The LEVEL

How to Install a Pitless Elevator.

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Important note

- Rails must be installed at 28” to center of brackets/structure. Adjust if needed if hoistway is not plumb and any trim that is on the back of the door jams.
- Rail side returns must be 12”.
- Hoist way doors must be inline, plumb and square to each other. Drop strings to confirm.
- Shoulder bolt must be installed on bottom of sling before walls are installed.
- Read entire Manual before beginning install.
- Overhead requirements

Level	8'	120"
Level	6'8"	108"

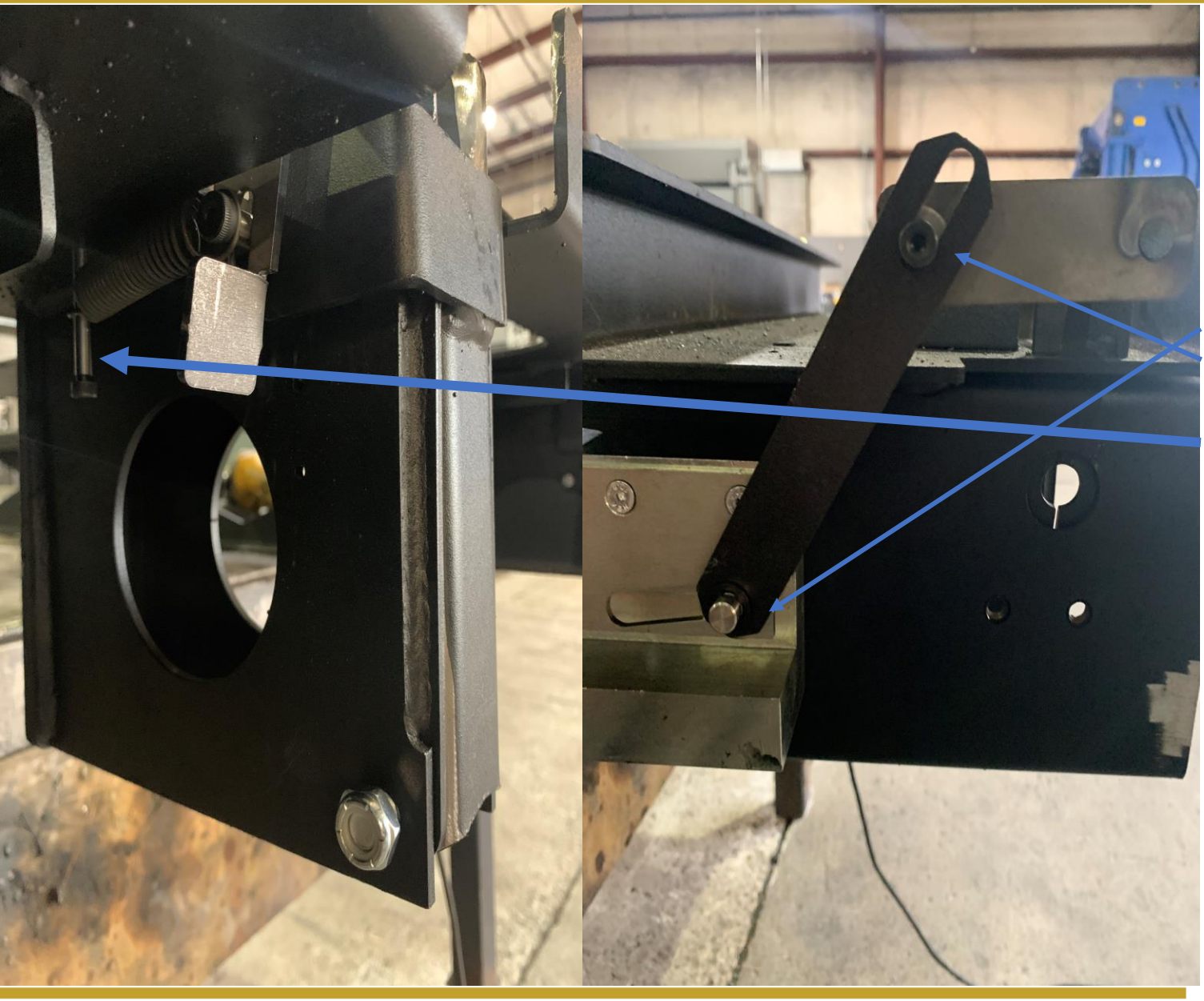
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The Sling.

Install the sling. See the Residential Elevator install manual for step-by-step process. The same process is used on the Level. When roping the sling measure 12" off the pit floor and mark the cables at this height. This will be the height of the shackles.

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Install safety device arm from safety device linkage using e clip on safety device and shoulder bolt on linkage.

Make sure to install shoulder bolt that connects spring to slack cable activation arm.

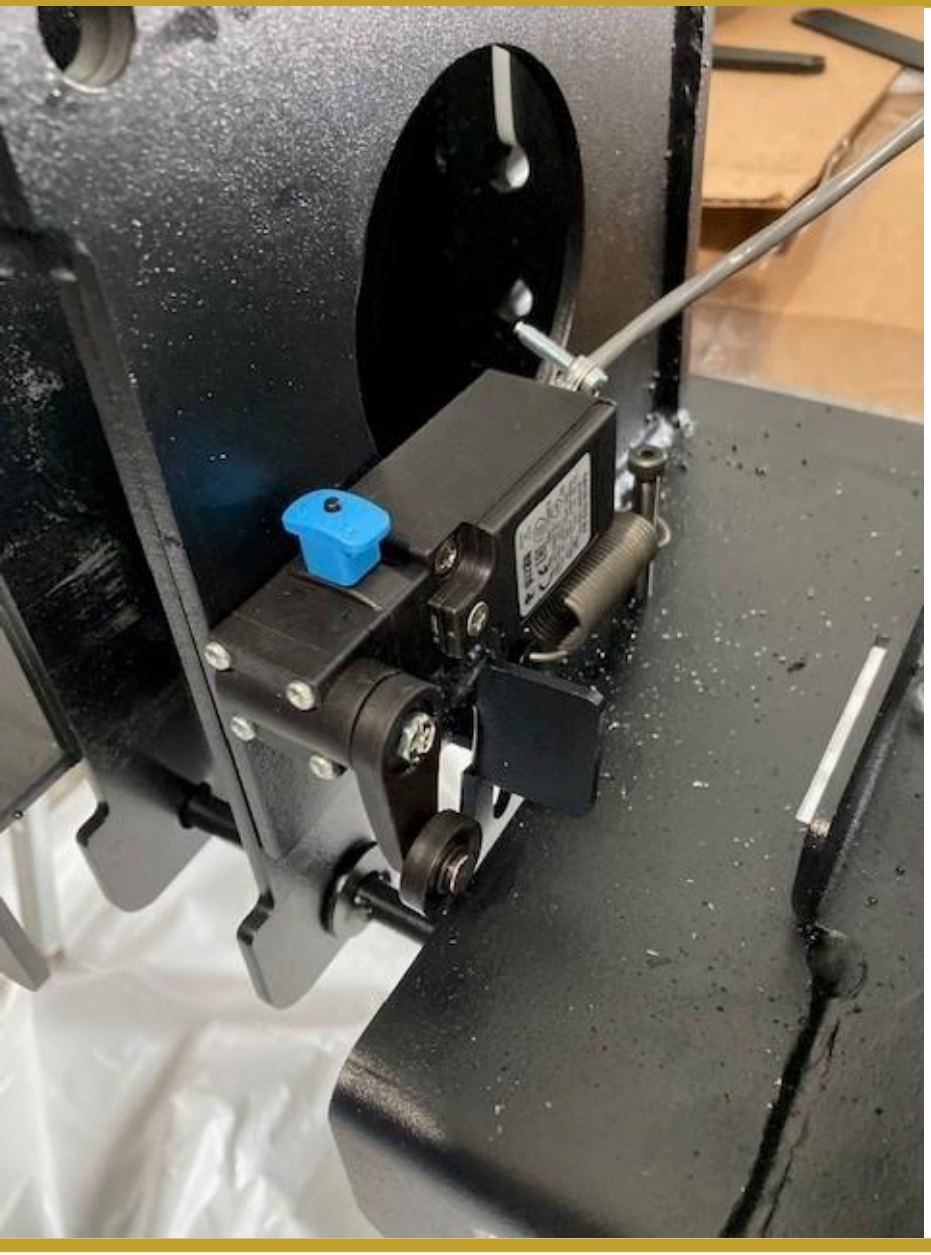
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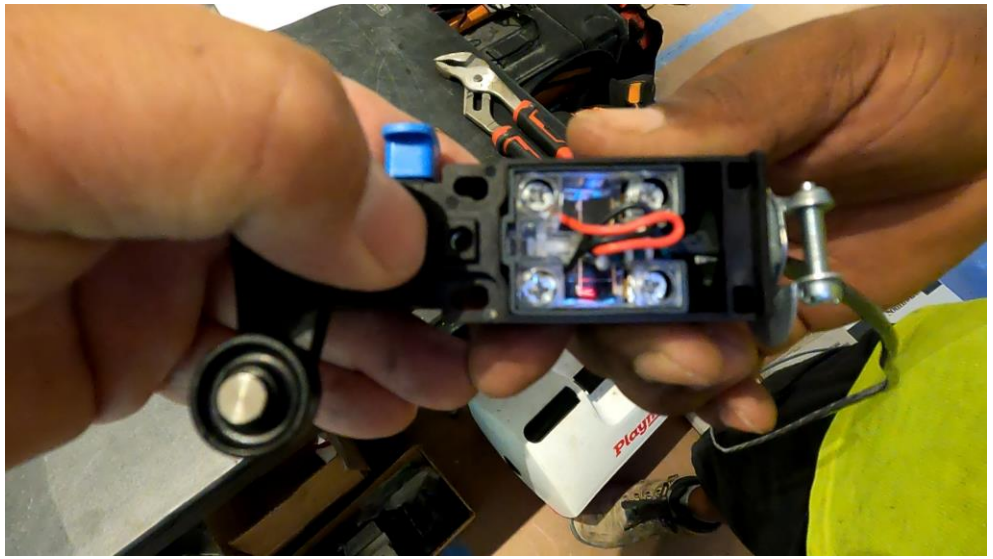


Installation of the safety activation arm spring.

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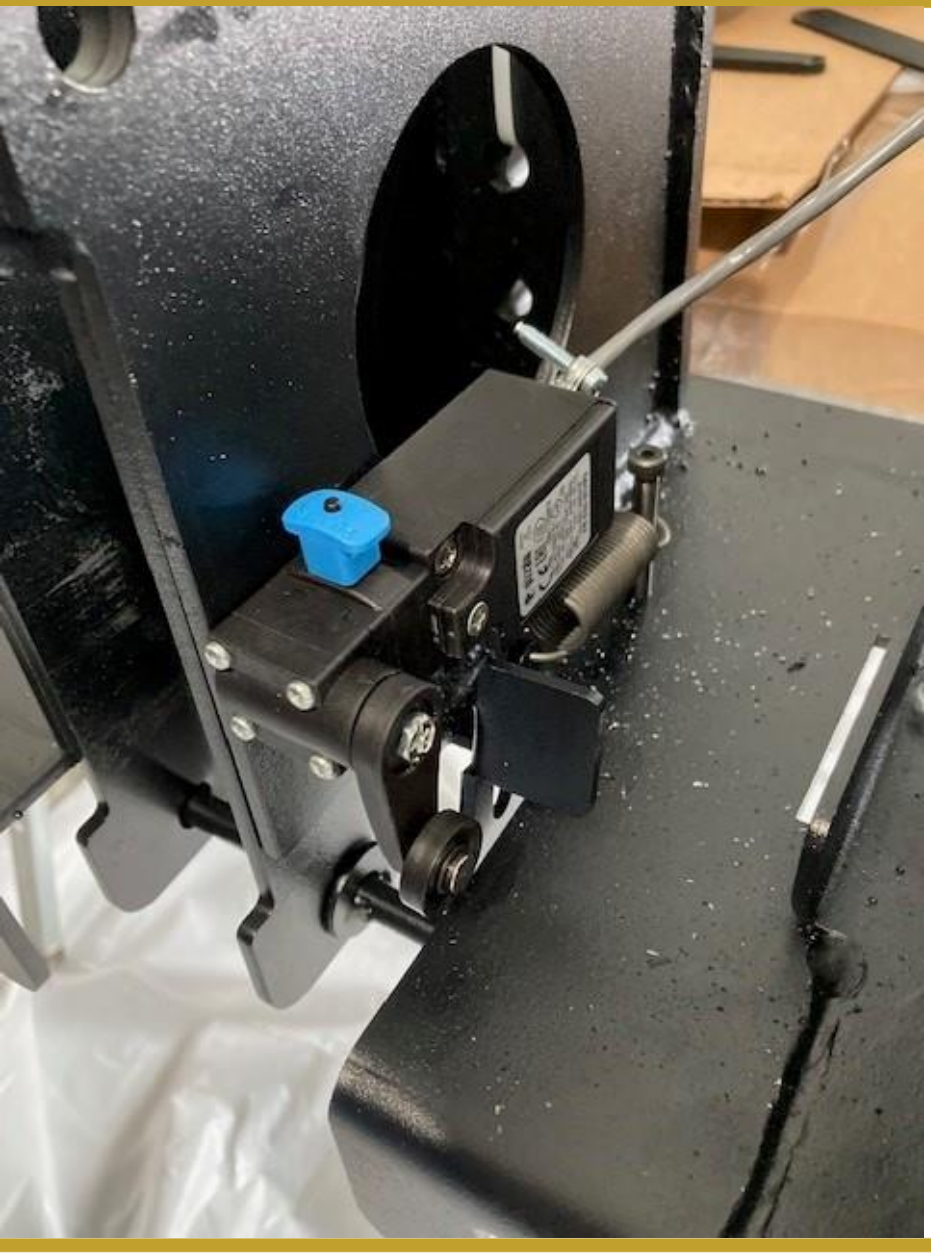


Installation of the slack cable switch. Using the top two terminals to connect your gray wire. Leave 12 to 14' of a tail.

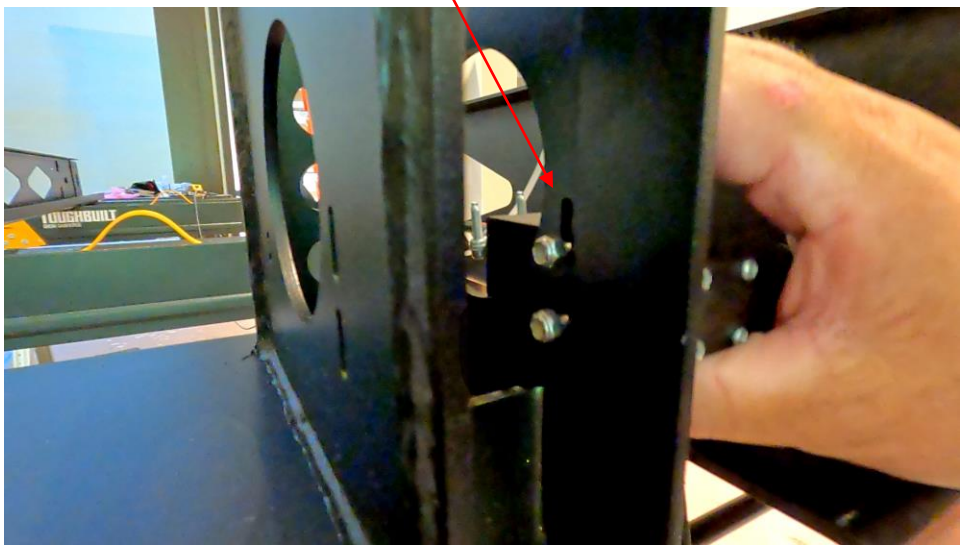


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Installation of the slack cable switch. These slots are to help adjust the switch during installation. This is to ensure that the switch is tripped by the activation arm



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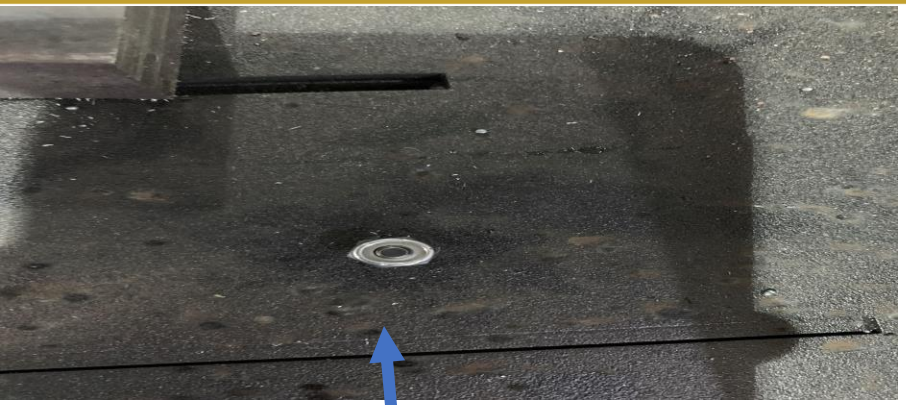


Installation of the slack cable switch and installation of the wire. Its best practice to wire up and install the switch before the installation of the sling. Run the wire up to the the top header and tie wrap the wire in place so your able to retrieve it later.

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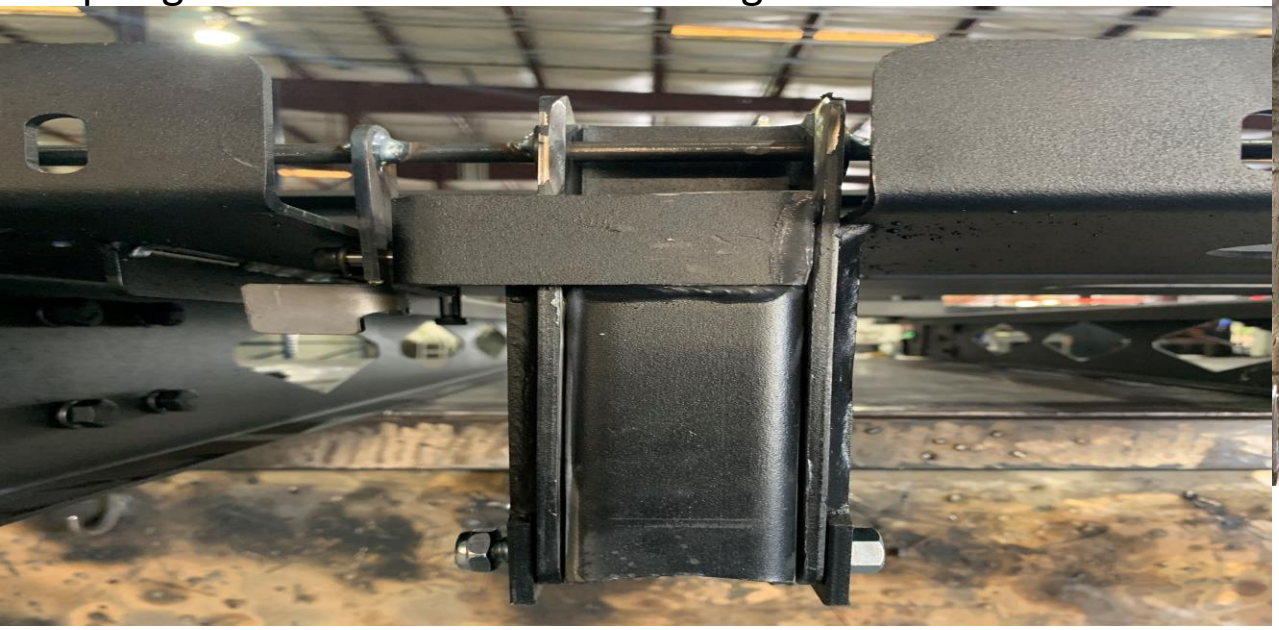




Use wrench sent with elevator to adjust bottom rollers.



Nut used to attach shoulder bolt that spring connects to back side of sling.



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Roping Of The Sling

When roping a Pitless elevator, the ropes should be 6 inches shorter than the standard length. For instance, if you typically place your shackles at a distance of 18” from the floor, they should be positioned 24 inches off the floor.

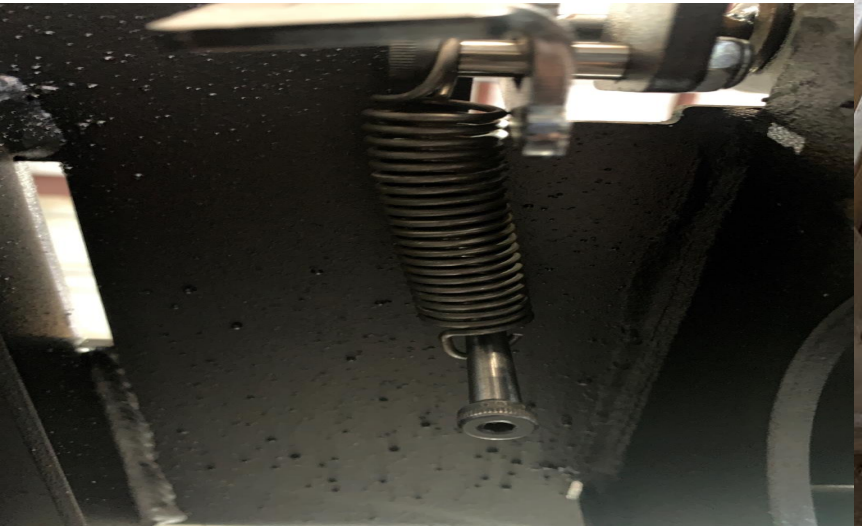


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The Platform

Set platform off the ground in hoist way. The bolts that secure platform to sling will come from under the platform and into the sling. Lower the sling onto platform with winch.

Note: A pallet or 2/4's can be used to set platform on. You will need this height to get the bolts on.







Bolts will come from under the platform and up to the sling. The sling bolt holes are slotted horizontally, and the platform bolt holes are slotted vertically. The nuts are self-locking flange nuts. Hand tighten all nuts and remove winch.

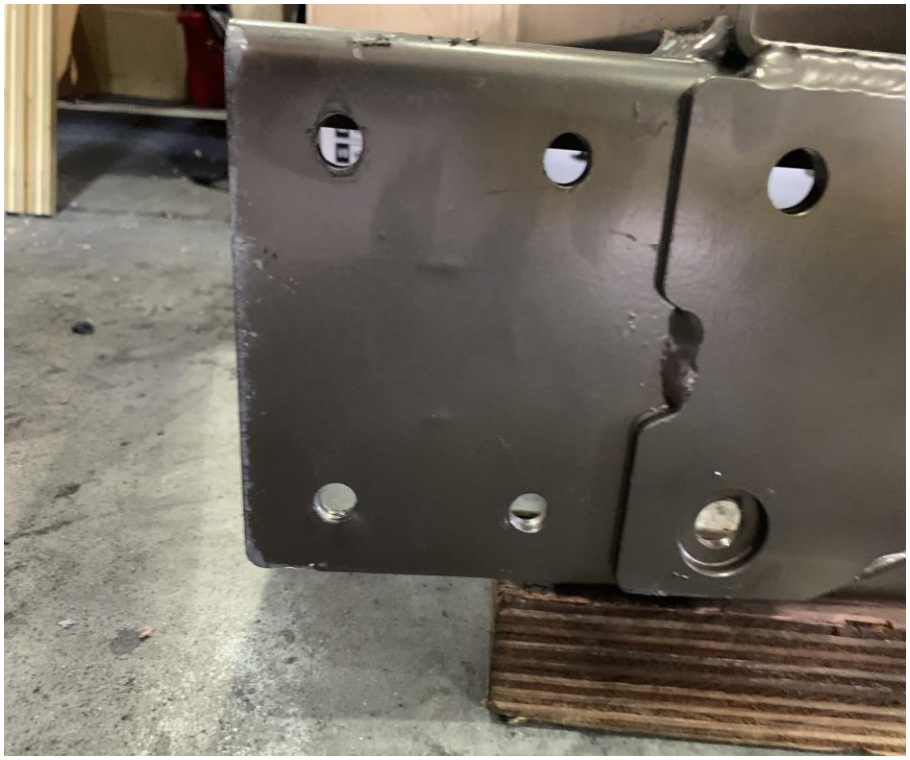
The platform has about ¾'' adjustment in all directions.

So, It is important to note that rail system must be installed at 28'' to center of brackets/structure. Also the rail side returns must be 12". Drop strings on doors to ensure hoist way doors are in line and plumb.

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Install plank arms at top of sling. Install 1 side at a time. Use 2 bolts and nuts and hand tighten. Put 1 bolt in bottom rear and 1 bolt in top front hole.



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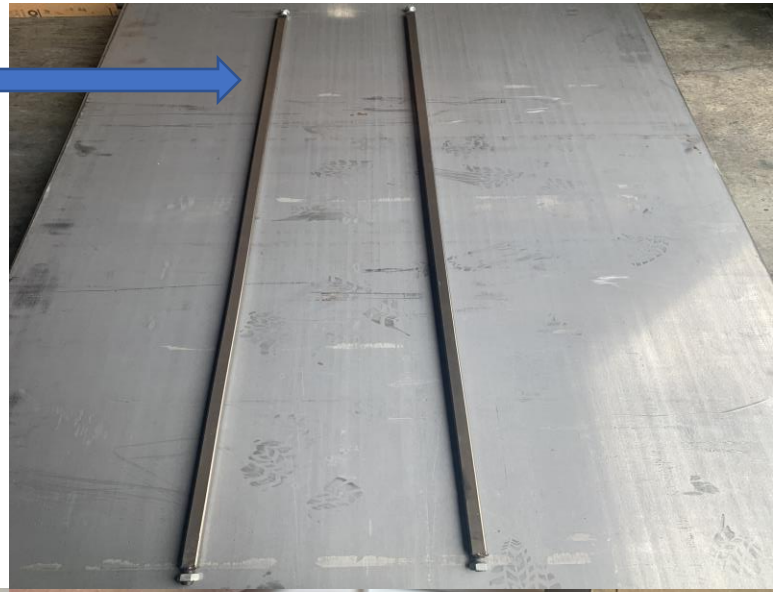


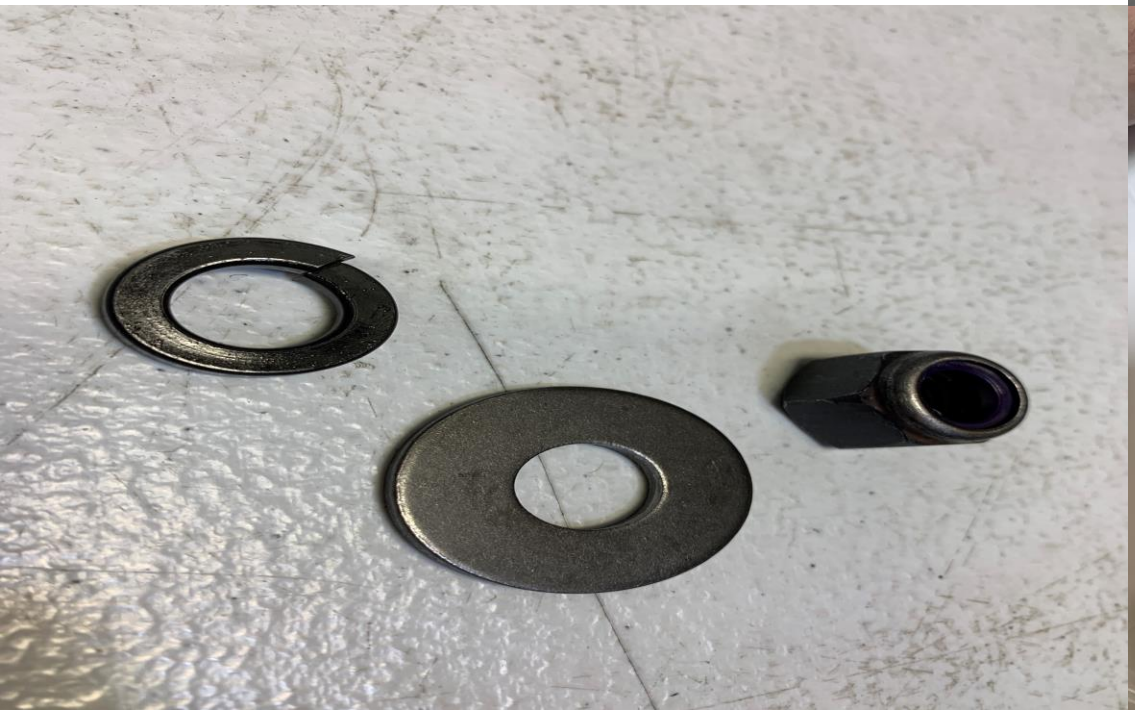
Install outrigger. The outrigger can be moved in and out to accommodate different cab widths depending on what bolt holes are used. Measure from front of sling stiles to edge of platform and use that measurement to match outrigger at the top of sling. Attach to top arm planks. Tighten all bolts that connect outrigger. Remember platform must be set before installing outrigger.

Picture is of outrigger sitting inside arm planks.

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Install the threaded rods that connect to the platform. Start the nut from bottom side of platform and lay rods to the corners of the hoist way, they will be tightened later after the cartop is installed. The nuts sent will be Nyloc nuts. Make sure the thread on rods do not hang below the platform as they will hit the floor after install is completed.







Now that the steel floor is supported by the sling and the outrigger (via the threaded rods), it is time to check for squareness of the floor to all landings. Run the sling up to each floor to check for squareness by using a run button. Squaring the floor up to the doors after the cab is installed is much more difficult, thus take extra care to get the floor squared up now with proper running clearances. You may have to loosen and re-tighten the bolts that hold the floor to the sling to make adjustments.



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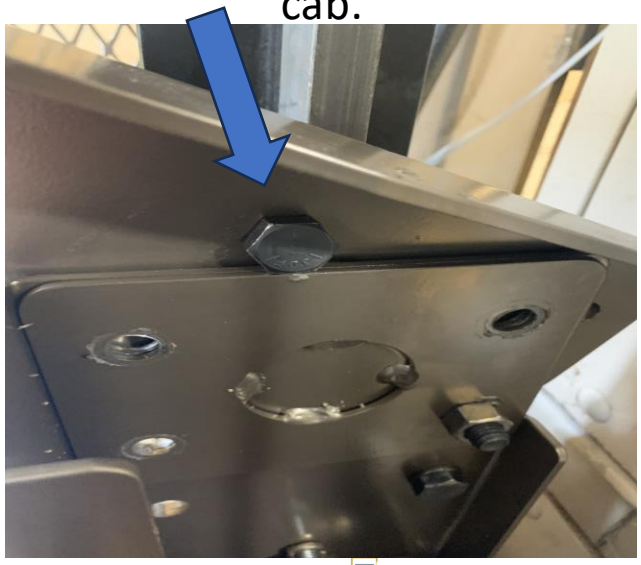


After platform is square with landings set back on the floor of hoist way and tighten nuts with socket and ratchet.

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Remove threaded rods from planks and take out the bolt that is in the top front hole of arm plank to the sling. Push outrigger up and insert bolt into first hole that clears stile on top of sling to hold in place. This is done to make room to build cab.



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Build the cab walls. Install the cab onto the steel floor. Do not attach any cab bolts until the entire cab is assembled. It should be loosely sitting on the steel floor now.



Slotted holes on end of outrigger that top of threaded rods will attach to must hang over edge of cab wall.

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Use access panel to lower outrigger (see previous video). Attach all car top bolts to wall and tighten. Install remaining plank arm bolts and tighten to sling.

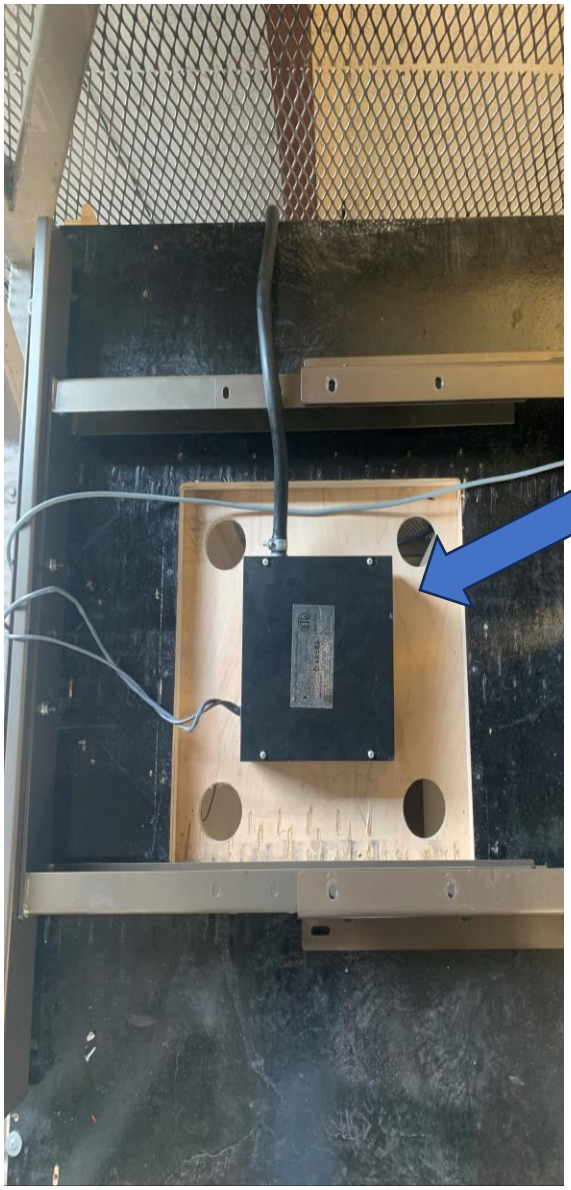
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Pull over stabilizing rods and attach to outrigger. Use a washer and Nyloc nut. Level platform by tightening bolts on stabilizing rods. Use cab stabilizing bracket (picture on next slide) to level walls side to side.

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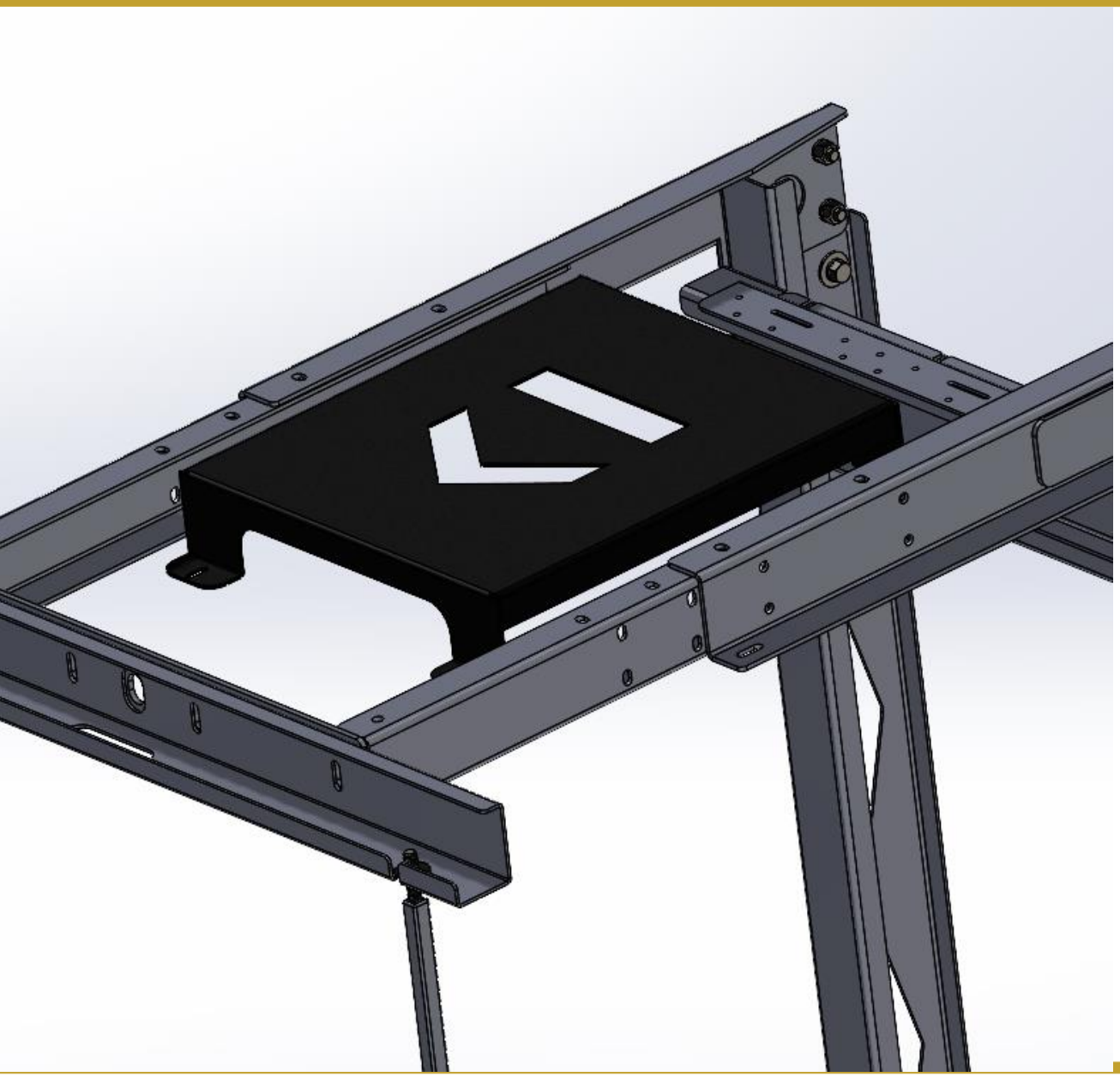




Attach access panel cover. Holes will be predrilled for screws. Attach from top of car. Use all screw locations and verify there are no gaps around cover to ceiling from inside car. DO NOT STEP on this cover after installed. Car top box will mount in center of cover.

Cab stabilizing bracket will bolt to sling and screw to car top.

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A protective cover will be mounted at end of install. It will bolt directly to the car top.

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