than 15m ²)
Headroom	190mm	(doors to 5500mm wide) (add 50mm for automatic opener)
	200mm	(doors over 5500mm wide) (add 50mm for automatic opener)

For low headroom installations involving large doors, Rear Torsion becomes a viable alternative when the radius of cable drums and spring gear becomes large enough to start impacting on headroom.

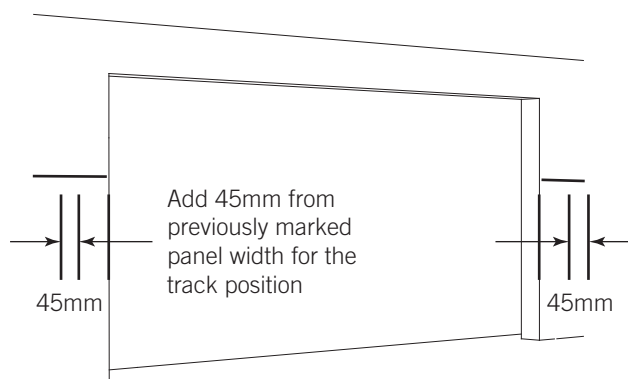


1.5 CHECK AND MARK OUT THE OPENING

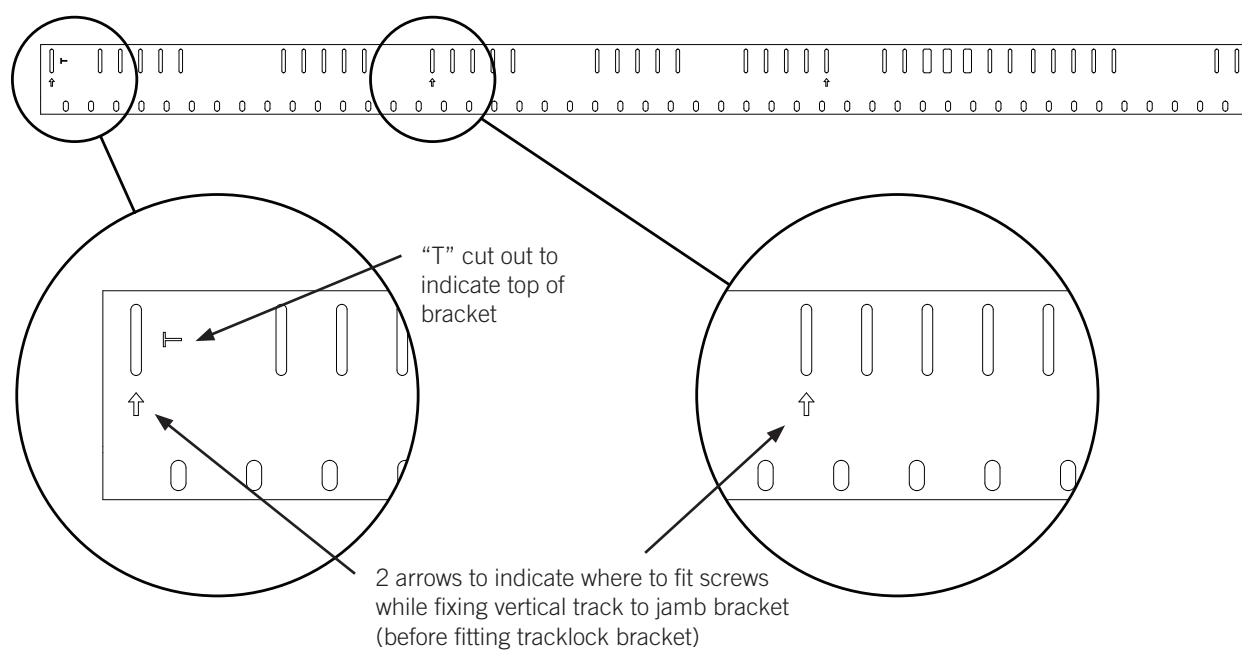
- Using a water level, mark both sides approx. 1.5m from the floor.
- Mark equal overlap at each side based on panel width.



- Mark the track position 45mm from the previously marked panel width.



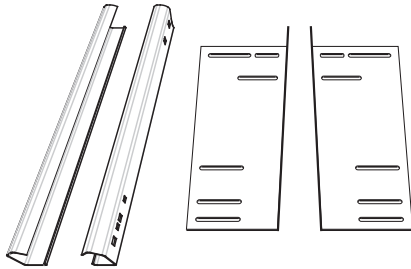
1.6 JAMB BRACKET



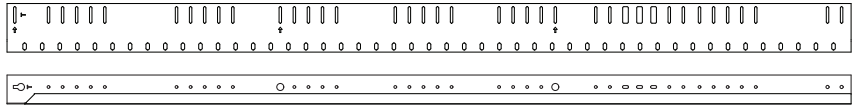
2.0 INSTALLATION

2.1 ASSEMBLING VERTICAL TRACKS

PARTS NEEDED



- Locate 2 x vertical straight tracks
- 2 x Short top track angle brackets
- 2 x Long lower track angle brackets
- 2 x Tracklock for doors up to (2.2m w Reg D)(3.1m w Reg C)
- 6 x Nuts & bolts only at this stage



Note the '**T**' mark on the lower track bracket and tracklock to indicate Top. Only the bottom must be cut to suit door height.

TRACK cut height for STANDARD headroom doors – Door height – 130mm.

LOW HEADROOM rear or front torsion – Door height – 280mm.

TRACKLOCK cut height for standard and low head room doors is less an additional 25mm.

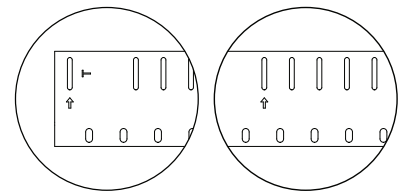


FIGURE 2.1.1 VERTICAL TRACK ASSEMBLY

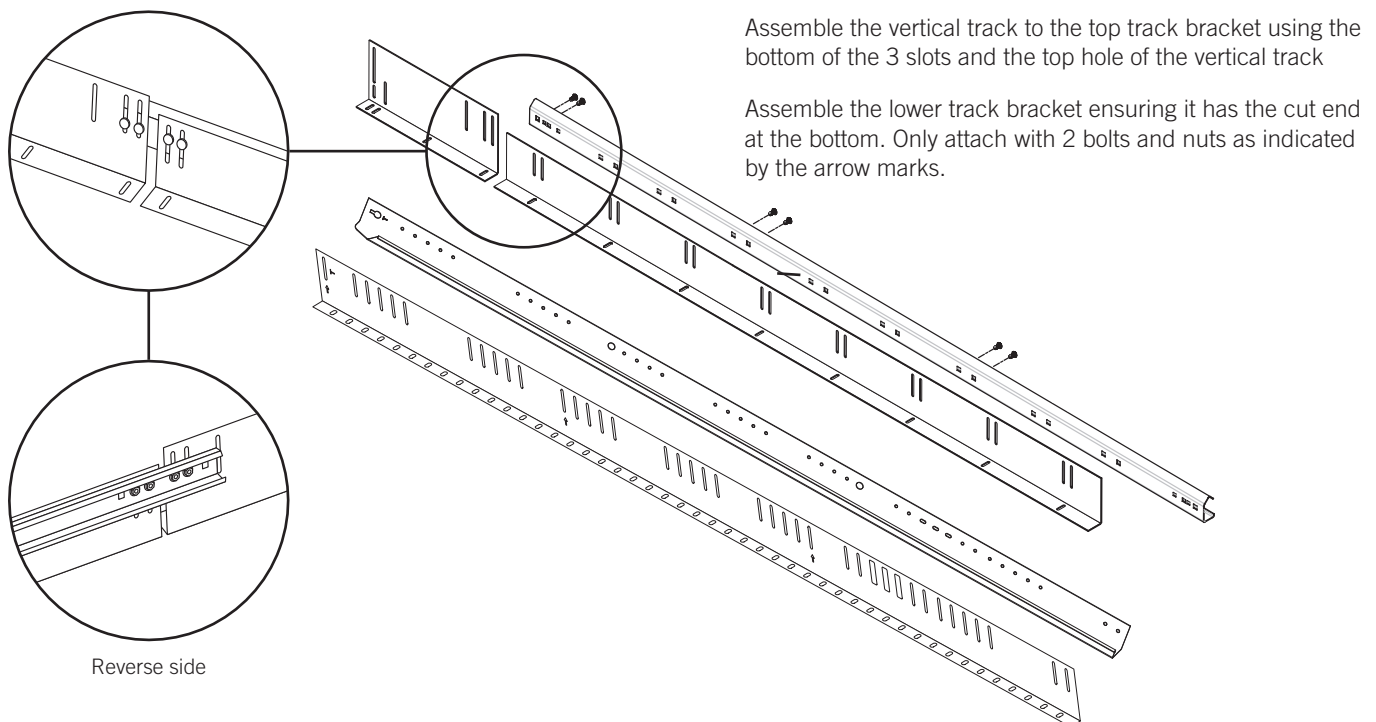


FIGURE 2.1.2 CLEARANCE FROM WALL

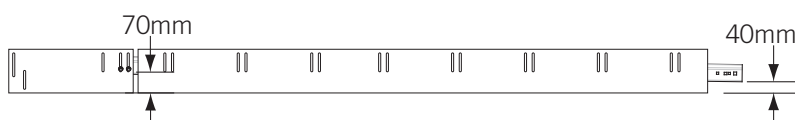
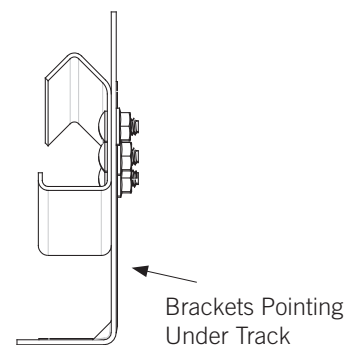


FIGURE 2.1.3 LOW SIDEROOM



2.2 ASSEMBLING BOTTOM PANEL

If installing tapers familiarise yourself with this section then please consult page 27. Open up the pack of door panels, take out the bottom panel (weather seal on the bottom of the panel). Carefully trim the weather seal to length.

Sort and organise hangers, this is recommended as it makes finding the proper hangers later much easier as you progressively add more panels, see Figure 2.2.1.

If using a rear torsion system a different hanger is required, please consult Rear Torsion Installation on page 16.

Before assembly place the panel on a flat surface such as the floor, ensure the panel face is protected.

Remove the screws in the corner of the panel. Figure 2.2.2.

Locate 1x L/H 1x R/H cable hanger and attach the loop of the cable with the pins and secure with the washer and split pins. Figure 2.2.3.

Locate the flat wheel hanger and attach both parts to each corner ensuring at least 5 fixings are used in each. Fig A.

Fit No 1 hinges to the top of the panel at every vertical stile ensure 4 fixings are used in each hinge flange.

Locate 4 x wheels and axles, grease the axles and fit to each bottom hanger and each top corner No 1 hinge.

Fit a split pin to each axle.

FIGURE 2.2.1

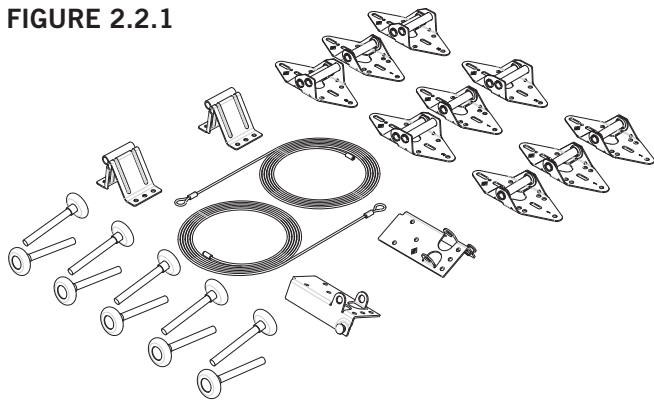


FIGURE 2.2.2

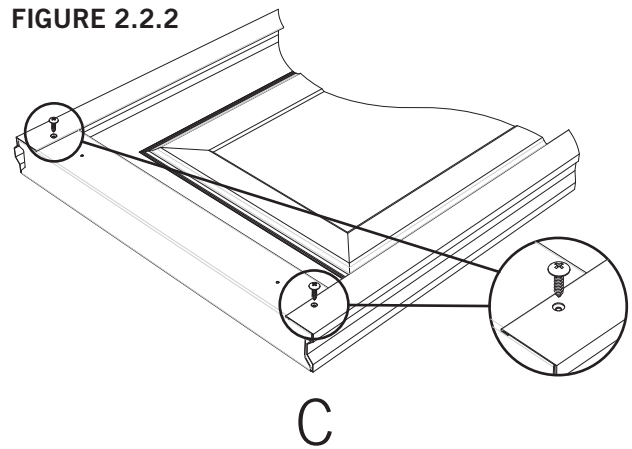
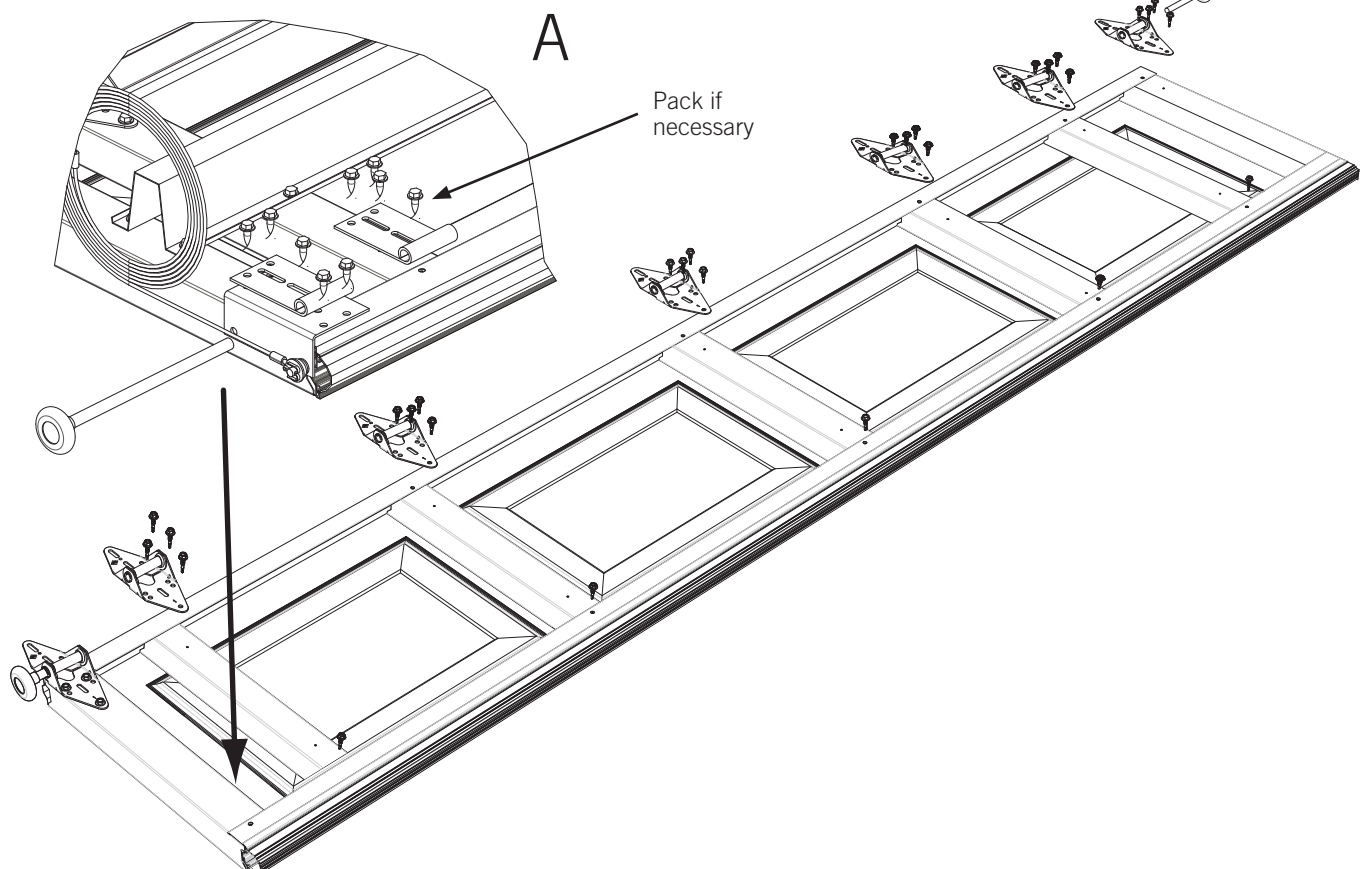
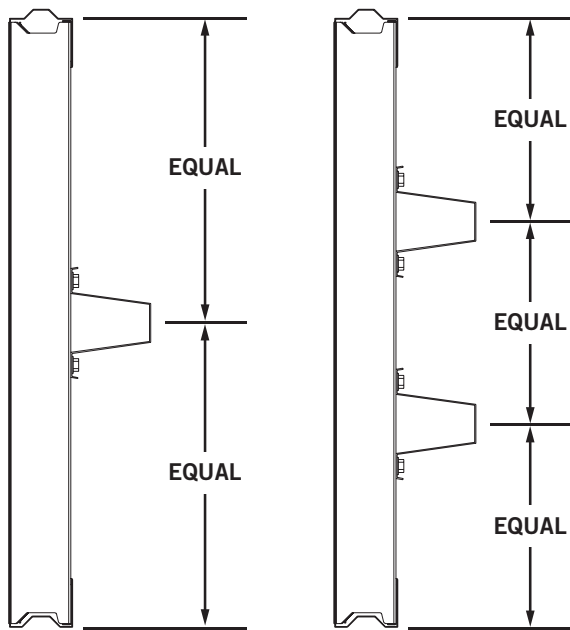


FIGURE 2.2.3



NOTE: Ensure 5 screws are used to fix bottom hangers at A and 4 to each hinge flange.
8 total for all other hangers and hinges.



PANEL REINFORCING

Before fitting reinforcing, place the panel on a flat surface such as the floor, ensure the panel face is protected.

Doors will have 1 or 2 reinforcing per panel. Check chart on page 4 to ensure the correct amount is fitted. Don't forget the plastic end caps.

If one reinforcing fit centrally on the panel, if two reinforcing fit equally spaced.

IMPORTANT reinforcing **MUST** be 60mm less than the panel width and fitted equally from each end, secure with 2 screws per stile.

The reinforcement batten **MUST** be placed equally on every panel, including the Top Panel.

2.3 INSTALLING BOTTOM PANEL AND VERTICAL TRACKS

Remove the plastic film from the face of the panel and stand the panel in the opening taking care to protect the face where it contacts each side wall.

Make sure each end aligns with the previously marked overlap lines and prop securely into position.

Check the measurement from the top of each end of the panel to the previously marked water levels, if not equal pack under the panel until correct.

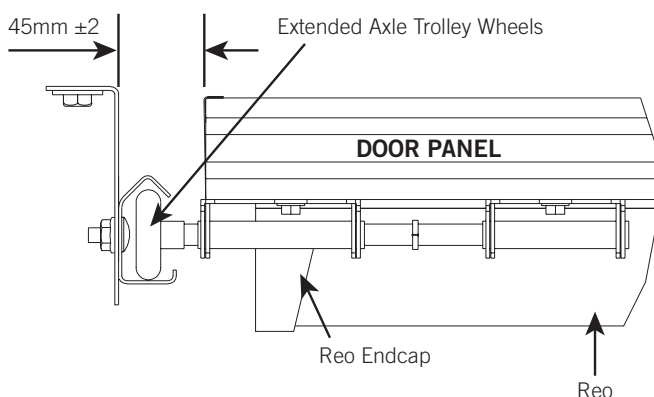
Place one of the previously assembled vertical tracks over the two wheels of the bottom panel and hold in place.

Make sure the cable is up above the wheel and axle but not unwound.

IMPORTANT Align the inside face of the track bracket with the previously set out vertical marks which are 45mm from the end of the panel Figure 2.3.1.

Fix to the structure using the specified fixings on drawing SO3H. Place one fixing approx. 400mm from the floor and lightly secure in place, it will need to be fully tightened later.

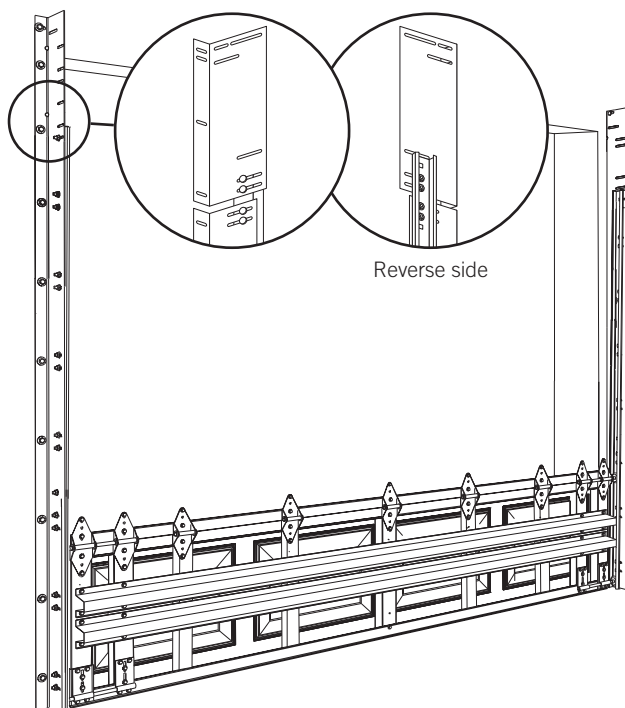
FIGURE 2.3.1



Repeat for the second vertical track.

After checking that the wheels are fitting snugly in the "V" of the vertical track ensure the clearance at the bottom between the face of panel and structure is correct on both sides.

FIGURE 2.3.2



Now make sure the track aligns with the previous vertical marks and secure the top of the track to the structure using the specified fixings on drawing SO3H.

DO NOT secure all fixings at this stage.

2.4 ADDING MIDDLE PANELS

Now the remaining panels can be assembled and fitted with the exception of the top panel.

Fit the No.1 hinges to all stiles with the exception of the double end stiles.

Fit reinforcing as previously described not forgetting the plastic end caps.

Locate 4 x No 2 hangers 2 x wheels and axles 2 x split pins.

Remove the plastic film from the face of the panel taking care to protect the face where it contacts each side wall.

Stack the panel onto the bottom panel. Use temporary 1-2mm spacers to give a small clearance between the panels as indicated, this will reduce noise and paint rub Figure 2.4.3.

Clamp in place until the hinges and wheels are fitted.

Grease the axles and fit 2 x hangers to each axle, twist wheel into the track and attach the hangers to both stiles with 4 fixings per hinge flange, fit the split pin.

Repeat at the opposite end of the panel.

Repeat this procedure for the remaining middle panels using No. 3 and 4 hangers.

Check and adjust the clearance between face of panel and the structure ensuring the wheels are fitting snugly into the "V" of the track.

FIGURE 2.4.1 HANGERS

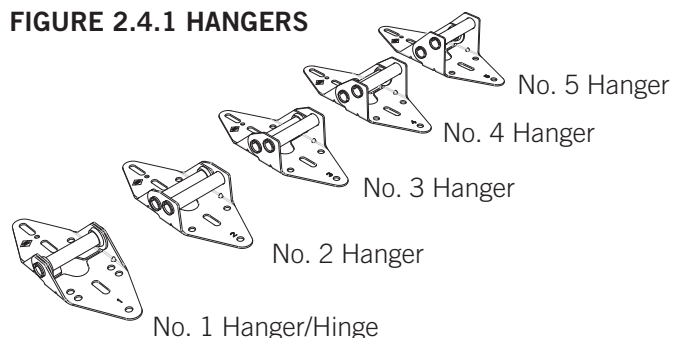


FIGURE 2.4.2 DOUBLE END STILES

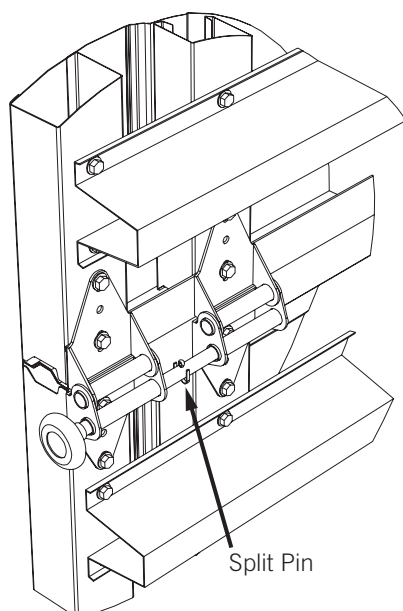


FIGURE 2.4.3 INSERT TEMP SPACERS

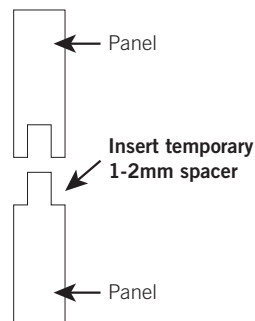


FIGURE 2.4.4 LABEL



FIGURE 2.4.5

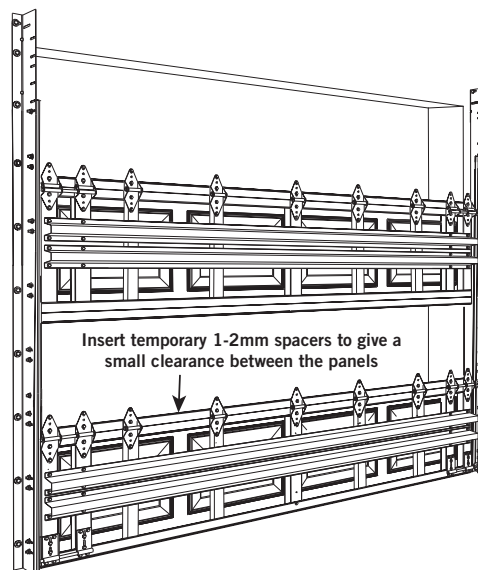


FIGURE 2.4.6

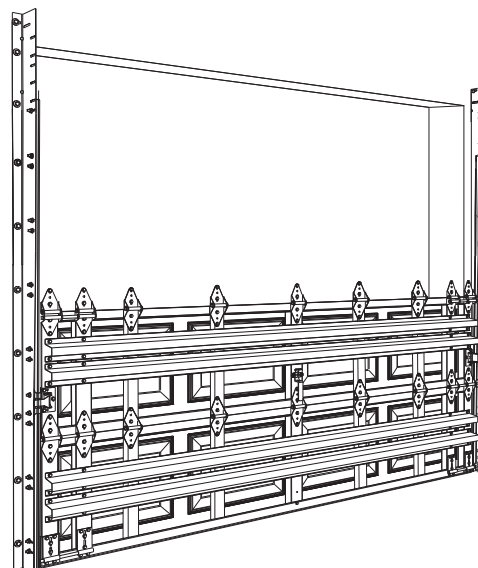
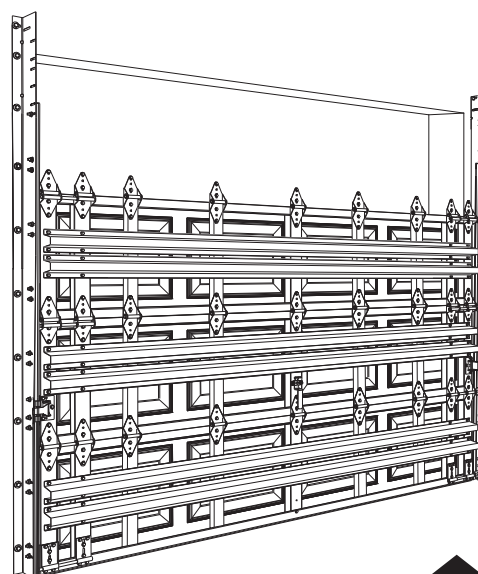


FIGURE 2.4.7



2.5 INSTALLING HORIZONTAL TRACKS

The horizontal tracks are identified by being the curved pair of tracks.

Attach the angle brace and the curved track as shown in Figure 2.5.1. The bottom hole in the curve aligns with the second slot from the bottom. Ensure the two ends of the track align, adjust if necessary.

Repeat for the other horizontal track.

Double check all ceiling fixing points are located correctly and are structurally sound.

Now temporarily suspend or support both tracks. If suspending see position in Figure 2.5.4 and only fit ceiling and vertical hanger at this time, angle brace will be fitted after ensuring the position of the tracks is correct and in alignment with the door.

NOTE: All doors must have two suspension points to each horizontal track due to the additional weight of the door.

FIGURE 2.5.1 ASSEMBLING CURVED TRACK

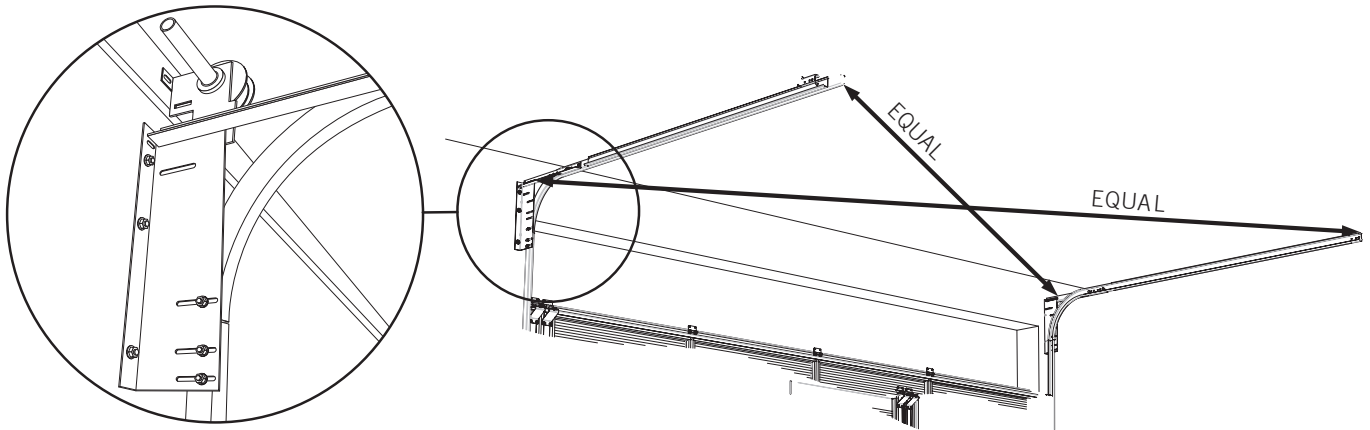


FIGURE 2.5.2 BRACING

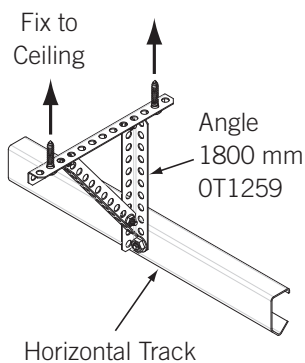
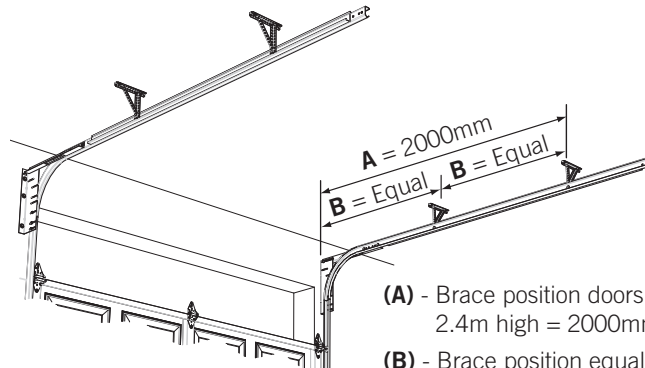


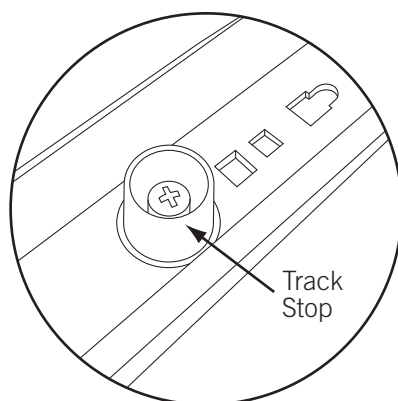
FIGURE 2.5.3 DOUBLE BRACE



- (A) - Brace position doors up to 2.4m high = 2000mm
- (B) - Brace position equal

The finished cut length of the track must not be shorter than **250mm** from the top of the fully open door.

FIGURE 2.5.4 INSTALLING THE SAFETY STOP



Safety stops must always be fitted at the end of each horizontal track.

2.6 INSTALLING THE TOP PANEL

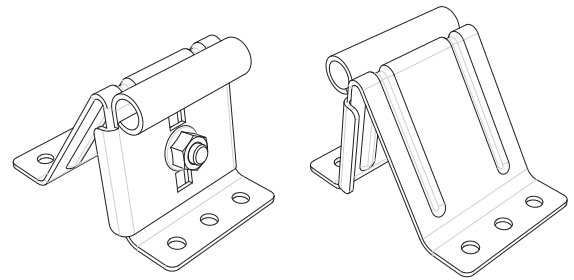
NOTE: In some cases the torsion assembly is fitted before the top panel i.e. poorly lit garage or no other access.

Follow the same procedure for assembling previous panels.

Only the reinforcing should be fitted to the top panel at this time, remove the exterior protective film and lift the panel into place on the last middle panel fitted and temporarily clamp in place.

Grease the wheel axles and fit into the 4 adjustable top hangers. Fix in place as Figure 2.6.2 shows using 6 fixings to each.

Adjust the axle carrier so that the panel is in a vertical position and not fouling on the structure, repeat for the other side.



**FIGURE 2.6.1
INSTALLING TOP PANEL**

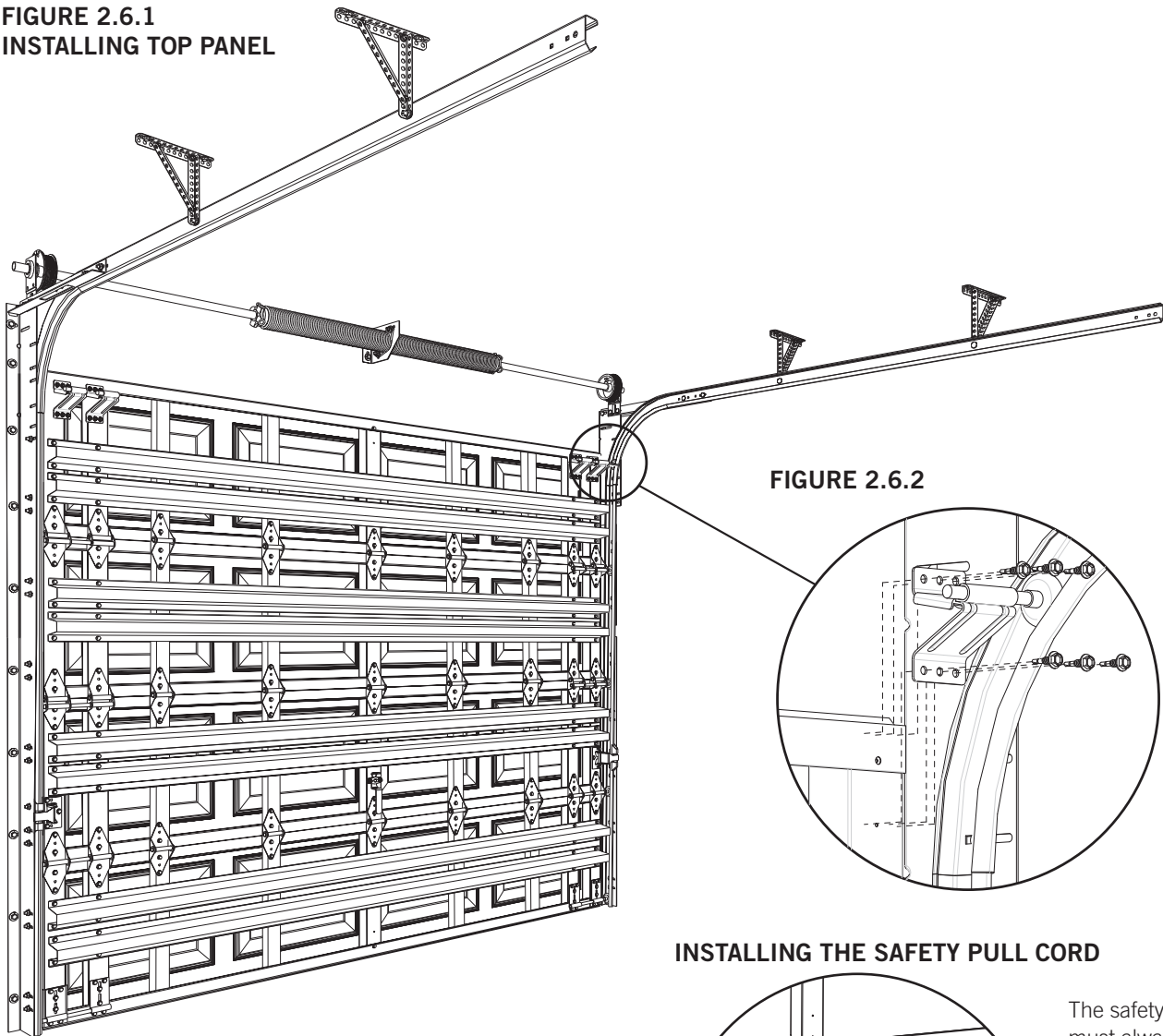
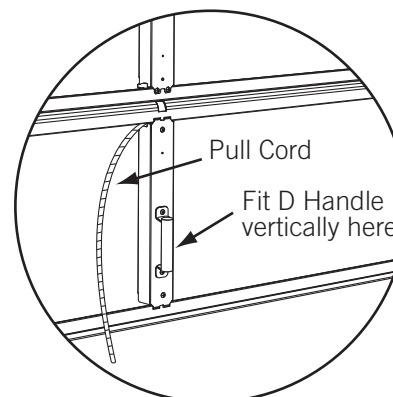


FIGURE 2.6.2

INSTALLING THE SAFETY PULL CORD



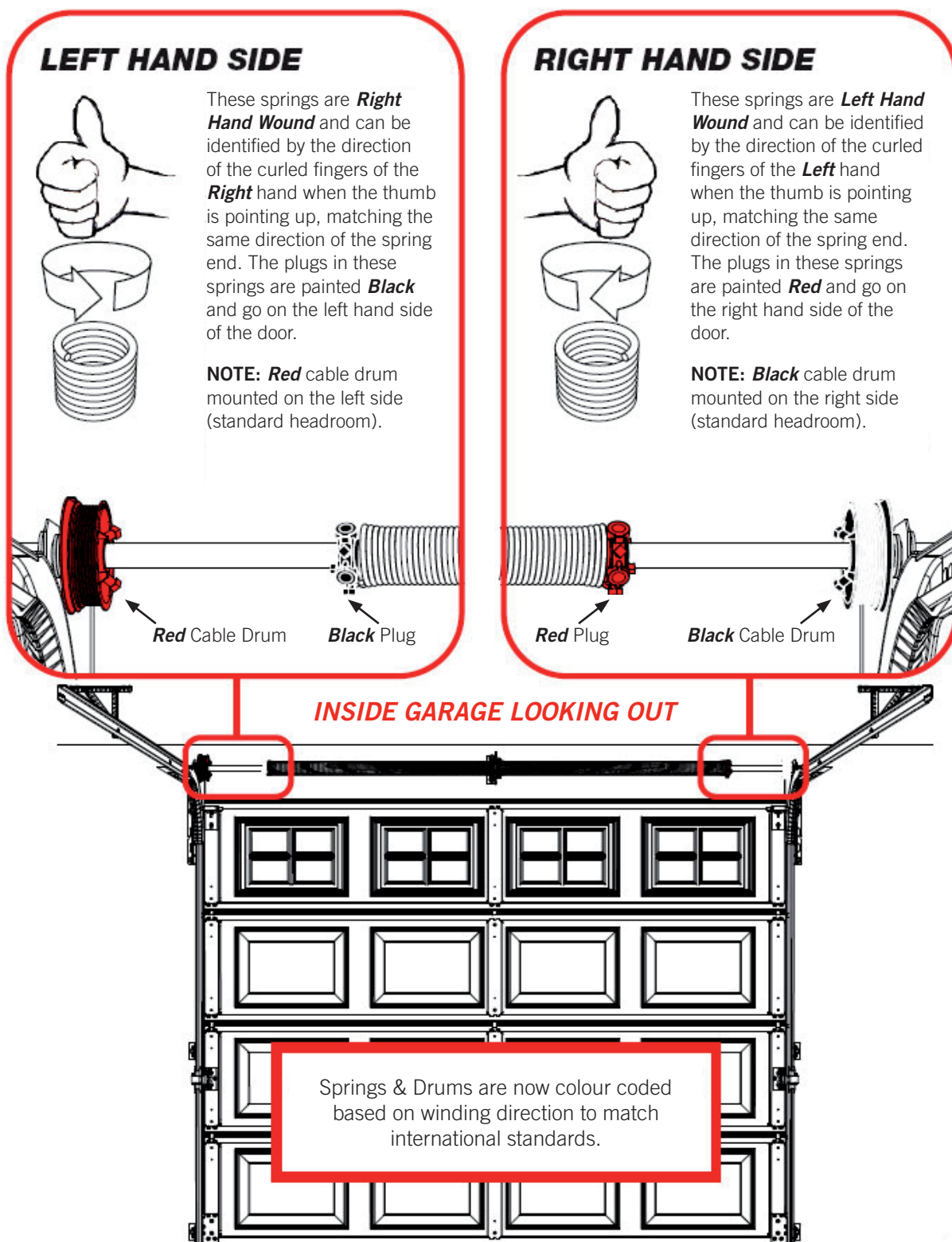
The safety pull cord must always be fitted.

Pass the cord through the hinge pin, tie a knot and adjust length, ensure the cut end is sealed.

FIGURE 2.6.2

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NEW COLOUR CODING STANDARD FOR ALL B&D SECTIONAL DOOR SPRINGS



2.7 ASSEMBLING SPRING COUNTERBALANCE SYSTEM

Place the torsion bar on the floor and position the lifting parts in order. Place the spring anchor bracket onto the torsion bar, positioning it approximately half way along. The 'cut off' corner should face the floor if mounted on the lintel, or if mounted on the ceiling should face rearward, away from the lintel to allow the panels to clear as the door operates, see Figure 2.7.2.

With single spring doors, slide a shaft collar against the spring anchor bracket. The bearing flange in the spring anchor bracket must face the spring. It may need to be reversed depending on whether a left or right hand spring is supplied, see Figure 2.7.3A. The shaft collar is tightened against the bearing flange. Slide the spring onto the torsion bar and over the shaft collar. A left hand spring has a red winding plug, and should be fitted to the left hand side of the spring anchor bracket. A right hand spring has a black winding plug. The winding plugs should face away from the spring anchor bracket, see Figure 2.7.3B.

With two springs no shaft collar is necessary. Place the cable drum onto the torsion bar with the red cable drum on the left side and the black cable drum on the right side as in Figure 2.7.3D.

The set screws on the cable drums should face inwards see Figure 2.7.3C. Place the two 3mm cable drum spacers on each side. Then the side bearing brackets are positioned outside the cable drum spacers with the flange facing outwards.

FIGURE 2.7.1 PARTS NEEDED

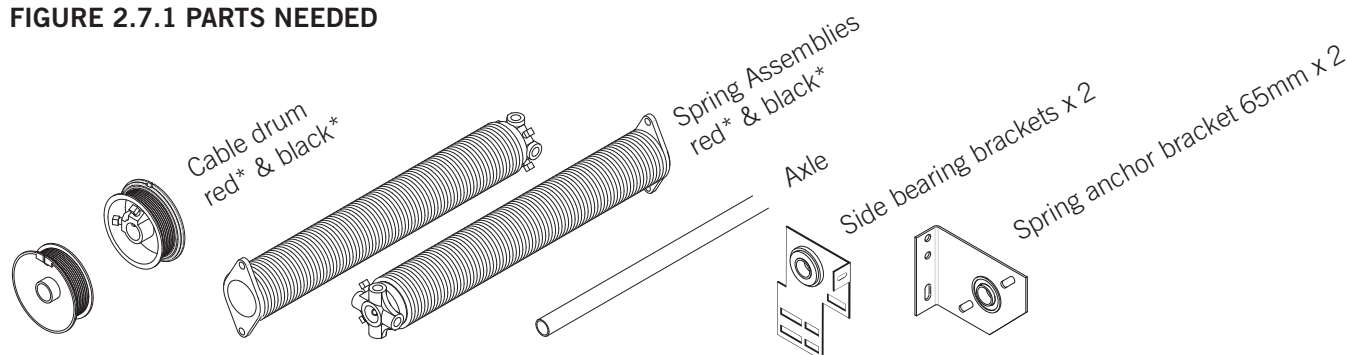


FIGURE 2.7.2 SPRING ANCHOR BRACKET

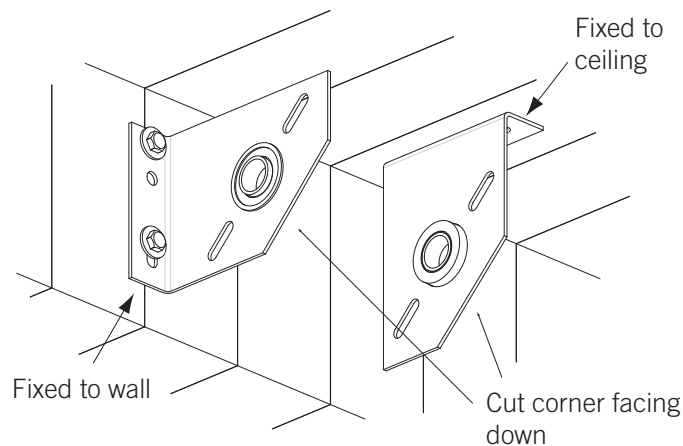
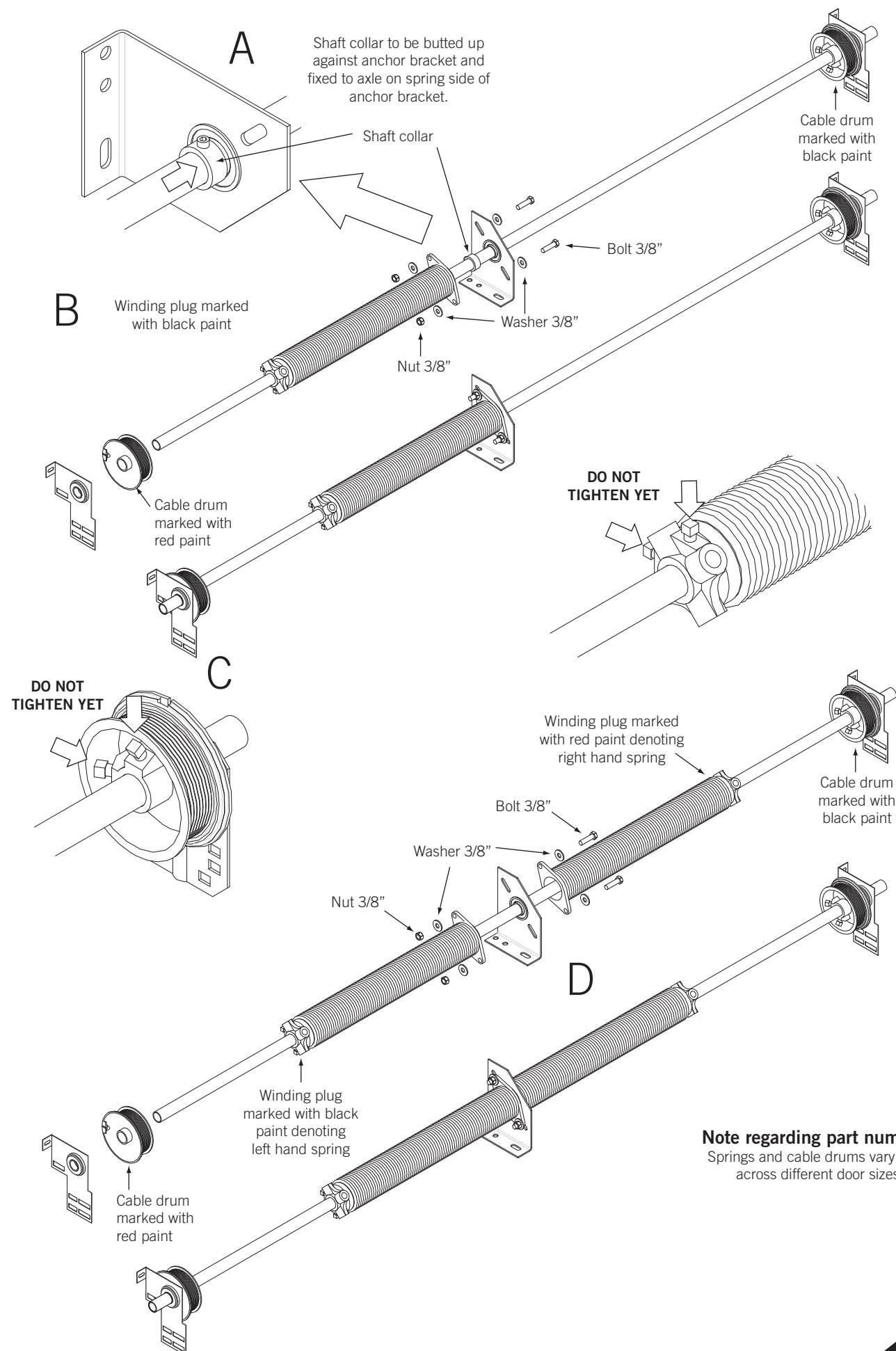


FIGURE 2.7.3 AXLE ASSEMBLY



2.8 REAR TORSION INSTALLATION

BOTTOM HANGERS: Find the low lift bottom hangers, the cables, clevis pins, humpback spring pins, and washers. Assemble low lift bottom hangers as shown in Figure 2.8.1A. Then assemble onto the bottom panel as shown in Figure 2.8.1B and Figure 2.8.1C.

AXLE ASSEMBLY: The axle assembly for rear torsion is different in that the side bearing brackets are replaced with sheave bracket rear torsion. The springs are mounted off these sheave brackets which are connected to the free ends of the horizontal tracks rather than directly over the opening.

Figure 2.8.2A illustrates the first stage of assembling a single spring rear torsion installation. A shaft collar is still required and fixed on the spring side of the flat spring anchor brackets.

Figure 2.8.2B demonstrates a double spring rear torsion installation, which like a single spring rear torsion door has the springs mounted off the sides on the flat spring anchor brackets rather than the centre.

DOUBLE TRACKS: Assemble double tracks and pulley bracket assembly as shown in Figure 2.8.3. Ensure curve butts up against and is aligned with the vertical track.

TOP PANEL: Please note the wheel on the top panel runs in the upper track, Figure 2.8.7, otherwise the assembly of the top panel is the same as a standard door.

FIGURE 2.8.1 BOTTOM HANGERS

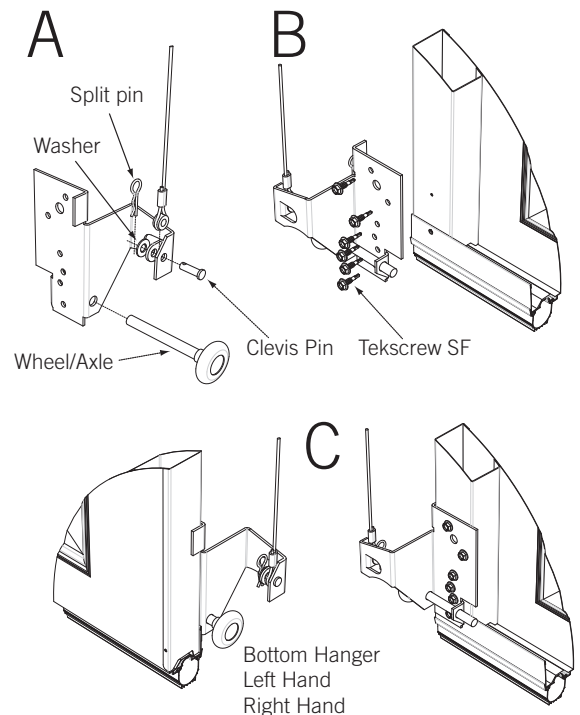


FIGURE 2.8.2 AXLE ASSEMBLY

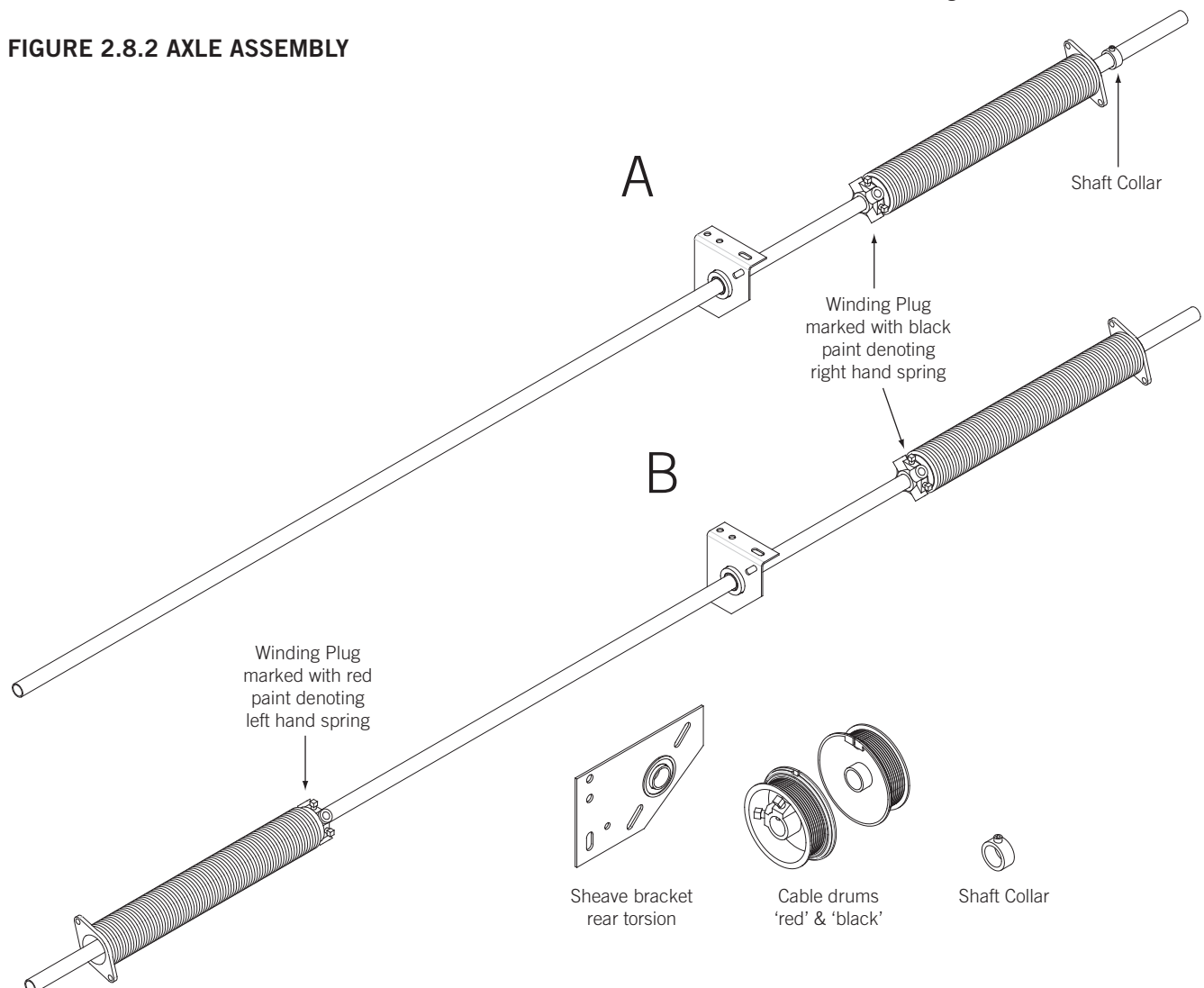
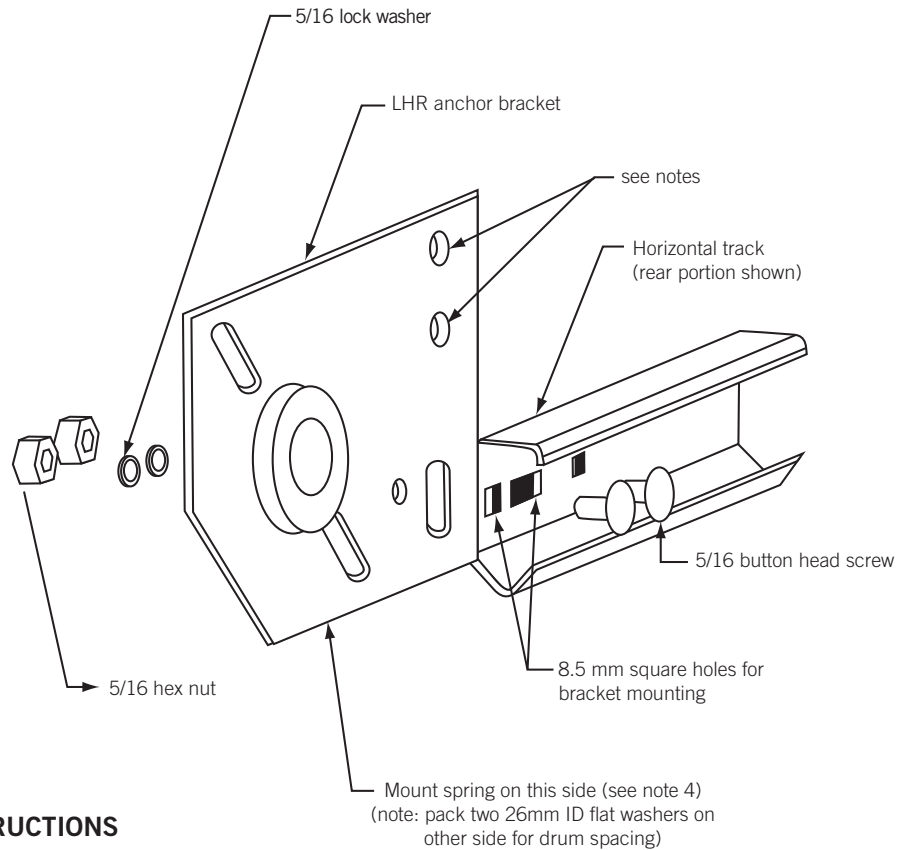


FIGURE 2.8.3 REAR TORSION LOW HEADROOM BRACKET INSTALLATION INSTRUCTION

1. Mount LHR brackets on horizontal tracks as per diagram on right.

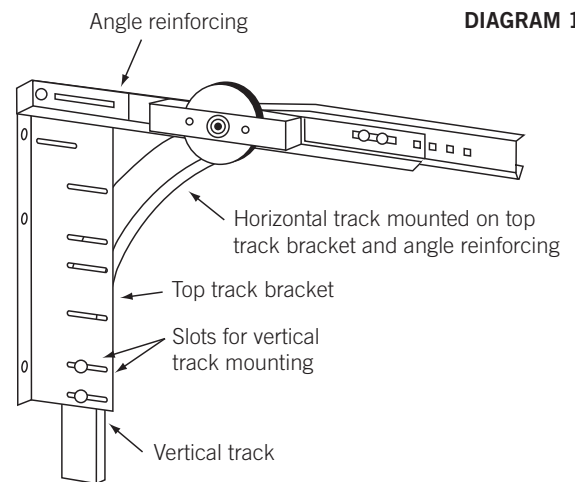
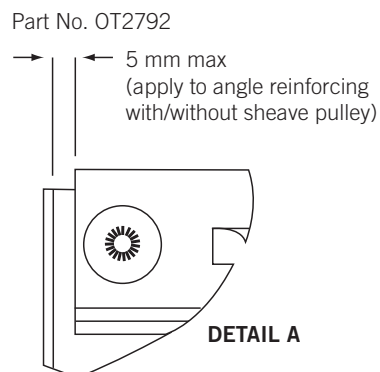
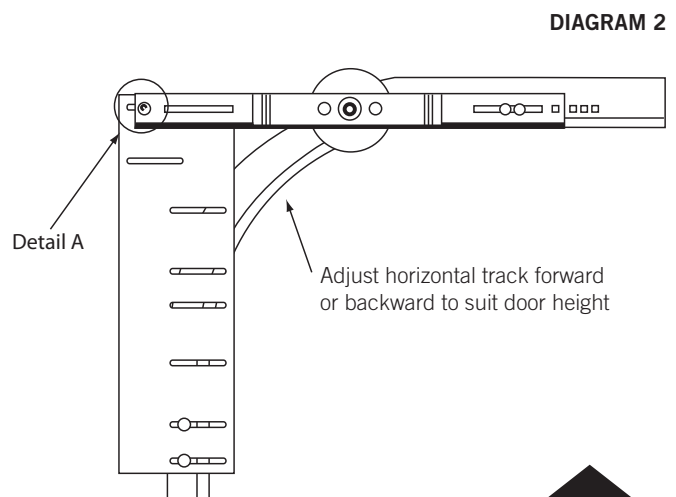
- (1) Left hand mounting shown only.
- (2) Use perforated angle lines to strengthen middle portion of horizontal tracks if door weight is over 100g.
- (3) Extra holes provided on bracket for strengthening if door weight is over 120kg or double track installation.
- (4) The bearing flange should face the cable drum.

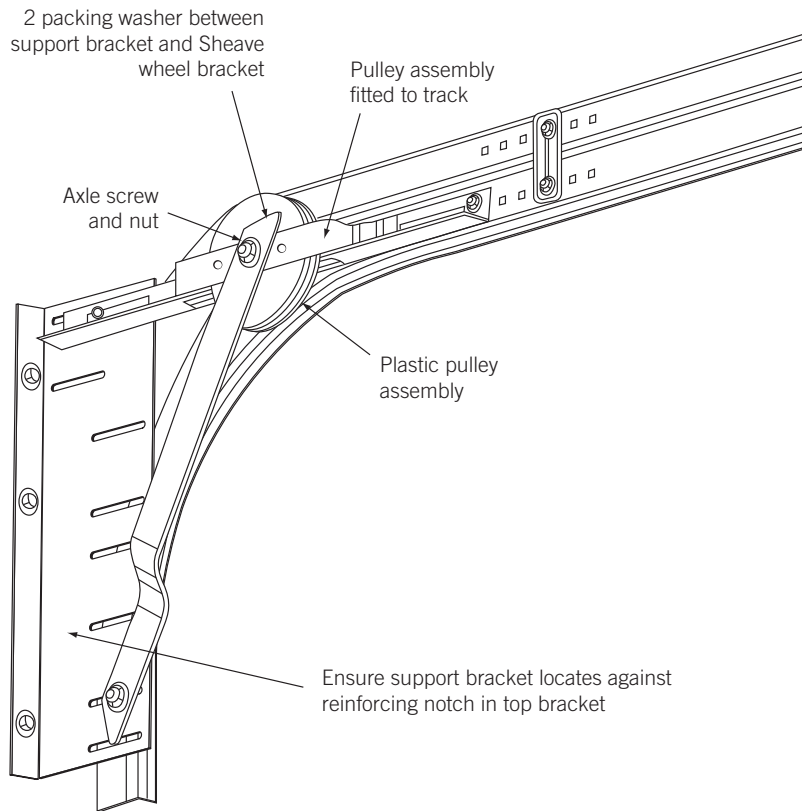
2. Mount torsion bar, spring/s and cable drums as normal.

**FIGURE 2.8.4 LOW HEAD ROOM INSTRUCTIONS****SHEAVE PULLEY BRACKET ASSEMBLY / ANGLE REINFORCING INSTALLATION INSTRUCTION (P/NO.T2791)**

NOTE: Use angle reinforcing for standard head room doors.

1. Mount vertical track on top track bracket by using two (2) #1/4 nuts and bolts (see Diagram 1).
2. Mount top track bracket (with vertical track) on wall as normal.
3. Mount one end of the LHR sheave pulley bracket assembly (P/No. T5244) on top track bracket to a position as shown in Diagram 2 by using one (1) #6/16 nut and bolt. **NOTE:** Use angle reinforcing (P/No. T5482) instead of sheave pulley bracket assembly for SHR doors.
4. Mount Horizontal track on top track by using one (1) #1/4 nut and bolt and on angle reinforcing by using two (2) #5/16 nuts and bolts (see Diagram 1 and 2).
5. Adjust vertical and horizontal track position as normal.

**DIAGRAM 1****DETAIL A****DIAGRAM 2**



1. Mount sheave pulley and angle reinforcing bracket sub-assembly as per instructions for Bracket (OT2791).
2. Unscrew sheave pulley axle screw, then remove nut and lock washer (DO NOT REMOVE SCREW).
3. Place two spacing washers and support bracket on to the sheave axle screw and replace lock washer and nut. Tighten to finger tightness.
4. Position support bracket to reinforcing notch in top bracket (see diagram).
5. Mark-off two bolt hole positions and drill two holes 10 mm diameter in top track bracket.
6. Fit support bracket bolts through the bracket and top track support bracket screw on the nylon nut.
7. Tighten all bolts and sheave axle screw and nut.
8. Continue installation to normal procedure.

RETRO FIT INSTALLATION INSTRUCTION FOR NEW SHEAVE PULLEY ASSEMBLY (OT5200)

Instructions given here for an experienced door installer.

1. Close door.
2. Release spring tension from door.
3. Remove cables from door.
4. Remove old pulley brackets OT5208 and OT5209.
5. Remove ANGLE REINFORCING OT5482 from track.
6. FIT NEW SHEAVE WHEEL AND BRACKET ASSEMBLY SUPPLIED into this position.
7. MARK OFF TWO HOLE POSITIONS through the support brackets to the vertical track top bracket (OT4670) already installed.
8. Drill two holes each side for the support bracket bolts 10mm diameter.
9. Fit the support bracket bolts through the track and support bracket.
10. Tighten all bolts.
11. Re-assemble the door to normal procedure.

2.9 ADDING TENSION TO SPRING

Secure the torsion bar to prevent any rotation, as shown in Figure 2.9.1.

WARNING: TORSION SPRINGS CAN CAUSE SERIOUS INJURY! IF YOU ARE NOT SURE, STOP NOW! ASK TRAINED PERSONNEL.

The number of turns required for each spring is shown on a paper tag attached to the springs Figure 2.9.2. If the spring is required to have 7.5 turns for example, these are full turns and are equivalent to 30 quarter turns. Alternatively, a line is painted along every spring. If the spring is turned for example 8 times, then 8 lines can be counted along the spring, See Figure 2.9.3.

WARNING: ONLY USE AUTHORISED WINDING BARS AS LISTED ON PAGE 8.

Turn the spring by inserting winding bars into the winding plug holes and wind up in an up and over direction towards the ceiling, Figure 2.9.4. Once you have completed the amount of turns required, remove one winding bar then tap the remaining bar back towards the spring anchor bracket if spring snaking occurs. Now you can tighten the two set screws with an open

ended spanner, Figure 2.9.5. Again be careful not to over-tighten the set screws.

Repeat this procedure if there is more than one spring but remember, always wind the springs, whether left or right hand, in an up and over direction towards the opening.

WARNING: KEEP HANDS CLEAR OF THE SPRING AND THE SPRING WINDING PLUG AT ALL TIMES.

Double check that the set screws are properly tightened, before removing the restraints on the torsion bar.

Test the balance of the door. Put the door into the open position and view along the horizontal tracks. Check that the clearance in the vertical tracks (5-10mm) is also in the horizontal tracks. If you find that the door is binding, open out the horizontal tracks slightly to create the correct tolerance. Once satisfied that the operation of the door is as near perfect as possible, check that all nuts and bolts are tight and oil the springs full length to prevent noise and reduce friction, 'TAL 5' or similar oil rich lubricant in a pressure spray can is acceptable, Figure 2.9.6.

**FIGURE 2.9.1
SECURING TORSION BAR**

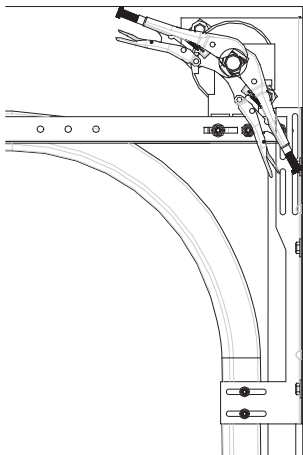


FIGURE 2.9.4 ADDING TENSION

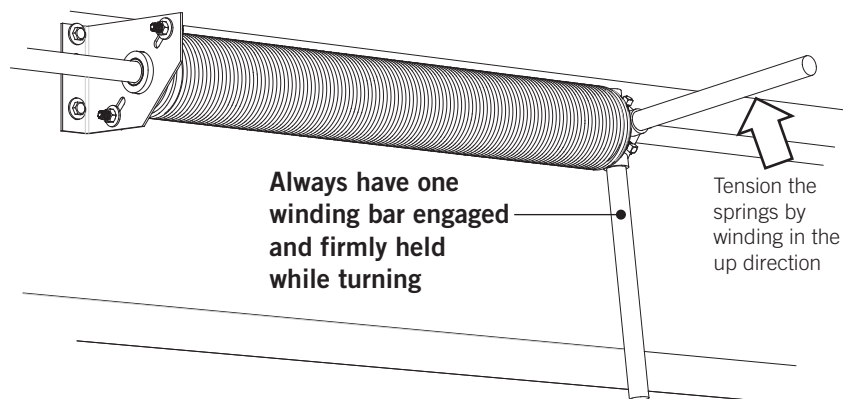


FIGURE 2.9.2 SPRING LABEL

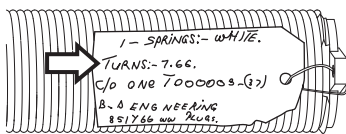


FIGURE 2.9.3 COUNTING THE TURNS

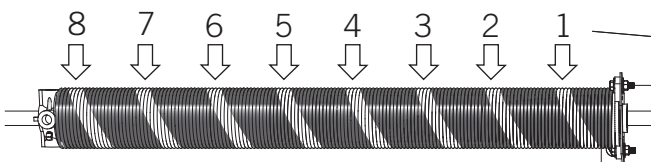
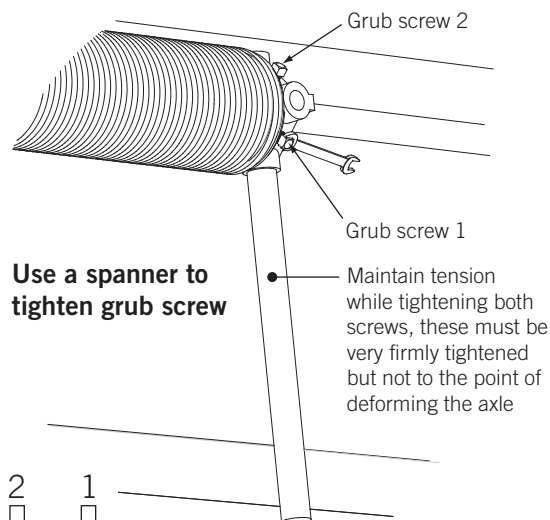
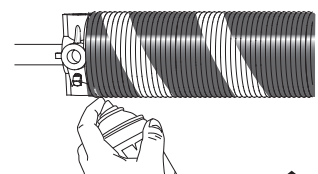


FIGURE 2.9.5 TIGHTENING GRUB SCREWS



**FIGURE 2.9.6
LUBRICATING SPRINGS**



2.10 FITTING THE TRACKLOCK AND FIXING THE VERTICAL TRACKS

When fully satisfied with the operation of the door and all the track clearances have been fully checked the TRACKLOCKS can be fitted to the doors that they are specified for.

The TRACKLOCKS should have been cut to length earlier when cutting and assembling the vertical tracks. (Vertical track height less 25mm).

The TRACKLOCK is attached to the vertical track and bracket.

Stand the TRACKLOCK against the vertical track making sure it has the "T" and key hole at the top.

Loosely fit a $\frac{1}{4}$ x 10mm dome head bolt and wiz nut into the vertical track hole that aligns with the key hole in the top of the TRACKLOCK.

Place the TRACKLOCK via the key hole onto the loosely fitted bolt in the track.

Fit dome head bolts and wiz nuts to the total length of the TRACKLOCK spacing them equal to the spacing as specified on drawings SO3H.

When all TRACKLOCK fixings are in place tighten and repeat this procedure for the other TRACKLOCK.

FIGURE 2.10.1

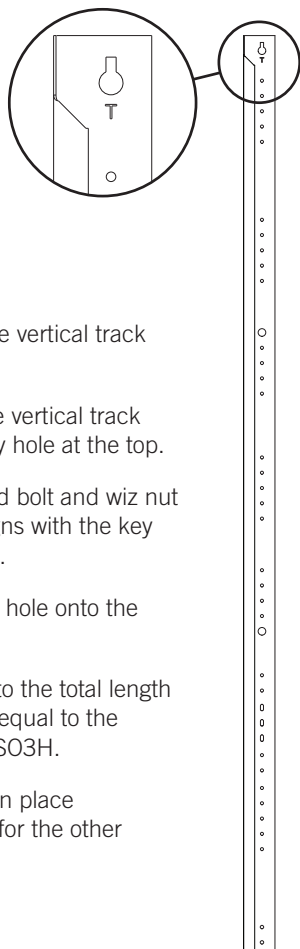
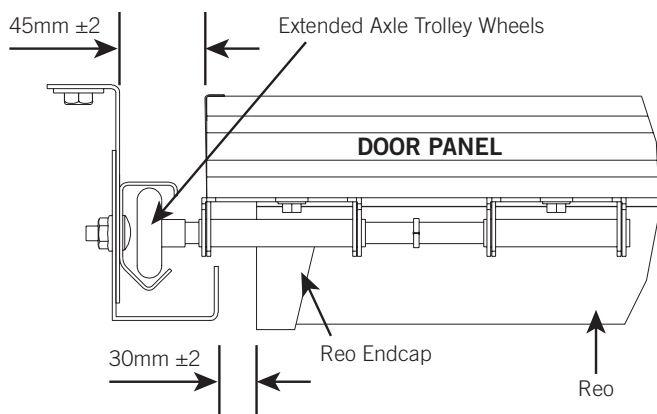


FIGURE 2.10.2



TRACKLOCK REQUIREMENTS

REGION	DOOR WIDTH	TRACKLOCK
C	1800mm > 3100mm	YES
C	3105mm > 6150mm	NO
D	1800mm > 2200mm	YES
D	2205mm > 3400mm	NO
D	3405mm > 4300mm	NO
D	4305mm > 5500mm	NO

IMPORTANT

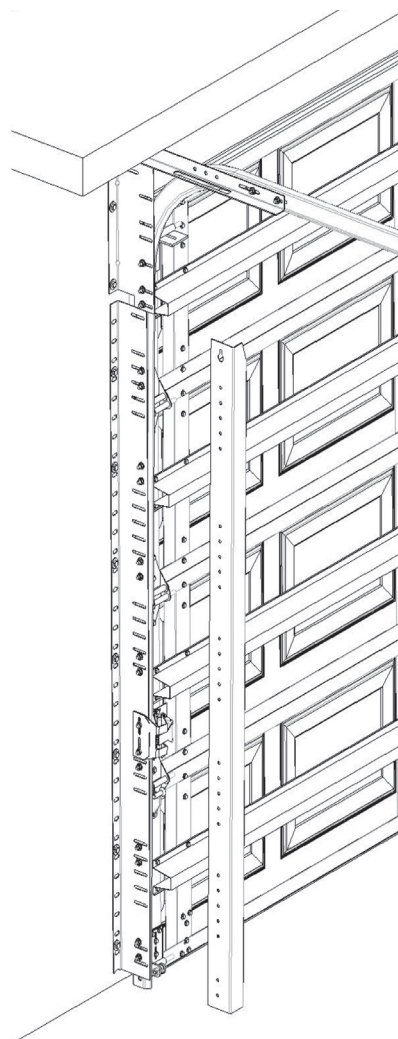
Before fitting all vertical track fixings as specified on drawing SO3H operate the door several times to make sure there is no misalignment and all clearances are satisfactory.

Now the specified fixings can be fitted and secured.

As outlined on the specification drawings.

NOTE: ENSURE THE CORRECT DRAWINGS ARE BEING FOLLOWED.

FIGURE 2.10.3



2.11 WINDPANEL BRACE ASSEMBLY

The number of vertical brace kits will differ depending on wind region and door size, ensure you know what the requirements are.

One kit comprises of 1 x long box containing the aluminium brace and 1 x small parts box.

BRACE KIT REQUIREMENT

REGION	DOOR WIDTH	BRACE
C	1800mm > 3100mm	NO
C	3105mm > 3400mm	1
C	3405mm > 6150mm	2
D	1800mm > 2200mm	NO
D	2205mm > 2600mm	2
D	2605mm > 4300mm	3
D	4305mm > 5500mm	4

It is important that the brace alignment with the door is to the specified positions.

Select the position the brace or braces are to be fitted, mark a vertical line on the lintel at this point directly above and central to the stile on the door panels.

Also mark a horizontal line that intersects the vertical line a minimum of 100mm above the top of the door panel.

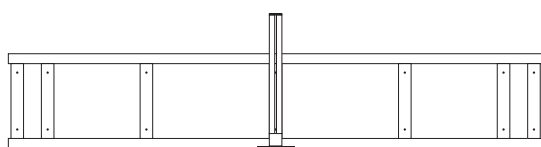
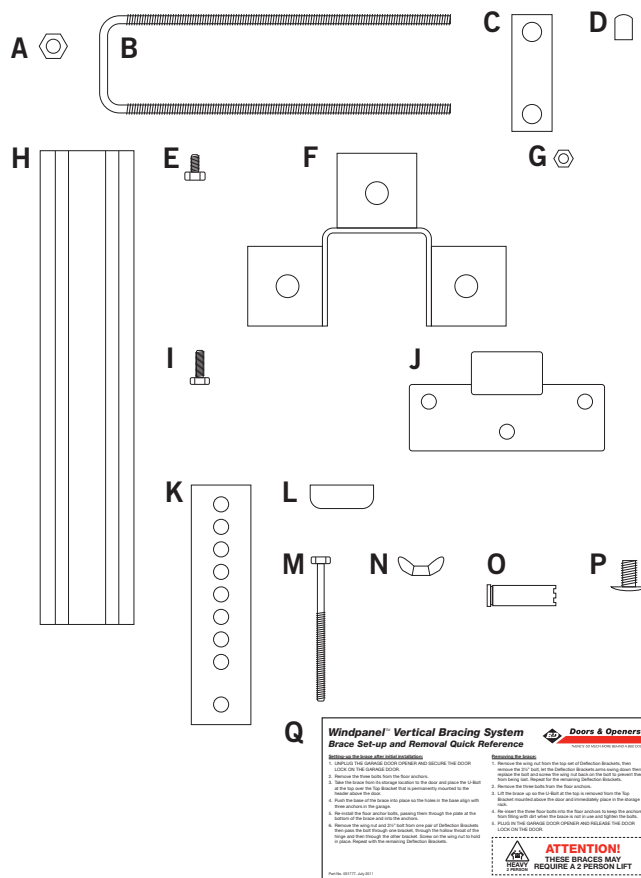
Mark, drill and fit item "J" at this point using the specified fixings from drawing S03H.

Provided the brace is long enough item "J" can be fitted above the springs if required.

Repeat for remaining braces.

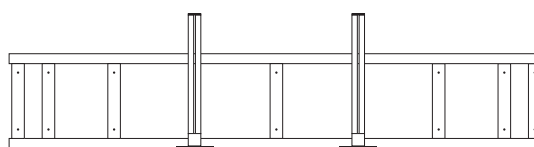
If the length of the brace is to be cut leave it until you are sure the assembly and fitting is correct.

FIGURE 2.11.1 PARTS CHECKLIST



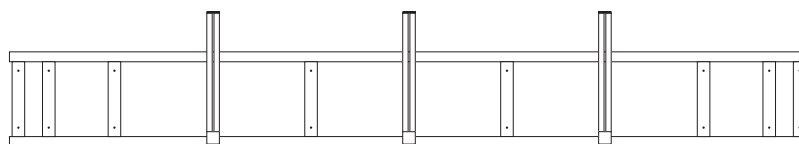
1 Brace

(Refer to compliance drawing S01J for Region C & D)



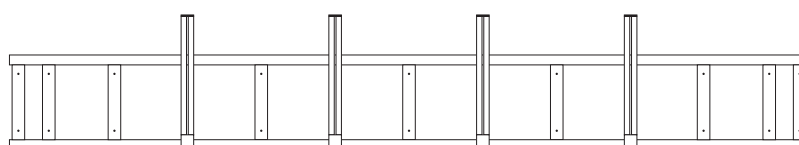
2 Braces

(Refer to compliance drawing S01J)



3 Braces

(Refer to compliance drawing S02J for Region D)

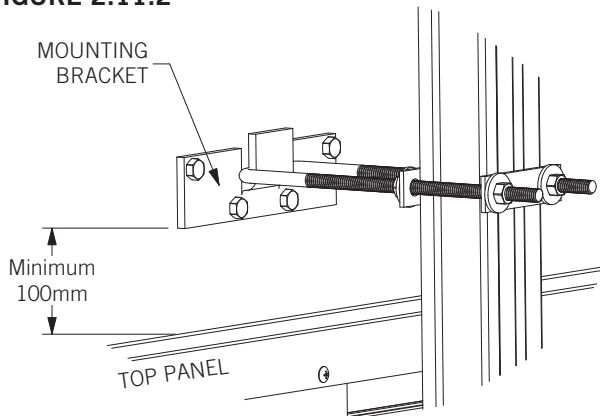


4 Braces

(Refer to compliance drawing S02J Region D)

Assemble the floor flange as shown to one end of the brace as shown Figure 2.11.3.

FIGURE 2.11.2



Slide the heads of 8 x 1/4" hex head bolts 4 into each side of the aluminium brace, ensure they are in the slots shown in Figure 2.11.4. Loosely fit 1/4" nuts to the 8 bolts this will become a spacer.

FIGURE 2.11.3

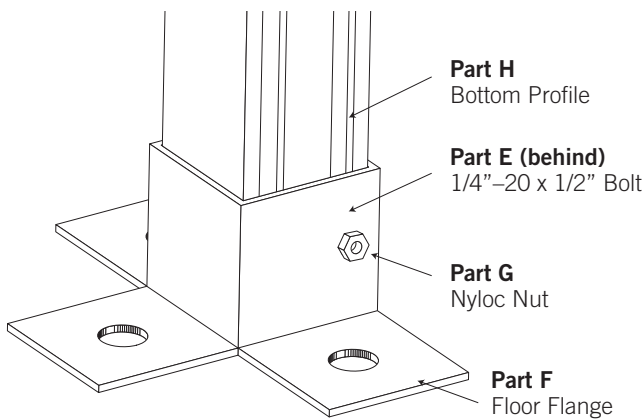
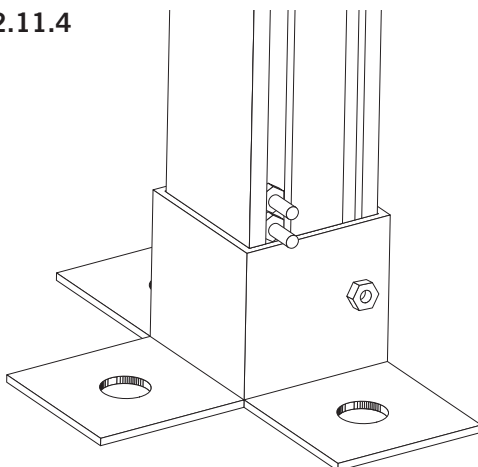


FIGURE 2.11.4



Assemble the "U" bolt as shown and fit over the top of the aluminium brace Figure 2.7.5.

When finally assembled the "U" bolt assembly must not be less than 30mm from the end of the brace Figure 2.7.2 and 2.7.6.

FIGURE 2.11.5

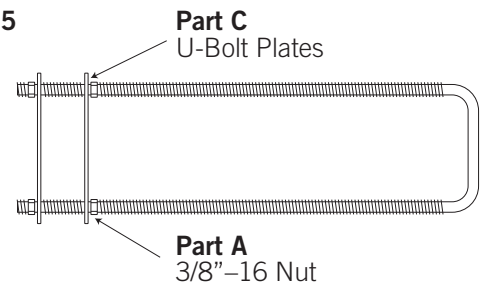
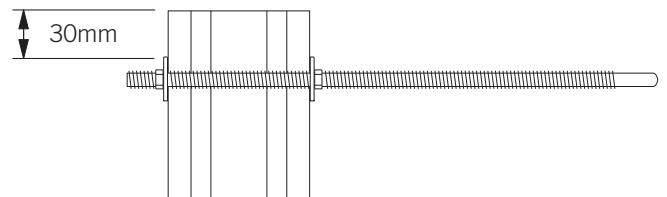
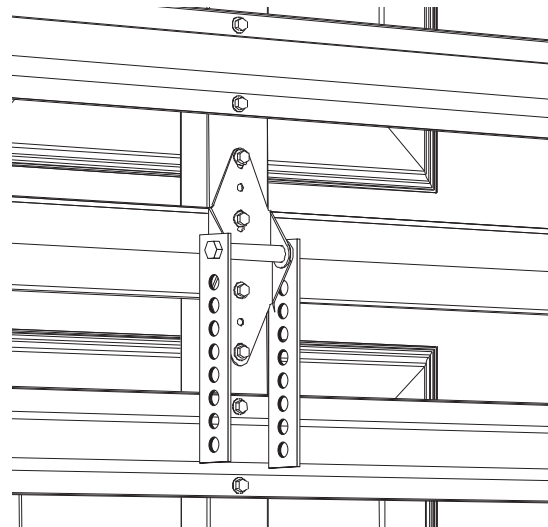


FIGURE 2.11.6

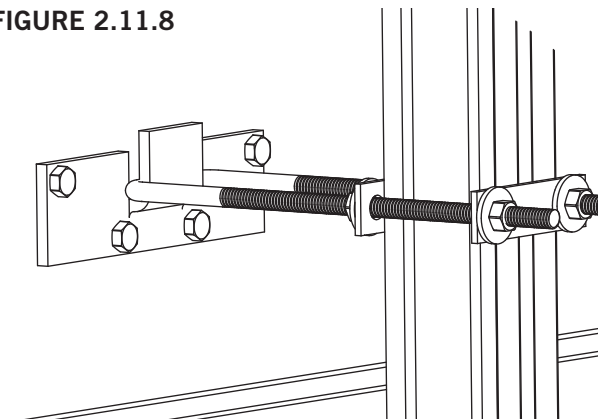


Stand the aluminium brace to one side, fit items O, P and M to the hinges as shown in Figure 2.11.7 directly under the lintel bracket to every hinge.

FIGURE 2.11.7

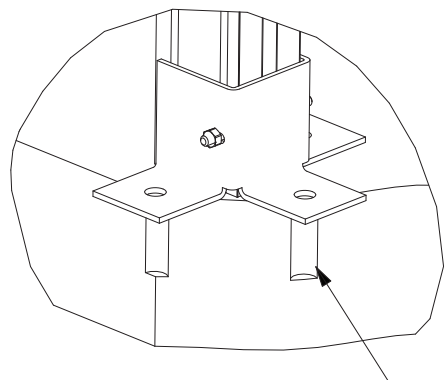


Now stand the aluminium brace in position, ensure it is plumb in line with the hinges, adjust the 'U' bolt so that it fits comfortably in the lintel bracket and the brace has 5-8mm clearance from the panel reinforcing Figure 2.11.2.

FIGURE 2.11.8

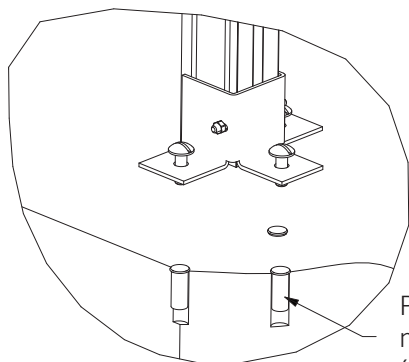
Ensure the brace is plumb and the clearance between the brace and reinforcing is correct accurately mark the three floor fixing points Figure 2.11.9.

Remove the brace and carefully drill the three floor fixing points, clean out the holes and insert the three (R) anchors they must be a push fit (do not hammer in place) Figure 2.11.10. When in place use the supplied punch to hammer home the internal plug.

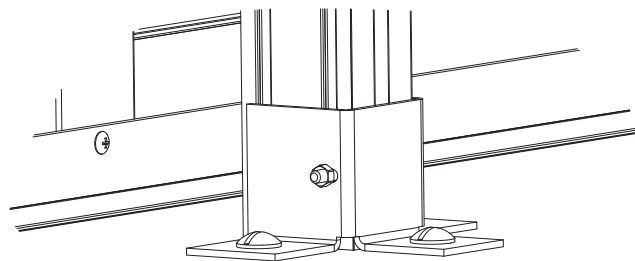
FIGURE 2.11.9

Straighten up
brace assembly

Mark and drill
floor for the
masonry inserts

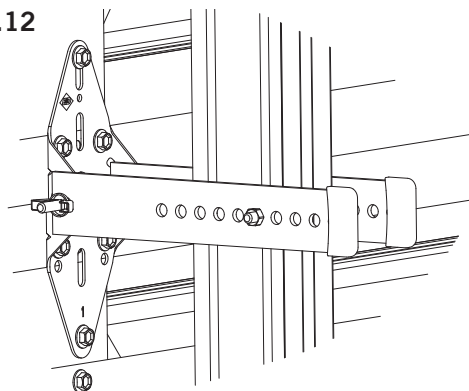
FIGURE 2.11.10

Prepare footing with
masonry insert
(3 off)

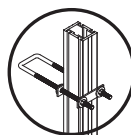
FIGURE 2.11.11

Stand the brace in position make sure it is hooked in place at the lintel and insert three dome head (S) fixing screws into the three floor anchors.

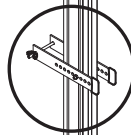
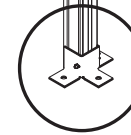
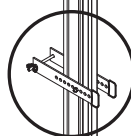
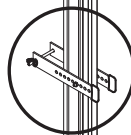
Slide bolts previously inserted up the brace to the top hinge and lightly tighten this will stop it sliding to the bottom, swivel the hinge attachment shown at Figure 2.11.12 and attach to the bolt, lightly hold in place with the nylock nut. Repeat for all other hinges, fit black plastic caps to U bolt thread and hinge plate ends.

FIGURE 2.11.12

Assembled Brace

**FIGURE 2.11.13**

Finally fit the supplied screw driver storage bracket and attach all warning labels and hand over the customer installation direction leaflet.

**FIGURE 2.11.14****FIGURE 2.11.15**

2.12 BRACE STORAGE RACK INSTALLATION

1. Select a suitable position to the side of the doorway or as close as possible.
2. Position the top rack bracket so that the u-bolt just touches the bottom of the groove and securely fasten the wall (Figure 2.12.1).
3. Align the floor rack, mark hole locations, drill and mount rack on the wall (Figure 2.12.2).

FIGURE 2.12.1

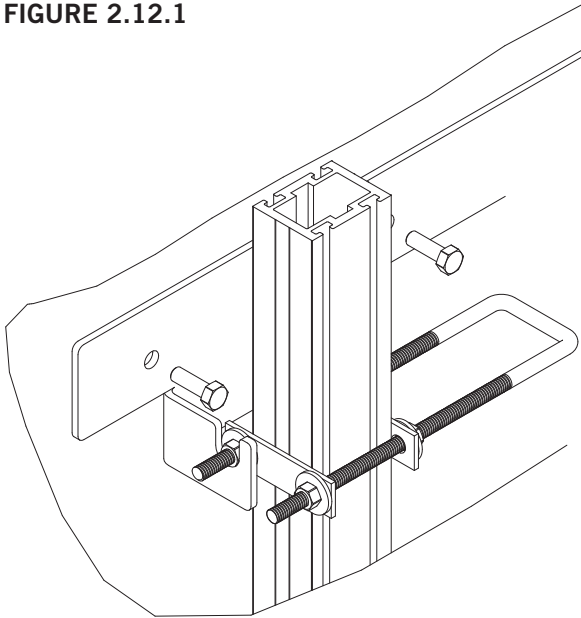
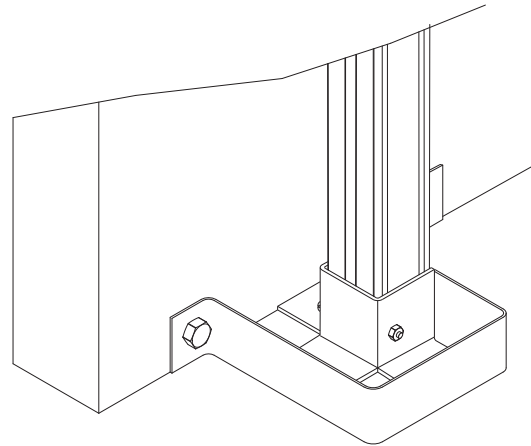


FIGURE 2.12.2



2.13 LINTEL ADAPTER BRACKET

Part No.: OT2565

The lintel adapter bracket is optional for use when the door is installed to timber framed structures with a non rated timber lintel. THIS SHOULD BE ADVISED BY THE BUILDER PRIOR TO INSTALLATION TIME.

The adapter can only be used when the ceiling is not higher than 2850mm.

The lintel brace bracket is attached as indicated using the specified fixings.

The 'U' bolt cannot be less than 30mm from the end of the aluminium brace.

All other details are as per the standard brace fitting instructions.

450mm minimum headroom is required.

The opener is to be mounted directly to the ceiling.

FIGURE 2.13.1

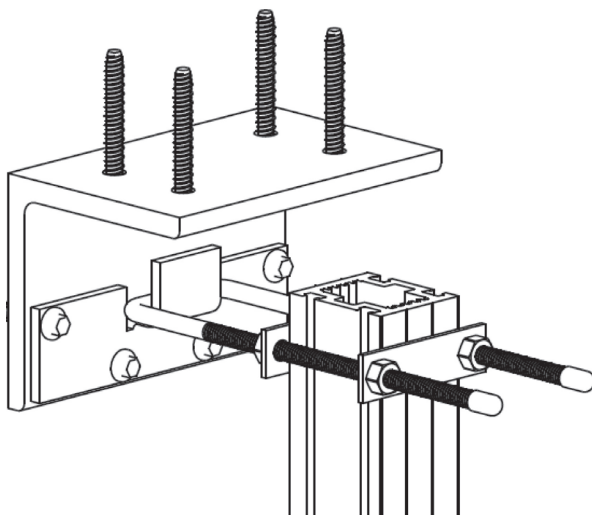
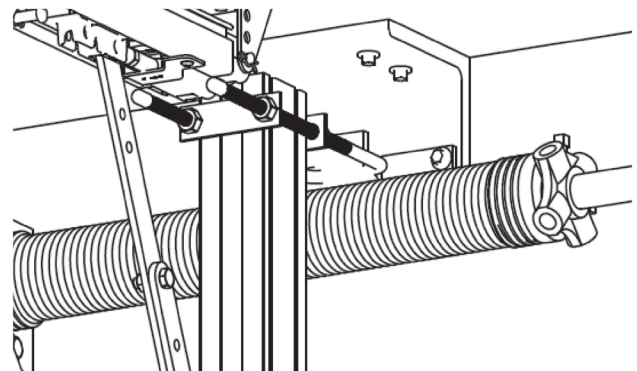


FIGURE 2.13.2



3.0 OPTIONAL COMPONENTS

3.1 LOCK INSTALLATION

NOTE: In coffin garages (those with no access other than the garage door), the lock handle should be installed immediately after fitting the lock panel.

The lock handle is to be fixed to the middle of the second panel. Using lock plate as a guide, centre on central end stile and drill through the end stile and the panel using a 1/2" (13 mm) drill bit for the large hole and a 3/16" (5 mm) bit for the two holes on either side.

Fit the "T" handle to the panel by inserting the lock shaft and the two 3/16" thread bolts into the panel from the outside, through the lock muntin. Attach the 3/16" or 4.7 mm nuts and washers securing the 'T' Handle in place. Next insert the lock guide plate (dimples facing away from door) followed by the internal handle, the lock cam and the second guide plate (dimples facing the door). Lock together with 3/16" nuts and washers, see Figure 3.1.2.

FIGURE 3.1.1 PARTS

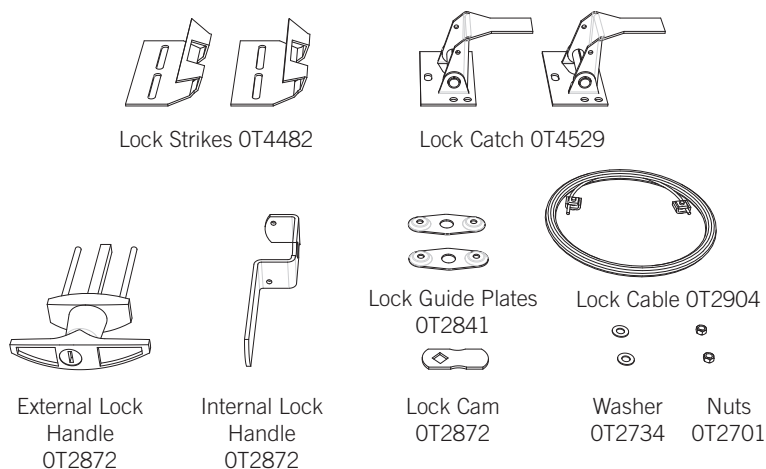
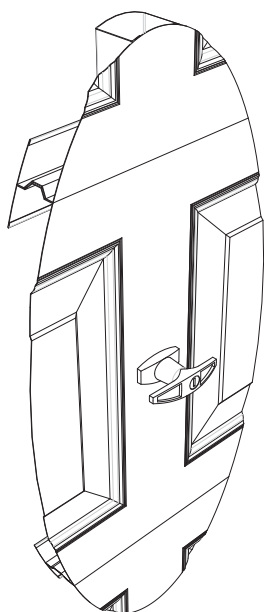


FIGURE 3.1.2



**ASSEMBLED LOCK
EXTERNAL VIEW**

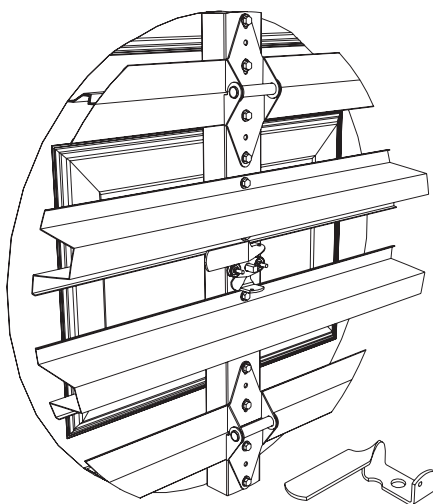
Fix the lock catch brackets to each end stile on the lock panel approximately one third to half way up the panel. Drill holes in each (top and bottom) and fix using 1/4" BSW x 1/2" cup-head bolts and nuts. Position the lock strike centrally on each lock catch. Fix into the vertical tracks with the 1/4" BSW x 1/2" cup-head bolts and nuts, Figure 3.1.3.

Fix the lock cable to one of the lock catch arms with the cable clamp. Then slip the lock cable through the internal lock handle and into the other lock catch arm. Make sure to tighten cable clamps, Figure 3.1.4.

To further facilitate smooth operation, the lock strike can be twisted slightly so that it easily slides over the lock catch as shown in Figure 3.1.5, make sure that on the upward movement that the lock strikes becomes firmly engaged.

LOCK PLACEMENT

The Reinforcement Battens cannot be shifted from their position, and therefore do not allow enough room for the standard Internal Lock Handle, an alternative 'bent' Internal Lock Handle must be used instead as shown below and to the left.



LOCK STRIKE

The Lock Strike can be wedged between the tracks and the angle bracket, additional holes may have to be drilled into both in order to line up the Lock Strike with the Lock Handle assembly installed either above or below the Reinforcing Batten.

FIGURE 3.1.3 LOCK STRIKE & CATCH

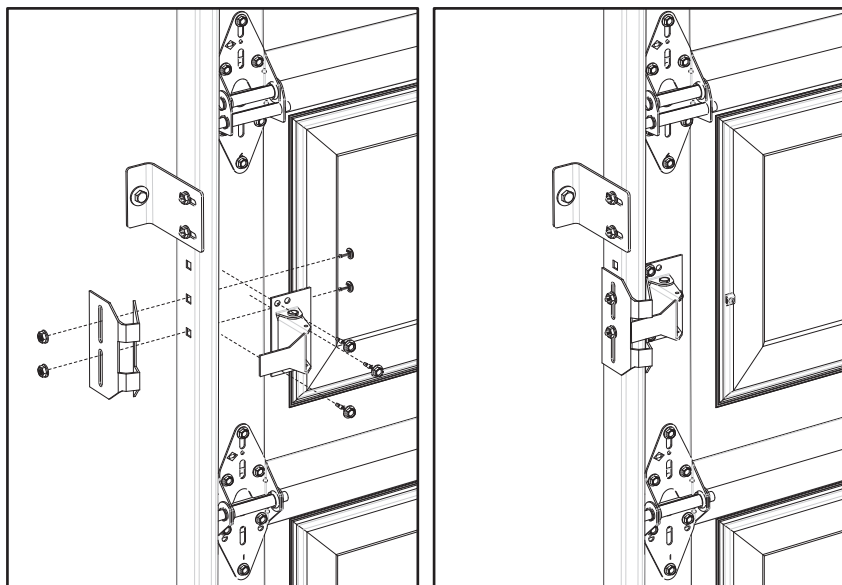


FIGURE 3.1.4 LOCK CABLE

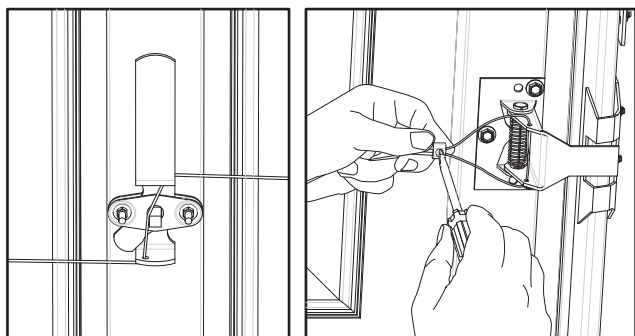
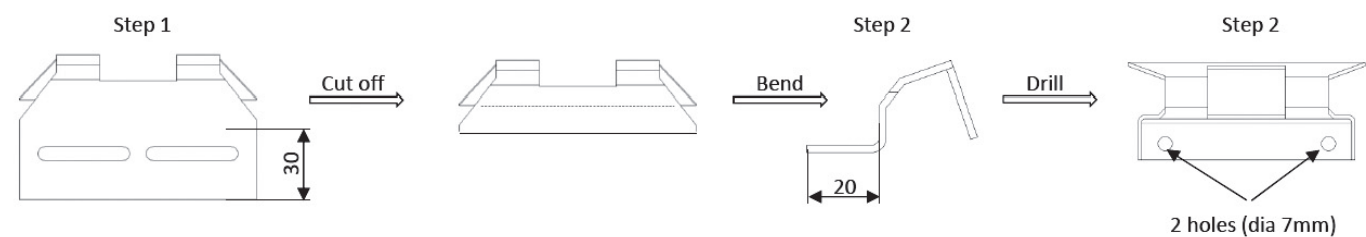


FIGURE 3.1.5 BENDING LOCK STRIKE

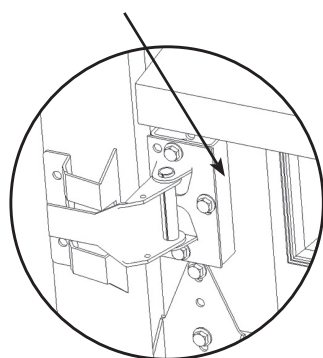


FIGURE 3.1.6 MODIFICATION TO LOCK WHEN TRACKLOCKS ARE FITTED (NOT SUPPLIED)

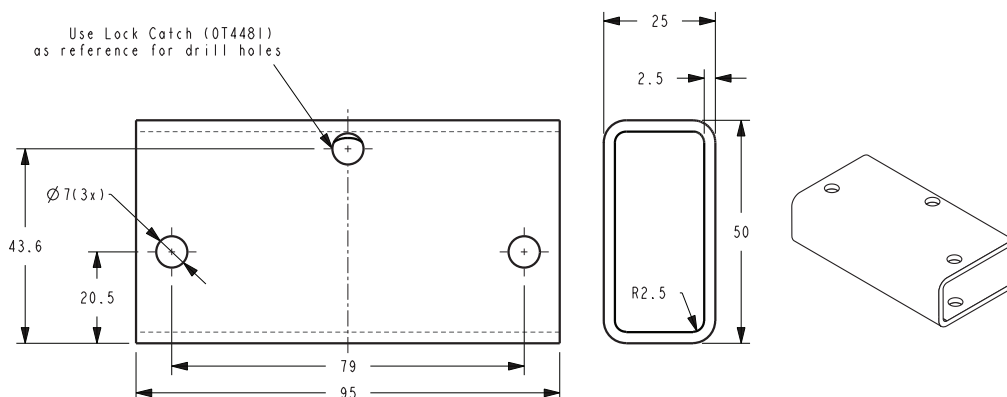
Modification to Lock Strike



**Spacer required
(Part No: 0T2567)**



Use Lock Catch (0T4481)
as reference for drill holes

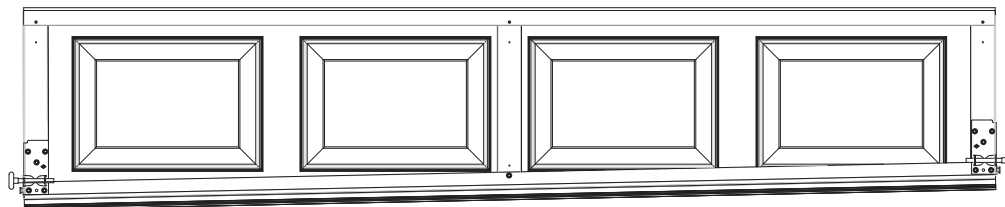


3.2 FIXED TAPERS

Fixed Tapers consist of a modified bottom panel, Figure 3.2.1. Please familiarise yourself with the standard bottom panel assembly on page 8. The installation is almost identical to that of the standard bottom panel but for one significant difference.

The wheel and lifting gear are fixed to the bottom corners of the panel.

FIGURE 3.2.1 PLACING BOTTOM HANGERS



Hinged tapers are accomplished using a small customised panel, which results in a slight variation in the installation process, please familiarise yourself with the standard installation before proceeding.

Tracks are assembled as standard with the only difference being that one vertical track needs to be cut down to accommodate the uneven floor. Both vertical tracks need to start from the ground and end level with each other. Cut the track as necessary from the ground end.

In Figure 3.2.2 the lifting panel is different from the standard bottom panel shown on page 7 in that there is no weather seal it's part of the taper panel. Assemble bottom hanger onto the lifting panel as shown in Figure 2.2.3 on page 7.

Simply assemble tapered panel onto lifting panel using the hinges provided on the tapered panel, Figure 3.3.3.

FIGURE 3.2.2 ASSEMBLING HINGED TAPER

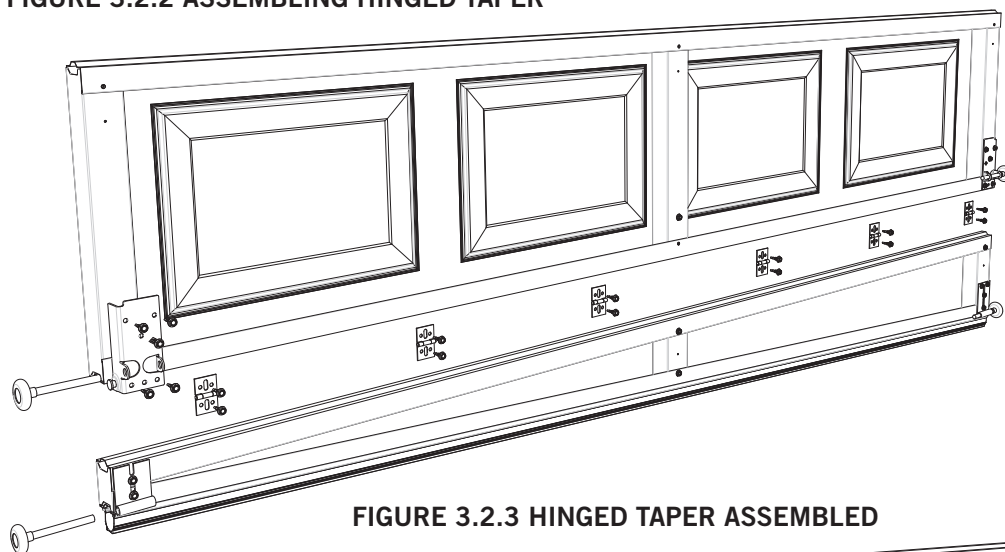
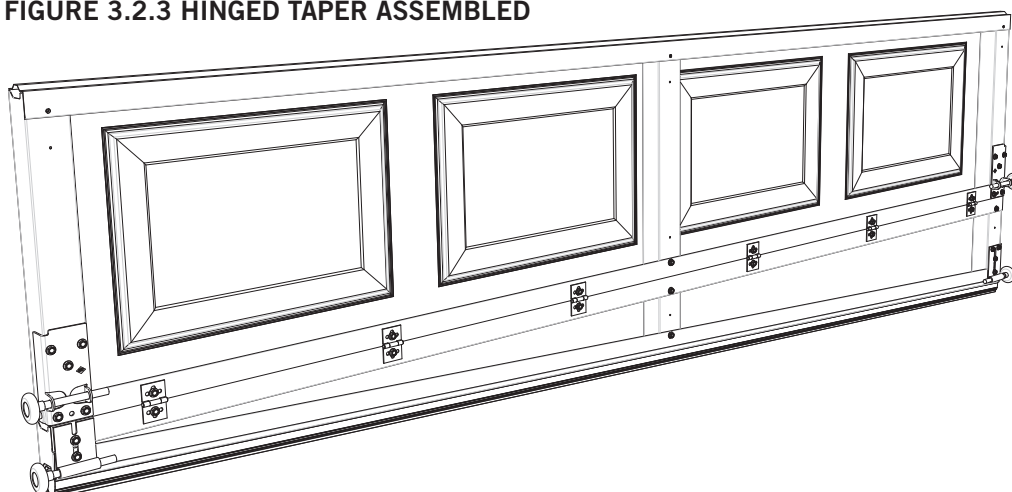


FIGURE 3.2.3 HINGED TAPER ASSEMBLED



LIMITATIONS (continued):

- FLOOR FLANGE FIXING ($V = 20$ MPa, $E = 210$ GPa)
- ALL DOOR COMPONENTS TO BE IN ACCORDANCE WITH STANDARD B80 WINDPANEL¹ MANUFACTURING.
- ACCORDANCE WITH STANDARD B80 WINDPANEL¹ INSTALLATION GUIDELINES.
- WINDPANEL¹ BRACES TO BE INSTALLED IN ACCORDANCE WITH STANDARD B80 WINDPANEL¹ BRACES TO BE USED.
- WINDPANEL¹ BRACES ARE TO BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH MANUFACTURERS INSTALLATION GUIDELINES AND THE STRUCTURE TO WHICH THE DOOR IS ATTACHED, INCLUDING LINTEL HEADS, CEILING WIND BEAMS AND SUPPORT BRACES. ALL BRACES MUST BE CERTIFIED BY AN ENGINEER AND ENDORSED BY A SUITABLY QUALIFIED ENGINEER.
- ALTERNATIVE DESIGN PARAMETERS TO WHAT ARE SPECIFIED ON THESE DRAWINGS ARE TO BE USED AT THE SITE SPECIFIC LOCAL PRESSURE FACTORS MAY BE ADOPTED PROVIDED THE CALCULATED SITE SPECIFIC ULTIMATE DESIGN WIND PRESSURES DO NOT EXCEED RATINGS SPECIFIED IN THE DESIGN RATINGS SPECIFIED IN THE DESIGN CRITERIA.
- THE BUILDING DESIGN ENGINEER IS TO PROVIDE THE DESIGN WIND LOADING TO NOT EXCEED THE ULTIMATE DESIGN WIND PRESSURE RATINGS AS SPECIFIED IN THE DESIGN CRITERIA.
- DOORS ARE TO BE POSITIONED AT ANY LOCATION ALONG THE BUILDING ENVELOPE INCLUDING ALL LOCAL PRESSURE ZONES (e.g. CORNERS OF BUILDINGS). PROVIDER TO CALCULATE SITE SPECIFIC WIND PRESSURES TO NOT EXCEED THE ULTIMATE DESIGN WIND PRESSURE RATINGS SPECIFIED IN THE DESIGN RATINGS SPECIFIED IN THE DESIGN CRITERIA.

NOTES COVERING BASIS OF DRAWINGS (RELEVANT TEST REPORTS etc)


- REPORT NO. TS917 & TS811 Revision A (CYCLONE TESTING STATION, SCHOOL OF ENGINEERING AND PHYSICAL SCIENCES, PRINCIPLES OF MECHANICS).
- AS 1170.2:2011-STRUCTURAL DESIGN ACTIONS, PART 2:WIND ACTIONS.
- AS 1170.1:2002-STRUCTURAL DESIGN ACTIONS, PART 1:WIND ACTIONS, IMPOSED AND OTHER ACTIONS.
- AS 1170.0:2002-STRUCTURAL DESIGN ACTIONS, PART 0:GENERAL PRINCIPLES.
- AS 1720.1:2010-TIMBER STRUCTURES, PART 1:DESIGN METHODS.
- AS 4600:2005-COLD FORMED STEEL STRUCTURES.
- AS 2599:2010-MASONRY STRUCTURES.
- AS 1664.1:1997-ALUMINIUM STRUCTURES, PART 1: LIMIT STATE DESIGN.
- AS/NZS 4305:2012 GARAGE DOORS AND SHUTTERS.
- AS 6000:2009 CONCRETE STRUCTURES.
- BUILDUP FASTENERS-TECHNICAL SPECIFICATION.
- RAMEST-SPECIFIERS RESOURCE BOOK, PART 1-DESIGN CRITERIA & LIMITATIONS.

DESIGN CRITERIA: (REFER ALSO TO NOTES COVERING BASIS OF DRAWINGS & LIMITATIONS) DOOR HEIGHT (RC1-3) = 2.44m MAX. DOOR HEIGHT (RC4-5) = 2.64m MAX. DOOR RATING C2 (FOR RC1-3) AND C4 (FOR RC4-5) AS GIVEN IN TABLE 5.2 OF AS/NZS 4500:2012 OR APPROXIMATELY EQUAL TO THE FOLLOWING WIND RATING WHEN IN ACCORDANCE WITH AS/NZS 1170.2:2011.	
FOR RC1-3 CONFIGURATIONS	
REGION C TERRAIN CATEGORY 2 INTERNAL PRESSURE COEFFICIENTS C_{pi} = (-0.3 & +0.6) REGIONAL WIND SPEED V_R = 69.3m/s	THE MAXIMUM DESIGN WIND PRESSURES ARE NOT TO EXCEED THE FOLLOWING MAGNITUDES:
FOR RD1-5 CONFIGURATIONS	
REGION D TERRAIN CATEGORY 1 INTERNAL PRESSURE COEFFICIENTS C_{pi} = (-0.3 & +0.6) REGIONAL WIND SPEED V_R = 89m/s	THE MAXIMUM DESIGN WIND PRESSURES ARE NOT TO EXCEED THE FOLLOWING MAGNITUDES:
FOR RC1-3 CONFIGURATIONS	
1. FOR DOORS WIDTHS LESS THAN 4m ULTIMATE DESIGN INWARD WIND PRESSURE = 2.92kPa, ULTIMATE DESIGN OUTWARD WIND PRESSURE = 3.37kPa, 2. FOR DOORS WIDTHS GREATER THAN 4m ULTIMATE DESIGN INWARD WIND PRESSURE = 2.92kPa, ULTIMATE DESIGN OUTWARD WIND PRESSURE = 3.04kPa,	THE MAXIMUM DESIGN WIND PRESSURES ARE NOT TO EXCEED THE FOLLOWING MAGNITUDES:
FOR RD1-5 CONFIGURATIONS	
1. FOR DOOR WIDTHS LESS THAN 4m ULTIMATE DESIGN INWARD WIND PRESSURE = 2.92kPa, ULTIMATE DESIGN OUTWARD WIND PRESSURE = 2.69kPa, 2. FOR DOOR WIDTHS GREATER THAN 4m ULTIMATE DESIGN INWARD WIND PRESSURE = 2.92kPa, ULTIMATE DESIGN OUTWARD WIND PRESSURE = 3.04kPa,	THE MAXIMUM DESIGN WIND PRESSURES ARE NOT TO EXCEED THE FOLLOWING MAGNITUDES:
LIMITATIONS:	
STEEL ABUTMENT POST AND STEEL LINTEL TO BE RESISTIVE TO WIND UPLIFT TO BE RESPECTIVELY WITH A MINIMUM STRESS GRADE OF 250 MPa U.N.O. CHARACTERISTIC UNCONFINED COMPRESSIVE STRENGTH OF BLOCK WALL f_{cu} 15 MPa (MIN). CONFINING OF BLOCK WALL (f_{cr}) = 15 MPa (MIN).	

RC1 - REGION C, CONFIGURATION 1
RC2 - REGION C, CONFIGURATION 2
RC3 - REGION C, CONFIGURATION 3

IN	SCALE	DRAWING No. S01 J
	DESIGNED	
	DRAWN	
	CHECKED & APPROVED	
	DATE	
COPIES.		PROJECT No. 2191
		June 2014

DRAWING SECTIONAL DOOR ELEVATIONS FOR USE
WIND REGIONS C2

 For further information please contact B&D

CLIENT	B&D AUSTRALIA PTY LTD
PROJECT	B&D WINDPANEL™ REINFORCED SECTIONAL DOOR WITH VERTICAL BRACES AND TRACKLOCK

ISSUE	DATE	AMENDMENTS
F	23.10.13	GENERAL REVISION
G	27.11.13	GENERAL REVISION
H	09.12.13	GENERAL REVISION
I	21.05.14	GENERAL REVISION
J	16.06.14	GENERAL REVISION

IMPORTANT INFORMATION ON FASTENERS

It is the installer's responsibility to follow the engineering fixing specifications set out on this page and subsequent pages throughout these instructions, failure to do so may result in a door failure.

Revision 7 - July 2014



It is the installer's responsibility to follow the engineering fixing specifications set out on this page and subsequent pages throughout these instructions, failure to do so may result in a door failure.



Revision 7 - July 2014



It is the installer's responsibility to follow the engineering fixing specifications set out on this page and subsequent pages throughout these instructions, failure to do so may result in a door failure.

4.0 AFTER INSTALLATION CARE

GENERAL CARE OF YOUR PANELIFT® WINDPANEL™

CLEANING

COLORBOND® & COLOURED STEEL FINISH Your B&D Panelift® Windpanel™ has been pre-painted with a silicone modified polyester formulation, which is one of the best paint films commercially available today. However, all exposed surfaces require some attention to guard against the premature onset of corrosion and any other harmful atmospheric effects. In our atmosphere there are harmful deposits that gather on the door surface and if not removed regularly, will seriously affect the appearance and life of the door.

Washing of the door with clean water and a cloth every 14 days is recommended – particular care should be taken to clean areas of the door not normally washed by rain.

LOCK

Your lock does not require special maintenance, however, if the keyway becomes stiff, the application of powdered graphite is recommended – do not grease or oil the lock.

WARNING! Do not disassemble the lock mechanism and do not allow paint to enter the lock keyway.

HINGES & HANGERS

If the hinges and hangers squeak and squeal during operation then the hinges haven't been greased or the grease has dried up. Please apply some grease to the shaft to minimise this.

CABLES

Check the cables regularly for corrosion, fraying or tangling, if any of these are evident call your service provider.

REGULAR MAINTENANCE REQUIRED

B&D recommends that you check the operation of your Panelift® Windpanel™ at least every six months (more regularly in extreme environments or frequent use). The effort required to manually open and to manually close the door should be about the same (if door has an automatic opener, put into manual mode before testing door).

If the door is difficult to operate in either direction (up or down) then check that the inside surfaces of the guides are clean and free of obstructions.

If the door is still difficult to operate, then your door will need a service to adjust the spring tension and possibly other operational parts of the door.

This service should only be carried out by an experienced door technician, using the correct tools.

If you have an automatic opener fitted to your door, it is particularly important that you ensure the optimum operation of the door, otherwise you may reduce the effective life of the opener.

To keep your door running well, it is recommended that your door be serviced, by an experienced door technician, every 12 months (more regularly in extreme environments or frequent use), or earlier if required.

SPRING TENSION

It is natural for springs to lose tension over time. When spring tension is adjusted or when your door is first installed it is usual to apply a little more tension than is required for balanced operation, to allow for the normal "settling in" of the springs.

WARRANTY

The B&D Panelift® Windpanel™ in residential use is covered by a 12 month warranty for complete door and parts, surface (excludes salt corrosion).

Warranty conditional on proper care as recommended above. Full details of the warranty are available from www.bnd.com.au

B&D Doors Office Locations:

New South Wales:	34 Marigold St, Revesby 2212.	Phone: (02) 9722 5555
Queensland:	17 Oasis Court, Clontarf 4019.	Phone: (07) 3883 0200
Newcastle:	Unit 1/108 Mitchell Rd, Cardiff NSW 2285.	Phone: (02) 4956 8533
Victoria:	147-153 Canterbury Rd, Kilsyth 3137.	Phone: (03) 9237 7766

South Australia:	23 Frederick Rd, Royal Park 5014.	Phone: (08) 8440 4747
Western Australia:	96 Mulgool Rd, Malaga 6090.	Phone: (08) 9247 8777
International/Export:	34 Marigold St, Revesby 2212.	Phone: +61 (0)2 9722 5555



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www.bnd.com.au

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