HYDRO
QUALITY GARAGE DOORS

DiGi
QUALITY ACCESS TECHNOLOGY



Installation Instructions

SINGLE FUSION GARAGE DOOR WITH TENSION SPRINGS

IMPORTANT

These instructions are intended for the DIY enthusiast, and the professional installer. It is assumed that the DIY installer will read these instructions in full and, where further understanding is required, our technical support team will be contacted before proceeding with the installation. It is assumed that the DIY enthusiast has the required skills to mark out, drill and bolt into concrete, steel and wood, and understands measuring and leveling concepts. The DIY enthusiast or installer should be aware that garage doors are heavy and must be correctly counter balanced, which is achieved by energy stored in a spring system. The DIY enthusiast must have a reasonable working knowledge relating to sectional overhead door Installation.

The following have been identified as hazards during installation of sectional doors.

- Risk of injury to other people or animals in the work area
- Working at heights and working with ladders
- Manual handling when installing tracks, door operators and springs
- Sharp edges on door tracks, cables and brackets
- Pinch points on hinges and doors
- Incorrect use of hand tools
- Tension springs and cables

For more information and/or technical advice, contact Swartland's Technical Department on 0861 10 24 25 or customerservice@swartland.co.za

The Hydro Guarantee Certificate is available for download at www.swartland.co.za

RECOMMENDED TOOLS AND EQUIPMENT

1. Electric drill – impact, variable speed, reversible
2. Drill bits – masonry: 6mm, 10mm
   –Steel: 6mm, 10mm, 12mm
3. Hacksaw
4. Wood saw
5. Screwdriver – ɵ 6mm
6. Spirit level (1m long recommended)
7. Tape measure – 5m
8. Hammer
9. Roofing square
10. Rivet gun (scissor type recommended)
11. Spanners
12. Sockets: – 8mm, 11mm, 13mm
13. Flat/ring: – 10mm, 11mm, 13mm, 14mm
14. Step ladder : 1,7m ~ 2m high
15. Electrical extension lead – to suit

PREPARATION

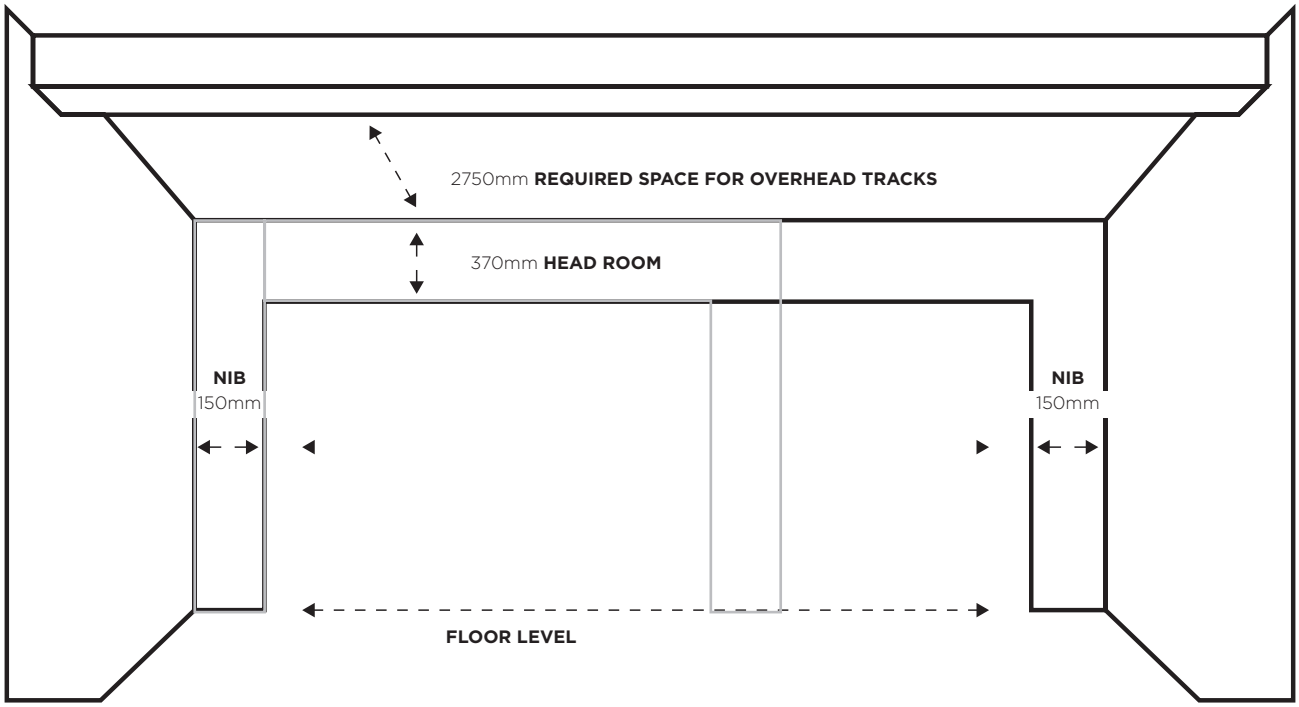
Read through the instruction booklet to gain an overall understanding of the stages involved in the task. **Important:** If the garage does not have access other than the vehicle entrance, to avoid becoming trapped, ensure that everything you need to complete the installation is placed inside the garage before starting. Remove vehicles to protect them, and to provide space to work.

FLOOR SPACE

Ensure that there is adequate space to place the door panels, box and equipment inside the garage, well clear of the doorway (at least 2m).

FRONT WALL SURROUNDING THE DOORWAY

This wall must be reasonably smooth and clear of obstructions and fittings at least 150mm on either side of the doorway and 450mm above.



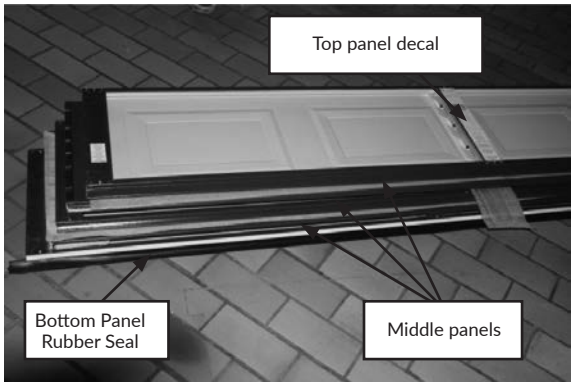
There must be space for the overhead tracks to project back 2.75m from the front wall, 150mm left and right of the doorway, and 370mm above the doorway. Ensure that side-wall fittings (such as shelves) do not encroach into this space.

HEADROOM

Ensure that no overhead fittings or fixtures (lights, shelves, beams, pipes etc) intrude into the headroom space of 370mm above the doorway and 2.75m back from the front wall. (Increase the 350 figure to 390mm if the door is to be automated.)

Single Timber Sectional Garage Door Installation

1. Identify the panels: The bottom panel has rubber seals, while the top panels feature the decal.



2. Centre the bottom panel with the rubber seals, in the doorway, and level it.



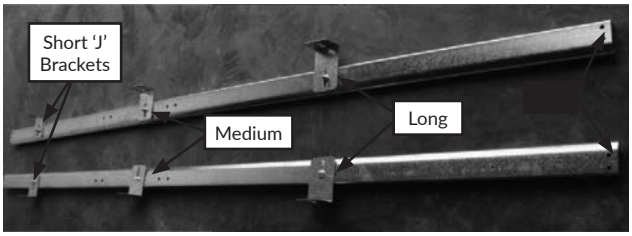
3a. Make a mark 45mm from the panel edge on the left upright.



3b) Marking verticals at 45mm: Make a mark 45mm from the panel edge on the Right upright.



4. To fit the J-brackets to the left vertical track:
a. Identify track (vertical tracks are shorter)



b. Fit a Bottom (shortest) J-Bracket using a track bolt and nut at the bottom end of the track. Tighten with your fingers for now. Orient the brackets to the track as shown.

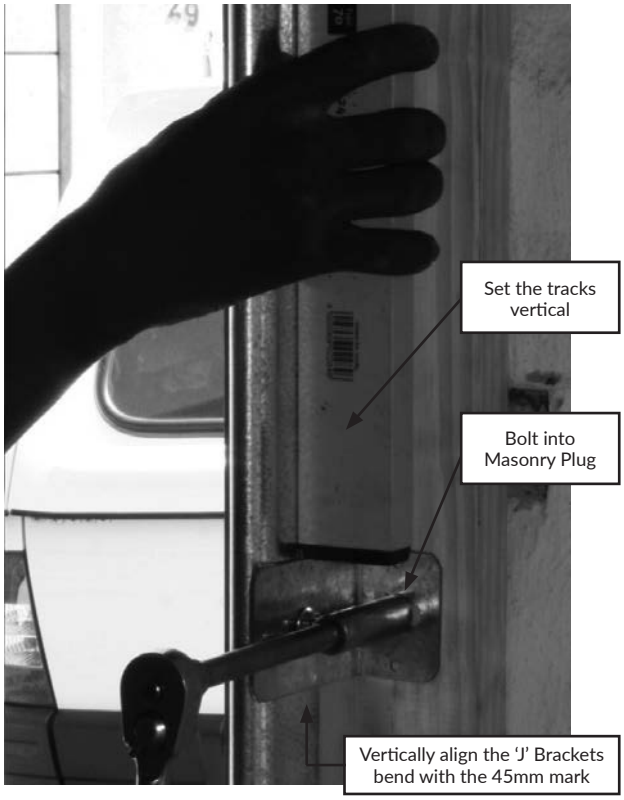
c. Fit medium-size J–bracket near the middle of the track.

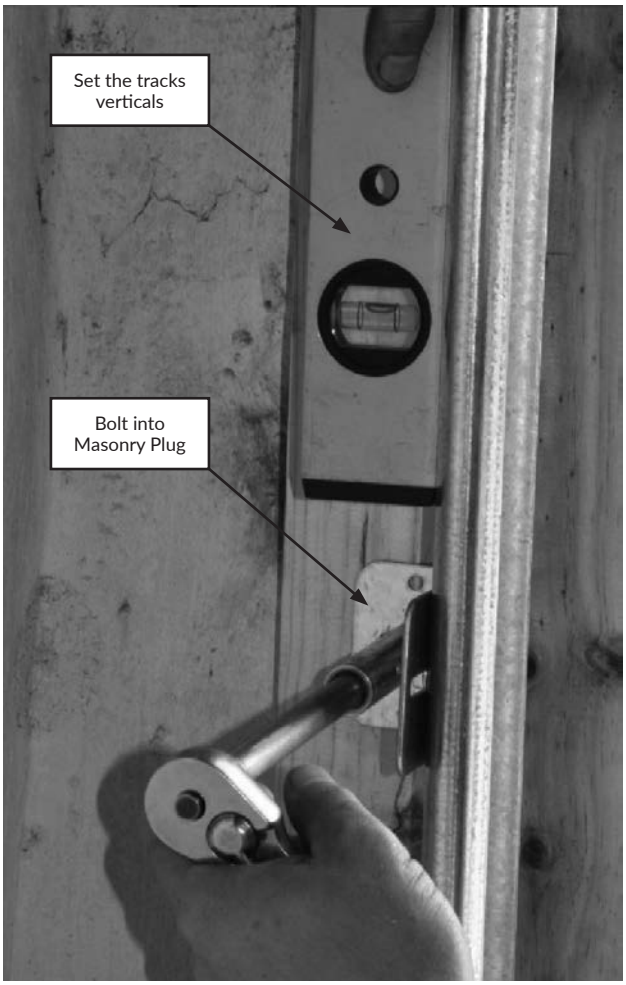
d. Fit longest J-bracket near the top of the track.



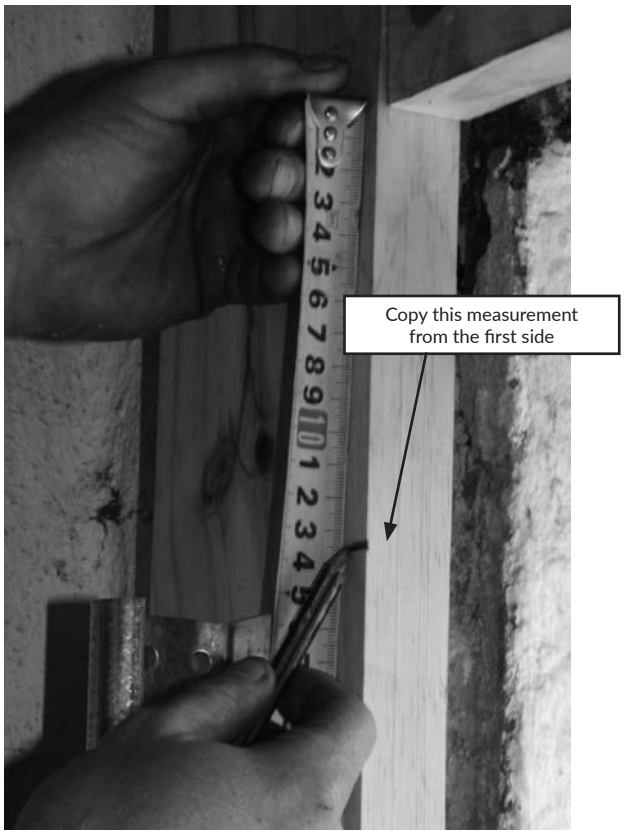
Fitting the vertical tracks

5. Using masonry plugs and bolts, fit the left or right vertical track standing on the higher side.



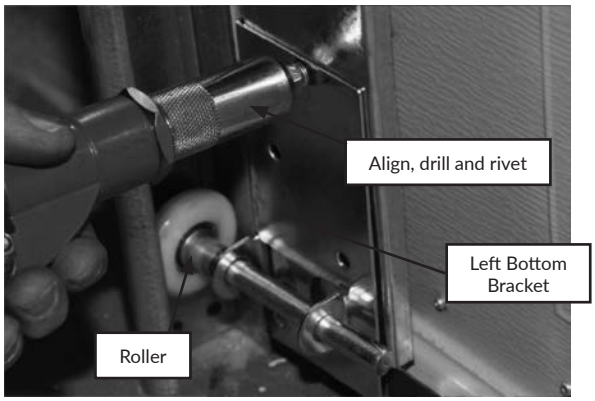


6. Measuring carefully, fit the other vertical track level with the first.

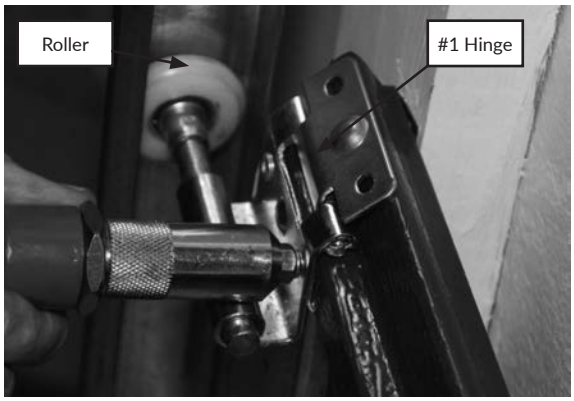


Bottom panels

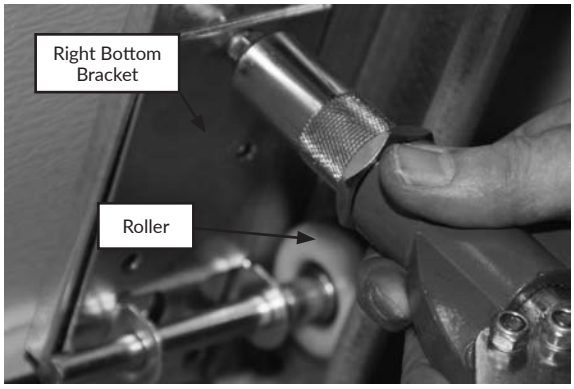
7. Fit a roller and a left bottom bracket.
With the lower edge aligned, drill and rivet the left bottom bracket to the panel.



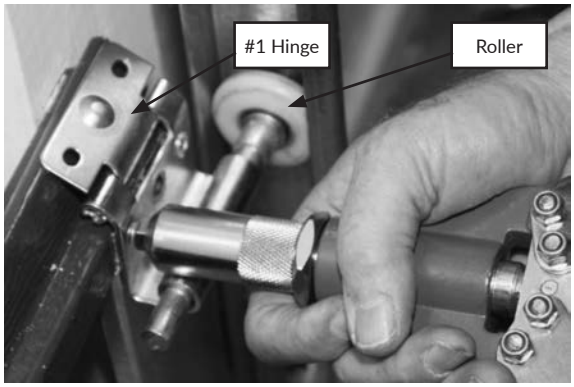
8. Fit a roller and a #1 hinge (left side).
Rivet the #1 hinge to the top corner of the panel in the pre-punched holes.



9. Fit a roller and the right bottom bracket.
Rivet the right bottom bracket to the panel.



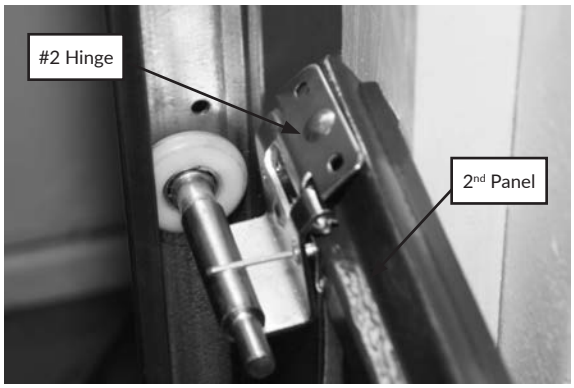
10. Fit a roller and a #1 hinge (right side).
Rivet the hinge to the top corner of the panel.



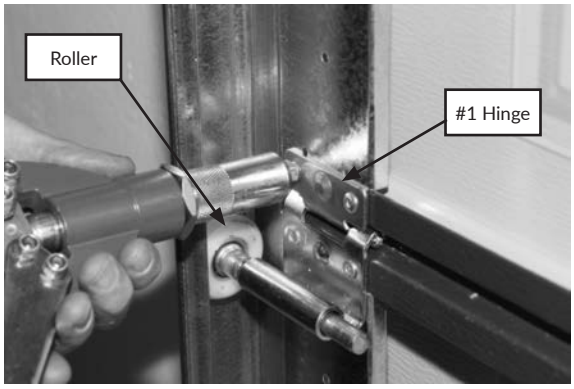
Second panel

11. Place the second panel on top of the first panel and hold it in place.

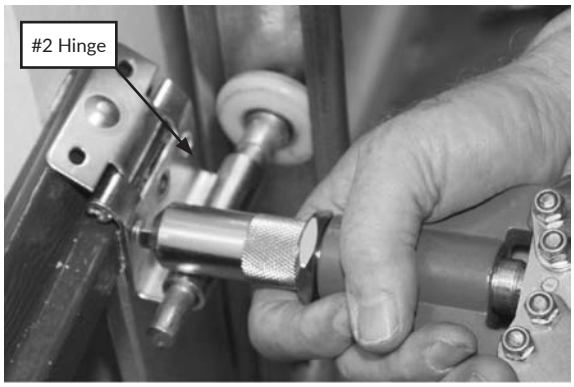
12. Fit a roller and a #2 hinge (left side).
Rivet a #2 hinge to the top corner of the panel in the pre-punched holes.



13. Rivet the upper part of the #1 hinge below to the lower left corner of the second panel.



14. Fit a roller and a #2 hinge (right side).
Rivet a #2 hinge to the top corner of the panel.



15. Rivet the upper part of the #1 hinge below to the lower right corner of the second panel.



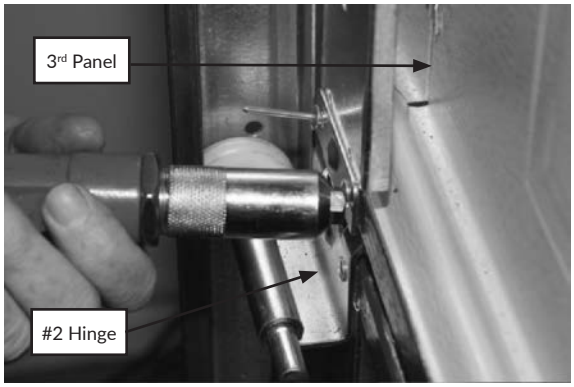
Third panel

16. Place the third panel on top of the second panel and hold it in place.

17. Fit a roller and a #3 hinge (left side).
Rivet a #3 hinge to the top corner of the panel.



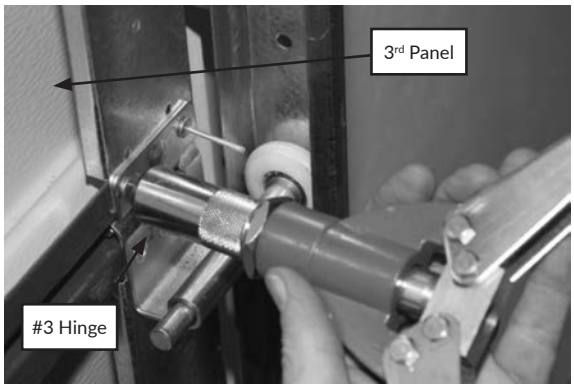
18. Rivet the upper part of the #2 hinge below to the lower left corner of the third panel.



19. Fit a roller and a #3 hinge (right side).
Rivet a #3 hinge to the top corner of the panel.



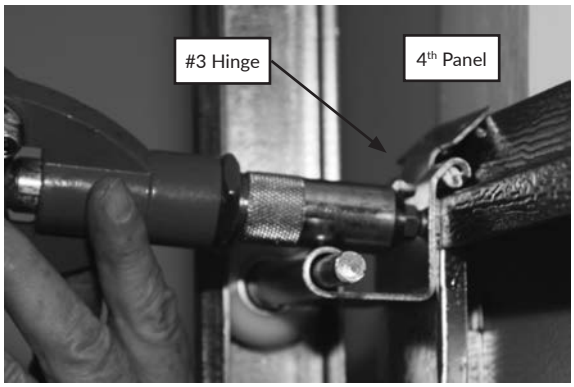
20. Rivet the upper part of the #2 hinge below, to the lower right corner of the third panel.



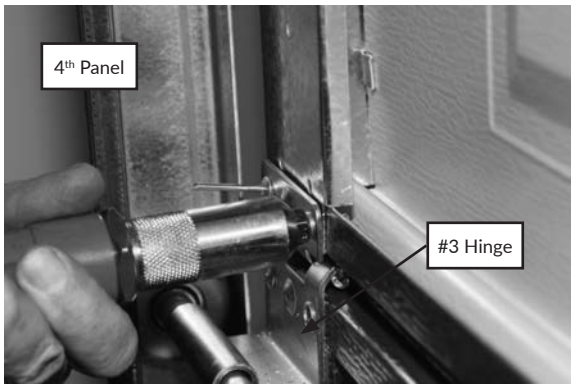
Forth panel

21. Place the forth panel on top of the third panel and hold it in place.

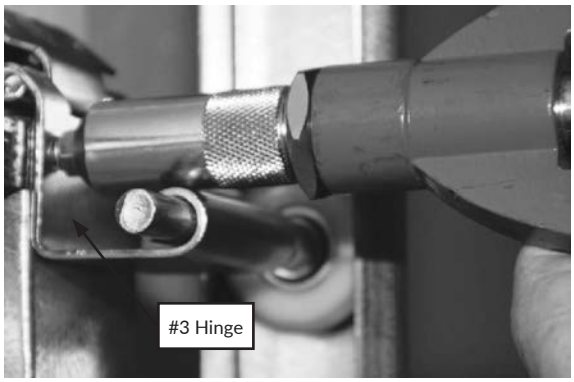
22. Fit a roller and a #4 hinge (left side).
Rivet a #4 hinge to the top edge of the panel.



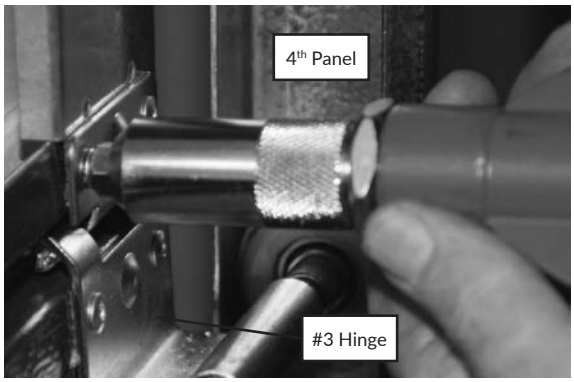
23. Rivet the upper part of the #3 hinge below to the lower left corner of the forth panel.



24. Fit a roller and a #4 hinge (right side).
Rivet a #4 hinge to the top corner of the panel.

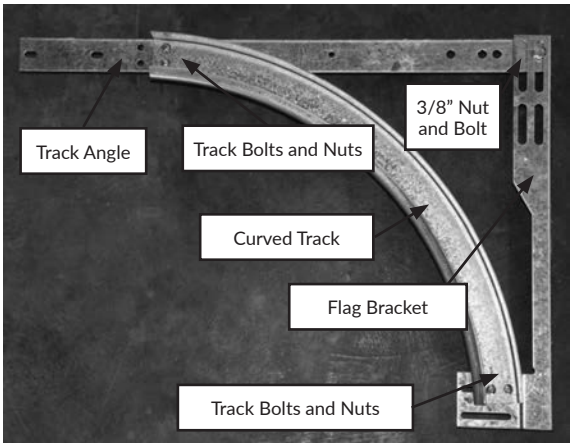


25. Rivet the upper part of the #3 hinge below to the lower right corner of the forth panel.

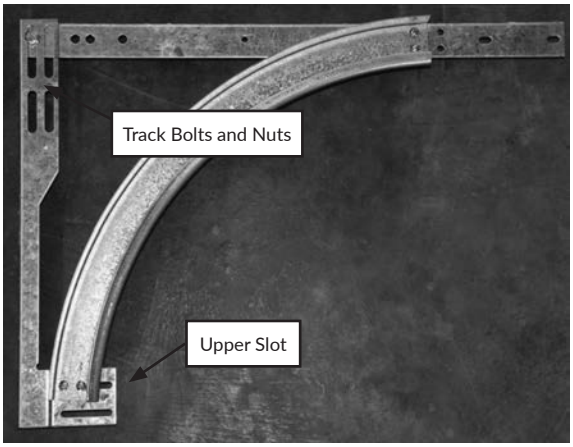


Assembling the tracks

26. Using track bolts and nuts, assemble the flag bracket, track angle and curved track, as shown. tighten the nuts and bolts with your fingers for now.

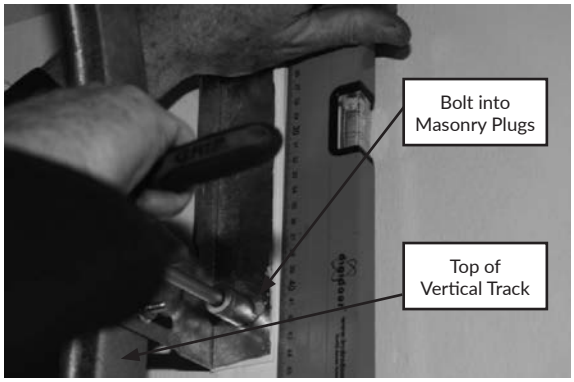


Left side



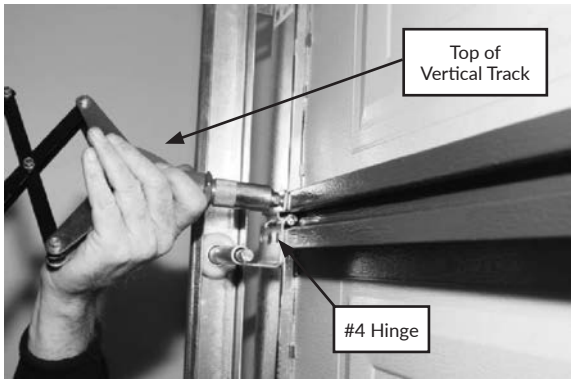
Right side

27. On the left side, attach the lower slot of the flag bracket to the top of the vertical track, using track bolts and nuts. Fasten the upright part of the flag bracket to the front wall in at least two places.

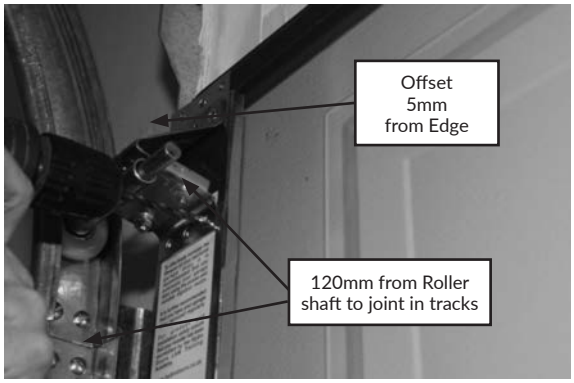


28. Repeat this procedure for the right hand Flag bracket.

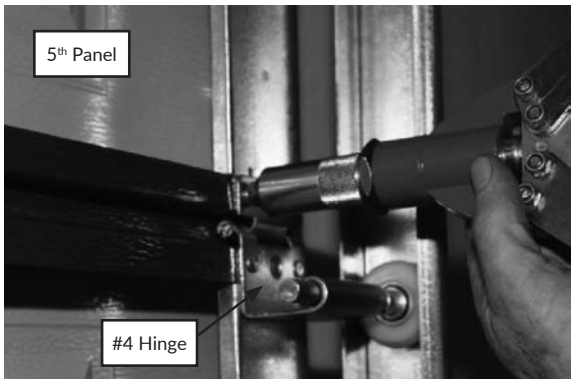
29. Place the fifth panel on top of the fourth panel and rivet the upper part of the #4 hinge below to the left side of the fifth panel.



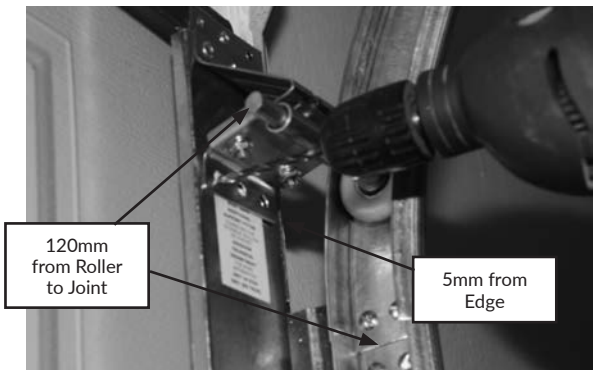
30. Rivet a top bracket and a roller to the top left side, 120mm from the centre of the roller to the joint between the track and the curve, and 5mm from the edge of the panel.



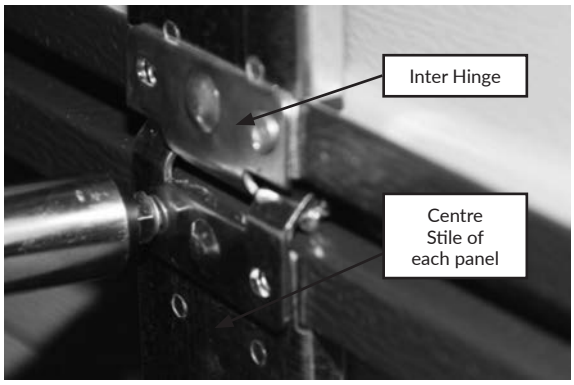
31. On the right side, secure the top of the previous #4 hinge.



32. Drill and rivet a top bracket and a roller to the top right side, 120mm from the centre of the roller to the joint between the track and the Curve, and 5mm from the edge of the panel.



33. Rivet four inter hinges in the middle position of each pair of panels using the pre-punched holes provided.

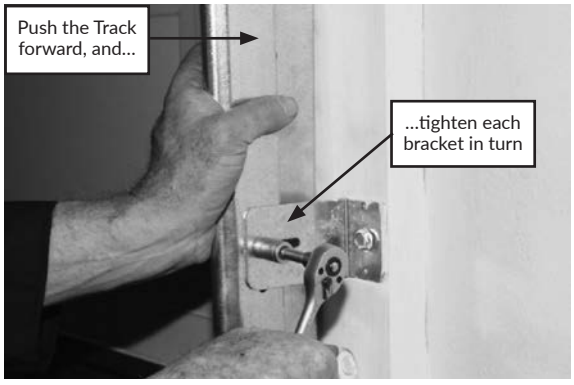


34. Drill and rivet the handle in the middle of the bottom panel.



Adjusting the fit of the door

35. Ensure that the track bolts in the J-brackets are loose. Starting at the bottom, push the track forward to minimize the gap between the face of the door and the front wall, and tighten the Track Bolts in each of the J-brackets in turn. Ensure that there is a small clearance between the door and the wall.



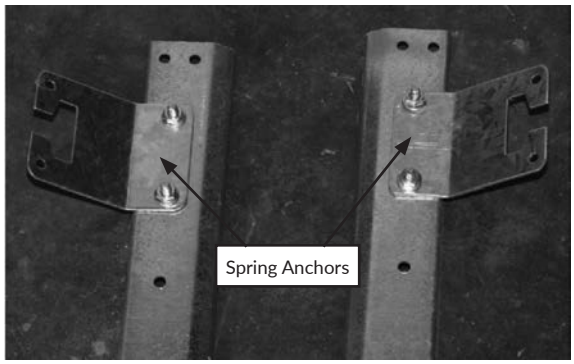
36. Push the track curve forward and tighten the adjusting nuts on the top bracket.



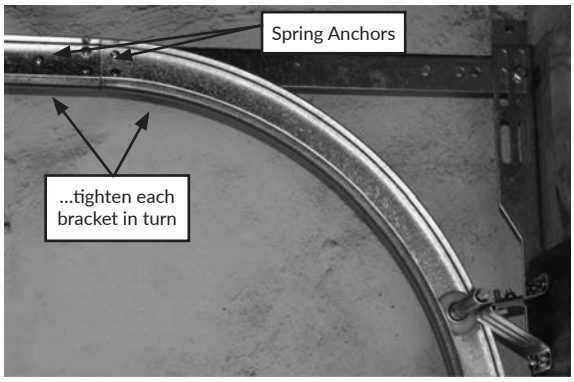
Repeat these two steps on the opposite side.

Installing the horizontal tracks

37. Using track bolts and nuts, secure the tension spring anchor brackets to the ends of the horizontal tracks, as shown below. Use the end of the track with the three equally spaced holes. Note the direction of the bracket related to the track shape, as well as the kink.



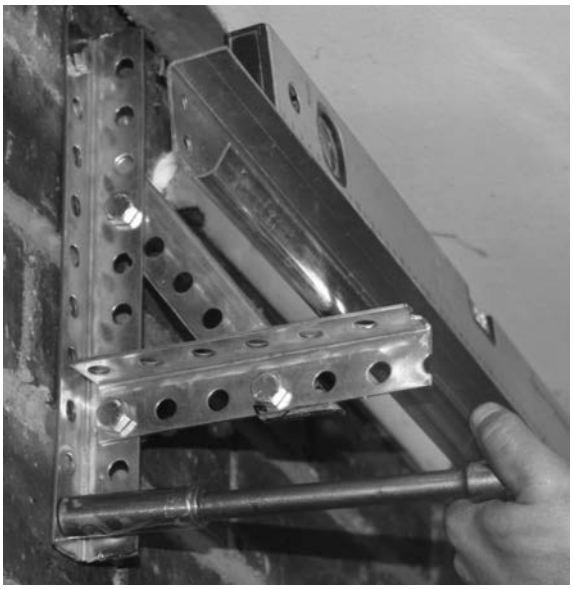
38. On the left side, bolt the horizontal track to the track angle so that it meets and matches the curve, using four track bolts and nuts.

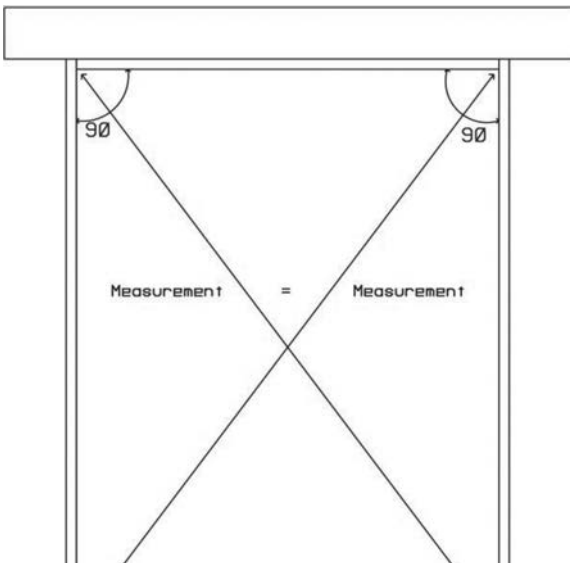


39. Using the punched angle supplied, support the horizontal track from the overhead structure, level and square to the front wall. Note: If overhead support is not possible, make a triangular bracket from the punched angle, and fix it to the side wall.

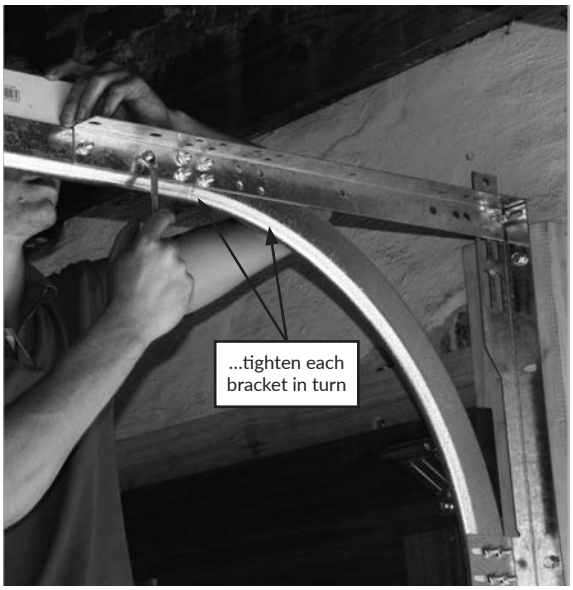


An example of a triangular wall bracket.





40. On the right side, bolt the horizontal track to the Track Angle so that it matches the curve, using four Track Bolts and Nuts.

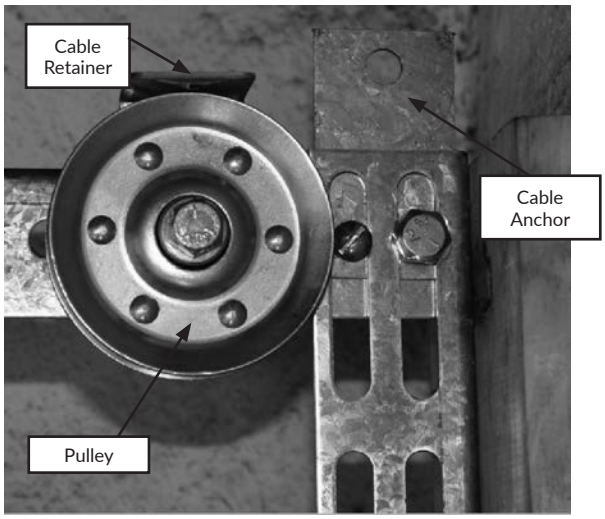


41. Using the punched angle, support the horizontal track from the overhead structure, level and square to the front wall.



Installing the spring system

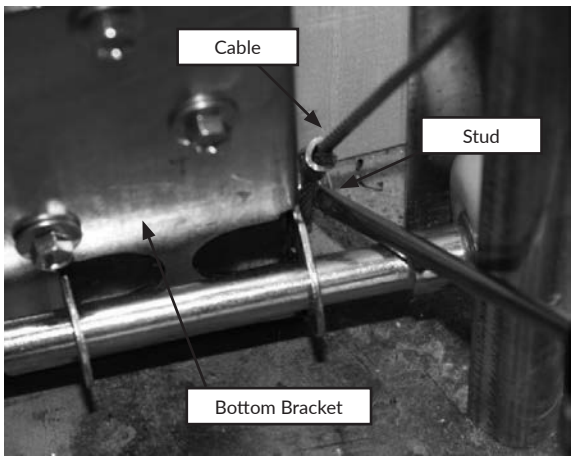
42. As shown for the left side, fit the pulley and cable retainer and tighten the nut and bolt. Also fit the cable anchor bracket to the top of the flag bracket. Rivet a #4 hinge to the top edge of the panel.



43. Repeat the above on the right side.



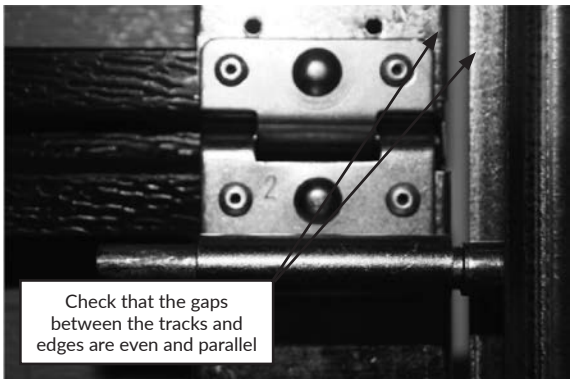
44. Fit the loop in the cable over the head of the stud on the bottom bracket. Repeat for the opposite side.



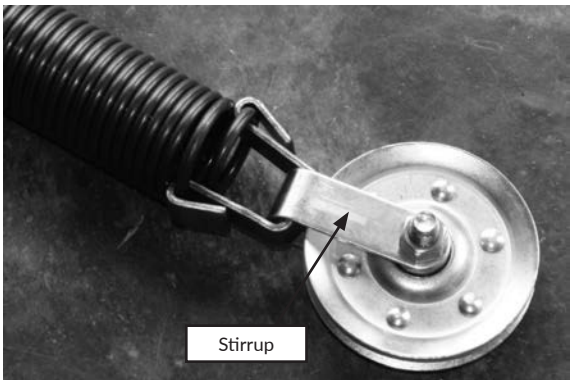
45. With assistance, open the door fully, and place a ladder under it in case it falls.



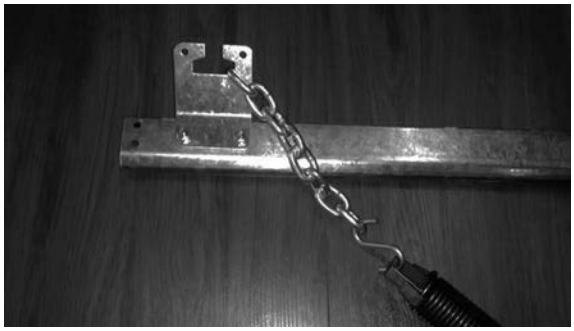
46. Check that the horizontal tracks are parallel to the edges of the open door. If necessary, close the door and reposition the horizontal track supports.



47. Remove the stirrup from the pulley, loop it through one end of a spring and re-bolt the pulley.



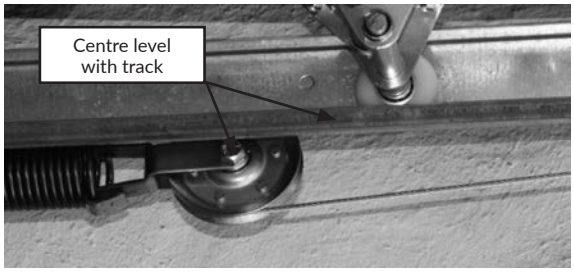
48. Hook the other end of the spring onto the spring anchor bracket using the chain and s-hook



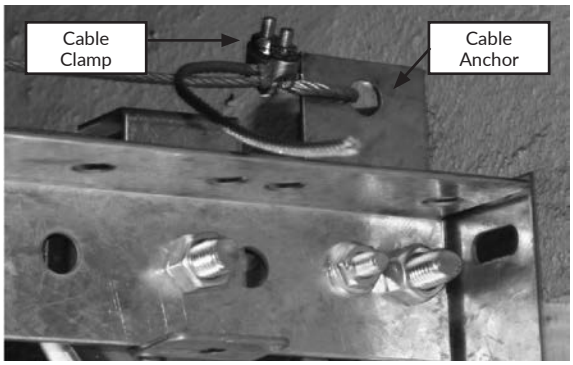
49. Run the cable from the stud on the bottom bracket, over the fixed pulley (step 43), through the stirrup pulley and back to the cable anchor (step 43).



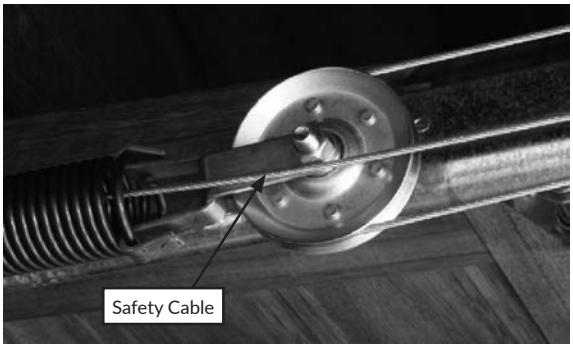
50. Pull up the slack in the cable until the centre of the pulley is level with the lower edge of the track.



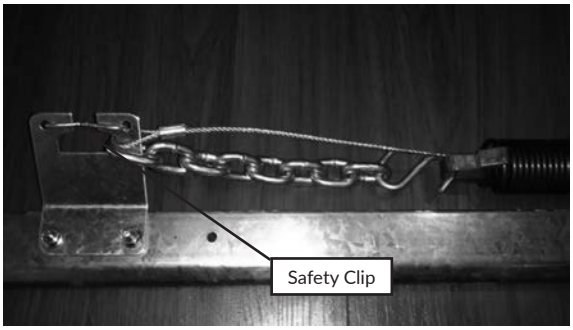
51. Fasten the cable using a cable clamp.



52. Pass the loop of the safety cable through the spring, and hook the loop over the spring anchor. attach the other end of the safety cable to the cable anchor with a cable clamp.



53. Fit a safety clip to the spring anchor and bend it closed.

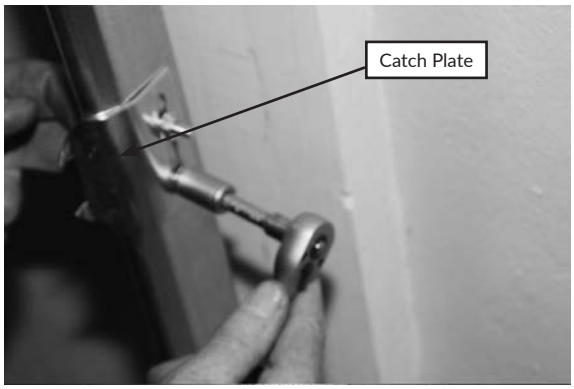


Repeat steps 45 to 53 on the opposite side.

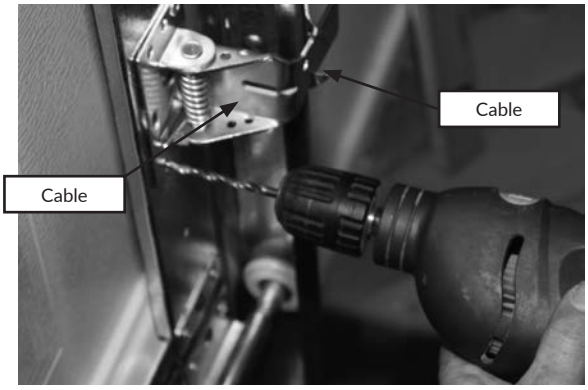
Manually test the door for smooth operation and correct the balance. If necessary, increase or decrease the spring tension on both sides by adjusting the chain length.

Fitting the Locks

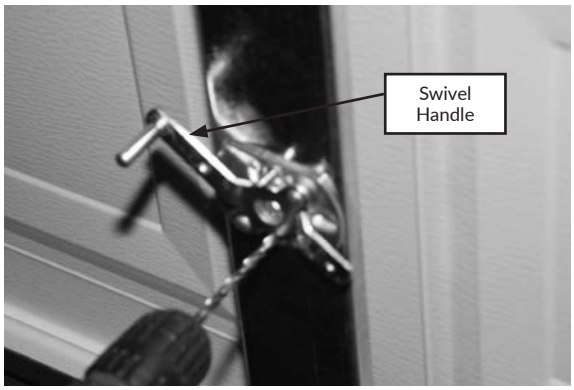
54. Using track bolts and nuts, fit a catch plate to the left track (opposite the second panel from the floor).



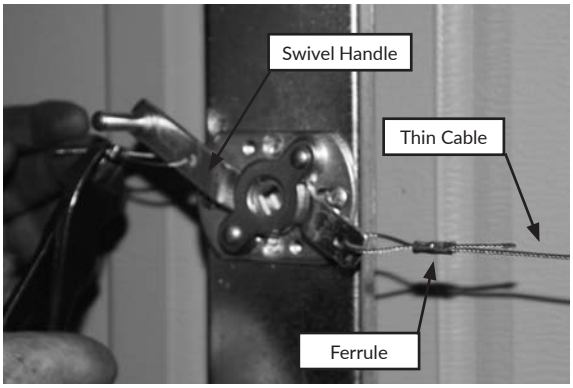
55. With the door closed and a latch engaged in the catch plate, drill and rivet the latch to the door and make fine adjustments to the catch plate.



56. Drill and rivet the swivel handle to the centre stile of the second panel, and attach a thin cable from each latch to the swivel handle using the screw connectors.



57. Use the ferrules, crimped with pliers to attach the thin cables.



To complete the installation, check that all nuts and bolts, especially those supporting the horizontal tracks, are tight.