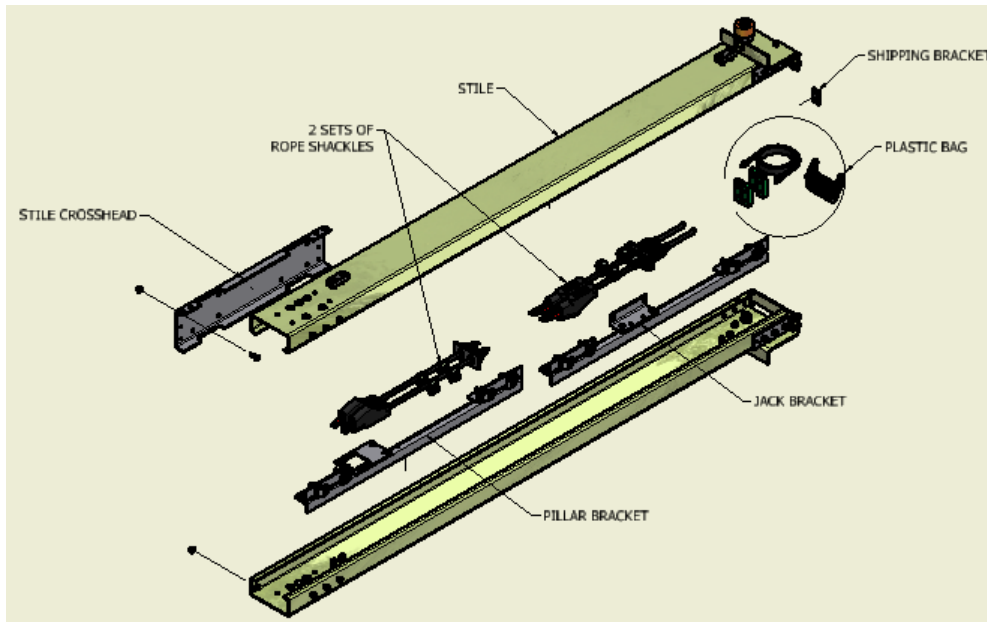


# 601 CAR FRAME INSTALLATIONS

The 601 Car Frame ride quality is fully dependent on accurately installing the rails, ropes, pillar, jack, sheave and Car Frame.

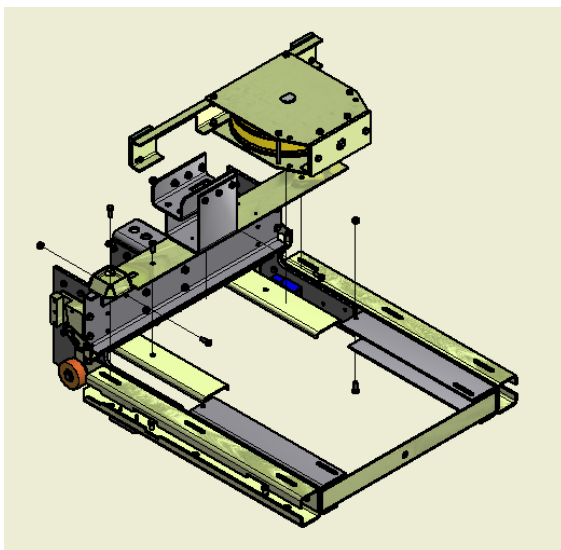
## CAR FRAME PREPARATION:

1. Separate left + right stile by removing stile crosshead and shipping bracket. Keep all packaging bolts for future car frame assembly. See Sketch 001
2. Inside styles you will find 2 sets of rope shackles, jack bracket, pillar bracket and plastic bag with 4 guide shoes, jack "U" bolt, 4 cab stabilisers square "U" bolts and jack rubber isolation.



SKETCH 001

3. Strip down plank; remove sheave, dead end hitch, jack pillar cup and 2 cab brackets. See Sketch 002

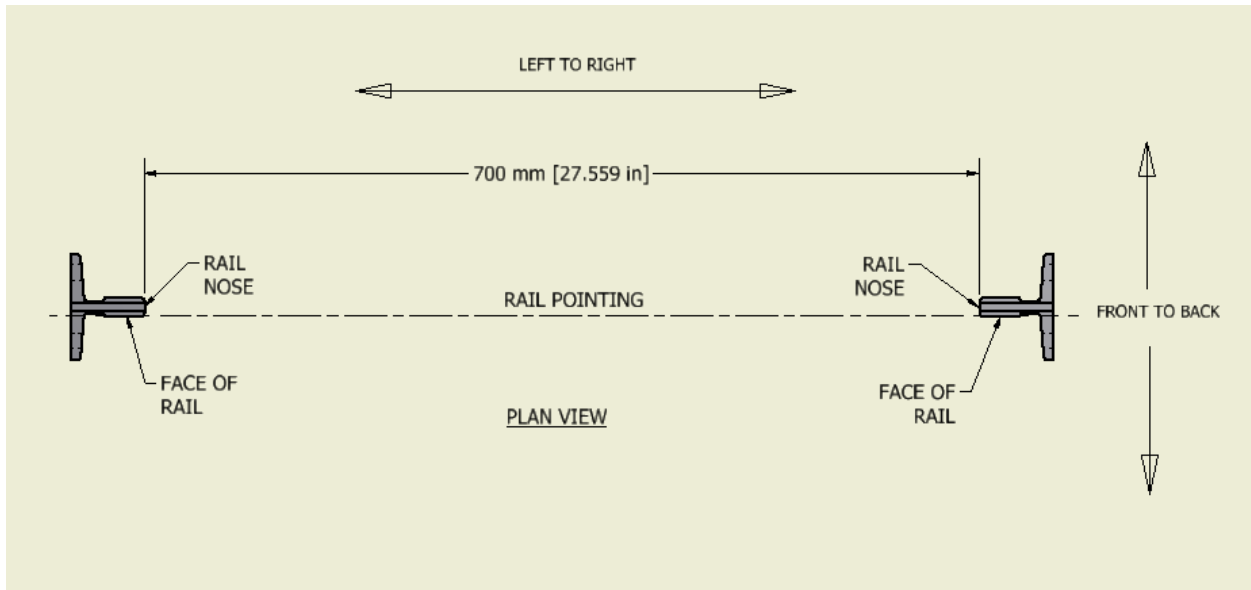


SKETCH 002

## RAIL INSTALLATION:

It is imperative that the rail be installed accurately considering the following points:

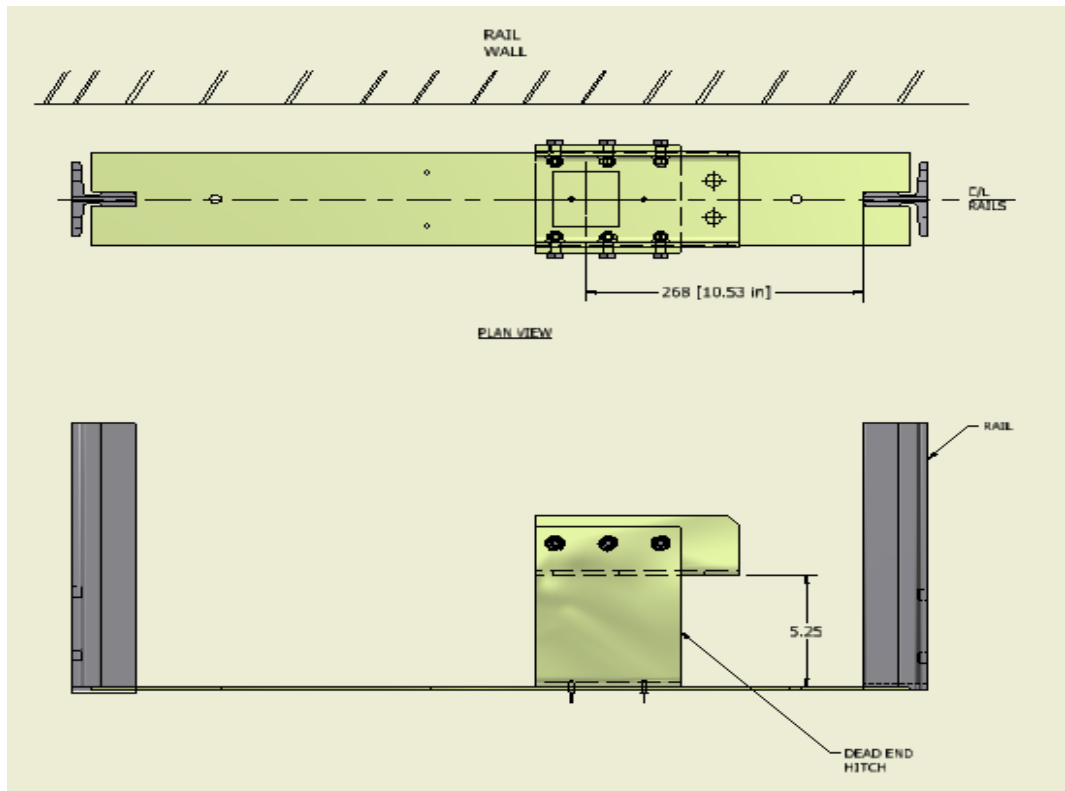
1. The 700 mm (27.559") (27 9/16") Distance between the Guides (DBG) is important but more important is a consistent DBG for the full length of the rail installation. See Sketch 003
2. By code the rail bracket spacing should be a maximum of 1525 mm (60") (5 ft), make sure rails brackets do not hit fish plates.
3. Both rails need to be plumb left to right and front to back.
4. The rail needs to be properly faced to each other (pointed)
5. File rail joints to prevent guide shoes and sheave shoes clipping joints.



SKETCH 003

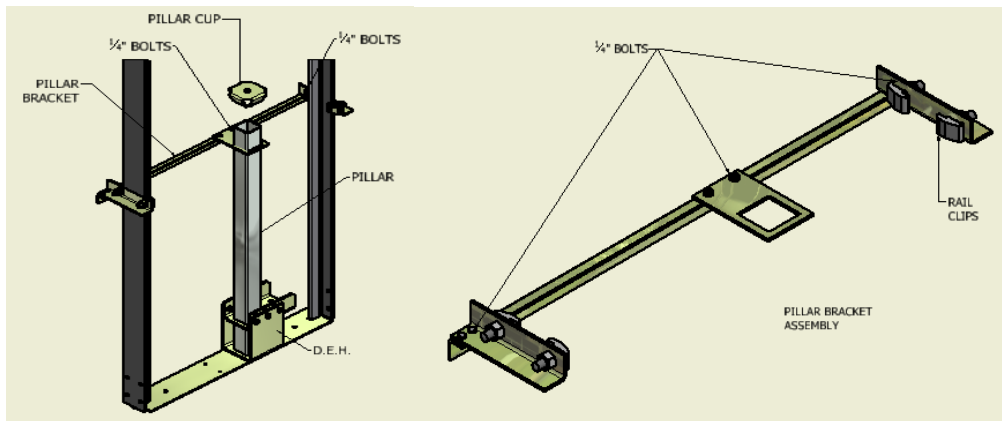
## JACK PILLAR INSTALLATION:

1. Locate dead end hitch between guide rails on the pit floor with pillar location to the right of centre of rails. Dead end hitch (D.E.H.) does not require lagging to pit floor but provisions have been made for (2) – 3/8" masonry lags as shown in sketch (lags not supplied). See Sketch 004



SKETCH 004

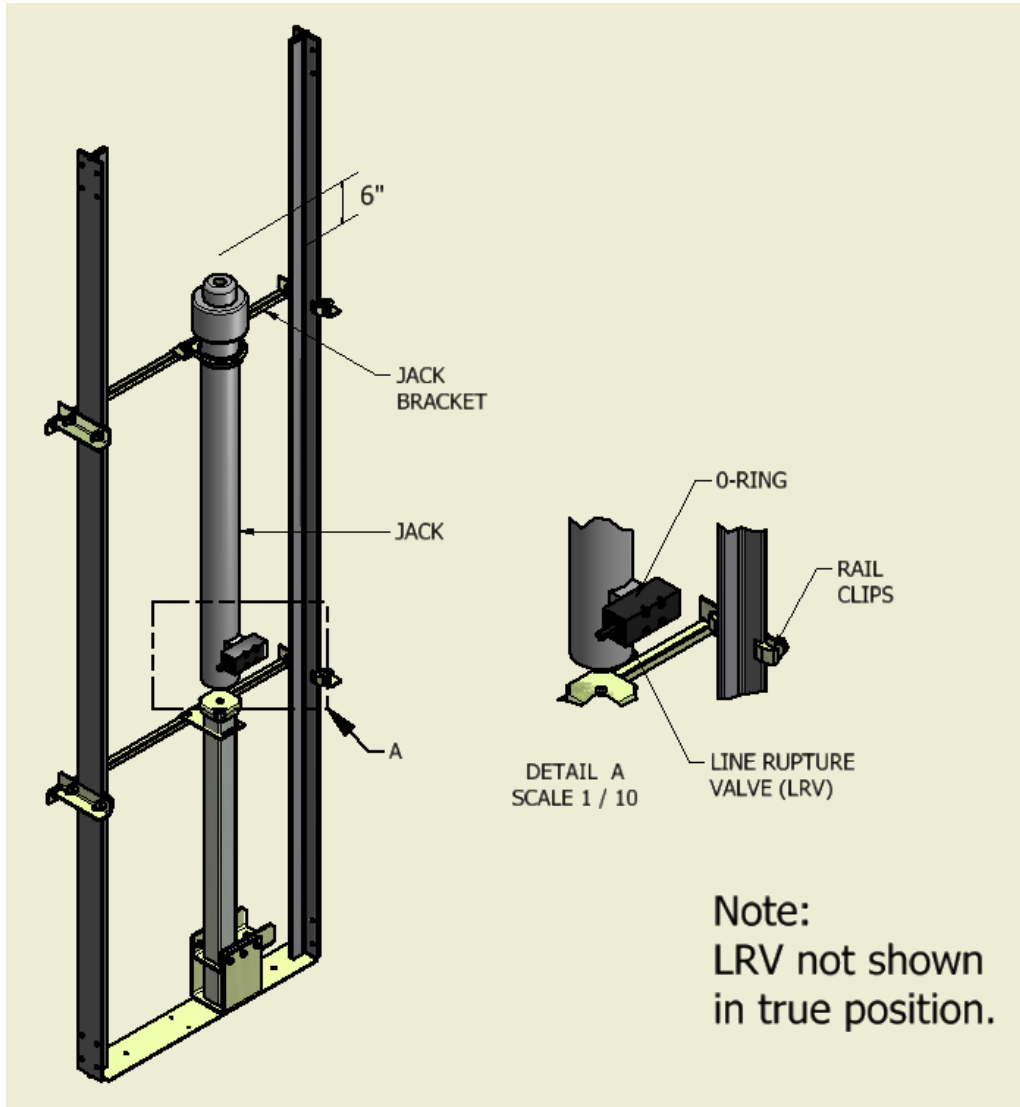
2. Locate pillar to D.E.H
3. With all 1/4" bolts loose fit pillar bracket to rail 80 mm (3 1/8") below top of pillar making sure bracket is level and tighten rail clips.
4. Make adjustment until pillar is plumb on both directions (left to right and front to back) using good quality level, when plumb tighten all 1/4" bolts.
5. Place jack pillar cup on top of pillar ready for jack. See Sketch 005



SKETCH 005

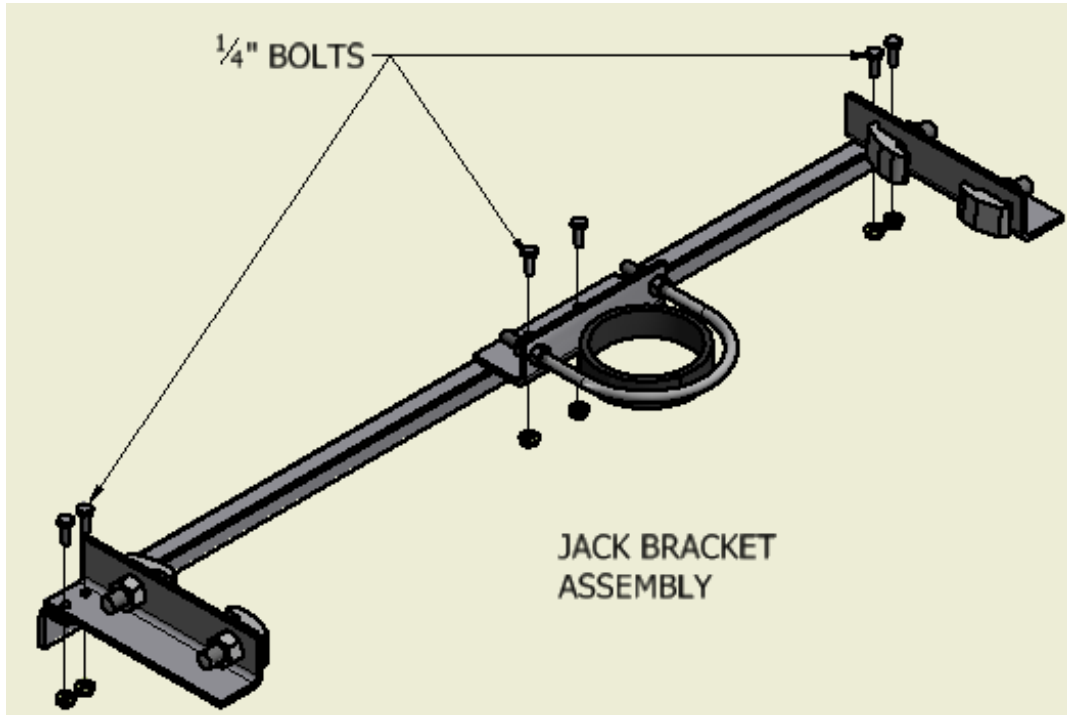
## JACK INSTALLATION:

1. Fit line rupture valve (LRV) to inlet of jack prior to installing jack making sure "O"-ring is in place; line rupture valve can be placed on jack in any one of 4 positions, left, right, up or down. Loosen lock/seal nut on LRV adjuster screw using 13 mm wrench, holding nut screw adjusting screw out all the way using 6 mm Allen Wrench and tighten lock/seal nut making sure you do not tighten nut too tight. At this time you may want to attach fitting or hose to LRV prior to lifting jack in place. Inlet to 1" LRV is 1" NPT, teflon tape will be required to seal thread.
2. With all 1/4" bolts loose fit jack clamp to rail approximately 6" below the top of jack, level bracket and tighten rail clips.
3. Lift jack into place using appropriate lifting device and secure with "U" bolt but do not fit rubber isolation.
4. Orientate LRV in final position making sure Car Frame will not hit LRV. See Sketch 006

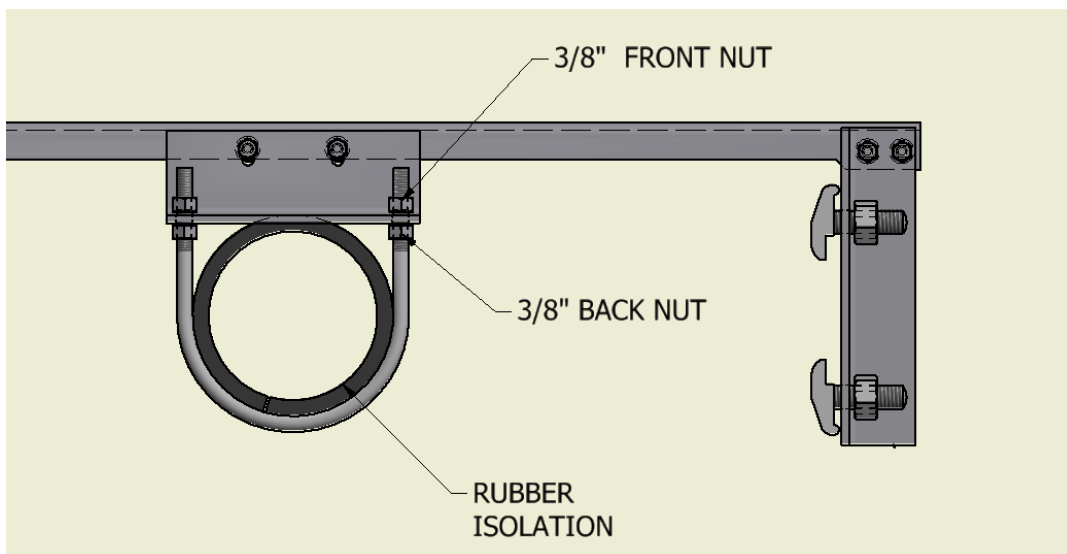


SKETCH 006

6. Fit rubber isolation to "U" bolt. Tighten front nuts until clamp is tight to jack then lock back nut. See Sketch 008
7. Plumb jack left to right and back to front using good quality level and tighten all 1/4" bolts when plumb.  
See Sketch 007



SKETCH 007

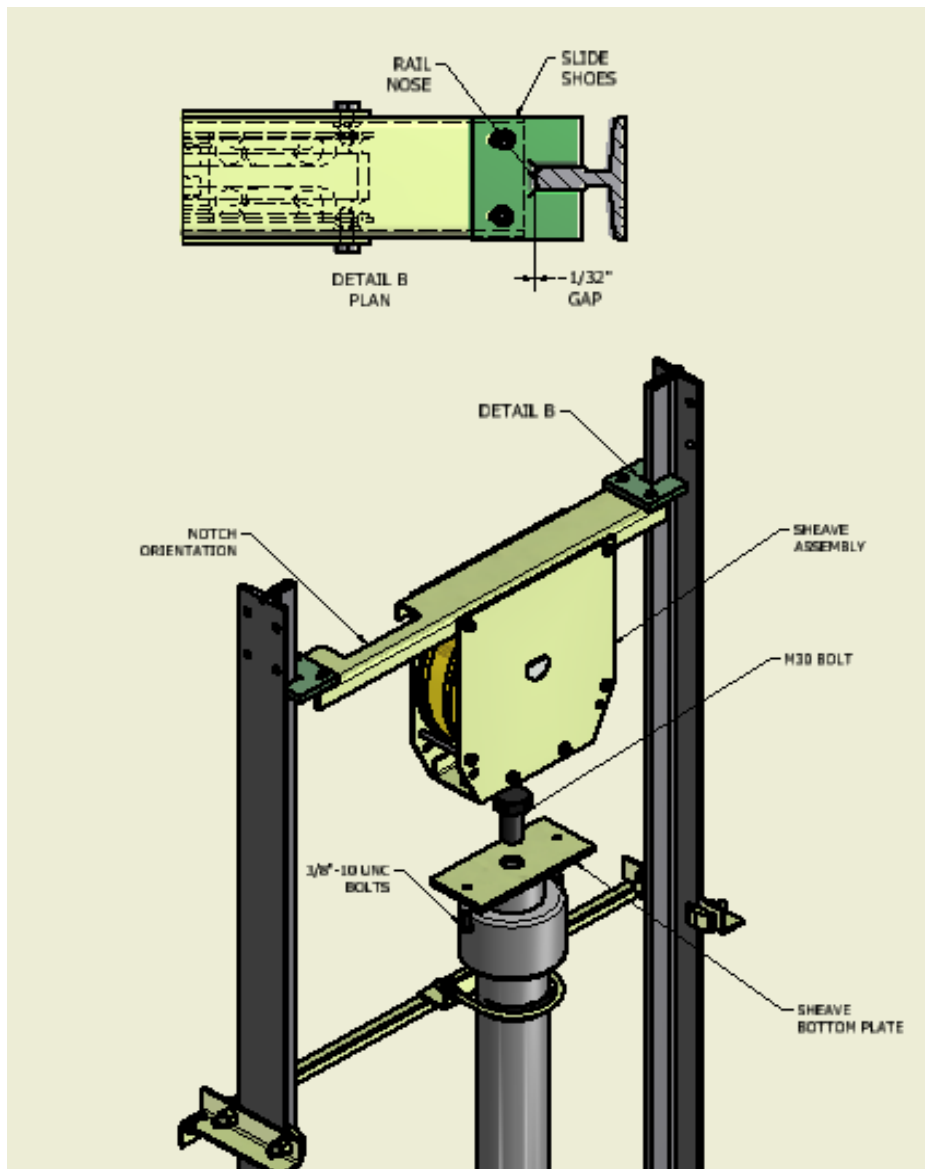


SKETCH 008

## SHEAVE ASSEMBLY INSTALLATION:

1. Remove M 30 bolt from top of jack and plate from bottom of sheave assembly.
2. Bolt plate to top of jack.
3. Loosen guide shoes on sheave.
4. Lift sheave into place, fit two 3/8" bolts and tighten.

With jack fully collapsed adjust shoes to rail. Running clearance of shoe to rail needs to be an absolute minimum without jamming on rails. See Sketch 009

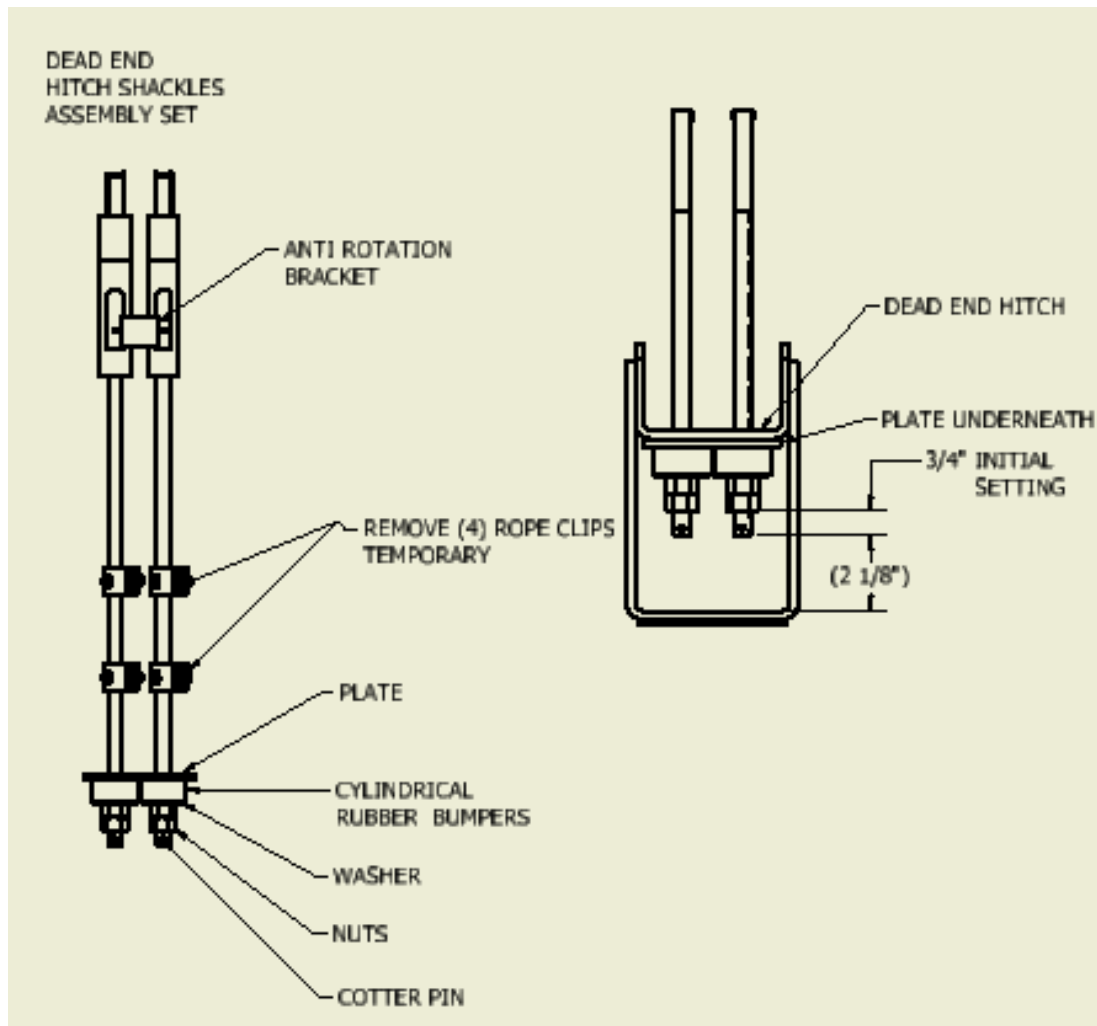


SKETCH 009

Accurate guide rail installation is very important to ensure proper support to jack for full travel of elevator.

- Consistent DBG
- Plumb in both directions
- Accurate pointing of rails.

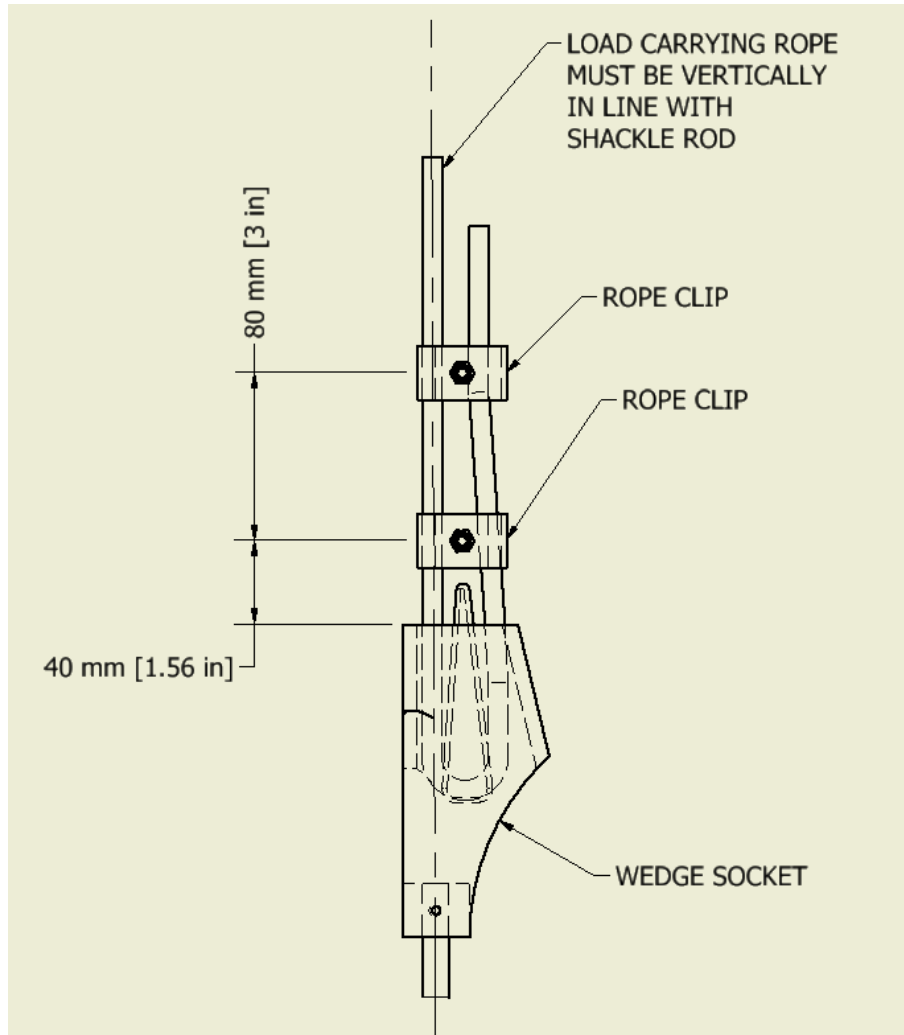
## FIT ROPE SHACKLES SET TO DEAD END HITCH IN PIT



1. Remove anti rotation bracket, cotter pins, nuts, washers, round rubbers isolation, plate and X rope clips. See Sketch 010
2. Slide both shackles in dead end hitch, fit plate, rubbers isolation, washers, nuts + cotter pins. Do not fit anti rotation bracket at this time.  
Adjust nuts until 3/4" of threaded rod it's past the nut on both shackles and lock nuts.
3. Final adjustment to these shackles will be required once car is running.  
Adjustment is required to obtain equal load on each rope.

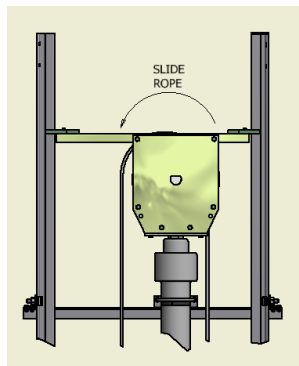
## ROPE INSTALLATION TO SHEAVE AND DEAD END HITCH SHACKLES

1. Slide both ropes over sheave with equal lengths of rope on both sides. Fit rope to dead end hitch shackles. See Sketch 011



SKETCH 011

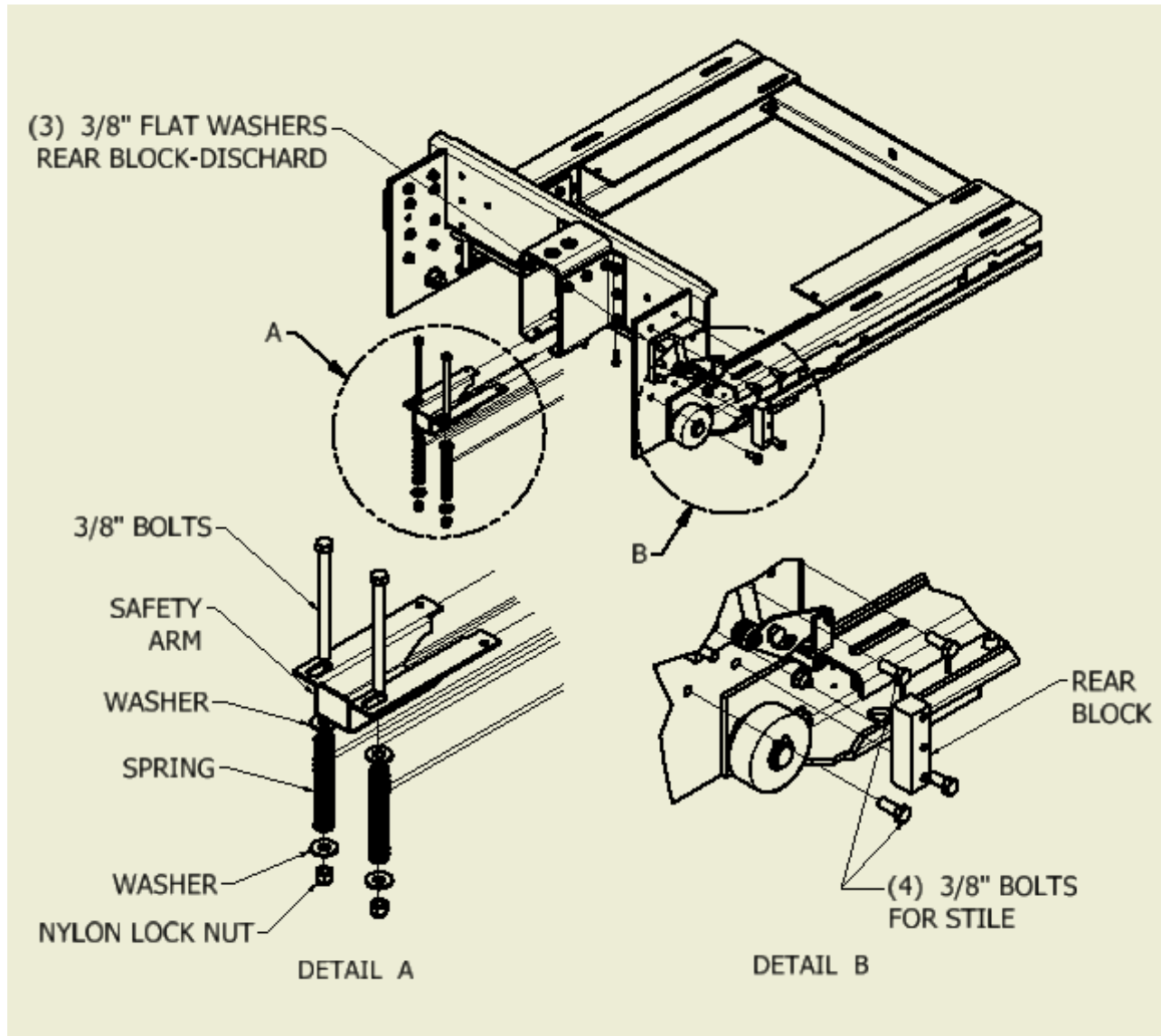
2. For 3/8" (10 mm) rope fit first rope clip 1 1/2" (40mm) from top of shackles and second rope clip 3" (80mm) from first clip.





## PLANK INSTALLATION:

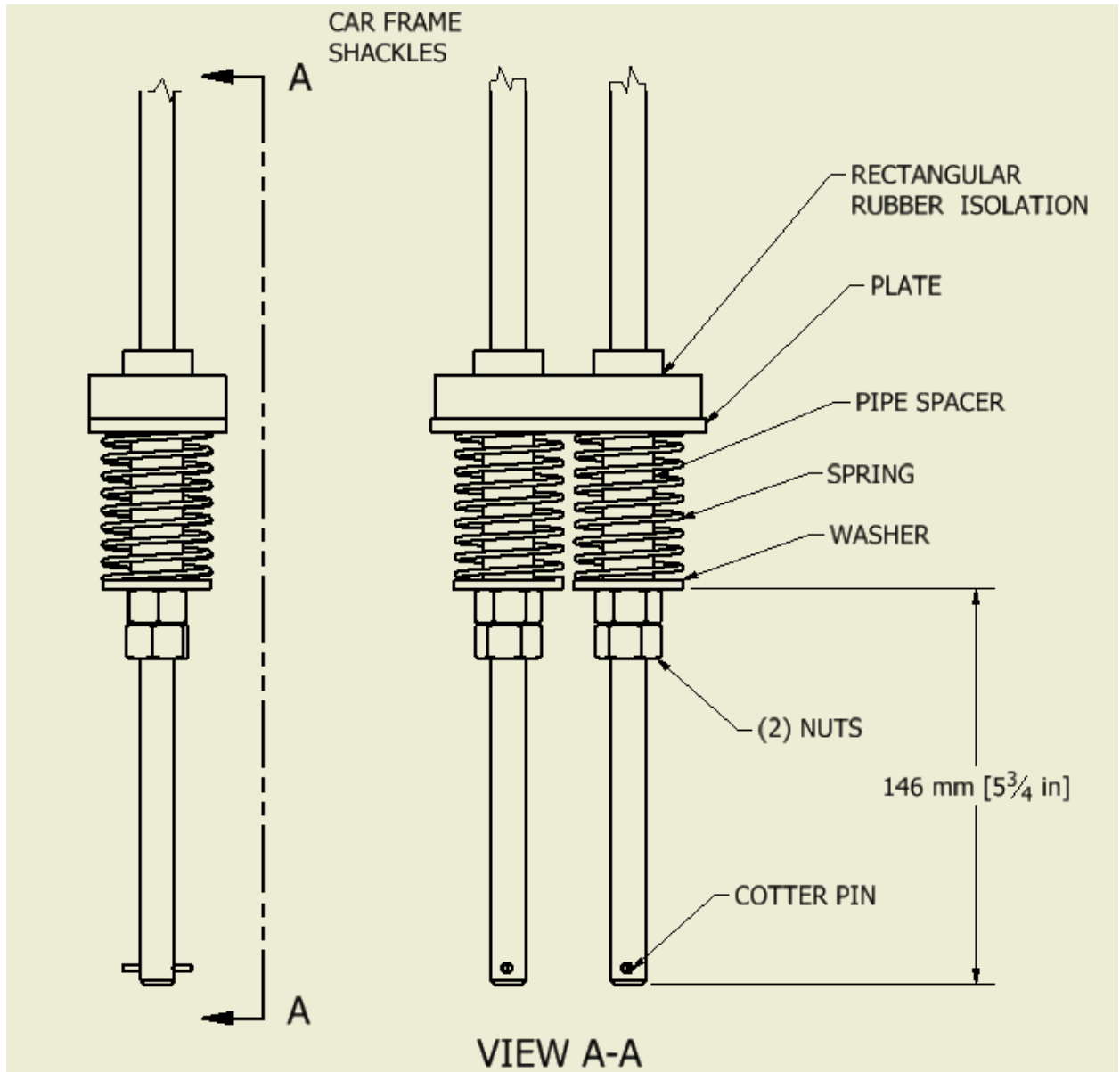
1. Remove rear block from left safety block, 3 bolts and discard flat washers.



SKETCH 012

2. Remove both springs + bolts on safety arm.
3. Remove safety arm 1/4" bolts (2)
4. Remove (8) x 3/8" bolts for attaching styles. See Sketch 012

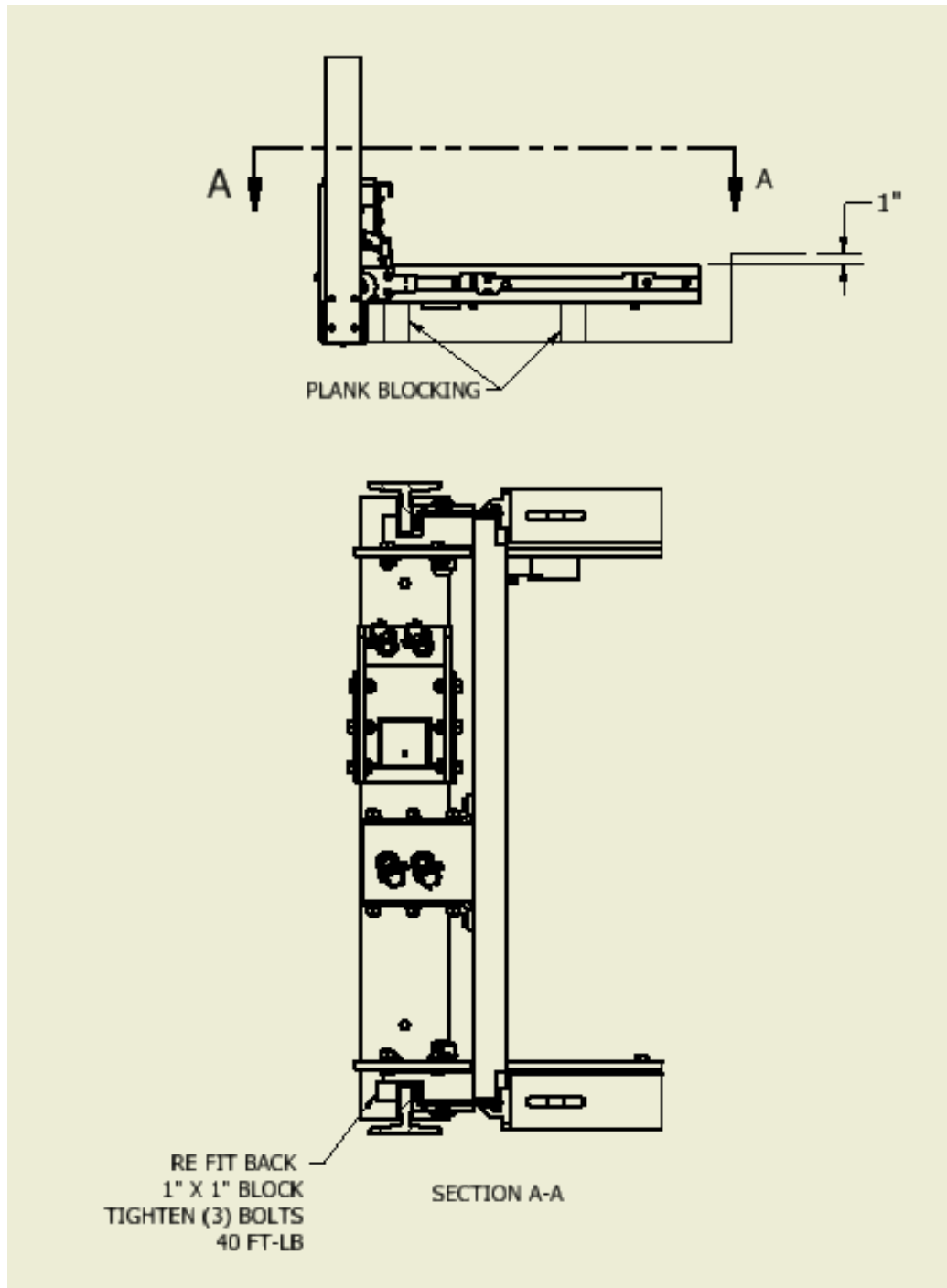
5. Prepare rope shackles for assembly to plank, remove cotter pins, nuts, washers, springs, pipe spacers, rubber isolation, plate and rope clips.



SKETCH 013

6. Slide both rope shackles through pick up bracket on plank and re-fit isolation rubber, plate, pipe spacers, springs, washers and nuts.
7. Adjust nuts until 5 3/4" (146 mm) dimension is achieved from top of nut to end rod as per sketch. Once set lock nuts up and fit cotter pins. See Sketch 013

8. Place blocks in pit so top of plank arms are 1" below bottom floor. See Sketch 014



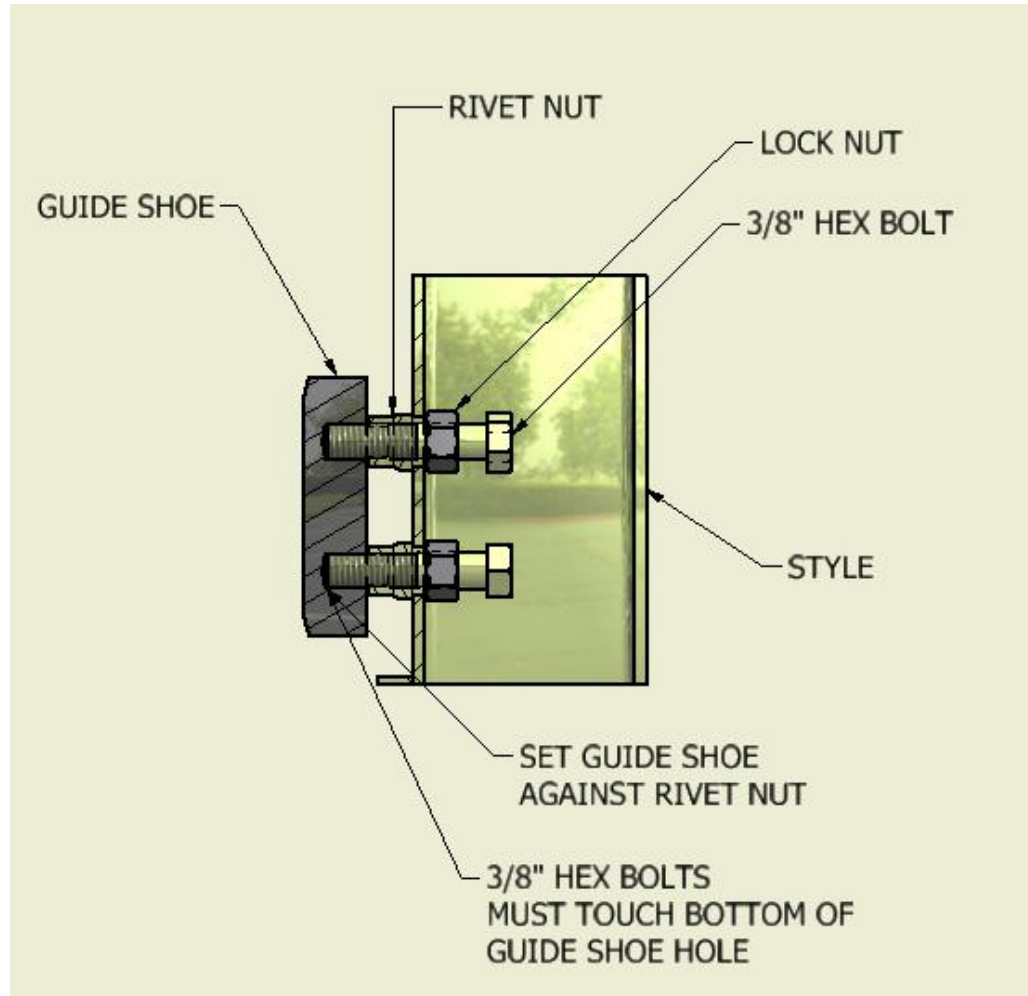
SKETCH 014

## **FINISH INSTALLING ROPE TO PLANK SHACKLES**

1. If jack needs to be pre extended complete this prior to attaching ropes to plank rope shackles.
2. Pull rope down to shackles on plank and attach rope to shackles as per attaching ropes to dead end hitch shackles. (See page 8)
3. Pull rope as taught as possible by hand, both ropes to have same tension. Do not fit rope clips until undertravel has been confirmed with springs fully compressed and car platform fitted. If undertravel is not correct adjustment can be made to rope shackles on dead end hitch in pit.

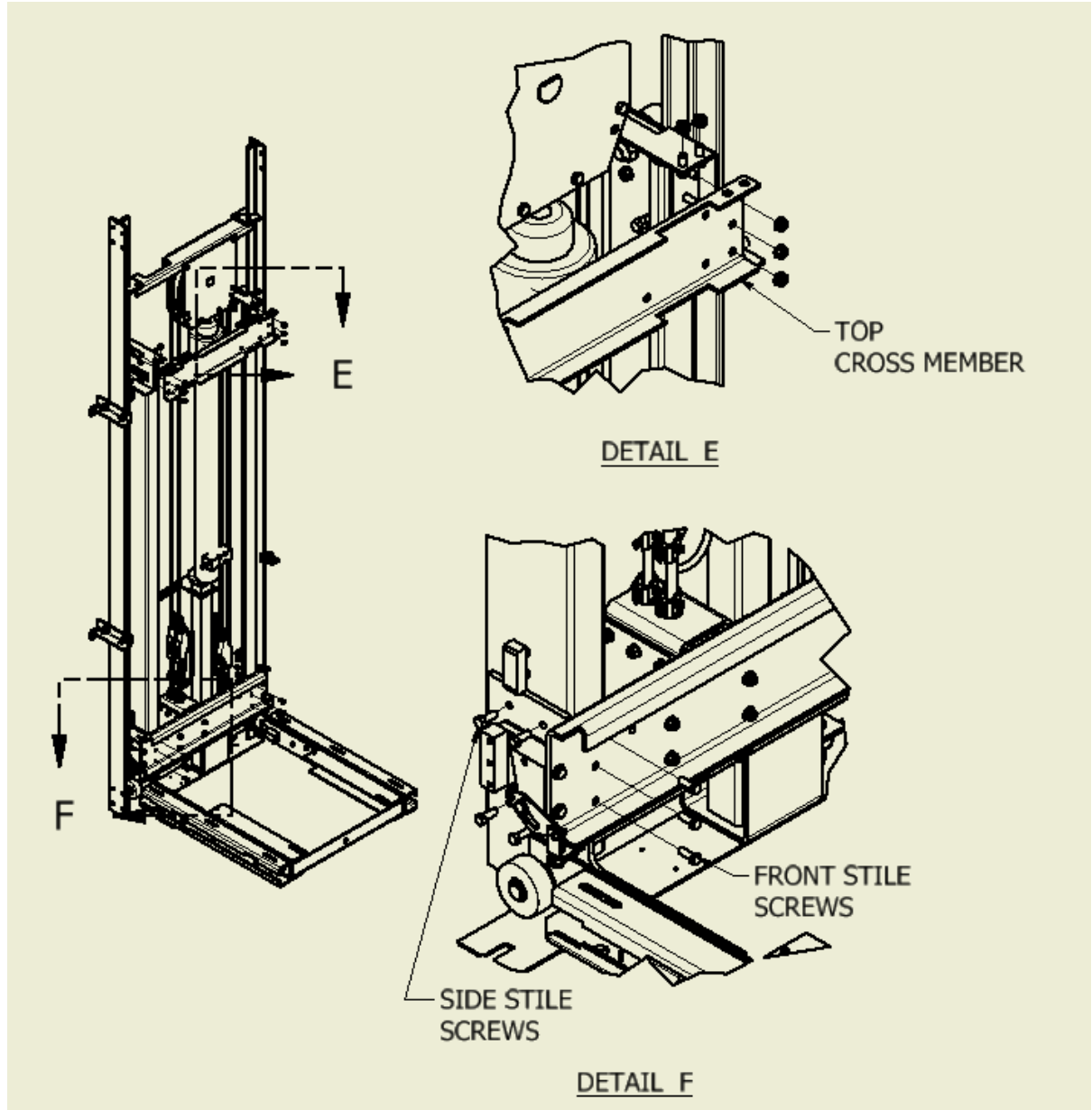
## INSTALLATIONS STYLES

1. Fit guides shoes to styles and secure in place with electrical tape. See Sketch 015



SKETCH 015

2. Slide both stile in place, fit 3 front stile 3/8" hex flange bolts to plank cross member and 4 side stile 3/8" hex flange bolts to plank main plate and hand tighten all bolts making sure stile faces are hard to plank face, See Sketch 016  
Do not tighten with wrenches at this time.



SKETCH 016

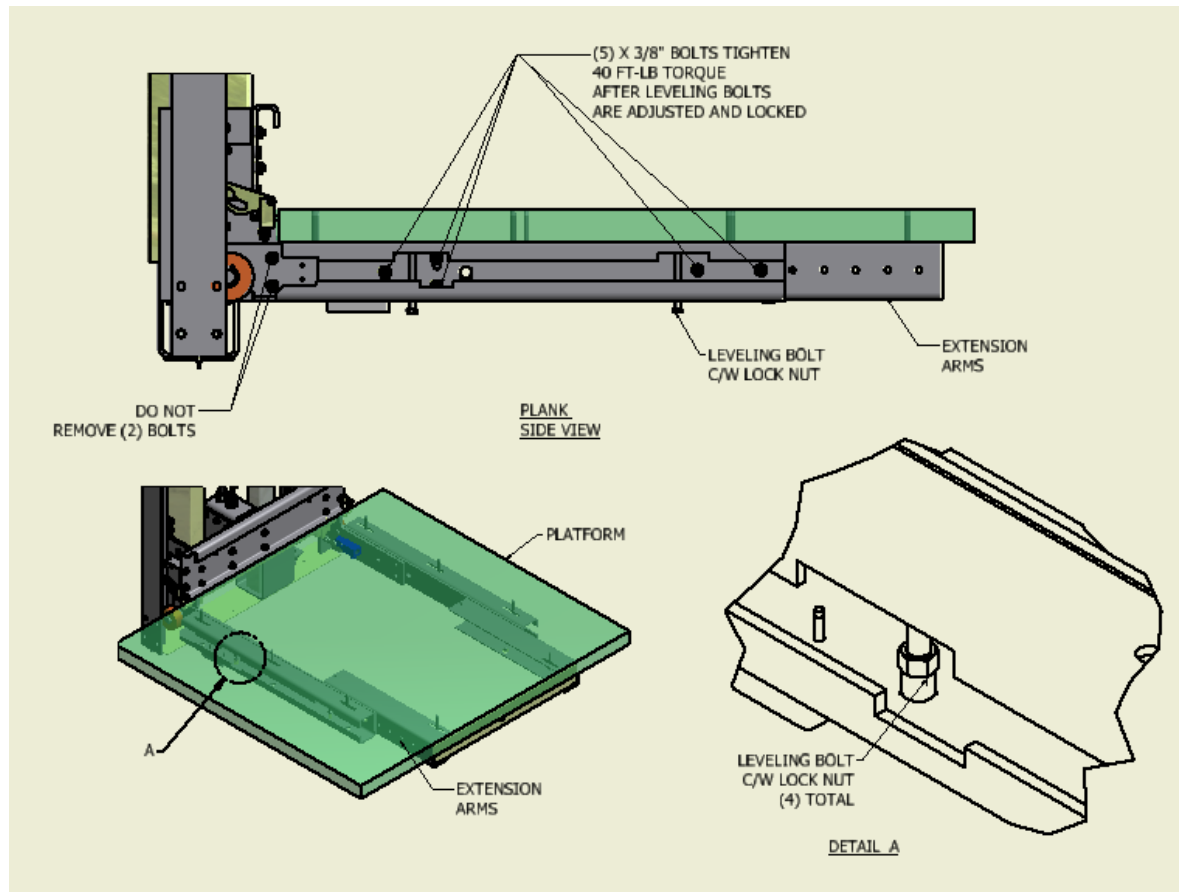
3. Fit crosshead to top of styles with (5) - 3/8" hex bolts on each side. Hand tightens all bolts on both sides making sure all faces are touching prior to tightening with wrench.
4. Tighten all 3/8" hex bolts to 40 FT-LB torque value using 9/16" wrenches.
5. Styles must be vertical. Plank design provides platform leveling adjustment.
6. Drive assembled car frame up when hydraulic system has been installed and remove blocking in pit under car frame.

## FINAL ADJUSTMENT TO CAR FRAME:

1. Remove electrical tape securing shoes in position and adjust guide shoes out equally top and bottom until shoes are just touching nose of rail.

Note: Shoes and rollers on car frame need to be supported by an accurate rail installation.

- DBG needs to be consistent for the full length of travel. If not the guide shoes will be tight in some sections and loose in other sections.
  - Rails need to be plumb left to right and front to back. If not this will put undue stress on jack and sheave guide shoes.
  - Rails need to be properly pointed to each other if not the rollers will push the car frame towards the guide shoes. This will result in premature shoe wear and possible noise ride. Poorly pointed rails could also cause delaminating of roller material from bearing.
2. Extend plank arms out until platform is properly supported. Locate platform to landings and secure to plank arms with lag screws [hardware not provided]. See Sketch 017



SKETCH 017

3. Note: Platform needs to be structurally sound as plank arms do not support total area of platform.
4. At this time you may want to add a little weight to platform to make sure all rollers are touching rails and springs on shackles are fully compressed.

5. Leveling platform:

Note: As a default 4 leveling bolts are completely adjusted up.

5.1 Leaving weights on platform place good quality level on platform.

5.2 Run platform up to gain access under platform. Pit prop is required while working under platform for safety.

5.3 Loosen 3/8" bolts and adjust platform using 4 jacking bolts until platform is level left to right and front to back. When platform it is level, tighten lock nuts on leveling bolt and tighten each side 3/8" bolts shown on sketch at 40 FT-LB torque values.