R-SGA Assist Lift

Loading Group | up to F900

Special range of access covers

Installation Instructions

Multispan

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Important Information

Please read the following information before operating the covers.

All GATIC Assist Lift covers must be adequately, solidly and continuously supported to a degree sufficient for the designed load conditions in each particular case. Because of the diversity of site conditions it is not possible to give precise instructions for each application but the following details will serve as a guide to operation in most cases.

GATIC 'Assist Lift' covers are also 'Assist Close'. It is imperative that the covers are opened & closed with extreme caution & assistance during and after the installation as the closing force will differ depending on cover and setup.

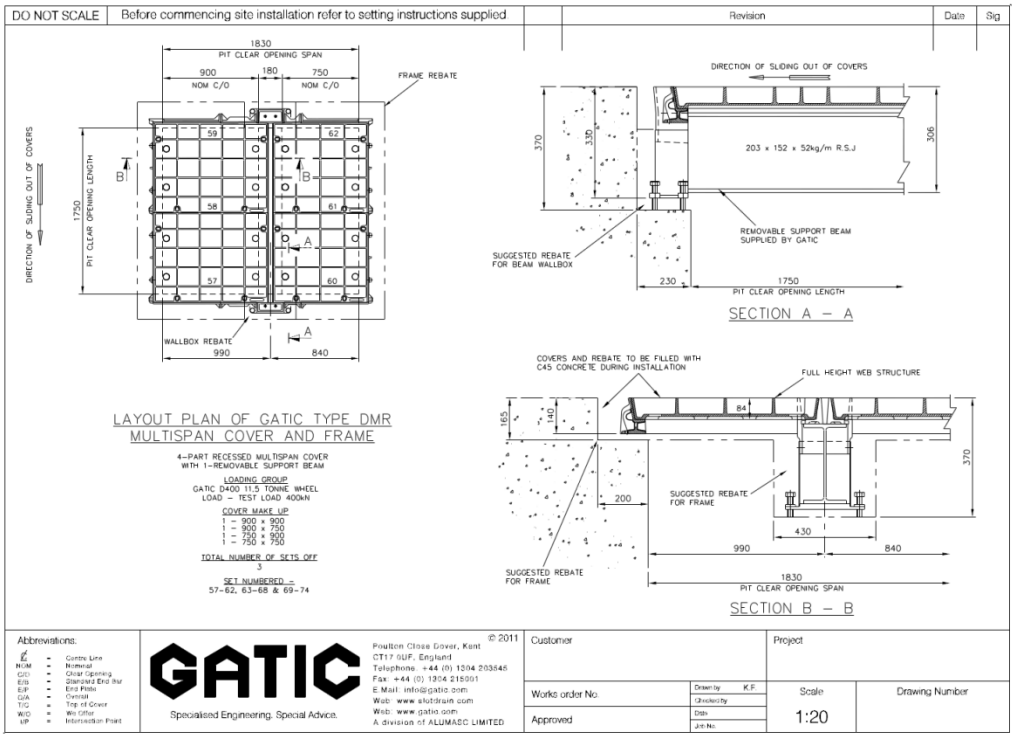
Introduction

This Installation Instruction is designed to assist you with the necessary steps in the Gatic multipsan installation with one or more assist lift covers. For the purpose of this installation instruction Gatic have shown a 4 part Multispan system.

Before starting the installer must refer to Gatic's layout drawing. This drawing is unique to the unit supplied. It shows rebate requirements and cover positions.

An online Multi Part Cover Installation Tutorial is also available at www.gatic.com

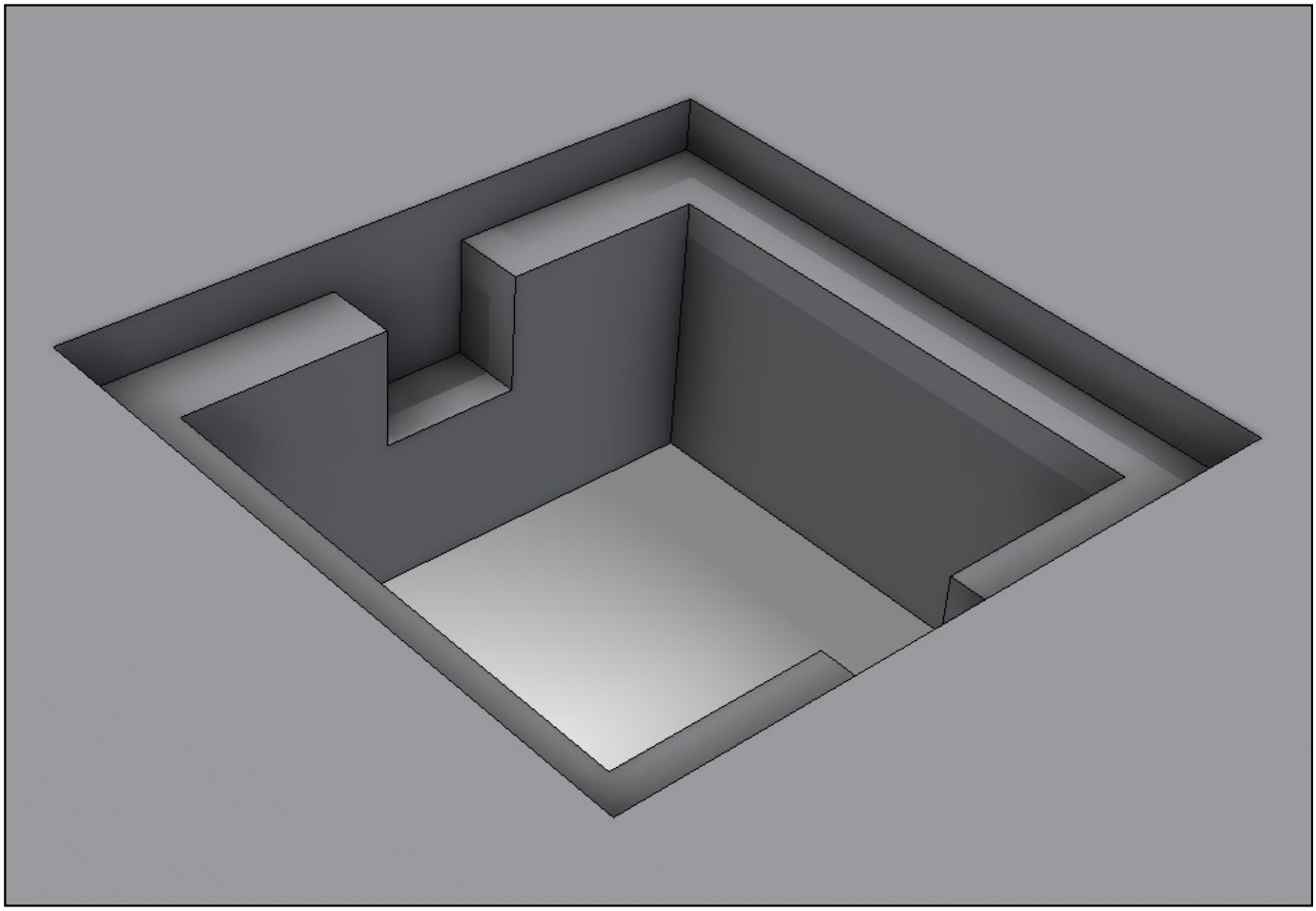
Gatic will provide a dimensioned drawing showing the actual opening of the cover and frame and suggested rebate details. Gatic will provide U-Shape assembly clamps, Tommy bars, spanners, keyhole plugs and manual lifting keys.

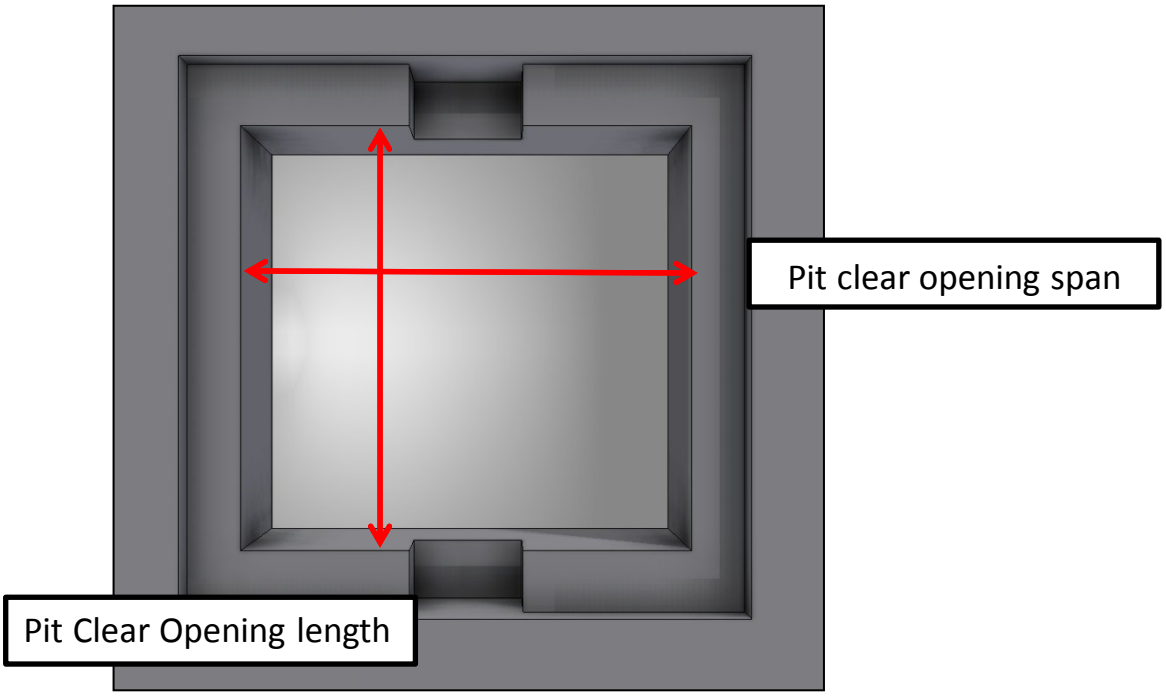


Example of Gatic layout drawing

1. Form The Rebate.

Form the frame and wallbox rebates around the pit strictly in accordance with Gatic's layout drawing. It is important to follow the stated dimensions otherwise the multispan cover will not fit.





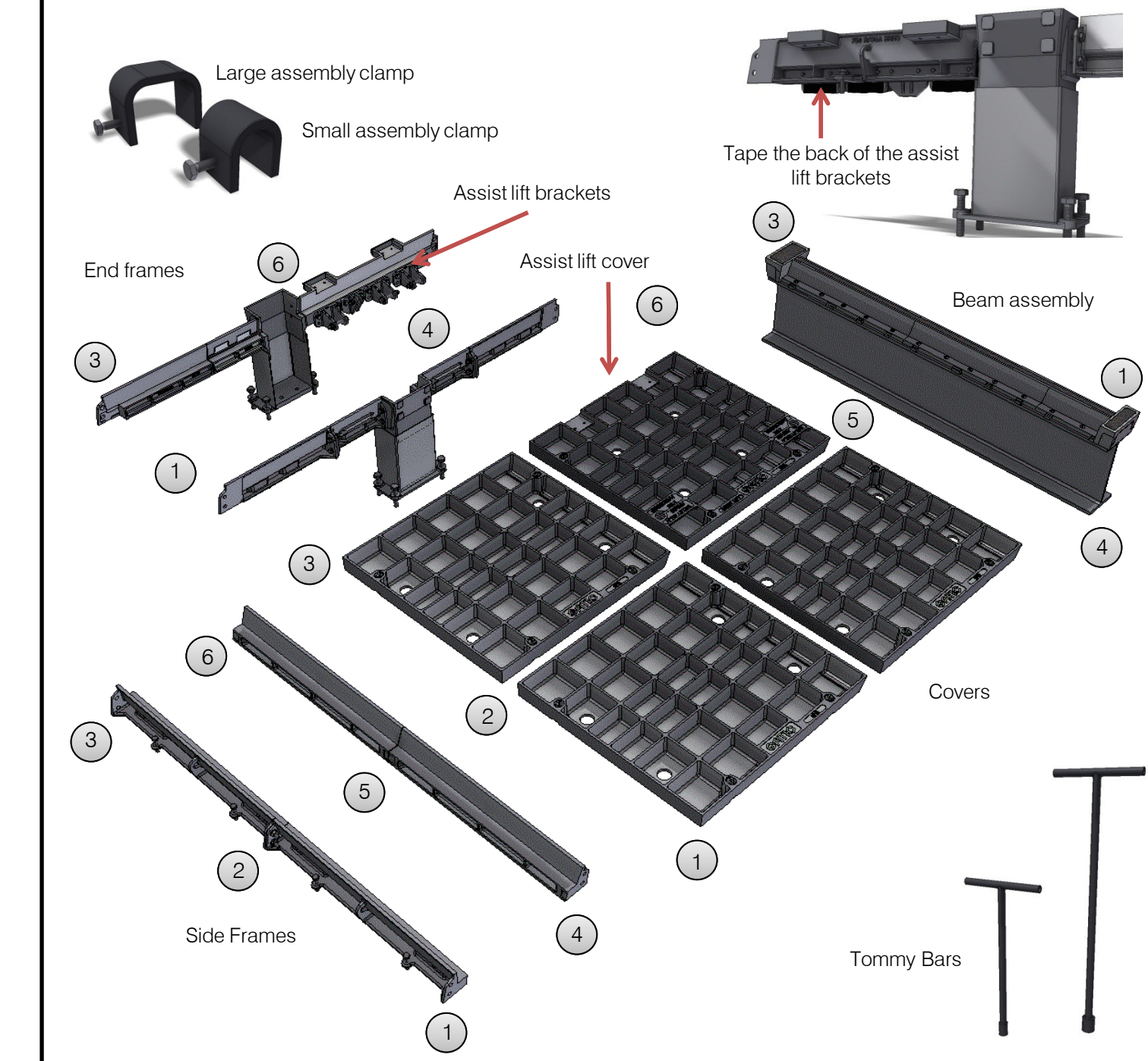
2. Frames

The frame is delivered in sections together with beam assemblies and covers. Ensure that the end frames match with the side frame components. The end frames can be identified as those sections with the beam end wallbox forming part of their construction. Frame sections and beam assemblies are numbered to help locate the cover positions.

Identification numbers are shown on the cover layout drawing supplied. Numbers can be found painted on the ends of covers, beams and outside faces of frames. Number tags are also fixed to the underside of the cover and also to the frame and beams.

The lowest numbers in each row of covers indicate that this is the front end of the unit.

Ensure the brackets on the assist lift end frame are attached. Tape the back of the assist lift brackets. This will prevent the ingress of concrete through the bracket holes when concreting.



3. Components of the Spring Assist Unit

Before starting the installation for each cover within the assembly, make sure the following parts are available for each cover. The images shown below may change due to different cover types and sizes.

1. M-Struts Springs
2. M-Strut Cover Brackets
3. M-Strut Frame Bracket
4. Stay bar Bracket x 1
5. Short Handle Lifting Keys x 2
6. Stay Bar & Chain x 1
7. Hinge Assembly x 2
8. Mechanical Lifting Keys x 4
9. Assist Lift Cover Locking Bolt M12x100 x 2

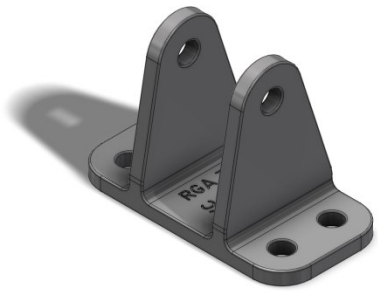
1

Cover Type	No. of M-Struts
Solid Top Gatic Assist 750	2
Solid Top Gatic Assist 900	2
Recessed Gatic Assist 750	3
Recessed Gatic Assist 900	4

2

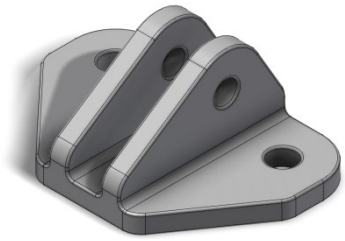
Cover Type	No. of Cover Brackets
Solid Top Gatic Assist 750	2
Solid Top Gatic Assist 900	2
Recessed Gatic Assist 750	3
Recessed Gatic Assist 900	4

3



Cover Type	No. of Frame Brackets
Solid Top Gatic Assist 750	2
Solid Top Gatic Assist 900	2
Recessed Gatic Assist 750	3
Recessed Gatic Assist 900	4

4



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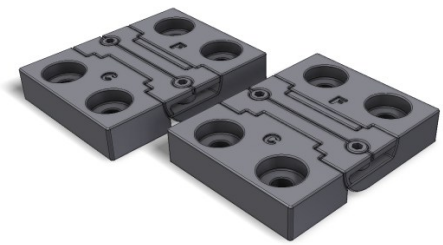

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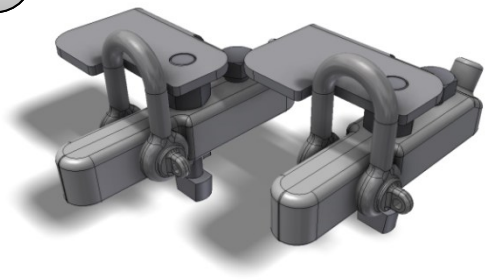
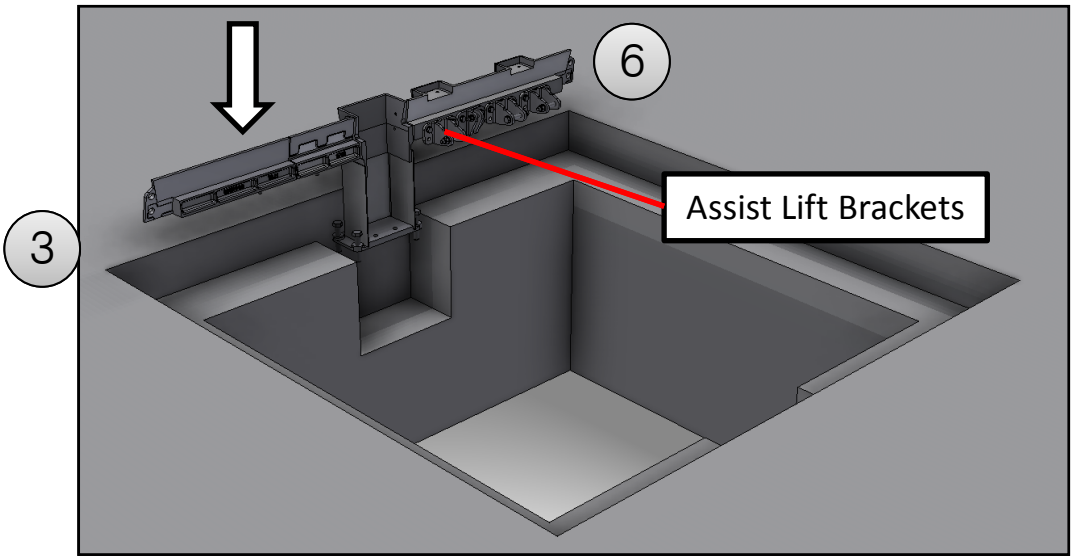


9

4. Frame Assembly

Position the back end frames in the wallbox pockets at one end of the unit ready to loosely join the sections together. Do not tighten the joints at this stage so that you do not damage the lead packers. On the illustration you will notice that all front frames are positioned at one end and back frames on the other end. The drawing will indicate which is the front end of the multispan cover, as being the lowest number in each row of covers. For units with more than one beam refer to the cover layout drawing for the number sequence. The frame is delivered in sections together with beam assemblies and covers. When installing the back end frames ensure the assist lift frame brackets are resting flush with the pit wall. Put tape on the back of the brackets before resting against the pit wall. This will ensure concrete will not flow into the bracket holes when concreting.

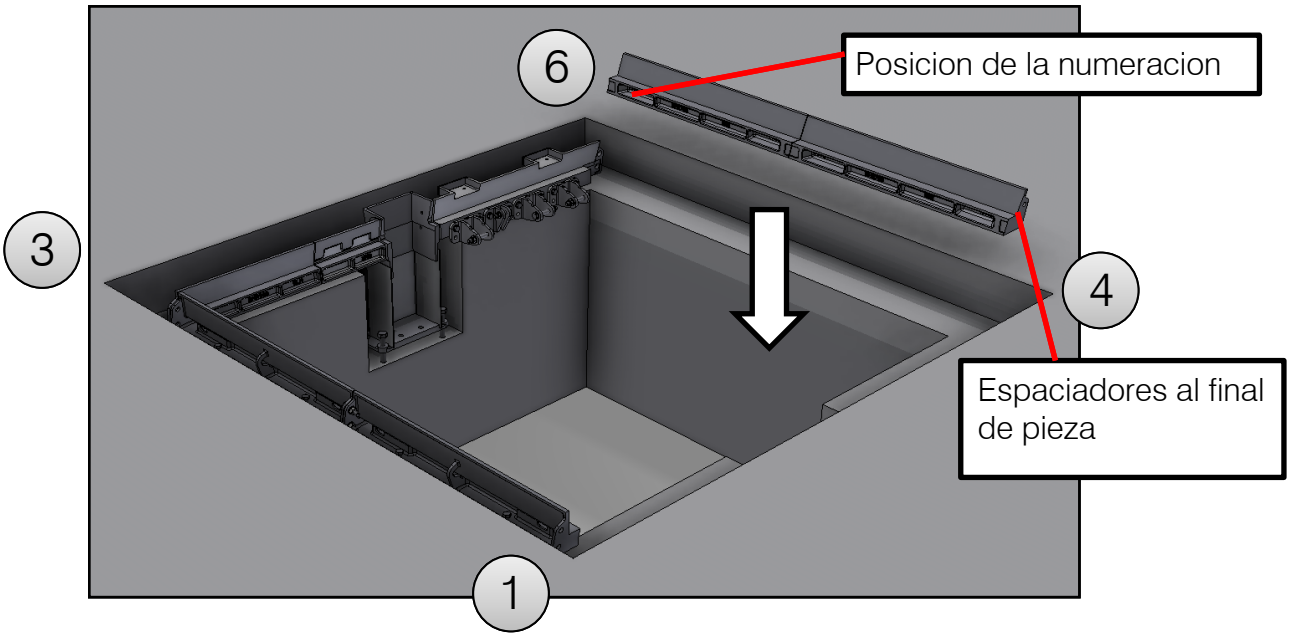


5. Ensamblaje del marco

Locate the side frame assemblies, these are handed so that they only fit on the correct side of the cover and offer up to the back end frames.

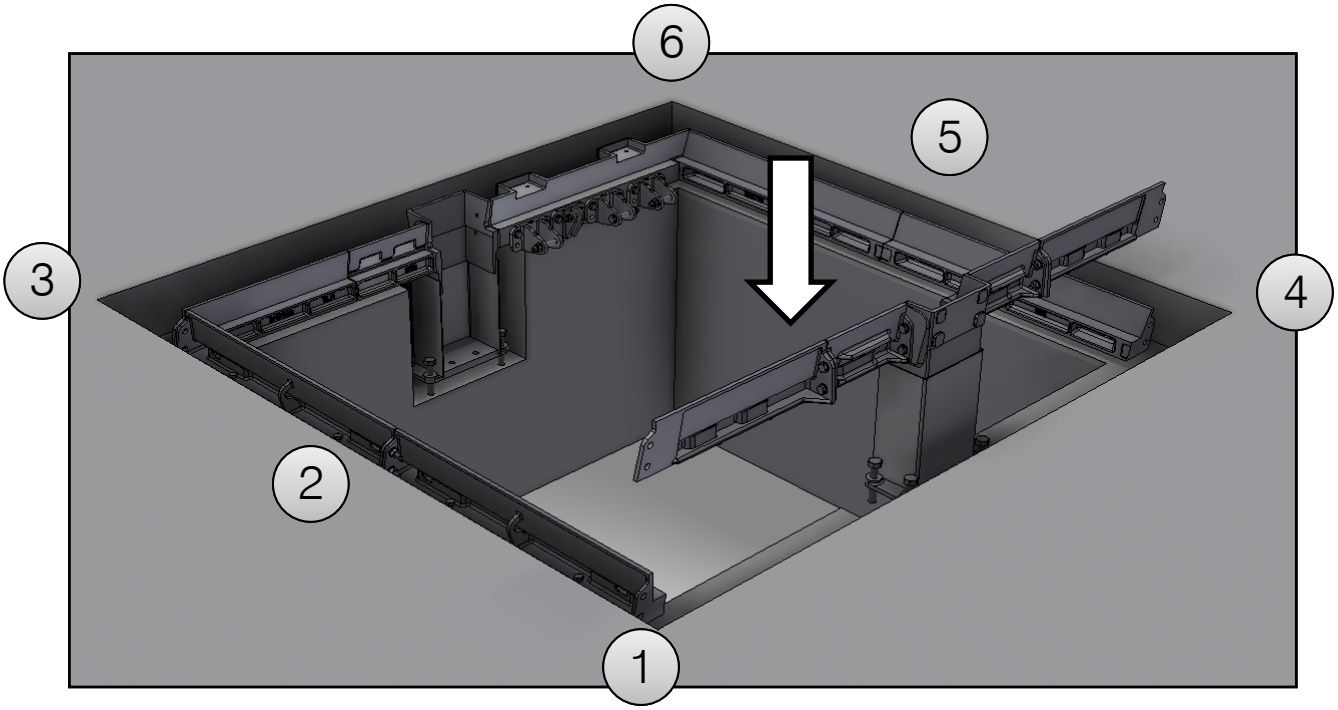
Remember that there are a number of short frame pieces that make up the straight frame.

Check that the lead spacers at the front joints have not been damaged otherwise the frame will no longer mate with the cover. Again loosely bolt the frames together.



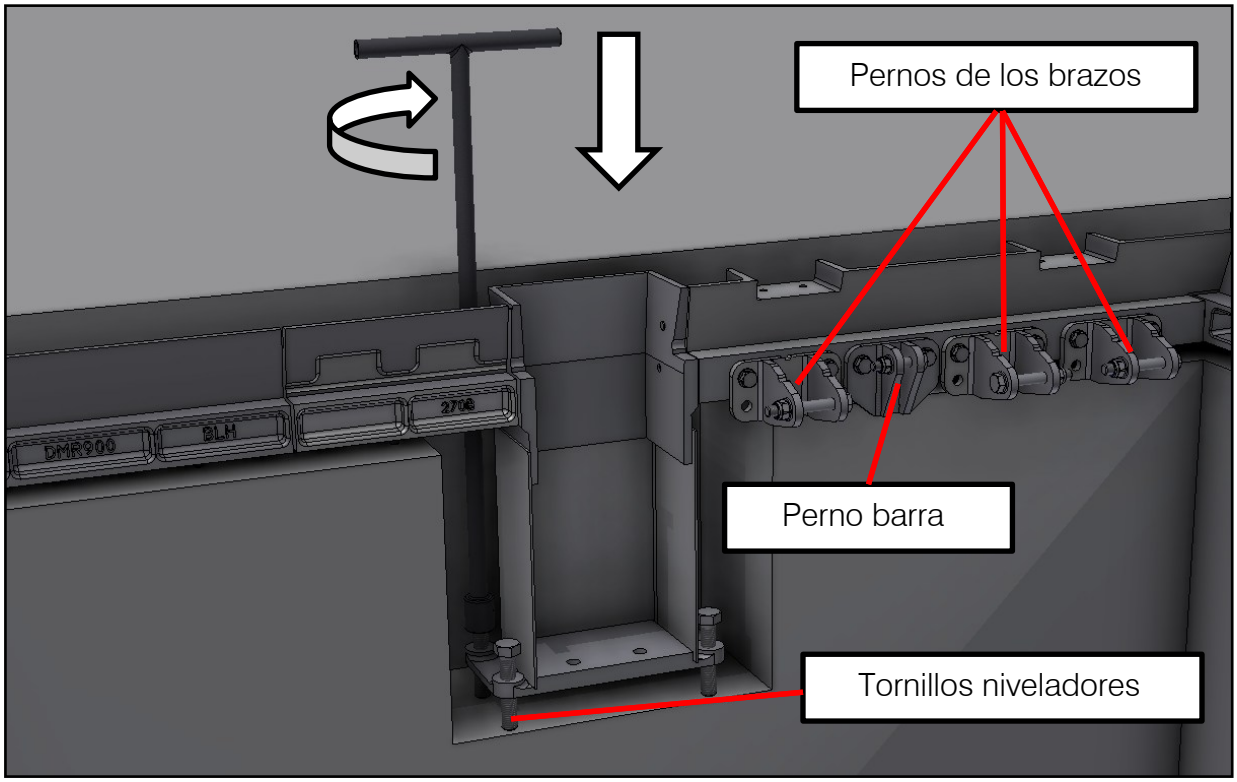
6. Ensamblaje del marco

Ahora coloca las piezas frontales del marco en los asientos y une las piezas en las esquinas



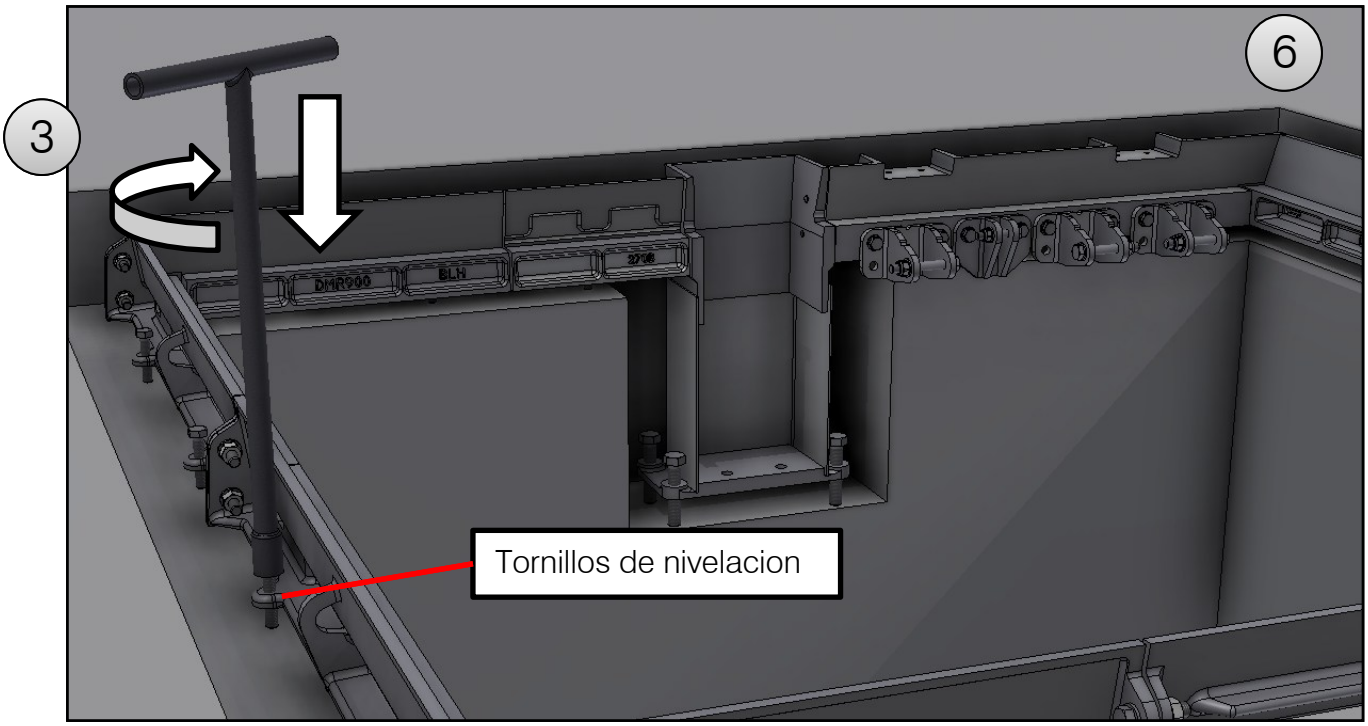
7. Ensamblaje del marco

Con la herramienta 'Tommy bar' ajustar los tornillos niveladores hasta que el marco este al nivel requerido .



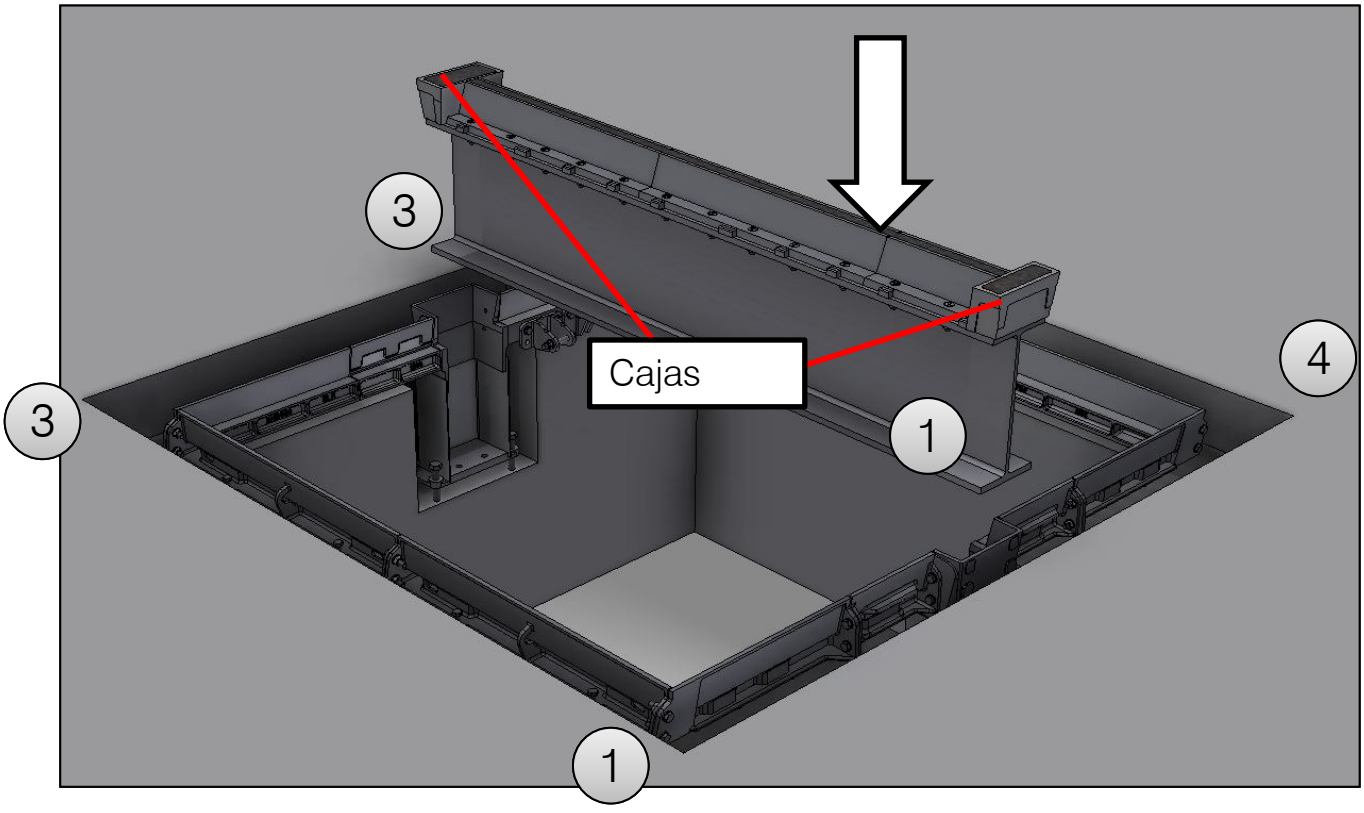
8. Ensamblaje del marco

Seguir ajustando los tornillos de nivelacion en todos los puntos .



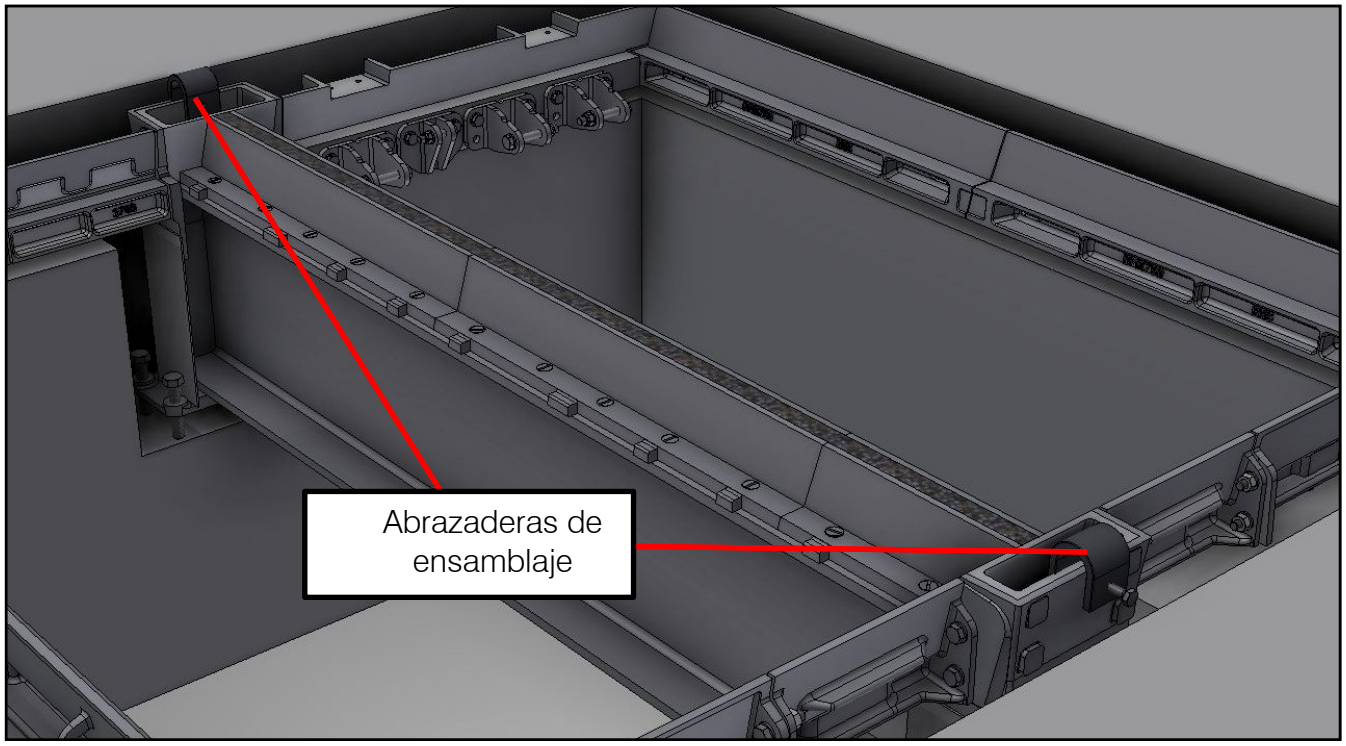
9. Ensamblado del marco

Posicionar la viga intermedia en su lugar , teniendo en cuenta la numeracion .



10. Frame Assembly

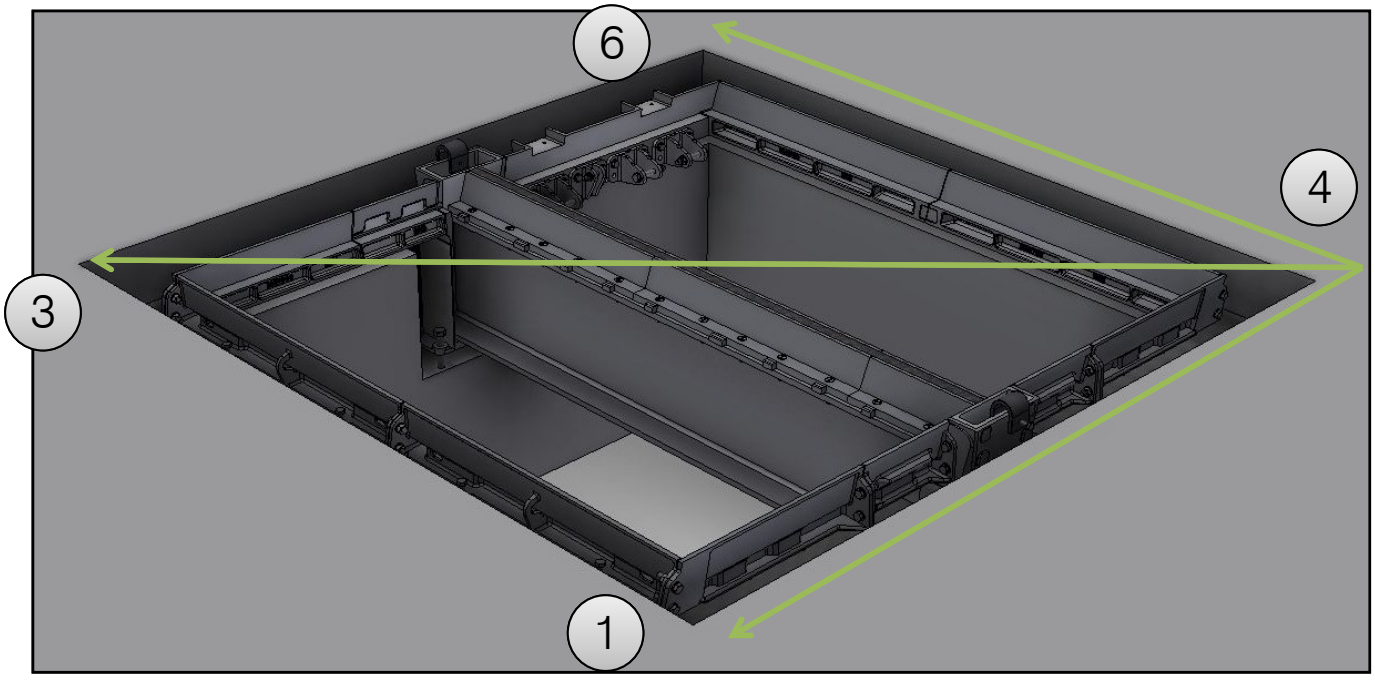
Tap down on the filler block, using a rubber mallet, and then, using the assembly clamp, clip the end of the beam into the wallbox. (If the filler block is not flush then the beam is not seated correctly in the wallbox and you will need to adjust accordingly). Ensure that the wallbox is vertical.



11. Frame Assembly

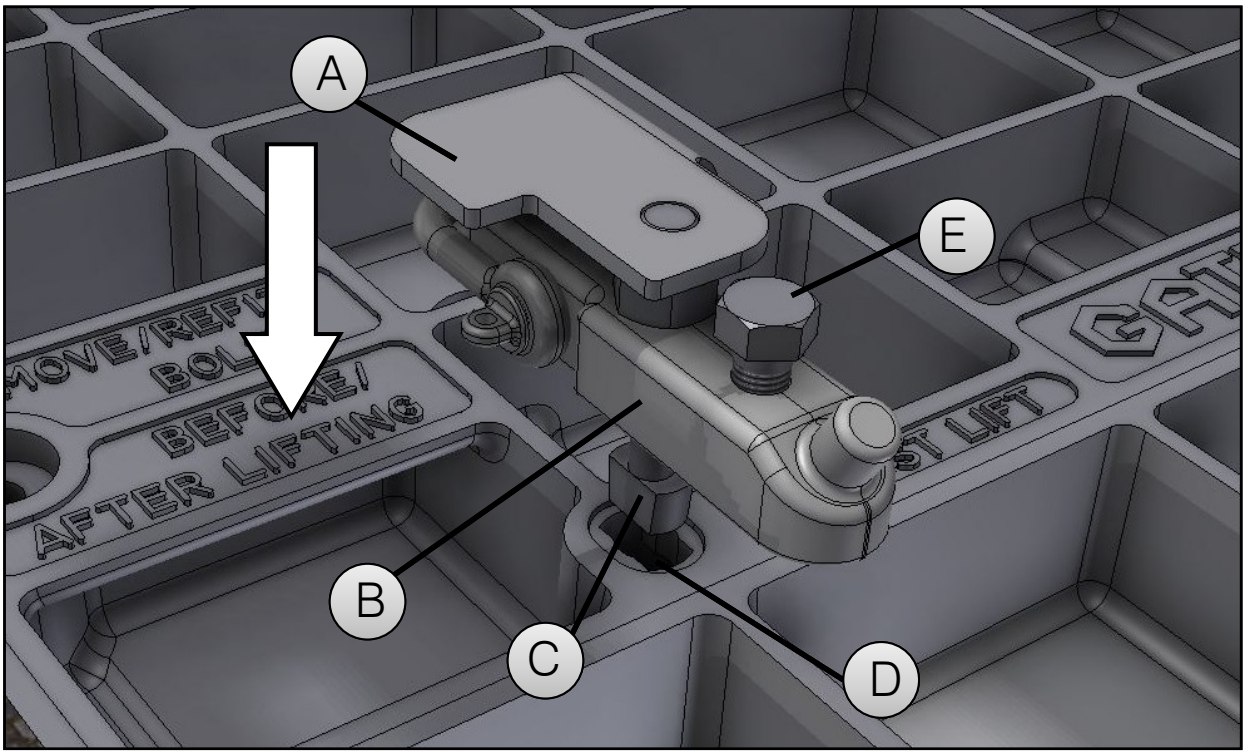
Dimensionally check the diagonals of the frame to ensure it is roughly square and make sure that none of the frame is overhanging into the pit. There should be about a 10mm sit back of the frame all around the opening.

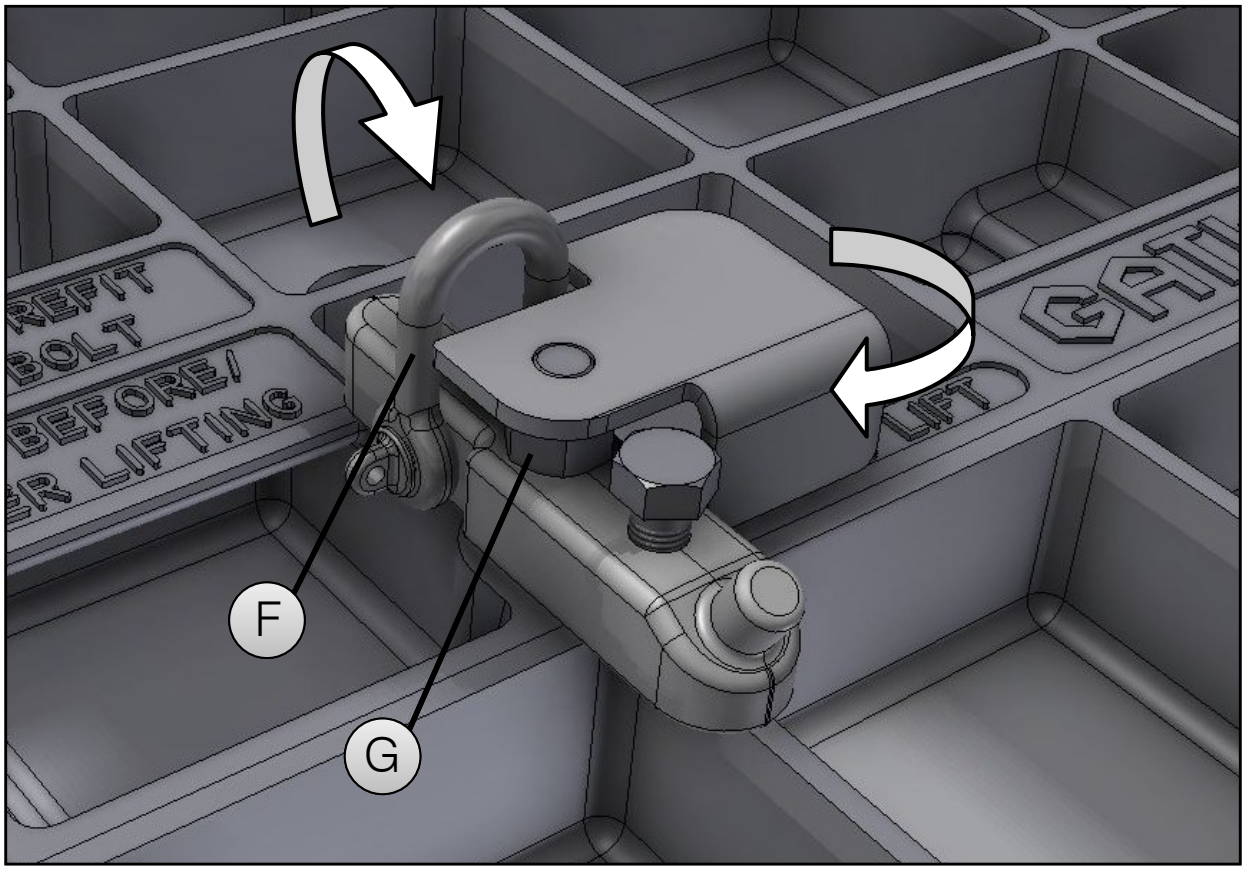
WARNING! *DO NOT ATTEMPT TO POUR CONCRETE AT THIS STAGE. It is important that covers are correctly located and in position before any concrete is poured*.



12. Attach Crane Operated Keys

Using the 4 crane operated keys provided (B), place the teebolt (C) into the keyways around the cover (D). Ensure the jacking screw (E) is facing towards the outside of the cover. Rotate the Indicator Stop Plate (A) 90 degrees. This will engage the teebolt (C) in the keyway (D). Once the Indicator Stop Plate has rotated 90 degrees, the crane key can be locked by rotating nut (G). This will secure the Crane Key to the cover. Shackle (F) can then be rotated and used to attach lifting hooks.





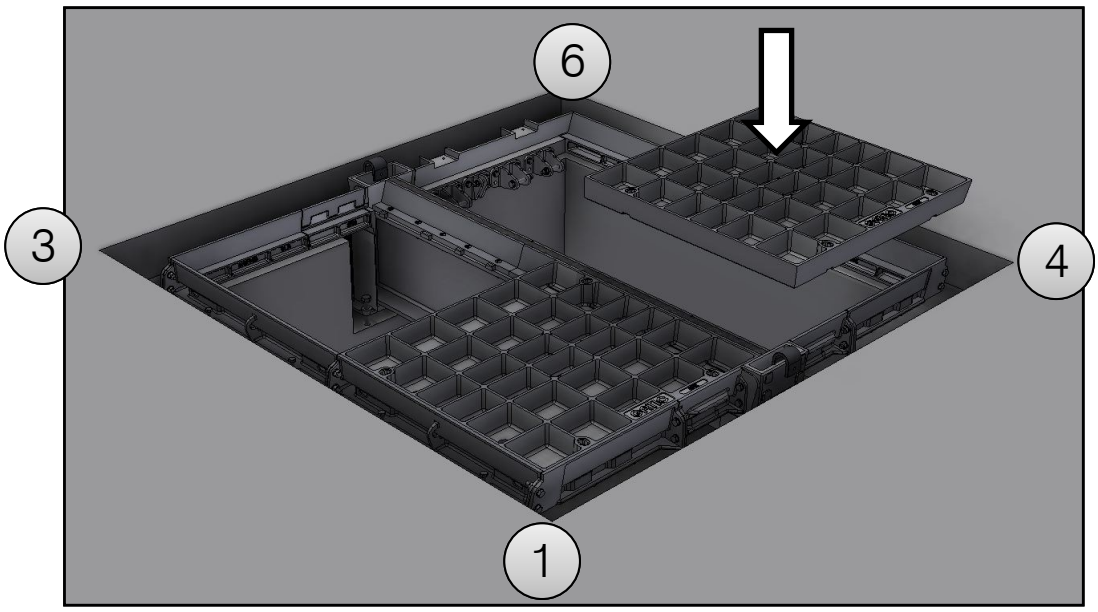
13. Cover Assembly

Now start positioning the covers. Clean of any site debris from the seating faces of the covers and frame.

Starting at the front end lay the two covers down either side of the beam. (Start in the middle of the beams if more than one I beam assembly is used).

These covers are identified by referring to the layout drawing for a numbering sequence.

With the two covers in position, adjust on the wallbox levelling bolts to attain the required height but also to make sure that the covers are seating correctly and not rocking *(refer to instruction No. 7).*



14. Cover Assembly

Now position the back standard cover in its correct position. Then position the assist lift cover in its correct position as shown on the drawing. Level up the side frames, adjusting the levelling bolts until the covers do not rock. Repeat for the other end row.

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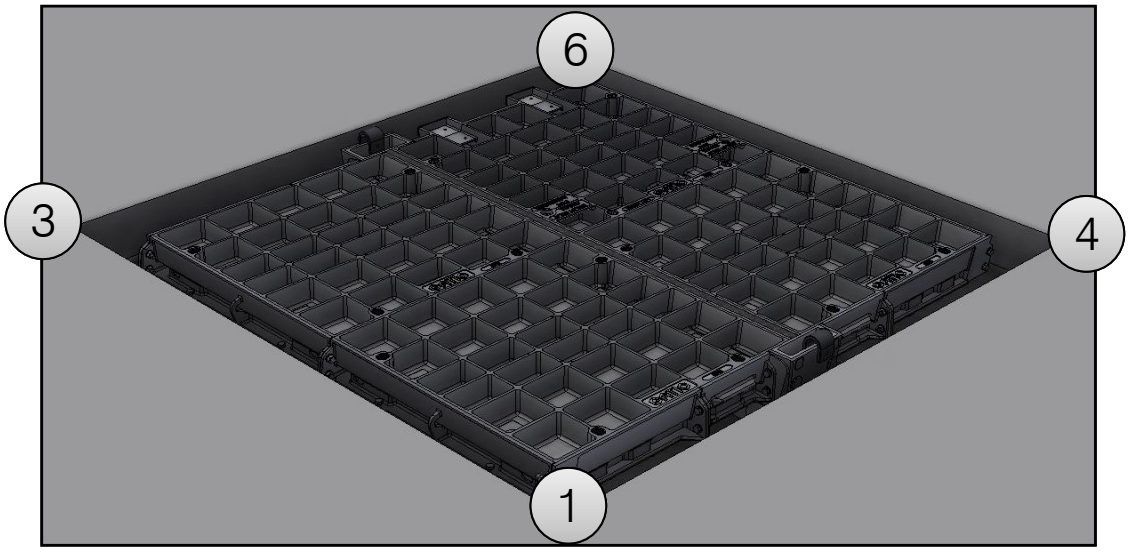
CAUTION *Ensure the Assist Lift Cover is placed in the correct position in the multispan.*

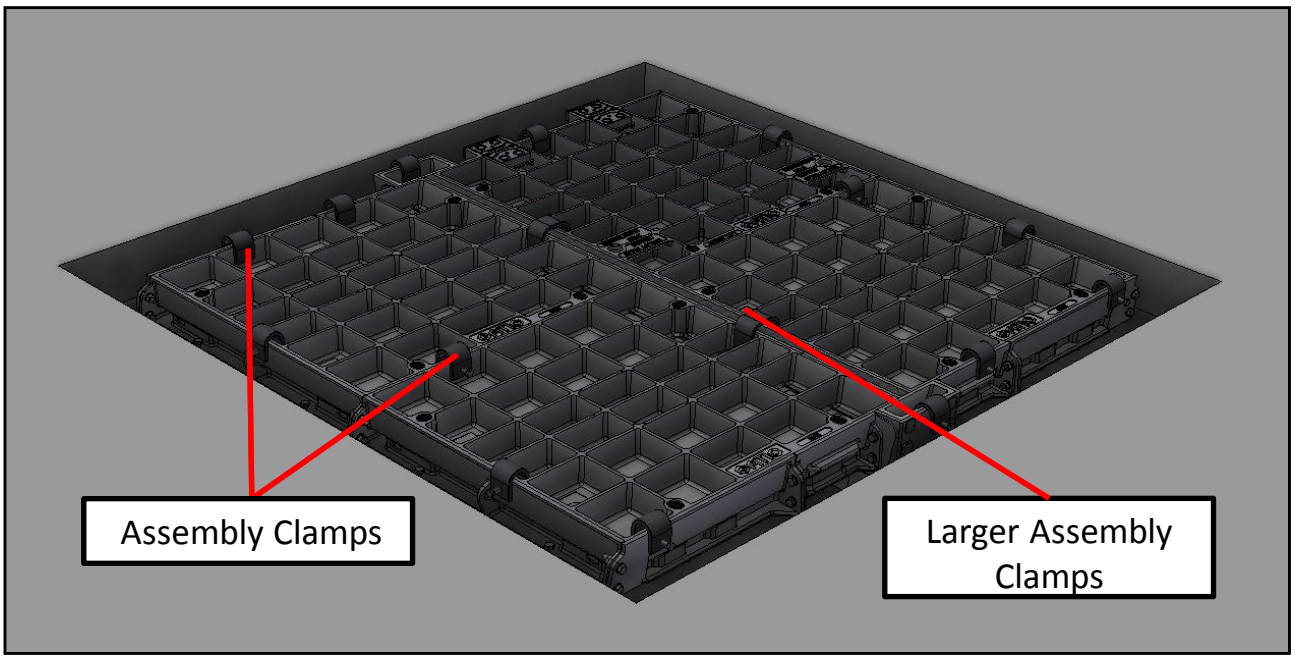
CAUTION *Do not fit the M-Struts or hinges at this stage.*



15. Cover Assembly

The cover is now sound enough to walk on to check that covers are not rocking. Whilst walking across the cover tap the corners of the covers with a balk of timber to ensure that they are firmly down.

Use the assembly clamps at this point to ensure the unit is seated correctly.



16. Frame Assembly

Visually check around the top edges of the cover and frames making sure that random grinding marks (1) align with each other. If you can see a mark on the frame that is not on the adjacent cover, you have something out of sequence and this needs to be put right.

Now go around the frame and tighten all of the frame joints which have been connected at site, but do not over tighten them, they only need to be nipped up.

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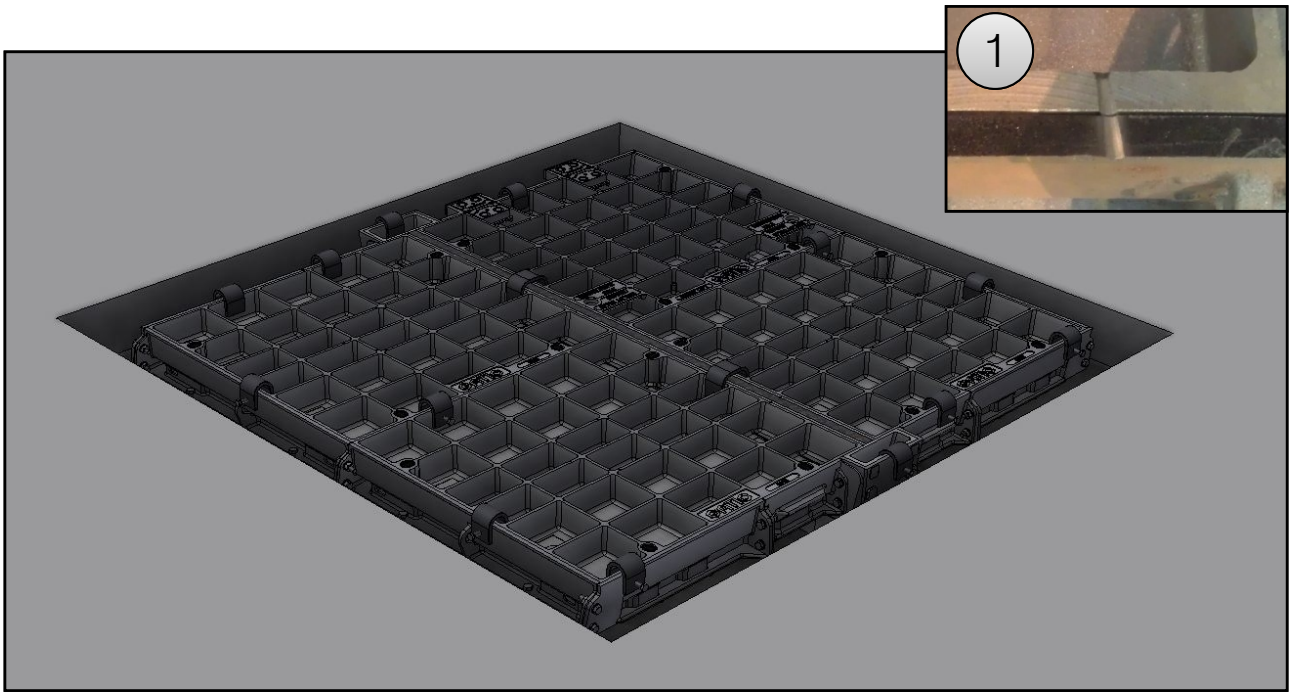
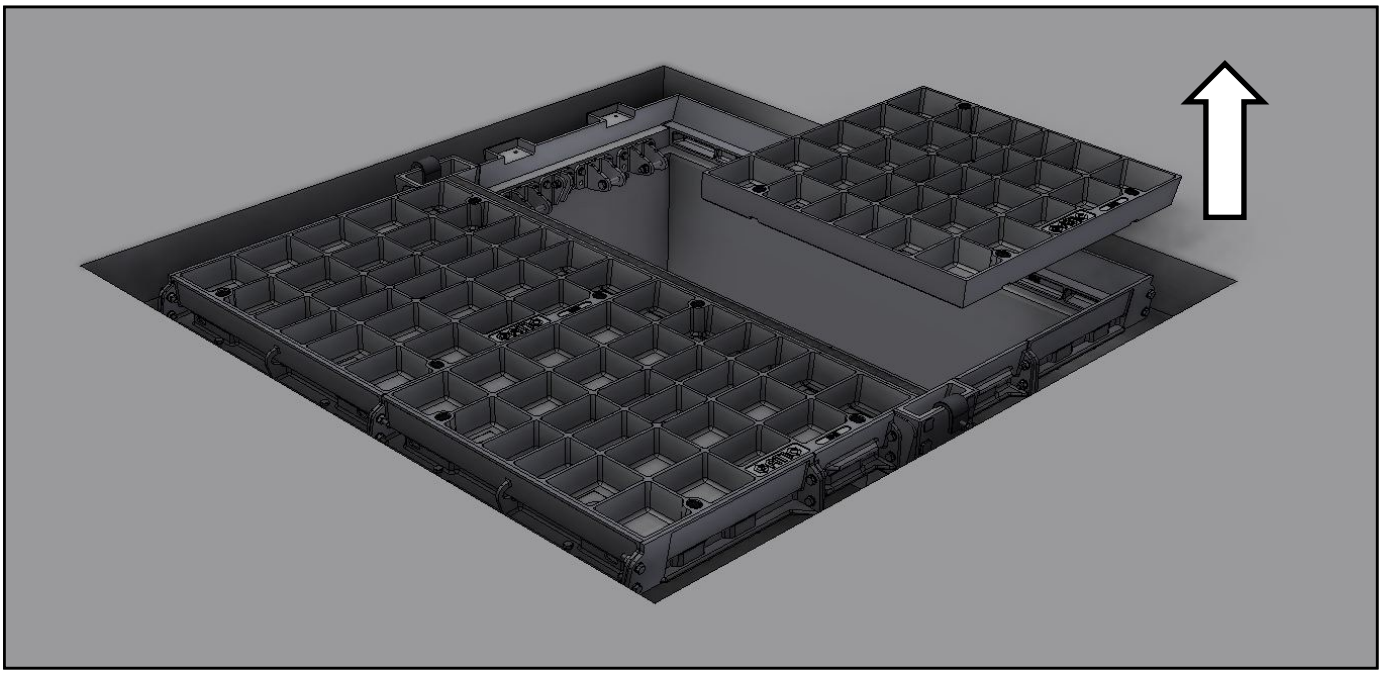


17. Shuttering

The inside of the pit will now need to be shuttered up to prevent spalling of the concrete when poured and vibrated into place.

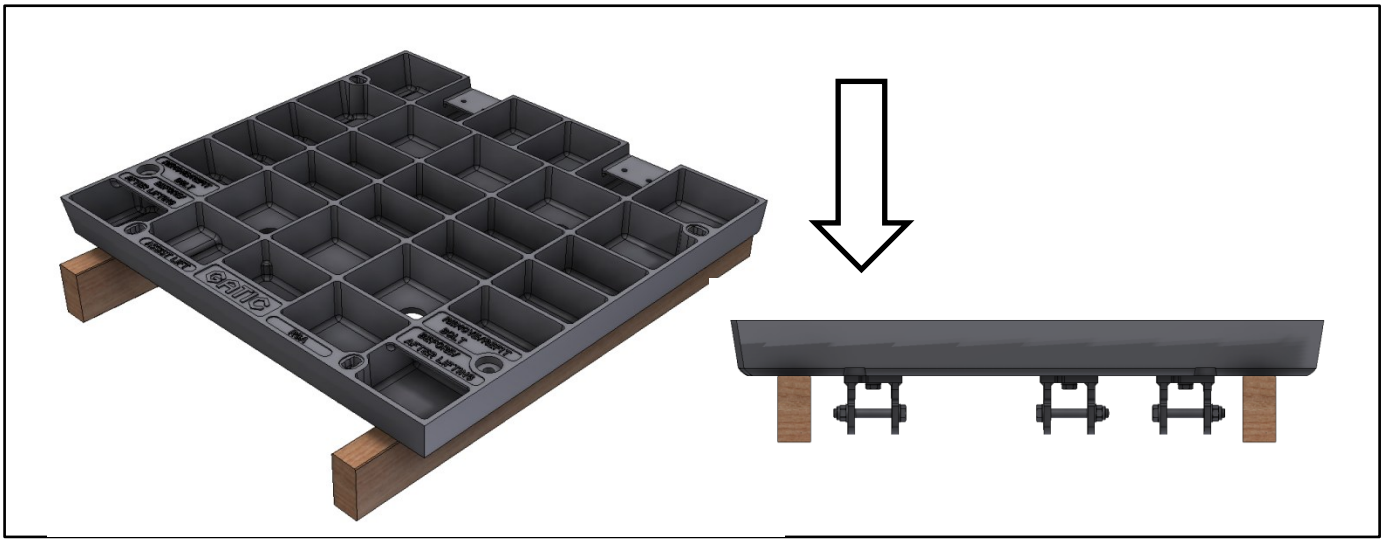
Remove the assembly clamps and covers, in reverse order and stack at the side of the pit.



18. Shuttering

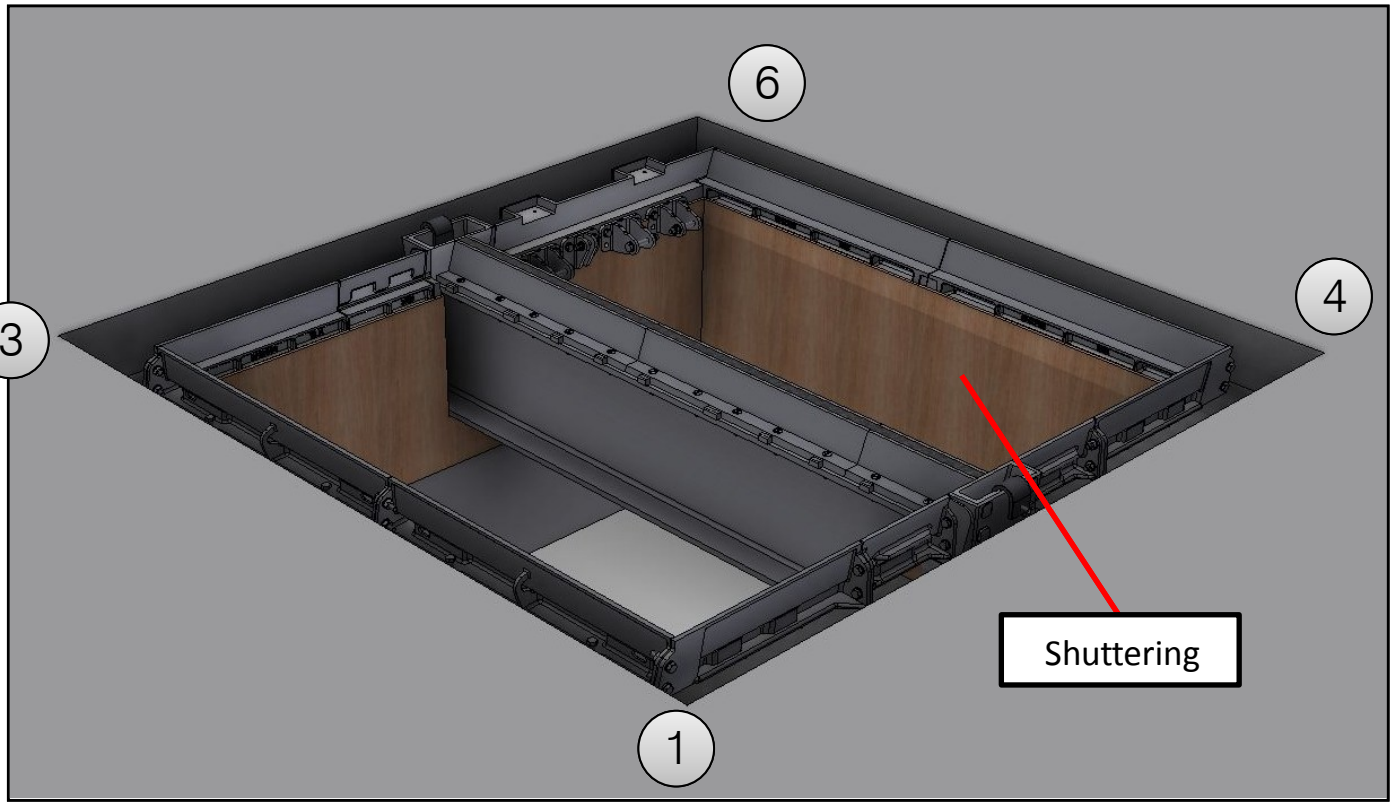
Place the Assist Lift covers on wood when removed to protect the brackets on the underside.

⚠ CAUTION *Ensure the Assist Lift cover is placed on wood when removed to protect the brackets on the underside.*



19. Shuttering

Place timber shuttering around the inside of the pit and brace as appropriate. The shuttering should sit approximately 10mm higher off the frame. Brace the pit as appropriate to add strength.

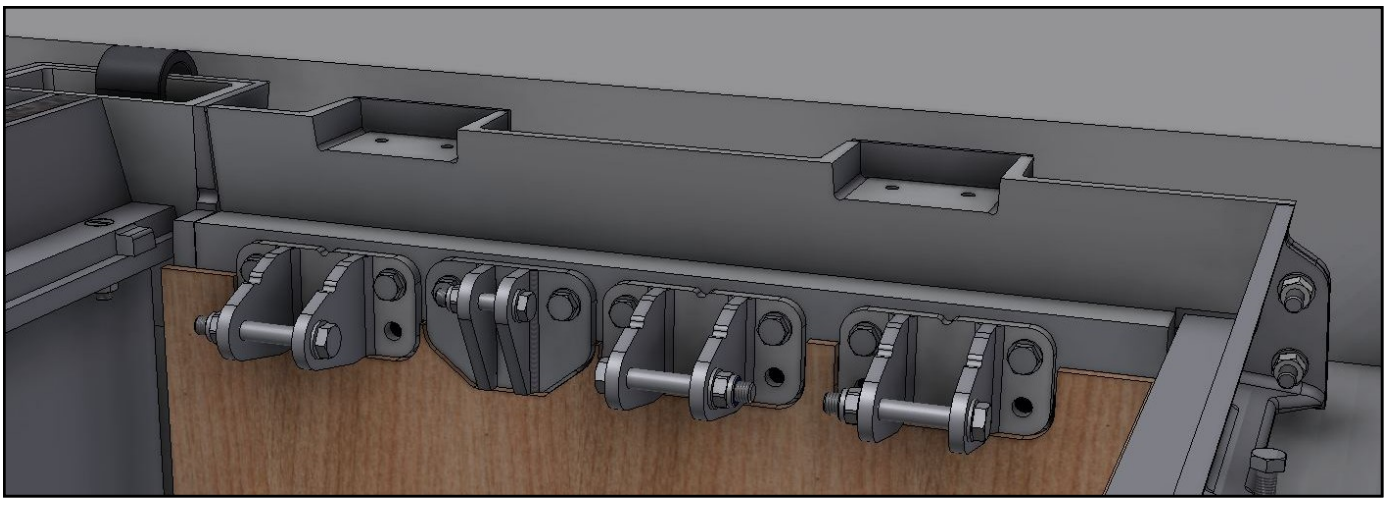


20. Shuttering

Place the shuttering around the inside of the frame. The shutting will need to be cut around the frame brackets to align correctly. If gaps are too small please use tape to prevent the ingress of concrete into the pit. Do not remove the brackets as these need to be flush and supported on the pit wall.

⚠ CAUTION *Do not remove the brackets as these need to be flush and supported to the pit wall.*

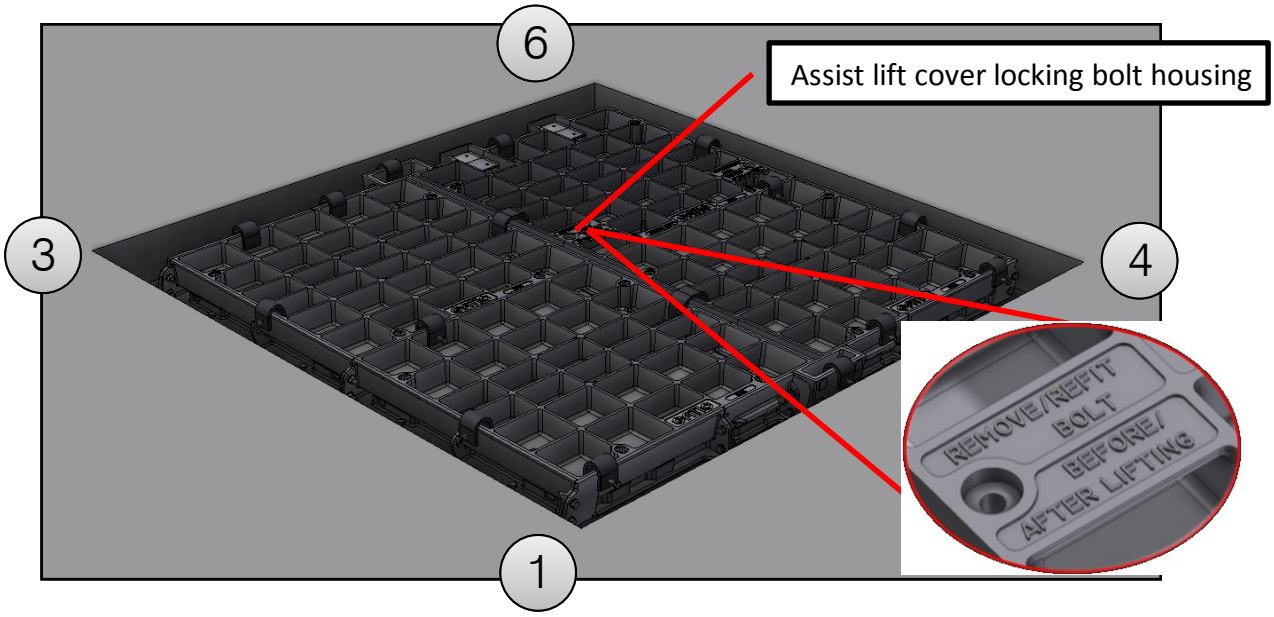
⚠ CAUTION *Ensure the Assist Lift Cover is used in the correct position in the multispan.*



21. Replace and Clamp Covers.

Now replace the covers, taking care that they are in their correct positions. Using smaller assembly clamps, clamp the covers together across their mating joints and at the ends across the cover to frame joint. Bolt down the Assist Lift Cover using the bolts provided.

Using the larger assembly clamps, clamp across the covers where they are seating on the beam assembly.



22. Cover Holes on Cover (RGA Covers Only)

Place small pieces of steel (supplied with goods) or tape over the four holes in the base of each cover.
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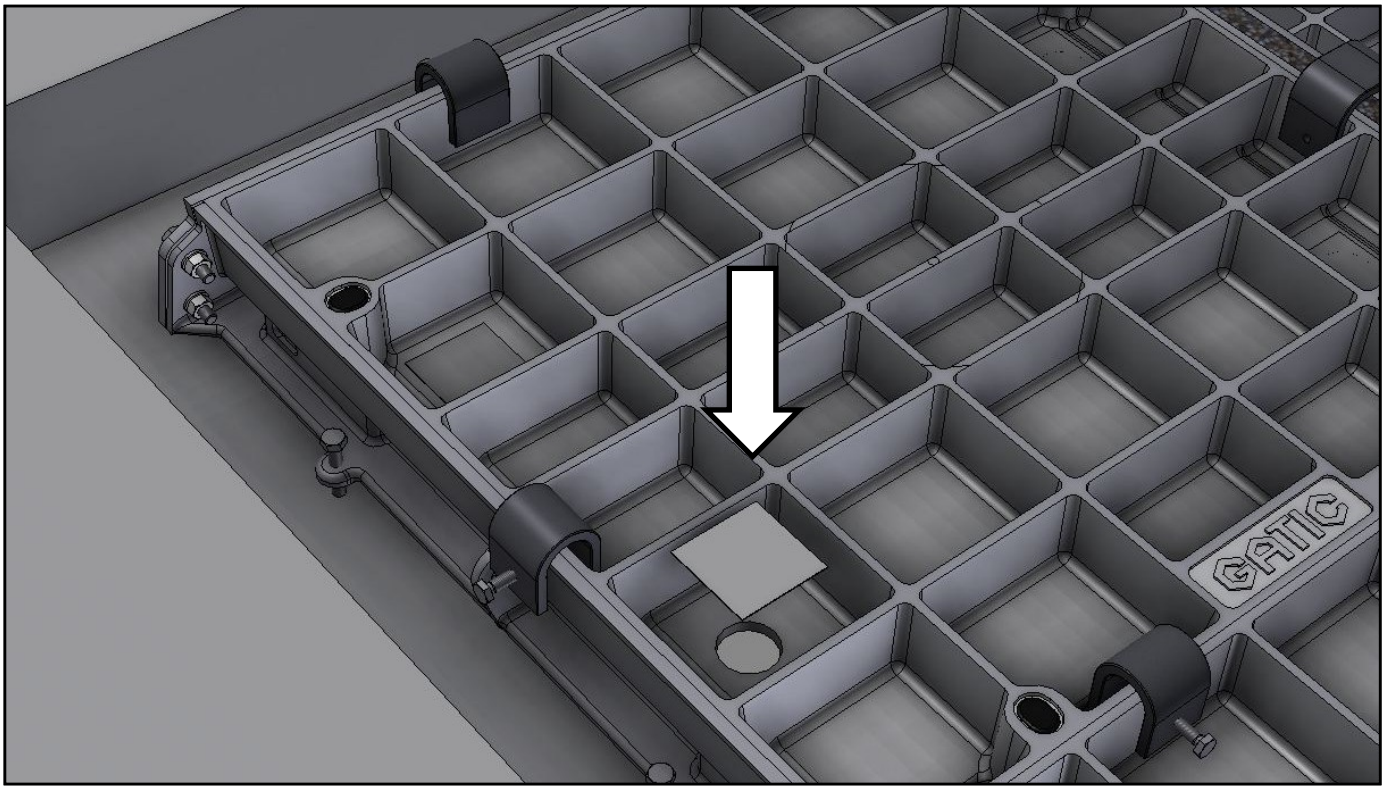
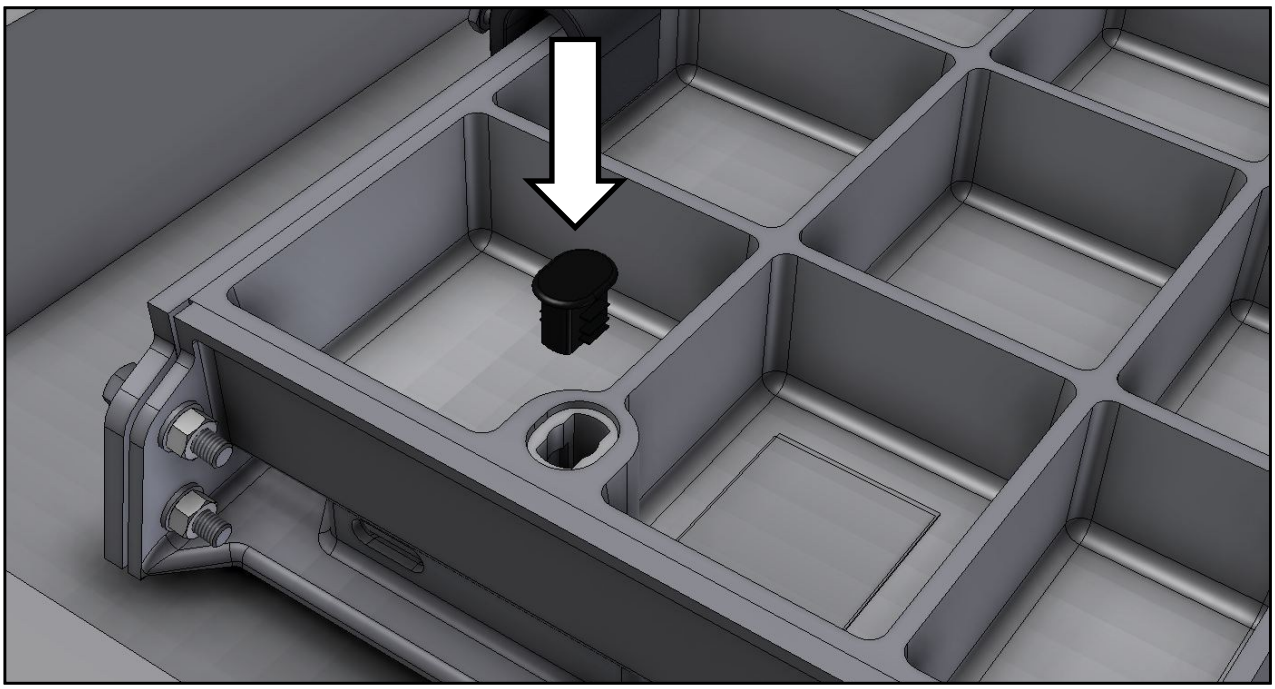


23. Insert Keyhole Plugs

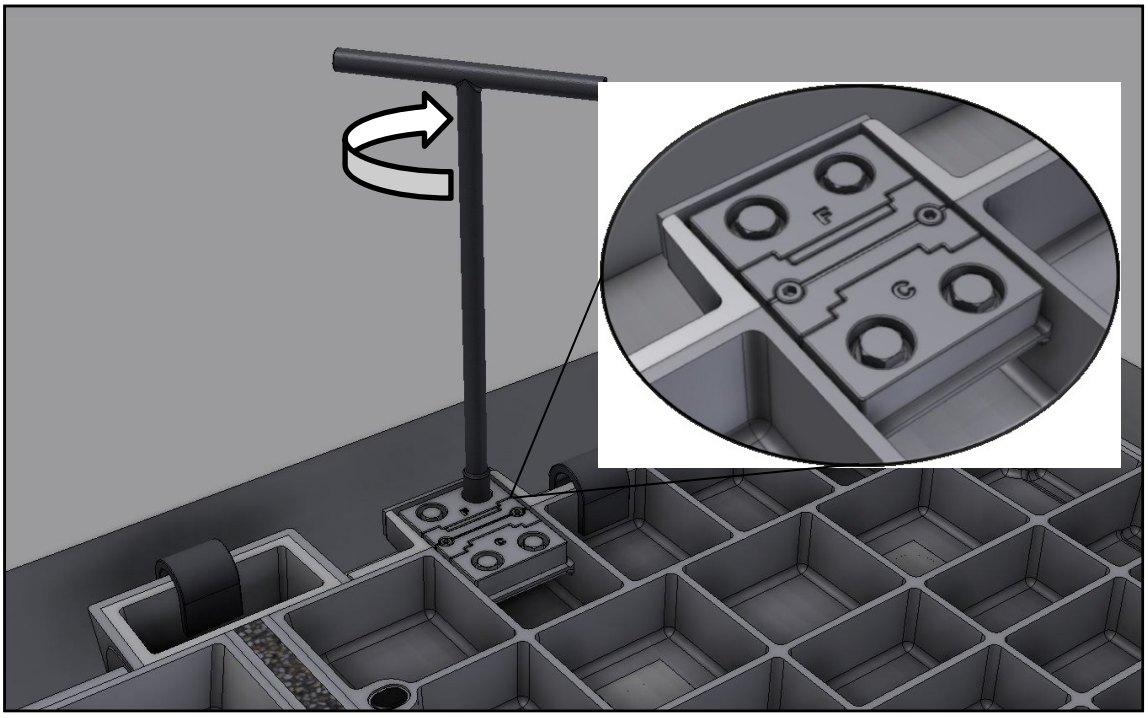
Insert keyhole plugs into all the keyholes if they are not already in place.



24. Attach the Hinge Assembly

Using the Tommy Bar provided, attach the hinge assembly to the cover and frame. Hinges are marked with a "C" for Cover side and "F" for Frame side.

⚠ CAUTION *Care must be taken not to damage the hinge assembly.*



25. Mask Cover

Before concreting, mask off the hinges and keyways and all other holes with tape. This will protect these areas from wet concrete during installation.

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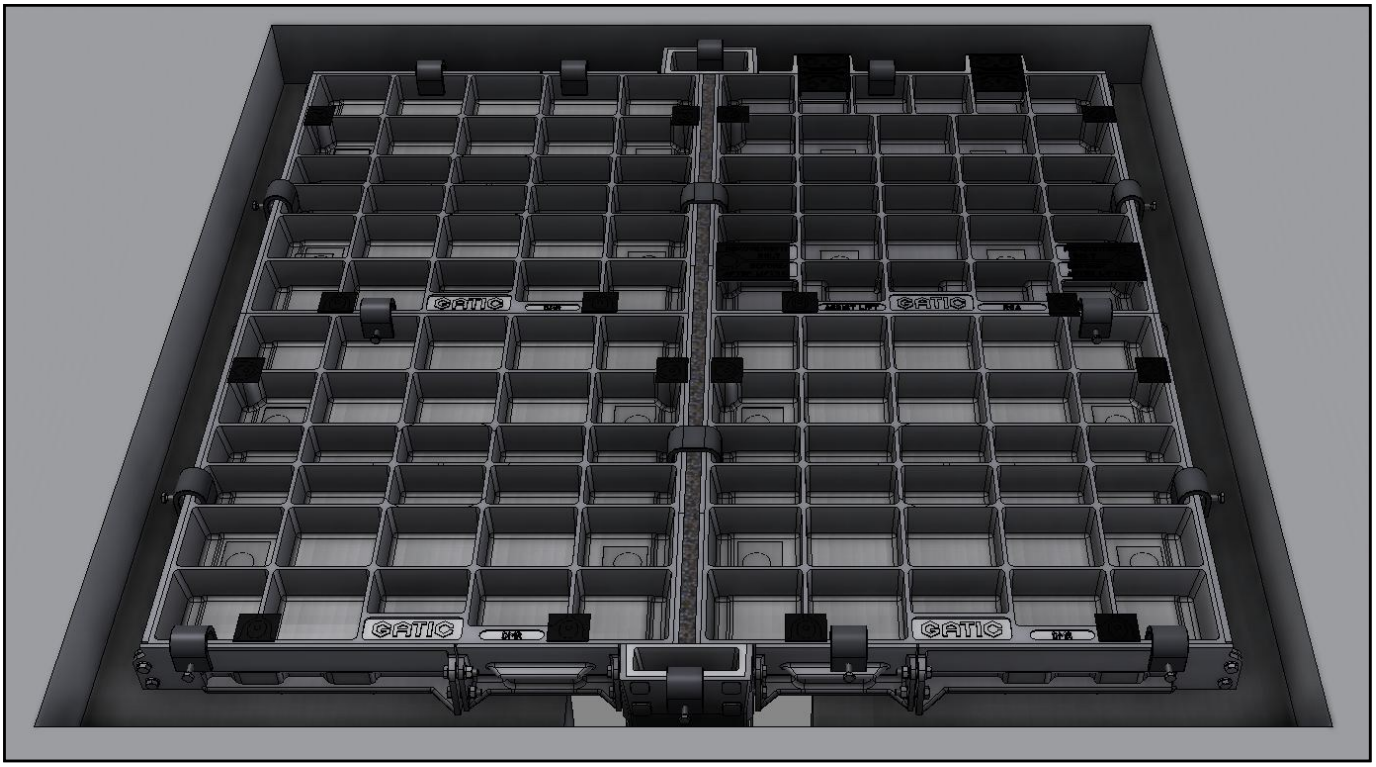
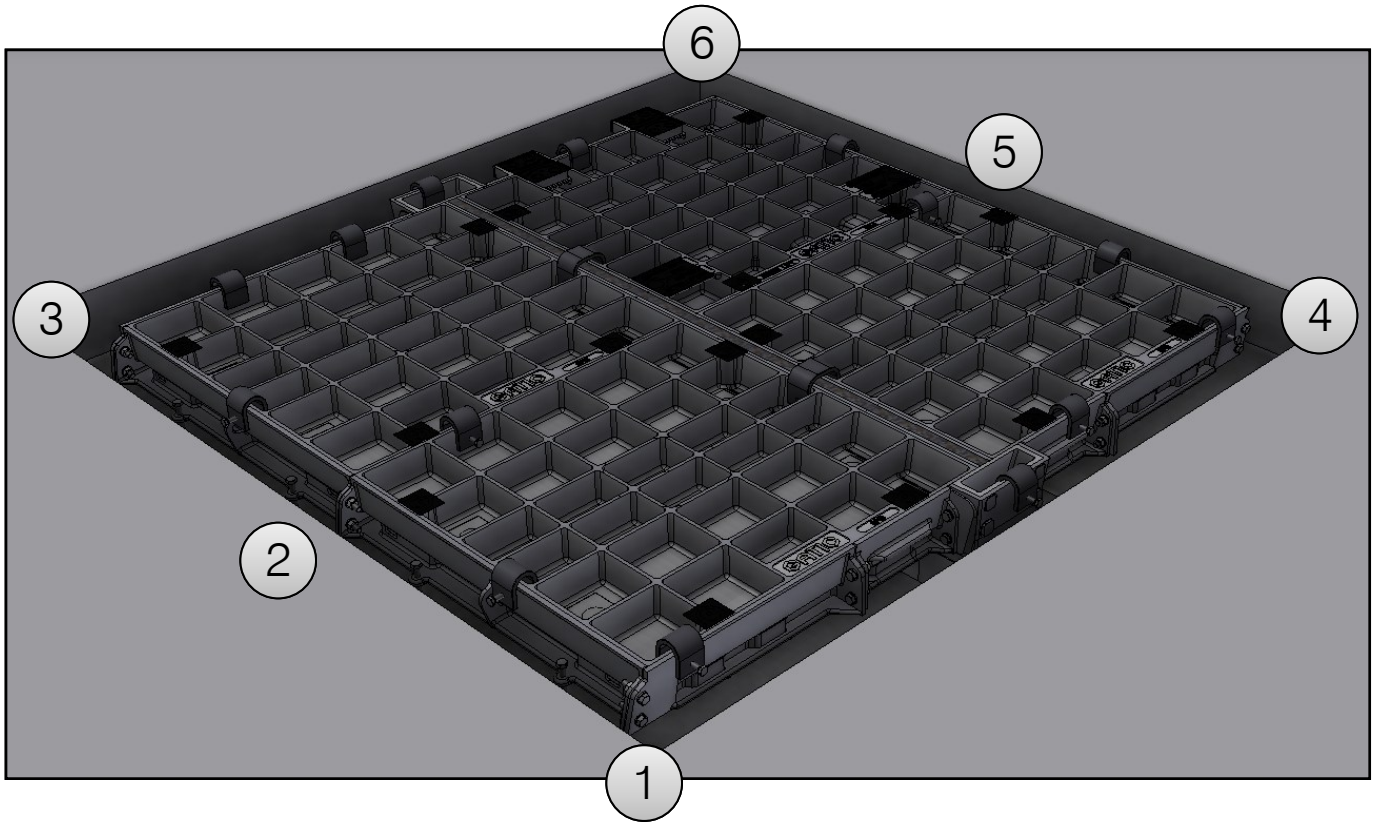




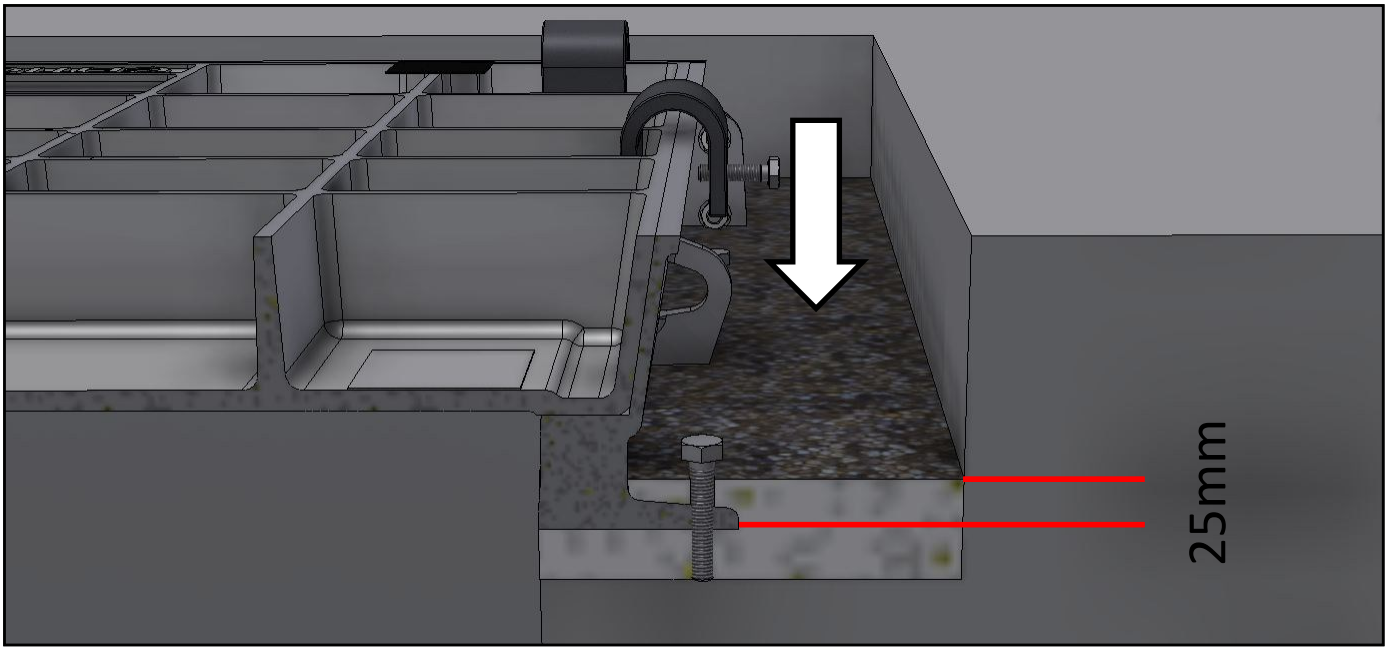
26. Concreting

When the covers are level and non-rocking the multispan unit is now ready to receive concrete.

The grade of concrete should be 45N/mm2 cube or 40N/mm2 cylinder strength. The concreting should now be carried out in 2 stages.

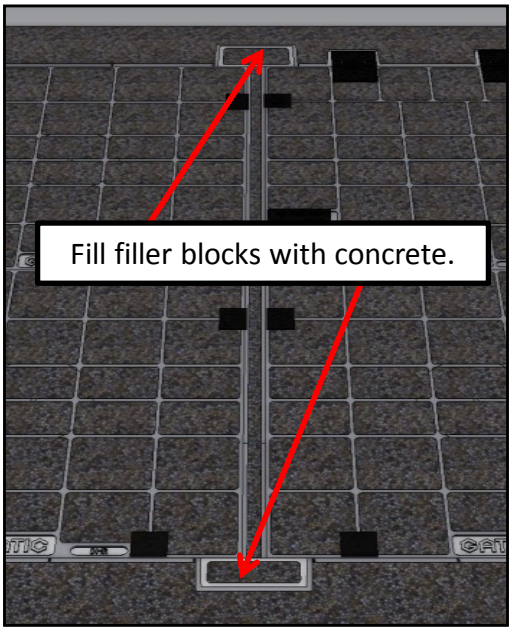
WARNING! *DO NOT ATTEMPT TO POUR CONCRETE IN ONE GO. IT MUST BE COMPLETED IN TWO STAGES.*

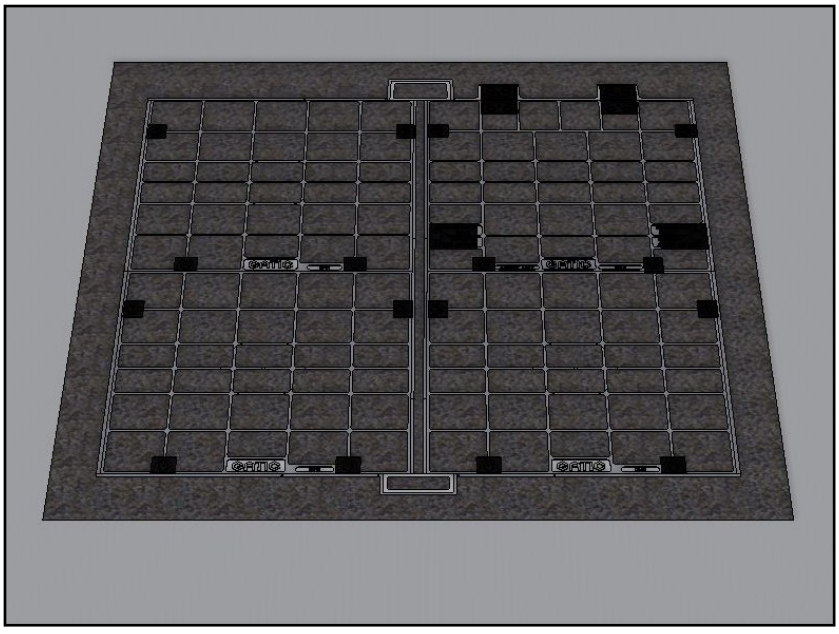
Stage 1 -Leave the assembly clamps in place and part fill the rebate around the frame going approximately 25mm up the back of the frame. Thoroughly tamping and vibrating, as you go, making sure that it flows under the frame.



Stage 2 – When stage 1 concrete has set you can remove the assembly clamps and proceed to infill the covers and around the rest of the frame wallbox with concrete. Thoroughly tamp and vibrate concrete.

WARNING! *Ensure the Assist Lift brackets are attached to the cover before concreting the covers.*

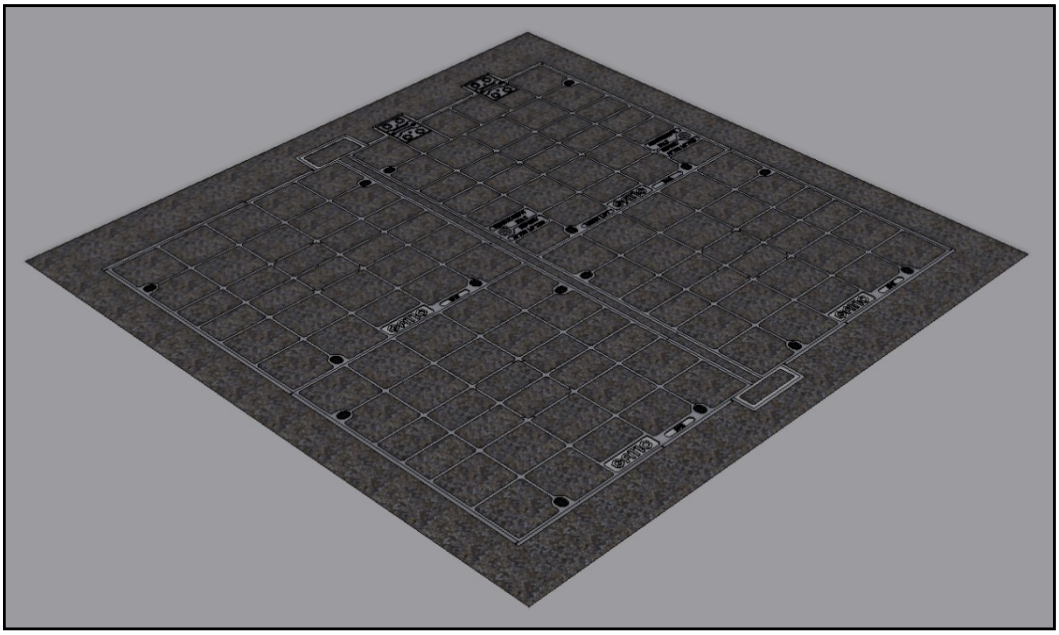




27. Concreting

Float off the surface to the desired texture. Please note that concrete should be finished flush with the top surface so that the edges of covers and frames are visible.

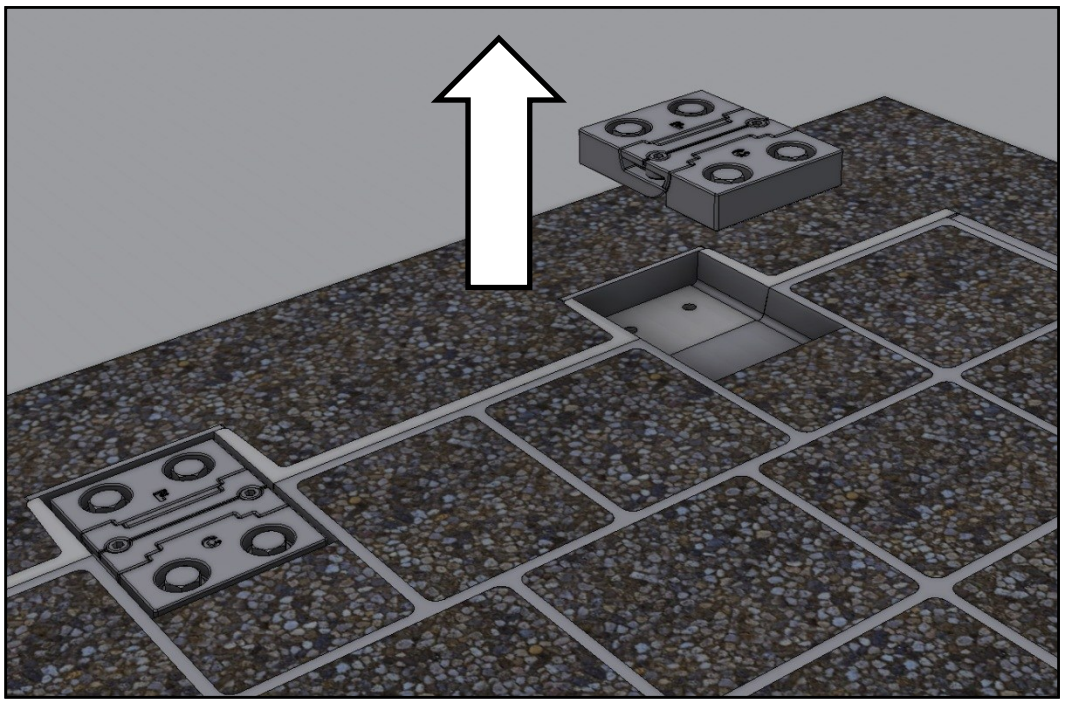
WARNING! *Allow the concrete to cure for 24 hours. Early removal of the covers may cause the frame to distort and damage the concrete. This may prevent covers from fitting back into the frame.*



28. Remove Hinge Assemblies

Remove the masking tape if it has not already been removed. Using the Tommy Bar provided, unscrew the bolts on the hinge assembly. Remove the hinges and store in a safe and secure location.

⚠ CAUTION *Care must be taken not to damage the hinge assembly when removing. Store the hinge bolts and washers in a safe location.*

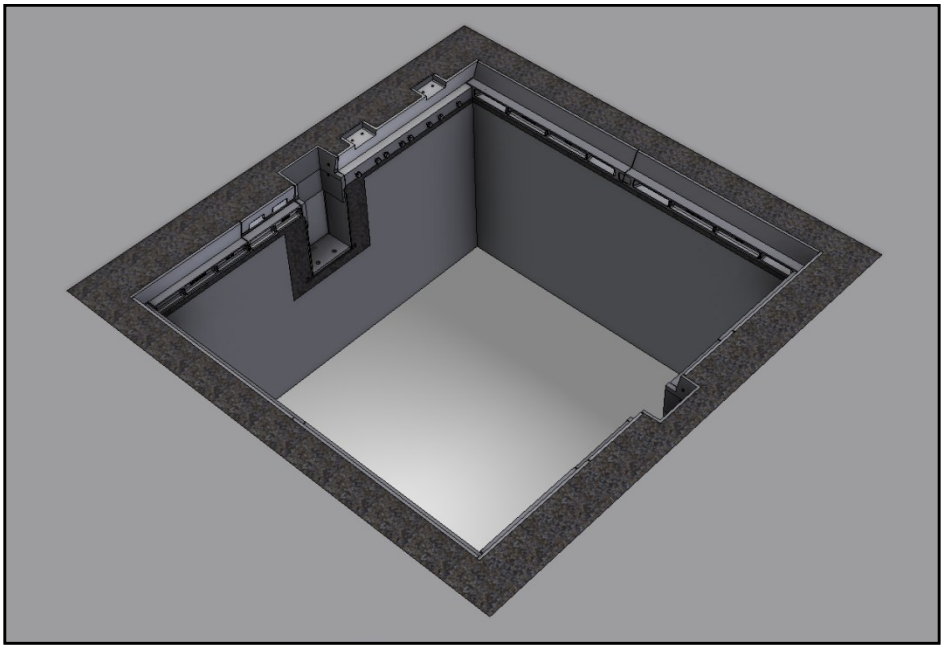


29. Remove Covers and I Beam Assembly

Remove all the tape and covers from the frames and then remove the shuttering below, checking that the concrete has fully flowed under the frame. Remove the beam assemblies and clean all site debris and concrete residue from any seating faces.

WARNING! *Ensure that the locking bolts are removed from the assist lift cover before trying to lift the cover out of its frame.*

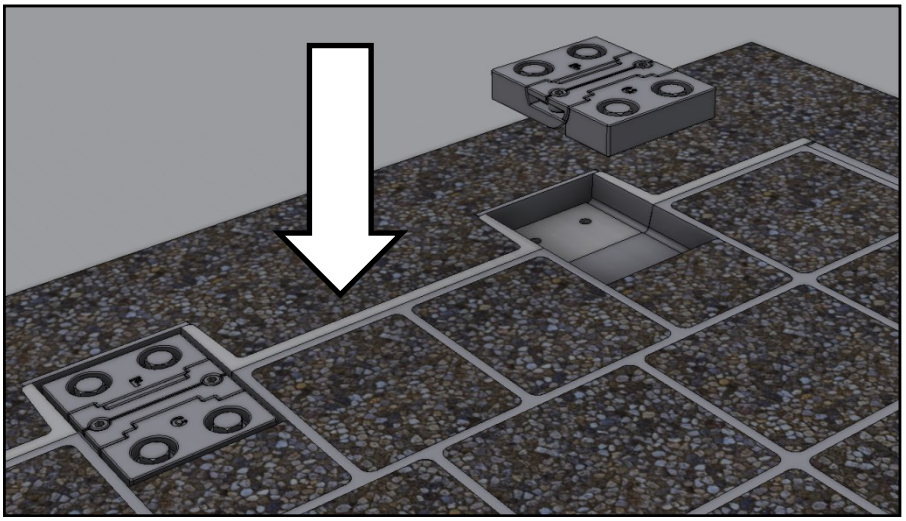
Apply a thin coat of graphite based grease to the filler blocks and all seating faces of the covers and frame then reposition beam assemblies and covers back into the frame. Do not bolt down the assist lift cover(s) at this stage. Check that they are in their correct numbered position and check that the grinding marks around the top surface align.



30. Replace Hinge Assemblies

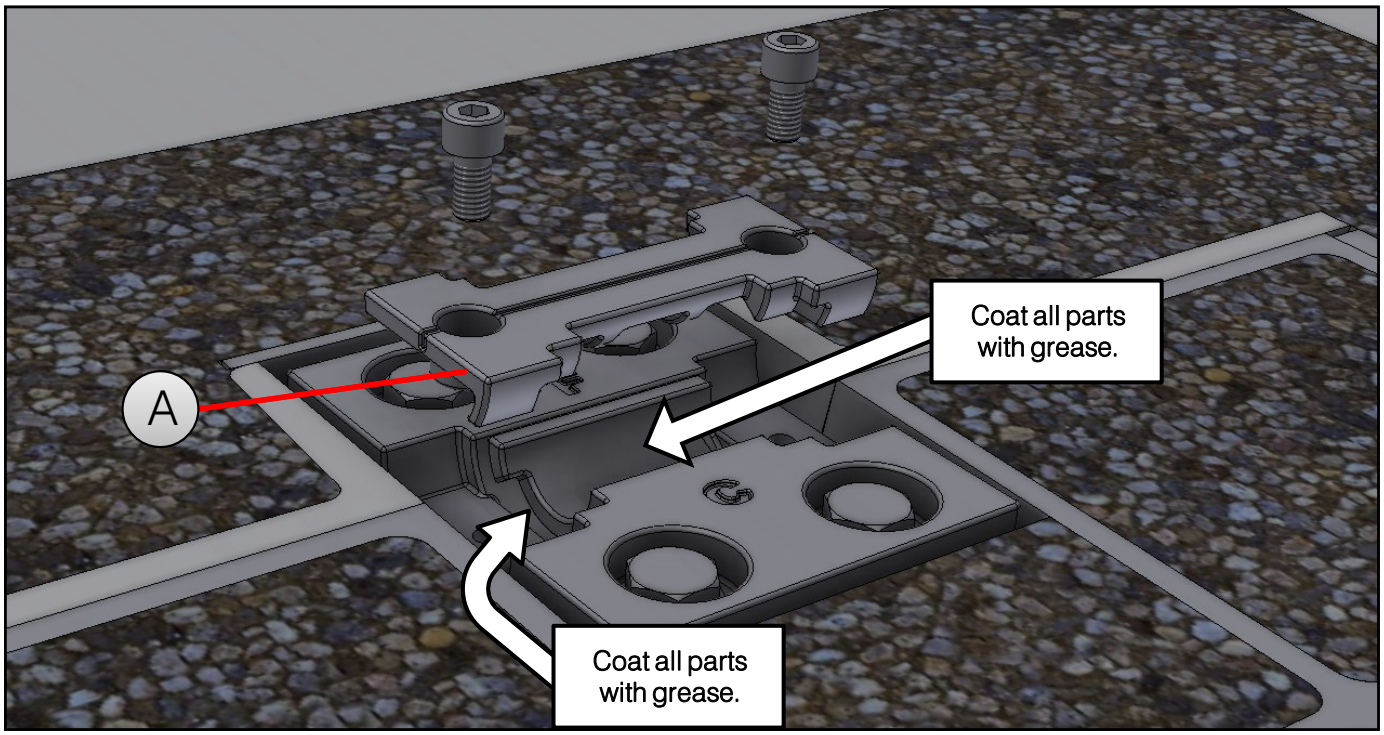
After the covers have been repositioned, use the Tommy Bar provided to attach the hinge assembly to the frame and cover.

⚠ CAUTION *Care must be taken not to damage the hinge assembly when attaching to the cover and frame.*



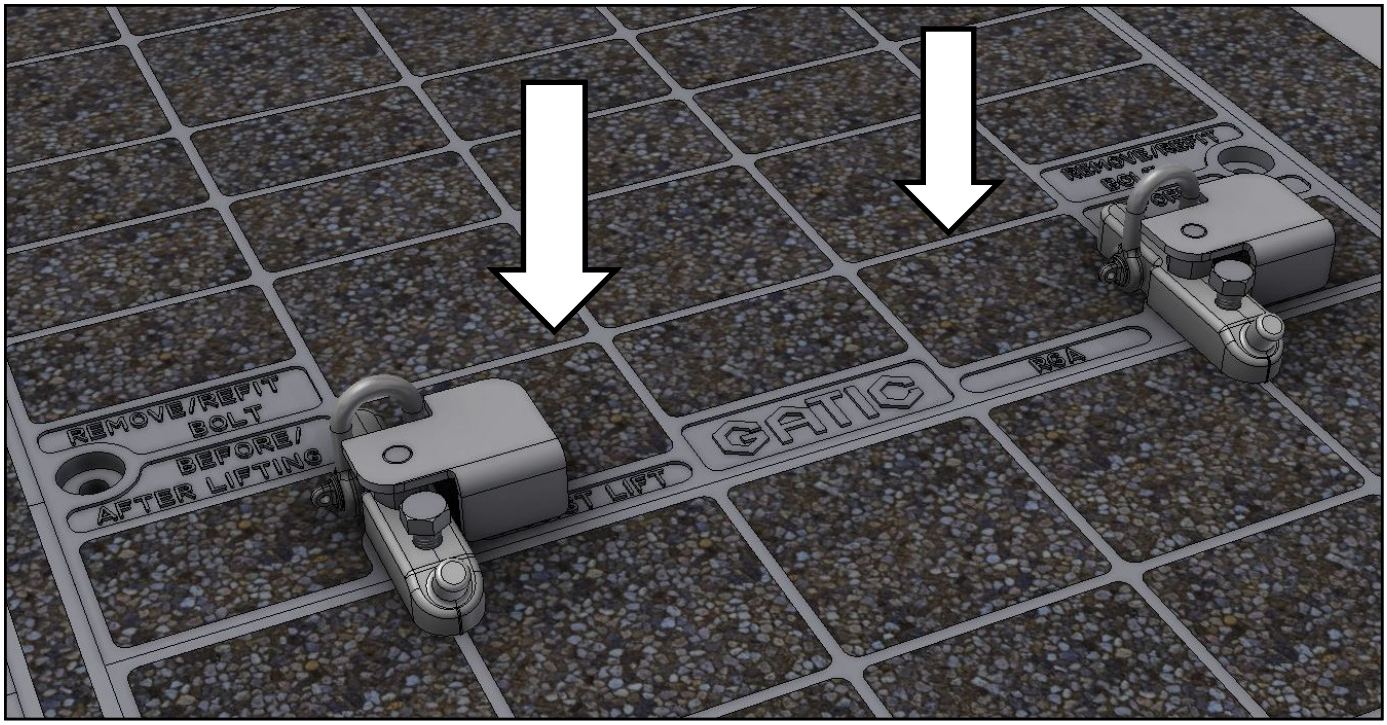
31. Grease The Hinge

Using a 6mm Allen Key remove the hinge centre (A) and pack with a molybdenum based grease ensuring all parts are coated. Refit the centre of hinge after greasing and tighten bolts.



32. Attach The Lifting Keys

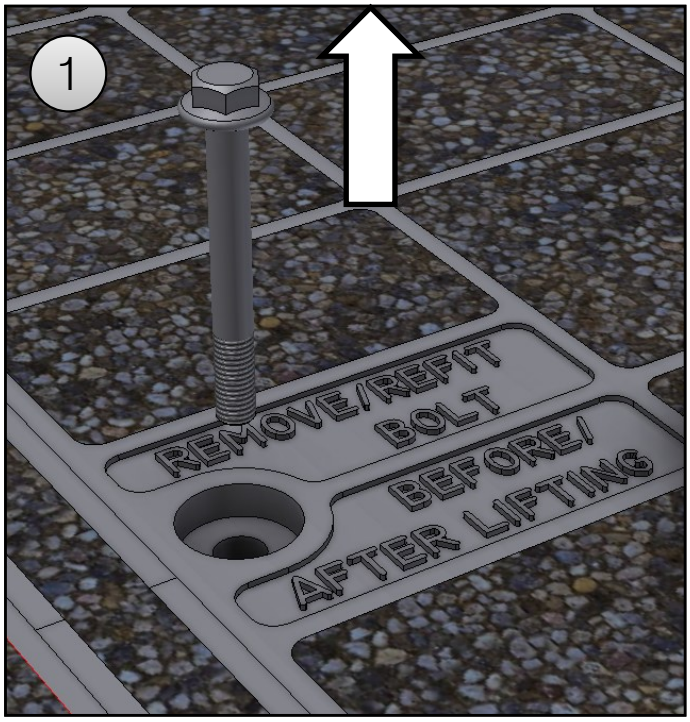
Carefully prise open and remove the keyway plugs to expose the Keyways. Store the Plugs in a safe and secure location. Securely attach the crane operating lifting keys into the front of the cover. (*please refer to instruction 12 for lifting key installation*).

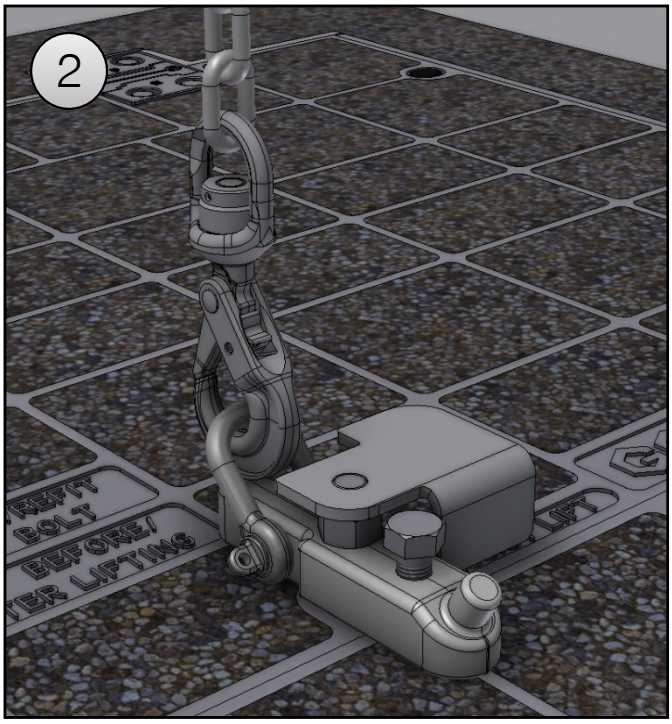


33. Open The Cover

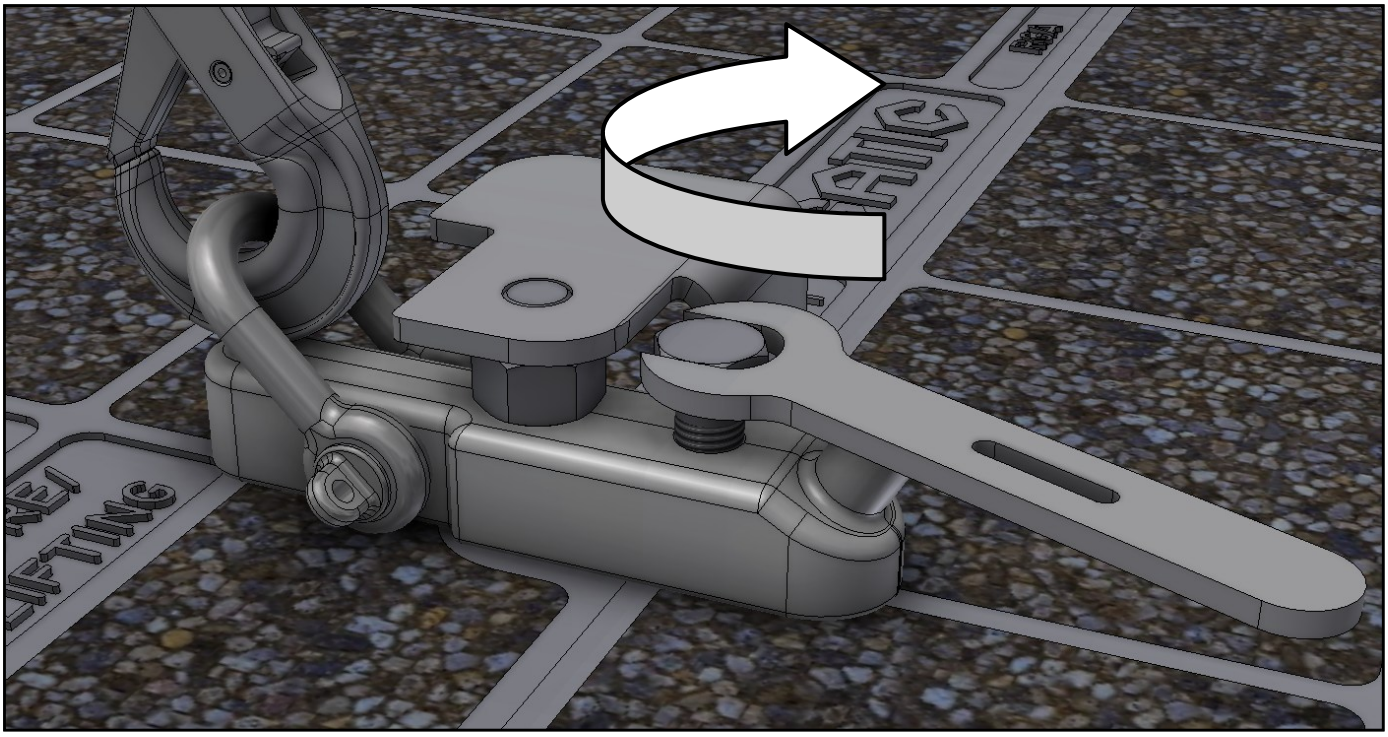
As the M-Struts have not yet been attached to the cover, care must be taken on the initial opening of the cover to prevent injury.

1. Using the Tommy Bar provided, unlock the locking bolts if they have been inserted in *error (see instruction 29).*
2. Attach lifting hooks to the mechanical lifting keys and ensure they are secure.





Rotate the Jacking Screw on the Short Handle Lifting Key with the spanner supplied. The Jacking Screw will push against the pad on the front bar. Keep rotating the Jacking Screw until the seal cracks between the cover and frame.

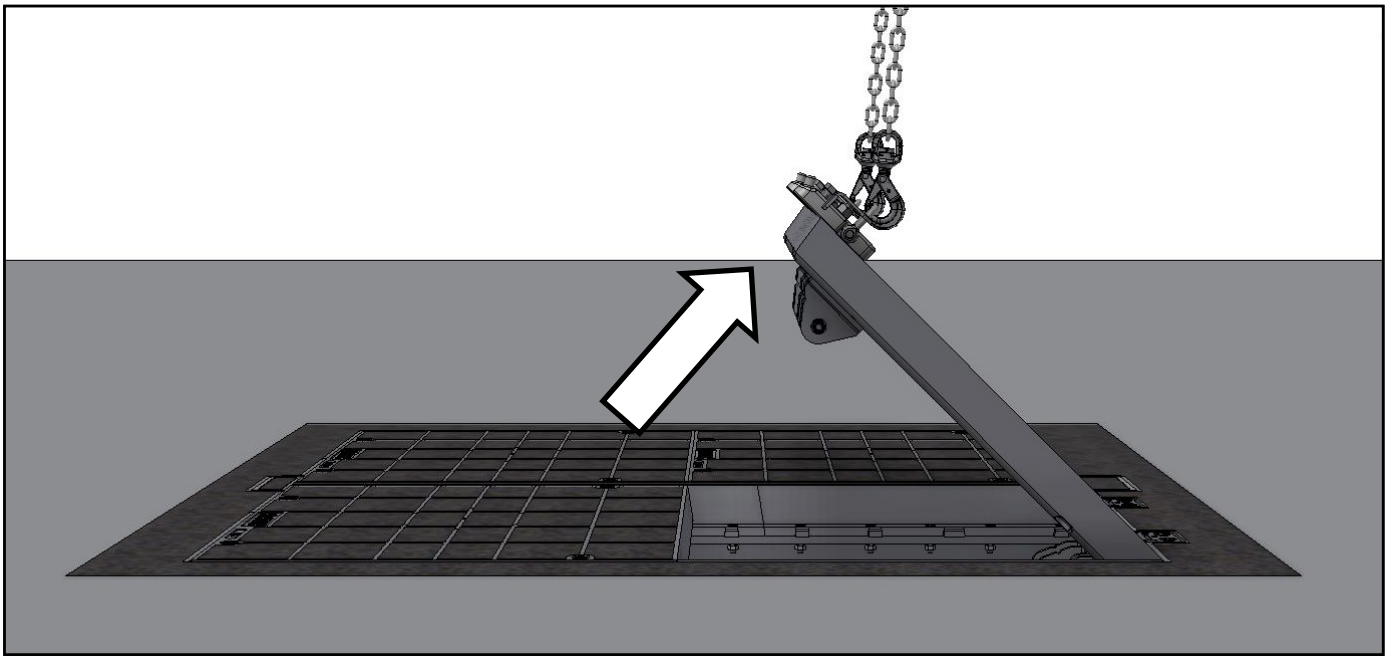


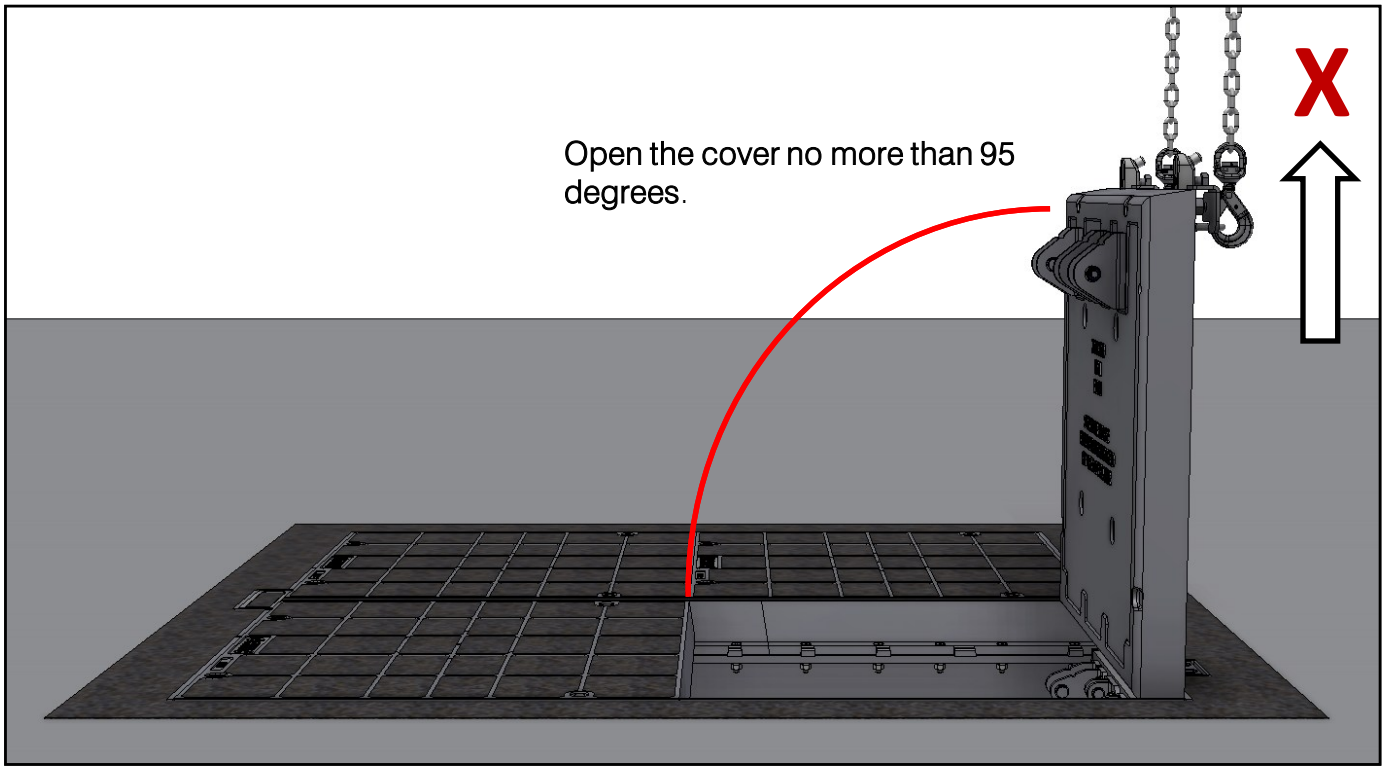
34. Open The Cover

Using a suitable lifting device open the cover. After lifting, secure the cover in the open position preventing it from moving and closing.

WARNING! *This must be done safely without allowing the cover to open more than 95 degrees. Failure to do this may result in damage to the hinges.*

WARNING! *When the cover is vertical do not apply any lifting force as this will seriously damage the hinges . The hinges will fail to prevent damage to the frame and concrete.*





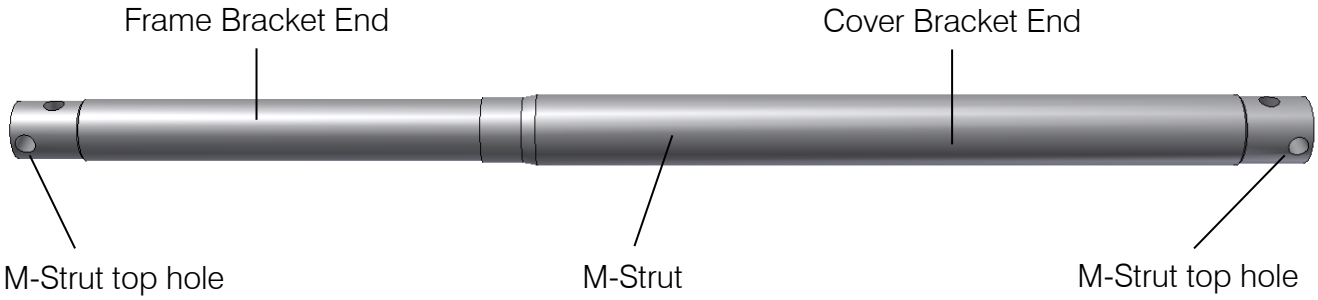
35. Attach the M-Struts

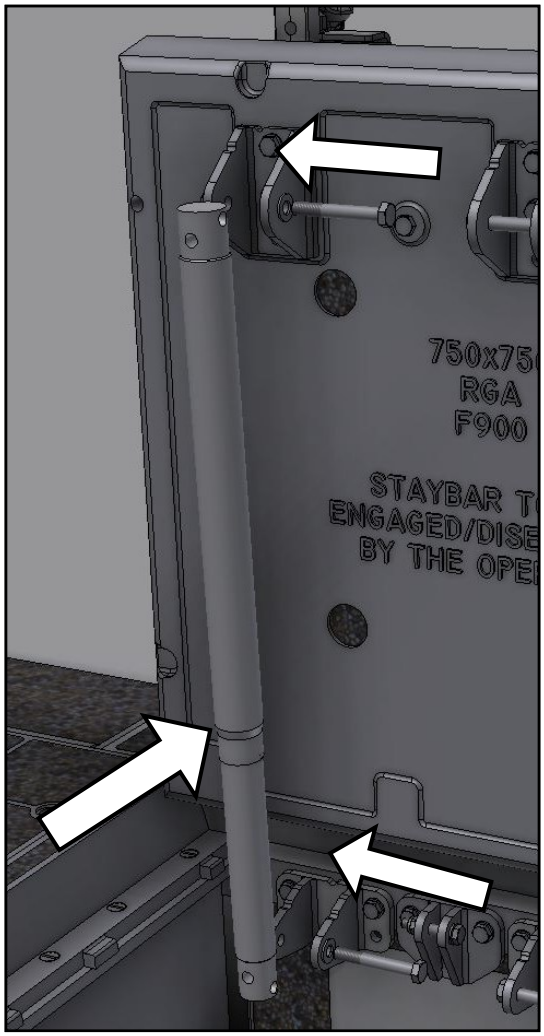
Remove the bolts that are already in the Cover and Frame brackets and attach the M-Struts using the top holes on the M-Strut. The cover can be set up as Pop Open (cover swings open) or Hard Close (cover does not swing open) using the different hole locations on the M-Strut brackets. Drawings EG/3183 (RGA) & EG/3184 (SGA) shows the bracket orientation and hole locations for Pop Open and Hard Close settings. These can be viewed at the back of this installation document.

CAUTION *Care must be taken when fastening the stainless steel fixings to prevent thread seizing. Apply a molybdenum based grease to bolts before refitting.*

CAUTION *Be careful not to damage the M-Struts.*

CAUTION *Ensure orientation of the M-Strut is correct with the larger diameter end attaching to the cover brackets.*



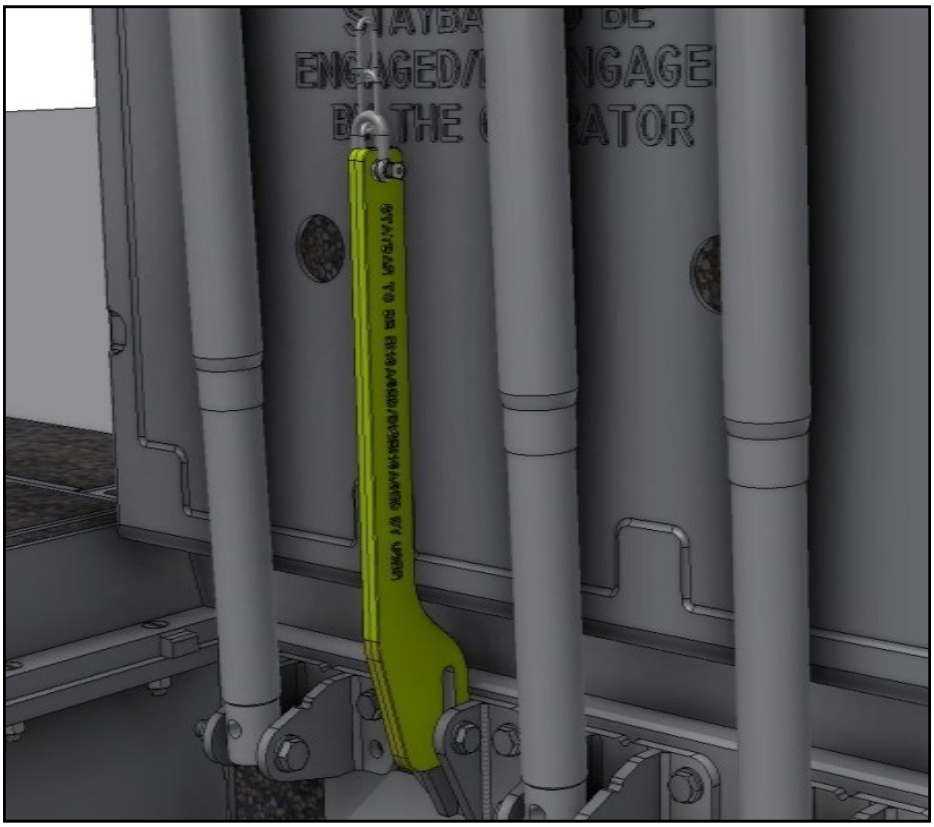


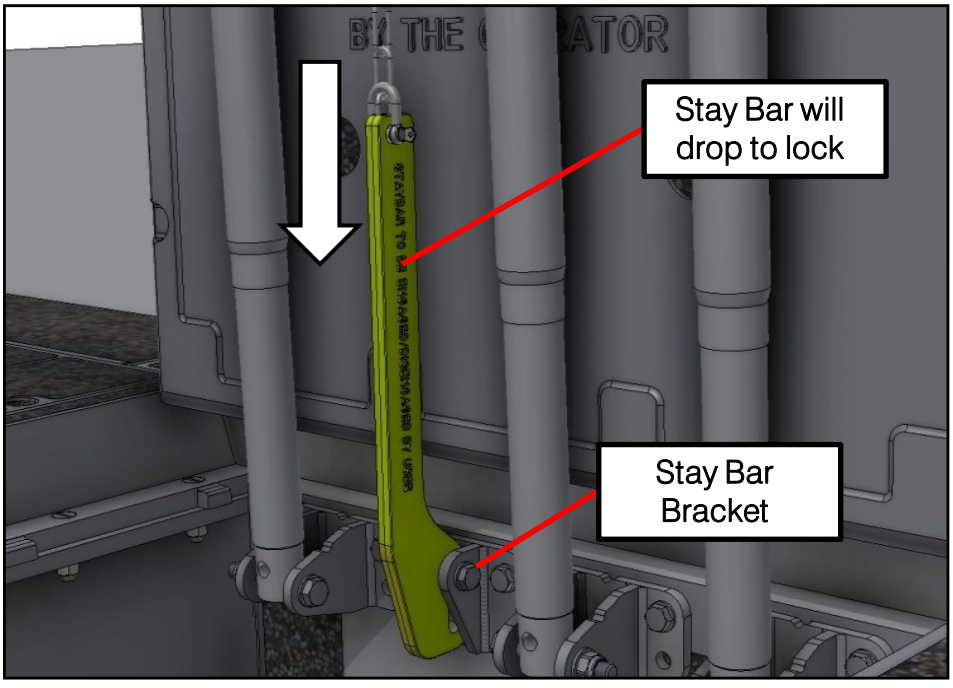
36. Attach the Stay Bar

Once the M-Struts are in position, attach the Stay Bar to the Stay Bar bracket using the bolts that will already be in place. The Stay Bar has to be manually engaged and disengaged..

WARNING! *Ensure the Stay Bar has been MANUALLY engaged fully before the weight of the cover is rested against the Stay Bar. Failure to do this may cause serious injury.*

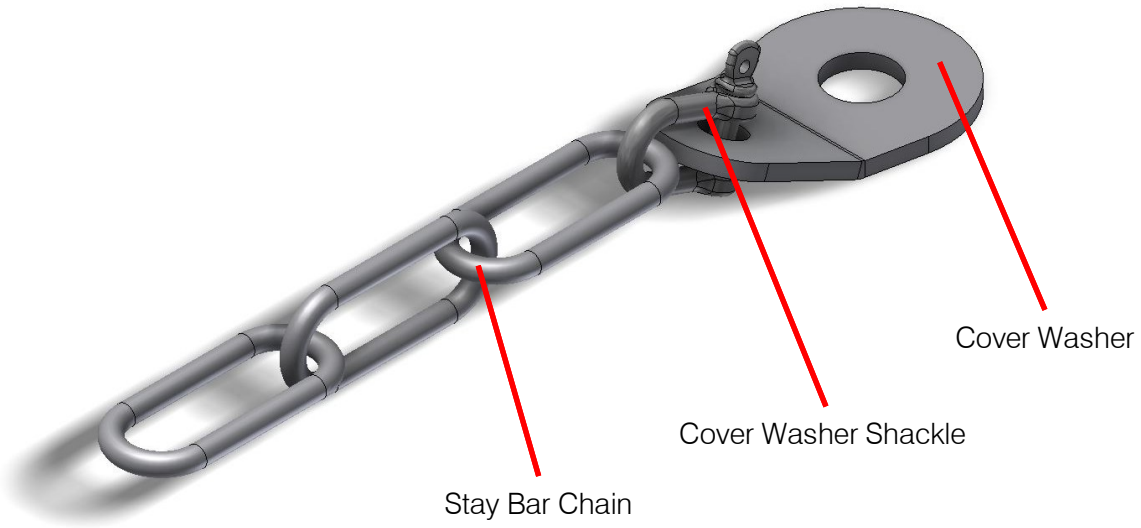
⚠ CAUTION *Care must be taken when fastening the stainless steel fixings to prevent thread seizing. Apply a molybdenum based grease to bolts before refitting.*





37. Chain Assembly (Recessed Gatic Assist Lift Covers Only)

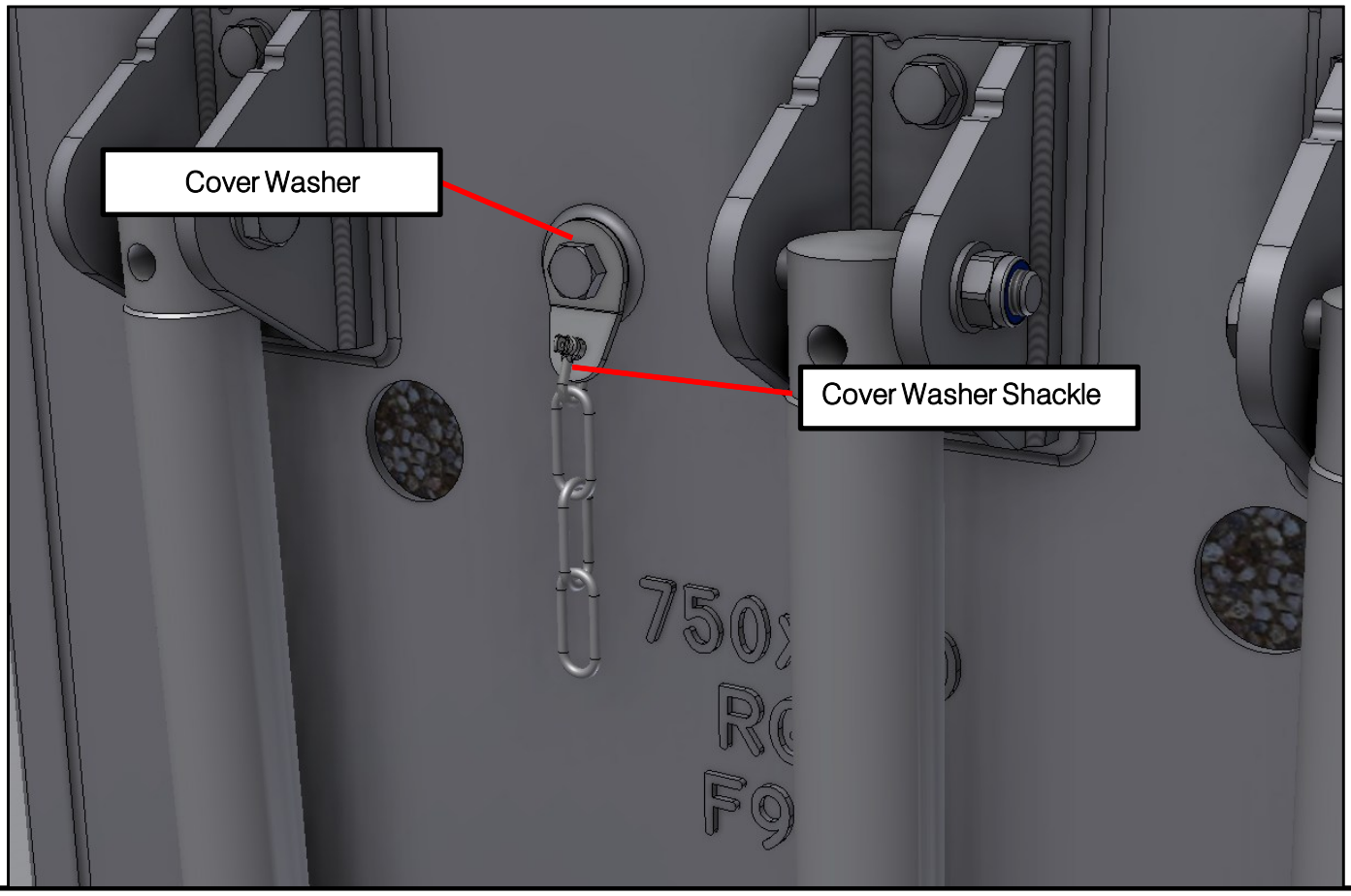
Once the Stay Bar is attached to the Stay Bar bracket, attach the chain to the cover washer shackle .
(*The Stay Bar chain should already be attached to the Stay Bar on delivery using the large Stay Bar shackle*).



37 B. Attach the Stay Bar Chain to the Cover Washer (Recessed Gatic Assist Lift Covers Only)

Now connect the Stay Bar chain to the cover washer shackle.

CAUTION *Ensure all the shackles are tight.*

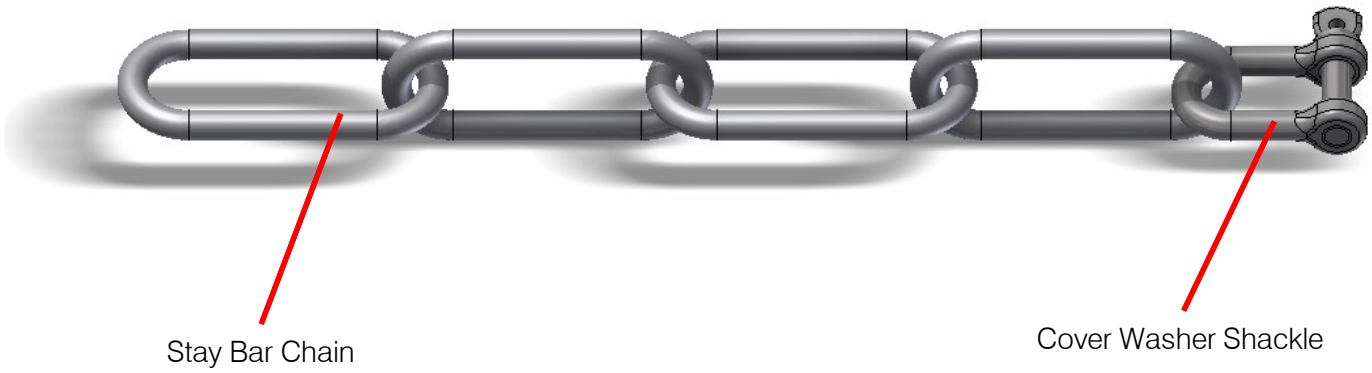


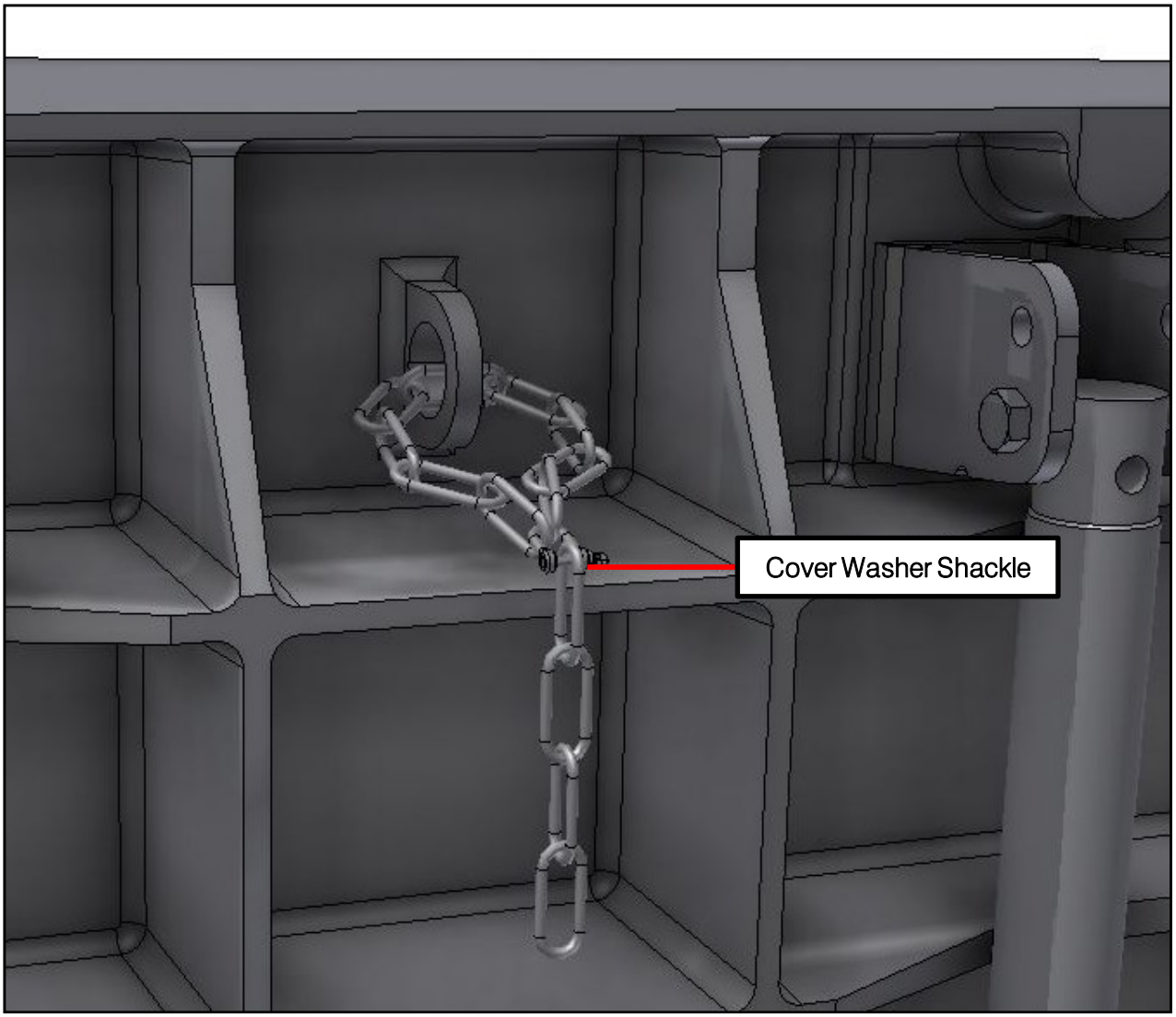
38. Attach the Stay Bar Chain to the Cover (SGA Covers Only)

Now connect the Stay Bar chain to the lifting eye on the cover. Wrap the chain around the lifting eye and attach using the shackle provided.

(*The Stay Bar chain should already be attached to the Stay Bar on delivery using the large Stay Bar shackle*).

CAUTION *Ensure all the shackles are tight.*





39. Clean, Close and Lock the Cover

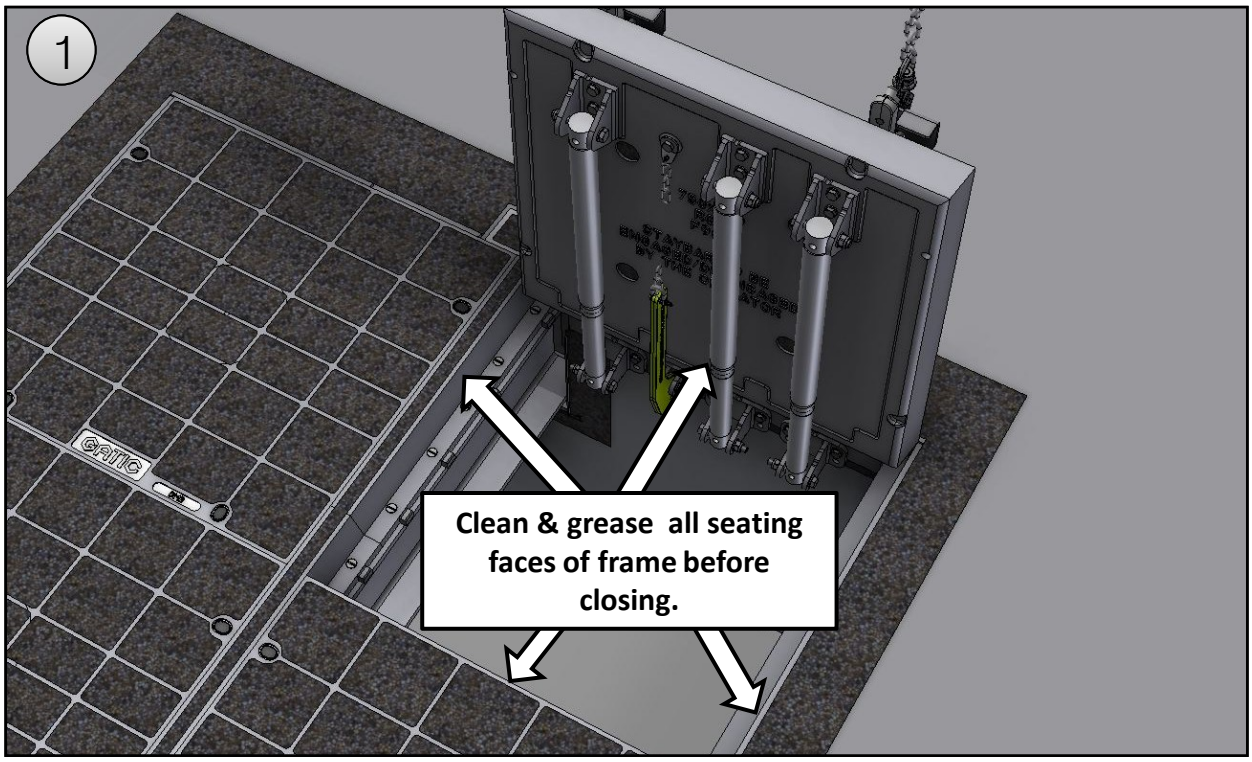
1. Clean the seating and remove any debris that may be sitting on the seating faces.

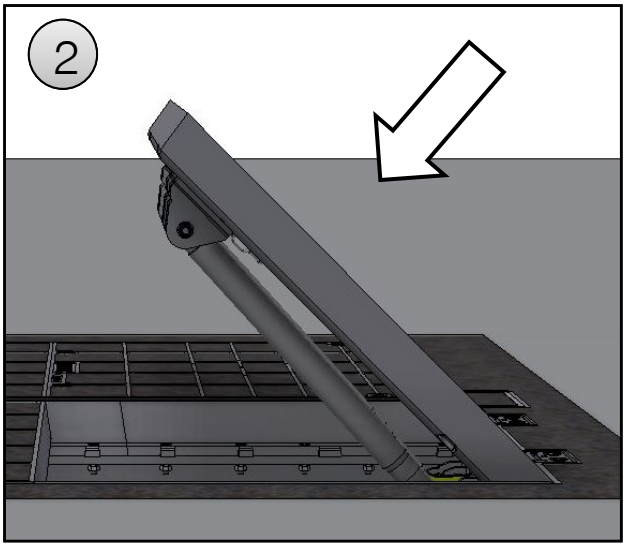
2. After the Stay Bar has been secured it can be operated and released. Remove the lifting chains from the keys and ensure that the jacking screws on the keys have been raised-the keys can be removed at this stage if required. The cover can now be lowered and bolted. To ensure everything is checked and in working order, re open the cover all the way and fully engage the Stay Bar once the cover is upright. Failure to do this may cause serious injury. Once the Stay bar is working correctly, the Stay Bar can be released and the cover can be closed.

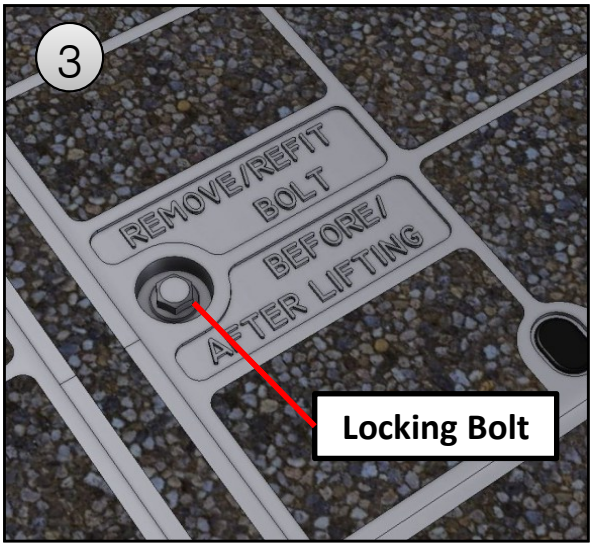
3. Tighten down locking bolts securely in position. This will ensure the cover is seating correctly and is secure.

WARNING! *Ensure the cover is opened fully so the Stay Bar drops and engages. Failure to do this may cause serious injury.*

CAUTION *Ensure the seating face is clear and free from debris. Failure to do this may damage the hinge assembly.*

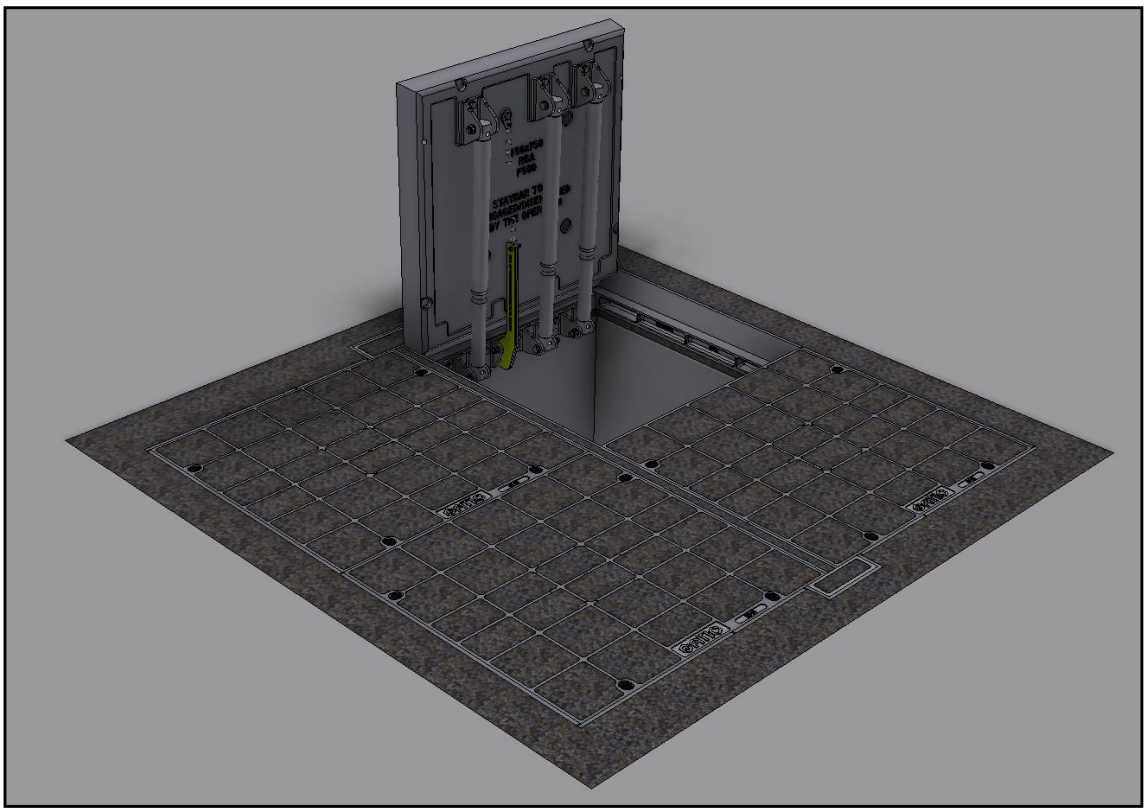




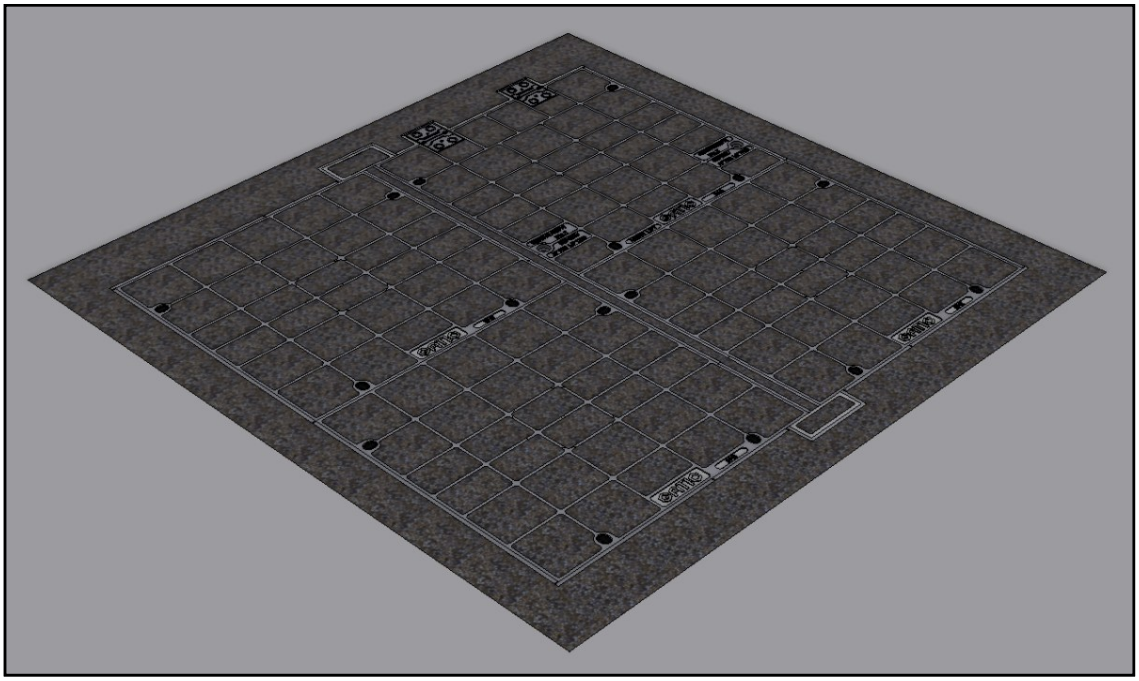


40. Grease Seating Faces

After installation is complete, and whenever the cover is opened, apply good quality graphite based grease to all the seating faces of the cover and frame before closing the cover.



Congratulations. Your cover is fully installed. Please store the keys and tommy bars in a secure location ready for next use.



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